Lexington Battle Green Streetscape Improvements

Public Meeting
February 01, 2022

Video Conferencing

Image Source: Nearmap, March 2020

Project History

- October 2015 Preliminary Evaluation
- June 2016 to November 2016 Traffic Trials Period
- 2021 Roundabout Concept Evaluation Based on New Design Guidelines

Project Limits

- **Four Key Roadways**
- Massachusetts Ave
- Bedford St (Rte 4/225)
- Harrington Rd
- Hancock St
- Meet Center Streetscape Project at Meriam Street

PROJECT LIMIT

Image Source: Nearmap, March 2020

BETA

Project Goals

- **Pedestrian and Bicycle Safety**
- **Vehicular Safety**
- **Improved Connectivity and Accessibility**

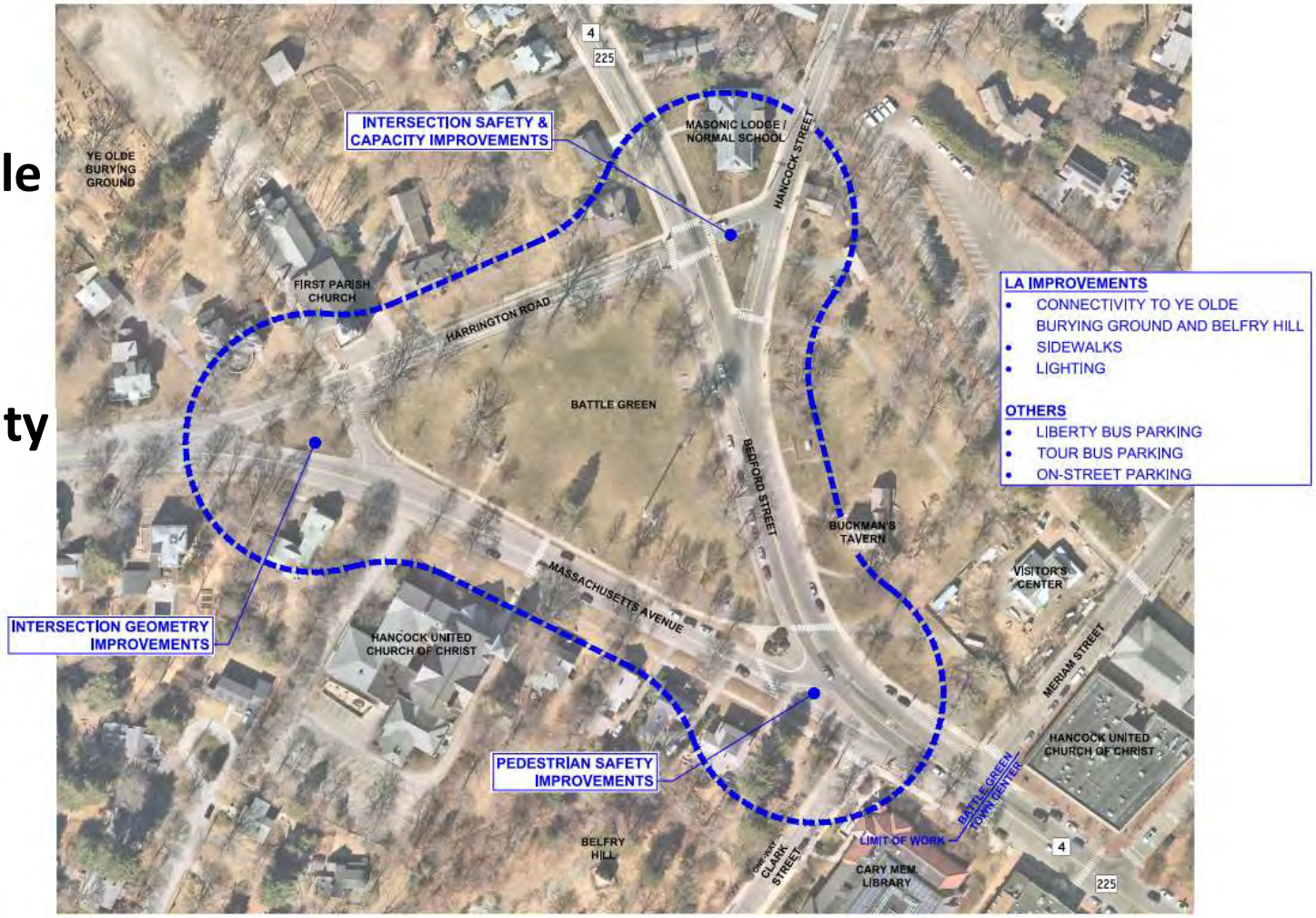
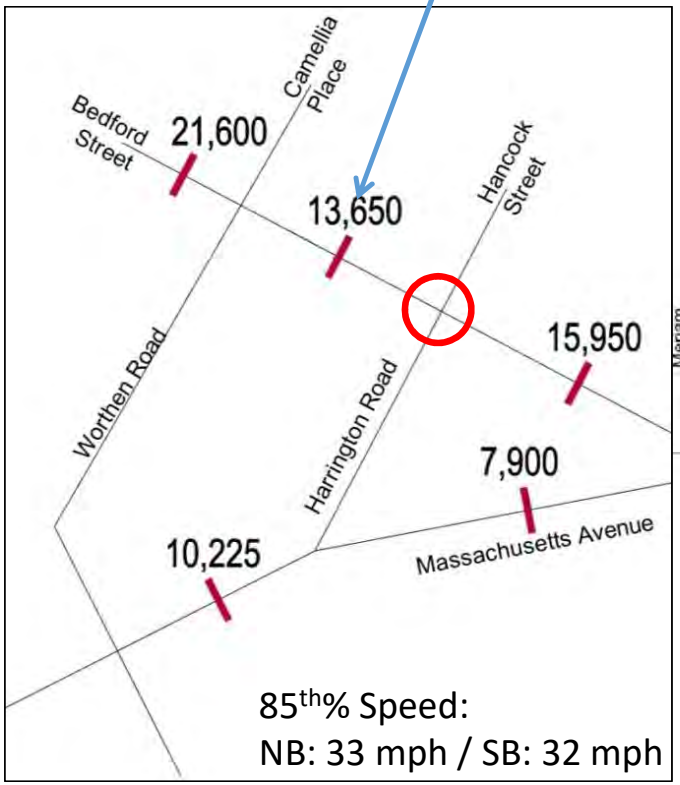


Image Source: Nearmap, March 2020

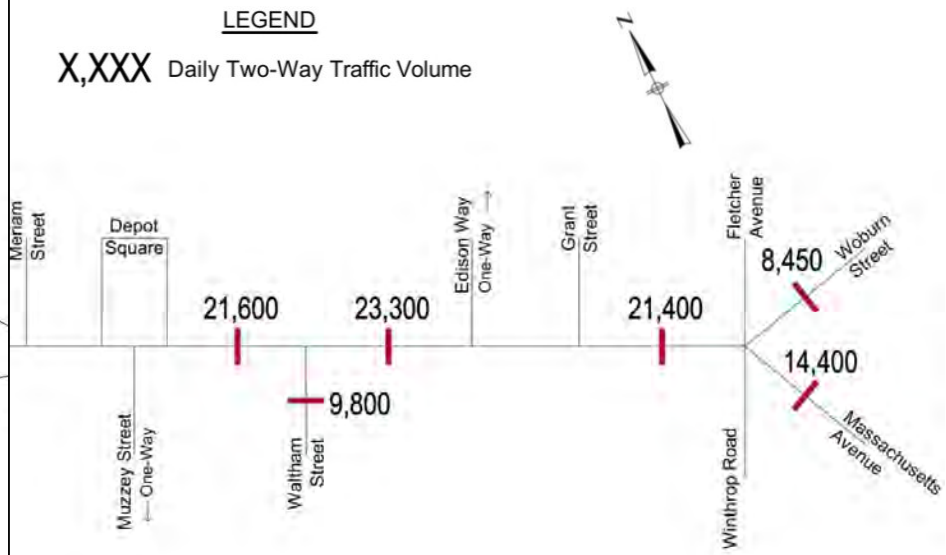
BETA

Average Daily Traffic Volumes

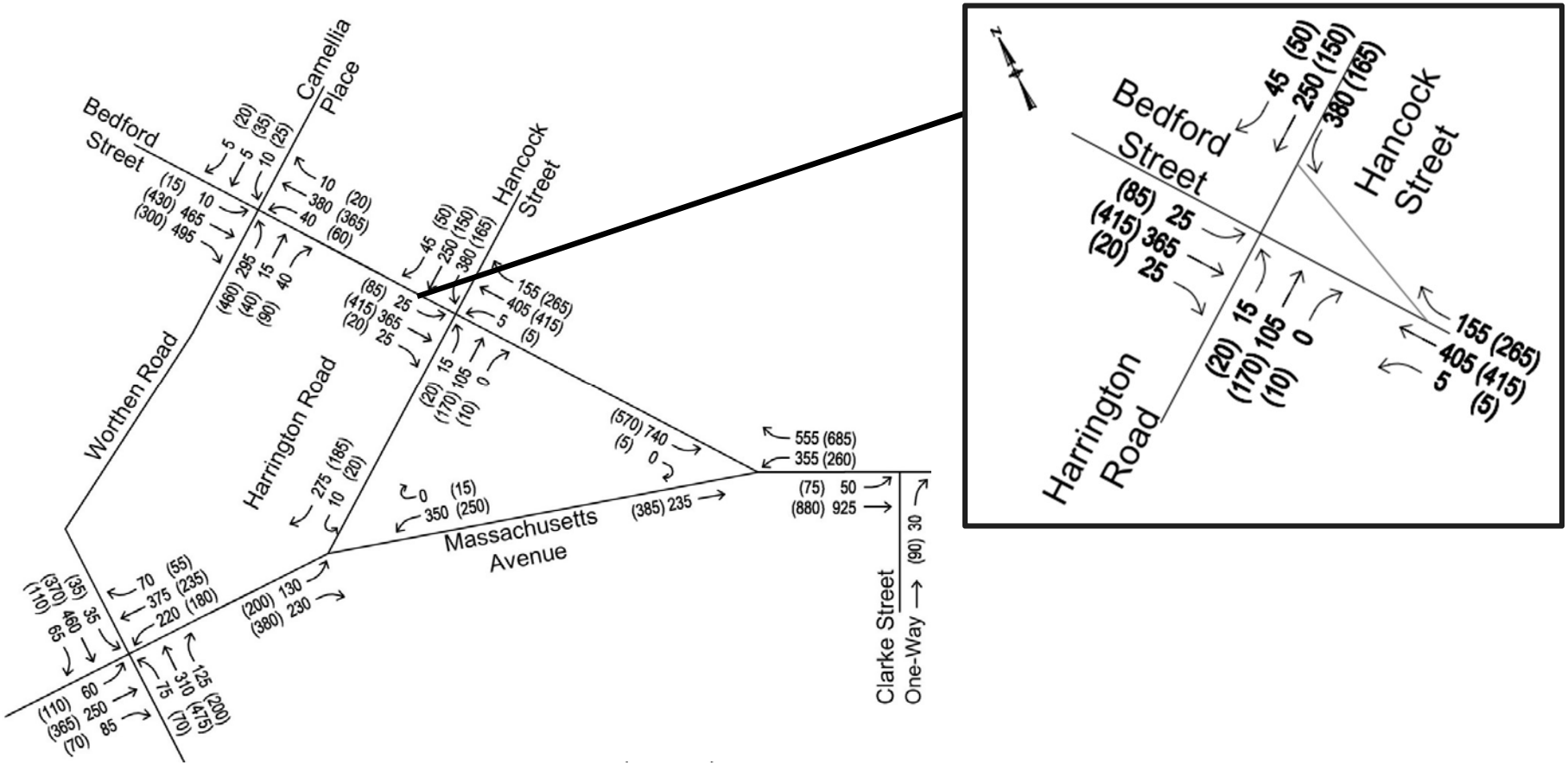
2.5% Trucks
0.4% Articulated Trucks



85th% Speed:
NB: 33 mph / SB: 32 mph

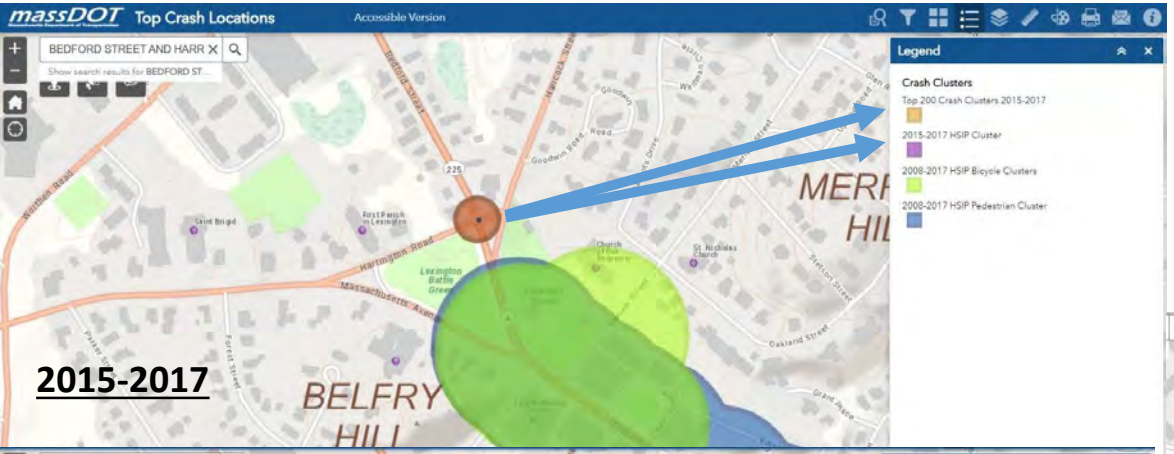


AM and PM Turning Movement Volumes

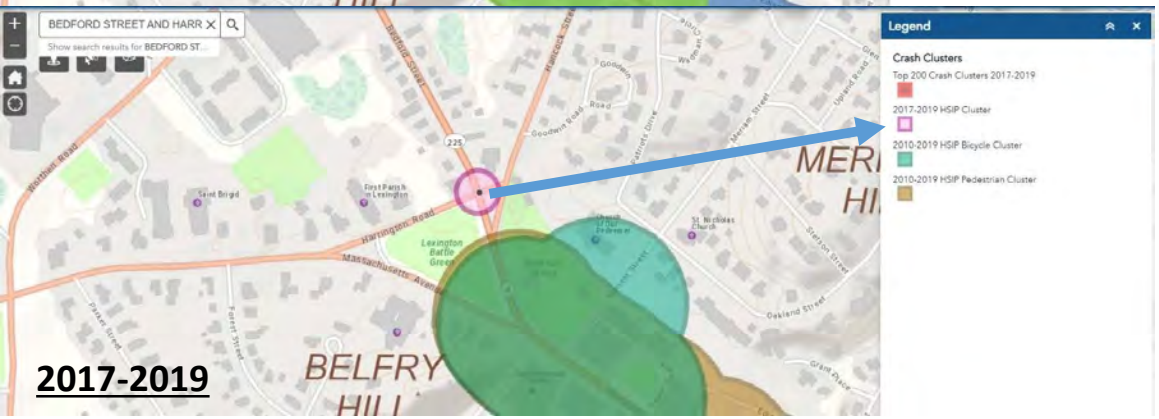


Intersection Crash History – Crash Clusters

Highway Safety Improvement Program (HSIP)



2015-2017



2017-2019

Top 200 Crash Cluster – 2015-2017

2015-2017 HSIP

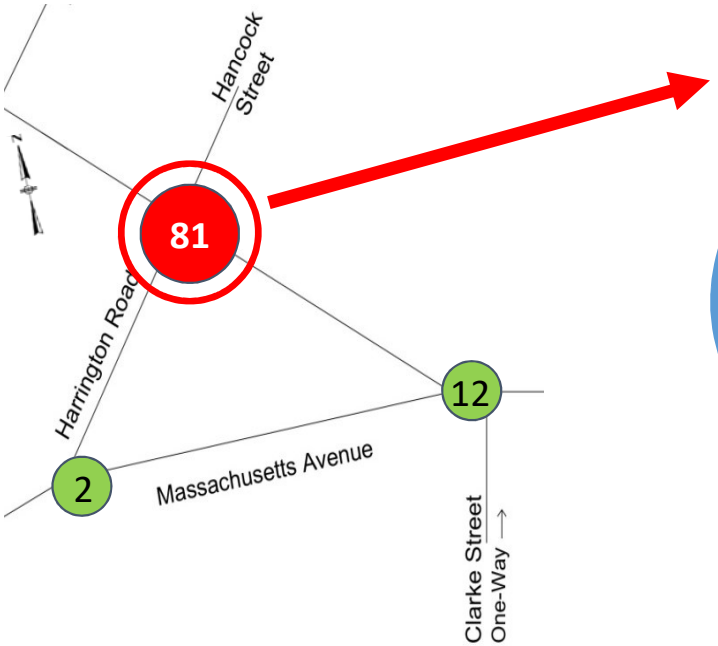
2016-2018 HSIP

2017-2019 HSIP

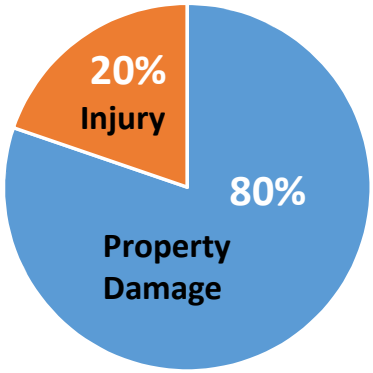
Area Bicycle and Pedestrian Clusters

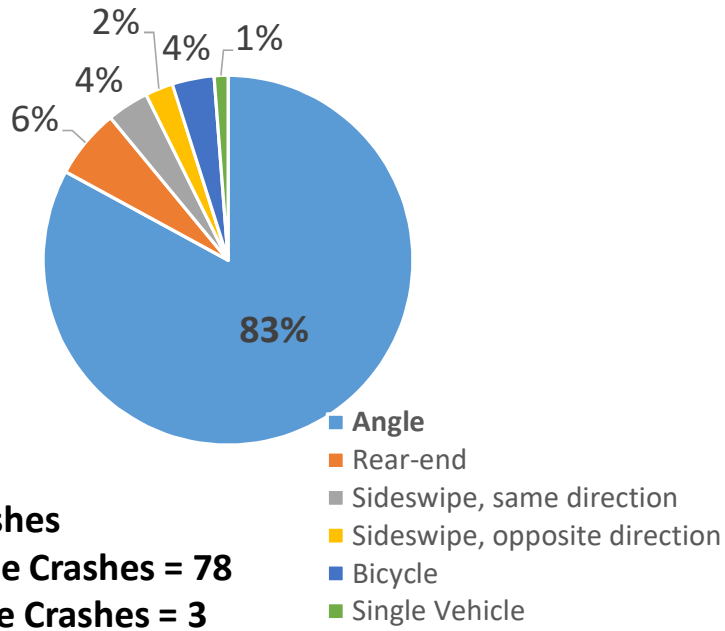
2016-2018

Intersection Crash History (2015-2019)



Bedford Street at Hancock Street and Harrington Road





2020-2021 Data*

Total = 11 Crashes

Bicycle Crashes = 1

Angle = 9 Rear-End = 1

** 2020 and 2021 are not "official." Shown for reference.*

Total = 81 Crashes

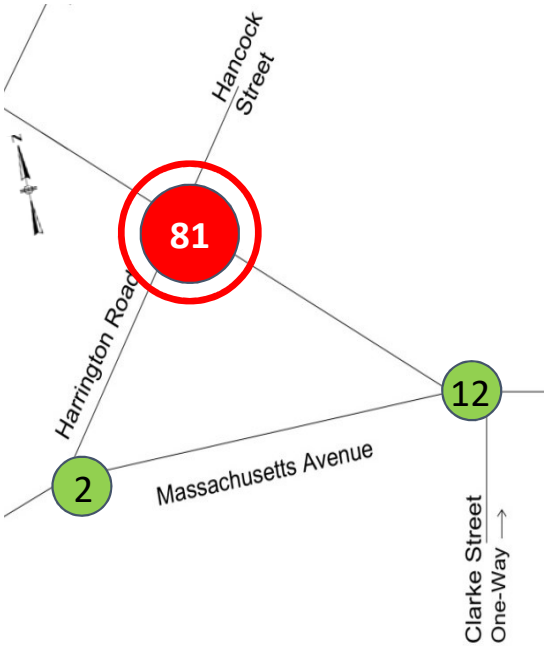
Vehicle/Vehicle Crashes = 78

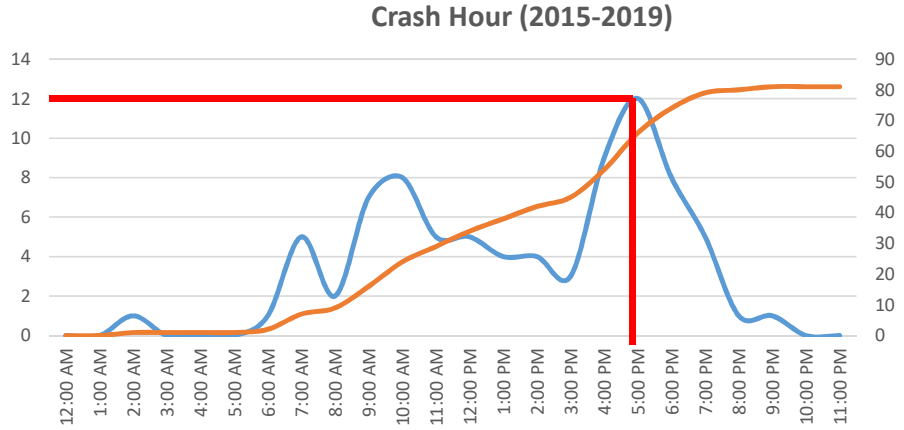
Vehicle/Bicycle Crashes = 3

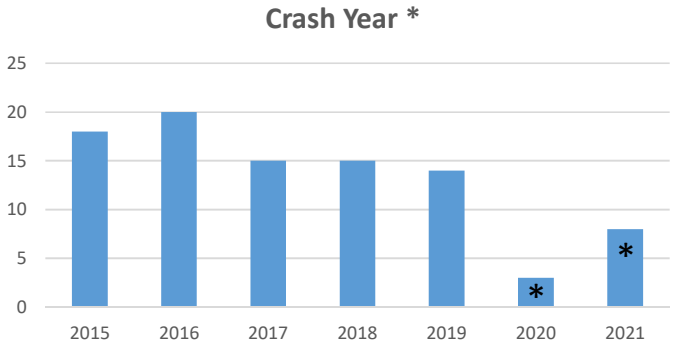
Vehicle/Pedestrian Crashes = 0

Intersection Crash History (2015-2019)

Bedford Street at Hancock Street and Harrington Road







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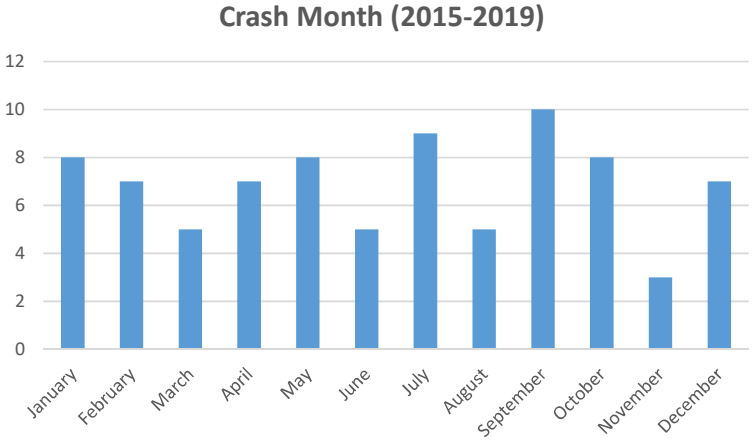

Battle Green Concept Improvements

Massachusetts Avenue at Bedford Street Concept

Massachusetts Avenue at Harrington Road Concept

Intersection Layout

- Triangular Intersection
- Right-Turn/Left Turn Bypass
- Two-Way Traffic
- Crosswalks

Image Source: Nearmap, March 2020

Bedford Street at Harrington Road & Hancock Street

Preliminary Design Option Evaluation

1. Remove the Bedford Street right-turn slip lane
2. Signalize Option 1
3. Convert Bedford Street right-turn slip lane to one-way northbound (departing Bedford Street)
4. Signalize Option 3
5. Harrington Road as one-way southbound (departing Bedford Street) & remove Bedford Street right-turn slip lane
6. Harrington Road as one-way northbound (approaching Bedford Street) & two-way STOP control
7. Harrington Road as one-way away southbound (departing Bedford Street) & retain the Bedford Street right-turn slip lane
8. Harrington Road one-way southbound (departing Bedford Street) & convert the Bedford Street right-turn slip lane one-way away northbound (departing Bedford Street)
9. Counterclockwise one-way circulation around Battle Green
10. **Roundabout**

Preferred Conceptual Roundabout

Kittelson & Associates

Rotary vs Roundabout

- Rotary - *Interchange*
  - Larger Diameter
  - Higher Speed (40 mph)
- **Roundabouts - *Intersection***
  - Smaller Diameter
  - Slower Speed (20 mph)

Improved Safety

- Reduce Conflict Points
  - ±50 to ±8
- Deflection
  - Large Vehicle Turns
  - Slow Speeds – 20 mph
- Pedestrian Crossing Paths

Traffic Control

- YIELD for all legs
  - Gaps and Risk

Image Source: Nearmap, March 2020

Thank You

Feedback email:

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Subject: Battle Green