

BEACON HIP LOFTS
TRAFFIC IMPACT STUDY
BEACON, NY

REVISED
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INTRODUCTION

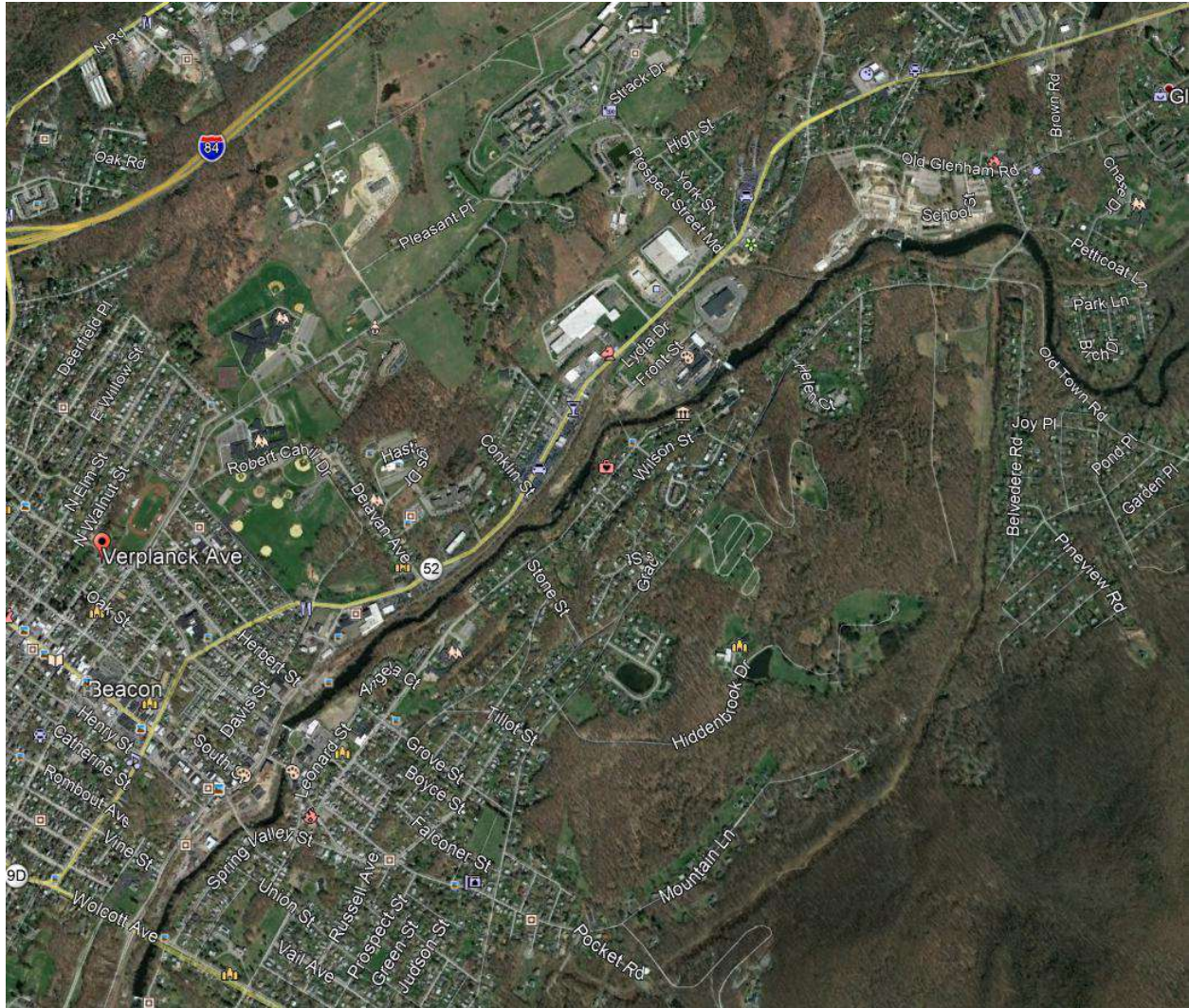
This 8.74 acre site is located in the City of Beacon, NY and is further identified as tax parcel 6055-04-590165. This application is for the proposed redevelopment of the parcel, collectively referred herein as “39 Front Street”, or “Beacon HIP Lofts”. The project generally encompasses renovations and additions to existing buildings within a former light industrial site. The majority of the former industrial/commercial spaces will be replaced with artist live/work residential units. Other projects in the scope of work include the renovation of an existing garage for use as a fitness room, and a central mail room for residents of the complex; and an addition to the existing self-storage building.

In addition, the project will include parking and internal circulation modifications to the site. The building renovations will be similar to the existing on-going work that is being conducted on the site. Some of the modified parking areas will require minor grading for drainage purposes, with the exception of the parking area closest to Front Street which will require moderate grading and a retaining wall into the existing slope. The entire site will be landscaped appropriately for the use. Access to the site will be via the intersection of Route 52 (Fishkill Avenue)/Mill Street which is controlled by a flashing light.

At the completion of the revised project, there will be a total of 172 live work apartments with a total of 196 bedrooms. The addition to the self-storage Building (4A) will be approximately 25,000 s.f. and the proposed gym in Building 7 is approximately 1,500 s.f. will be for residents only.

The proposed site plan shows that there will be 282 parking spaces. According to the zoning, 301 parking spaces are required. **Figure 1** shows the project location. We have based our analysis on the site plan prepared by Aryeh Siegel architects. For traffic purposes, the future build out year is 2016.

The purpose of this study is to determine the potential traffic impact of the proposed development on the adjacent roadway network, and where necessary, make recommendations for roadway improvements necessary to serve the existing and future traffic volumes.



PROJECT LOCATION

FIGURE 1

Pre-Approvals Prior to Undertaking the Traffic Impact Study

Prior to undertaking this study, representatives of Harry Baker & Associates (HBA) and Frederick P. Clark (FPC) had a discussion regarding the preparation of the traffic study. Based on this discussion, we agreed on the following:

- The traffic counts will take place between 7AM to 9AM and 4 PM to 6 PM for weekdays and 10 AM to 1 PM on Saturday.
- The ITE "Trip Generation Manual" 9th Edition would be used to calculate the generated trips.
- For the residential units, Land Use Code 223 Mid-Rise Apartments would be used.
- For the self-storage building, Land Use Code 151 Mini-Warehouse would be used.
- The design year will 2016 and the background growth rate must be at least one percent. Two percent was used for this study.
- FPC provided reports from John Collins Engineering and Fitzpatrick Engineering for projects that have been submitted to the Beacon Planning Board for approval. The traffic generated from these developments was added to the No-Build traffic.
- We contacted NYSDOT, Dutchess County, and the City of Beacon to obtain the traffic signal timing and phasing plans for the two signalized intersections in this study. We were not able to obtain the information. The traffic signal timing and phasing is based on field observations. Both traffic signals operate as fixed time.
- The Synchro 8 software program will be used to calculate the Level of Service, V/C Ratio, and Average Vehicle Delay.

EXISTING ROADWAY NETWORK

The proposed project will be located along at the intersection of Route 52 (Fishkill Avenue)/Mill Street. A description of the existing local roadway system is provided below.

- New York State Route 52 (Fishkill Avenue) is a roadway under the jurisdiction of the NYSDOT. In the vicinity of the site, the roadway has an east-west orientation. The roadway originates to the west at Main Street and continues east intersecting with Route 9 in Fishkill.

In the immediate area of the site, Route 52 consists of one lane in each direction. The intersection of Route 52/Mill Street is controlled by a flashing light. The development along this portion of Route 52 is commercial. Across the street from Mill Street is Chemprene Inc. Virgo's Café and Auto Zone are located to the west. The posted speed limit on Route 52 is 40 mph.

- Delavan Avenue is a north/south roadway in the vicinity of the site and is a dead end street. Delavan Avenue is a one-lane roadway in each direction. The development along Delavan Avenue is predominately residential. There is a church located in the northwest corner of the intersection. The STS Tire driveway is located on the south side of the intersection. Cervone Auto Sales is located just west of the intersection. The intersection of Rout 52/Delavan Avenue is unsignalized.
- Verplanck is a north/south roadway. Verplanck begins at the intersection of Main Street and continues north to Route 9D. The southbound Delavan Avenue approach has an exclusive left-turn lane and a combination through/right-turn lane. The other three approaches have single approach lanes.

The intersection of Route 52/Delavan Avenue operates under a semi-actuated controller. The southbound Delavan Avenue approach receives an advances green arrow phase for left-turning vehicles. The posted speed limit on Delavan Avenue is 25 mph and 40 mph on Route 52.

The development along Delavan Avenue is primarily residential. There is the Cornell Co-Op Extension building located on the northeast corner of the intersection. On the southwest corner is the Beacon Hebrew Alliance building.

- Main Street is a north-south roadway. Main Street begins at Churchill Street and continues north to Route 9D. The intersection of Route 52/Main Street operates under a semi-actuated controller. All four legs have single lane approaches. There are No Turns on Red signs posted for each approach.

Two-hour parking is permitted on Main Street from 9AM to 5PM. There is no parking from 4AM to 9AM Monday thru Thursday. No parking is permitted on Route 52.

The development at this intersection is a combination of office and commercial. The VFW Post 666 building is located in the southwest corner of the intersection. In the southeast corner are commercial stores and a bank. A gas station is located in the northeast corner. In the northwest corner are a commercial building with residential above and the Yankee Clipper Diner.

EXISTING TRAFFIC CONDITIONS

Manual Traffic Counts

In order to properly assess the impacts of the proposed project, manual turning movement counts were taken during the weekday morning (7AM to 9AM) and evening (4PM to 6PM) peak hours and Saturday day (10AM to 1PM) peak hours. The manual counts were conducted on Tuesday, June 18th 2013. The Saturday counts were taken on June 22, 2013 at the following intersections:

- Route 52/Mill Street – unsignalized
- Route 52/Delavan Avenue/STS Tire Driveway – unsignalized
- Route 52/Verplanck Avenue – signalized
- Route 52/Main Street – signalized

The traffic counts were conducted in 15-minute intervals. The counts were classified by cars, trucks, buses and school buses. Full size school buses were considered as trucks for this count.

The weekday traffic count at the intersection of Route 52/Delavan Avenue/STS Tire Driveway was based on traffic counts from a previous report by Fitzpatrick Engineering. The count was collected in October 2012. No adjustments were made to the count since it was within seven months of the data collected for this study. The raw traffic counts should not be factored because school was in session when the counts were taken.

The balanced traffic volumes are shown in **Figures 2 and 3** show the morning and evening peak hour traffic volumes. **Figure 3** shows the Saturday peak hour traffic volumes. The figures show the existing traffic volumes by movement and in parentheses is the truck and bus volume which is included in the existing volume shown in the figures.

Capacity Analysis - Existing Conditions

The Synchro 10 software was used to calculate the Level of Service for each intersection. The traffic analysis is performed by calculating the capacity of the facility (e.g., intersection approach roadway) to process traffic. In general, the capacity of a facility is defined as the maximum number of vehicles or pedestrians that can reasonably be expected to traverse a point or section of roadway during a given time period under prevailing roadway, traffic and control conditions. Capacity analyses are, therefore, a set of procedures used to estimate the traffic carrying capabilities of facilities over a range of defined operational conditions. They provide tools for the analysis and improvement of existing facilities and for the planning and design of future facilities.

One measure of traffic conditions is a facility's ability to process actual or projected volumes of traffic. The volume-to-capacity (V/C) ratio represents the comparison of the facility's volume to its capacity, with traffic conditions becoming more congested as the ratio nears 1.0. When v/c ratios exceed 1.0, volume is higher than capacity, resulting in congestion and delays.

Traffic conditions are expressed in terms of Levels of Service (LOS). This term is used to describe the quality of traffic flow in a standard manner. Level of Service for signalized intersections is defined in terms of delay, which is a measure of driver discomfort and frustration, fuel consumption, and lost travel time. Specifically, LOS criteria are stated in terms of average stopped delay per vehicles for a 15-minute analysis period. The criteria are provided below. Delay may be measured in the field or estimated using procedures presented later in this section. Delay is a complex measure and is dependent upon a number of variables, including the quality of progression, the cycle length, the green ratio, and the v/c ratio for the lane group in question.

Six LOS' are defined for each type of facility for which analysis procedures are available. Letter designations from "A" to "F" represent the range of operating conditions from the best conditions – "free flow" – to the worst – "unacceptable delay."

LEVEL OF SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS

Level of Service	Average Delay per Vehicle (Sec)
A	≤ 10
B	>10 and ≤ 20
C	>20 and ≤ 35
D	>35 and ≤ 55
E	>55 and ≤ 80
F	> 80

LEVEL OF SERVICE CRITERIA FOR UNSIGNALIZED INTERSECTIONS

Level of Service	Average Delay per Vehicle (Sec)
A	≤ 10
B	>10 and ≤ 15
C	>15 and ≤ 25
D	>25 and ≤ 35
E	>35 and ≤ 50
F	> 50

The signal timing and phasing plans for the signalized intersections in the study area were obtained from the NYSDOT Region 8 office. These signal timings were used for the analysis of the existing conditions. The results of the capacity analyses are shown in **Table 1**.

The results of the capacity analyses show that for the four intersections analyzed the LOS for the approaches and overall intersection is “C” or better for all four intersections for the morning, evening, and Saturday peak periods.

2016 NO-BUILD CONDITIONS

The no-build conditions represent the traffic volumes that would be on the street network prior to the completion of the proposed development. A background growth rate of two percent was used to increase the base traffic to 2016. In addition to the background growth rate, there are three other developments that are going to be built that would impact the proposed project. These projects are: East Main Street Mills, Round House, and Hudson Baylor Beacon. The traffic studies for these three developments were prepared by John Collins Engineers, P.C. The projected vehicle trips and distribution patterns for these three developments were taken from these reports. **Figures 5-7** show the traffic volumes from these three developments for the morning, evening and Saturday peak hours, respectively. **Figures 8-10** show the 2016 No-Build traffic volumes for the morning, evening and Saturday peak hours, respectively. The results of the capacity analyses are shown in **Table 2**.

At the Route 52/Delavan Avenue/STS Tire Driveway, the Delavan Avenue southbound approach is projected to operate at LOS “D” in the morning peak hour. The STS Tire Driveway northbound approach is projected to operate at LOS “D” in the Saturday peak hour. The Verplanck Avenue northbound approach is projected to at LOS “D” in the weekday PM peak hour. The remaining approaches at the intersections are projected to operate at LOS “C” or better for for all three peak periods.

TABLE 1 CAPACITY ANALYSIS SUMMARY EXISTING CONDITIONS SIGNALIZED INTERSECTIONS									
	Weekday AM Peak			Weekday PM Peak			Saturday Peak		
	LOS	V/C Ratio	Delay	LOS	V/C Ratio	Delay	LOS	V/C Ratio	Delay
Route 52/Verplanck Avenue									
Route 52									
Eastbound LTR	B	0.43	15.8	B	0.43	18.2	B	0.42	18.5
Westbound LTR	C	0.58	21.2	C	0.65	23.2	C	0.63	22.2
Verplanck Avenue									
Northbound LTR	C	0.42	26.4	D	0.71	37.5	C	0.32	24.5
Southbound Lt	A	0.18	9.0	A	0.18	9.5	A	0.18	8.9
Southbound Th + Rt	A	0.18	8.7	A	0.15	8.4	A	0.16	8.5
Overall	B		17.0			21.6			17.7
Route 52/Main Street/Teller Avenue									
Teller Avenue									
Eastbound LTR	B	0.30	12.5	B	0.31	11.7	B	0.29	11.2
Route 52									
Westbound LTR	B	0.39	13.5	B	0.38	11.0	B	0.43	11.7
Main Street									
Northbound LTR	B	0.26	12.9	B	0.43	13.2	B	0.49	15.7
Southbound LTR	B	0.27	12.9	B	0.32	12.3	B	0.49	13.6
Overall	B		13.0	B		12.1	B		13.2
TABLE 1 CAPACITY ANALYSIS SUMMARY EXISTING CONDITIONS UNSIGNALIZED INTERSECTIONS									
	Weekday AM Peak			Weekday PM Peak			Saturday Peak		
	LOS	V/C Ratio	Delay	LOS	V/C Ratio	Delay	LOS	V/C Ratio	Delay
Route 52/Mill Street									
Route 52									
Eastbound Th + Rt	A	0.00	0.0	A	0.00	0.0	A	0.00	0.0
Westbound Lt + Th	A	0.00	0.0	A	0.01	8.3	A	0.01	8.5
Mill Street									
Northbound Lt + Rt	C	0.07	15.8	C	0.09	15.4	C	0.07	17.4
Route 52/Delavan Avenue/STS Tire Driveway									
Route 52									
Eastbound LTR	A	0.03	8.3	A	0.01	8.3	A	0.02	8.5
Westbound LTR	A	0.00	8.2	A	0.00	8.1	A	0.01	8.2
STS Tire Driveway									
Northbound LTR	B	0.01	10.9	B	0.03	13.4	C	0.01	22.8
Delavan Avenue									
Southbound LTR	C	0.23	21.5	C	0.13	16.2	C	0.13	18.0

TABLE 2 CAPACITY ANALYSIS SUMMARY 2016 NO-BUILD CONDITIONS SIGNALIZED INTERSECTIONS									
	Weekday AM Peak			Weekday PM Peak			Saturday Peak		
	LOS	V/C Ratio	Delay	LOS	V/C Ratio	Delay	LOS	V/C Ratio	Delay
Route 52/Verplanck Avenue									
Route 52									
Eastbound LTR	B	0.48	15.9	C	0.52	20.2	C	0.52	21.1
Westbound LTR	C	0.66	23.4	C	0.75	27.8	C	0.71	24.9
Verplanck Avenue									
Northbound LTR	C	0.46	27.2	D	0.78	42.9	C	0.33	24.8
Southbound Lt	A	0.22	9.0	A	0.20	9.9	A	0.19	9.0
Southbound Th + Rt	A	0.21	8.9	A	0.19	8.7	A	0.20	8.9
Overall	B		17.9	C		24.5	B		19.3
Route 52/Main Street/Teller Avenue									
Teller Avenue									
Eastbound LTR	B	0.32	11.8	B	0.34	11.9	B	0.32	11.4
Route 52									
Westbound LTR	B	0.41	12.6	B	0.41	11.5	B	0.45	12.2
Main Street									
Northbound LTR	B	0.29	11.9	B	0.48	14.1	B	0.59	18.2
Southbound LTR	B	0.30	12.2	B	0.37	13.1	B	0.56	15.3
Overall	B		12.2	B		12.7	B		14.5
TABLE 2 CAPACITY ANALYSIS SUMMARY 2016 NO-BUILD CONDITIONS UNSIGNALIZED INTERSECTIONS									
	Weekday AM Peak			Weekday PM Peak			Saturday Peak		
	LOS	V/C Ratio	Delay	LOS	V/C Ratio	Delay	LOS	V/C Ratio	Delay
Route 52/Mill Street									
Route 52									
Eastbound Th + Rt	A	0.00	0.0	A	0.00	0.0	A	0.00	0.0
Westbound Lt + Th	A	0.01	8.3	A	0.02	8.4	A	0.01	8.6
Mill Street									
Northbound Lt + Rt	B	0.06	13.7	C	0.11	17.1	C	0.09	19.5
Route 52/Delavan Avenue/STS Tire Driveway									
Route 52									
Eastbound LTR	A	0.04	8.5	A	0.02	8.5	A	0.02	8.7
Westbound LTR	A	0.00	8.4	A	0.01	8.3	A	0.01	8.3
STS Tire Driveway									
Northbound LTR	B	0.01	11.3	B	0.04	14.3	D	0.01	25.8
Delavan Avenue									
Southbound LTR	D	0.29	25.9	C	0.16	18.3	C	0.15	20.2

2016 BUILD CONDITIONS

As stated above, the proposed revised project generally encompasses renovations and additions to existing buildings within a former light industrial site. There will be 172 live work apartments with a total of 196 bedrooms. The addition self-storage Building (4A) will be about 25,000 sq. ft. and the proposed gym in building 7 is about 1,500 sq. ft. will be for residents only.

To determine the number of vehicular trips generated by this proposed development, the Institute of Transportation Engineers "Trip Generation Manual" 9th Edition. For the 172 live work apartments, Land Use 223 Mid-Rise Apartments was used. For the 25,000 sq. ft. self-storage building, Land Use 151 Mini-Warehouse was used. **Tables 3A - 3D** summarize the vehicle trips that would be generated by the apartments and storage facility. In calculating the number of vehicle trips, we calculated the number of trips that be generated using the average trip rate and by the fitted curve equation. The generated vehicle trips were based on the formula that generated the higher number of vehicle trips.

TABLE 3A - Calculation of Weekday Peak Hour Trips	
Mid-Rise Apartments Land Use 223 – 172units	
Morning Peak Hour	Afternoon Peak Hour
Total Trips = $0.32 \times 172 \text{ units} = 56 \text{ trips}$	Total Trips = $0.40 \times 172 \text{ units} = 69 \text{ trips}$
Trips Entering = $0.31 \times 56 \text{ trips} = 18 \text{ trips}$	Trips Entering = $0.58 \times 69 \text{ trips} = 41 \text{ trips}$
Trips Exiting = $0.69 \times 56 \text{ trips} = 38 \text{ trips}$	Trips Exiting = $0.42 \times 69 \text{ trips} = 28 \text{ trips}$

TABLE 3B - Calculation of Weekday Peak Hour Trips	
Self-Storage Land Use 151 – 25,000 sq. ft.	
Morning Peak Hour	Afternoon Peak Hour
Total Trips = $0.14 \times 25,000 \text{ sq. ft.} = 4 \text{ trips}$	Total Trips = $0.26 \times 25,000 \text{ sq. ft.} = 7 \text{ trips}$
Trips Entering = $0.55 \times 4 \text{ trips} = 2 \text{ trips}$	Trips Entering = $0.50 \times 7 \text{ trips} = 4 \text{ trips}$
Trips Exiting = $0.45 \times 4 \text{ trips} = 2 \text{ trips}$	Trips Exiting = $0.50 \times 7 \text{ trips} = 3 \text{ trips}$

TABLE 3C - Calculation of Weekend Day Peak Hour Trips	
Mid-Rise Apartments Land Use 223 – 172 units	
Saturday Peak Hour	
Total Trips = $0.64 \times 172 \text{ units} = 111 \text{ trips}$	
Trips Entering = $0.43 \times 111 \text{ trips} = 48 \text{ trips}$	
Trips Exiting = $0.57 \times 111 \text{ trips} = 63 \text{ trips}$	

TABLE 3D - Calculation of Weekend Day Peak Hour Trips	
Self-Storage Land Use 151 – 25,000 sq. ft.	
Saturday Peak Hour	
Total Trips = $0.40 \times 25,000 \text{ sq. ft.} = 10 \text{ trips}$	
Trips Entering = $0.50 \times 10 \text{ trips} = 5 \text{ trips}$	
Trips Exiting = $0.50 \times 10 \text{ trips} = 5 \text{ trips}$	

Figure 11 shows the distribution of these vehicle trips for the morning and evening peak hours. **Figure 12** shows the distribution of these vehicle trips for the Saturday peak hour. These generated vehicle trips were then added to the 2016 No-Build traffic volumes to develop the 2016 Build traffic volumes. **Figures 13 and 14** show the 2016 Build traffic volumes for the morning and evening peak hours. **Figure 15** shows the 2016 Build traffic volumes for the Saturday peak hour. The results of the capacity analysis are shown in **Table 4**.

At the Route 52/Mill Street intersection, the Mill Street northbound approach is projected to operate at LOS “D” during the Saturday peak hour and LOS “C” during the morning and evening peak hours. There will be no change to the approach LOS for the other three intersections with the proposed development. The results of the capacity analysis show that there will be no significant impacts to any of intersections.

2013 ADJUSTED CONCLUSIONS (WITH ADDITIONAL RESIDENTIAL UNITS)

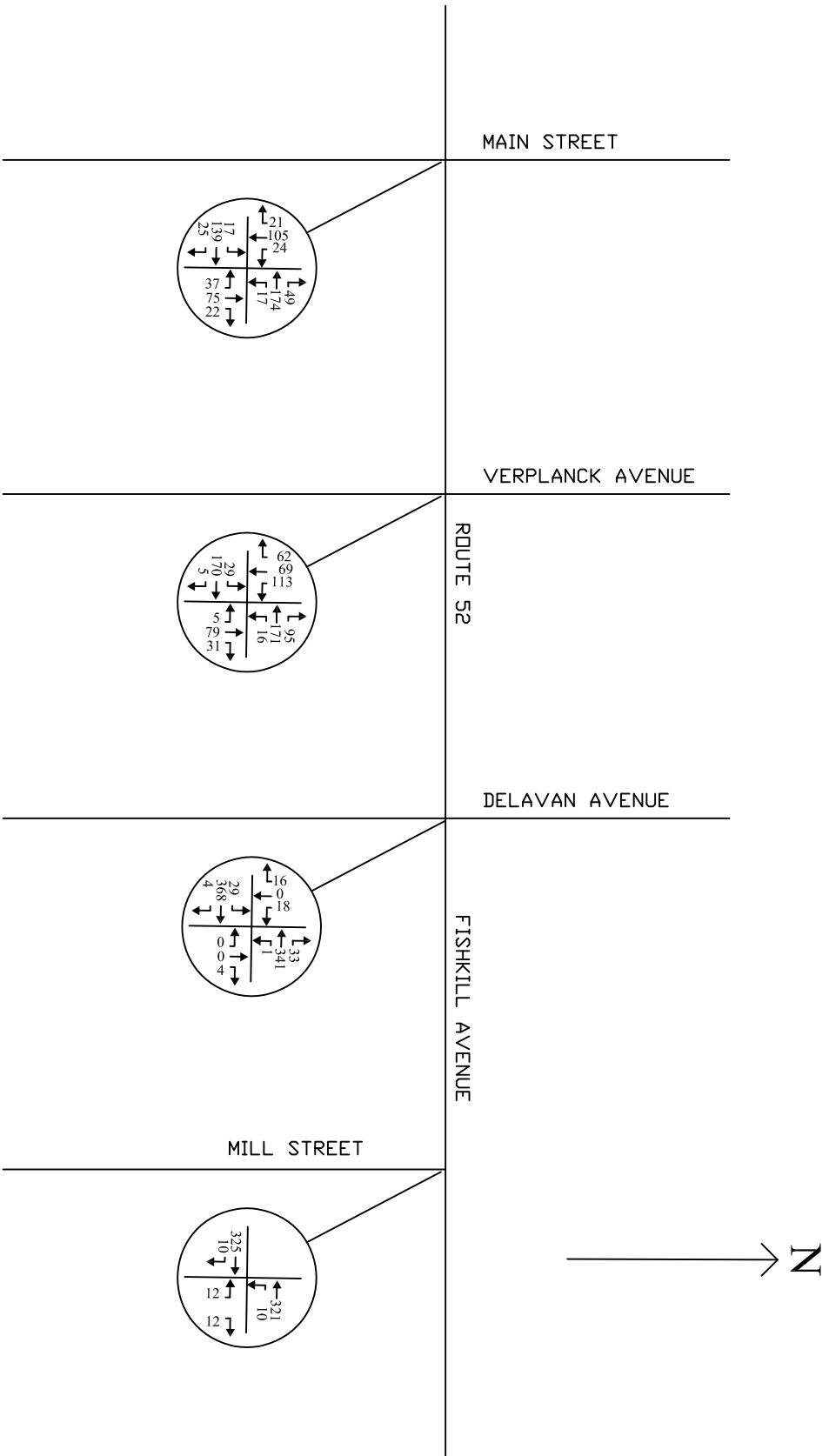
1. At the completion of the project, there will be a total of 172 live work apartments with a total of 196 bedrooms. The addition to the self-storage Building (4A) will be approximately 25,000 s.f. and the proposed gym in building 7 is about 1,500 s.f. The proposed site plan shows that there will be 282 parking spaces provided.
2. The proposed residential development will generate a total of 56 vehicle trips in the morning peak hour with 18 vehicles entering and 38 vehicles exiting; a total of 69 vehicle trips in the evening peak hour with 41 vehicles entering and 28 vehicles exiting; and a total of 111 vehicle trips in the Saturday peak hour with 48 vehicles entering and 63 vehicles exiting.
3. The proposed self-storage development will generate a total of 4 vehicle trips in the morning peak hour with 2 vehicles entering and 2 vehicles exiting; a total of 7 vehicle trips in the evening peak hour with 4 vehicles entering and 3 vehicles exiting; and a total of 10 trips in the Saturday peak hour with 5 vehicles entering and 5 vehicles exiting..
4. The results of the capacity analysis show that at the Route 52/Mill Street intersection, the Mill Street northbound approach is projected to operate at LOS “D” during the Saturday peak hour and LOS “C” during

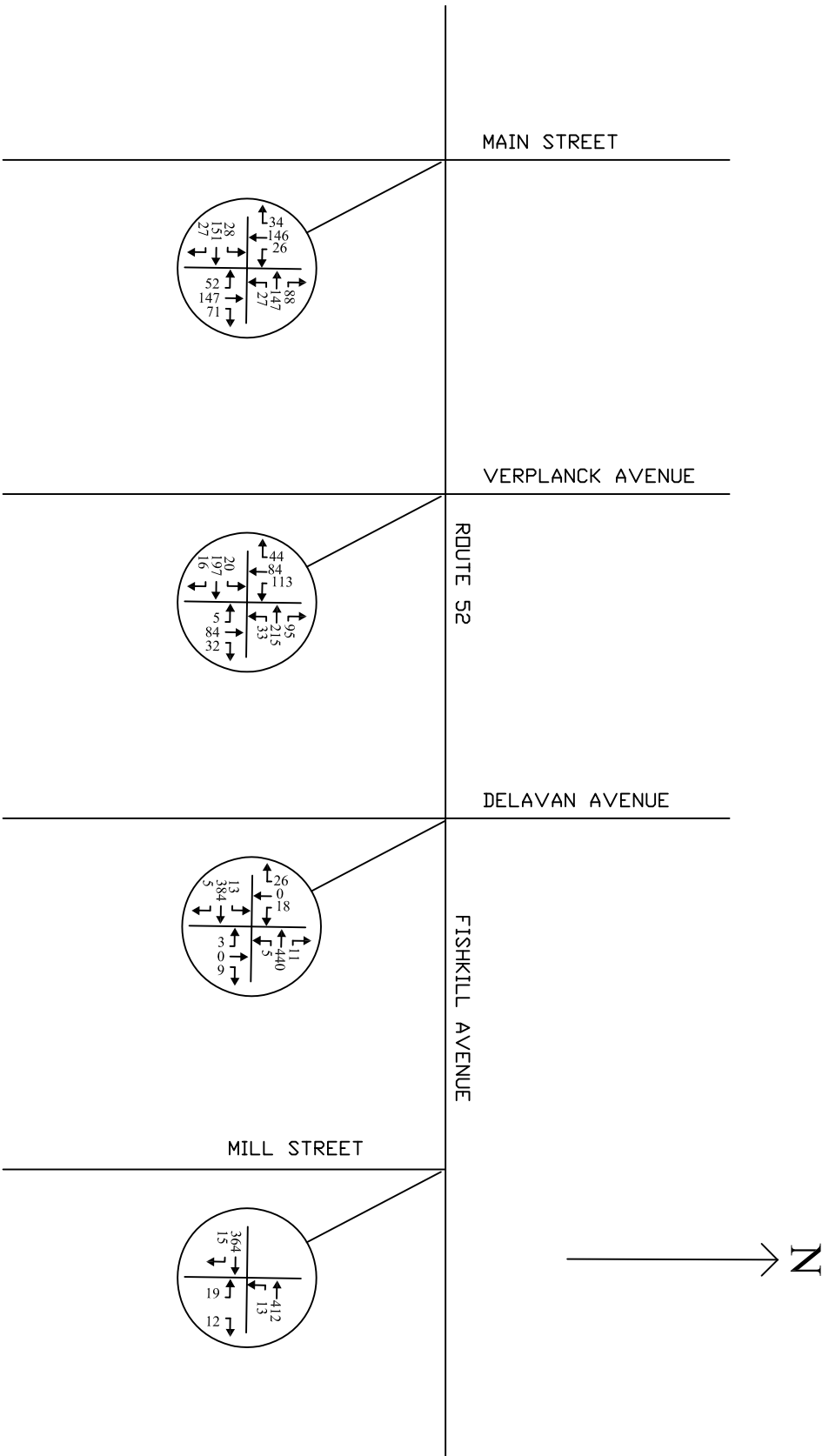
TABLE 4 CAPACITY ANALYSIS SUMMARY 2016 NO-BUILD VS 2016 BUILD CONDITIONS SIGNALIZED INTERSECTIONS																		
	2016 NO-BUILD CONDITIONS									2016 BUILD CONDITIONS								
	Weekday AM Peak			Weekday PM Peak			Saturday Peak			Weekday AM Peak			Weekday PM Peak			Saturday Peak		
	LOS	V/C	Delay	LOS	V/C	Delay	LOS	V/C	Delay	LOS	V/C	Delay	LOS	V/C	Delay	LOS	V/C	Delay
Route 52/Verplanck Avenue																		
Route 52																		
Eastbound LTR	B	0.36	10.3	B	0.38	11.4	B	0.38	11.4	B	0.40	11.8	B	0.40	11.7	B	0.41	11.8
Westbound LTR	B	0.48	12.8	B	0.55	14.0	B	0.52	13.2	B	0.52	13.5	B	0.58	14.5	B	0.58	14.3
Verplanck Avenue																		
Northbound LTR	C	0.44	24.5	D	0.75	38.0	C	0.32	22.4	C	0.44	24.5	D	0.75	38.0	C	0.32	22.4
Southbound Lt	B	0.35	14.6	B	0.32	15.6	B	0.27	13.8	B	0.37	14.8	B	0.35	16.2	B	0.30	14.1
Southbound Th + Rt	B	0.28	13.7	B	0.26	13.3	B	0.28	13.5	B	0.28	13.7	B	0.26	13.3	B	0.28	13.5
Overall	B		14.1	B		18.1	B		13.7	B		14.6	B		18.2	B		14.2
Route 52/Main Street/Teller Avenue																		
Teller Avenue																		
Eastbound LTR	B	0.38	15.6	B	0.41	15.9	B	0.38	15.0	B	0.40	15.8	B	0.43	16.3	B	0.41	15.6
Route 52																		
Westbound LTR	B	0.49	16.9	B	0.49	15.7	B	0.39	15.5	B	0.52	17.5	B	0.51	16.2	B	0.59	18
Main Street																		
Northbound LTR	A	0.24	8.8	B	0.40	10.2	B	0.50	12.9	A	0.24	8.8	B	0.40	10.2	B	0.50	12.9
Southbound LTR	A	0.25	9.1	A	0.32	9.7	B	0.47	10.8	A	0.26	9.1	A	0.32	9.8	B	0.49	11.3
Overall	B		13.3	B		12.8	B		13.2	B		13.6	B		13.1	B		14.4
TABLE 4 CAPACITY ANALYSIS SUMMARY 2016 NO-BUILD VS 2016 BUILD CONDITIONS UNSIGNALIZED INTERSECTIONS																		
	2016 NO-BUILD CONDITIONS									2016 BUILD CONDITIONS								
	Weekday AM Peak			Weekday PM Peak			Saturday Peak			Weekday AM Peak			Weekday PM Peak			Saturday Peak		
	LOS	V/C	Delay	LOS	V/C	Delay	LOS	V/C	Delay	LOS	V/C	Delay	LOS	V/C	Delay	LOS	V/C	Delay
Route 52/Mill Street																		
Route 52																		
Eastbound Th + Rt	A	0.00	0.0	A	0.00	0.0	A	0.00	0.0	A	0.00	0.0	A	0.00	0.0	A	0.00	0.0
Westbound Lt + Th	A	0.01	8.3	A	0.02	8.4	A	0.01	8.6	A	0.02	8.3	A	0.03	8.6	A	0.03	8.8
Mill Street																		
Northbound Lt + Rt	B	0.06	13.7	C	0.11	17.1	C	0.09	19.5	C	0.18	15.7	C	0.23	20.2	D	0.41	30
Route 52/Delavan Avenue/STS Tire Driveway																		
Route 52																		
Eastbound LTR	A	0.04	8.5	A	0.02	8.5	A	0.02	8.7	A	0.04	8.6	A	0.02	8.6	A	0.02	8.8
Westbound LTR	A	0.00	8.4	A	0.01	8.3	A	0.01	8.3	A	0.00	8.4	A	0.01	8.4	A	0.01	8.4
STS Tire Driveway																		
Northbound LTR	B	0.01	11.3	B	0.04	14.3	D	0.01	25.8	B	0.01	11.4	B	0.04	14.9	D	0.01	29.2
Delavan Avenue																		
Southbound LTR	D	0.29	25.9	C	0.16	18.3	C	0.15	20.2	D	0.31	27.8	C	0.17	19.2	C	0.17	22.6

the morning and evening peak hours. This is an acceptable LOS for an urban area.

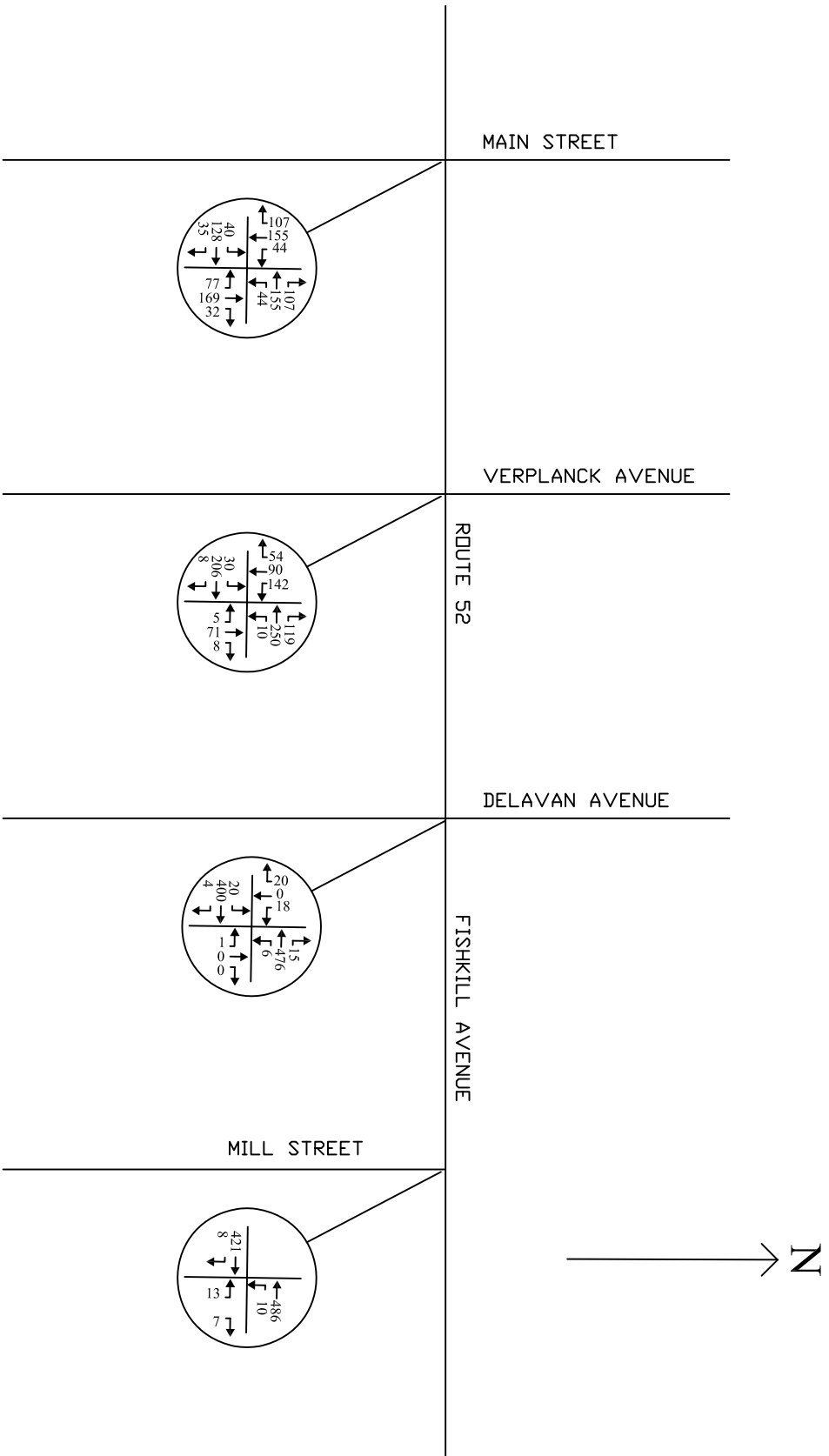
5. The proposed project will not generate any significant impacts to the four intersections studied for this project.

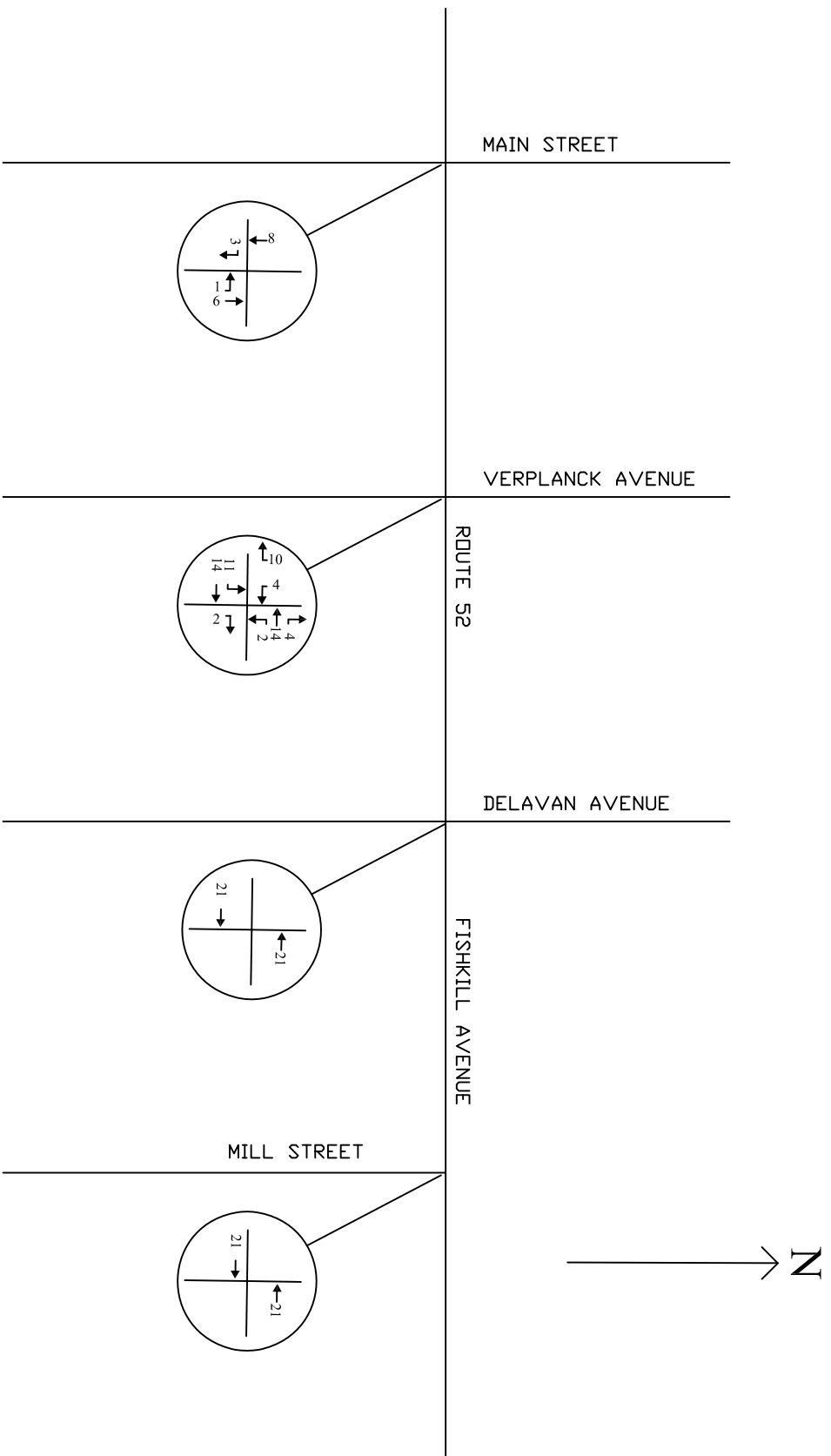
APPENDIX A TRAFFIC FIGURES





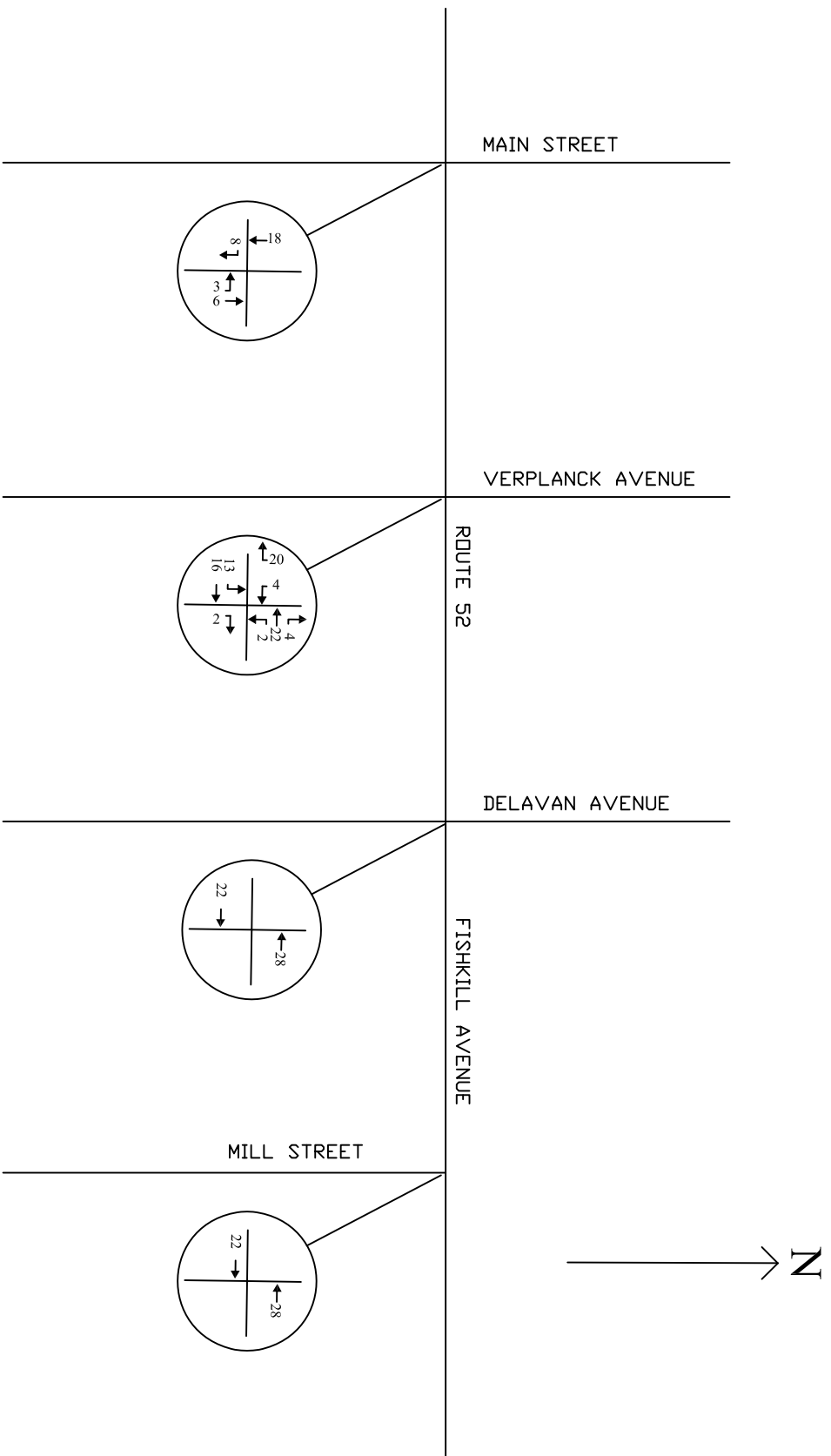
EXISTING AFTERNOON PEAK HOUR TRAFFIC
 4:45 PM - 5:45 PM
 FIGURE 3





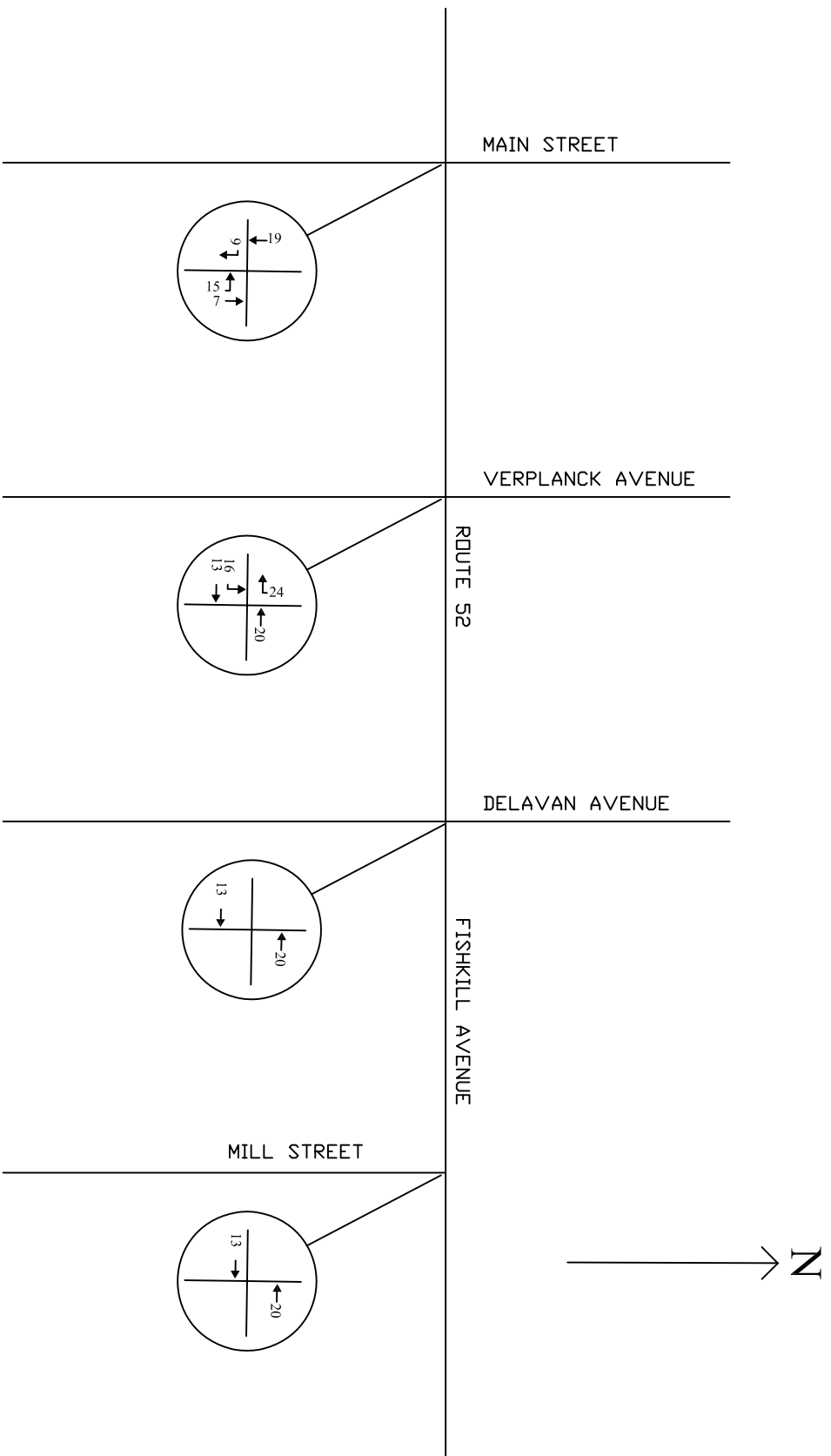
TRAFFIC FROM OTHER DEVELOPMENTS
ONE EAST MAIN ST., ROUND HOUSE,
& HUDSON BAYLOR CORP.

TRAFFIC FROM OTHER DEVELOPMENTS
8:00 AM - 9:00 AM
FIGURE 5



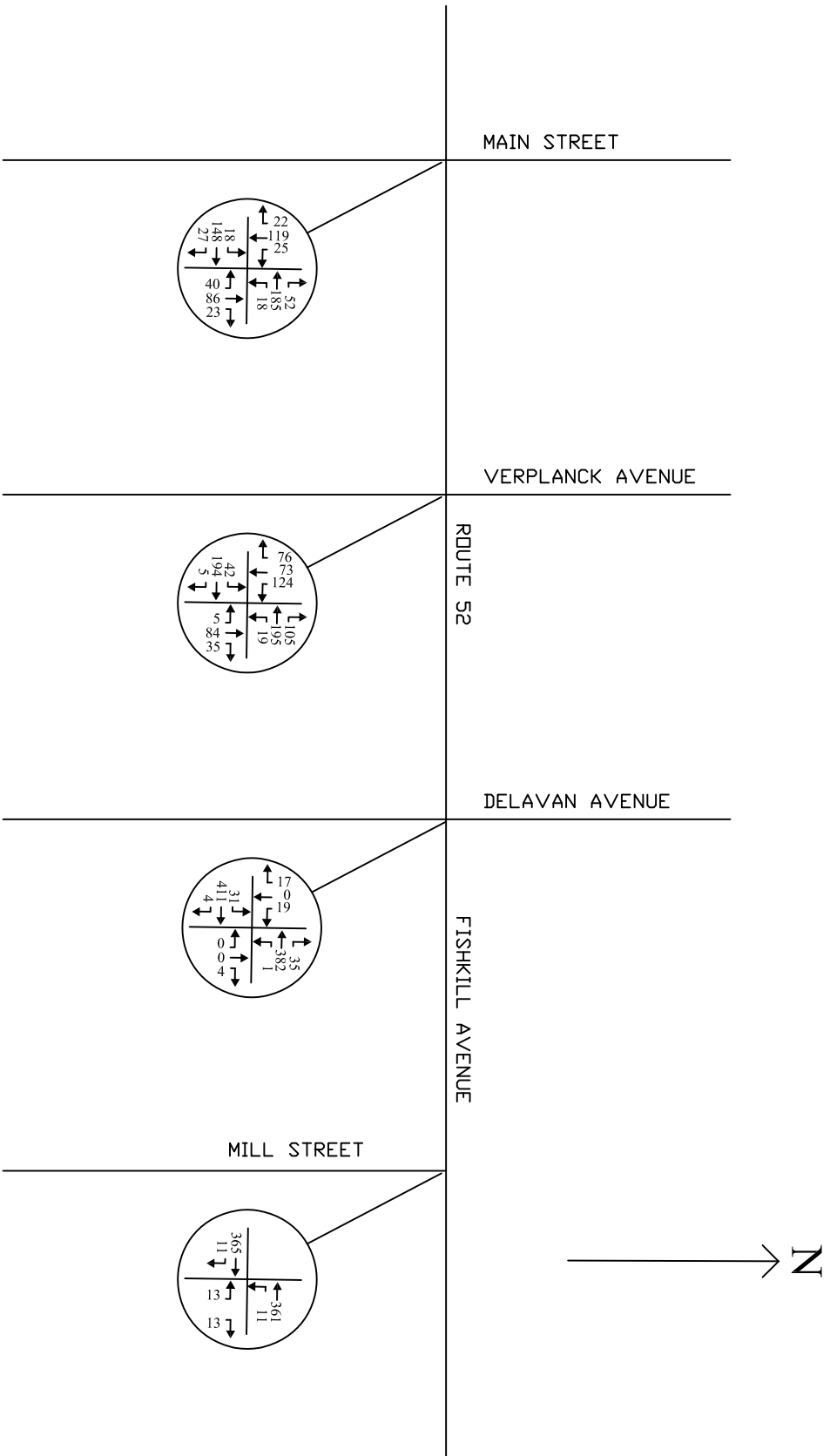
TRAFFIC FROM OTHER DEVELOPMENTS
ONE EAST MAIN ST., ROUND HOUSE,
& HUDSON BAYLOR CORP.

TRAFFIC FROM OTHER DEVELOPMENTS
5:00 PM - 6:00 PM
FIGURE 6

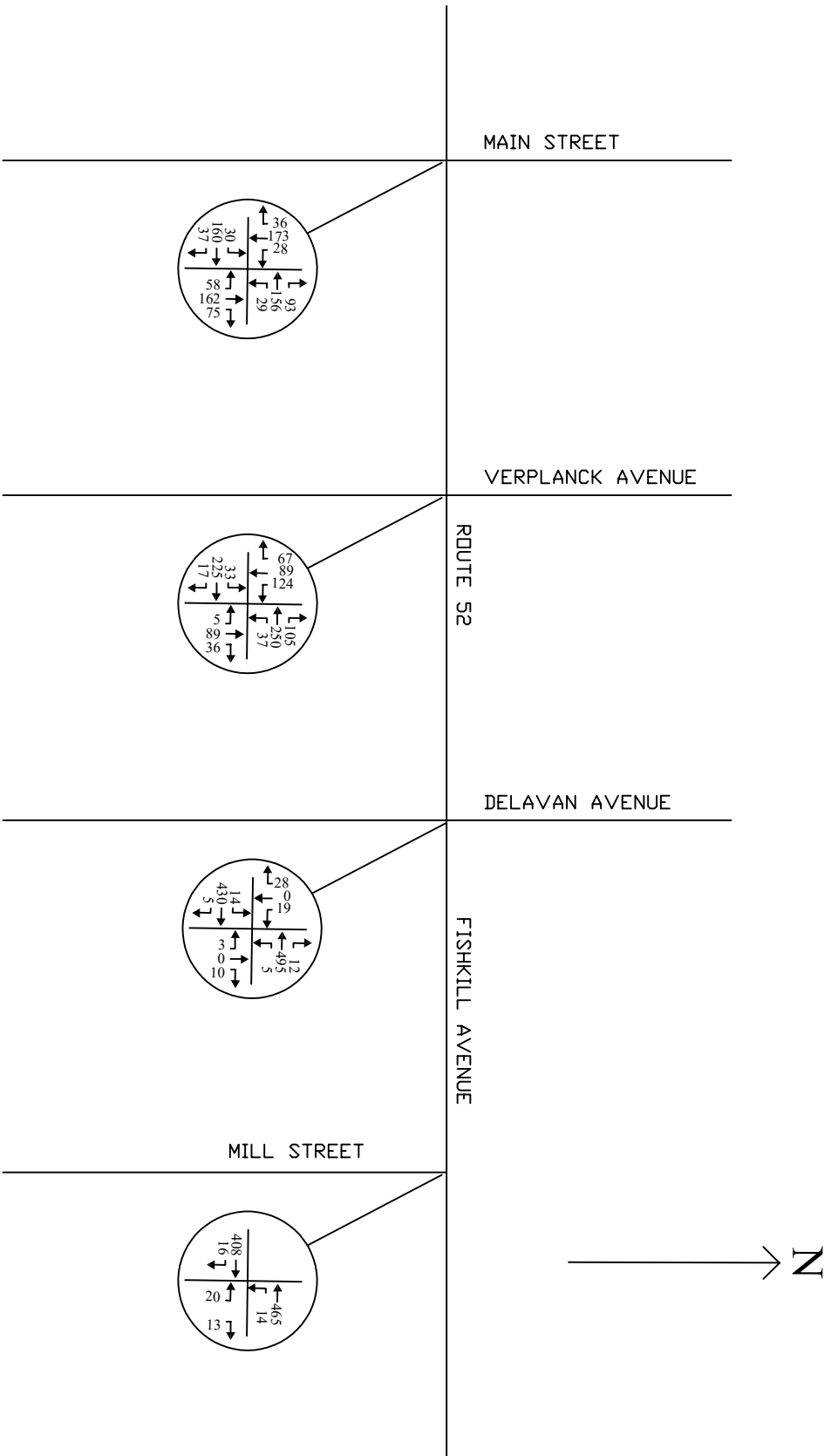


TRAFFIC FROM OTHER DEVELOPMENTS
ONE EAST MAIN ST., ROUND HOUSE,
& HUDSON BAYLOR CORP.

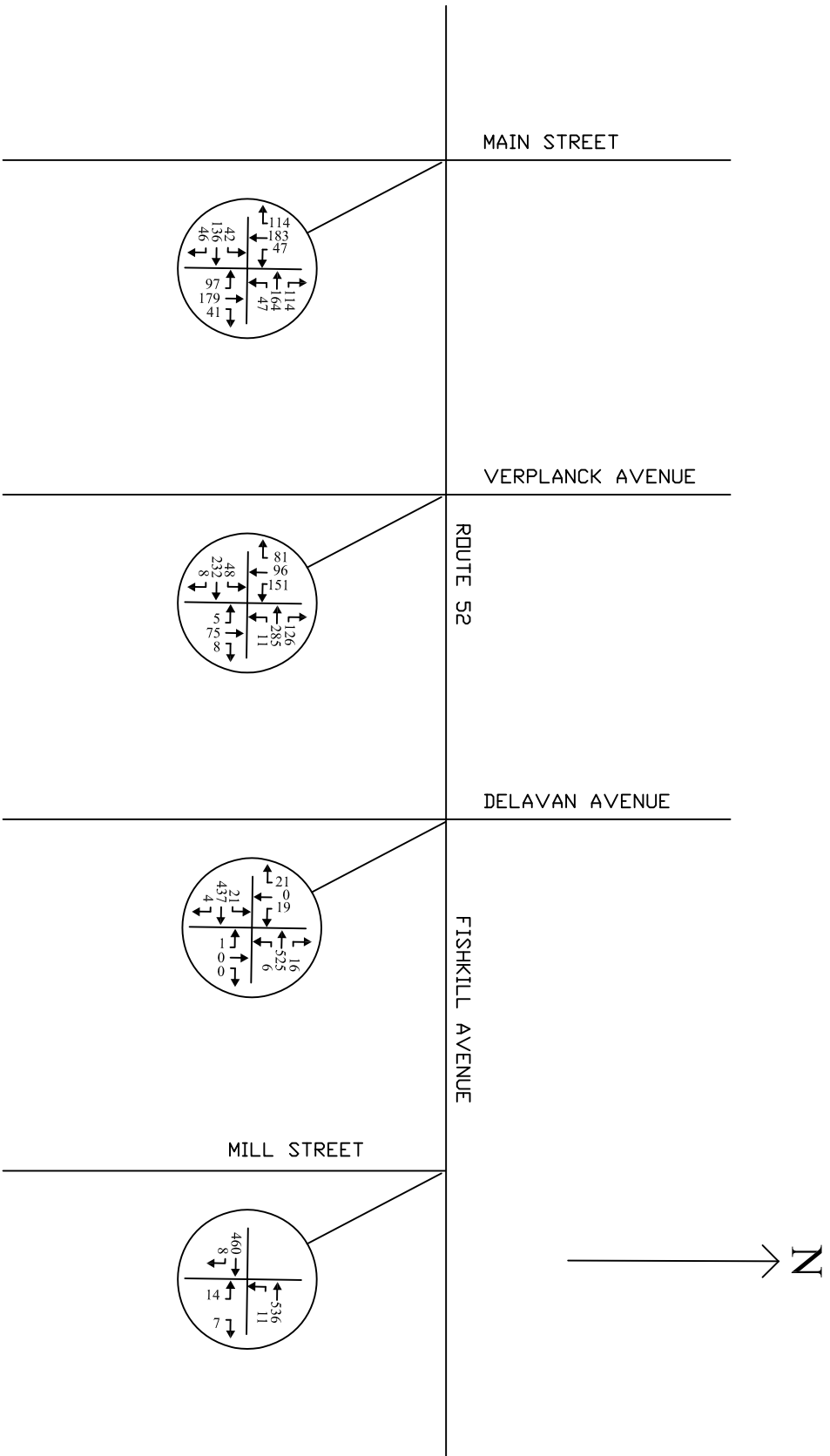
TRAFFIC FROM OTHER DEVELOPMENTS
SATURDAY 12:00 N - 1:00 PM
FIGURE 7



2016 NO-BUILD MORNING PEAK HOUR TRAFFIC
8:00 AM - 9:00 AM
FIGURE 8

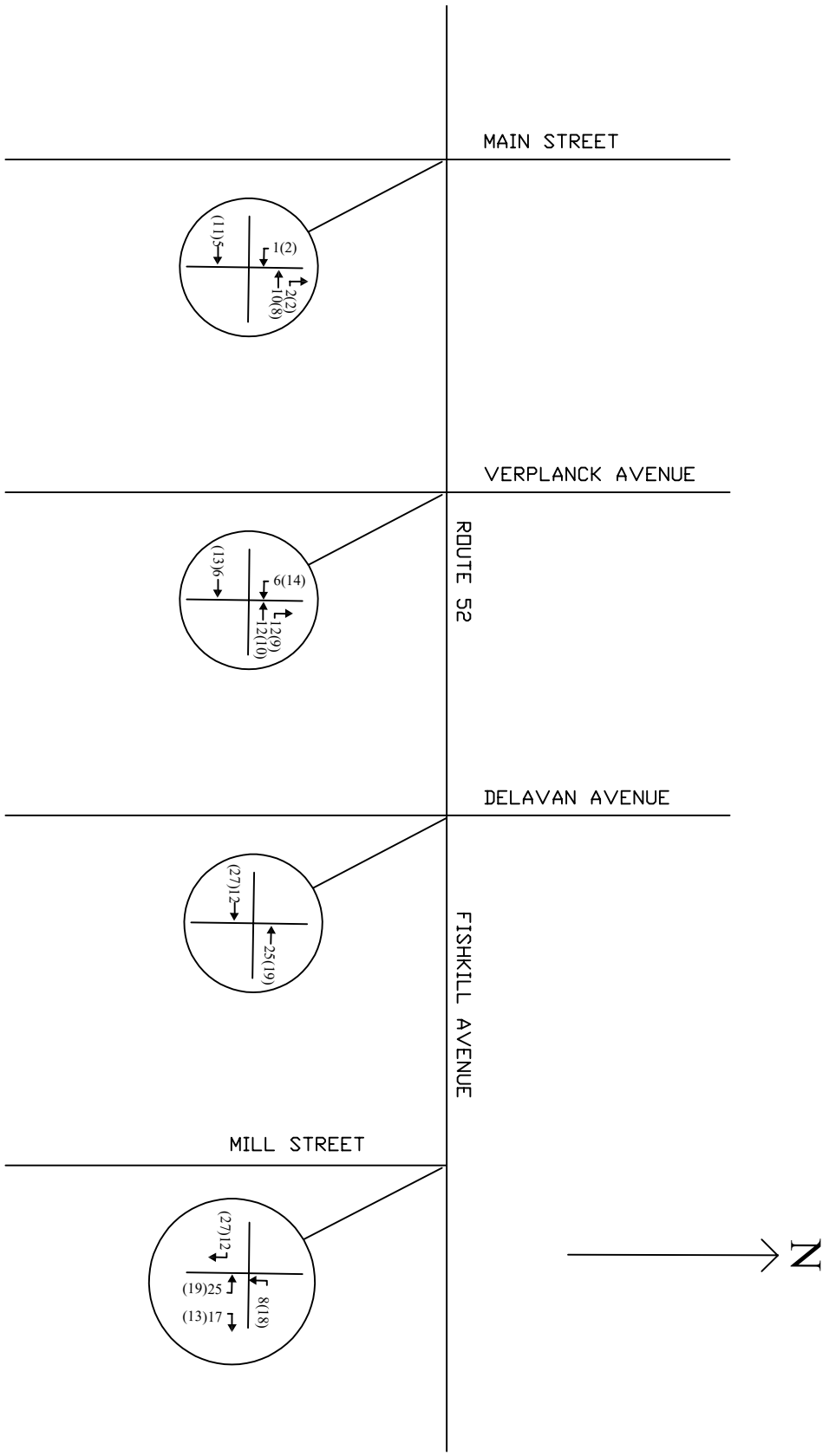


2016 NO-BUILD AFTERNOON PEAK HOUR TRAFFIC
 4:45 PM - 5:45 PM
 FIGURE 9



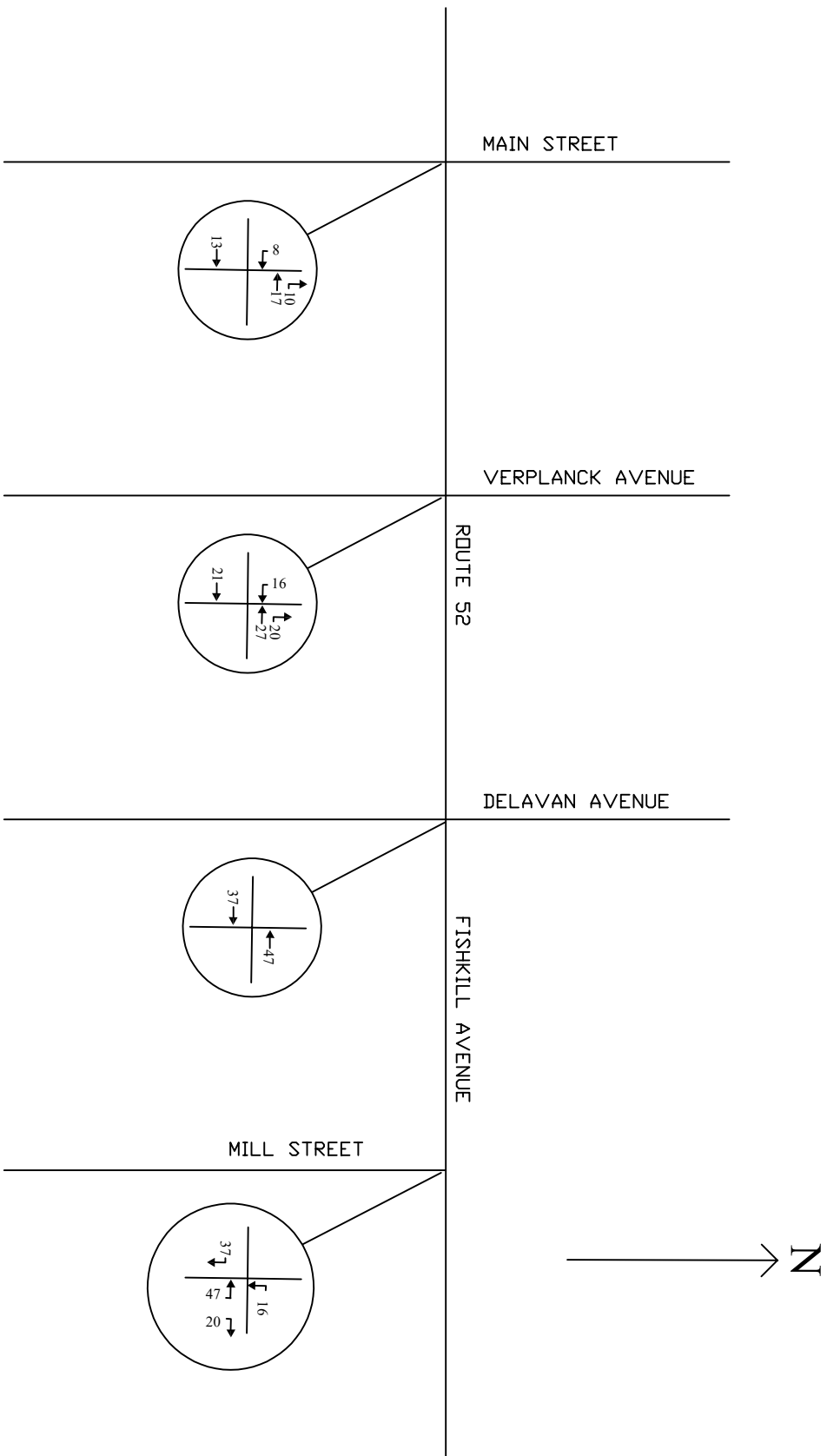
2016 NO-BUILD SATURDAY PEAK HOUR TRAFFIC
12:00 NOON - 1:00 PM
FIGURE 10

LEGEND
 AM PEAK HOUR - 00
 PM PEAK HOUR - <00>



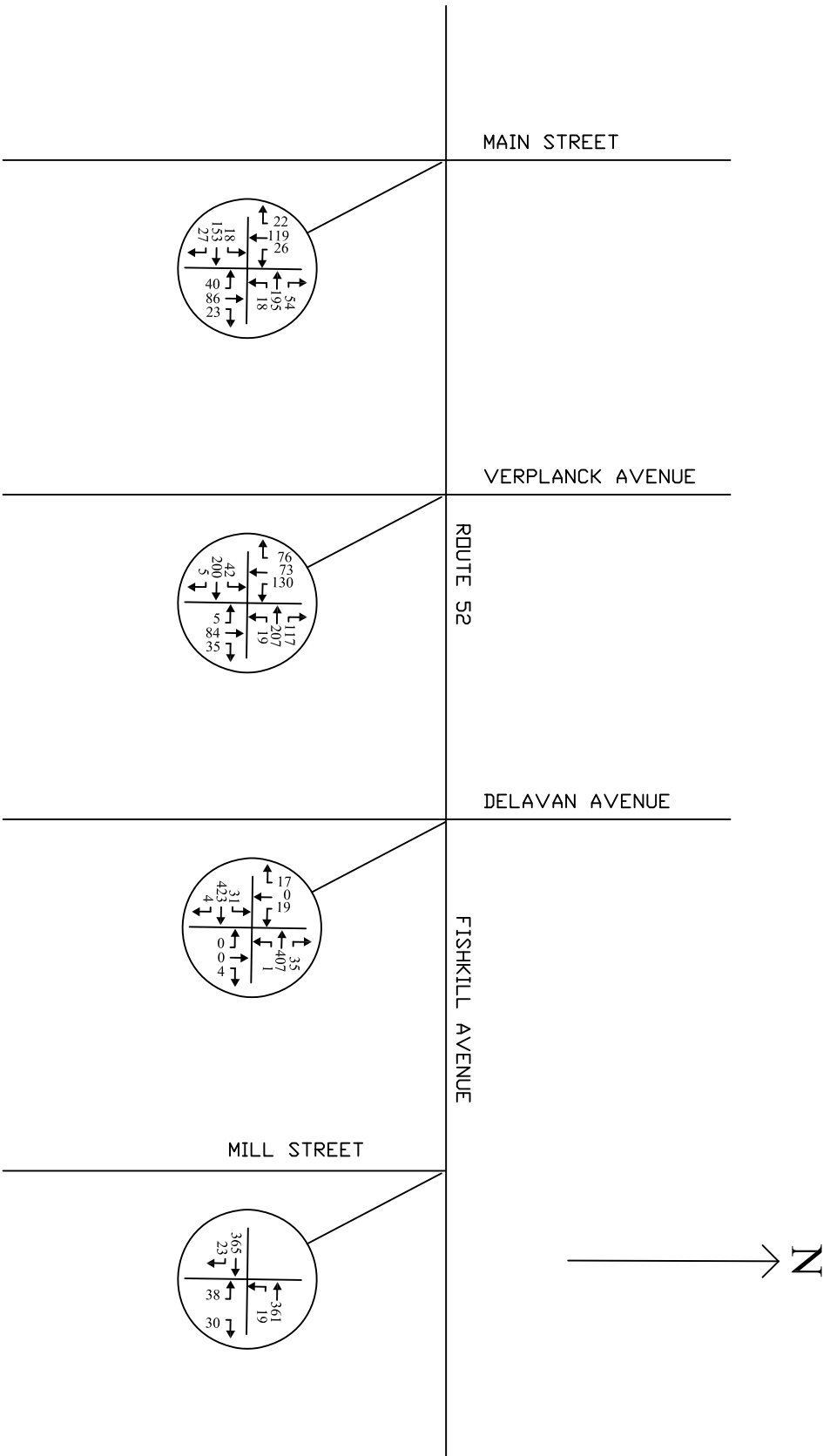
TRIP DISTRIBUTION

FIGURE 11

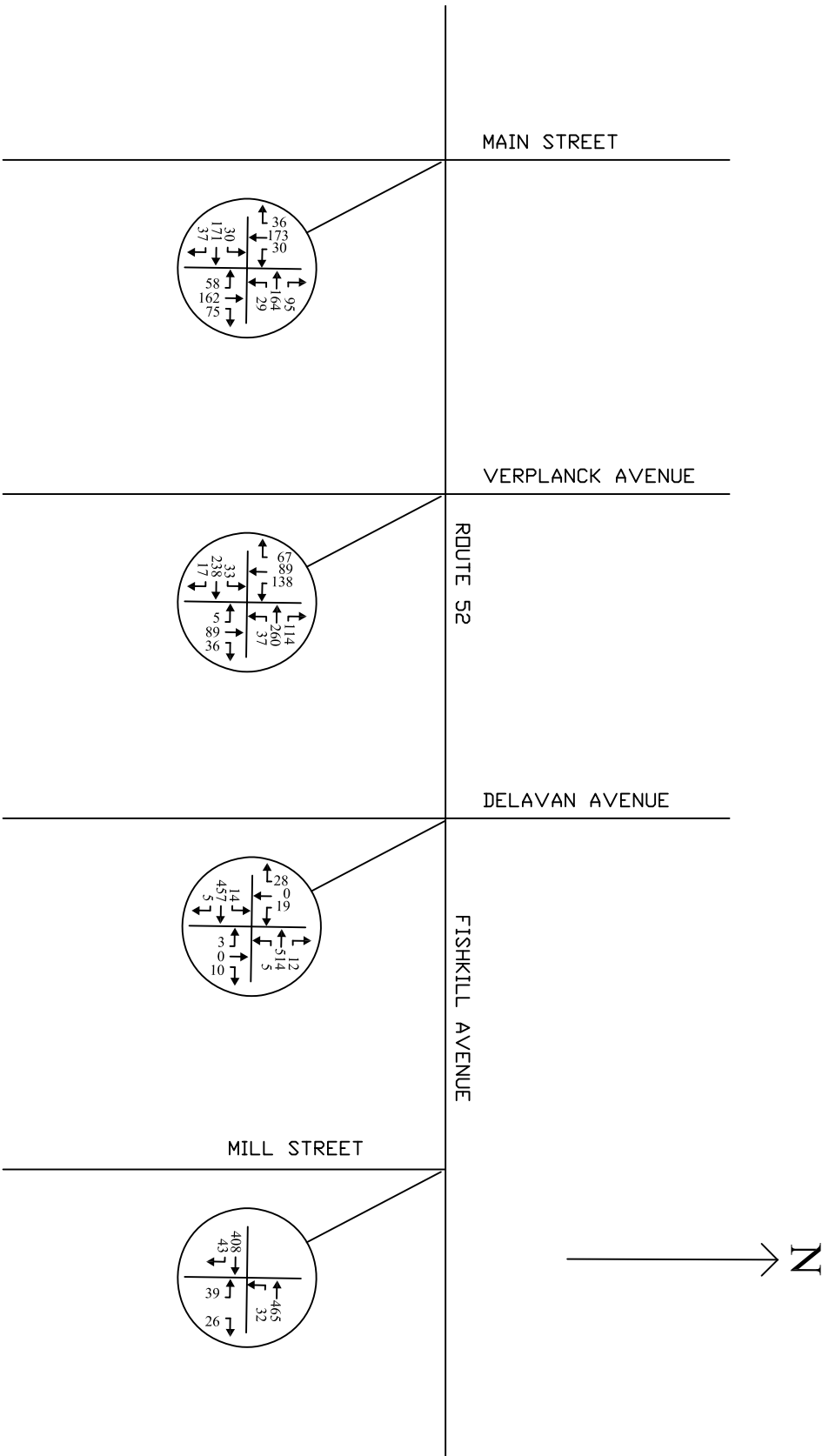


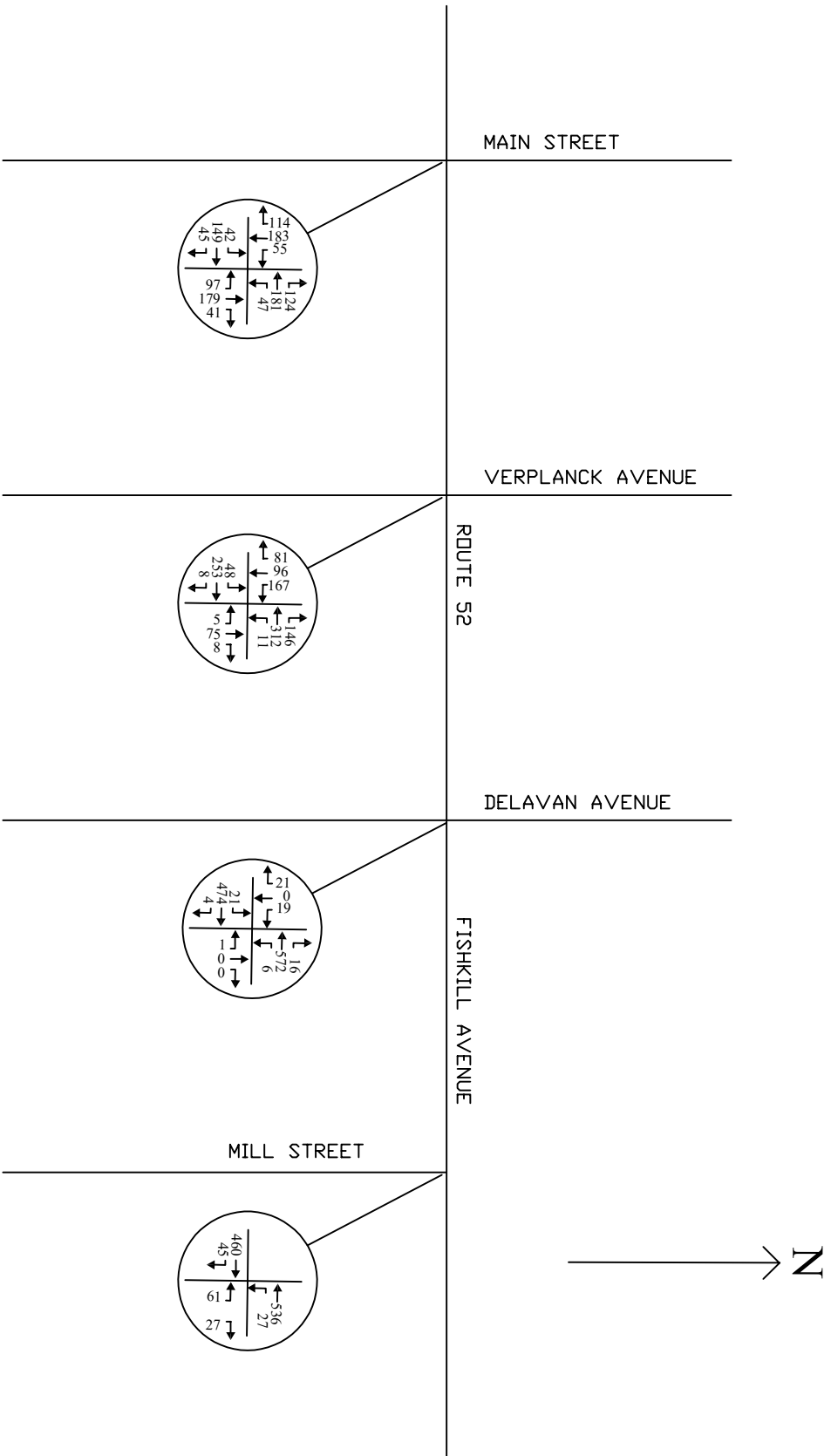
TRIP DISTRIBUTION

FIGURE 12



2016 BUILD MORNING PEAK HOUR TRAFFIC
8:00 AM - 9:00 AM
FIGURE 13





2016 BUILD SATURDAY PEAK HOUR TRAFFIC
 12:00 NOON - 1:00 PM
 FIGURE 15

APPENDIX B

CAPACITY ANALYSIS SUMMARIES

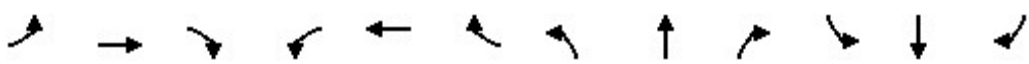
CAPACITY ANALYSIS SUMMARY
EXISTING CONDITIONS

Lanes, Volumes, Timings

3: Verplanck Avenue & Fishkill Avenue

Exist AM Peak Hour

10/25/2017

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	170	5	16	171	95	5	79	31	113	69	62
Future Volume (vph)	29	170	5	16	171	95	5	79	31	113	69	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.997			0.954			0.964			0.929	
Flt Protected		0.993			0.997			0.998		0.950		
Satd. Flow (prot)	0	1754	0	0	1710	0	0	1767	0	1736	1665	0
Flt Permitted		0.928			0.979			0.984		0.699		
Satd. Flow (perm)	0	1639	0	0	1680	0	0	1742	0	1277	1665	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		755			673			733			700	
Travel Time (s)		17.2			15.3			20.0			19.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	10%	7%	0%	0%	6%	6%	0%	5%	0%	4%	6%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	34	200	6	19	201	112	6	93	36	133	81	73
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	240	0	0	332	0	0	135	0	133	154	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		2			6			4		3	8	
Permitted Phases	2			6			4			8		
Detector Phase	2	2		6	6		4	4		3	8	
Switch Phase												

Lanes, Volumes, Timings
3: Verplanck Avenue & Fishkill Avenue

Exist AM Peak Hour
10/25/2017

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Minimum Split (s)	23.5	23.5		23.5	23.5		10.0	10.0		9.0	22.5	
Total Split (s)	30.0	30.0		30.0	30.0		15.0	15.0		10.0	25.0	
Total Split (%)	54.5%	54.5%		54.5%	54.5%		27.3%	27.3%		18.2%	45.5%	
Maximum Green (s)	25.5	25.5		25.5	25.5		10.5	10.5		5.5	20.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
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	
Total Lost Time (s)		4.5			4.5			4.5		4.5	4.5	
Lead/Lag							Lead	Lead		Lag		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	Max	Max		Max	Max		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0							
Flash Dont Walk (s)	12.0	12.0		12.0	12.0							
Pedestrian Calls (#/hr)	0	0		0	0							
Act Effct Green (s)		25.5			25.5			10.5		20.5	20.5	
Actuated g/C Ratio		0.46			0.46			0.19		0.37	0.37	
v/c Ratio		0.32			0.43			0.41		0.26	0.25	
Control Delay		10.7			12.0			23.8		13.8	13.3	
Queue Delay		0.0			0.0			0.0		0.0	0.0	
Total Delay		10.7			12.0			23.8		13.8	13.3	
LOS		B			B			C		B	B	
Approach Delay		10.7			12.0			23.8			13.6	
Approach LOS		B			B			C			B	
Queue Length 50th (ft)		46			68			39		29	34	
Queue Length 95th (ft)		80			112			77		56	64	
Internal Link Dist (ft)		675			593			653			620	
Turn Bay Length (ft)												
Base Capacity (vph)		759			778			332		521	620	
Starvation Cap Reductn		0			0			0		0	0	
Spillback Cap Reductn		0			0			0		0	0	
Storage Cap Reductn		0			0			0		0	0	
Reduced v/c Ratio		0.32			0.43			0.41		0.26	0.25	
Intersection Summary												
Area Type:	Other											
Cycle Length: 55												
Actuated Cycle Length: 55												
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green												
Natural Cycle: 50												
Control Type: Pretimed												
Maximum v/c Ratio: 0.43												
Intersection Signal Delay: 13.8						Intersection LOS: B						
Intersection Capacity Utilization 39.6%						ICU Level of Service A						
Analysis Period (min) 15												

Lanes, Volumes, Timings
 3: Verplanck Avenue & Fishkill Avenue

Exist AM Peak Hour
 10/25/2017

Splits and Phases: 3: Verplanck Avenue & Fishkill Avenue



Lanes, Volumes, Timings
6: Main Street & Teller Ave/Fishkill Avenue

Exist AM Peak Hour

10/25/2017

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	139	25	17	174	49	37	75	22	24	105	21
Future Volume (vph)	17	139	25	17	174	49	37	75	22	24	105	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.981			0.973			0.977			0.981	
Flt Protected		0.995			0.997			0.986			0.992	
Satd. Flow (prot)	0	1800	0	0	1817	0	0	1699	0	0	1735	0
Flt Permitted		0.957			0.972			0.895			0.946	
Satd. Flow (perm)	0	1731	0	0	1771	0	0	1543	0	0	1654	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		265			755			728			670	
Travel Time (s)		6.0			17.2			16.5			15.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	8%	3%	0%	0%	2%	0%	0%	9%	16%	0%	9%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	21	174	31	21	218	61	46	94	28	30	131	26
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	226	0	0	300	0	0	168	0	0	187	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												

Lanes, Volumes, Timings
6: Main Street & Teller Ave/Fishkill Avenue

Exist AM Peak Hour
10/25/2017

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	21.0	21.0		21.0	21.0		23.5	23.5		23.5	23.5	
Total Split (s)	26.0	26.0		26.0	26.0		34.0	34.0		34.0	34.0	
Total Split (%)	43.3%	43.3%		43.3%	43.3%		56.7%	56.7%		56.7%	56.7%	
Maximum Green (s)	21.5	21.5		21.5	21.5		29.5	29.5		29.5	29.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
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	
Total Lost Time (s)		4.5			4.5			4.5			4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	Max	Max		Max	Max		Max	Max		Max	Max	
Walk Time (s)							7.0	7.0		7.0	7.0	
Flash Dont Walk (s)							12.0	12.0		12.0	12.0	
Pedestrian Calls (#/hr)							0	0		0	0	
Act Effct Green (s)		21.5			21.5			29.5			29.5	
Actuated g/C Ratio		0.36			0.36			0.49			0.49	
v/c Ratio		0.36			0.47			0.22			0.23	
Control Delay		16.3			17.9			9.7			9.7	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		16.3			17.9			9.7			9.7	
LOS		B			B			A			A	
Approach Delay		16.3			17.9			9.7			9.7	
Approach LOS		B			B			A			A	
Queue Length 50th (ft)		59			82			32			36	
Queue Length 95th (ft)		94			123			55			60	
Internal Link Dist (ft)		185			675			648			590	
Turn Bay Length (ft)												
Base Capacity (vph)		620			634			758			813	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.36			0.47			0.22			0.23	
Intersection Summary												
Area Type:	Other											
Cycle Length: 60												
Actuated Cycle Length: 60												
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green												
Natural Cycle: 45												
Control Type: Pretimed												
Maximum v/c Ratio: 0.47												
Intersection Signal Delay: 14.2							Intersection LOS: B					
Intersection Capacity Utilization 35.9%							ICU Level of Service A					
Analysis Period (min) 15												

Splits and Phases: 6: Main Street & Teller Ave/Fishkill Avenue



Intersection												
Int Delay, s/veh	1.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	29	368	4	1	341	33	0	0	4	18	0	16
Future Vol, veh/h	29	368	4	1	341	33	0	0	4	18	0	16
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	38	83	83
Heavy Vehicles, %	0	2	0	0	2	0	0	0	0	0	0	0
Mvmt Flow	35	443	5	1	411	40	0	0	5	47	0	19

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	451	0	0	448	0	0	959	969	446	951	951	431
Stage 1	-	-	-	-	-	-	516	516	-	433	433	-
Stage 2	-	-	-	-	-	-	443	453	-	518	518	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1120	-	-	1123	-	-	239	256	617	242	262	629
Stage 1	-	-	-	-	-	-	546	538	-	605	585	-
Stage 2	-	-	-	-	-	-	598	573	-	544	536	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1120	-	-	1123	-	-	224	245	617	232	251	629
Mov Cap-2 Maneuver	-	-	-	-	-	-	224	245	-	232	251	-
Stage 1	-	-	-	-	-	-	523	515	-	580	584	-
Stage 2	-	-	-	-	-	-	579	572	-	517	513	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0	10.9	21.5
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	617	1120	-	-	1123	-	-	284
HCM Lane V/C Ratio	0.008	0.031	-	-	0.001	-	-	0.235
HCM Control Delay (s)	10.9	8.3	0	-	8.2	0	-	21.5
HCM Lane LOS	B	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0	0.1	-	-	0	-	-	0.9

Intersection						
Int Delay, s/veh	0.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	325	10	1	639	12	12
Future Vol, veh/h	325	10	1	639	12	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	7	0	10	7	8	0
Mvmt Flow	353	11	1	695	13	13

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	364	0	1056
Stage 1	-	-	-	-	359
Stage 2	-	-	-	-	697
Critical Hdwy	-	-	4.2	-	6.48
Critical Hdwy Stg 1	-	-	-	-	5.48
Critical Hdwy Stg 2	-	-	-	-	5.48
Follow-up Hdwy	-	-	2.29	-	3.572
Pot Cap-1 Maneuver	-	-	1152	-	243
Stage 1	-	-	-	-	694
Stage 2	-	-	-	-	483
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1152	-	243
Mov Cap-2 Maneuver	-	-	-	-	243
Stage 1	-	-	-	-	693
Stage 2	-	-	-	-	483

Approach	EB	WB	NB
HCM Control Delay, s	0	0	15.8
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	359	-	-	1152	-
HCM Lane V/C Ratio	0.073	-	-	0.001	-
HCM Control Delay (s)	15.8	-	-	8.1	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Lanes, Volumes, Timings

3: Verplanck Avenue & Fishkill Avenue

Exist PM Peak Hour
10/25/2017

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	197	16	33	215	95	5	84	32	113	84	44
Future Volume (vph)	20	197	16	33	215	95	5	84	32	113	84	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.991			0.963			0.923			0.949	
Flt Protected		0.996			0.995			0.999		0.950		
Satd. Flow (prot)	0	1829	0	0	1765	0	0	1752	0	1805	1803	0
Flt Permitted		0.957			0.956			0.992		0.523		
Satd. Flow (perm)	0	1757	0	0	1696	0	0	1740	0	994	1803	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		755			673			733			700	
Travel Time (s)		17.2			15.3			16.7			15.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.25	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	3%	0%	0%	5%	0%	0%	0%	0%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	22	216	18	36	236	104	5	92	128	124	92	48
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	256	0	0	376	0	0	225	0	124	140	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		2			6			4		3	8	
Permitted Phases	2			6			4			8		
Detector Phase	2	2		6	6		4	4		3	8	
Switch Phase												

Lanes, Volumes, Timings
3: Verplanck Avenue & Fishkill Avenue

Exist PM Peak Hour

10/25/2017

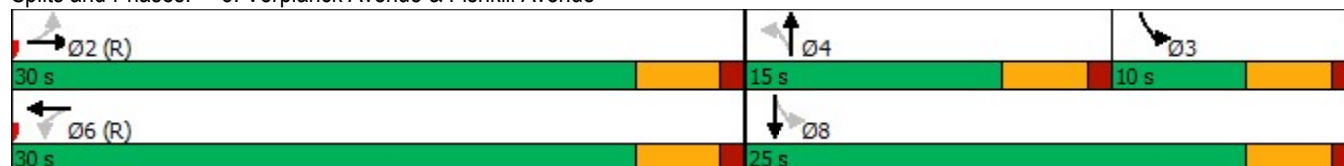
												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		4.5	5.0	
Minimum Split (s)	23.5	23.5		23.5	23.5		10.0	10.0		9.0	22.5	
Total Split (s)	30.0	30.0		30.0	30.0		15.0	15.0		10.0	25.0	
Total Split (%)	54.5%	54.5%		54.5%	54.5%		27.3%	27.3%		18.2%	45.5%	
Maximum Green (s)	25.5	25.5		25.5	25.5		10.5	10.5		5.5	20.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
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	
Total Lost Time (s)		4.5			4.5			4.5		4.5	4.5	
Lead/Lag							Lead	Lead		Lag		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	Max	Max		Max	Max		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0							
Flash Dont Walk (s)	12.0	12.0		12.0	12.0							
Pedestrian Calls (#/hr)	0	0		0	0							
Act Effct Green (s)		25.5			25.5			10.5		20.5	20.5	
Actuated g/C Ratio		0.46			0.46			0.19		0.37	0.37	
v/c Ratio		0.31			0.48			0.68		0.27	0.21	
Control Delay		10.6			12.7			33.5		14.7	12.8	
Queue Delay		0.0			0.0			0.0		0.0	0.0	
Total Delay		10.6			12.7			33.5		14.7	12.8	
LOS		B			B			C		B	B	
Approach Delay		10.6			12.7			33.5			13.7	
Approach LOS		B			B			C			B	
Queue Length 50th (ft)		49			79			69		26	30	
Queue Length 95th (ft)		91			141			#154		56	62	
Internal Link Dist (ft)		675			593			653			620	
Turn Bay Length (ft)												
Base Capacity (vph)		814			786			332		451	672	
Starvation Cap Reductn		0			0			0		0	0	
Spillback Cap Reductn		0			0			0		0	0	
Storage Cap Reductn		0			0			0		0	0	
Reduced v/c Ratio		0.31			0.48			0.68		0.27	0.21	
Intersection Summary												
Area Type:	Other											
Cycle Length: 55												
Actuated Cycle Length: 55												
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green												
Natural Cycle: 50												
Control Type: Pretimed												
Maximum v/c Ratio: 0.68												
Intersection Signal Delay: 16.6						Intersection LOS: B						
Intersection Capacity Utilization 46.1%						ICU Level of Service A						
Analysis Period (min) 15												

Lanes, Volumes, Timings 3: Verplanck Avenue & Fishkill Avenue

Exist PM Peak Hour
10/25/2017

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

Splits and Phases: 3: Verplanck Avenue & Fishkill Avenue



Lanes, Volumes, Timings
6: Main Street & Teller Avenue/Fishkill Avenue

Exist PM Peak Hour
10/25/2017

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	151	27	27	147	88	52	147	71	26	146	34
Future Volume (vph)	28	151	27	27	147	88	52	147	71	26	146	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.982			0.955			0.964			0.978	
Flt Protected		0.993			0.995			0.991			0.994	
Satd. Flow (prot)	0	1829	0	0	1781	0	0	1796	0	0	1778	0
Flt Permitted		0.933			0.955			0.909			0.943	
Satd. Flow (perm)	0	1719	0	0	1709	0	0	1647	0	0	1687	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14			47			42			23	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		265			755			728			670	
Travel Time (s)		6.0			17.2			16.5			15.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	1%	0%	8%	1%	0%	0%	2%	0%	0%	5%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	31	170	30	30	165	99	58	165	80	29	164	38
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	231	0	0	294	0	0	303	0	0	231	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												

Lanes, Volumes, Timings
6: Main Street & Teller Avenue/Fishkill Avenue

Exist PM Peak Hour

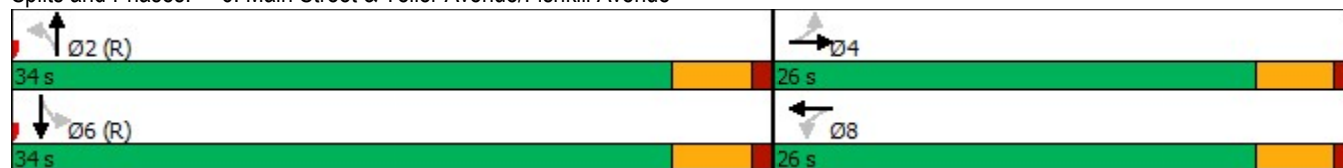
10/25/2017

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	21.5	21.5		21.5	21.5		23.5	23.5		23.5	23.5	
Total Split (s)	26.0	26.0		26.0	26.0		34.0	34.0		34.0	34.0	
Total Split (%)	43.3%	43.3%		43.3%	43.3%		56.7%	56.7%		56.7%	56.7%	
Maximum Green (s)	21.5	21.5		21.5	21.5		29.5	29.5		29.5	29.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
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	
Total Lost Time (s)		4.5			4.5			4.5			4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	Max	Max		Max	Max		Max	Max		Max	Max	
Walk Time (s)							7.0	7.0		7.0	7.0	
Flash Dont Walk (s)							12.0	12.0		12.0	12.0	
Pedestrian Calls (#/hr)							0	0		0	0	
Act Effct Green (s)		21.5			21.5			29.5			29.5	
Actuated g/C Ratio		0.36			0.36			0.49			0.49	
v/c Ratio		0.37			0.46			0.36			0.27	
Control Delay		15.5			15.1			9.6			9.1	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		15.5			15.1			9.6			9.1	
LOS		B			B			A			A	
Approach Delay		15.5			15.1			9.6			9.1	
Approach LOS		B			B			A			A	
Queue Length 50th (ft)		56			65			53			40	
Queue Length 95th (ft)		105			123			99			77	
Internal Link Dist (ft)		185			675			648			590	
Turn Bay Length (ft)												
Base Capacity (vph)		624			642			831			841	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.37			0.46			0.36			0.27	
Intersection Summary												
Area Type:	Other											
Cycle Length: 60												
Actuated Cycle Length: 60												
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green												
Natural Cycle: 45												
Control Type: Pretimed												
Maximum v/c Ratio: 0.46												
Intersection Signal Delay: 12.3							Intersection LOS: B					
Intersection Capacity Utilization 48.8%							ICU Level of Service A					
Analysis Period (min) 15												

Lanes, Volumes, Timings
 6: Main Street & Teller Avenue/Fishkill Avenue

Exist PM Peak Hour
 10/25/2017

Splits and Phases: 6: Main Street & Teller Avenue/Fishkill Avenue



Intersection												
Int Delay, s/veh	1.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	13	384	5	5	440	11	3	0	9	18	0	26
Future Vol, veh/h	13	384	5	5	440	11	3	0	9	18	0	26
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	2	0	0	2	0	0	0	0	0	0	0
Mvmt Flow	14	413	5	5	473	12	3	0	10	19	0	28

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	485	0	0	418	0	0	947	939	416	938	935	479
Stage 1	-	-	-	-	-	-	444	444	-	489	489	-
Stage 2	-	-	-	-	-	-	503	495	-	449	446	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1088	-	-	1152	-	-	243	266	641	247	267	591
Stage 1	-	-	-	-	-	-	597	579	-	564	553	-
Stage 2	-	-	-	-	-	-	555	549	-	593	577	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1088	-	-	1152	-	-	227	260	641	239	261	591
Mov Cap-2 Maneuver	-	-	-	-	-	-	227	260	-	239	261	-
Stage 1	-	-	-	-	-	-	587	569	-	554	550	-
Stage 2	-	-	-	-	-	-	526	546	-	574	567	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.1	13.4	16.2
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	440	1088	-	-	1152	-	-	369
HCM Lane V/C Ratio	0.029	0.013	-	-	0.005	-	-	0.128
HCM Control Delay (s)	13.4	8.4	0	-	8.1	0	-	16.2
HCM Lane LOS	B	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.4

Intersection						
Int Delay, s/veh	0.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	364	15	13	412	19	12
Future Vol, veh/h	364	15	13	412	19	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	0	8	2	0	8
Mvmt Flow	404	17	14	458	21	13

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	421	0	899	413
Stage 1	-	-	-	-	413	-
Stage 2	-	-	-	-	486	-
Critical Hdwy	-	-	4.18	-	6.4	6.28
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.272	-	3.5	3.372
Pot Cap-1 Maneuver	-	-	1107	-	312	626
Stage 1	-	-	-	-	672	-
Stage 2	-	-	-	-	623	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1107	-	307	626
Mov Cap-2 Maneuver	-	-	-	-	307	-
Stage 1	-	-	-	-	661	-
Stage 2	-	-	-	-	623	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	15.4
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	382	-	-	1107	-
HCM Lane V/C Ratio	0.09	-	-	0.013	-
HCM Control Delay (s)	15.4	-	-	8.3	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0	-

Lanes, Volumes, Timings

3: Verplanck Avenue & Fishkill Avenue

Exist Sat Peak Hour
10/25/2017

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	206	8	10	250	119	5	71	8	142	90	54
Future Volume (vph)	30	206	8	10	250	119	5	71	8	142	90	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.996			0.958			0.989			0.944	
Flt Protected		0.994			0.999			0.990		0.950		
Satd. Flow (prot)	0	1881	0	0	1818	0	0	1860	0	1805	1794	0
Flt Permitted		0.931			0.992			0.918		0.772		
Satd. Flow (perm)	0	1762	0	0	1806	0	0	1725	0	1467	1794	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		755			673			733			700	
Travel Time (s)		17.2			15.3			16.7			15.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.25	0.97	0.97	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	31	212	8	10	258	123	20	73	8	146	93	56
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	251	0	0	391	0	0	101	0	146	149	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		2			6			4		3	8	
Permitted Phases	2			6			4			8		
Detector Phase	2	2		6	6		4	4		3	8	
Switch Phase												

Lanes, Volumes, Timings
3: Verplanck Avenue & Fishkill Avenue

Exist Sat Peak Hour
10/25/2017

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.5	4.0	
Minimum Split (s)	23.5	23.5		23.5	23.5		10.0	10.0		9.0	22.5	
Total Split (s)	30.0	30.0		30.0	30.0		15.0	15.0		10.0	25.0	
Total Split (%)	54.5%	54.5%		54.5%	54.5%		27.3%	27.3%		18.2%	45.5%	
Maximum Green (s)	25.5	25.5		25.5	25.5		10.5	10.5		5.5	20.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
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	
Total Lost Time (s)		4.5			4.5			4.5		4.5	4.5	
Lead/Lag							Lead	Lead		Lag		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	Max	Max		Max	Max		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0							
Flash Dont Walk (s)	12.0	12.0		12.0	12.0							
Pedestrian Calls (#/hr)	0	0		0	0							
Act Effct Green (s)		25.5			25.5			10.5		20.5	20.5	
Actuated g/C Ratio		0.46			0.46			0.19		0.37	0.37	
v/c Ratio		0.31			0.47			0.31		0.25	0.22	
Control Delay		10.5			12.4			22.1		13.6	13.0	
Queue Delay		0.0			0.0			0.0		0.0	0.0	
Total Delay		10.5			12.4			22.1		13.6	13.0	
LOS		B			B			C		B	B	
Approach Delay		10.5			12.4			22.1			13.3	
Approach LOS		B			B			C			B	
Queue Length 50th (ft)		48			82			29		31	32	
Queue Length 95th (ft)		89			143			65		65	66	
Internal Link Dist (ft)		675			593			653			620	
Turn Bay Length (ft)												
Base Capacity (vph)		816			837			329		580	668	
Starvation Cap Reductn		0			0			0		0	0	
Spillback Cap Reductn		0			0			0		0	0	
Storage Cap Reductn		0			0			0		0	0	
Reduced v/c Ratio		0.31			0.47			0.31		0.25	0.22	
Intersection Summary												
Area Type:	Other											
Cycle Length: 55												
Actuated Cycle Length: 55												
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green												
Natural Cycle: 50												
Control Type: Pretimed												
Maximum v/c Ratio: 0.47												
Intersection Signal Delay: 13.1						Intersection LOS: B						
Intersection Capacity Utilization 48.3%						ICU Level of Service A						
Analysis Period (min) 15												

Lanes, Volumes, Timings
 3: Verplanck Avenue & Fishkill Avenue

Exist Sat Peak Hour
 10/25/2017

Splits and Phases: 3: Verplanck Avenue & Fishkill Avenue



Lanes, Volumes, Timings
6: Main Street & Teller Avenue/Fishkill Avenue

Exist Sat Peak Hour

10/25/2017

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	128	34	44	155	107	77	169	32	24	166	38
Future Volume (vph)	40	128	34	44	155	107	77	169	32	24	166	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.977			0.953			0.984			0.977	
Flt Protected		0.990			0.993			0.986			0.995	
Satd. Flow (prot)	0	1826	0	0	1778	0	0	1638	0	0	1650	0
Flt Permitted		0.896			0.932			0.860			0.955	
Satd. Flow (perm)	0	1653	0	0	1669	0	0	1428	0	0	1584	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		19			51			15			24	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		265			755			728			670	
Travel Time (s)		6.0			17.2			16.5			15.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	1%	0%	8%	0%	0%	0%	1%	6%	0%	1%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)								0			0	
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	42	135	36	46	163	113	81	178	34	25	175	40
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	213	0	0	322	0	0	293	0	0	240	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.14	1.00	1.00	1.14	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												

Lanes, Volumes, Timings
6: Main Street & Teller Avenue/Fishkill Avenue

Exist Sat Peak Hour

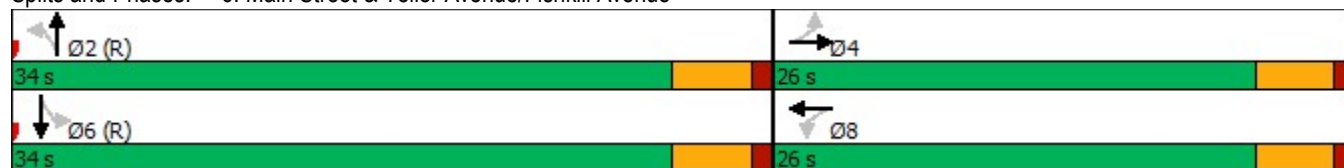
10/25/2017

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	23.5	23.5		23.5	23.5		23.5	23.5		23.5	23.5	
Total Split (s)	26.0	26.0		26.0	26.0		34.0	34.0		34.0	34.0	
Total Split (%)	43.3%	43.3%		43.3%	43.3%		56.7%	56.7%		56.7%	56.7%	
Maximum Green (s)	21.5	21.5		21.5	21.5		29.5	29.5		29.5	29.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
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	
Total Lost Time (s)		4.5			4.5			4.5			4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	Max	Max		Max	Max		Max	Max		Max	Max	
Walk Time (s)							7.0	7.0		7.0	7.0	
Flash Dont Walk (s)							12.0	12.0		12.0	12.0	
Pedestrian Calls (#/hr)							0	0		0	0	
Act Effct Green (s)		21.5			21.5			29.5			29.5	
Actuated g/C Ratio		0.36			0.36			0.49			0.49	
v/c Ratio		0.35			0.51			0.41			0.30	
Control Delay		14.9			16.0			11.4			9.4	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		14.9			16.0			11.4			9.4	
LOS		B			B			B			A	
Approach Delay		14.9			16.0			11.4			9.4	
Approach LOS		B			B			B			A	
Queue Length 50th (ft)		50			73			59			43	
Queue Length 95th (ft)		97			140			111			82	
Internal Link Dist (ft)		185			675			648			590	
Turn Bay Length (ft)												
Base Capacity (vph)		604			630			709			791	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.35			0.51			0.41			0.30	
Intersection Summary												
Area Type:	Other											
Cycle Length: 60												
Actuated Cycle Length: 60												
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green												
Natural Cycle: 50												
Control Type: Pretimed												
Maximum v/c Ratio: 0.51												
Intersection Signal Delay: 13.1							Intersection LOS: B					
Intersection Capacity Utilization 59.2%							ICU Level of Service B					
Analysis Period (min) 15												

Lanes, Volumes, Timings
 6: Main Street & Teller Avenue/Fishkill Avenue

Exist Sat Peak Hour
 10/25/2017

Splits and Phases: 6: Main Street & Teller Avenue/Fishkill Avenue



Intersection												
Int Delay, s/veh	1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	20	400	4	6	476	15	1	0	0	18	0	20
Future Vol, veh/h	20	400	4	6	476	15	1	0	0	18	0	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	2	0	0	2	0	0	0	0	0	0	0
Mvmt Flow	22	430	4	6	512	16	1	0	0	19	0	22

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	528	0	0	434	0	0	1019	1016	432	1008	1010	520
Stage 1	-	-	-	-	-	-	476	476	-	532	532	-
Stage 2	-	-	-	-	-	-	543	540	-	476	478	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1049	-	-	1136	-	-	217	240	628	221	242	560
Stage 1	-	-	-	-	-	-	574	560	-	535	529	-
Stage 2	-	-	-	-	-	-	528	524	-	574	559	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1049	-	-	1136	-	-	203	232	628	215	234	560
Mov Cap-2 Maneuver	-	-	-	-	-	-	203	232	-	215	234	-
Stage 1	-	-	-	-	-	-	558	544	-	520	525	-
Stage 2	-	-	-	-	-	-	504	520	-	558	543	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0.1	22.8	18
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	203	1049	-	-	1136	-	-	318
HCM Lane V/C Ratio	0.005	0.021	-	-	0.006	-	-	0.128
HCM Control Delay (s)	22.8	8.5	0	-	8.2	0	-	18
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0	0.1	-	-	0	-	-	0.4

Intersection						
Int Delay, s/veh	0.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	421	8	10	486	13	7
Future Vol, veh/h	421	8	10	486	13	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	1	0	10	1	0	14
Mvmt Flow	473	9	11	546	15	8

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	482	0	1046	478
Stage 1	-	-	-	-	478	-
Stage 2	-	-	-	-	568	-
Critical Hdwy	-	-	4.2	-	6.4	6.34
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.29	-	3.5	3.426
Pot Cap-1 Maneuver	-	-	1040	-	255	564
Stage 1	-	-	-	-	628	-
Stage 2	-	-	-	-	571	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1040	-	251	564
Mov Cap-2 Maneuver	-	-	-	-	251	-
Stage 1	-	-	-	-	619	-
Stage 2	-	-	-	-	571	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	17.4
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	312	-	-	1040	-
HCM Lane V/C Ratio	0.072	-	-	0.011	-
HCM Control Delay (s)	17.4	-	-	8.5	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

CAPACITY ANALYSIS SUMMARY
2016 NO-BUILD CONDITIONS

Lanes, Volumes, Timings

3: Verplanck Avenue & Fishkill Avenue

2016 No-Build AM Peak Hour

10/25/2017

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	194	5	19	195	105	5	84	35	124	73	76
Future Volume (vph)	42	194	5	19	195	105	5	84	35	124	73	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.997			0.955			0.962			0.924	
Flt Protected		0.991			0.997			0.998		0.950		
Satd. Flow (prot)	0	1748	0	0	1712	0	0	1764	0	1736	1656	0
Flt Permitted		0.906			0.975			0.984		0.483		
Satd. Flow (perm)	0	1598	0	0	1675	0	0	1740	0	882	1656	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		755			673			733			700	
Travel Time (s)		17.2			15.3			20.0			19.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	10%	7%	0%	0%	6%	6%	0%	5%	0%	4%	6%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	49	228	6	22	229	124	6	99	41	146	86	89
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	283	0	0	375	0	0	146	0	146	175	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		2			6			4		3	8	
Permitted Phases	2			6			4			8		
Detector Phase	2	2		6	6		4	4		3	8	
Switch Phase												

Lanes, Volumes, Timings
3: Verplanck Avenue & Fishkill Avenue

2016 No-Build AM Peak Hour

10/25/2017

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.5	4.0	
Minimum Split (s)	23.5	23.5		23.5	23.5		10.0	10.0		9.0	22.5	
Total Split (s)	30.0	30.0		30.0	30.0		15.0	15.0		10.0	25.0	
Total Split (%)	54.5%	54.5%		54.5%	54.5%		27.3%	27.3%		18.2%	45.5%	
Maximum Green (s)	27.0	27.0		25.5	25.5		10.5	10.5		5.5	20.5	
Yellow Time (s)	2.0	2.0		3.5	3.5		3.5	3.5		3.5	3.5	
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	
Total Lost Time (s)		3.0			4.5			4.5		4.5	4.5	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	Max	Max		Max	Max		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0							
Flash Dont Walk (s)	12.0	12.0		12.0	12.0							
Pedestrian Calls (#/hr)	0	0		0	0							
Act Effct Green (s)		27.0			25.5			10.5		20.5	20.5	
Actuated g/C Ratio		0.49			0.46			0.19		0.37	0.37	
v/c Ratio		0.36			0.48			0.44		0.35	0.28	
Control Delay		10.3			12.8			24.5		14.6	13.7	
Queue Delay		0.0			0.0			0.0		0.0	0.0	
Total Delay		10.3			12.8			24.5		14.6	13.7	
LOS		B			B			C		B	B	
Approach Delay		10.3			12.8			24.5			14.1	
Approach LOS		B			B			C			B	
Queue Length 50th (ft)		53			79			43		32	39	
Queue Length 95th (ft)		90			130			82		61	72	
Internal Link Dist (ft)		675			593			653			620	
Turn Bay Length (ft)												
Base Capacity (vph)		784			776			332		414	617	
Starvation Cap Reductn		0			0			0		0	0	
Spillback Cap Reductn		0			0			0		0	0	
Storage Cap Reductn		0			0			0		0	0	
Reduced v/c Ratio		0.36			0.48			0.44		0.35	0.28	
Intersection Summary												
Area Type:	Other											
Cycle Length: 55												
Actuated Cycle Length: 55												
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green												
Natural Cycle: 50												
Control Type: Pretimed												
Maximum v/c Ratio: 0.48												
Intersection Signal Delay: 14.1						Intersection LOS: B						
Intersection Capacity Utilization 45.5%						ICU Level of Service A						
Analysis Period (min) 15												

Splits and Phases: 3: Verplanck Avenue & Fishkill Avenue



Lanes, Volumes, Timings
6: Main Street & Fishkill Avenue

2016 No-Build AM Peak Hour

10/25/2017

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	148	27	18	185	52	40	86	23	25	119	22
Future Volume (vph)	18	148	27	18	185	52	40	86	23	25	119	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.981			0.972			0.979			0.982	
Flt Protected		0.995			0.996			0.987			0.993	
Satd. Flow (prot)	0	1800	0	0	1813	0	0	1705	0	0	1736	0
Flt Permitted		0.953			0.969			0.890			0.946	
Satd. Flow (perm)	0	1724	0	0	1764	0	0	1537	0	0	1654	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15			24			22			18	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		265			755			728			670	
Travel Time (s)		6.0			17.2			16.5			15.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	8%	3%	0%	0%	2%	0%	0%	9%	16%	0%	9%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	23	185	34	23	231	65	50	108	29	31	149	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	242	0	0	319	0	0	187	0	0	208	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												

Lanes, Volumes, Timings
6: Main Street & Fishkill Avenue

2016 No-Build AM Peak Hour
10/25/2017

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	23.5	23.5		23.5	23.5		29.5	29.5		23.5	23.5	
Total Split (s)	26.0	26.0		26.0	26.0		34.0	34.0		34.0	34.0	
Total Split (%)	43.3%	43.3%		43.3%	43.3%		56.7%	56.7%		56.7%	56.7%	
Maximum Green (s)	21.5	21.5		21.5	21.5		29.5	29.5		29.5	29.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
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	
Total Lost Time (s)		4.5			4.5			4.5			4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	Max	Max		Max	Max		Max	Max		Max	Max	
Walk Time (s)							7.0	7.0		7.0	7.0	
Flash Dont Walk (s)							12.0	12.0		12.0	12.0	
Pedestrian Calls (#/hr)							0	0		0	0	
Act Effct Green (s)		21.5			21.5			29.5			29.5	
Actuated g/C Ratio		0.36			0.36			0.49			0.49	
v/c Ratio		0.39			0.49			0.24			0.25	
Control Delay		15.6			17.0			8.8			9.1	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		15.6			17.0			8.8			9.1	
LOS		B			B			A			A	
Approach Delay		15.6			17.0			8.8			9.1	
Approach LOS		B			B			A			A	
Queue Length 50th (ft)		59			80			31			37	
Queue Length 95th (ft)		95			123			55			61	
Internal Link Dist (ft)		185			675			648			590	
Turn Bay Length (ft)												
Base Capacity (vph)		627			647			766			822	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.39			0.49			0.24			0.25	
Intersection Summary												
Area Type:	Other											
Cycle Length: 60												
Actuated Cycle Length: 60												
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green												
Natural Cycle: 55												
Control Type: Pretimed												
Maximum v/c Ratio: 0.49												
Intersection Signal Delay: 13.3							Intersection LOS: B					
Intersection Capacity Utilization 38.4%							ICU Level of Service A					
Analysis Period (min) 15												

Splits and Phases: 6: Main Street & Fishkill Avenue



Intersection												
Int Delay, s/veh	2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	31	411	4	1	382	35	0	0	4	19	0	17
Future Vol, veh/h	31	411	4	1	382	35	0	0	4	19	0	17
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	38	83	83
Heavy Vehicles, %	0	2	0	0	2	0	0	0	0	0	0	0
Mvmt Flow	37	495	5	1	460	42	0	0	5	50	0	20

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	502	0	0	500	0	0	1065	1076	498	1057	1057	481
Stage 1	-	-	-	-	-	-	572	572	-	483	483	-
Stage 2	-	-	-	-	-	-	493	504	-	574	574	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1073	-	-	1075	-	-	202	221	576	205	227	589
Stage 1	-	-	-	-	-	-	509	508	-	569	556	-
Stage 2	-	-	-	-	-	-	562	544	-	507	506	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1073	-	-	1075	-	-	188	210	576	196	216	589
Mov Cap-2 Maneuver	-	-	-	-	-	-	188	210	-	196	216	-
Stage 1	-	-	-	-	-	-	485	484	-	542	555	-
Stage 2	-	-	-	-	-	-	542	543	-	479	482	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0	11.3	25.8
HCM LOS			B	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	576	1073	-	-	1075	-	-	243
HCM Lane V/C Ratio	0.008	0.035	-	-	0.001	-	-	0.29
HCM Control Delay (s)	11.3	8.5	0	-	8.4	0	-	25.8
HCM Lane LOS	B	A	A	-	A	A	-	D
HCM 95th %tile Q(veh)	0	0.1	-	-	0	-	-	1.2

Intersection						
Int Delay, s/veh	0.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	365	11	11	361	13	13
Future Vol, veh/h	365	11	11	361	13	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	7	0	10	7	8	0
Mvmt Flow	397	12	12	392	14	14

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	409
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.2
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.29
Pot Cap-1 Maneuver	-	-	1108
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1108
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	13.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	440	-	-	1108	-
HCM Lane V/C Ratio	0.064	-	-	0.011	-
HCM Control Delay (s)	13.7	-	-	8.3	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Lanes, Volumes, Timings
3: Verplanck Avenue & Fishkill Avenue

2016 No-Build PM Peak Hour

10/25/2017

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	225	17	37	250	105	5	89	36	124	89	67
Future Volume (vph)	33	225	17	37	250	105	5	89	36	124	89	67
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.992			0.964			0.921			0.935	
Flt Protected		0.994			0.995			0.999		0.950		
Satd. Flow (prot)	0	1829	0	0	1766	0	0	1748	0	1805	1776	0
Flt Permitted		0.925			0.950			0.992		0.485		
Satd. Flow (perm)	0	1702	0	0	1686	0	0	1736	0	922	1776	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		755			673			733			700	
Travel Time (s)		17.2			15.3			20.0			19.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.25	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	3%	0%	0%	5%	0%	0%	0%	0%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	36	247	19	41	275	115	5	98	144	136	98	74
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	302	0	0	431	0	0	247	0	136	172	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		2			6			4		3	8	
Permitted Phases	2			6			4			8		
Detector Phase	2	2		6	6		4	4		3	8	
Switch Phase												

Lanes, Volumes, Timings
3: Verplanck Avenue & Fishkill Avenue

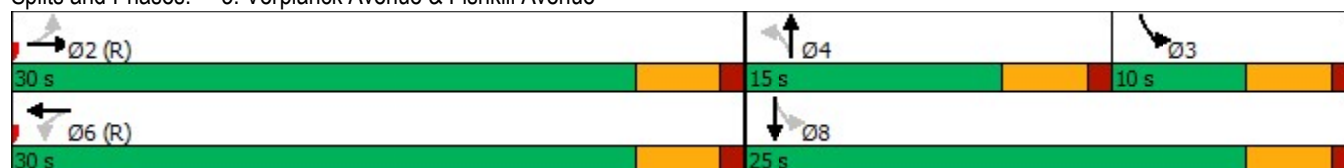
2016 No-Build PM Peak Hour

10/25/2017

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.5	4.0	
Minimum Split (s)	23.5	23.5		23.5	23.5		10.0	10.0		9.0	22.5	
Total Split (s)	30.0	30.0		30.0	30.0		15.0	15.0		10.0	25.0	
Total Split (%)	54.5%	54.5%		54.5%	54.5%		27.3%	27.3%		18.2%	45.5%	
Maximum Green (s)	25.5	25.5		25.5	25.5		10.5	10.5		5.5	20.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
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	
Total Lost Time (s)		4.5			4.5			4.5		4.5	4.5	
Lead/Lag							Lead	Lead		Lag		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	Max	Max		Max	Max		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0							
Flash Dont Walk (s)	12.0	12.0		12.0	12.0							
Pedestrian Calls (#/hr)	0	0		0	0							
Act Effct Green (s)		25.5			25.5			10.5		20.5	20.5	
Actuated g/C Ratio		0.46			0.46			0.19		0.37	0.37	
v/c Ratio		0.38			0.55			0.75		0.32	0.26	
Control Delay		11.4			14.0			38.0		15.6	13.3	
Queue Delay		0.0			0.0			0.0		0.0	0.0	
Total Delay		11.4			14.0			38.0		15.6	13.3	
LOS		B			B			D		B	B	
Approach Delay		11.4			14.0			38.0			14.3	
Approach LOS		B			B			D			B	
Queue Length 50th (ft)		60			95			77		29	38	
Queue Length 95th (ft)		109			167			#173		61	75	
Internal Link Dist (ft)		675			593			653			620	
Turn Bay Length (ft)												
Base Capacity (vph)		789			781			331		431	661	
Starvation Cap Reductn		0			0			0		0	0	
Spillback Cap Reductn		0			0			0		0	0	
Storage Cap Reductn		0			0			0		0	0	
Reduced v/c Ratio		0.38			0.55			0.75		0.32	0.26	
Intersection Summary												
Area Type:	Other											
Cycle Length: 55												
Actuated Cycle Length: 55												
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green												
Natural Cycle: 55												
Control Type: Pretimed												
Maximum v/c Ratio: 0.75												
Intersection Signal Delay: 18.1						Intersection LOS: B						
Intersection Capacity Utilization 54.2%						ICU Level of Service A						
Analysis Period (min) 15												

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

Splits and Phases: 3: Verplanck Avenue & Fishkill Avenue



Lanes, Volumes, Timings
6: Main Street & Fishkill Avenue

2016 No-Build PM Peak Hour

10/25/2017

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	160	37	29	156	93	58	162	75	28	173	36
Future Volume (vph)	30	160	37	29	156	93	58	162	75	28	173	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.978			0.955			0.966			0.980	
Flt Protected		0.993			0.995			0.990			0.994	
Satd. Flow (prot)	0	1823	0	0	1780	0	0	1797	0	0	1780	0
Flt Permitted		0.929			0.949			0.897			0.942	
Satd. Flow (perm)	0	1705	0	0	1698	0	0	1628	0	0	1687	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18			47			40			21	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		265			755			728			670	
Travel Time (s)		6.0			17.2			16.5			15.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	1%	0%	8%	1%	0%	0%	2%	0%	0%	5%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	34	180	42	33	175	104	65	182	84	31	194	40
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	256	0	0	312	0	0	331	0	0	265	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												

Lanes, Volumes, Timings
6: Main Street & Fishkill Avenue

2016 No-Build PM Peak Hour

10/25/2017

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	23.5	23.5		23.5	23.5		23.5	23.5		29.5	29.5	
Total Split (s)	26.0	26.0		26.0	26.0		34.0	34.0		34.0	34.0	
Total Split (%)	43.3%	43.3%		43.3%	43.3%		56.7%	56.7%		56.7%	56.7%	
Maximum Green (s)	21.5	21.5		21.5	21.5		29.5	29.5		29.5	29.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
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	
Total Lost Time (s)		4.5			4.5			4.5			4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	Max	Max		Max	Max		Max	Max		Max	Max	
Walk Time (s)							7.0	7.0		7.0	7.0	
Flash Dont Walk (s)							12.0	12.0		12.0	12.0	
Pedestrian Calls (#/hr)							0	0		0	0	
Act Effct Green (s)		21.5			21.5			29.5			29.5	
Actuated g/C Ratio		0.36			0.36			0.49			0.49	
v/c Ratio		0.41			0.49			0.40			0.32	
Control Delay		15.9			15.7			10.2			9.7	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		15.9			15.7			10.2			9.7	
LOS		B			B			B			A	
Approach Delay		15.9			15.7			10.2			9.7	
Approach LOS		B			B			B			A	
Queue Length 50th (ft)		63			71			60			49	
Queue Length 95th (ft)		115			133			111			89	
Internal Link Dist (ft)		185			675			648			590	
Turn Bay Length (ft)												
Base Capacity (vph)		622			638			820			840	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.41			0.49			0.40			0.32	
Intersection Summary												
Area Type:	Other											
Cycle Length: 60												
Actuated Cycle Length: 60												
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green												
Natural Cycle: 55												
Control Type: Pretimed												
Maximum v/c Ratio: 0.49												
Intersection Signal Delay: 12.8							Intersection LOS: B					
Intersection Capacity Utilization 53.1%							ICU Level of Service A					
Analysis Period (min) 15												

Splits and Phases: 6: Main Street & Fishkill Avenue



Intersection												
Int Delay, s/veh	1.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	14	430	5	5	495	12	3	0	10	19	0	28
Future Vol, veh/h	14	430	5	5	495	12	3	0	10	19	0	28
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	2	0	0	2	0	0	0	0	0	0	0
Mvmt Flow	15	462	5	5	532	13	3	0	11	20	0	30

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	545	0	0	467	0	0	1059	1050	465	1049	1046	539
Stage 1	-	-	-	-	-	-	495	495	-	549	549	-
Stage 2	-	-	-	-	-	-	564	555	-	500	497	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1034	-	-	1105	-	-	204	229	602	207	230	546
Stage 1	-	-	-	-	-	-	560	549	-	524	520	-
Stage 2	-	-	-	-	-	-	514	516	-	557	548	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1034	-	-	1105	-	-	189	223	602	199	224	546
Mov Cap-2 Maneuver	-	-	-	-	-	-	189	223	-	199	224	-
Stage 1	-	-	-	-	-	-	549	538	-	514	516	-
Stage 2	-	-	-	-	-	-	482	512	-	536	537	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.1	14.3	18.3
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	400	1034	-	-	1105	-	-	320
HCM Lane V/C Ratio	0.035	0.015	-	-	0.005	-	-	0.158
HCM Control Delay (s)	14.3	8.5	0	-	8.3	0	-	18.3
HCM Lane LOS	B	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.6

Intersection						
Int Delay, s/veh	0.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	408	16	14	465	20	13
Future Vol, veh/h	408	16	14	465	20	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	0	8	2	0	8
Mvmt Flow	453	18	16	517	22	14

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	471
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.18
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.272
Pot Cap-1 Maneuver	-	-	1060
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1060
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	17.1
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	335	-	-	1060	-
HCM Lane V/C Ratio	0.109	-	-	0.015	-
HCM Control Delay (s)	17.1	-	-	8.4	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.4	-	-	0	-

Lanes, Volumes, Timings
3: Verplanck Avenue & Fishkill Avenue

2016 No-Build Sat Peak Hour

10/25/2017

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	48	232	8	11	285	126	5	75	8	151	96	81
Future Volume (vph)	48	232	8	11	285	126	5	75	8	151	96	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.996			0.960			0.990			0.931	
Flt Protected		0.992			0.999			0.991		0.950		
Satd. Flow (prot)	0	1877	0	0	1822	0	0	1864	0	1805	1769	0
Flt Permitted		0.889			0.991			0.914		0.764		
Satd. Flow (perm)	0	1682	0	0	1808	0	0	1719	0	1452	1769	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		755			673			733			700	
Travel Time (s)		17.2			15.3			20.0			19.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.25	0.97	0.97	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	49	239	8	11	294	130	20	77	8	156	99	84
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	296	0	0	435	0	0	105	0	156	183	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		2			6			4		3	8	
Permitted Phases	2			6			4			8		
Detector Phase	2	2		6	6		4	4		3	8	
Switch Phase												

Lanes, Volumes, Timings
3: Verplanck Avenue & Fishkill Avenue

2016 No-Build Sat Peak Hour

10/25/2017

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.5	4.0	
Minimum Split (s)	23.5	23.5		23.5	23.5		10.0	10.0		9.0	22.5	
Total Split (s)	30.0	30.0		30.0	30.0		15.0	15.0		10.0	25.0	
Total Split (%)	54.5%	54.5%		54.5%	54.5%		27.3%	27.3%		18.2%	45.5%	
Maximum Green (s)	25.5	25.5		25.5	25.5		10.5	10.5		5.5	20.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
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	
Total Lost Time (s)		4.5			4.5			4.5		4.5	4.5	
Lead/Lag							Lead	Lead		Lag		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	Max	Max		Max	Max		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0							
Flash Dont Walk (s)	12.0	12.0		12.0	12.0							
Pedestrian Calls (#/hr)	0	0		0	0							
Act Effct Green (s)		25.5			25.5			10.5		20.5	20.5	
Actuated g/C Ratio		0.46			0.46			0.19		0.37	0.37	
v/c Ratio		0.38			0.52			0.32		0.27	0.28	
Control Delay		11.4			13.2			22.4		13.8	13.5	
Queue Delay		0.0			0.0			0.0		0.0	0.0	
Total Delay		11.4			13.2			22.4		13.8	13.5	
LOS		B			B			C		B	B	
Approach Delay		11.4			13.2			22.4			13.7	
Approach LOS		B			B			C			B	
Queue Length 50th (ft)		59			94			30		34	40	
Queue Length 95th (ft)		108			163			66		69	79	
Internal Link Dist (ft)		675			593			653			620	
Turn Bay Length (ft)												
Base Capacity (vph)		779			838			328		576	659	
Starvation Cap Reductn		0			0			0		0	0	
Spillback Cap Reductn		0			0			0		0	0	
Storage Cap Reductn		0			0			0		0	0	
Reduced v/c Ratio		0.38			0.52			0.32		0.27	0.28	
Intersection Summary												
Area Type:	Other											
Cycle Length: 55												
Actuated Cycle Length: 55												
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green												
Natural Cycle: 50												
Control Type: Pretimed												
Maximum v/c Ratio: 0.52												
Intersection Signal Delay: 13.7						Intersection LOS: B						
Intersection Capacity Utilization 59.9%						ICU Level of Service B						
Analysis Period (min) 15												

Splits and Phases: 3: Verplanck Avenue & Fishkill Avenue



Lanes, Volumes, Timings
6: Main Street & Teller Avenue/Fishkill Avenue

2016 No-Build Sat Peak Hour

10/25/2017

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	136	45	25	176	40	97	179	41	47	183	114
Future Volume (vph)	42	136	45	25	176	40	97	179	41	47	183	114
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.973			0.978			0.983			0.955	
Flt Protected		0.991			0.995			0.985			0.993	
Satd. Flow (prot)	0	1821	0	0	1834	0	0	1634	0	0	1613	0
Flt Permitted		0.907			0.956			0.810			0.922	
Satd. Flow (perm)	0	1667	0	0	1762	0	0	1344	0	0	1498	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		24			19			18			59	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		265			755			728			670	
Travel Time (s)		6.0			17.2			16.5			15.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	1%	0%	8%	0%	0%	0%	1%	6%	0%	1%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)								0			0	
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	44	143	47	26	185	42	102	188	43	49	193	120
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	234	0	0	253	0	0	333	0	0	362	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.14	1.00	1.00	1.14	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												

Lanes, Volumes, Timings
6: Main Street & Teller Avenue/Fishkill Avenue

2016 No-Build Sat Peak Hour

10/25/2017

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	23.5	23.5		23.5	23.5		23.5	23.5		23.5	23.5	
Total Split (s)	26.0	26.0		26.0	26.0		34.0	34.0		34.0	34.0	
Total Split (%)	43.3%	43.3%		43.3%	43.3%		56.7%	56.7%		56.7%	56.7%	
Maximum Green (s)	21.5	21.5		21.5	21.5		29.5	29.5		29.5	29.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
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	
Total Lost Time (s)		4.5			4.5			4.5			4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	Max	Max		Max	Max		Max	Max		Max	Max	
Walk Time (s)							7.0	7.0		7.0	7.0	
Flash Dont Walk (s)							12.0	12.0		12.0	12.0	
Pedestrian Calls (#/hr)							0	0		0	0	
Act Effct Green (s)		21.5			21.5			29.5			29.5	
Actuated g/C Ratio		0.36			0.36			0.49			0.49	
v/c Ratio		0.38			0.39			0.50			0.47	
Control Delay		15.0			15.5			12.9			10.8	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		15.0			15.5			12.9			10.8	
LOS		B			B			B			B	
Approach Delay		15.0			15.5			12.9			10.8	
Approach LOS		B			B			B			B	
Queue Length 50th (ft)		54			61			71			65	
Queue Length 95th (ft)		105			114			134			126	
Internal Link Dist (ft)		185			675			648			590	
Turn Bay Length (ft)												
Base Capacity (vph)		612			643			669			766	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.38			0.39			0.50			0.47	
Intersection Summary												
Area Type:	Other											
Cycle Length: 60												
Actuated Cycle Length: 60												
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green												
Natural Cycle: 50												
Control Type: Pretimed												
Maximum v/c Ratio: 0.50												
Intersection Signal Delay: 13.2							Intersection LOS: B					
Intersection Capacity Utilization 60.7%							ICU Level of Service B					
Analysis Period (min) 15												

Splits and Phases: 6: Main Street & Teller Avenue/Fishkill Avenue



Intersection												
Int Delay, s/veh	1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	21	437	4	6	525	16	1	0	0	19	0	21
Future Vol, veh/h	21	437	4	6	525	16	1	0	0	19	0	21
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	2	0	0	2	0	0	0	0	0	0	0
Mvmt Flow	23	470	4	6	565	17	1	0	0	20	0	23

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	582	0	0	474	0	0	1115	1112	472	1104	1106	574
Stage 1	-	-	-	-	-	-	518	518	-	586	586	-
Stage 2	-	-	-	-	-	-	597	594	-	518	520	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1002	-	-	1099	-	-	187	211	596	190	212	522
Stage 1	-	-	-	-	-	-	544	536	-	500	500	-
Stage 2	-	-	-	-	-	-	493	496	-	544	535	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1002	-	-	1099	-	-	174	203	596	184	204	522
Mov Cap-2 Maneuver	-	-	-	-	-	-	174	203	-	184	204	-
Stage 1	-	-	-	-	-	-	527	519	-	485	496	-
Stage 2	-	-	-	-	-	-	468	492	-	527	518	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0.1	25.8	20.2
HCM LOS			D	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	174	1002	-	-	1099	-	-	279
HCM Lane V/C Ratio	0.006	0.023	-	-	0.006	-	-	0.154
HCM Control Delay (s)	25.8	8.7	0	-	8.3	0	-	20.2
HCM Lane LOS	D	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0	0.1	-	-	0	-	-	0.5

Intersection						
Int Delay, s/veh	0.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	460	8	11	536	14	7
Future Vol, veh/h	460	8	11	536	14	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	1	0	10	1	0	14
Mvmt Flow	517	9	12	602	16	8

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	526
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.2
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.29
Pot Cap-1 Maneuver	-	-	1001
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1001
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	19.5
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	271	-	-	1001	-
HCM Lane V/C Ratio	0.087	-	-	0.012	-
HCM Control Delay (s)	19.5	-	-	8.6	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0	-

**CAPACITY ANALYSIS SUMMARY
2016 BUILD CONDITIONS**

Lanes, Volumes, Timings

3: Verplanck Avenue & Fishkill Avenue

2016 Build AM Peak Hour

10/26/2017

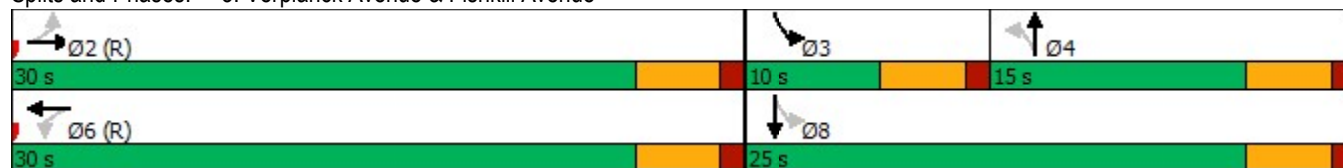
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	200	5	19	207	117	5	84	35	130	73	76
Future Volume (vph)	42	200	5	19	207	117	5	84	35	130	73	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.997			0.954			0.962			0.924	
Flt Protected		0.992			0.997			0.998		0.950		
Satd. Flow (prot)	0	1750	0	0	1710	0	0	1764	0	1736	1656	0
Flt Permitted		0.893			0.976			0.984		0.483		
Satd. Flow (perm)	0	1576	0	0	1674	0	0	1740	0	882	1656	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		755			673			733			700	
Travel Time (s)		17.2			15.3			20.0			19.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	10%	7%	0%	0%	6%	6%	0%	5%	0%	4%	6%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	49	235	6	22	244	138	6	99	41	153	86	89
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	290	0	0	404	0	0	146	0	153	175	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		2			6			4		3	8	
Permitted Phases	2			6			4			8		
Detector Phase	2	2		6	6		4	4		3	8	
Switch Phase												

Lanes, Volumes, Timings
3: Verplanck Avenue & Fishkill Avenue

2016 Build AM Peak Hour
10/26/2017

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.5	4.0	
Minimum Split (s)	23.5	23.5		23.5	23.5		10.0	10.0		9.0	22.5	
Total Split (s)	30.0	30.0		30.0	30.0		15.0	15.0		10.0	25.0	
Total Split (%)	54.5%	54.5%		54.5%	54.5%		27.3%	27.3%		18.2%	45.5%	
Maximum Green (s)	25.5	25.5		25.5	25.5		10.5	10.5		5.5	20.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
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	
Total Lost Time (s)		4.5			4.5			4.5		4.5	4.5	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	Max	Max		Max	Max		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0							
Flash Dont Walk (s)	12.0	12.0		12.0	12.0							
Pedestrian Calls (#/hr)	0	0		0	0							
Act Effct Green (s)		25.5			25.5			10.5		20.5	20.5	
Actuated g/C Ratio		0.46			0.46			0.19		0.37	0.37	
v/c Ratio		0.40			0.52			0.44		0.37	0.28	
Control Delay		11.8			13.5			24.5		14.8	13.7	
Queue Delay		0.0			0.0			0.0		0.0	0.0	
Total Delay		11.8			13.5			24.5		14.8	13.7	
LOS		B			B			C		B	B	
Approach Delay		11.8			13.5			24.5			14.2	
Approach LOS		B			B			C			B	
Queue Length 50th (ft)		58			87			43		33	39	
Queue Length 95th (ft)		99			141			82		64	72	
Internal Link Dist (ft)		675			593			653			620	
Turn Bay Length (ft)												
Base Capacity (vph)		730			776			332		414	617	
Starvation Cap Reductn		0			0			0		0	0	
Spillback Cap Reductn		0			0			0		0	0	
Storage Cap Reductn		0			0			0		0	0	
Reduced v/c Ratio		0.40			0.52			0.44		0.37	0.28	
Intersection Summary												
Area Type:	Other											
Cycle Length: 55												
Actuated Cycle Length: 55												
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green												
Natural Cycle: 50												
Control Type: Pretimed												
Maximum v/c Ratio: 0.52												
Intersection Signal Delay: 14.6						Intersection LOS: B						
Intersection Capacity Utilization 47.1%						ICU Level of Service A						
Analysis Period (min) 15												

Splits and Phases: 3: Verplanck Avenue & Fishkill Avenue



Lanes, Volumes, Timings
6: Main Street & Fishkill Avenue

2016 Build AM Peak Hour

10/26/2017

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	153	27	18	195	54	40	86	23	26	119	22
Future Volume (vph)	18	153	27	18	195	54	40	86	23	26	119	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.981			0.973			0.979			0.982	
Flt Protected		0.995			0.997			0.987			0.992	
Satd. Flow (prot)	0	1800	0	0	1817	0	0	1705	0	0	1735	0
Flt Permitted		0.953			0.970			0.889			0.943	
Satd. Flow (perm)	0	1724	0	0	1767	0	0	1536	0	0	1650	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15			24			22			18	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		265			755			728			670	
Travel Time (s)		6.0			17.2			16.5			15.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	8%	3%	0%	0%	2%	0%	0%	9%	16%	0%	9%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	23	191	34	23	244	68	50	108	29	33	149	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	248	0	0	335	0	0	187	0	0	210	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												

Lanes, Volumes, Timings
6: Main Street & Fishkill Avenue

2016 Build AM Peak Hour

10/26/2017

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	23.5	23.5		23.5	23.5		23.5	23.5		23.5	23.5	
Total Split (s)	26.0	26.0		26.0	26.0		34.0	34.0		34.0	34.0	
Total Split (%)	43.3%	43.3%		43.3%	43.3%		56.7%	56.7%		56.7%	56.7%	
Maximum Green (s)	21.5	21.5		21.5	21.5		29.5	29.5		29.5	29.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
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	
Total Lost Time (s)		4.5			4.5			4.5			4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	Max	Max		Max	Max		Max	Max		Max	Max	
Walk Time (s)							7.0	7.0		7.0	7.0	
Flash Dont Walk (s)							12.0	12.0		12.0	12.0	
Pedestrian Calls (#/hr)							0	0		0	0	
Act Effct Green (s)		21.5			21.5			29.5			29.5	
Actuated g/C Ratio		0.36			0.36			0.49			0.49	
v/c Ratio		0.40			0.52			0.24			0.26	
Control Delay		15.8			17.5			8.8			9.1	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		15.8			17.5			8.8			9.1	
LOS		B			B			A			A	
Approach Delay		15.8			17.5			8.8			9.1	
Approach LOS		B			B			A			A	
Queue Length 50th (ft)		61			85			31			37	
Queue Length 95th (ft)		97			129			55			62	
Internal Link Dist (ft)		185			675			648			590	
Turn Bay Length (ft)												
Base Capacity (vph)		627			648			766			820	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.40			0.52			0.24			0.26	
Intersection Summary												
Area Type:	Other											
Cycle Length: 60												
Actuated Cycle Length: 60												
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green												
Natural Cycle: 50												
Control Type: Pretimed												
Maximum v/c Ratio: 0.52												
Intersection Signal Delay: 13.6							Intersection LOS: B					
Intersection Capacity Utilization 38.9%							ICU Level of Service A					
Analysis Period (min) 15												

Splits and Phases: 6: Main Street & Fishkill Avenue



Intersection												
Int Delay, s/veh	2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	31	423	4	1	407	35	0	0	4	19	0	17
Future Vol, veh/h	31	423	4	1	407	35	0	0	4	19	0	17
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	38	83	83
Heavy Vehicles, %	0	2	0	0	2	0	0	0	0	0	0	0
Mvmt Flow	37	510	5	1	490	42	0	0	5	50	0	20

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	532	0	0	515	0	0	1110	1121	513	1102	1102	511
Stage 1	-	-	-	-	-	-	587	587	-	513	513	-
Stage 2	-	-	-	-	-	-	523	534	-	589	589	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1046	-	-	1061	-	-	188	208	565	191	213	567
Stage 1	-	-	-	-	-	-	499	500	-	548	539	-
Stage 2	-	-	-	-	-	-	541	528	-	498	499	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1046	-	-	1061	-	-	174	197	565	182	202	567
Mov Cap-2 Maneuver	-	-	-	-	-	-	174	197	-	182	202	-
Stage 1	-	-	-	-	-	-	474	475	-	521	538	-
Stage 2	-	-	-	-	-	-	521	527	-	469	474	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0	11.4	27.8
HCM LOS			B	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	565	1046	-	-	1061	-	-	227
HCM Lane V/C Ratio	0.009	0.036	-	-	0.001	-	-	0.31
HCM Control Delay (s)	11.4	8.6	0	-	8.4	0	-	27.8
HCM Lane LOS	B	A	A	-	A	A	-	D
HCM 95th %tile Q(veh)	0	0.1	-	-	0	-	-	1.3

Intersection						
Int Delay, s/veh	1.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	365	23	19	361	38	30
Future Vol, veh/h	365	23	19	361	38	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	7	0	10	7	8	0
Mvmt Flow	397	25	21	392	41	33

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	422
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.2
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.29
Pot Cap-1 Maneuver	-	-	1096
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1096
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	15.7
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	410	-	-	1096	-
HCM Lane V/C Ratio	0.18	-	-	0.019	-
HCM Control Delay (s)	15.7	-	-	8.3	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.7	-	-	0.1	-

Lanes, Volumes, Timings

3: Verplanck Avenue & Fishkill Avenue

2016 Build PM Peak Hour Traffic

10/26/2017

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	238	17	37	260	114	5	89	36	138	89	67
Future Volume (vph)	33	238	17	37	260	114	5	89	36	138	89	67
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.992			0.963			0.921			0.935	
Flt Protected		0.994			0.995			0.999		0.950		
Satd. Flow (prot)	0	1828	0	0	1765	0	0	1748	0	1805	1776	0
Flt Permitted		0.926			0.950			0.992		0.485		
Satd. Flow (perm)	0	1703	0	0	1685	0	0	1736	0	922	1776	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		755			673			733			700	
Travel Time (s)		17.2			15.3			20.0			19.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.25	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	3%	0%	0%	5%	0%	0%	0%	0%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	36	262	19	41	286	125	5	98	144	152	98	74
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	317	0	0	452	0	0	247	0	152	172	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		2			6			4		3	8	
Permitted Phases	2			6			4			8		
Detector Phase	2	2		6	6		4	4		3	8	
Switch Phase												

Lanes, Volumes, Timings
3: Verplanck Avenue & Fishkill Avenue

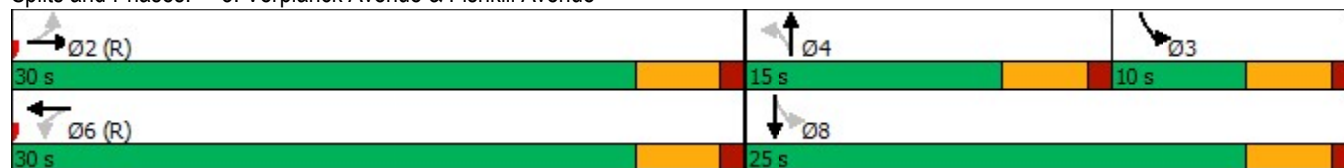
2016 Build PM Peak Hour Traffic

10/26/2017

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.5	4.0	
Minimum Split (s)	23.5	23.5		23.5	23.5		10.0	10.0		9.0	22.5	
Total Split (s)	30.0	30.0		30.0	30.0		15.0	15.0		10.0	25.0	
Total Split (%)	54.5%	54.5%		54.5%	54.5%		27.3%	27.3%		18.2%	45.5%	
Maximum Green (s)	25.5	25.5		25.5	25.5		10.5	10.5		5.5	20.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
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	
Total Lost Time (s)		4.5			4.5			4.5		4.5	4.5	
Lead/Lag							Lead	Lead		Lag		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	Max	Max		Max	Max		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0							
Flash Dont Walk (s)	12.0	12.0		12.0	12.0							
Pedestrian Calls (#/hr)	0	0		0	0							
Act Effct Green (s)		25.5			25.5			10.5		20.5	20.5	
Actuated g/C Ratio		0.46			0.46			0.19		0.37	0.37	
v/c Ratio		0.40			0.58			0.75		0.35	0.26	
Control Delay		11.7			14.5			38.0		16.2	13.3	
Queue Delay		0.0			0.0			0.0		0.0	0.0	
Total Delay		11.7			14.5			38.0		16.2	13.3	
LOS		B			B			D		B	B	
Approach Delay		11.7			14.5			38.0			14.7	
Approach LOS		B			B			D			B	
Queue Length 50th (ft)		64			101			77		33	38	
Queue Length 95th (ft)		115			178			#173		67	75	
Internal Link Dist (ft)		675			593			653			620	
Turn Bay Length (ft)												
Base Capacity (vph)		789			781			331		431	661	
Starvation Cap Reductn		0			0			0		0	0	
Spillback Cap Reductn		0			0			0		0	0	
Storage Cap Reductn		0			0			0		0	0	
Reduced v/c Ratio		0.40			0.58			0.75		0.35	0.26	
Intersection Summary												
Area Type:	Other											
Cycle Length: 55												
Actuated Cycle Length: 55												
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green												
Natural Cycle: 55												
Control Type: Pretimed												
Maximum v/c Ratio: 0.75												
Intersection Signal Delay: 18.2						Intersection LOS: B						
Intersection Capacity Utilization 55.5%						ICU Level of Service B						
Analysis Period (min) 15												

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

Splits and Phases: 3: Verplanck Avenue & Fishkill Avenue



Lanes, Volumes, Timings
6: Main Street & Teller Avenue/Fishkill Avenue

2016 Build PM Peak Hour Traffic

10/26/2017

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	171	37	29	164	95	58	162	75	30	173	36
Future Volume (vph)	30	171	37	29	164	95	58	162	75	30	173	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.979			0.955			0.966			0.980	
Flt Protected		0.994			0.995			0.990			0.994	
Satd. Flow (prot)	0	1827	0	0	1781	0	0	1797	0	0	1781	0
Flt Permitted		0.930			0.949			0.896			0.935	
Satd. Flow (perm)	0	1709	0	0	1698	0	0	1627	0	0	1675	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17			46			40			21	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		265			755			728			670	
Travel Time (s)		6.0			17.2			16.5			15.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	1%	0%	8%	1%	0%	0%	2%	0%	0%	5%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	34	192	42	33	184	107	65	182	84	34	194	40
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	268	0	0	324	0	0	331	0	0	268	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												

Lanes, Volumes, Timings
6: Main Street & Teller Avenue/Fishkill Avenue

2016 Build PM Peak Hour Traffic

10/26/2017

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	23.5	23.5		23.5	23.5		23.5	23.5		23.5	23.5	
Total Split (s)	26.0	26.0		26.0	26.0		34.0	34.0		34.0	34.0	
Total Split (%)	43.3%	43.3%		43.3%	43.3%		56.7%	56.7%		56.7%	56.7%	
Maximum Green (s)	21.5	21.5		21.5	21.5		29.5	29.5		29.5	29.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
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	
Total Lost Time (s)		4.5			4.5			4.5			4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	Max	Max		Max	Max		Max	Max		Max	Max	
Walk Time (s)							7.0	7.0		7.0	7.0	
Flash Dont Walk (s)							12.0	12.0		12.0	12.0	
Pedestrian Calls (#/hr)							0	0		0	0	
Act Effct Green (s)		21.5			21.5			29.5			29.5	
Actuated g/C Ratio		0.36			0.36			0.49			0.49	
v/c Ratio		0.43			0.51			0.40			0.32	
Control Delay		16.3			16.2			10.2			9.8	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		16.3			16.2			10.2			9.8	
LOS		B			B			B			A	
Approach Delay		16.3			16.2			10.2			9.8	
Approach LOS		B			B			B			A	
Queue Length 50th (ft)		67			75			60			49	
Queue Length 95th (ft)		122			139			111			91	
Internal Link Dist (ft)		185			675			648			590	
Turn Bay Length (ft)												
Base Capacity (vph)		623			637			820			834	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.43			0.51			0.40			0.32	
Intersection Summary												
Area Type:	Other											
Cycle Length: 60												
Actuated Cycle Length: 60												
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green												
Natural Cycle: 50												
Control Type: Pretimed												
Maximum v/c Ratio: 0.51												
Intersection Signal Delay: 13.1							Intersection LOS: B					
Intersection Capacity Utilization 53.2%							ICU Level of Service A					
Analysis Period (min) 15												

Splits and Phases: 6: Main Street & Teller Avenue/Fishkill Avenue



Intersection												
Int Delay, s/veh	1.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	14	457	5	5	514	12	3	0	10	19	0	28
Future Vol, veh/h	14	457	5	5	514	12	3	0	10	19	0	28
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	2	0	0	2	0	0	0	0	0	0	0
Mvmt Flow	15	491	5	5	553	13	3	0	11	20	0	30

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	566	0	0	496	0	0	1109	1100	494	1099	1096	560
Stage 1	-	-	-	-	-	-	524	524	-	570	570	-
Stage 2	-	-	-	-	-	-	585	576	-	529	526	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1016	-	-	1078	-	-	189	214	579	192	215	532
Stage 1	-	-	-	-	-	-	540	533	-	510	509	-
Stage 2	-	-	-	-	-	-	501	505	-	537	532	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1016	-	-	1078	-	-	175	208	579	185	209	532
Mov Cap-2 Maneuver	-	-	-	-	-	-	175	208	-	185	209	-
Stage 1	-	-	-	-	-	-	529	522	-	500	505	-
Stage 2	-	-	-	-	-	-	469	501	-	516	521	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.1	14.9	19.2
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	378	1016	-	-	1078	-	-	303
HCM Lane V/C Ratio	0.037	0.015	-	-	0.005	-	-	0.167
HCM Control Delay (s)	14.9	8.6	0	-	8.4	0	-	19.2
HCM Lane LOS	B	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.6

Intersection						
Int Delay, s/veh	1.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	408	43	32	465	39	26
Future Vol, veh/h	408	43	32	465	39	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	0	8	2	0	8
Mvmt Flow	453	48	36	517	43	29

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	501	0	1066	477
Stage 1	-	-	-	-	477	-
Stage 2	-	-	-	-	589	-
Critical Hdwy	-	-	4.18	-	6.4	6.28
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.272	-	3.5	3.372
Pot Cap-1 Maneuver	-	-	1033	-	248	576
Stage 1	-	-	-	-	629	-
Stage 2	-	-	-	-	558	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1033	-	236	576
Mov Cap-2 Maneuver	-	-	-	-	236	-
Stage 1	-	-	-	-	598	-
Stage 2	-	-	-	-	558	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	20.2
HCM LOS			C

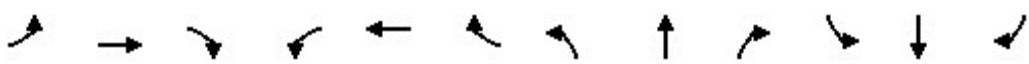
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	309	-	-	1033	-
HCM Lane V/C Ratio	0.234	-	-	0.034	-
HCM Control Delay (s)	20.2	-	-	8.6	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.9	-	-	0.1	-

Lanes, Volumes, Timings

3: Verplanck Avenue & Fishkill Avenue

2016 Build SAT Peak Hour

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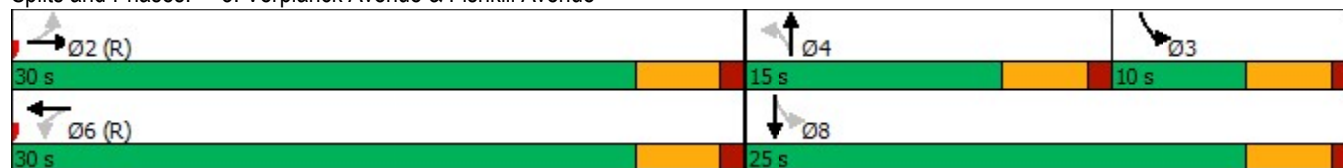
												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	48	253	8	11	312	146	5	75	8	167	96	81
Future Volume (vph)	48	253	8	11	312	146	5	75	8	167	96	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.997			0.958			0.990			0.931	
Flt Protected		0.992			0.999			0.991		0.950		
Satd. Flow (prot)	0	1879	0	0	1818	0	0	1864	0	1805	1769	0
Flt Permitted		0.888			0.991			0.914		0.764		
Satd. Flow (perm)	0	1682	0	0	1804	0	0	1719	0	1452	1769	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		755			673			733			700	
Travel Time (s)		17.2			15.3			20.0			19.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.25	0.97	0.97	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	49	261	8	11	322	151	20	77	8	172	99	84
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	318	0	0	484	0	0	105	0	172	183	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		2			6			4		3	8	
Permitted Phases	2			6			4			8		
Detector Phase	2	2		6	6		4	4		3	8	
Switch Phase												

Lanes, Volumes, Timings
3: Verplanck Avenue & Fishkill Avenue

2016 Build SAT Peak Hour
10/26/2017

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.5	4.0	
Minimum Split (s)	23.5	23.5		23.5	23.5		10.0	10.0		9.0	22.5	
Total Split (s)	30.0	30.0		30.0	30.0		15.0	15.0		10.0	25.0	
Total Split (%)	54.5%	54.5%		54.5%	54.5%		27.3%	27.3%		18.2%	45.5%	
Maximum Green (s)	25.5	25.5		25.5	25.5		10.5	10.5		5.5	20.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
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	
Total Lost Time (s)		4.5			4.5			4.5		4.5	4.5	
Lead/Lag							Lead	Lead		Lag		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	Max	Max		Max	Max		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0							
Flash Dont Walk (s)	12.0	12.0		12.0	12.0							
Pedestrian Calls (#/hr)	0	0		0	0							
Act Effct Green (s)		25.5			25.5			10.5		20.5	20.5	
Actuated g/C Ratio		0.46			0.46			0.19		0.37	0.37	
v/c Ratio		0.41			0.58			0.32		0.30	0.28	
Control Delay		11.8			14.3			22.4		14.1	13.5	
Queue Delay		0.0			0.0			0.0		0.0	0.0	
Total Delay		11.8			14.3			22.4		14.1	13.5	
LOS		B			B			C		B	B	
Approach Delay		11.8			14.3			22.4			13.8	
Approach LOS		B			B			C			B	
Queue Length 50th (ft)		64			108			30		38	40	
Queue Length 95th (ft)		116			186			66		75	79	
Internal Link Dist (ft)		675			593			653			620	
Turn Bay Length (ft)												
Base Capacity (vph)		779			836			328		576	659	
Starvation Cap Reductn		0			0			0		0	0	
Spillback Cap Reductn		0			0			0		0	0	
Storage Cap Reductn		0			0			0		0	0	
Reduced v/c Ratio		0.41			0.58			0.32		0.30	0.28	
Intersection Summary												
Area Type:	Other											
Cycle Length: 55												
Actuated Cycle Length: 55												
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green												
Natural Cycle: 50												
Control Type: Pretimed												
Maximum v/c Ratio: 0.58												
Intersection Signal Delay: 14.2						Intersection LOS: B						
Intersection Capacity Utilization 62.8%						ICU Level of Service B						
Analysis Period (min) 15												

Splits and Phases: 3: Verplanck Avenue & Fishkill Avenue



Lanes, Volumes, Timings
6: Main Street & Teller Avenue/Fishkill Avenue

2016 Build SAT Peak Hour

10/26/2017

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	149	45	47	181	124	97	179	41	55	183	114
Future Volume (vph)	42	149	45	47	181	124	97	179	41	55	183	114
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.974			0.952			0.983			0.956	
Flt Protected		0.991			0.993			0.985			0.992	
Satd. Flow (prot)	0	1822	0	0	1777	0	0	1634	0	0	1613	0
Flt Permitted		0.904			0.931			0.809			0.907	
Satd. Flow (perm)	0	1662	0	0	1666	0	0	1342	0	0	1475	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		22			51			18			56	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		265			755			728			670	
Travel Time (s)		6.0			17.2			16.5			15.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	1%	0%	8%	0%	0%	0%	1%	6%	0%	1%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)								0			0	
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	44	157	47	49	191	131	102	188	43	58	193	120
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	248	0	0	371	0	0	333	0	0	371	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.14	1.00	1.00	1.14	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												

Lanes, Volumes, Timings
6: Main Street & Teller Avenue/Fishkill Avenue

2016 Build SAT Peak Hour

10/26/2017

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	23.5	23.5		23.5	23.5		23.5	23.5		23.5	23.5	
Total Split (s)	26.0	26.0		26.0	26.0		34.0	34.0		34.0	34.0	
Total Split (%)	43.3%	43.3%		43.3%	43.3%		56.7%	56.7%		56.7%	56.7%	
Maximum Green (s)	21.5	21.5		21.5	21.5		29.5	29.5		29.5	29.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
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	
Total Lost Time (s)		4.5			4.5			4.5			4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	Max	Max		Max	Max		Max	Max		Max	Max	
Walk Time (s)							7.0	7.0		7.0	7.0	
Flash Dont Walk (s)							12.0	12.0		12.0	12.0	
Pedestrian Calls (#/hr)							0	0		0	0	
Act Effct Green (s)		21.5			21.5			29.5			29.5	
Actuated g/C Ratio		0.36			0.36			0.49			0.49	
v/c Ratio		0.41			0.59			0.50			0.49	
Control Delay		15.6			18.0			12.9			11.3	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		15.6			18.0			12.9			11.3	
LOS		B			B			B			B	
Approach Delay		15.6			18.0			12.9			11.3	
Approach LOS		B			B			B			B	
Queue Length 50th (ft)		59			90			71			69	
Queue Length 95th (ft)		113			167			134			132	
Internal Link Dist (ft)		185			675			648			590	
Turn Bay Length (ft)												
Base Capacity (vph)		609			629			668			753	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.41			0.59			0.50			0.49	
Intersection Summary												
Area Type:	Other											
Cycle Length: 60												
Actuated Cycle Length: 60												
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green												
Natural Cycle: 50												
Control Type: Pretimed												
Maximum v/c Ratio: 0.59												
Intersection Signal Delay: 14.4							Intersection LOS: B					
Intersection Capacity Utilization 62.9%							ICU Level of Service B					
Analysis Period (min) 15												

Splits and Phases: 6: Main Street & Teller Avenue/Fishkill Avenue



Intersection												
Int Delay, s/veh	1.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	21	474	4	6	572	16	1	0	0	19	0	21
Future Vol, veh/h	21	474	4	6	572	16	1	0	0	19	0	21
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	2	0	0	2	0	0	0	0	0	0	0
Mvmt Flow	23	510	4	6	615	17	1	0	0	20	0	23

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	632	0	0	514	0	0	1205	1202	512	1194	1196	624
Stage 1	-	-	-	-	-	-	558	558	-	636	636	-
Stage 2	-	-	-	-	-	-	647	644	-	558	560	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	960	-	-	1062	-	-	162	186	566	165	188	489
Stage 1	-	-	-	-	-	-	518	515	-	469	475	-
Stage 2	-	-	-	-	-	-	463	471	-	518	514	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	960	-	-	1062	-	-	150	178	566	160	180	489
Mov Cap-2 Maneuver	-	-	-	-	-	-	150	178	-	160	180	-
Stage 1	-	-	-	-	-	-	500	497	-	453	471	-
Stage 2	-	-	-	-	-	-	438	467	-	500	497	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0.1	29.2	22.6
HCM LOS			D	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	150	960	-	-	1062	-	-	247
HCM Lane V/C Ratio	0.007	0.024	-	-	0.006	-	-	0.174
HCM Control Delay (s)	29.2	8.8	0	-	8.4	0	-	22.6
HCM Lane LOS	D	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0	0.1	-	-	0	-	-	0.6

Intersection						
Int Delay, s/veh	2.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	460	45	27	536	61	27
Future Vol, veh/h	460	45	27	536	61	27
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	1	0	10	1	0	14
Mvmt Flow	517	51	30	602	69	30

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	568	0	1205	543
Stage 1	-	-	-	-	543	-
Stage 2	-	-	-	-	662	-
Critical Hdwy	-	-	4.2	-	6.4	6.34
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.29	-	3.5	3.426
Pot Cap-1 Maneuver	-	-	966	-	205	517
Stage 1	-	-	-	-	586	-
Stage 2	-	-	-	-	517	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	966	-	195	517
Mov Cap-2 Maneuver	-	-	-	-	195	-
Stage 1	-	-	-	-	558	-
Stage 2	-	-	-	-	517	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	30
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	241	-	-	966	-
HCM Lane V/C Ratio	0.41	-	-	0.031	-
HCM Control Delay (s)	30	-	-	8.8	0
HCM Lane LOS	D	-	-	A	A
HCM 95th %tile Q(veh)	1.9	-	-	0.1	-

APPENDIX C

TRAFFIC COUNTS