Liberty & Rockaway
Intersection Safety & Traffic Improvements

Commissioner Janette Sadik-Khan  New York City Department of Transportation
Office of Research, Implementation & Safety  -- June 03, 2010 Presentation to CB10
Child pedestrian fatality at Cross Bay Blvd and Liberty Ave in Jan 2009
Cross Bay Blvd and Liberty Ave noted by NYPD as a challenging location
Review requested by the Queens Borough Commissioner
Within Woodhaven Boulevard Congested Corridor study area
Existing Conditions

- Rockaway Blvd subway station
- 7 bus lines
- High traffic volumes on Woodhaven/Cross Bay (over 2000 vph NB peak)
- Heavily congested intersections
- Complex intersection geometry
- Elevated train runs over Liberty Ave
- Busy commercial retail area
- Heavy pedestrian volume (including many children)

Severity-Weighted Injuries Intersection Ranking (Queens):
Rockaway & Woodhaven = 99th Percentile
Rockaway & 94th = 89th Percentile

<table>
<thead>
<tr>
<th>Rockaway Blvd &amp; Liberty Ave Between 94th and 96th Streets (2004-2008)</th>
<th>Total Injuries</th>
<th>Average Injury per Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pedestrian</td>
<td>13</td>
<td>2.6</td>
</tr>
<tr>
<td>Bicyclist</td>
<td>6</td>
<td>1.2</td>
</tr>
<tr>
<td>Motor Vehicle Occupant</td>
<td>188</td>
<td>37.6</td>
</tr>
<tr>
<td><strong>Total Injuries</strong></td>
<td><strong>207</strong></td>
<td><strong>41.4</strong></td>
</tr>
</tbody>
</table>
Existing Conditions
Existing Conditions: crash hotspots
Existing Conditions: issues

- Chaotic congestion at mid-intersection bus stop
- Long, dangerous pedestrian crossing
- Dangerous movements in/out of lot
- Dangerous merge
Existing Conditions: issues

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- Frustrated left-turns
- Red light running
- Chaotic congestion at bus stop
Existing Conditions: issues

- Chaotic congestion at bus stop
- Frustrated left-turns, red light running
Existing Conditions: issues

- Complex, confusing intersection
- Missing crosswalks
- Skewed crosswalk

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Existing Conditions: issues

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- Skewed crosswalk
Proposal: Crossbay/Woodhaven

Key Changes

- One block of Liberty Ave converted to one-way, forced to turn right at Crossbay
- 6 parking spaces added
- Expanded NB LT lane/phase
- Added capacity at WB Rockaway Blvd
Proposal: Crossbay/Woodhaven

- Add back-in angle parking
- Convert to one-way
- Expand left-turn lane/phase
- Add left-turn lane
- Jersey barriers installed

EB Liberty traffic routed NB on 93rd to Rockaway
Proposal: Rockaway/Liberty

- Construct pedestrian refuge island
- Install traffic signal
- Expand pedestrian refuge island
- Install more direct crosswalk
- Add drop-off areas
Project Benefits

- Reduces vehicle/pedestrian conflicts
- All intersections crossable at 3.5 feet/sec
- Protects pedestrians from traffic by installing refuge islands
- Accommodates pedestrian desire lines by adding new crosswalks
- Simpler, safer left turns
Traffic Impacts

SB left: Diminished Level of Service due to expanded pedestrian crossing time

NB left: Improved Level of Service due to expanded LT lane
Parking Impacts

- 2 metered spots removed
- 8 metered spots added
- Total: +6 metered parking spaces gained

Daylight approach to intersection (-2)

Provide 14 back-in angle parking spaces (+8)