Castle Hill Ave
Corridor Safety Improvements

New York City Department of Transportation
Presented to Community Board 9 by Research Implementation and Safety on February 4, 2016
Project Location

- Project area: Castle Hill Ave from E Tremont Ave to Hart St (2.1 mi)
- Corridor runs entire length of Community Board 9, and small section of CB10
- Borders the Parkchester Neighborhood Slow Zone
- Connects both Cross Bronx Expy and Bruckner Expy
- Schools and libraries in north section
- Residential areas in north and south sections
Vision Zero Priority Corridors

**Vision Zero**

- Multi-agency effort to reduce traffic fatalities in NYC
- Borough Action Plans released in 2015
- Priority Intersections, Corridors, and Areas identified for each borough
  - **Castle Hill Ave** identified as a Priority Corridor for the Bronx
  - **Castle Hill Ave & Westchester Ave** identified as a Priority Intersection for the Bronx
Why Castle Hill Ave?

- **2010-2014:** 28 KSI (persons killed or severely injured)
- 4 Pedestrian Fatalities, 2008-present
- Total injuries: pedestrian injuries less than ¼ motor vehicle injuries
- **Severe injuries:** near same number of pedestrian and motor vehicle occupant injuries

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**Castle Hill Ave - E Tremont Ave to Hart St, BX**

Injury Summary, 2010-2014 (5 Years)

<table>
<thead>
<tr>
<th></th>
<th>Total Injuries</th>
<th>Severe Injuries</th>
<th>Fatalities</th>
<th>KSI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pedestrian</td>
<td>95</td>
<td>12</td>
<td>2</td>
<td>14</td>
</tr>
<tr>
<td>Bicyclist</td>
<td>26</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Motor Vehicle Occupant</td>
<td>390</td>
<td>13</td>
<td>0</td>
<td>13</td>
</tr>
<tr>
<td>Total</td>
<td>511</td>
<td>26</td>
<td>2</td>
<td>28</td>
</tr>
</tbody>
</table>
Existing Conditions

- 6 lanes
  - 4 travel, 2 parking
- 60’ wide roadway
- Wide travel lanes
- Faded markings
- Heavy traffic volumes between Westchester Ave & Bruckner Expressway
- Speeding
- U-turns
- Double parking
Walkable Neighborhood

• Important connection between the neighborhoods of: Castle Hill, Union Port, Parkchester, Westchester Square, and Morris Park

• Pedestrian and cyclists use the corridor to access:
  • Parks
  • Subway, Buses
  • Neighborhood shops
  • Schools

Residents should feel safe walking and biking along Castle Hill Avenue.
Proposal: Castle Hill Ave

• Goal: calm traffic where possible

• Proposal in four sections to accommodate different traffic volumes

  1. E Tremont to Westchester Ave (one lane each way, LT bays)
  2. Westchester Ave to Powell Ave (1 lane NB, 2 lanes SB)
  3. Powell Ave to Bruckner Blvd (same lane setup as now)
  4. Bruckner Blvd to Hart St (one lane each way, LT bays)
Proposal: E Tremont Ave to Westchester Ave

Residential and School area, with 25-48% of vehicles traveling above the speed limit

4 to 3 calming, with left turn bays, and wide parking lanes
Proposal: Westchester Ave to Powell Ave

Higher volumes southbound than northbound:
1 travel lane northbound and 2 travel lanes southbound
With wide parking lanes
Proposal: Powell Ave to Bruckner Expy

Highest traffic volume area: keep same lane configuration, add parking lanes and extend left turn bay lengths over expressway bridges.
Proposal: Bruckner Expy to Hart St

Residential and School area, with 29-38% of vehicles traveling above the speed limit

**EXISTING**

- West Sidewalk
- 19 Combined Parking/Moving Lane
- 11’ Travel Lane
- 11’ Travel Lane
- 19 Combined Parking/Moving Lane
- East Sidewalk

**PROPOSED**

- West Sidewalk
- 14’ Wide Parking Lane
- 11’ Travel Lane
- 11’ Travel Lane
- 14’ Wide Parking Lane
- East Sidewalk

4 to 3 calming, with left turn bays, and wide parking lanes
### Expected Injury Reduction

<table>
<thead>
<tr>
<th>Location</th>
<th>Change in Total Injuries</th>
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<tr>
<td><strong>West 6th Street, BK</strong></td>
<td>-24%</td>
</tr>
<tr>
<td>65th St – 86th St</td>
<td></td>
</tr>
<tr>
<td><strong>Macombs Road, BX</strong></td>
<td>-42%</td>
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<tr>
<td>University Av – Jerome Ave</td>
<td></td>
</tr>
<tr>
<td><strong>Allerton Avenue, BX</strong></td>
<td>-35%</td>
</tr>
<tr>
<td>Boston Rd – E Gun Hill Rd</td>
<td></td>
</tr>
<tr>
<td><strong>Empire Boulevard, BK</strong></td>
<td>-27%</td>
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<tr>
<td>Bedford Av – Utica Av</td>
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</table>
Existing: at Lyvere/Zerega

- Uncontrolled pedestrian crossing
- Heavy turns on to Zerega Ave
Proposal: at Lyvere/Zerega

- Add pedestrian crossing on east curb

Add crosswalk to improve pedestrian safety
Proposal: at Parker St

Expand island to narrow right turn slip to northbound Castle Hill Ave
Proposal: at Starling Ave

• Existing
  • Wide, skewed crossing
  • Location of pedestrian fatality

• Proposal
  • Add concrete island in north crosswalk to provide refuge for pedestrians crossing the street
  • Add neckdown on northwest corner to align crossing
  • Remove three parking spots on northeast corner to ease turns
Proposal: at Cross Bronx Expy N

Add Quick Curb to restrict traffic from exiting Sunoco gas station to northbound.
Existing: at Haviland Ave

No crosswalk, near PS36
Proposal: at Haviland Ave

Add Stop Sign facing Haviland and crosswalk
Proposal: Longer Left Turn Bays

• Extend left turn bay length approaching the Cross Bronx and Bruckner Expressways
• Organize traffic
• Safer, easier left turns
Improve connection to Parks
Opportunity: Add Bike Lanes

- YMCA bike corral
- Connection to Pugsley Creek Park
- Connection to Lafayette Ave
- Parkchester & Unionport cut off from waterfront
- No bike network connection to subway
- 6 train

LEGEND
- Existing Bicycle Facilities
  - Protected Bicycle Path
  - Bicycle Lane
  - Shared Lane
  - Signed Route
Proposal: E Tremont Ave to Westchester Ave

Residential and School area, with 25-48% of vehicles traveling above the speed limit

EXISTING

PROPOSED

4 to 3 calming, with left turn bays, and bike lanes
Proposal: Westchester Ave to Powell Ave

Higher volumes southbound than northbound:
1 travel lane northbound and 2 travel lanes southbound
And bike lanes
Proposal: Powell Ave to Bruckner Expy

Highest traffic volume area: keep same lane configuration, add parking lanes and extend left turn bay lengths over expressway bridges. With “Sharrows” in the right lane.
Proposal: Bruckner Expy to Hart St

Residential and School area, with 29-38% of vehicles traveling above the speed limit

4 to 3 calming, with left turn bays, and bike lanes
### Bike Lanes: Similar Injury Reduction

#### Three Year Before and After Crash Analysis on 4 to 3 Traffic Lane Conversions

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Adjacent Project Status

- Bridge over the Bruckner Expwy – completion Feb 2016
- Resurfacing (E Tremont – Glover St): March/April 2016
- Neckdowns on Westchester Ave – under construction at Castle Hill – 4 locations scheduled for completion July 2016
- Parkchester Slow Zone – completed
- Metered parking study – planned
  - Virgil Pl – Story Ave: both sides
  - Starling Ave – Manning St: west side
- Loading Zones –
  - Possible near grocery stores
Project Benefits

• Pedestrian safety island and neckdown allow for shorter, safer crossings

• Lane reduction lowers speeds and calms traffic outside heaviest traffic areas

• 32 new left turn bays, and longer left turn bays approaching Cross Bronx and Bruckner expressways better organize traffic

• Bicycle lanes connect neighborhoods to waterfront, discourage sidewalk riding and organize traffic flow
Questions?

Thank You