BROADWAY AT VAN CORTLANDT PARK
SAFETY AND MOBILITY IMPROVEMENTS

New York City Department of Transportation

Presented by the Bicycle and Greenway Program on April 25, 2017
Project Timeline

**September 2015**
Walkthrough with Councilman Cohen

**Fall 2015**
Public Survey on Broadway

**October 2015**
Community Workshop with CB 8

**Winter 2016 to Winter 2017**
Data Collection, Analysis, Design

**November 2016**
Installation of 2 New Signalized Crossings

**January 2017**
Presentation of Proposed Project to Elected Officials and CB 8

**Winter 2017**
Field Visits with Councilman Cohen and CB 8
Presentation Overview

1 - Broadway Corridor
   • Overall Issues
   • Proposed Corridor Improvements
     1. Westchester County to W 246th St
     2. W 246th St to W 242nd St

2 - Targeted Intersections
   A. Mosholu Ave
   B. Henry Hudson Entrance/Exit Ramps
   C. Manhattan College Parkway

3 - Summary of Benefits
BROADWAY CORRIDOR
Issue: Safety

12 people, including 10 pedestrians, were killed or severely injured on Broadway between W 242\textsuperscript{nd} St and Caryl Ave (2010-2014)

Of the 450+ people surveyed Fall 2015:

38\% do not feel safe crossing Broadway
50\% cited speeding as their top concern

Source: Radar speed study taken on March 9, 2016 btw. Manhattan College Parkway and W 251\textsuperscript{st} Street on Broadway
<table>
<thead>
<tr>
<th></th>
<th>Percentage of Vehicles Speeding</th>
<th>Average Speed</th>
<th>Maximum Speed</th>
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<tbody>
<tr>
<td><strong>Northbound</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Daytime</td>
<td>80%</td>
<td>30.2 mph</td>
<td>51 mph</td>
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<tr>
<td>Nighttime</td>
<td>73%</td>
<td>28.6 mph</td>
<td>41 mph</td>
</tr>
<tr>
<td><strong>Southbound</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Daytime</td>
<td>82%</td>
<td>30.2 mph</td>
<td>44 mph</td>
</tr>
<tr>
<td>Nighttime</td>
<td>95%</td>
<td>32.1 mph</td>
<td>44 mph</td>
</tr>
</tbody>
</table>

**Issue: Safety**

Speeding is an issue along the corridor and is especially prevalent during off-peak hours.

Source: Daytime radar speed study taken on March 9, 2016 btw. Manhattan College Parkway and W 251st Street on Broadway, nighttime radar speed study taken on March 29, 2017 btw Manhattan College Parkway and W 251st St on Broadway at approximately 8:00 pm.
Issue: Park Access

Broadway divides Van Cortlandt Park from the neighborhood

Of the 450+ people surveyed in Fall 2015:
30% come to the park less than once a month
11% never come to the park
58% would come to the park more often if it was safer to cross Broadway
Issue: Vulnerable Populations

Broadway is close to several schools (●) whose students regularly use the park

Broadway also has several senior housing developments in this area
Issue: Infrequent Pedestrian Crossings

- Long distances between crossings between Manhattan College Parkway and W 251st St
- Multiple fatalities between Manhattan College Parkway and W 251st St

DOT Action

- Installed two signalized crossings in November 2016
  - Tortoise and Hare Statue Park Entrance
  - W 246th Street / Museum Entrance
Issue: Important Bus Route

Broadway is an important bus route, serving 8 lines and connecting to the subway

- NYCT Local Buses
- NYCT Express Buses
- Westchester County Beeline
**Issue: Variable Vehicle Volumes**

- Southbound vehicle volumes are typically 900 – 1200 vehicles during peak hour
- Northbound vehicle volumes are typically 600 – 900 vehicles during peak hour
- Low volumes during off-peak periods encourage speeding

Vehicle volumes change significantly at the Henry Hudson Parkway
Existing Conditions
- 70’ wide roadway
- Moderate traffic volumes during peak hours
- Low off-peak traffic volumes
- Edge condition along park
- Wide parking lanes create space for cyclists, 12hr counts: 260 Sat/150 weekday

Issues
- Speeding, especially during off-peak hours
- Long pedestrian crossings
- Infrequent pedestrian crossings
Proposed Design

- Install standard width lanes to narrow roadway
- Add two-way protected bike lane along park edge
- Install bus boarding islands at bus stops

Benefits

- Narrow roadway discourages speeding
- Islands shorten crossings, create ADA compliant bus stops
- Bus loading/unloading happens from travel lane, speeds up service
- Protected bike lane
  - creates new transportation/recreation facility, comfortable for all ages/abilities
  - improves bike access to Van Cortlandt Park, Westchester County trails
  - activates park edge

Crossing distance reduced nearly 30% from 70’ to 50’
Protected two-way bike lane along park edge is a neighborhood amenity that provides a recreation opportunity for cyclists of all ages and abilities and activates the park edge.
Existing Conditions
- Land use along both sides of Broadway changes
- Transfers between subway and bus lines
- Roadway widens significantly and includes a median

Issues
- Southbound roadway excessively wide
- Northbound roadway does not have space for protected bike lanes
- Heavy bus loading/unloading on east curb along park
1 – Broadway Corridor: W 246th to W 242nd St

Proposed Design

• Transition to conventional bike lane on each side of the street at W 246th St
• Transition will require removal of 5 parking spaces (~100 ft) to maintain vehicle alignment

Benefits

• Maintains parking in front of businesses
• Organizes space under the elevated train structure
• Continues bike lane and minimizes bus conflicts
• Connects to bike facilities at W 242nd St
TARGETED INTERSECTIONS
2 – Targeted Intersections: Mosholu Ave

Existing Conditions
- Angled intersection
- Driveway for NYC DOT and DPR vehicles

Issues
- Angle creates very long diagonal pedestrian crossing
- Radius enables vehicles to take very quick turns
- No sidewalks at Sheridan Plaza

Pedestrian fatalities in 2011 and 2012
Crossing distance at intersection of Broadway and Mosholu Ave reduced 33% from 120’ to 80’

Proposed Design

- Install bus boarding and pedestrian safety islands on the east side of Broadway at Mosholu Ave
- Install painted curb extensions on the west side of Broadway at Mosholu Ave
- Mosholu Ave will be accessed only from north side of Sheridan Triangle
- Install Leading Pedestrian Interval signal timing for pedestrians crossing Broadway

Benefits

- Reduces pedestrian crossing distances
- Gives pedestrians a head start when crossing Broadway
- Maintains existing parking
Existing Conditions

- Uncontrolled ramps crossings
- Angle of ramps facilitates fast vehicular movements
- Long distances to cross at ramps and across Broadway

Pedestrian fatality at W 254th St in 2015
Proposed Design at Controlled Ramps

- Narrow roadway exits from the Henry Hudson Parkway

Benefits
- Shorter pedestrian crossings
- Adds approximately 8 parking spaces
Proposed Design at Uncontrolled Ramps

- Redesign entrances to require sharper turns and reduce vehicle speeds
- Create shorter crossings and add missing pedestrian connection
- Control protected bike lanes with stop signs
- Remove underutilized left turn lane at W 254th St

Benefits

- Shorter pedestrian crossings
- Slower vehicle movements entering parkway
- Improved vehicle alignment at W 254th St
2 – Targeted Intersections: Manhattan College Pkwy

Existing Conditions
- SB roadway widens on approach to Manhattan College Pkwy
- Manhattan College Pkwy has WB service road and EB slip lane

Issues
- Long crossing distance (70 ft) from west curb to median
- Redundant slip lane complicates intersection
- Disorganized right turns for southbound motorists
- Bus stop consistently used for private vehicle pick-up and drop-offs
Proposed Design

• Close Manhattan College Parkway slip lane
• Install pedestrian safety islands and right turn wedges in the intersection
• Install bus boarding island at entrance of the 1 train

Benefits

• Closed slip lane simplifies the intersection and maintains current parking
• Pedestrian safety islands reduce crossing distances for pedestrians
• Right turn wedge slows right turning vehicles at uncontrolled right turn
• Bus boarding island improves safety and convenience of bus operations
**Existing Conditions**
- Bus stop at elevated train station
- Columns in roadway divide southbound travel lanes

**Issues**
- Buses regularly do not pull to the curb to drop off/pick up passengers
PROJECT SUMMARY
Pedestrian Enhancements

- Crossings shortened by 30% at typical bus stops along the corridor
- Realigned, shortened crossing at Mosholu Ave
- Normalized crossings at entrance/exit ramps
- Shorter crossings and new plaza at Manhattan College Pkwy

*Improved access to Van Cortlandt Park, transit, and new public space*

Bus Service Improvements

- New bus boarding islands at northbound bus stops between W 246th St and 261st St shorten crossings and speed up service
- New southbound bus boarding island at elevated train station facilitates passenger drop-off and pick-up

*Bus islands improve and sped up boarding and alighting experience*

Protected Bike Lanes and Conventional Bike Lanes

- Creates new transportation and recreation facility that is comfortable for all ages and abilities
- Improves bike access Van Cortlandt Park, Westchester County trails, and subway station
- Enlivens park edge

*New bike path increases transportation options and creates new recreation amenity for the neighborhood*

*Addition of 8 parking spaces, removal of 5, net gain of 3*
THANK YOU!

Questions?