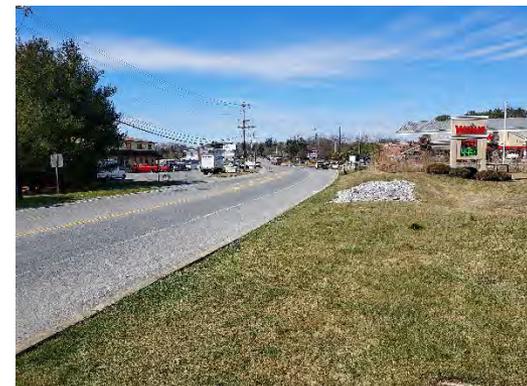


SR 41 Transportation Study and Corridor Improvement Plan



Public Presentation – Recommendations

7/10/2024 and 7/15/2024



Bowman

Background

Project Needs

- Longstanding safety and traffic congestion concerns.
- Numerous past planning studies.
- New land developments along the corridor.
- Ongoing PennDOT projects.
- Provide a fresh, cohesive vision and framework for future transportation improvements.

Background

- **Transportation Planning Study funded partially by the Chester County Planning Commission.**
 - Vision Partnership Program (VPP) Grant
- **Multi-municipal study**
 - Londonderry Township
 - London Grove Township
 - New Garden Township
 - Kennett Township
 - Avondale Borough
- **10-mile study corridor**
 - Route 796 to Route 7

Vision

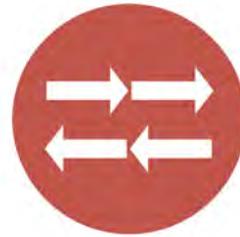
To develop a vision and plan for Route 41 that:

- promotes safety, convenience, and accessibility for all users,
- supports key local industries and businesses,
- and reflects the character of the diverse communities along the corridor.

Key Considerations



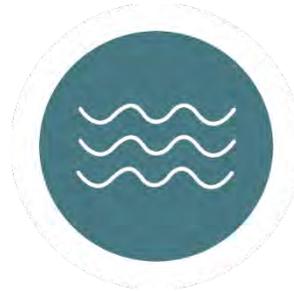
- Corridor Safety



- Congestion



- Truck Movements



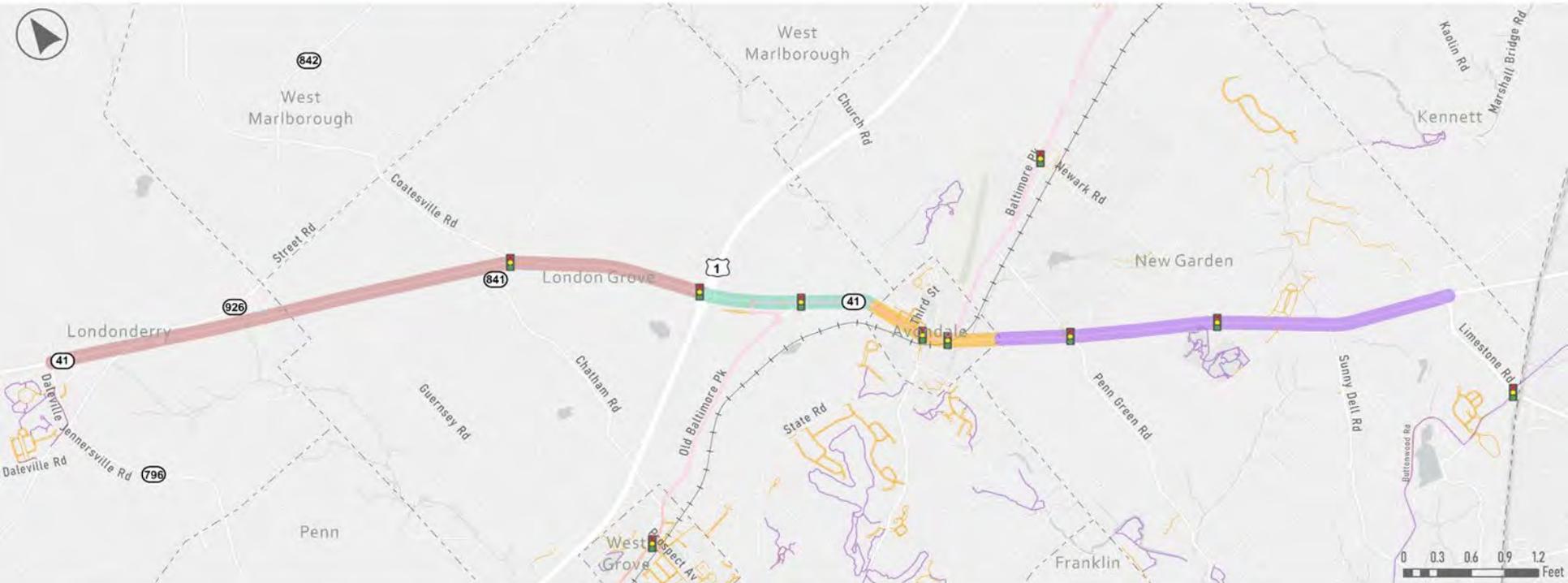
- Flooding



- Accommodating Pedestrians & Bicyclists

SR 41 CORRIDOR PLAN

CORRIDOR OVERVIEW MAP



- 1. PA 796 to US Route 1
- 2. US Route 1 to Avondale Borough Line
- 3. Avondale Borough
- 4. Avondale Borough Line To Route 7 Interchange

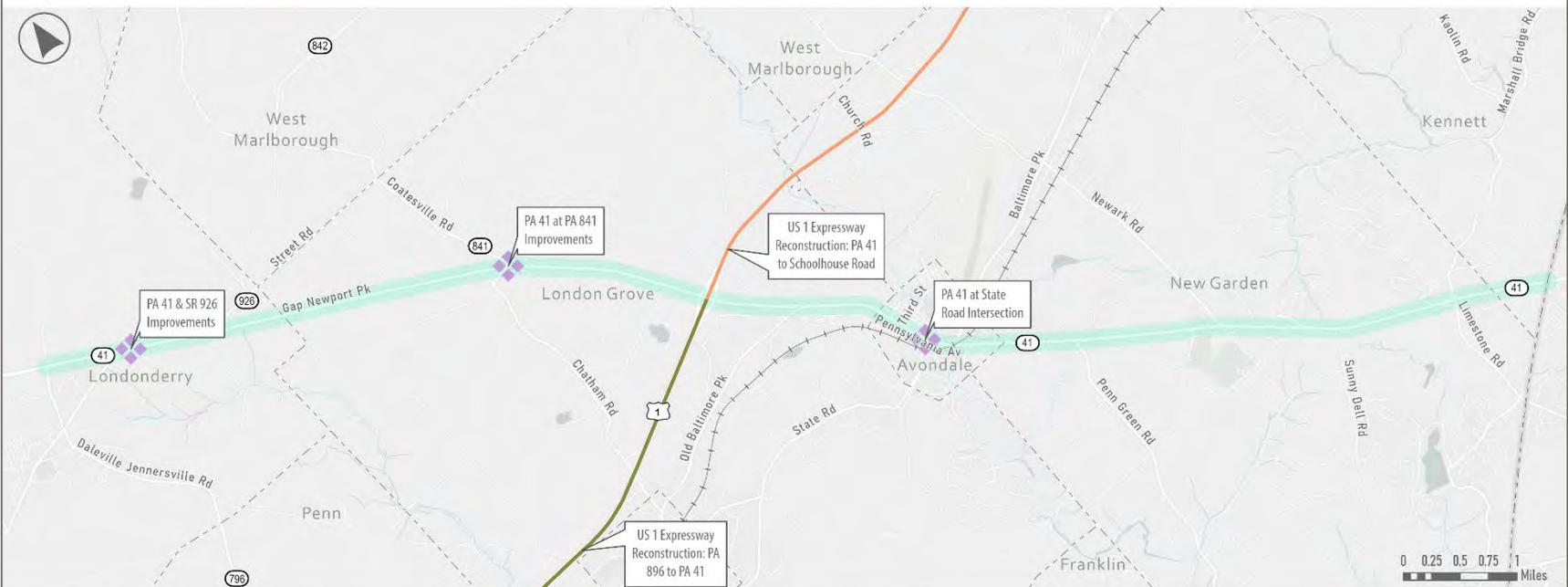
- Traffic Signals
- Sidewalks
- Existing Trails
- Rail Lines
- SCCOOT Bus Route
- Municipalities

Planned Improvements

Background – PennDOT Plans and Projects

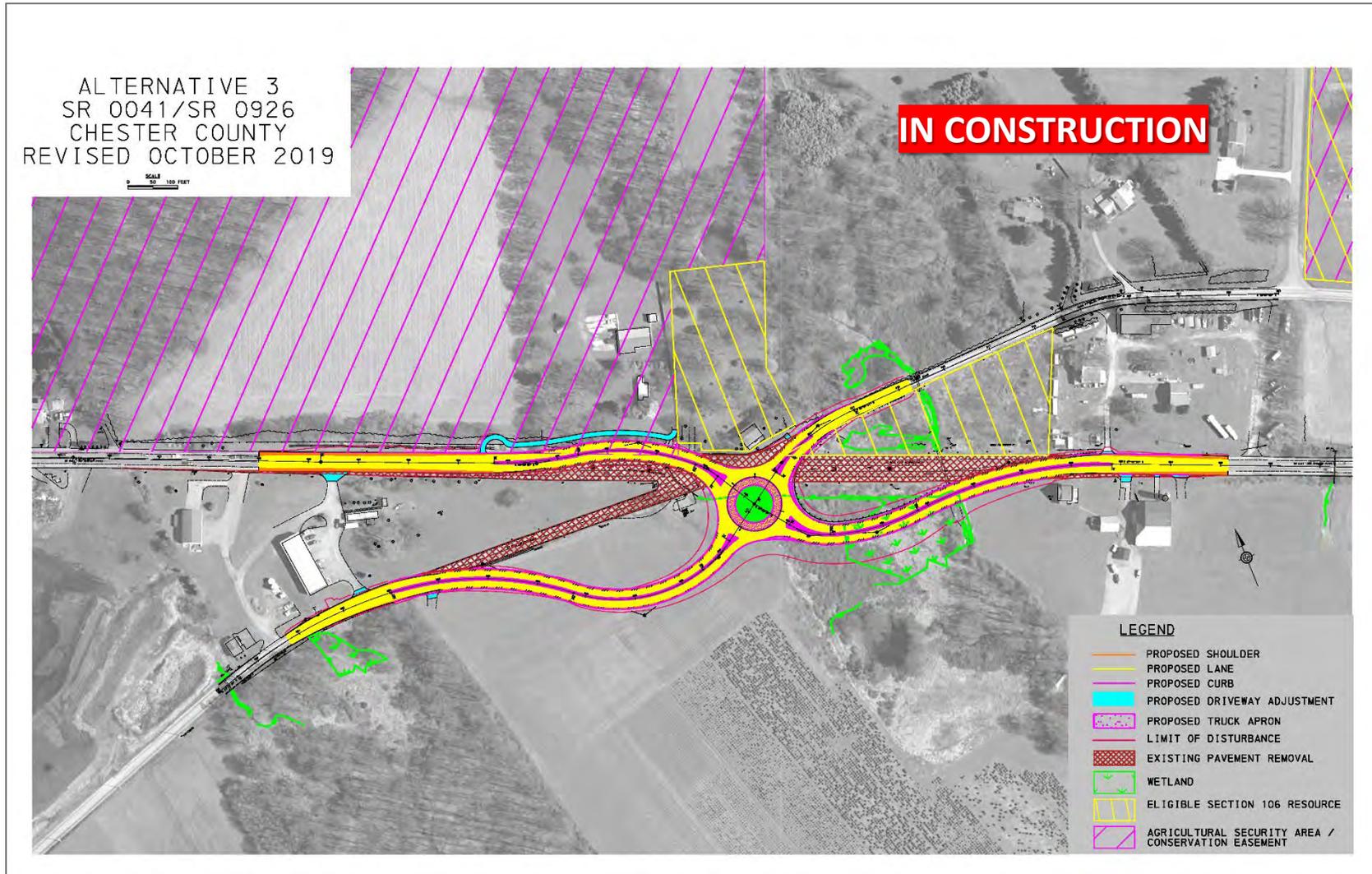
SR 41 CORRIDOR PLAN

TIP PROJECTS MAP

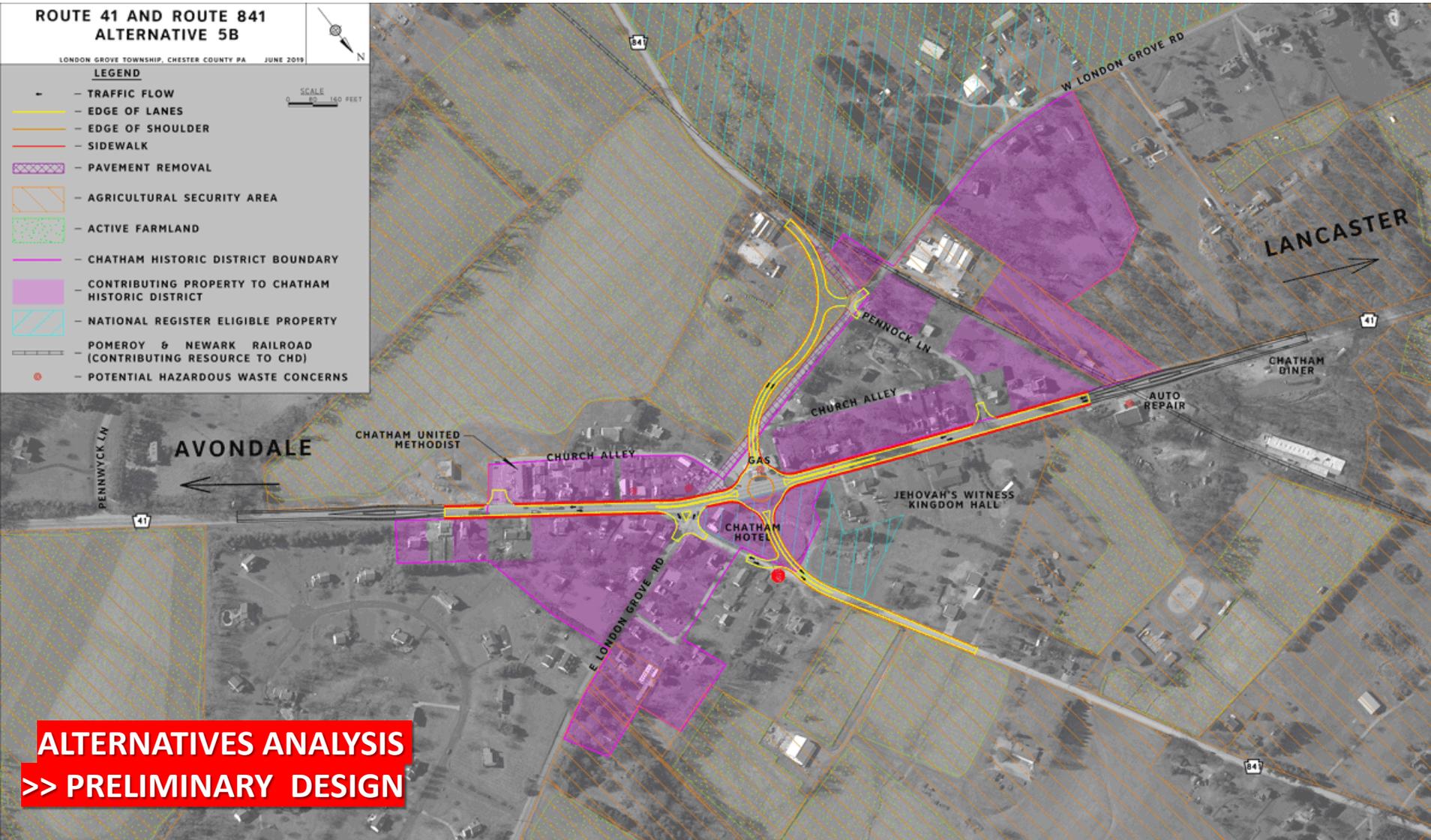


-  TIP Project Locations
-  Rail Lines
-  Municipalities
-  Project Extent

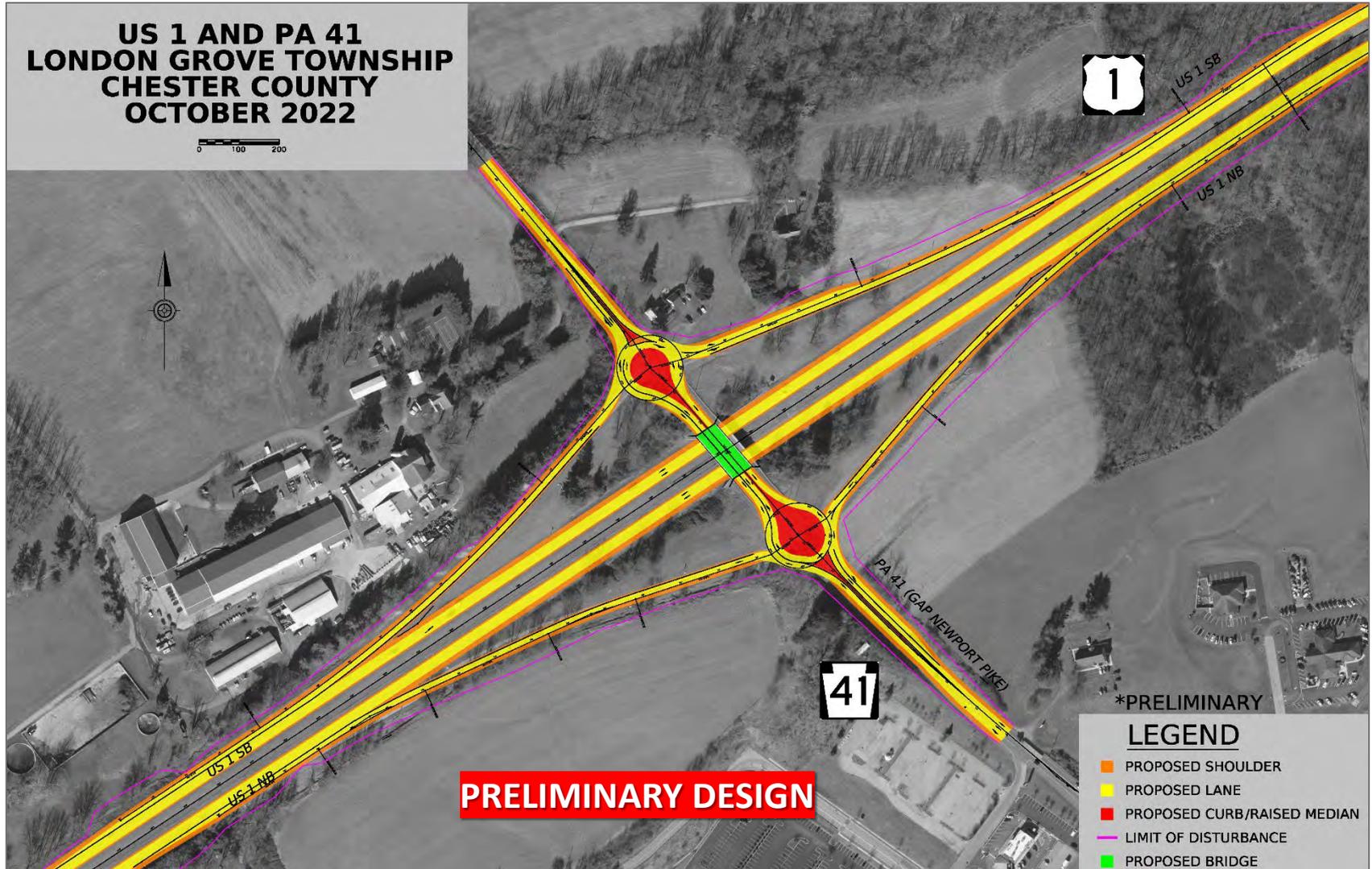
Background – PennDOT Plans and Projects



Background – PennDOT Plans and Projects



Background – PennDOT Plans and Projects



Background – PennDOT Plans and Projects

State Street Intersection

Bridge over White Clay Creek

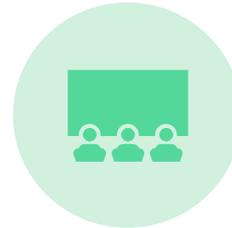


Community Outreach

Outreach | Meetings



**Study Advisory
Committee Meetings
(3)**



**Online Public
Presentation
(January)**



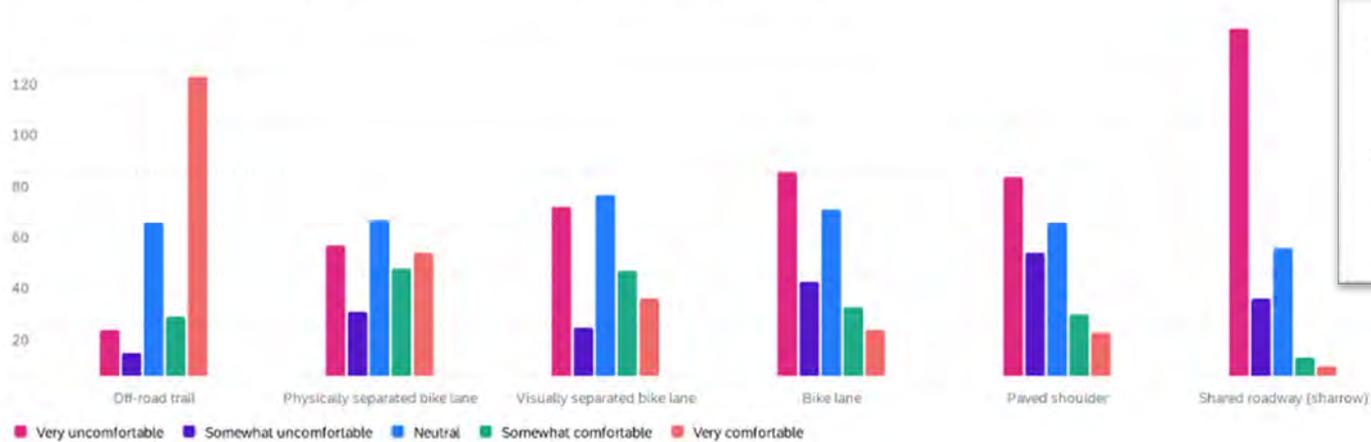
Online Survey



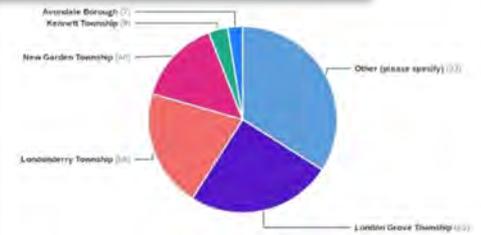
**Draft
Recommendations
Presentations**

Outreach | Public Survey

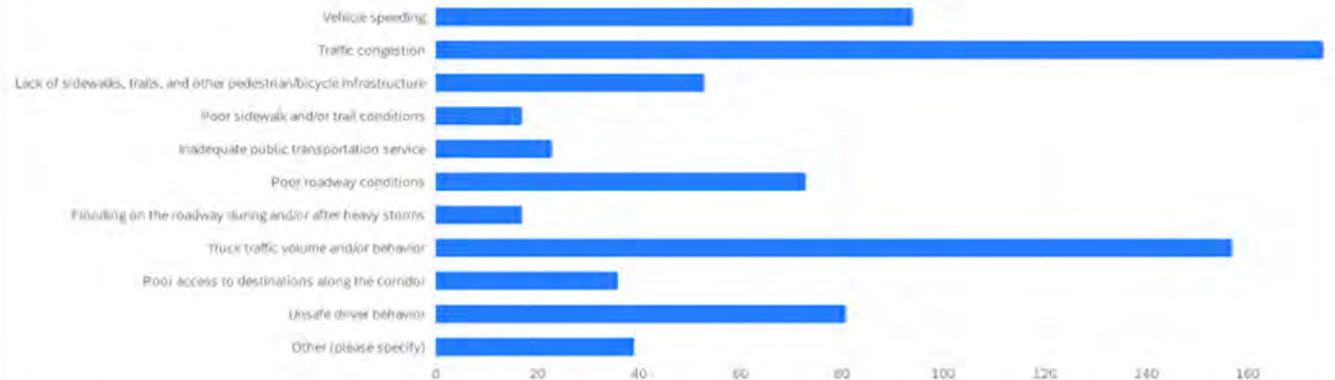
Rate your comfort level with biking along Route 41 if the following facilities were present. 227



In which municipality do you live?



What are the most important transportation issues related to the Route 41 corridor? Select all that apply. 248



278 Responses

Outreach | Feedback



Recommended Improvements

PLANNED IMPROVEMENTS AND FUTURE RECOMMENDATIONS

Segment #1 - PA Route 796 to US Route 1



GRAPHIC LEGEND

Planned Improvements / Recommended Improvements		
Intersection Improvement (+)	Bicycle Improvement	Low Cost Safety Improvements (Unsignalized) (▲)
Gateway Treatment (●)	Turn Lane Improvement	Monitor for Capacity Improvements and Traffic Control (*)
Roundabout (⊙)	Crossing Enhancement (ⓧ)	
Sidewalk/Sidepath (■)	Streetcape Improvement	

Gateway Treatment

Sidewalk

Crossing Enhancement

Recommendations for traffic calming, gateway features, sidewalks and crossing enhancements to improve safety within Village of Chatham.

London Grove Comprehensive Plan (2011)

Roundabout

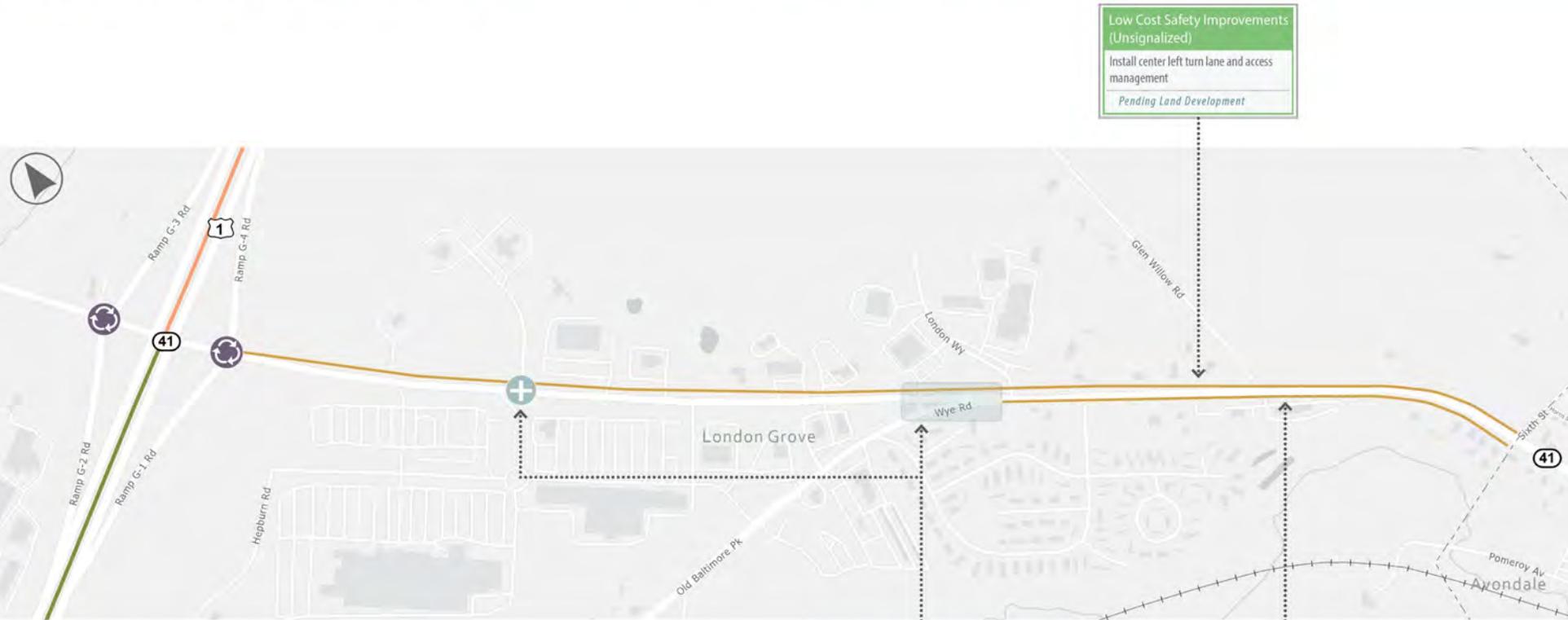
! ●

Roundabouts at east and westbound approaches to US 1 overpass bridge as part of a series of projects within the Kennett-Oxford Bypass effort.

Transportation Improvement Plan; PennDOT

PLANNED IMPROVEMENTS AND FUTURE RECOMMENDATIONS

Segment #2 - US Route 1 to Avondale Borough



GRAPHIC LEGEND

Planned Improvements / Recommended Improvements

Intersection Improvement (+)	Bicycle Improvement	Low Cost Safety Improvements (Unsignalized) (▲)
Gateway Treatment (●)	Turn Lane Improvement	Monitor for Capacity Improvements and Traffic Control (*)
Roundabout (⊙)	Crossing Enhancement (⚠)	
Sidewalk/Sidepath (■)	Streetcape Improvement	

Intersection Improvement

Crossing Enhancement

- Bike-ped intersection improvements at 41-Moxley and 41-Baltimore Pike intersections
- Sidewalk extensions north of borough line
- Buffered bike lane on west side on 41 and multi-use trail/split mode combination for east side

Chesco Circuit Trail (2021) - Pending Land Development

Sidewalk/Sidepath

Sidewalks on both sides of road south of Old Baltimore Pike

London Grove Comprehensive Plan (2011)

Alternative: install sidepath (2) or multi-use trail in lieu of sidewalk

PLANNED IMPROVEMENTS AND FUTURE RECOMMENDATIONS

Segment #3 - Avondale Borough



Bicycle Improvement
 Buffered bike lanes on PA 41 through borough to First Avenue, then multi-use trail diverting onto Baltimore Pike
Chesco Circuit Trail (2021)
 Alternative: utilize parallel streets for bicycle route

Intersection Improvement
Turn Lane Improvement
Bicycle Improvement
 • Traffic calming and speed enforcement
 • Pedestrian improvements at several intersections
 • Addition of turning lane for southbound traffic at one of a few potential intersections
 • Shared roadway treatment on 41 through the borough downtown, then bike lane further south
Avondale Comprehensive Plan (2019)

Intersection Improvement
Gateway Treatment
 • Median gateway treatments on 41 at both entrances to borough
Kennett Area Freight Study (2019)

Bridge Rehabilitation/Replacement

GRAPHIC LEGEND

Planned Improvements / Recommended Improvements	
Intersection Improvement (+)	Bicycle Improvement
Gateway Treatment (●)	Turn Lane Improvement
Roundabout (⊙)	Crossing Enhancement (⚠)
Sidewalk/Sidepath (▬)	Streetcape Improvement
	Low Cost Safety Improvements (Unsignalized) (▲)
	Monitor for Capacity Improvements and Traffic Control (✳)

Intersection Improvement
Turn Lane Improvement
Crossing Enhancement
 Realign intersection, improve turning lanes, incorporate ITS, improve sidewalk and ped access, accommodate heavy vehicle traffic
Transportation Improvement Plan; PennDOT
 Consider addition through lane (SB) between State St and E Baltimore Pike

Gateway Treatment
Intersection Improvement
Sidewalk
Bicycle Improvement
 • Bike-ped improvements at PA 41-Baltimore Pike intersection (London Grove)
 • Extension of sidewalks on PA 41 north of Avondale Borough (in London Grove)
 • Traffic calming measures, borough gateway treatment at north entrance to borough, on-street parking and curb bump-outs through borough
CCPC B-Pike for Everyone (2015)

London Grove

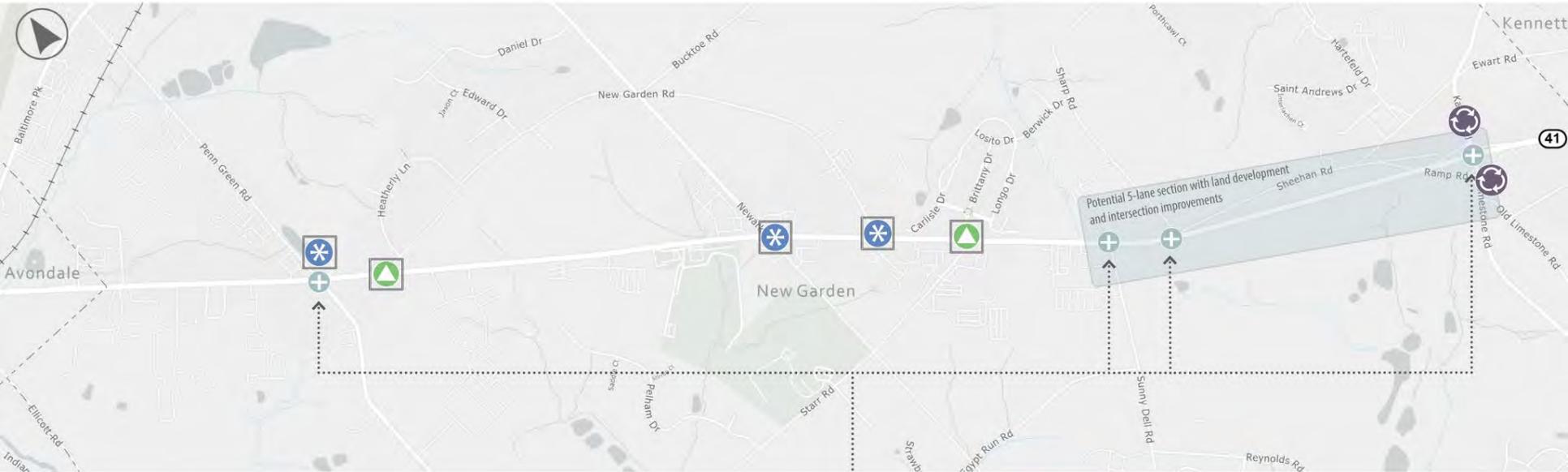
New Garden

Avondale

41

PLANNED IMPROVEMENTS AND FUTURE RECOMMENDATIONS

Segment #4 - Avondale Borough to Route 7 interchange



GRAPHIC LEGEND

Planned Improvements / Recommended Improvements

Intersection Improvement (+)	Bicycle Improvement	Low Cost Safety Improvements (Unsignalized) (▲)
Gateway Treatment (●)	Turn Lane Improvement	Monitor for Capacity Improvements and Traffic Control (✳)
Roundabout (⊙)	Crossing Enhancement (⚠)	
Sidewalk/Sidepath	Streetcape Improvement	

Gateway Treatment
Intersection Improvement
Turn Lane Improvement
Streetcape Improvement
<ul style="list-style-type: none"> Consistent three-lane cross-section with a center turn lane throughout the corridor in the township General goals and objectives to improve the "appearance, function, and safety" of the corridor Township gateways and consistent streetscapes for different areas of corridor
<i>New Garden Comprehensive Plan (2018)</i>

TRAFFIC CALMING

Description

Traffic calming measures include physical changes to a roadway to reduce speeds and cut-through traffic. Traffic calming strategies are typically used on neighborhood roadways. Traffic calming measures can be implemented in conjunction with bicycle and pedestrian infrastructure to slow traffic and create a safer and more comfortable environment for walking and biking. The Active Transportation Toolbox includes several common traffic calming measures. Additionally, PennDOT's *Traffic Calming Handbook* (Publication 383) provides details regarding the appropriate placement and design of traffic calming measures.

Gateway Treatments

Description

A combination of special treatments used at the entrance to an area or neighborhood that alerts drivers to slow down due to a change in environment. Gateway treatments can include signage to identify the area or neighborhood. Other potential gateway treatments include landscaped medians or landscaped areas on the roadside.



Roundabout

Description

An intersection design treatment that reduces conflict points and slows traffic. Traffic approaching the intersection yields to traffic circulating around the roundabout. Splitter islands at the entries help to slow and direct traffic and serve as pedestrian refuge areas. In some situations, roundabouts can provide increased capacity and reduced delay when compared with traffic signals.



Roundabout Variation: Mini-Roundabout

A roundabout with a small diameter and traversable central island. Mini-roundabouts offer benefits similar to roundabouts, but with a smaller footprint and less cost. Mini-roundabouts are typically used in urban or small town settings on roadways with low speeds.

BIKE AND PEDESTRIAN CROSSINGS

Marked Crossing

Description

Pavement markings designating a location for pedestrians to cross a road, often connecting sidewalks, paths, or multi-use trails. Crosswalks must be a minimum of 6 feet wide. High visibility crosswalks, also known as continental design, are most visible to motorists.



Marked Crossing Variation: Mid-Block Crossing

A crosswalk that is not located at an intersection. Additional warning devices are required to increase pedestrian safety compared to typical crosswalks at intersections. A mid-block crosswalk can include advance signage and pavement markings. Other design treatments could include a pedestrian refuge island or raised crosswalk.



Traffic Signal

Description

Traffic signal equipment for pedestrians can include pedestrian pushbuttons, accessible pedestrian signals, passive detection for bicyclists or pedestrians, pedestrian signal heads, and pedestrian countdown signal heads. Accessible Pedestrian Signals (APS) communicate information about the WALK and DON'T WALK intervals for pedestrians who are blind or have low vision. Countdown pedestrian signal heads show how much time remains before the traffic signal changes.

Flashing Warning Device

Description

A flashing warning device can be used in combination with pedestrian crossing signs and a marked crosswalk at uncontrolled crossing locations. Signs and flashing warning devices can be side-mounted or overhead. Additionally, flashing warning devices can be user-activated. Rectangular Rapid Flashing Beacons (RRFBs) are one example of a flashing warning device.



Curb Extension/Bulb-out

Description

Areas of expanded curbing that extend across a parking lane and may narrow a travel lane. Curb extensions create shorter crossing distances for pedestrians while increasing available space for street furniture and plantings. Curb extensions can also serve as a traffic calming measure.



Footpath

Description

Walkway for use by pedestrians, typically for recreation purposes. Natural paths are often through or adjacent to undeveloped land. Sometimes foot paths follow the natural landscape or include steep slopes, steps, and stairs that are not fully accessible

Target Users	Dimensions	Surface Materials
Pedestrians	Varies	Grass; Dirt; Other natural surfaces; Steps and stairs

Boardwalk

Description

Elevated walkway that is constructed as a series of low-height bridges through sensitive areas with seasonably variable water depths or low strength soils, such as wetlands. Boardwalks typically include a curb or handrail along at least one, often both, edges.

Target Users	Dimensions	Surface Materials
Pedestrians; Bicyclists (optional and dependent upon the design)	6-10 feet wide (typical)	Wood; Wood Composite; Plastic Composite; Concrete (for decking)



Bike Lane

Description

A portion of the roadway that has been designated by striping, signage, and pavement markings for the preferential or exclusive public use by bicyclists. Bicycle lanes are located directly adjacent to motor vehicle travel lanes and operate in the same direction as motor vehicle traffic.

Benefits

- Provides separate space dedicated for cyclists, which can offer added comfort for less experienced riders
- Allows bicycles to operate on a roadway without impeding motor vehicle traffic
- Encourages predictable positioning by bicyclists at intersections

Dimensions
5 - 7 feet wide (4 feet minimum)



Shared Roadway/Bicycle Boulevard

Description

A roadway with signage and pavement markings to indicate the use of a travel lane by both bicycles and motor vehicles. Pavement markings may include a "sharrow," which is a bicycle symbol with two chevron arrows denoting the direction of travel.

Benefits

Design Features

- Shared lane pavement marking or "sharrow" placed in accordance with MUTCD, Section 9C.07
- Bicycle May Use Full Lane Sign (R4-11) placed in accordance with MUTCD, Section 9B.06
- Should be limited to roadways with proper speed and traffic volumes to safely accommodate bicyclists

- Alert motorists to the potential presence of bicyclists that may occupy the travel lane
- Recommend proper lateral position for bicyclists
- Encourage safe passing of bicyclists by motorists
- Reduce the incidence of wrong-way bicycling
- Provide wayfinding

ON-ROAD BICYCLE FACILITIES AND FEATURES

Visually Separated/Buffered Bike Lane

Description

A bicycle lane with a striped buffer area that separates the vehicular travel lane and the shoulder used for the bicycle lane.

Benefits

- Provides additional buffer between the bike lane and vehicular traffic
- Offers added comfort for less experienced riders
- Increases visibility and awareness of cyclists within dedicated space

Dimensions

2-3 feet wide buffer (2 feet minimum) plus 5-7 feet wide bike lane (4 feet minimum, exclusive of gutter)



Paved Shoulder

Description

A portion of the roadway adjacent to the travel lane that can be enhanced with signage, striping, or coloring to serve as functional space for bicyclists and pedestrians to travel, particularly when other dedicated facilities are not feasible.

Dimensions

4 feet wide (minimum); provide greater width based on feasibility and traffic.



ENHANCING USERS' EXPERIENCE



Landscaping and Green Infrastructure

Description

Landscaping and green infrastructure can provide shade for pedestrians, integrated stormwater management, and help to create a sense of place. Trees and vegetation can also have a calming effect on traffic with the increased sense of enclosure. The type and location of landscaping should be chosen based on site conditions. A diverse native plant palette can be used in the design of the landscape zones, including trees, shrubs, and groundcover where appropriate. A mix of flowering species can offer seasonal appeal while providing habitat for birds and other native wildlife. Landscaping and green infrastructure can be placed between a road edge and sidewalk or path.

Streetscape Amenities

Description

Benches, trash receptacles, and bicycle racks create a more comfortable and convenient environment for walking, biking, and enjoying the street. The design of the streetscape furniture or amenities should be consistent to convey the unique character of the community. Amenities should be placed so they do not obstruct pedestrian walkways, building entrances, or fire hydrants.



Seating (Overlooks, Benches, View Areas)

Description

Seating areas can be provided along sidewalk, paths, or trails in downtown settings, park areas, or at scenic vistas. Seating can include benches or seat walls and can incorporate public art or other creative design elements to create a sense of place. Seating can be created with natural materials reflecting the native geology or ecology of the region like boulders and/or logs.



Pedestrian-Scale Lighting

Description

Pedestrian-scale street lights, 10-12 feet in height, help provide security along sidewalks, as well as help to provide aesthetic appeal to the streetscape. Lighting adjacent to natural areas should adhere to dark sky lighting recommendations to avoid impacting native habitat.



Bike Rack

Description

A frame that is permanently anchored to the ground and is used to secure bikes when not in use. Bicycle racks should be located in visible areas and near major destinations such as employment centers, business and retail districts, parks, and transit.

Placement

Placement of bicycle racks should consider dimensions when occupied and must maintain clear walkways, particularly when placed along sidewalks. Bicycle racks should be setback 2-3 feet from the curb when installed along a street. Bicycle racks can be located under shelters or building overhangs.

Bike Repair Station

Description

A piece of equipment consisting of a simple bicycle stand and tools necessary to perform minor repairs and adjustments. The tools are typically securely attached to the stand, which can be used to hang the bike and allow the pedals and wheels to spin while making adjustments. Repair stations should be located in visible areas, particularly along bicycle routes or near recreational resources.



Public Art

Description

Public art may be incorporated into streetscapes through elements such as: planters and/or benches embellished by local artists, unique bike racks, or other art installations. Public art helps to provide character to streetscapes.

Banners

Description

Banners help to announce and publicize special events, as well as to create an identity and sense of place. Vertical banners may be attached to street light poles or may be freestanding.



ACCESS MANAGEMENT

Description
Access management refers to means of controlling the ways that vehicles can access major roadways, using measures such as limiting the number of driveways and intersections with local roads. Properly managed access is vital to the safety and efficiency of a community's roadway network. The Active Transportation Toolbox includes a few common access management measures. In addition, PennDOT's *Access Management: Model Ordinances for Pennsylvania Municipalities Handbook* provides additional resources for access management strategies.



Driveway Spacing

Description
Adequate spacing and aligning of driveways to reduce conflicts points and create a safer environment for walking and biking.

Joint and Cross Access

Description
Providing joint or cross access between adjacent properties allows circulation between the properties and reduces the number of driveways and conflict areas along a roadway. Joint and cross access can be used in combination with shared parking.



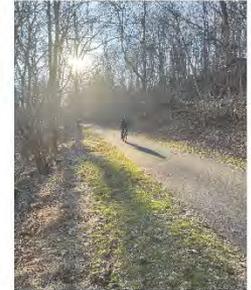
OFF-ROAD PEDESTRIAN AND BICYCLE FACILITIES

Shared Use Path

Description
A combined bikeway and walkway that is designed for shared use by bicyclists and pedestrians of all abilities, as well as other non-motorized modes of transportation. Shared use paths along or adjacent to a roadway are physically separated from vehicular traffic by a verge, fencing, or other barrier.

Target Users
Bicyclists; Pedestrians; Other non-motorized users

Dimensions
10-12 feet wide (8 feet is permissible where there are constraints). When a shared use path is adjacent to a roadway, a 5 foot wide verge is recommended between the edge of the shoulder and the path. If this width is not feasible, a suitable physical barrier is recommended.



Surface Materials
Asphalt; Compacted Stone; Concrete



Pedestrian Path

Description
Walkway for use by pedestrians of all abilities. Walking paths may be adjacent to roadways and serve as an alternative design treatment to sidewalks. Walking paths are also prevalent in parks or within other developed sites to provide pedestrian connections and support active recreation.

Target Users	Dimensions	Surface Materials
Pedestrians	< 8 feet wide (6 feet typical)	Asphalt; Compacted Stone

Sidewalk

Description
Walkway parallel to the road that is intended for use by pedestrians, often with numerous access points to adjacent land uses. The walkway is typically physically separated from the roadway with a curb and/or verge. The verge may contain grass, vegetation, pavers, and sometimes street trees. Sidewalks are typically concrete, but can be constructed with asphalt, bricks, or pavers.

Target Users	Dimensions
Pedestrians	< 5 feet wide (minimum). The verge, when provided, may range in width though 4 feet is a typical minimum.



Surface Materials
Concrete (typically); Brick; Pavers; Asphalt

Additional Toolboxes:

- Safety Countermeasures
- Green Infrastructure

Next Steps

Draft Report

PennDOT Coordination

Municipalities Accept Final Report



Questions

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