

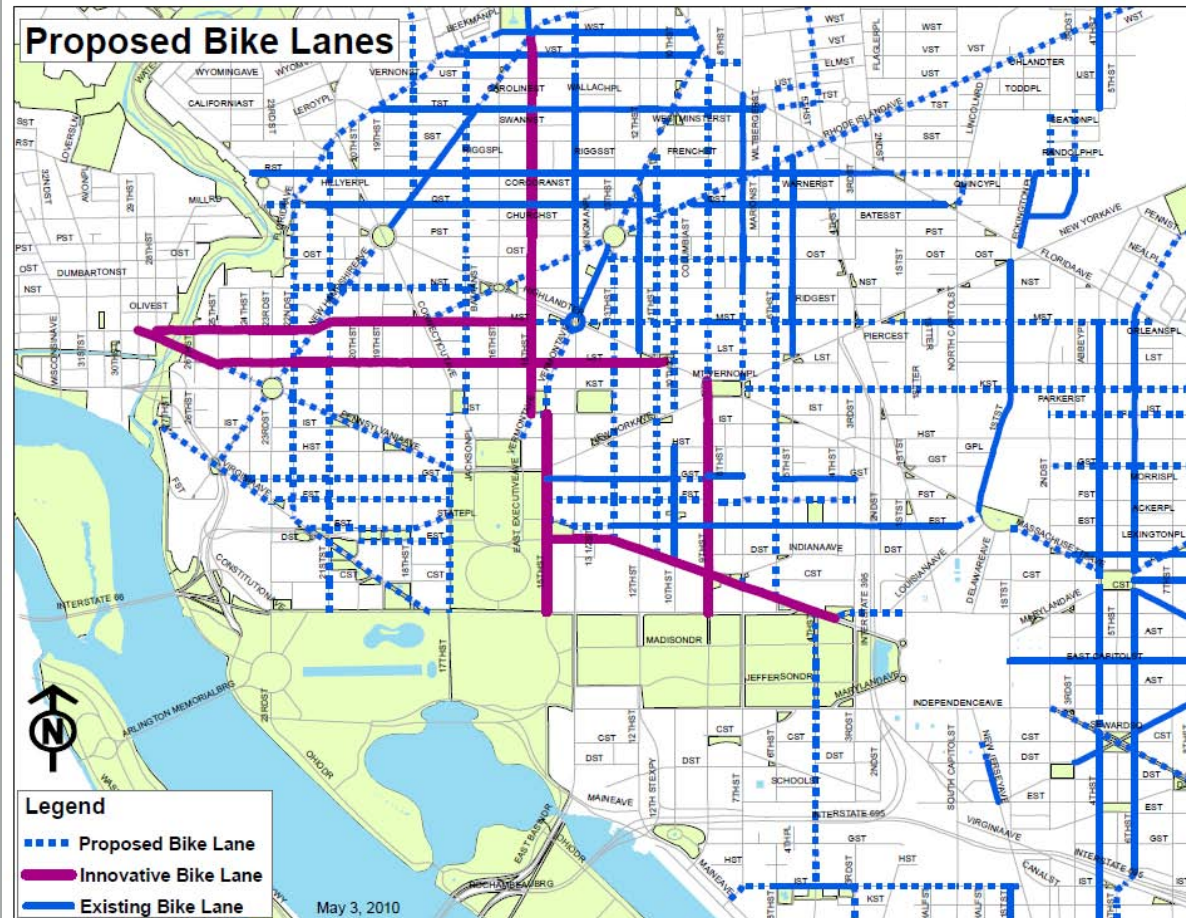
# 15<sup>th</sup> Street Separated Bike Lane Pilot Project

## Interim Results and Next Steps



August 2010

# Downtown Bicycling



- Bicycle lanes
- Separated lanes (aka Cycle Tracks)



# Why Separated Bike Lanes?

- Research has Shown that Cycle Tracks can increase ridership by 18% to 20%, compared to 5% to 7% for bike lanes
- Provide greater clarity about expected behavior on the part of both cyclists and motorists
- Can eliminate conflicts between bicycles and parking cars
- Provide adequate space removes the danger of “car dooring”



# Promoting Cycling

- The 2005 District of Columbia Bicycle Master Plan calls for the proportion of bicycle trips to increase from about **1%** of all trips in 2000 to at least **3%** in 2010 and **5%** of all trips in the District of Columbia by 2015.
- Current bicycle mode share is **2.3%** (work trips). Reaching the 2010 and 2015 goals will be possible if D.C. continues developing a safe bicycle network.
- NYC commuter cycling increased **26%** in 2009 following 2008 installation of cycle tracks on central roadways.



# Enhanced Safety

## 9<sup>th</sup> Avenue Bike Lane & streetscaping in New York City \*

- Injuries to all street users down 56%
- Reported crashes down 48%
- Injuries to pedestrians down 29%
- Injuries to cyclists down 57%



\*Dates conducted: 12/1/04 to 11/31/07 & 12/1/07 to 11/30/08

# Avoids Curbside Conflicts

- Parking
- Loading
- Valet Parking
- Buses



Photo by davereid2



# Goals of Pilot 15<sup>th</sup> St. Bike Lane

- Calm traffic
- Provide more options for cyclists
- Provide DDOT with a better understanding for future cycle tracks
- Increase bicycle trips



# Pilot Results

- **Reduced speeds,**  
especially > 45mph



| Collection Dates | 85th<br>Percentile<br>mph | Median mph | % > 25 mph | Total > 25<br>mph | % > 45 mph | Total > 45<br>mph | Total<br>Vehicles |
|------------------|---------------------------|------------|------------|-------------------|------------|-------------------|-------------------|
| Jul-09           | 35.3                      | 28.6       | 65.60%     | 6651              | 1.60%      | 161               | 10138             |
| Jul-10           | 28                        | 22         | 26.40%     | 2990              | 0.03%      | 3                 | 11000             |
| Change           | -7.3 mph                  | -6.6 mph   | -59.8%     | -3661             | -98.28%    | -158              | 862               |

# Pilot Results

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## More Cycling on 15<sup>th</sup> Street

- 40% increase in number of cyclists (15<sup>th</sup> and T)
  - 12% decrease in sidewalk riding (southbound, 15<sup>th</sup> and P)
  - (14% are riding the wrong way (northbound) in new cycletrack)
- 

# Pilot Results

- **Fewer Vehicles on the Street**

39 fewer peak hour vehicle trips daily

| Mode                            | Rate   | Mode split of non-cyclists<br>(Rate x 1.0233) | Number of trips shifted<br>from each mode on<br>14 <sup>th</sup> /15th Street (-87) |
|---------------------------------|--------|-----------------------------------------------|-------------------------------------------------------------------------------------|
| Car (Drive alone<br>or carpool) | 43.82% | 44.84%                                        | -39                                                                                 |
| Transit                         | 35.74% | 36.57%                                        | -32                                                                                 |
| Walk                            | 12.11% | 12.39%                                        | -11                                                                                 |
| Bike                            | 2.33%  | N/A                                           | N/A                                                                                 |

# INTERCEPT SURVEY RESULTS

## 15<sup>th</sup> St. Separated Bike Lane Users

### Why 2-Way?

- 81% of respondents would prefer a 2-way cycle track on 15<sup>th</sup>
  - 49% of respondents said they do not feel safe riding Northbound in the sharrow lane
  - 44% of respondents said they sometimes ride Northbound in the cycle track (currently designated Southbound only)
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# INTERCEPT SURVEY RESULTS

## 15<sup>th</sup> St. Cycle Track Users

### Why Extend the Cycle Track?

- 33% of respondents reported riding more now that the cycle track is in place
  - 7% of respondents said they didn't ride a bike for transportation prior to the installation of this cycle track
  - Average daily commute of respondents was 3 miles
  - 55% of respondents indicated that they had recently considered purchasing a new bicycle or bicycle equipment
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# Non-cyclists

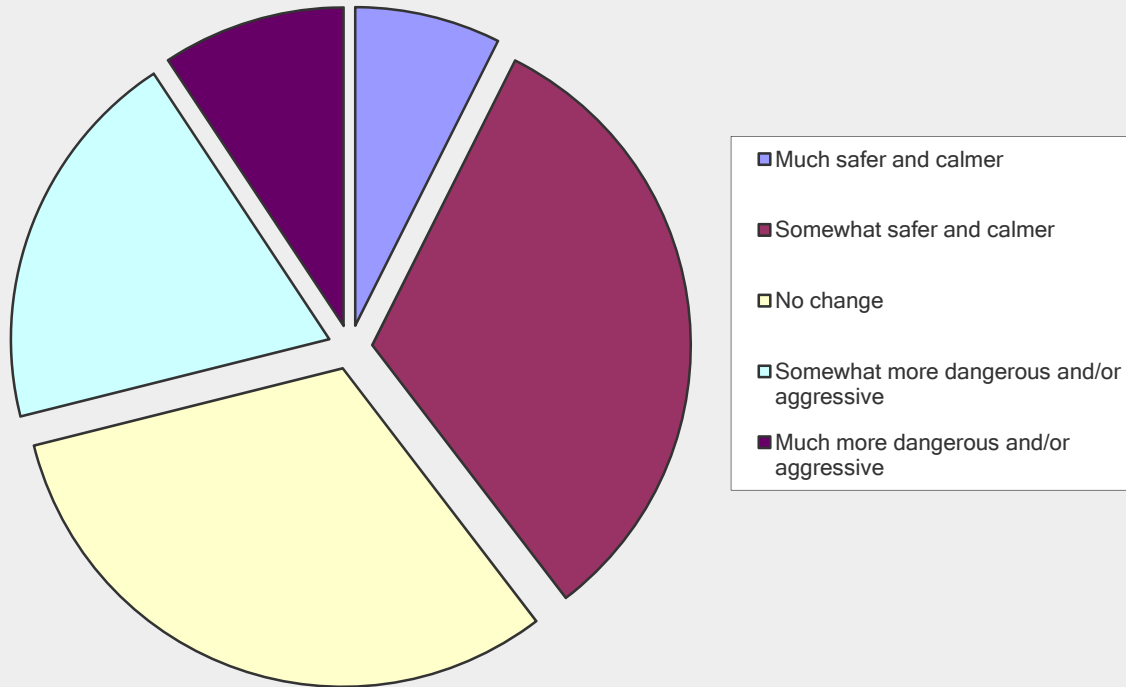
- Non-bicyclists observed in peak hours in one day:
  - 33 Joggers
  - Four razor scooters
  - Three motorized wheelchairs
  - Three skateboarders
  - Three pedestrians
  - One electric bicycle
  - One motorbike
  - One pedestrian with a roller suitcase
- => Cycle track also acts as an urban trail



# NEIGHBORHOOD SURVEY RESULTS

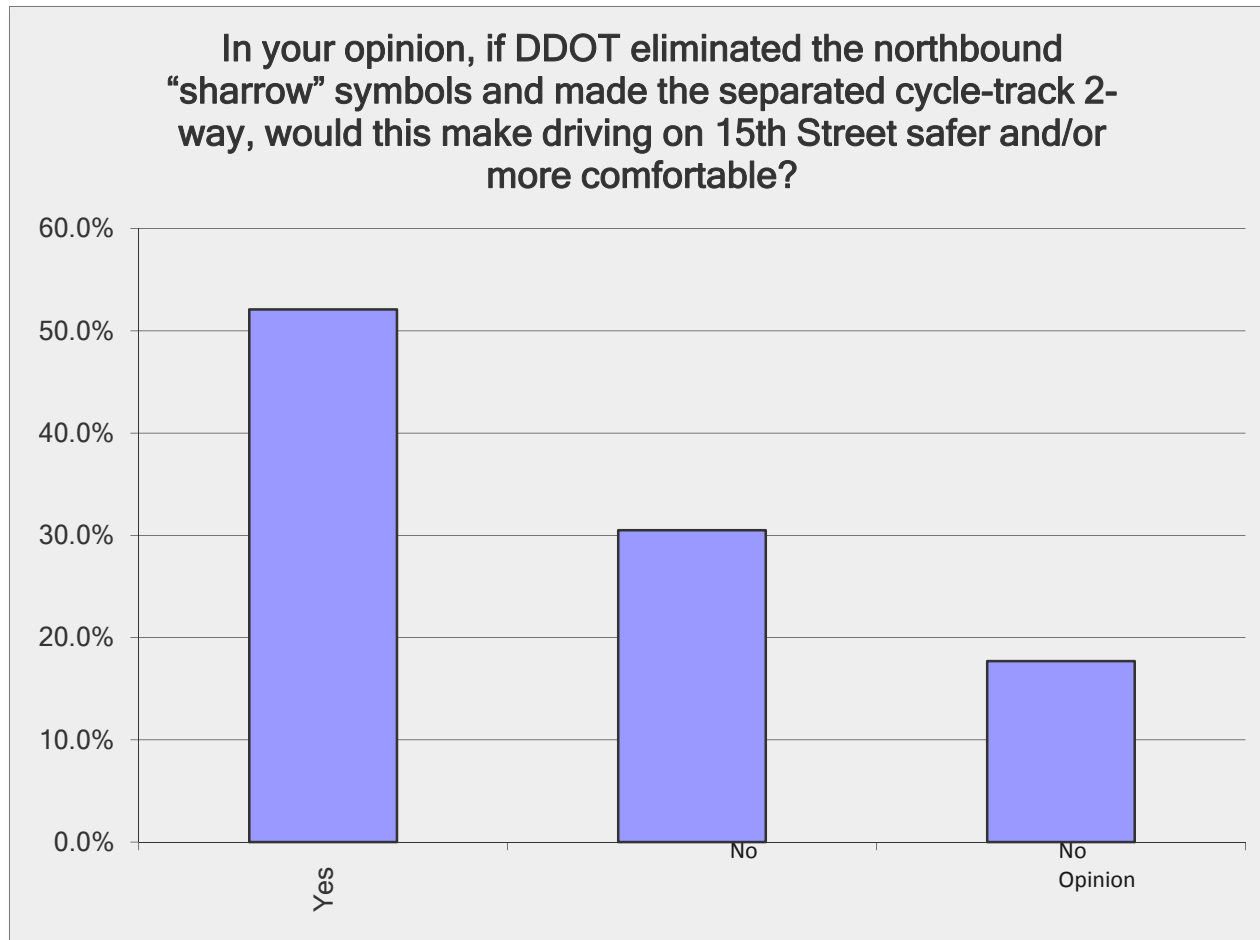
## 15<sup>th</sup> St. Cycle Track Users

While driving on 15th Street, have you noticed driver behavior change since the 15th Street cycle track was installed last fall?



# NEIGHBORHOOD SURVEY RESULTS

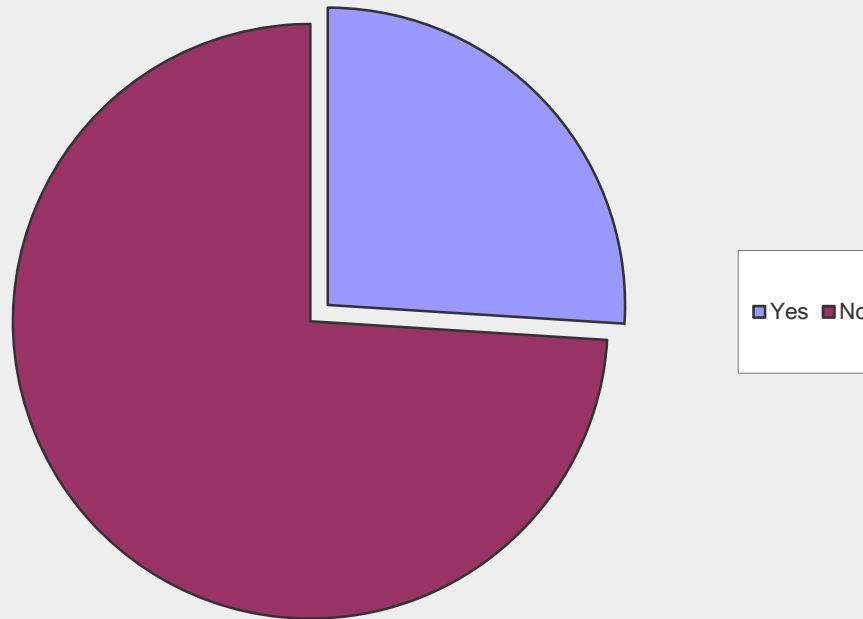
## 15<sup>th</sup> St. Cycle Track Users



# NEIGHBORHOOD SURVEY RESULTS

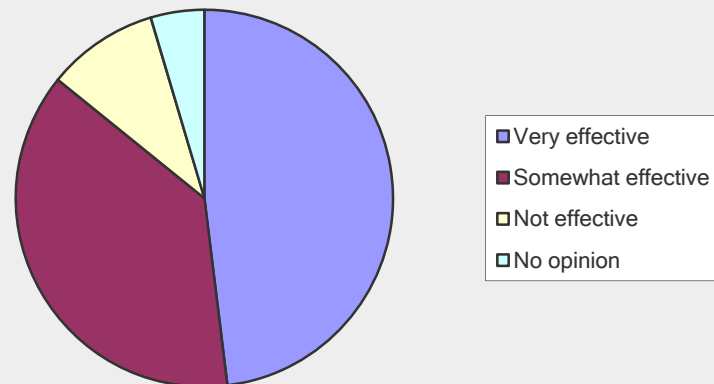
## 15<sup>th</sup> St. Cycle Track Users

In your opinion, does the Leading Pedestrian Interval (LPI) cause a noticeable delay?

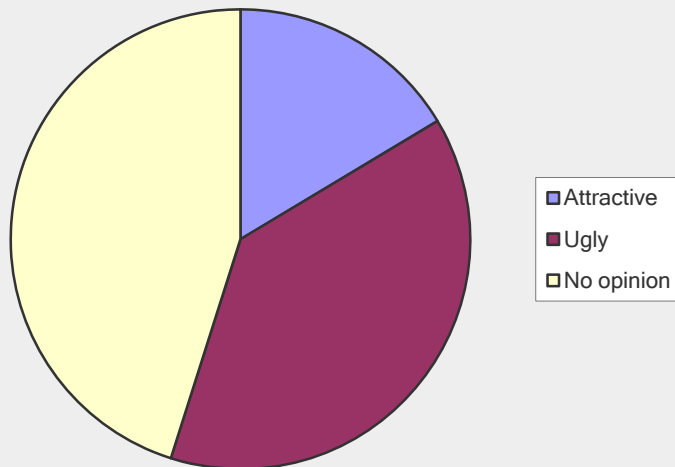


# Flex Posts

What is your opinion of the effectiveness of the yellow flexposts to keep motor vehicles out of the cycle track on 15th St.?



What is your opinion of the aesthetics of the yellow flexposts?



# Return on Investment Study \$\$\$



As part of a larger initiative to look at the costs and benefits of transportation projects, DDOT analyzed the Return on Investment (ROI) of the 15<sup>th</sup> Street project

# ROI Summary

| Factors                                                                                        | Year 1       | Net Present Value over 6 years |
|------------------------------------------------------------------------------------------------|--------------|--------------------------------|
| <b>Discount Factor</b>                                                                         |              |                                |
| <b>Project Budget/Direct Costs - Allocations</b>                                               | \$ 89,750.00 | \$(89,750.00)                  |
| <b>Indirect Costs</b>                                                                          |              |                                |
| Driving related to installation                                                                | \$ 136.00    | \$ (136.00)                    |
| Crash resulting in property damage instead of injury                                           | \$ 4,841.21  | \$(28,343.34)                  |
| <b>Direct Benefits - Sources</b>                                                               |              | \$ 0                           |
| <b>Indirect Benefits</b>                                                                       |              |                                |
| 39 trips/day switched from vehicle to bicycle, 3.17 miles average, 250 days/year (\$2.73/mile) | \$84,377.48  | \$ 493,996.37                  |
| Increased Activity (71 new trips from vehicles and transit)                                    | \$ 9,088.00  | \$ 53,206.60                   |
| Injury Reduction (0.89 Serious injuries/year)                                                  | \$296,815.00 | \$1,737,733.10                 |
| <b>Total Return on Investment of the Project</b>                                               |              | <b>\$ 2,166,706.73</b>         |
| <b>Return on Investment Ratio</b>                                                              |              | <b>19.33</b>                   |

# What Will It Cost Taxpayers & What Kind of Benefits Result?

- Current cycle track cost under \$90,000 to install .9 miles
  - Planned extension is estimated at approximately \$250,000 for the full 2.1 mile length
  - Projected annualized benefits amount to over \$360,000 for the existing cycle track, or a projected \$2,167,000 over a six year period.
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# Next Step: Extension of the 15<sup>th</sup> St. Cycle Track



Short Term\*

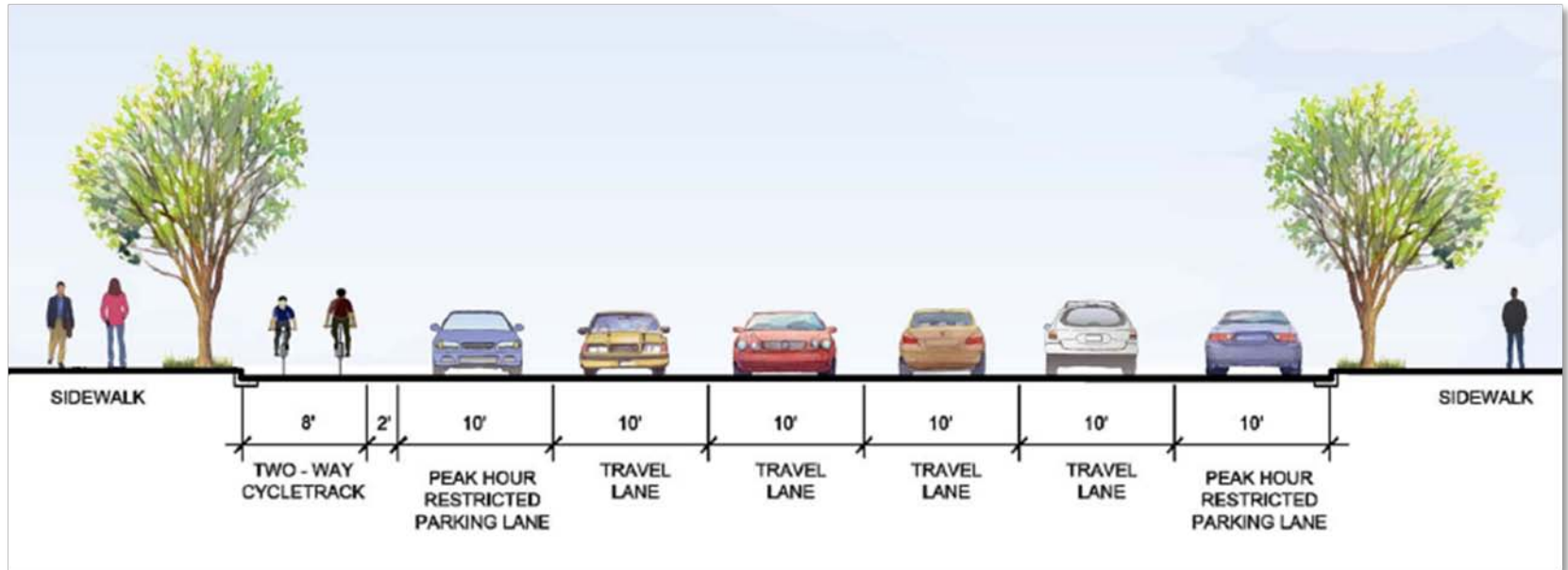


Long Term\*

- Connect DC Neighborhoods to Downtown Employment Areas
- Create additional linkages in the bicycle network.
- Provide high quality non-motorized route for residents and tourists
- Implement successful practices from pilot project
- Increase bicycle trips

\*Photos from Montreal

# Approach



Cross Section between K St. and Massachusetts Ave.

- Install 2-way cycle track from E St. to Euclid St. NW
- Create separation between bicycles, cars, and pedestrians
- Maintain existing motor vehicle operations and parking insofar as possible



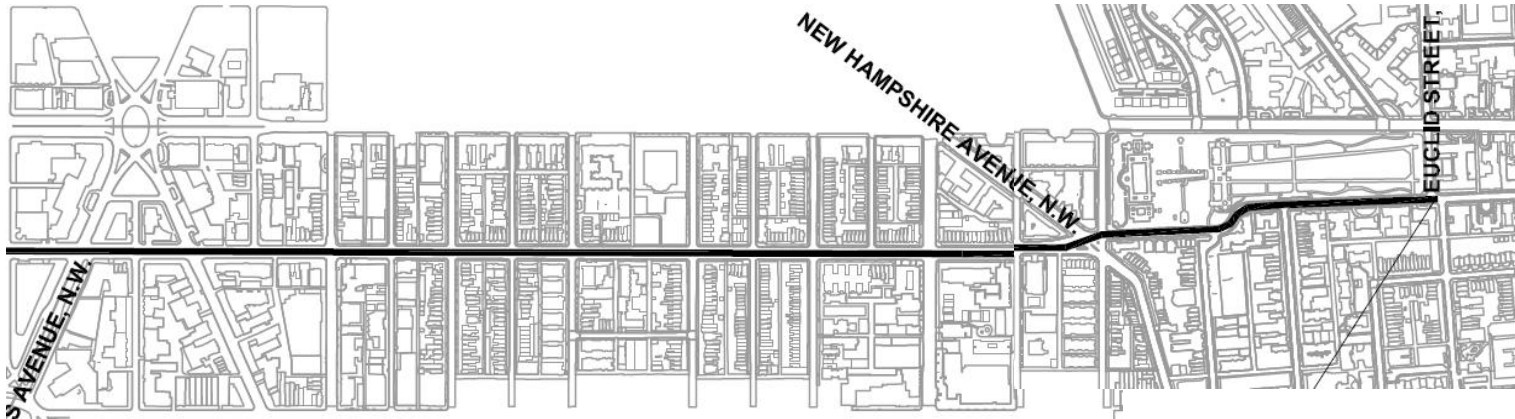
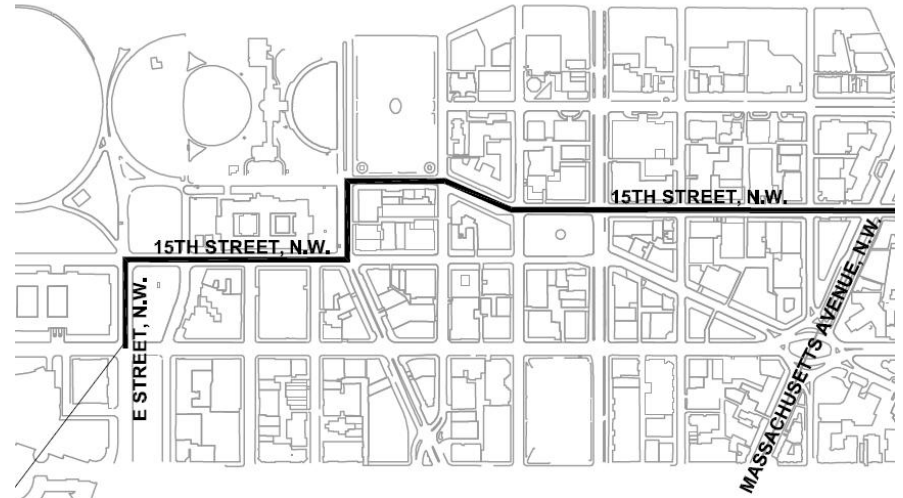
# Implementation

- September - October 2010
- 4 Weeks “construction”  
(phased)



# Connections

- Pennsylvania Ave Bike Lanes
- L street Cycle Track
- M street Cycle Track
- Q street Bike Lanes
- R street Bike Lanes
- T Street Bike Lanes
- V street Bike Lanes
- W street Bike Lanes
- Existing Bike Lanes at 15<sup>th</sup> & Euclid



d. delivers

