



November 21, 2016

To the Honorable, the City Council:

I am writing to provide an update received from Traffic, Parking, and Transportation Director Joseph Barr, Assistant Commissioner for Engineering Kathy Watkins, and Assistant City Manager for Community Development Iram Farooq, on various projects and initiatives related to the City's Bicycle Safety Work Plan. While we are still in the process of assembling all of the elements of the work plan laid out during multiple City Council meetings, I believe it is important that we provide the Council with intermediate updates on issues that are of a pressing nature, as described in the sections below. I assure you that we are working very hard on all of these issues and the information and analysis below reflects a tremendous amount of work, discussion, and reflection, based on the many inputs and comments we have received. Below you will find updates on:

- (1) Protected Bike Lane Demonstration
- (2) Coordination between the Bicycle Plan and the Five Year Plan for Streets and Sidewalks
- (3) Cambridge Delivery Solutions Study
- (4) Vision Zero Advisory Committee
- (5) Design of Huron Avenue

This update is in response to the following Awaiting Report Policy Orders, as well as other questions and issues that have been raised recently:

- 16-91: Report on moving one popup pilot lane up in time to winter or pre-winter and use the time between now and spring to plan.
- 16-92: Report to instruct the city's Vision Zero process and team to engage professional bicycle leaders and experts in Cambridge and Greater Boston on an urgent basis in response to collisions and on an ongoing basis to keep these leaders more directly involved in this work.
- 16-93: Report to re-open the discussion on protected bicycle infrastructure on Huron Avenue with the bicycle community, Huron Avenue businesses, and other stakeholders.

### **(1) Protected Bike Lane Demonstration**

Through a number of Policy Orders and other discussions, the City Council and the Cambridge community have made clear the strong desire for a demonstration of temporary protected bike lane infrastructure prior to the winter. Such a demonstration would allow the City to gain experience with the installation and maintenance of the flexible delineators that are typically used for these types of bike lanes, as well as the ongoing maintenance and operations associated with street sweeping and snow clearance. At the same time, this will provide an opportunity for a short-term expansion of the bicycle network, while pointing towards more significant projects that we plan to implement next year. To move forward with this type of demonstration, we have identified two locations where we believe that installing protected bike lanes will add meaningfully to the safety of the system, will have limited impacts that reduce the need for public outreach, and where we believe that the improvements are maintainable. Based on these goals and criteria, we will be working to implement two demonstrations of protected bike lane infrastructure using temporary materials, to be implemented prior to the upcoming winter:

- Massachusetts Avenue Northbound (east/odd side of the street) from Sidney Street to Douglass Street: This is the area in front of the proposed Mass+Main residential and retail development project, and would involve creating a parking-protected bicycle lane in this area, with the use of flexible delineators to further separate the parking from the bike lane. This type of improvement has been proposed in a more permanent form as part of the Mass+Main development, and this would provide an opportunity to fast track a more temporary version. This would not require the removal of significant parking, although a small number of spaces might need to be restricted to create proper sight lines for cyclists.

Massachusetts Avenue Northbound (east/odd side of the street) from Waterhouse Street to Everett Street: This location runs in front of the Harvard Law School, in an area with an existing bike lane located adjacent to parking. The proposed improvement would involve removing the parking to provide a separated bike lane protected by flexible delineators while maintaining two travel lanes on Massachusetts Avenue. Although this area does not have any loading zones that must be relocated, there are two bus stops (one for the 77 bus and the other for the Harvard shuttle) that must be accommodated. We will be reaching out to the abutters to discuss impacts of installing this bike lane and to understand the extent to which we can mitigate impacts

We will monitor these locations carefully over the course of the winter and make a decision as to whether these can be retained or expanded, whether further adjustments are needed, or whether one or both should be removed.

## (2) Coordination between the Bicycle Plan and the Five Year Plan for Streets and Sidewalks

The City's Five Year Sidewalk and Street Plan, [www.cambridgema.gov/theworks/fiveyearplan](http://www.cambridgema.gov/theworks/fiveyearplan) is a commitment to reconstructing streets, sidewalks and bicycle facilities with an emphasis on a Complete Streets approach that designs streets for all users. The projects are prioritized based on the condition of streets and sidewalks; utility priorities; priorities from the Commission for Persons with Disabilities, the Pedestrian Committee, and the Bicycle Committee (Cambridge Bicycle Plan); and coordination with private utility companies such as Eversource Gas.

The Bicycle Network Vision is used as an overlay to the plan, in order to identify and prioritize areas with non-existent or inadequate bicycle facilities, particularly where reconstruction could improve connectivity and route continuity for people who bicycle. This coordination is outlined on page 15 of the Bicycle Plan, [www.cambridgema.gov/CDD/Transportation/bikesincambridge/bicyclenetworkplan](http://www.cambridgema.gov/CDD/Transportation/bikesincambridge/bicyclenetworkplan)



Over the last number of years, more sidewalks and bicycle facilities have been included in and prioritized through the 5 Year Plan. The Bicycle Plan is highlighted on page 24 of the 5 Year Plan. Specific projects that have been prioritized from the Bicycle Plan include River Street and Binney Street. Other projects have been prioritized for other reasons, such as utility needs, but the design of the streets has been heavily influenced by the Bicycle Plan; examples of this approach include Fern Street and Ames Street.

The 5 Year Plan is an evolving document that is updated annually. The completion of the Bicycle Plan will inform the priorities of future years of the 5 Year Plan as well as the design processes that the City undertakes for all major projects.

### **(3) Cambridge Delivery Solutions Study**

The City is preparing to launch a delivery solutions study that will consider a number of issues related to truck deliveries and how they interact with other street users. This is a particularly important issue for bicycle safety for a number of reasons:

- The interaction between trucks and vulnerable users such as cyclists and pedestrians can be very difficult, and can lead to serious injuries and fatalities.
- Trucks are sometimes seen double stopping in bike lanes, either because they try to be as close to the location of their delivery rather than using a loading zone or because no loading zone space is available.
- As we install more facilities that require restricting curbside parking, the need for truck loading does not go away simply by putting up regulatory signs, so it is important that we provide options for that loading activity to occur,

The scope of the study includes evaluating best practices for managing, enforcing, and potentially pricing truck loading zones and analyzing the City's legal abilities to regulate and restrict trucks. The study will include national and international best practices, and will develop case study solutions for specific locations within Cambridge. In addition, the study will include significant outreach to local and national delivery companies, local businesses, institutional stakeholders, and freight/logistics experts. The City will also work closely with other nearby municipalities, regional partners, and state agencies to better understand how we can jointly develop local and regional solutions related to truck safety.

The scope for this study is currently being finalized and we expect to release a Request for Proposals before the end of the 2016. The study is expected to take six to nine months to complete, and should therefore be final before the end of 2017, taking into account the procurement process. To the extent that the study produces any early action items that can begin to be implemented prior to the completion of the study, we will attempt to move these forward as quickly as possible, particularly if they relate to critical safety issues.

### **(4) Vision Zero Advisory Committee**

In the feedback we received from the City Council over last month, there was a strong request for greater inclusion of the community and other stakeholders in the City's development of a Vision Zero Action Plan and the ongoing implementation of Vision Zero initiatives. This request has also been echoed by local advocacy organizations, including Livable Streets, the Boston Cyclists' Union, and WalkBoston. Based on these requests and our desire to move Vision Zero forward as a truly collaborative initiative, we will be convening the Vision Zero Advisory Committee early next year. To ensure representation from the most appropriate stakeholders, we intend to reserve a number of seats on this committee for specific stakeholders:

- City Departments
  - Traffic, Parking, and Transportation
  - Community Development
  - Public Works
  - Police
  - Public Health

- Cambridge Public Schools
- City Standing Committees
  - Bicycle Committee
  - Pedestrian Committee
  - Transit Advisory Committee
- Advocacy Organizations
  - Livable Streets
  - Boston Cyclists' Union
  - WalkBoston
  - Massachusetts Bicycle Coalition
  - Cambridge Bicycle Safety
- Business and Institutional Stakeholders
  - Massachusetts Institute of Technology
  - Harvard University
  - Lesley University
  - Cambridge Chamber of Commerce
  
- In addition to soliciting membership from these specific organizations, we will also be releasing a general solicitation for 3-5 general community members to serve on the advisory committee, with the goal of garnering representation from a range of transportation system users who bring a variety of different perspectives. We intend to release this general solicitation before the end of November, with the goal of convening the first meeting in January 2017.

#### **(5) Design of Huron Avenue**

Huron Ave from Concord Ave to Fresh Pond Parkway is being reconstructed as part of the Alewife Sewer Separation Project. Construction began on the Huron A Contract, including major utility crossings of Huron Ave, in September 2012. The Huron B Contract, which includes the reconstruction of Huron Ave, began in September 2013 and is scheduled to be completed in 2017.

*Provided below is a summary of the design, the status of construction, an overview of the community design process and the impacts of modifying the design of the bicycle facility.*

**HURON AVENUE DESIGN  
(SEE ATTACHED FINAL  
CONCEPT PLAN)**

The goals for street reconstruction projects in the city, including Huron Ave, are to expand pedestrian and bicycle access with new facilities, make travel safer, slow the speed of traffic on streets, upgrade the aesthetics of a corridor, and ensure access to local businesses. Street design focuses on making it easier to bike, walk and get around by transit for people of all ages and abilities as well as making neighborhood streets more livable by reducing the impacts of motor vehicle traffic through traffic calming.

The design of Huron Ave was developed through a comprehensive community process, described below, and includes the following elements:

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### *Walking*

- **More crosswalks:** Eight additional crosswalks are being added. These are highlighted in pink in the attached plan.
- **Crossing island:** A flush crossing island is being added at Fayerweather St to slow vehicle speeds and improve pedestrian crossing safety.
- **Special intersection treatment:** The intersections at Chilton and Appleton streets are being constructed with pavers to visually reinforce that drivers are in a business district and should slow down.
- **Curb extensions:** Curb extensions are being added at most crosswalks to shorten the roadway distance pedestrians need to cross and also make pedestrians more visible to drivers.
- **Raised side street crosswalks:** Most crosswalks parallel to Huron Ave will be raised at side streets to be at the same level as the sidewalk, thereby eliminating the need for curb ramps. This helps prioritize pedestrians at intersections and reduces problems of puddles forming at ramps. These are highlighted in pink in the attached plan.



### *Biking*

- **A 3' striped buffer** is being painted between the bike lane and parked cars to move the bike lane away from the door zone and improve bicyclist safety. The vehicular travel lanes and parking lanes are being narrowed to provide the width for the 3' buffer zone.
- **Green pavement markings** are being used for the bike lanes at all intersection conflict zones to improve driver and bicyclist awareness.

- A **Hubway bicycle sharing station** is being incorporated into the new enlarged plaza at the end of Vassal Lane.

#### *Bus stops*

- **Bus stop curb extensions** are being built at most bus stops to facilitate bus drivers getting both the front and back doors of the bus aligned with the curb. This is especially critical for wheelchair users and people with mobility limitations, including the elderly, who are frequent users of the bus system.
- **Consolidation of bus stops** that are too close together will help speed the bus trip.



#### *Miscellaneous*

- **New street trees** are being added throughout the corridor and additional soil will be added to help the trees thrive.
- **Vassal Lane Plaza** is being enlarged and will include landscaping, seating and a new Hubway station.
- **Pedestrian scale lighting** will be added between Lakeview and Fayerweather streets to enhance the business district.



#### **HURON AVENUE STATUS OF CONSTRUCTION**

Construction began on the Huron A Contract in September 2012. This contract included the utility crossings of Huron Ave at Larch Rd, Grozier Rd, Lexington Ave, Lakeview Ave. and Standish St, as well as the significant modifications to the water system at Huron and Gurney streets (shown in photo).

The Huron B Contract began in September 2013 and is scheduled to be completed at the end of 2017. The Huron B Contract includes Huron Ave and all of the residential streets between Gurney St and Concord Ave.

### Huron Avenue Work Completed to Date

- All utility crossings of Huron Ave.
- Huron Ave utilities including new catch basins to improve drainage in the area and support the curb changes.
- Replacement of the existing 42" watermain between Fresh Pond Parkway and Gurney St.
- Removal of the existing trolley tracks and full depth roadway reconstruction in those areas.
- Full depth roadway reconstruction between Reservoir St and Concord Ave.



### Huron Avenue Work Remaining

- Full depth roadway reconstruction between Fresh Pond Parkway and Reservoir St – on-going.
- Granite curb installation – scheduled to begin November 2016.
- Sidewalks – scheduled to begin April 2017.
- Final paving – scheduled in fall 2017.
- Tree plantings and Vassal Lane Plaza plantings – scheduled in fall 2017.

### HURON AVENUE DESIGN PROCESS

The design of Huron Ave was developed through a comprehensive community process, which included five Huron Ave focused community-wide meetings, three drop-in sessions at Sarah's Market and a neighborhood tree walk. In addition, numerous open houses, neighborhood bar-b-ques, business events and coffee talks have been held during the construction process and neighbors have continued to review the plans, identify concerns and coordinate on details such as driveways and tree plantings.

During the design process a parking protected bike lane (or cycle track) was considered, but did not move forward, primarily for the following reasons:

- Number of driveways (56 +/-) and side streets (17 +/-) would necessitate reducing the number of on-street parking spaces in order to ensure generous sightlines (40 +/- out of the existing 209 parking spaces on Huron Ave).
- Narrow roadway cross-section – 10' travel lanes next to 7' parking lanes is a tight cross-section for buses, trucks and other operations, particularly during snow, when the effective width would be further reduced.
- Trolley-bus operations with overhead wire limit ability of buses to maneuver.
- Snow clearance of narrow roadway and cycle track challenging.

### IMPACTS OF DESIGN CHANGES

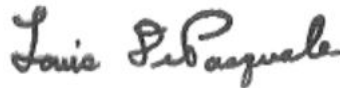
At this point in the construction of Huron Ave, modifying the design to incorporate a parking protected bike lane would have the following impacts:



- The **roadway and sidewalks would need to be redesigned**, as the curb extensions (37), raised side-street details (23) and curb extension bus stops (8) would all need to be redesigned.
- A series of **community meetings** would need to be held to develop a new design and gain support for changes at this point in the process. We estimate a minimum of 3 meetings.
- Construction would be delayed. The Huron Ave construction is scheduled to be completed at the end of 2017. The contractor would not be able to proceed with the installation of granite curbing nor the reconstruction of the sidewalks until the redesign is completed. **Construction would likely be delayed a year and not be completed until late 2018.**
- **Approximately 40 out of the 209 parking spaces on Huron Ave would be eliminated.** Without a full design we do not know the exact number, but based on the number of driveways (56) and side streets (17) and our experience on Western Ave, we estimate approximately 40 parking spaces would be eliminated to provide adequate sightlines for a parking protected bike lane.
- **The narrow cross-section could work**, but would be challenging for bus operations, large vehicles, and parking, especially during winter conditions.
- **The cost increase is estimated at \$1.5 million to \$2.5 million** for the redesign efforts, delay of contract and reconstruction of some of the work already completed.

Based on this review of the project status and the impacts associated with making major changes to the design at this point in construction, we do not plan to modify the layout of Huron Avenue. The buffered bike lane currently included in the design is significantly safer than the prior design, because it moves cyclists out of the door zone and provides greater operating space for cyclists as they move along the corridor. Given that the historical crash statistics do not indicate a particular safety issue along this corridor, and we do not believe that changing the design to a parking-protected bike lane justifies the additional construction duration, cost, and other impact.

Very truly yours,



Louis A. DePasquale  
City Manager

LAD/mec  
Attachment(s)

# HURON AVENUE, CAMBRIDGE, MA - FINAL CONCEPT DESIGN

