

Public Information Meeting

Route 3A / Safety Improvements: Summer / Rockland Streets Pilot Road Diet

- April 11th 2018: Hingham Public Meeting w/MassDOT
- April 12th 2018: Hull Public Meeting w/MassDOT



Agenda

- **Welcome (Phil Lemnios, Hull Town Manager)**
- **Presentation (David Giangrande, Traffic Engineer - DCI Consultants)**
 - **Limits of this Project**
 - **History of Study and Stakeholder Collaboration**
 - **Existing Conditions and Safety Concerns**
 - **Roadway Constraints and Proposed Design**
 - **The Pilot Road Diet, Summer 2018**
 - **Detail of area**
 - **Travel Time & Capacity**
 - **Emergency Apparatus Access**
 - **Data Collection and Management Plan**
- **Q & A**

Road Diet Limits (3A Rotary to George Washington Blvd./Summer St.)

Objective: To undertake a “Pilot Study” of the impacts of a Road Diet “lane reduction from four (4) to two (2) lanes” by installing temporary traffic control delineators that reduce the amount of travel lanes.



Sequence of events

- **April 2009: State considers alternative rotary design.**
- **June 2013: MassDOT Road Safety Audit**
- **October 2014: Hull & Hingham submitted request for a State CTPS Study**
- **April 2015 Article 30: Annual Town Meeting: \$400,000 awarded for Engineering Services**
- **February 2016: CTPS Study of 3A/GW Blvd Complete**
- **2016: Design Team begins work for on 3A/Summer St alternatives**
- **Spring 2017: Start of public discussion of plans (results of traffic analysis, crash history and proposed pilot)**
- **Summer 2017: Possible Pilot of Road Diet (delayed)**
- **Fall 2017-March of 2018, working closely with Cohasset and Hull the project was refined-included Technical Discussions, Collaboration Efforts, Logistics' Planning- obtained state approvals and established Operational Review process**

Collaboration Efforts

Over the last year there has been a Collaboration effort by 18 plus team members consisting of Regional Community Leaders, Traffic Engineers, Civil Engineers, Project Mangers, Planners & Operations and Maintenance Professionals:

- **Public Safety (Cohasset, Hull & Hingham)**
- **MassDOT**
 - » Taunton District 5 (Maintenance, Traffic, Engineering, Project Management, etc.)
 - » Boston Office (Traffic, Engineering, Project Managers, etc.)
 - » CTPS (Central Transportation Planning Staff-Authors of the original corridor study)
- **DCI (Design Consultants Inc.) Engineering firm hired by the Town of Hingham**
- **Synchro 9 from Trafficware to build the corridor models to evaluate the various alternatives being considered**
- **SIDRA Intersection 7 software to evaluate the roundabout alternatives.**
- **Kittelson & Associates - Engineering firm hired by the MassDOT**
 - » **Vissim Analysis (Traffic modeling software & simulation)**

Public Safety



- ✓ On November 20, 2017 and January 17, 2018 - Hingham safety personnel meet with Hull and Cohasset safety personal.
- ✓ Consensus - Safety officials from all three towns continue to work together and will continue to meet and discuss.
- ✓ Consensus - Continue to work to develop a more all-encompassing evacuation plan

Primary Concerns: Accidents

Over 40% of accidents here result in injury, on average

Based on the CTPS STUDY DATED February 18, 2016
Summer Street/George Washington Boulevard Sub-regional Priority Roadway Study
in Hingham and Hull

2008-2012	Crashes	With Injury (fatality)	Avg.
Summer St. & Steamboat Ln	16	9	56%
Summer St. & Martins	18	5	28%
Muzzis Corner (GW Blvd and Rockland St.)	15	6 (1)	40%
East of Rotary to Rockland Overall	56	23	41%
Rotary	49	15	31%
North St. Intersection	46	8	17%
West of Rotary to North St Overall	105	24	23%

Map Crash Location



FIGURE 12
 Summary of MassDOT Crash Data 2008-12
 Summer Street/George Washington Boulevard in Hingham and Hull



Primary Concerns: Speed & Safe Access

- **Average 85 percentile speeds are 10 mph over posted speeds (CTPS study)**
- **The speeds in combination with the Horizontal and Vertical Curves contribute to the severity of crashes**

An increase of 1 mph in mean vehicle speed results in an increase of 3% in the incidence of crashes and an increase of 4–5% in the incidence of fatal crashes. (MassDOT)

- **There are no bicycle, pedestrian, or ADA accommodations**

Map with Excess Speeds

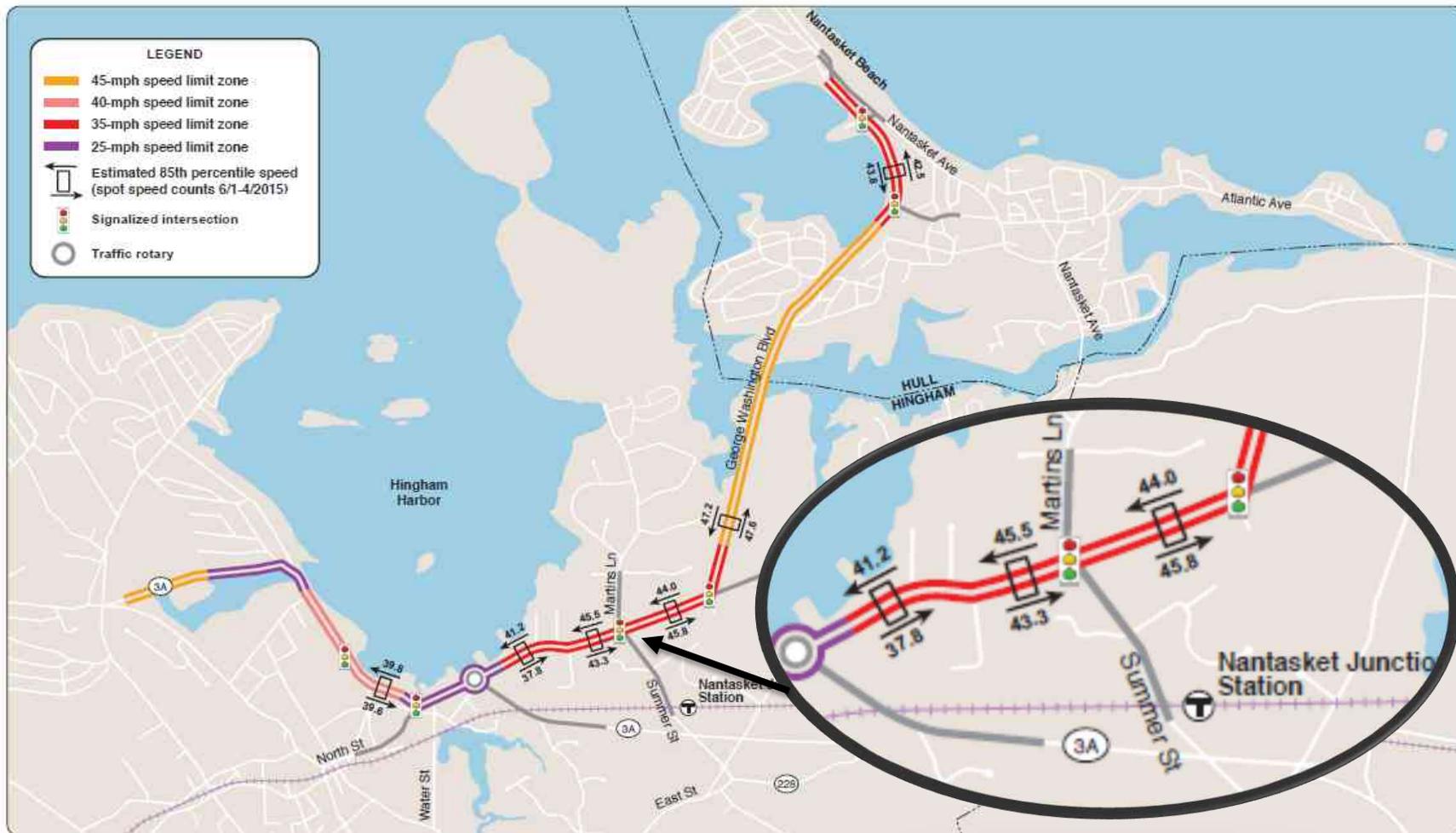


FIGURE 11
Speed Regulations and Estimated 85th Percentile Speeds
Summer Street/George Washington Boulevard in Hingham and Hull

Road Design Matters

The design of roads can have a considerable impact on their safety. Footpaths, cycling lanes, safe crossing points, and other traffic calming measures can be critical to reducing the risk of injury among these road users.

- Sidewalks reduce pedestrian crashes 88% (FHWA)
- Shoulders reduce pedestrian crashes 71% (FDOT)
- Medians reduce crashes 40% (NCHRP)
- Road diets reduce crashes 18 to 49% (ITE)

Source:

MassDOT Complete Streets 201 Training-Road Diets: Road Diet Handbook, Setting Trends for Livable Streets-World Health Organization - <http://www.who.int/mediacentre/factsheets/fs358/en/>

Design Considerations & Why a Road Diet ?

The state of Massachusetts owns the right of way (state-owned layout) and it is limited to staying within that area by the geometry. Any plan will seek to maximize the amount of space available.

Any redesign plan has to maximize the space available, and include all state-required elements. Per MassDOT requirements:

- Sidewalks must be provided and ADA compliant (wheelchair ramp accommodations)
- Bicycle lanes must be provided

Lane reductions & medians (road diets) optimize street space to benefit all users:

- By reducing speeds
- By improving safety and comfort for motorists, pedestrian and bicyclists.
- By reducing severity of accidents



Vissim Simulation Video (Eastbound)

Earthstar Geographics SIO
Image courtesy of USGS
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**Summer St/Rockland St Road Diet:
Build Saturday Mid-day Operations**



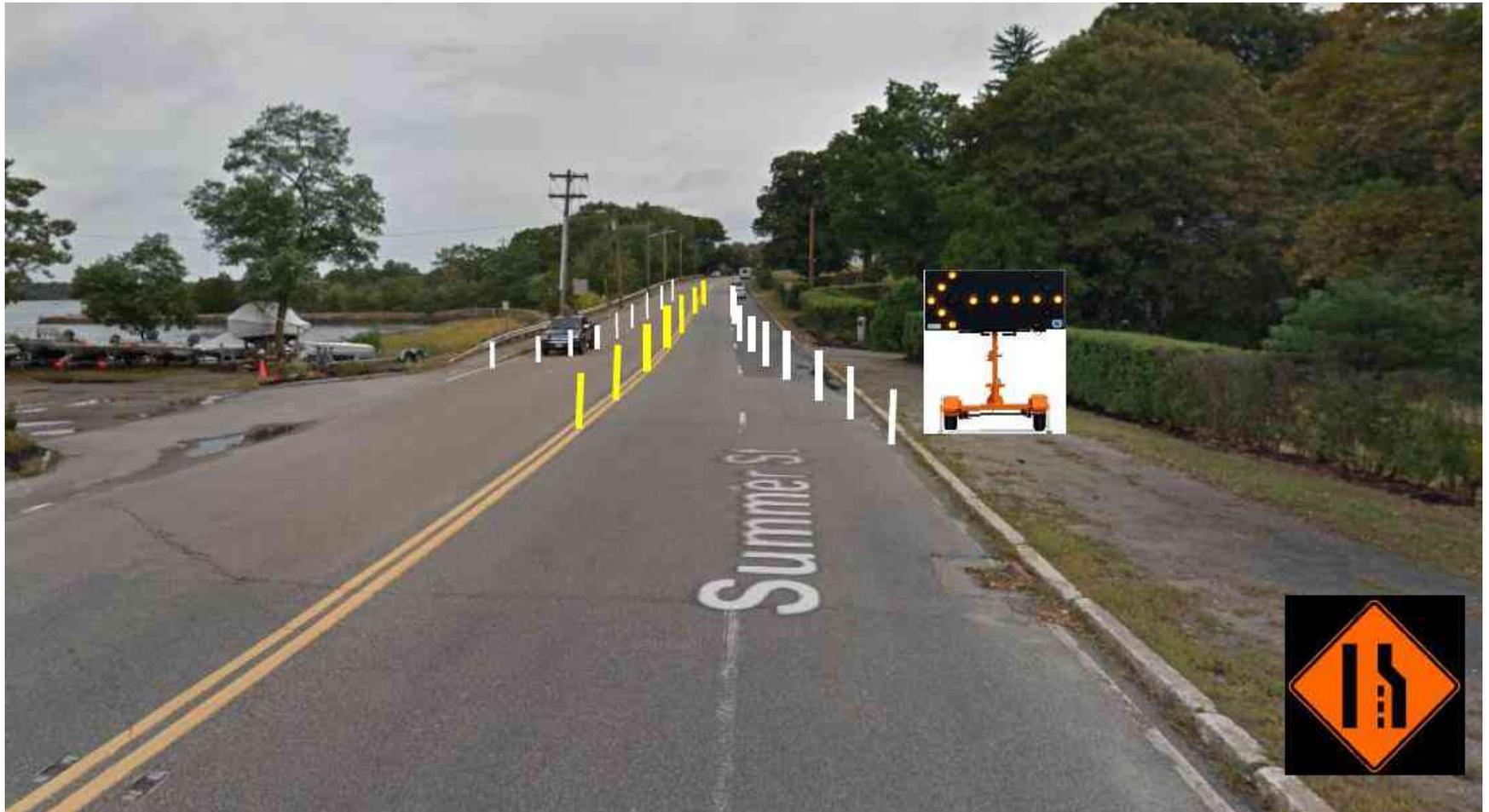
Vissim Simulation Video (Westbound)

Earthstar Geographics SIO
Image courtesy of USGS
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What will this look like

Eastbound out of Rotary



What will this look like

Eastbound



SHUR-FLEX Surface Mount Delineator

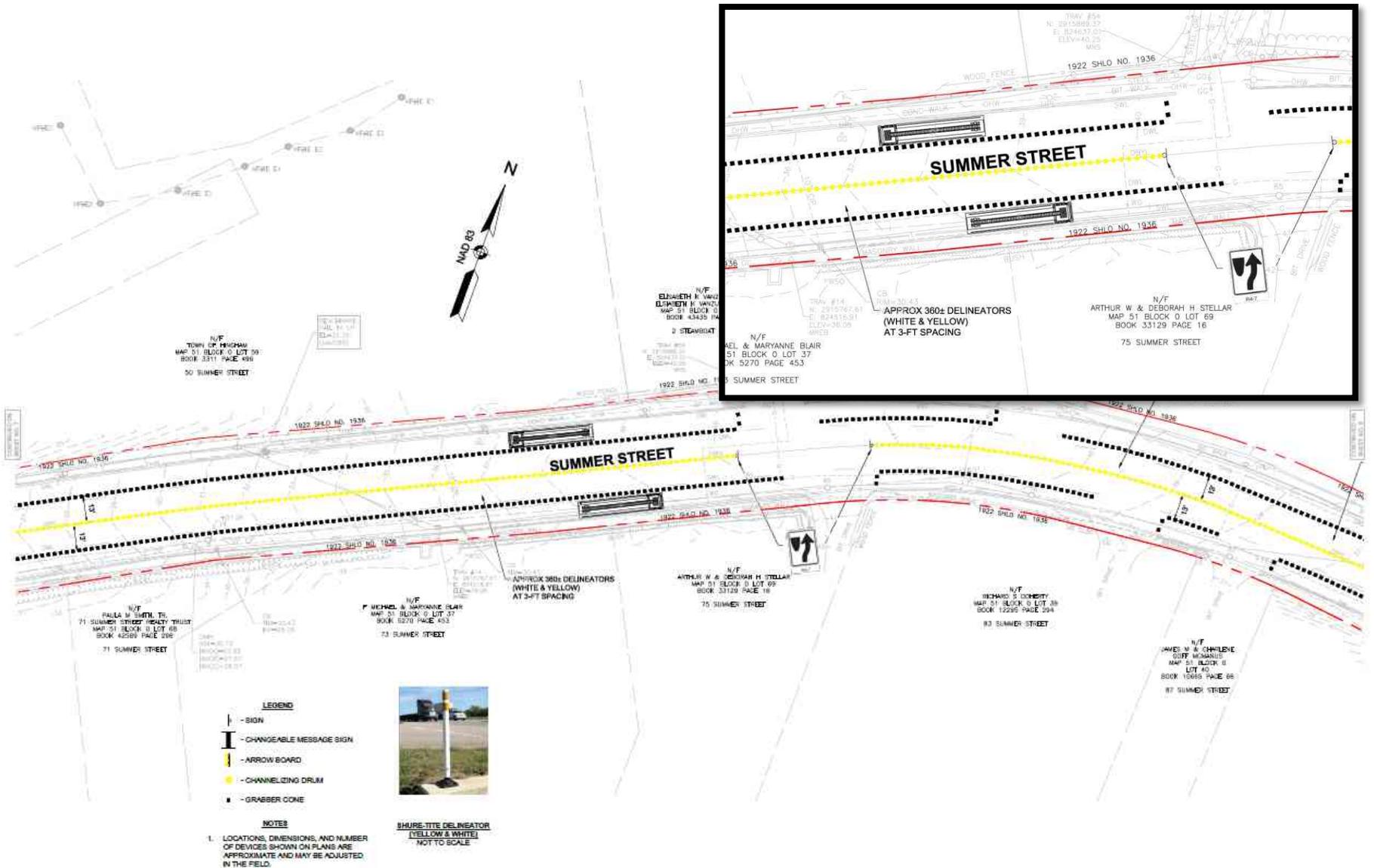


FEATURES AND BENEFITS

- durable system results in limited maintenance and fewer change-outs to save time and money
- can be bolted or epoxied to the road surface
- surface mount can be installed on vertical slopes up to 30 degrees
- simple, non-mechanical self-righting system
- uses the proven SHUR-FLEX® Square to Round Insert
- easy installation and post replacement—lessens the exposure of traffic and other dangerous situations to field personnel



Emergency Apparatus Access



Travel Time & Capacity (Computer Simulation Results):

Travel Time

Saturday Mid-day

Differences in Corridor Travel Time under Existing (4-lane) and Potential (2-Lane)
Measured by computer Modeling

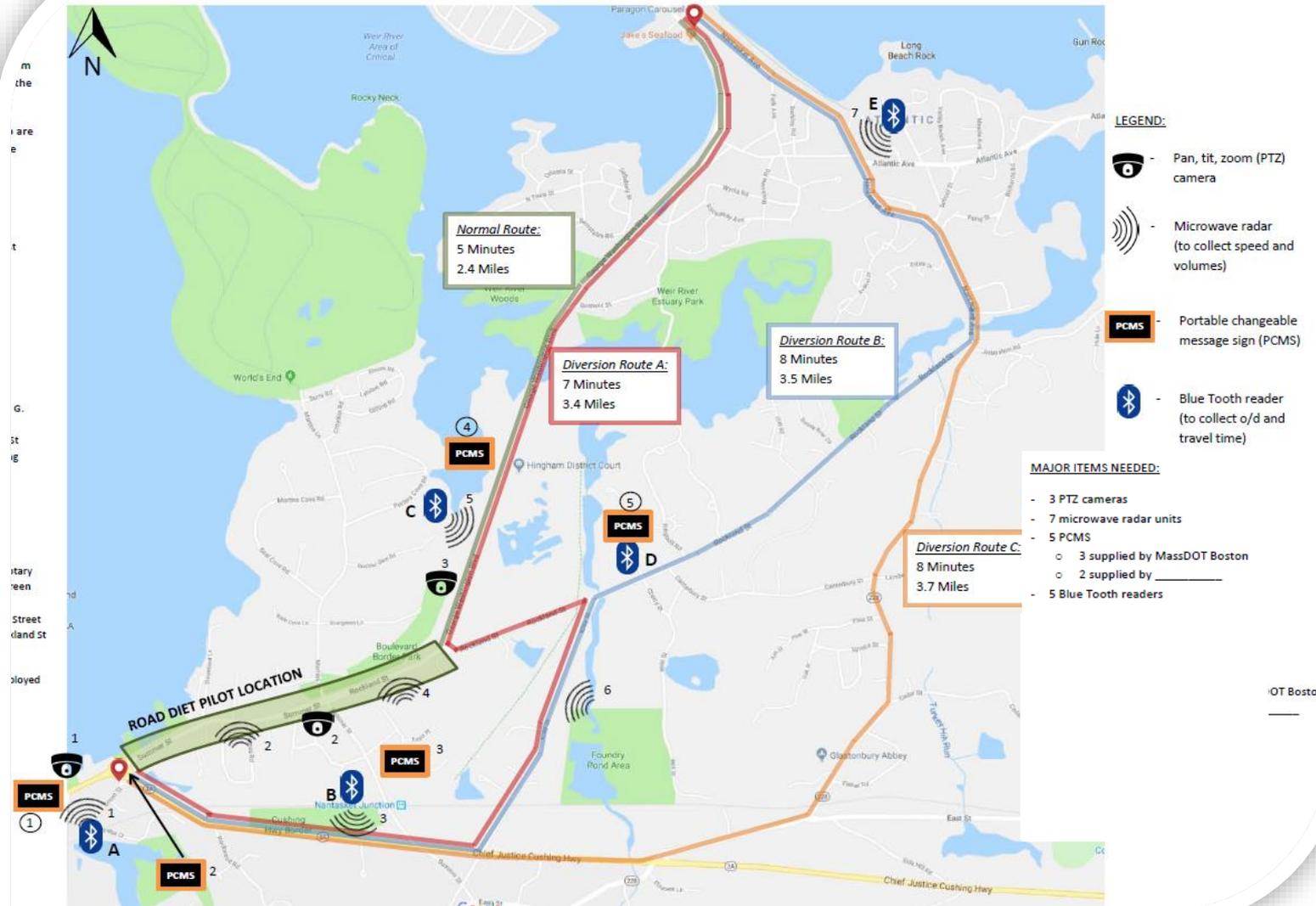
Road Segment	Existing (4-lane) in Seconds	Potential (2-Lane)	Difference in seconds	Percent Difference
Eastbound: From North St. to George Washington Blvd.	135.6	167.0	31.4	23.2%
Westbound: From Washington George Blvd. to North St.	143.0	149.8	6.8	4.7%

Capacity Results

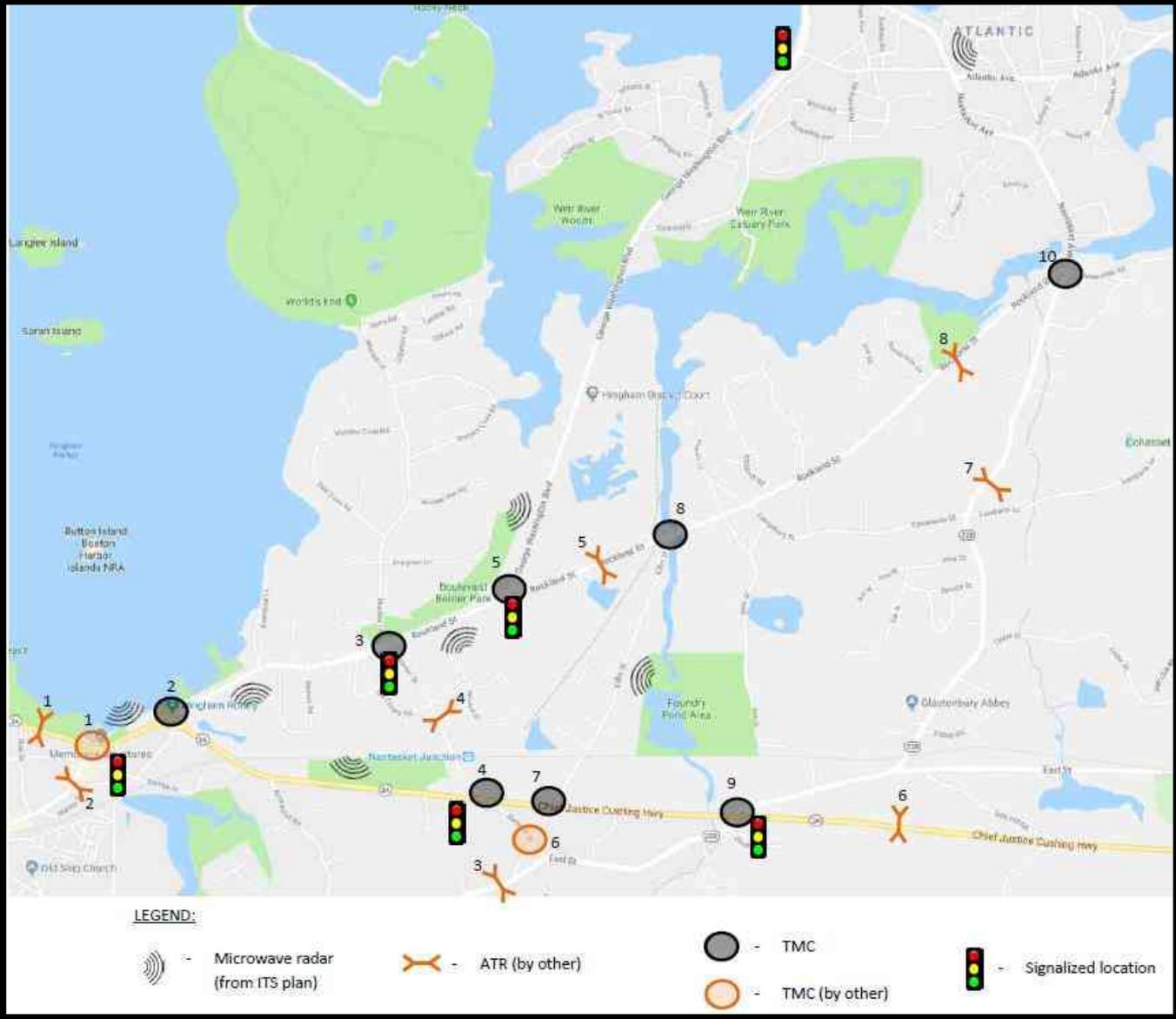
- WB throughput around **1,450** vehicles per hour per lane.
- The computer modeling indicates that there is no significant increase in travel time.
- Traffic counters and measuring devices will be installed during the proposed pilot to quantify spillover traffic (alternate route traffic & spillover effects on other facilities and neighborhoods)

Intelligent Transportation System (ITS)

Hingham, Summer Street and Rockland Street Road Diet Pilot ITS Plan



Traffic Counter Locations



Proposed Installation Dates / Breakdown

- Set-up of ITS Equipment / Data Collection Equipment:
Approx. April 19 - 23, 2018 *(One month prior to start of road diet per MassDOT)*
- Set-up of Variable Message Boards:
Approx. May 3 - 7, 2018
- Set-up of traffic control/ Start of Road Diet:
Approx. May 20, 2018
- Anticipated Completion of Road Diet:
Approx. July 30, 2018
- Evaluate Results Post Pilot

Communication Procedure During Pilot

- Municipal and State officials will continue to communicate and monitor the project
- We will keep the public informed through use of visual message boards MUNICIPAL WEBSITES MassDOT WEBSITE, along with ongoing PRESS releases and SOCIAL MEDIA.

Anecdotally the Fore River Bridge project was a success with no significant traffic issues or complaints.

Questions – Thoughts?

The purpose of this Pilot Program is to test the viability of a road diet by collecting data to that measures impacts and informs future dialogue.