



BROADWAY AT VAN CORTLANDT PARK

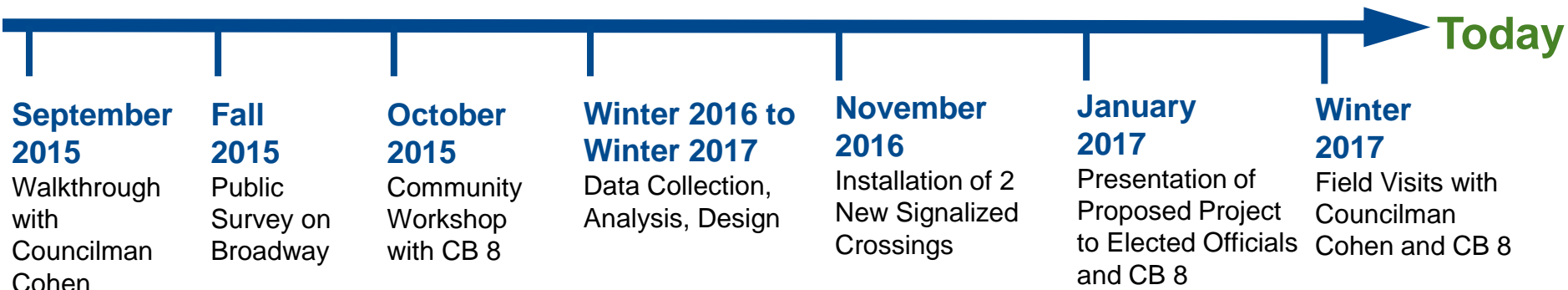
SAFETY AND MOBILITY IMPROVEMENTS

New York City Department of Transportation

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



Project Timeline



Today



Presentation Overview

1 - Broadway Corridor

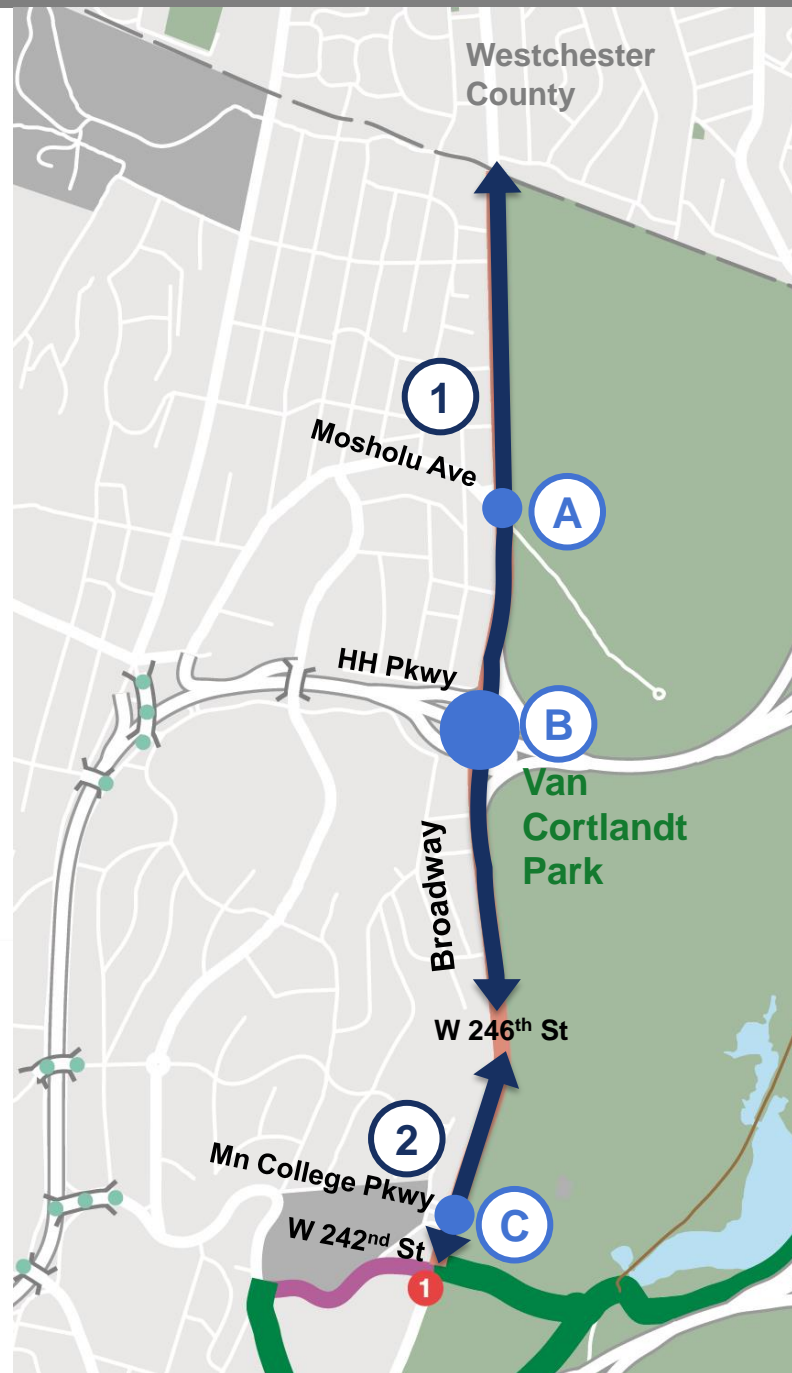
- Overall Issues
- Proposed Corridor Improvements

- ① Westchester County to W 246th St
- ② W 246th St to W 242nd St

2 - Targeted Intersections

- Ⓐ Mosholu Ave
- Ⓑ Henry Hudson Entrance/Exit Ramps
- Ⓒ Manhattan College Parkway

3 - Summary of Benefits



BROADWAY CORRIDOR

1

1 – Broadway Corridor

| Northbound | Percentage of Vehicles Speeding | Average Speed | Maximum Speed |
|------------|---------------------------------|---------------|---------------|
| Daytime | 80% | 30.2 mph | 51 mph |
| Nighttime | 73% | 28.6 mph | 41 mph |

| Southbound | Percentage of Vehicles Speeding | Average Speed | Maximum Speed |
|------------|---------------------------------|---------------|---------------|
| Daytime | 82% | 30.2 mph | 44 mph |
| Nighttime | 95% | 32.1 mph | 44 mph |



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

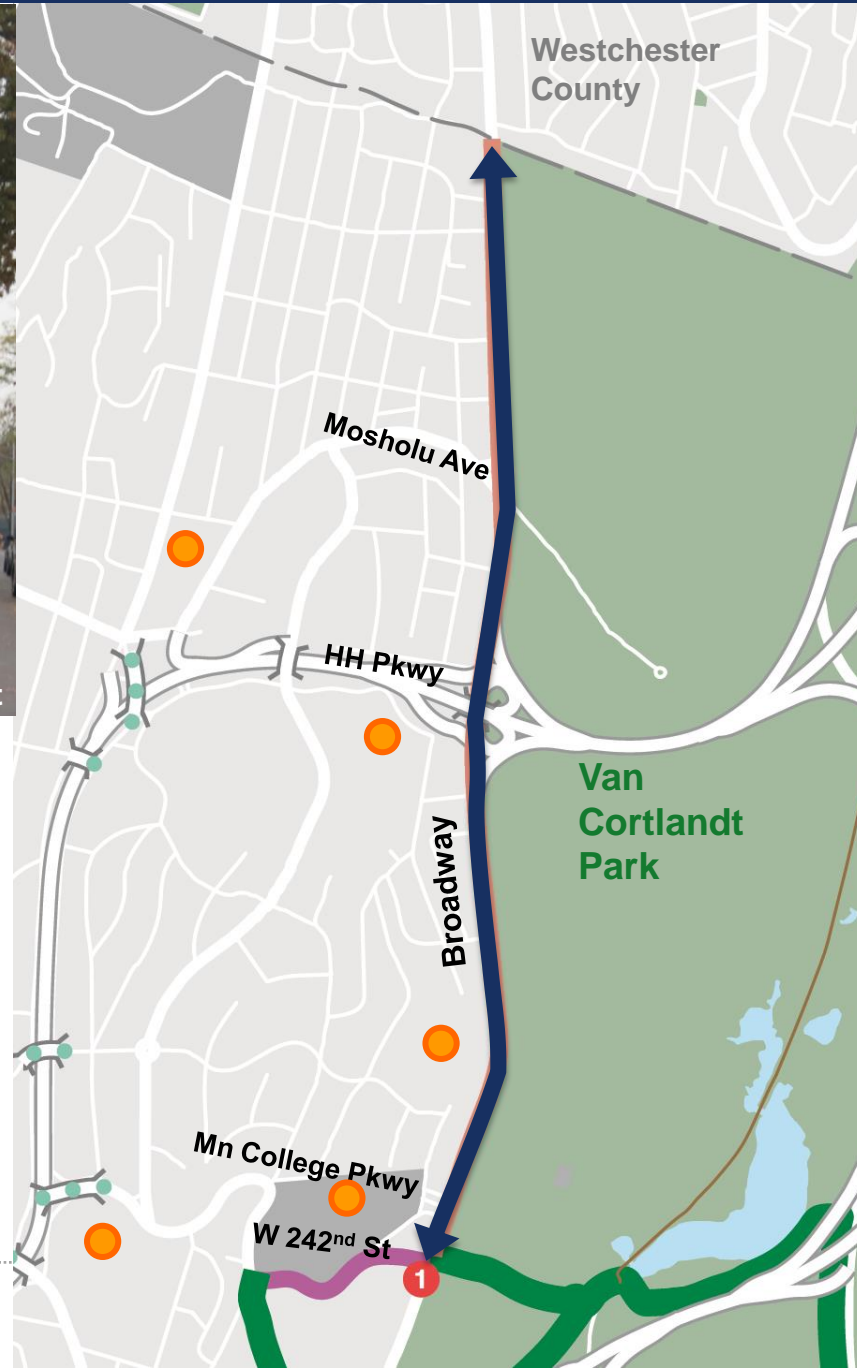
58% would come to the park more often if it was safer to cross Broadway



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

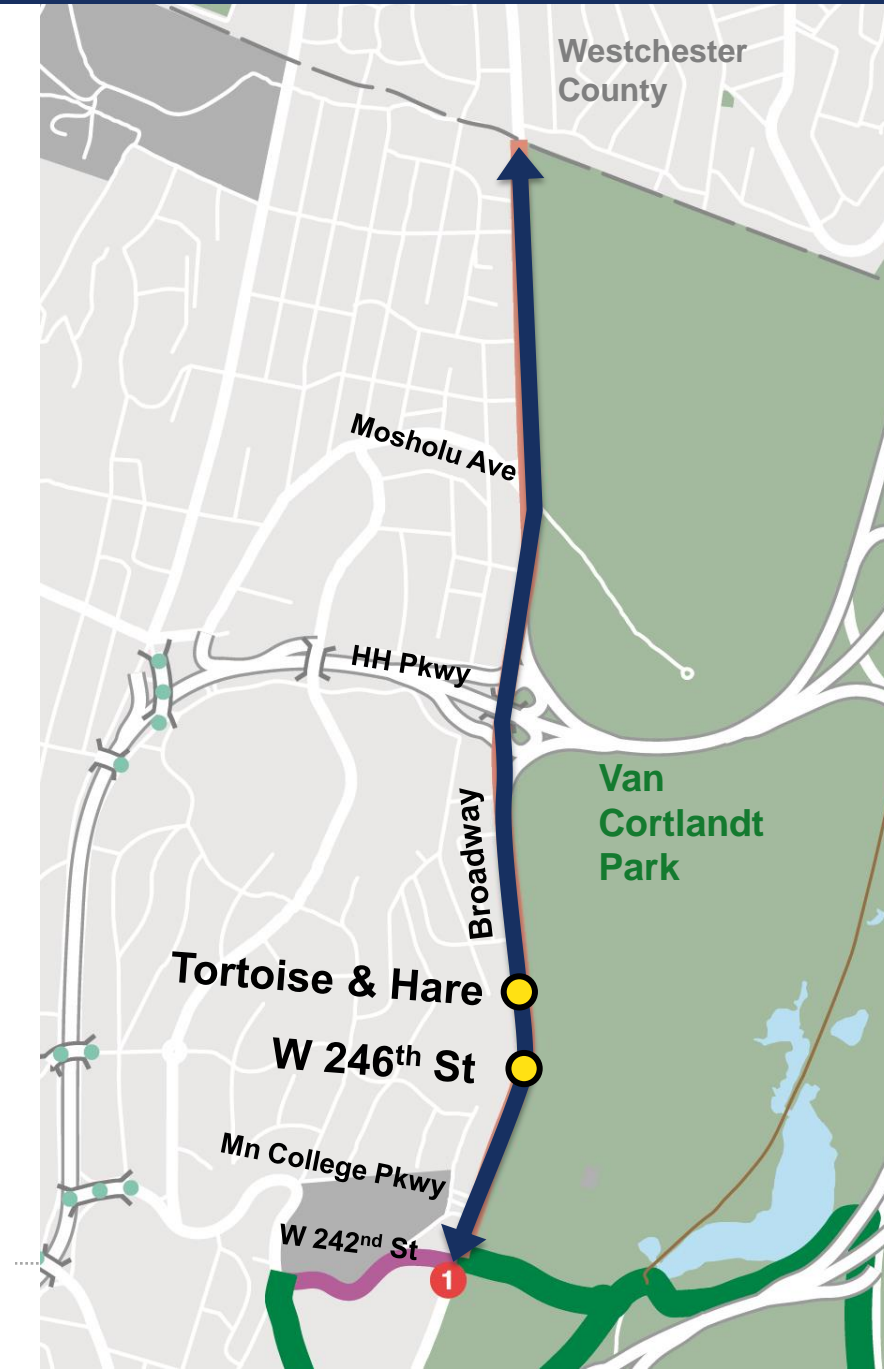


Issue: Infrequent Pedestrian Crossings

- 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





Broadway and Manhattan College Pkwy

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

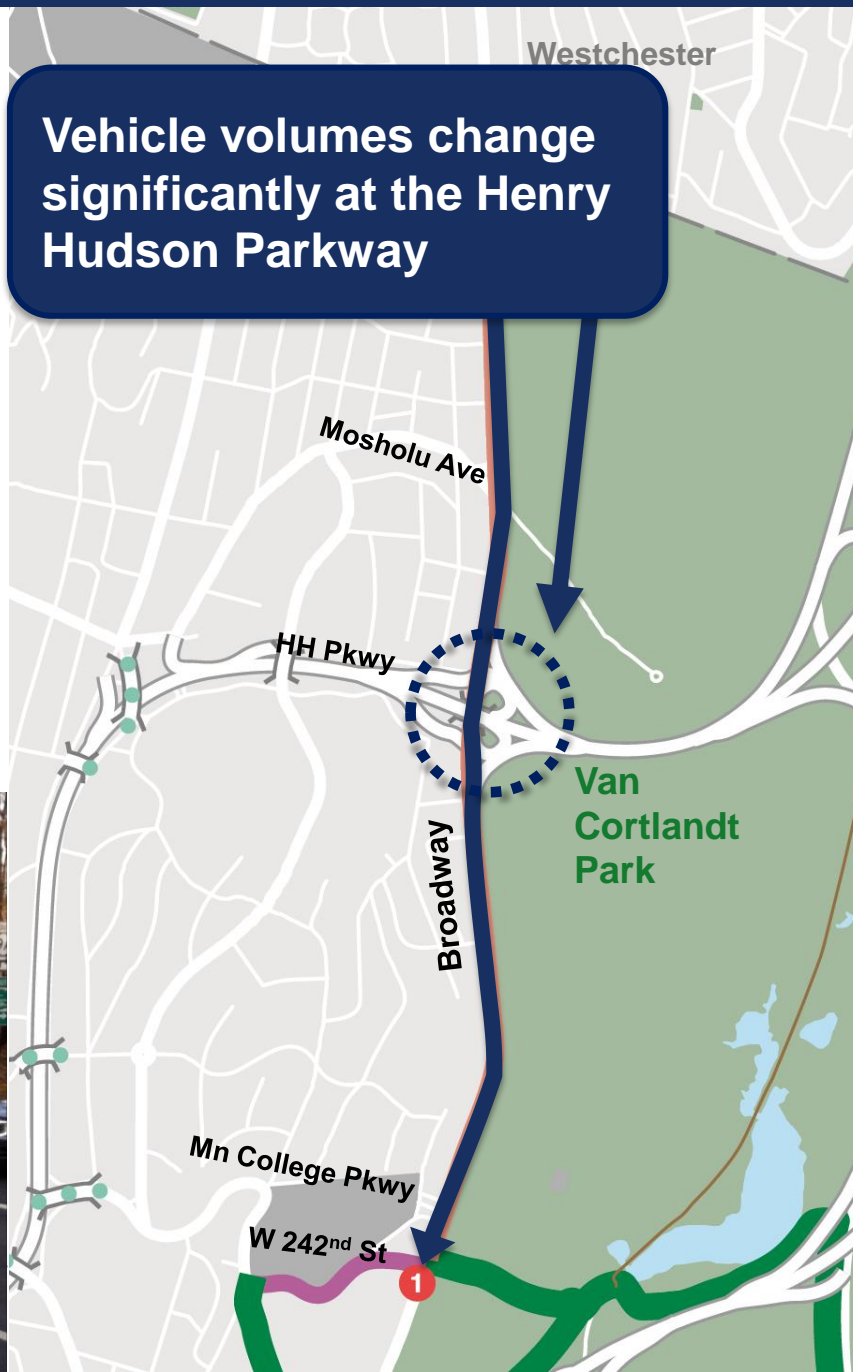


Issue: Variable Vehicle Volumes

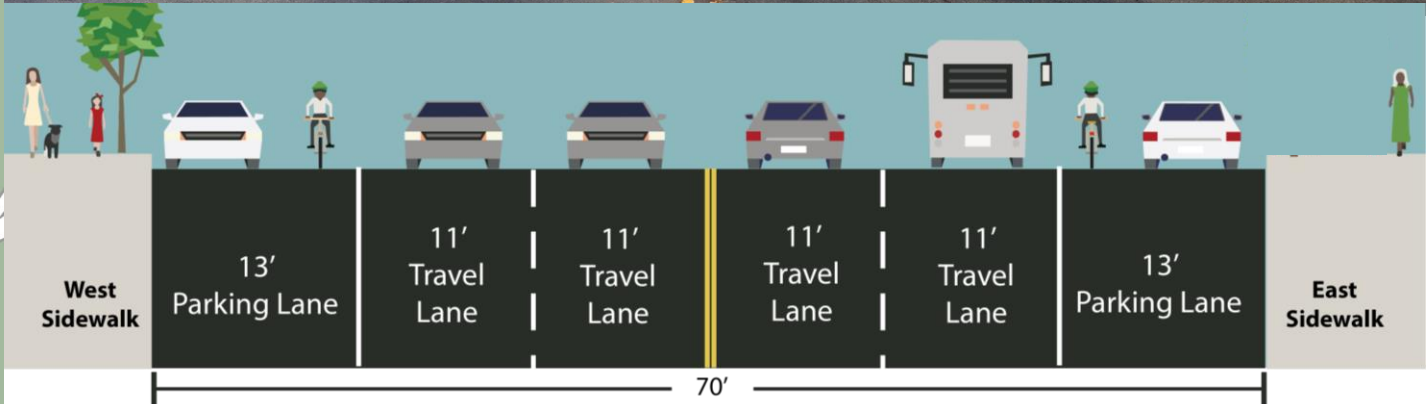
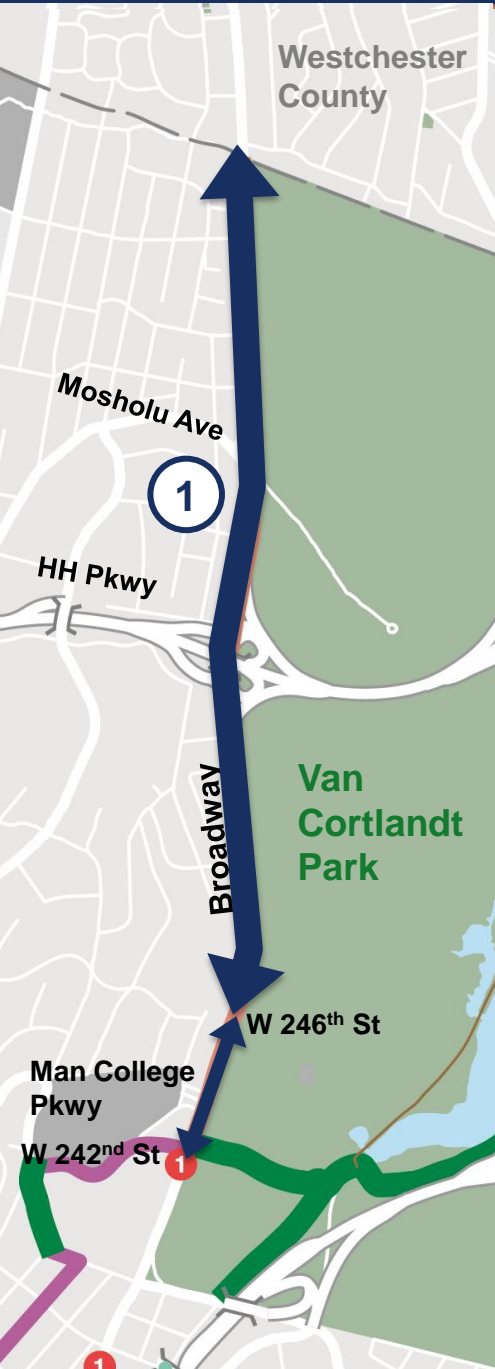
- Southbound vehicle volumes are typically 900 – 1200 vehicles during peak hour
- Northbound vehicle volumes are typically 600 – 900 vehicles during peak hour
- Low volumes during off-peak periods encourage speeding



Broadway and HHP



1 – Broadway Corridor: Westchester County to W 246th St



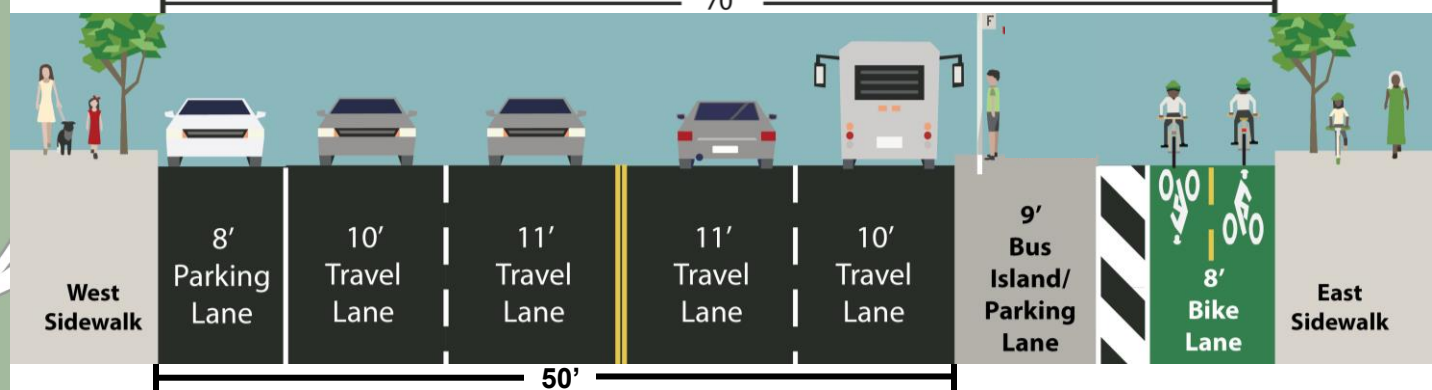
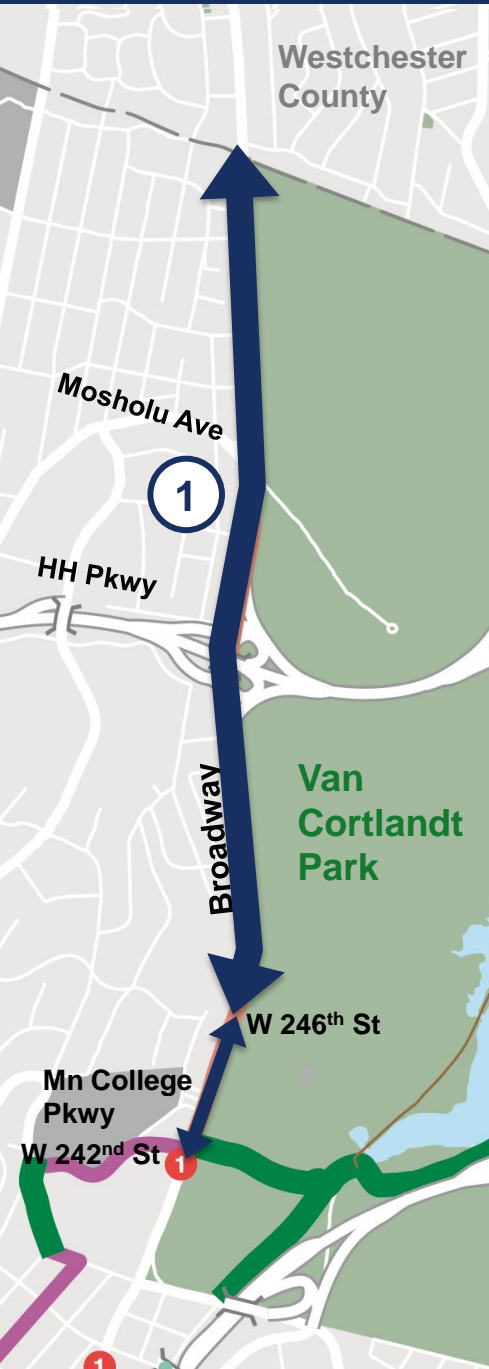
Existing Conditions

- 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

1 – Broadway Corridor: Westchester County to W 246th St



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

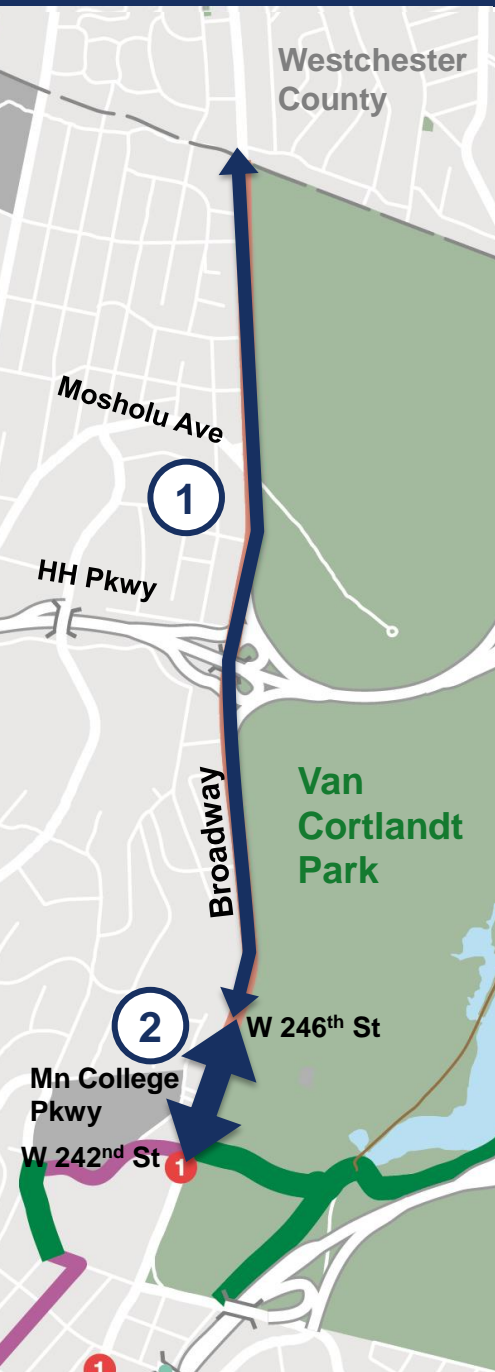
- Narrow roadway discourages speeding
- Islands shorten crossings, create ADA compliant bus stops
- Bus loading/unloading happens from travel lane, speeds up service
- Protected bike lane
 - creates new transportation/recreation facility, comfortable for all ages/abilities
 - improves bike access to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

Crossing distance reduced nearly 30% from 70' to 50'

1 – Broadway Corridor: Westchester County to W 246th St



1 – Broadway Corridor: W 246th St to W 242nd St



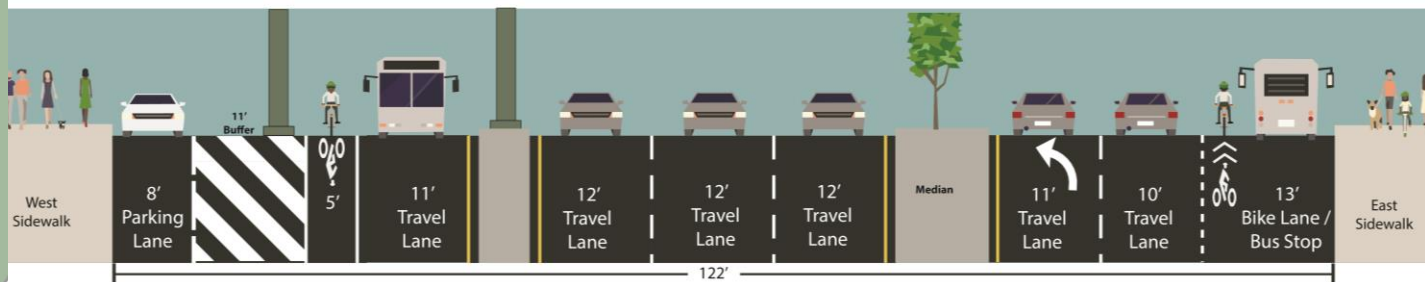
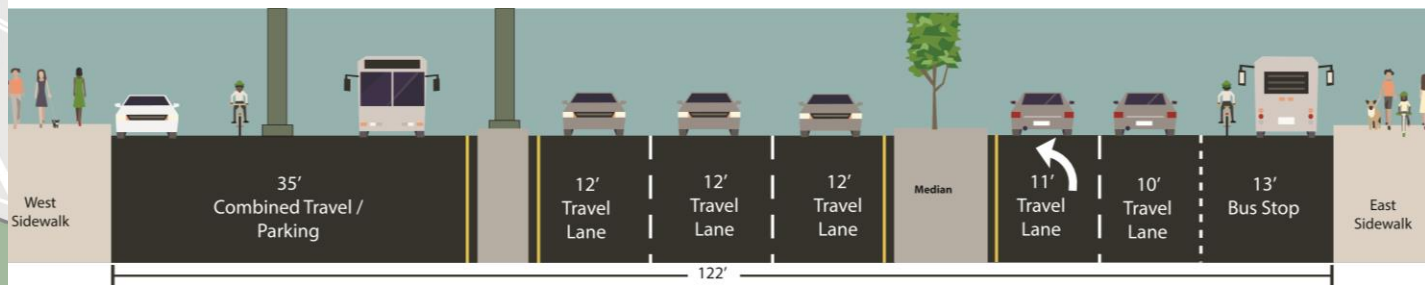
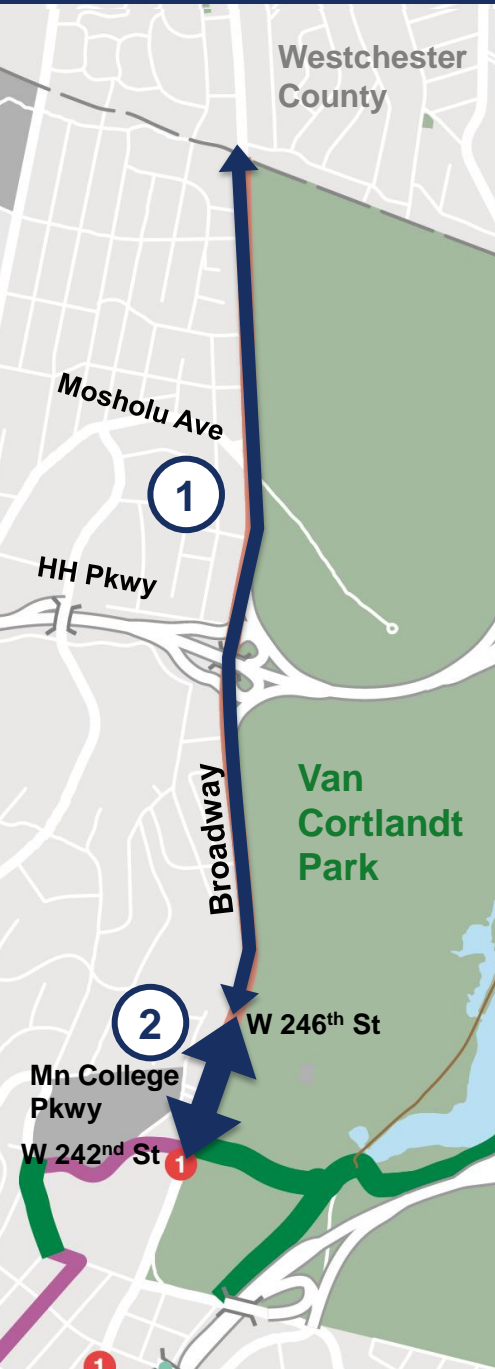
Existing Conditions

- 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

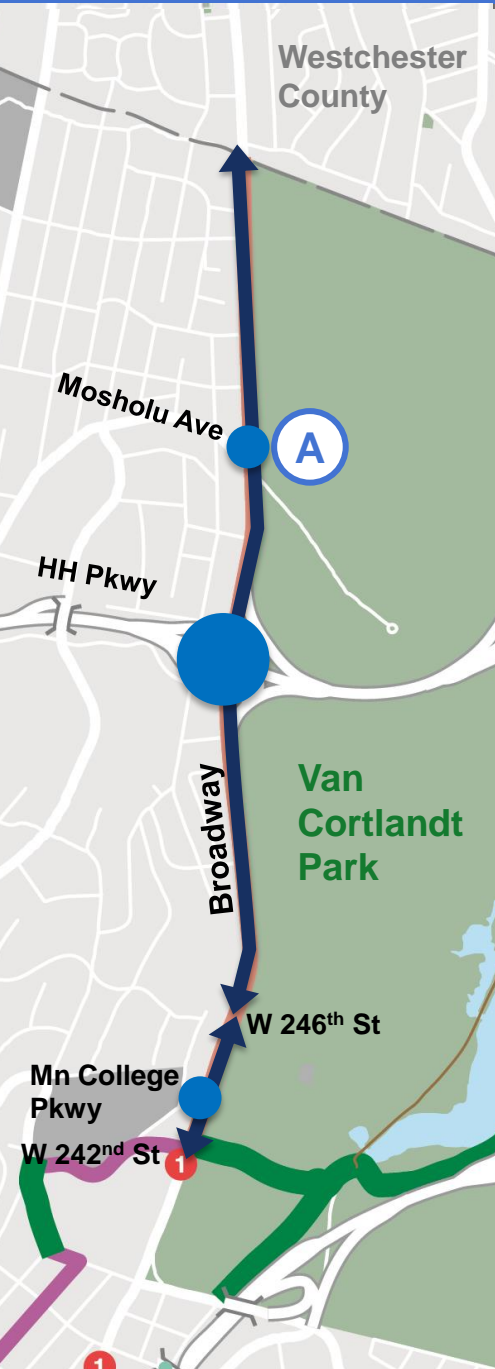
- Transition to conventional bike lane on each side of the street at W 246th St
- Transition will require removal of 5 parking spaces (~100 ft) to maintain vehicle alignment

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



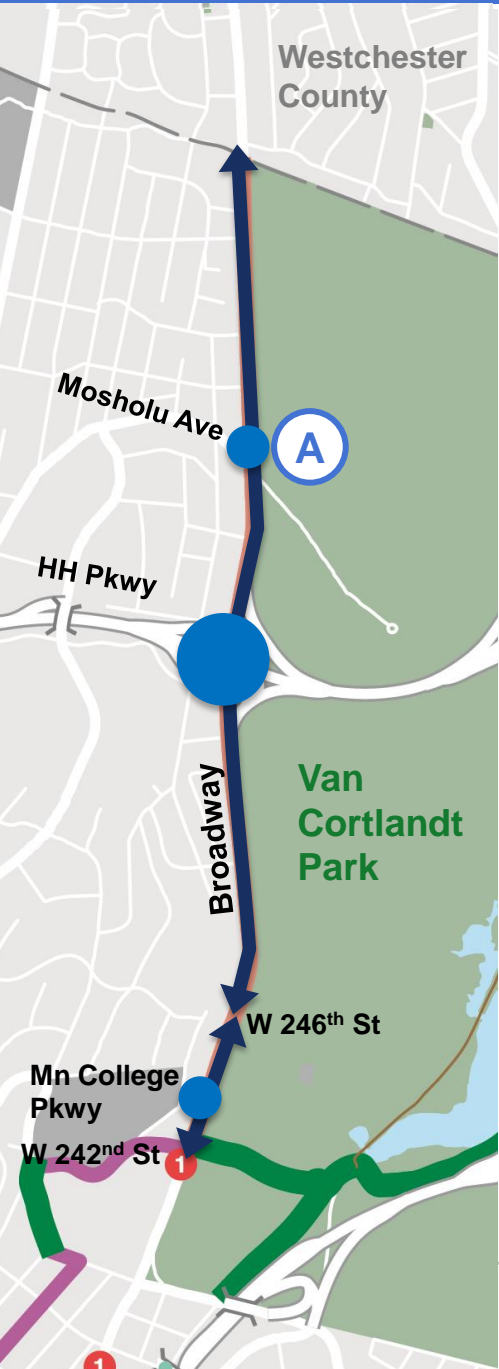
Existing Conditions

- 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'

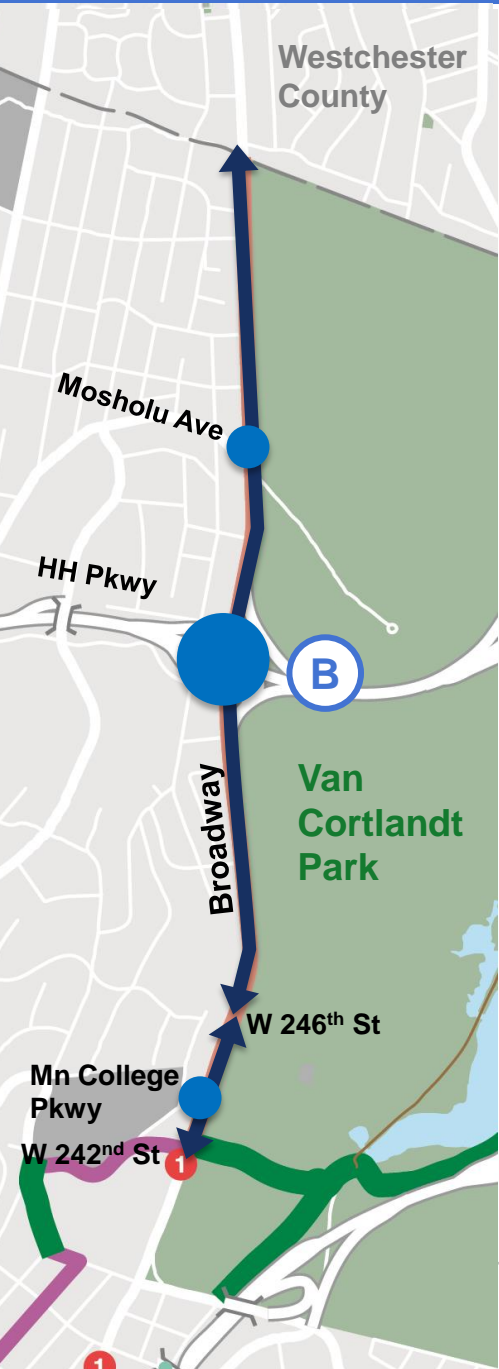
Proposed Design

- 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



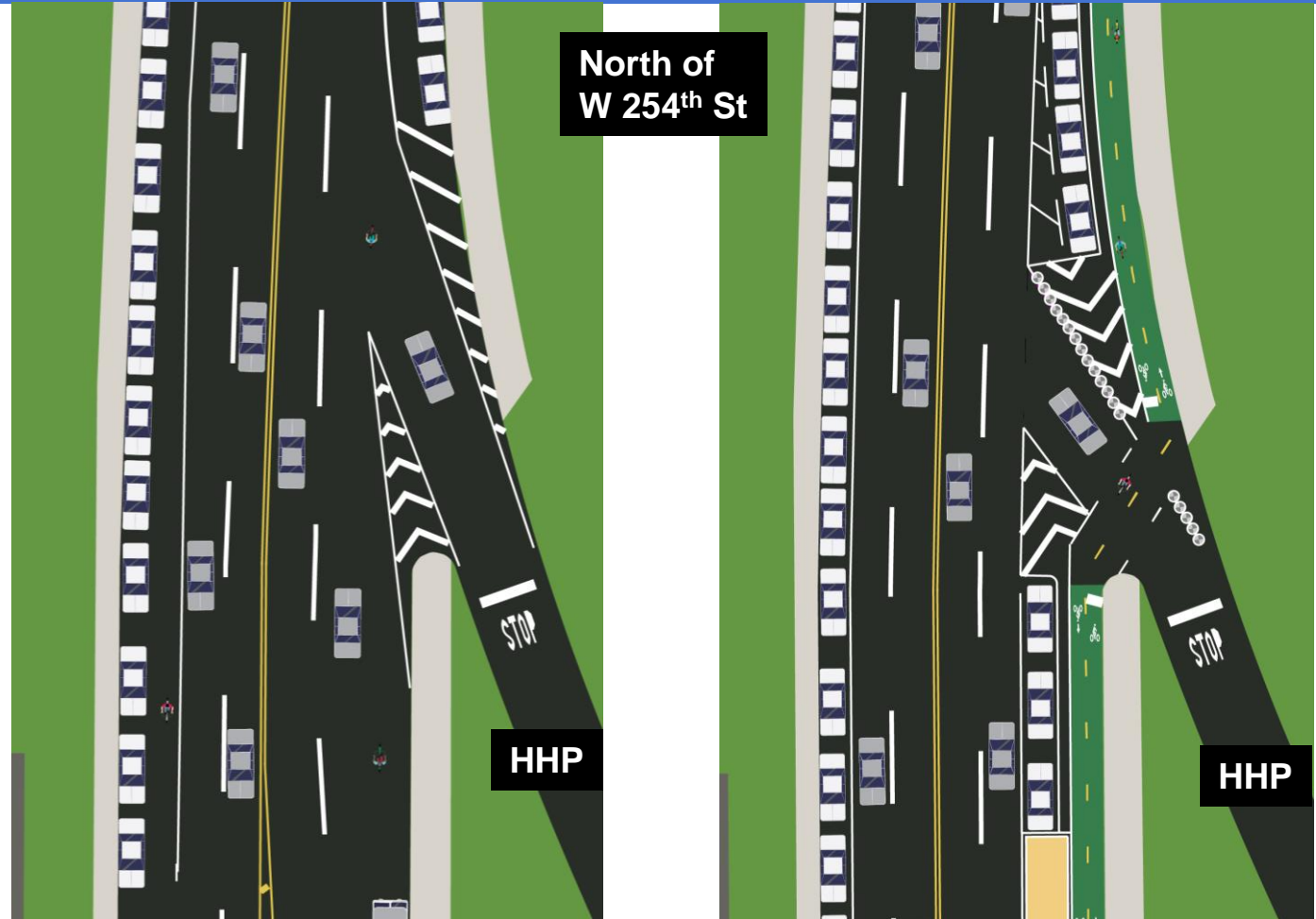
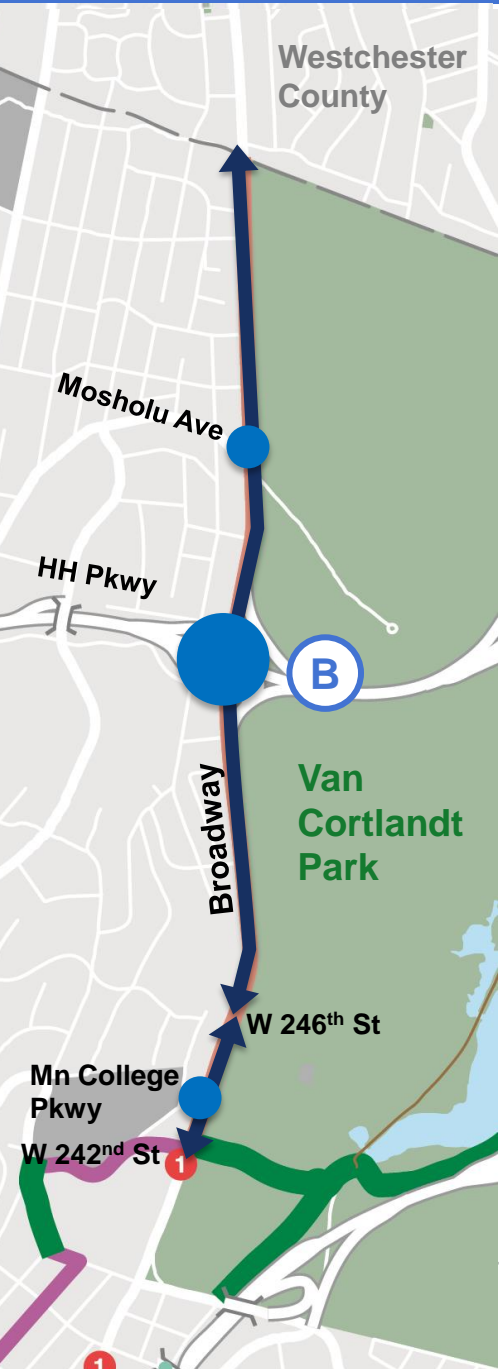


Existing Conditions

- 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

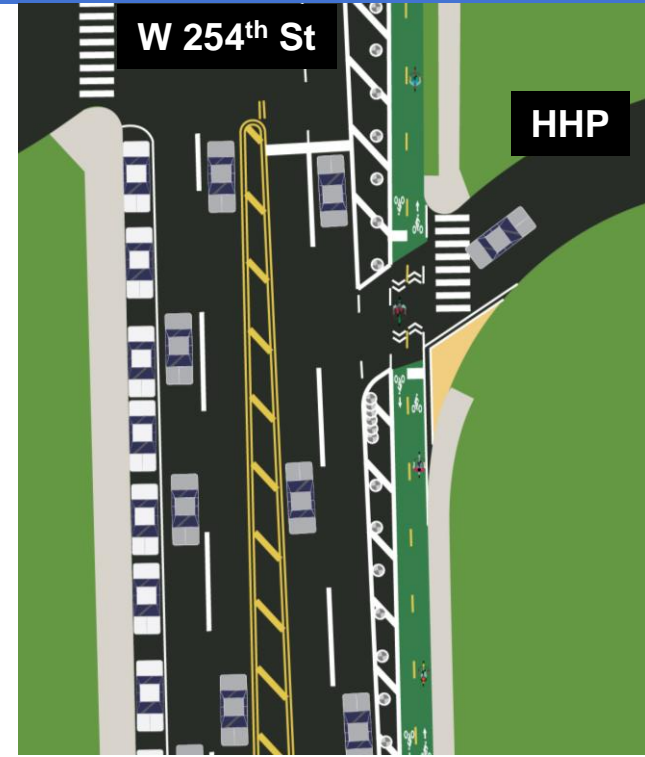
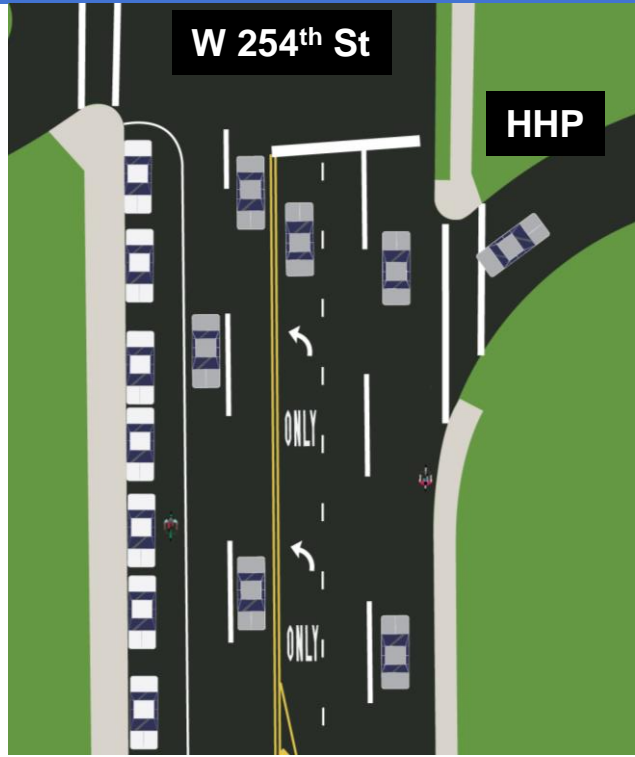
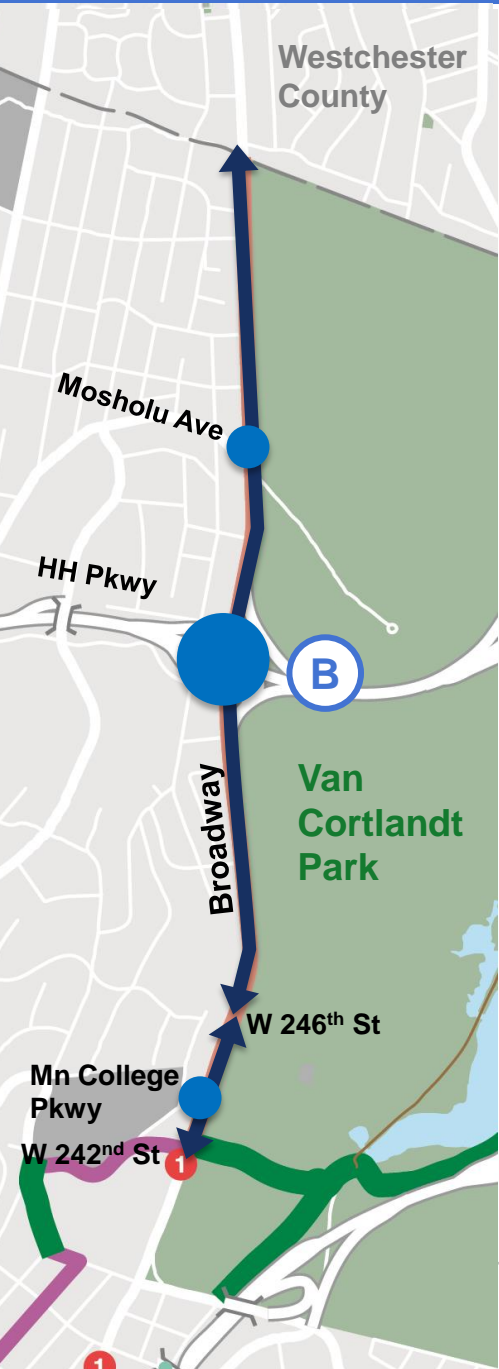


Proposed Design at Controlled Ramps

- Narrow roadway exits from the Henry Hudson Parkway

Benefits

- Shorter pedestrian crossings
- Adds approximately 8 parking spaces

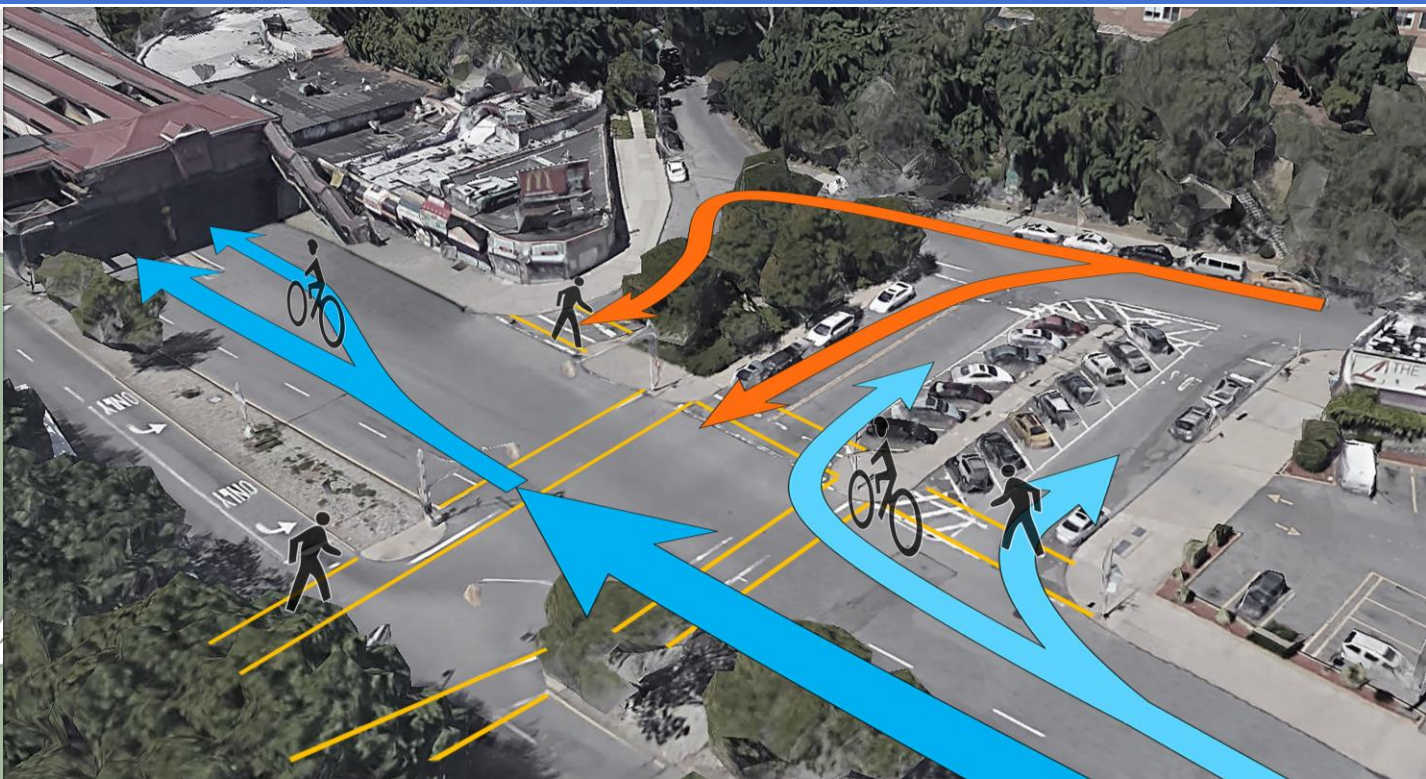
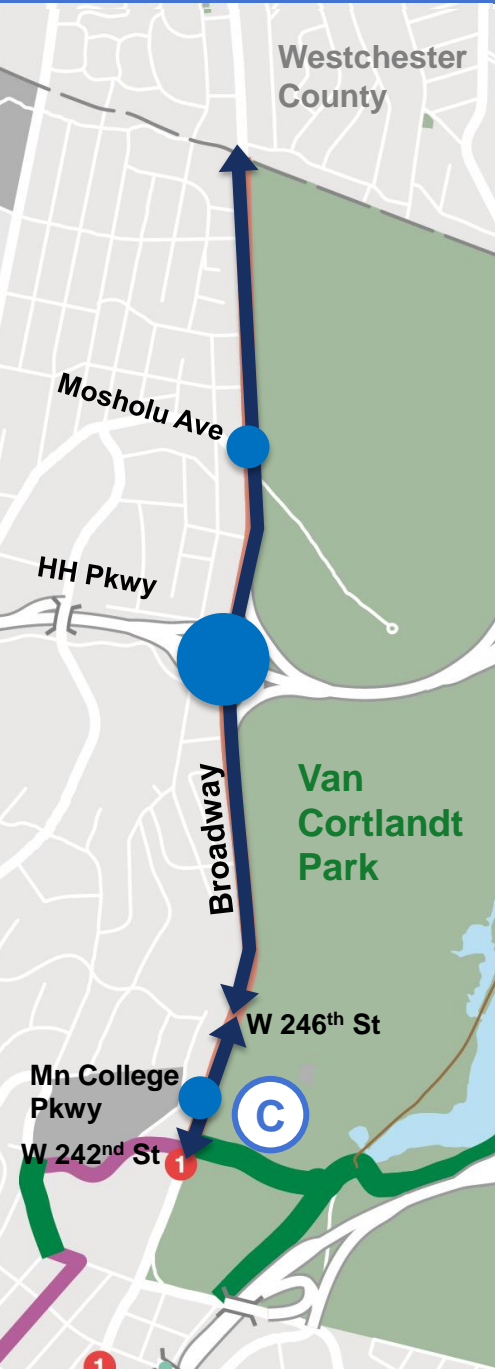


Proposed Design at Uncontrolled Ramps

- 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 254 St

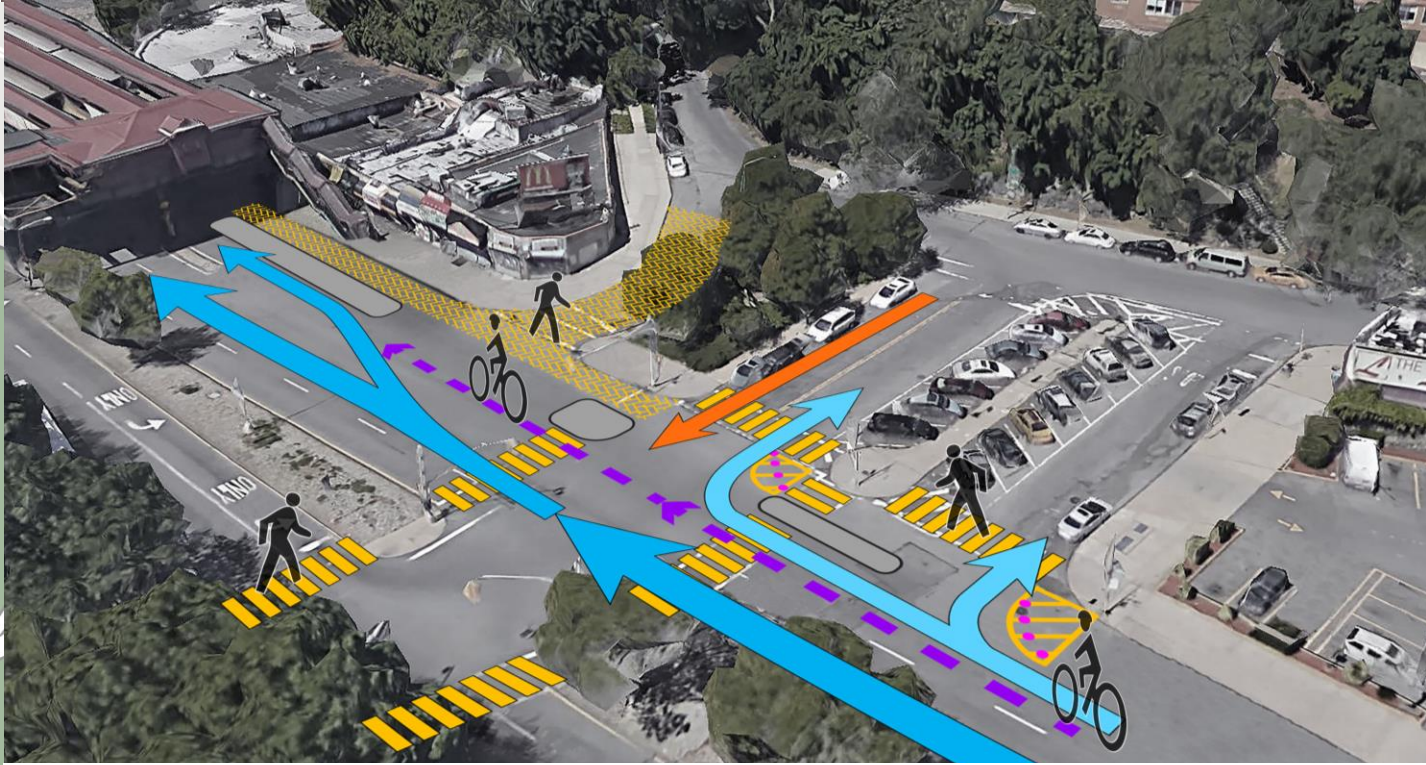
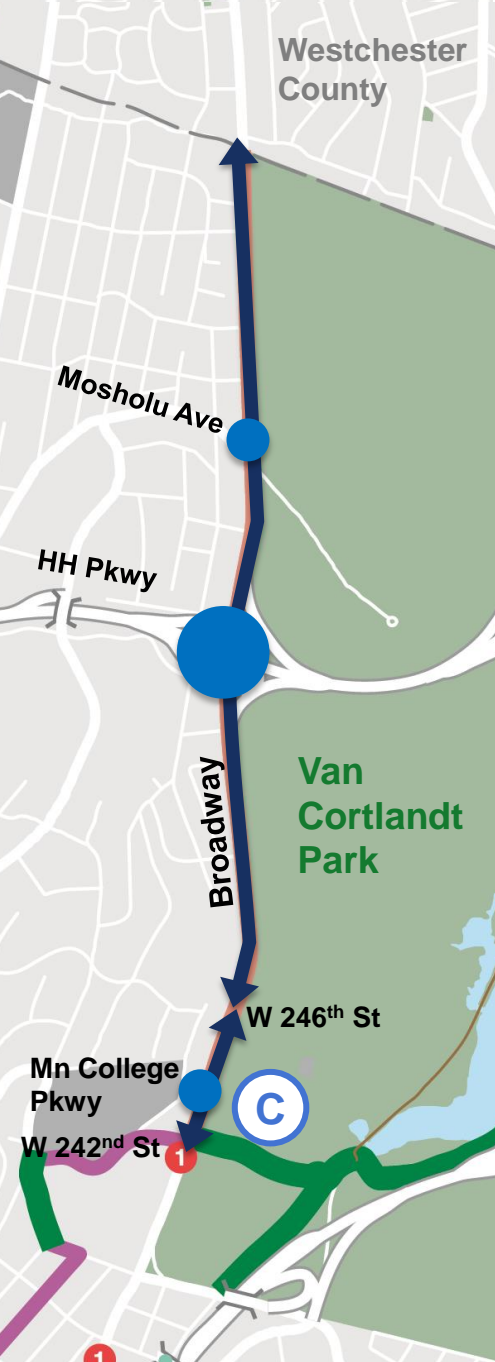


Existing Conditions

- SB roadway widens on approach to Mosholu Parkway
- Mosholu Parkway 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

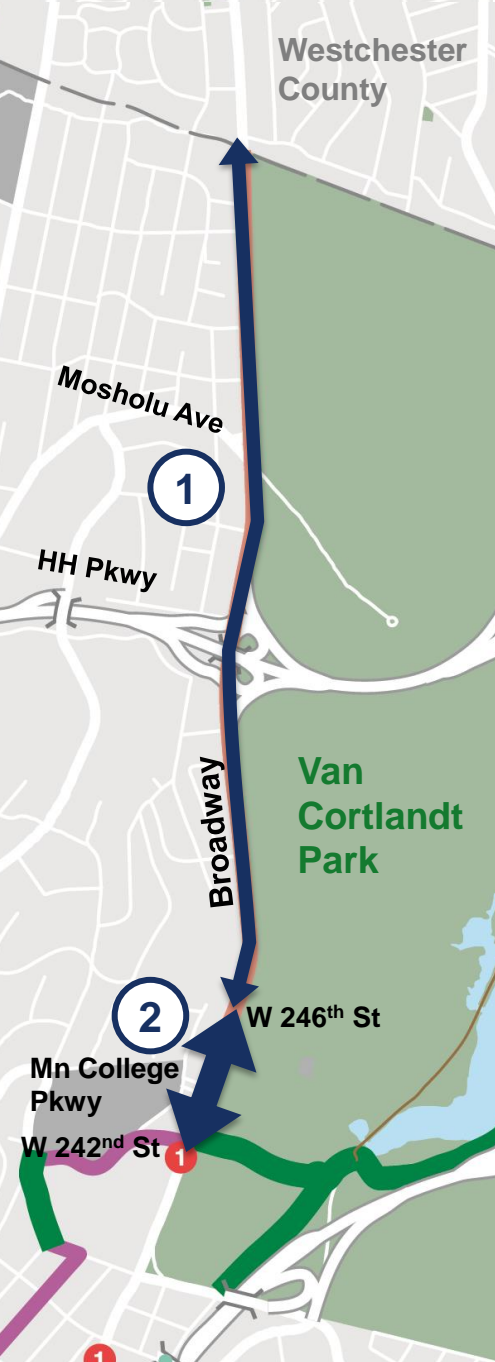


Proposed Design

- 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



Broadway and Manhattan College Pkwy

PROJECT SUMMARY

3

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?



NYC DOT



NYC DOT



nyc_dot



NYC DOT