Sherman and St Nicholas Avenues
Safety Improvements and Bicycle Lanes

Presented by New York City Department of Transportation, Transportation Planning & Management
May 4, 2015 to Manhattan CB 12 Traffic and Transportation Committee
Vision Zero calls for an expanded bicycle network in Manhattan that improves safety for all road users.

CB 12 requested a network of bike routes in 2012.

CB 12 approved Phase 1 bike routes and DOT began implementation in 2014.

Sherman Ave scheduled for repaving this summer provides an opportunity to improve road configuration.
Sherman and St Nicholas Avenues
Corridor Project Map

Legend
- Project Route
- Approved, Installation Pending
- Existing On-Street Bicycle Facility
- Protected Bicycle Path
Sherman and St Nicholas Avenues
Existing Conditions

- 60’ wide corridors with long crossings
- No dedicated space for cyclists
- Moderate traffic volumes can be accommodated in a single lane
- Shared through/ left turn lane causes unpredictable maneuvers
- Poor signal timing on St Nicholas Ave
Sherman Ave
Crash History (2009-2013)

Total Injuries  Fatalities

1
47
5
12
45
6
22
2
3

Intersection in the top 10% KSI of Manhattan intersections

KSI = Killed/ Severely Injured

Sherman Ave - Broadway to 10th Ave, MN

Injury Summary, 2009-2013 (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>51</td>
<td>2</td>
<td>2</td>
<td>4</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>138</td>
<td>4</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>199</td>
<td>7</td>
<td>2</td>
<td>9</td>
</tr>
</tbody>
</table>

# of KSI

# of KSI
St Nicholas Ave
Crash History (2009-2013)

- High Crash Corridor with 20 people killed or severely injured (KSI) per mile, ranking in the top third of Manhattan corridors

St Nicholas Ave - Broadway to W 193rd St, MN

Injury Summary, 2009-2013 (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>141</td>
<td>18</td>
<td>0</td>
<td>18</td>
</tr>
<tr>
<td>Bicyclist</td>
<td>29</td>
<td>2</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Motor Vehicle Occupant</td>
<td>234</td>
<td>5</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>404</td>
<td>25</td>
<td>0</td>
<td>25</td>
</tr>
</tbody>
</table>

KSI = Killed/ Severely Injured

Intersection in the top 10% KSI of Manhattan intersections

Total Injuries

# of KSI
Sherman and St Nicholas Avenues
Proposed Configuration (Cross Section)

EXISTING

20' Sidewalk

20' Combined Travel/Parking Lane

10' Travel Lane

10' Travel Lane

20' Combined Travel/Parking Lane

PROPOSED

20' Sidewalk

9' Parking Lane

5' Travel Lane

11' Painted Median/Left Turn Bay

11' Travel Lane

5' Parking Lane

20' Sidewalk

60'
Sherman and St Nicholas Avenues
Proposed Configuration (Sample Block)
Sherman and St Nicholas Avenues
Proposed Design

Proposed Configuration: E 222nd St, Bronx

- Bicycle lane provides dedicated space for cyclists
- Remove one lane in each direction
- Add left turn lanes maintain capacity at intersections
- No parking loss
Safety Results from Similar Treatments
4 lane to 3 lane Traffic Calming

<table>
<thead>
<tr>
<th>PROJECT</th>
<th>CRASHES WITH INJURIES (% CHANGE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>West 6th Street, BK</td>
<td>-24%</td>
</tr>
<tr>
<td>Empire Boulevard, BK</td>
<td>-15%</td>
</tr>
<tr>
<td>Allerton Avenue, BX</td>
<td>-28%</td>
</tr>
<tr>
<td>Gerritsen Avenue, BK</td>
<td>-40%</td>
</tr>
<tr>
<td>Southern Boulevard, BK</td>
<td>-20%</td>
</tr>
<tr>
<td>Randall Avenue, BX</td>
<td>-22%</td>
</tr>
<tr>
<td>Macombs Road, BX</td>
<td>-44%</td>
</tr>
</tbody>
</table>

Reducing the number of travel lanes and installing bike lanes improves safety for all street users.
To address double parking, DOT will work with businesses to identify possible locations for commercial loading zones.
Concrete pedestrian safety islands can be located in painted medians pending approval.
DOT contractor is producing study to optimize signal progression. Benefits will include:

- Decreased travel times
- Reduced congestion
Sherman and St Nicholas Avenues
Corridor Project Summary

- Enhances safety for all street users
- Expands the bicycle network by creating new bicycle connections
- Improves safety at left-turn intersections
- Reduces opportunities for speeding and reckless driving
The Sherman Creek/Inwood Traffic Study, presented on April 5th 2010 to CB 12, developed recommendations for pedestrian safety at 16 critical intersections, including Broadway & Sherman Ave.

DOT presented Sherman Creek – Inwood Safety Improvements to CB 12 on May 2nd 2011 and received a resolution in support; Broadway & Sherman Ave identified as future Department of Design and Construction (DDC) project.

No longer planned for capital project; in-house project developed.
Sherman Ave and Broadway Intersection
Crash History (2009-2013)

Broadway is a Vision Zero Priority Corridor
Complicated, wide intersection with long multi-part crossings

Slip lanes allowing high speed turns

Pedestrian desire line
Conflicting turning movements with complicated signal timing
Sherman Ave and Broadway Intersection
Existing Conditions

Conflicting turns

Pedestrian desire line at Ellwood St
Sherman Ave and Broadway Intersection
Proposal

- Close right turn slip lane from Broadway with concrete sidewalk extension
- Expand northern island
- Construct median island with trees
- Reverse Ellwood St between Nagle and Sherman Aves
Sherman Ave and Broadway Intersection
Proposal

Right Turn Only at Sherman Ave

Reverse Ellwood (SB to NB) From Sherman to Nagle
Existing pedestrian paths

More direct pedestrian paths

118 ft
73 ft

38% reduction in crossing distance

Sherman Ave and Broadway Intersection Proposal
• Increase safety for all users
• Create shorter, more direct pedestrian crossings
• Clarify vehicular movements
• Safer turning movements
• Improve streetscape
nyc.gov/dot

Thank You