

**Meeting Minutes**  
**Hightstown Borough Council**  
**November 11, 2021**  
**6:30 p.m.**

The meeting was called to order by Mayor Quattrone at 6:30 p.m. and he read the Open Public Meetings Act statement which stated, “Adequate notice of this meeting has been given in accordance with the Open Public Meetings Act, pursuant to Public Law 1975, Chapter 231. Said notice was sent to the *Trenton Times* and the *Windsor-Hights Herald*, and is posted on the Borough website.” Do to COVID-19 and self-distancing protocols, this meeting was held remotely through [www.zoom.com](http://www.zoom.com).

The flag salute followed Roll Call.

	<b>PRESENT</b>	<b>ABSENT</b>
<i>Councilmember Susan Bluth</i>	✓	
<i>Councilmember Joseph Cicalese</i>	✓	
<i>Councilmember Cristina Fowler</i>	✓	
<i>Councilmember Joshua Jackson</i>	✓	
<i>Councilmember Steven Misiura</i>	✓	
<i>Councilmember Frederick Montferrat</i>	✓	
<i>Mayor Quattrone</i>	✓	

Also in attendance: Margaret (Peggy) Riggio, Borough Clerk; Dimitri Musing, Borough Administrator and Fred Raffetto, Borough Attorney.

The Flag Salute followed roll call.

**APPROVAL OF AGENDA**

Moved by Councilmember Fowler; Seconded by Councilmember Jackson.

Roll Call Vote: Councilmembers Bluth, Cicalese, Fowler, Jackson, Misiura and Montferrat.

Agenda approved 6-0.

**APPROVAL OF MINUTES**

**September 7, 2021 – Public Session**

Moved by Councilmember Montferrat; Seconded by Councilmember Misiura.

Roll Call Vote: Councilmembers Bluth, Cicalese, Fowler, Jackson, Misiura and Montferrat voted yes.

Minutes approved 6-0.

**September 7, 2021 – Executive Session**

Moved by Councilmember Cicalese; Seconded by Councilmember Fowler.

Roll Call Vote: Councilmembers Bluth, Cicalese, Fowler, Jackson, Misiura and Montferrat voted yes.

Minutes approved 6-0.

## **PRESENTATIONS**

### **Complete Streets – Redevelopment Area Circulation Study**

Bev Asselstine, Complete Streets and Chair of Planning Board informed Council that there will be a hearing at the December Planning Board Meeting looking to add this to the Master Plan. They are looking for input from Council. She gave a background of the project and reviewed the October 25, 2021, draft of the plan (attached hereto and made part thereof; Attachment 1).

Discussion ensued. Some concerns that were brought up by Council were:

- Has North Main Street been looked at. This is a problem area.
  - They did not look at anything north of Bank Street. The lynchpin is the center intersection at Franklin and Main Street
- This looks like the strip mall will lose about 5 parking spaces. There are times when there are no available spaces now.
  - Bev Asselstine will speak with George Chin, Construction/Zoning Official, about the number of spaces needed there.
- What is the pedestrian lead time to cross the street at the light? Does this depend on traffic cycling through or is it a set time?
  - Lead time is about 3-10 seconds. It is triggered by someone pushing the pedestrian button. This can be scheduled also.
- What are the next steps?
  - The report needs to be finalized and adopted into the Master Plan. Complete Streets will engage with the County and State to determine how we can partner with them and move forward with the improvements. Complete Streets will also be looking for funding opportunities.

## **ENGINEERING ITEMS**

### **Improvements to Hausser Avenue, Bennett Place, and Prospect Drive**

Ms. Roberts reviewed her letter to council dated 10/25/2021. She is looking for authorization to move ahead with the project and have the bond increased by \$60,000. The additional fees are for inspection services. This needs to be addressed soon. Funding needs to be in place before the contract is awarded.

### **Resolution 2021-168 Awarding a Contract for Improvements to Railroad Avenue, Dey Street, Center Street and South Academy Street – S. Brothers, Inc.**

Moved by Councilmember Cicalese; Seconded by Councilmember Jackson.

Roll Call Vote: Councilmembers Bluth, Cicalese, Fowler, Jackson, Misiura and Montferrat voted yes.

Resolution adopted 6-0.

Resolution 2021-168

*BOROUGH OF HIGHTSTOWN  
COUNTY OF MERCER  
STATE OF NEW JERSEY*

**AWARDING A CONTRACT FOR IMPROVEMENTS TO RAILROAD AVENUE, DEY STREET, CENTER STREET AND SOUTH ACADEMY STREET – S. BROTHERS, INC.**

**WHEREAS**, six (6) bids were received on October 28, 2021, for Improvements to Railroad Avenue, Dey Street, Center Street and South Academy Street; and

**WHEREAS**, the bids have been reviewed by the Borough Engineer and it is the Engineer's recommendation that a contract for the for Improvements to Railroad Avenue, Dey Street, Center Street and South Academy Street; be awarded to the low bidder S. Brothers, Inc., of South River, New Jersey at the price of \$573,798.00; and

**WHEREAS**, this project is partially funded by the New Jersey Department of Transportation Municipal Aid Grant program, the award of this contract is conditional upon approval by the New Jersey Department of Transportation; and

**WHEREAS**, the execution of this contract is subject to the review and approval of the Borough Attorney to assure that the bid submitted by S. Brothers, Inc. is in order with respect to legal compliance; and,

**WHEREAS**, the CFO has certified that funds are available for this purpose.

**NOW, THEREFORE, BE IT RESOLVED** by the Mayor and Council of the Borough of Hightstown that the contract for the for Improvements to Railroad Avenue, Dey Street, Center Street and South Academy Street, be awarded to the low bidder, S. Brothers, Inc., of South River, New Jersey at the price of \$573,798.00.

**PUBLIC COMMENT**

Mayor Quattrone opened the public comment period and the following individuals spoke:

**Jeff Epstein, 421 North Main Street** - There has been 2 truck accidents in town since the last meeting. There needs to be a solution to this ongoing issue. Truck traffic is only getting worse with all the new warehouses in the area.

**Eugene Sarafin, 628 South Main Street** - North Main Street and South Main Street are both the County Highway. He has called Dan Benson's office about the truck traffic at least once a week. All of our community needs to come together on this. He then spoke against the republican party.

**Billy Bullock, 5 Pershing Avenue** - Spoke about the noise ordinance 3-7.1 and 3-7.2. There is a resident on Grape Run playing music from 12:00 - 3:00 and after 10:00 p.m. He has asked that it be turned down. The music can be heard on South Street and Taylor Avenue. The neighbors do not want to approach the resident. Is this permitted during the day? Would like clarification.

Mayor Quattrone will look into this and speak with Chief Gendron.

There being further comments, Mayor Quattrone closed the public comment period.

**RESOLUTIONS**

**Resolution 2021-169 Authorizing Payment of Bills**

Moved by Councilmember Montferrat; Seconded by Councilmember Fowler.

Roll Call Vote: Councilmembers Bluth, Cicalese, Fowler, Jackson, Misiura and Montferrat voted yes.

Resolution adopted 6-0.

Resolution 2021-169

*BOROUGH OF HIGHTSTOWN  
COUNTY OF MERCER  
STATE OF NEW JERSEY*

**AUTHORIZING PAYMENT OF BILLS**

**WHEREAS**, certain bills are due and payable as per itemized claims listed on the following schedules, which are made a part of the minutes of this meeting as a supplemental record;

**NOW, THEREFORE, BE IT RESOLVED** by the Mayor and Council of the Borough of Hightstown that the bills be paid on audit and approval of the Borough Administrator, the appropriate Department Head and the Treasurer in the amount of \$1,690,010.97 from the following accounts:

Current		\$1,031,514.88
W/S Operating		48,472.89
General Capital		56,074.04
Water/Sewer Capital		548,638.66
Grant		0.00
Trust		3,100.00
Unemployment Trust		0.00
Animal Control		0.00
Law Enforcement Trust		0.00
Tax Lien Trust		0.00
Public Defender Trust		0.00
Escrow		<u>2,210.50</u>
Total		<u>\$1,690,010.97</u>

**Resolution 2021-170 Authorizing an Amendment to Resolution 2020-233 Awarding a Contract for Zeta Lyte 2800 CH Cationic Polyelectrolyte – Custom Environmental Technology**

Moved by Councilmember Fowler; Seconded by Councilmember Jackson.

Roll Call Vote: Councilmembers Bluth, Cicalese, Fowler, Jackson, Misiura and Montferrat voted yes.

Resolution adopted 6-0.

Resolution 2021-170

*BOROUGH OF HIGHTSTOWN  
COUNTY OF MERCER  
STATE OF NEW JERSEY*

**AUTHORIZING AN AMENDMENT TO RESOLUTION 2020-233 AWARDING A  
CONTRACT FOR ZETA LYTE 2800 CH CATIONIC POLYELECTROLYTE -  
CUSTOM ENVIRONMENTAL TECHNOLOGY**

**WHEREAS**, on December 7, 2020, Borough Council adopted Resolution 2020-233 awarding a contract to Custom Environmental Technologies for Zeta Lyte 2800 CH Cationic Polyelectrolyte; and

**WHEREAS**, the total contract amount awarded was \$40,227.00; and

**WHEREAS**, it has been found that additional funds in the amount of \$1,600.00 will be necessary to complete the contract through December 31, 2021; and,

**WHEREAS**, the CFO has certified funds are available for this expenditure.

**NOW, THEREFORE, BE IT RESOLVED** by the Mayor and Council of the Borough of Hightstown that the agreement with Custom Environmental Technology of Collegeville, PA be amended to not exceed \$41,827.00.

**NEW BUSINESS**

**Subcommittee – Review RFPs**

Requests for proposals are being received for Labor Counsel and Affordable Housing Attorney. Mayor Quattrone named the following subcommittees to review the proposals once they are received.

Labor Counsel - Mayor Quattrone and Council President Bluth

Affordable Housing Attorney - Councilmember Misiura will work with Planning Board

**Truck Traffic (added to agenda by Mayor Quattrone)**

Councilmember Montferrat - truck traffic is a definite problem in the Borough. It would be helpful to do an investigation of where the trucks are coming from and where they are going. Maybe a taskforce or subcommittee. Would let the residents to be involved

## **OLD BUSINESS**

### **Recodification of Borough Code**

Borough Clerk, Peggy Riggio, reviewed the proposal received for recodification. CFO, George Lang stated that there is money in the budget for this. Council agreed to move forward this this using funding other than the ARP funds.

## **SUBCOMMITTEE REPORTS**

### **Bank Street Redevelopment**

Councilmember Misiura stated that there was an advertisement in the newspaper regarding a foreclosure action. PRC is having an issue with one of their partners. This is part of the process to have 100% control of the property. Once this is complete, they will be able to move forward.

## **MAYOR/COUNCIL/ADMINISTRATIVE REPORTS**

### **Councilmember Fowler**

Environmental Commission - Some of the trees planted on North Main and South Main Street have died. They will be replaced at no cost to the Borough.

Downtown Hightstown - It was a busy weekend downtown with many events going on. When all groups and committees come together it lends to a terrific weekend long event. Looking forward to more of this. Hop and Shop is scheduled for November 19th. 16 Businesses will have their windows painted by students from Hightstown High School and The Peddie School. Residents will be able to vote for a winner.

Hightstown High School's varsity football team beat West Windsor/Plainsboro South this weekend bringing the Mayor's Cup back to Hightstown.

Councilmember Cicalese - Had a great time in Hightstown this weekend.

Councilmember Montferrat - Fantastic weekend in Hightstown. BeTheLight Foundation is very special. Great to see the town so vibrant.

### **Councilmember Misiura**

Municipal Facilities - Met with the Musial Group on the 22nd. Chief Gendron commented that he needed an extra room for interactions with the public. Council received an update in Mr. Musing's weekly update. We will need to authorize the Musial group to begin work again. This was put on hold during the Robbinsville negotiations.

First Aid - Still having issues with their ambulance.

Halloween is back. When Halloween is back, Hightstown is back!

### **Councilmember Jackson**

HPC - Had an interesting meeting with the County on the Peddie Bridge (Ward Street Bridge). Discussed the history of the bridge. The County will be holding a zoom presentation on 11/8 regarding the renovations of the bridge.

Halloween was great!

**Council President Bluth**

Cultural Arts Commission - Light up the Lake - Incredible day all around. BeTheLight hosted a pumpkin carving. Teachers from the schools came to help. The Lake looked beautiful all lit. Thanked Ken Lewis and Public Works for setting up tables and getting the electric set up.

**Peggy Riggio, Borough Clerk**

RFPs - Requests for Proposals for Labor Counsel and Affordable Housing Attorney will be received in the Clerk's office on December 1st.

Elections - Polls open tomorrow from 6:00 a.m. - 8:00 p.m. All districts vote at the Firehouse. Mail in ballots can be placed in the drop box located outside the Firehouse until 8:00 p.m. tomorrow evening.

**Dimitri Musing, Borough Administrator**

It was a wonderful weekend in the Borough. It feels like there was no pandemic.

**Mayor Quattrone**

Very happy we decided to do Halloween again. The town was happy and everyone was joyful. The Police did an outstanding job. He received many compliments about the town. All the boards and commissions are doing an outstanding job.

**EXECUTIVE SESSION**

**Resolution 2021-171 Authorizing a Meeting that Excludes the Public**

Moved by Councilmember Montferrat; Seconded by Councilmember Jackson.

Roll Call Vote: Councilmembers Bluth, Cicalese, Fowler, Jackson, Misiura and Montferrat voted yes.

Resolution adopted 6-0.

Resolution 2021-171

*BOROUGH OF HIGHTSTOWN  
COUNTY OF MERCER  
STATE OF NEW JERSEY*

**AUTHORIZING A MEETING WHICH EXCLUDES THE PUBLIC**

**BE IT RESOLVED** by the Mayor and Council of the Borough of Hightstown that this body will hold a meeting on November 1, 2021, via [www.zoom.com](http://www.zoom.com), that will be limited only to consideration of an item or items with respect to

which the public may be excluded pursuant to section 7b of the Open Public Meetings Act.

The general nature of the subject or subjects to be discussed:

Attorney Client Privilege

Contract Negotiations/Collective Bargaining Agreements

Stated as precisely as presently possible the following is the time when and the circumstances under which the discussion conducted at said meeting can be disclosed to the public February 1, 2022, or when the need for confidentiality no longer exists.

The public is excluded from said meeting, and further notice is dispensed with, all in accordance with sections 8 and 4a of the Open Public Meetings Act.

Council President Bluth moved to adjourn to executive session at 7:56 p.m.; Seconded by Councilmember Fowler. All ayes.

Council returned to public session at 8:35 p.m.

**ADJOURNMENT**

Councilmember Fowler moved to adjourn at 8:36 p.m.; Councilmember Cicalese seconded. All ayes.

Respectfully Submitted,



Margaret M. Riggio  
Borough Clerk

Approved by Hightstown Borough Council: February 22, 2022



DRAFT

HIGHTSTOWN  
REDEVELOPMENT AREA  
CIRCULATION STUDY

Submitted: October 25, 2021

Prepared for:  
Borough of Hightstown

Prepared by:  
NV5, Inc.

In association with  
Bright View Engineering

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DRAFT

## Introduction

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The Borough of Hightstown received funds from the Delaware Valley Regional Planning Commission (DVRPC) to conduct a Redevelopment Area Circulation Study to examine the change in circulation arising from the planned redevelopment of the the vacant Rug Mill in the downtown. The NV5/Brightview project team was tasked with reviewing the series of studies and plans that envision an active downtown with planned redevelopment and identify potential opportunities and constraints associated with circulation in the downtown area because of the planned improvements. Reviewing alternatives for the intersection of North Main Street and Franklin Street, including feasibility and assessment of a roundabout at this intersection instead of the existing traffic signal was the focus of the study, and set the groundwork for all the traffic analysis throughout the study area.

Major work tasks included:

1. Review Existing Plans and Traffic Projections
2. Traffic Count Data Collection (to complete the study area base information)
3. Traffic Model Development
4. Safety Enhancement Concept Development
5. Traffic Modeling for potential Build Scenarios
6. Community Input

NV5 worked with the Hightstown Complete Streets Committee and developed recommendations for enhancing pedestrian safety and access while maintaining motor vehicle circulation throughout the Redevelopment Area. This includes presentation to and coordination with the Hightstown Planning Board.

The study area for this project included the streets and intersections adjacent to all three phases of the redevelopment area as shown on Figure 1 below. The following intersections were included in the assessment:

1. N. Main Street and Franklin Street
2. N. Main Street and Stockton Street
3. N. Main Street and Bank Street
4. Franklin Street and Maxwell Avenue
5. Stockton Street and Academy Street



Figure 1: Study Area Map

## Analysis of Existing Plans and Traffic Projections

NV5 staff reviewed the redevelopment plans for the Lakefront Plan and the Hightstown Mobility Master Plan to plan field work and identify site opportunities and constraints. The review of the report suggests that the increased parking and traffic growth associated with these projects appears to conform to industry standards and be consistent with the vision described by the Complete Streets Committee during project coordination meetings. NV5 collected additional data for the intersection of Franklin Street at Maxwell Avenue to develop the traffic models as the recent redevelopment studies did not include existing traffic counts at that intersection.

## Community Outreach

The NV5 Team participated in monthly Complete Streets Committee meetings throughout the project. The plan to facilitate educational community outreach activities was modified due in part to the COVID-19 restrictions and reinforced once the roundabout concept was removed from consideration allowing the labor to be targeted to the concepts developed and analyzed. The team also presented to the Planning Board and is currently scheduled to brief the Town Council on the project findings.

## Traffic Count Data Collection

NV5 collected turning movement counts using a video traffic data collection system at the intersection of Franklin Street at Maxwell Avenue to augment the data provided from other recent studies.

**Appendix A – Traffic Data** includes a summary of all traffic data collected.

## Traffic Model Development

The NV5 Team built a traffic model using Synchro, version 11 to quantify existing operational conditions for the weekday morning, weekday evening and Saturday mid-day peak hours and set a base line for comparing future traffic and potential safety enhancement concept analysis. Using the existing conditions model as a base condition, The NV5 Team surcharged traffic from known planned developments in the area onto the existing conditions model to establish the anticipated future conditions for each of the study area intersections. The resulting 2022 projected future volumes are shown in Figure 2 below.

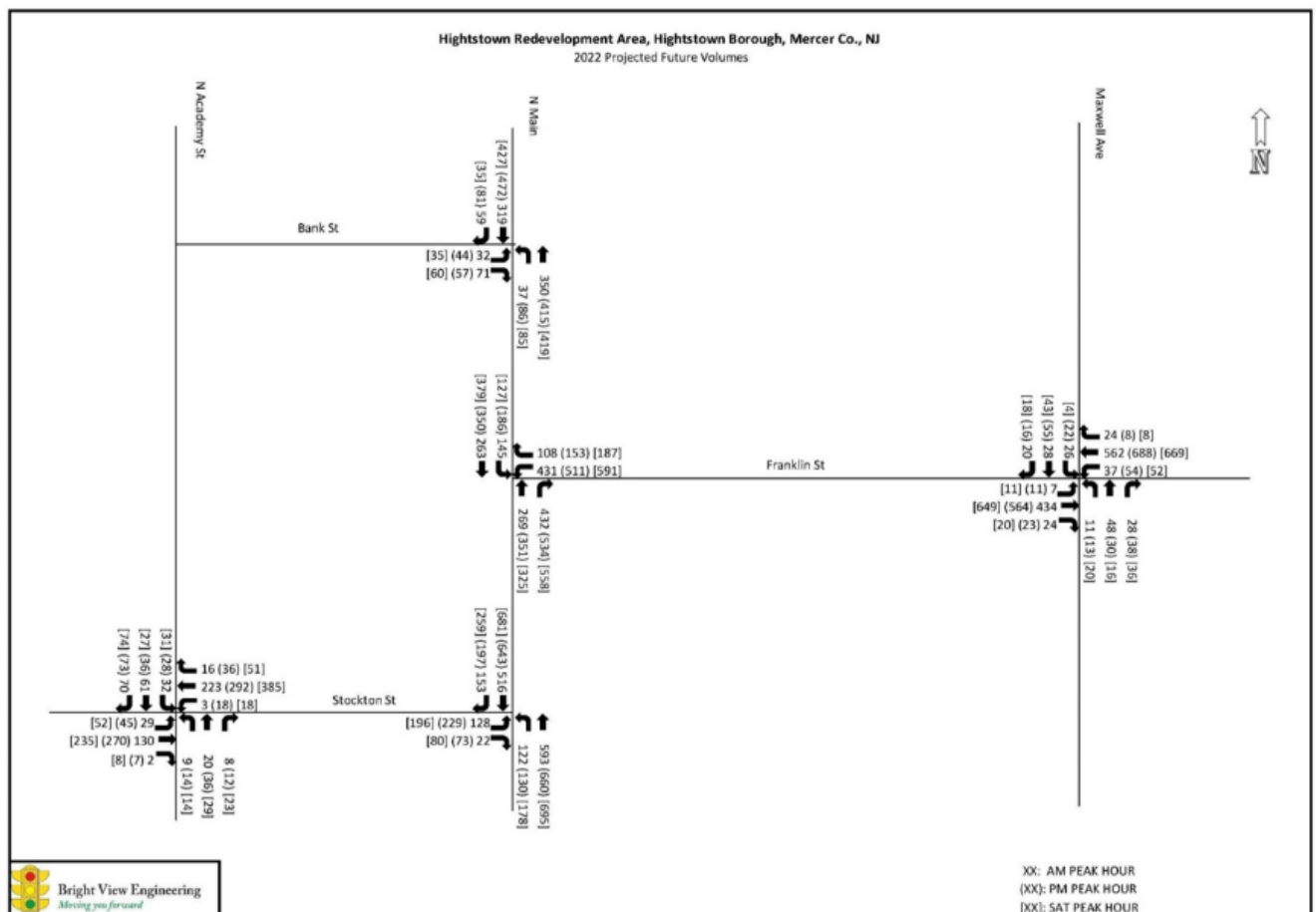


Figure 2: Traffic Model

## Safety Enhancement Concept Development

### Initial Screening

Central to the project is the identification of improvements at the intersection of North Main Street and Franklin Street. Previous efforts by the Borough identified a roundabout as a potential alternative to the existing traffic signal at the intersection. Based on the team’s initial screening efforts focused on determining if a roundabout could effectively process the needed traffic volumes at the intersection without adversely affecting the surrounding area. Since roundabouts work most effectively with clear downstream conditions, one of the key measures in this analysis was to determine vehicle queues from adjacent intersections would queue back into the proposed roundabout.



Figure 3: Roundabout Concept



To that end, the NV5 team reviewed the expected operation of the roadway network with the introduction of a modern one lane roundabout at the intersection of North Main Street and Franklin Street. This included an estimation of the vehicle queues from the intersections surrounding the roundabout.

This screening produced several key findings that directed the intersection configuration of all safety concepts developed. The results of the queuing analysis showed that there is a high likelihood that the southbound traffic along N. Main Street approaching the Stockton Street intersection would likely backup into and through the intersection at Franklin Street. With a traditional signalized intersection, this can be mitigated with 'DO NOT BLOCK THE BOX' type treatments or roadway widening where possible. If a roundabout intersection configuration were considered, this downstream queue backing into the intersection could stop all circulating traffic and cause gridlock. This was particularly critical at the intersection of North Main Street and Franklin Street due to the firehouse located at the intersection. Traffic queued at the roundabout would be difficult to clear and could impede emergency response times. Figure 3 below shows the initial roundabout concept considered, which provides the minimum acceptable lane geometries while attempting to minimize impacts.

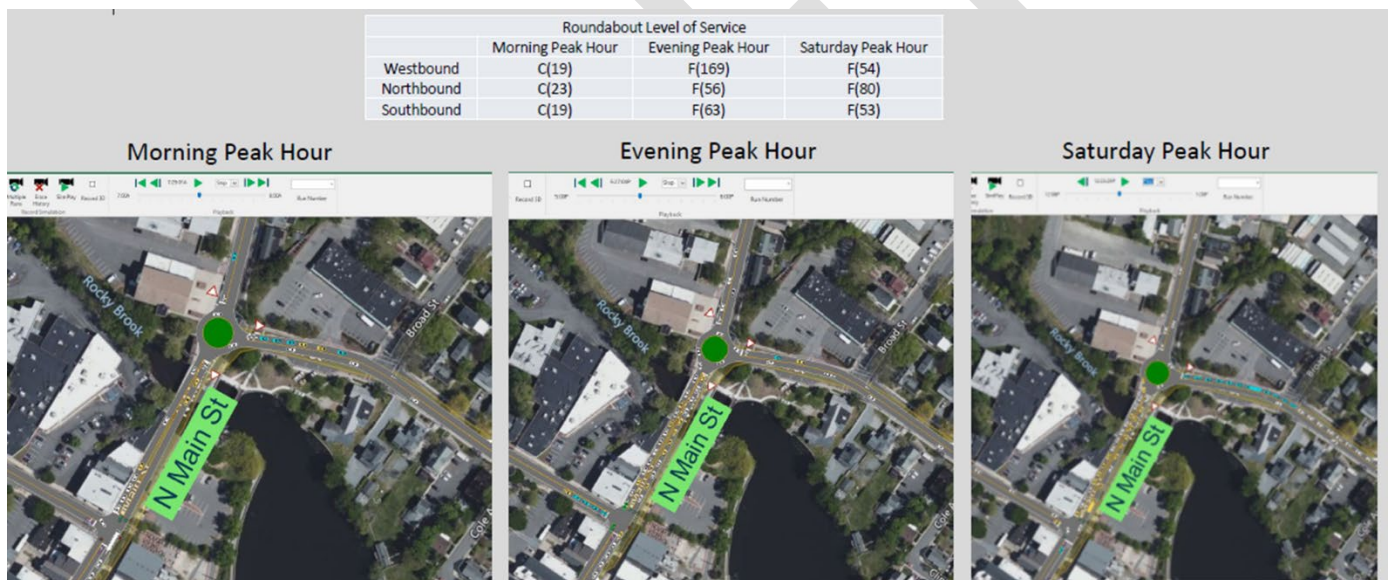


Figure 4: Roundabout Level of Service

The traffic simulation modeling indicated a fatal flow in the roundabout scenario, requiring it to be removed from future considerations. It was recommended that safety enhancements to the traditional traffic signal configuration be developed in lieu of the roundabout at the intersection.

## Safety Enhancement Concepts

Seven scenarios were developed to model potential circulation and safety enhancement throughout the study area, these are summarized in Table 1, below:

- M1 – Add a Right Turn Lane along Franklin St approach to N. Main St & Update Signal Timing
- M2 – Add a Dedicated Pedestrian Signal Phase @ Franklin St and N. Main St & Update Signal Timing
- M3 – Add a Right Turn Lane along Franklin St approach to N. Main St, a Dedicated Pedestrian Signal Phase & Update Signal Timing
- M4 – Add a Lead Pedestrian Interval across Franklin St approach to N. Main St
- M5 – Add a Turn Lane AND Lead Pedestrian Interval across Franklin St approach to N. Main St & Update Signal Timing
- M6 – Add a Lead Pedestrian Interval at Stockton St & N. Main St & Update Signal Timing
- M7 – Add a 4-Way STOP at Stockton St & Academy St

Table 1: Traffic Model Scenarios

	Intersection	Right Turn Lane	Update Signal Timing	Dedicated Pedestrian Signal Phase	Lead Pedestrian Interval (LPI)	4-Way Stop
Model 1(M1)	N. Main St. & Franklin St.	●	●			
Model 2(M2)	N. Main St. & Franklin St.		●	●		
Model 3(M3)	N. Main St. & Franklin St.	●	●	●		
Model 4(M4)	N. Main St. & Franklin St.				●	
Model 5(M5)	N. Main St. & Franklin St.	●	●		●	
Model 6(M6)	Stockton St. & N. Main St.		●		●	
Model 7(M7)	Academy St. & Stockton St.					●



## Traffic Modeling Scenarios

### Traffic Modeling Scenario M1

The M1 traffic model is based on redesigning/reconfiguring the intersection of North Main Street and Franklin Street by adding a Right Turn Lane along the westbound Franklin St approach to N. Main St and updating the traffic signal timing accordingly. Table 2, below, compares the anticipated future intersection operation without any changes to the proposed mitigation measures.

Table 2: Traffic Model 1 Level of Service

Intersection	FBAM		FBPM		FBSA		FBAM-M1 WB L+R		FBPM-M1 WB L+R		FBSA-M1 WB L+R	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
<b>N Main St &amp; Franklin St</b>												
WBLR	D	42.2	D	51.2	D	43.6						
WBL							D	44.8	D	45.3	D	43.7
WBR							D	25.2	C	22.6	C	20.2
NBT	C	23.3	D	36	D	38.5	B	17.9	C	25.5	C	25.3
NBR	D	37.2	F	198.1	F	275.5	A	6	A	7.9	A	6.5
SBL	E	56.8	E	66	F	122.7	D	46.6	D	45.1	E	56.5
SBT	B	12.5	B	17.8	C	24.8	A	8.8	B	12.2	B	15.4



Figure 5: Traffic Model 1

As Table 2 indicates, the addition of the westbound right turn lane in conjunction with traffic signal timing and phasing improvements results in significantly improved levels of service for vehicles. Pedestrian mobility, however, is not improved, as pedestrians in this scenario are required to cross concurrent with vehicle movements. The addition of the westbound right turn also increases pedestrian crossing time for the westbound approach.

## Traffic Modeling Scenario M2

The M2 traffic model is based on redesigning/reconfiguring the intersection by adding a Dedicated Pedestrian Signal Phase at Franklin Street and N. Main Street and updating the traffic signal timing / phasing.

Table 3: Traffic Model 2 Level of Service

Intersection	FBAM		FBPM		FBSA		FBAM-M2 PED PHASE		FBPM-M2 PED PHASE		FBSA-M2 PED PHASE	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
<b>N Main St &amp; Franklin St</b>												
WBLR	D	42.2	D	51.2	D	43.6	D	35.5	E	60.4	E	78.6
WBL												
WBR												
NBT	C	23.3	D	36	D	38.5	D	36.2	E	76.8	E	70
NBR	D	37.2	F	198.1	F	275.5	A	2.4	A	2.4	A	3.6
SBL	E	56.8	E	66	F	122.7	D	37.5	D	39.2	D	37.2
SBT	B	12.5	B	17.8	C	24.8	B	14.2	B	17.5	B	19.6



Figure 6: Traffic Model 2

As Table 3 indicates, revisions to the traffic signal timing improves vehicular flow and results in improved levels of service for vehicles. The dedicated pedestrian phase minimizes the conflicts between pedestrians and vehicles, improving pedestrian connectivity. It must be noted that while the timing has been balanced to eliminate any level of service 'F' conditions, very little capacity remains in this scenario for future increases in traffic volumes.

## Traffic Modeling Scenario M3

The M3 traffic model is based on redesigning/reconfiguring the intersection by adding a Right Turn Lane along Franklin Street approach to N. Main Street, a Dedicated Pedestrian Signal Phase at Franklin Street and N. Main Street and updating the traffic signal timing.

Intersection	FBAM		FBPM		FBSA		FBAM-M3 PED PHASE, WB L+R		FBPM-M3 PED PHASE, WB L+R		FBSA-M3 PED PHASE, WB L+R	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
<b>N Main St &amp; Franklin St</b>												
WBLR	D	42.2	D	51.2	D	43.6						
WBL							C	31.4	D	49.1	D	40.8
WBR							B	17.5	C	22.1	B	17.3
NBT	C	23.3	D	36	D	38.5	C	30.5	D	38.9	D	41
NBR	D	37.2	F	198.1	F	275.5	A	2.4	A	2.4	A	3.5
SBL	E	56.8	E	66	F	122.7	D	37.5	D	39.2	D	37.2
SBT	B	12.5	B	17.8	C	24.8	B	12.2	B	12.9	B	16.3

Table 4: Traffic Model 4



Figure 7: Traffic Model 3

As once could expect, Table 4 shows a hybrid result compared to scenarios M1 & M2, with improvements to both traffic flow and the addition of a dedicated pedestrian phase to improve pedestrian connectivity.



## Traffic Modeling Scenario M4

The M4 traffic model is based on redesigning/reconfiguring the intersection by adding a Lead Pedestrian Interval across Franklin Street approach to N. Main Street.

Intersection	FBAM		FBPM		FBSA		FBAM-M4 LPI FRANKLIN ST		FBPM-M4 LPI FRANKLIN ST		FBSA-M4 LPI FRANKLIN ST	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
<b>N Main St &amp; Franklin St</b>												
WBLR	D	42.2	D	51.2	D	43.6	D	43.3	E	60.4	E	68.3
NBT	C	23.3	D	36	D	38.5	C	32.3	D	53	D	51
NBR	D	37.2	F	198.1	F	275.5	A	2.7	A	5.4	A	4.2
SBL	E	56.8	E	66	F	122.7	D	46	D	46.7	D	49.7
SBT	B	12.5	B	17.8	C	24.8	B	14.7	B	17.5	C	22.5
<b>Maxwell St &amp; Franklin St</b>												
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay

Table 5: Traffic Model 4 Level of Service



Figure 8: Traffic Model 4

The lead pedestrian interval (LPI) consists of providing a comparatively short (3-5 second) head start for pedestrians prior to vehicles receiving a green light. While the timing changes proposed do improve vehicular circulation and the LPI does improve pedestrian movements, pedestrians and vehicles remain in conflict with each other moving through the intersection.

## Traffic Modeling Scenario M5

The M5 traffic model is based on redesigning/reconfiguring the intersection by adding a Turn Lane and a Lead Pedestrian Interval across Franklin Street approach to N. Main Street and updating the traffic signal timing.

Intersection	FBAM		FBPM		FBSA		FBAM-M5 LPI FRANKLIN WB L+R		FBPM-M5 LPI FRANKLIN WB L+R		FBSA-M5 LPI FRANKLIN WB L+R	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
<b>N Main St &amp; Franklin St</b>												
WBLR	D	42.2	D	51.2	D	43.6						
WBL							D	37.1	D	38.2	D	43.9
WBR							C	21.4	C	20.8	C	21.1
NBT	C	23.3	D	36	D	38.5	C	28.5	D	41.2	D	37.2
NBR	D	37.2	F	198.1	F	275.5	A	2.6	A	5.1	A	3.9
SBL	E	56.8	E	66	F	122.7	D	46	D	46	D	46
SBT	B	12.5	B	17.8	C	24.8	B	12.7	B	15.6	B	17.9

Table 6: Traffic Model 5 Level of Service



Figure 9: Traffic Model 5

Scenario M5 includes both the LPI and the westbound approach widening. Table 6 shows, this results in an improvement in vehicular levels of service but still has similar pedestrian concerns as Scenario M4 since pedestrians and vehicles are still required to traverse the intersection concurrently.

## Traffic Modeling Scenario M6

The M6 traffic model is based on redesigning/reconfiguring the Stockton Street and N. Main Street intersection by adding a Lead Pedestrian Interval and updating the traffic signal timing.

Intersection	FBAM		FBPM		FBSA		FBAM-M6 LPI STOCKTON		FBPM-M6 LPI STOCKTON		FBSA-M6 LPI STOCKTON	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
<b>N Main St &amp; Stockton St</b>												
EBLR	D	42.4	E	76.3	E	61.4	D	40.6	E	64.3	E	56.7
NBL	A	7	B	19.8	C	31.4	A	5.8	C	26.6	C	27.4
NBT	A	4.7	A	9	A	5	A	7.4	B	10.5	A	5.5
SBTR	B	11.8	C	28.5	D	48.8	C	21.1	F	81.1	F	84.4

Figure 10: Traffic Model 6



Table 7: Traffic Model 6 Level of Service

This alternative evaluates the intersection of North Main Street and Stockton Street with the addition of a Lead Pedestrian Interval. This results in a degradation in vehicular levels of service as time during the traffic signal cycle is diverted from vehicles to pedestrians.



## Traffic Modeling Scenario M7

The M7 traffic model is based on adding a 4-way stop at Stockton Street and Academy Street intersection.

Average and Delay Percentile Queue Lengths (ft)												
Intersection	FBAM		FBPM		FBSA		FBAM-M7 4WAY ACAD &STOCKTON		FBPM-M7 4WAY ACAD &STOCKTON		FBSA-M7 4WAY ACAD &STOCKTON	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
<b>Academy St &amp; Stockton St</b>												
EBLTR	A	1.4	A	1.1	A	1.5	A	9.4	B	13.5	B	13.3
WBLTR	A	0.1	A	0.4	A	0.3	B	10.2	B	13.9	C	19.2
NBLTR	B	13.2	C	20.5	C	21	A	8.6	A	9.9	B	10.2
SBLTR	B	14.3	C	19.1	C	22.3	A	9.4	B	10.5	B	10.8

Table 8: Traffic Model 7 Level of Service



Figure 11: Traffic Model 7

As Table 8 indicates, the intersection is anticipated to operate at acceptable Levels of Service with an all-way stop in place. It is important to note, however, that prior to implementing an all-way stop at this intersection, a formal all-way stop analysis should be prepared for Mercer County review and approval.

## Conclusions/Next Steps

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The NV5 team with input from the Complete Street Committee recommends that Hightstown Borough should consider implementing the widening of Franklin Street at North Main Street to provide a dedicated right turn lane along with signal timing and phasing improvements. This reconfiguration will provide additional intersection capacity which will allow the introduction of an additional crosswalk across North Main Street on the south side of Franklin Street and implementation of a dedicated pedestrian phase, which will improve pedestrian safety and connectivity. While the team recognizes there is a significant cost to implementing this improvement, this improvement maintains the historic areas south of the intersection and minimizes impacts to the surrounding areas. Additional improvements such as timing changes at the intersection of North Main Street and Stockton Street and potentially adding a four way stop at Stockton Street and Academy Street will also help to improve pedestrian connectivity and balance the needs of pedestrian, bicycle, and vehicle users alike.

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## Appendices

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Appendix A – Traffic Data (Level of Service, Delay and Queue)

Appendix B – Concept Plans

Appendix C – Cost Estimate

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## Appendix A – Traffic Data (Level of Service, Delay and Queue) (separate attachment)

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## Appendix B – Concept Plans

Concept 1: Maintain Existing Splitter Island

Concept 2: All Pedestrian Crossings Provided (1)

Concept 3: All Pedestrian Crossings Provided (2)

Concept 4: Modern Roundabout

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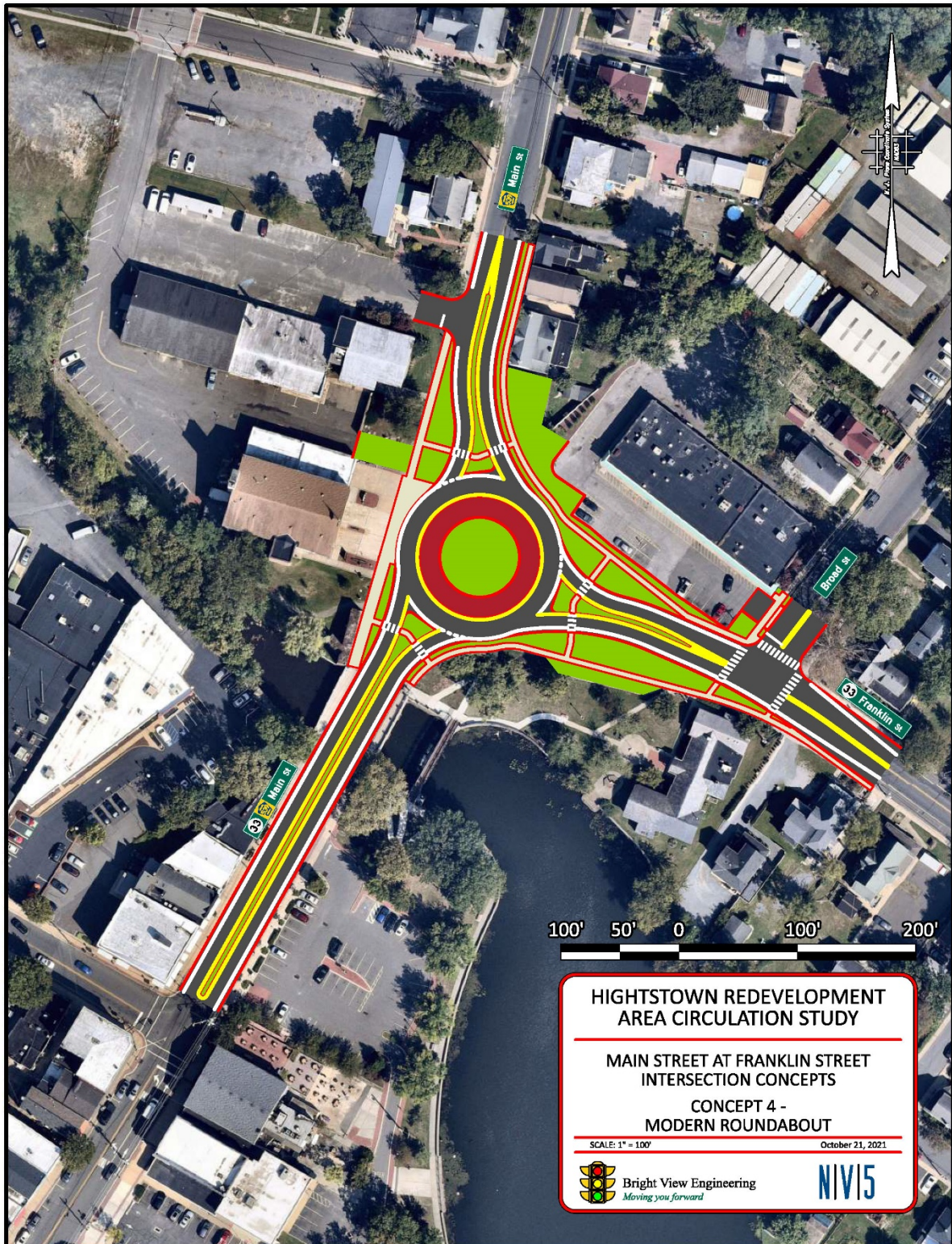












## Appendix C – Cost Estimate

Franklin-Main Order of Magnitude Cost Estimate				
Major Item	Unit	Unit Cost	Quantity	Item Cost
Full Depth Pavement	SY	\$ 70.00	190	\$ 13,300.00
2" Surface Course				
6" Base Course				
8" Dense Aggregate Base Course				
Milling & Resurfacing	SY	\$ 30.00	3,483	\$ 104,490.00
Milling 3" or Less				
2" HMA Surface Course				
Variable HMA Intermediate Course (assume 2.5")				
9"x16" Concrete Vertical Curb	LF	\$ 40.00	820	\$ 32,800.00
Brick Sidewalk	SY	\$ 100.00	34	\$ 3,400.00
Concrete Sidewalk, 4" Thick	SY	\$ 75.00	300	\$ 22,500.00
HMA Driveway	SY	\$ 30.00	-	\$ -
Concrete Driveway	SY	\$ 110.00	86	\$ 9,460.00
Roadway Drainage (per Roadway CL length)	LF	\$ 150.00	160	\$ 24,000.00
Landscape Wall	LF	\$ 250.00	-	\$ -
Topsoil/Seeding/Mulching	SY	\$ 40.00	377	\$ 15,080.00
New Traffic Signal	LS	\$ 250,000.00	1	\$ 250,000.00
Foundations, Poles, Mast Arms, Signs, Conduit,				
Junction Boxes, Signal Heads, Controller, Wiring,				
and Pedestrian Push Buttons				
Subtotal Estimated Cost:				\$ 475,030.00
Non-Quantified Construction Costs:	Percent of Subtotal Costs:			
Stormwater Management	N/A			N/A
Maintenance and Protection of Traffic	7%			\$ 33,252.10
Lighting, Traffic Striping, Delineators, & Signs	3%			\$ 14,250.90
ROW Impacts (1750 SF fee taking, 4 parking spaces)				\$ 75,000.00
Utility Relocation (Based on anticipated utility impacts and relocations)				\$ 250,000.00
Total Estimated Cost:				\$ 847,533.00

USE FOR Franklin-Main: \$ 850,000.00

