Agenda

• Welcome and Introductions
• Review of Project Scope and Schedule
• Review of Bicycle Network and Gaps
• Overview of Priority Bicycle Commuting Corridors
• Overview of Priority Pedestrian Areas
• Mapping and Prioritization Exercise
• Next Steps
Introductions
This project was financed in part by a grant from the Keystone Recreation, Park and Conservation Fund, under the administration of the Pennsylvania Department of Conservation and Natural Resources, Bureau of Recreation and Conservation. The preparation of this report has been financed in part through grant[s] from the Federal Highway Administration and Federal Transit Administration, U.S. Department of Transportation, under the State Planning and Research Program, Section 505 (or Metropolitan Planning Program, Section 104(f)) of Title 23, U.S. Code. The contents of this report do not necessarily reflect the official views or policy of the U.S. Department of Transportation.
PLANNING PARTNERS

LVPC  LVTS
Lehigh Valley Planning Commission  Lehigh Valley Transportation Study

DELAWARE & LEHIGH NATIONAL HERITAGE CORRIDOR

Wildlands Conservancy

LANta

Community Bike Works

Coalition for appropriate transportation LVCAT.org

WALK/ROLL LV
Project Scope and Schedule

Key Tasks

- Task 1: Project Initiation
- Task 2: Inventory and Analysis
- Task 3: Implementation and Draft Plan Development
- Task 4: Final Plan and Plan Review
Project Scope—Additional Detail

- Priority bicycle commuting corridors
- Priority pedestrian areas
- Catalytic projects
- Visionary bicycle network
- Design toolkit decision matrices
- Policy and programmatic recommendations
- Guidance on funding and implementation
Existing Bicycle Network
Existing Bikeways

- Existing Bike Lanes
- Existing Paved Trails
- Existing Unpaved Trails
Existing Network
(based on bikeways)
BICYCLIST DESIGN USER PROFILES

**Interested but Concerned**
51%-56% of the total population

Often not comfortable with bike lanes, may bike on sidewalks even if bike lanes are provided; prefer off-street or separated bicycle facilities or quiet or traffic-calmed residential roads. May not bike at all if bicycle facilities do not meet needs for perceived comfort.

**Somewhat Confident**
5-9% of the total population

Generally prefer more separated facilities, but are comfortable riding in bicycle lanes or on paved shoulders if need be.

**Highly Confident**
4-7% of the total population

Comfortable riding with traffic; will use roads without bike lanes.

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Bicycle Level of Traffic Stress

LOW STRESS TOLERANCE

HIGH STRESS TOLERANCE
High-Stress & Low-Stress Facilities
Existing Network

(based on low-stress facilities)
High-Stress Roads Can Create Network Gaps
Priority Bicycle Commuting Corridors
What’s a Priority Bicycle Commuting Corridor?

A Priority Bicycle Commuting Corridor (PBCC):

• Has the potential for relatively high bicycle commuting volumes
• Can include on-street or off-street connections
• Can be improved to provide a continuous, low-stress bicycling connection
• Is 1-3 miles long
Role of PBCCs in Walk/Roll LV

• Up to 10 priority commuting corridors will be field-assessed.
• Recommendations will be developed.
• Some recommendations may be further developed as catalytic projects.
• Any draft PBCCs that are not included in the final set of up to 10 PBCCs will be included in the “visionary bicycle network.”
We will add to and modify this today.
**Allentown and Southern Lehigh County**

1. Union Boulevard
2. Hanover Avenue and Hamilton Street Bridge
3. Irving Street
4. Liberty Street
5. Hamilton Street (7th Street to 26th Street)
6. N. 27th Street/N. 28th Street
7. Mack Boulevard/S. Eight Street and N. Ninth Street
8. Emmaus Avenue and Main Street
9. Hamilton Boulevard
10. Ruppsville Road and Grange Road
11. Linden Street and Turner Street
12. N. 4th Street
13. N. 15th Street
14. Cedar Crest Boulevard
15. Tilghman Street
16. Harrison Street
17. Wenner Street/Keystone Road
18. E. Texas Road and Fish Hatchery Road
19. Mill Creek Corridor
20. Grim Road/Nestle Way

**Northern Lehigh County and the Lehigh River Corridor**

21. D&L Trail (West Side of Lehigh River)
22. Washington Avenue (Northampton) and Main Street (North Catasauqua)
23. Fullerton Avenue/Third Street
24. Main Street (Northampton)
25. Cementon Bridge
26. Whitehall Avenue (South Whitehall) and Girard Avenue
27. Walbert Avenue

**Bethlehem Area and Saucon Valley**

28. Easton Avenue (Linden Street to Stefko Boulevard)
29. Elizabeth Street and Eaton Avenue
30. Schoenersville Road
31. E. Broad Street
32. W. Broad Street
33. N. New Street, S. New Street, and the Fahy Bridge
34. Delaware Avenue and W. 3rd Street
35. Hecktown Road and Easton Avenue
36. Linden Street and E. Church Street

**Northern Northampton Count**

37. Center Street
38. Eighth Avenue
39. Johnston Drive
40. Wyandotte Street
41. Broadway

**Easton/Wilson and Surrounding Communities**

42. Third Street and St. John Street
43. Ferry Street
44. Northampton Street
45. Lehigh Street
46. Northwood Avenue and Van Buren Avenue

**Northern Northampton County**

47. Bangor to Pen Argyl (via Market Street, Blue Valley Drive, E. Main Street, etc.)
48. Tatamy Road
49. Bath Pike (Route 248) from Nazareth to Bath
50. Nor Bath Boulevard
How were the draft PBCCs developed?

Draft PBCCs were identified based on local knowledge and the following:

- People and jobs map
- Census commute patterns
- Bicycling Level of Traffic Stress (LTS) map
- Wikimap feedback
- Strava Heatmap
- Existing trails
- Existing and proposed high-volume transit stops
- Topography
People and Jobs Map

• Highlights areas in the Lehigh Valley with the highest combined population and employment densities.
How this data was used

Draft PBCCs link to or pass through areas with high population + employment scores
Commuting patterns based on census data

• The project team evaluated data gathered from the Census Bureau’s OnTheMap tool, which provides inflow and outflow counts for commute trips.

• The map at right shows commute to work inflows between municipalities, townships, and boroughs in the Lehigh Valley.
How this data was used

The OnTheMap data was filtered to show segments ≤ 3 miles, which were reviewed alongside the underlying road network and other data to determine draft PBC C s that could serve the connection indicated by the segment.
How this data was used

Bethlehem to Hanover connection
Bicycling Level of Traffic Stress (LTS) Map

• Shows bicycling level of traffic stress (LTS) based on motor vehicle speeds and volumes, existing bicycle facility types, and street configuration.

• Blue (low-stress) routes are routes a typical adult would feel comfortable using.

• Red (high-stress) routes are gaps in the Lehigh Valley’s bicycling network.
How this data was used

LTS was used to understand gaps in the bicycling network. Most draft PBCCs include high-stress street segments or intersections that can be improved to create a continuous, low-stress bicycling connection.
• Feedback on current walking and bicycling conditions and habits was collected through an online interactive map between September and December 2018.
• This map shows current walking and bicycling routes by destination type.
How this data was used

Wikimap feedback on current walking and biking routes confirmed that there are numerous work- and school-related trips along and across the Lehigh River.

The feedback also showed that routes described as being used for school- and work-related trips were concentrated around Allentown, Bethlehem, and Easton.
Strava Heatmap

- Strava is primarily used by confident cyclists for recreational bicycle rides.
- The Strava Heatmap highlights the bicycle routes most frequently used by Strava users.
- While GIS data could not be acquired, the project team used the interactive map available on the Strava website.
How this data was used

The data is helpful for distinguishing between parallel routes, because it shows which route Strava users prefer under current conditions.
Locations of existing trails

• The Lehigh Valley has many existing trails within and between communities.

• Trails that would likely serve a transportation purpose provide direct connections between population centers or major destinations.
How this data was used

The D&L Trail provides a low-stress connection between Easton and Allentown but the trail can be difficult to access from Easton. A low-stress commuting corridor connecting Easton to the D&L could help facilitate commutes along the trail.
Locations of high-volume transit stops

- Using data received from LANta, the project team identified high-volume transit stops as those in the top 20% for number of boardings.
How this data was used

The project team placed emphasis on ensuring proposed corridors were along or near transit stops in the top 20% for boarding counts.
Topography

Where possible, the project team avoided roadways with steep slopes that would discourage daily commuting trips. Parallel alternatives were identified.
Priority Pedestrian Areas
What’s a Priority Pedestrian Area?

A priority pedestrian area (PPA):
• Has relatively high existing pedestrian volumes or has the potential for relatively high pedestrian volumes
• May include an entire neighborhood or one block that serves as a “Main Street” for the surrounding community
Role of PPAs in Walk/Roll LV

• 10-15 PPAs will be identified
• Identified PPAs will be grouped into types
• PPA types include:
  • City downtown
  • Small town main street
  • High-volume transit stop
• For each type, the plan will recommend generalized (i.e., not location specific) infrastructure and non-infrastructure strategies to improve walkability
Draft PPAs
We will add to and modify this today.
Allentown and Southern Lehigh County
1. Center City Allentown
2. 19th Street/Fairgrounds
3. Emmaus

Northern Lehigh County and the Lehigh River Corridor
4. Northampton

Bethlehem Area and Saucon Valley
5. Historic Downtown Bethlehem
6. South Bethlehem
7. Hellertown

Easton/Wilson and Surrounding Communities
8. Downtown Easton

Northern Northampton County
9. Downtown Nazareth
10. Bangor
Mapping and Prioritization Exercise
## Five Tables

<table>
<thead>
<tr>
<th>Table #</th>
<th>Focus Area</th>
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<tbody>
<tr>
<td>1</td>
<td>Allentown and Southern Lehigh County</td>
</tr>
<tr>
<td>2</td>
<td>Northern Lehigh County and the Lehigh River Corridor</td>
</tr>
<tr>
<td>3</td>
<td>Bethlehem Area and Saucon Valley</td>
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<td>Easton/Wilson and Surrounding Communities</td>
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<tr>
<td>5</td>
<td>Northern Northampton County</td>
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</table>
Two Phases

• **Phase 1:** Review and provide feedback on the draft PBCCs and PPAs. Consider whether additional PBCCs and PPAs should be added.
  (30 minutes)

• **Phase 2:** Use dots to indicate which corridors are most important to you.
  (10 minutes)
Keep in Mind…

• PBCCs are corridors that have the potential for relatively high bicycle commuting volumes and are 1-3 miles long.
• PPAs are locations that are already known to have relatively high pedestrian volumes or that have the potential for relatively high pedestrian volumes.
Next Steps
Next Steps for PBCCs

- Rank using objective criteria.
- Review ranked list to determine which top-ranked corridors should be field-assessed.
- Proceed with field assessment and develop recommendations.

### Objective Criteria for PBCC Ranking

<table>
<thead>
<tr>
<th>Factors</th>
<th>Variables</th>
</tr>
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<tbody>
<tr>
<td>Potential Demand for Bicycle Commuting</td>
<td>Inflow commute trips</td>
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<tr>
<td></td>
<td>Access to jobs</td>
</tr>
<tr>
<td></td>
<td>Population density</td>
</tr>
<tr>
<td>Safety and Accessibility</td>
<td>Crashes involving bicyclists</td>
</tr>
<tr>
<td>Convenience and Connectivity</td>
<td>Connects to other low-stress facilities</td>
</tr>
<tr>
<td></td>
<td>Connects to other proposed corridors</td>
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<tr>
<td>Seamless Multimodal Integration</td>
<td>Provides connection to major trails</td>
</tr>
<tr>
<td></td>
<td>Provides connection to existing or proposed high-volume transit stops</td>
</tr>
<tr>
<td>Equity</td>
<td>Households in poverty</td>
</tr>
</tbody>
</table>
Next Steps for PPAs

- Review, adjust PPA list
- Organize PPAs into types
- Develop recommendations for each type
Other Next Steps

- Catalytic projects
- Policy and programmatic recommendations
Upcoming Meetings

• February 27
• March 27
Thank you!