URBAN ROAD DIETS
Making it Fit – For all Road Users

Heidi Wolf, Acting Deputy Director Pedestrian Projects Group, NYC Department of Transportation
Northeast Region Road Diet Peer to Peer Exchange, June 9, 2016
### STREET DESIGN, THE OLD WAY

<table>
<thead>
<tr>
<th>Standard No</th>
<th>Distance (ft)</th>
<th>Face</th>
<th>Arrow Points From</th>
<th>Mounting</th>
<th>Side</th>
<th>Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. From: 33 St.</td>
<td>1. To: Roosevelt Ave.</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

- **Paint center lane line, and one lane line 11'0 off each side of center lane line.**

*Contract 77-6*

<table>
<thead>
<tr>
<th>Prepared by: J. Meyer</th>
<th>Typed: SW</th>
<th>Recommended: E. Chapman</th>
</tr>
</thead>
</table>

*City of New York - Department of Traffic*
VISION ZERO IN NYC

- Lead by City Hall
- Multi-Agency
- Comprehensive
  - Engineering
  - Enforcement
  - Education
  - Policy
STREET IMPROVEMENT PROJECTS:

9 years of Aggressive Street Re-Engineering
DATA DRIVEN

Corridor Report (2008 - 2012)

**Corridor Classes Reference**
Middle third of borough corridors in KSI/mile

<table>
<thead>
<tr>
<th>Type</th>
<th>Total Injuries</th>
<th>Severe Injuries</th>
<th>Fatalities</th>
<th>Total KSI/Mile</th>
<th>KSI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pedestrian</td>
<td>111</td>
<td>10</td>
<td>0</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Bicyclist</td>
<td>51</td>
<td>4</td>
<td>0</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Motor</td>
<td>187</td>
<td>9</td>
<td>0</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>349</td>
<td>23</td>
<td>0</td>
<td>12.8</td>
<td>23</td>
</tr>
</tbody>
</table>
ROAD DIET BASICS

- Generally ~ 500 cars per lane
- Level of service C is acceptable
- Refuge islands in shadow of left turn bay where applicable
- Road diets help enforce safe driving and the new 25 mph speed limit
**STREET DESIGN: 3 CONSTRUCTION OPTIONS**

For safety projects, faster construction saves lives.

<table>
<thead>
<tr>
<th></th>
<th>Capital Concrete</th>
<th>In-House Concrete</th>
<th>Temporary Non-Concrete</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Build Time</strong></td>
<td>5+ years</td>
<td>1-2 years</td>
<td>1-2 years</td>
</tr>
<tr>
<td><strong>Cost</strong></td>
<td>High</td>
<td>Low</td>
<td>Very Low</td>
</tr>
</tbody>
</table>

- **Flatbush Ave Ext, Brooklyn**
- **7th Av & W 23rd St, Manhattan**
- **Madison Square, Manhattan**
Typical 4 to 3 Road Diet Cross-Section

EXISTING

West End Ave from W 72nd to W 106th St

PROPOSED

Sidewalk

10’ Parking Lane

10’ Travel Lane

10’ Travel Lane

10’ Travel Lane

10’ Parking Lane

Sidewalk

13’ Wide Parking/ Bike/Loading Lane

11’ Travel Lane

12’ Turn Bay/ Flush Median

11’ Travel Lane

13’ Wide Parking/ Bike/Loading Lane

Sidewalk
ISSUE: **Interrupted Through Movements**

- **Existing Condition**
  - Double-parked vehicle
  - Autos moving thru
  - Left-turning vehicle waiting for gap
  - Right lane vehicles change lanes twice
  - ID’ing Pedestrians in Crosswalk

- Frequent lane changing
- No “good” through travel lane
Proposed Traffic Movement

- Normal activity doesn’t force lane changes
- One “good” through travel lane
- More orderly and predictable movements
ISSUE: Challenging Left Turns

Existing Condition

2) Identifying Gap in Left Lane

3) ID’ing Gap in Right Lane

(VISIBILITY HINDERED)

Left Turning Motorist Have 4 Concerns

1) Vehicles Approaching from Behind

4) ID’ing Pedestrians in Crosswalk
Proposed Left Turn

Proposal

Vehicles from behind in different lane

Driver only needs ONE gap to turn; can then look at crosswalk
Gerritsen Ave, between Ave W & Ave R, BK

Corridor Redesign: 4 to 3 (2009)

Crashes with Injuries
-40%
Gerritsen Ave, between Ave W & Ave R, BK

Corridor Redesign: 4 to 3 (2009)

- Travel Lane Reduction
- Left Turn Bays
- Channelized Center Median
- Pedestrian Refuge Islands
- Street trees
Empire Blvd, between Bedford Ave & Utica Ave Bk

Corridor Redesign: 4 to 3 (2010)

Crashes with Injuries
-15%
Empire Blvd, between Bedford Ave & Utica Ave Bk

Corridor Redesign: 4 to 3 (2010)

- Travel Lane Reduction
- Left Turn Bays
- Channelized Center Median
- Pedestrian Refuge Islands
- Bicycle Lanes
- Street trees
Vanderbilt Ave, BK
4 lane two-way street: 4 to 3, bike lane

Filled major gap in bike network
Vanderbilt Ave, BK
4 lane two-way street: 4 to 3, bike lane
9th Ave, between 16th St & 23rd St, MN
60’ wide one-way Ave: 4 to 3 protected bike lane

Crashes with Injuries
-52%
9th Ave, between 16th St & 23rd St, MN
60’ wide one-way Ave: 4 to 3 protected bike lane

- Travel Lane Reduction
- Split Left Turn Lanes
- Channelized Center Median
- Pedestrian Refuge Islands
- Bicycle Lanes & Signals
- Street trees
1st Ave, between 1st St & 33rd St MN

70’ Wide One-Way Ave: 5 to 3, Protected Bike Lane

Crashes with Injuries -6%
1st Ave, between 1st St & 33rd St MN

70’ Wide One-Way Ave: 5 to 3, Protected Bike Lane

- Bicycle Path
- Safety Islands
- Landscaping
- Left Turn Bays
- Bus Lane
- Travel Lane Reduction
Adam Clayton Powell
6 to 5 Conversion (2013)

Pedestrian Injuries
-17%
Adam Clayton Powell

6 to 5 Conversion (2013)

• Travel Lane Reduction
• Left Turn Bays
• Median tip extensions
• Bicycle Lanes
Broadway: Greenlight For Midtown, MN
Corridor Redesign- One way with Bike Lane (2009)

Crashes for all users -52%
Broadway: Greenlight For Midtown, MN
Capital Corridor Redesign

Temporary materials were quickly installed and then capitally built.
Columbus Ave, between 77th St & 97th St, MN

Corridor Redesign (2010) – Lane narrowing lead to parking protected bike lane

Crashes with Injuries

-27%
Columbus Ave, between 77th St & 97th St, MN
Complex Corridor Redesign (2010)

- Travel Lane Narrowing
- Left Turn Bays
- Pedestrian Refuge Islands
- Parking Protected Bicycle Lanes
- Street trees
E 180th St, between Webster & Boston Rd, BX
50’ Wide: 2-way lane narrowing (2010)

Crashes with Injuries
-21%

Before

After
E 180th St, between Webster & Boston Rd, BX

50’ Wide: 2-way lane narrowing (2010)

- Travel Lane Narrowing
- Channelized Center Median
- Left Turn Bays
THANK YOU!

Questions?