



Public Safety & Transportation Committee Report

City of Newton **In City Council**

Wednesday, February 7, 2018

Present: Councilors Ciccone (Chair), Auchincloss, Downs, Markiewicz, Noel, Lipof and Grossman

Absent: Councilor Cote

Also Present: Councilor Kelley

City Staff: Jim McGonagle, Commissioner of Public Works; Lou Taverna, City Engineer; Barney Heath, Director of Planning and Development; Chief Bruce Proia, Newton Fire Department; Rachel Blatt, Long Range Planner; Stephen Simoglou, Traffic Engineer; Nicole Freedman, Director of Transportation for Planning; Jonathan Yeo, Chief Operating Officer and Amy Hamel, Chief of Staff Public Works

Referred to Public Safety and Transportation and Public Facilities Committees

#51-18

West Newton Square Enhancements Project

COMMISSIONER OF PUBLIC WORKS, DIRECTOR OF PLANNING & DEVELOPMENT and COUNCILORS COTE, KELLEY, & BROUSAL-GLASER requesting approval pursuant to §26-51 of the City of Newton Ordinances for the West Newton Square Enhancements Project on Washington Street running approximately from Chestnut Street to Lucas Court.

Public Facilities Approved 5-0-3 Gentile, Laredo and Lappin abstaining on 01/17/18

Action: Public Safety & Transportation Approved 6-0-1, Ciccone abstaining

Note:

Mr. Heath provided Council members with a PowerPoint presentation, attached to this report.

Mr. Heath stated that this project began in June 2016. He provided an overview of the proposed West Newton Square redesign. At times, West Newton Square can be extremely challenging for bicyclists, motorists and pedestrians. There is currently no bike infrastructure and only eight of eighty trees remain from thirty years ago.

The project includes changes to curb alignments, widening sidewalks and public plazas, advanced traffic signalization, clear crosswalk markings and the installation of bicycle lanes. All of the proposed improvements are designed with a focus on ensuring public safety while maximizing efficiencies and enhancing West Newton Square. The Planning Department has been working to design the Square with improvements to the pedestrian and vehicle experience, to help encourage a lively but safer village center. Mr. Heath stated that the City will take advantage of planting new trees, improve storm water quality and will aim to encourage walking, biking and transit use.

Mr. Heath reviewed with Council members the current street design and proposed changes. Throughout the corridor, the project includes relocating a bus stop to the opposite side of the intersection, the island will be moved and parking will be added by relocating a fire hydrant to the opposite side of the street. The project will result in a net gain of twenty-two parking spaces including accessible parking spaces and one motorcycle space. A new, raised island in front of Waltham Street will be installed to help prevent left hand turns onto Watertown Street. Left turns will now be prohibited from Elm Street. As requested by some business owners a few short term parking spaces will be available and installed near the courthouse and four new parking spaces will be installed near the post office. Traffic signals will be synchronized and the general traffic flow in the square will allow evacuation of the intersection during emergencies. Some crosswalks will be relocated. Bollards will be installed in front of the Newton Police Station. The bridge entering West Newton Square will be reduced to two lanes of traffic with a buffer on the south side to protect the proposed bike lane. The proposed plan includes a floating bus stop. Floating bus stops are placed on the outside of a bike lane, allowing minimized conflict points and reducing time pulling travel in and out of traffic.

Ms. Freedman stated that the five-foot bike lanes will have a three-foot buffer on both sides of the street. Around the Country, these are how bike lanes are being designed. Education will be necessary. Safety data proves that the buffer benefits bike lanes by providing a 30-50% decrease in crashes with protected facilities.

Mr. Heath noted that there are currently six uncoordinated signals in a space of a 1/4 mile, contributing to driver frustration and unsafe conditions for pedestrians and bicyclists. The transportation strategy noted that MassDOT has identified West Newton Square as a hot spot for accidents involving vehicles and pedestrians.

Committee member's questions, suggestions and concerns:

- If a driver opens their door onto a bicyclist who is responsible for the accident? Ms. Freedman answered that this is happening now without buffered bike lanes. It is the drivers responsibility to look for a bicyclist, it would be the driver's fault.
- Do driver's education classes are educating drivers to be alert of bicyclists? Ms. Freedman answered that Mass Bike works with the Registry of Motor Vehicles on educating drivers. An option for education including safety rules for bicyclists could be provided through the annual Excise Tax Bill when bike lanes are installed and expanded.
- How will drivers be educated? Mr. Heath stated that visual signs and education would be necessary. He envisions the City educating drivers and public demonstrations on the street regarding bicyclists. Ms. Freedman added that temporary education signs could be installed on the street and the option through the annual Excise Tax Bill, emails, newsletters and the Newton Police Department when bike lanes are installed and expanded. A committee member suggested creating a web page.
- What is proper procedure when you first approach a bike lane? Ms. Freedman answered education is necessary to provide drivers with education on road markings. Research has proven that drivers typically move to the side of the bicyclist.

- Will the bike lanes heading west on Washington Street have buffers? Ms. Blatt answered that this location is a transition area. Mr. Heath noted this is the area where a significant amount of sixteen parking spaces will be installed. This area is designed to go from three travel lanes to two travel lanes in a business district to deter speeders.
- Can the proposals be adjusted moving forward? Ms. Freedman answered that if this plan project is not accommodating, it can be tweaked; the City is confident the project is correct. Ms. Freedman then noted that the bike lane buffers will be painted green in conflict and/or complicated areas such as Waltham/Watertown and Washington Streets intersection. Ms. Freedman does not recommend painting the Washington Street corridor buffer lanes green. Green paint should be used sparingly. Mr. Heath stated that some flex posts could be installed to deter vehicles reinforcing bike lanes.
- How many people were contacted and worked on this project? Ms. Blatt answered that approximately 350 emails were received and 200 conversations. Mr. Heath noted that Ms. Blatt and the community engagement manager, Ms. Reynolds visited and reached out to every business in the corridor. All West Newton businesses are aware of this plan.
- Will parking meters be upgraded and if the parking meters accept credit cards? Ms. Freedman answered that the parking meters would not be upgraded at this time. Parking meters only accept passport. To have dynamic pricing, parking meters would have to be upgraded.
- Did you consider installing new parking meters as part of the project? Ms. Blatt answered that new parking meters is ongoing but not part of this project. Mr. McGonagle stated that the City has reviewed and put out bids for smart meters. Once the bids were received, the City reviewed the bids but determined that the City would have to spend a significant amount of money on technology that is rapidly changing. The City is in the process of reviewing parking meters that could serve as Wi-Fi hot spots and identify empty parking spaces. The City is using kiosks and will try as a pilot on city streets this year.
- A committee member asked Mr. Heath to compare this project with the Auburndale Square project? Mr. Heath answered that he is not familiar with the Auburndale Square project. The West Newton Square project provides balance without sacrificing public safety. Chief Proia and Chief MacDonald provided assistance on public safety matters and concerns.
- The project is an improvement to make Newton a bike friendly community. It is necessary for bicyclists to take more responsibility such as paying for citations. Bicyclists need to be educated and they should be cited for unacceptable behavior.
- It is hopeful, the City will move forward with new parking meter technology. Mr. McGonagle answered yes; it is the City's intent.
- A suggestion was made that the list of goals presented should include village vitality, foot traffic, village feel, extra parking and bike friendly.

Chair Ciccone opened the discussion to members of the public who were present. David Donahue from Tody's Service, Inc. stated that he was concerned about Tody's center driveway. Prior to June 2016, he received a phone call from the City proposing that the City will close off the driveway. Mr. Donahue spoke with Mr. Heath and Mr. McGonagle regarding his concern they indicated that the driveway will not be closed, the driveway will be shortened and a proposal of different driveway angles drastically affecting Tody's business. Mr. Donahue said that it is now a process problem. He then stated that he supports this project including the proposed bike lanes, safety is necessary. He shared another concern regarding the inside bike lane from Cherry Street to Elm Street as he thinks visual difficulties may pose a problem. He suggests eliminating another two parking spaces on Washington Street because site visibility is extremely important. Ms. Freedman stated that the City would review the standard recommendations. Mr. Donahue then stated that Mr. Heath and Mr. McGonagle agree that the crosswalk locations need to be tweaked.

A committee member asked Mr. Donahue if he felt comfortable with the proposal for the driveway? Mr. Donahue said that he would continue conversations hoping to tweak the design of the driveway and reach an agreement with Mr. Heath and Mr. McGonagle at a site visit. Mr. Heath said that the proposed plan has been tweaked to better accommodate movement of Tody's vehicles. It is necessary to accommodate pedestrian crossings and Tody's large vehicle movements. The City has tried to preserve the width and pavement room to allow Tody's vehicles movements by maintaining public safety. The City will review crosswalk locations at Tody's Service, Inc. Mr. Donahue stated that the proposed crosswalk was there until 1988. Mr. Donahue then stated that it took seven years for the City to agree to a left hand turn from Washington Street onto Chestnut Street; the Federal Government did not agree.

A committee member asked if the crosswalk proposed at Elm and Washington Streets is satisfactory or shall it be tweaked? Mr. Heath stated that these four crosswalks were designed for maximum pedestrian safety. He does not know if the proposed crosswalks can be tweaked and agreed to review this request. Mr. McGonagle agreed to review this request.

Alicia Bowman, President, Bike Newton; stated that Bike Newton represents approximately 1600 members who have expressed that they are very excited and support this proposal. She stated that it is necessary to provide safe delineated bike lanes and crosswalks. She stated that often times when drivers or pedestrians observe bicyclists making unsafe moves is because there are no delineated bike lanes. Research proves that approximately 7% of the time, drivers, bicyclists and pedestrians are making unsafe moves. Bicyclists want to make safe moves and be safe. She then stated that she has spoken Newton North High School student who also expressed support of this proposal.

Committee members stated that this project is a well thought out process and thanked Mr. Heath and all for their time and effort on this project. Chair Ciccone thanked Mr. Heath and Ms. Blatt for their diligence, time and effort on this project.

Mr. McGonagle stated that this proposal is conceptual. The final design of West Newton Square project will be discussed in the Public Facilities Committee.

Without further discussion, Councilor Lipof made a motion to approve the West Newton Square enhancement project. Council members agreed 6-0-1, Councilor Ciccone abstaining. Chair Ciccone stated that he was abstaining because the City was to conduct a trial in April of 2017, this did not happen; he is awaiting a trial to begin.

At approximately, 8:20 p.m., Councilor Lipof made a motion to adjourn. Council members agreed 7-0.

Respectfully submitted,

Allan Ciccone, Jr. Chair



West Newton Square Enhancements Project

City Council Discussion
February 7, 2018

Department of Planning and
Community Development

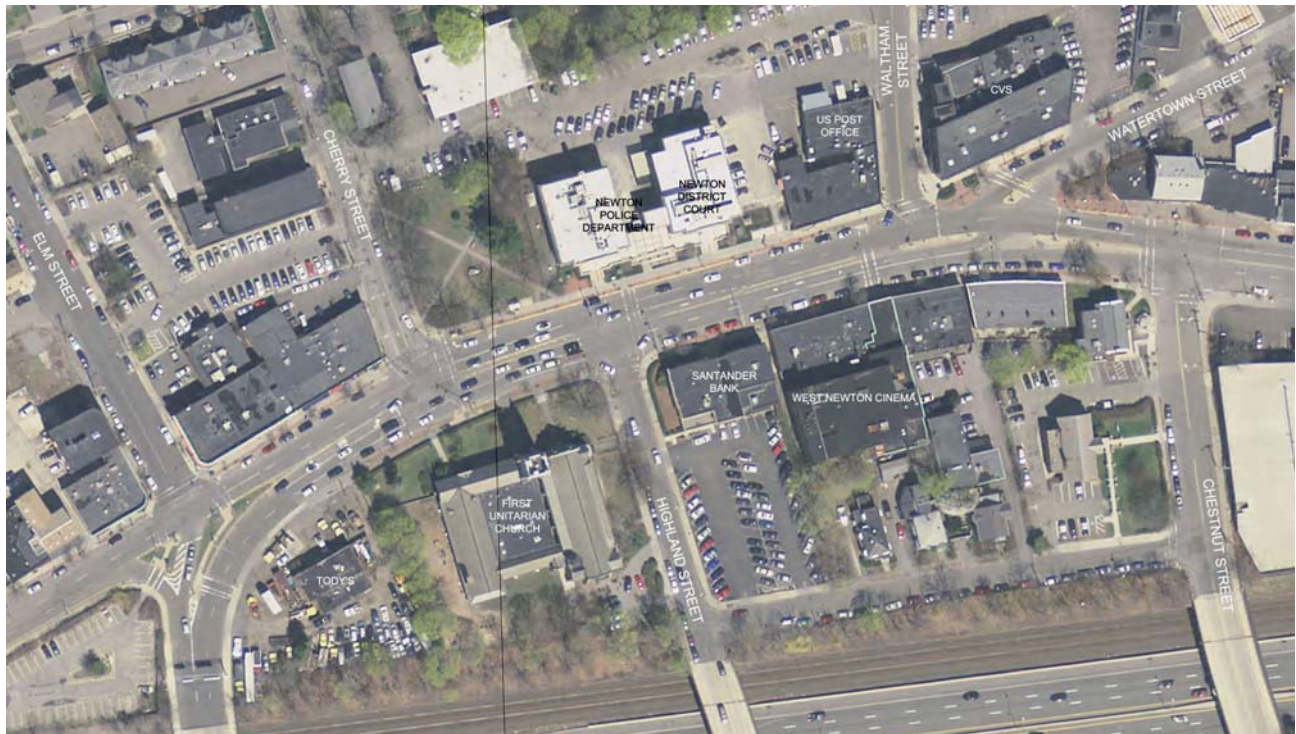
Department of Public Works



Ruthanne Fuller
Mayor



#51-18 West Newton Square Enhancements
Public Safety & Transportation
February 7, 2018



West Newton Square Today

#51-18 West Newton Square Enhancements
Public Safety & Transportation
February 7, 2018

Project Goals

Maximize **Safety** and convenience for all travel modes

- Simplify intersections and traffic patterns
- Accommodate bicycles
- Improve wayfinding to MBTA services and to parking

Enhance Pedestrian **Experience** / Village Character

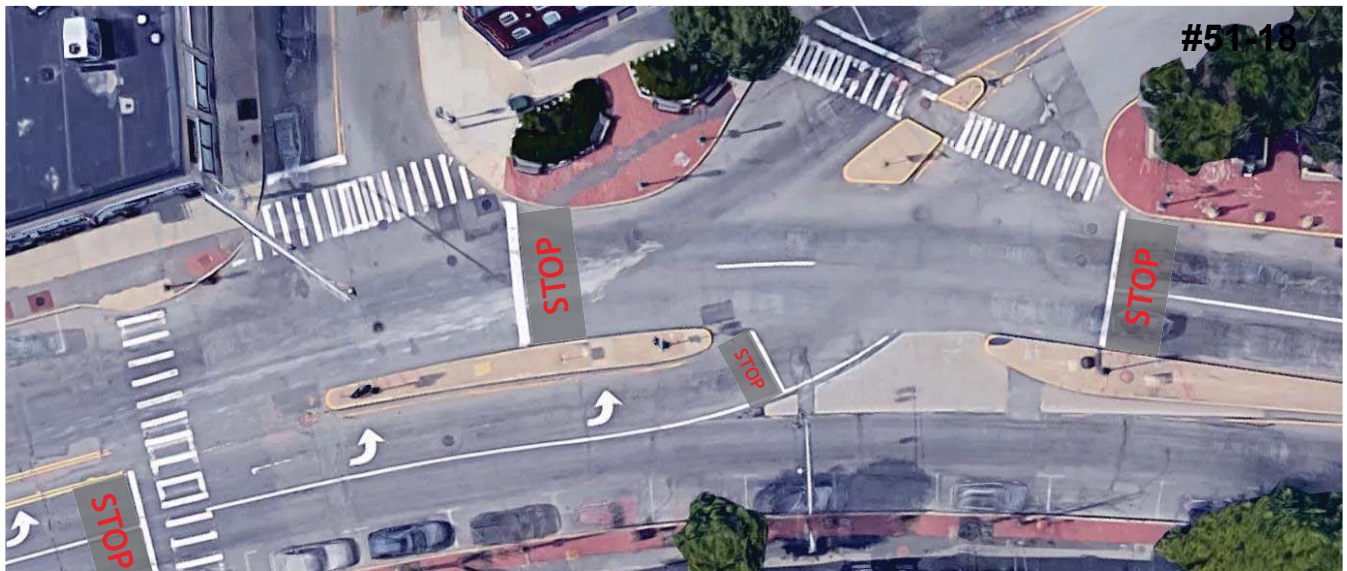
- Vehicular traffic calming
- More direct and rational pedestrian crossings and routes
- Places to linger and socialize
- Pleasant and maintainable streetscape and landscape elements

Benefit the **Environment**

- Increased tree canopy to mitigate urban “heat island”
- Green Infrastructure to improve stormwater quality
- Encourage walking, biking and transit use

PROPOSED IMPROVEMENTS

#51-18



Eastbound
Google StreetView



Washington @ Watertown & Waltham - Plaza & Square

#51-18 West Newton Square Enhancements
Public Safety & Transportation
February 7, 2018



West Newton Square - Plaza

#51-18 West Newton Square Enhancements
Public Safety & Transportation
February 7, 2018



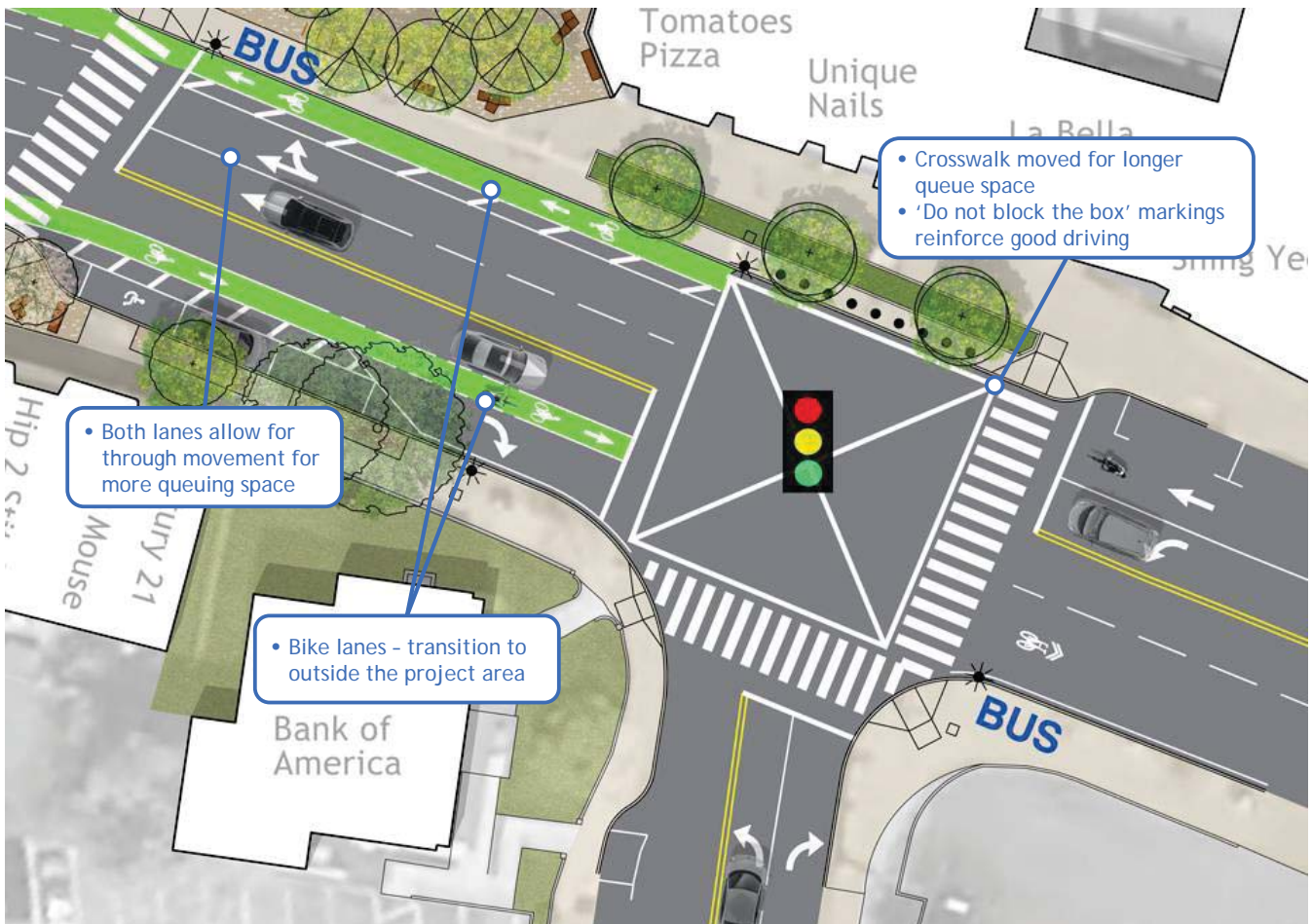
- 20 new high-visibility crosswalks
- 3 accessible stalls
- All new, modern traffic signal equipment

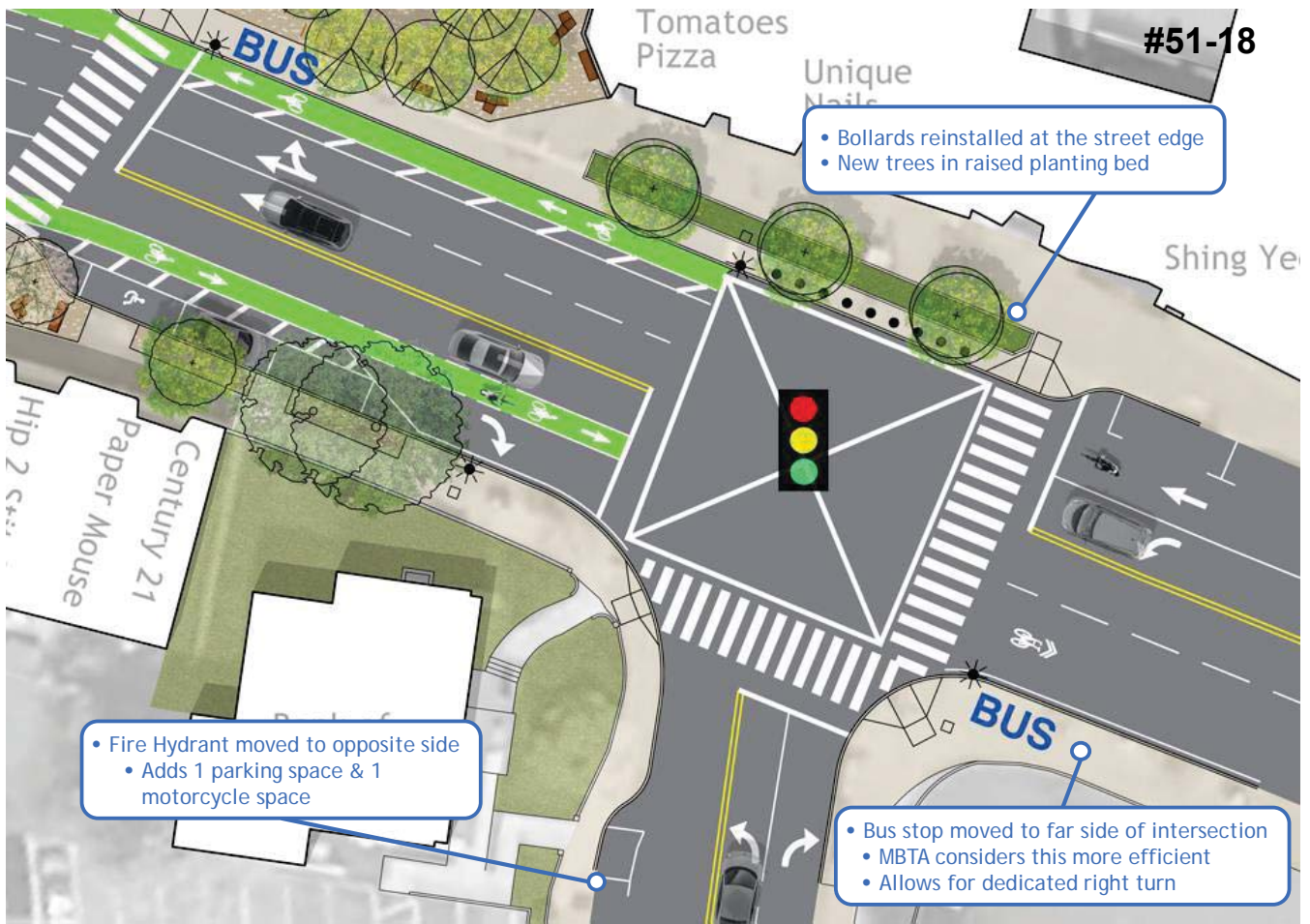


Transportation Summary

#51-18 West Newton Square Enhancements
Public Safety & Transportation
February 7, 2018

BLOCK BY BLOCK

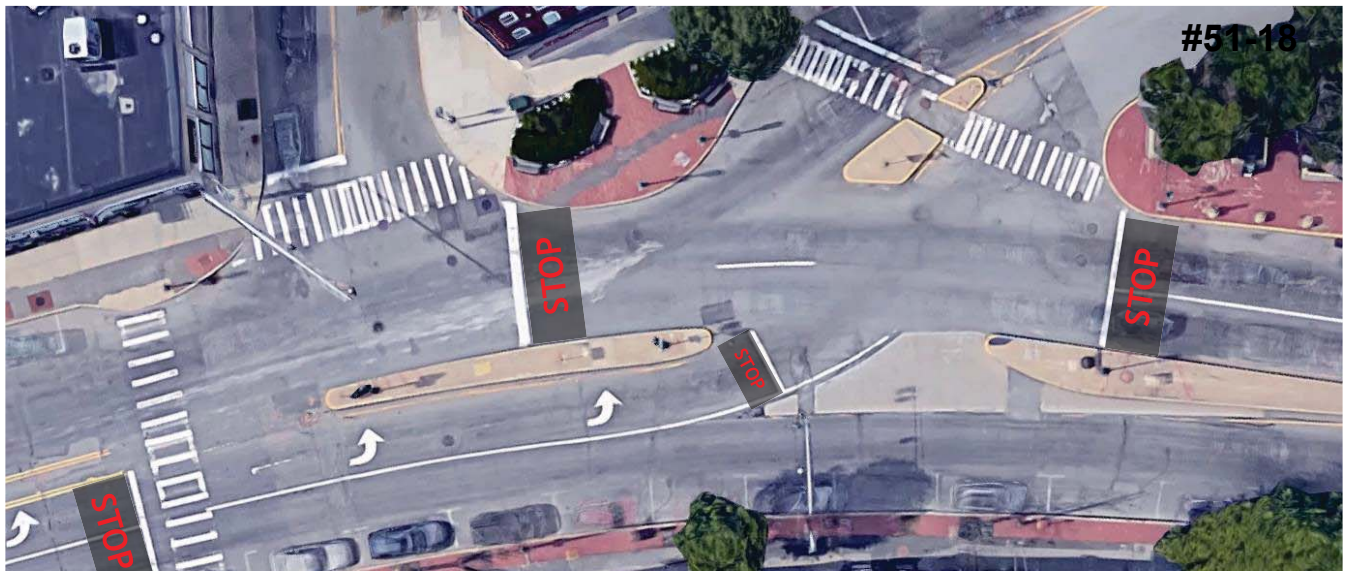




H2Rkmdg KLOPFER MARTIN DESIGN GROUP

Washington @ Watertown & Waltham - Plaza & Square

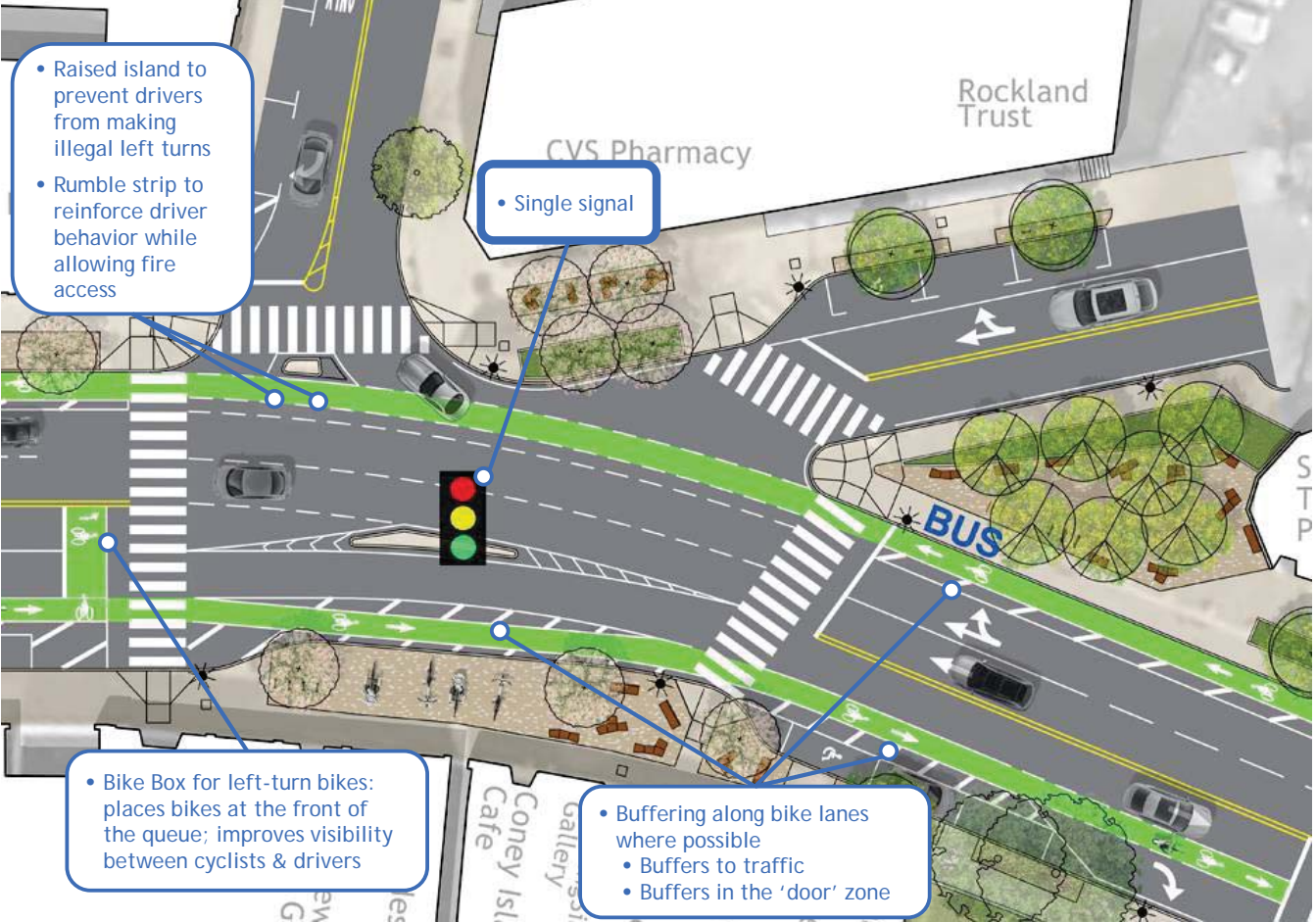
#51-18 West Newton Square Enhancements
Public Safety & Transportation
February 7, 2018

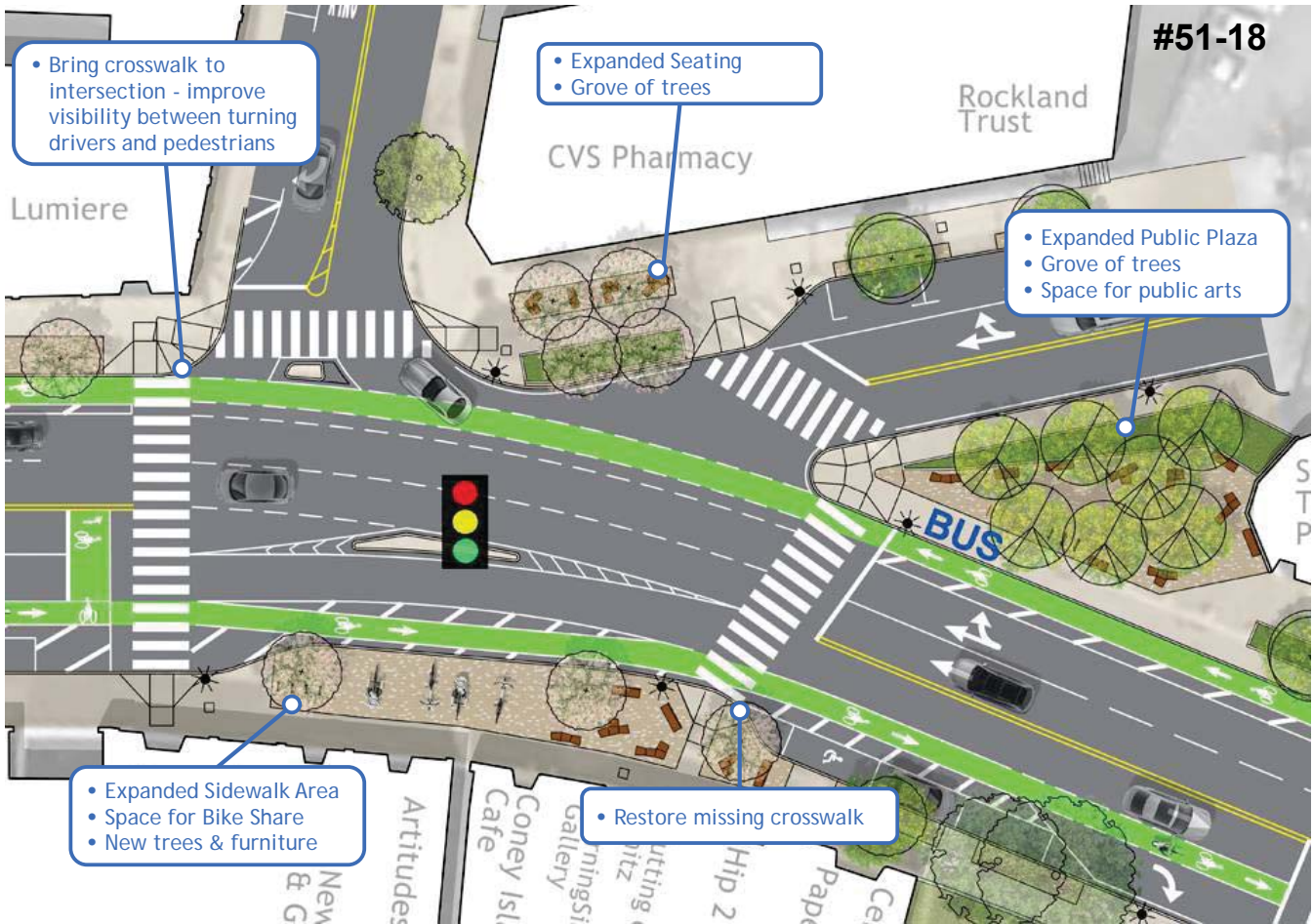


Eastbound
Google StreetView

Washington @ Watertown & Waltham - Plaza & Square

#51-18 West Newton Square Enhancements
Public Safety & Transportation
February 7, 2018





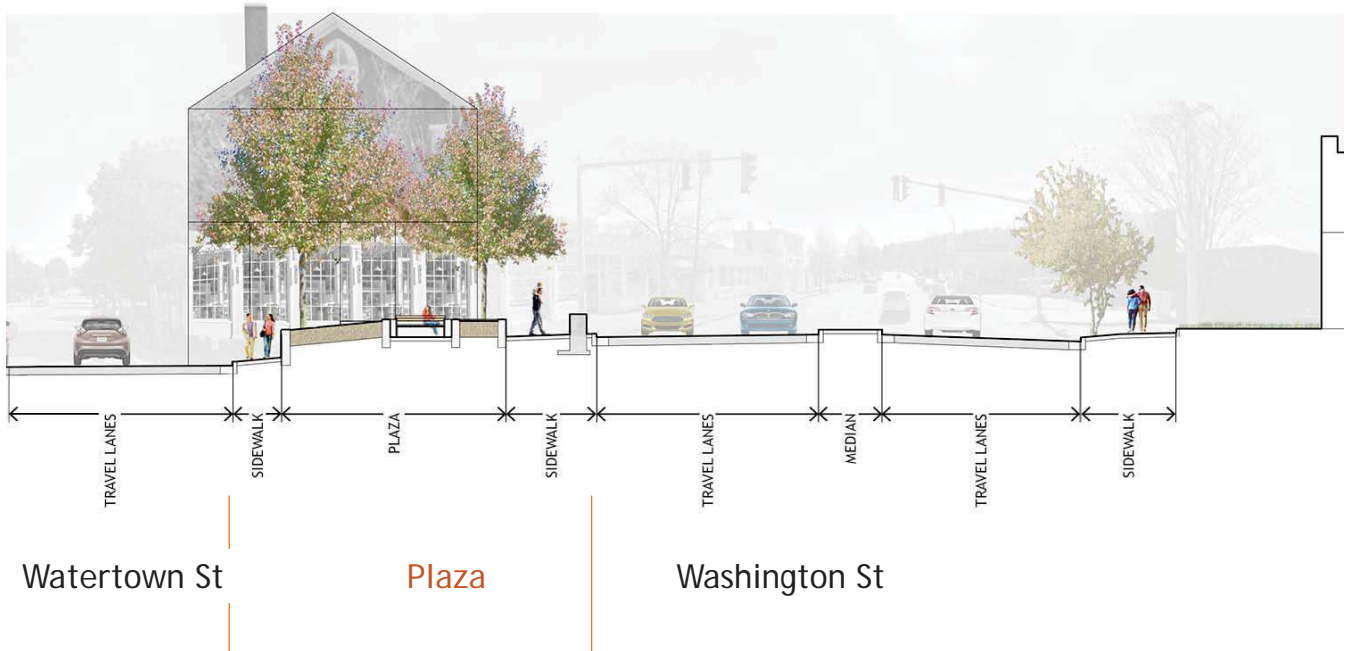
Washington @ Watertown & Waltham - Plaza & Square

#51-18 West Newton Square Enhancements
Public Safety & Transportation
February 7, 2018

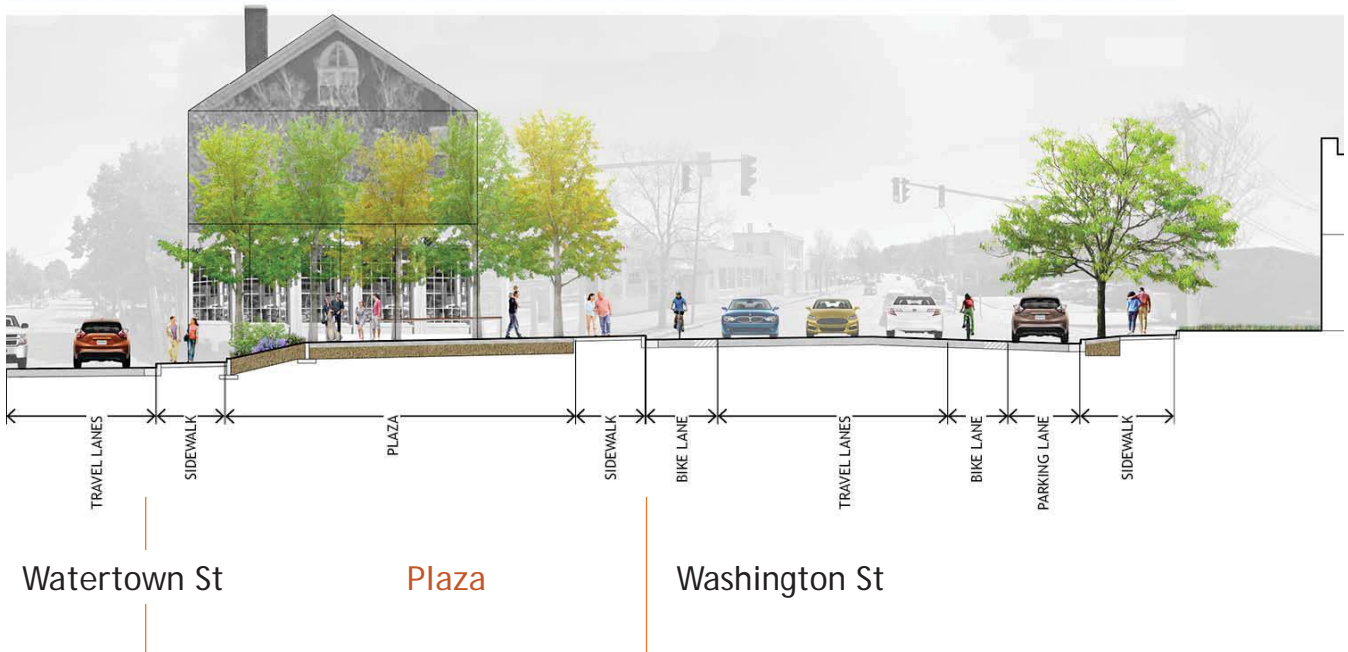


Washington @ Watertown & Waltham - Plaza & Square

#51-18 West Newton Square Enhancements
Public Safety & Transportation
February 7, 2018

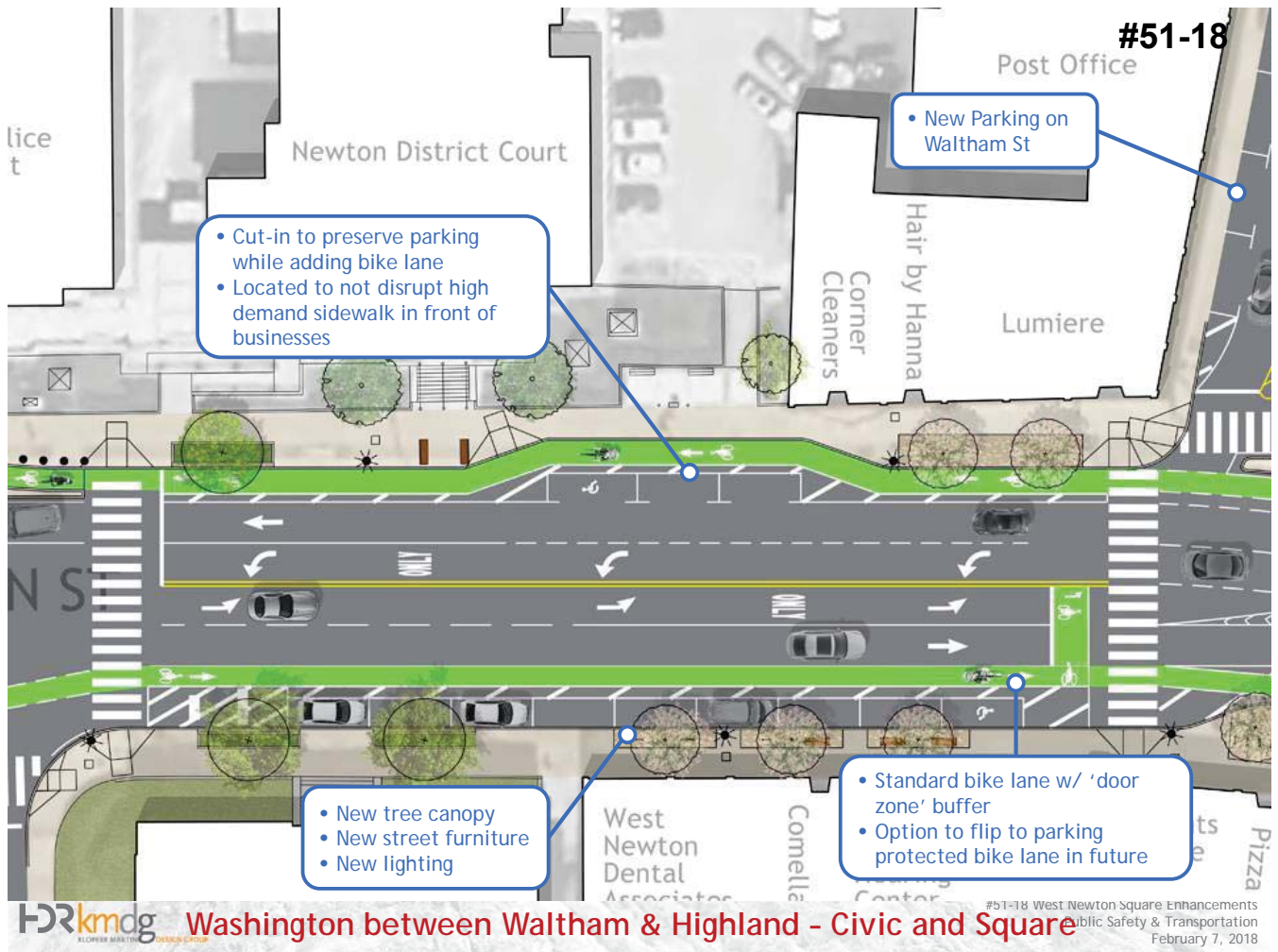


PLAZA TODAY



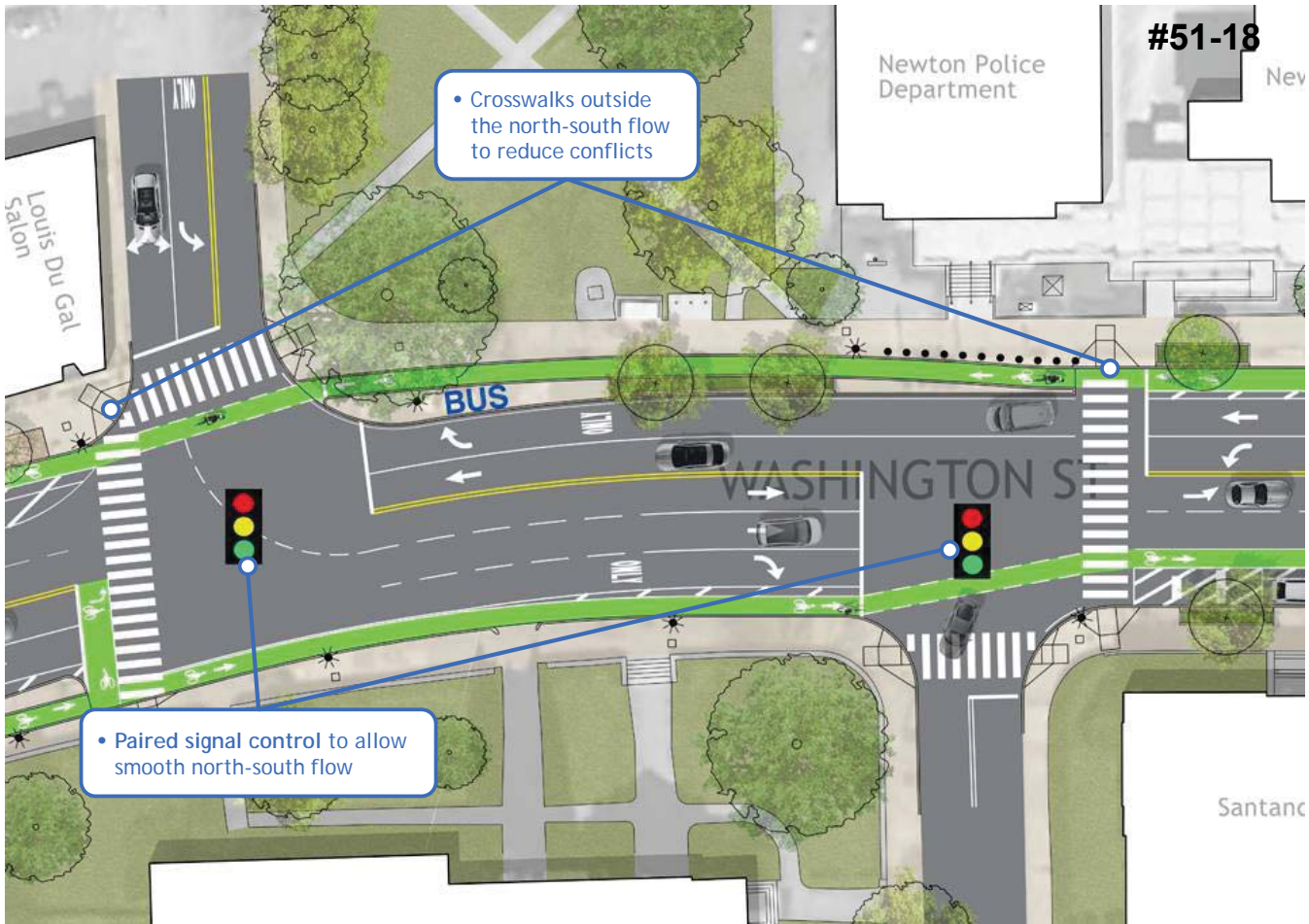
PLAZA - PROPOSED





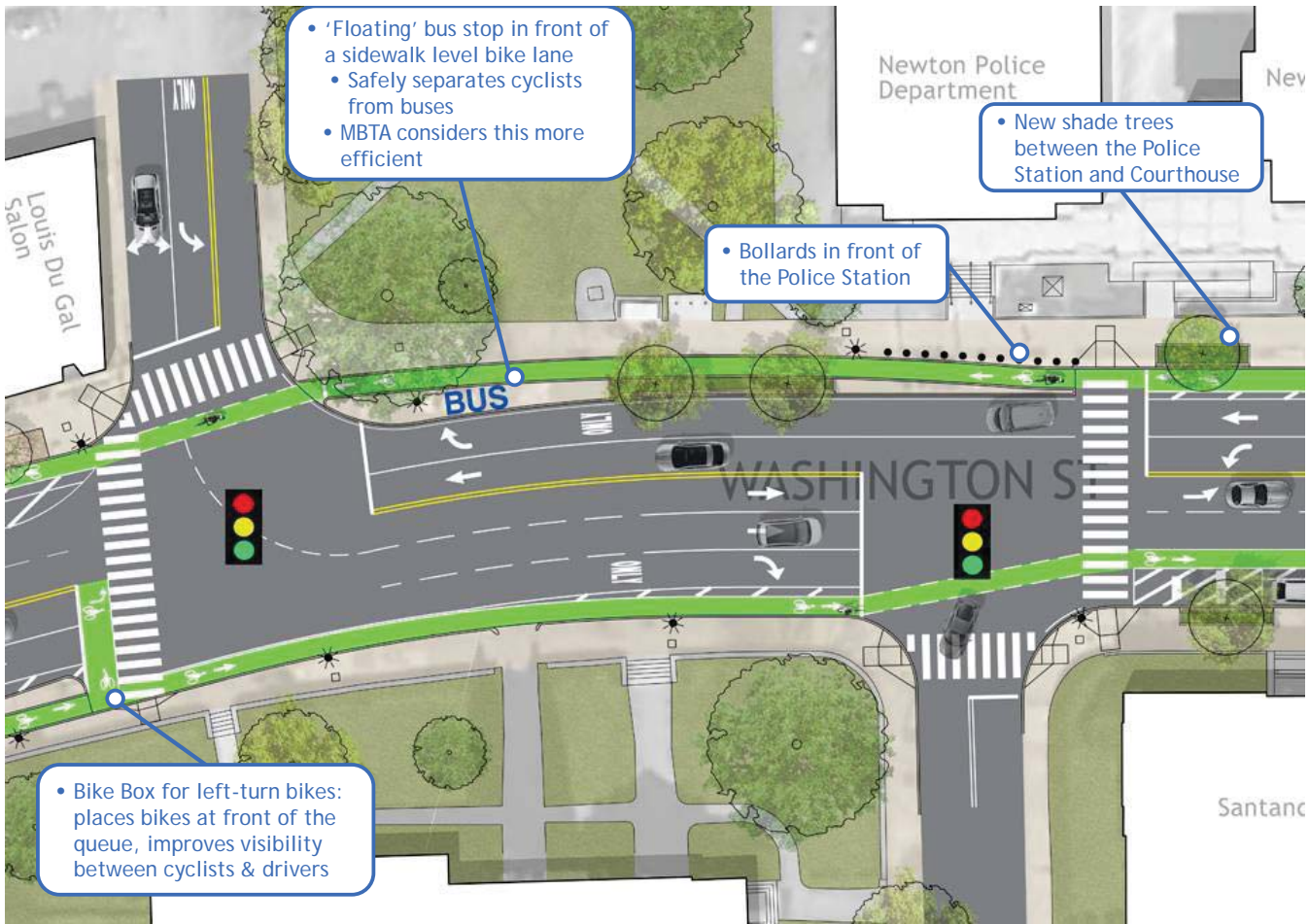
HRkmdg **Washington @ Cherry & Highland - Civic Streetscape**

#51-18 West Newton Square Enhancements
Public Safety & Transportation
February 7, 2018



• Crosswalks outside the north-south flow to reduce conflicts

• Paired signal control to allow smooth north-south flow

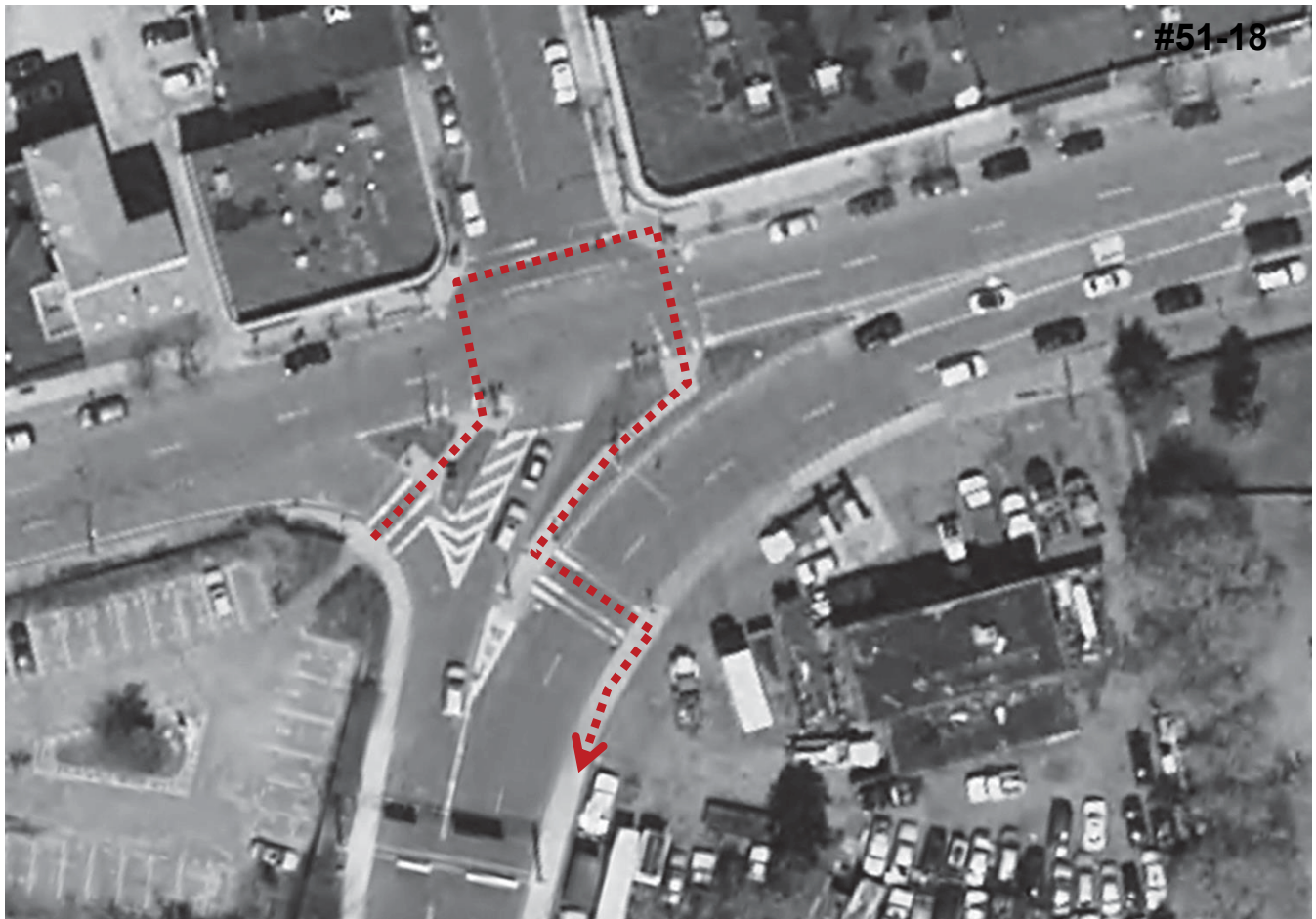


• 'Floating' bus stop in front of a sidewalk level bike lane
• Safely separates cyclists from buses
• MBTA considers this more efficient

• New shade trees between the Police Station and Courthouse

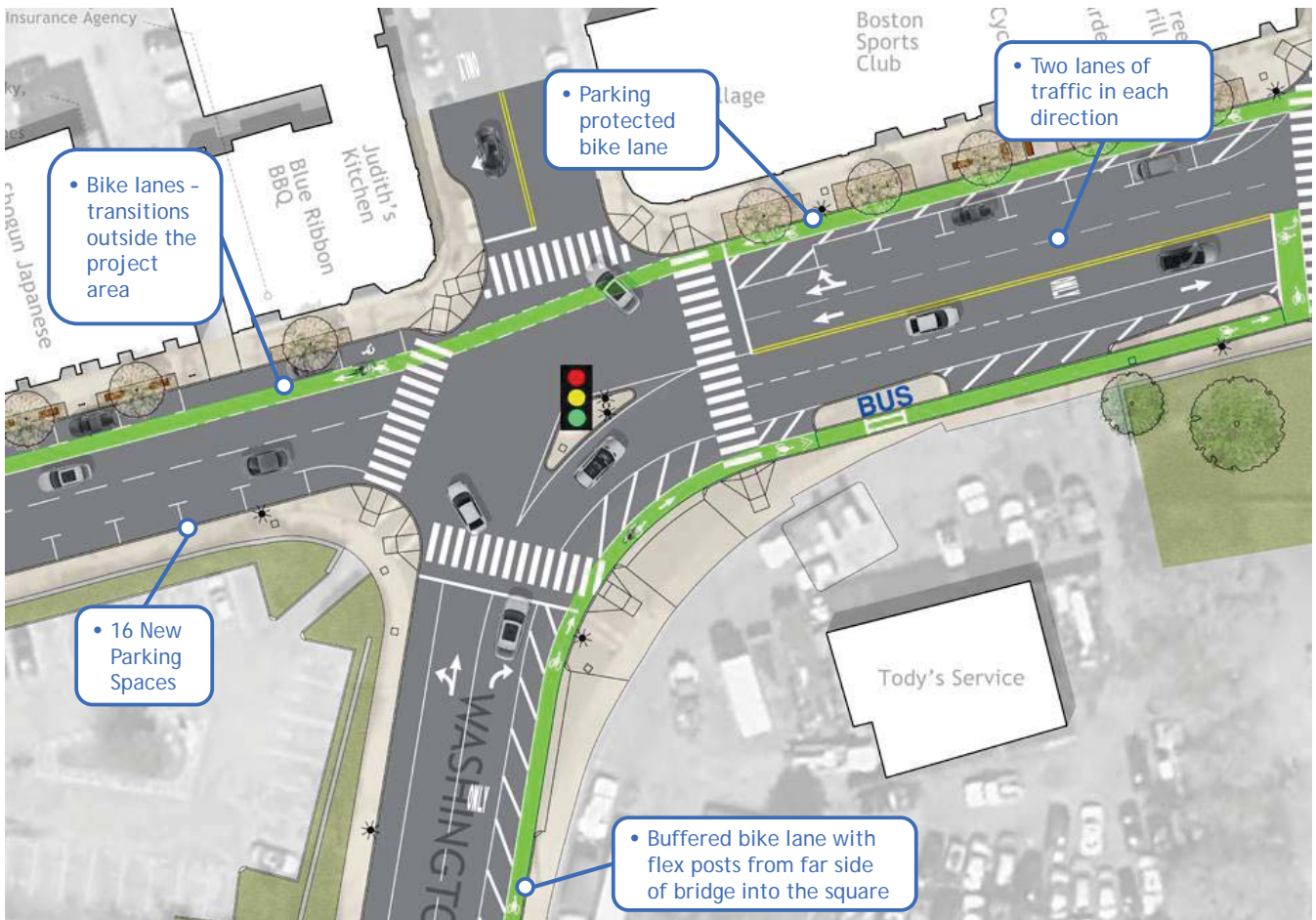
• Bollards in front of the Police Station

• Bike Box for left-turn bikes: places bikes at front of the queue, improves visibility between cyclists & drivers



Washington @ Elm - Gateway & Storefront Streetscape

#51-18 West Newton Square Enhancements
Public Safety & Transportation
February 7, 2018



• Bike lanes - transitions outside the project area

• Parking protected bike lane

• Two lanes of traffic in each direction

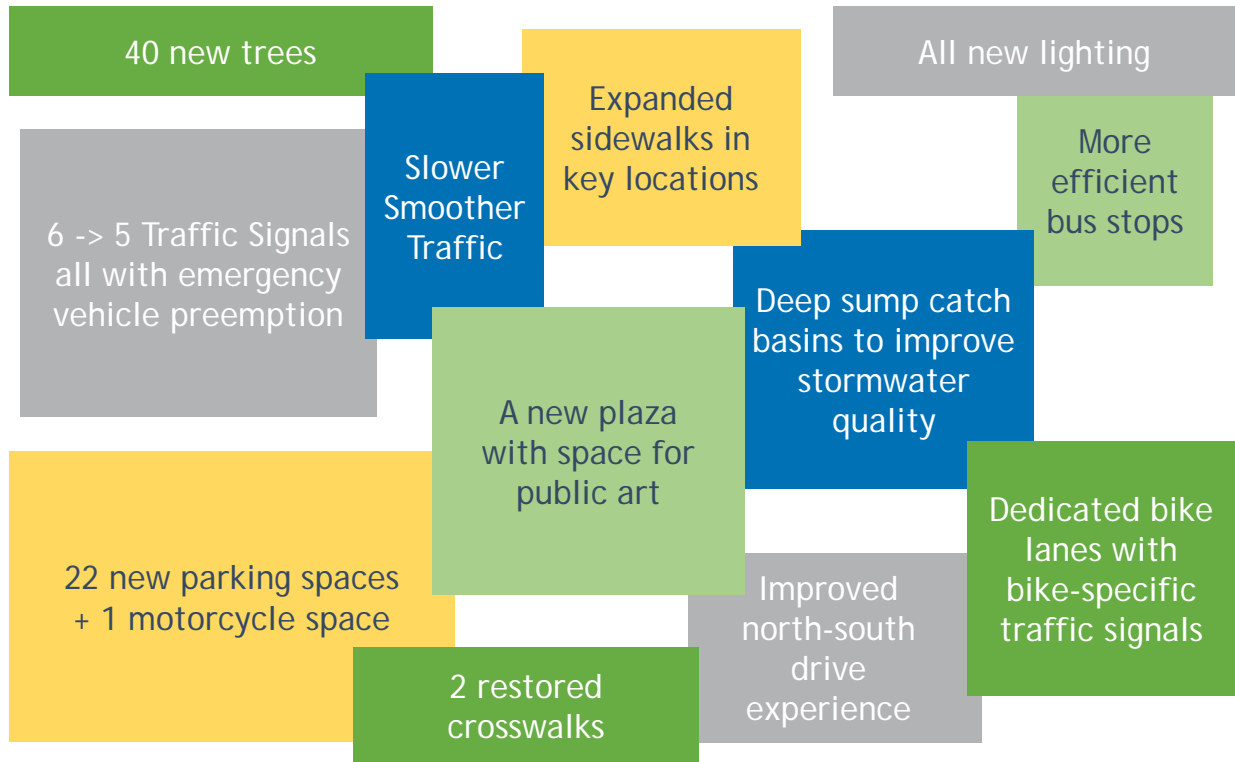
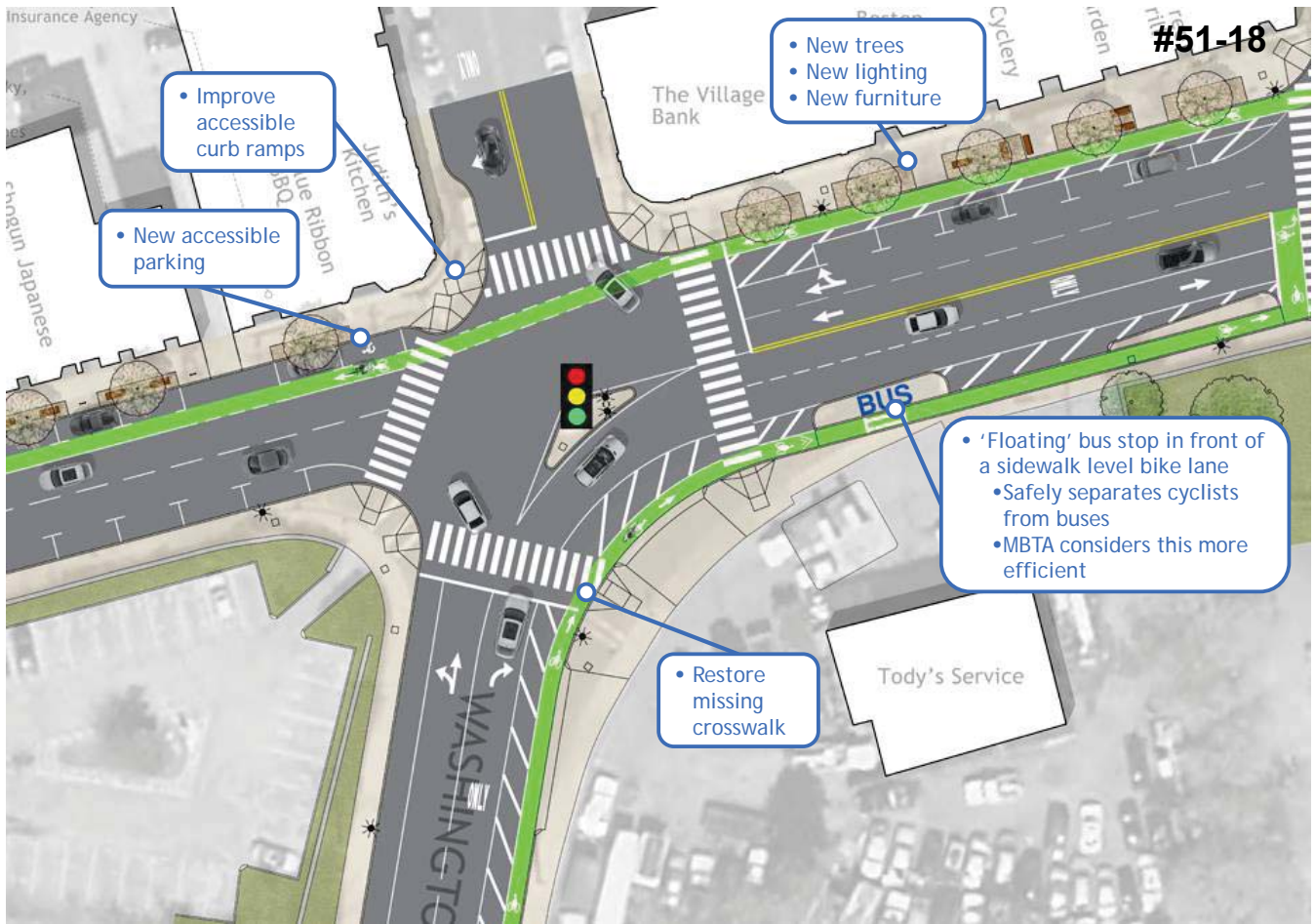
• 16 New Parking Spaces

• Buffered bike lane with flex posts from far side of bridge into the square

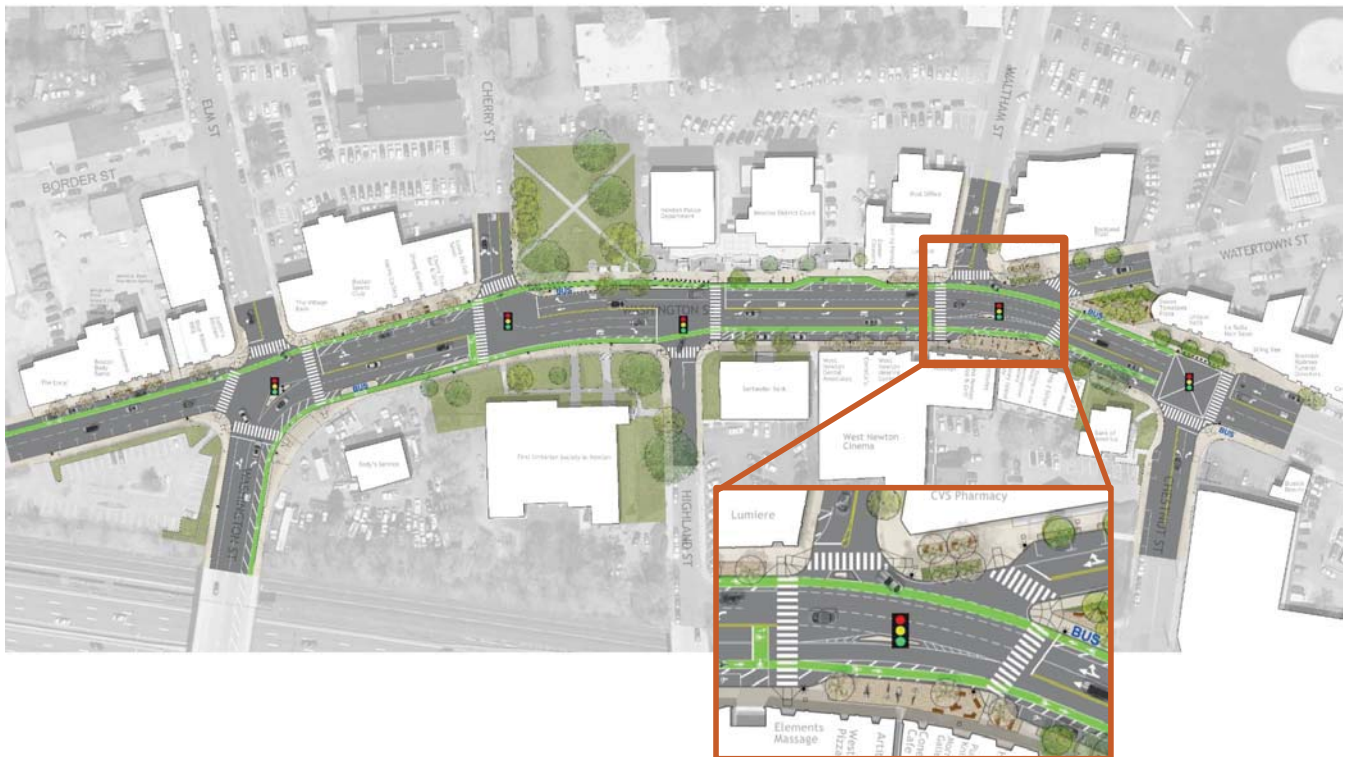


Washington @ Elm - Gateway & Storefront Streetscape

#51-18 West Newton Square Enhancements
Public Safety & Transportation
February 7, 2018



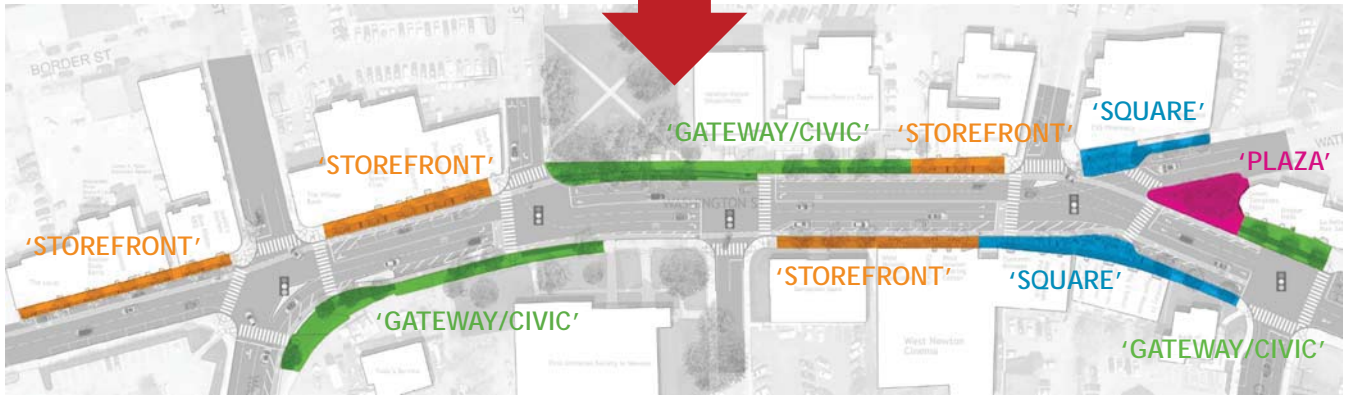
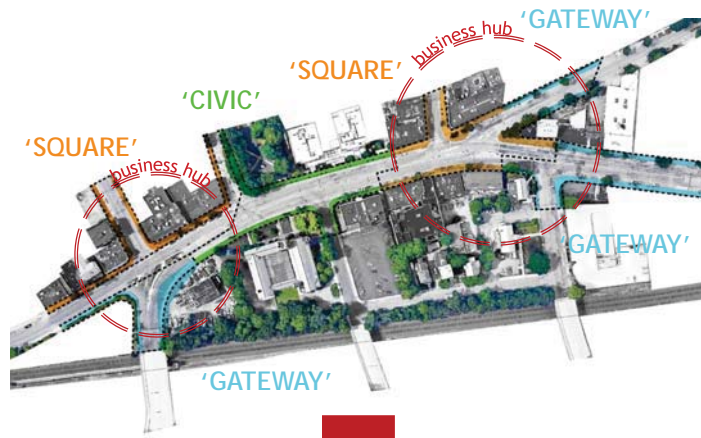
REFERENCE MATERIALS





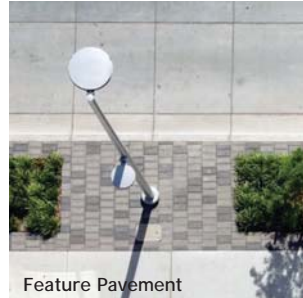
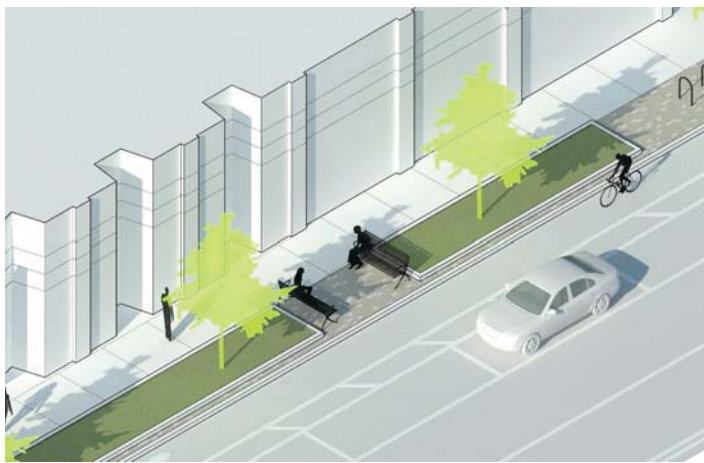
Additional Material

LANDSCAPING

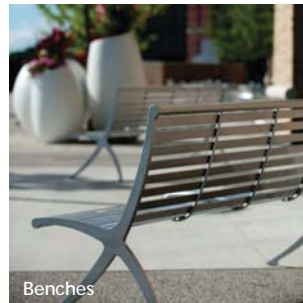


Concept to Detail - Streetscape Types

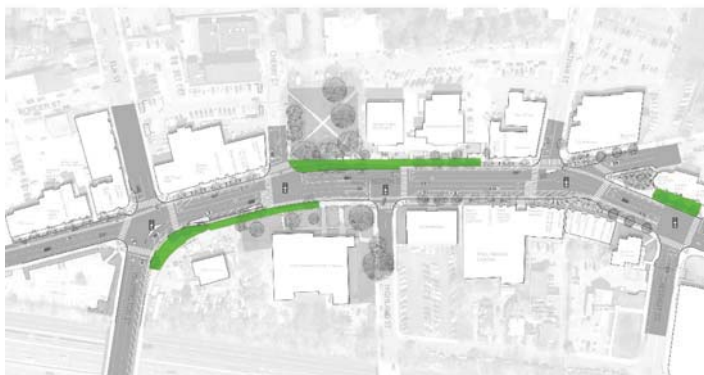
#51-18 West Newton Square Enhancements
Public Safety & Transportation
February 7, 2018



Feature Pavement



Benches



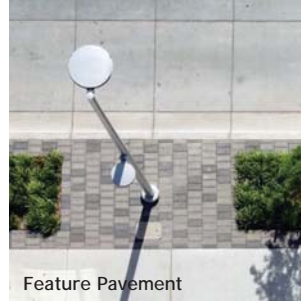
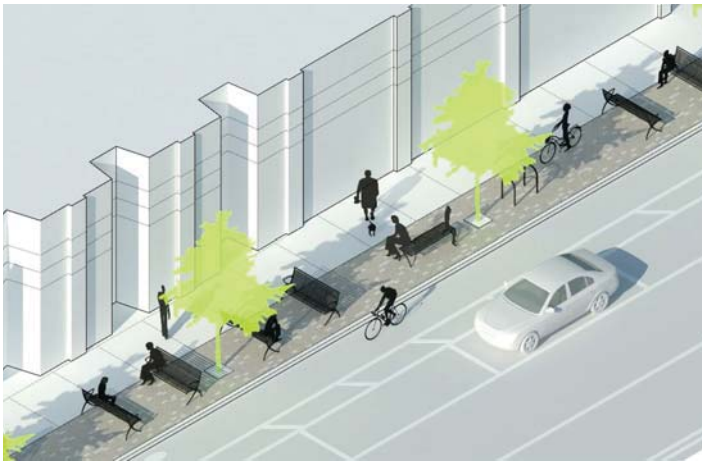
Trees in Raised Planters



'Gateway/Civic' Streetscape

#51-18 West Newton Square Enhancements
Public Safety & Transportation
February 7, 2018

#51-18



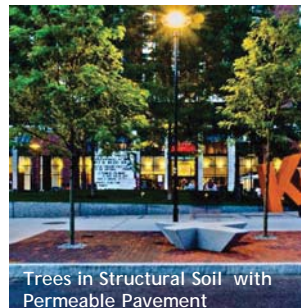
Feature Pavement



Benches



Bike Racks

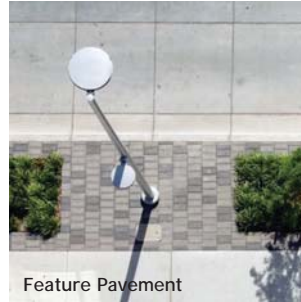


Trees in Structural Soil with Permeable Pavement



'Storefront' Streetscape

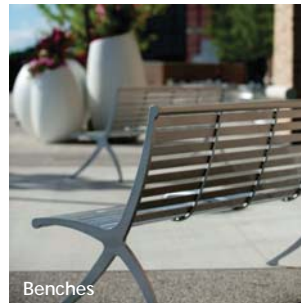
#51-18 West Newton Square Enhancements
Public Safety & Transportation
February 7, 2018



Feature Pavement



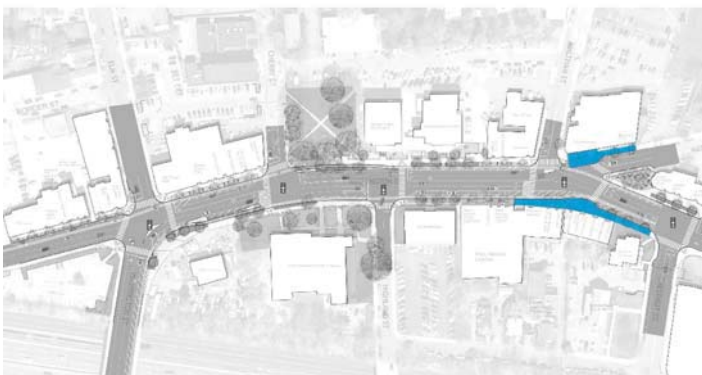
Special Furniture



Benches



Bike Racks

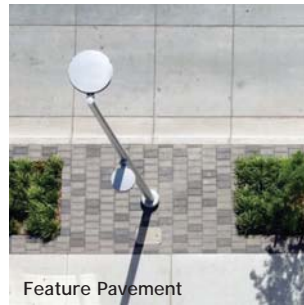


Trees in Structural Soil with Permeable Pavement



'Square' Streetscape

#51-18 West Newton Square Enhancements
Public Safety & Transportation
February 7, 2018

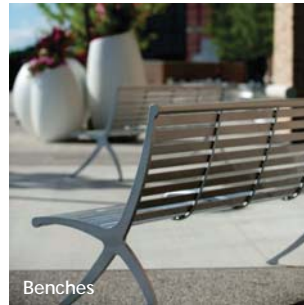
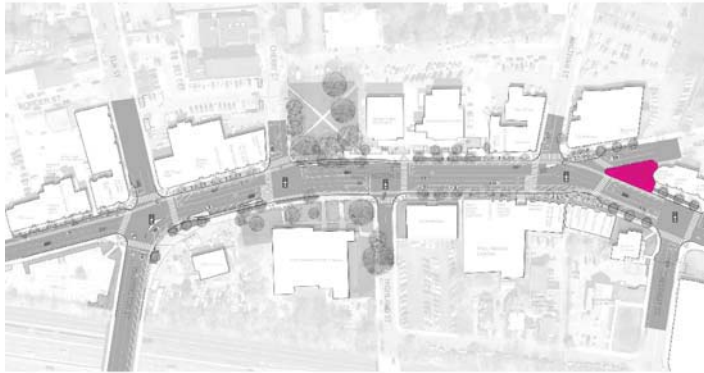


Feature Pavement



#51-18

Special Furniture



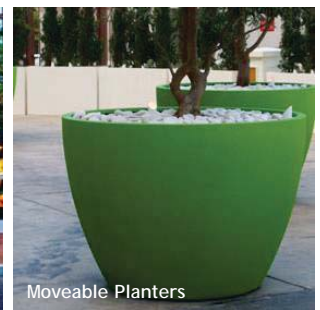
Benches



Sculptural Bike Racks



Trees in Structural Soil with Permeable Pavement



Moveable Planters



'Plaza' Streetscape

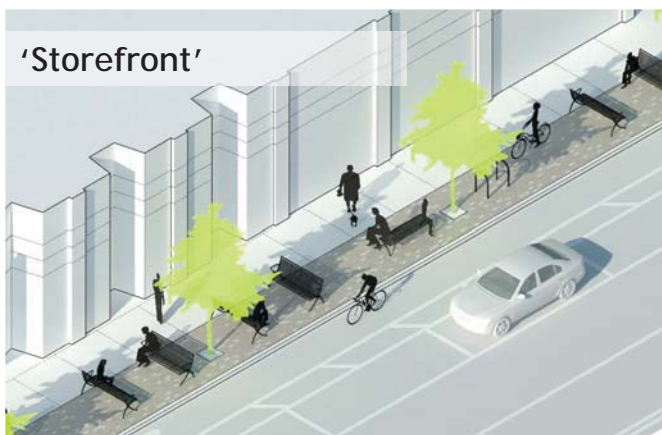
#51-18 West Newton Square Enhancements
Public Safety & Transportation
February 7, 2018



'Gateway/Civic'



'Square'



'Storefront'



'Plaza'



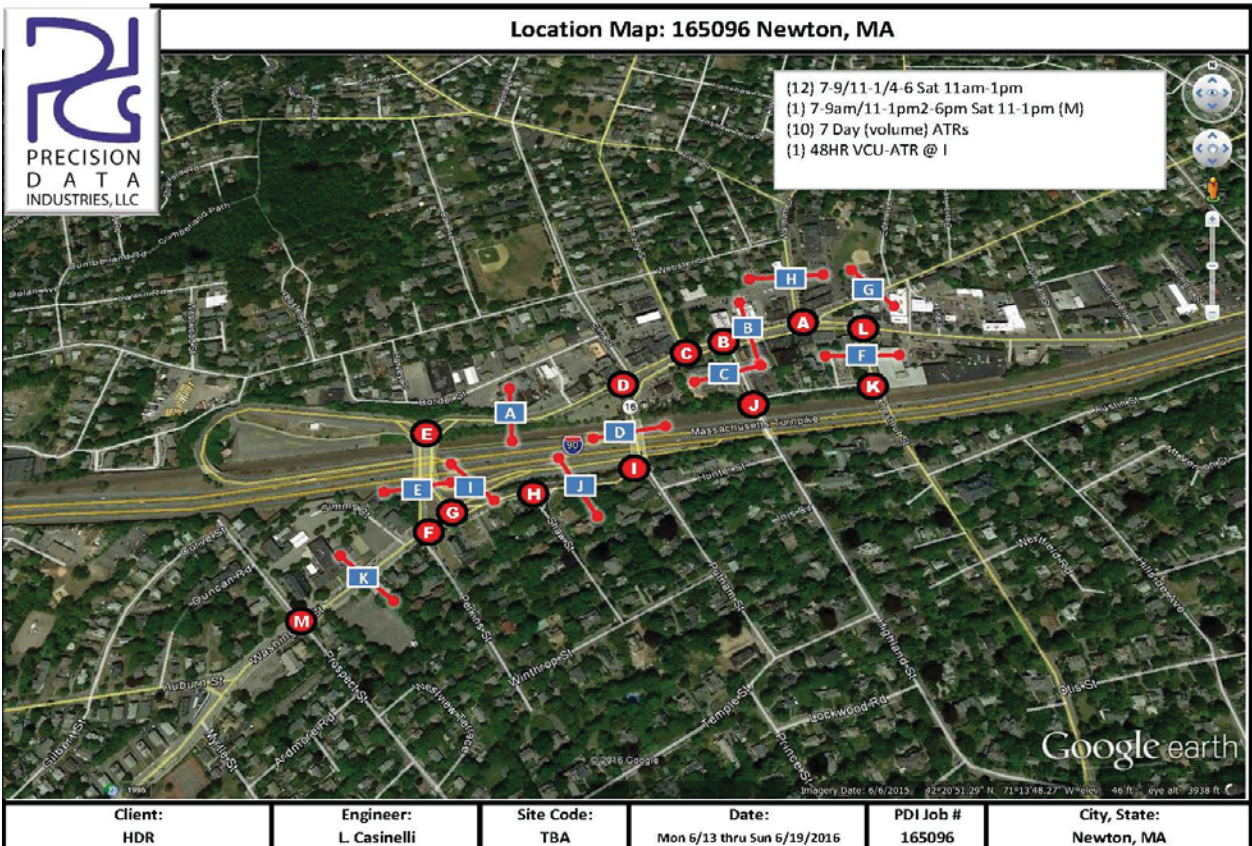
Streetscape Types

#51-18 West Newton Square Enhancements
Public Safety & Transportation
February 7, 2018

Additional Material

TRAFFIC ANALYSIS

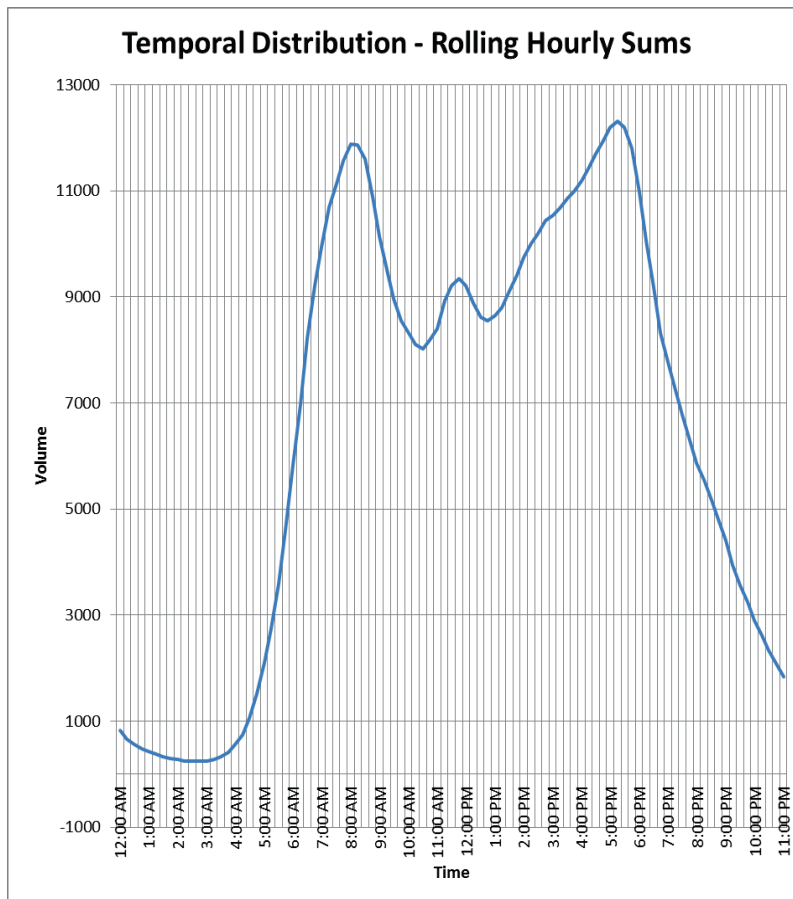
Traffic Counting Program



● = TMC

■ = ATR

- June 12 - June 19, 2016
 - ATR (Tube) counts every 15 minutes for 7 days
 - TMC (video) counts
 - Thursday 6/16: 7-9 AM; 11-1 PM; 4-6 PM
 - Saturday 6/18 11AM - 1PM
 - Extended hours at location "M" near school
- September 21-22 Check Counts
Cherry/Elm/Highland/Chestnut (utility construction)
- October 18 count - Washington-to-Watertown Right Turn
- Nov 11 - drive time trials - 10 runs in morning peak and 10 runs in evening peak



Future Volume Development

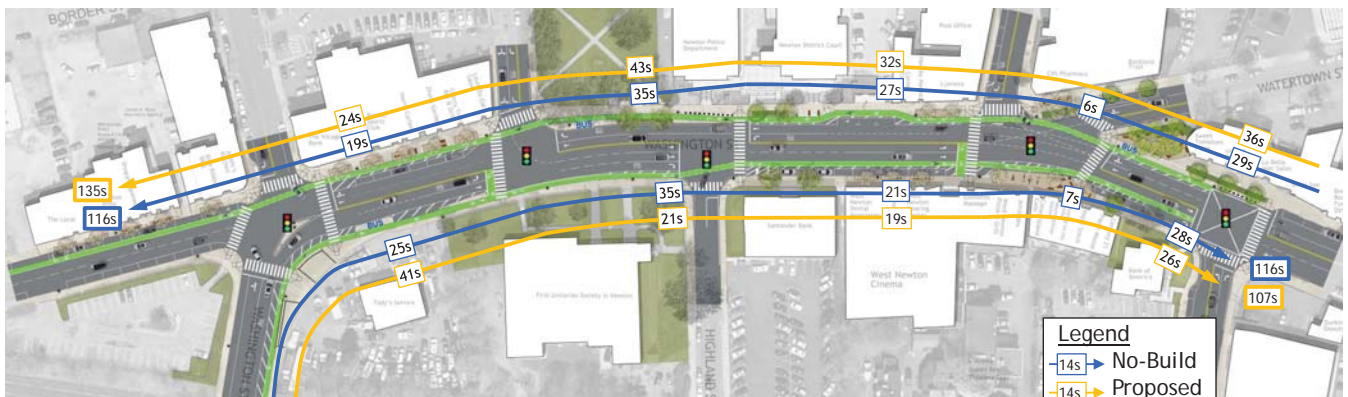
- Design Year is 2025
- Applied annual background growth rates
 - 0.3% per year for AM peak
 - 0.4% per year for mid-day and PM Peak
- Took compounded results, and added additional 5% to be conservative and to account for unknown impacts of Pike Electronic Tolling
- Net result of above:
 - 2025 AM volumes 7.7% higher than 2016 AM
 - 2025 PM volumes 8.7% higher than 2016 PM



Drive Times

- Balance the needs of all users
- Improving safety and operations
- 5:00 - 6:00 pm is the peak of all travel in West Newton Sq
- Anticipating 20 - 40 seconds longer*
 - 40 sec shorter for Southbound
 - 40 sec longer for Northbound
 - 10 sec shorter for Eastbound
 - 20 sec longer for Westbound

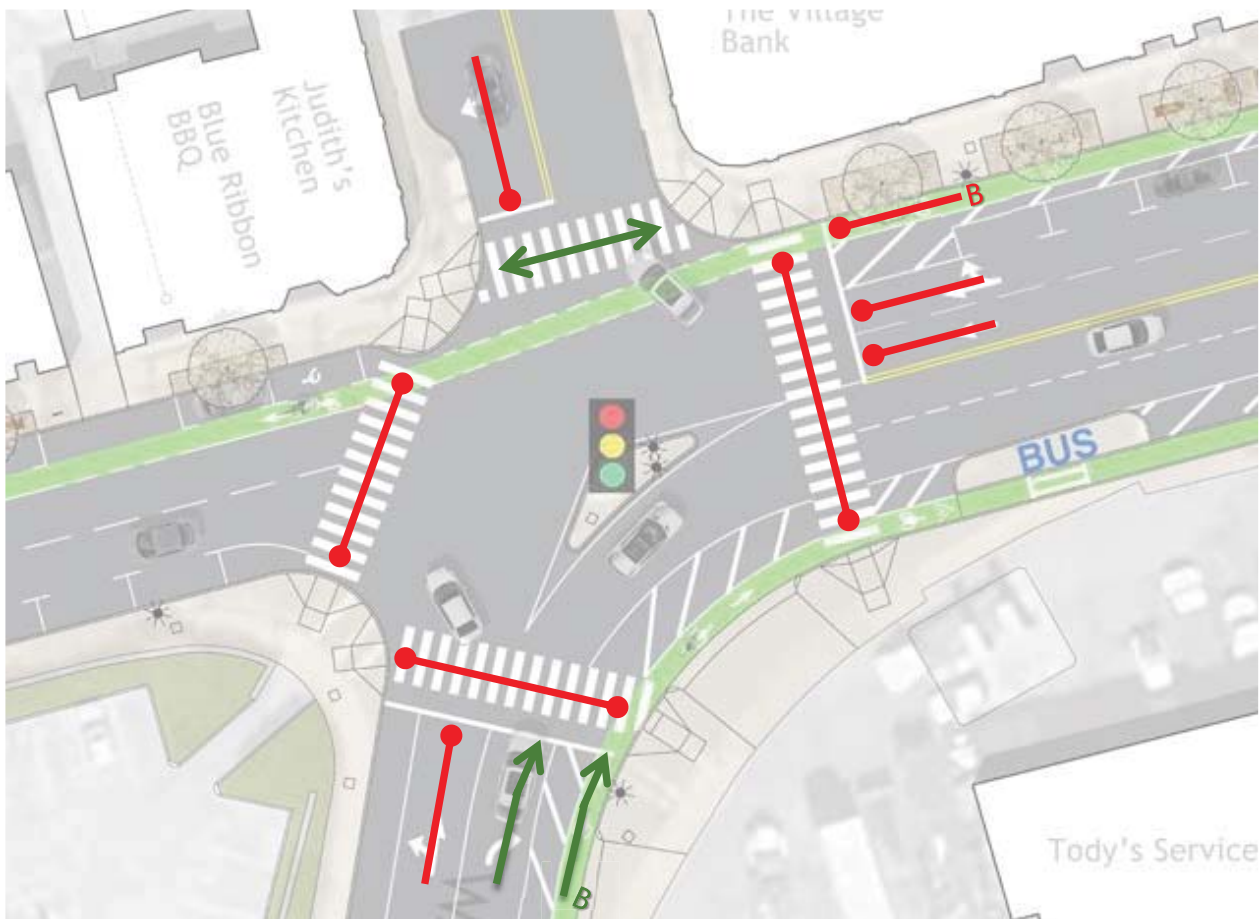
*Compared to travel through the square if all current signals worked properly (not reality)

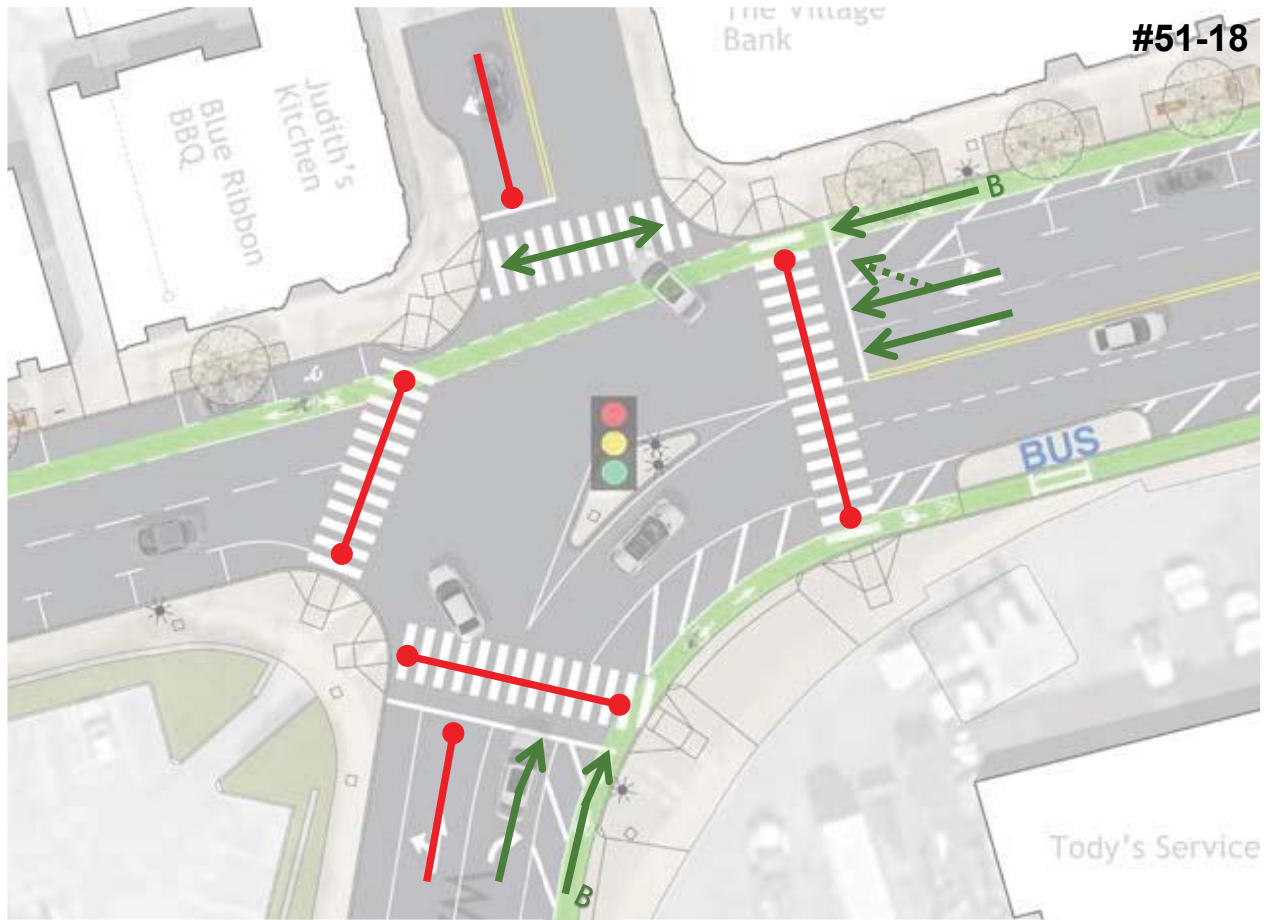


Peak Hour Drive Times

Additional Material

PHASING DIAGRAMS



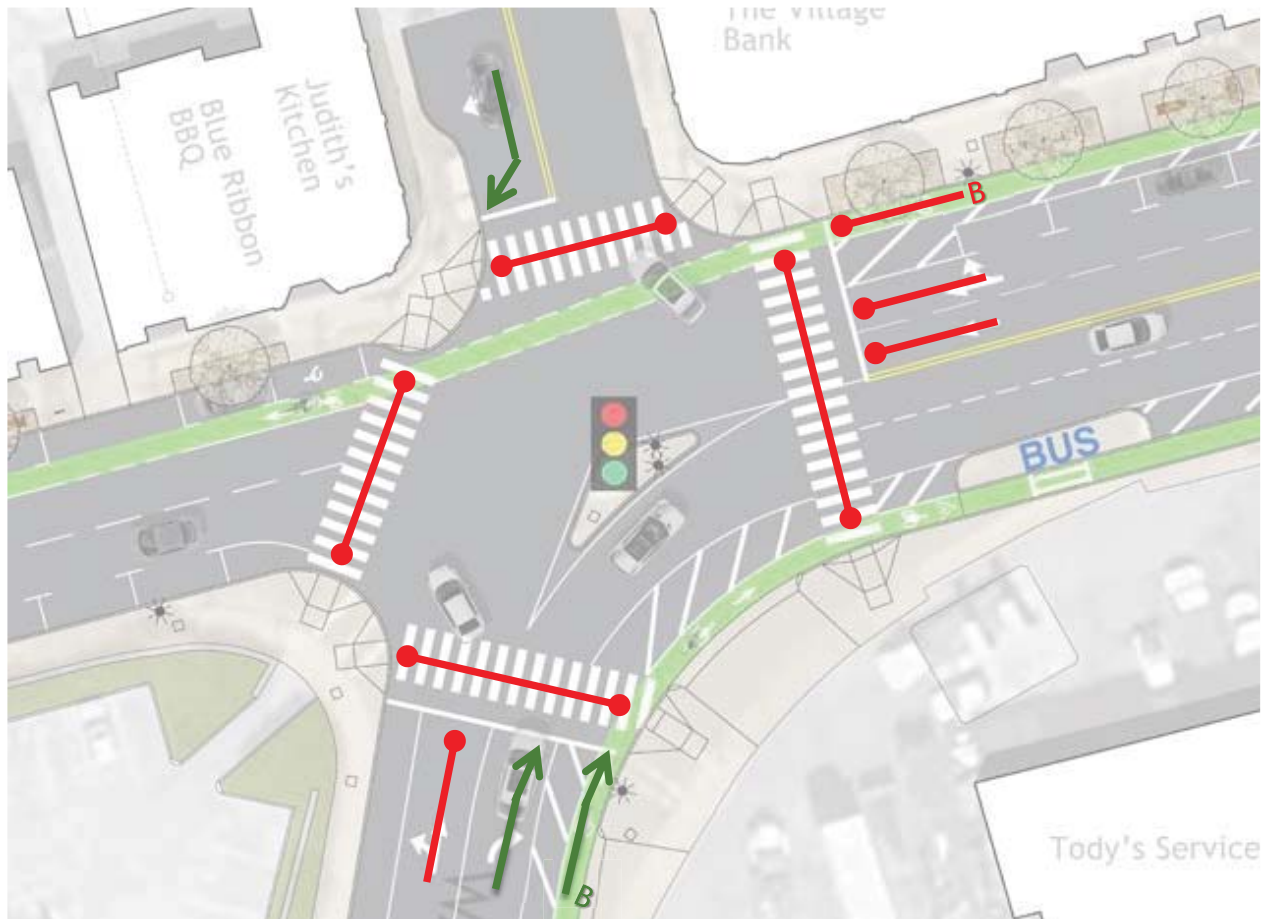


#51-18



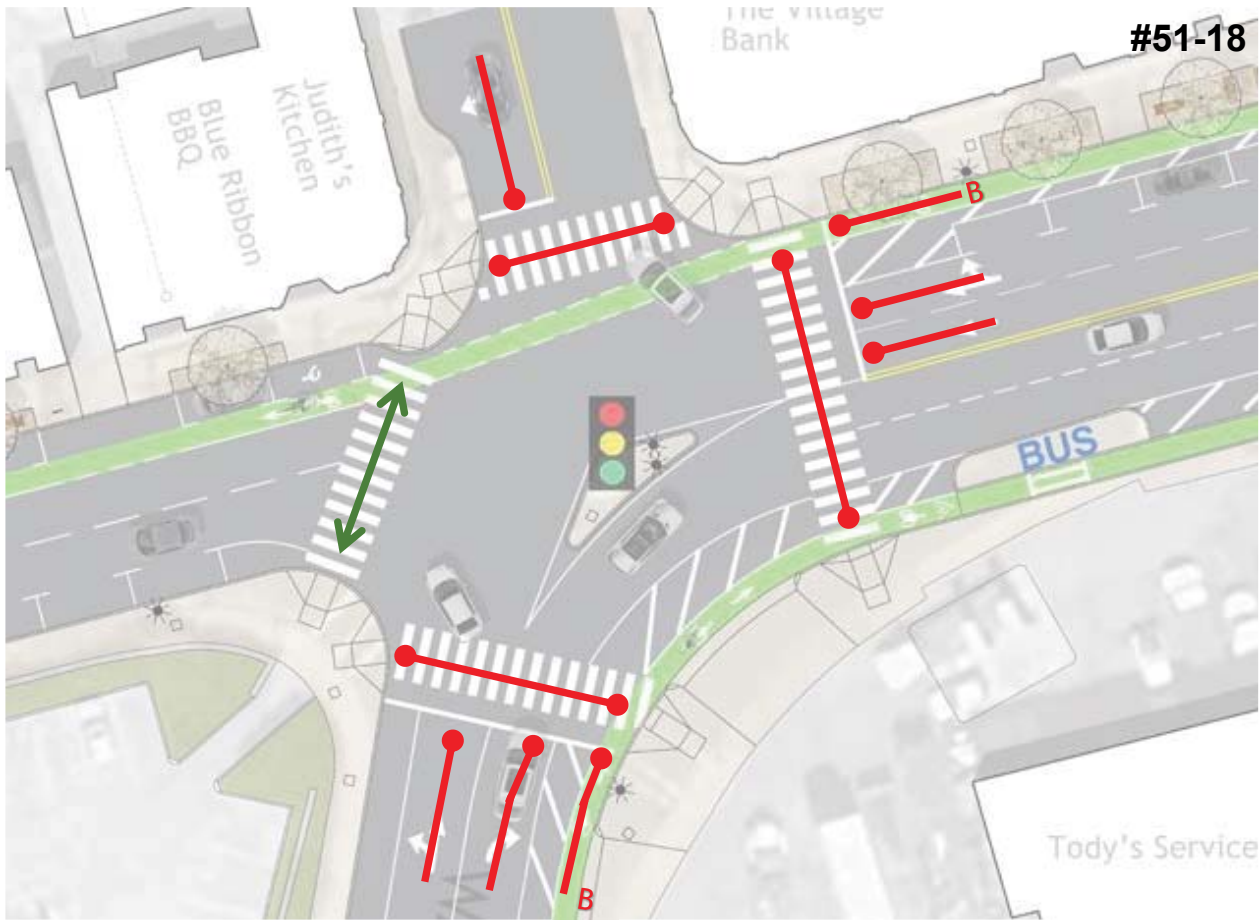
Elm/Washington Street Phasing Sequence 1

#51-18 West Newton Square Enhancements
Public Safety & Transportation
February 7, 2018



Elm/Washington Street Phasing Sequence - 2

#51-18 West Newton Square Enhancements
Public Safety & Transportation
February 7, 2018

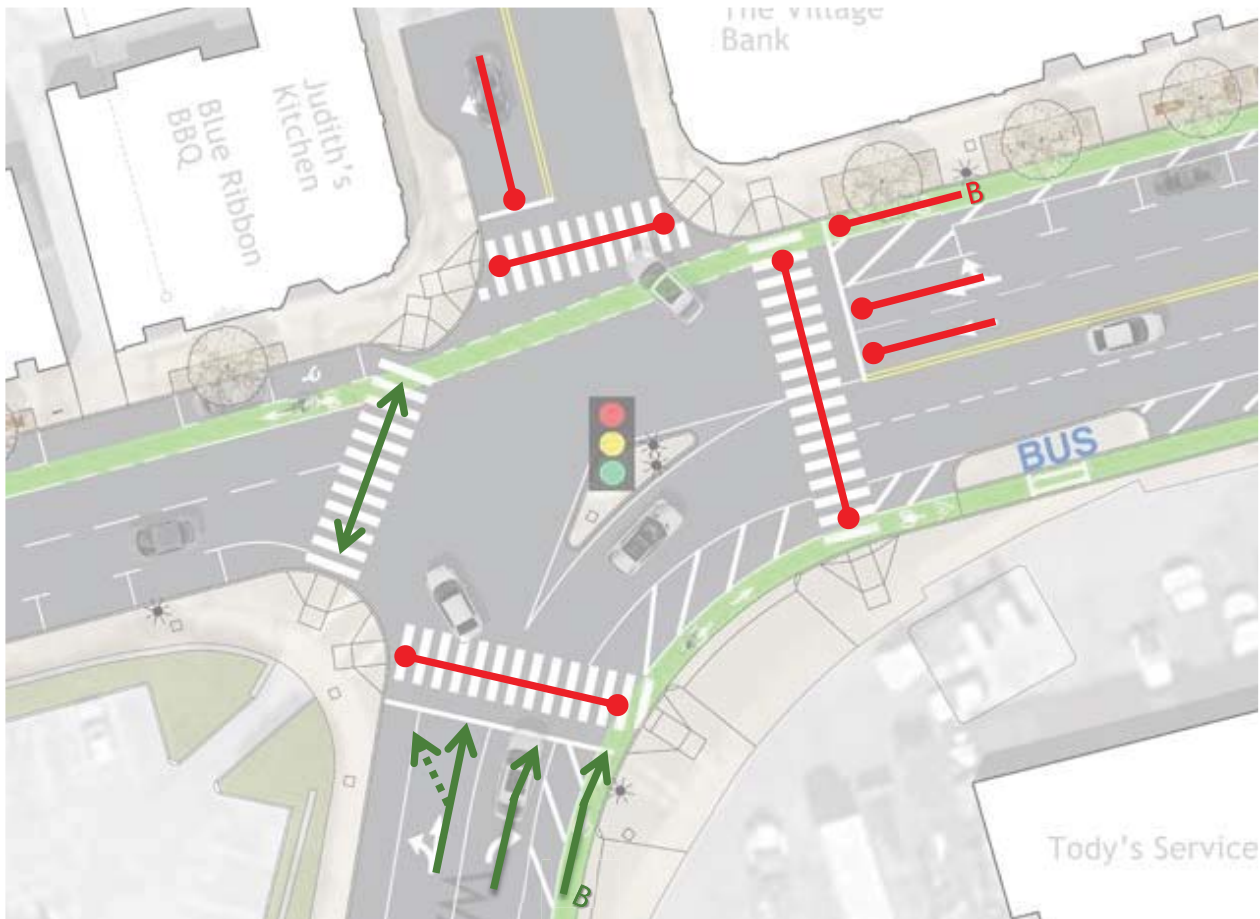


#51-18



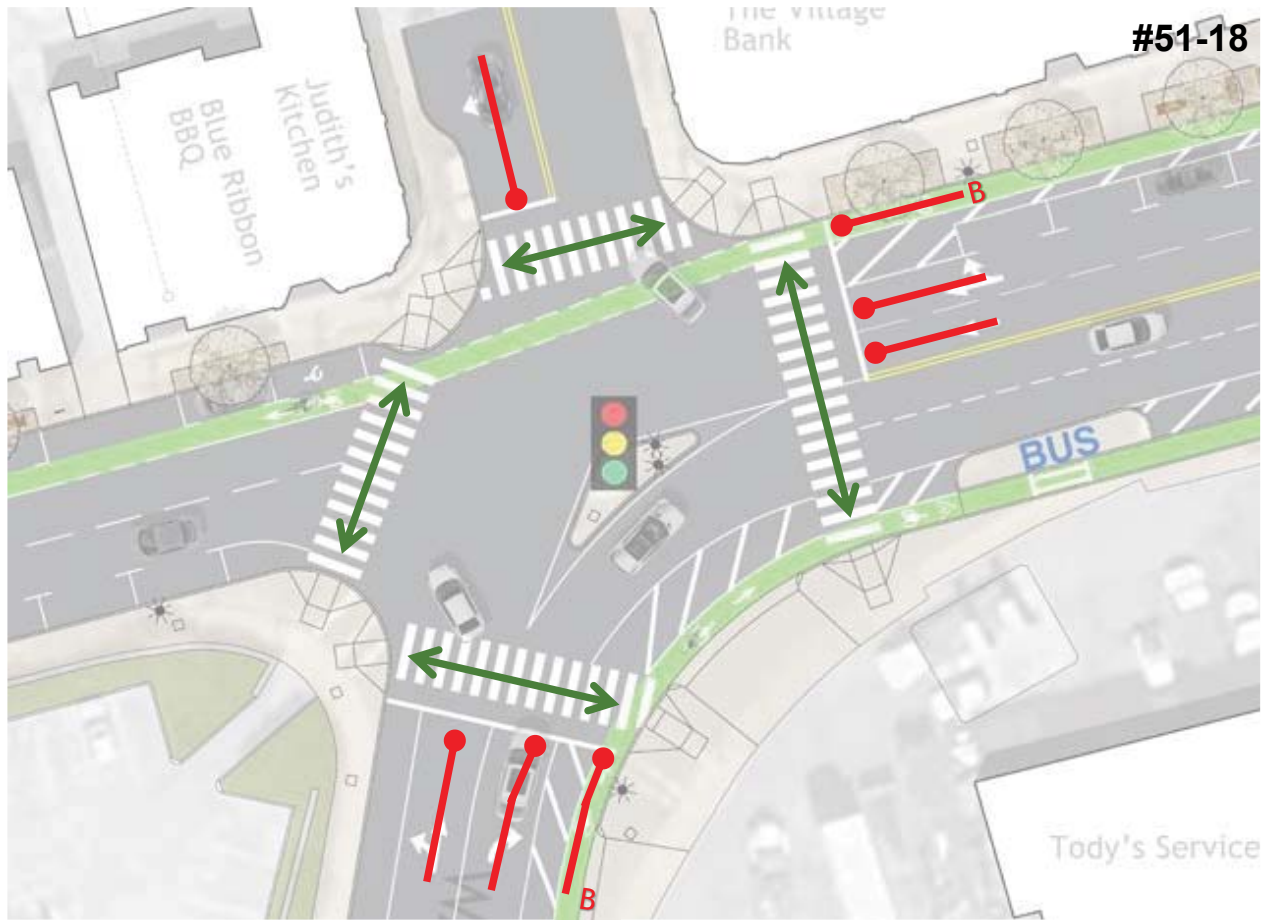
Elm/Washington Street Phasing Sequence 3 - LPI upon Actuation

#51-18 West Newton Square Enhancements
Public Safety & Transportation
February 7, 2018



Elm/Washington Street Phasing Sequence - 3

#51-18 West Newton Square Enhancements
Public Safety & Transportation
February 7, 2018

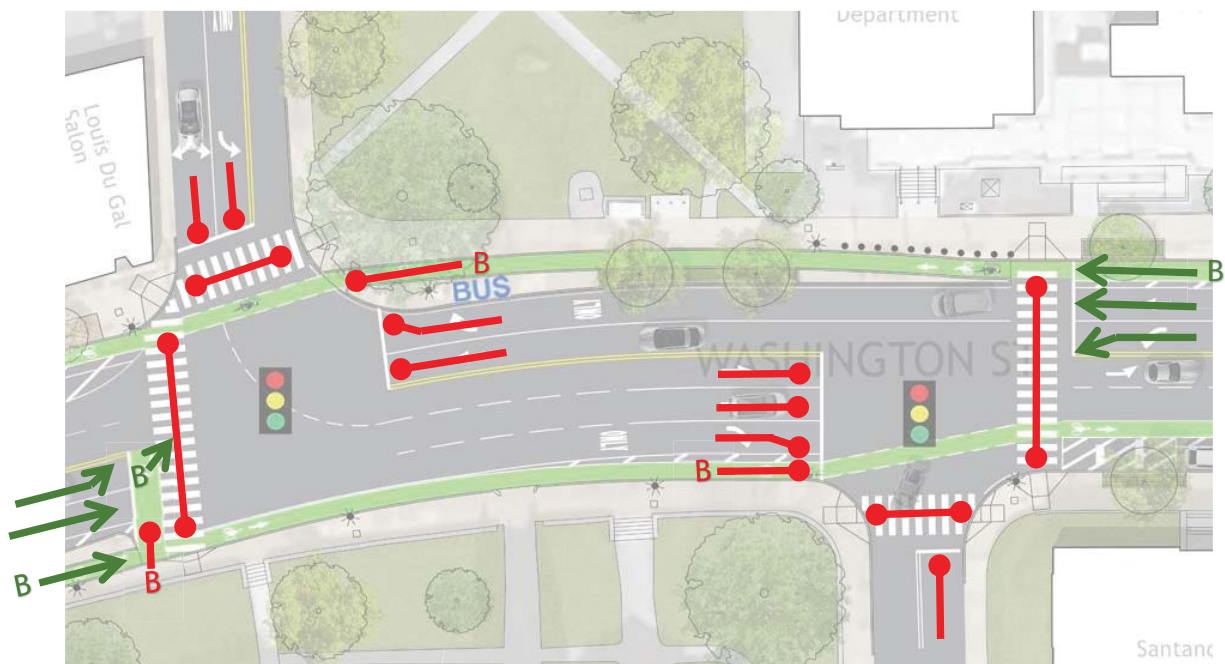


#51-18



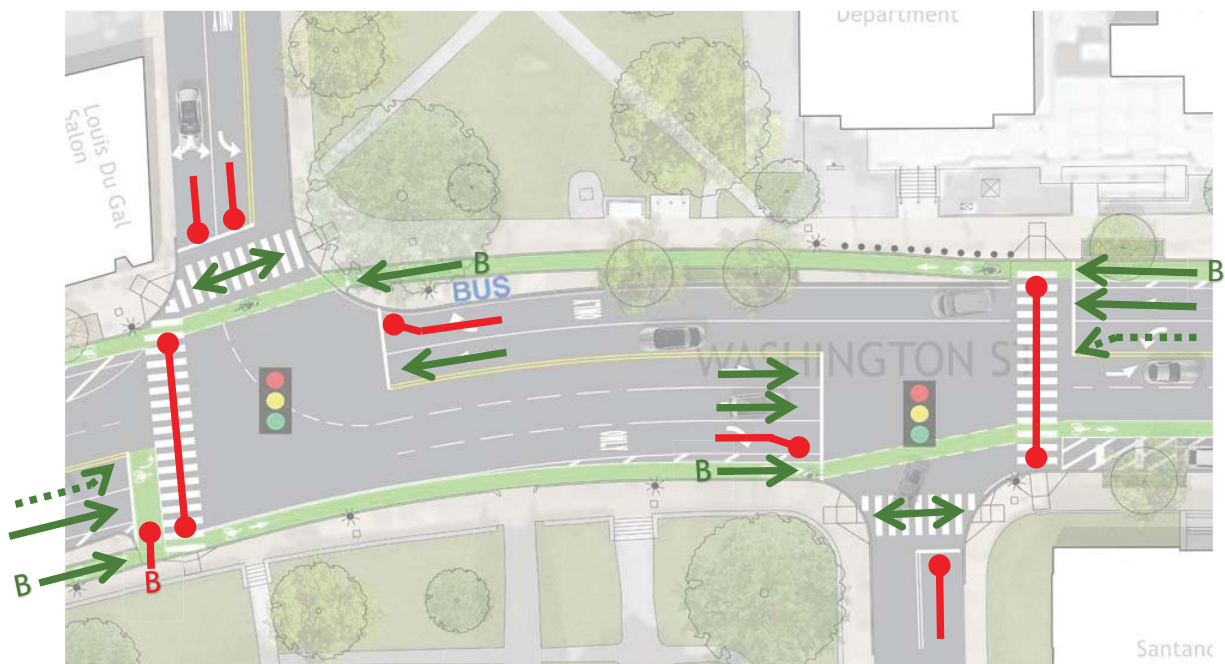
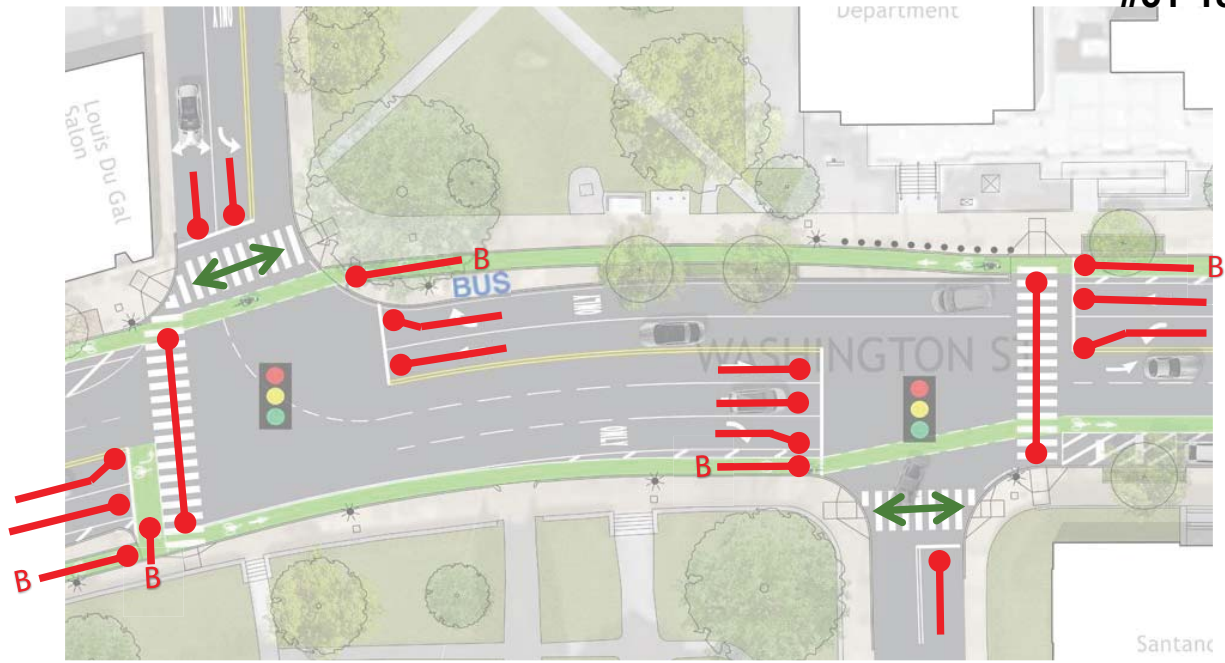
Elm/Washington Street Phasing Sequence 4 (Exclusive Ped upon Actuation)

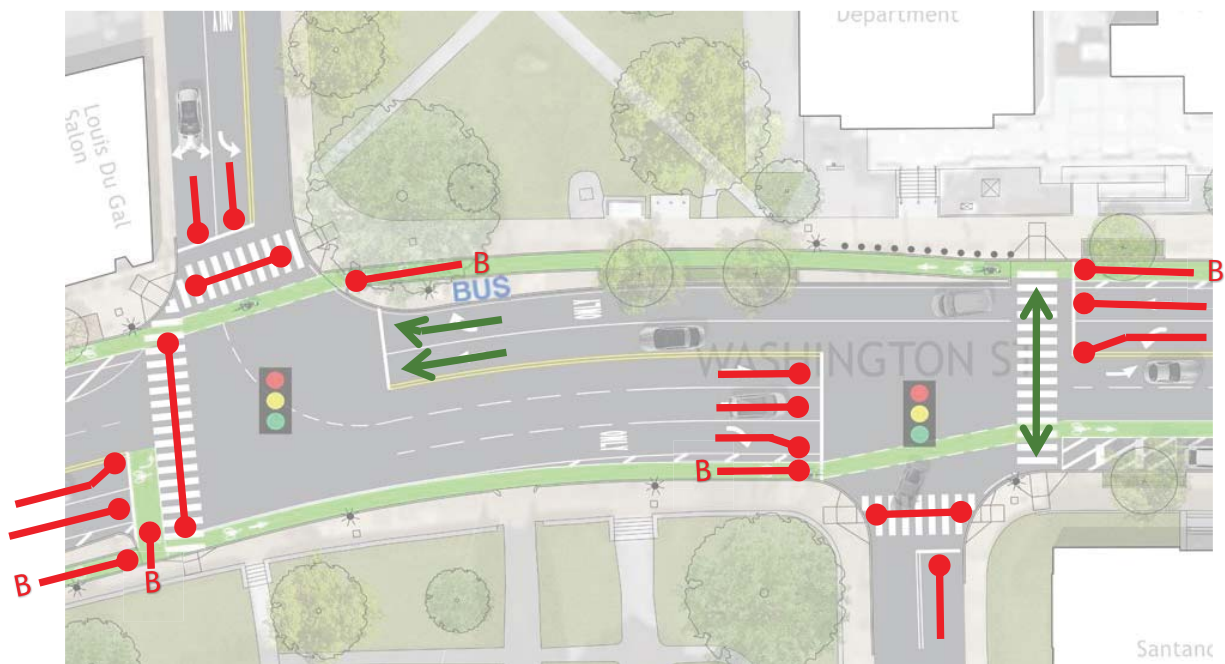
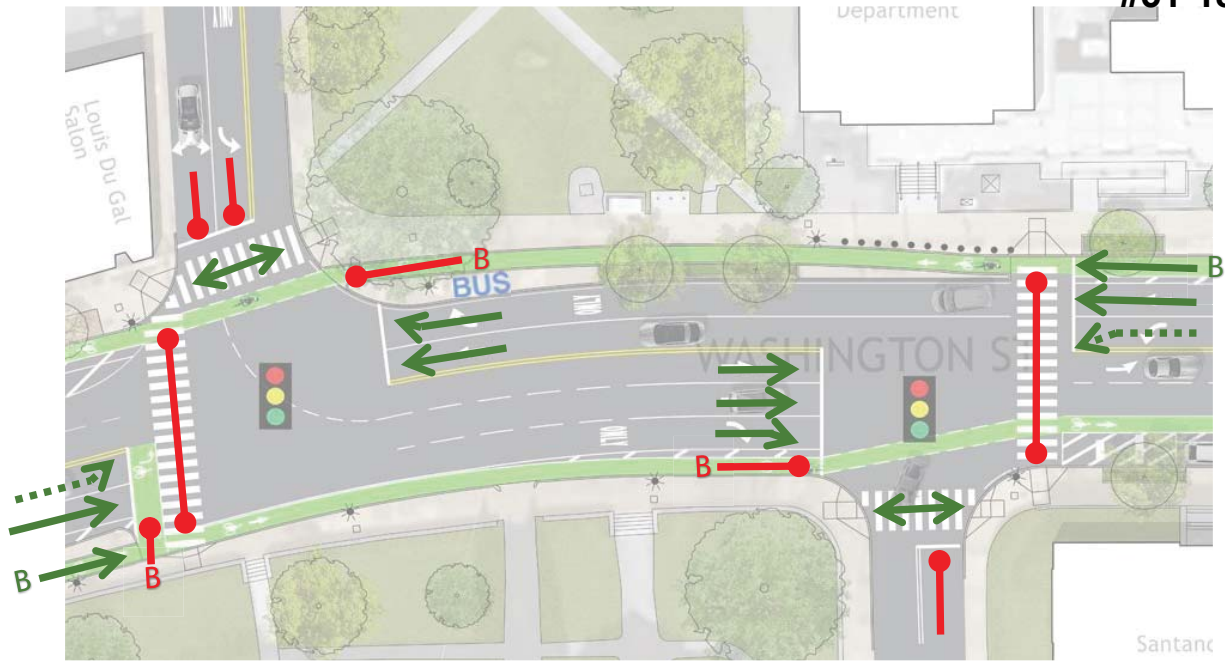
#51-18 West Newton Square Enhancements
Public Safety & Transportation
February 7, 2018

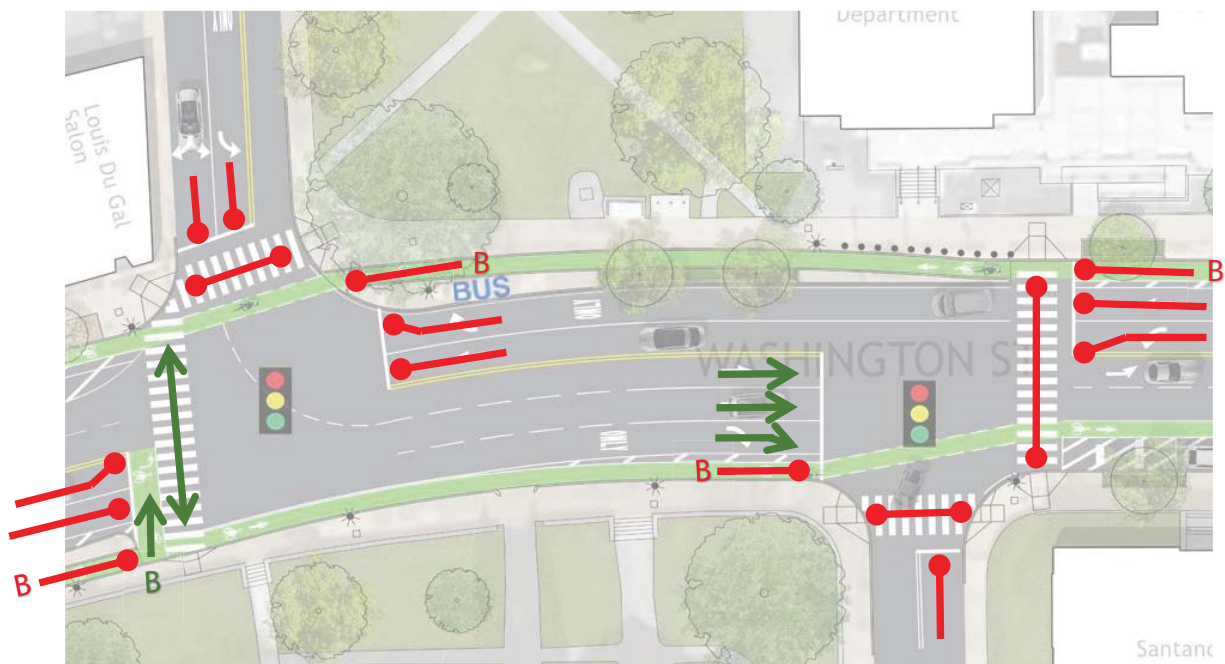
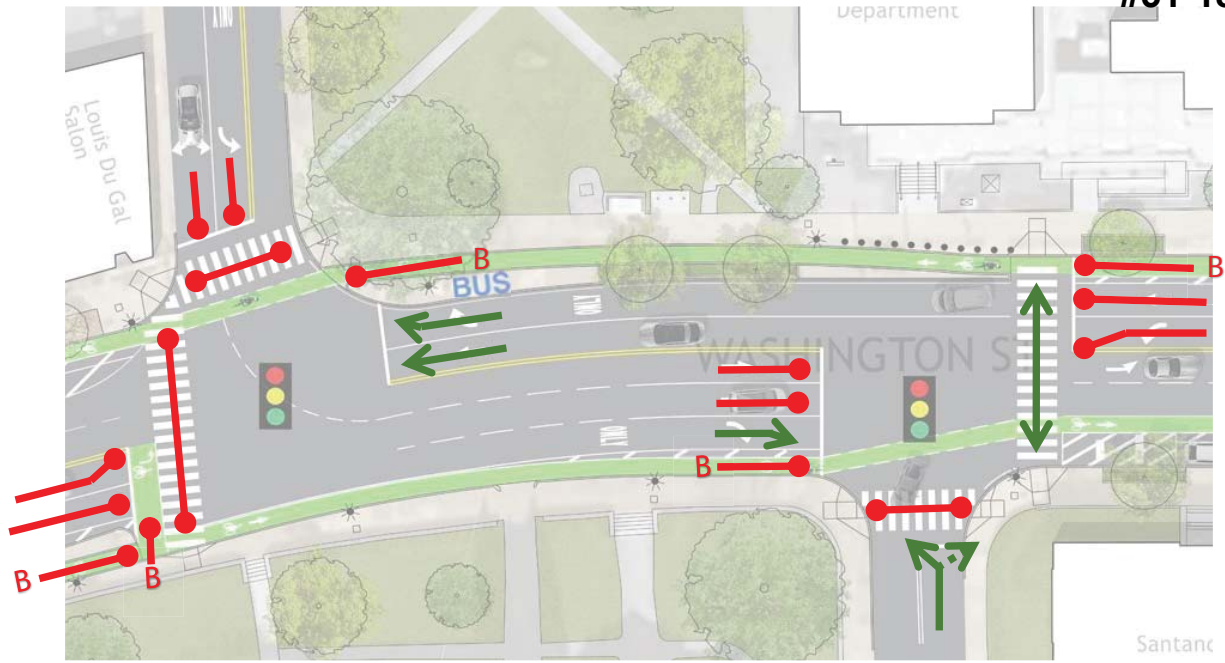


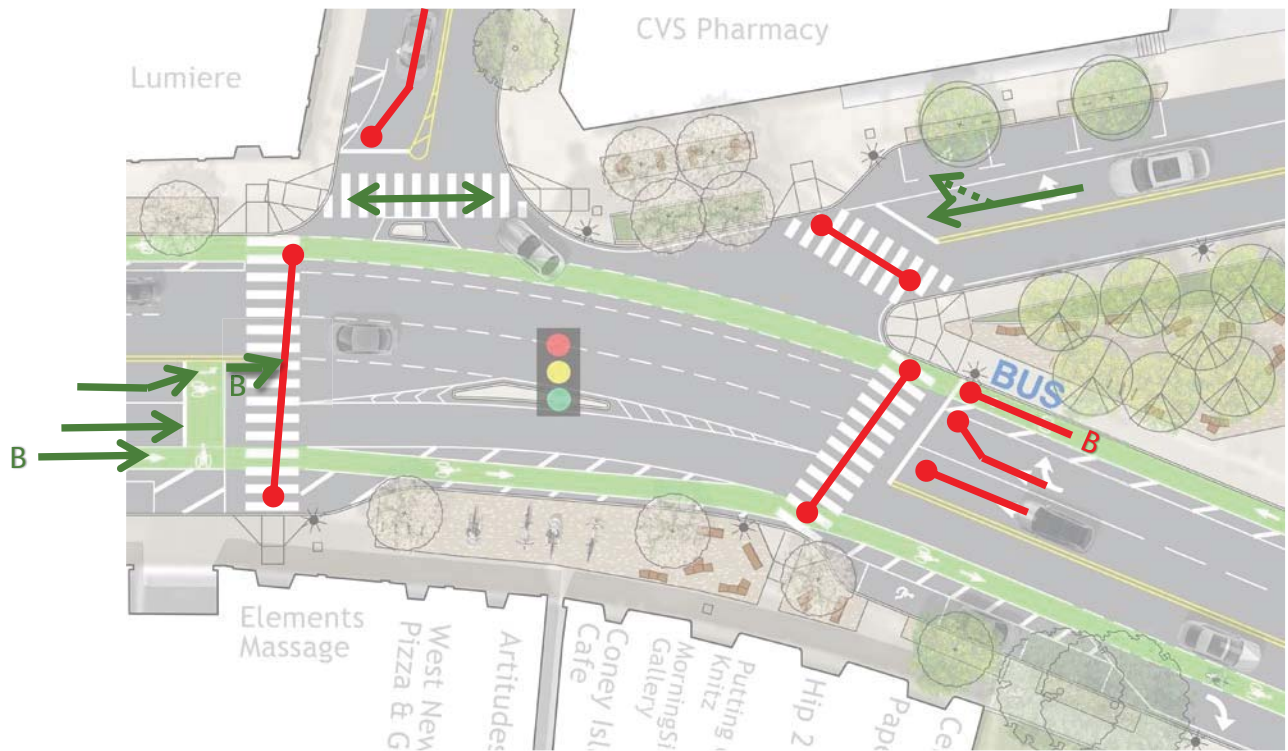
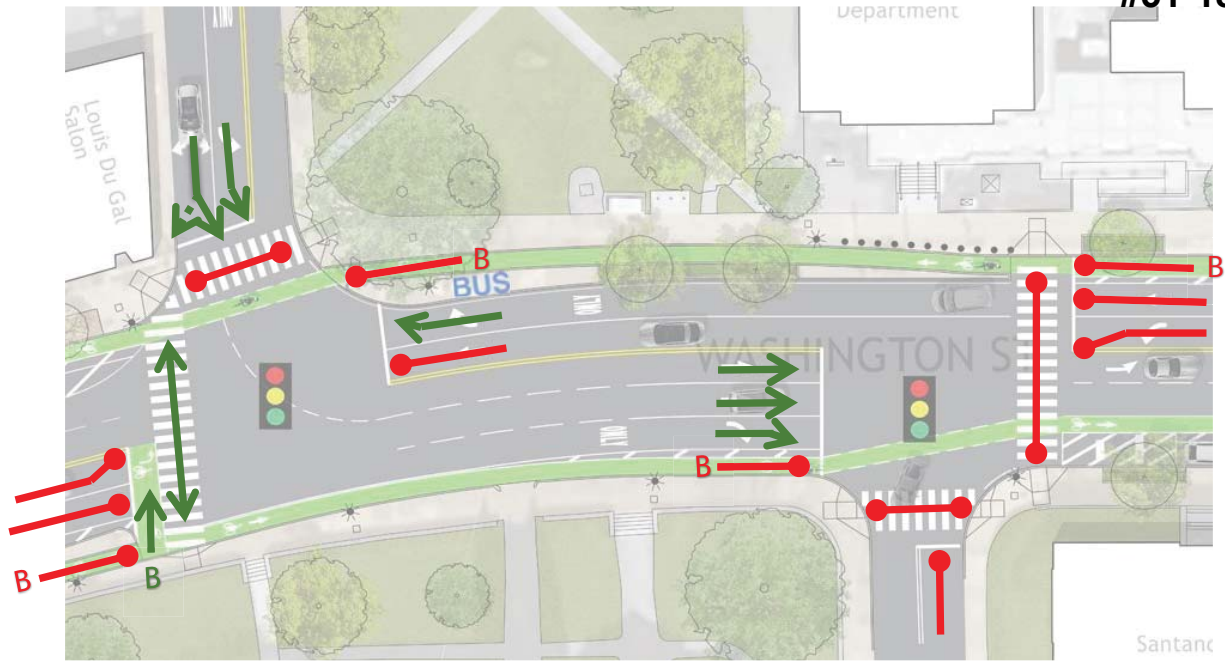
Cherry/Highland Street Phasing Sequence 1

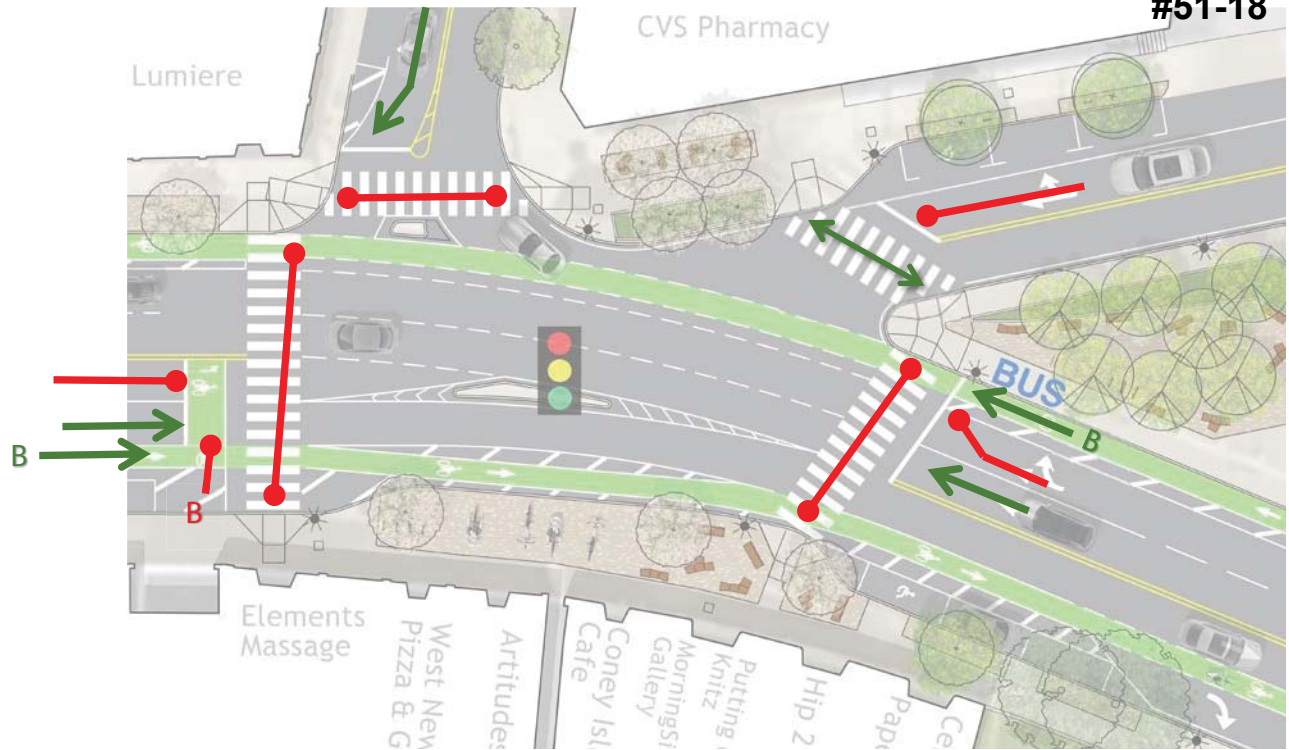
#51-18 West Newton Square Enhancements
Public Safety & Transportation
February 7, 2018





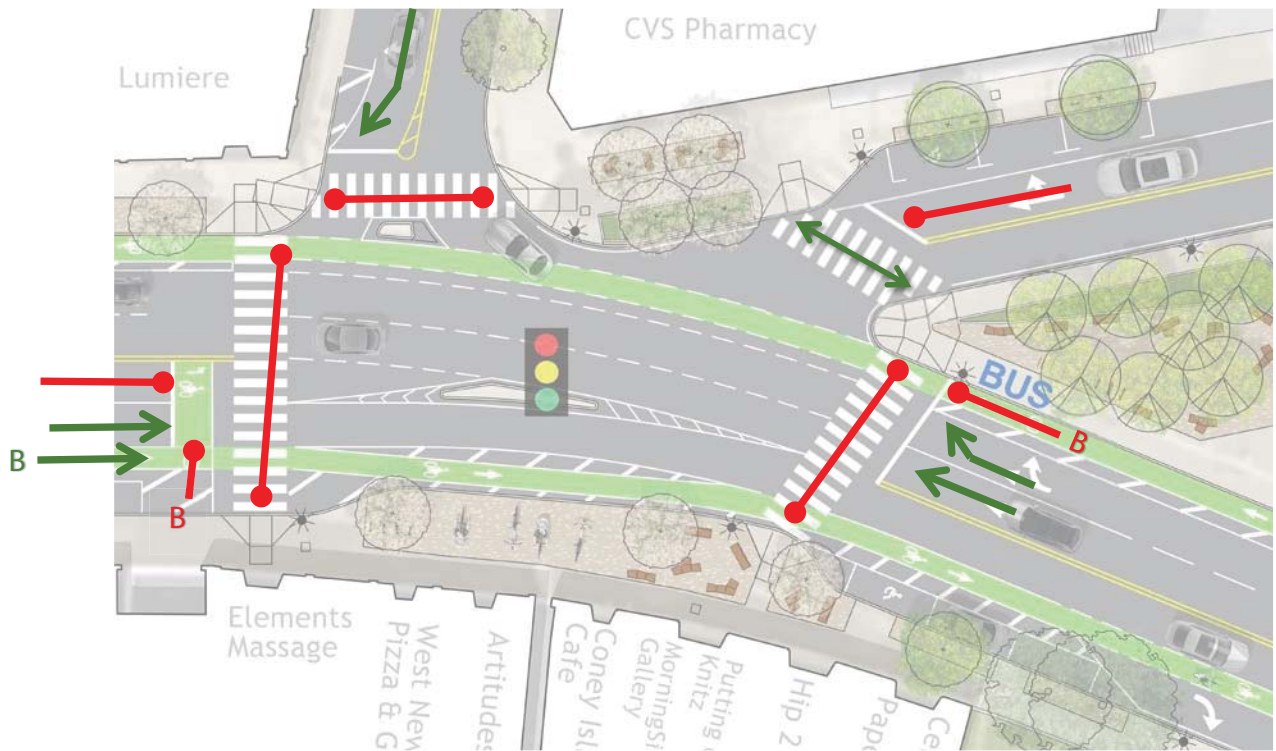






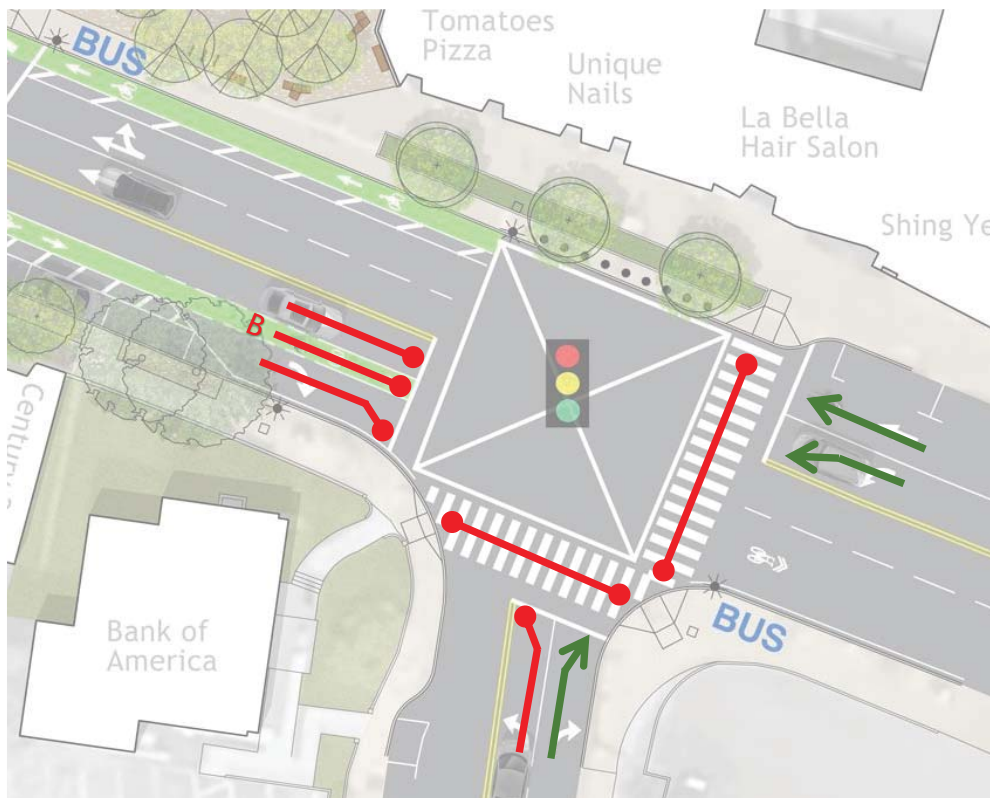
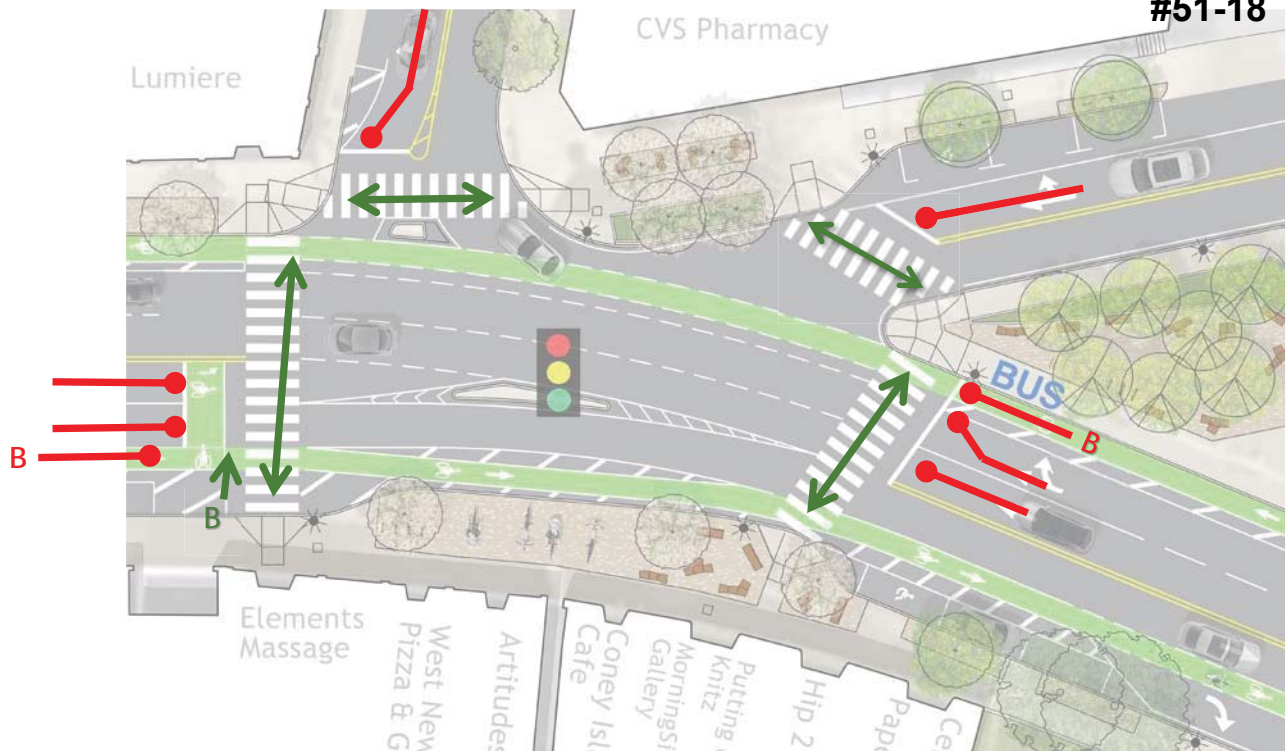
Washington/Waltham/Watertown Street Phasing Sequence 2
With Bike Actuation

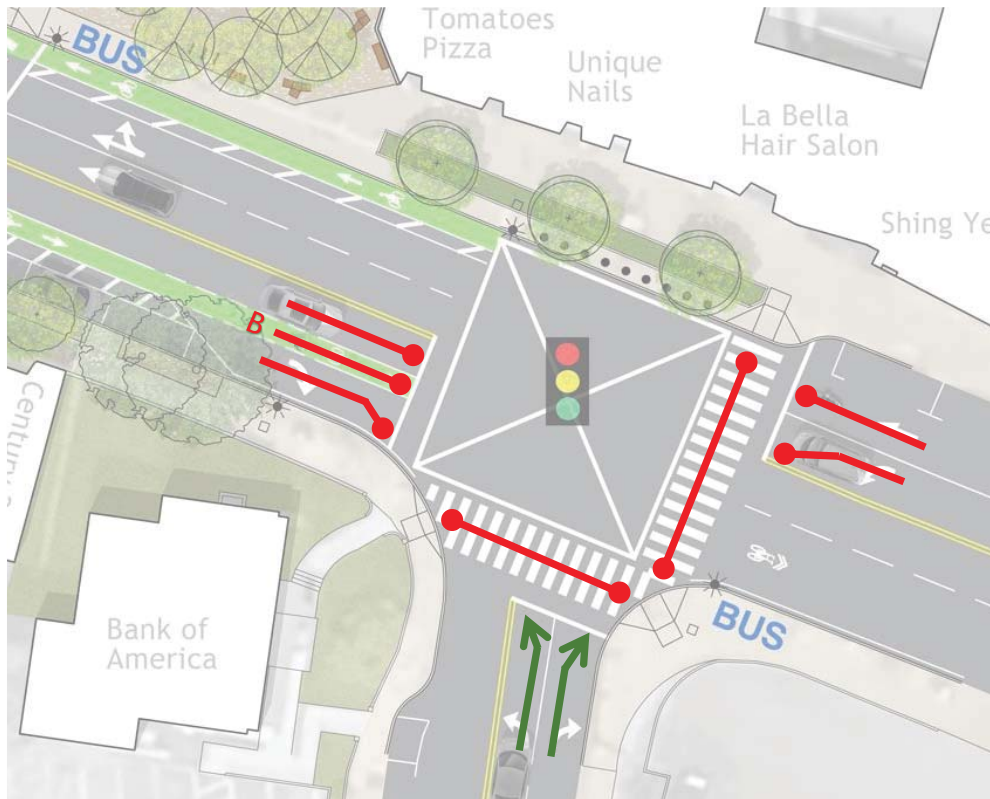
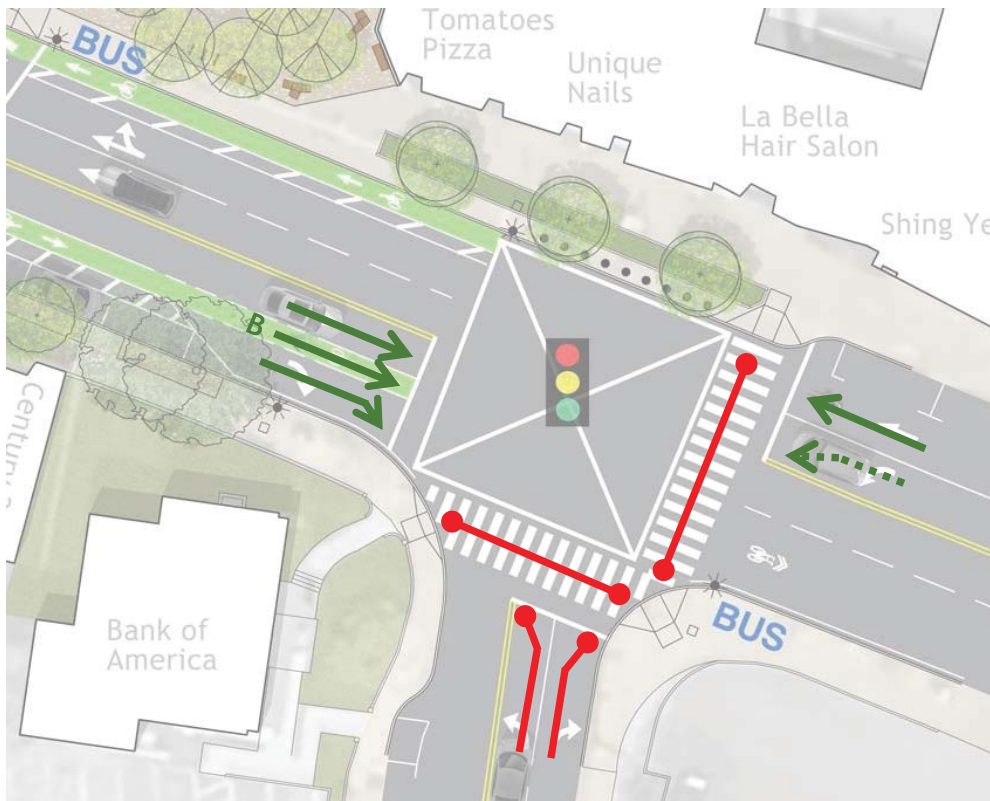
#51-18 West Newton Square Enhancements
Public Safety & Transportation
February 7, 2018

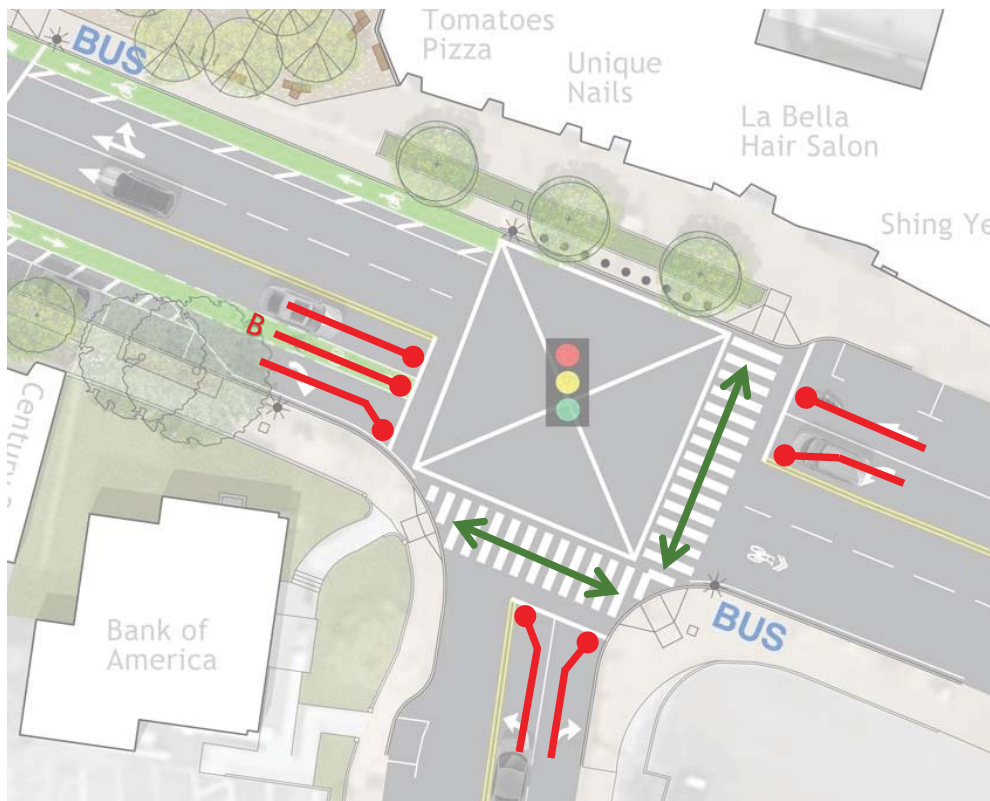


Washington/Waltham/Watertown Street Phasing Sequence 2
Without Bike Actuation

#51-18 West Newton Square Enhancements
Public Safety & Transportation
February 7, 2018







Chestnut Street Phasing Sequence 4 - Exclusive Ped

#51-18 West Newton Square Enhancements
Public Safety & Transportation
February 7, 2018

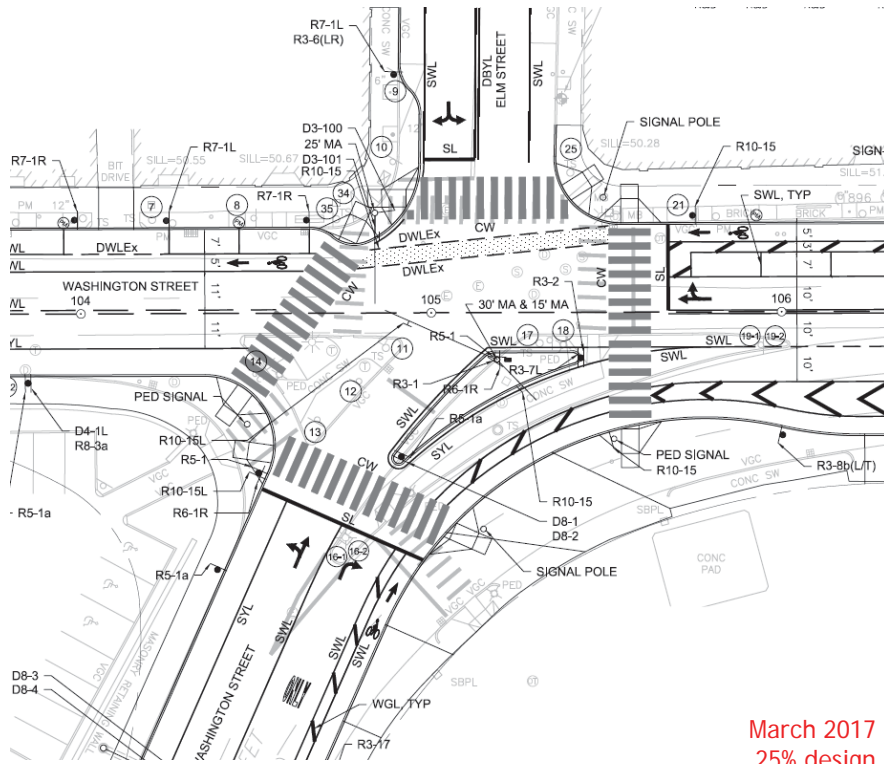
Additional Material

TODY'S CENTER DRIVEWAY

Initial proposal was to
consider eliminating the
middle drive

Discussion with Mr. Donohue
confirmed the driveway is
important to business operation
all drawings included a middle driveway





March 2017
25% design



June 2017
Detail Design Presentation



November 2017
Joint Council Presentation



Feb 2018
PS&T Presentation