Tribeca/WTC Bicycle Network Enhancements
Church St, 6th Ave, West Broadway, Varick St, Murray St, Park Pl, Barclay St

Presentation to Manhattan Community Board 1
February 4, 2020
Proposal Overview

1. Upgrade existing buffered conventional bike lanes on main north-south corridors to protected bike lanes and extend south

2. Install conventional bike lanes on side streets to improve connectivity between the Brooklyn Bridge, World Trade Center, and Hudson River Greenway.
Church Street, 6th Avenue, Varick Street, West Broadway
Upgrade to Protected Bicycle Lanes
Upgrade to Protected Bicycle Lanes: Church Street/6th Avenue

• Install parking-protected bicycle lanes on Church Street and 6th Avenue between Barclay Street and Walker Street
• Repurpose an average of two parking spaces per block for turn conflict mitigation and additional pedestrian space
• Remove a travel lane and install a curbside buffered bike lane on 6th Avenue for 1 block between Walker Street and Lispenard Street
• Provide bike boxes and shared lanes to transition cyclists from the west side of 6th Avenue to West Broadway
Upgrade to Protected Bicycle Lanes: Varick Street

- Install parking-protected bicycle lanes on Varick Street between Laight Street and Leonard Street
- Remove third travel lane/turn lane for one block between Laight Street and Beach Street
- Repurpose an average of two parking spaces per block for turn conflict mitigation and additional pedestrian space
Upgrade to Protected Bicycle Lanes: West Broadway

- Install parking-protected bicycle lanes on West Broadway between Beach Street/Walker Street and Barclay Street
- Remove third travel lane for two blocks between Chambers Street and Murray Street
- Repurpose an average of 0.75 parking spaces per block for turn conflict mitigation and additional pedestrian space
- DOT is coordinating with the Port Authority of New York and New Jersey on the design for West Broadway between Park Place and Barclay Street
Murray Street, Park Place, Barclay Street

Improve Bicycle Network Connectivity
### Install conventional bicycle lanes on:
- Murray Street, Broadway to West Street
- Park Place, Greenwich Street to Broadway
- Barclay Street, Broadway to Greenwich Street

### All streets are 1-way except for:
- Park Place, Church Street to Broadway
- Murray Street, Greenwich Street to West Street

### Future connection on Greenwich Street to be explored following planned capital project

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**Improve Bicycle Network Connectivity**

<table>
<thead>
<tr>
<th>Existing</th>
<th>Proposed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-way typical cross section</td>
<td>2-way typical cross section</td>
</tr>
</tbody>
</table>

- **Broadway protected bike lane**
  - Planned 2020 implementation

- **Existing**
  - 34' Combined Travel / Parking Lane

- **Proposed**
  - 9' Parking Lane
  - 5' Travel Lane
  - 11' Travel Lane
  - 9' Parking Lane

- **Existing**
  - 25' Combined Travel and Parking Lane

- **Proposed**
  - 9' Parking Lane
  - 5' Travel Lane
  - 11' Travel Lane
  - 5' Parking Lane

- **Existing**
  - 25' Combined Travel and Parking Lane

- **Proposed**
  - 9' Parking Lane
  - 5' Travel Lane
  - 11' Travel Lane
  - 5' Parking Lane

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nyc.gov/visionzero
Project Benefits

• Shortens pedestrian crossing distances

• Provides additional pedestrian space and improves visibility.

• Discourages speeding

• Upgrade to protected lanes improves safety and functionality of bicycle facilities

• New bicycle lanes improve connectivity north and south, and strengthen connections between Brooklyn Bridge and the Greenway.
THANK YOU!

Questions?
Appendix
## Safety Benefits of Protected Bike Lane

### Protected Bike Lanes

**Before and After Crash Data, 2007 - 2017**

<table>
<thead>
<tr>
<th>Category</th>
<th>Before</th>
<th>After</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Injuries</td>
<td>1,477</td>
<td>1,263</td>
<td>-15%</td>
</tr>
<tr>
<td>MV Occupant Injuries</td>
<td>627</td>
<td>533</td>
<td>-15%</td>
</tr>
<tr>
<td>Pedestrian Injuries</td>
<td>628</td>
<td>499</td>
<td>-21%</td>
</tr>
<tr>
<td>Cyclist Injuries</td>
<td></td>
<td>224</td>
<td>231</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3%</td>
</tr>
</tbody>
</table>

Data from 25 separate protected bicycle lane projects installed from 2007-2014 with 3 years of after data. Includes portions of 1 Ave, 2 Ave, 8 Ave, 9 Ave, Broadway, Columbus Ave, Hudson St, Lafayette St / 4 Ave, Sands St, Allen/Pike St, Kent Ave, Prospect Park West, Flushing Ave, Bruckner Blvd & Longfellow Ave, Imlay St / Conover St, Paerdegat Ave. Only sections of projects that included protected bike lanes were analyzed. Source: NYPD AIS/TAMS Crash Database.
Analysis of fatalities key factors (2014-Present):

- 60% of fatalities happened at intersections; 23% involved a vehicle turn; 16% involved a driver’s failure to yield the right of way
- Nearly 90% of fatalities happened on streets without bike lanes

Citywide Protected Bicycle Lane (PBL) Network

- Build 30 miles of protected bicycle lane annually, guided by a PBL vision document.

Better Design:

- Implement new design standards based on national & international best practices to enhance safety at intersections.
- Continue piloting new designs with rigorous safety analysis

Education and Outreach:

- Launch next phase of Vision Zero public awareness campaign, educating drivers with a focus on cyclist safety — and expand the “Get There” bicycle encouragement/rules of the road campaign
- Educate all street users about safe truck operation on city streets
- Increase helmet giveaways and helmet use encouragement.
### Summary of Proposed Left-turn Treatments on Planned Protected Bicycle Lanes

<table>
<thead>
<tr>
<th>On street</th>
<th>Cross-street</th>
<th>Left-turn treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Church Street</td>
<td>Murray Street</td>
<td>offset crossing</td>
</tr>
<tr>
<td>Church Street</td>
<td>Chambers Street</td>
<td>offset crossing</td>
</tr>
<tr>
<td>Church Street</td>
<td>Reade Street</td>
<td>offset crossing</td>
</tr>
<tr>
<td>Church Street</td>
<td>Thomas Street</td>
<td>offset crossing</td>
</tr>
<tr>
<td>Church Street</td>
<td>Worth Street</td>
<td>offset crossing</td>
</tr>
<tr>
<td>Church Street</td>
<td>Leonard Street</td>
<td>offset crossing</td>
</tr>
<tr>
<td>6th Avenue</td>
<td>White Street</td>
<td>offset crossing</td>
</tr>
<tr>
<td>Varick Street</td>
<td>Beach Street</td>
<td>mixing zone</td>
</tr>
<tr>
<td>Varick Street</td>
<td>Franklin Street</td>
<td>split-phase signal operation</td>
</tr>
<tr>
<td>West Broadway</td>
<td>Franklin Street</td>
<td>offset crossing</td>
</tr>
<tr>
<td>West Broadway</td>
<td>Worth Street</td>
<td>offset crossing</td>
</tr>
<tr>
<td>West Broadway</td>
<td>Duane Street</td>
<td>offset crossing</td>
</tr>
<tr>
<td>West Broadway</td>
<td>Chambers Street</td>
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</tr>
<tr>
<td>West Broadway</td>
<td>Warren Street</td>
<td>offset crossing</td>
</tr>
<tr>
<td>West Broadway</td>
<td>Park Place</td>
<td>split-phase signal operation</td>
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</tbody>
</table>