BROADWAY AT VAN CORTLANDT PARK
SAFETY AND MOBILITY IMPROVEMENTS

New York City Department of Transportation

Presented by the Bicycle and Greenway Program on May 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 242nd 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 251st Street on Broadway
### Northbound

<table>
<thead>
<tr>
<th>Time</th>
<th>Percentage of Vehicles Speeding</th>
<th>Average Speed</th>
<th>Maximum Speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daytime</td>
<td>99%</td>
<td>32.8 mph</td>
<td>44 mph</td>
</tr>
<tr>
<td>Nighttime</td>
<td>73%</td>
<td>28.6 mph</td>
<td>41 mph</td>
</tr>
</tbody>
</table>

### Southbound

<table>
<thead>
<tr>
<th>Time</th>
<th>Percentage of Vehicles Speeding</th>
<th>Average Speed</th>
<th>Maximum Speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daytime</td>
<td>92%</td>
<td>31.7 mph</td>
<td>44 mph</td>
</tr>
<tr>
<td>Nighttime</td>
<td>95%</td>
<td>32.1 mph</td>
<td>47 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 May 24, 2017 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 from Manhattan College Parkway to 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
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

- 8’ parking lane
- 10’ travel lane

On-street Parking

- 8’ parking is a standard width used throughout the city
1 – Broadway Corridor: Westchester County to W 261st St

- Maintain bus layover area
- Continue single southbound lane from Westchester County to W 261st St to maintain alignment
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
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
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
2 – Targeted Intersections: Henry Hudson Pkwy Entrance/Exit Ramps

- Shorten pedestrian crossing distances
- Add 8 new parking spaces
- Remove underutilized left turn lane for NB vehicles approaching W 254th St
- Modify geometry to slow the vehicles entering HHP
Targeted Intersections: Henry Hudson Pkwy Entrance/Exit Ramps

Existing

Proposed

- Extend SB left turn lane for vehicles approaching HHP
- Modify geometry to shorten ramp crossing
- Adjust signal timing to provide protected crossing for bikes and peds
- Maintain existing vehicle lanes
2 – Targeted Intersections: Henry Hudson Pkwy Entrance/Exit Ramps

Existing

Proposed

Install hardened center line to create safer left turn from Lakeview Pl

Modify geometry to slow vehicles entering the HHP

Add missing pedestrian connection
Unsignalized Ramp Crossings

Cyclists have a stop sign

Roadway markings to show extent of crossing

Signage to advise motorists of ramp crossing
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
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
2 – Targeted Intersections: Manhattan College Pkwy

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
2 – Targeted Intersections: Manhattan College Pkwy

Existing

- Maintain existing parking capacity and access to businesses

Proposed

- Create new plaza space, with continuous connection to subway station
- Simplify bus operations and limit the impact of double parked vehicles
- Maintain existing parking capacity and access to businesses
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 speed 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?