



lower Little Rock Creek

Walkable Watershed

healthy waters : healthy communities

Public Meeting

May 20, 2014



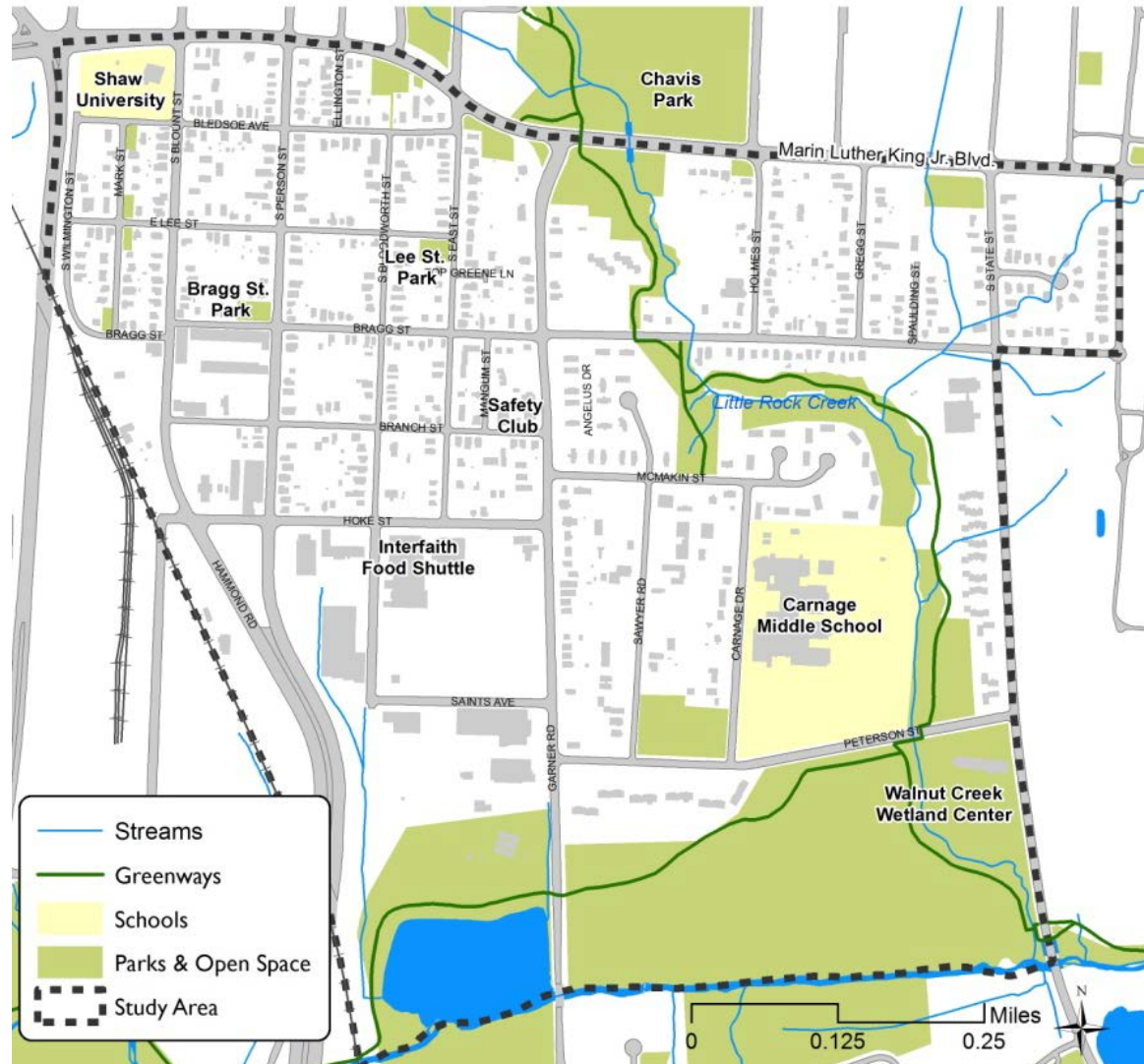
Overview

- Study Purpose
- Study Area Overview
- Strategies
- Potential Opportunities
- Implementation and Discussion



Purpose

Develop a concept plan to improve water flow and pedestrian amenities in lower Little Rock Creek Watershed.





Walkable

The neighborhood includes safe and pleasant routes for walking.

- **Physical health benefits**

- Obesity rates in children have more than doubled over the past 20 years.
- Walking meets the Surgeon General’s recommendation of 30 min/day of exercise.

- **Mental health benefits**

- Walking is associated with an increased ability to concentrate, including for children with ADHD.
- Elderly have improved mental health when they can exercise, walk to local amenities.

- **Community benefits**

- 88.2% less risk of a crash on sidewalks (versus roads)
- Decreases crime
 - More “eyes on the street”
 - Sidewalks clearly mark public space and discourage people from entering private space

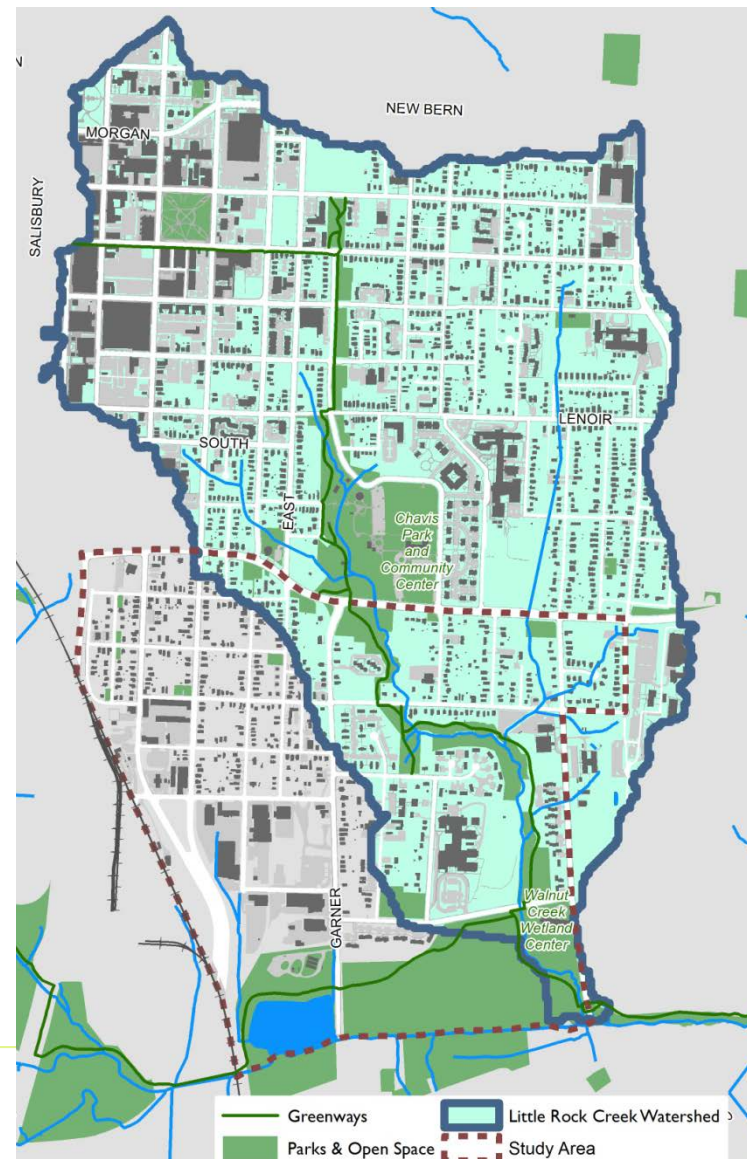
- **Economic benefits**

- Buyers willing to pay more for homes in walkable neighborhoods
- Sidewalks improve customer traffic for retail businesses

Watershed

All the land area where rainwater drains to Little Rock Creek.

- The Little Rock Watershed includes downtown, Chavis Park, the greenway and surrounding neighborhoods.
- Stormwater in this area flows through a network of pipes and ditches to the creek, and eventually the Neuse River.



Study Area Overview



Community Assets

- John Chavis Memorial Park
- Inter-Faith Food Shuttle and Urban Garden
- Raleigh Community and Safety Club
- Carnage Middle School
- Capital Area Greenway
- Walnut Creek Wetland Center
- Little Rock Creek and natural environment



Challenges

- Pedestrian safety crossing intersections
- Missing sidewalks on major pedestrian routes
- Narrow street right-of-ways
- Flooding and mud on sidewalks/greenways
- Perception that walking in neighborhood and greenway is not safe
- People may be unaware there is a creek or see the creek as a nuisance





Water Flow Challenges



- Litter and illegal dumping
- Erosive flows
- Polluted water
- Local flooding

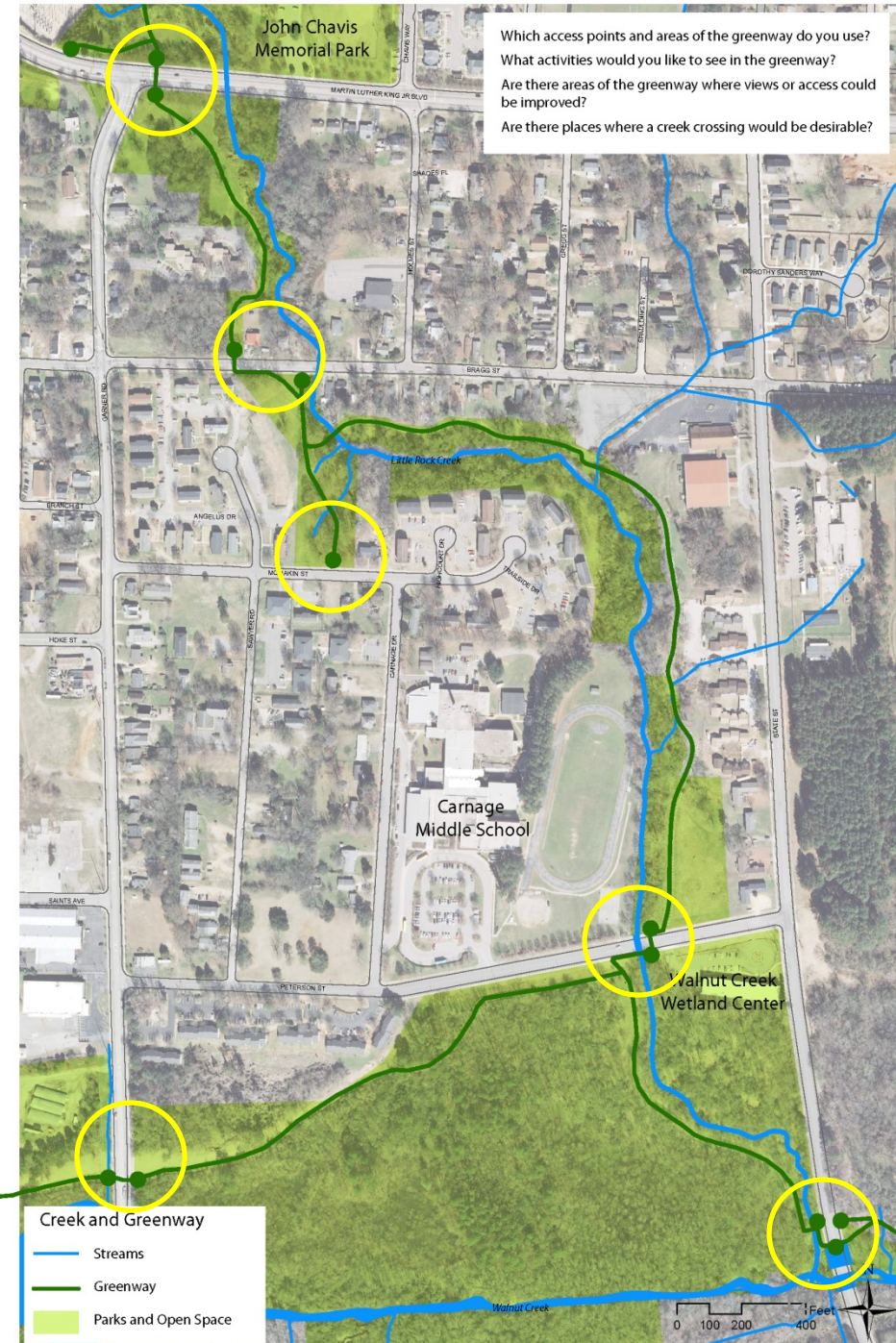


Community Connections





Creek and Greenway



Strategies

Integrating walkability and
stormwater improvements



Green Streets

- Enable **safe** access for all users (including pedestrians, bicyclists, motorists and transit riders of all ages and abilities)
- And enhance **water quality** by cleaning stormwater runoff.





Safe Crossings

Stormwater treatment can be integrated with safe pedestrian crossings.



Mid-block Stormwater Bump-out



Corner Stormwater Bump-out

Source: City of Philadelphia Green Streets Design Manual



Stormwater Flow – On Street

Swales are grassy or vegetated channels that safely hold and direct water from one place to another. They can be located adjacent to streets and parking lots to slow and clean the water before it flows to the creek.



Curb extension retrofit



Water-filled planted swale during 25-year storm event



Grassy swale



Stormwater Flow – Off Street

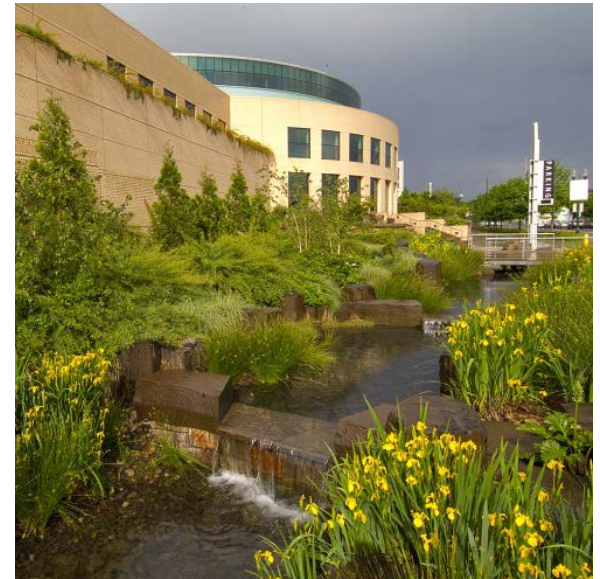
Rain gardens are planted areas that are sunk into the ground to collect rainwater runoff from impervious urban areas (such as roofs, driveways and parking lots). Rain gardens can be added to front yards, public spaces and vacant lots.



Integrated into a community park



In public spaces with educational signage



Terraced rain gardens provide a visual attraction

Potential Opportunities

Potential improvements to include in the Concept Plan after public input and further refinement

Public Input

March 13, 2014

- Where are there flooding issues?
- How can pedestrian connections be improved?
- How can creek and greenway access be enhanced?

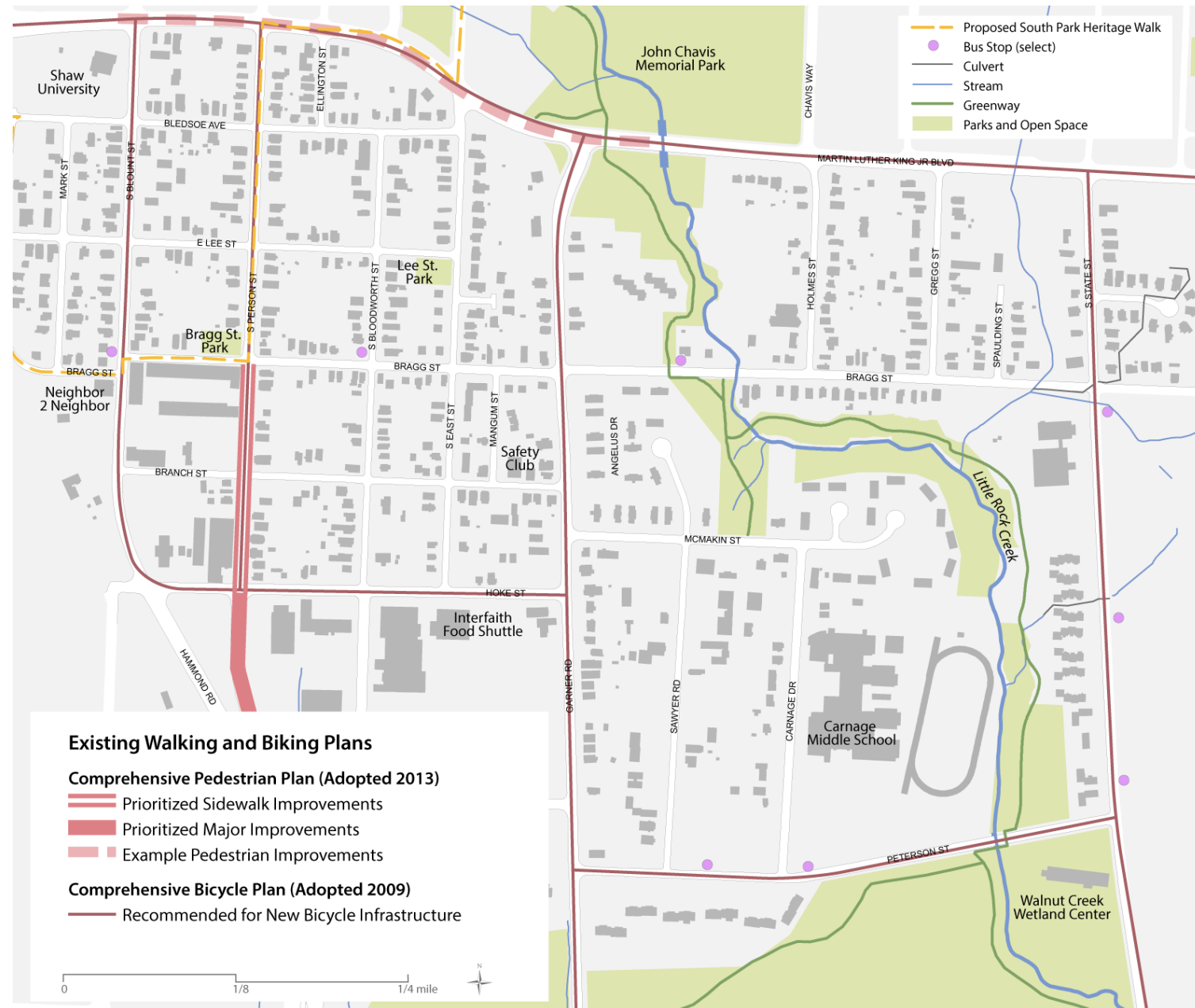




Existing City Programs & Plans

- Neighborhood Traffic Management Program
- Bicycle Program
- Stormwater Cost Share Program
- Sidewalk Petition Program
- Comprehensive Pedestrian Plan
- Bicycle Transportation Plan
- Street Design Manual
- Stormwater Green Infrastructure Study
- Greenway Accessibility Improvements

Existing Walking and Biking Plans



Potential Opportunities



- Proposed South Park Heritage Walk
- Bus Stop (select)
- Culvert
- Stream
- Greenway
- Parks and Open Space

- Street Opportunities**
 - Enhanced Connections
 - Potential Connection
- Safe Crossings**
 - Intersections
 - Greenway Crossings
- Stormwater Flows**
 - Swales
 - Rain Gardens
- Greenway Access**
 - Connections
- Education**
 - Outdoor Education

Walkable Watershed Potential Opportunities (DRAFT)

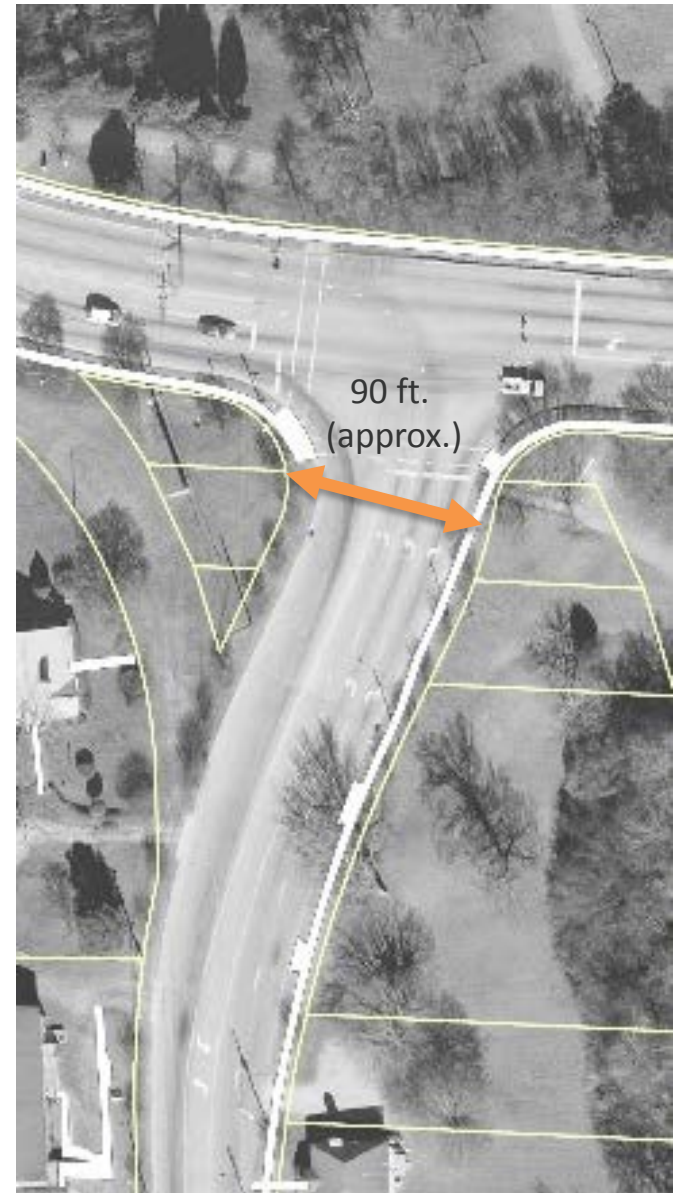
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1. Garner at MLK Jr. Blvd. Intersection

Current conditions

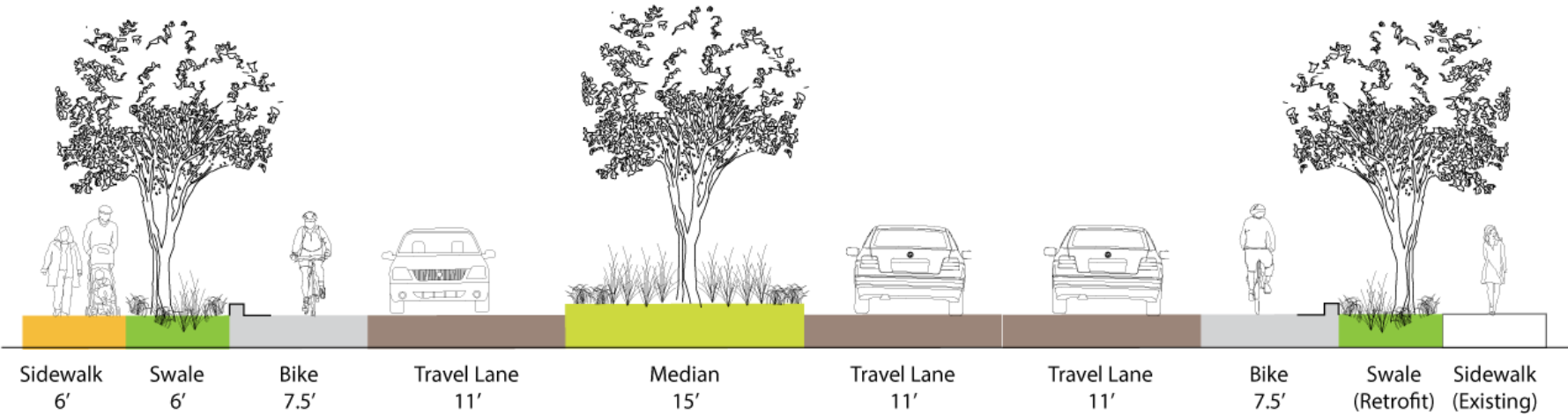
- Intersection identified in Pedestrian Comprehensive Plan for improvements.
- Additional right-of-way and city-owned property presents opportunities to improve pedestrian safety and stormwater runoff.



1. Garner at MLK Jr. Blvd. Intersection

Potential Opportunities – On Street

- Integrate bike lanes, planted median and planted sidewalk bump outs to increase pedestrian safety and reduce stormwater runoff.



Example street that integrates planted median and sidewalks within 90 ft right-of-way

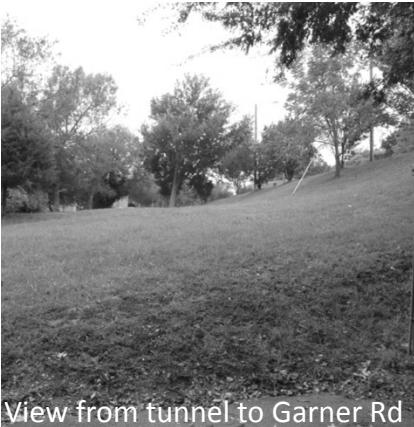
1. Garner at MLK Jr. Blvd. Intersection

Potential Opportunities – Off Street

- Add Greenway access from Garner just south of MLK Jr. Blvd as alternative to crossing MLK.
- Potential to capture water from street inlet and route to rain garden in greenway to slow water and provide educational opportunity.



Source: Metropolitan Sewer District of Greater Cincinnati



View from tunnel to Garner Rd

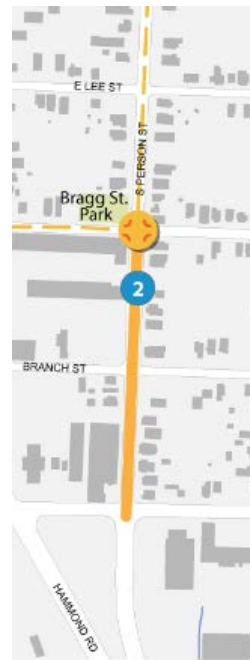


View from Garner Rd to greenway

2. Bragg Intersection (S. Person Street)

Current Conditions

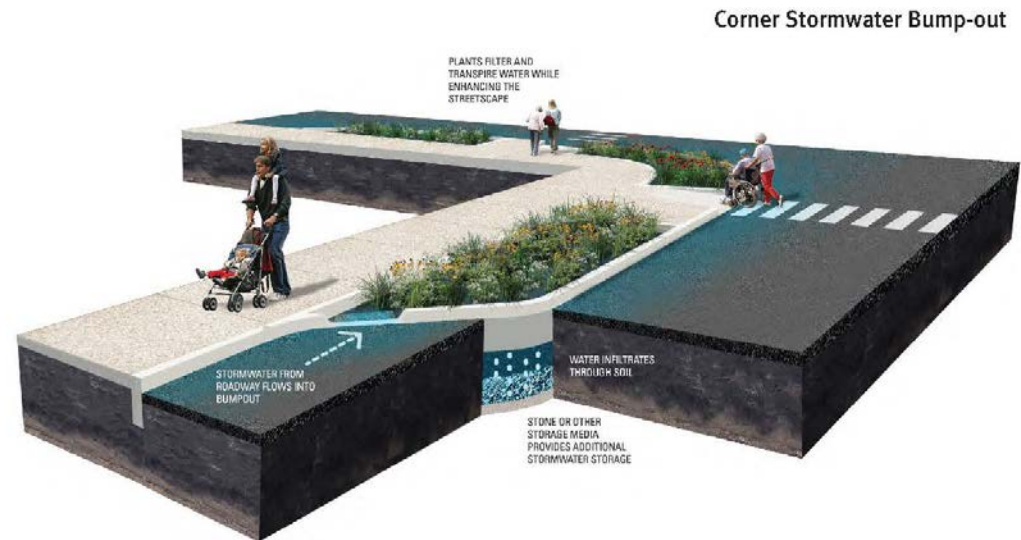
- Comprehensive Pedestrian Plan identifies S. Person Street between Bragg Street and Hoke Street for sidewalk improvements.



Potential Opportunities

Integrate stormwater strategies into sidewalk improvements such as:

- Explore planted bump-outs at key intersections to slow street runoff draining along gutters.
- Extend pedestrian and green street amenities through narrower residential streets and connect to the South Park Heritage Trail and Bragg Street Park.



Source: City of Philadelphia Green Streets Design Manual

3. Bragg Street

Current conditions

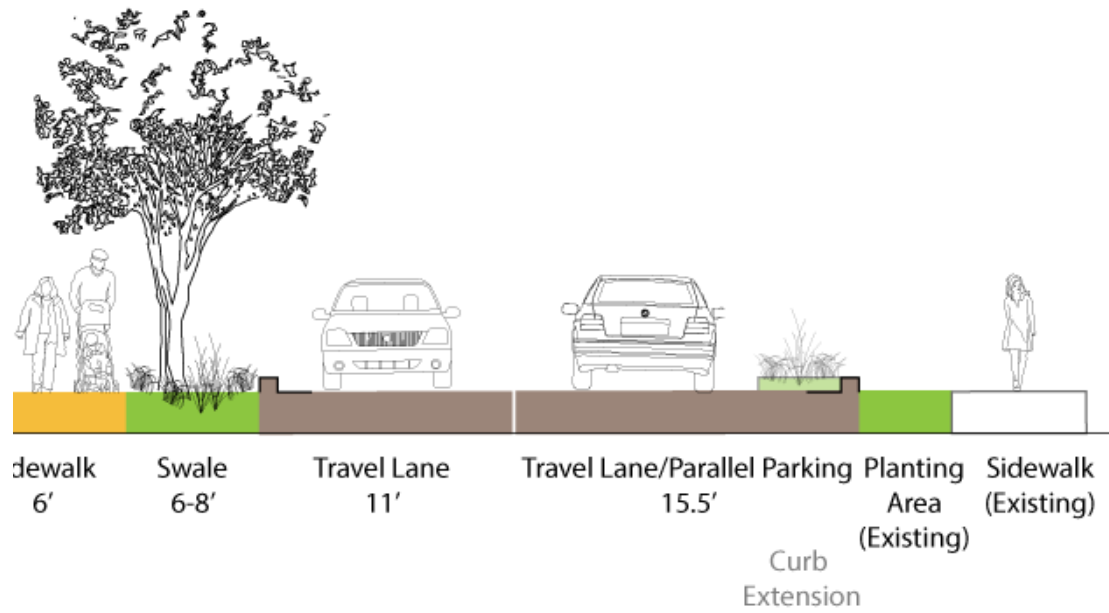
- No sidewalk on north side of Bragg.
- No pedestrian crossing connecting greenway access points. (Bus stop located at north greenway access point.)
- Street stormwater is piped to creek.
- Street may be wide enough to incorporate additional improvements.



3. Bragg Street

Potential Opportunities

- Add planted swale and sidewalk.
- Add curb extension, planted sidewalk bump outs or other treatments at Greenway trail entrances.
- Improve pedestrian crossing at Garner Road intersection



Example of a street that integrates planted swale and sidewalks within 50 ft right-of-way.



5. State Street

Current Conditions

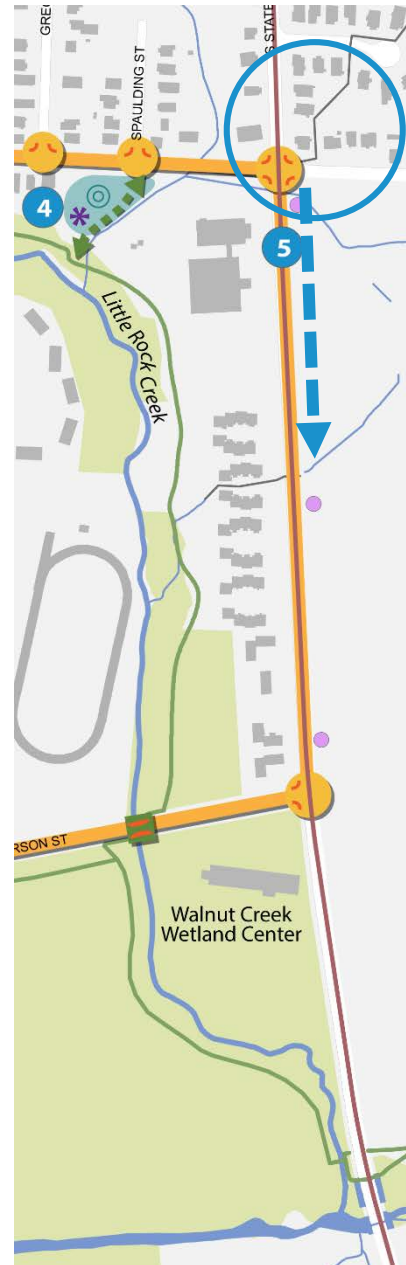
- Identified in Bike Comprehensive Plan for bicycle infrastructure improvements.
- Major route to Walnut Creek Wetland Center and Carnage Middle School.
- Lack of designated pedestrian crossings at intersections.
- Bus stops located at intersections and midblock.
- Neighbors concerned about speed of through-traffic.
- Wide street presents opportunity for improvements.



5. State Street

Potential Opportunities

- Add bike lane.
- Remove midblock bus stops in favor of bus stops at intersections. Integrate planted sidewalk bump outs to improve pedestrian safety at intersection/bus stops.
- Add a swale on State Street between Bragg St intersection and midblock to intercept and slow runoff from recently piped tributary.
- Improve accessibility from Walnut Creek Wetland Center to Greenway entrance at Walnut Creek bridge.



Swale or curb extensions to intercept and slow runoff

6. Park Swales and Educational Rain Garden

- Transform ditches to swales and add rain garden to slow the water.
- Opportunity to integrate educational signage, along with community garden at this Greenway access point.



7. McMakin Street

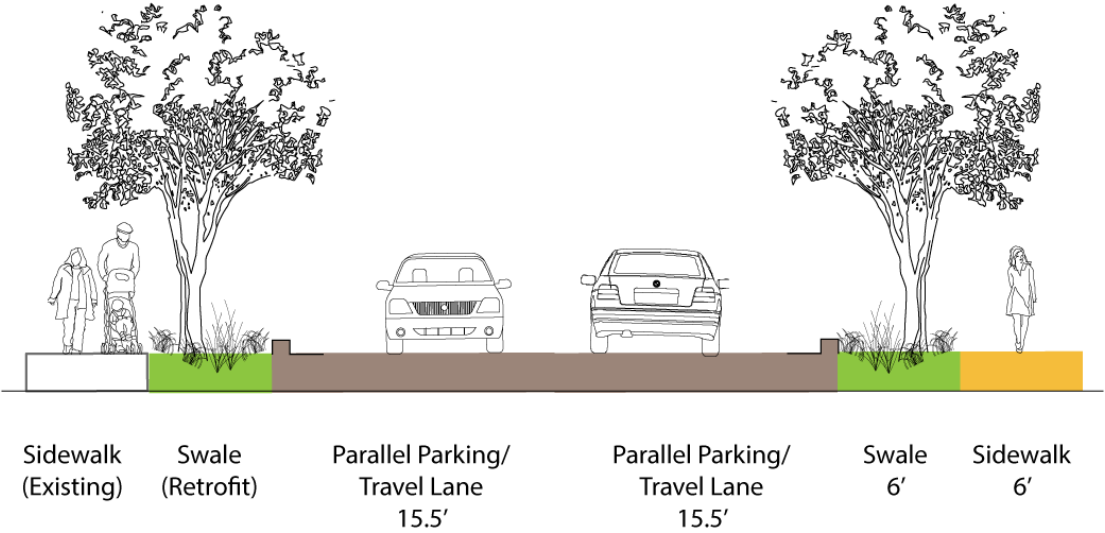
Current Conditions

- Walking route to middle school.
- No sidewalk on south side of street.
- No pedestrian crossing connecting greenway access point.
- Street stormwater is piped to ditch that drains to creek.
- Street may be wide enough to incorporate additional improvements.



7. McMakin Street

- Integrate planted swales and sidewalk to slow rain water and increase pedestrian safety.
- Add planted curb extensions at Greenway trail entrance.



9. Peterson Street

Current Conditions

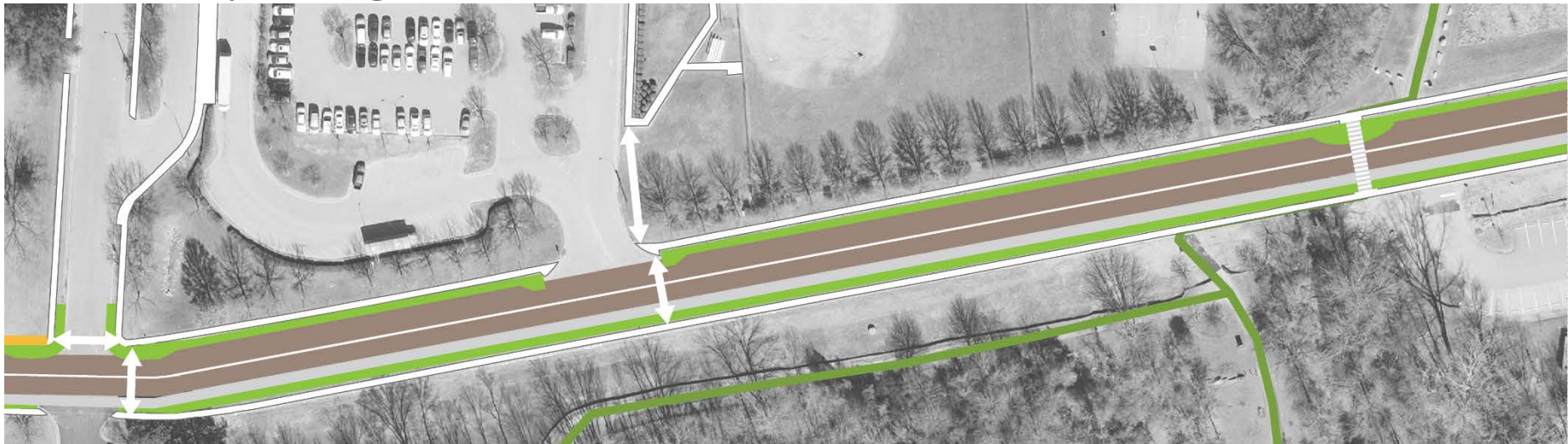
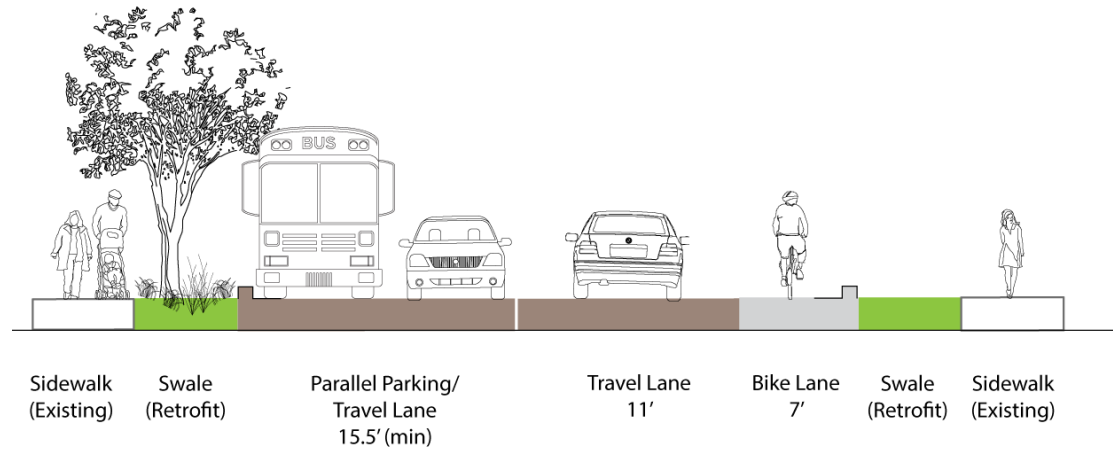
- No sidewalk on north side of street west of Carnage Dr.
- School buses park along north side daily
- Local youth walk/bike to Walnut Creek Wetland Center
- Street stormwater is piped to creek.
- Street may be wide enough to incorporate additional improvements. Identified for bike infrastructure improvements.



9. Peterson Street

Potential Opportunities

- Add bike lane.
- Add swale to improve stormwater draining from Carnegie Street and middle school.
- Add swale to existing planting strip on south side.
- Extend sidewalks to Garner.
- Include planted sidewalk bump outs at Greenway crossing.



10. Rain Garden Installation Enhancement

- Potential to coordinate with property owners in strategic locations to install rain gardens and transform detention area into rain garden with educational signage.
- 25% property owner cost share and maintenance agreement required.



11. Stewardship

Potential to coordinate with community organizations to:

- promote litter prevention and removal
- invasive plant management
- storm drain marking
- stream clean up days
- stormwater best practices on private property



storm drain marking



stream cleanup

12. Greenway Enhancement

- Potential to improve access and increase activity along greenway.
- Integrate fitness stations, signage, mileage markers, seating and water fountains.
- Clear vegetation in strategic locations to improve visibility.
- Promote activities such as bike and foot races to encourage activity.



Integrate Greenway access from the northeast





Implementation Considerations

- Opportunities will be prioritized and refined based on community and city input, amendments to Council adopted plans, and programs based on individual projects.
- Projects will likely be phased in over time as funding is available through different programs.
- Partnerships and community stewardship will be essential to success!



Discussion Questions

- Are these the right opportunities, anything missing?
- What is most important, near term and long term?
- What are important considerations in design and implementation?