Mount Auburn Street
A Complete Streets Project

The Town Council Public Works Committee Meeting

Richard E. Mastrangelo
Council Chambers

October 30, 2018

Meeting #2 Mount Auburn Street from School Street to Cambridge City Line
Agenda

- How We Got Here...
- Purpose of Meeting – *Why are we here?*
- Public Outreach Summary
- Coolidge Square Business District
  - Road Safety Audit
  - Parking Analysis
  - Bus Network
  - Loading / Unloading Zones
- Proposed Improvements Along Corridor
  - Kimball Road Intersection Alternatives
- Summary / Conclusions
- Recommendations
- Next Steps – *Where do we go from here?*
- Questions
How We Got Here...

Town Council Meeting held on July 10, 2018
- Approved complete streets concept plan
- Conceptual plan included implementation of the road diet

Follow-up on the recommendations of the Town Council at the July 10, 2018 meeting:

“Town Council authorized Administration to proceed and submit to MassDOT a design for the Mt. Auburn St. project based on the conceptual design developed to date...”
Purpose of Meeting
Why are we here?

Goals of tonight’s meeting:
- Discuss Coolidge Square Business District in relation to transit operations, loading zones, and parking
- Evaluate Mt. Auburn Street / Kimball Road design alternatives
- Overview of proposed improvements along Mt. Auburn Street
  - From School Street to Cambridge City Line
  - From Patten Street to School Street discussed at October 16, 2018 Public Works Committee Meeting
- Endorse a final concept to develop the 25% Design plans
Public Outreach Summary

Public Outreach Completed Since June 2009

- 6 Open House / Workshops
- 7 Public Works Committee Meetings
- 1 Town Council Meeting
- Mailings:
  - Mailing to Abutters (November 2017)
  - Town Newsletter (2)
  - Flyers to business districts and residents of Kimball Road
- Project Website  www.MountAuburnStreet.com
  - 7,500 visitors to website since May 2017
  - More than 20 e-blasts to email list with more than 2,900 subscribers
- Social Media
  - Follow @WatertownDPW on Twitter
Public Outreach Summary
What we heard at Coolidge Sq. Open House (Jan 2018)

- Desire for additional pedestrian amenities, wider sidewalks, and safer crossings
- Intersections that need safety improvements*
  - Arlington Street at Grove Street (9)
  - Mt. Auburn Street at:
    - Kimball Road / Bigelow Avenue (8)
    - Melendy Avenue / Elton Avenue (7)
    - Dexter Avenue / Upland Road (5)
- Locations that feel unsafe for walking or crossing the street*
  - Arlington Street at Grove Street (2)
  - Mt. Auburn Street at:
    - Kimball Road / Bigelow Avenue (3)
    - Melendy Avenue / Elton Avenue (4)
    - Dexter Avenue / Upland Road (2)

*Respondents could identify more than one location. A total of 37 comment forms were submitted, but not all questions were completed.
Coolidge Square Road Safety Audit
Recommendations for Further Study
Conducted on December 5, 2017

Consists of multidisciplinary team that examines existing roadway to identify safety issues and opportunities for safety improvements

Team included: MassDOT, Watertown, WalkBoston, MBTA, WorldTech Engineering

Study is inclusive of all corridor users

Consider Road Diet
Consider Making Kimball Rd. One-Way / Close Off
Relocate Bus Stop(s)
Bus Priority / Emergency Preemption
Gateway Treatment
Consider Bus Priority Lane
Consider “T” Intersection
Wayfinding for Parking Lot
Consider Signal / Roundabout
Pedestrian Signal
Gateway Treatment
Bike Lanes / Sharrows
Relocate Parking from Intersections / Crosswalks
Potential Curb Extensions / Bump Outs
Bike Detection / Bike Boxes
Gateway Treatment
Bus Priority / Emergency Preemption
Consider Bus Priority Lane
Consider “T” Intersection
Wayfinding for Parking Lot
Consider Signal / Roundabout
Existing Parking Inventory
Dexter Avenue to Arlington Street (Coolidge Sq.)

Existing On Street Parking
Eastbound: 27 Spaces
Westbound: 13 Spaces

Total of 40 Existing Parking Spaces
(Along Mt. Auburn Street from Dexter Avenue to Arlington Street)
Proposed Parking Breakdown
Dexter Avenue to Arlington Street (Coolidge Sq.)

**Proposed On Street Parking**
Eastbound: 27 Spaces (No Change)
Westbound: 16 Spaces (3 Gained)

**Total of 43 Proposed Parking Spaces**
(Along Mt. Auburn Street from Dexter Avenue to Arlington Street)

- 6 Spaces (6 Gained)
- 6 Spaces (No Change)
- 4 Spaces (Less 3)
- 7 Spaces (Less 3)
- 0 Spaces (Less 2)
- 5 Spaces (Less 1)
- 2 Spaces (No Change)
- 13 Spaces (6 Gained)
Existing Bus Network
Coolidge Square Business District

Ridership Information (passengers per day)

- Boarding: 46 Disembarking: 71
- Boarding: 63 Disembarking: 234
- Boarding: 34 Disembarking: 232
- Boarding: 110 Disembarking: 45
- Boarding: 227 Disembarking: 101
- Boarding: 210 Disembarking: 39
Loading / Unloading for Local Businesses
Coolidge Square Business District

- Loading / unloading to local businesses currently occurs in a travel lane or on side streets
  - Creates safety issue as cars are forced to weave around truck
  - Delivery trucks adjacent to crosswalks block pedestrian visibility
- Deliveries will likely occur in buffered bike lanes or side streets
  - Compromise in relation to multimodal aspects of the corridor
    - Allows for implementation of buffered bike lanes as space permits
  - Town of Watertown is open to dedicated loading/unloading space at specific times
    - Common practice in Central Business Districts
Improvements Along the Corridor
Dexter Avenue to Irma Avenue (Coolidge Sq.)

- Rectangular Rapid Flashing Beacons at Upland Road / Dexter Avenue crossing
- Melendy Avenue intersection layout
  - Residents voiced concerns regarding sight distance and ability to enter traffic
  - Parking regulations and geometry changes will enhance sight distance
  - Gaps in traffic will provide access to / from side streets
Improvements Along the Corridor
Irma Avenue to Arlington Street (Coolidge Sq.)

- Begin two-lane approach to Arlington Street (EB) at Bigelow Avenue
- Bigelow Avenue intersection
  - “Do Not Block the Box”
  - Placemaking area
  - Existing bus stop at Bigelow Avenue (EB) remains near sided
- Kimball Road one-way away from Mt. Auburn Street to first driveway
- Templeton Parkway
  - “No Left Turn” restriction on to Mt. Auburn Street posted
Coolidge Square Business District
Wider sidewalks, new trees and seating. Concept only – design to be determined (TBD)
Improvements Along the Corridor
Kimball Road Alternative 1 – July 2018 Layout

- Layout as shown in July 2018 Roll Plan
  - Near side bus stop at Bigelow Avenue (EB)
- Kimball Road is one-way away from Mt. Auburn Street until first driveway
  - Recommendation from Road Safety Audit
- Intersection geometry will deter cut-through traffic on Kimball Road

“Consider making Kimball Road one-way away from the intersection or closing off Kimball from the intersection...”
-Coolidge Sq. RSA
Improvements Along the Corridor
Kimball Road Alternative 1 – July 2018 Layout

**Pro’s**
- Maximizes number of parking spaces based on bus stop location
- Geometry will deter cut through traffic on Kimball Road
- T-intersection configuration of Bigelow Ave. will improve sight lines
- Sidewalk bump-out at Kimball Road will shorten pedestrian crossing distances
- Placemaking area in reclaimed public space

**Con’s**
- Crosswalk across Mt. Auburn Street at Bigelow Ave. is in front of bus stop
  - Two crossings required to north side of Mt. Auburn Street
- High volume bus stop located in an area with limited pedestrian waiting areas
- Use of placemaking area limited with respect to transit users
- No left turn from Mt. Auburn Street (EB) to Kimball Road
- No access to Mt. Auburn Street from Kimball Road
  - Recommendation from Road Safety Audit
Improvements Along the Corridor
Kimball Road Alternative 2 – Far Side Bus Stop (EB)

- Bigelow Avenue bus stop (EB) located on far side of intersection
- Kimball Road is one-way away from Mt. Auburn Street until first driveway
  - Recommendation from Road Safety Audit
- Intersection geometry will deter cut-through traffic on Kimball Road
Improvements Along the Corridor
Kimball Road Alternative 2 – Far Side Bus Stop (EB)

**Pro’s**
- Crosswalk across Mt. Auburn Street at Bigelow Avenue is behind bus stop
  - One road crossing required to get to north side of Mt. Auburn Street
- Geometry will deter cut through traffic on Kimball Road
- T-intersection configuration of Bigelow Avenue will improve sight lines
- Placemaking area can be incorporated into transit stop
- Stop placement allows for Transit Signal Priority (TSP)

**Con’s**
- Loss of 3 parking spaces (compared to Alt 1) within Business District
  - Net gain of 3 parking spaces in relation to the existing condition
- Longer crosswalk across Mt. Auburn Street at Bigelow Avenue
  - Bump-out removed for bus stop relocation
- No left turn from Mt. Auburn Street (EB) to Kimball Road
Improvements Along the Corridor
Kimball Road Alternative 3 – Existing Geometry

- Bus stop would remain at current location (near side of Bigelow Avenue)
- Kimball Road would remain a two-way street
- Geometry will reinforce current traffic behaviors (i.e. cut throughs)
- Layout mimics 2015 conceptual design
  - Geometry shown in roll plan adjusted based on Road Safety Audit (RSA) findings / recommendations
<table>
<thead>
<tr>
<th>Pro’s</th>
<th>Con’s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two-way traffic maintained on Kimball Road</td>
<td>Loss of 2 parking spaces (compared to Alt 1) within Business District</td>
</tr>
<tr>
<td>Left turn from Mt. Auburn Street to Kimball Road permitted</td>
<td>Net gain of 4 parking spaces in relation to the existing condition</td>
</tr>
<tr>
<td>Bike box at Mt. Auburn Street eastbound approach</td>
<td>Crosswalk across Mt. Auburn Street at Bigelow Avenue is in front of bus stop</td>
</tr>
<tr>
<td>Two pedestrian crosswalks across Mt. Auburn Street</td>
<td>Near side bus stop</td>
</tr>
<tr>
<td></td>
<td>Loss of placemaking area</td>
</tr>
<tr>
<td></td>
<td>Removal of 12” tree at SE corner of intersection</td>
</tr>
<tr>
<td></td>
<td>Limited sight distance for pedestrians at Bigelow (W) crosswalk</td>
</tr>
<tr>
<td></td>
<td>Magnified if bus is parked at bus stop</td>
</tr>
<tr>
<td></td>
<td>Impacts to intersection level of service (LOS)</td>
</tr>
</tbody>
</table>
Recommendations

Kimball Road Intersection Alternatives

- All three concepts presented herein are technically feasible and could be implemented
  - Each alternative achieves different objectives in relation to the needs of users along Mt. Auburn Street with different opportunity costs

**Alternative 2 – Far Side Bus Stop (EB)**

- Increase in the total amount of legal parking spaces within Coolidge Square Business District
- Mt. Auburn Street (EB) bus stop at Bigelow Avenue to be relocated as a far side stop
  - Crosswalk will be behind the bus stop
- Allow for the implementation of Transit Signal Priority
Coolidge Square Business District

Project goal is to retain parking within Coolidge Square Business District

- Existing Legal Spaces: 40
- Proposed Spaces: 43
  - Alternative 2 – Far Side Bus Stop (EB)
Improvements Along the Corridor
School Street to Dexter Avenue

- Proposed crosswalk at Langdon Avenue
  - Crosswalk located behind bus stop (WB)
  - Rectangular Rapid Flashing Beacons (RRFB’s)
- Near side bus stop at Adams Street (EB)
- Inclusion of formalized parking and bump-outs on Boylston Street (E)
Improvements Along the Corridor
Arlington Street to Cambridge City Line

- Bus stop far side of Cottage Street (EB)
  - Beginning of shared bus-bike lane into Cambridge
- Curb extension removed from Cambridge line to St. Mary Street (WB)
  - Additional space for funeral processions
- Bus landing between Cottage Street and city line reduced to maximize parking (EB)
- Incorporates Watertown-Cambridge BRT Pilot
Improvements Along the Corridor
Arlington Street / Grove Street

- Reconfiguration of the Arlington Street / Grove Street intersection
- Placemaking area in lieu of existing slip lane
- Revised intersection incorporates Tufts Health Building entrance
Summary / Conclusions
Mt. Auburn Street Corridor

Additional parking analysis
- Watertown Dept. of Community Development & Planning is conducting a parking study within Watertown Square and Coolidge Square
  - Focused on parking regulations
  - First public meeting scheduled for December 2018

Considerations / prioritization in comparison analysis of Bigelow Avenue alternatives:
- Safe pedestrian crossings
- Transit benefits
- Increase in amount parking within business district
- Emergency response
Summary / Conclusions
Coolidge Square Business District

- VISSM Traffic Simulation
  - Applies projected traffic counts and signal timing
  - Creates traffic model that can be used as a tool by Engineers to evaluate traffic flow / operations
  - It is a next step in the design process...
Next Steps
Where do we go from here?

- Future Town Council Meeting
  - Public Works Committee Report
    - Issued to the Council in its entirety
    - Design recommendations from October meetings
    - Summary of design changes based on July 2018 concept

- Submit 25% Design to MassDOT
  - Submission is on critical path toward FY 2022 project advertisement

- Future Design Development / Refinement
  - Amenities / Placemaking Areas
  - Potential loading zones within business districts
Questions?

How to Stay Informed

• Visit the project website and sign up for email updates: www.MountAuburnStreet.com