

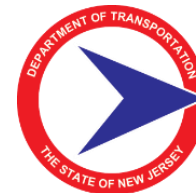
# Intersections Improvements Along Main Street (CR 531) from Talmadge Avenue to Brunswick Avenue

Local Safety Program

Local Safety Engineering Assistance Program

Middlesex County  
Borough of Metuchen, NJ

Public Information Center  
October 7, 2020



# Agenda

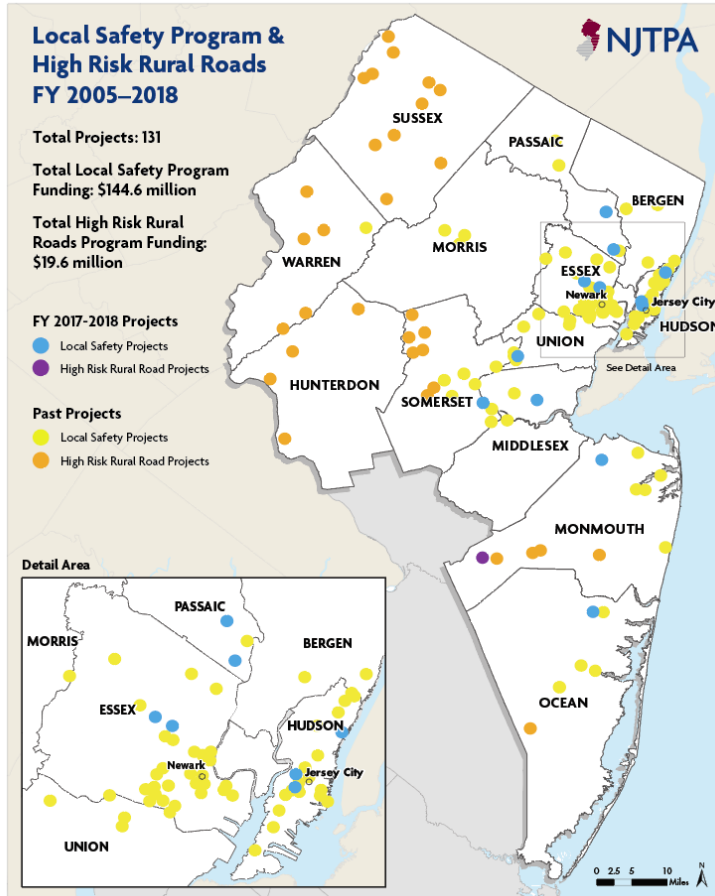
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- Welcome and Introductions
- Project Funding
- Project Location
- Existing Conditions and Deficiencies
- Summary of Proposed Improvements
- Next Steps & Comments



# North Jersey Transportation Planning Authority (NJTPA)

## The Metropolitan Planning Organization for Northern New Jersey



### Local Safety and High-Risk Rural Roads Programs

- Over \$145 million in funding for safety improvements since 2004 on County and Local Roadways in urban, suburban, and rural communities

### Highway Safety Improvement Program (HSIP)

- Emphasizes a data-driven, strategic approach to improving highway safety

### Funding Source

- Federal Transportation Funding administered through the NJTPA

### Network Screening

- Identifies locations experiencing:
- High crash frequencies
- Severe crash injuries
- Specific crash types such as right-angle or roadway departures

### Community Outreach

- Provides the public, local stakeholders and officials with an opportunity to provide comments and ask questions

# Main Street from Talmadge Avenue to Brunswick Avenue

Total length = 1.1 miles

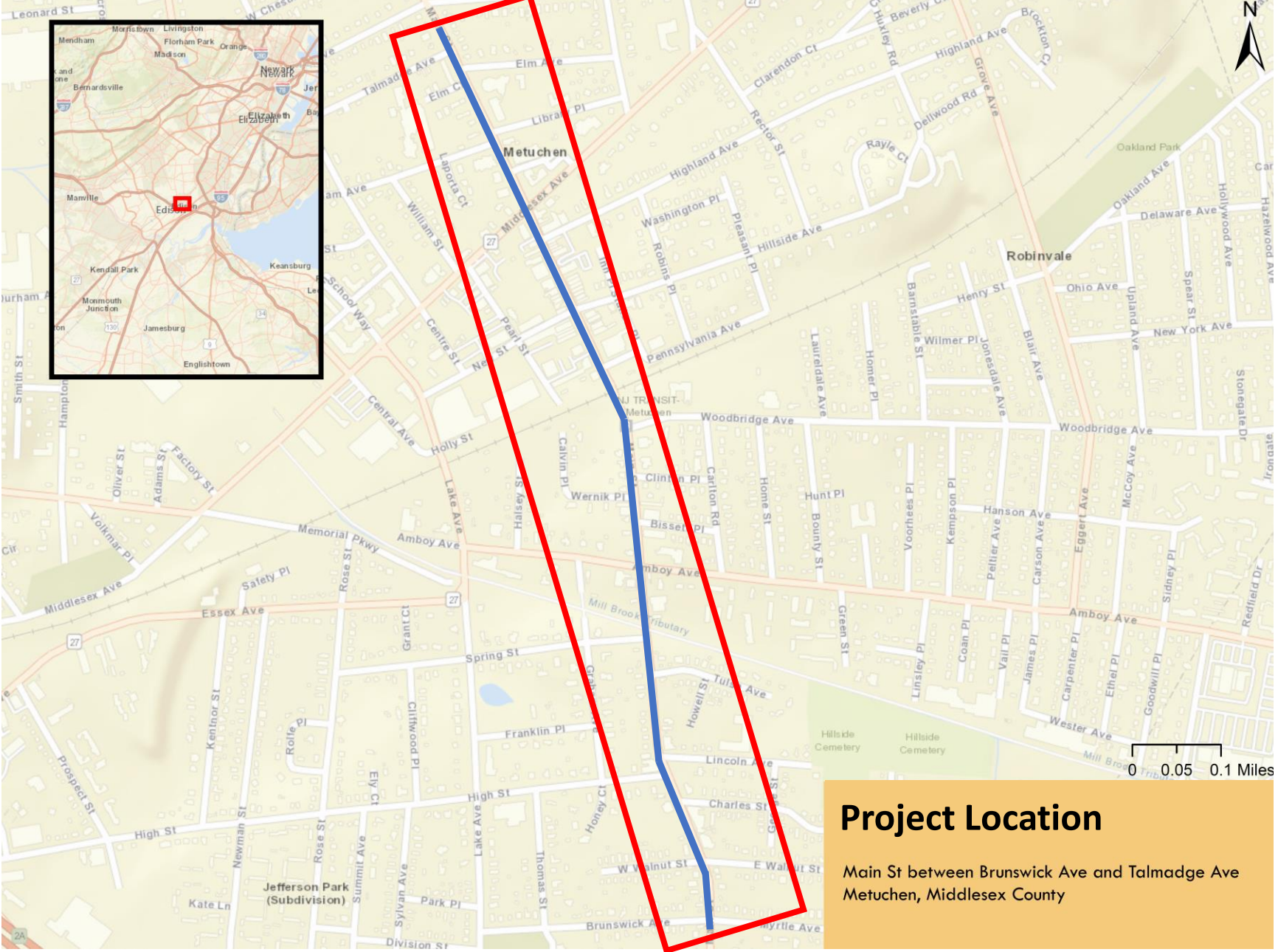
## Tentative Project Schedule

Preliminary Engineering  
2020-2021

Final Design  
2022

Anticipated Construction  
2023

Anticipated Completion  
2024



## Project Location

Main St between Brunswick Ave and Talmadge Ave  
Metuchen, Middlesex County

# Purpose and Need

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## Project Purpose

To provide safety improvements for the Main Street (CR 531) corridor from Talmadge Avenue to Brunswick Avenue

## Project Need

There were 444 crashes during a 5-year period 2014-2018 including the fatality of a school crossing guard at Brunswick Avenue. There were also 55 bridge strikes during the same period at the Amtrak bridge. Safety concerns along this high crash corridor include pedestrian and cyclist safety at crossings, safe and accessible parking along the roadway, accessibility at public transit stops, and overall ADA/PROWAG compliance.



# Existing Conditions and Deficiencies

- High crash corridor, frequent bridge strikes at NEC-AMTRAK underpass
- Pedestrian facilities are not fully compliant with ADA/PROWAG standards
- Limited bicycle accommodations



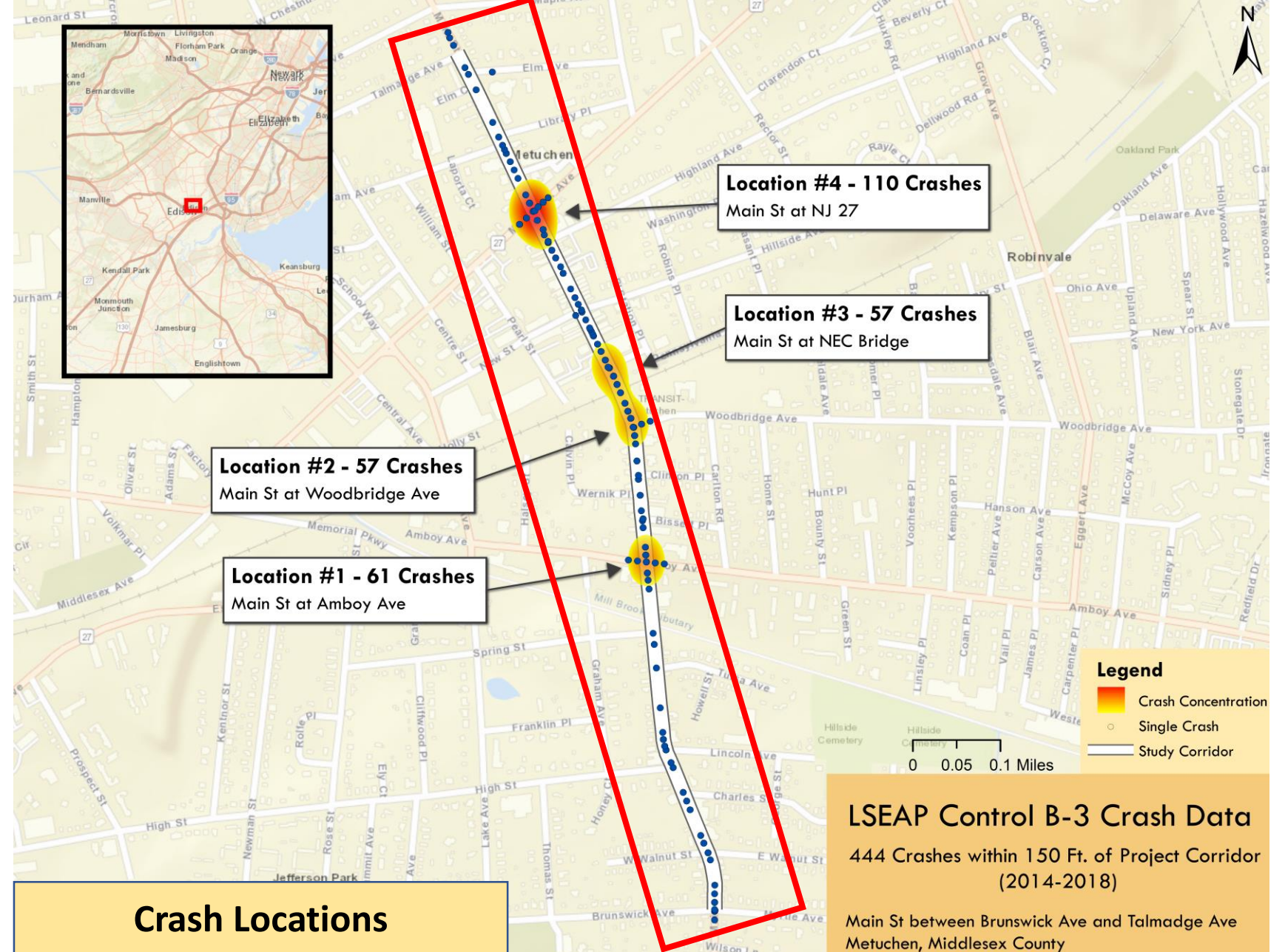
# High Crash Corridor

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- Total of 444 crashes during 5-year period 2014-2018
- More than 24% of all crashes in Borough of Metuchen during this 5-year period
- Four locations accounted for 64% of the 444 crashes
  - NJ 27/Middlesex Avenue (110 total crashes)
  - Pennsylvania Avenue/NEC-AMTRAK Bridge (57)
  - Woodbridge Avenue - Train Station/Post Office (57)
  - Amboy Avenue (61)



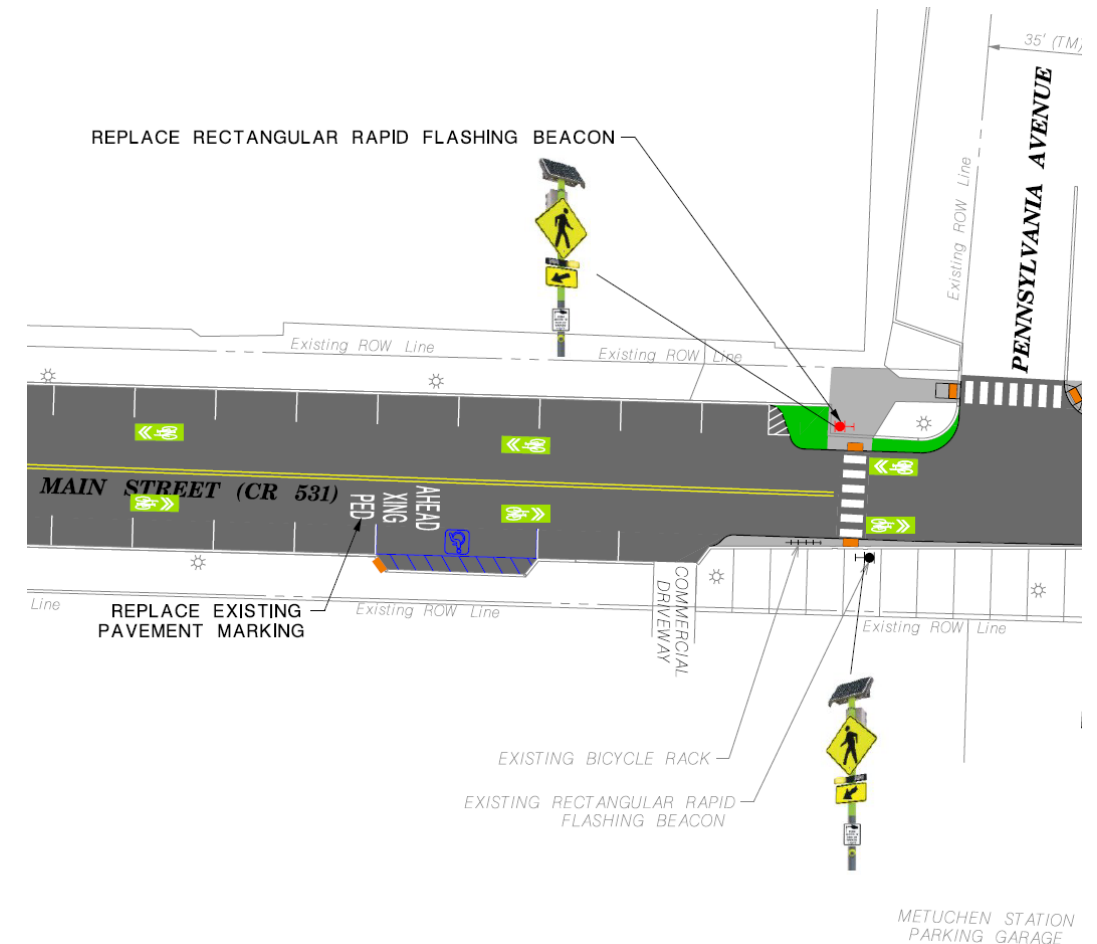
# High Crash Locations





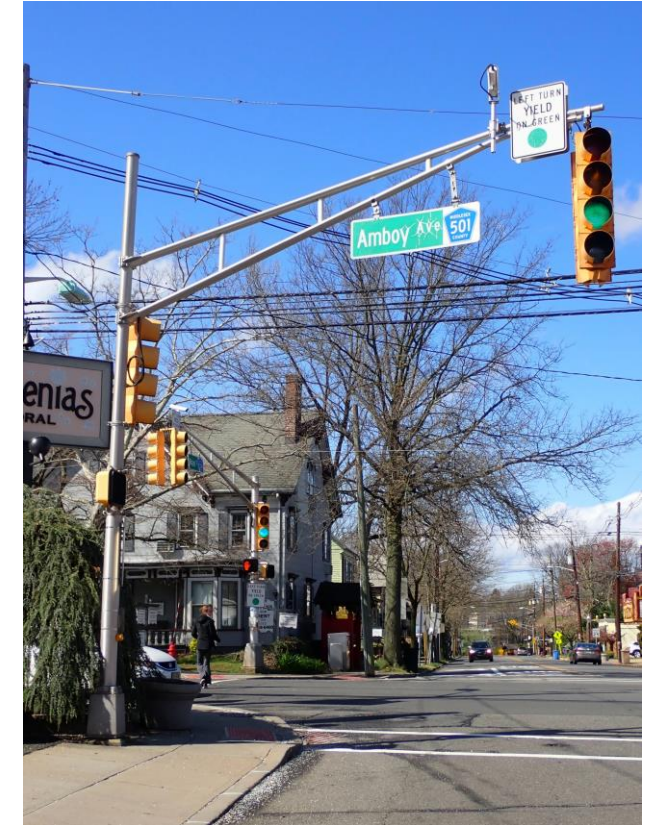
# Corridor-wide Proposed Improvements

- New and upgraded traffic signal infrastructure
- New and upgraded flashing pedestrian beacons
- Traffic calming curb extensions (daylighting) and ADA/PROWAG curb ramps
- Sidewalk and drainage improvements
- Green infrastructure and landscaping
- Electronic Overheight Vehicle Detection System (OVDS)
- Shared-Lane (Sharrow) bicycle treatments
- Milling and paving of roadway surface throughout the project limits
- Roadway and pedestrian-scale lighting improvements
- Reduce sign clutter



# New and Upgraded Traffic Signals

- New and upgraded traffic signal infrastructure
  - Main Street at New Street & Hillside Avenue (upgraded equipment)
  - Main Street at Woodbridge Avenue (proposed new signal)
  - Main Street at Amboy Avenue (upgraded equipment)
  - Main Street at Brunswick Avenue & Myrtle Avenue (proposed new signal)
- Upgrades to traffic signal infrastructure, timing, phasing, and video image detection to improve overall safety and traffic flow
- Traffic signal poles, foundations, mast arms, controller cabinets, and 12" LED signal heads with reflective backplates to aid visibility at select intersections
- New pedestrian signal heads (countdown timers), push buttons (or automatic pedestrian detection), audible features, high visibility crosswalks and pavement markings, installation and replacement of regulatory, warning and pedestrian signs
- Exclusive left turn lanes at select intersection approaches to mitigate queuing and traffic congestion





# Flashing Pedestrian Beacons

- Rectangular Rapid Flashing Beacon (RRFB)
- Targeted crosswalk locations based specifically on adjacent land uses, areas with high pedestrian demand, and high crash locations, conflicts with vehicular traffic
- Up to five (5) new or upgraded flashing pedestrian beacons proposed
  - Main Street at Elm Avenue (proposed new RRFB)
  - Main Street midblock between Highland Avenue and Hillside Avenue/New Street (proposed new RRFB)
  - Main Street @ Pennsylvania Avenue (upgrade of existing RRFB)
  - Main Street @ Lincoln Avenue (upgrade of existing RRFB)
  - Main Street midblock between Charles Street & E/W Walnut Street (proposed new RRFB)
- Includes flashing Beacon, High-visibility Retro-reflective signs & arrows
  - Push-Button actuated (or automatic pedestrian detection)
  - Solar powered



*Pedestrian Beacon*

# Traffic Calming Curb Extensions and Curb Ramps

- Targeted locations based specifically on adjacent land uses, areas with high pedestrian demand, and high crash locations, conflicts with vehicular traffic
- New ADA/PROWAG-compliant curb ramps with detectable warning surfaces
- Numerous locations along Main Street, based on unique conditions at each intersection and mid-block locations
  - Curb extensions to slow traffic, mitigate crash occurrence and severity, shorten crossing distances, improve overall safety for pedestrians
  - Some locations include green infrastructure to mitigate storm water impacts, reduce heat island effect, improve aesthetics
  - Truck turning-accessible designs where required



*Curb extensions with high-visibility crosswalks*



# Overheight Vehicle Detection System (OVDS)

- Reduce occurrence of 55 bridge strikes at NEC-AMTRAK underpass, 2012-16
- OVDS identifies and diverts overheight vehicles at selected intersections to suitable alternative routes
- Infrastructure proposed at eight locations
  - Southbound at Elm Avenue, Durham Avenue, Highland Avenue, Hillside Avenue & New Streets
  - Northbound at Spring Street, Amboy Avenue, Clinton Place, Woodbridge Avenue
- Infrastructure includes: Pole-mounted Vehicle detection equipment, amber beacons, electronic and static “Overheight Vehicle” and “Low Clearance” signage, and “Bridge Ahead” signs



*Example OVDS in Monmouth County*



*AMTRAK NEC Underpass*

# Shared-Lanes

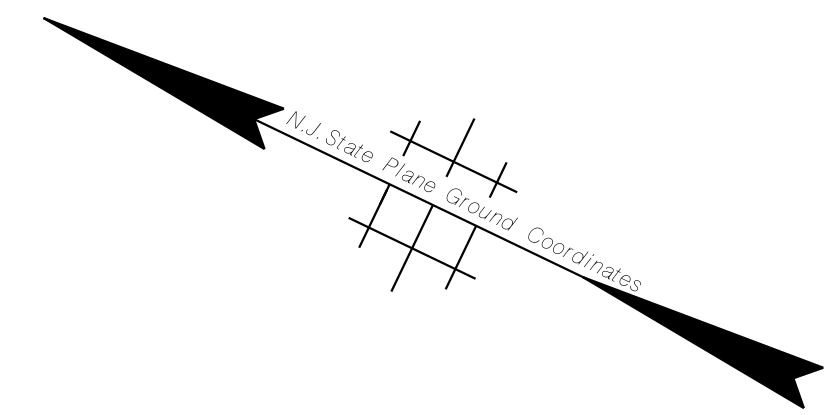
- Main Street is too narrow for dedicated bicycle lanes or paths
- Shared-lane design with “Sharrow” symbols proposed
- Shared-Lanes/Sharrows are recommended for 25 mph, traffic calmed roadways where dedicated bicycle facilities are not feasible
- Sharrow symbols installed approximately every 100 feet



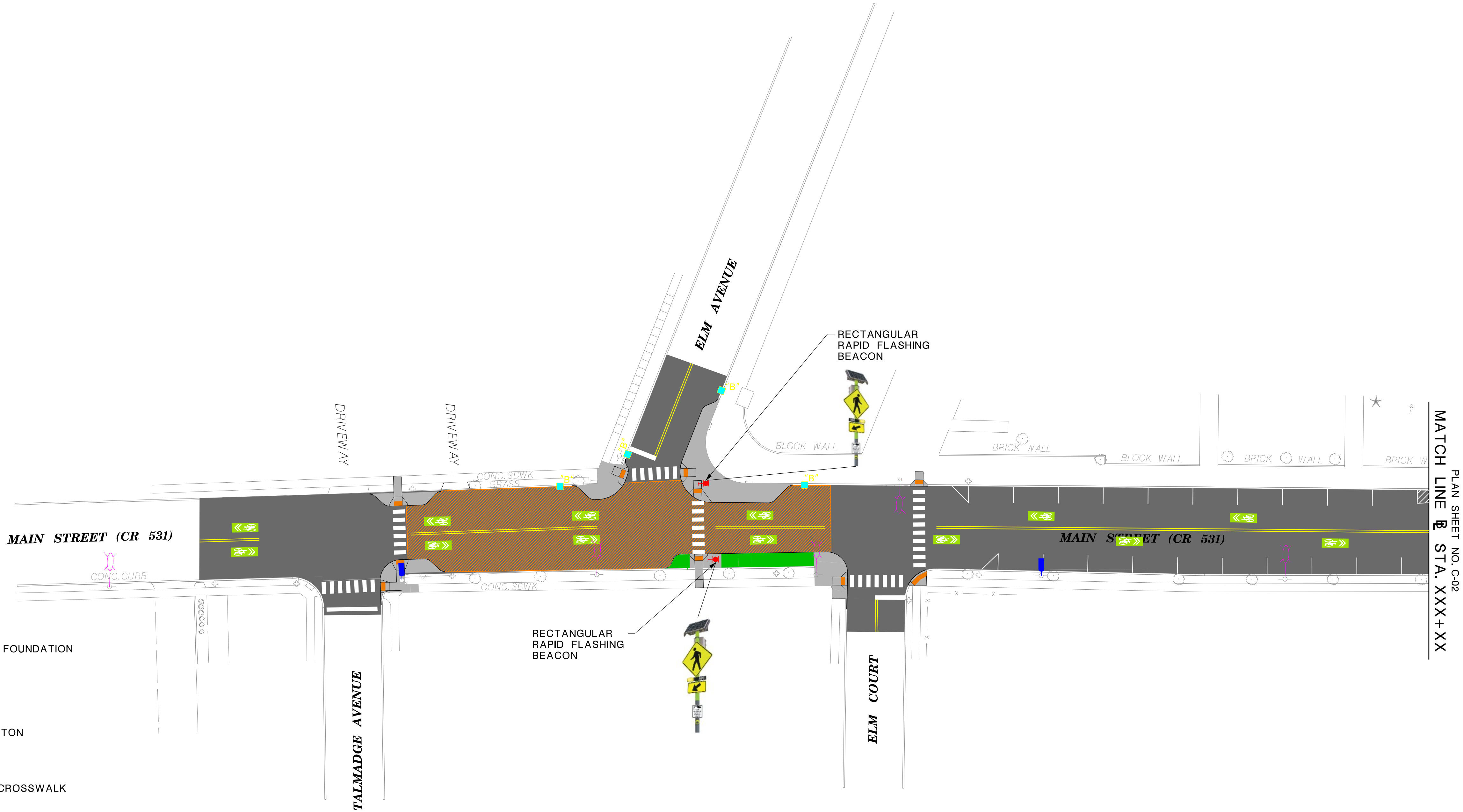
*Typical Sharrow design and pavement markings*







- LEGEND**
- | EXISTING | PROPOSED |  |
|----------|----------|--|
|          |          | TRAFFIC SIGNAL POLE FOUNDATION   |
|          |          | UTILITY POLE   |
|          |          | POLE MOUNTED SIGN  |
|          |          | PEDESTRIAN PUSH BUTTON   |
|          |          | SIDEWALK   |
|          |          | PAINTED PEDESTRIAN CROSSWALK   |
|          |          | DOUBLE SOLID YELLOW LINE   |
|          |          | CONCRETE CURB  |
|          |          | DECIDUOUS TREES (SIZE, KIND)   |
|          |          | POST MOUNTED SIGN  |
|          |          | MILLING AND PAVING AREA  |
|          |          | CURB RAMP DETECTABLE WARNING SURFACE   |
|          |          | LIGHTING   |
|          |          | VEGETATED AREA   |
|          |          | SHARED LANE MARKING  |
|          |          | COLOR-TEXTURE PAVING TREATMENT   |
|          |          | LIGHTING ASSEMBLY WITH 150W HPS I.E.S. TYPE II CUTOFF MONGOOSE LUMINAIRE, AT 26-FEET MOUNTING HEIGHT |



**DRAFT  
FOR DISCUSSION  
PURPOSES**



C-01  
C-08

COUNTY OF MIDDLESEX  
OFFICE OF ENGINEERING, DEPARTMENT OF TRANSPORTATION

**CONCEPT PLANS  
MAIN STREET (CR 531) FROM TALMADGE  
AVENUE TO BRUNSWICK AVENUE**

MICHAEL BAKER INTERNATIONAL, INC.  
CERTIFICATION OF AUTHORIZATION NO. 24GA27954700

BRAD J. MILLER  
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04927300



DRAFT  
FOR DISCUSSION  
PURPOSES



COUNTY OF MIDDLESEX  
OFFICE OF ENGINEERING, DEPARTMENT OF TRANSPORTATION

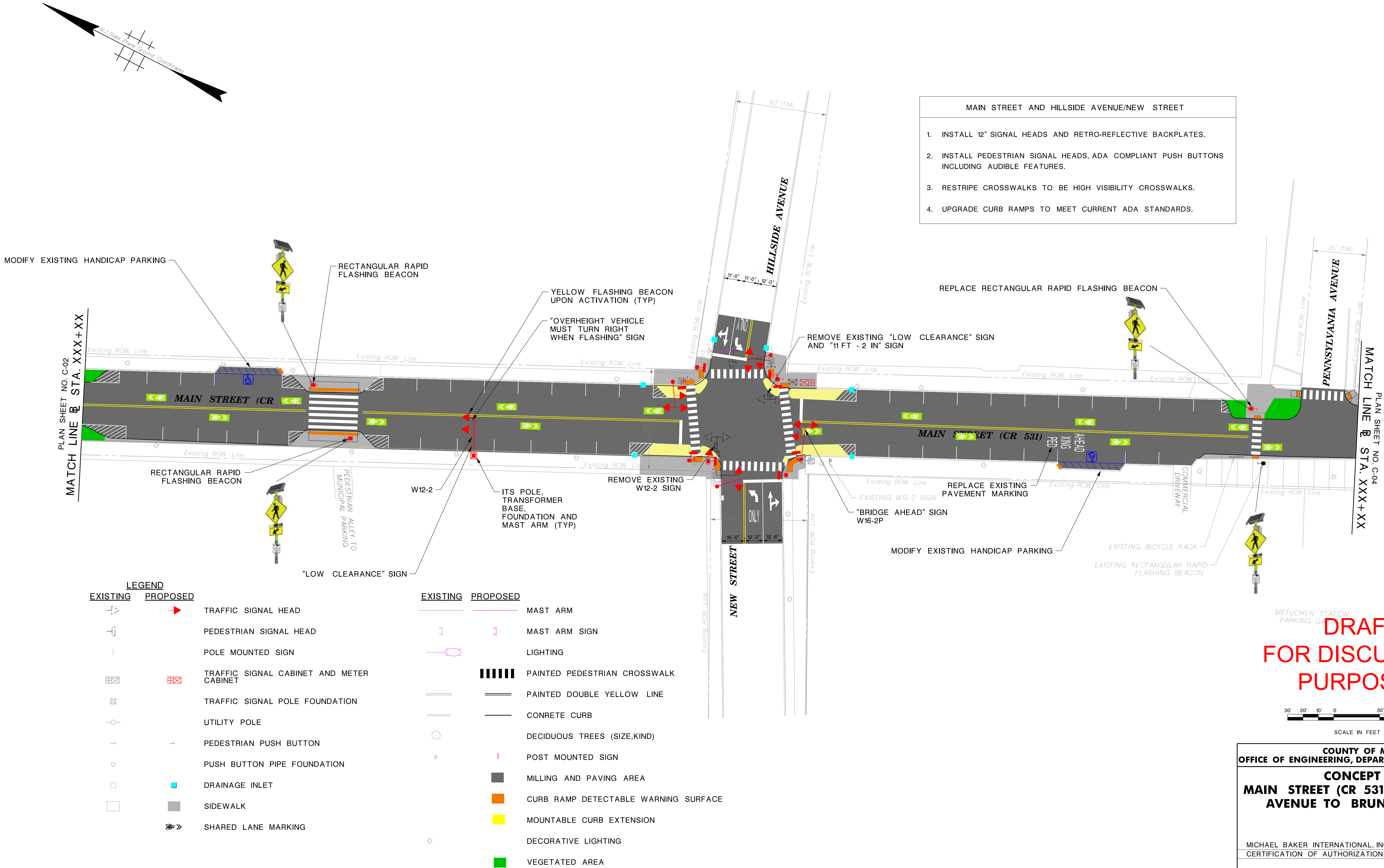
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USERNAME:\$\$\$USERNAMESS\$  
DATE & TIME: \$\$-DATE-TIME-\$\$  
MBIPW PATH LOCATION: Master File



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FOR DISCUSSION  
PURPOSES

30' 20' 10' 0 30' 60'  
SCALE IN FEET

COUNTY OF MIDDLESEX  
OFFICE OF ENGINEERING, DEPARTMENT OF TRANSPORTATION

CONCEPT PLANS  
MAIN STREET (CR 531) FROM TALMADGE  
AVENUE TO BRUNSWICK AVENUE

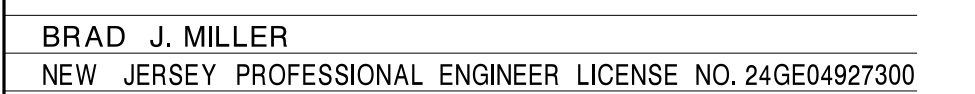
MICHAEL BAKER INTERNATIONAL, INC.  
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BRAD J. MILLER  
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04927300

C-03  
C-08

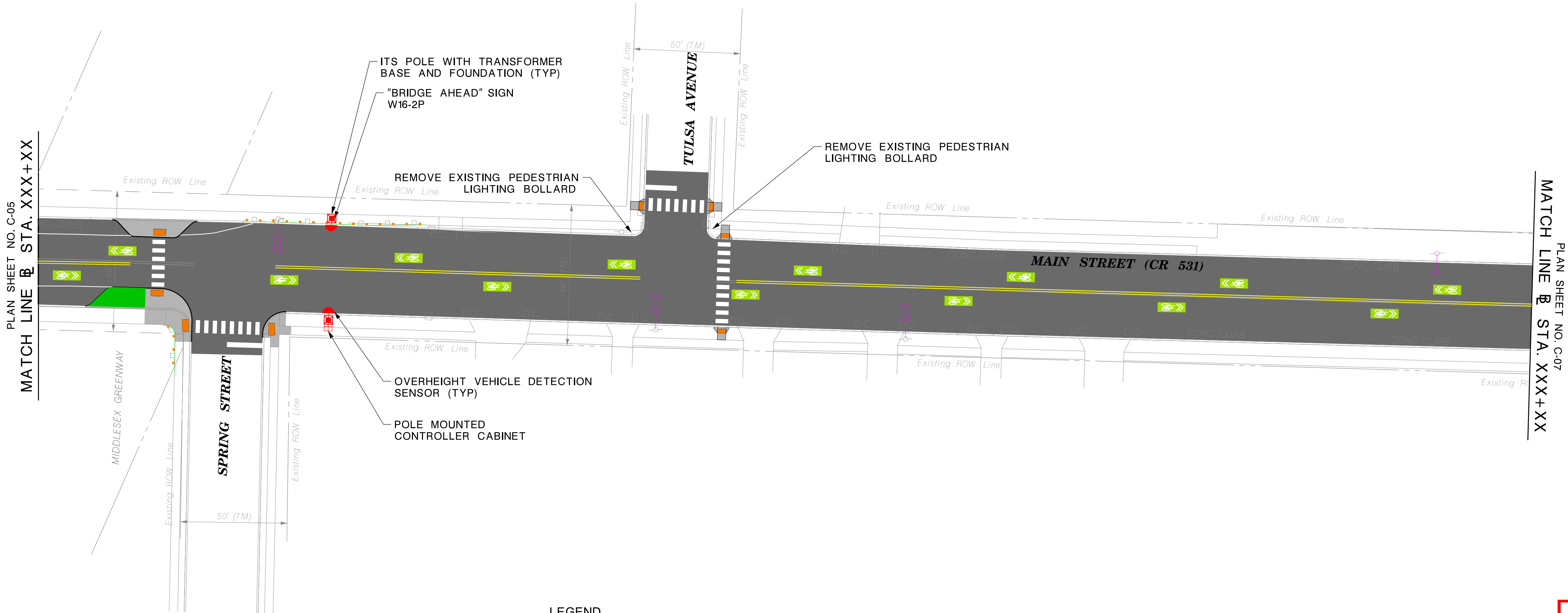
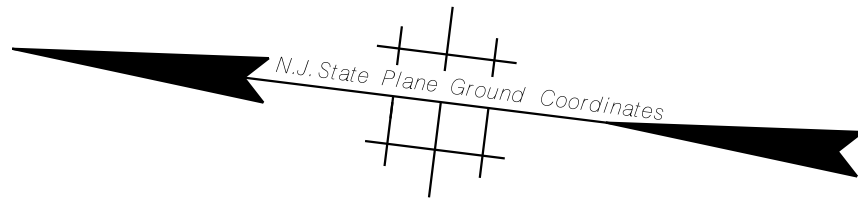
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LEGEND	
EXISTING	PROPOSED
	UTILITY POLE
	DRAINAGE INLET
	SIDEWALK
	MANHOLE
	PAINTED PEDESTRIAN CROSSWALK
	CONCRETE CURB
	MILLING AND PAVING AREA
	CURB RAMP DETECTABLE WARNING SURFACE
	LIGHTING
	VEGETATED AREA
	SHARED LANE MARKING

DRAFT  
FOR DISCUSSION  
PURPOSES



C-06  
C-08

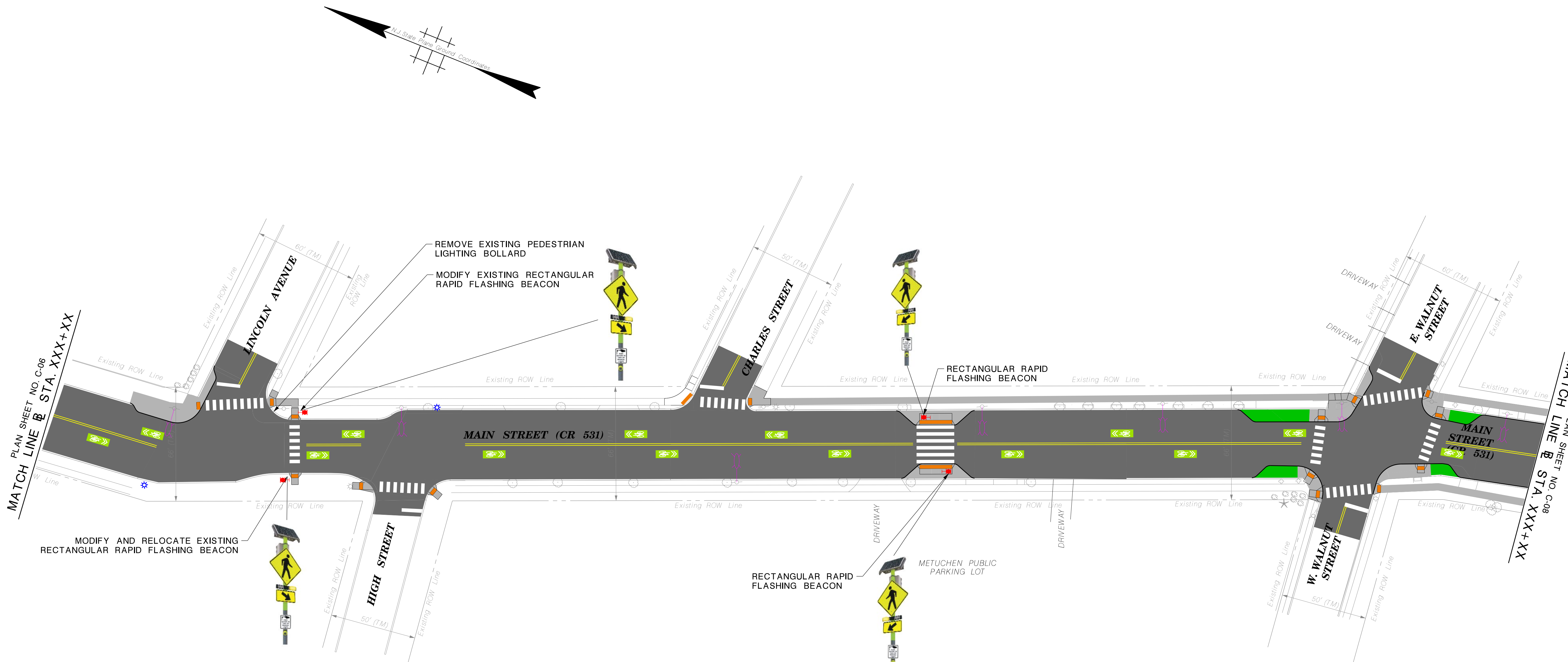
COUNTY OF MIDDLESEX  
OFFICE OF ENGINEERING, DEPARTMENT OF TRANSPORTATION

CONCEPT PLANS  
MAIN STREET (CR 531) FROM TALMADGE  
AVENUE TO BRUNSWICK AVENUE

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BRAD J. MILLER  
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04927300





LEGEND

EXISTING	PROPOSED	
		POLE MOUNTED SIGN
	●	TRAFFIC SIGNAL POLE FOUNDATION
○		UTILITY POLE
	⊥	PEDESTRIAN PUSH BUTTON
□	■	SIDEWALK
		PAINTED PEDISTRIAN CROSSWALK
○		DECIDUOUS TREES (SIZE, KIND)
P		POST MOUNTED SIGN
	■	MILLING AND PAVING AREA
	■	CURB RAMP DETECTABLE WARNING SURFACE
⚡		LIGHTING
★	★	DECORATIVE LIGHTING
	■	VEGETATED AREA
	🚶➡	SHARED LANE MARKING

DRAFT  
FOR DISCUSSION  
PURPOSES



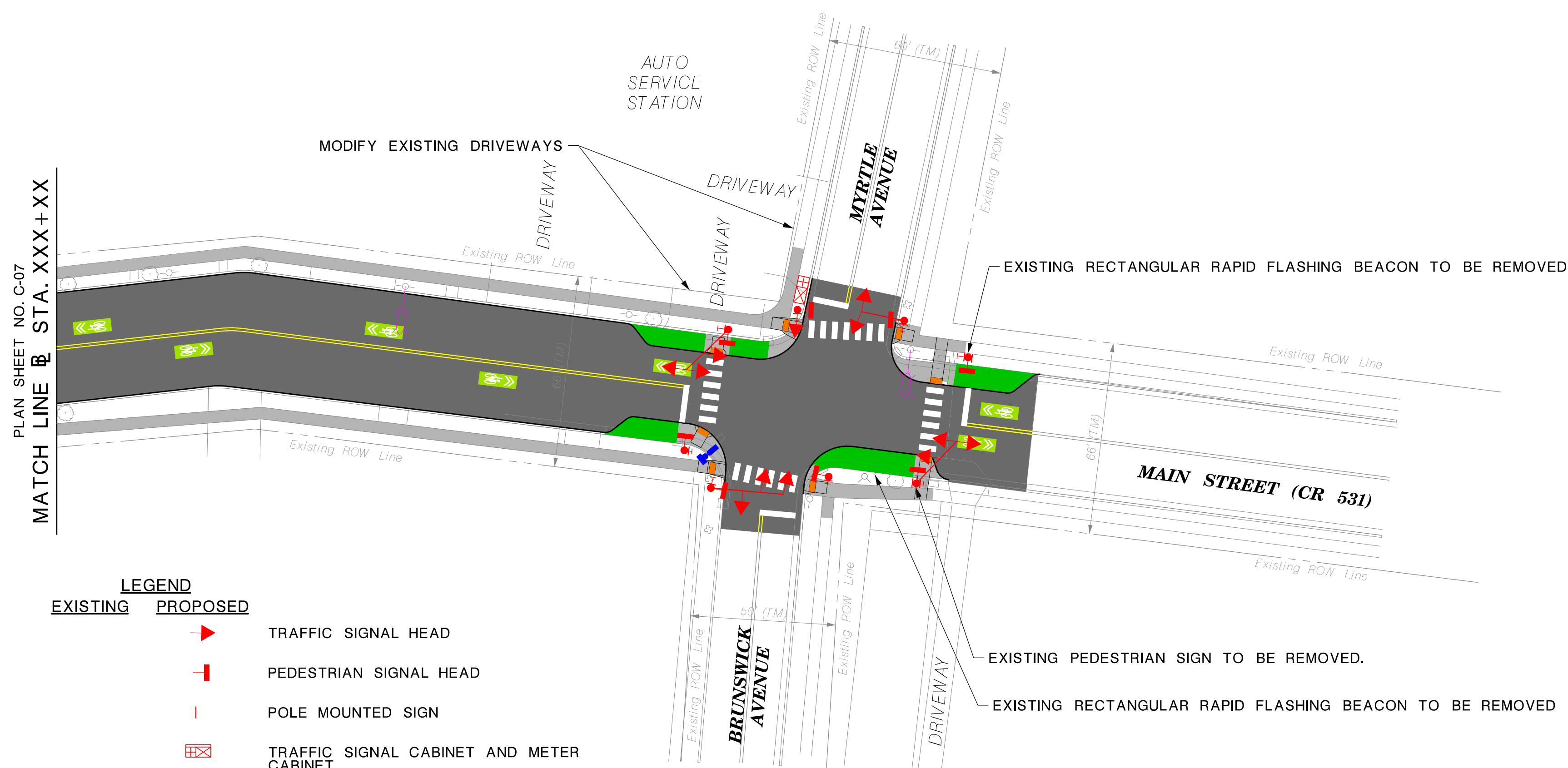
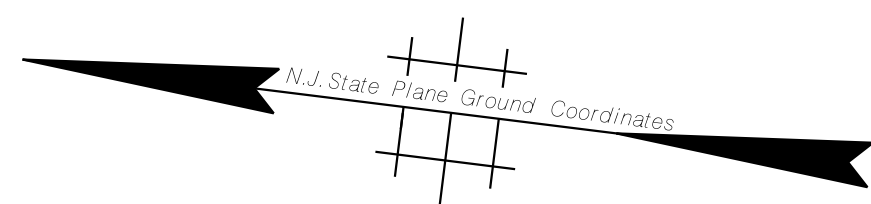
COUNTY OF MIDDLESEX  
OFFICE OF ENGINEERING, DEPARTMENT OF TRANSPORTATION

CONCEPT PLANS  
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AVENUE TO BRUNSWICK AVENUE















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BRAD J. MILLER  
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04927300

C-07  
C-08



- | MAIN STREET AND BRUNSWICK AVENUE/MYRTLE AVENUE |   |
|--|---|
| 1.   | INSTALL 12" SIGNAL HEADS AND RETRO-REFLECTIVE BACKPLATES.                               |
| 2.   | INSTALL PEDESTRIAN SIGNAL HEADS. ADA COMPLIANT PUSH BUTTONS INCLUDING AUDIBLE FEATURES. |
| 3.   | RESTRIPE CROSSWALKS TO BE HIGH VISIBILITY CROSSWALKS.                                   |
| 4.   | UPGRADE CURB RAMPS TO MEET CURRENT ADA STANDARDS.                                       |

- | EXISTING  | PROPOSED  |  |
|---|---|--|
|   |  | TRAFFIC SIGNAL HEAD                      |
|   |  | PEDESTRIAN SIGNAL HEAD                   |
|   |  | POLE MOUNTED SIGN                        |
|   |  | TRAFFIC SIGNAL CABINET AND METER CABINET |
|   |  | TRAFFIC SIGNAL POLE FOUNDATION           |
|  |   | UTILITY POLE                             |
|   |  | PEDESTRIAN PUSH BUTTON                   |
|   |   | DRAINAGE INLET                           |
|  |  | SIDEWALK                                 |
|   |  | MAST ARM                                 |
|  |   | MANHOLE                                  |
|   |  | PAINTED PEDESTRIAN CROSSWALK             |
|   |  | MILLING AND PAVING AREA                  |
|   |  | CURB RAMP DETECTABLE WARNING SURFACE     |

- | EXISTING   | PROPOSED  |  |
|--|---|--|
|  |   | LIGHTING   |
|   |   | DECIDUOUS TREES (SIZE, KIND)   |
|   |   | POST MOUNTED SIGN  |
|  |  | VEGETATED AREA   |
|  |  | LIGHTING STANDARD ASSEMBLY WITH 150W<br>HPS, I.E.S. TYPE II CUTOFF MONGOOSE<br>LUMINAIRE, AT 26-FEET MOUNTING HEIGHT |
|  |  | SHARED LANE MARKING  |

**DRAFT  
FOR DISCUSSION  
PURPOSES**



**COUNTY OF MIDDLESEX  
OFFICE OF ENGINEERING, DEPARTMENT OF TRANSPORTATION**

**CONCEPT PLANS  
MAIN STREET (CR 531) FROM TALMADGE  
AVENUE TO BRUNSWICK AVENUE**

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BRAD J. MILLER  
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE0492730

# Next Steps

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Activity	Tentative Timeframe
Public Information Center (PIC)	October 7, 2020
Complete Preliminary Design	Winter 2020/21
NJDOT to Approve Environmental Document	Fall 2021/21
Authorization to Commence Final Design	Spring 2022
Anticipated Federal Authorization to Construct	Winter 2022/23
Begin Construction	Spring 2023
Construction Substantially Completed	Winter 2023/24



# Comments & Questions

Written comments will be accepted through  
Friday, October 30, 2020

For the public comment form please visit:

<https://www.njtpa.org/Get-Involved/Info-Resources/Calendar/2020/October/Public-Meeting-Metuchen-Safety-Improvements.aspx>



Local Safety Program  
Local Safety Engineering Assistance Program



Intersection Improvements along Main Street (CR 531)  
From Talmadge Avenue to Brunswick Avenue

Borough of Metuchen, Middlesex County

## Public Comments & Suggestions

Please use the space below to provide comments or suggestions (please print legibly):

Name: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

Email: \_\_\_\_\_

Comments/Suggestions: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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\_\_\_\_\_

Kindly submit the comments by Wednesday, October 30, 2020 to:

Ron Sendner, Middlesex County Engineer  
Office of Engineering, Department of Transportation  
75 Bayard St.  
New Brunswick, NJ 08901  
Phone: (732) 745-3248 | Fax: (732) 745 - 8852  
[Ronald.Sendner@co.middlesex.nj.us](mailto:Ronald.Sendner@co.middlesex.nj.us)



# Thank You!

