20th & 21st Streets Cross-Town Bicycle Route

Division of Street Management & Safety
Traffic Operations Bureau
Presentation to CB 6, Manhattan
April, 2007
DOT 3-Year Bicycle Network Expansion Plan

- 200 mile expansion of on-street network
- Targeted to:
  - Increase connectivity
  - Areas with high demand
  - Citywide backbone of routes
- Routes from NYC Bicycle Master Plan
20th & 21st Streets: Bicycle Network Link
West Side: Connections

Chelsea Piers & Hudson River Park Bikeway
East Side: Connections

Stuyvesant Town & Peter Cooper Village

Stuyvesant Cove & East River Bikeway
20th & 21st Streets Bicycle Route: Project Summary

- 20th & 21st Streets (10th Ave to 1st Ave)
  - One-Way Pair
  - Bicycle Lanes
  - No Impact on Parking Lanes or Travel Lanes
- 18^{th} & 22^{nd} Streets (10^{th} to 11^{th} Ave)
  - Bicycle Lanes
  - Signalized crossings to Hudson River path
- 20th Street (East of 1st Ave)
  - "Road Diet" Travel Lane Reduction
  - Bicycle Lanes
  - Improved Bus Operations
20th & 21st Streets Bicycle Route: Project Map

Existing Bicycle Facilities
- Class 1, Greenway / Off-Street Path
- Class 2, Bicycle Lane

Planned Bicycle Facilities
- Class 2, Bicycle Lane
- Class 3, Bicycle Route
Bicycle Lane Markings

Typical Bicycle Lane Markings for a Crosstown One-Way Street
20\textsuperscript{th} & 21\textsuperscript{st} Streets Bicycle Route: Project Map

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- Class 2, Bicycle Lane

\textbf{Planned Bicycle Facilities}
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- Class 3, Bicycle Route
Uncomfortable Cycling Environment

- Cyclist squeezes b/w moving lane and parked cars, or
- “Takes” moving lane

Existing Condition
- 8’ Parking Lane
- 9’ Moving Lane
- 10’ Moving Lane

Proposed Condition
- 10’ Parking Lane
- 5’ Bike Lane
- 12’ Moving Lane

Cyclist separated from travel lanes
Excess Capacity: Speeds

- **Excess Capacity**
  - Grand Street (at Clinton): 590 vehicles per hour in peak hours
  - E 20th Street: 370 vehicles per hour in peak hours

- **Speed Study (E/B E. 20th St, Midday sample)**
  - 53% of vehicles exceed 30 mph speed limit
  - 85th Percentile Speed = 37mph

- **Thru Lane Removal**
  - 1 Lane: lead vehicle sets pace
  - Successful Speed reductions using “Road Diet”:
    - Vanderbilt Ave
    - Gerritsen Ave
E 20th Street Traffic Volume

Traffic Counts performed on E 20th Street between 1st Ave & Avenue C, October 2006
E 20th Street Traffic Volume

Traffic Counts performed on E 20th Street between 1st Ave & Avenue C, October 2006
Bicycle Lane Markings

Typical Bicycle Lane Markings for a Two-Way Street
Bicycle Lane Markings

20th Street between 1st Avenue & Avenue C
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End of Presentation