Retrofitting Beacon Street

Short-Term Recommendations to Improve Bicycle Mobility on Brookline’s Iconic Boulevard
Premise

- Brookline has made considerable progress improving bicycle infrastructure and increasing its bicycling rate in recent years

- Beacon Street remains a barrier to unlocking Brookline’s potential as a bicycle friendly community

- Retrofits for bicycle comfort and safety are feasible on Beacon Street
Project Overview

Goals

- Provide greater separation between bicyclists and motor vehicles where possible
- Enhance the road sharing experience for bicyclists where separation is not currently possible
- Spot treatments at intersections to provide increased visibility and facilitate turning maneuvers for bicyclists

Parameters

- Work within existing cross section
- Avoid parking removal
- Travel lane modification possible on certain segments
- Compatible with upcoming modifications
Bicycle Commuting Rates

- Cambridge = 6.9%
- **Brookline = 4.4%**
- Boston = 2.0%
- Newton = 1.6%
- National Average = 0.6%

*U.S. Census 2013*
Traffic Analysis

- 1996: VHB predicts 11% growth in peak hour motor vehicle traffic over 10 years at the Beacon/Harvard Street intersection.


- Bicycle commuting in Brookline grew from 1.5% in 2000 to 4.4% in 2013
Design Elements
Cross Section

Separated Bike Lanes

Buffered Bike Lanes
Design Elements
Intersection

Two-stage queue box

Intersection crossings
Design Elements
Shared Lanes

VS.

SHARE THE ROAD

MAY USE FULL LANE
Cross Sections
Existing Conditions
Wide Side
35 ft. through zone
Alternative 1
Narrow Travel Lanes
Drive-side buffer
Alternative 2
Narrow Travel Lanes
Parking-side buffer
Alternative 3
Narrow Travel Lanes
Separated bike lane
Existing Conditions
Narrow Side
30 ft. through zone
Alternative 1
Narrow travel lanes
Shared lane markings
Alternative 2
Remove one travel lane
Buffered bike lane
Alternative 3
Remove travel lane
Separated bike lane
Beacon at Harvard
Beacon at Harvard
Recommendations

- Focus on improving shared sections
  - Sharrows coming soon
  - Consider narrowing travel lanes
  - “Bikes May Use Full Lane” signage

- Enhance bike lanes
  - Add buffer zones
  - Consider narrowing travel lanes

- Improve intersections
  - Crossing markings
  - Two-stage queue boxes