

# *City of Alexandria Pedestrian and Bicycle Mobility Plan*



City of Alexandria & Toole Design Group  
February 2007



# Project Purpose

- Make pedestrian and bicycle transportation safer and more attractive for Alexandria residents
- Provide a blueprint for pedestrian and bicycle infrastructure improvements over the next 10 years
- Develop existing conditions maps, prioritized recommended facilities, and plan document

# Planning Context

- Build on 2007 Transportation Master Plan
- Recommendations incorporated into small area plans and site plans
- Community Pathways Initiative
- Neighborhood Traffic Calming Program
- Safe Routes To School Programs
- Spin City 2009



# Project Support & Implementation

- Funded by a State Transportation Planning pilot grant from VDOT & Northern Virginia Regional Commission
- Recommendations
  - Incorporate into other City programs
  - Accomplish during regular maintenance
  - Work with developers to make improvements
- More than \$3.6 million in grant-funded and local projects



# Pedestrian and Bicycle Planning Experience

ICBC British Columbia



# Pedestrian and Bicycle Plans

- Northern Virginia Regional Bikeways and Trails Study
- Loudoun County Pedestrian and Bicycle Mobility Master Plan
- Richmond, VA Area Bicycle and Pedestrian Master Plan
- District of Columbia Pedestrian Master Plan
- District of Columbia Bicycle Master Plan
- Kenilworth Avenue (DC) Corridor Study (Pedestrian and Bicycle Recommendations)
- Arlington County Transportation Master Plan
- Rockville, MD Bicycle Master Plan Update / On-Call Services

# Project Scope/Timeline

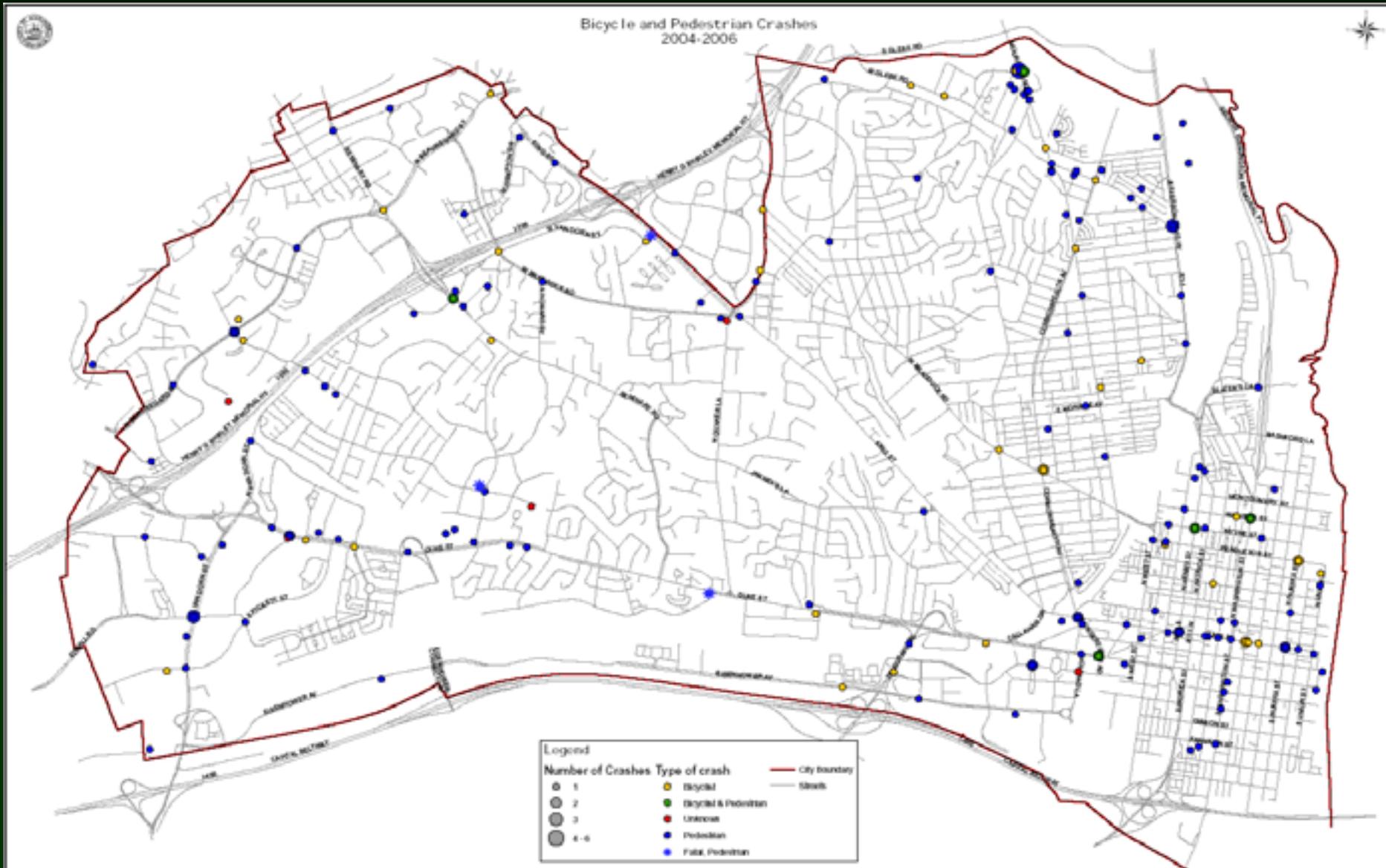
- Kick-off meeting (January)
- Field data collection: Develop GIS layers of sidewalk, crosswalk, shared-use path, and bikeways (Feb.-Mar.)
- Stakeholder meetings, public meetings, online survey, DASH survey (Jan.-June)
- Pedestrian, transit access, and bicycle recommendations (Mar.-Apr.)
- Prioritized list of recommendations (May)
- Final Draft Plan (Summer 2007)

# Use previous planning efforts/recommendations

- Open Space Plan
- Parks and Recreation Plan
- Transportation Master Plan
- Alexandria Commission on Persons with Disabilities
- Alexandria Bicycle Transportation and Multi-Use Trail Master Plan (1998)
- Existing GIS data



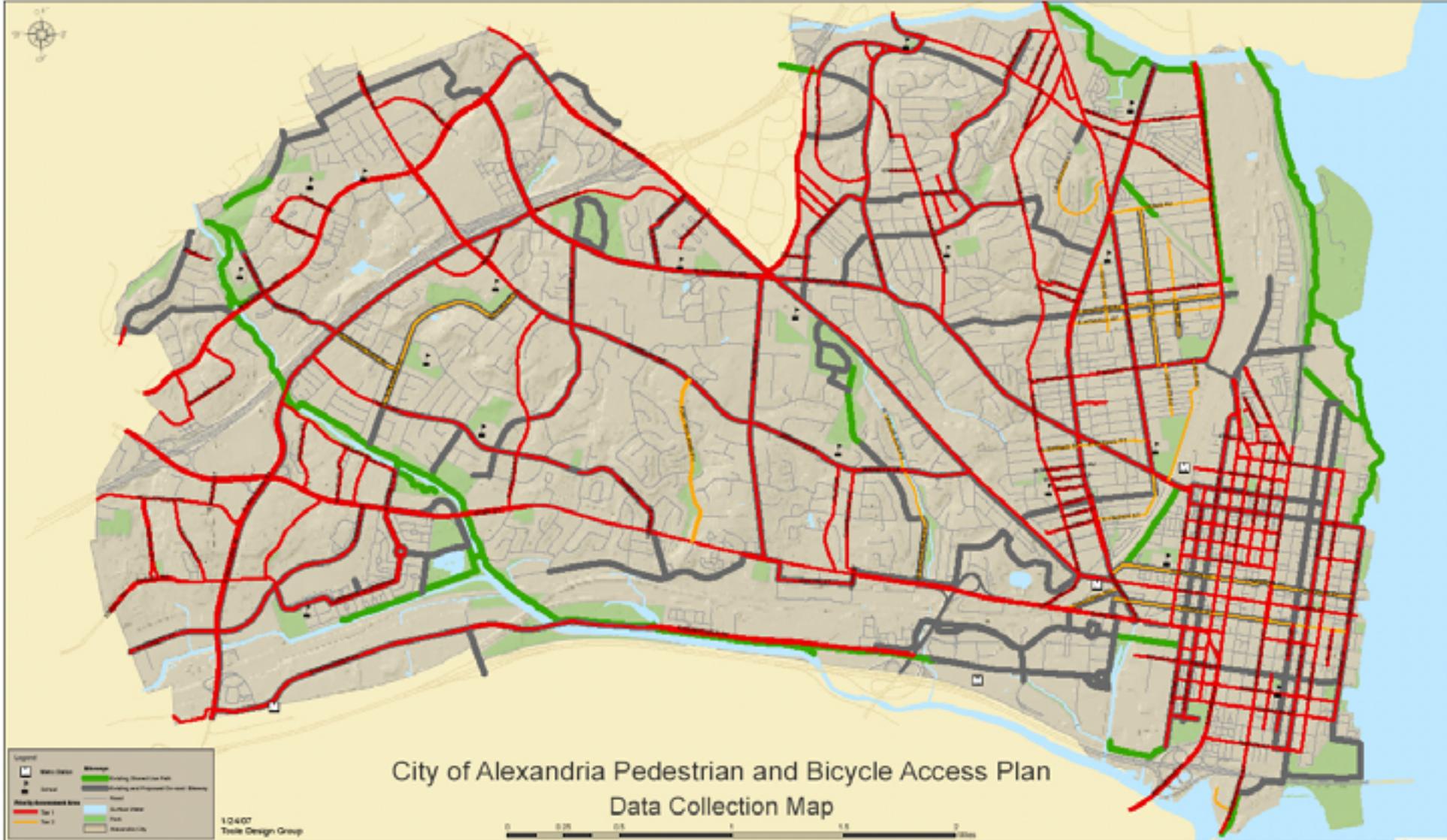
# Pedestrian and Bicycle Crashes



# Existing Conditions Inventory

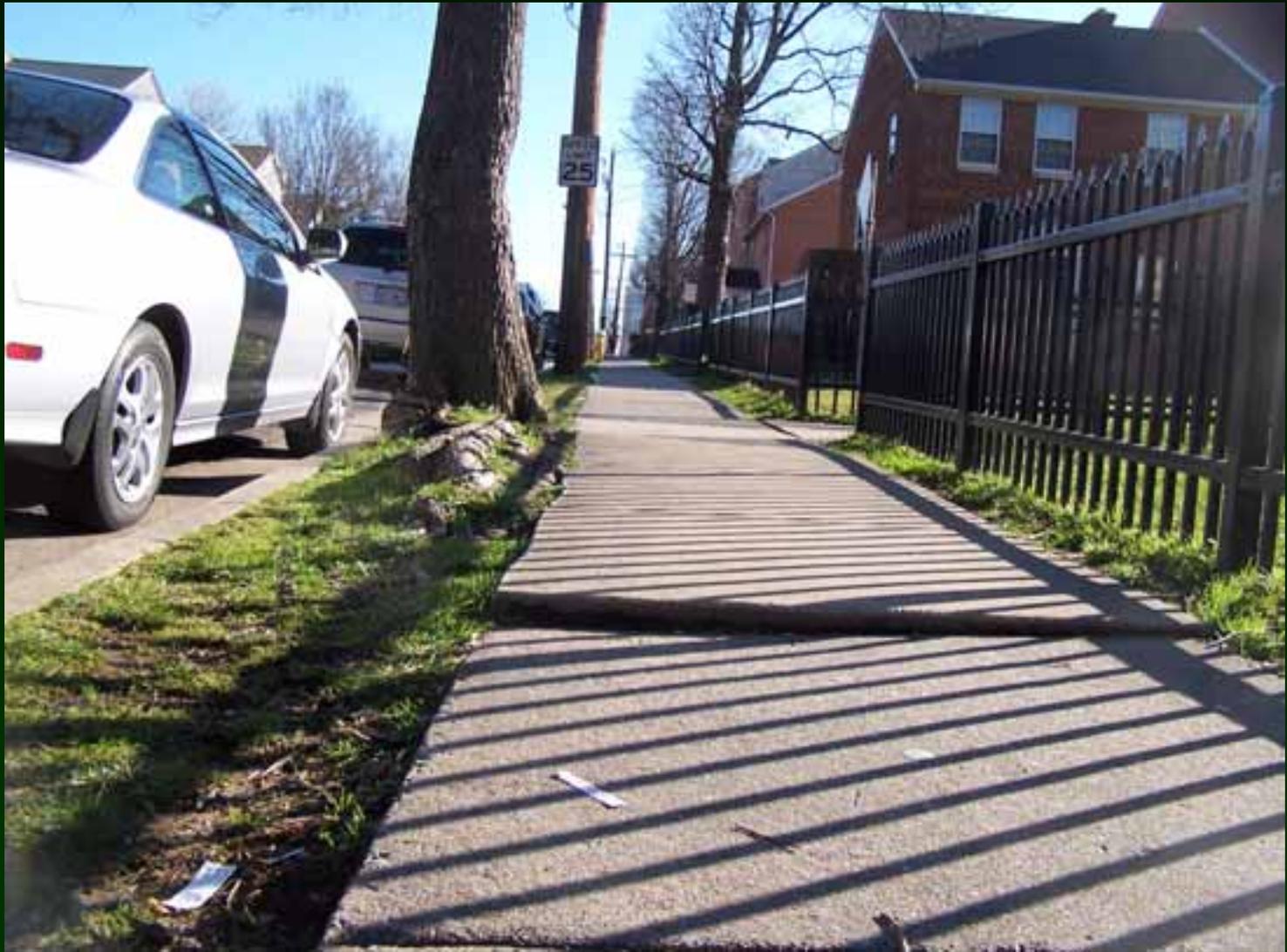


# Priority Assessment Areas

















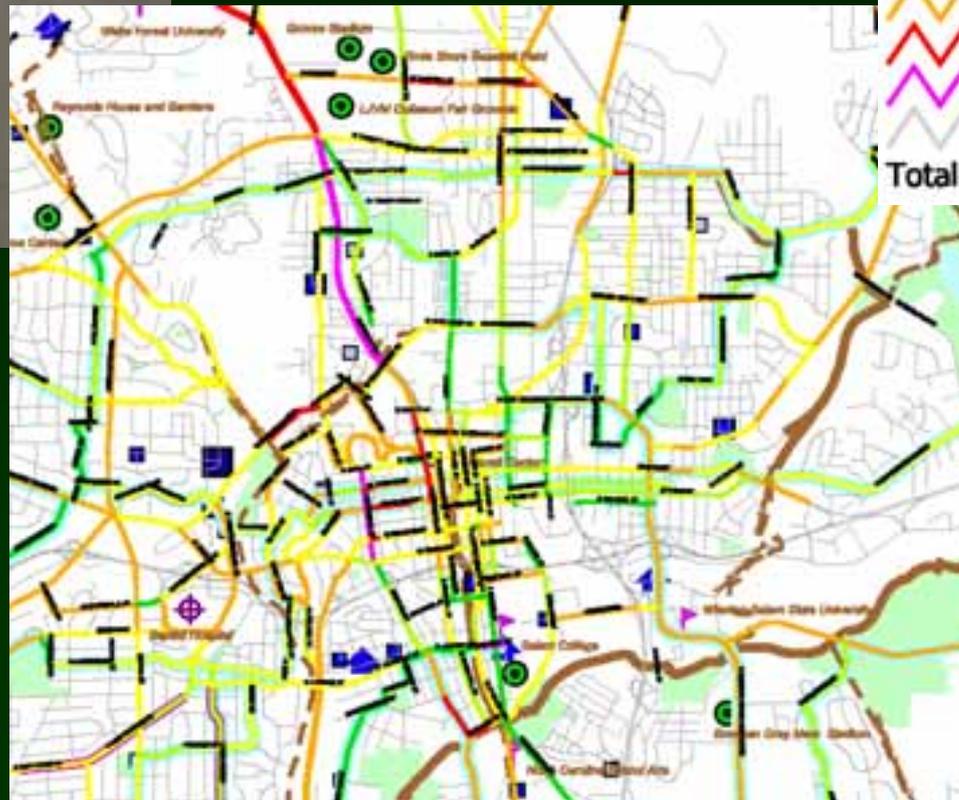








# Bicycle Level of Service Analysis



## BICYCLE LEVEL OF SERVICE GRADE

-  LOS A (37.0 miles)
  -  LOS B (78.2 miles)
  -  LOS C (204.5 miles)
  -  LOS D (391.1 miles)
  -  LOS E (179.8 miles)
  -  LOS F (46.0 miles)
  -  No Grade (0.7 miles)
- Total Network = 937.3 miles

# Public Participation





# Stakeholder Meetings



# AlexRide.org

Commuter Newsletter :: Current Conditions



## Bicycle and Pedestrian

- Pedestrian & Bicycle Transportation Study
- Bike Trails
- The Alexandria Bike Plan
- Bicycle Racks
- Bike-on-Rail
- Get Involved
- Register Your Bicycle
- Art Racks
- Bicycling Skills & Maintenance Classes
- Bicycle Tours & Guided Rides
- All About Pedestrian & Traffic Signals
- About Shared Lane Bicycle Markings ("Sharrows")
- Crosswalks 101
- Flags for Amblers

- Spin City 2009
- Community Pathways
- Bicycle Commuter Assistance
- Bicycle Laws in Virginia
- Report a Bike Trail Problem
- Guaranteed Ride Home
- Commuter Connections
- Safe Routes to School
- Walk to School Day

- 
- Ride Well, Read Well
  - Carshare Alexandria!
  - Carpool, Vanpool & HOV
  - Public Transportation
  - Bicycle & Pedestrian
  - Guaranteed Ride Home
  - Telework
  - Employer Services
  - Air Quality Action Days
  - Old Town Trench Club

Online Questionnaire: [www.alexride.org](http://www.alexride.org)

# Pedestrian Facility Recommendations



# Everyone is a Pedestrian



Photo by Dan Burden



# Good Sidewalks

Photo by Dan Burden



**Bad  
Sidewalks**



# High-Visibility Crosswalk Markings



# Curb Ramps



E. Market St.





Photo by Karen Gonzalez, City of Bellevue, WA



# Curb Extensions

# Median Crossing Islands



N. Church Street



## Curb Radius Reduction

# Pedestrian Countdown Signals



# Lighting Improvements



# Other Types of Pedestrian Crossing Improvements

- Raised Pedestrian Crossings
- Advance Warning Signs
- In-Roadway Pedestrian Warning Signs
- Leading Pedestrian Interval
- Right-Turn on Red Restriction
- Pedestrian Activated Crossing Signals

# Shared Use Paths



# Transit Access Improvements



# Transit Access Improvements



# Bicycle Racks on Buses



# Bicycle Facility Recommendations



# People of all ages are bicyclists



# Bicycle lanes





# Shoulders



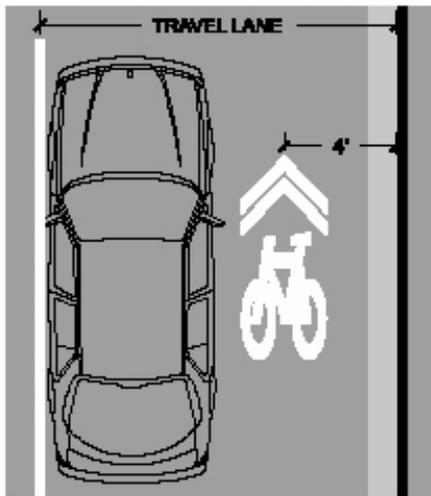
# Shared Lane Pavement Markings



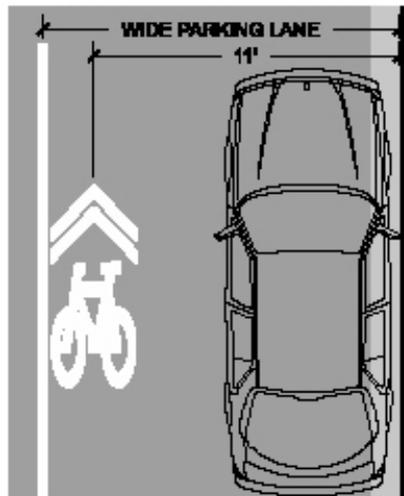
## EXPERIMENTAL

### SHARED LANE SYMBOL PLACEMENT

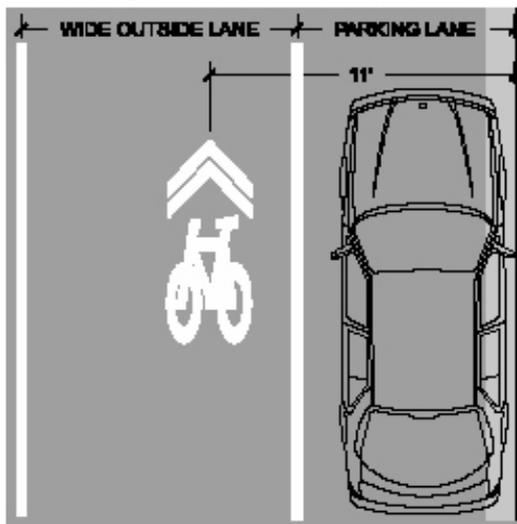
#### WIDE OUTSIDE LANE



#### WIDE PARKING LANE



#### WIDE OUTSIDE LANE ADJACENT TO PARKING



#### SYMBOL PLACEMENT NOTES:

1. Symbols shall be placed after each intersection. Symbols may be placed up to 250' thereafter.
2. If used on roadways with on-street parking, symbols shall be placed so that their centers are a minimum of 11' from the adjacent curb face.
3. Symbols placed in a shared lane without parking shall be placed so that their centers are a minimum of 4' from the adjacent curbface.
4. Do not place symbols on lane lines.

# Shared Lane Pavement Markings



# Signed Bicycle Routes



# Sidepaths/Wide Sidewalks



# Bicycle Parking



# Bicycle Parking

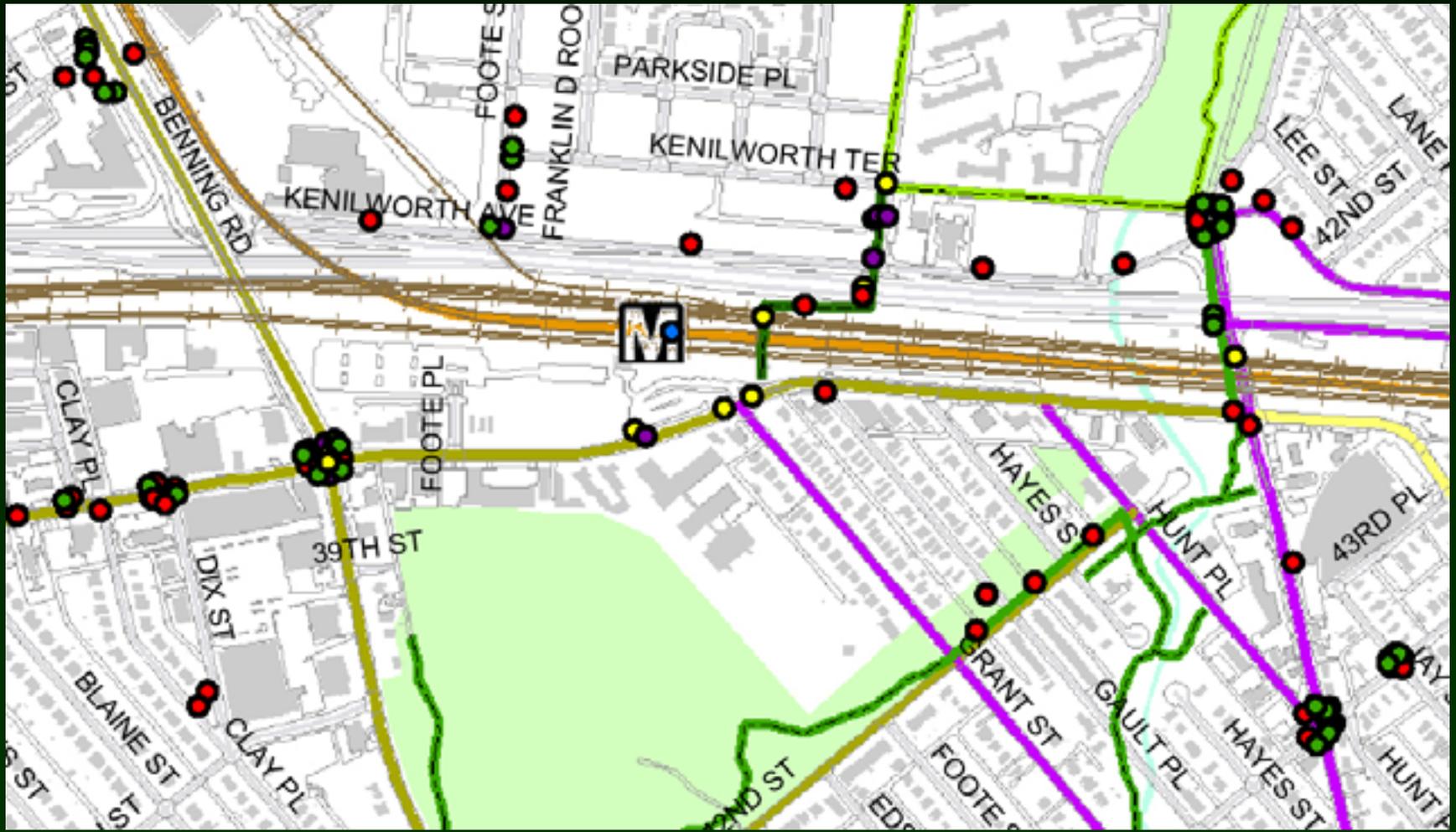


# Supportive Programs

- Pedestrian and bicycle safety training
- Safe Routes to Schools
- Promotional/safety websites
- Enforcement of driver and bicycle behavior
- Public awareness campaigns
- Bicycle maps



# Specific Recommendations



## PEDESTRIAN IMPROVEMENTS

- Curb Ramps
- Lighting/Signals
- Ped/Bike Through-Way
- Roadway Design

## BICYCLE IMPROVEMENTS

- On-Road Bicycle Facility or Roadway Restriping
- Bike Route
- Wide Sidewalks
- Bicycle Parking

## SHARED-USE PATHWAYS

- Planned Anacostia Riverwalk Trail
- Interim Anacostia Riverwalk Trail
- Anacostia Riverwalk Nature Trail
- Existing Watts Branch and Fort Circle Trails
- Interim/Proposed Watts Branch and Fort Circle Trails

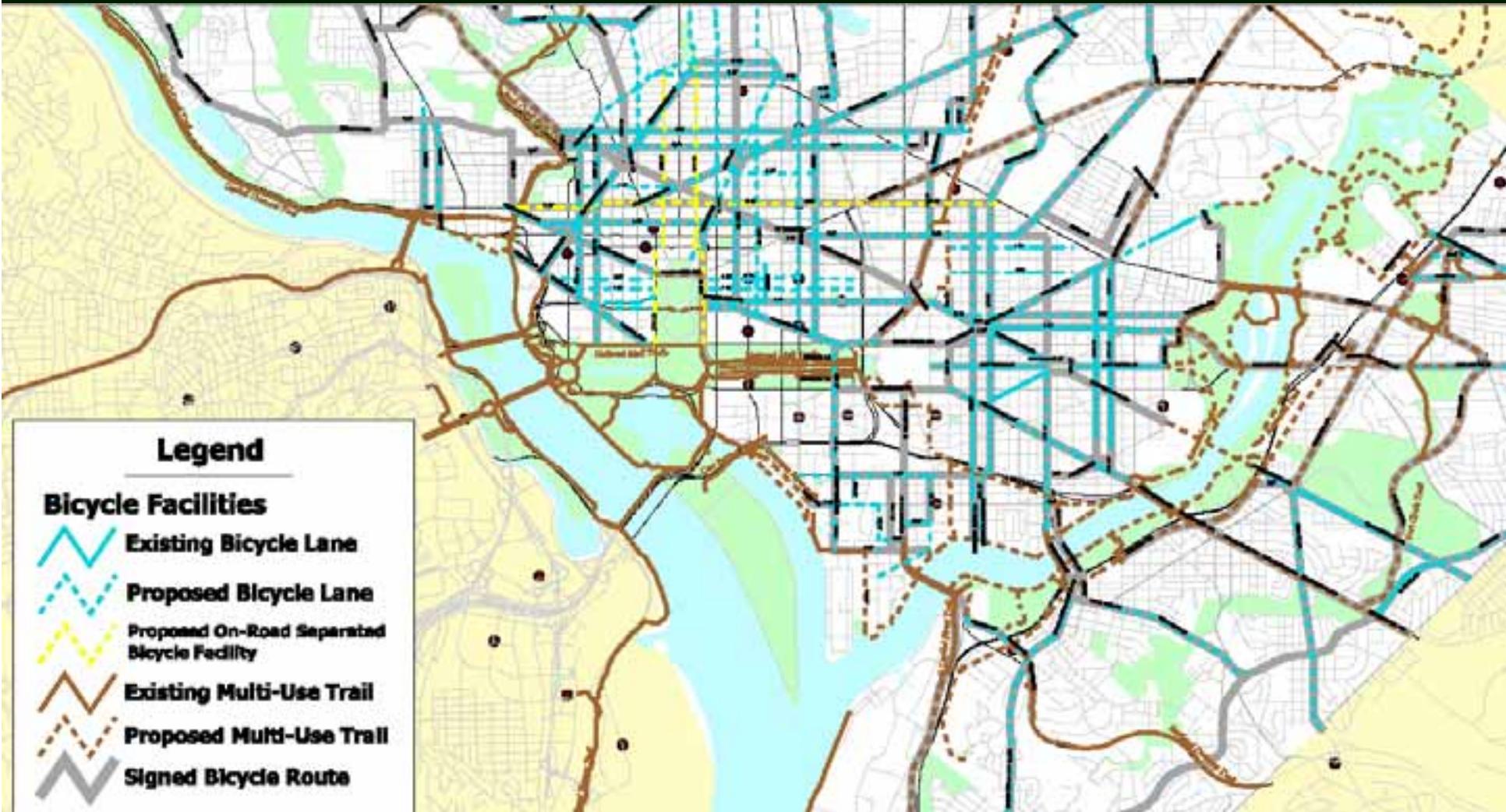
## METRO RAIL LINES

- blue
- orange

## OTHER FEATURES

- DC Boundary
- Building Footprint
- Park
- Water
- Metro Station
- Rail Line
- Road

# Network Planning



# Implementing Facilities



# Implementing Facilities



# Taking Advantage of Reconstruction/Resurfacing



# Routine Maintenance



# Routine Maintenance



# Implementation/Prioritization

## Implementation Schedule

Lancaster County Bicycle and Pedestrian Transportation Plan, Phase II

3. MULTIMODAL ACCESS/LAND USE POLICY Recommendations	LCPC Partners	Implementation Schedule											
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Years 11-20	
Sidewalk&BLOS Standards near Transit Facilities	M												
Transit Facility Field Study	M, R												
Bike Parking at Transit Facilities	R												
Transit Facility Site Improvements	R												
Adoption of Mixed-Use Zoning Policies	B, M												
Adopt PennDOT Bike and Ped Checklist	M												
Update County Road and Subdivision Guidelines													
Update Municipal Road and Subdivision Guidelines	M												
Establish Minimum Bike and Ped Facility Standards	M												

B = Lancaster County Bicycle and Pedestrian Advisory Council  
 BU = Lancaster County businesses  
 C = Lancaster County colleges and universities  
 D = Lancaster County driver education organizations  
 H = Lancaster County health organizations

L = Lancaster County government agencies (all levels)  
 M = Local municipalities  
 N = Neighboring counties  
 P=PennDOT  
 PD = Municipal police departments

PW = Municipal public works departments  
 R = Red Rose Transit Authority  
 S = Lancaster County schools  
 T = Lancaster County tourism organizations

# Draft and Final Plan

