November, 2017

City of Milford

TRAFFIC AND PARKING STUDY

Transit Oriented Development

Milford Train Station
Milford, CT

PREPARED BY:
BL Companies
355 Research Parkway
Meriden, CT 06450

BL Companies

CONTENTS

ILLUSTRATIONS

TABLES

APPENDIX

EXECUTIVE SUMMARY

The City of Milford has proposed a transit oriented development (TOD) along Railroad Avenue between High Street and River Street in close proximity to the Milford Metro-North Train Station. Two different mixed-use development options were considered as outlined below:

Low Density Mixed Use:

- 13,000 SF Retail/Restaurant
- 24 Apartments
- 24 Townhomes
- 100 Space Parking Structure

High Density Mixed Use:

- 22,800 SF Retail/Restaurant
- 84 Apartments
- 33 Townhomes
- 352 Space Parking Structure

This study investigated the potential traffic impacts of the proposed development during the weekday morning and weekday afternoon traffic periods. Weekday morning and afternoon peak hour traffic volumes were obtained at the key intersections during October 2016. The existing traffic volumes were grown to a 20-year horizon by a generalized growth factor, representative of non-area wide specific growth and develop No-Build traffic volumes, which served as the basis for evaluation of traffic impacts of the proposed development options.

The number of trips generated by each development proposal was estimated using ITE Trip Generation Manual 9th Edition. It is assumed that the parking structures will be used by commuters in the area, accessing the Metro-North train station. Adjusting for internal trips, and transit usage, it is projected that the low-density development option will generate approximately 152 trips in the AM peak hour and approximately 156 trips in the PM peak hour. The high-density development option will generate approximately 229 trips in the AM peak hour and 240 trips in the PM peak hour.

A detailed traffic analysis was conducted at the intersections and roadways in the general vicinity of the train station in accordance with methodologies outlined in the Highway Capacity Manual

2010, published by the Transportation Research Board and the results indicated that current overall traffic operating conditions are acceptable except at the intersection of River Street/Factory Lane and New Haven Avenue, where congested conditions exist, especially at the PM peak hour. A significant number of fixed object crashes (10 total) occurred at the Amtrak/Metro-North Railroad Overpass over the three- year period 2014-2017. These crashes resulted from trucks hitting the overpass, due to low vertical clearance. Most of the crashes that occurred within the study area were from collisions from vehicles maneuvering to park. There were four pedestrian crashes within the study area.

In the future No-Build conditions traffic operations are projected to remain same or deteriorate to some degree. With the proposed development proposals, traffic operating conditions are expected to deteriorate further, especially for the high-density development proposal.

Based on the traffic assessment and prior studies of the area roadways, specific improvements were proposed to improve circulation and traffic operations in the Downtown area. These include:

- Conversion of Railroad Avenue North, High Street (between North and South Broad Street), River Street (between Daniel Street and Broad Street), Daniel Street and New Haven Avenue (between Daniel Street and River Street) to two-way streets.
- Traffic signal improvements at River Street/Factory Lane and New Haven Avenue (CT Route 162)
- New traffic signals at the intersections of North Broad Street (CT Route 162) and High Street, New Haven Avenue and Daniel Street
- Co-ordination of traffic signals along CT Route 162 between the intersections of River Street, Daniel Street and Prospect Street
- All-Way STOP control at the intersection of River Street and Railroad Avenue North
- Elimination of on-street parking along River Street from Railroad Avenue to New Haven Avenue

The additional traffic generated by the development proposals in each case is anticipated to be accommodated safely by the area roadway system, with the above improvements in place. However, the southbound through movement at the intersection of Factory Lane and River

Street/New Haven Avenue is anticipated to experience congested conditions (Level of Service E) during both AM and PM peak hours.

To promote multimodal transportation and walking in the downtown area, pedestrian accommodation improvements are recommended. Recommended improvements include accessible pedestrian signals, countdown timers, and American for Disabilities Act compliant sidewalks will improve.

A detailed parking study indicated that the surface lots in and around the train station operate at or over capacity, especially during commuter peak periods. On-street parking was observed to be heavily utilized. However, it was also observed that commuter usage of on-street parking around the train station is prevalent resulting in lack of parking for customers of businesses, located in the Downtown area.

ITE Parking Generation Manual 4th Edition was utilized to project future peak-hour parking demand for the low-density and high-density development proposals. The projections indicated that the parking demand for the low-density proposal cannot be accommodated by the proposed parking garage and the existing parking supply (both on and off-street). However, the parking demand for the high-density proposal is anticipated to be accommodated by a combination of the new parking structure and existing on and off-site parking spaces.

I. INTRODUCTION

The City of Milford has proposed a transit oriented development (TOD) along Railroad Avenue between High Street and River Street in the vicinity of the Metro-North Train Station. The study area is within downtown Milford which consists of various land uses such as numerous government buildings, churches, schools, restaurants, bars, small retail, banks, and medical offices. See Figure 1 for a location map.

Two mixed use development options were considered as outlined below:

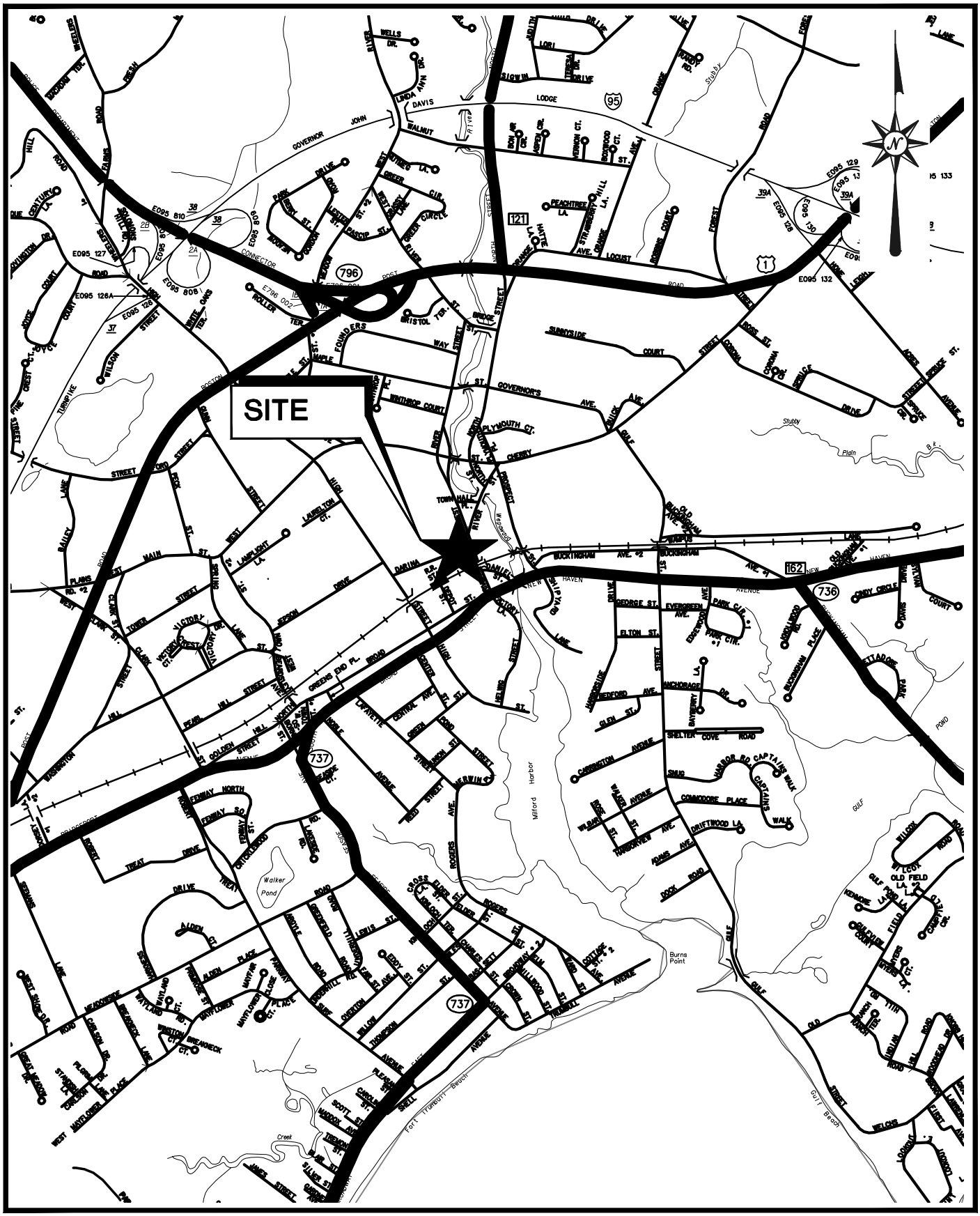
Low Density:

- 13,000 SF Retail/Restaurant
- 24 Apartments
- 24 Townhomes
- 100 Space Parking Structure

High Density:

- 22,800 SF Retail/Restaurant
- 84 Apartments
- 33 Townhomes
- 352 Space Parking Structure

The study investigated the change potential traffic impacts associated with the TOD in the weekday morning and afternoon peak periods.



LOCATION MAP
TRANSIT ORIENTED DEVELOPMENT
MILFORD, CT

SCHEMATIC, NOT TO SCALE

FIGURE 1

CAD File: TLOC16C586701.dwg

II. EXISTING CONDITIONS

An investigation of the existing traffic and parking conditions on the adjacent roadway network and existing parking lots formed the basis for assessing any traffic issues associated with the proposed development. This investigation included a field reconnaissance, traffic counting, parking surveys, and research of pertinent planning and traffic data available with Connecticut Department of Transportation (CTDOT) and the City of Milford.

Access Network

Major roadways in the vicinity of the project include CT Route 162 (South Broad Street) and River Street.

CT Route 162 (South Broad Street/ New Haven Avenue) is a minor arterial that originates at an intersection with US Route 1 (Boston Post Road/Bridgeport Avenue) in Milford and extends easterly to an intersection with US Route 1 (Boston Post Road) in Orange. In the vicinity of the project, CT Route 162 has two travel lanes in the eastbound direction and allows for parallel parking on both sides. The speed limit is 25 mph and the average daily traffic, provided by CTDOT in 2012, for Broad Street is approximately 10,900 vehicles per day within in the study area. The road provides access to residential neighborhoods and major retail.

North Broad Street is a collector, that extends from the intersection of Golden Hill Street and Osborne Street east to the intersection of North Broad Street, Factory Lane, River Street, and New Haven Avenue. North Broad Street is one way westbound with one travel lane from Greens End Place to its terminus There is parallel parking on one side of the street. In the vicinity of the project, the speed limit is 25 mph and the average daily traffic, provided by CTDOT in 2012, for North Broad Street is approximately 10,700 vehicles per day within the study area. North Broad Street runs parallel with CT Route 162 and provides access to residential neighborhoods.

High Street is a minor arterial, that extends from the Milford waterfront to the intersection of Wheelers Farm Road and Oronoque Road. It provides access to US Route 1 (Boston Post Road) and a residential neighborhood. The street is one way southbound between North Broad

Street and South Broad Street. In the vicinity of the project, the speed limit is 25 mph and the average daily traffic, provided by CTDOT in 2012, for High Street is approximately 4,100 vehicles per day in the study area.

River Street is a minor arterial that extends from the intersection of North Broad Street, South Broad Street, Factory Lane, and New Haven Avenue. The street is one way southbound from the intersection with Daniel Street and Railroad Avenue South to the intersection of North Broad Street, South Broad Street, Factory Lane, and New Haven Avenue. The speed limit is 25 mph within the project vicinity and the average daily traffic, provided by CTDOT in 2012, for River Street is approximately 9,400 vehicles per day within the study area. It provides access to residential neighborhoods and major retail. Parallel parking is allowed on one side of the street.

Daniel Street is a minor arterial that is one way westbound for its entire length. The street originates at the intersection with CT Route 162 (New Haven Avenue) and terminates at the intersection of Railroad Avenue South and River Street. The street provides access to numerous bars and restaurants. The speed limit is 25 mph and the average daily traffic, provided by CTDOT in 2012, for Daniel Street is approximately 9,500 vehicles per day.

Factory Lane is a local street that originates at the Milford waterfront as Helwig Street and terminates at the intersection with North Broad Street, South Broad Street, New Haven Avenue, and River Street. The street provides access to a marina and several office buildings. The speed limit is 25 mph.

Railroad Avenue North is a local street that originates at High Street and terminates at River Street. The street is one way eastbound for its entire length and parallel parking is allowed on one side. The street provides direct access to the Milford Train Station.

Railroad Avenue South is a local street that originates at River Street and terminates at River Street. The street is one way westbound for its entire length and there is 45° and 90° parking spots along both sides of the street. The street provides direct access to the Milford Train Station.

Intersection Characteristics

Several key intersections were reviewed in this study to determine if they would be impacted by the expected site traffic volumes. They are as follows:

- **CT Route 162 (South Broad Street) at High Street –** At this signalized intersection, the CT Route 162 eastbound approach consists of a through lane and shared through/right turn lane. The High Street southbound approach consists of a left-turn lane and a through lane. The High Street northbound approach consists of one lane that is restricted to making the right turn onto South Broad Street. The three-phase traffic signal includes permitted phasing for both South Broad Street and High Street. There is an exclusive pedestrian phase.

- **CT Route 162 (South Broad Street/New Haven Avenue) at River Street and Factory Lane -** This signalized intersection has a left turn lane that allows for a U-turn onto North Broad Street, a through lane and a shared through/right-turn lane for the eastbound South Broad Street approach. The northbound Factory Lane approach has a shared left/right turn lane. River Street southbound has an exclusive left-turn, through, and right-turn lane. There are four phases with phase 2 permitting the South Broad Street approach and overlapping with the River Street right turn. The Factory Lane approach is protected and permitted and the River Street approach is permitted. There is an exclusive pedestrian phase.

- **CT Route 162 (New Haven Avenue) at Daniel Street** – This intersection is controlled by a YIELD sign on the westbound New Haven Avenue left turn onto Daniel Street. The westbound New Haven Avenue approach also has a through lane. The only permitted turn on eastbound New Haven Avenue is the right turn onto Daniel Street.

- **River Street at Daniel Street and Railroad Avenue South** – This intersection is controlled by a STOP sign on the Daniel Street approach. The Daniel Street approach has an exclusive left-turn lane and a shared through/right turn lane. River Street has a shared left/through lane and a shared through/right-turn lane.

- **River Street at Railroad Avenue North**– This intersection is controlled by a STOP sign on the Railroad Avenue North approach. The northbound River Street approach has a shared left-turn/through lane. The southbound River Street approach has a through lane and a shared through/right-turn lane. The Railroad Avenue North approach has a shared left/right-turn lane.

- **High Street at Railroad Avenue North** – This intersection is not controlled and consists of a shared left/through/right-turn lane on both High Street approaches.

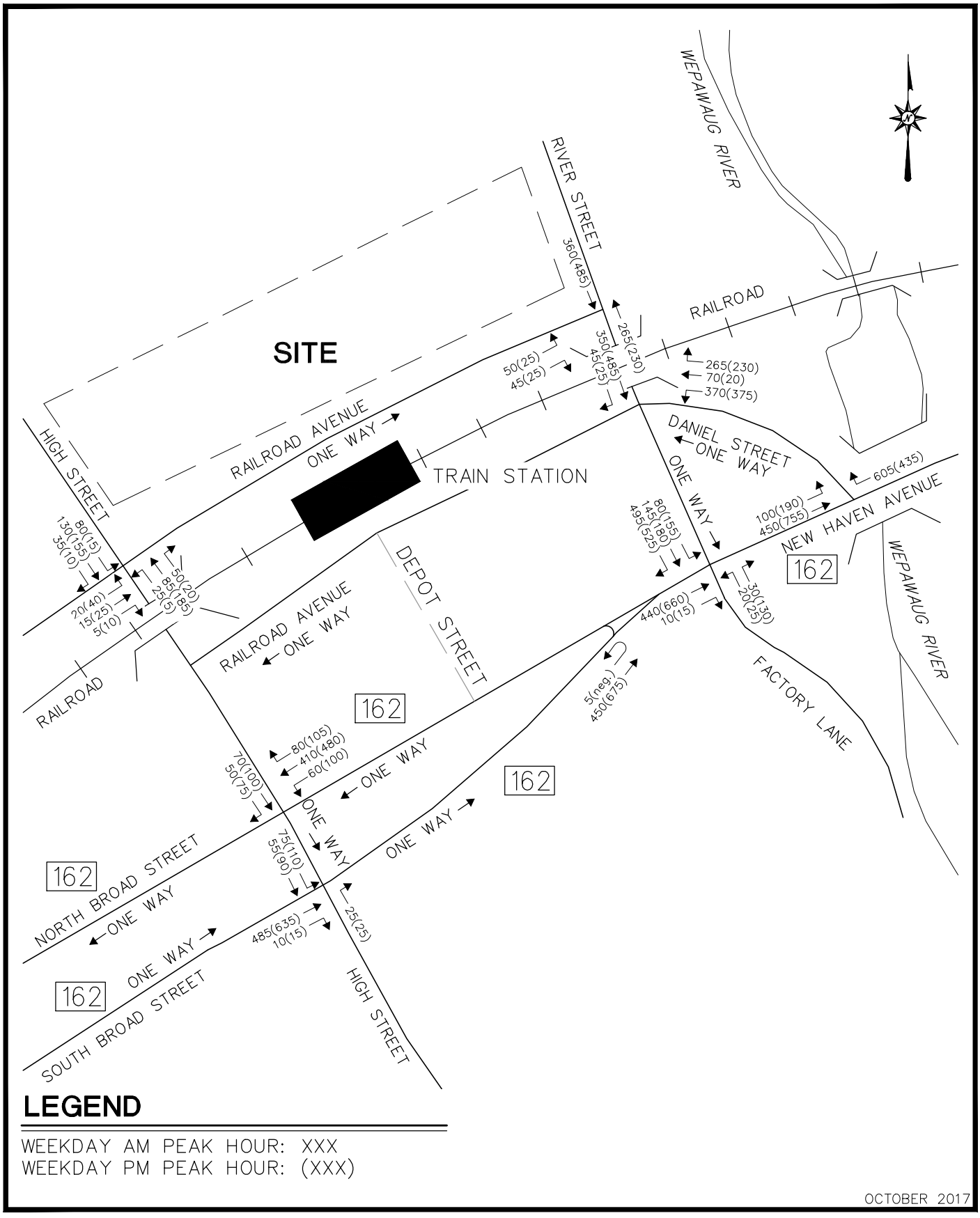
- **High Street at North Broad Street –** This is intersection is stop controlled on the High Street southbound approach. There is a shared left/through lane on the High Street approach and a shared through/right-turn lane on the North Broad Street approach.

Existing Traffic Volumes

Weekday morning and afternoon peak hour traffic volumes were obtained at the key intersections described above in October 2016. The current peak hour traffic volumes for the intersections are illustrated in Figure 2.

Existing Parking Lot Utilization

Data was collected in October 2016 for parking space utilization at the locations shown in Figure 3 during the morning (9:00 am – 10:30 am) and afternoon (6:00 pm – 7:30 pm) periods. An illustration of the parking lots analyzed is on Figure 3. A breakdown of the parking lot utilization rates are provided below in Table 1.



LEGEND

WEEKDAY AM PEAK HOUR: XXX
WEEKDAY PM PEAK HOUR: (XXX)

OCTOBER 2017

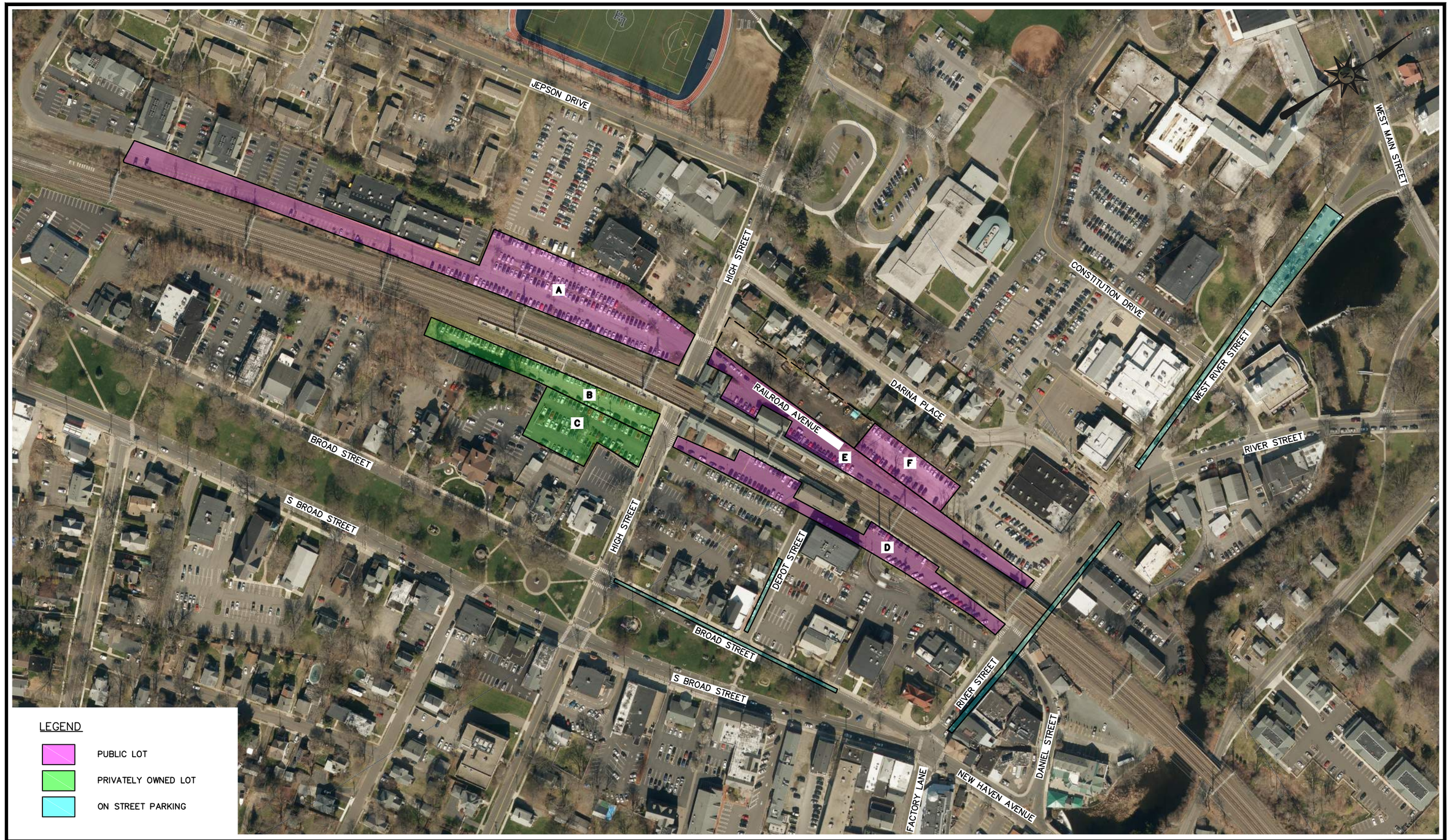
BL Companies

EXISTING (2016) TRAFFIC VOLUMES
TRANSIT ORIENTED DEVELOPMENT
MILFORD, CONNECTICUT

SCHEMATIC, NOT TO SCALE

FIGURE 2

CAD File: TFL016C586701.dwg



BL Companies
ARCHITECTURE
ENGINEERING
ENVIRONMENTAL
LAND SURVEYING

355 Research Parkway
Meriden, CT 06450
(203) 630-1406
(203) 630-2615 Fax

PARKING STUDY LOCATIONS

SIX OFF STREET LOTS AND ON
N. BROAD STREET/DEPOT STREET AND RIVER STREET
MILFORD, CT

Designed	M.S.
Drawn	C.L.M.
Checked	
Approved	
Scale	1"=200'
Project No.	16C5867
Date	11/08/16
CAD File	TLOC16C586702

FIGURE 3

XREF (s):

Table 1
Parking Lot Utilization

	Total # of Spaces	Spaces Used		Utilization (%)	
		AM Peak	PM Peak	AM Peak	PM Peak
Lot #3 "A" Surface Lot	252	193	104	77%	41%
B&W Parking "B" Surface Lot[2]	82	82	57	100%	70%
B&B Parking "C" Surface Lot[2]	110	72	48	65%	44%
"D" Surface Lot	65	65	68+10[1]	100%	120%
"E" Surface Lot	54	47	39	87%	72%
"F" Surface Lot	112	57	38	51%	34%

[1] 10 Vehicles were double parked

[2] Privately Owned Lot

It is evident from observations that Surface Lot “D” experiences capacity-constrained conditions in the PM Peak Hour, due to people picking up exiting riders from the train. The B&W Parking “B” Surface Lot and “E” Surface Lot also experience high levels of usage and are at or near capacity. The high usage of these lots causes spill over to nearby parking lots and to on-street parking, which limits the amount of stalls available for nearby businesses.

Crash Experience

Data from the UCONN Crash Data Repository was compiled for the study area for the years 2014-2017. A crash detail of each location is provided in Figures CD-1 to CD-6 and a breakdown by collision type are attached in the Appendix under Collision Data. A breakdown of the intersections and corridors by collision number and severity are below in Table 5 and 6, respectively. Throughout the study area, there were no fatalities.

Table 2
Collision Summary – Intersections[1]

	Injury	Property Damage Only
High Street @ Railroad Avenue South	0 (0%)	3 (100%)
High Street @ Broad Street	1 (10%)	9 (90%)
CT Route 162 (Broad Street/South Broad Street/New Haven Avenue) @ Factory Lane and River Street	2 (25%)	6 (75%)
Daniel Street @ New Haven Avenue	1 (14%)	6 (86%)
River Street @ Railroad Avenue South/Daniel Street	0 (0%)	11 (100%)
River Street @ Railroad Avenue North	3 (30%)	7 (70%)

[1]Within 100' of the intersection approach
Reference: UCONN Crash Data Repository

Table 3
Collision Summary – Corridors[1]

	Injury	Property Damage Only
CT Route 162 EB (South Broad Street) – from High Street to River Street	3 (33%)	6 (67%)
CT Route 162 WB (Broad Street) – from High Street to River Street	3 (50%)	3 (50%)
High Street – from Railroad Avenue North to CT Route 162 (South Broad Street)	0 (0%)	0 (0%)
River Street – from Railroad Avenue North to CT Route 162 (South Broad Street/New Haven Avenue/Broad Street)	0 (0%)	2 (100%)
Daniel Street – from River Street to CT Route 162 (New Haven Avenue)	0 (0%)	3 (100%)
Railroad Avenue North & Railroad Avenue South	0 (0%)	0 (0%)

[1]Beyond 100' of an intersection approach
Reference: UCONN Crash Data Repository

A high number of fixed object crashes (10 total) occurred at the Amtrak/Metro-North Railroad Overpass from trucks/buses hitting the structure. Most of the crashes that occurred within the corridors were due to collisions resulting from vehicles maneuvering to park. There were four pedestrian crashes within the study area.

Mass Transit

Multiple modes of mass transit are available for access in the study area. The most prominent being the Metro-North train station, which provides access to New York City and New Haven with additional connections to Amtrak and the Shore Line East from New Haven.

There is also access to bus service, operated by the Milford Transit Disctrict, at the train station with local access to the surrounding neighborhoods and local shopping centers located on US Route 1 (Boston Post Road). The Coastal Link, which is operated by Greater Bridgeport Transit, provides access to points south of Milford, with access to Stratford, Bridgeport, Fairfield, and Norwalk.

III. PROJECTED TRAFFIC CONDITIONS

For the purpose of this study, the proposed development is assumed to be built by the year 2038. A future growth rate of 0.5% per year for 20 years was used to project traffic volumes to establish No-Build or background conditions.

Horizon Year Traffic Volumes

As per CTDOT guidelines and generally accepted transportation planning practice, the existing Traffic Volumes were projected out for 20 years to 2038, at the rate of 0.5% per year, amounting to an overall growth of 10%.

No Build Traffic Volumes

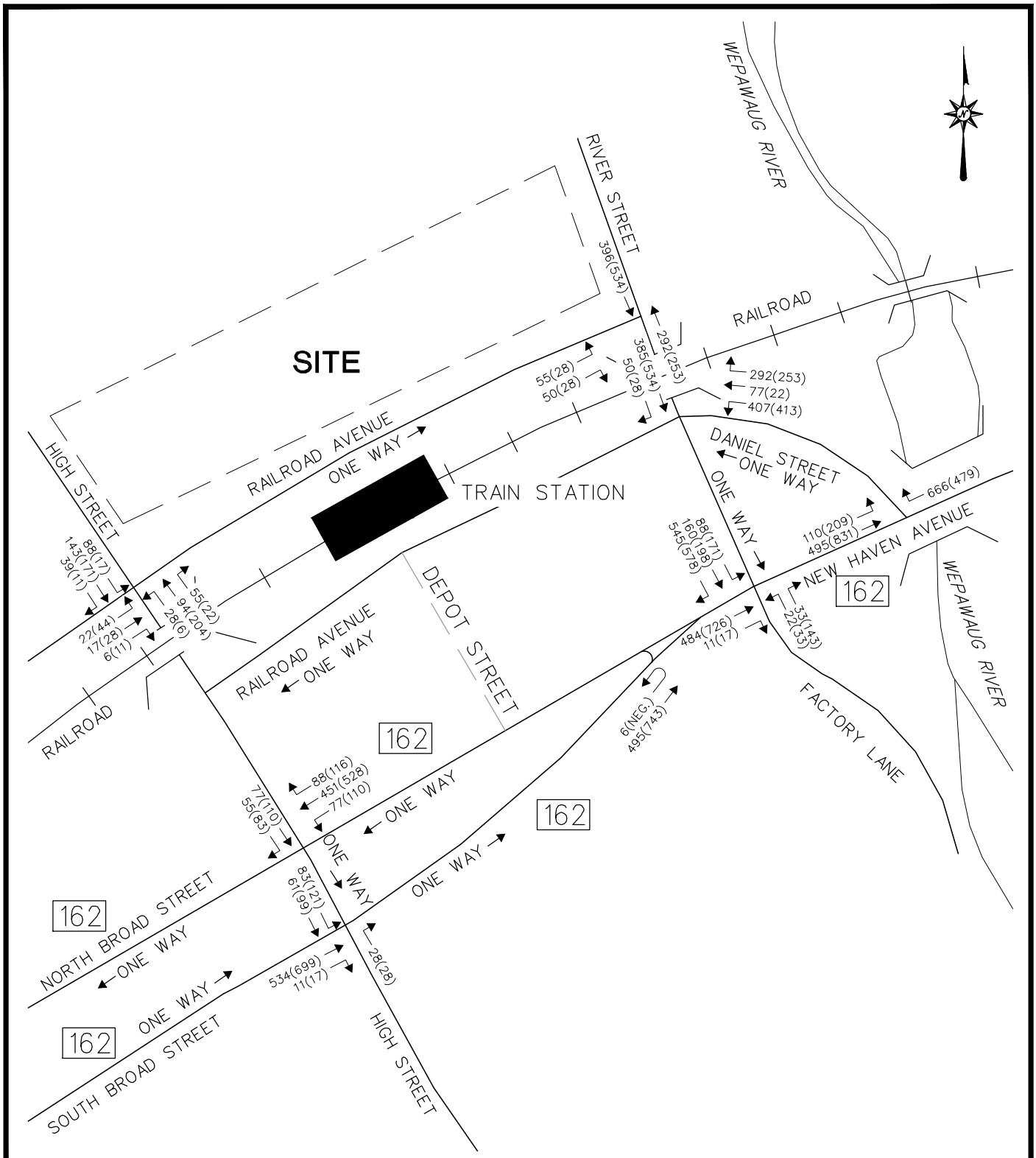
The Horizon Year Traffic Volumes were added to the Existing Traffic Volumes to determine the No Build Traffic Volumes. Figure 4 graphically illustrates the No Build Traffic Volumes.

Redistributed No Build Traffic Volumes

The No Build Traffic Volumes were reassigned based on new traffic circulation patterns designed to help improve traffic operations on New Haven Avenue, Daniel Street, High Street, and River Street. Most of these patterns were based on the report produced by the Yale Urban Design Workshop titled “Milford Downtown Plan” and dated December 3, 2012. These roadway improvements are anticipated to occur before the proposed development is operational.

The patterns were redistributed based on existing traffic patterns with the following being converted from one-way to two-way streets:

- Railroad Avenue North
- High Street between North and South Broad Street
- River Street between Daniel Street and Broad Street
- Daniel Street
- New Haven Avenue between Daniel Street and River Street



LEGEND

WEEKDAY AM PEAK HOUR: XXX
WEEKDAY PM PEAK HOUR: (XXX)

OCTOBER 2017

BL Companies

NO BUILD (2038) TRAFFIC VOLUMES
TRANSIT ORIENTED DEVELOPMENT
MILFORD, CONNECTICUT

SCHEMATIC, NOT TO SCALE

FIGURE 4

CAD File: TFL016C586701.dwg

Traffic from points west would be more likely to use High Street and Railroad Avenue North to enter the train station with two-way operation occurring on those streets. Traffic volumes were also redistributed to reflect the changes in the circulation around the River Street, CT Route 162, and Daniel Street area. Traffic moving away from the train station towards points east on CT Route 162 were distributed predominantly onto Daniel Street

Figure 5 shows the Redistributed No Build Traffic Volumes.

Trip Generation

As currently envisioned the proposed TOD will consist of the three different land use types (retail, restaurant, and residential). Two different development proposals were evaluated:

Low Density:

- 13,000 SF Retail/Restaurant
- 24 Apartments
- 24 Townhomes
- 100 Space Parking Structure

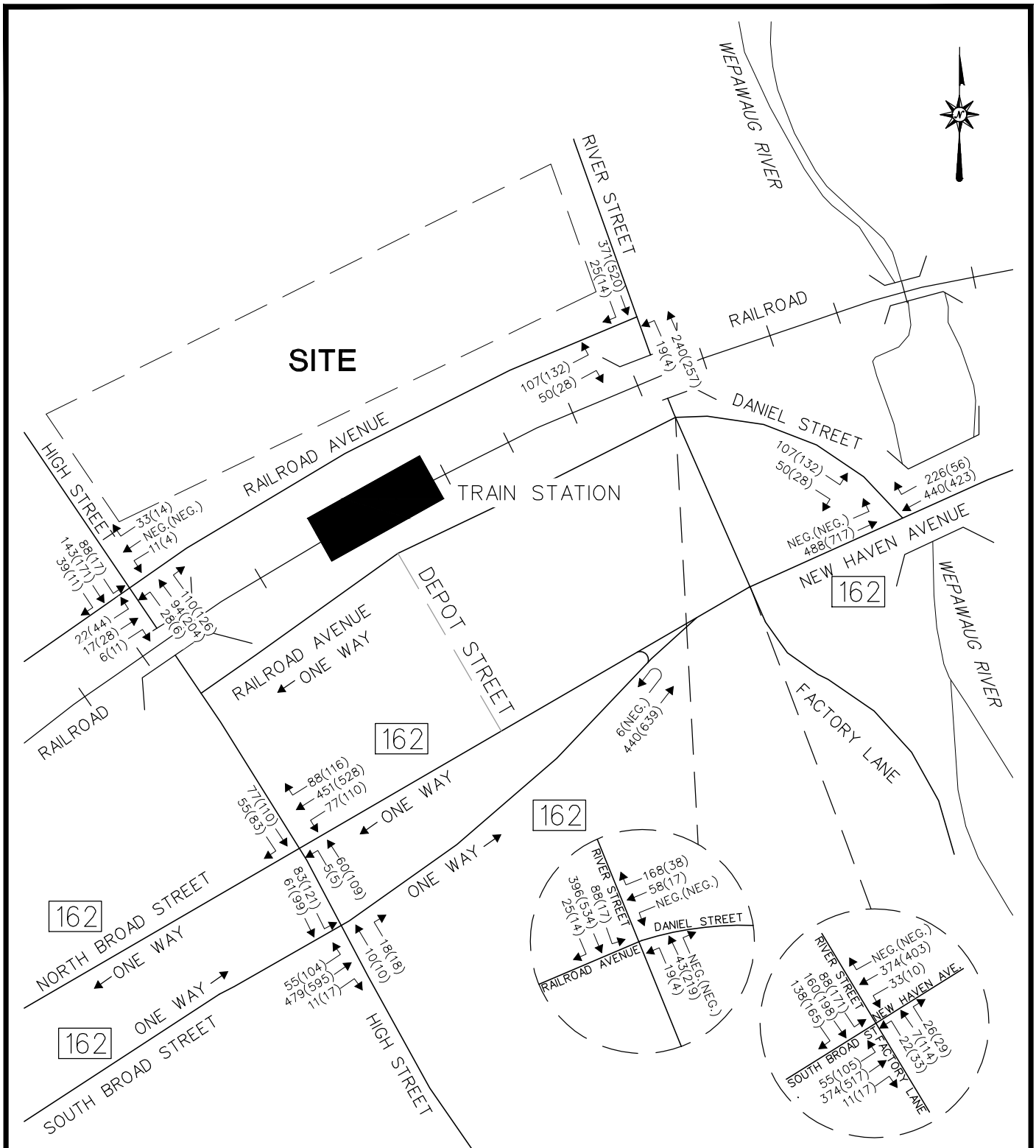
High Density:

- 22,800 SF Retail/Restaurant
- 84 Apartments
- 33 Townhomes
- 352 Space Parking Structure

The commuter peak periods were analyzed in the study, which represent the worst case scenarios for the site and study area.

The number of trips generated by each development proposal was estimated using *ITE Trip Generation Manual 9th Edition*. It is assumed that the parking structures will be used by commuters in the area, accessing the Metro-North train station. The trips entering and exiting the parking structures were computed based on existing counts around the train station.

Transit was also factored in as another mode of transport for the development because of its proximity to the Metro-North Train Station. The development also has multiple land uses that will promote trips within the development itself. The internal capture rates reflect this. Per Connecticut Department of Transportation (CTDOT) recommended practice, an internal trip capture rate of 5% and transit capture of 20% is considered to be appropriate in this case.



LEGEND

WEEKDAY AM PEAK HOUR: XXX
WEEKDAY PM PEAK HOUR: (XXX)

OCTOBER 2017

BL Companies

REDISTRIBUTED NO BUILD (2038) TRAFFIC VOLUMES
TRANSIT ORIENTED DEVELOPMENT
MILFORD, CONNECTICUT

SCHEMATIC, NOT TO SCALE

FIGURE 5

CAD File: TFL016C586701.dwg

Table 4 and Table 5 illustrate the trip generation for the proposed TOD scenarios. It is projected that the low-density development option will generate approximately 152 trips in the AM peak hour and approximately 156 trips in the PM peak hour. The high-density development option will generate approximately 229 trips in the AM peak hour and 240 trips in the PM peak hour.

Table 4
Peak Hour Trip Generation – Low Density

ITE Land Use Code	**Size (sf/units)**	**Trips**					
		Weekday AM Peak			Weekday PM Peak		
		Total	In	Out	Total	In	Out
High-Turnover (Sit-Down) Restaurant (932)	7800	85	47	38	78	47	31
Shopping Center (820)	5200	6	4	2	21	10	11
Low/Mid-Rise Apartments (221)	24	13	3	10	16	10	6
Residential Condominium/Townhouse (230)	24	11	2	9	14	9	5
Total =		115	56	59	129	76	53
Less Transit and Internal Capture (25%)[1] =		86	42	44	97	57	40
Commuter Lot Trips[2] =		66	40	26	59	9	50
Grand Total =		**152**	**82**	**70**	**156**	**66**	**90**

[1]Per CTDOT Allowance
[2]Estimated based on existing counts done in the site area

Table 5
Peak Hour Trip Generation – High Density

ITE Land Use Code	Size (sf/units)	Trips					
		Weekday AM Peak			Weekday PM Peak		
		Total	In	Out	Total	In	Out
High-Turnover (Sit-Down) Restaurant (932)	13680	149	82	67	135	81	54
Shopping Center (820)	9120	10	6	4	35	17	18
Low/Mid-Rise Apartments (221)	84	44	9	35	53	34	19
Residential Condominium/Townhouse (230)	33	15	10	5	18	12	6
Total =		218	107	111	241	144	97
Less Transit and Internal Capture (25%)[1] =		163	80	83	181	108	73
Commuter Lot Trips[2] =		66	40	26	59	9	50
Grand Total =		**229**	**120**	**109**	**240**	**117**	**123**

[1]Per CTDOT Allowance
[2]Estimated based on existing counts done in the site area

Trip Distribution

The distribution of the anticipated traffic volumes was based on arrival/departure patterns shown in Figure 6.

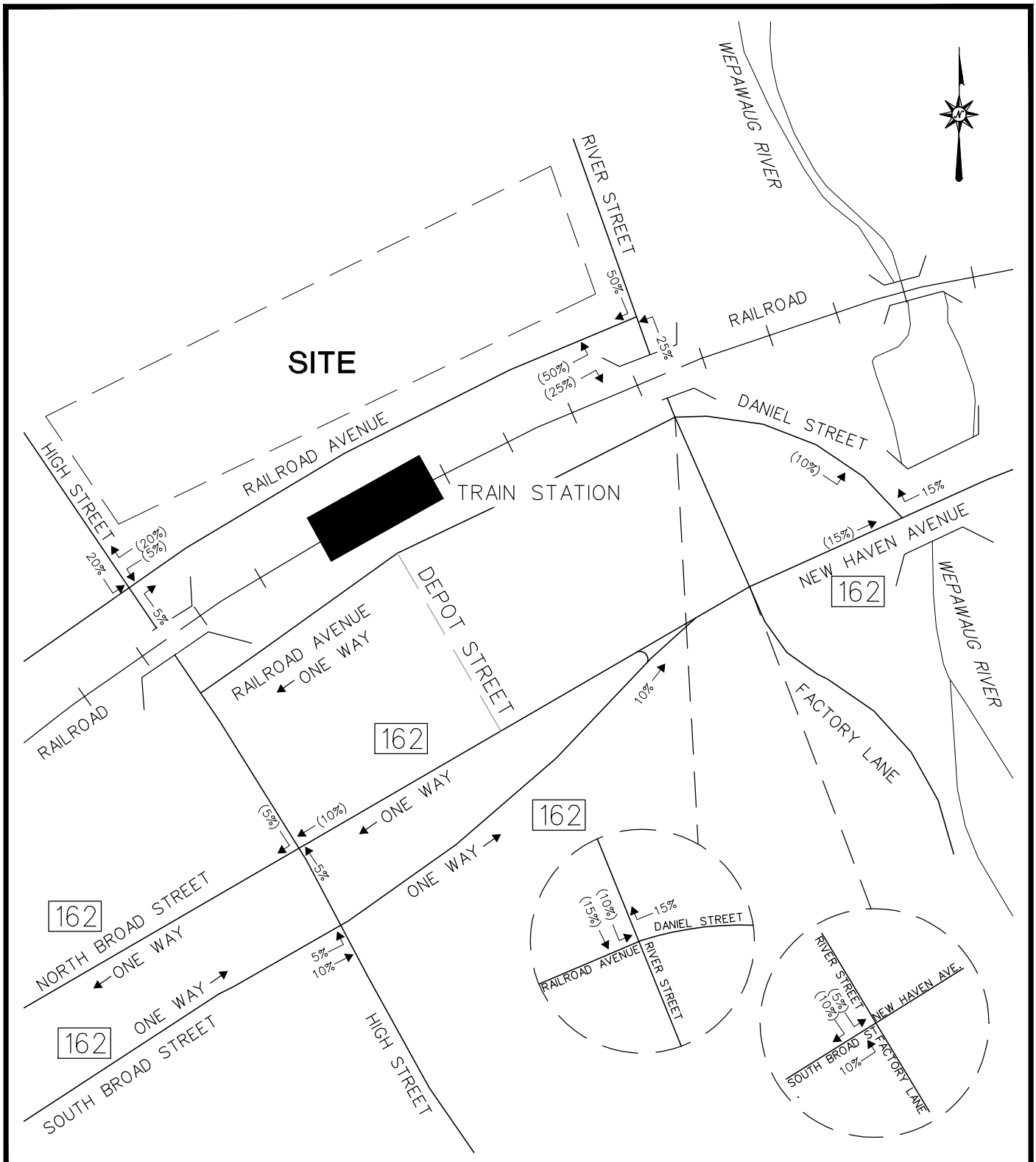
Assigned Site Generated Traffic Volumes

The generated trips for both scenarios are multiplied by the corresponding proportions to ascertain the site-generated traffic volumes.

Figure 7 shows the site generated peak hour traffic generated by the Low Density transit oriented development and Figure 8 shows the High Density scenario assigned to the nearby roadway network.

Build Traffic Volumes

The assigned site-generated traffic volumes were superimposed onto the No Build Redistributed Traffic volumes to establish the future Build Traffic volumes, as illustrated in Figure 9 and 10 for each scenario.



LEGEND

PERCENT ARRIVING: XX%

PERCENT DEPARTING: (XX%)

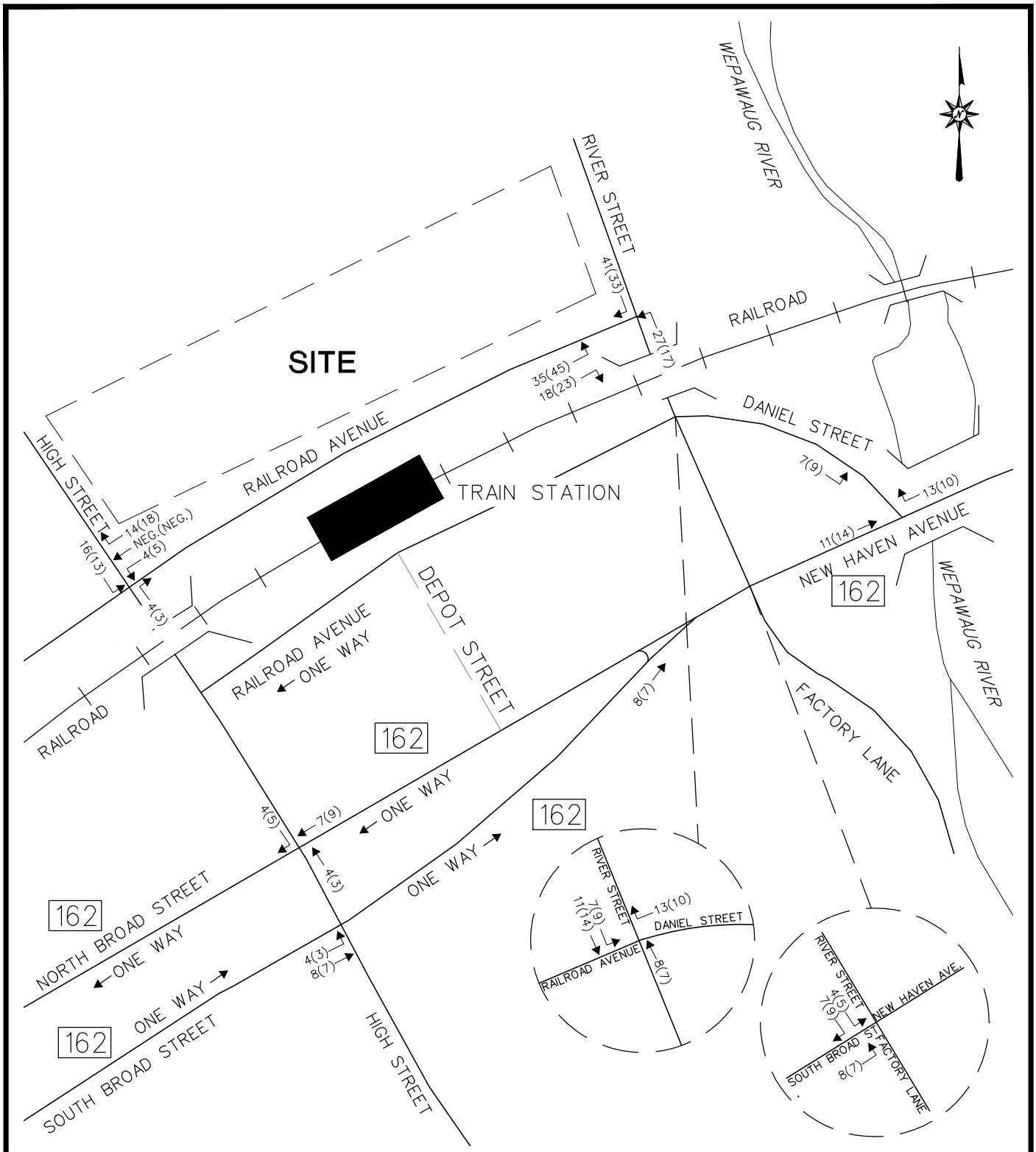
OCTOBER 2017

TRIP DISTRIBUTION
TRANSIT ORIENTED DEVELOPMENT
MILFORD, CONNECTICUT

SCHEMATIC, NOT TO SCALE

FIGURE 6

CAD File: TFL016C586701.dwg



LEGEND

WEEKDAY AM PEAK HOUR: XXX
WEEKDAY PM PEAK HOUR: (XXX)

OCTOBER 2017

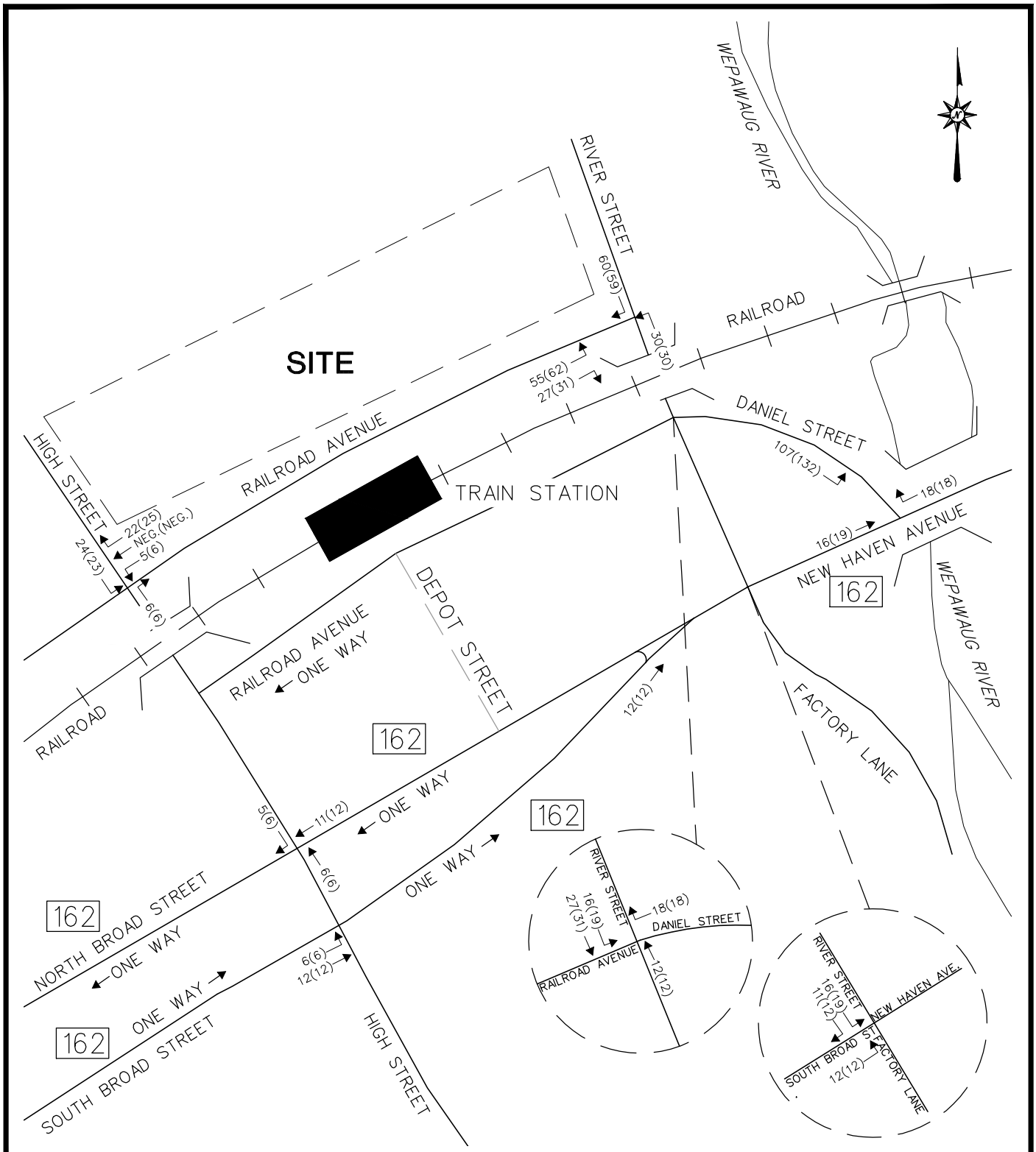
BL Companies

SITE GENERATED (LOWER DENSITY) TRAFFIC VOLUMES TRANSIT ORIENTED DEVELOPMENT MILFORD, CONNECTICUT

SCHEMATIC, NOT TO SCALE

FIGURE 7

CAD File: TFL016C586701.dwg



LEGEND

WEEKDAY AM PEAK HOUR: XXX
WEEKDAY PM PEAK HOUR: (XXX)

OCTOBER 2017

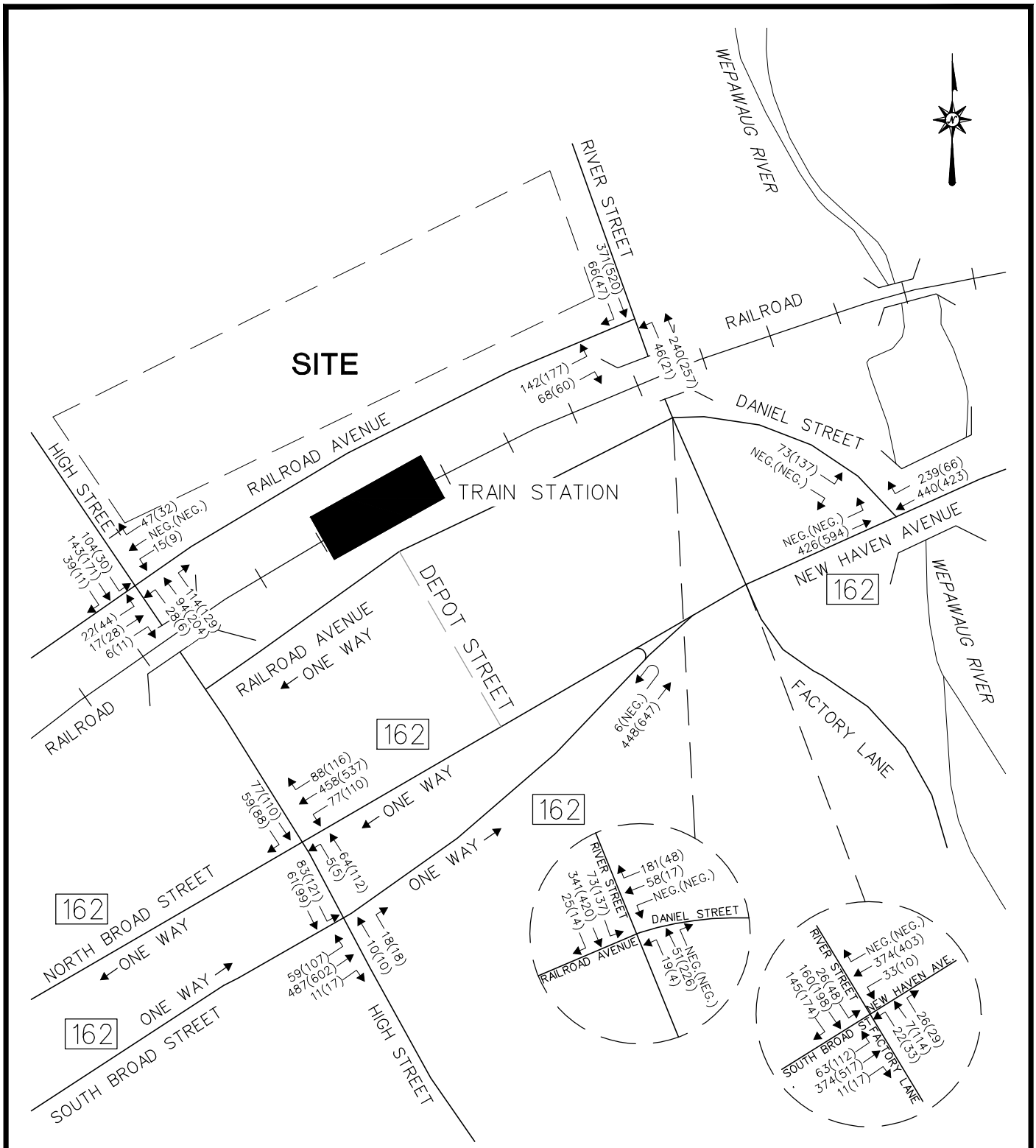
BL Companies

SITE GENERATED (HIGHER DENSITY) TRAFFIC VOLUMES TRANSIT ORIENTED DEVELOPMENT MILFORD, CONNECTICUT

SCHEMATIC, NOT TO SCALE

FIGURE 8

CAD File: TFL016C586701.dwg



LEGEND

WEEKDAY AM PEAK HOUR: XXX
WEEKDAY PM PEAK HOUR: (XXX)

OCTOBER 2017

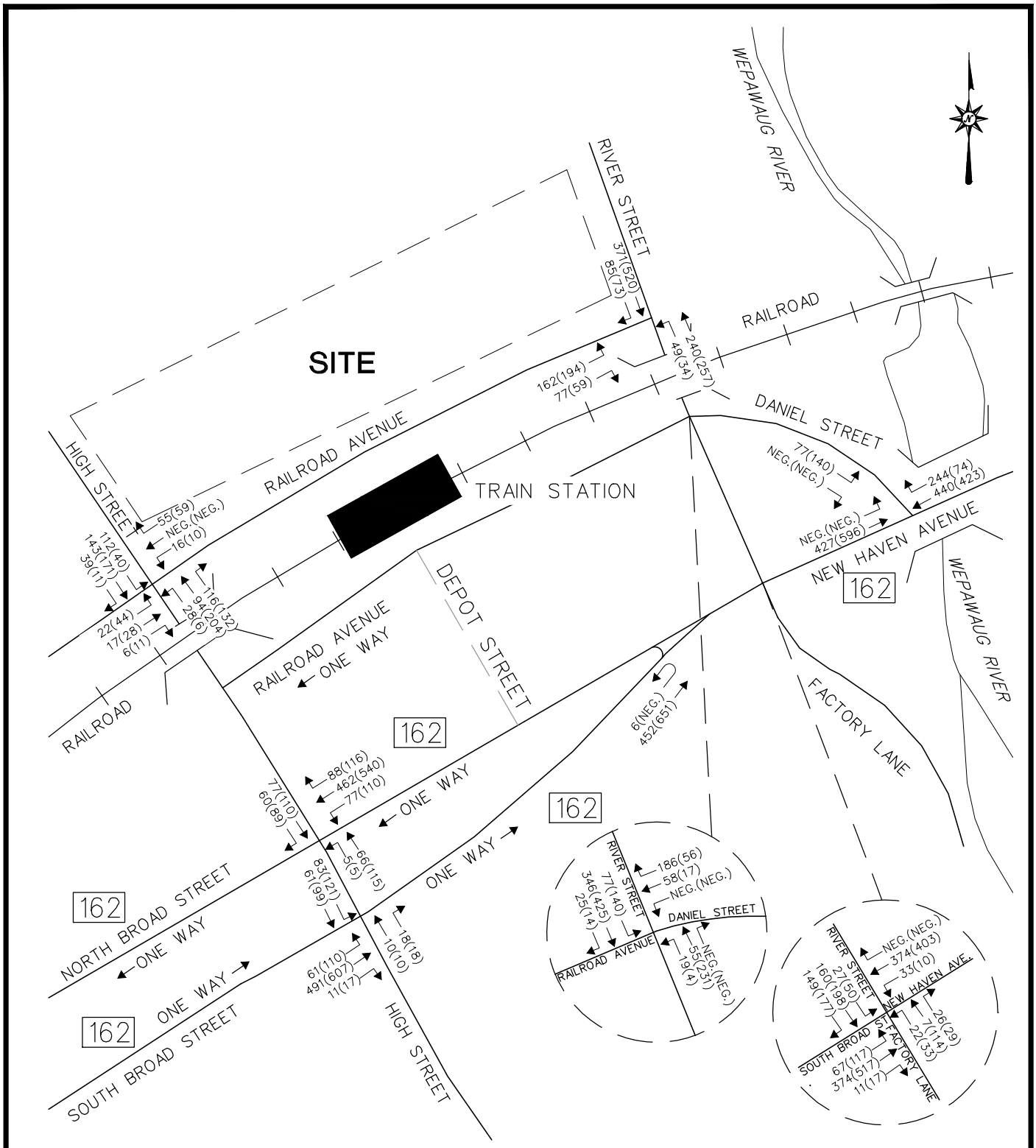
BL Companies

LOW DENSITY BUILD (2038) TRAFFIC VOLUMES
TRANSIT ORIENTED DEVELOPMENT
MILFORD, CONNECTICUT

SCHEMATIC, NOT TO SCALE

FIGURE 9

CAD File: TFL016C586701.dwg



LEGEND

WEEKDAY AM PEAK HOUR: XXX
WEEKDAY PM PEAK HOUR: (XXX)

OCTOBER 2017

HIGH DENSITY BUILD (2038) TRAFFIC VOLUMES
TRANSIT ORIENTED DEVELOPMENT
MILFORD, CONNECTICUT

SCHEMATIC, NOT TO SCALE

FIGURE 10

BL Companies

CAD File: TFL016C586701.dwg

IV. ROADWAY ADEQUACY

Capacity analyses were prepared using the methodology described in the Highway Capacity Manual (HCM), published by the Transportation Research Board (TRB) for the existing and build traffic volume scenarios to simulate the traffic impact of a proposed Mixed-Use Development on the adjacent roadway network.

Signalized Intersections

Signalized intersections are analyzed in terms of vehicle capacity and motorist delay. Capacity is the maximum rate of vehicle flow through an intersection given typical operating conditions. The number of vehicles traveling through an intersection is divided by the capacity of the intersection to determine an overall volume to capacity ratio (v/c). A v/c value under 1.00 indicates that the number of vehicles traveling through an intersection is less than capacity.

As stated in the HCM, level of service for signalized intersections is defined in terms of control delay. Control delay measures the increase in delay a motorist experiences while encountering a traffic control signal. These factors include initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. This delay is measured per vehicle for a 15-minute analysis period and is associated with the levels of service, which are summarized in Table 4 below:

Table 6
Signalized Intersection - Level of Service

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

Level of service A represents the optimum level where most motorists arrive at the subject intersection during the green phase and thus experience virtually no delay. Conversely, level of

service F indicates that motorists are delayed over 80 seconds while traveling through the intersection, and can often imply a complete breakdown of that location. Level of service D is generally considered the limit of acceptable motorist delay.

Unsignalized Intersections

Unsignalized intersections are generally evaluated in terms of average side street delay, as well as the capacity of the roadway approach. This analysis is based on the random arrival of vehicles and the associated gaps generated by this random arrival within the traffic stream. There is no overall level of service for unsignalized intersections. The relationship between levels of service and average side street delay are summarized in Table 5 below:

Table 7
Unsignalized Intersection – Level of Service

Level of Service	Delay Range (seconds)
A	< 10
B	> 10 and ≤ 15
C	> 15 and ≤ 25
D	> 25 and ≤ 35
E	> 35 and ≤ 50
F	> 50

It should be noted that unsignalized levels of service do not correspond to those for signalized intersections, nor do they constitute warrants for the installation of traffic control signals. It is also recognized that the methodology is overly conservative and that computations can indicate operations at poor levels of service (E or F) with even very low side street volumes, although they often function without serious problems in the real world.

Table 8 shows the levels of service (LOS) at the subject intersections. A more detailed table is included in the Appendix.

Table 8
Peak Hour Levels of Service

	Existing	No Build	Build (Low Density)	Build (High Density)
High Street @ Route 162 (South Broad Street)[1]	B(B)	B(B)	A(A)	A(A)
High Street EB Thru	B(B)	B(B)	A(A)	A(A)
High Street NB Thru	A(A)	A(A)	A(A)	A(A)
High Street SB Left	A(A)	A(A)	-	-
High Street SB Thru	B(B)	B(B)	B(B)	B(B)
Factory Lane & River Street @ Route 162 (South Broad Street)/Route 162 (New Haven Ave) [1]	C(E)	C(F)	D(D)	D(D)
Route 162 (South Broad Street) EB Thru	C(D)	C(D)	C(D)	D(D)
Route 162 (New Haven Avenue) WB Left/Thru/Right	-	-	C(C)	C(C)
Factory Lane NB Left/Thru/Right	D(F)	D(F)	C(D)	C(D)
River Street SB Left	D(E)	D(E)	C(C)	C(C)
River Street SB Thru	D(D)	D(D)	E(E)	E(E)
River Street SB Right	C(C)	C(C)	-	-
Route 162 (New Haven Ave) @ Daniel Street[1]	-	-	A(A)	A(B)
Route 162 (New Haven Ave) EB Left/Thru	-	-	A(A)	A(A)
Route 162 (New Haven Ave) WB Thru/Right	-	-	A(A)	A(A)
Daniel Street SB Left	-	-	E(E)	E(E)
North Broad Street @ High Street	-	-	A(B)[2]	A(B)[2]
North Broad Street WB Thru	-	-	A(B)[2]	A(C)[2]
High Street NB Thru	-	-	B(B)[2]	B(B)[2]
High Street SB Thru	B(C)[1]	B(C)[1]	A(A)[2]	A(A)[2]
Railroad Avenue @ High Street[2]	-	-		
Parking Lot EB Thru	B(B)	B(B)	C(C)	C(C)
Railroad Avenue WB Thru	-	-	B(B)	B(B)

	Existing	No Build	Build (Low Density)	Build (High Density)
River Street @ Daniel Street & Railroad Avenue[1]				
Daniel Street WB Left	-	-	-	-
Daniel Street WB Thru	-	-	A(B)	A(B)
Railroad Avenue @ River Street[1]	-	-		
River Street NB Thru	-	-	B(B)	B(B)
Railroad Avenue EB Left	B(B)	B(B)	B(B)	B(B)
River Street SB Thru	-	-	B(C)	B(C)
River Street SB Thru/Right	-	-	B(B)	B(B)

1- Signalized, overall intersection LOS; AM(PM)
2- Unsignalized, controlled movement LOS; AM(PM)

As illustrated in Table 8, the No-Build Scenario traffic operations are projected to remain the same or deteriorate. In the Build Scenario, the High Density Scenario projects to be slightly worse than the Low Density scenario. Overall Level of Service is worse for the Route 162 EB Thru movement at Factory Lane and River Street during the AM Peak Hour, with the Low Density Build experiencing a Level of Service C and the High Density Build experiencing a Level of Service D. A Level of Service B (Low Density) and C (High Density) are experienced at the North Broad Street Thru movement at High Street in the PM Peak. It should also be noted that the CT Route 162 at Factory Lane and River Street improves to an overall Level of Service of D in both Build Scenarios from an F in the No Build Scenario.

In the PM Peak Hour, specific movements that experience Levels of Service E or F during the Existing and No Build Scenarios are as follows:

- Factory Lane NB Thru Movement at CT Route 162 and River Street
- River Street SB Left at CT Route 162 and Factory Lane

Specific movements that experience Levels of Service of E or F are the following in the AM and PM Peak Hour for both Build Scenarios are as follows:

- River Street SB Thru Movement at CT Route 162 and Factory Lane
- Daniel Street SB Left at CT Route 162

In the Build Scenario, several improvements were analyzed to ascertain the Levels of Service described in Table 8. The exclusive pedestrian phase at CT Route 162, Factory Lane, and River Street has been observed to be called in every cycle during the PM Peak Hour, due to the high amount of pedestrian traffic. This is causing longer queues and delays. It is recommended that the cycle length be increased from 90 seconds to 120 seconds to give more time to the other phases of the signal to reduce the delays.

The signal at CT Route 162, Factory Lane, and River Street is currently being coordinated with the signal east of the study area at CT Route 162 and Prospect Street. Timings will need to be adjusted with that signal in order to facilitate traffic operations on CT Route 162.

Traffic operations were changed on Daniel Street from one-way to two-way operation. Daniel street is narrow (20 feet from curb line to curb line), but will accommodate two-way operation. Daniel Street was altered because of the change to two-way operation on River Street. The removal of the exclusive left turn lane and change to a shared left/thru lane caused undesirable Levels of Service for the approach. Allowing vehicles to access New Haven Avenue from Daniel Street helps to alleviate the strain put on the shared left/thru lane on River Street. With the change of Daniel Street to two-way traffic, traffic operations will be altered at the intersection of CT Route 162. It is recommended that a signal, coordinated with the CT Route 162 at Factory Lane and River Street and CT Route 162 at Prospect Street signals, be added to accommodate the new approach.

The altering of the traffic pattern between North Broad Street and South Broad Street on High Street to two-way traffic will cause operational issues at North Broad Street and High Street. Queues will spill back into the Broad Street intersection with a three-way stop controlled intersection. For efficient traffic operation, a signal is recommended at the intersection.

Railroad Avenue North will be altered to two-way traffic operations. Changing the traffic pattern on Railroad Avenue North will help to circulate traffic around the site and in the study area. Traffic will be able to enter from River Street and by pass the intersection with CT Route 162 and Factory Lane, helping to alleviate congestion in the area. The additional traffic at Railroad Avenue North and River Street from the TOD development will cause low Levels of Service in a one-way stop controlled scenario. Acceptable Level of Service will be experienced with all-way

stop control at the intersection. Queues will be accommodated by the all-way stop control and will not spill back past the intersection with Daniel Street.

In summary, with the proposed improvements in place, it is anticipated that the additional traffic volumes generated by the proposed development can be safely accommodated in the roadway system in the vicinity of the TOD.

V. PROJECTED PARKING CONDITIONS

Parking conditions were prepared for the two scenarios investigated. *The ITE Parking Generation Manual 4th Edition* was consulted to compute the overall parking demand for each development proposal. However, this number has been highly generalized due to the nature of the development and the modes of transportation generated by a TOD. According to TCRP Report #128, "There is no rule of thumb or single mode share number that can be easily applied to a hypothetical new TOD…This is due to widely varying local travel conditions and employment distribution."

The parking study results are shown below:

Table 9
Peak Hour Parking Generation

ITE Land Use Code	**Low Density**		**High Density**	
	Size (sf/units)	**Spaces**	**Size (sf/units)**	**Spaces**
High-Turnover (Sit-Down) Restaurant (932)	7800	44	13680	76
Shopping Center (820)	5200	16	9120	27
Low/Mid-Rise Apartments (221)	24	26	84	81
Rental Townhouse (230)	24	39	33	54
Total =		125		184
Less Transit and Internal Capture (25%)[1] =		94		139
Commuter Parking Spaces[2] =		166		166
Grand Total =		260		305

[1]Per CTDOT Allowance
[2]Based on existing commuter lots "E" and "F"

The Low Density parking scenario features 92 on-street parking stalls and 100 parking stalls in an off-street parking structure. High Density also has 92 on-street parking stalls and 352 off-street parking stalls. Comparing the Peak Hour Parking Generation number in Table 9 with the proposed conditions are show in Table 10.

Table 10
Parking Comparison

Scenario	Projected	Actual	Difference
Lower Density	260	192	-68
Higher Density	305	444	+139

The results show that the Low Density development will not have enough parking supply to accommodate the planned development and existing commuter parking. The High Density will have an additional 139 stalls that could be used for a variety of different uses. The stalls could be designated for more commuter parking, which could help relieve the current conditions in the Downtown area and as outlined in the Yale Urban Workshop's "Milford Downtown Plan" dated December 3, 2012

The additional parking could be used for other means, such as car sharing services, which can also relieve congestion in the downtown area by providing means for people to have access to a vehicle, but not necessarily own one. This could also help relieve parking and traffic congestion downtown by reducing the number of cars on downtown streets.

Electric vehicle charging stations could also be used to promote green and environmentally friendly technology. A combination of both services, could also be proposed, which is illustrated below. A possible location for the charging stations and car sharing services can be found on the concept plan in the Appendix.

VI. PEDESTRIAN ACCOMODATIONS

To help promote pedestrian and multi-modal transportation within the downtown Milford area, it is recommended that pedestrian facilities be approved in the area. The recommendations for the study area are as follows. Accessible pedestrian signals and countdown timers are recommended to be installed at any new signal installation and at the CT Route 162 at Factory Lane and River Street intersection. Accessible pedestrian signals give access to the visually and mobility impaired and improves crossing times for sighted pedestrians. Countdown timers allow people to judge the amount of time left to cross the street before the signal changes.

Along with changes to signal equipment, Americans for Disabilities Act (ADA) compliant sidewalk ramps are recommended to be installed. The ramps will allow people that are impaired to cross the street more easily and will also promote people crossing at preferable locations where the pedestrian signals are the most visible to pedestrians.

Countdown Pedestrian Signal

ADA Compliant Sidewalk Ramp

Accessible Pedestrian Signal Push Button

These pedestrian improvements will promote a walkable downtown area and increase use of other modes of transport besides personal vehicles. Bus and train transit will only benefit from the increased walkability.

VII. CONCLUSIONS AND RECOMMENDATIONS

The downtown area of Milford will benefit from changing the circulation patterns on the local streets as described above. With those traffic patterns changed, traffic operations will either have to be amended. The recommendations for the area are:

- Coordinating the signals at CT Route 162 at Factory Lane and River Street with the new signal at CT Route 162 at New Haven Avenue. This will have to be added to the closed loop system associated with the next signal to the east that is associated with CT Route 162 at Prospect Street.
- Increasing the cycle length at CT Route 162 from 90 seconds to 120 seconds. The Exclusive Pedestrian Phase at the intersection is causing excessive delays and are not allowing traffic on CT Route 162 to clear. Increasing the cycle length will help to decrease queue lengths. Timings will also need to be reflected for coordination at the new signal on Daniel Street.
- Change both Daniel Street and River Street to two-way traffic operation in order to facilitate movement of traffic to and from the train station. Daniel Street will ease congestion at the River Street left/thru shared lane created by the introduction of two-way operation on River Street.
- Signalization at North Broad Street and High Street. The changing of High Street between North and South Broad Street from one-way to two-way traffic will cause queueing that will enter the South Broad Street intersection. Adding a signal to the North Broad Street and High Street intersection will alleviate the issue.
- Changing the intersection at Railroad Avenue North and River Street to all-way stop control.
- Provide pedestrian improvements at signalized intersection within the study area. Accessible pedestrian signals and countdown timer signals will promote walking and connections to transit modes of transport.

A summary of the changes are provided in a concept plan in the Appendix.

From both traffic operations and a parking utilization standpoint the High Density development is recommended, which will provide the necessary number for existing commuter parking and any

additional development at the Site. The development will also allow for extra stalls, which could be used for other services such additional commuter parking, car sharing services, electric vehicle charging stations, or a combination of these uses.

APPENDIX

COLLISION DIAGRAMS

Corridors

	River Street		
	2014	2015/2016	**Total A**
Injury	-	-	**0**
Property damage only	2	-	**2**
TYPE OF CRASH			**Total B**
Sideswipe	1	-	**1**
Fixed Object	1	-	**1**
GRAND TOTAL B	**2**	-	**2**

	Daniel Street		
	2014	2015/2016	**Total A**
Injury	-	-	**0**
Property damage only	-	3	**3**
TYPE OF CRASH			**Total B**
Backing	-	1	**1**
Sideswipe	-	2	**2**
GRAND TOTAL B	-	**3**	**3**

	Broad Street		
	2014	2015/2016	**Total A**
Injury	1	2	**3**
Property damage only	1	2	**3**
TYPE OF CRASH			**Total B**
Front to rear	1	3	**4**
Front to front	-	1	**1**
Sideswipe	1	-	**1**
GRAND TOTAL B	**2**	**4**	**6**

	South Broad Street		
	2014	2015/2016	**Total A**
Injury	1	2	**3**
Property damage only	-	6	**6**
TYPE OF CRASH			**Total B**
Front to rear	-	1	**1**
Angle	-	1	**1**
Sideswipe	1	3	**4**
NA	-	1	**1**
Backing	-	1	**1**
Pedestrian	-	1	**1**
GRAND TOTAL B	**1**	**8**	**9**

	High Street		
	2014	2015/2016	**Total A**
Injury	-	-	
Property damage only	-	-	
TYPE OF CRASH			**Total B**
Front to rear	-	-	
Angle	-	-	
NA	-	-	
GRAND TOTAL B	-	-	

	Railroad Avenue		
	2014	2015/2016	**Total A**
Injury	-	-	-
Property damage only	-	-	-
TYPE OF CRASH		-	**Total B**
Front to rear	-	-	-
Angle	-	-	-
NA	-	-	-
GRAND TOTAL B	**-**	-	-

REF: UCONN Crash Data Repository (2017)

Intersections (within 100' of approach)

High Street @ Railroad Avenue (WB)			
	2014	2015/2016	**Total A**
Injury	-	-	**0**
Property damage only	-	3	**3**
TYPE OF CRASH			**Total B**
Fixed Object	-	2	**2**
Angle	-	1	**1**
GRAND TOTAL B	**0**	**3**	**3**

CT Route 162 (Broad Street) @ High Street			
	2014	2015/2016	**Total A**
Injury	1	0	**1**
Property damage only	1	8	**9**
TYPE OF CRASH			**Total B**
Front to rear	1	1	**2**
Angle	1	6	**7**
Pedestrian	-	1	**1**
GRAND TOTAL B	**2**	**8**	**10**

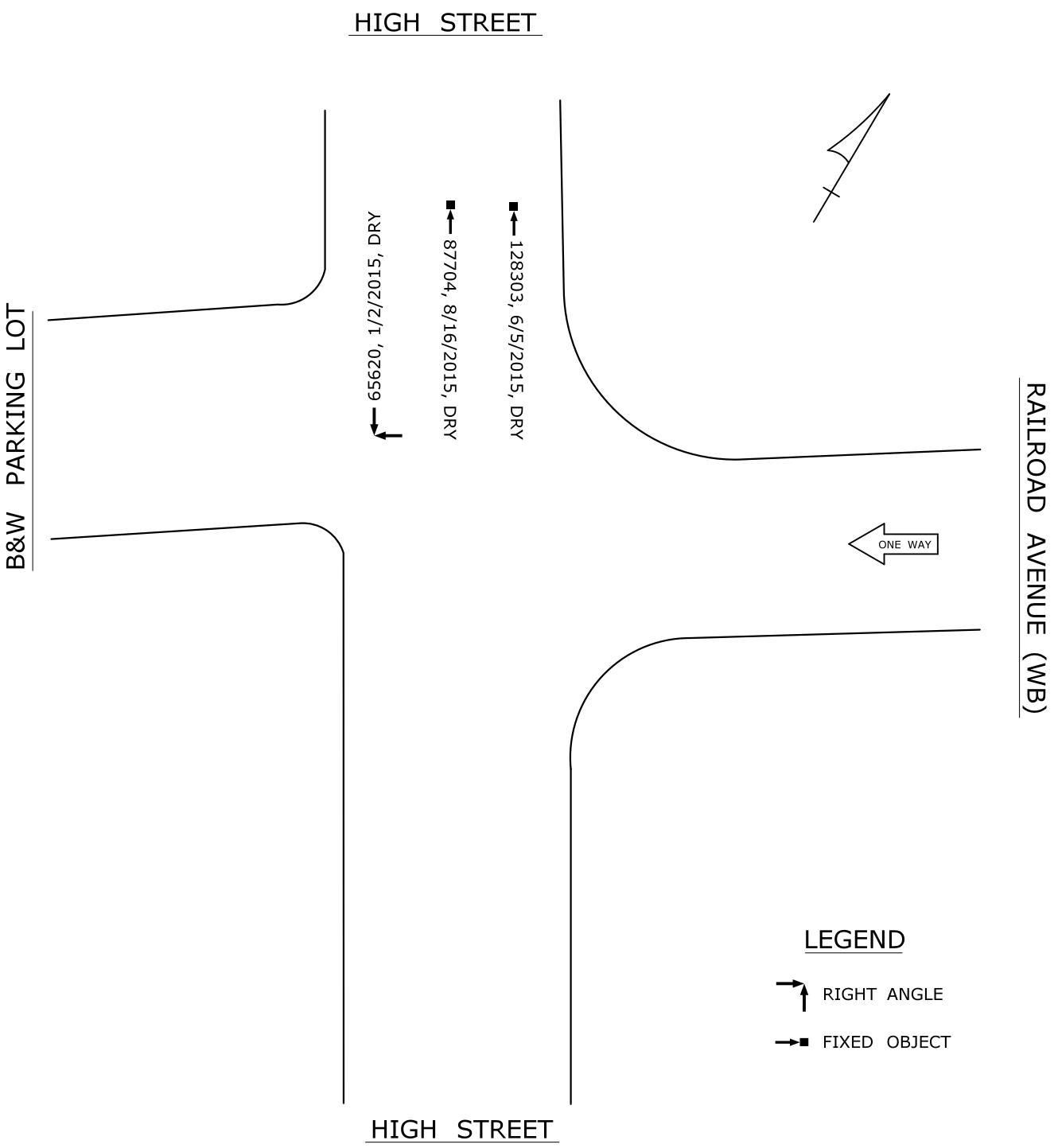
CT Route 162 (Broad Street/South Broad Street) @ River Street			
	2014	2015/2016	**Total A**
Injury	1	1	**2**
Property damage only	-	6	**6**
TYPE OF CRASH			**Total B**
Front to rear	-	1	**1**
Angle	-	2	**2**
Sideswipe	1	1	**2**
Pedestrian	-	1	**1**
Front to Front	-	1	**1**
Fixed Object	-	1	**1**
GRAND TOTAL B	**1**	**7**	**8**

CT Route 162 (New Haven Avenue) @ Daniel Street			
	2014	2015/2016	**Total A**
Injury	1	-	**1**
Property damage only	2	4	**6**
TYPE OF CRASH			**Total B**
Front to rear	2	1	**3**
Sideswipe	1	1	**2**
Pedestrian	-	1	**1**
Fixed Object	-	1	**1**
GRAND TOTAL B	**3**	**4**	**7**

River Street @ Railroad Street (WB)/Daniel Street			
	2014	2015/2016	**Total A**
Injury	-	-	**0**
Property damage only	1	10	**11**
TYPE OF CRASH			**Total B**
Front to rear	1	1	**2**
Angle	1	3	**4**
Fixed Object	-	3	**3**
Sideswipe	-	2	**2**
GRAND TOTAL B	2	**9**	**11**

River Street @ Railroad Avenue (EB)			
	2014	2015/2016	**Total A**
Injury	1	2	**3**
Property damage only	-	7	**7**
TYPE OF CRASH			**Total B**
Front to rear	-	1	**1**
Fixed Object	-	7	**7**
Sideswipe	-	1	**1**
Pedestrian	1	-	**1**
GRAND TOTAL B	**1**	**9**	**10**

REF: UCONN Crash Data Repository (2017)



BL Companies

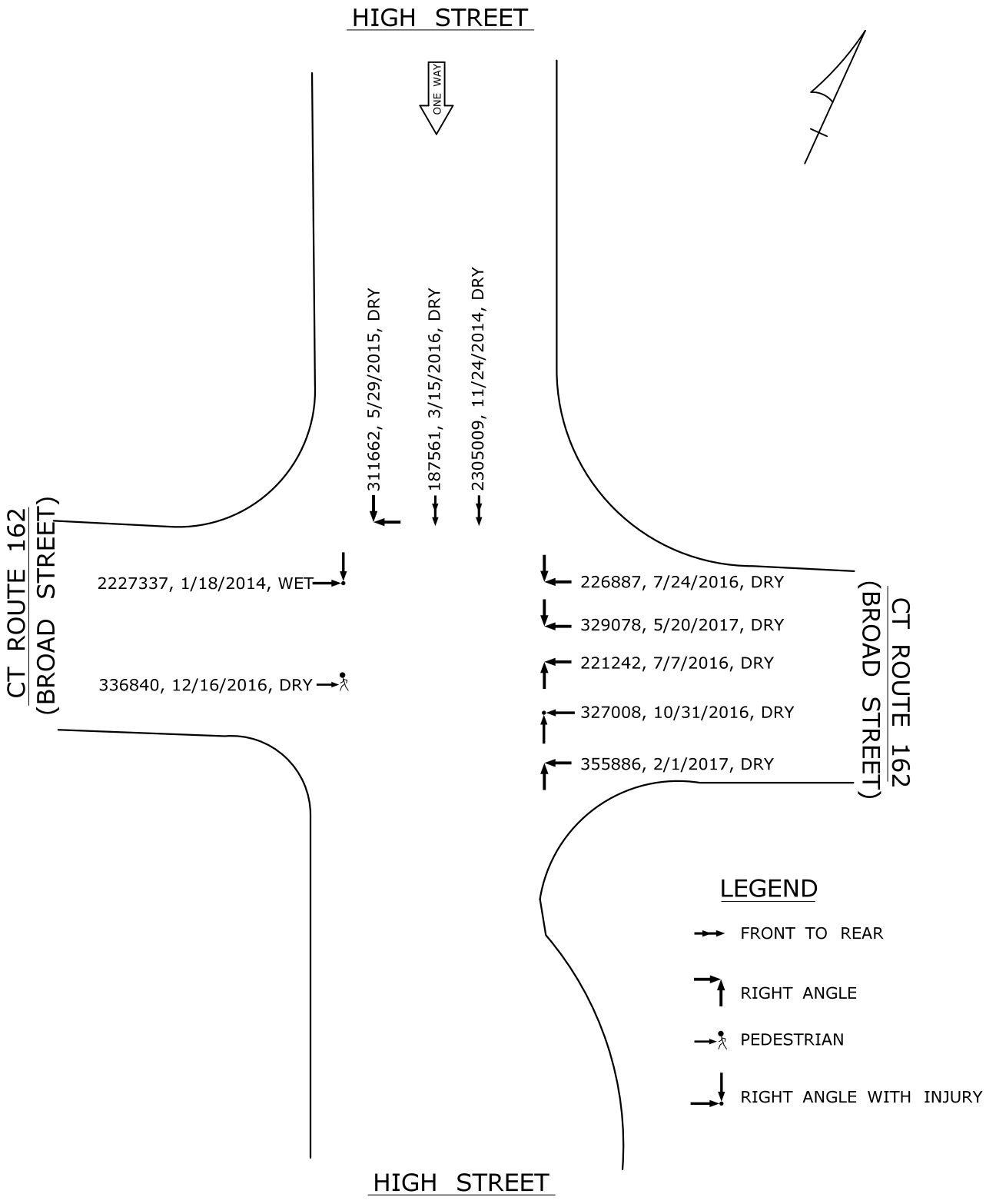
ARCHITECTURE
ENGINEERING
ENVIRONMENTAL
LAND SURVEYING

TRANSIT ORIENTED DEVELOPMENT
COLLISION DIAGRAM
MILFORD, CONNECTICUT

Designed	M.R.S.
Drawn	M.R.S.
Checked	A.J.C.
Approved	
Scale	NOT TO SCALE
Project No.	16C5867
Date	6/26/2017

CD-1

G:\JOBS16\16C\16C5867\DGN\Traffic\TR_MSH_16C5867_CD-01.dgn



BL Companies

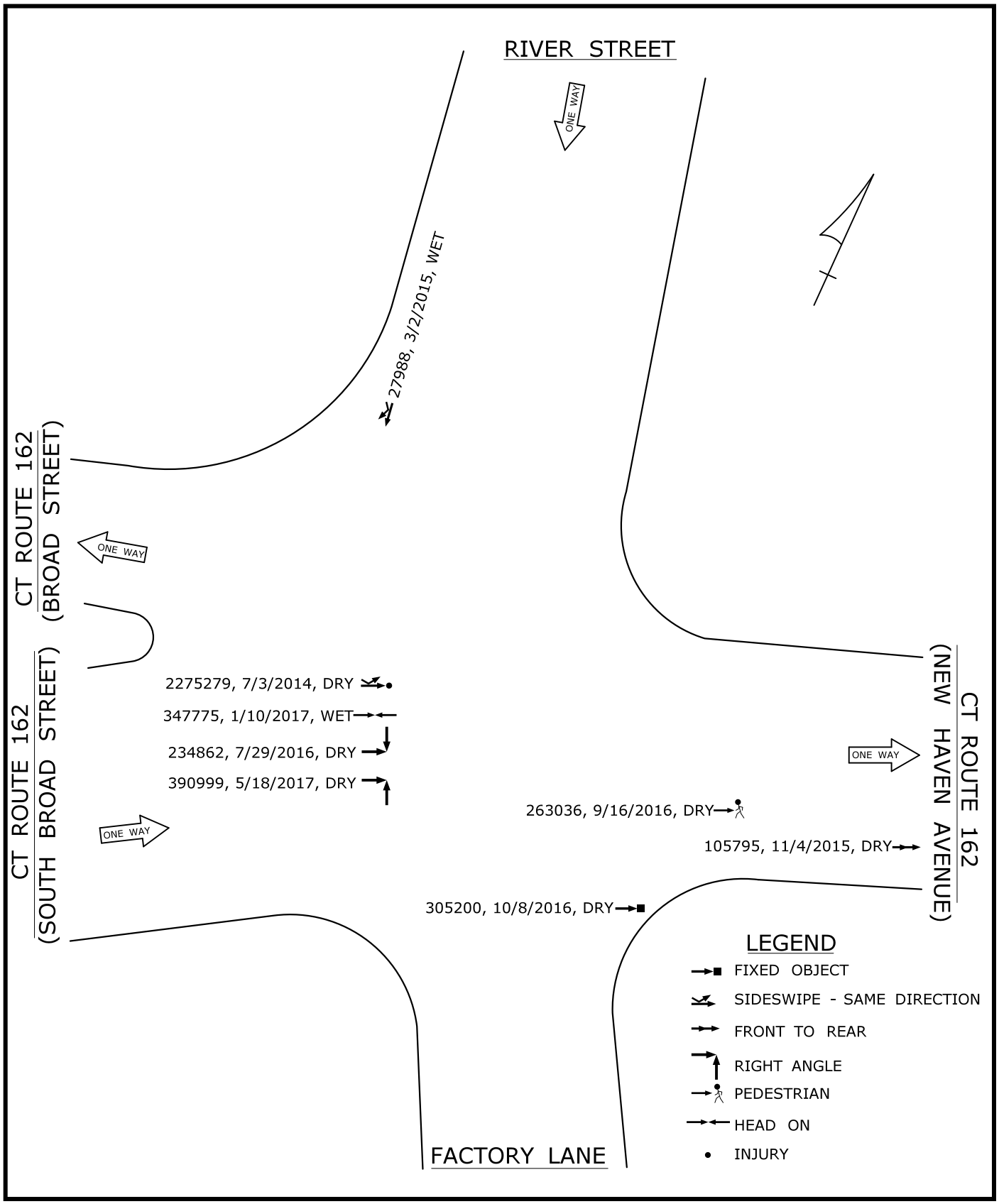
ARCHITECTURE
ENGINEERING
ENVIRONMENTAL
LAND SURVEYING

TRANSIT ORIENTED DEVELOPMENT
COLLISION DIAGRAM
MILFORD, CONNECTICUT

Designed	M.R.S.
Drawn	M.R.S.
Checked	A.J.C.
Approved	
Scale	NOT TO SCALE
Project No.	16C5867
Date	6/26/2017

CD-2

G:\JOBS16\16C\16C5867\DGN\Traffic\TR_MSH_16C5867_CD-02.dgn



BL Companies

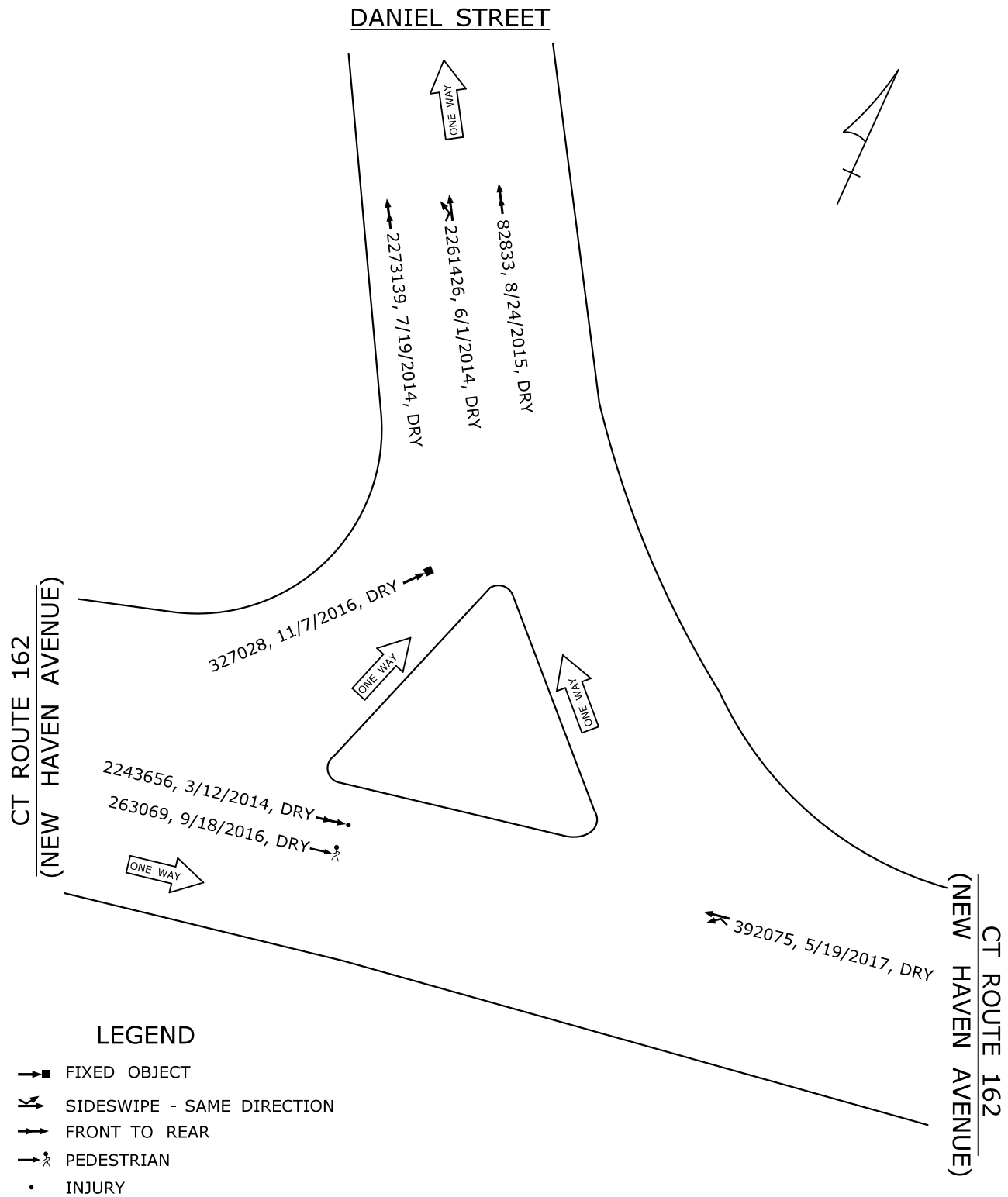
ARCHITECTURE
ENGINEERING
ENVIRONMENTAL
LAND SURVEYING

TRANIT ORIENTED DEVELOPMENT
COLLISION DIAGRAM
MILFORD, CONNECTICUT

Designed	M.R.S.
Drawn	M.R.S.
Checked	A.J.C.
Approved	
Scale	NOT TO SCALE
Project No.	16C5867
Date	6/26/2017

CD-3

G:\JOBS16\16C\16C5867\DGN\Traffic\TR_MSH_16C5867_CD-03.dgn



BL Companies

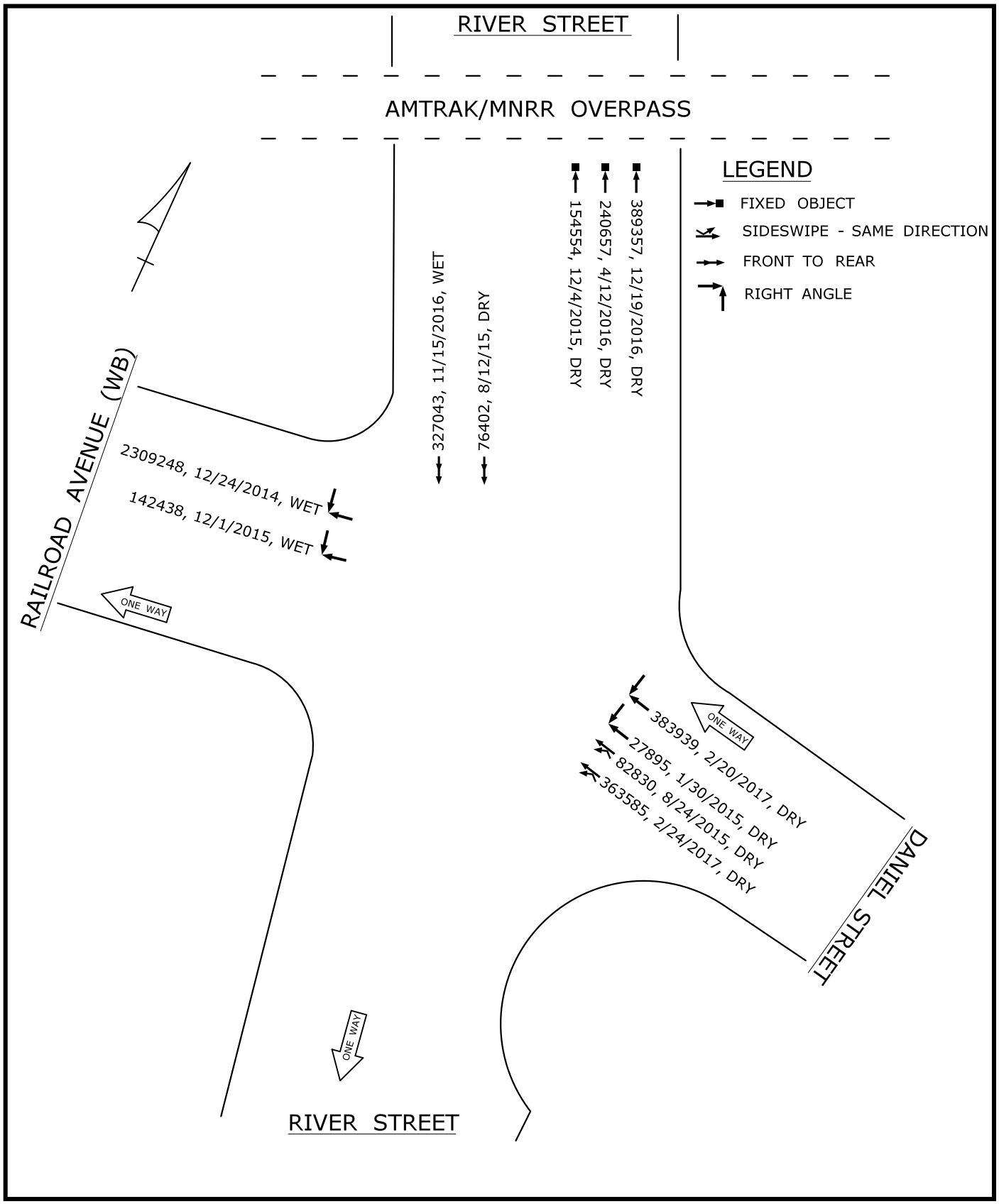
ARCHITECTURE
ENGINEERING
ENVIRONMENTAL
LAND SURVEYING

TRANSIT ORIENTED DEVELOPMENT
COLLISION DIAGRAM
MILFORD, CONNECTICUT

Designed	M.R.S.
Drawn	M.R.S.
Checked	A.J.C.
Approved	
Scale	NOT TO SCALE
Project No.	16C5867
Date	6/26/2017

CD-4

G:\JOBS16\16C\16C5867\DGN\Traffic\TR_MSH_16C5867_CD-04.dgn



BL Companies

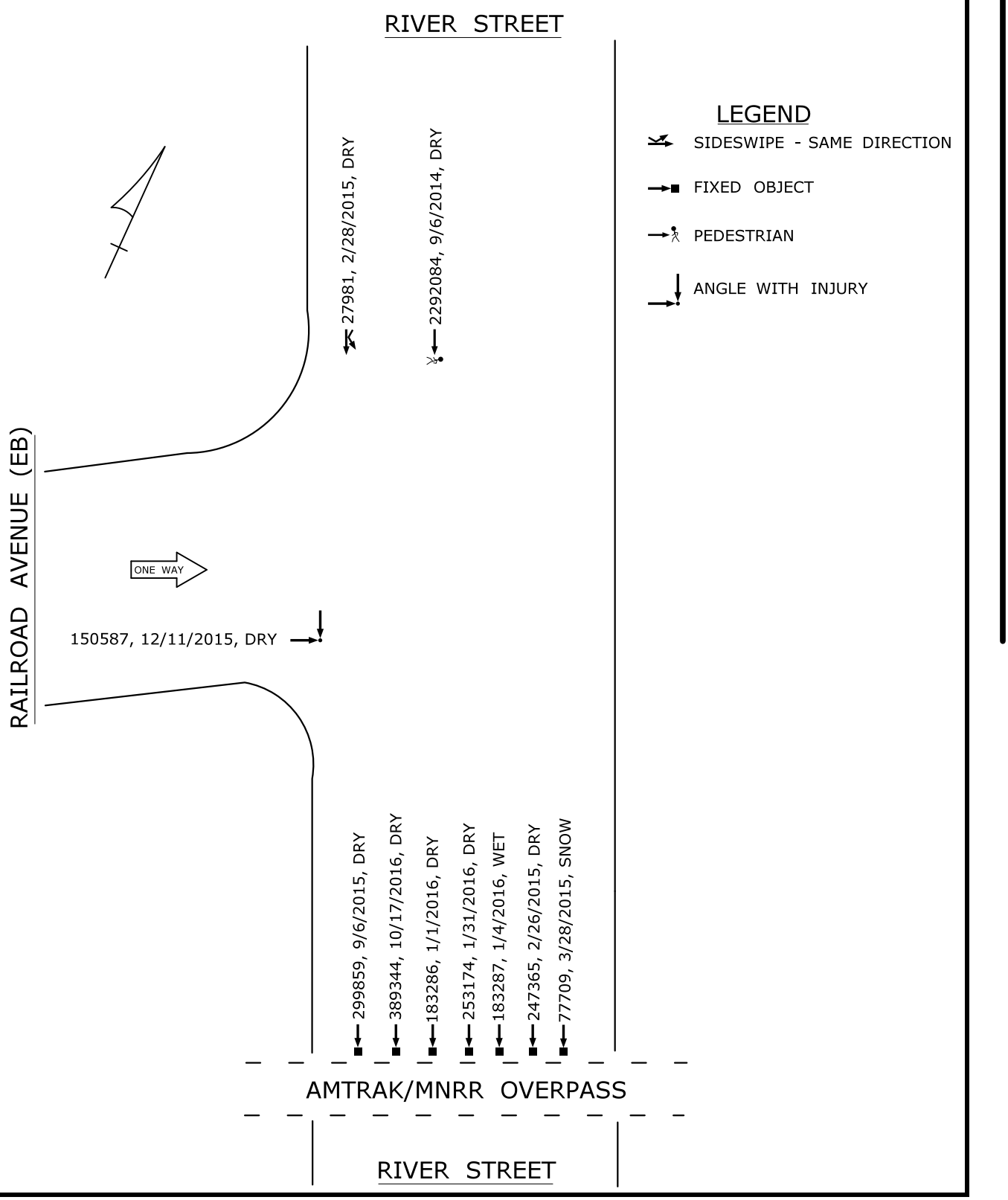
ARCHITECTURE
ENGINEERING
ENVIRONMENTAL
LAND SURVEYING

TRANSIT ORIENTED DEVELOPMENT
COLLISION DIAGRAM
MILFORD, CONNECTICUT

Designed	M.R.S.
Drawn	M.R.S.
Checked	A.J.C.
Approved	
Scale	NOT TO SCALE
Project No.	16C5867
Date	6/26/2017

CD-5

G:\JOBS16\16C\16C5867\DGN\Traffic\TR_MSH_16C5867_CD-05.dgn



BL Companies

ARCHITECTURE
ENGINEERING
ENVIRONMENTAL
LAND SURVEYING

TRANSIT ORIENTED DEVELOPMENT
COLLISION DIAGRAM
MILFORD, CONNECTICUT

Designed	M.R.S.
Drawn	M.R.S.
Checked	A.J.C.
Approved	
Scale	NOT TO SCALE
Project No.	16C5867
Date	6/26/2017

CD-6

G:\JOBS16\16C\16C5867\DGN\Traffic\TR_MSH_16C5867_CD-06.dgn

TRAFFIC OPERATIONS SUMMARY

Peak Hour Traffic Operations

	Existing		No Build		Lower Density Build		Higher Density Build	
	AM	PM	AM	PM	AM	PM	AM	PM
High Street @ Route 162 (South Broad Street)	B/14.1	B/15.0	B/14.5	B/15.7	A/7.1	A/9.8	A/7.1	A/9.9
High Street EB Thru	B/0.54/105	B/0.63/140	B/0.58/115	B/0.68/155	A/0.34/65	A/0.52/115	A/0.34/65	A/0.53/115
High Street NB Thru	A/0.04/25	A0.04/25	A/0.04/25	A/0.05/25	A/0.08/25	A/0.07/25	A/0.08/25	A/0.07/25
High Street SB Left	A/0.17/30	A/0.24/35	A/0.19/30	A/0.26/40	-[2]	-[2]	-[2]	-[2]
High Street SB Thru	B/0.14/40	B/0.23/60	B/0.16/45	B/0.26/70	B/0.35/45	B/0.51/65	B/0.35/45	B/0.51/65
Factory Lane & River Street @ Route 162 (South Broad Street)/Route 162 (New Haven Ave)	C/27.3	E/65.5	C/29.0	F/82.4	D/38.1	D/45.9	D/38.5	D/46.6
Route 162 (South Broad Street) EB Thru	C/0.60/170	D/0.87/295	C/0.64/195	D/0.93/345	C/0.46/200	D/0.84/375	D/0.47/205	D/0.87/380
Route 162 (New Haven Avenue) WB Left/Thru/Right	-	-	-	-	C/0.63/410	C/0.67/410	C/0.64/410	C/0.68/410
Factory Lane NB Thru	D/0.39/75	F/1.66/265	D/0.44/85	F/1.95/295	C/0.21/70	D/0.62/210	C/0.20/70	D/0.58/210
River Street SB Left	D/0.54/85	E/0.79/170	D/0.57/95	E/0.84/195	C/0.11/40	C/0.24/70	C/0.11/45	C/0.24/70
River Street SB Thru	D/0.59/135	D/0.60/170	D/0.62/145	D/0.62/175	E/0.87/345	E/0.92/480	E/0.87/350	E/0.90/485
River Street SB Right	C/0.73/310	C/0.75/330	C/0.78/365	C/0.80/395	-[3]	-[3]	-[3]	-[3]
Route 162 (New Haven Ave) @ Daniel Street	-	-	-	-	A/7.9	A/10.6	A/8.1	B/11.8
Route 162 (New Haven Ave) EB Left/Thru	-	-	-	-	A/0.29/25	A/0.44/25	A/0.29/25	A/.44/25
Route 162 (New Haven Ave) WB Thru/Right	-	-	-	-	A/0.50/215	A/0.38/180	A/0.50/225	A/.39/185
Daniel Street SB Left	-	-	-	-	E/0.51/110	E/0.67/175	E/.53/115	E/.67/180
North Broad Street @ High Street	-	-	-	-	A/8.8	B/17.2	A/8.9	B/17.4
North Broad Street WB Thru	-	-	-	-	A/0.55/175	B/0.79/375	A/0.55/175	C/0.79/375
High Street NB Thru	-	-	-	-	B/0.18/45	B/0.26/70	B/0.19/45	B/0.27/70
High Street SB Thru	B/0.23/25[1]	C/0.50/70[1]	B/0.26/30[1]	C/0.44/55[1]	A/0.30/40	A/0.40/55	A/0.31/40	A/0.40/55

	Existing		No Build		Lower Density Build		Higher Density Build	
	AM	PM	AM	PM	AM	PM	AM	PM
Railroad Avenue @ High Street[1]	-	-	-	-				
Parking Lot EB Thru	B/0.08/25	B/0.13/25	B/0.01/25	B/0.16/25	C/0.14/25	C/0.22/25	C/0.14/25	C/0.23/25
Railroad Avenue WB Thru	-	-	-	-	B/0.11/25	B/0.07/25	B/.12/25	B/.12/25
River Street @ Daniel Street & Railroad Avenue[1]	-	-	-	-	-	-	-	-
Daniel Street WB Left	C/0.53/80	C/0.61/105	C/0.61/105	C/0.70/145	-[3]	-[3]	-[3]	-[3]
Daniel Street WB Thru	-	-	-	-	A/0.26/25	B/0.09/25	A/0.26/25	B/0.10/25
Railroad Avenue @ River Street[1]	-	-	-	-	-	-	-	-
River Street NB Thru	-	-	-	-	B/0.46/60	B/0.47/65	B/0.48/65	B/0.51/70
Railroad Avenue EB Left	B/0.20/25	B/0.12/25	B/0.23/25	B/0.14/25	B/0.36/40	B/0.43/55	B/0.42/55	B/0.47/65
River Street SB Thru	-	-	-	-	B/0.42/55	C/0.60/100	B/0.43/55	C/0.61/105
River Street SB Thru/Right	-	-	-	-	B/0.31/35	B/0.37/45	B/0.34/40	B/0.42/55

[1] Unsignalized – LOS for controlled movement
[2] Movement combined with SB Thru
[3] Independent movement was eliminated
X/X.XX/XXX – Level of Service/Volume to Capacity Ratio/95% Queue Length in ft

BL Companies
ARCHITECTURE
ENGINEERING
ENVIRONMENTAL
LAND SURVEYING

355 Research Parkway
Meriden, CT 06450
(203) 630-1406
(203) 630-2615 Fax

TRANSIT ORIENTED DEVELOPMENT

RAILROAD AVENUE
MILFORD, CONNECTICUT

REVISIONS

No.	Date	Desc.

Designed	M.R.S.
Drawn	M.R.S.
Reviewed	
Scale	N.T.S.
Project No.	16C5867
Date	08/23/2017
CAD File:	TSK16C586701

Title

TRAFFIC CONCEPT PLAN

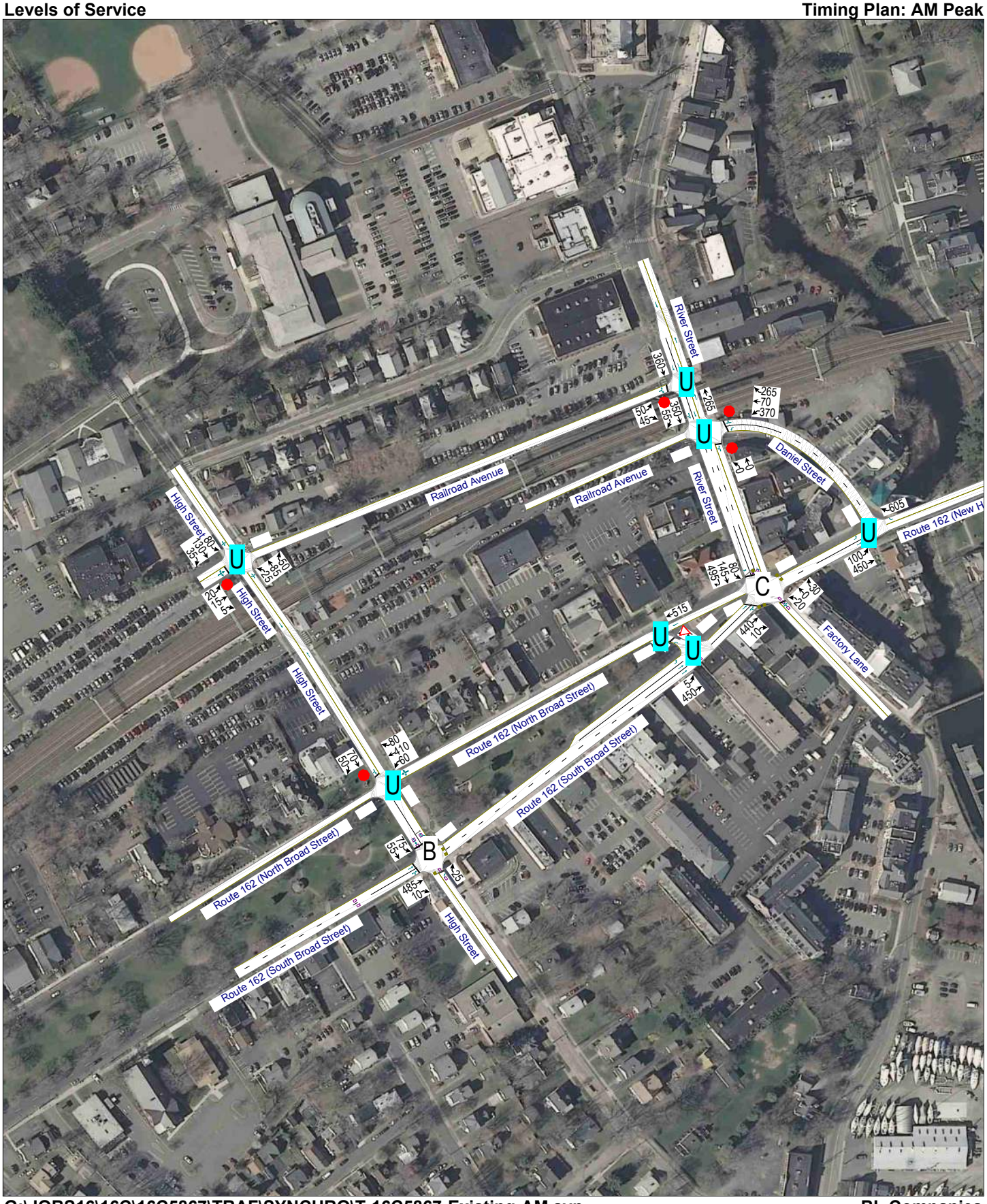
Sheet No.

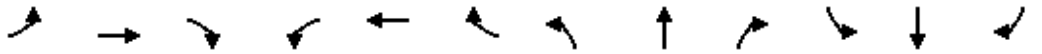
SK-1

Xref (s): ; B016C586701 ; XR16C586701 ; CP16C586702

11/7/2017, MSHEPLEY, G:\JOBS\16\16C\16C5867\DWG\TSK16C586701.DWG,SK-1 24X36 50SC.

CAPACITY ANALYSES


River Street
Railroad Avenue
Railroad Avenue
River Street
Daniel Street
Route 162 (New H
High Street
High Street
High Street
Factory Lane
Route 162 (North Broad Street)
Route 162 (South Broad Street)
Route 162 (North Broad Street)
Route 162 (South Broad Street)
High Street
U
U
U
U
U
U
C
B
360
50
45
350
55
265
265
70
370
20
605
100
450
80
145
495
30
20
515
440
10
50
450
80
410
60
70
50
75
55
485
10
25
80
130
35
50
85
25
20
15



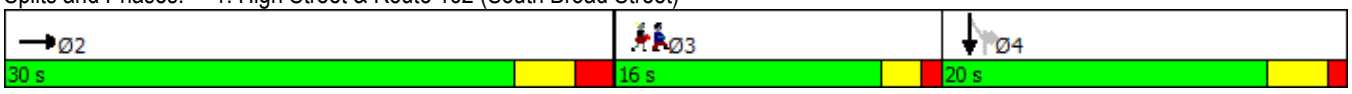
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	485	10	0	0	0	0	0	25	75	55	0
Future Volume (vph)	0	485	10	0	0	0	0	0	25	75	55	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12	12	12	11	16	16	12
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.997							0.865			
Flt Protected										0.950		
Satd. Flow (prot)	0	2985	0	0	0	0	0	0	1558	2006	2111	0
Flt Permitted										0.950		
Satd. Flow (perm)	0	2985	0	0	0	0	0	0	1558	2006	2111	0
Right Turn on Red			Yes			Yes			Yes	Yes		Yes
Satd. Flow (RTOR)		4							489	83		
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		438			633			294			144	
Travel Time (s)		11.9			17.3			8.0			3.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Parking (#/hr)	30	30	30									
Adj. Flow (vph)	0	527	11	0	0	0	0	0	27	82	60	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	538	0	0	0	0	0	0	27	82	60	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Left	R NA	Right	Right
Median Width(ft)		12			12			0			16	
Link Offset(ft)		0			0			-12			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.24	1.00	1.00	1.00	1.00	1.00	1.00	1.04	0.85	0.85	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type		NA							Perm	Perm	NA	
Protected Phases		2									4	
Permitted Phases									4	4		
Detector Phase		2							4	4	4	
Switch Phase												
Minimum Initial (s)		15.0							9.0	9.0	9.0	
Minimum Split (s)		23.0							14.0	14.0	14.0	
Total Split (s)		30.0							20.0	20.0	20.0	
Total Split (%)		45.5%							30.3%	30.3%	30.3%	
Maximum Green (s)		25.0							16.0	16.0	16.0	
Yellow Time (s)		3.0							3.0	3.0	3.0	
All-Red Time (s)		2.0							1.0	1.0	1.0	
Lost Time Adjust (s)		0.0							0.0	0.0	0.0	
Total Lost Time (s)		5.0							4.0	4.0	4.0	
Lead/Lag									Lag	Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0							2.0	2.0	2.0	
Recall Mode		Min							None	None	None	
Walk Time (s)												
Flash Dont Walk (s)												

Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Parking (#/hr)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	16.0
Total Split (s)	16.0
Total Split (%)	24%
Maximum Green (s)	13.0
Yellow Time (s)	2.0
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	Ped
Walk Time (s)	7.0
Flash Dont Walk (s)	5.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)												
Act Effct Green (s)		15.2							9.1	9.1	9.1	
Actuated g/C Ratio		0.33							0.20	0.20	0.20	
v/c Ratio		0.54							0.04	0.17	0.14	
Control Delay		15.6							0.1	6.2	17.4	
Queue Delay		0.0							0.0	0.0	0.0	
Total Delay		15.6							0.1	6.2	17.4	
LOS		B							A	A	B	
Approach Delay		15.6						0.1			10.9	
Approach LOS		B						A			B	
Queue Length 50th (ft)		64							0	0	14	
Queue Length 95th (ft)		103							0	26	38	
Internal Link Dist (ft)		358			553			214			64	
Turn Bay Length (ft)												
Base Capacity (vph)		1671							871	772	755	
Starvation Cap Reductn		0							0	0	0	
Spillback Cap Reductn		0							0	0	0	
Storage Cap Reductn		0							0	0	0	
Reduced v/c Ratio		0.32							0.03	0.11	0.08	

Intersection Summary			
Area Type:	Other		
Cycle Length: 66			
Actuated Cycle Length: 45.4			
Natural Cycle: 55			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.54			
Intersection Signal Delay: 14.1		Intersection LOS: B	
Intersection Capacity Utilization 65.4%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: High Street & Route 162 (South Broad Street)



Lane Group	Ø3
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Lane Group	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	0	0	5	450	0	0
Future Volume (vph)	0	0	5	450	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12
Storage Length (ft)	0	0	250			0
Storage Lanes	0	0	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	1.00
Frt						
Flt Protected			0.950			
Satd. Flow (prot)	0	0	1327	3097	0	0
Flt Permitted			0.950			
Satd. Flow (perm)	0	0	1327	3097	0	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	69			633	181	
Travel Time (s)	1.9			17.3	4.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Parking (#/hr)			30	30		
Adj. Flow (vph)	0	0	5	489	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	5	489	0	0
Enter Blocked Intersection	No	No	Yes	Yes	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.04	1.04	1.43	1.19	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 37.1%		ICU Level of Service A	
Analysis Period (min) 15			

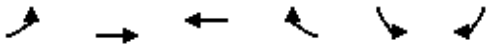
Lane Group	EBT	EBR	NBL	NBT	NBR	SBL	SBT	SBR2	Ø3
Lane Configurations									
Traffic Volume (vph)	440	10	20	0	30	80	145	495	
Future Volume (vph)	440	10	20	0	30	80	145	495	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	11	11	12	11	12	10	10	12	
Storage Length (ft)		0	150		150	0			
Storage Lanes		0	0		0	1			
Taper Length (ft)			25			25			
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	0.997			0.919				0.850	
Flt Protected				0.980		0.950			
Satd. Flow (prot)	2985	0	0	1622	0	1239	1565	1425	
Flt Permitted				0.980		0.721			
Satd. Flow (perm)	2985	0	0	1622	0	940	1565	1425	
Right Turn on Red		No			No			No	
Satd. Flow (RTOR)									
Link Speed (mph)	25			25			25		
Link Distance (ft)	181			347			312		
Travel Time (s)	4.9			9.5			8.5		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Parking (#/hr)	30	30				30	0	0	
Adj. Flow (vph)	478	11	22	0	33	87	158	538	
Shared Lane Traffic (%)									
Lane Group Flow (vph)	489	0	0	55	0	87	158	538	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Left	Right	Left	Left	Right	
Median Width(ft)	0			0			10		
Link Offset(ft)	0			0			0		
Crosswalk Width(ft)	16			16			16		
Two way Left Turn Lane									
Headway Factor	1.24	1.04	1.00	1.04	1.00	1.56	1.25	1.14	
Turning Speed (mph)		9	15		9	15		9	
Turn Type	NA		D.P+P	NA		Perm	NA	custom	
Protected Phases	2		4	4			5	2	3
Permitted Phases	2		5			5		5	
Detector Phase	2		4	4		5	5	2	
Switch Phase									
Minimum Initial (s)	15.0		5.0	5.0		9.0	9.0	15.0	1.0
Minimum Split (s)	20.5		9.0	9.0		13.8	13.8	20.5	23.0
Total Split (s)	28.5		9.0	9.0		26.8	26.8	28.5	23.0
Total Split (%)	32.6%		10.3%	10.3%		30.7%	30.7%	32.6%	26%
Maximum Green (s)	23.0		6.0	6.0		22.0	22.0	23.0	16.0
Yellow Time (s)	3.5		3.0	3.0		3.2	3.2	3.5	4.0
All-Red Time (s)	2.0		0.0	0.0		1.6	1.6	2.0	3.0
Lost Time Adjust (s)	0.0			0.0		0.0	0.0	0.0	
Total Lost Time (s)	5.5			3.0		4.8	4.8	5.5	
Lead/Lag			Lag	Lag					Lead
Lead-Lag Optimize?			Yes	Yes					Yes
Vehicle Extension (s)	3.0		3.0	3.0		2.0	2.0	3.0	3.0

Lane Group	EBT	EBR	NBL	NBT	NBR	SBL	SBT	SBR2	Ø3
Recall Mode	Min		None	None		None	None	Min	Ped
Walk Time (s)									7.0
Flash Dont Walk (s)									9.0
Pedestrian Calls (#/hr)									25
Act Effct Green (s)	19.3			6.1		12.2	12.2	36.3	
Actuated g/C Ratio	0.27			0.09		0.17	0.17	0.52	
v/c Ratio	0.60			0.39		0.54	0.59	0.73	
Control Delay	26.8			43.4		41.6	37.8	20.7	
Queue Delay	0.0			0.0		0.0	0.0	0.0	
Total Delay	26.8			43.4		41.6	37.8	20.7	
LOS	C			D		D	D	C	
Approach Delay	26.8			43.4			26.5		
Approach LOS	C			D			C		
Queue Length 50th (ft)	101			24		37	68	189	
Queue Length 95th (ft)	168			#71		84	131	309	
Internal Link Dist (ft)	101			267			232		
Turn Bay Length (ft)									
Base Capacity (vph)	1000			141		301	501	823	
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	0.49			0.39		0.29	0.32	0.65	

Intersection Summary			
Area Type:	Other		
Cycle Length: 87.3			
Actuated Cycle Length: 70.4			
Natural Cycle: 70			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay: 27.3		Intersection LOS: C	
Intersection Capacity Utilization 42.7%		ICU Level of Service A	
Analysis Period (min) 15			

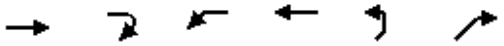
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Factory Lane/River Street & Route 162 (South Broad Street)/Route 162 (New Haven Avenue) & Route 162 (North Broad Street)



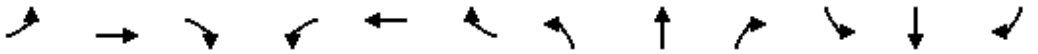
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	100	450	0	605	0	0
Future Volume (vph)	100	450	0	605	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	11	11	11
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.865		
Flt Protected	0.950					
Satd. Flow (prot)	1770	1863	0	1558	0	0
Flt Permitted	0.950					
Satd. Flow (perm)	1770	1863	0	1558	0	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		228	368		393	
Travel Time (s)		5.2	8.4		8.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	109	489	0	658	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	109	489	0	658	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.04	1.04	1.04	1.04
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 49.7%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Volume (vph)	0	0	0	515	5	0
Future Volume (vph)	0	0	0	515	5	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected					0.950	
Satd. Flow (prot)	0	0	0	1863	1770	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	0	0	1863	1770	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	585			218	69	
Travel Time (s)	16.0			5.9	1.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	560	5	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	560	5	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Yield	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 37.1%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	60	410	80	0	0	0	0	70	50
Future Volume (vph)	0	0	0	60	410	80	0	0	0	0	70	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	16	12	12	12	12	12	11	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.980						0.944	
Flt Protected					0.995							
Satd. Flow (prot)	0	0	0	0	2059	0	0	0	0	0	1700	0
Flt Permitted					0.995							
Satd. Flow (perm)	0	0	0	0	2059	0	0	0	0	0	1700	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		501			585			144			334	
Travel Time (s)		13.7			16.0			3.9			9.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Parking (#/hr)						30						
Adj. Flow (vph)	0	0	0	65	446	87	0	0	0	0	76	54
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	598	0	0	0	0	0	130	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			12	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	0.85	1.00	1.00	1.00	1.00	1.00	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 65.4%		ICU Level of Service C	
Analysis Period (min) 15			

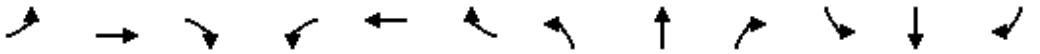
Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	60	410	80	0	0	0	0	70	50
Future Vol, veh/h	0	0	0	60	410	80	0	0	0	0	70	50
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	-	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	65	446	87	0	0	0	0	76	54

Major/Minor	Major2			Minor2		
Conflicting Flow All	0	0	0	-	620	489
Stage 1	-	-	-	-	620	-
Stage 2	-	-	-	-	0	-
Critical Hdwy	4.12	-	-	-	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.218	-	-	-	4.018	3.318
Pot Cap-1 Maneuver	-	-	-	0	404	579
Stage 1	-	-	-	0	480	-
Stage 2	-	-	-	0	-	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	-	-	-	-	0	579
Mov Cap-2 Maneuver	-	-	-	-	0	-
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-

Approach	WB	SB
HCM Control Delay, s		13
HCM LOS		B

Minor Lane/Major Mvmt	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	579
HCM Lane V/C Ratio	-	-	-	0.225
HCM Control Delay (s)	-	-	-	13
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.9



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	15	5	0	0	0	25	85	50	80	130	35
Future Volume (vph)	20	15	5	0	0	0	25	85	50	80	130	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	12	12	12	12	12	11	12	12	11	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.984						0.958			0.981	
Flt Protected		0.975						0.992			0.984	
Satd. Flow (prot)	0	2025	0	0	0	0	0	1711	0	0	1738	0
Flt Permitted		0.975						0.992			0.984	
Satd. Flow (perm)	0	2025	0	0	0	0	0	1711	0	0	1738	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		85			925			191			210	
Travel Time (s)		2.3			25.2			5.2			5.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	16	5	0	0	0	27	92	54	87	141	38
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	43	0	0	0	0	0	173	0	0	266	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	0.85	1.00	1.00	1.00	1.00	1.00	1.04	1.00	1.00	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 34.9%		ICU Level of Service A	
Analysis Period (min) 15			

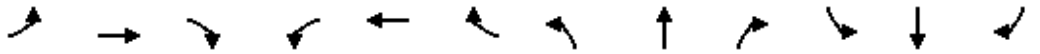
Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕			↕	
Traffic Vol, veh/h	20	15	5	0	0	0	25	85	50	80	130	35
Future Vol, veh/h	20	15	5	0	0	0	25	85	50	80	130	35
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	16	5	0	0	0	27	92	54	87	141	38

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	508	535	160	179	0	0	147	0	0
Stage 1	334	334	-	-	-	-	-	-	-
Stage 2	174	201	-	-	-	-	-	-	-
Critical Hdwy	6.42	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	5.42	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.42	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	525	452	885	1397	-	-	1435	-	-
Stage 1	725	643	-	-	-	-	-	-	-
Stage 2	856	735	-	-	-	-	-	-	-
Platoon blocked, %					-	-		-	-
Mov Cap-1 Maneuver	479	0	885	1397	-	-	1435	-	-
Mov Cap-2 Maneuver	479	0	-	-	-	-	-	-	-
Stage 1	676	0	-	-	-	-	-	-	-
Stage 2	838	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.4	1.2	2.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	SBL	SBT	SBR
Capacity (veh/h)	1397	-	-	527	1435	-	-
HCM Lane V/C Ratio	0.019	-	-	0.083	0.061	-	-
HCM Control Delay (s)	7.6	0	-	12.4	7.7	0	-
HCM Lane LOS	A	A	-	B	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.3	0.2	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	370	70	265	0	0	0	0	350	55
Future Volume (vph)	0	0	0	370	70	265	0	0	0	0	350	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	11	12	12	12	11	11	11
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95
Frt					0.881						0.980	
Flt Protected				0.950								
Satd. Flow (prot)	0	0	0	1711	1586	0	0	1863	0	0	3353	0
Flt Permitted				0.950								
Satd. Flow (perm)	0	0	0	1711	1586	0	0	1863	0	0	3353	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		370			393			312			107	
Travel Time (s)		10.1			10.7			8.5			2.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	402	76	288	0	0	0	0	380	60
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	402	364	0	0	0	0	0	440	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			0			0	
Link Offset(ft)		0			0			12			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.04	1.04	1.04	1.00	1.00	1.00	1.04	1.04	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 38.6%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	370	70	265	0	0	0	0	350	55
Future Vol, veh/h	0	0	0	370	70	265	0	0	0	0	350	55
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	402	76	288	0	0	0	0	380	60

Major/Minor	Minor1			Minor2			Major2		
Conflicting Flow All	190	440	0	592	410	-	-	-	0
Stage 1	0	0	-	410	410	-	-	-	-
Stage 2	190	440	-	182	0	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	-	-	-	-
Critical Hdwy Stg 1	-	-	-	6.54	5.54	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	-	-	-	-
Pot Cap-1 Maneuver	753	510	-	390	530	0	0	-	-
Stage 1	-	-	-	589	594	0	0	-	-
Stage 2	794	576	-	-	-	0	0	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	753	510	-	-	530	-	-	-	-
Mov Cap-2 Maneuver	753	510	-	-	530	-	-	-	-
Stage 1	-	-	-	589	594	-	-	-	-
Stage 2	794	576	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s		0	0
HCM LOS	-	A	

Minor Lane/Major Mvmt	NBLn1	WBLn1	WBLn2	SBT	SBR
Capacity (veh/h)	-	753	-	-	-
HCM Lane V/C Ratio	-	0.534	-	-	-
HCM Control Delay (s)	0	15.1	-	-	-
HCM Lane LOS	A	C	-	-	-
HCM 95th %tile Q(veh)	-	3.2	-	-	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	50	45	0	265	360	0
Future Volume (vph)	50	45	0	265	360	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	12	12	11	11
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00
Frt	0.936					
Flt Protected	0.974					
Satd. Flow (prot)	1811	0	0	1863	3421	0
Flt Permitted	0.974					
Satd. Flow (perm)	1811	0	0	1863	3421	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	925			107	118	
Travel Time (s)	25.2			2.9	3.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	54	49	0	288	391	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	103	0	0	288	391	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	14			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.92	0.92	1.00	1.00	1.04	1.04
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 26.1%		ICU Level of Service A	
Analysis Period (min) 15			

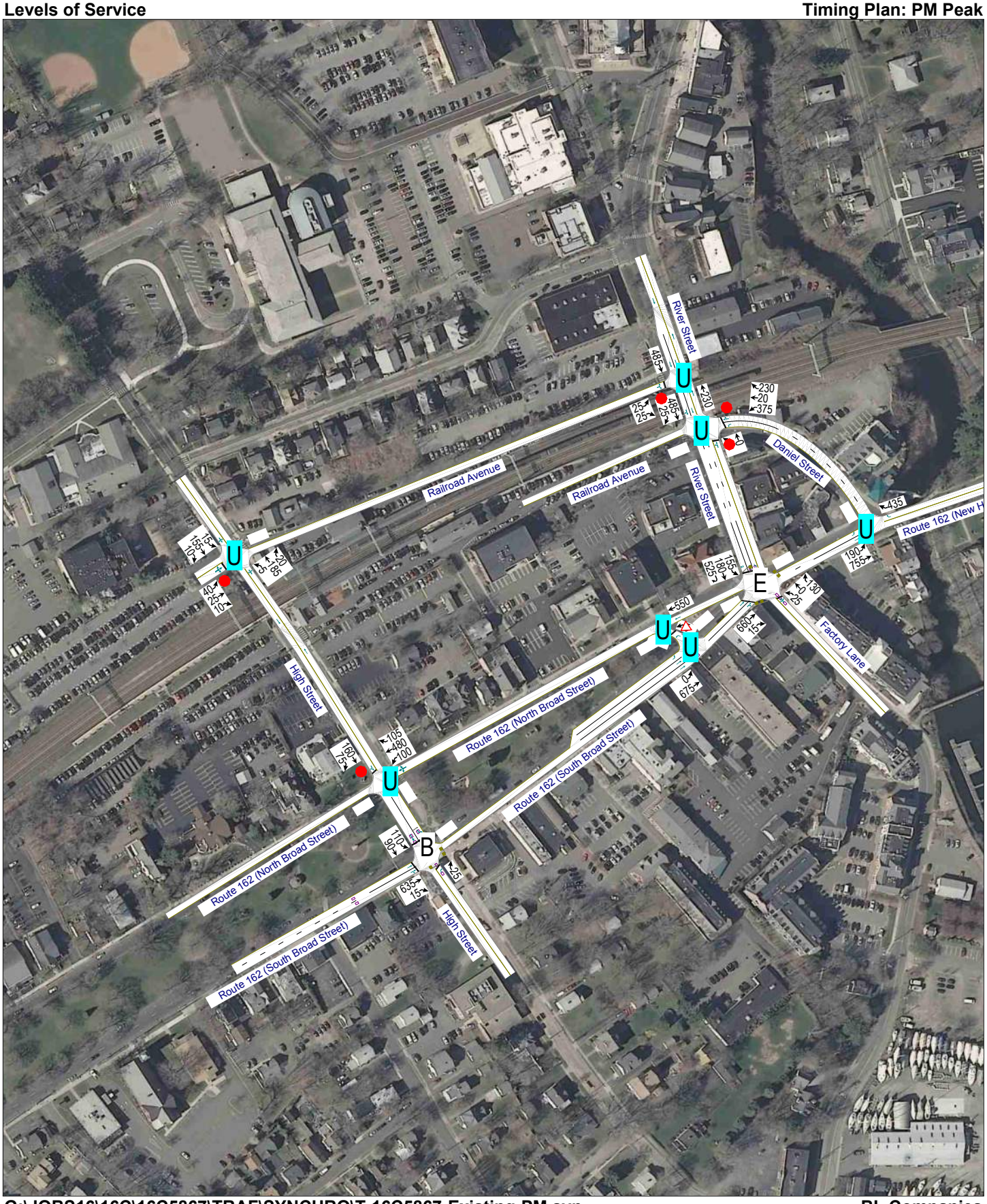
Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	50	45	0	265	360	0
Future Vol, veh/h	50	45	0	265	360	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	54	49	0	288	391	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	679	196	-	0	-	0
Stage 1	391	-	-	-	-	-
Stage 2	288	-	-	-	-	-
Critical Hdwy	6.63	6.93	-	-	-	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	-	-	-	-
Pot Cap-1 Maneuver	401	813	0	-	-	0
Stage 1	653	-	0	-	-	0
Stage 2	760	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	401	813	-	-	-	-
Mov Cap-2 Maneuver	401	-	-	-	-	-
Stage 1	653	-	-	-	-	-
Stage 2	760	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.5	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT
Capacity (veh/h)	-	528	-
HCM Lane V/C Ratio	-	0.196	-
HCM Control Delay (s)	-	13.5	-
HCM Lane LOS	-	B	-
HCM 95th %tile Q(veh)	-	0.7	-


River Street
Railroad Avenue
Railroad Avenue
River Street
Daniel Street
Route 162 (New H
High Street
Route 162 (North Broad Street)
Route 162 (South Broad Street)
Factory Lane
Route 162 (North Broad Street)
Route 162 (South Broad Street)
High Street
U
U
U
U
U
U
E
B
485
25
25
485
25
230
230
20
375
0
435
190
755
155
80
525
0
25
30
550
660
15
0
675
105
480
100
160
55
110
90
635
15
25

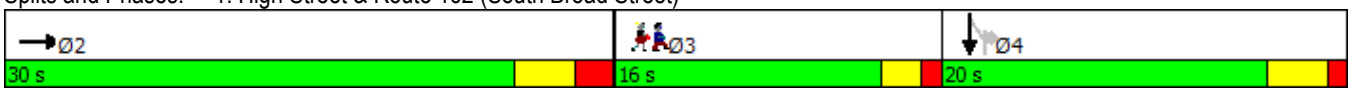
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	635	15	0	0	0	0	0	25	110	90	0
Future Volume (vph)	0	635	15	0	0	0	0	0	25	110	90	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	12	12	12	12	12	11	16	16	12
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.997							0.865			
Flt Protected										0.950		
Satd. Flow (prot)	0	3240	0	0	0	0	0	0	1558	2006	2111	0
Flt Permitted										0.950		
Satd. Flow (perm)	0	3240	0	0	0	0	0	0	1558	2006	2111	0
Right Turn on Red			Yes			Yes			Yes	Yes		Yes
Satd. Flow (RTOR)		4							437	120		
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		438			633			294			144	
Travel Time (s)		11.9			17.3			8.0			3.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Parking (#/hr)		0	0									
Adj. Flow (vph)	0	690	16	0	0	0	0	0	27	120	98	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	706	0	0	0	0	0	0	27	120	98	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Left	R NA	Right	Right
Median Width(ft)		24			24			0			16	
Link Offset(ft)		0			0			-12			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.12	1.04	1.00	1.00	1.00	1.00	1.00	1.04	0.85	0.85	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type		NA							Perm	Perm	NA	
Protected Phases		2									4	
Permitted Phases									4	4		
Detector Phase		2							4	4	4	
Switch Phase												
Minimum Initial (s)		15.0							9.0	9.0	9.0	
Minimum Split (s)		23.0							14.0	14.0	14.0	
Total Split (s)		30.0							20.0	20.0	20.0	
Total Split (%)		45.5%							30.3%	30.3%	30.3%	
Maximum Green (s)		25.0							16.0	16.0	16.0	
Yellow Time (s)		3.0							3.0	3.0	3.0	
All-Red Time (s)		2.0							1.0	1.0	1.0	
Lost Time Adjust (s)		0.0							0.0	0.0	0.0	
Total Lost Time (s)		5.0							4.0	4.0	4.0	
Lead/Lag									Lag	Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0							2.0	2.0	2.0	
Recall Mode		Min							None	None	None	
Walk Time (s)												
Flash Dont Walk (s)												

Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Parking (#/hr)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	16.0
Total Split (s)	16.0
Total Split (%)	24%
Maximum Green (s)	13.0
Yellow Time (s)	2.0
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	Ped
Walk Time (s)	7.0
Flash Dont Walk (s)	5.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)												
Act Effct Green (s)		15.9							9.3	9.3	9.3	
Actuated g/C Ratio		0.34							0.20	0.20	0.20	
v/c Ratio		0.63							0.04	0.24	0.23	
Control Delay		16.6							0.1	6.2	19.0	
Queue Delay		0.0							0.0	0.0	0.0	
Total Delay		16.6							0.1	6.2	19.0	
LOS		B							A	A	B	
Approach Delay		16.6						0.1			11.9	
Approach LOS		B						A			B	
Queue Length 50th (ft)		88							0	0	24	
Queue Length 95th (ft)		136							0	33	59	
Internal Link Dist (ft)		358			553			214			64	
Turn Bay Length (ft)												
Base Capacity (vph)		1787							832	785	744	
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							0.03	0.15	0.13	

Intersection Summary			
Area Type:	Other		
Cycle Length: 66			
Actuated Cycle Length: 46.2			
Natural Cycle: 55			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.63			
Intersection Signal Delay: 15.0		Intersection LOS: B	
Intersection Capacity Utilization 83.4%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 1: High Street & Route 162 (South Broad Street)



Lane Group	Ø3
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Lane Group	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	0	0	0	675	0	0
Future Volume (vph)	0	0	0	675	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12
Storage Length (ft)	0	0	250			0
Storage Lanes	0	0	2			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	0	1863	3539	0	0
Flt Permitted						
Satd. Flow (perm)	0	0	1863	3539	0	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	62			633	181	
Travel Time (s)	1.7			17.3	4.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	734	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	734	0	0
Enter Blocked Intersection	No	No	Yes	Yes	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.04	1.04	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	38.9%	ICU Level of Service	A
Analysis Period (min)	15		

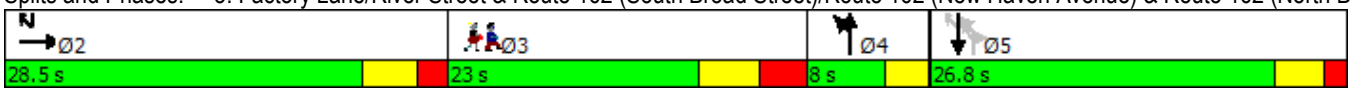
Lane Group	EBT	EBR	NBL	NBT	NBR	SBL	SBT	SBR2	Ø3
Lane Configurations									
Traffic Volume (vph)	660	15	25	0	130	155	180	525	
Future Volume (vph)	660	15	25	0	130	155	180	525	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	11	11	12	11	12	10	10	12	
Storage Length (ft)		0	150		150	0			
Storage Lanes		0	0		0	1			
Taper Length (ft)			25			25			
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	0.997			0.887				0.850	
Flt Protected				0.992		0.950			
Satd. Flow (prot)	3240	0	0	1584	0	1486	1565	1425	
Flt Permitted				0.992		0.651			
Satd. Flow (perm)	3240	0	0	1584	0	1019	1565	1425	
Right Turn on Red		No			No			No	
Satd. Flow (RTOR)									
Link Speed (mph)	25			25			25		
Link Distance (ft)	181			347			312		
Travel Time (s)	4.9			9.5			8.5		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Parking (#/hr)	0	0				0	0	0	
Adj. Flow (vph)	717	16	27	0	141	168	196	571	
Shared Lane Traffic (%)									
Lane Group Flow (vph)	733	0	0	168	0	168	196	571	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Left	Right	Left	Left	Right	
Median Width(ft)	0			0			10		
Link Offset(ft)	0			0			0		
Crosswalk Width(ft)	16			16			16		
Two way Left Turn Lane									
Headway Factor	1.12	1.04	1.00	1.04	1.00	1.25	1.25	1.14	
Turning Speed (mph)		9	15		9	15		9	
Turn Type	NA		D.P+P	NA		Perm	NA	custom	
Protected Phases	2		4	4			5	2	3
Permitted Phases	2		5			5		5	
Detector Phase	2		4	4		5	5	2	
Switch Phase									
Minimum Initial (s)	15.0		5.0	5.0		9.0	9.0	15.0	1.0
Minimum Split (s)	20.5		8.0	8.0		13.8	13.8	20.5	23.0
Total Split (s)	28.5		8.0	8.0		26.8	26.8	28.5	23.0
Total Split (%)	33.0%		9.3%	9.3%		31.1%	31.1%	33.0%	27%
Maximum Green (s)	23.0		5.0	5.0		22.0	22.0	23.0	16.0
Yellow Time (s)	3.5		3.0	3.0		3.2	3.2	3.5	4.0
All-Red Time (s)	2.0		0.0	0.0		1.6	1.6	2.0	3.0
Lost Time Adjust (s)	0.0			0.0		0.0	0.0	0.0	
Total Lost Time (s)	5.5			3.0		4.8	4.8	5.5	
Lead/Lag			Lag	Lag					Lead
Lead-Lag Optimize?									
Vehicle Extension (s)	3.0		3.0	3.0		2.0	2.0	3.0	3.0

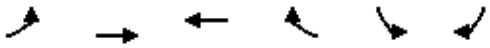
Lane Group	EBT	EBR	NBL	NBT	NBR	SBL	SBT	SBR2	Ø3
Recall Mode	Min		None	None		None	None	Min	Ped
Walk Time (s)									7.0
Flash Dont Walk (s)									9.0
Pedestrian Calls (#/hr)									65
Act Effct Green (s)	20.6			5.1		16.6	16.6	42.0	
Actuated g/C Ratio	0.26			0.06		0.21	0.21	0.53	
v/c Ratio	0.87			1.66		0.79	0.60	0.75	
Control Delay	40.9			367.0		55.6	36.4	21.4	
Queue Delay	0.0			0.0		0.0	0.0	0.0	
Total Delay	40.9			367.0		55.6	36.4	21.4	
LOS	D			F		E	D	C	
Approach Delay	40.9			367.0			30.7		
Approach LOS	D			F			C		
Queue Length 50th (ft)	184			~130		81	91	202	
Queue Length 95th (ft)	#293			#262		#166	157	329	
Internal Link Dist (ft)	101			267			232		
Turn Bay Length (ft)									
Base Capacity (vph)	955			101		287	441	807	
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	0.77			1.66		0.59	0.44	0.71	

Intersection Summary

Area Type: Other
Cycle Length: 86.3
Actuated Cycle Length: 78.9
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.66
Intersection Signal Delay: 65.5 Intersection LOS: E
Intersection Capacity Utilization 49.8% ICU Level of Service A
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

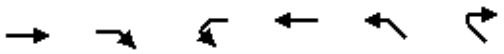
Splits and Phases: 3: Factory Lane/River Street & Route 162 (South Broad Street)/Route 162 (New Haven Avenue) & Route 162 (North Broad Street)





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	190	755	0	435	0	0
Future Volume (vph)	190	755	0	435	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.865		
Flt Protected	0.950					
Satd. Flow (prot)	1711	1801	0	1558	0	0
Flt Permitted	0.950					
Satd. Flow (perm)	1711	1801	0	1558	0	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		228	379		393	
Travel Time (s)		5.2	8.6		8.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	207	821	0	473	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	207	821	0	473	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		11	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.04	1.04	1.04	1.04	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 44.1%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations						
Traffic Volume (vph)	0	0	0	550	5	0
Future Volume (vph)	0	0	0	550	5	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected					0.950	
Satd. Flow (prot)	0	0	0	1863	1770	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	0	0	1863	1770	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	596			207	62	
Travel Time (s)	16.3			5.6	1.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	598	5	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	598	5	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Yield	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 38.9%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	100	480	105	0	0	0	0	160	75
Future Volume (vph)	0	0	0	100	480	105	0	0	0	0	160	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	12	16	12	12	12	12	12	11	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.979						0.957	
Flt Protected					0.993							
Satd. Flow (prot)	0	0	0	0	2052	0	0	0	0	0	1723	0
Flt Permitted					0.993							
Satd. Flow (perm)	0	0	0	0	2052	0	0	0	0	0	1723	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		501			596			144			334	
Travel Time (s)		13.7			16.3			3.9			9.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	109	522	114	0	0	0	0	174	82
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	745	0	0	0	0	0	256	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			12	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.85	0.85	0.85	1.00	0.85	1.00	1.00	1.00	1.00	1.00	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 83.4%		ICU Level of Service E	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	4.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	100	480	105	0	0	0	0	160	75
Future Vol, veh/h	0	0	0	100	480	105	0	0	0	0	160	75
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	-	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	109	522	114	0	0	0	0	174	82

Major/Minor	Major2			Minor2		
Conflicting Flow All	0	0	0	-	796	579
Stage 1	-	-	-	-	796	-
Stage 2	-	-	-	-	0	-
Critical Hdwy	4.12	-	-	-	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.218	-	-	-	4.018	3.318
Pot Cap-1 Maneuver	-	-	-	0	320	515
Stage 1	-	-	-	0	399	-
Stage 2	-	-	-	0	-	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	-	-	-	-	0	515
Mov Cap-2 Maneuver	-	-	-	-	0	-
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-

Approach	WB	SB
HCM Control Delay, s		18.7
HCM LOS		C

Minor Lane/Major Mvmt	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	515
HCM Lane V/C Ratio	-	-	-	0.496
HCM Control Delay (s)	-	-	-	18.7
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	2.7

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	25	10	0	0	0	5	185	20	15	155	10
Future Volume (vph)	40	25	10	0	0	0	5	185	20	15	155	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	12	12	12	12	12	11	12	12	11	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.982						0.987			0.992	
Flt Protected		0.974						0.999			0.996	
Satd. Flow (prot)	0	2019	0	0	0	0	0	1775	0	0	1779	0
Flt Permitted		0.974						0.999			0.996	
Satd. Flow (perm)	0	2019	0	0	0	0	0	1775	0	0	1779	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		85			925			191			179	
Travel Time (s)		2.3			25.2			5.2			4.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	43	27	11	0	0	0	5	201	22	16	168	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	81	0	0	0	0	0	228	0	0	195	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	0.85	1.00	1.00	1.00	1.00	1.00	1.04	1.00	1.00	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 27.1%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕			↕	
Traffic Vol, veh/h	40	25	10	0	0	0	5	185	20	15	155	10
Future Vol, veh/h	40	25	10	0	0	0	5	185	20	15	155	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	43	27	11	0	0	0	5	201	22	16	168	11

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	430	441	174	179	0	0	223	0	0
Stage 1	207	207	-	-	-	-	-	-	-
Stage 2	223	234	-	-	-	-	-	-	-
Critical Hdwy	6.42	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	5.42	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.42	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	582	510	869	1397	-	-	1346	-	-
Stage 1	828	731	-	-	-	-	-	-	-
Stage 2	814	711	-	-	-	-	-	-	-
Platoon blocked, %					-	-		-	-
Mov Cap-1 Maneuver	572	0	869	1397	-	-	1346	-	-
Mov Cap-2 Maneuver	572	0	-	-	-	-	-	-	-
Stage 1	817	0	-	-	-	-	-	-	-
Stage 2	811	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.8	0.2	0.6
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	SBL	SBT	SBR
Capacity (veh/h)	1397	-	-	614	1346	-	-
HCM Lane V/C Ratio	0.004	-	-	0.133	0.012	-	-
HCM Control Delay (s)	7.6	0	-	11.8	7.7	0	-
HCM Lane LOS	A	A	-	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.5	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	375	20	230	0	0	0	0	485	25
Future Volume (vph)	0	0	0	375	20	230	0	0	0	0	485	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	11	12	12	12	12	11	11
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95
Frt					0.862						0.993	
Flt Protected				0.950								
Satd. Flow (prot)	0	0	0	1711	1552	0	0	1863	0	0	3397	0
Flt Permitted				0.950								
Satd. Flow (perm)	0	0	0	1711	1552	0	0	1863	0	0	3397	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		370			393			312			107	
Travel Time (s)		10.1			10.7			8.5			2.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	408	22	250	0	0	0	0	527	27
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	408	272	0	0	0	0	0	554	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			0			0	
Link Offset(ft)		0			0			12			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.04	1.04	1.04	1.00	1.00	1.00	1.00	1.04	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 41.6%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	375	20	230	0	0	0	0	485	25
Future Vol, veh/h	0	0	0	375	20	230	0	0	0	0	485	25
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	408	22	250	0	0	0	0	527	27

Major/Minor	Minor1			Minor2			Major2		
Conflicting Flow All	264	554	0	677	541	-	-	-	0
Stage 1	0	0	-	541	541	-	-	-	-
Stage 2	264	554	-	136	0	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	-	-	-	-
Critical Hdwy Stg 1	-	-	-	6.54	5.54	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	-	-	-	-
Pot Cap-1 Maneuver	668	439	-	339	447	0	0	-	-
Stage 1	-	-	-	493	519	0	0	-	-
Stage 2	718	512	-	-	-	0	0	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	668	439	-	-	447	-	-	-	-
Mov Cap-2 Maneuver	668	439	-	-	447	-	-	-	-
Stage 1	-	-	-	493	519	-	-	-	-
Stage 2	718	512	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s		0	0
HCM LOS	-	A	

Minor Lane/Major Mvmt	NBLn1	WBLn1	WBLn2	SBT	SBR
Capacity (veh/h)	-	668	-	-	-
HCM Lane V/C Ratio	-	0.61	-	-	-
HCM Control Delay (s)	0	18.5	-	-	-
HCM Lane LOS	A	C	-	-	-
HCM 95th %tile Q(veh)	-	4.2	-	-	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	25	25	0	230	485	0
Future Volume (vph)	25	25	0	230	485	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	12	12	12	11	11
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00
Frt	0.932					
Flt Protected	0.976					
Satd. Flow (prot)	1751	0	0	1863	3421	0
Flt Permitted	0.976					
Satd. Flow (perm)	1751	0	0	1863	3421	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	925			107	118	
Travel Time (s)	25.2			2.9	3.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	27	27	0	250	527	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	54	0	0	250	527	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	13			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.96	1.00	1.00	1.00	1.04	1.04
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 23.4%		ICU Level of Service A	
Analysis Period (min) 15			

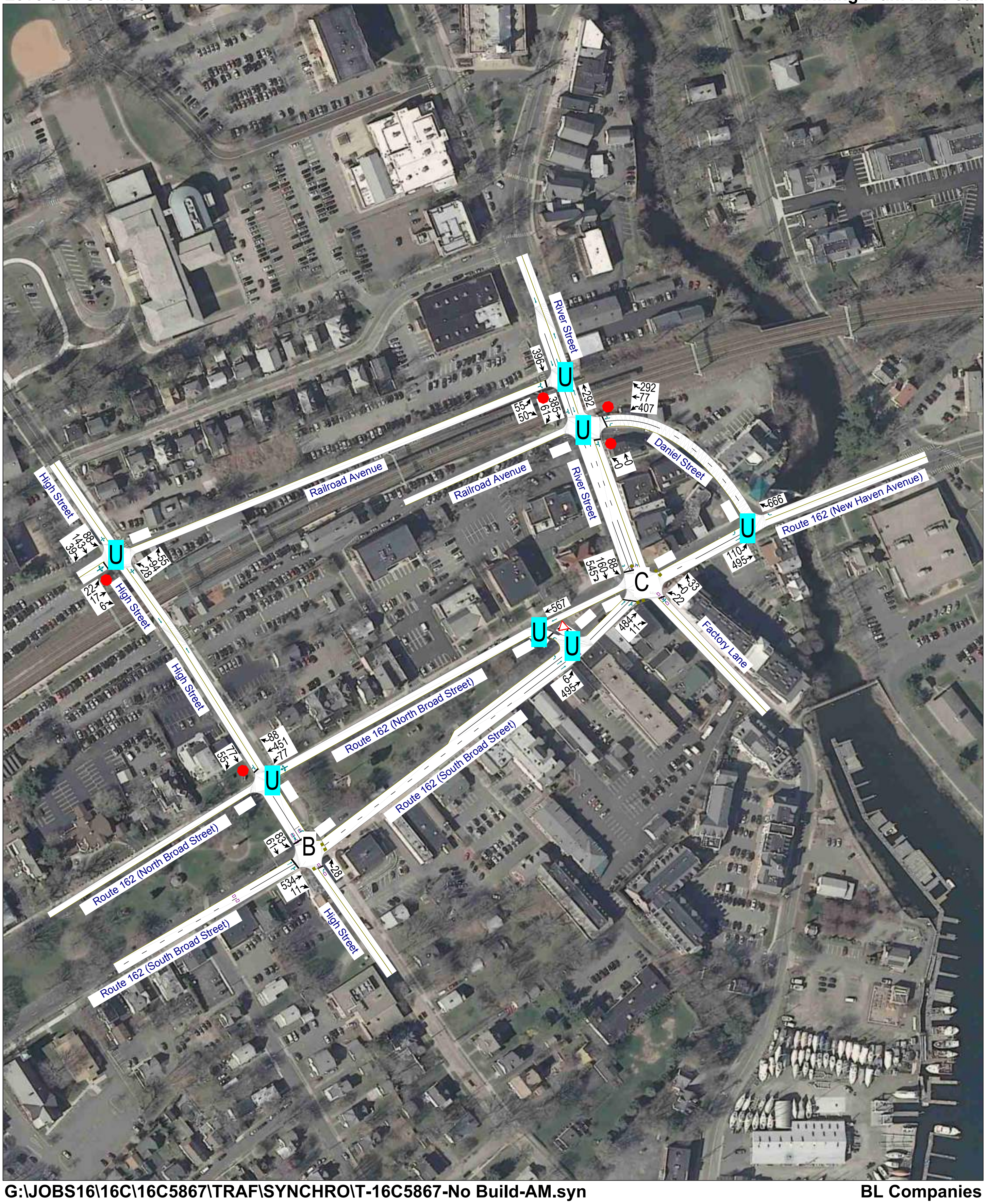
Intersection	
Int Delay, s/veh	0.9

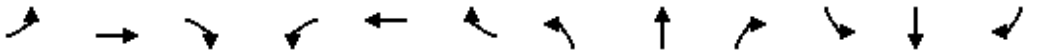
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	25	25	0	230	485	0
Future Vol, veh/h	25	25	0	230	485	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	27	27	0	250	527	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	777	264	-	0	-	0
Stage 1	527	-	-	-	-	-
Stage 2	250	-	-	-	-	-
Critical Hdwy	6.63	6.93	-	-	-	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	-	-	-	-
Pot Cap-1 Maneuver	349	735	0	-	-	0
Stage 1	558	-	0	-	-	0
Stage 2	791	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	349	735	-	-	-	-
Mov Cap-2 Maneuver	349	-	-	-	-	-
Stage 1	558	-	-	-	-	-
Stage 2	791	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.6	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT
Capacity (veh/h)	-	473	-
HCM Lane V/C Ratio	-	0.115	-
HCM Control Delay (s)	-	13.6	-
HCM Lane LOS	-	B	-
HCM 95th %tile Q(veh)	-	0.4	-


River Street
Railroad Avenue
Railroad Avenue
River Street
Daniel Street
High Street
High Street
High Street
Route 162 (New Haven Avenue)
C
Factory Lane
Route 162 (North Broad Street)
Route 162 (South Broad Street)
Route 162 (North Broad Street)
B
Route 162 (South Broad Street)
High Street



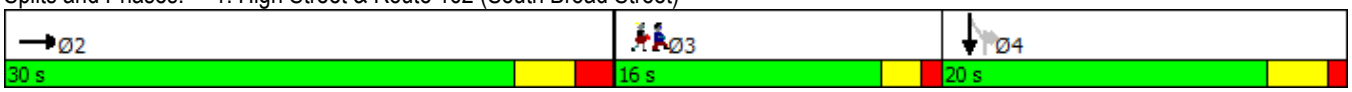
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	534	11	0	0	0	0	0	28	83	61	0
Future Volume (vph)	0	534	11	0	0	0	0	0	28	83	61	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12	12	12	11	16	16	12
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.997							0.865			
Flt Protected										0.950		
Satd. Flow (prot)	0	2985	0	0	0	0	0	0	1558	2006	2111	0
Flt Permitted										0.950		
Satd. Flow (perm)	0	2985	0	0	0	0	0	0	1558	2006	2111	0
Right Turn on Red			Yes			Yes			Yes	Yes		Yes
Satd. Flow (RTOR)		4							469	90		
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		438			633			294			144	
Travel Time (s)		11.9			17.3			8.0			3.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Parking (#/hr)	30	30	30									
Adj. Flow (vph)	0	580	12	0	0	0	0	0	30	90	66	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	592	0	0	0	0	0	0	30	90	66	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Left	R NA	Right	Right
Median Width(ft)		12			12			0			16	
Link Offset(ft)		0			0			-12			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.24	1.00	1.00	1.00	1.00	1.00	1.00	1.04	0.85	0.85	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type		NA							Perm	Perm	NA	
Protected Phases		2									4	
Permitted Phases									4	4		
Detector Phase		2							4	4	4	
Switch Phase												
Minimum Initial (s)		15.0							9.0	9.0	9.0	
Minimum Split (s)		23.0							14.0	14.0	14.0	
Total Split (s)		30.0							20.0	20.0	20.0	
Total Split (%)		45.5%							30.3%	30.3%	30.3%	
Maximum Green (s)		25.0							16.0	16.0	16.0	
Yellow Time (s)		3.0							3.0	3.0	3.0	
All-Red Time (s)		2.0							1.0	1.0	1.0	
Lost Time Adjust (s)		0.0							0.0	0.0	0.0	
Total Lost Time (s)		5.0							4.0	4.0	4.0	
Lead/Lag									Lag	Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0							2.0	2.0	2.0	
Recall Mode		Min							None	None	None	
Walk Time (s)												
Flash Dont Walk (s)												

Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Parking (#/hr)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	16.0
Total Split (s)	16.0
Total Split (%)	24%
Maximum Green (s)	13.0
Yellow Time (s)	2.0
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	Ped
Walk Time (s)	7.0
Flash Dont Walk (s)	5.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)												
Act Effct Green (s)		15.6							9.2	9.2	9.2	
Actuated g/C Ratio		0.34							0.20	0.20	0.20	
v/c Ratio		0.58							0.04	0.19	0.16	
Control Delay		16.1							0.1	6.3	17.9	
Queue Delay		0.0							0.0	0.0	0.0	
Total Delay		16.1							0.1	6.3	17.9	
LOS		B							A	A	B	
Approach Delay		16.1						0.1			11.2	
Approach LOS		B						A			B	
Queue Length 50th (ft)		72							0	0	16	
Queue Length 95th (ft)		114							0	28	42	
Internal Link Dist (ft)		358			553			214			64	
Turn Bay Length (ft)												
Base Capacity (vph)		1660							856	771	750	
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							0.04	0.12	0.09	

Intersection Summary			
Area Type:	Other		
Cycle Length: 66			
Actuated Cycle Length: 45.8			
Natural Cycle: 55			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.58			
Intersection Signal Delay: 14.5		Intersection LOS: B	
Intersection Capacity Utilization 71.0%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: High Street & Route 162 (South Broad Street)



Lane Group	Ø3
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Lane Group	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	0	0	6	495	0	0
Future Volume (vph)	0	0	6	495	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12
Storage Length (ft)	0	0	250			0
Storage Lanes	0	0	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	1.00
Frt						
Flt Protected			0.950			
Satd. Flow (prot)	0	0	1327	3097	0	0
Flt Permitted			0.950			
Satd. Flow (perm)	0	0	1327	3097	0	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	69			633	181	
Travel Time (s)	1.9			17.3	4.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Parking (#/hr)			30	30		
Adj. Flow (vph)	0	0	7	538	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	7	538	0	0
Enter Blocked Intersection	No	No	Yes	Yes	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.04	1.04	1.43	1.19	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 39.8%		ICU Level of Service A	
Analysis Period (min) 15			

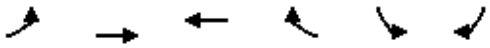
Lane Group	EBT	EBR	NBL	NBT	NBR	SBL	SBT	SBR2	Ø3
Lane Configurations									
Traffic Volume (vph)	484	11	22	0	33	88	160	545	
Future Volume (vph)	484	11	22	0	33	88	160	545	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	11	11	12	11	12	10	10	12	
Storage Length (ft)		0	150		150	0			
Storage Lanes		0	0		0	1			
Taper Length (ft)			25			25			
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	0.997			0.919				0.850	
Flt Protected				0.980		0.950			
Satd. Flow (prot)	2985	0	0	1622	0	1239	1565	1425	
Flt Permitted				0.980		0.718			
Satd. Flow (perm)	2985	0	0	1622	0	936	1565	1425	
Right Turn on Red		No			No			No	
Satd. Flow (RTOR)									
Link Speed (mph)	25			25			25		
Link Distance (ft)	181			347			312		
Travel Time (s)	4.9			9.5			8.5		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Parking (#/hr)	30	30				30	0	0	
Adj. Flow (vph)	526	12	24	0	36	96	174	592	
Shared Lane Traffic (%)									
Lane Group Flow (vph)	538	0	0	60	0	96	174	592	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Left	Right	Left	Left	Right	
Median Width(ft)	0			0			10		
Link Offset(ft)	0			0			0		
Crosswalk Width(ft)	16			16			16		
Two way Left Turn Lane									
Headway Factor	1.24	1.04	1.00	1.04	1.00	1.56	1.25	1.14	
Turning Speed (mph)		9	15		9	15		9	
Turn Type	NA		D.P+P	NA		Perm	NA	custom	
Protected Phases	2		4	4			5	2	3
Permitted Phases	2		5			5		5	
Detector Phase	2		4	4		5	5	2	
Switch Phase									
Minimum Initial (s)	15.0		5.0	5.0		9.0	9.0	15.0	1.0
Minimum Split (s)	20.5		9.0	9.0		13.8	13.8	20.5	23.0
Total Split (s)	28.5		9.0	9.0		26.8	26.8	28.5	23.0
Total Split (%)	32.6%		10.3%	10.3%		30.7%	30.7%	32.6%	26%
Maximum Green (s)	23.0		6.0	6.0		22.0	22.0	23.0	16.0
Yellow Time (s)	3.5		3.0	3.0		3.2	3.2	3.5	4.0
All-Red Time (s)	2.0		0.0	0.0		1.6	1.6	2.0	3.0
Lost Time Adjust (s)	0.0			0.0		0.0	0.0	0.0	
Total Lost Time (s)	5.5			3.0		4.8	4.8	5.5	
Lead/Lag			Lag	Lag					Lead
Lead-Lag Optimize?			Yes	Yes					Yes
Vehicle Extension (s)	3.0		3.0	3.0		2.0	2.0	3.0	3.0

Lane Group	EBT	EBR	NBL	NBT	NBR	SBL	SBT	SBR2	Ø3
Recall Mode	Min		None	None		None	None	Min	Ped
Walk Time (s)									7.0
Flash Dont Walk (s)									9.0
Pedestrian Calls (#/hr)									25
Act Effct Green (s)	20.6			6.1		13.1	13.1	38.6	
Actuated g/C Ratio	0.28			0.08		0.18	0.18	0.53	
v/c Ratio	0.64			0.44		0.57	0.62	0.78	
Control Delay	27.9			47.1		43.2	39.0	22.8	
Queue Delay	0.0			0.0		0.0	0.0	0.0	
Total Delay	27.9			47.1		43.2	39.0	22.8	
LOS	C			D		D	D	C	
Approach Delay	27.9			47.1			28.4		
Approach LOS	C			D			C		
Queue Length 50th (ft)	116			28		44	81	222	
Queue Length 95th (ft)	191			#82		92	143	364	
Internal Link Dist (ft)	101			267			232		
Turn Bay Length (ft)									
Base Capacity (vph)	968			137		290	485	815	
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	0.56			0.44		0.33	0.36	0.73	

Intersection Summary			
Area Type:	Other		
Cycle Length: 87.3			
Actuated Cycle Length: 72.6			
Natural Cycle: 75			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay: 29.0		Intersection LOS: C	
Intersection Capacity Utilization 45.8%		ICU Level of Service A	
Analysis Period (min) 15			

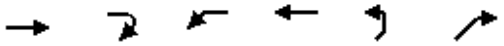
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Factory Lane/River Street & Route 162 (South Broad Street)/Route 162 (New Haven Avenue) & Route 162 (North Broad Street)



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	110	495	0	666	0	0
Future Volume (vph)	110	495	0	666	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	11	11	11
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.865		
Flt Protected	0.950					
Satd. Flow (prot)	1770	1863	0	1558	0	0
Flt Permitted	0.950					
Satd. Flow (perm)	1770	1863	0	1558	0	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		228	368		393	
Travel Time (s)		5.2	8.4		8.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	120	538	0	724	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	120	538	0	724	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.04	1.04	1.04	1.04
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 54.0%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Volume (vph)	0	0	0	567	5	0
Future Volume (vph)	0	0	0	567	5	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected					0.950	
Satd. Flow (prot)	0	0	0	1863	1770	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	0	0	1863	1770	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	585			218	69	
Travel Time (s)	16.0			5.9	1.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	616	5	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	616	5	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Yield	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 39.8%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	77	451	88	0	0	0	0	77	55
Future Volume (vph)	0	0	0	77	451	88	0	0	0	0	77	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	16	12	12	12	12	12	11	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.981						0.944	
Flt Protected					0.994							
Satd. Flow (prot)	0	0	0	0	2059	0	0	0	0	0	1700	0
Flt Permitted					0.994							
Satd. Flow (perm)	0	0	0	0	2059	0	0	0	0	0	1700	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		501			585			144			334	
Travel Time (s)		13.7			16.0			3.9			9.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Parking (#/hr)						30						
Adj. Flow (vph)	0	0	0	84	490	96	0	0	0	0	84	60
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	670	0	0	0	0	0	144	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			12	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	0.85	1.00	1.00	1.00	1.00	1.00	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 71.0%		ICU Level of Service C	
Analysis Period (min) 15			

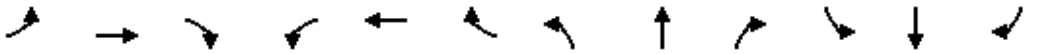
Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	77	451	88	0	0	0	0	77	55
Future Vol, veh/h	0	0	0	77	451	88	0	0	0	0	77	55
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	-	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	84	490	96	0	0	0	0	84	60

Major/Minor	Major2			Minor2		
Conflicting Flow All	0	0	0	-	705	538
Stage 1	-	-	-	-	705	-
Stage 2	-	-	-	-	0	-
Critical Hdwy	4.12	-	-	-	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.218	-	-	-	4.018	3.318
Pot Cap-1 Maneuver	-	-	-	0	361	543
Stage 1	-	-	-	0	439	-
Stage 2	-	-	-	0	-	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	-	-	-	-	0	543
Mov Cap-2 Maneuver	-	-	-	-	0	-
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-

Approach	WB	SB
HCM Control Delay, s		14
HCM LOS		B

Minor Lane/Major Mvmt	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	543
HCM Lane V/C Ratio	-	-	-	0.264
HCM Control Delay (s)	-	-	-	14
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	1.1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	17	6	0	0	0	28	94	55	88	143	39
Future Volume (vph)	22	17	6	0	0	0	28	94	55	88	143	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	12	12	12	12	12	11	12	12	11	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.981						0.958			0.981	
Flt Protected		0.976						0.992			0.984	
Satd. Flow (prot)	0	2021	0	0	0	0	0	1711	0	0	1738	0
Flt Permitted		0.976						0.992			0.984	
Satd. Flow (perm)	0	2021	0	0	0	0	0	1711	0	0	1738	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		85			925			191			210	
Travel Time (s)		2.3			25.2			5.2			5.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	24	18	7	0	0	0	30	102	60	96	155	42
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	49	0	0	0	0	0	192	0	0	293	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	0.85	1.00	1.00	1.00	1.00	1.00	1.04	1.00	1.00	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 37.3%		ICU Level of Service A	
Analysis Period (min) 15			

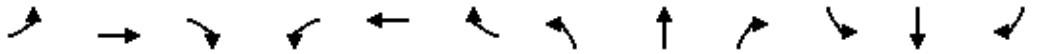
Intersection	
Int Delay, s/veh	3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕			↕	
Traffic Vol, veh/h	22	17	6	0	0	0	28	94	55	88	143	39
Future Vol, veh/h	22	17	6	0	0	0	28	94	55	88	143	39
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	24	18	7	0	0	0	30	102	60	96	155	42

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	561	591	177	198	0	0	162	0	0
Stage 1	368	368	-	-	-	-	-	-	-
Stage 2	193	223	-	-	-	-	-	-	-
Critical Hdwy	6.42	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	5.42	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.42	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	489	420	866	1375	-	-	1417	-	-
Stage 1	700	621	-	-	-	-	-	-	-
Stage 2	840	719	-	-	-	-	-	-	-
Platoon blocked, %					-	-		-	-
Mov Cap-1 Maneuver	441	0	866	1375	-	-	1417	-	-
Mov Cap-2 Maneuver	441	0	-	-	-	-	-	-	-
Stage 1	646	0	-	-	-	-	-	-	-
Stage 2	820	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.1	1.2	2.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	SBL	SBT	SBR
Capacity (veh/h)	1375	-	-	493	1417	-	-
HCM Lane V/C Ratio	0.022	-	-	0.099	0.068	-	-
HCM Control Delay (s)	7.7	0	-	13.1	7.7	0	-
HCM Lane LOS	A	A	-	B	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.3	0.2	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	407	77	292	0	0	0	0	385	61
Future Volume (vph)	0	0	0	407	77	292	0	0	0	0	385	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	11	12	12	12	11	11	11
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95
Frt					0.881						0.980	
Flt Protected				0.950								
Satd. Flow (prot)	0	0	0	1711	1586	0	0	1863	0	0	3353	0
Flt Permitted				0.950								
Satd. Flow (perm)	0	0	0	1711	1586	0	0	1863	0	0	3353	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		370			393			312			107	
Travel Time (s)		10.1			10.7			8.5			2.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	442	84	317	0	0	0	0	418	66
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	442	401	0	0	0	0	0	484	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			0			0	
Link Offset(ft)		0			0			12			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.04	1.04	1.04	1.00	1.00	1.00	1.04	1.04	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 41.8%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	407	77	292	0	0	0	0	385	61
Future Vol, veh/h	0	0	0	407	77	292	0	0	0	0	385	61
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	442	84	317	0	0	0	0	418	66

Major/Minor	Minor1			Minor2			Major2		
Conflicting Flow All	209	485	0	653	452	-	-	-	0
Stage 1	0	0	-	452	452	-	-	-	-
Stage 2	209	485	-	201	0	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	-	-	-	-
Critical Hdwy Stg 1	-	-	-	6.54	5.54	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	-	-	-	-
Pot Cap-1 Maneuver	730	481	-	352	502	0	0	-	-
Stage 1	-	-	-	557	569	0	0	-	-
Stage 2	774	550	-	-	-	0	0	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	730	481	-	-	502	-	-	-	-
Mov Cap-2 Maneuver	730	481	-	-	502	-	-	-	-
Stage 1	-	-	-	557	569	-	-	-	-
Stage 2	774	550	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s		0	0
HCM LOS	-	A	

Minor Lane/Major Mvmt	NBLn1	WBLn1	WBLn2	SBT	SBR
Capacity (veh/h)	-	730	-	-	-
HCM Lane V/C Ratio	-	0.606	-	-	-
HCM Control Delay (s)	0	17.2	-	-	-
HCM Lane LOS	A	C	-	-	-
HCM 95th %tile Q(veh)	-	4.1	-	-	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	55	50	0	292	396	0
Future Volume (vph)	55	50	0	292	396	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	12	12	11	11
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00
Frt	0.936					
Flt Protected	0.974					
Satd. Flow (prot)	1811	0	0	1863	3421	0
Flt Permitted	0.974					
Satd. Flow (perm)	1811	0	0	1863	3421	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	925			107	118	
Travel Time (s)	25.2			2.9	3.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	60	54	0	317	430	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	114	0	0	317	430	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	14			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.92	0.92	1.00	1.00	1.04	1.04
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 28.1%		ICU Level of Service A	
Analysis Period (min) 15			

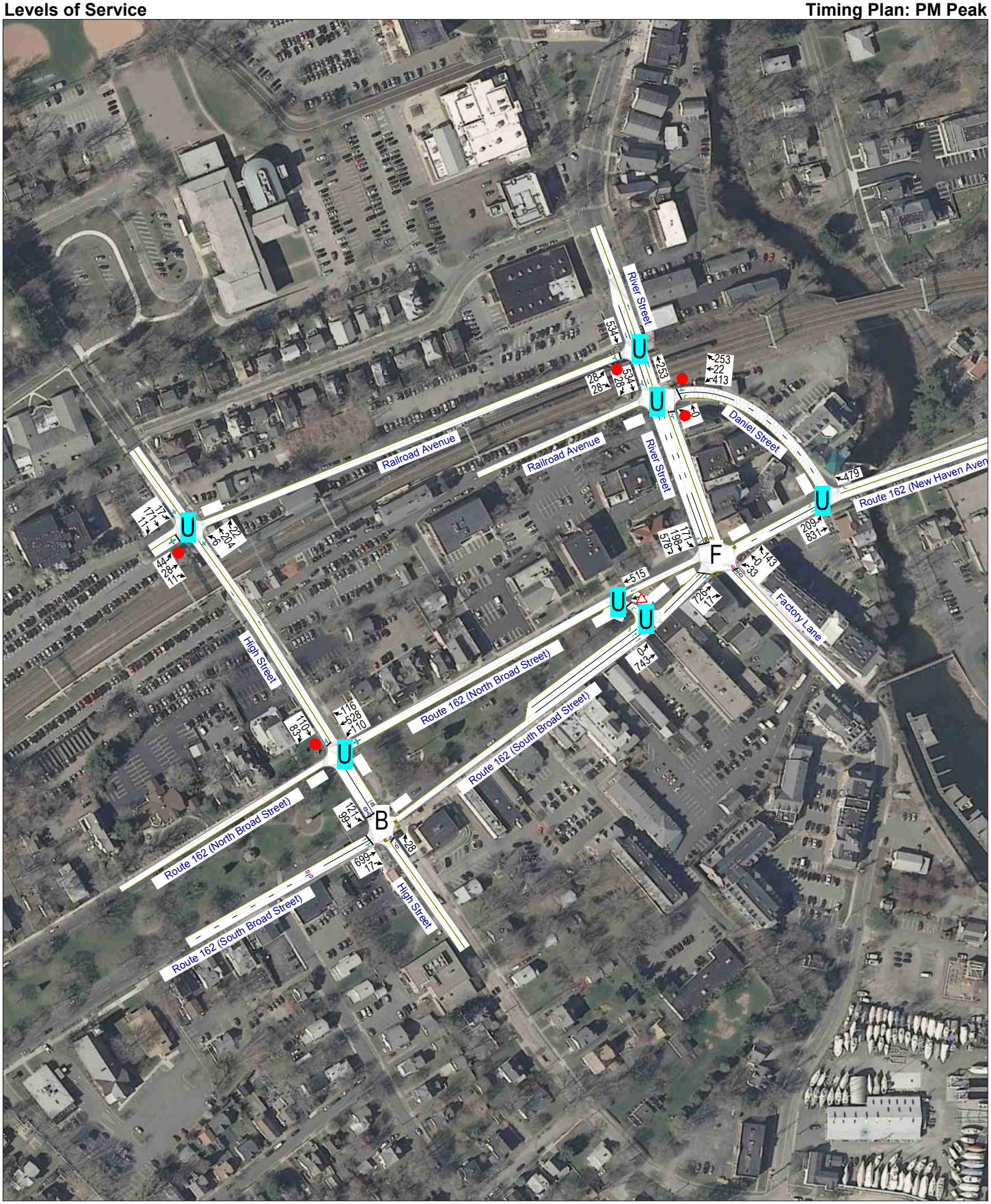
Intersection	
Int Delay, s/veh	1.9

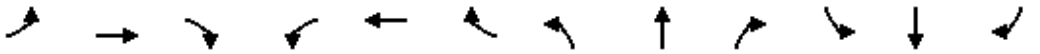
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	55	50	0	292	396	0
Future Vol, veh/h	55	50	0	292	396	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	60	54	0	317	430	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	747	215	-	0	-	0
Stage 1	430	-	-	-	-	-
Stage 2	317	-	-	-	-	-
Critical Hdwy	6.63	6.93	-	-	-	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	-	-	-	-
Pot Cap-1 Maneuver	364	790	0	-	-	0
Stage 1	625	-	0	-	-	0
Stage 2	738	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	364	790	-	-	-	-
Mov Cap-2 Maneuver	364	-	-	-	-	-
Stage 1	625	-	-	-	-	-
Stage 2	738	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.6	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT
Capacity (veh/h)	-	490	-
HCM Lane V/C Ratio	-	0.233	-
HCM Control Delay (s)	-	14.6	-
HCM Lane LOS	-	B	-
HCM 95th %tile Q(veh)	-	0.9	-


River Street
Railroad Avenue
Railroad Avenue
River Street
Daniel Street
Route 162 (New Haven Aven
High Street
Route 162 (North Broad Street)
Route 162 (South Broad Street)
Route 162 (North Broad Street)
Route 162 (South Broad Street)
High Street
Factory Lane
U
U
U
U
U
U
F
B
534
28
26
534
28
253
22
413
20
479
209
831
177
198
578
143
33
515
726
17
0
743
116
528
110
110
83
121
69
699
17
28
44
28
11
17
17
23
6
204



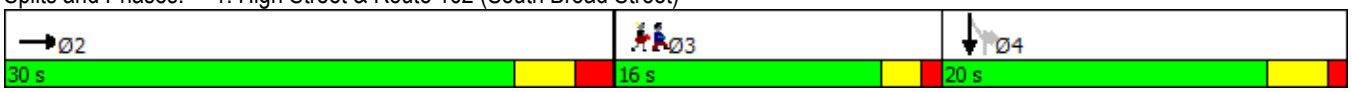
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	699	17	0	0	0	0	0	28	121	99	0
Future Volume (vph)	0	699	17	0	0	0	0	0	28	121	99	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	12	12	12	12	12	11	16	16	12
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.997							0.865			
Flt Protected										0.950		
Satd. Flow (prot)	0	3240	0	0	0	0	0	0	1558	2006	2111	0
Flt Permitted										0.950		
Satd. Flow (perm)	0	3240	0	0	0	0	0	0	1558	2006	2111	0
Right Turn on Red			Yes			Yes			Yes	Yes		Yes
Satd. Flow (RTOR)		4							423	132		
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		438			633			294			144	
Travel Time (s)		11.9			17.3			8.0			3.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Parking (#/hr)		0	0									
Adj. Flow (vph)	0	760	18	0	0	0	0	0	30	132	108	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	778	0	0	0	0	0	0	30	132	108	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Left	R NA	Right	Right
Median Width(ft)		24			24			0			16	
Link Offset(ft)		0			0			-12			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.12	1.04	1.00	1.00	1.00	1.00	1.00	1.04	0.85	0.85	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type		NA							Perm	Perm	NA	
Protected Phases		2									4	
Permitted Phases									4	4		
Detector Phase		2							4	4	4	
Switch Phase												
Minimum Initial (s)		15.0							9.0	9.0	9.0	
Minimum Split (s)		23.0							14.0	14.0	14.0	
Total Split (s)		30.0							20.0	20.0	20.0	
Total Split (%)		45.5%							30.3%	30.3%	30.3%	
Maximum Green (s)		25.0							16.0	16.0	16.0	
Yellow Time (s)		3.0							3.0	3.0	3.0	
All-Red Time (s)		2.0							1.0	1.0	1.0	
Lost Time Adjust (s)		0.0							0.0	0.0	0.0	
Total Lost Time (s)		5.0							4.0	4.0	4.0	
Lead/Lag									Lag	Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0							2.0	2.0	2.0	
Recall Mode		Min							None	None	None	
Walk Time (s)												
Flash Dont Walk (s)												

Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Parking (#/hr)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	16.0
Total Split (s)	16.0
Total Split (%)	24%
Maximum Green (s)	13.0
Yellow Time (s)	2.0
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	Ped
Walk Time (s)	7.0
Flash Dont Walk (s)	5.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)												
Act Effct Green (s)		16.6							9.4	9.4	9.4	
Actuated g/C Ratio		0.35							0.20	0.20	0.20	
v/c Ratio		0.68							0.05	0.26	0.26	
Control Delay		17.3							0.1	6.2	19.9	
Queue Delay		0.0							0.0	0.0	0.0	
Total Delay		17.3							0.1	6.2	19.9	
LOS		B							A	A	B	
Approach Delay		17.3						0.1			12.4	
Approach LOS		B						A			B	
Queue Length 50th (ft)		100							0	0	26	
Queue Length 95th (ft)		155							0	36	67	
Internal Link Dist (ft)		358			553			214			64	
Turn Bay Length (ft)												
Base Capacity (vph)		1761							817	783	733	
Starvation Cap Reductn		0							0	0	0	
Spillback Cap Reductn		0							0	0	0	
Storage Cap Reductn		0							0	0	0	
Reduced v/c Ratio		0.44							0.04	0.17	0.15	

Intersection Summary			
Area Type:	Other		
Cycle Length: 66			
Actuated Cycle Length: 47.1			
Natural Cycle: 55			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.68			
Intersection Signal Delay: 15.7		Intersection LOS: B	
Intersection Capacity Utilization 86.8%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 1: High Street & Route 162 (South Broad Street)



Lane Group	Ø3
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Lane Group	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	0	0	0	743	0	0
Future Volume (vph)	0	0	0	743	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12
Storage Length (ft)	0	0	250			0
Storage Lanes	0	0	2			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	0	1863	3539	0	0
Flt Permitted						
Satd. Flow (perm)	0	0	1863	3539	0	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	62			633	181	
Travel Time (s)	1.7			17.3	4.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	808	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	808	0	0
Enter Blocked Intersection	No	No	Yes	Yes	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.04	1.04	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	37.1%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	EBR	NBL	NBT	NBR	SBL	SBT	SBR2	Ø3
Lane Configurations									
Traffic Volume (vph)	726	17	33	0	143	171	198	578	
Future Volume (vph)	726	17	33	0	143	171	198	578	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	11	11	12	11	12	10	10	12	
Storage Length (ft)		0	150		150	0			
Storage Lanes		0	0		0	1			
Taper Length (ft)			25			25			
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	0.997			0.890				0.850	
Flt Protected				0.991		0.950			
Satd. Flow (prot)	3240	0	0	1588	0	1486	1565	1425	
Flt Permitted				0.991		0.637			
Satd. Flow (perm)	3240	0	0	1588	0	997	1565	1425	
Right Turn on Red		No			No			No	
Satd. Flow (RTOR)									
Link Speed (mph)	25			25			25		
Link Distance (ft)	181			347			312		
Travel Time (s)	4.9			9.5			8.5		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Parking (#/hr)	0	0				0	0	0	
Adj. Flow (vph)	789	18	36	0	155	186	215	628	
Shared Lane Traffic (%)									
Lane Group Flow (vph)	807	0	0	191	0	186	215	628	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Left	Right	Left	Left	Right	
Median Width(ft)	0			0			10		
Link Offset(ft)	0			0			0		
Crosswalk Width(ft)	16			16			16		
Two way Left Turn Lane									
Headway Factor	1.12	1.04	1.00	1.04	1.00	1.25	1.25	1.14	
Turning Speed (mph)		9	15		9	15		9	
Turn Type	NA		D.P+P	NA		Perm	NA	custom	
Protected Phases	2		4	4			5	2	3
Permitted Phases	2		5			5		5	
Detector Phase	2		4	4		5	5	2	
Switch Phase									
Minimum Initial (s)	15.0		5.0	5.0		9.0	9.0	15.0	1.0
Minimum Split (s)	20.5		8.0	8.0		13.8	13.8	20.5	23.0
Total Split (s)	28.5		8.0	8.0		26.8	26.8	28.5	23.0
Total Split (%)	33.0%		9.3%	9.3%		31.1%	31.1%	33.0%	27%
Maximum Green (s)	23.0		5.0	5.0		22.0	22.0	23.0	16.0
Yellow Time (s)	3.5		3.0	3.0		3.2	3.2	3.5	4.0
All-Red Time (s)	2.0		0.0	0.0		1.6	1.6	2.0	3.0
Lost Time Adjust (s)	0.0			0.0		0.0	0.0	0.0	
Total Lost Time (s)	5.5			3.0		4.8	4.8	5.5	
Lead/Lag			Lag	Lag					Lead
Lead-Lag Optimize?									
Vehicle Extension (s)	3.0		3.0	3.0		2.0	2.0	3.0	3.0

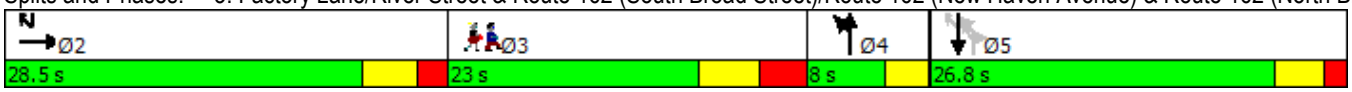
Lane Group	EBT	EBR	NBL	NBT	NBR	SBL	SBT	SBR2	Ø3
Recall Mode	Min		None	None		None	None	Min	Ped
Walk Time (s)									7.0
Flash Dont Walk (s)									9.0
Pedestrian Calls (#/hr)									65
Act Effct Green (s)	21.9			5.0		18.1	18.1	44.8	
Actuated g/C Ratio	0.27			0.06		0.22	0.22	0.55	
v/c Ratio	0.93			1.95		0.84	0.62	0.80	
Control Delay	48.1			489.3		62.7	37.1	23.9	
Queue Delay	0.0			0.0		0.0	0.0	0.0	
Total Delay	48.1			489.3		62.7	37.1	23.9	
LOS	D			F		E	D	C	
Approach Delay	48.1			489.3			33.7		
Approach LOS	D			F			C		
Queue Length 50th (ft)	221			~163		93	101	238	
Queue Length 95th (ft)	#341			#295		#195	172	392	
Internal Link Dist (ft)	101			267			232		
Turn Bay Length (ft)									
Base Capacity (vph)	919			98		270	424	804	
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	0.88			1.95		0.69	0.51	0.78	

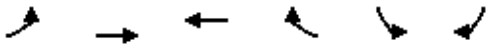
Intersection Summary			
Area Type:	Other		
Cycle Length: 86.3			
Actuated Cycle Length: 81.6			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.95			
Intersection Signal Delay: 82.4		Intersection LOS: F	
Intersection Capacity Utilization 54.4%		ICU Level of Service A	
Analysis Period (min) 15			

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

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

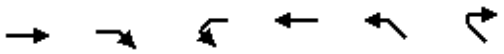
Splits and Phases: 3: Factory Lane/River Street & Route 162 (South Broad Street)/Route 162 (New Haven Avenue) & Route 162 (North Broad Street)





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	209	831	0	479	0	0
Future Volume (vph)	209	831	0	479	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.865		
Flt Protected	0.950					
Satd. Flow (prot)	1711	1801	0	1558	0	0
Flt Permitted	0.950					
Satd. Flow (perm)	1711	1801	0	1558	0	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		228	379		393	
Travel Time (s)		5.2	8.6		8.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	227	903	0	521	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	227	903	0	521	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		11	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.04	1.04	1.04	1.04	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 47.9%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations						
Traffic Volume (vph)	0	0	0	515	5	0
Future Volume (vph)	0	0	0	515	5	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected					0.950	
Satd. Flow (prot)	0	0	0	1863	1770	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	0	0	1863	1770	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	596			207	62	
Travel Time (s)	16.3			5.6	1.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	560	5	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	560	5	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Yield	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 37.1%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	110	528	116	0	0	0	0	110	83
Future Volume (vph)	0	0	0	110	528	116	0	0	0	0	110	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	12	16	12	12	12	12	12	11	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.979						0.942	
Flt Protected					0.993							
Satd. Flow (prot)	0	0	0	0	2052	0	0	0	0	0	1696	0
Flt Permitted					0.993							
Satd. Flow (perm)	0	0	0	0	2052	0	0	0	0	0	1696	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		501			596			144			334	
Travel Time (s)		13.7			16.3			3.9			9.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	120	574	126	0	0	0	0	120	90
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	820	0	0	0	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			12	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.85	0.85	0.85	1.00	0.85	1.00	1.00	1.00	1.00	1.00	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 86.8%		ICU Level of Service E	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	3.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	110	528	116	0	0	0	0	110	83
Future Vol, veh/h	0	0	0	110	528	116	0	0	0	0	110	83
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	-	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	120	574	126	0	0	0	0	120	90

Major/Minor	Major2			Minor2		
Conflicting Flow All	0	0	0	-	876	637
Stage 1	-	-	-	-	876	-
Stage 2	-	-	-	-	0	-
Critical Hdwy	4.12	-	-	-	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.218	-	-	-	4.018	3.318
Pot Cap-1 Maneuver	-	-	-	0	287	477
Stage 1	-	-	-	0	367	-
Stage 2	-	-	-	0	-	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	-	-	-	-	0	477
Mov Cap-2 Maneuver	-	-	-	-	0	-
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-

Approach	WB	SB
HCM Control Delay, s		18.3
HCM LOS		C

Minor Lane/Major Mvmt	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	477
HCM Lane V/C Ratio	-	-	-	0.44
HCM Control Delay (s)	-	-	-	18.3
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	2.2

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	28	11	0	0	0	6	204	22	17	171	11
Future Volume (vph)	44	28	11	0	0	0	6	204	22	17	171	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	12	12	12	12	12	11	12	12	11	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.982						0.987			0.992	
Flt Protected		0.974						0.999			0.996	
Satd. Flow (prot)	0	2019	0	0	0	0	0	1775	0	0	1779	0
Flt Permitted		0.974						0.999			0.996	
Satd. Flow (perm)	0	2019	0	0	0	0	0	1775	0	0	1779	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		85			925			191			179	
Travel Time (s)		2.3			25.2			5.2			4.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	48	30	12	0	0	0	7	222	24	18	186	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	90	0	0	0	0	0	253	0	0	216	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	0.85	1.00	1.00	1.00	1.00	1.00	1.04	1.00	1.00	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 29.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕			↕	
Traffic Vol, veh/h	44	28	11	0	0	0	6	204	22	17	171	11
Future Vol, veh/h	44	28	11	0	0	0	6	204	22	17	171	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	48	30	12	0	0	0	7	222	24	18	186	12

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	476	488	192	198	0	0	246	0	0
Stage 1	229	229	-	-	-	-	-	-	-
Stage 2	247	259	-	-	-	-	-	-	-
Critical Hdwy	6.42	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	5.42	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.42	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	548	480	850	1375	-	-	1320	-	-
Stage 1	809	715	-	-	-	-	-	-	-
Stage 2	794	694	-	-	-	-	-	-	-
Platoon blocked, %					-	-		-	-
Mov Cap-1 Maneuver	537	0	850	1375	-	-	1320	-	-
Mov Cap-2 Maneuver	537	0	-	-	-	-	-	-	-
Stage 1	797	0	-	-	-	-	-	-	-
Stage 2	789	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.3	0.2	0.7
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	SBL	SBT	SBR
Capacity (veh/h)	1375	-	-	580	1320	-	-
HCM Lane V/C Ratio	0.005	-	-	0.156	0.014	-	-
HCM Control Delay (s)	7.6	0	-	12.3	7.8	0	-
HCM Lane LOS	A	A	-	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.5	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	413	22	253	0	0	0	0	534	28
Future Volume (vph)	0	0	0	413	22	253	0	0	0	0	534	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	11	12	12	12	12	11	11
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95
Frt					0.862						0.993	
Flt Protected				0.950								
Satd. Flow (prot)	0	0	0	1711	1552	0	0	1863	0	0	3397	0
Flt Permitted				0.950								
Satd. Flow (perm)	0	0	0	1711	1552	0	0	1863	0	0	3397	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		370			393			312			107	
Travel Time (s)		10.1			10.7			8.5			2.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	449	24	275	0	0	0	0	580	30
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	449	299	0	0	0	0	0	610	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			0			0	
Link Offset(ft)		0			0			12			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.04	1.04	1.04	1.00	1.00	1.00	1.00	1.04	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 45.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	413	22	253	0	0	0	0	534	28
Future Vol, veh/h	0	0	0	413	22	253	0	0	0	0	534	28
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	449	24	275	0	0	0	0	580	30

Major/Minor	Minor1			Minor2			Major2		
Conflicting Flow All	290	611	0	745	596	-	-	-	0
Stage 1	0	0	-	596	596	-	-	-	-
Stage 2	290	611	-	149	0	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	-	-	-	-
Critical Hdwy Stg 1	-	-	-	6.54	5.54	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	-	-	-	-
Pot Cap-1 Maneuver	640	407	-	302	415	0	0	-	-
Stage 1	-	-	-	457	490	0	0	-	-
Stage 2	694	482	-	-	-	0	0	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	640	407	-	-	415	-	-	-	-
Mov Cap-2 Maneuver	640	407	-	-	415	-	-	-	-
Stage 1	-	-	-	457	490	-	-	-	-
Stage 2	694	482	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s		0	0
HCM LOS	-	A	

Minor Lane/Major Mvmt	NBLn1	WBLn1	WBLn2	SBT	SBR
Capacity (veh/h)	-	640	-	-	-
HCM Lane V/C Ratio	-	0.701	-	-	-
HCM Control Delay (s)	0	22.7	-	-	-
HCM Lane LOS	A	C	-	-	-
HCM 95th %tile Q(veh)	-	5.7	-	-	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	28	28	0	253	534	0
Future Volume (vph)	28	28	0	253	534	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	12	12	12	11	11
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00
Frt	0.932					
Flt Protected	0.976					
Satd. Flow (prot)	1751	0	0	1863	3421	0
Flt Permitted	0.976					
Satd. Flow (perm)	1751	0	0	1863	3421	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	925			107	118	
Travel Time (s)	25.2			2.9	3.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	30	30	0	275	580	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	60	0	0	275	580	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	13			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.96	1.00	1.00	1.00	1.04	1.04
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 24.8%		ICU Level of Service A	
Analysis Period (min) 15			

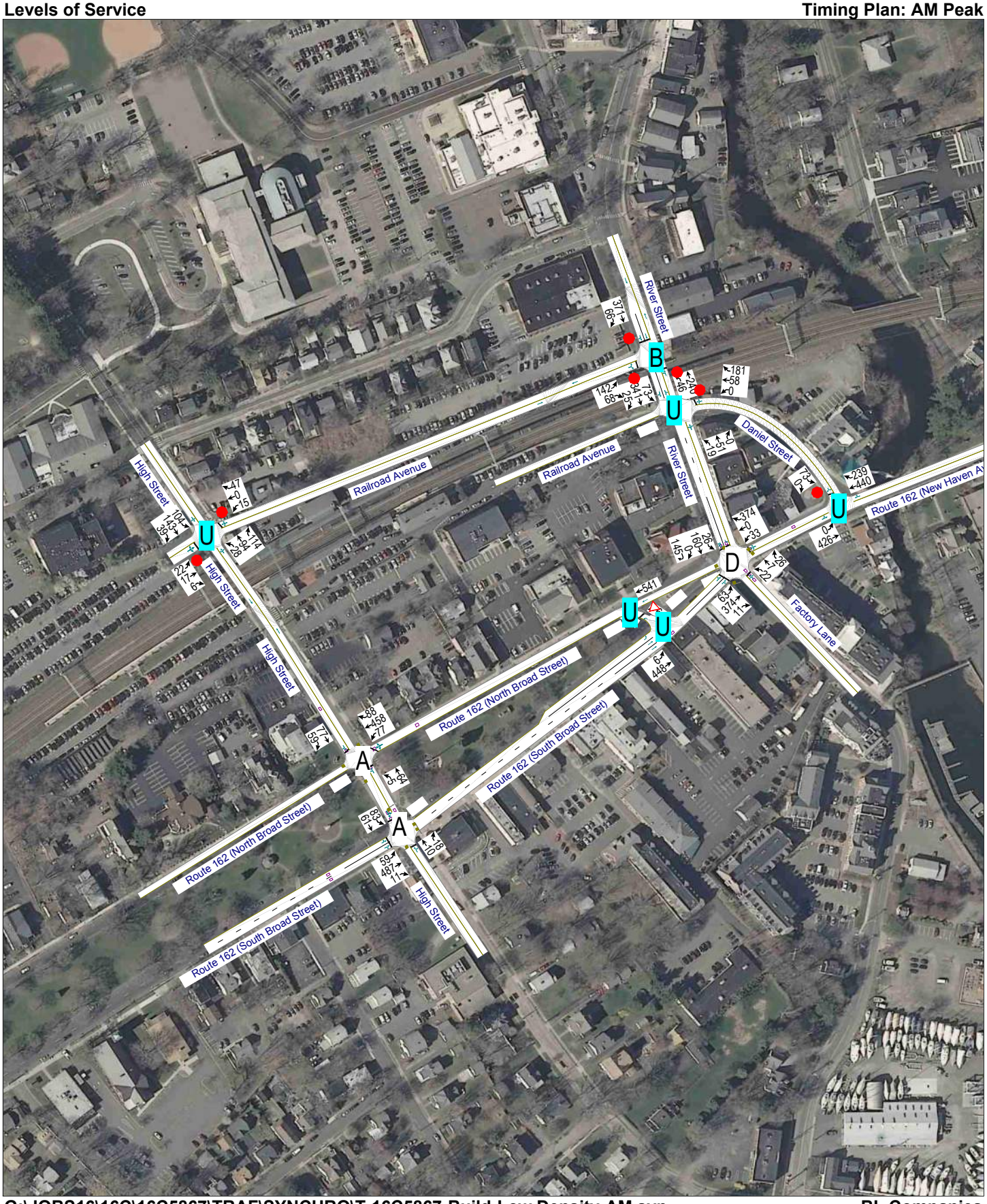
Intersection	
Int Delay, s/veh	1

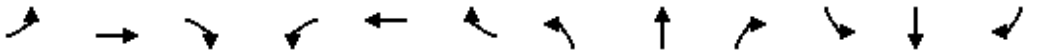
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	28	28	0	253	534	0
Future Vol, veh/h	28	28	0	253	534	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	30	30	0	275	580	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	855	290	-	0	-	0
Stage 1	580	-	-	-	-	-
Stage 2	275	-	-	-	-	-
Critical Hdwy	6.63	6.93	-	-	-	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	-	-	-	-
Pot Cap-1 Maneuver	313	707	0	-	-	0
Stage 1	524	-	0	-	-	0
Stage 2	771	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	313	707	-	-	-	-
Mov Cap-2 Maneuver	313	-	-	-	-	-
Stage 1	524	-	-	-	-	-
Stage 2	771	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.6	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT
Capacity (veh/h)	-	434	-
HCM Lane V/C Ratio	-	0.14	-
HCM Control Delay (s)	-	14.6	-
HCM Lane LOS	-	B	-
HCM 95th %tile Q(veh)	-	0.5	-


River Street
Railroad Avenue
Railroad Avenue
River Street
Daniel Street
Route 162 (New Haven Av
High Street
High Street
High Street
Factory Lane
Route 162 (North Broad Street)
Route 162 (South Broad Street)
Route 162 (North Broad Street)
Route 162 (South Broad Street)
B
U
U
U
U
U
D
A
A



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	59	487	11	0	0	0	0	10	18	83	61	0
Future Volume (vph)	59	487	11	0	0	0	0	10	18	83	61	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12	12	12	11	16	16	12
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.997						0.913				
Flt Protected		0.995									0.972	
Satd. Flow (prot)	0	2970	0	0	0	0	0	1701	0	0	2052	0
Flt Permitted		0.995									0.804	
Satd. Flow (perm)	0	2970	0	0	0	0	0	1701	0	0	1697	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5						20				
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		438			633			294			144	
Travel Time (s)		11.9			17.3			8.0			3.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Parking (#/hr)	30	30	30									
Adj. Flow (vph)	64	529	12	0	0	0	0	11	20	90	66	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	605	0	0	0	0	0	31	0	0	156	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Left	R NA	Right	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			-6			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.24	1.00	1.00	1.00	1.00	1.00	1.00	1.04	0.85	0.85	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		2						8			4	
Permitted Phases	2									4		
Detector Phase	2	2						8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0						5.0		9.0	9.0	
Minimum Split (s)	22.5	22.5						22.5		22.5	22.5	
Total Split (s)	22.5	22.5						22.5		22.5	22.5	
Total Split (%)	50.0%	50.0%						50.0%		50.0%	50.0%	
Maximum Green (s)	18.0	18.0						18.0		18.5	18.5	
Yellow Time (s)	3.5	3.5						3.5		3.0	3.0	
All-Red Time (s)	1.0	1.0						1.0		1.0	1.0	
Lost Time Adjust (s)		0.0						0.0			0.0	
Total Lost Time (s)		4.5						4.5			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0						3.0		2.0	2.0	
Recall Mode	Max	Max						None		None	None	
Walk Time (s)	7.0	7.0						7.0				
Flash Dont Walk (s)	11.0	11.0						11.0				

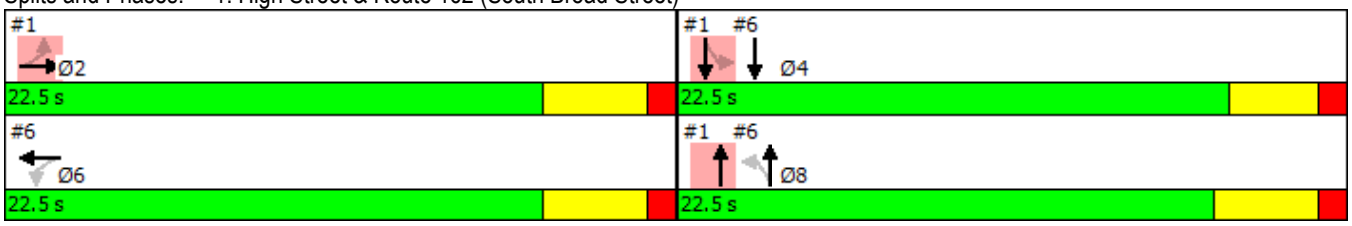
Lane Group	Ø6
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Parking (#/hr)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Turn Type	
Protected Phases	6
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	22.5
Total Split (s)	22.5
Total Split (%)	50%
Maximum Green (s)	18.0
Yellow Time (s)	3.5
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	7.0
Flash Dont Walk (s)	11.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)	0	0						0				
Act Effct Green (s)		21.8						8.4			9.5	
Actuated g/C Ratio		0.60						0.23			0.26	
v/c Ratio		0.34						0.08			0.35	
Control Delay		6.0						7.2			11.2	
Queue Delay		0.0						0.0			0.1	
Total Delay		6.0						7.2			11.3	
LOS		A						A			B	
Approach Delay		6.0						7.2			11.3	
Approach LOS		A						A			B	
Queue Length 50th (ft)		31						2			24	
Queue Length 95th (ft)		63						13			m45	
Internal Link Dist (ft)		358			553			214			64	
Turn Bay Length (ft)												
Base Capacity (vph)		1782						852			864	
Starvation Cap Reductn		0						0			179	
Spillback Cap Reductn		0						0			0	
Storage Cap Reductn		0						0			0	
Reduced v/c Ratio		0.34						0.04			0.23	

Intersection Summary			
Area Type:	Other		
Cycle Length: 45			
Actuated Cycle Length: 36.4			
Natural Cycle: 50			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.55			
Intersection Signal Delay: 7.1		Intersection LOS: A	
Intersection Capacity Utilization 37.1%		ICU Level of Service A	
Analysis Period (min) 15			

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

Splits and Phases: 1: High Street & Route 162 (South Broad Street)



Lane Group	Ø6
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Lane Group	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	0	0	6	448	0	0
Future Volume (vph)	0	0	6	448	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12
Storage Length (ft)	0	0	250			0
Storage Lanes	0	0	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	1.00
Frt						
Flt Protected			0.950			
Satd. Flow (prot)	0	0	1327	3097	0	0
Flt Permitted			0.950			
Satd. Flow (perm)	0	0	1327	3097	0	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	69			633	181	
Travel Time (s)	1.9			17.3	4.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Parking (#/hr)			30	30		
Adj. Flow (vph)	0	0	7	487	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	7	487	0	0
Enter Blocked Intersection	No	No	Yes	Yes	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.04	1.04	1.43	1.19	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 38.5%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR2
Lane Configurations												
Traffic Volume (vph)	63	374	11	33	0	374	22	7	26	26	160	145
Future Volume (vph)	63	374	11	33	0	374	22	7	26	26	160	145
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	11	10	12	12	12	11	12	11	11	11
Storage Length (ft)	0		0	50		0	150		150	0		
Storage Lanes	0		0	0		0	0		0	1		
Taper Length (ft)	25			60			25			25		
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996			0.876			0.937			0.929	
Flt Protected		0.993			0.996			0.980		0.950		
Satd. Flow (prot)	0	2961	0	0	1625	0	0	1653	0	1283	1506	0
Flt Permitted		0.720			0.931			0.776		0.786		
Satd. Flow (perm)	0	2147	0	0	1519	0	0	1309	0	1061	1506	0
Right Turn on Red			No						No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		181			228			347			312	
Travel Time (s)		4.9			6.2			9.5			8.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Parking (#/hr)		30	30							30	0	0
Adj. Flow (vph)	68	407	12	36	0	407	24	8	28	28	174	158
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	487	0	0	443	0	0	60	0	28	332	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.24	1.04	1.09	1.00	1.00	1.00	1.04	1.00	1.49	1.19	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2	2		6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	15.0	15.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	20.5	20.5		22.5	22.5		32.5	32.5		32.5	32.5	
Total Split (s)	32.5	32.5		32.5	32.5		32.5	32.5		32.5	32.5	
Total Split (%)	36.1%	36.1%		36.1%	36.1%		36.1%	36.1%		36.1%	36.1%	
Maximum Green (s)	27.0	27.0		28.0	28.0		28.0	28.0		28.0	28.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	2.0	2.0		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)		5.5			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	

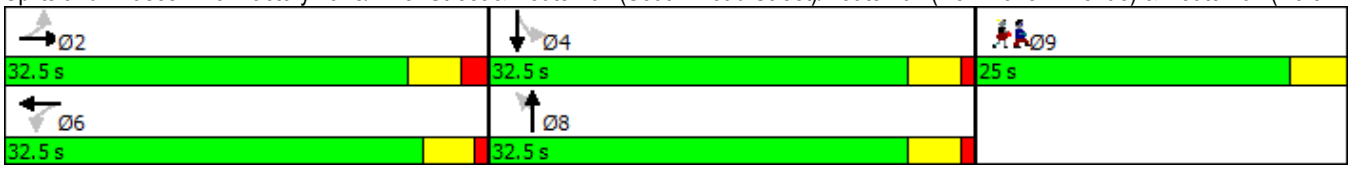
Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Parking (#/hr)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	25.0
Total Split (s)	25.0
Total Split (%)	28%
Maximum Green (s)	21.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR2
Recall Mode	Min	Min		Min	Min		None	None		None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		25.8			26.8			22.4		22.4	22.4	
Actuated g/C Ratio		0.31			0.32			0.27		0.27	0.27	
v/c Ratio		0.73			0.91			0.17		0.10	0.82	
Control Delay		34.4			53.5			24.5		23.5	46.3	
Queue Delay		0.0			0.0			0.0		0.0	0.0	
Total Delay		34.4			53.5			24.5		23.5	46.3	
LOS		C			D			C		C	D	
Approach Delay		34.4			53.5			24.5			44.5	
Approach LOS		C			D			C			D	
Queue Length 50th (ft)		121			225			24		11	166	
Queue Length 95th (ft)		#192			#430			55		31	#267	
Internal Link Dist (ft)		101			148			267			232	
Turn Bay Length (ft)												
Base Capacity (vph)		699			513			442		358	509	
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		0.70			0.86			0.14		0.08	0.65	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 83.5			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.91			
Intersection Signal Delay: 42.9		Intersection LOS: D	
Intersection Capacity Utilization 72.5%		ICU Level of Service C	
Analysis Period (min) 15			

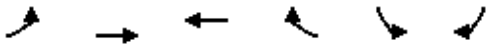
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Factory Lane/River Street & Route 162 (South Broad Street)/Route 162 (New Haven Avenue) & Route 162 (North Broad Street)



Lane Group	Ø9
Recall Mode	Ped
Walk Time (s)	7.0
Flash Dont Walk (s)	14.0
Pedestrian Calls (#/hr)	25
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	426	440	239	73	0
Future Volume (vph)	0	426	440	239	73	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	11	11	11	11
Storage Length (ft)	50			0	0	0
Storage Lanes	0			0	1	0
Taper Length (ft)	60				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.952			
Flt Protected					0.950	
Satd. Flow (prot)	0	1863	1714	0	1711	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	1863	1714	0	1711	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		228	368		393	
Travel Time (s)		5.2	8.4		8.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	463	478	260	79	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	463	738	0	79	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		11	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.09	1.00	1.04	1.04	1.04	1.04
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	48.4%	ICU Level of Service	A
Analysis Period (min)	15		

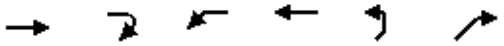
Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	426	440	239	73	0
Future Vol, veh/h	0	426	440	239	73	0
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, %	2	2	2	2	2	2
Mvmt Flow	0	463	478	260	79	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	738	0	-	0	1071	608
Stage 1	-	-	-	-	608	-
Stage 2	-	-	-	-	463	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	868	-	-	-	244	496
Stage 1	-	-	-	-	543	-
Stage 2	-	-	-	-	634	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	868	-	-	-	244	496
Mov Cap-2 Maneuver	-	-	-	-	244	-
Stage 1	-	-	-	-	543	-
Stage 2	-	-	-	-	634	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	26.7
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	868	-	-	-	244
HCM Lane V/C Ratio	-	-	-	-	0.325
HCM Control Delay (s)	0	-	-	-	26.7
HCM Lane LOS	A	-	-	-	D
HCM 95th %tile Q(veh)	0	-	-	-	1.4



Lane Group	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Volume (vph)	0	0	0	541	6	0
Future Volume (vph)	0	0	0	541	6	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected					0.950	
Satd. Flow (prot)	0	0	0	1863	1770	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	0	0	1863	1770	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	585			218	69	
Travel Time (s)	16.0			5.9	1.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	588	7	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	588	7	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Yield	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 38.5%		ICU Level of Service A	
Analysis Period (min) 15			

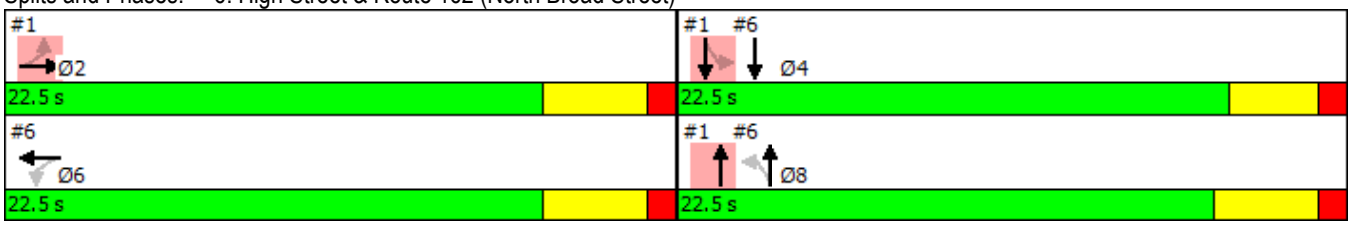
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	77	458	88	5	64	0	0	77	59
Future Volume (vph)	0	0	0	77	458	88	5	64	0	0	77	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	16	12	12	12	12	12	11	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.981						0.942	
Flt Protected					0.994			0.997				
Satd. Flow (prot)	0	0	0	0	2059	0	0	1857	0	0	1696	0
Flt Permitted					0.994			0.971				
Satd. Flow (perm)	0	0	0	0	2059	0	0	1809	0	0	1696	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					22						64	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		501			585			144			334	
Travel Time (s)		13.7			16.0			3.9			9.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Parking (#/hr)						30						
Adj. Flow (vph)	0	0	0	84	498	96	5	70	0	0	84	64
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	678	0	0	75	0	0	148	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			12	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	0.85	1.00	1.00	1.00	1.00	1.00	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					6			8			4	
Permitted Phases				6			8					
Detector Phase				6	6		8	8			4	
Switch Phase												
Minimum Initial (s)				5.0	5.0		5.0	5.0			9.0	
Minimum Split (s)				22.5	22.5		22.5	22.5			22.5	
Total Split (s)				22.5	22.5		22.5	22.5			22.5	
Total Split (%)				50.0%	50.0%		50.0%	50.0%			50.0%	
Maximum Green (s)				18.0	18.0		18.0	18.0			18.5	
Yellow Time (s)				3.5	3.5		3.5	3.5			3.0	
All-Red Time (s)				1.0	1.0		1.0	1.0			1.0	
Lost Time Adjust (s)					0.0			0.0			0.0	
Total Lost Time (s)					4.5			4.5			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)				3.0	3.0		3.0	3.0			2.0	
Recall Mode				Max	Max		None	None			None	
Walk Time (s)				7.0	7.0		7.0	7.0				
Flash Dont Walk (s)				11.0	11.0		11.0	11.0				

Lane Group	Ø2
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Parking (#/hr)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Turn Type	
Protected Phases	2
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	22.5
Total Split (s)	22.5
Total Split (%)	50%
Maximum Green (s)	18.0
Yellow Time (s)	3.5
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	7.0
Flash Dont Walk (s)	11.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)				0	0		0	0				
Act Effct Green (s)					21.8			8.4			9.5	
Actuated g/C Ratio					0.60			0.23			0.26	
v/c Ratio					0.55			0.18			0.30	
Control Delay					8.4			13.5			8.6	
Queue Delay					0.0			0.1			0.0	
Total Delay					8.4			13.6			8.6	
LOS					A			B			A	
Approach Delay					8.4			13.6			8.6	
Approach LOS					A			B			A	
Queue Length 50th (ft)					77			15			13	
Queue Length 95th (ft)					173			42			40	
Internal Link Dist (ft)		421			505			64			254	
Turn Bay Length (ft)												
Base Capacity (vph)					1243			896			895	
Starvation Cap Reductn					0			250			0	
Spillback Cap Reductn					0			0			6	
Storage Cap Reductn					0			0			0	
Reduced v/c Ratio					0.55			0.12			0.17	

Intersection Summary			
Area Type:	Other		
Cycle Length: 45			
Actuated Cycle Length: 36.4			
Natural Cycle: 50			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.55			
Intersection Signal Delay: 8.8		Intersection LOS: A	
Intersection Capacity Utilization 48.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 6: High Street & Route 162 (North Broad Street)



Lane Group	Ø2
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	17	6	15	0	47	28	94	114	104	143	39
Future Volume (vph)	22	17	6	15	0	47	28	94	114	104	143	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	12	12	12	12	12	11	12	12	11	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.981			0.897			0.935			0.982	
Flt Protected		0.976			0.988			0.994			0.982	
Satd. Flow (prot)	0	2021	0	0	1651	0	0	1674	0	0	1736	0
Flt Permitted		0.976			0.988			0.994			0.982	
Satd. Flow (perm)	0	2021	0	0	1651	0	0	1674	0	0	1736	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		85			723			191			210	
Travel Time (s)		2.3			19.7			5.2			5.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	24	18	7	16	0	51	30	102	124	113	155	42
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	49	0	0	67	0	0	256	0	0	310	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	0.85	1.00	1.00	1.00	1.00	1.00	1.04	1.00	1.00	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 43.8%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	22	17	6	15	0	47	28	94	114	104	143	39
Future Vol, veh/h	22	17	6	15	0	47	28	94	114	104	143	39
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	24	18	7	16	0	51	30	102	124	113	155	42

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	654	690	177	640	649	164	198	0	0	226	0	0
Stage 1	403	403	-	225	225	-	-	-	-	-	-	-
Stage 2	251	287	-	415	424	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	380	368	866	388	389	881	1375	-	-	1342	-	-
Stage 1	624	600	-	778	718	-	-	-	-	-	-	-
Stage 2	753	674	-	615	587	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	326	325	866	335	343	881	1375	-	-	1342	-	-
Mov Cap-2 Maneuver	326	325	-	335	343	-	-	-	-	-	-	-
Stage 1	608	543	-	759	700	-	-	-	-	-	-	-
Stage 2	692	657	-	534	531	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	16.8	11.4	0.9	2.9
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1375	-	-	355	632	1342	-	-
HCM Lane V/C Ratio	0.022	-	-	0.138	0.107	0.084	-	-
HCM Control Delay (s)	7.7	0	-	16.8	11.4	7.9	0	-
HCM Lane LOS	A	A	-	C	B	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.5	0.4	0.3	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	58	181	19	51	0	73	341	25
Future Volume (vph)	0	0	0	0	58	181	19	51	0	73	341	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	11	12	12	12	11	11	11
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Frt					0.898						0.992	
Flt Protected								0.986			0.992	
Satd. Flow (prot)	0	0	0	0	1617	0	0	1837	0	0	3367	0
Flt Permitted								0.986			0.992	
Satd. Flow (perm)	0	0	0	0	1617	0	0	1837	0	0	3367	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		370			393			312			107	
Travel Time (s)		10.1			10.7			8.5			2.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	63	197	21	55	0	79	371	27
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	260	0	0	76	0	0	477	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			12			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.04	1.04	1.04	1.00	1.00	1.00	1.04	1.04	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 40.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	4.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕			↕			↕	
Traffic Vol, veh/h	0	0	0	0	58	181	19	51	0	73	341	25
Future Vol, veh/h	0	0	0	0	58	181	19	51	0	73	341	25
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	63	197	21	55	0	79	371	27

Major/Minor	Minor1			Major1			Major2		
Conflicting Flow All	441	654	55	398	0	0	55	0	0
Stage 1	97	97	-	-	-	-	-	-	-
Stage 2	344	557	-	-	-	-	-	-	-
Critical Hdwy	6.63	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	5.43	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.83	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.519	4.019	3.319	2.219	-	-	2.219	-	-
Pot Cap-1 Maneuver	559	385	1011	1159	-	-	1549	-	-
Stage 1	926	814	-	-	-	-	-	-	-
Stage 2	690	511	-	-	-	-	-	-	-
Platoon blocked, %					-	-		-	-
Mov Cap-1 Maneuver	512	0	1011	1159	-	-	1549	-	-
Mov Cap-2 Maneuver	512	0	-	-	-	-	-	-	-
Stage 1	908	0	-	-	-	-	-	-	-
Stage 2	644	0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.8	2.2	1.4
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1159	-	-	1011	1549	-	-
HCM Lane V/C Ratio	0.018	-	-	0.257	0.051	-	-
HCM Control Delay (s)	8.2	0	-	9.8	7.5	0.2	-
HCM Lane LOS	A	A	-	A	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	1	0.2	-	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	142	68	46	240	371	66
Future Volume (vph)	142	68	46	240	371	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	12	12	11	11
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95
Frt	0.956				0.977	
Flt Protected	0.967			0.992		
Satd. Flow (prot)	1837	0	0	1848	3343	0
Flt Permitted	0.967			0.992		
Satd. Flow (perm)	1837	0	0	1848	3343	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	202			107	118	
Travel Time (s)	5.5			2.9	3.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	154	74	50	261	403	72
Shared Lane Traffic (%)						
Lane Group Flow (vph)	228	0	0	311	475	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	14			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.92	0.92	1.00	1.00	1.04	1.04
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Stop	Stop	

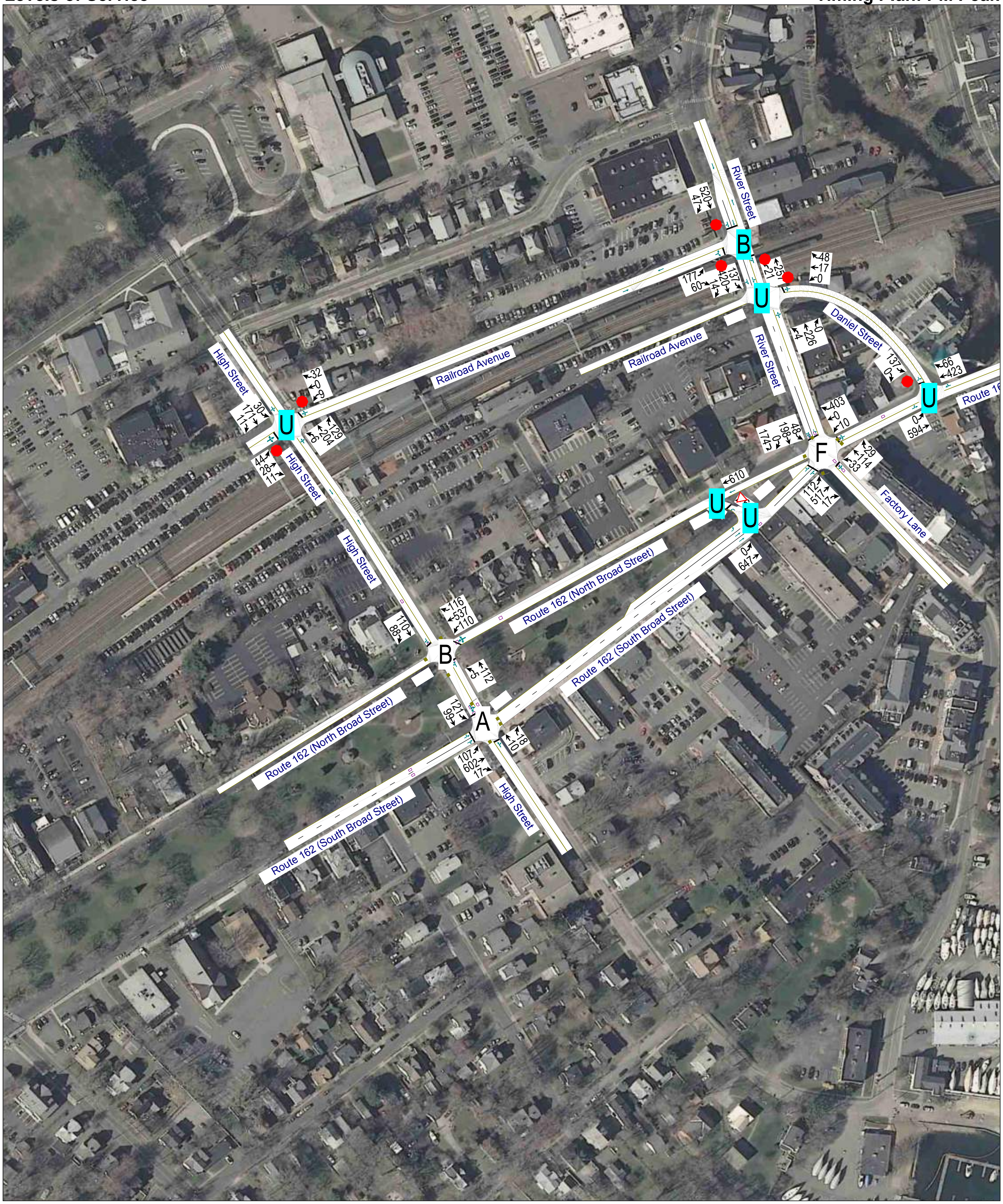
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 49.6%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Intersection Delay, s/veh	12
Intersection LOS	B

Movement	EBU	EBL	EBR	NBU	NBL	NBT	SBU	SBT	SBR
Lane Configurations									
Traffic Vol, veh/h	0	142	68	0	46	240	0	371	66
Future Vol, veh/h	0	142	68	0	46	240	0	371	66
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	154	74	0	50	261	0	403	72
Number of Lanes	0	1	0	0	0	1	0	2	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	2	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	12	12.9	11.5
HCM LOS	B	B	B

Lane	NBLn1	EBLn1	SBLn1	SBLn2
Vol Left, %	16%	68%	0%	0%
Vol Thru, %	84%	0%	100%	65%
Vol Right, %	0%	32%	0%	35%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	286	210	247	190
LT Vol	46	142	0	0
Through Vol	240	0	247	124
RT Vol	0	68	0	66
Lane Flow Rate	311	228	269	206
Geometry Grp	5	2	7	7
Degree of Util (X)	0.462	0.362	0.418	0.307
Departure Headway (Hd)	5.347	5.712	5.599	5.353
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	675	630	645	672
Service Time	3.373	3.742	3.323	3.076
HCM Lane V/C Ratio	0.461	0.362	0.417	0.307
HCM Control Delay	12.9	12	12.3	10.4
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	2.4	1.6	2.1	1.3


River Street
Railroad Avenue
Railroad Avenue
Daniel Street
River Street
High Street
High Street
High Street
Route 162 (North Broad Street)
Route 162 (South Broad Street)
Route 162 (North Broad Street)
Route 162 (South Broad Street)
High Street
Factory Lane
A
B
B
F

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	107	602	17	0	0	0	0	10	18	121	99	0
Future Volume (vph)	107	602	17	0	0	0	0	10	18	121	99	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12	12	12	11	16	16	12
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.997						0.913				
Flt Protected		0.993									0.973	
Satd. Flow (prot)	0	2964	0	0	0	0	0	1701	0	0	2054	0
Flt Permitted		0.993									0.812	
Satd. Flow (perm)	0	2964	0	0	0	0	0	1701	0	0	1714	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6						20				
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		438			633			294			144	
Travel Time (s)		11.9			17.3			8.0			3.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Parking (#/hr)	30	30	30									
Adj. Flow (vph)	116	654	18	0	0	0	0	11	20	132	108	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	788	0	0	0	0	0	31	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	Left	R NA	Right	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			-6			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.24	1.00	1.00	1.00	1.00	1.00	1.00	1.04	0.85	0.85	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		2						8			4	
Permitted Phases	2									4		
Detector Phase	2	2						8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0						5.0		9.0	9.0	
Minimum Split (s)	22.5	22.5						22.5		22.5	22.5	
Total Split (s)	22.5	22.5						22.5		22.5	22.5	
Total Split (%)	50.0%	50.0%						50.0%		50.0%	50.0%	
Maximum Green (s)	18.0	18.0						18.0		18.5	18.5	
Yellow Time (s)	3.5	3.5						3.5		3.0	3.0	
All-Red Time (s)	1.0	1.0						1.0		1.0	1.0	
Lost Time Adjust (s)		0.0						0.0			0.0	
Total Lost Time (s)		4.5						4.5			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0						3.0		2.0	2.0	
Recall Mode	Max	Max						None		None	None	
Walk Time (s)	7.0	7.0						7.0				
Flash Dont Walk (s)	11.0	11.0						11.0				

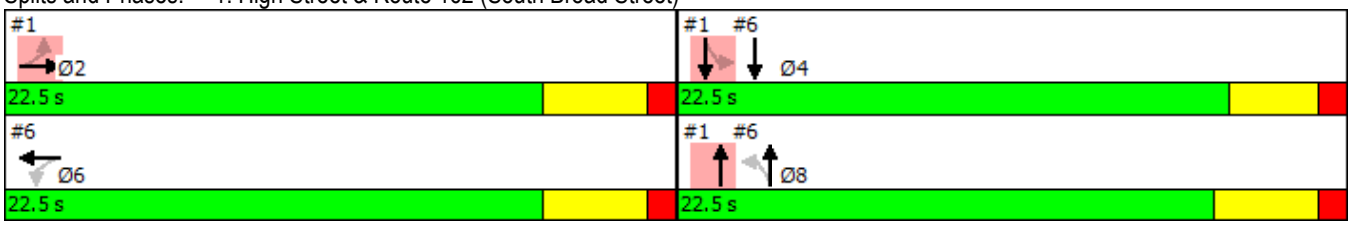
Lane Group	Ø6
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Parking (#/hr)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Turn Type	
Protected Phases	6
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	22.5
Total Split (s)	22.5
Total Split (%)	50%
Maximum Green (s)	18.0
Yellow Time (s)	3.5
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	7.0
Flash Dont Walk (s)	11.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)	0	0						0				
Act Effct Green (s)		20.0						10.4			10.9	
Actuated g/C Ratio		0.51						0.26			0.28	
v/c Ratio		0.52						0.07			0.51	
Control Delay		8.8						6.5			13.1	
Queue Delay		0.1						0.0			0.3	
Total Delay		8.8						6.5			13.4	
LOS		A						A			B	
Approach Delay		8.8						6.5			13.4	
Approach LOS		A						A			B	
Queue Length 50th (ft)		45						2			38	
Queue Length 95th (ft)		114						13			m65	
Internal Link Dist (ft)		358			553			214			64	
Turn Bay Length (ft)												
Base Capacity (vph)		1501						794			811	
Starvation Cap Reductn		0						0			185	
Spillback Cap Reductn		81						1			0	
Storage Cap Reductn		0						0			0	
Reduced v/c Ratio		0.55						0.04			0.38	

Intersection Summary			
Area Type:	Other		
Cycle Length: 45			
Actuated Cycle Length: 39.5			
Natural Cycle: 60			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.79			
Intersection Signal Delay: 9.8		Intersection LOS: A	
Intersection Capacity Utilization 45.9%		ICU Level of Service A	
Analysis Period (min) 15			

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

Splits and Phases: 1: High Street & Route 162 (South Broad Street)



Lane Group	Ø6
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Lane Group	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	0	0	0	647	0	0
Future Volume (vph)	0	0	0	647	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12
Storage Length (ft)	0	0	250			0
Storage Lanes	0	0	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	0	1397	3097	0	0
Flt Permitted						
Satd. Flow (perm)	0	0	1397	3097	0	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	69			633	181	
Travel Time (s)	1.9			17.3	4.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Parking (#/hr)			30	30		
Adj. Flow (vph)	0	0	0	703	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	703	0	0
Enter Blocked Intersection	No	No	Yes	Yes	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.04	1.04	1.43	1.19	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 42.1%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR2
Lane Configurations												
Traffic Volume (vph)	112	517	17	10	0	403	33	114	29	48	198	174
Future Volume (vph)	112	517	17	10	0	403	33	114	29	48	198	174
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	11	10	12	12	12	11	12	11	11	11
Storage Length (ft)	0		0	50		0	150		150	0		
Storage Lanes	0		0	0		0	0		0	1		
Taper Length (ft)	25			60			25			25		
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996			0.868			0.977			0.930	
Flt Protected		0.991			0.999			0.991		0.950		
Satd. Flow (prot)	0	2955	0	0	1615	0	0	1743	0	1283	1507	0
Flt Permitted		0.616			0.979			0.692		0.575		
Satd. Flow (perm)	0	1837	0	0	1583	0	0	1217	0	777	1507	0
Right Turn on Red			No						No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		181			228			347			312	
Travel Time (s)		4.9			6.2			9.5			8.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Parking (#/hr)		30	30							30	0	0
Adj. Flow (vph)	122	562	18	11	0	438	36	124	32	52	215	189
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	702	0	0	449	0	0	192	0	52	404	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.24	1.04	1.09	1.00	1.00	1.00	1.04	1.00	1.49	1.19	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2	2		6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	15.0	15.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	20.5	20.5		22.5	22.5		32.5	32.5		32.5	32.5	
Total Split (s)	32.5	32.5		32.5	32.5		32.5	32.5		32.5	32.5	
Total Split (%)	36.1%	36.1%		36.1%	36.1%		36.1%	36.1%		36.1%	36.1%	
Maximum Green (s)	27.0	27.0		28.0	28.0		28.0	28.0		28.0	28.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	2.0	2.0		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)		5.5			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	

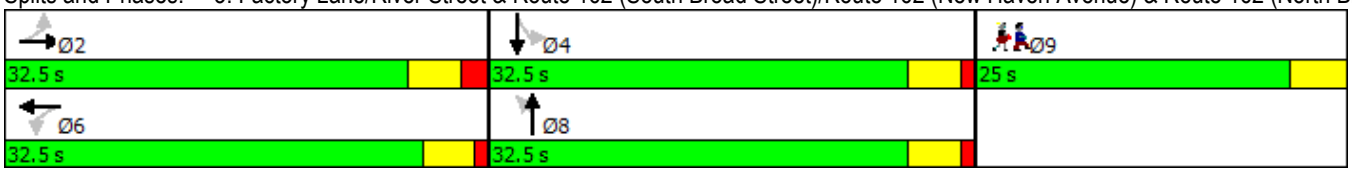
Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Parking (#/hr)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	25.0
Total Split (s)	25.0
Total Split (%)	28%
Maximum Green (s)	21.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR2
Recall Mode	Min	Min		Min	Min		None	None		None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		25.6			26.6			25.8		25.8	25.8	
Actuated g/C Ratio		0.30			0.31			0.30		0.30	0.30	
v/c Ratio		1.29			0.92			0.53		0.23	0.90	
Control Delay		174.1			56.9			31.7		26.1	54.7	
Queue Delay		0.0			0.0			0.0		0.0	0.0	
Total Delay		174.1			56.9			31.7		26.1	54.7	
LOS		F			E			C		C	D	
Approach Delay		174.1			56.9			31.7			51.4	
Approach LOS		F			E			C			D	
Queue Length 50th (ft)		~268			244			89		22	215	
Queue Length 95th (ft)		#380			#425			156		52	#380	
Internal Link Dist (ft)		101			148			267			232	
Turn Bay Length (ft)												
Base Capacity (vph)		576			514			395		252	489	
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		1.22			0.87			0.49		0.21	0.83	

Intersection Summary

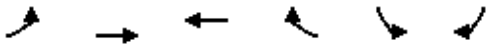
Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 86.6
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.29
Intersection Signal Delay: 98.6 Intersection LOS: F
Intersection Capacity Utilization 90.1% ICU Level of Service E
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Factory Lane/River Street & Route 162 (South Broad Street)/Route 162 (New Haven Avenue) & Route 162 (North Broad Street)



Lane Group	Ø9
Recall Mode	Ped
Walk Time (s)	7.0
Flash Dont Walk (s)	14.0
Pedestrian Calls (#/hr)	25
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	594	423	66	137	0
Future Volume (vph)	0	594	423	66	137	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	11	11	11	11
Storage Length (ft)	50			0	0	0
Storage Lanes	0			0	1	0
Taper Length (ft)	60				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.982			
Flt Protected					0.950	
Satd. Flow (prot)	0	1863	1768	0	1711	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	1863	1768	0	1711	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		228	368		393	
Travel Time (s)		5.2	8.4		8.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	646	460	72	149	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	646	532	0	149	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		11	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.09	1.00	1.04	1.04	1.04	1.04
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	45.5%	ICU Level of Service	A
Analysis Period (min)	15		

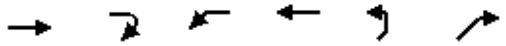
Intersection	
Int Delay, s/veh	5.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	594	423	66	137	0
Future Vol, veh/h	0	594	423	66	137	0
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, %	2	2	2	2	2	2
Mvmt Flow	0	646	460	72	149	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	532	0	-	0	1142	496
Stage 1	-	-	-	-	496	-
Stage 2	-	-	-	-	646	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1036	-	-	-	222	574
Stage 1	-	-	-	-	612	-
Stage 2	-	-	-	-	522	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1036	-	-	-	222	574
Mov Cap-2 Maneuver	-	-	-	-	222	-
Stage 1	-	-	-	-	612	-
Stage 2	-	-	-	-	522	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	49
HCM LOS			E

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1036	-	-	-	222
HCM Lane V/C Ratio	-	-	-	-	0.671
HCM Control Delay (s)	0	-	-	-	49
HCM Lane LOS	A	-	-	-	E
HCM 95th %tile Q(veh)	0	-	-	-	4.2



Lane Group	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Volume (vph)	0	0	0	610	6	0
Future Volume (vph)	0	0	0	610	6	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected					0.950	
Satd. Flow (prot)	0	0	0	1863	1770	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	0	0	1863	1770	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	585			218	69	
Travel Time (s)	16.0			5.9	1.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	663	7	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	663	7	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Yield	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 42.1%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	110	537	116	5	112	0	0	110	88
Future Volume (vph)	0	0	0	110	537	116	5	112	0	0	110	88
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	16	12	12	12	12	12	11	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.980						0.940	
Flt Protected					0.993			0.998				
Satd. Flow (prot)	0	0	0	0	2054	0	0	1859	0	0	1693	0
Flt Permitted					0.993			0.984				
Satd. Flow (perm)	0	0	0	0	2054	0	0	1833	0	0	1693	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					24						96	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		501			585			144			334	
Travel Time (s)		13.7			16.0			3.9			9.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Parking (#/hr)						30						
Adj. Flow (vph)	0	0	0	120	584	126	5	122	0	0	120	96
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	830	0	0	127	0	0	216	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			12	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	0.85	1.00	1.00	1.00	1.00	1.00	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					6			8			4	
Permitted Phases				6			8					
Detector Phase				6	6		8	8			4	
Switch Phase												
Minimum Initial (s)				5.0	5.0		5.0	5.0			9.0	
Minimum Split (s)				22.5	22.5		22.5	22.5			22.5	
Total Split (s)				22.5	22.5		22.5	22.5			22.5	
Total Split (%)				50.0%	50.0%		50.0%	50.0%			50.0%	
Maximum Green (s)				18.0	18.0		18.0	18.0			18.5	
Yellow Time (s)				3.5	3.5		3.5	3.5			3.0	
All-Red Time (s)				1.0	1.0		1.0	1.0			1.0	
Lost Time Adjust (s)					0.0			0.0			0.0	
Total Lost Time (s)					4.5			4.5			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)				3.0	3.0		3.0	3.0			2.0	
Recall Mode				Max	Max		None	None			None	
Walk Time (s)				7.0	7.0		7.0	7.0				
Flash Dont Walk (s)				11.0	11.0		11.0	11.0				

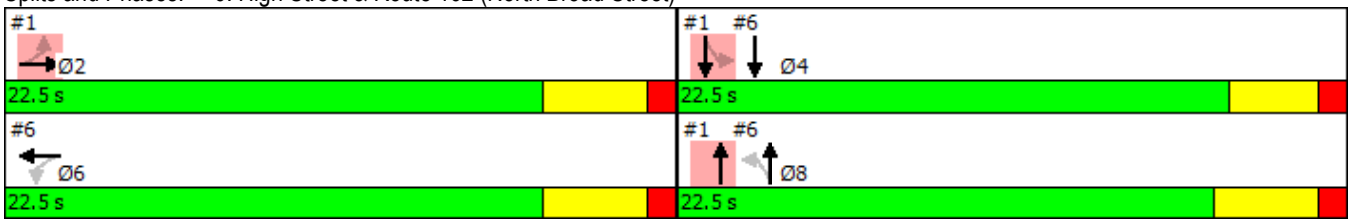
Lane Group	Ø2
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Parking (#/hr)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Turn Type	
Protected Phases	2
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	22.5
Total Split (s)	22.5
Total Split (%)	50%
Maximum Green (s)	18.0
Yellow Time (s)	3.5
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	7.0
Flash Dont Walk (s)	11.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)				0	0		0	0				
Act Effct Green (s)					20.0			10.4			10.9	
Actuated g/C Ratio					0.51			0.26			0.28	
v/c Ratio					0.79			0.26			0.40	
Control Delay					17.8			14.2			8.5	
Queue Delay					2.1			0.2			0.0	
Total Delay					19.9			14.4			8.5	
LOS					B			B			A	
Approach Delay					19.9			14.4			8.5	
Approach LOS					B			B			A	
Queue Length 50th (ft)					108			27			18	
Queue Length 95th (ft)					#371			m67			52	
Internal Link Dist (ft)		421			505			64			254	
Turn Bay Length (ft)												
Base Capacity (vph)					1050			844			852	
Starvation Cap Reductn					0			312			0	
Spillback Cap Reductn					109			0			12	
Storage Cap Reductn					0			0			0	
Reduced v/c Ratio					0.88			0.24			0.26	

Intersection Summary			
Area Type:	Other		
Cycle Length: 45			
Actuated Cycle Length: 39.5			
Natural Cycle: 60			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.79			
Intersection Signal Delay: 17.2		Intersection LOS: B	
Intersection Capacity Utilization 59.6%		ICU Level of Service B	
Analysis Period (min) 15			

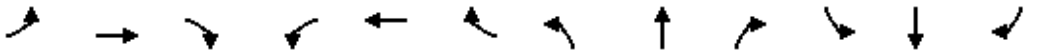
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: High Street & Route 162 (North Broad Street)



Lane Group	Ø2
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	28	11	9	0	32	6	204	129	30	171	11
Future Volume (vph)	44	28	11	9	0	32	6	204	129	30	171	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	12	12	12	12	12	11	12	12	11	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.982			0.895			0.949			0.993	
Flt Protected		0.974			0.989			0.999			0.993	
Satd. Flow (prot)	0	2019	0	0	1649	0	0	1707	0	0	1776	0
Flt Permitted		0.974			0.989			0.999			0.993	
Satd. Flow (perm)	0	2019	0	0	1649	0	0	1707	0	0	1776	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		85			723			191			210	
Travel Time (s)		2.3			19.7			5.2			5.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	48	30	12	10	0	35	7	222	140	33	186	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	90	0	0	45	0	0	369	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	0.85	1.00	1.00	1.00	1.00	1.00	1.04	1.00	1.00	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 43.5%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	44	28	11	9	0	32	6	204	129	30	171	11
Future Vol, veh/h	44	28	11	9	0	32	6	204	129	30	171	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	48	30	12	10	0	35	7	222	140	33	186	12

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	579	632	192	583	568	292	198	0	0	362	0	0
Stage 1	257	257	-	305	305	-	-	-	-	-	-	-
Stage 2	322	375	-	278	263	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	426	398	850	424	432	747	1375	-	-	1197	-	-
Stage 1	748	695	-	705	662	-	-	-	-	-	-	-
Stage 2	690	617	-	728	691	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	395	383	850	382	416	747	1375	-	-	1197	-	-
Mov Cap-2 Maneuver	395	383	-	382	416	-	-	-	-	-	-	-
Stage 1	744	673	-	701	658	-	-	-	-	-	-	-
Stage 2	654	613	-	664	670	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	15.9	11.3	0.1	1.1
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1375	-	-	420	617	1197	-	-
HCM Lane V/C Ratio	0.005	-	-	0.215	0.072	0.027	-	-
HCM Control Delay (s)	7.6	0	-	15.9	11.3	8.1	0	-
HCM Lane LOS	A	A	-	C	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.8	0.2	0.1	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	17	48	4	226	0	137	420	14
Future Volume (vph)	0	0	0	0	17	48	4	226	0	137	420	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	11	12	12	12	11	11	11
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Frt					0.900						0.996	
Flt Protected								0.999			0.988	
Satd. Flow (prot)	0	0	0	0	1621	0	0	1861	0	0	3367	0
Flt Permitted								0.999			0.988	
Satd. Flow (perm)	0	0	0	0	1621	0	0	1861	0	0	3367	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		370			393			312			107	
Travel Time (s)		10.1			10.7			8.5			2.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	18	52	4	246	0	149	457	15
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	70	0	0	250	0	0	621	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			12			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.04	1.04	1.04	1.00	1.00	1.00	1.04	1.04	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 42.0%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	0	17	48	4	226	0	137	420	14
Future Vol, veh/h	0	0	0	0	17	48	4	226	0	137	420	14
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	18	52	4	246	0	149	457	15

Major/Minor	Minor1			Major1			Major2		
Conflicting Flow All	780	1024	246	472	0	0	246	0	0
Stage 1	254	254	-	-	-	-	-	-	-
Stage 2	526	770	-	-	-	-	-	-	-
Critical Hdwy	6.63	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	5.43	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.83	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.519	4.019	3.319	2.219	-	-	2.219	-	-
Pot Cap-1 Maneuver	348	235	792	1088	-	-	1319	-	-
Stage 1	788	696	-	-	-	-	-	-	-
Stage 2	558	409	-	-	-	-	-	-	-
Platoon blocked, %					-	-		-	-
Mov Cap-1 Maneuver	294	0	792	1088	-	-	1319	-	-
Mov Cap-2 Maneuver	294	0	-	-	-	-	-	-	-
Stage 1	785	0	-	-	-	-	-	-	-
Stage 2	473	0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10	0.1	2.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1088	-	-	792	1319	-	-
HCM Lane V/C Ratio	0.004	-	-	0.089	0.113	-	-
HCM Control Delay (s)	8.3	0	-	10	8.1	0.4	-
HCM Lane LOS	A	A	-	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.4	-	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	177	60	21	257	520	47
Future Volume (vph)	177	60	21	257	520	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	12	12	11	11
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95
Frt	0.966				0.988	
Flt Protected	0.964			0.996		
Satd. Flow (prot)	1850	0	0	1855	3380	0
Flt Permitted	0.964			0.996		
Satd. Flow (perm)	1850	0	0	1855	3380	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	202			107	118	
Travel Time (s)	5.5			2.9	3.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	192	65	23	279	565	51
Shared Lane Traffic (%)						
Lane Group Flow (vph)	257	0	0	302	616	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	14			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.92	0.92	1.00	1.00	1.04	1.04
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 51.0%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Intersection Delay, s/veh	14.3
Intersection LOS	B

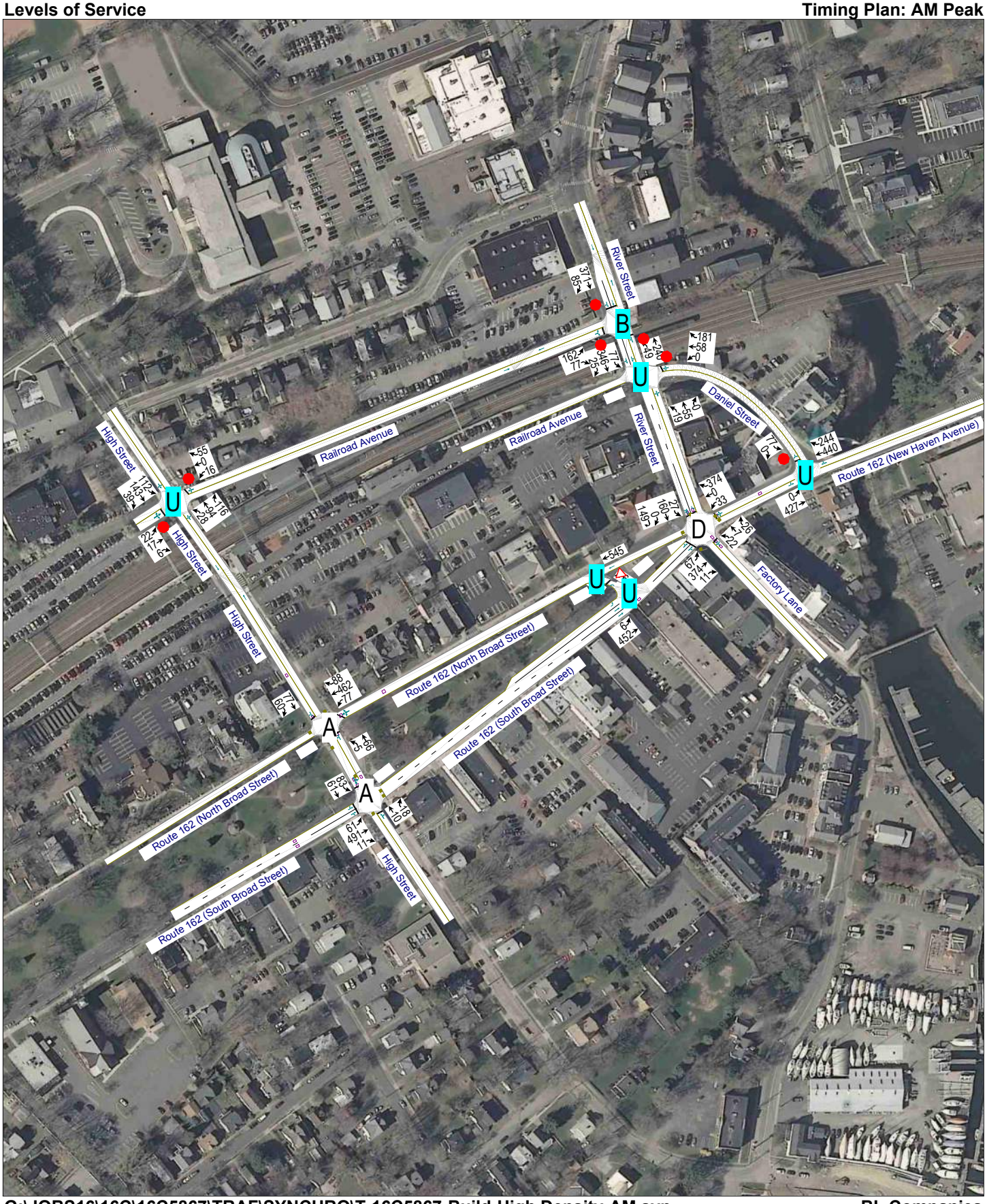
Movement	EBU	EBL	EBR	NBU	NBL	NBT	SBU	SBT	SBR
Lane Configurations									
Traffic Vol, veh/h	0	177	60	0	21	257	0	520	47
Future Vol, veh/h	0	177	60	0	21	257	0	520	47
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	192	65	0	23	279	0	565	51
Number of Lanes	0	1	0	0	0	1	0	2	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	2	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	13.6	13.7	14.9
HCM LOS	B	B	B

Lane	NBLn1	EBLn1	SBLn1	SBLn2
Vol Left, %	8%	75%	0%	0%
Vol Thru, %	92%	0%	100%	79%
Vol Right, %	0%	25%	0%	21%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	278	237	347	220
LT Vol	21	177	0	0
Through Vol	257	0	347	173
RT Vol	0	60	0	47
Lane Flow Rate	302	258	377	239
Geometry Grp	5	2	7	7
Degree of Util (X)	0.473	0.431	0.603	0.373
Departure Headway (Hd)	5.631	6.029	5.759	5.608
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	641	598	626	642
Service Time	3.668	4.068	3.492	3.341
HCM Lane V/C Ratio	0.471	0.431	0.602	0.372
HCM Control Delay	13.7	13.6	16.9	11.7
HCM Lane LOS	B	B	C	B
HCM 95th-tile Q	2.5	2.2	4	1.7

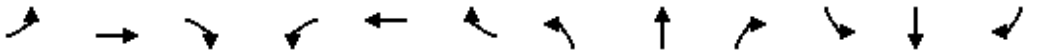
Transit Oriented Development - Milford, CT
Levels of Service

Build - Higher Density
Timing Plan: AM Peak



G:\JOBS16\16C\16C5867\TRAF\SYNCHRO\T-16C5867-Build-High Density-AM.syn
M. Shepley

BL Companies
08/24/2017



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	61	491	11	0	0	0	0	10	18	83	61	0
Future Volume (vph)	61	491	11	0	0	0	0	10	18	83	61	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12	12	12	11	16	16	12
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.997						0.913				
Flt Protected		0.995									0.972	
Satd. Flow (prot)	0	2970	0	0	0	0	0	1701	0	0	2052	0
Flt Permitted		0.995									0.804	
Satd. Flow (perm)	0	2970	0	0	0	0	0	1701	0	0	1697	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5						20				
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		438			633			294			144	
Travel Time (s)		11.9			17.3			8.0			3.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Parking (#/hr)	30	30	30									
Adj. Flow (vph)	66	534	12	0	0	0	0	11	20	90	66	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	612	0	0	0	0	0	31	0	0	156	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Left	R NA	Right	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			-6			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.24	1.00	1.00	1.00	1.00	1.00	1.00	1.04	0.85	0.85	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		2						8			4	
Permitted Phases	2									4		
Detector Phase	2	2						8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0						5.0		9.0	9.0	
Minimum Split (s)	22.5	22.5						22.5		22.5	22.5	
Total Split (s)	22.5	22.5						22.5		22.5	22.5	
Total Split (%)	50.0%	50.0%						50.0%		50.0%	50.0%	
Maximum Green (s)	18.0	18.0						18.0		18.5	18.5	
Yellow Time (s)	3.5	3.5						3.5		3.0	3.0	
All-Red Time (s)	1.0	1.0						1.0		1.0	1.0	
Lost Time Adjust (s)		0.0						0.0			0.0	
Total Lost Time (s)		4.5						4.5			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0						3.0		2.0	2.0	
Recall Mode	Max	Max						None		None	None	
Walk Time (s)	7.0	7.0						7.0				
Flash Dont Walk (s)	11.0	11.0						11.0				

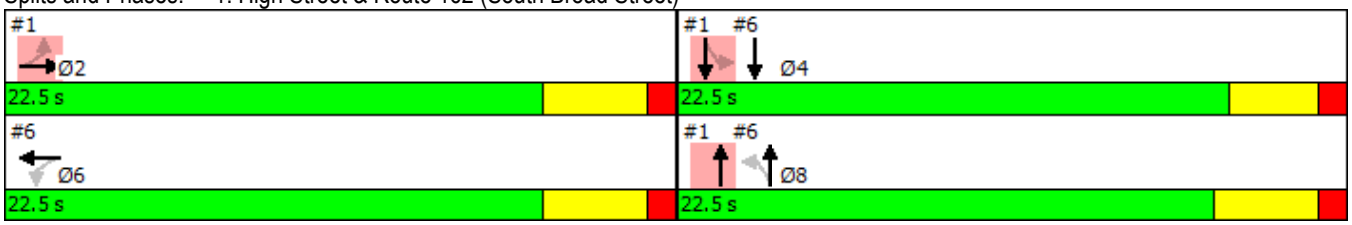
Lane Group	Ø6
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Parking (#/hr)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Turn Type	
Protected Phases	6
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	22.5
Total Split (s)	22.5
Total Split (%)	50%
Maximum Green (s)	18.0
Yellow Time (s)	3.5
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	7.0
Flash Dont Walk (s)	11.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)	0	0						0				
Act Effct Green (s)		21.8						8.4			9.5	
Actuated g/C Ratio		0.60						0.23			0.26	
v/c Ratio		0.34						0.08			0.35	
Control Delay		6.0						7.2			11.2	
Queue Delay		0.0						0.0			0.1	
Total Delay		6.0						7.2			11.3	
LOS		A						A			B	
Approach Delay		6.0						7.2			11.3	
Approach LOS		A						A			B	
Queue Length 50th (ft)		32						2			24	
Queue Length 95th (ft)		64						13			m44	
Internal Link Dist (ft)		358			553			214			64	
Turn Bay Length (ft)												
Base Capacity (vph)		1782						852			864	
Starvation Cap Reductn		0						0			179	
Spillback Cap Reductn		0						0			0	
Storage Cap Reductn		0						0			0	
Reduced v/c Ratio		0.34						0.04			0.23	

Intersection Summary			
Area Type:	Other		
Cycle Length: 45			
Actuated Cycle Length: 36.4			
Natural Cycle: 50			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.55			
Intersection Signal Delay: 7.1		Intersection LOS: A	
Intersection Capacity Utilization 37.2%		ICU Level of Service A	
Analysis Period (min) 15			

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

Splits and Phases: 1: High Street & Route 162 (South Broad Street)



Lane Group	Ø6
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Lane Group	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	0	0	6	452	0	0
Future Volume (vph)	0	0	6	452	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12
Storage Length (ft)	0	0	250			0
Storage Lanes	0	0	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	1.00
Frt						
Flt Protected			0.950			
Satd. Flow (prot)	0	0	1327	3097	0	0
Flt Permitted			0.950			
Satd. Flow (perm)	0	0	1327	3097	0	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	69			633	181	
Travel Time (s)	1.9			17.3	4.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Parking (#/hr)			30	30		
Adj. Flow (vph)	0	0	7	491	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	7	491	0	0
Enter Blocked Intersection	No	No	Yes	Yes	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.04	1.04	1.43	1.19	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 38.7%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR2
Lane Configurations												
Traffic Volume (vph)	67	374	11	33	0	374	22	7	26	27	160	149
Future Volume (vph)	67	374	11	33	0	374	22	7	26	27	160	149
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	11	10	12	12	12	11	12	11	11	11
Storage Length (ft)	0		0	50		0	150		150	0		
Storage Lanes	0		0	0		0	0		0	1		
Taper Length (ft)	25			60			25			25		
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996			0.876			0.937			0.928	
Flt Protected		0.993			0.996			0.980		0.950		
Satd. Flow (prot)	0	2961	0	0	1625	0	0	1653	0	1283	1504	0
Flt Permitted		0.702			0.931			0.773		0.786		
Satd. Flow (perm)	0	2093	0	0	1519	0	0	1304	0	1061	1504	0
Right Turn on Red			No						No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		181			228			347			312	
Travel Time (s)		4.9			6.2			9.5			8.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Parking (#/hr)		30	30							30	0	0
Adj. Flow (vph)	73	407	12	36	0	407	24	8	28	29	174	162
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	492	0	0	443	0	0	60	0	29	336	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.24	1.04	1.09	1.00	1.00	1.00	1.04	1.00	1.49	1.19	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2	2		6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	15.0	15.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	20.5	20.5		22.5	22.5		32.5	32.5		32.5	32.5	
Total Split (s)	32.5	32.5		32.5	32.5		32.5	32.5		32.5	32.5	
Total Split (%)	36.1%	36.1%		36.1%	36.1%		36.1%	36.1%		36.1%	36.1%	
Maximum Green (s)	27.0	27.0		28.0	28.0		28.0	28.0		28.0	28.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	2.0	2.0		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)		5.5			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	

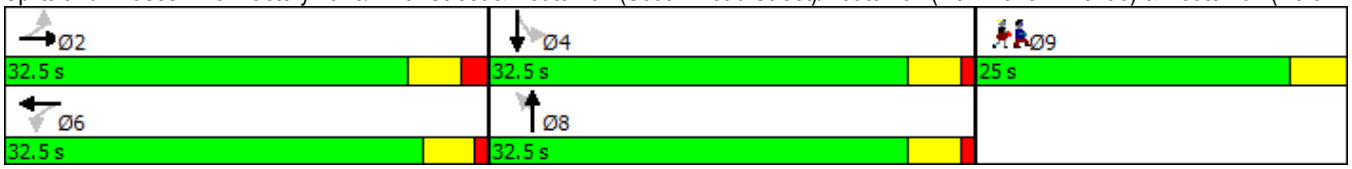
Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Parking (#/hr)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	25.0
Total Split (s)	25.0
Total Split (%)	28%
Maximum Green (s)	21.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR2
Recall Mode	Min	Min		Min	Min		None	None		None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		25.8			26.9			22.7		22.7	22.7	
Actuated g/C Ratio		0.31			0.32			0.27		0.27	0.27	
v/c Ratio		0.76			0.91			0.17		0.10	0.83	
Control Delay		36.3			54.0			24.4		23.5	46.7	
Queue Delay		0.0			0.0			0.0		0.0	0.0	
Total Delay		36.3			54.0			24.4		23.5	46.7	
LOS		D			D			C		C	D	
Approach Delay		36.3			54.0			24.4			44.9	
Approach LOS		D			D			C			D	
Queue Length 50th (ft)		125			228			24		12	168	
Queue Length 95th (ft)		#212			#430			55		32	#275	
Internal Link Dist (ft)		101			148			267			232	
Turn Bay Length (ft)												
Base Capacity (vph)		679			511			439		357	506	
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		0.72			0.87			0.14		0.08	0.66	

Intersection Summary

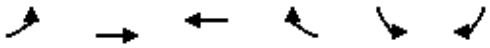
Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 83.8
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.91
Intersection Signal Delay: 43.8 Intersection LOS: D
Intersection Capacity Utilization 72.6% ICU Level of Service C
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Factory Lane/River Street & Route 162 (South Broad Street)/Route 162 (New Haven Avenue) & Route 162 (North Broad Street)



Lane Group	Ø9
Recall Mode	Ped
Walk Time (s)	7.0
Flash Dont Walk (s)	14.0
Pedestrian Calls (#/hr)	25
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	427	440	244	77	0
Future Volume (vph)	0	427	440	244	77	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	11	11	11	11
Storage Length (ft)	50			0	0	0
Storage Lanes	0			0	1	0
Taper Length (ft)	60				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.952			
Flt Protected					0.950	
Satd. Flow (prot)	0	1863	1714	0	1711	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	1863	1714	0	1711	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		228	368		393	
Travel Time (s)		5.2	8.4		8.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	464	478	265	84	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	464	743	0	84	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		11	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.09	1.00	1.04	1.04	1.04	1.04
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	49.0%	ICU Level of Service	A
Analysis Period (min)	15		

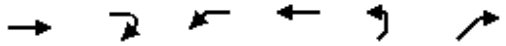
Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	427	440	244	77	0
Future Vol, veh/h	0	427	440	244	77	0
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, %	2	2	2	2	2	2
Mvmt Flow	0	464	478	265	84	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	743	0	-	0	1075	611
Stage 1	-	-	-	-	611	-
Stage 2	-	-	-	-	464	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	864	-	-	-	243	494
Stage 1	-	-	-	-	542	-
Stage 2	-	-	-	-	633	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	864	-	-	-	243	494
Mov Cap-2 Maneuver	-	-	-	-	243	-
Stage 1	-	-	-	-	542	-
Stage 2	-	-	-	-	633	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	27.4
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	864	-	-	-	243
HCM Lane V/C Ratio	-	-	-	-	0.344
HCM Control Delay (s)	0	-	-	-	27.4
HCM Lane LOS	A	-	-	-	D
HCM 95th %tile Q(veh)	0	-	-	-	1.5



Lane Group	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Volume (vph)	0	0	0	545	6	0
Future Volume (vph)	0	0	0	545	6	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected					0.950	
Satd. Flow (prot)	0	0	0	1863	1770	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	0	0	1863	1770	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	585			218	69	
Travel Time (s)	16.0			5.9	1.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	592	7	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	592	7	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Yield	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 38.7%		ICU Level of Service A	
Analysis Period (min) 15			

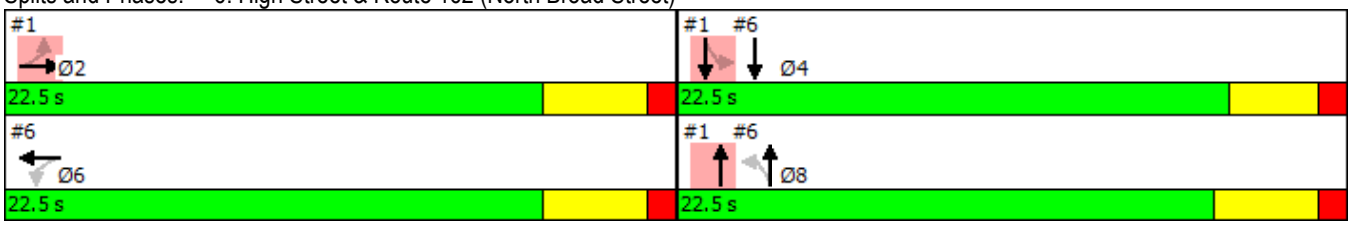
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	77	462	88	5	66	0	0	77	60
Future Volume (vph)	0	0	0	77	462	88	5	66	0	0	77	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	16	12	12	12	12	12	11	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.981						0.941	
Flt Protected					0.994			0.997				
Satd. Flow (prot)	0	0	0	0	2059	0	0	1857	0	0	1694	0
Flt Permitted					0.994			0.972				
Satd. Flow (perm)	0	0	0	0	2059	0	0	1811	0	0	1694	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					22						65	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		501			585			144			334	
Travel Time (s)		13.7			16.0			3.9			9.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Parking (#/hr)						30						
Adj. Flow (vph)	0	0	0	84	502	96	5	72	0	0	84	65
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	682	0	0	77	0	0	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			0			0	
Link Offset(ft)		0			0			0			12	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	0.85	1.00	1.00	1.00	1.00	1.00	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					6			8			4	
Permitted Phases				6			8					
Detector Phase				6	6		8	8			4	
Switch Phase												
Minimum Initial (s)				5.0	5.0		5.0	5.0			9.0	
Minimum Split (s)				22.5	22.5		22.5	22.5			22.5	
Total Split (s)				22.5	22.5		22.5	22.5			22.5	
Total Split (%)				50.0%	50.0%		50.0%	50.0%			50.0%	
Maximum Green (s)				18.0	18.0		18.0	18.0			18.5	
Yellow Time (s)				3.5	3.5		3.5	3.5			3.0	
All-Red Time (s)				1.0	1.0		1.0	1.0			1.0	
Lost Time Adjust (s)					0.0			0.0			0.0	
Total Lost Time (s)					4.5			4.5			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)				3.0	3.0		3.0	3.0			2.0	
Recall Mode				Max	Max		None	None			None	
Walk Time (s)				7.0	7.0		7.0	7.0				
Flash Dont Walk (s)				11.0	11.0		11.0	11.0				

Lane Group	Ø2
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Parking (#/hr)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Turn Type	
Protected Phases	2
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	22.5
Total Split (s)	22.5
Total Split (%)	50%
Maximum Green (s)	18.0
Yellow Time (s)	3.5
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	7.0
Flash Dont Walk (s)	11.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)				0	0		0	0				
Act Effct Green (s)					21.8			8.4			9.5	
Actuated g/C Ratio					0.60			0.23			0.26	
v/c Ratio					0.55			0.19			0.31	
Control Delay					8.5			13.6			8.6	
Queue Delay					0.0			0.1			0.0	
Total Delay					8.5			13.6			8.6	
LOS					A			B			A	
Approach Delay					8.5			13.6			8.6	
Approach LOS					A			B			A	
Queue Length 50th (ft)					78			16			13	
Queue Length 95th (ft)					174			43			40	
Internal Link Dist (ft)		421			505			64			254	
Turn Bay Length (ft)												
Base Capacity (vph)					1243			897			894	
Starvation Cap Reductn					0			250			0	
Spillback Cap Reductn					0			0			6	
Storage Cap Reductn					0			0			0	
Reduced v/c Ratio					0.55			0.12			0.17	

Intersection Summary			
Area Type:	Other		
Cycle Length: 45			
Actuated Cycle Length: 36.4			
Natural Cycle: 50			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.55			
Intersection Signal Delay: 8.9		Intersection LOS: A	
Intersection Capacity Utilization 49.0%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 6: High Street & Route 162 (North Broad Street)



Lane Group	Ø2
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	17	6	16	0	55	28	94	116	112	143	39
Future Volume (vph)	22	17	6	16	0	55	28	94	116	112	143	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	12	12	12	12	12	11	12	12	11	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.981			0.895			0.934			0.982	
Flt Protected		0.976			0.989			0.994			0.981	
Satd. Flow (prot)	0	2021	0	0	1649	0	0	1672	0	0	1735	0
Flt Permitted		0.976			0.989			0.994			0.981	
Satd. Flow (perm)	0	2021	0	0	1649	0	0	1672	0	0	1735	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		85			723			191			210	
Travel Time (s)		2.3			19.7			5.2			5.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	24	18	7	17	0	60	30	102	126	122	155	42
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	49	0	0	77	0	0	258	0	0	319	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	0.85	1.00	1.00	1.00	1.00	1.00	1.04	1.00	1.00	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 44.6%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	4.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	22	17	6	16	0	55	28	94	116	112	143	39
Future Vol, veh/h	22	17	6	16	0	55	28	94	116	112	143	39
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	24	18	7	17	0	60	30	102	126	122	155	42

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	676	709	177	659	667	165	198	0	0	228	0	0
Stage 1	420	420	-	226	226	-	-	-	-	-	-	-
Stage 2	256	289	-	433	441	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	367	359	866	377	380	879	1375	-	-	1340	-	-
Stage 1	611	589	-	777	717	-	-	-	-	-	-	-
Stage 2	749	673	-	601	577	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	309	314	866	323	332	879	1375	-	-	1340	-	-
Mov Cap-2 Maneuver	309	314	-	323	332	-	-	-	-	-	-	-
Stage 1	596	528	-	758	699	-	-	-	-	-	-	-
Stage 2	681	656	-	516	518	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	17.4	11.5	0.9	3
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1375	-	-	340	633	1340	-	-
HCM Lane V/C Ratio	0.022	-	-	0.144	0.122	0.091	-	-
HCM Control Delay (s)	7.7	0	-	17.4	11.5	8	0	-
HCM Lane LOS	A	A	-	C	B	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.5	0.4	0.3	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	58	181	19	55	0	77	346	25
Future Volume (vph)	0	0	0	0	58	181	19	55	0	77	346	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	11	12	12	12	11	11	11
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Frt					0.898						0.992	
Flt Protected								0.987			0.991	
Satd. Flow (prot)	0	0	0	0	1617	0	0	1839	0	0	3363	0
Flt Permitted								0.987			0.991	
Satd. Flow (perm)	0	0	0	0	1617	0	0	1839	0	0	3363	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		370			393			312			107	
Travel Time (s)		10.1			10.7			8.5			2.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	63	197	21	60	0	84	376	27
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	260	0	0	81	0	0	487	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			12			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.04	1.04	1.04	1.00	1.00	1.00	1.04	1.04	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 40.4%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	5.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕			↕			↕	
Traffic Vol, veh/h	0	0	0	0	58	181	19	55	0	77	346	25
Future Vol, veh/h	0	0	0	0	58	181	19	55	0	77	346	25
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	63	197	21	60	0	84	376	27

Major/Minor	Minor1			Major1			Major2		
Conflicting Flow All	456	672	60	403	0	0	60	0	0
Stage 1	101	101	-	-	-	-	-	-	-
Stage 2	355	571	-	-	-	-	-	-	-
Critical Hdwy	7.33	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.53	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.519	4.019	3.319	2.219	-	-	2.219	-	-
Pot Cap-1 Maneuver	501	376	1005	1154	-	-	1543	-	-
Stage 1	905	811	-	-	-	-	-	-	-
Stage 2	636	504	-	-	-	-	-	-	-
Platoon blocked, %					-	-		-	-
Mov Cap-1 Maneuver	467	343	1005	1154	-	-	1543	-	-
Mov Cap-2 Maneuver	467	343	-	-	-	-	-	-	-
Stage 1	888	796	-	-	-	-	-	-	-
Stage 2	591	469	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.5	2.1	1.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1154	-	-	684	1543	-	-
HCM Lane V/C Ratio	0.018	-	-	0.38	0.054	-	-
HCM Control Delay (s)	8.2	0	-	13.5	7.5	0.2	-
HCM Lane LOS	A	A	-	B	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	1.8	0.2	-	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	162	77	49	240	371	85
Future Volume (vph)	162	77	49	240	371	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	12	12	11	11
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95
Frt	0.956				0.972	
Flt Protected	0.967			0.992		
Satd. Flow (prot)	1837	0	0	1848	3325	0
Flt Permitted	0.967			0.992		
Satd. Flow (perm)	1837	0	0	1848	3325	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	202			107	118	
Travel Time (s)	5.5			2.9	3.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	176	84	53	261	403	92
Shared Lane Traffic (%)						
Lane Group Flow (vph)	260	0	0	314	495	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	14			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.92	0.92	1.00	1.00	1.04	1.04
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Stop	Stop	

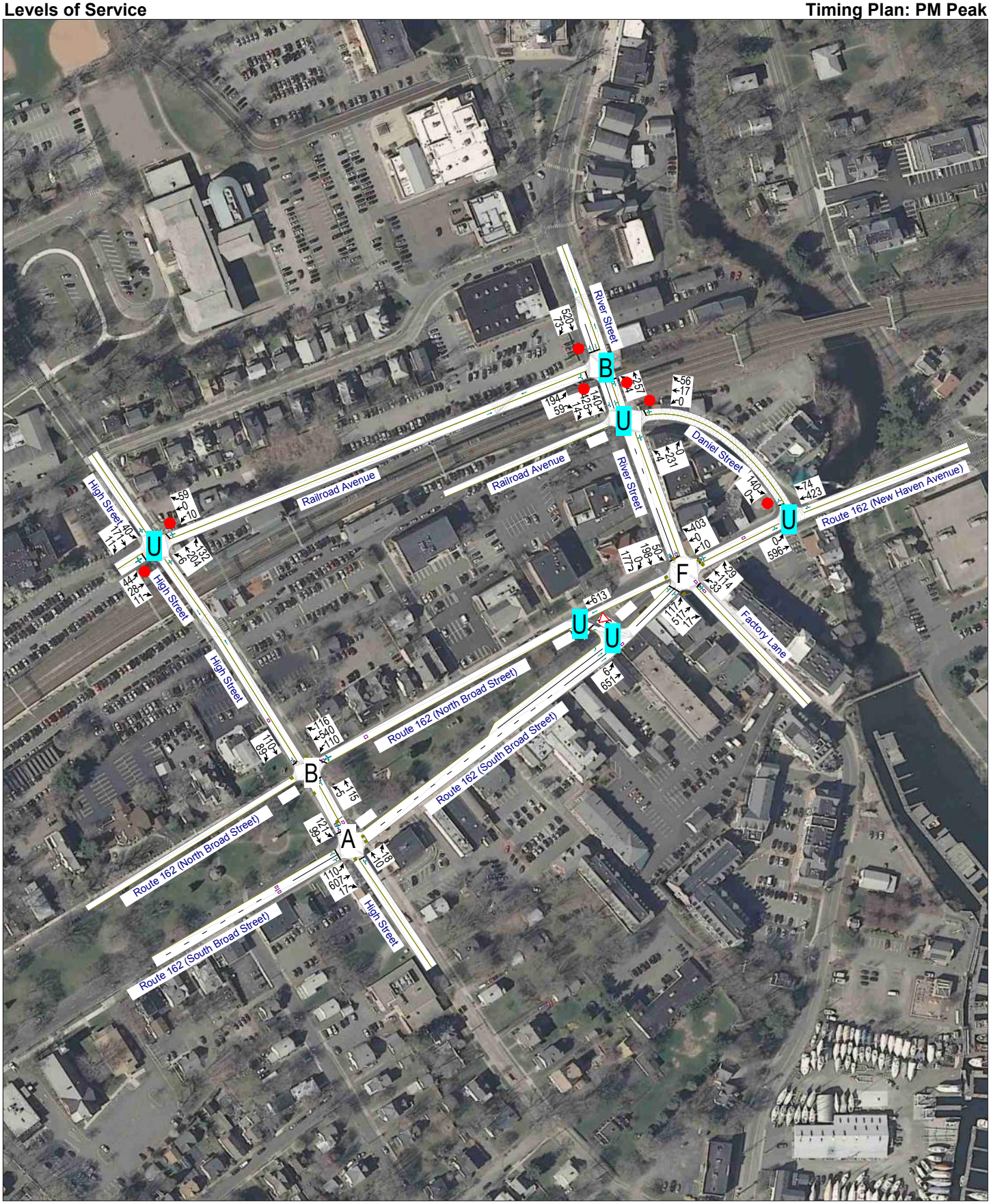
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 52.0%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Intersection Delay, s/veh	12.6
Intersection LOS	B

Movement	EBU	EBL	EBR	NBU	NBL	NBT	SBU	SBT	SBR
Lane Configurations									
Traffic Vol, veh/h	0	162	77	0	49	240	0	371	85
Future Vol, veh/h	0	162	77	0	49	240	0	371	85
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	176	84	0	53	261	0	403	92
Number of Lanes	0	1	0	0	0	1	0	2	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	2	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	12.9	13.5	11.9
HCM LOS	B	B	B

Lane	NBLn1	EBLn1	SBLn1	SBLn2
Vol Left, %	17%	68%	0%	0%
Vol Thru, %	83%	0%	100%	59%
Vol Right, %	0%	32%	0%	41%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	289	239	247	209
LT Vol	49	162	0	0
Through Vol	240	0	247	124
RT Vol	0	77	0	85
Lane Flow Rate	314	260	269	227
Geometry Grp	5	2	7	7
Degree of Util (X)	0.479	0.417	0.428	0.343
Departure Headway (Hd)	5.495	5.78	5.735	5.446
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	657	623	629	660
Service Time	3.526	3.814	3.465	3.176
HCM Lane V/C Ratio	0.478	0.417	0.428	0.344
HCM Control Delay	13.5	12.9	12.7	11
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	2.6	2.1	2.1	1.5


River Street
Railroad Avenue
Railroad Avenue
River Street
Daniel Street
Route 162 (New Haven Avenue)
High Street
High Street
High Street
Factory Lane
Route 162 (North Broad Street)
Route 162 (South Broad Street)
Route 162 (North Broad Street)
Route 162 (South Broad Street)
High Street
U
U
U
U
U
U
B
B
A
F

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	607	17	0	0	0	0	10	18	121	99	0
Future Volume (vph)	110	607	17	0	0	0	0	10	18	121	99	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12	12	12	11	16	16	12
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.997						0.913				
Flt Protected		0.993									0.973	
Satd. Flow (prot)	0	2964	0	0	0	0	0	1701	0	0	2054	0
Flt Permitted		0.993									0.812	
Satd. Flow (perm)	0	2964	0	0	0	0	0	1701	0	0	1714	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6						20				
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		438			633			294			144	
Travel Time (s)		11.9			17.3			8.0			3.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Parking (#/hr)	30	30	30									
Adj. Flow (vph)	120	660	18	0	0	0	0	11	20	132	108	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	798	0	0	0	0	0	31	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	Left	R NA	Right	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			-6			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.24	1.00	1.00	1.00	1.00	1.00	1.00	1.04	0.85	0.85	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		2						8			4	
Permitted Phases	2									4		
Detector Phase	2	2						8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0						5.0		9.0	9.0	
Minimum Split (s)	22.5	22.5						22.5		22.5	22.5	
Total Split (s)	22.5	22.5						22.5		22.5	22.5	
Total Split (%)	50.0%	50.0%						50.0%		50.0%	50.0%	
Maximum Green (s)	18.0	18.0						18.0		18.5	18.5	
Yellow Time (s)	3.5	3.5						3.5		3.0	3.0	
All-Red Time (s)	1.0	1.0						1.0		1.0	1.0	
Lost Time Adjust (s)		0.0						0.0			0.0	
Total Lost Time (s)		4.5						4.5			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0						3.0		2.0	2.0	
Recall Mode	Max	Max						None		None	None	
Walk Time (s)	7.0	7.0						7.0				
Flash Dont Walk (s)	11.0	11.0						11.0				

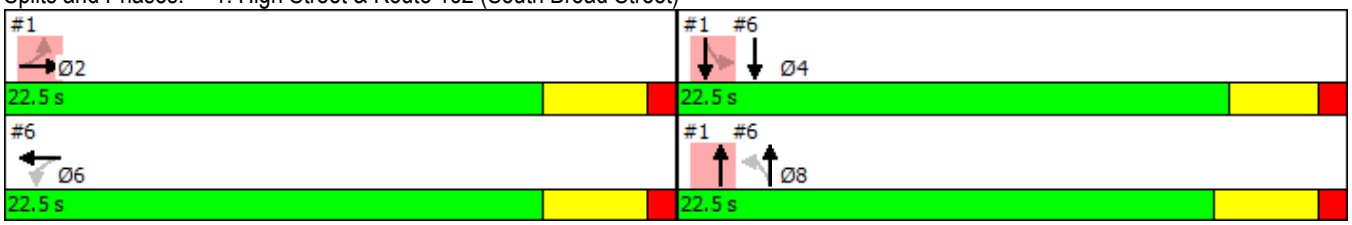
Lane Group	Ø6
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Parking (#/hr)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Turn Type	
Protected Phases	6
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	22.5
Total Split (s)	22.5
Total Split (%)	50%
Maximum Green (s)	18.0
Yellow Time (s)	3.5
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	7.0
Flash Dont Walk (s)	11.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)	0	0						0				
Act Effct Green (s)		19.9						10.4			10.9	
Actuated g/C Ratio		0.51						0.26			0.28	
v/c Ratio		0.53						0.07			0.51	
Control Delay		8.9						6.5			13.1	
Queue Delay		0.1						0.0			0.3	
Total Delay		8.9						6.5			13.3	
LOS		A						A			B	
Approach Delay		8.9						6.5			13.3	
Approach LOS		A						A			B	
Queue Length 50th (ft)		45						2			38	
Queue Length 95th (ft)		115						13			m65	
Internal Link Dist (ft)		358			553			214			64	
Turn Bay Length (ft)												
Base Capacity (vph)		1500						794			812	
Starvation Cap Reductn		0						0			185	
Spillback Cap Reductn		82						1			0	
Storage Cap Reductn		0						0			0	
Reduced v/c Ratio		0.56						0.04			0.38	

Intersection Summary			
Area Type:	Other		
Cycle Length: 45			
Actuated Cycle Length: 39.4			
Natural Cycle: 60			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.79			
Intersection Signal Delay: 9.9		Intersection LOS: A	
Intersection Capacity Utilization 46.2%		ICU Level of Service A	
Analysis Period (min) 15			

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

Splits and Phases: 1: High Street & Route 162 (South Broad Street)

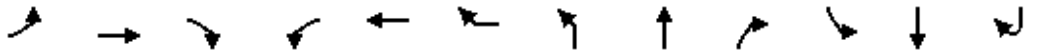


Lane Group	Ø6
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Lane Group	EBL	EBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	0	0	6	651	0	0
Future Volume (vph)	0	0	6	651	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12
Storage Length (ft)	0	0	250			0
Storage Lanes	0	0	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	1.00
Frt						
Flt Protected			0.950			
Satd. Flow (prot)	0	0	1327	3097	0	0
Flt Permitted			0.950			
Satd. Flow (perm)	0	0	1327	3097	0	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	69			633	181	
Travel Time (s)	1.9			17.3	4.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Parking (#/hr)			30	30		
Adj. Flow (vph)	0	0	7	708	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	7	708	0	0
Enter Blocked Intersection	No	No	Yes	Yes	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.04	1.04	1.43	1.19	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	42.3%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR2
Lane Configurations												
Traffic Volume (vph)	117	517	17	10	0	403	33	114	29	50	198	177
Future Volume (vph)	117	517	17	10	0	403	33	114	29	50	198	177
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	11	10	12	12	12	11	12	11	11	11
Storage Length (ft)	0		0	50		0	150		150	0		
Storage Lanes	0		0	0		0	0		0	1		
Taper Length (ft)	25			60			25			25		
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996			0.868			0.977			0.929	
Flt Protected		0.991			0.999			0.991		0.950		
Satd. Flow (prot)	0	2955	0	0	1615	0	0	1743	0	1283	1506	0
Flt Permitted		0.612			0.978			0.690		0.576		
Satd. Flow (perm)	0	1825	0	0	1581	0	0	1214	0	778	1506	0
Right Turn on Red			No						No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		181			228			347			312	
Travel Time (s)		4.9			6.2			9.5			8.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Parking (#/hr)		30	30							30	0	0
Adj. Flow (vph)	127	562	18	11	0	438	36	124	32	54	215	192
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	707	0	0	449	0	0	192	0	54	407	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.24	1.04	1.09	1.00	1.00	1.00	1.04	1.00	1.49	1.19	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2	2		6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	15.0	15.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	20.5	20.5		22.5	22.5		32.5	32.5		32.5	32.5	
Total Split (s)	32.5	32.5		32.5	32.5		32.5	32.5		32.5	32.5	
Total Split (%)	36.1%	36.1%		36.1%	36.1%		36.1%	36.1%		36.1%	36.1%	
Maximum Green (s)	27.0	27.0		28.0	28.0		28.0	28.0		28.0	28.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	2.0	2.0		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)		5.5			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	

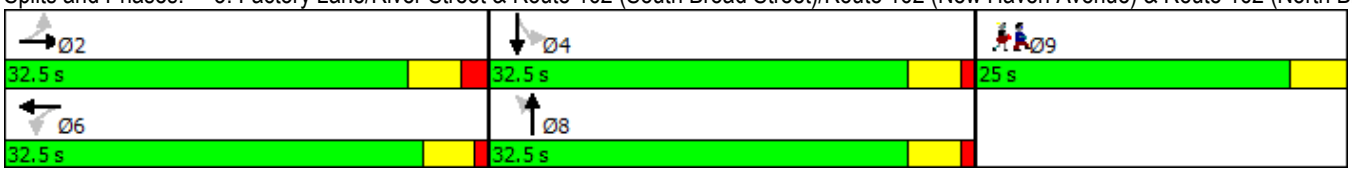
Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Parking (#/hr)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	25.0
Total Split (s)	25.0
Total Split (%)	28%
Maximum Green (s)	21.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR2
Recall Mode	Min	Min		Min	Min		None	None		None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		25.6			26.6			26.0		26.0	26.0	
Actuated g/C Ratio		0.29			0.31			0.30		0.30	0.30	
v/c Ratio		1.31			0.93			0.53		0.23	0.90	
Control Delay		182.6			57.5			31.7		26.3	55.1	
Queue Delay		0.0			0.0			0.0		0.0	0.0	
Total Delay		182.6			57.5			31.7		26.3	55.1	
LOS		F			E			C		C	E	
Approach Delay		182.6			57.5			31.7			51.7	
Approach LOS		F			E			C			D	
Queue Length 50th (ft)		~272			244			89		23	217	
Queue Length 95th (ft)		#385			#426			156		54	#383	
Internal Link Dist (ft)		101			148			267			232	
Turn Bay Length (ft)												
Base Capacity (vph)		570			512			393		252	488	
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		1.24			0.88			0.49		0.21	0.83	

Intersection Summary

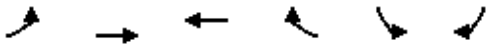
Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 86.8
Natural Cycle: 100
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.31
Intersection Signal Delay: 102.2 Intersection LOS: F
Intersection Capacity Utilization 90.4% ICU Level of Service E
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Factory Lane/River Street & Route 162 (South Broad Street)/Route 162 (New Haven Avenue) & Route 162 (North Broad Street)



Lane Group	Ø9
Recall Mode	Ped
Walk Time (s)	7.0
Flash Dont Walk (s)	14.0
Pedestrian Calls (#/hr)	25
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	596	423	74	140	0
Future Volume (vph)	0	596	423	74	140	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	11	11	11	11
Storage Length (ft)	50			0	0	0
Storage Lanes	0			0	1	0
Taper Length (ft)	60				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.980			
Flt Protected					0.950	
Satd. Flow (prot)	0	1863	1765	0	1711	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	1863	1765	0	1711	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		228	368		393	
Travel Time (s)		5.2	8.4		8.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	648	460	80	152	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	648	540	0	152	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		11	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.09	1.00	1.04	1.04	1.04	1.04
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

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

Intersection	
Int Delay, s/veh	5.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	596	423	74	140	0
Future Vol, veh/h	0	596	423	74	140	0
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, %	2	2	2	2	2	2
Mvmt Flow	0	648	460	80	152	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	540	0	-	0	1148	500
Stage 1	-	-	-	-	500	-
Stage 2	-	-	-	-	648	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1028	-	-	-	220	571
Stage 1	-	-	-	-	609	-
Stage 2	-	-	-	-	521	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1028	-	-	-	220	571
Mov Cap-2 Maneuver	-	-	-	-	220	-
Stage 1	-	-	-	-	609	-
Stage 2	-	-	-	-	521	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	51.5
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1028	-	-	-	220
HCM Lane V/C Ratio	-	-	-	-	0.692
HCM Control Delay (s)	0	-	-	-	51.5
HCM Lane LOS	A	-	-	-	F
HCM 95th %tile Q(veh)	0	-	-	-	4.4

Lane Group	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Volume (vph)	0	0	0	613	6	0
Future Volume (vph)	0	0	0	613	6	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected					0.950	
Satd. Flow (prot)	0	0	0	1863	1770	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	0	0	1863	1770	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	585			218	69	
Travel Time (s)	16.0			5.9	1.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	666	7	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	666	7	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Yield	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	42.3%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	110	540	116	5	115	0	0	110	89
Future Volume (vph)	0	0	0	110	540	116	5	115	0	0	110	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	16	12	12	12	12	12	11	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.980						0.940	
Flt Protected					0.993			0.998				
Satd. Flow (prot)	0	0	0	0	2054	0	0	1859	0	0	1693	0
Flt Permitted					0.993			0.985				
Satd. Flow (perm)	0	0	0	0	2054	0	0	1835	0	0	1693	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					24						97	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		501			585			144			334	
Travel Time (s)		13.7			16.0			3.9			9.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Parking (#/hr)						30						
Adj. Flow (vph)	0	0	0	120	587	126	5	125	0	0	120	97
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	833	0	0	130	0	0	217	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			12	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	0.85	1.00	1.00	1.00	1.00	1.00	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					6			8			4	
Permitted Phases				6			8					
Detector Phase				6	6		8	8			4	
Switch Phase												
Minimum Initial (s)				5.0	5.0		5.0	5.0			9.0	
Minimum Split (s)				22.5	22.5		22.5	22.5			22.5	
Total Split (s)				22.5	22.5		22.5	22.5			22.5	
Total Split (%)				50.0%	50.0%		50.0%	50.0%			50.0%	
Maximum Green (s)				18.0	18.0		18.0	18.0			18.5	
Yellow Time (s)				3.5	3.5		3.5	3.5			3.0	
All-Red Time (s)				1.0	1.0		1.0	1.0			1.0	
Lost Time Adjust (s)					0.0			0.0			0.0	
Total Lost Time (s)					4.5			4.5			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)				3.0	3.0		3.0	3.0			2.0	
Recall Mode				Max	Max		None	None			None	
Walk Time (s)				7.0	7.0		7.0	7.0				
Flash Dont Walk (s)				11.0	11.0		11.0	11.0				

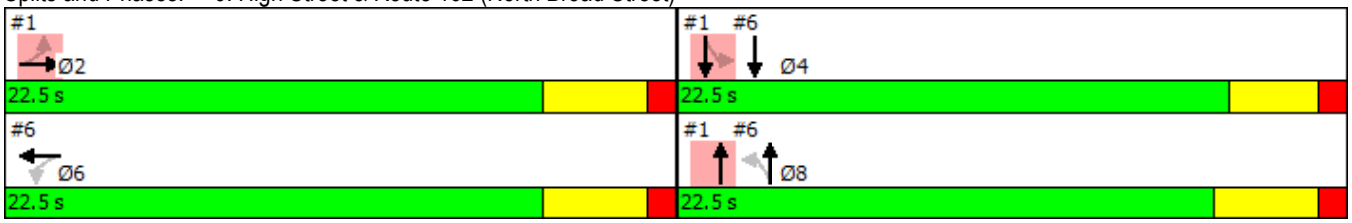
Lane Group	Ø2
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Parking (#/hr)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Turn Type	
Protected Phases	2
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	22.5
Total Split (s)	22.5
Total Split (%)	50%
Maximum Green (s)	18.0
Yellow Time (s)	3.5
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	7.0
Flash Dont Walk (s)	11.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)				0	0		0	0				
Act Effct Green (s)					19.9			10.4			10.9	
Actuated g/C Ratio					0.51			0.26			0.28	
v/c Ratio					0.79			0.27			0.40	
Control Delay					18.0			14.2			8.4	
Queue Delay					2.2			0.2			0.0	
Total Delay					20.2			14.4			8.5	
LOS					C			B			A	
Approach Delay					20.2			14.4			8.5	
Approach LOS					C			B			A	
Queue Length 50th (ft)					108			28			18	
Queue Length 95th (ft)					#373			m67			52	
Internal Link Dist (ft)		421			505			64			254	
Turn Bay Length (ft)												
Base Capacity (vph)					1049			845			853	
Starvation Cap Reductn					0			313			0	
Spillback Cap Reductn					109			0			12	
Storage Cap Reductn					0			0			0	
Reduced v/c Ratio					0.89			0.24			0.26	

Intersection Summary			
Area Type:	Other		
Cycle Length: 45			
Actuated Cycle Length: 39.4			
Natural Cycle: 60			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.79			
Intersection Signal Delay: 17.4		Intersection LOS: B	
Intersection Capacity Utilization 59.9%		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.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: High Street & Route 162 (North Broad Street)



Lane Group	Ø2
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	28	11	10	0	59	6	204	132	40	171	11
Future Volume (vph)	44	28	11	10	0	59	6	204	132	40	171	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	12	12	12	12	12	11	12	12	11	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.982			0.885			0.948			0.993	
Flt Protected		0.974			0.993			0.999			0.991	
Satd. Flow (prot)	0	2019	0	0	1637	0	0	1705	0	0	1772	0
Flt Permitted		0.974			0.993			0.999			0.991	
Satd. Flow (perm)	0	2019	0	0	1637	0	0	1705	0	0	1772	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		85			723			191			210	
Travel Time (s)		2.3			19.7			5.2			5.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	48	30	12	11	0	64	7	222	143	43	186	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	90	0	0	75	0	0	372	0	0	241	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	0.85	1.00	1.00	1.00	1.00	1.00	1.04	1.00	1.00	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 51.5%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	3.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	44	28	11	10	0	59	6	204	132	40	171	11
Future Vol, veh/h	44	28	11	10	0	59	6	204	132	40	171	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	48	30	12	11	0	64	7	222	143	43	186	12

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	618	657	192	607	592	293	198	0	0	365	0	0
Stage 1	279	279	-	307	307	-	-	-	-	-	-	-
Stage 2	339	378	-	300	285	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	402	385	850	408	419	746	1375	-	-	1194	-	-
Stage 1	728	680	-	703	661	-	-	-	-	-	-	-
Stage 2	676	615	-	709	676	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	354	367	850	363	399	746	1375	-	-	1194	-	-
Mov Cap-2 Maneuver	354	367	-	363	399	-	-	-	-	-	-	-
Stage 1	723	652	-	698	656	-	-	-	-	-	-	-
Stage 2	614	611	-	639	648	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	17	11.3	0.1	1.5
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1375	-	-	389	647	1194	-	-
HCM Lane V/C Ratio	0.005	-	-	0.232	0.116	0.036	-	-
HCM Control Delay (s)	7.6	0	-	17	11.3	8.1	0	-
HCM Lane LOS	A	A	-	C	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.9	0.4	0.1	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	17	56	4	231	0	140	425	14
Future Volume (vph)	0	0	0	0	17	56	4	231	0	140	425	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	11	12	12	12	11	11	11
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Frt					0.896						0.996	
Flt Protected								0.999			0.988	
Satd. Flow (prot)	0	0	0	0	1613	0	0	1861	0	0	3367	0
Flt Permitted								0.999			0.988	
Satd. Flow (perm)	0	0	0	0	1613	0	0	1861	0	0	3367	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		370			393			312			107	
Travel Time (s)		10.1			10.7			8.5			2.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	18	61	4	251	0	152	462	15
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	79	0	0	255	0	0	629	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			12			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.04	1.04	1.04	1.00	1.00	1.00	1.04	1.04	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 43.0%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕			↕			↕	
Traffic Vol, veh/h	0	0	0	0	17	56	4	231	0	140	425	14
Future Vol, veh/h	0	0	0	0	17	56	4	231	0	140	425	14
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	18	61	4	251	0	152	462	15

Major/Minor	Minor1			Major1			Major2		
Conflicting Flow All	795	1042	251	477	0	0	251	0	0
Stage 1	260	260	-	-	-	-	-	-	-
Stage 2	535	782	-	-	-	-	-	-	-
Critical Hdwy	6.63	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	5.43	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.83	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.519	4.019	3.319	2.219	-	-	2.219	-	-
Pot Cap-1 Maneuver	340	229	787	1083	-	-	1313	-	-
Stage 1	783	692	-	-	-	-	-	-	-
Stage 2	552	404	-	-	-	-	-	-	-
Platoon blocked, %					-	-		-	-
Mov Cap-1 Maneuver	285	0	787	1083	-	-	1313	-	-
Mov Cap-2 Maneuver	285	0	-	-	-	-	-	-	-
Stage 1	780	0	-	-	-	-	-	-	-
Stage 2	465	0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.1	0.1	2.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1083	-	-	787	1313	-	-
HCM Lane V/C Ratio	0.004	-	-	0.101	0.116	-	-
HCM Control Delay (s)	8.3	0	-	10.1	8.1	0.4	-
HCM Lane LOS	A	A	-	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.4	-	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	194	59	34	257	520	73
Future Volume (vph)	194	59	34	257	520	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	12	12	11	11
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95
Frt	0.969				0.982	
Flt Protected	0.963			0.994		
Satd. Flow (prot)	1854	0	0	1852	3360	0
Flt Permitted	0.963			0.994		
Satd. Flow (perm)	1854	0	0	1852	3360	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	202			107	118	
Travel Time (s)	5.5			2.9	3.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	211	64	37	279	565	79
Shared Lane Traffic (%)						
Lane Group Flow (vph)	275	0	0	316	644	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	14			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.92	0.92	1.00	1.00	1.04	1.04
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 56.5%		ICU Level of Service B	
Analysis Period (min) 15			

Intersection	
Intersection Delay, s/veh	15
Intersection LOS	B

Movement	EBU	EBL	EBR	NBU	NBL	NBT	SBU	SBT	SBR
Lane Configurations									
Traffic Vol, veh/h	0	194	59	0	34	257	0	520	73
Future Vol, veh/h	0	194	59	0	34	257	0	520	73
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	211	64	0	37	279	0	565	79
Number of Lanes	0	1	0	0	0	1	0	2	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	2	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	14.5	14.5	15.4
HCM LOS	B	B	C

Lane	NBLn1	EBLn1	SBLn1	SBLn2
Vol Left, %	12%	77%	0%	0%
Vol Thru, %	88%	0%	100%	70%
Vol Right, %	0%	23%	0%	30%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	291	253	347	246
LT Vol	34	194	0	0
Through Vol	257	0	347	173
RT Vol	0	59	0	73
Lane Flow Rate	316	275	377	268
Geometry Grp	5	2	7	7
Degree of Util (X)	0.505	0.468	0.614	0.421
Departure Headway (Hd)	5.748	6.129	5.869	5.658
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	626	589	614	637
Service Time	3.788	4.172	3.607	3.396
HCM Lane V/C Ratio	0.505	0.467	0.614	0.421
HCM Control Delay	14.5	14.5	17.5	12.5
HCM Lane LOS	B	B	C	B
HCM 95th-tile Q	2.8	2.5	4.2	2.1