Pilot Project

• February through May 2017
• 16 volunteers checked for motor vehicles stopped in bike lane as they passed through one of the street segments
• Recorded what they observed: street segment, date, time, and number of violations (0, 1, 2, etc)
• 18 street segments with bike lanes
Data

• Volunteers submitted 1503 observations (1463 on Harvard and Beacon Streets)
• The data provided statistics of frequency of bike lane violations
  – Unbiased
  – Statistically significant
  – on many segments of Harvard and Beacon Streets
Overall Results
on Harvard and Beacon Streets

• Bike lane segments were blocked 27% of the time

• Average number of obstructions at any point in time was 0.35

• Two main types of obstruction occur
  – Freight vehicles
  – Passenger cars (private and Uber/Lyft)
Harvard Northbound Beacon to Green
July 18, 2017 10:45 a.m.
Beacon Outbound at St. Mary’s
August 9, 2017 3:15 p.m.
Beacon Outbound at St. Mary’s
August 9, 2017 5:00 p.m.
Harvard Street
Average Number of Obstructions At Any Point In Time

<table>
<thead>
<tr>
<th>Segment</th>
<th>Description/Abutter</th>
<th>No. of counts</th>
<th>Weekdays</th>
<th></th>
<th></th>
<th></th>
<th>Weekends</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>AM Peak</td>
<td>Mid Day</td>
<td>PM Peak</td>
<td>Eve</td>
<td>AM Peak</td>
<td>Mid Day</td>
<td>PM Peak</td>
<td>Eve</td>
<td></td>
</tr>
<tr>
<td>SOUTHBOUND</td>
<td></td>
<td></td>
<td>AM Peak</td>
<td>Mid Day</td>
<td>PM Peak</td>
<td>Eve</td>
<td>AM Peak</td>
<td>Mid Day</td>
<td>PM Peak</td>
<td>Eve</td>
<td></td>
</tr>
<tr>
<td>Babcock St to Beacon St</td>
<td>Coolidge Theatre</td>
<td>117</td>
<td>0.35</td>
<td>0.36</td>
<td>0.38</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beacon St to Longwood Ave</td>
<td>Michael's Deli</td>
<td>195</td>
<td>0.20</td>
<td>0.30</td>
<td>0.28</td>
<td>0.36</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Longwood Ave to Webster St</td>
<td>Focal Point, Eagle Cleaners</td>
<td>42</td>
<td>0.25</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marion St to School/Aspinwall</td>
<td>Brookline Grooming</td>
<td>55</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NORTHBOUND</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aspinwall/School to Marion St</td>
<td>Stop &amp; Shop</td>
<td>60</td>
<td></td>
<td>0.50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beacon St to Green St</td>
<td>Booksmith</td>
<td>238</td>
<td>0.23</td>
<td><strong>0.57</strong></td>
<td>0.39</td>
<td><strong>0.54</strong></td>
<td><strong>1.12</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Green St to Babcock St</td>
<td>Panera</td>
<td>192</td>
<td>0.21</td>
<td>0.30</td>
<td>0.13</td>
<td><strong>0.69</strong></td>
<td>0.33</td>
<td>0.60</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Babcock St to Lawton St</td>
<td>Devotion School</td>
<td>26</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes:

1. Greyed segment names are perceived as most dangerous.
2. Blank time period cells have statistically insignificant frequencies (less than 2 standard deviations from zero).
3. AMPeak--6:30-9:30; Midday--9:30-3:30; PMPeak--3:30-7:30; Eve--7:30-11:30
Beacon Street
Average Number of Obstructions At Any Point In Time

<table>
<thead>
<tr>
<th>Segment</th>
<th>Description/Abutter</th>
<th>Weekdays</th>
<th></th>
<th>Weekends</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>No. of</td>
<td>AM Peak</td>
<td>Mid Day</td>
<td>PM Peak</td>
</tr>
<tr>
<td>OUTBOUND</td>
<td></td>
<td>counts</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>St Marys St to Carlton St</td>
<td>Whole Foods</td>
<td>117</td>
<td>0.55</td>
<td>0.92</td>
<td>1.03</td>
</tr>
<tr>
<td>Marion St to Lancaster Terr.</td>
<td>new buffered bike lane</td>
<td>165</td>
<td>0.37</td>
<td>0.65</td>
<td>0.46</td>
</tr>
<tr>
<td>Lancaster Terr. to Washington St</td>
<td>new buffered bike lane</td>
<td>115</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INBOUND</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Washington St to Fairbanks St</td>
<td>Athan's</td>
<td>112</td>
<td>0.14</td>
<td>0.57</td>
<td>0.36</td>
</tr>
<tr>
<td>Marion St to Webster St</td>
<td>Eastern Bank, Sleepy's</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes:
1. Greyed segment names are perceived as most dangerous.
2. Blank time period cells have statistically insignificant frequencies (less than 2 standard deviations from zero).
3. AMPeak--6:30-9:30; Midday--9:30-3:30; PMPeak--3:30-7:30; Eve--7:30-11:30
General Takeaways

• Bike lanes on most monitored sections of Harvard and Beacon Streets are frequently blocked
• These blockages occur at all times (not just weekday rush hours)
• Unprotected bike lanes on the monitored sections of Harvard and Beacon Streets are not adequate because they are frequently blocked
General Suggestions

• Transition to protected bike lanes is needed on Harvard and Beacon Streets. Possible treatments include
  – Protective posts
  – Curbside bike lane protected by “floating” parking lane
  – Raised lane separated from traffic by curb (cycle track)
• Designate more loading zones to reduce blockage of bike and traffic lanes
• Increase police attention to bike lane violation enforcement on Beacon and Harvard Streets
Specific Facility Suggestions

1. Install bike lane protection on one section of Harvard or Beacon as a demonstration (e.g. Beacon inbound in front of Athan’s)
2. Install a loading zone on Green Street at Harvard
3. Change ‘No Parking’ signs in street segments with bike lanes and no parking to ‘No Parking, No Standing, No Stopping’ or ‘No Stopping’
4. Conduct a study to better address the needs for vehicle loading and unloading without blocking bicycle lanes
5. Solicit feedback/ideas from businesses along street segments with frequent blockages
6. Begin a public process to identify options and address issues for getting continuous unobstructed bike lanes along the entire length of Harvard Street
Specific Enforcement Suggestions

1. Initiate ongoing police enforcement program of bike lane violations on Harvard and Beacon Streets

2. Begin issuing monthly report of bike lane violation citations on Harvard and Beacon Streets

3. Develop solutions with specific merchants, such as CVS, whose trucks are chronic violators
What Ideas Do Transportation Board and Police Department Have?

• ?
End of Presentation

• Subsequent slides provide summary of ideas suggested by bike lane violation counters
Facility improvements suggested by violation counters

- Install a segment of cycle track somewhere as a demonstration
- Put bike lane curbside on southbound Harvard between Babcock and Beacon
- Build a Center Street parking garage in exchange for removed parking on Harvard Street and Beacon Street locations, making way for protected bike lanes
- Provide van-friendly loading zones to nudge delivery companies towards smaller vehicles
- Install posts to protect the Harvard Street bike lane from Beacon north past Booksmith, in the stretch where there is already no parking. Provide a loading zone at the end of Green Street for delivery vehicles that currently stop in this stretch of bike lane?
Enforcement improvements suggested by violation counters

• Implement enforcement program on entire lengths of Beacon and Harvard Streets.
• Use either the Brookline Police Twitter feed or the BonLINE app to submit pictures w/ license plate numbers of vehicles parked in bike lanes.
• Target enforcement at spots that are especially dangerous, not just spots with high violation frequency.
  – Both sides of Harvard in Coolidge Corner between Babcock and Longwood
  – Southbound Harvard in front of the UPS Store at Longwood Ave
  – Outbound Beacon in the commercial strip near St. Mary’s
• Increase lane violation fines for commercial vehicles
• Implement penalties that impact commercial driving licenses of violators
• Implement and enforce programs to allow regular large vehicle deliveries only at scheduled times during low traffic hours
• Take initiatives to develop solutions with specific merchants, such as CVS, whose trucks are chronic violators
• Implement procedures for getting on-the-spot enforcement when violations are encountered.
Other comments of violation counters

• Improving facilities is superior to relying on enforcement.
• We might get more push-back if we start with the high-violation areas.
• A bike lane is an inadequate provision if it is known to be blocked frequently.
• Being forced to maneuver out of a blocked lane only once every five times (comparable to a frequency score of 0.2) is not satisfactory.