Grand Concourse, 138th St to 158th St
Corridor Safety Improvements

New York City Department of Transportation
Presented by the Pedestrian Projects Group on March 14, 2016
to Bronx Community Board 1 Municipal Services Committee
• Capital Projects
  – 161<sup>st</sup> St to 166<sup>th</sup> St completed
  – 166<sup>th</sup> St to 171<sup>st</sup> St under construction
  – 171<sup>st</sup> St to 175<sup>th</sup> St in planning

• Safety Projects
  – 2009 – Safe routes to school pedestrian improvements
  – 2009 - Service Road Bike Lanes b/n 166<sup>th</sup> St and Mosholu Parkway
  – 2013 – 204<sup>th</sup> St to Mosholu Pkwy
  – 2014 – Grand Concourse Arterial Slow Zone (25 mph)
  – 2015 – Intersection improvements at 165<sup>th</sup> St

• Section south of 158<sup>th</sup> St is the only area that has not yet been redesigned
Existing Issues: Injuries

Killed or Severely Injured (KSI) 2010-2014

Total Injuries 2010-2014

149th St is a Vision Zero priority intersection

13 Pedestrian Injuries (2 Fatalities) (2010-2014)

Grand Concourse - 138 St to 158 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>24</td>
<td>3</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Bicyclist</td>
<td>10</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Motor Vehicle Occupant</td>
<td>182</td>
<td>7</td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td>Total</td>
<td>216</td>
<td>11</td>
<td>2</td>
<td>13</td>
</tr>
</tbody>
</table>
Existing Issues: Speeding

- Approximately 1,100-1,200 vehicles in the peak hour in the peak direction
- North of 161st St, this volume is accommodated by 2 lanes with left turn bays
- Excess lanes and roadway space south of 161st St encourages speeding

<table>
<thead>
<tr>
<th>Street</th>
<th>Percent of Vehicles Speeding</th>
<th>85th Percentile Speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>153 St – 156 St</td>
<td>Northbound 82%</td>
<td>40 mph</td>
</tr>
<tr>
<td></td>
<td>Southbound 53%</td>
<td>32 mph</td>
</tr>
<tr>
<td>144 St – 149 St</td>
<td>Northbound 79%</td>
<td>34 mph</td>
</tr>
<tr>
<td></td>
<td>Southbound 72%</td>
<td>37 mph</td>
</tr>
</tbody>
</table>

*Study conducted December 30, 2015*
Existing Issues: Community Concerns

- Issues identified by community members on Vision Zero map:
  - Speeding
  - Long crossing distances
  - Not enough time to cross
  - Long wait to cross
  - Failure to yield

Existing Conditions

- Inadequate refuge and not ADA accessible
- No left turn bay
- Signal pole in middle of pedestrian crossing
- Long crossing distances
  Street width varies from 80’ to 120’
Existing Conditions

144TH ST

Few turning lanes: Left turning cars obstruct traffic flow
Existing Conditions

No pedestrian refuge
Cut-back median allows for fast, uncontrolled turns that conflict with pedestrians.
Rapid Response Toolkit

New signage

Flexible delineators

Painted and gravel pedestrian spaces

Grand Concourse and Mosholu Parkway

Concrete median tip extensions and pedestrian islands

Pavement markings

Tremont Ave and Silver Ave

Forsyth St
Proposed Plans: Typical

- Install left turn bays at intersections
- Reduce to 5 lanes (2 moving lanes in each direction + 1 left turning lane)
- Upgrade crosswalks to high visibility
- Stripe parking lanes and bus stops
- Install concrete or painted median tip extensions at intersections
- Install left turn bays at intersections

Pennsylvania Avenue, Brooklyn
140th St – 151st St, 156th St - 158th St: Typical

**Existing**
- Sidewalk
- 17' - 18' Shared Travel and Parking Lane
- 10' Travel Lane
- 10' Travel Lane
- 5' Median
- 10' Travel Lane
- 10' Travel Lane
- 17' - 18' Shared Travel and Parking Lane
- Sidewalk

**Proposed**
- Sidewalk
- 8' Parking Lane
- 10' Travel Lane
- 10' Travel Lane
- 13' Concrete / Painted Median Tip Extension
- 10' Left Turn Bay
- 10' Travel Lane
- 10' Travel Lane
- 8' Parking Lane
- Sidewalk

**Construct 10 concrete median tip extensions**

**Install 2 painted median tip extensions**
153rd St – 156th St: Operational Changes

Implement safety improvements at intersections with complicated geometry

Concrete median tip extensions and pedestrian islands

Concrete island extensions

Painted pedestrian spaces

Wide parking lanes
153rd St: Existing Issues

Long crossing distances

Excess road capacity
4 northbound moving lanes,
4-5 southbound moving lanes
153rd St: Existing Issues

Significant pedestrian activity, particularly before and after school

Yield-controlled westbound right slip lane
153rd St: Existing Conditions

Narrow median on north side does not provide sufficient refuge for pedestrians.

Slip lane with yield control.

Bus stops in crosswalks (Bx1, Bx2).

Long, three part crossing.
153rd St: Proposed Plans

- Shift southbound bus stop out of the crosswalk area
- Concrete median tip extensions with trees
- Expanded sidewalk with paint
- Expanded concrete triangle and lengthen bus stop
- Wide parking lanes
- Upgrade slip lane to Stop control
- Expanded concrete triangle with paint and add parking
- Add parking along south triangle
- Close slip lane outside Cardinal Hayes High School and create pedestrian space
- No loss to parking
Existing Issues: 156th St

- Excess road capacity
- 4 northbound thru lanes + 1 northbound turn bay

Long crossing distances
Existing Issues: 156th St

Bx1/2 buses have difficulty pulling all the way into stop
Existing Conditions: 156\textsuperscript{th} St

- Shared thru and left turn lane blocks thru traffic
- Long crossing distances with insufficient refuge
- Excessively wide roadway (3-5 lanes in each direction)
- Bus cannot pull all the way to sidewalk

Franz Sigel Park
Proposed Plans: 156th St

- Exclusive left turn lane
- Concrete median tip extensions with trees
- Wide parking lanes
- Pedestrian island with trees
- Concrete curb extension

Franz Sigel Park
Bike facilities are not feasible between 138th St and 158th St on the Grand Concourse due to constrained geometry, however wide sections between 153rd St and 156th St allow for 13’ parking lanes that accommodate bicyclists.

Future capital plans would incorporate bicycle facilities on this section of the Grand Concourse.

Upgraded bicycle facilities are in planning for all sections of the Grand Concourse north of 162nd St.
Project Benefits

Simpler, safer intersections
Reduced speeding and weaving
Safer, shorter pedestrian crossings
Better refuge for pedestrians
Improved pedestrian visibility
Clarified vehicular movements
Parking maintained
Traffic flow maintained

Similar treatments have improved safety

Adam Clayton Powell Jr Blvd, 133 St – 153 St, Manhattan
(3 year averages)
• 26% reduction in total injuries
• 37% reduction in pedestrian injuries

4th Avenue, 15 St – 65 St, Brooklyn
(2 year averages)
• 17% reduction in total injuries
• 34% reduction in pedestrian injuries

Pennsylvania Ave, Brooklyn
(2 year averages)
• 12% reduction in total injuries
• 29% reduction in pedestrian injuries
1. Reduce the number of moving lanes from 6 to 5, including a left turn lanes where needed

2. Install 14 concrete and 2 painted median tip extensions at intersections along the corridor

3. Expand concrete triangles in paint/gravel (north side) and concrete (south side) and close south slip lane with paint/gravel at 153rd St outside Cardinal Hayes High School. Extend west sidewalk by Franz Sigel Park in paint/gravel.

4. Install 1 concrete island and 1 concrete curb extension at 156th St

5. Install parking lanes and channelization to clarify traffic movements

6. Upgrade all crosswalks to high visibility crosswalks

7. Update markings on the corridor

8. Install pedestrian ramps along the corridor