9th Avenue Bicycle Facility & Complete Street Redesign

W16th Street – W23rd Street

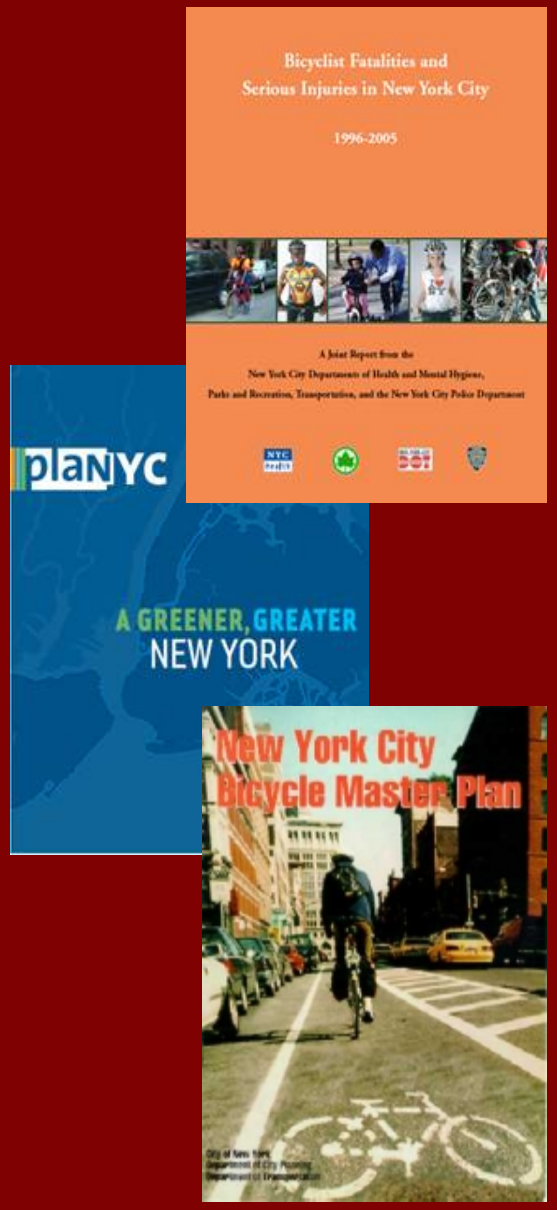
NEW YORK CITY DOT

Office of Alternative Modes
Traffic Operations Bureau

September 19, 2007
Presentation to Manhattan CB4
Transportation Committee

Why are we here?

- Bicycle Fatality Study - Improve Safety
- Mayor's PlaNYC – A Greener Transportation Network
- 1997 Bicycle Master Plan

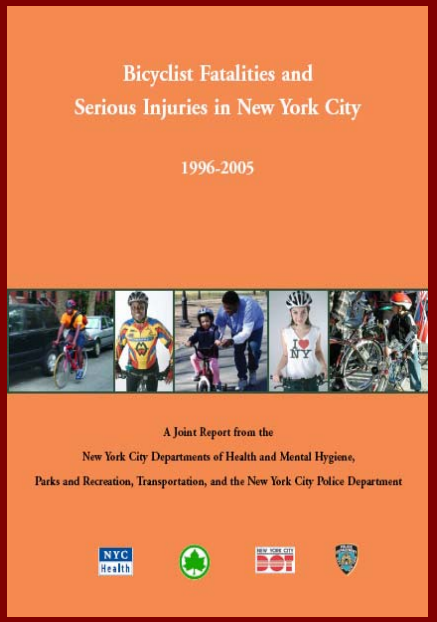


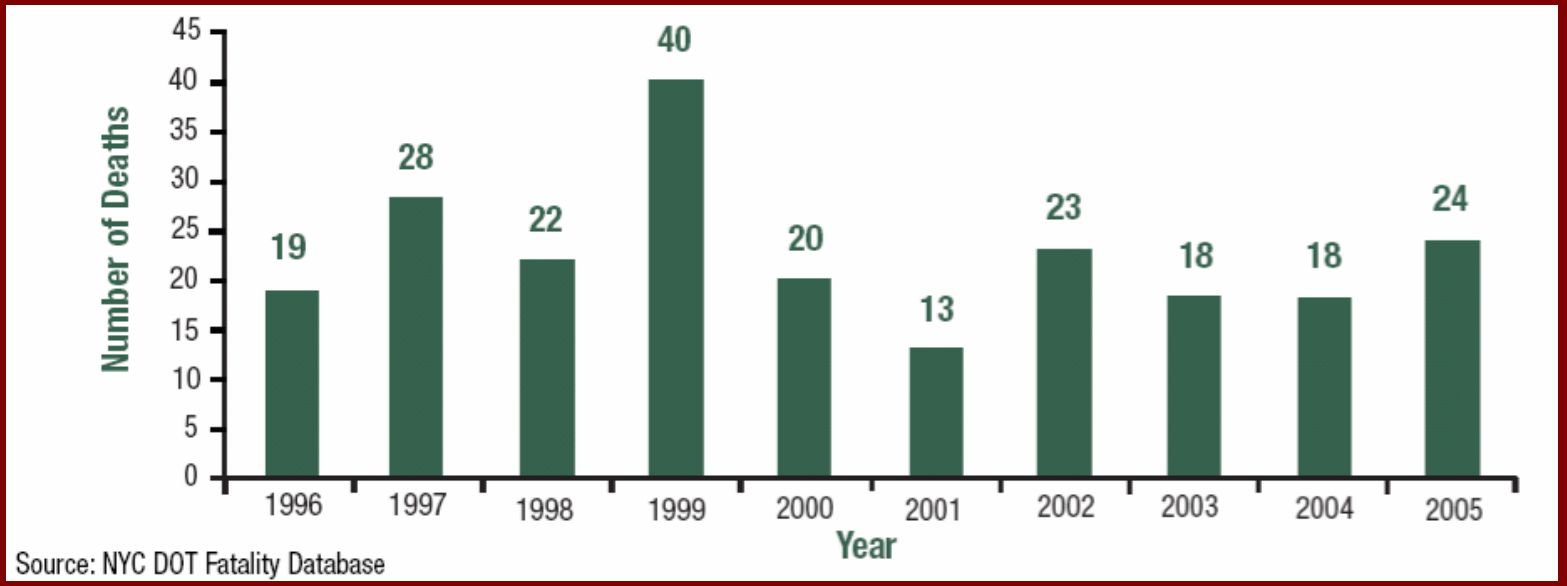
NYC DOT Bicycle Program

- 200 mile, 3 year bicycle route commitment
- Targeting Areas of High Demand & Key Connections
- Design Approach:
  1. Study Best Practices
  2. Apply & Interpret Standards & Guidelines to Constrained NYC Environment
  3. “Complete Streets” Design Philosophy

Cyclist Safety in NYC

- Serious injuries declining
  - 41% decline in last decade
  - 46% decline adjusted for population
- Fatalities – no trend in last 10 yrs
  - Average 23 fatalities/yr
  - 17 fatalities in 2006

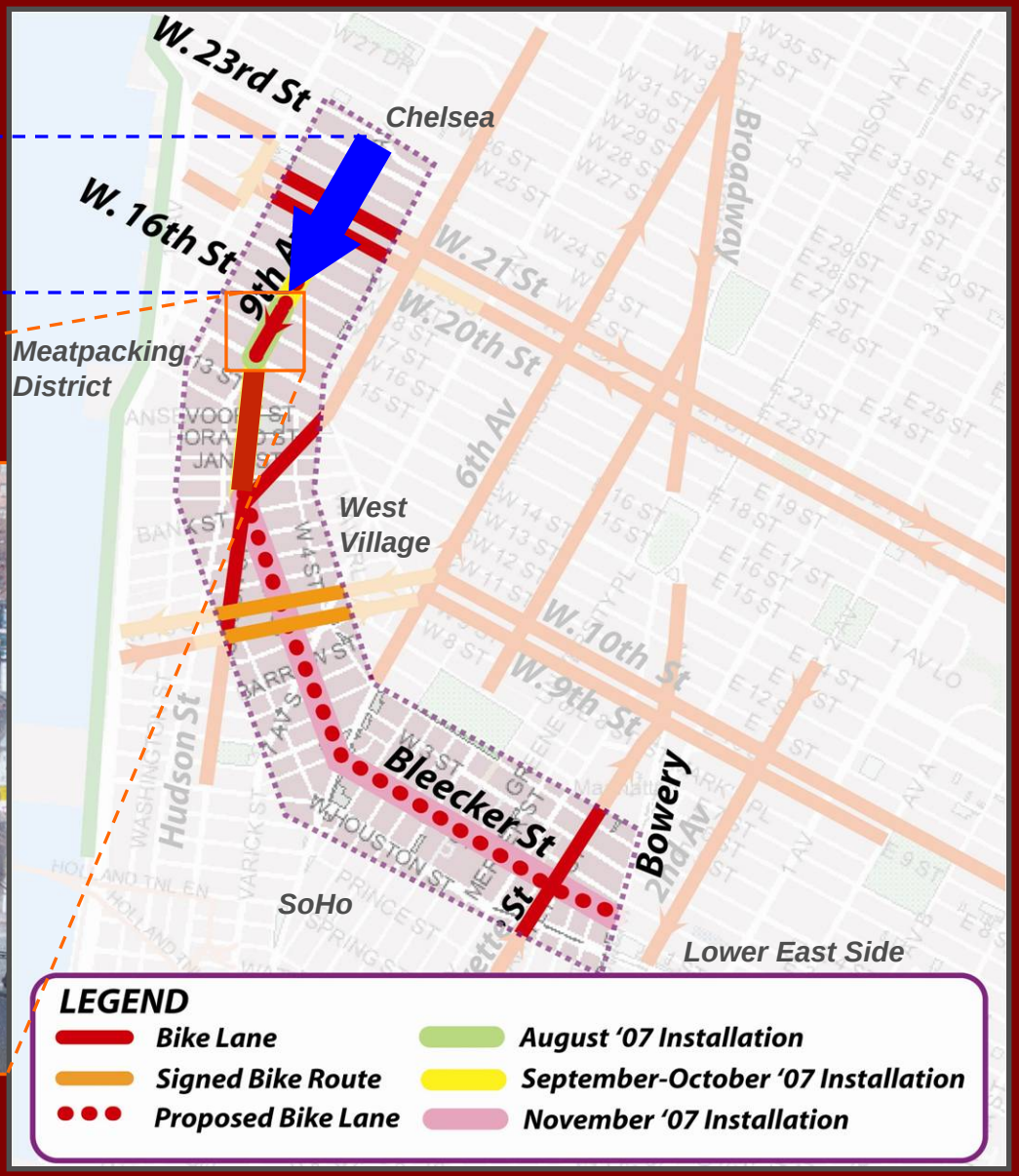




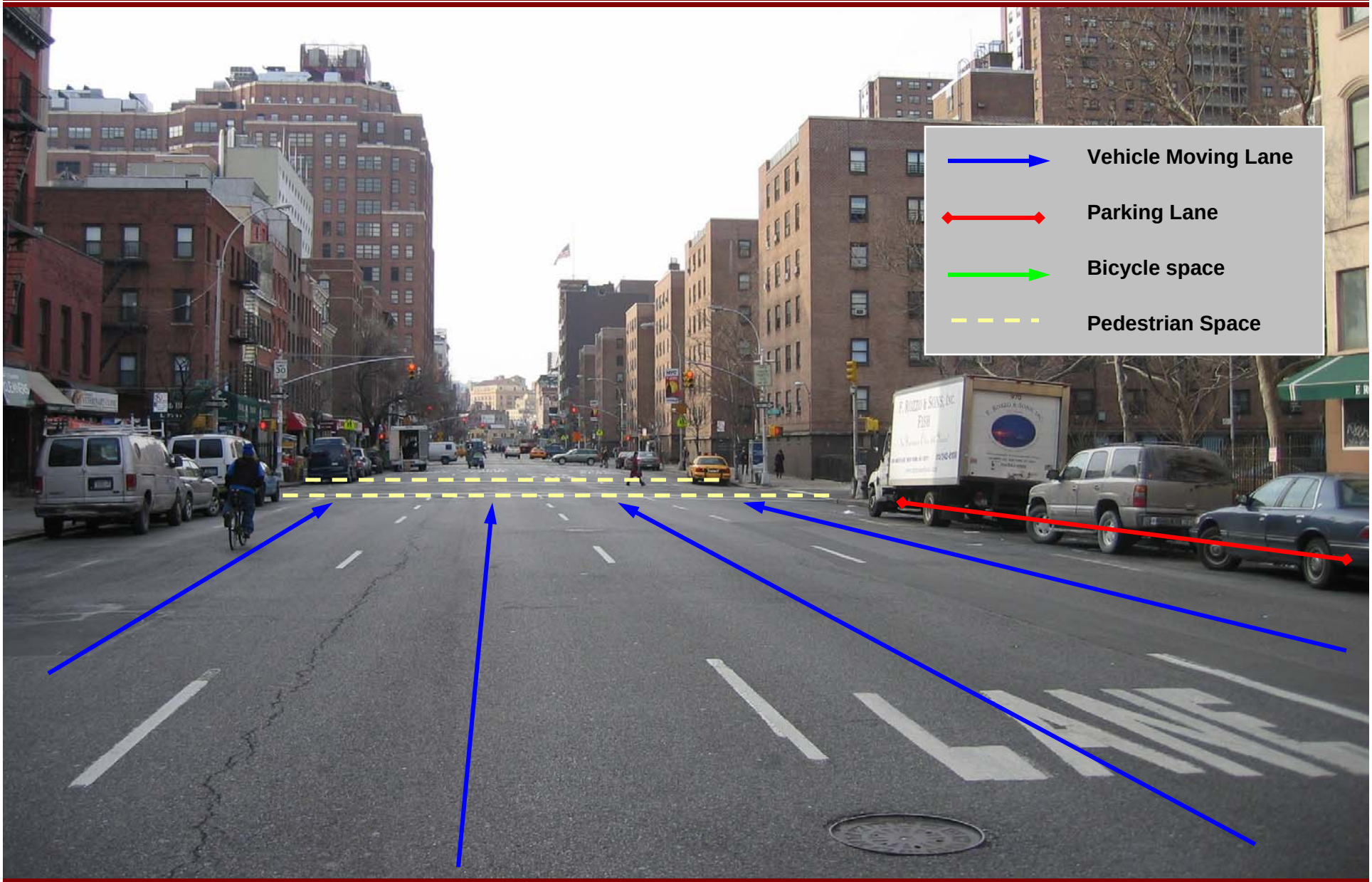
Making Connections

9th Avenue Bicycle Facility
W 23rd St – W 16th St

Rendering of New Gansevoort Plaza intersection of 9th Ave, Hudson and 14th Streets – one of many destinations.

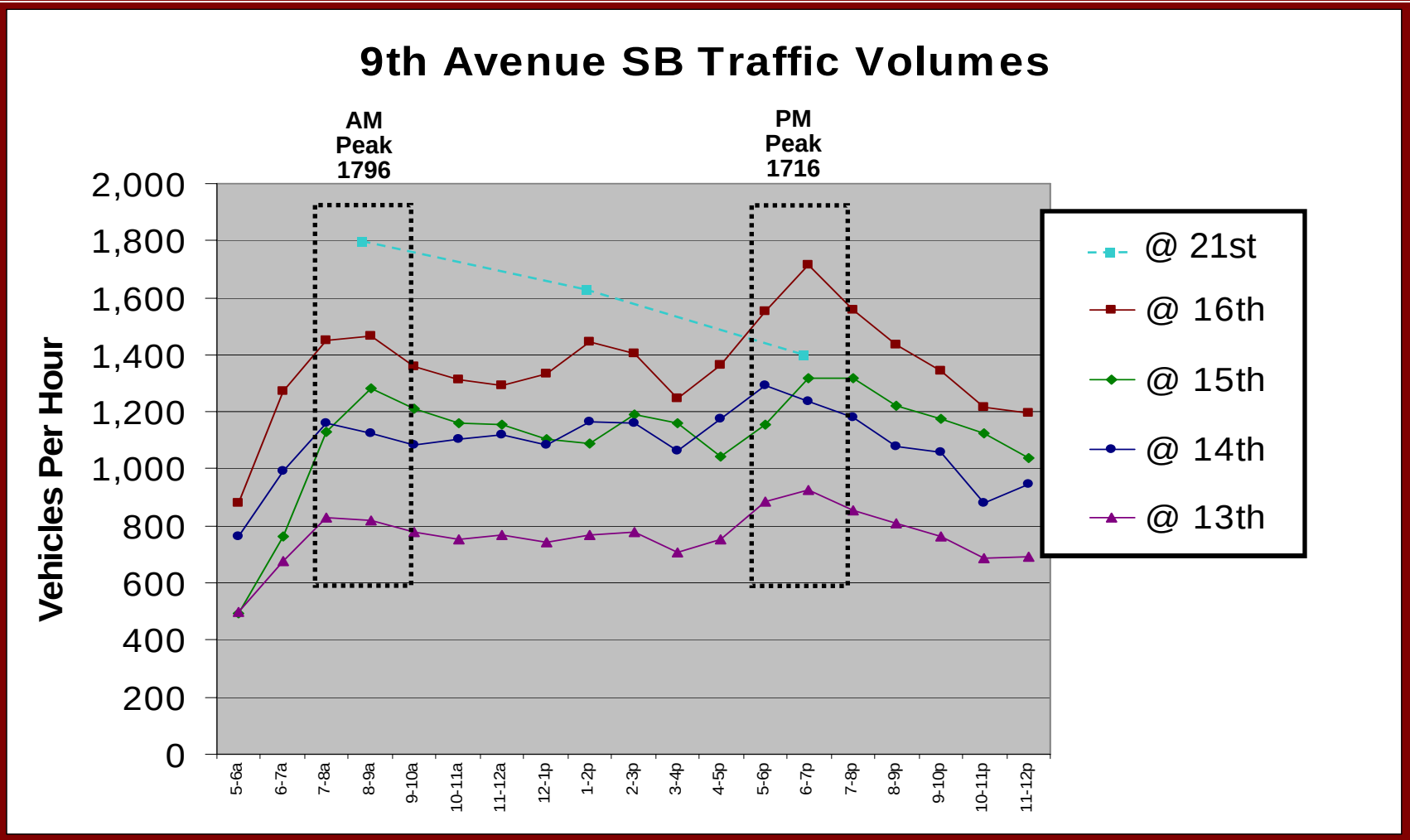


Current configuration



4 vehicle moving lanes, little pedestrian amenities, no bike facility

Traffic Analysis



- During peak hours never more than 1800 vehicles per hour
- Each travel lane comfortably accommodates 600 vehicles per hour
- Currently 4 travel lanes – excess capacity

Source: April 2005 DOT ATR Volume data (W 16th – W 13th Streets); 2004 West Chelsea Rezoning FEIS (W 21st Street)

Bicycle Volumes

9th Avenue between W 18th & W 17th Streets

Total Number of Cyclists		**782**
	Total Male Cyclists	680
	Total Female Cyclists	102
	% of Male Cyclists	87%
	% of Female Cyclists	13%
% of Total Helmet Use		**29%**
	% of Male Helmet Use	21%
	% of Female Helmet Use	55%
% of Total Cyclist Traveling with Traffic		**91%**
	% of Male Cyclist	92%
	% of Female Cyclists	85%
% Traveling Against Traffic		**4%**
	% of Male Traveling Against Traffic	4%
	% of Females Traveling Against Traffic	4%
% Traveling On Sidewalk		**5%**
	% of males Traveling on Sidewalk	4%
	% of Females Traveling On Sidewalk	11%
AM & PM Peak Travel Hour & Volume		
AM Peak Hour	**8:30AM - 9:30AM**	**41**
PM Peak Hour	**5:45PM - 6:45PM**	**108**

Counts performed from 7AM – 7PM on July 10, 2007

9th Avenue Design – Complete Street

Safe and **comfortable** street for all users

- Higher quality experience for cyclists of all levels
- Secure and pleasant pedestrian experience
- Conflict-free loading and unloading
- Thru vehicle movements accommodated
- Congestion-free surface transit

A complete street meets needs of **all users**

Current configuration

9th Ave between 19th and 20th Streets – typical street configuration

Pedestrian Experience – **Fair**
- long crossing distance (70')

Cyclist Experience – **Poor**
- no cycling space

Motorist Experience – **Acceptable**
- little to no congestion

Parking/Unloading – **Acceptable**
- easy curbside access

Transit – **Acceptable**
- local bus service

On-street Bicycle Lane

Clinton Street, Brooklyn – Typical 5’ wide, striped bicycle lane

Buffered Bicycle Lane

8th Avenue, Manhattan – Buffered bicycle lane, 3 vehicle lanes

Separated Bicycle Path

Tillary Street, Brooklyn – connecting to the Brooklyn Bridge

Why this type of facility?

- Compliance Problems/Intrusion Rates of Striped, On Street (Class 2) Lanes
- Strong NYC Advocacy Call for “Protected” or “Segregated” or “Separated” Paths
- Success / Popularity of European Cycletrack Networks
- Success / Popularity of NYC Greenways Near City Center
- Potential Growth in Cycling / Mode Shift in NYC

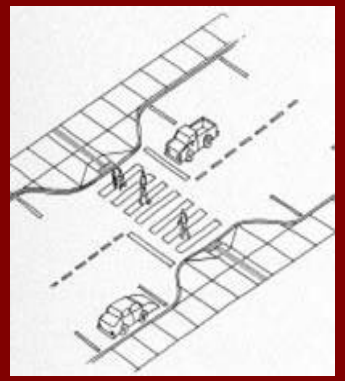
Curb-separated “Cycle-Track” in Copenhagen, Denmark

Examples of Pedestrian Improvements

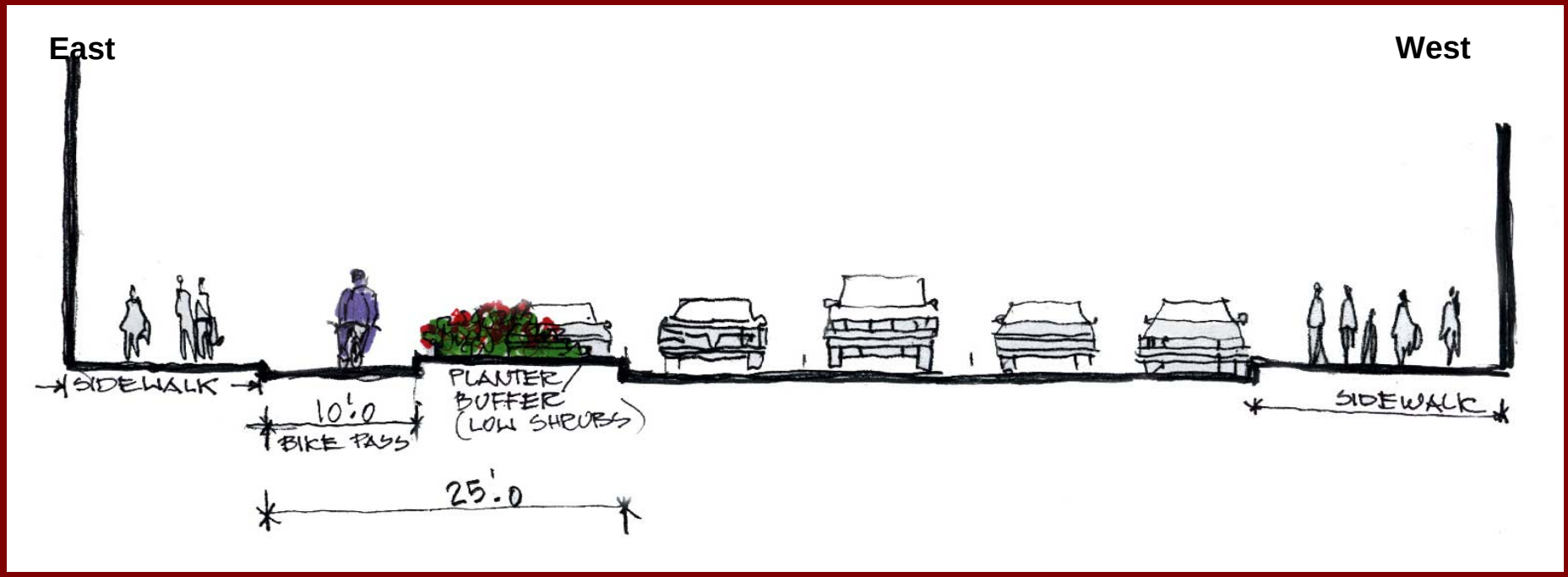
Pedestrian island with ‘cut-through’

Curb extensions shorten crossing distance

Parking aligns with curb extension, giving pedestrians a view of oncoming traffic

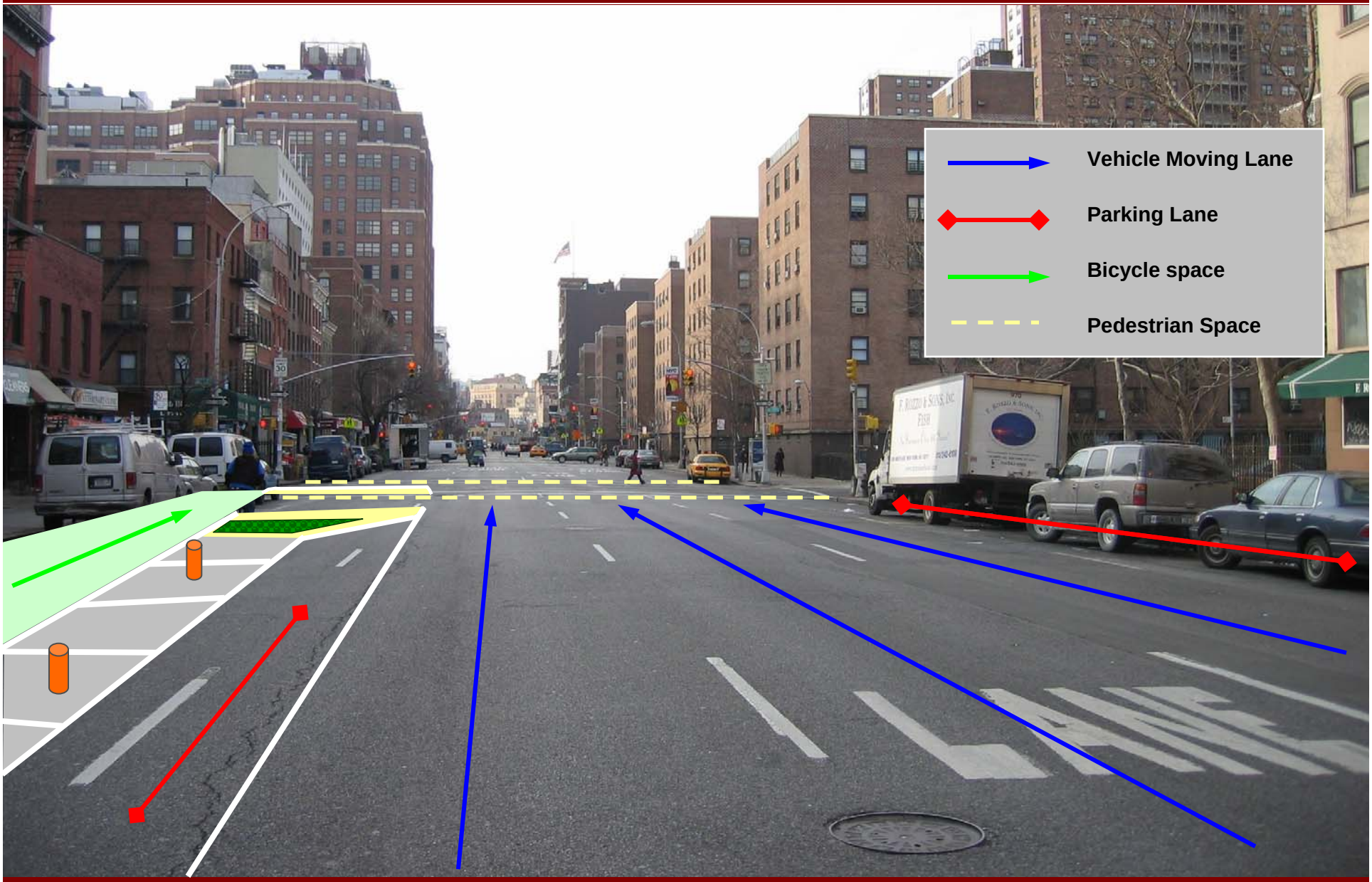


Design Proposal



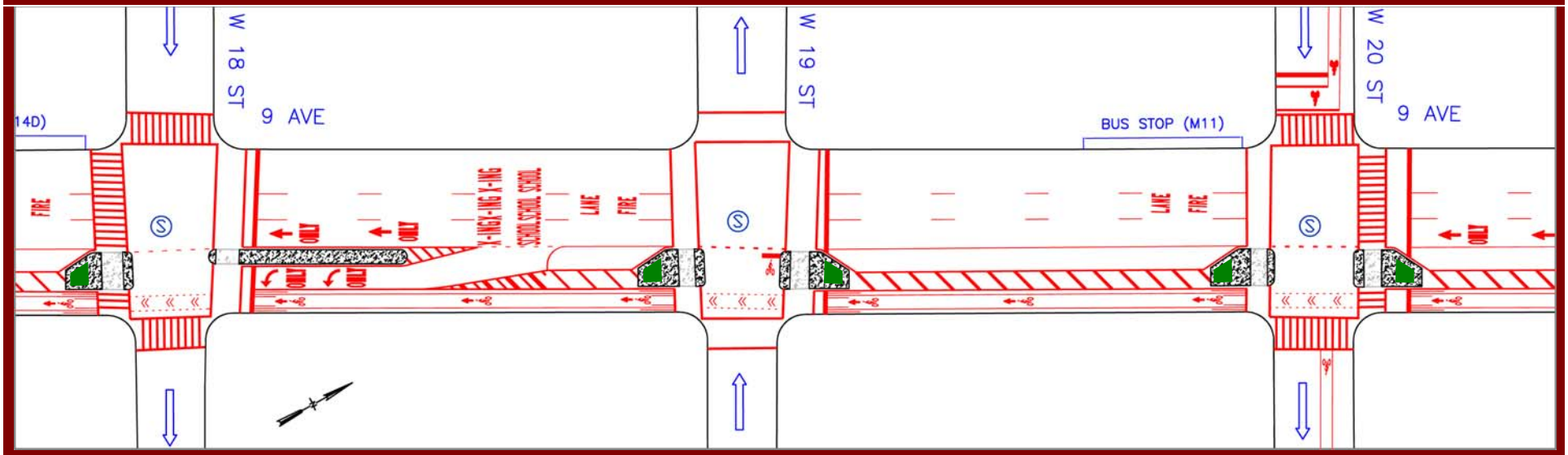
9th Avenue Cross-section

Proposed configuration



3 vehicle moving lanes, pedestrian refuge islands, separated bike path

9th Avenue Short-Term Complete Street Design



<u>Pedestrian Experience</u>
– reduces crossing distance by 25’
– planting beds

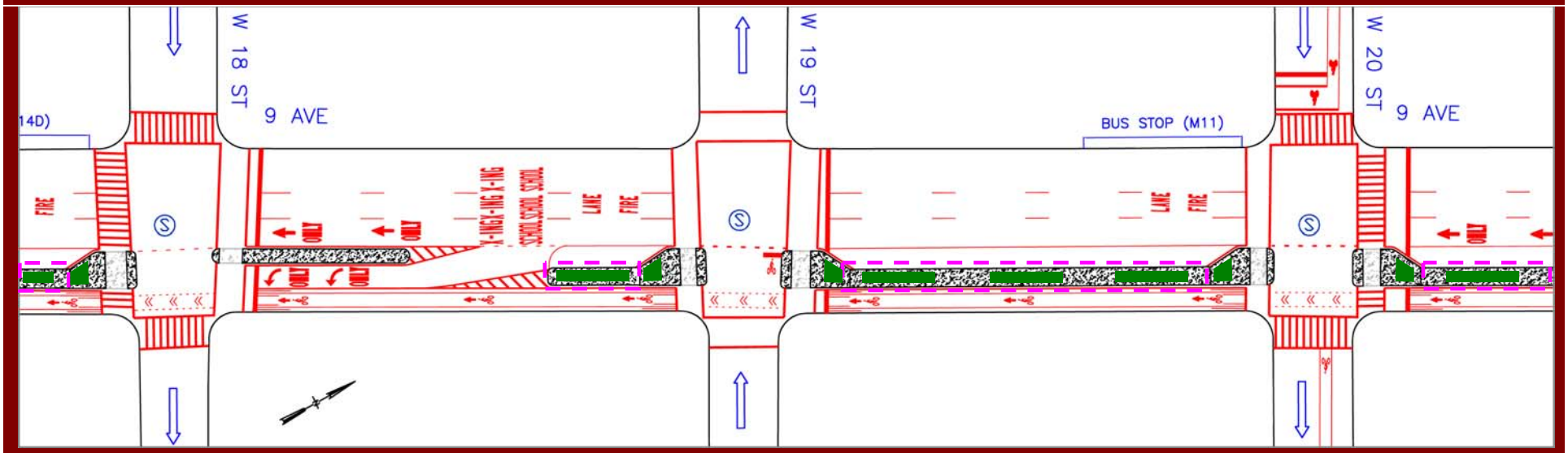
<u>Cyclist Experience</u>
– separated bike path
– bicycle signals

<u>Motorist Experience</u>
– sufficient lanes to handle volumes
– mobility restriction at banned left turn at W 20rd St

<u>Parking/Loading</u>
– single space meters replaced with multi space
– some parking loss where there are left turn bays
→ Three new loading zones
→ Net loss of about 20 metered parking spaces

<u>Transit</u>
– bus service unchanged

9th Avenue Long-term Build-out



Pedestrian Experience – more green space opportunity

Cyclist Experience – more robust separation

Motorist Experience – no additional change

Parking/Unloading – no additional change

Transit – no additional change

Project Summary

Pilot Separated Bicycle Path

- Ten foot, one-way **signalized** bike path with 8’ buffer
- Safe, comfortable facility

Pedestrian Refuge Islands

- **Shortens crossing** distance from 70’ – 45’
- **Greener** street with planting beds

Left Turning Vehicles

- Left turn lanes at W 22nd, W 18th and W 16th Streets
- Left turns banned at W 20th Streets

Parking

- Loss of ~20 metered parking spaces for left turn bays
- New Muni-Meters and loading zones

End of Presentation