T202107101
Old Baltimore Pike, Battle Drive to SR 72

Welcome

The Delaware Department of Transportation (DelDOT) is holding this Public Workshop to solicit public input for the proposed improvements along Old Baltimore Pike from Battle Drive to SR 72 and Old Coochs Bridge Road from the intersection with Old Baltimore Pike to approximately 1,000 feet south of the intersection.

The purpose of the project is to:

- Reduce congestion
- Improve mobility for all users within the study area
- Improve the bridges to a “good” condition rating to extend the lifespan of the structures

Addressing substandard geometric, structural, and operational conditions along the corridor will result in a benefit from a safety perspective. This workshop also provides an update on the project’s schedule. Attendees will have an opportunity to review the proposed improvements and provide comments to DelDOT representatives.

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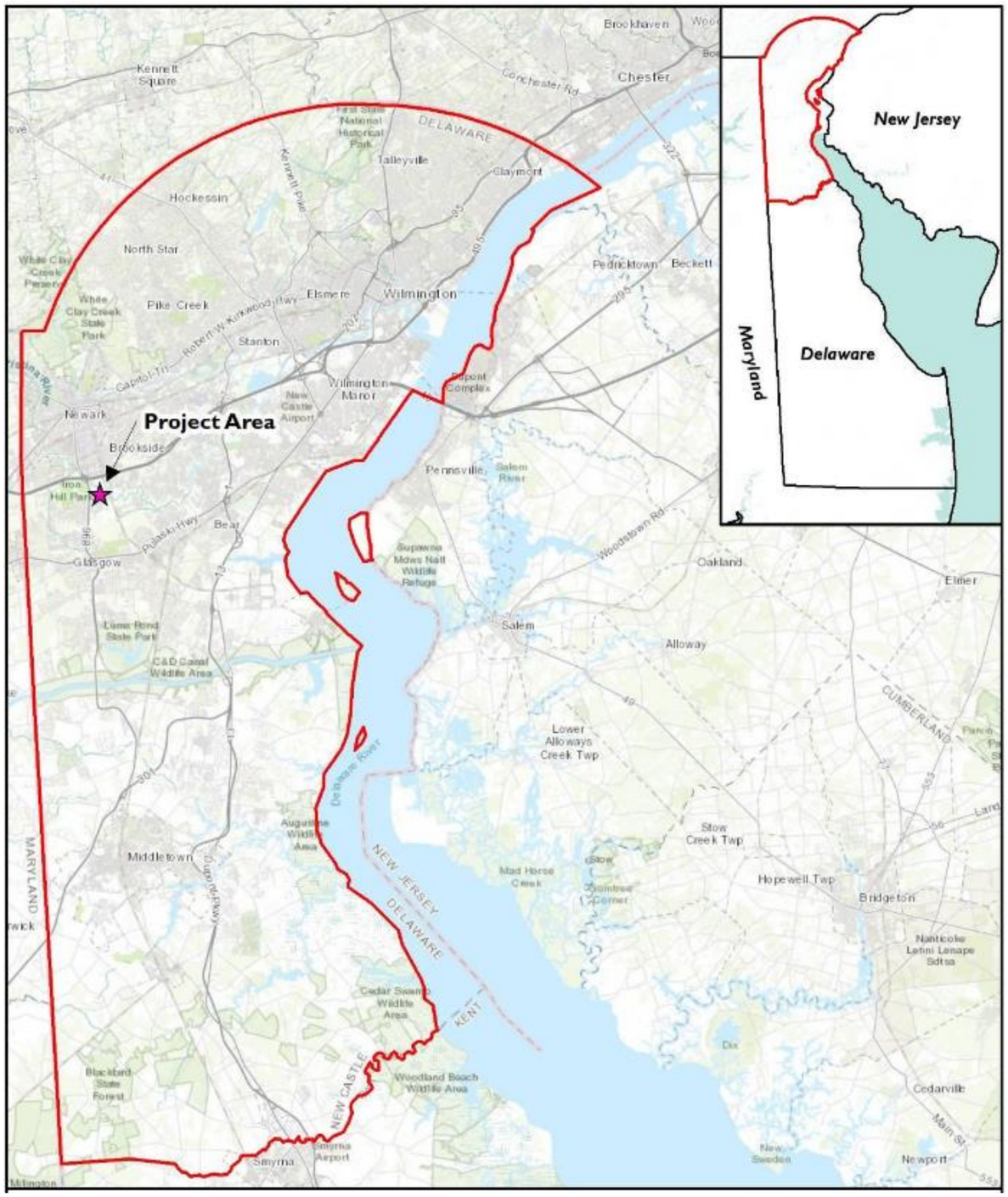
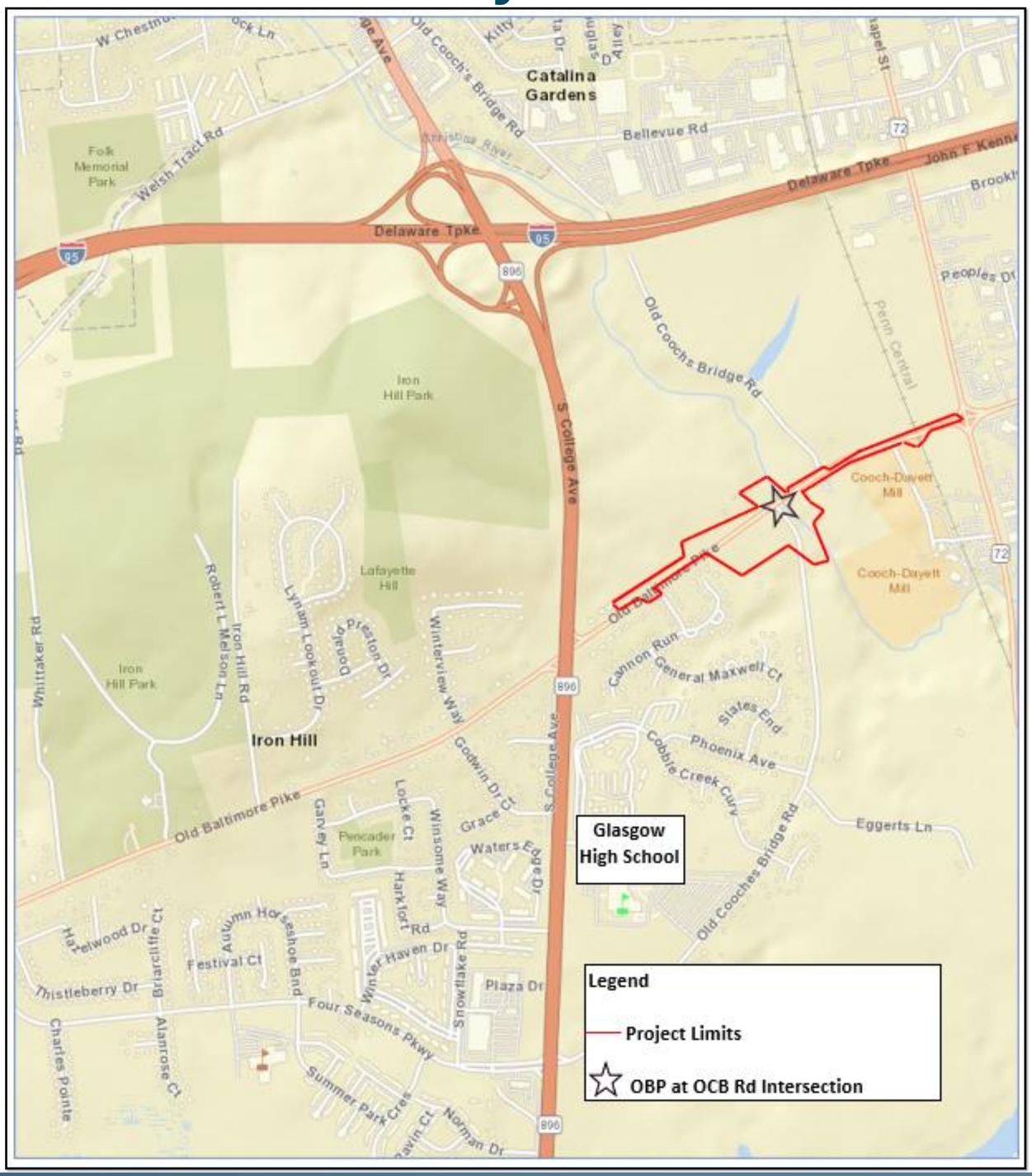
Project Location



Study Area



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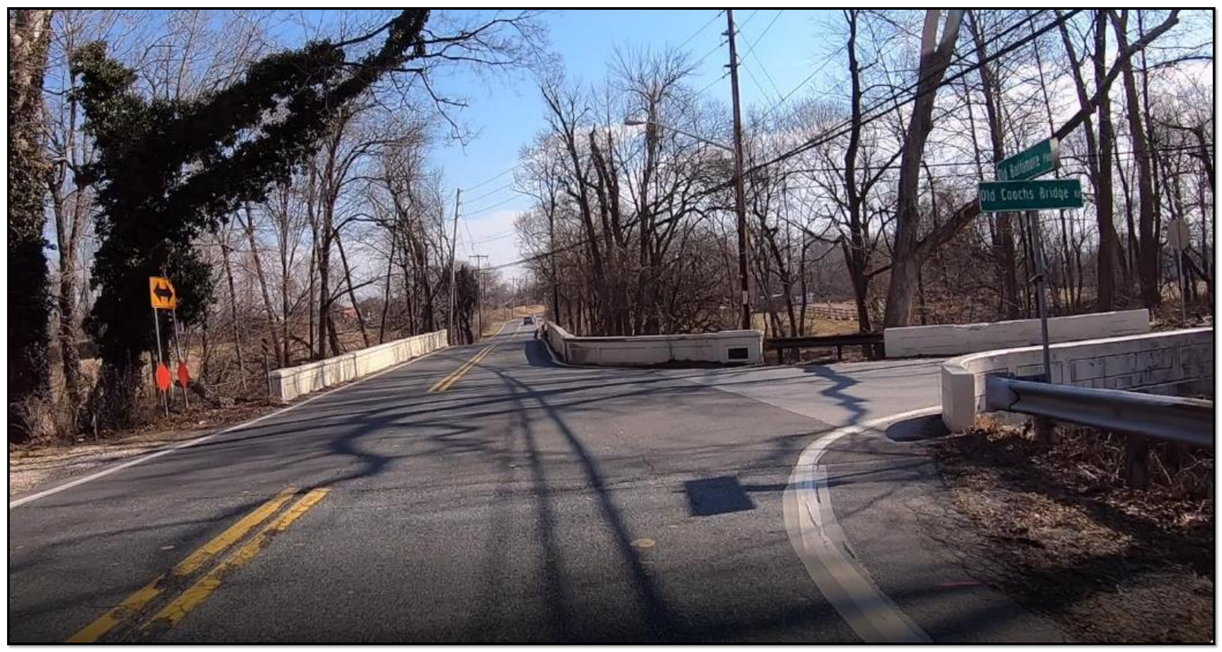
Purpose

The purpose of the project is to reduce congestion and improve mobility for all users within the study area and improve the bridges to a “good” condition rating to extend the lifespan of the structures. Addressing substandard geometric, structural, and operational conditions along the corridor will result in a benefit from a safety perspective.

Need

The project need arises from the deficiencies associated with substandard geometric conditions, including narrow travel lanes and shoulders along the corridor and on the bridges, structural deficiencies, non-compliant roadside safety features and unprotected hazards within the clear zones, a lack of multimodal accommodations within the study area, and intersection capacity and traffic operations.



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Substandard Geometric Conditions
Travel Lanes & Shoulders

- **Old Baltimore Pike** (Two-Lane Minor Arterial, Posted Speed 35 MPH):
  - Existing Travel Lanes: 10-ft; Shoulders: 1 to 2 ft
  - Standards: Travel Lanes: 11 ft; Shoulders: 5 ft

- **Old Coochs Bridge Road** (Two-Lane, Local Road, Posted Speed 35 MPH):
  - Existing Travel Lanes: 10-ft; Shoulders: Less Than 1-ft
  - Standards: Travel Lanes: 11-ft; Shoulders: 5-ft

Eastbound Old Baltimore Pike Approaching Old Coochs Bridge Rd

Northbound Old Coochs Bridge Rd Approaching Old Baltimore Pk

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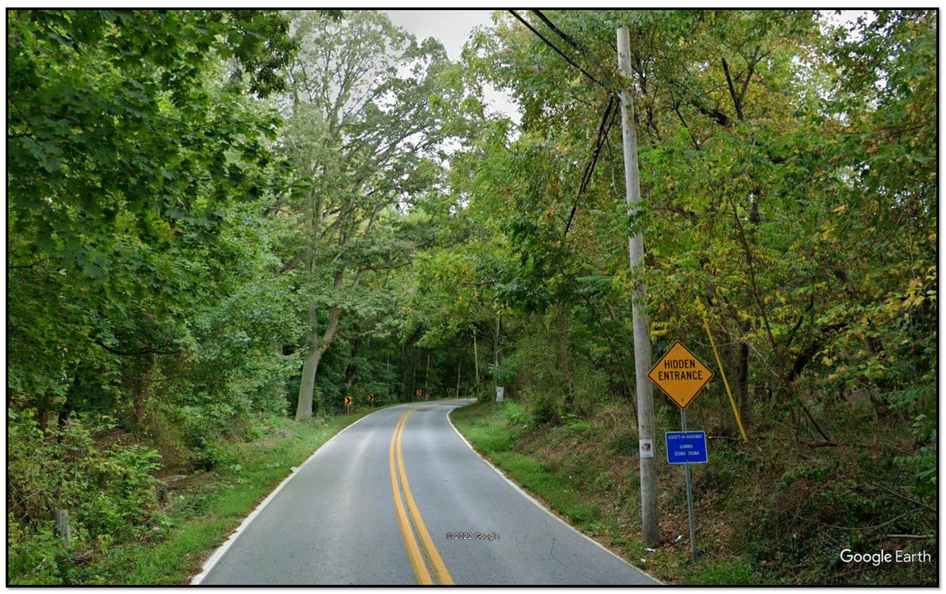
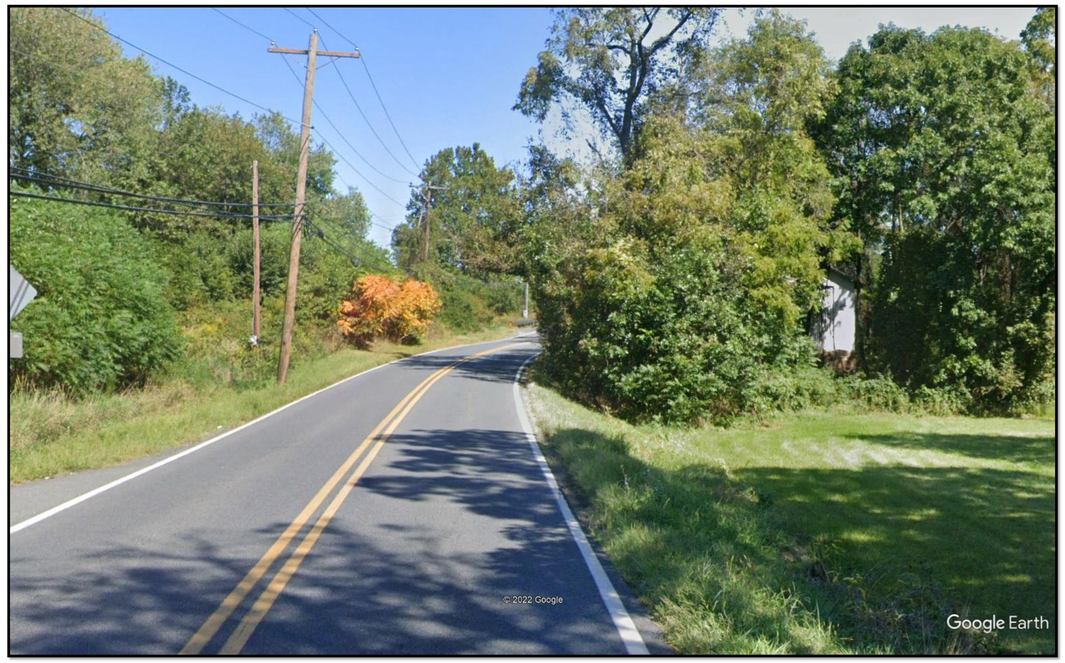
Substandard Geometric Conditions

Inadequate Sight Distances

Inadequate sight distances exist for vehicles operating at the Old Baltimore Pike and Old Coochs Bridge Road intersection and along the two roadways, notably eastbound Old Baltimore Pike between the Christina River and Dayett Mill Road





The Project Team coordinated with the Christina School District regarding bus routes in the area, notably for Glasgow High School and residential developments along Old Coochs Bridge Road. They do not route any buses to use the intersection of Old Baltimore Pike and Old Coochs Bridge Road due to operational concerns. If the intersection were improved, they indicated that more efficient bus routes may be possible.

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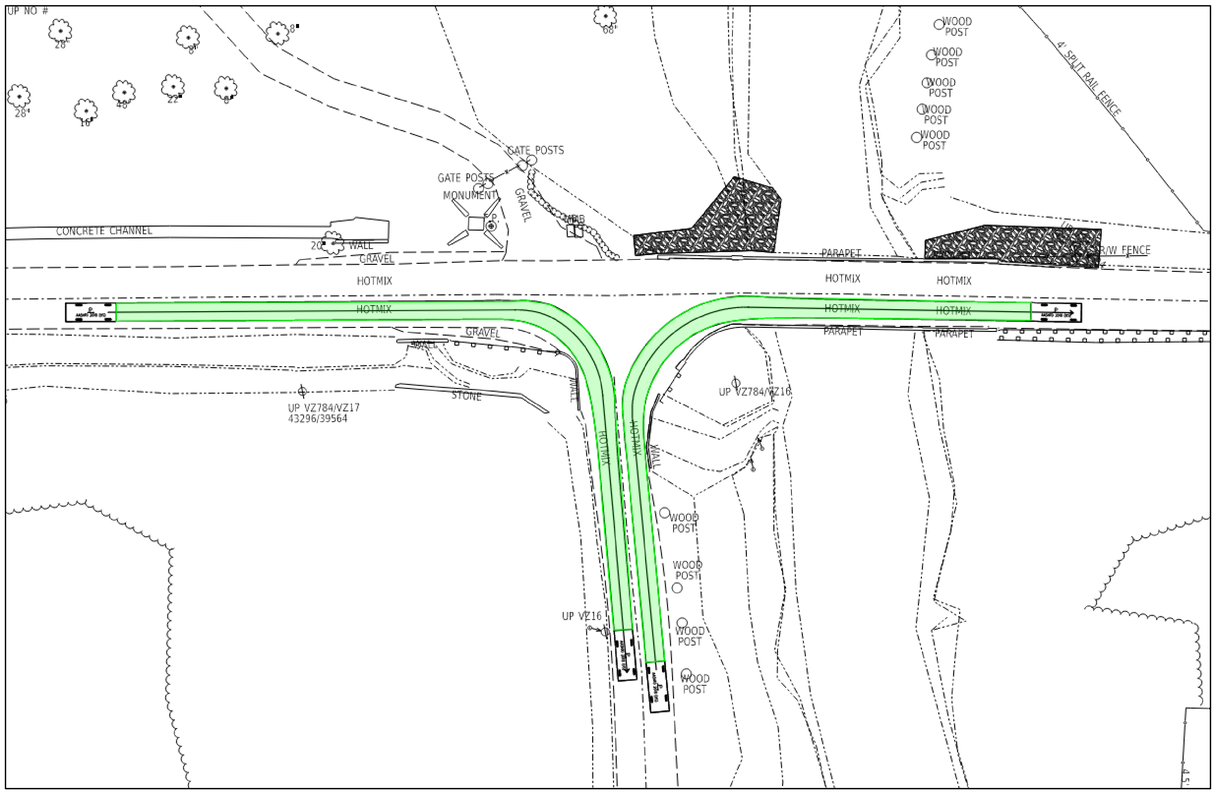
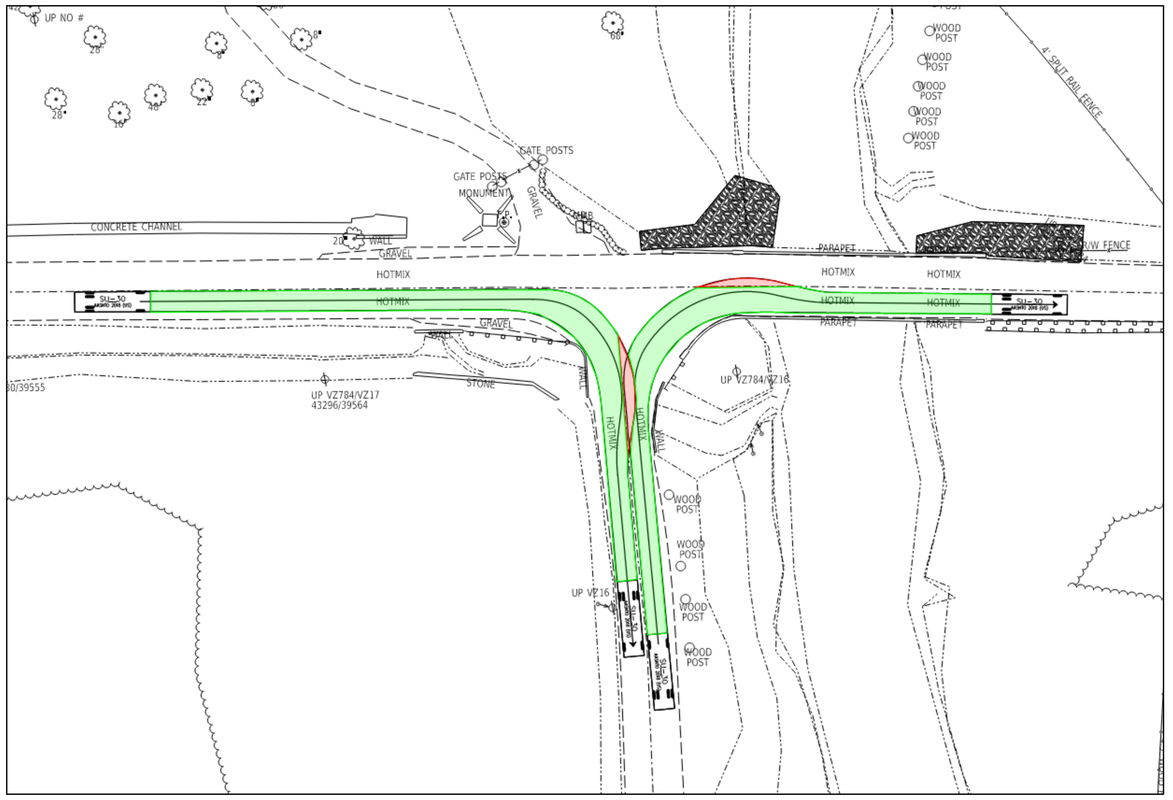
Substandard Geometric Conditions
Inadequate Turning Geometry at the OBP and OCB Rd intersection

Vehicles larger than a Passenger vehicle cannot make the Old Coochs Bridge Road Northbound right turn movement or the Old Baltimore Pike East Bound right turn movement without encroaching into the travel lane of opposing vehicles.



Passenger Vehicle Turning Template



Single-Unit Turning Template

Note: Both show ideal turning movement without driver shying away from fixed objects adjacent to travel way at this location.

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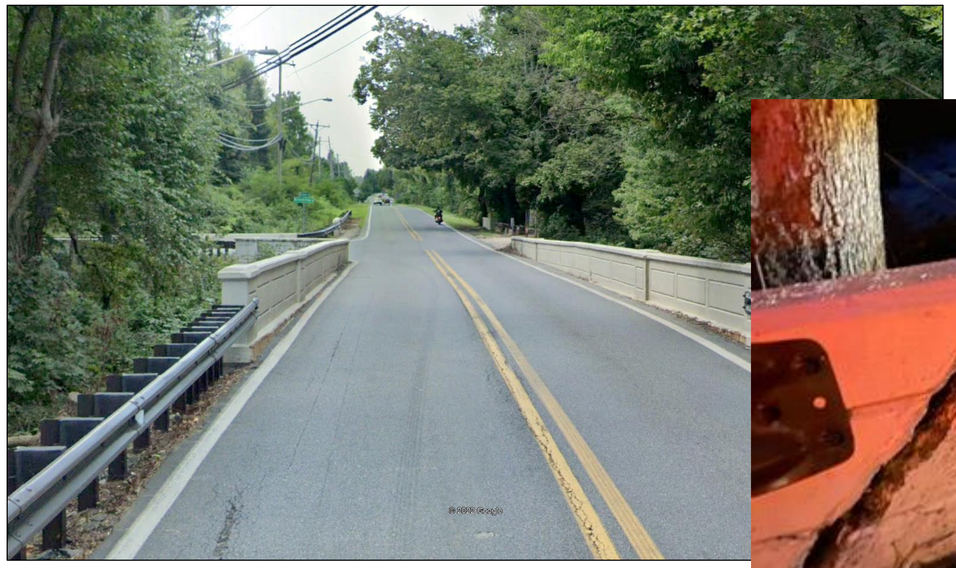
Structural Deficiencies
Substandard Bridge Parapets & Barriers

Existing bridge parapets and barriers on the roadways approaching the bridges, and existing guardrail and guardrail end treatments do not meet current design and crash standards.



Bridge 1-337 Old Coochs Bridge Road: NB Parapet Vehicle Impact January 2023

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Unprotected Hazards within Clear Zone

Rigid objects and other hazardous roadside conditions are located within the clear zone

Lack of Multimodal Accommodations

No bicycle or pedestrian facilities exist within the project limits

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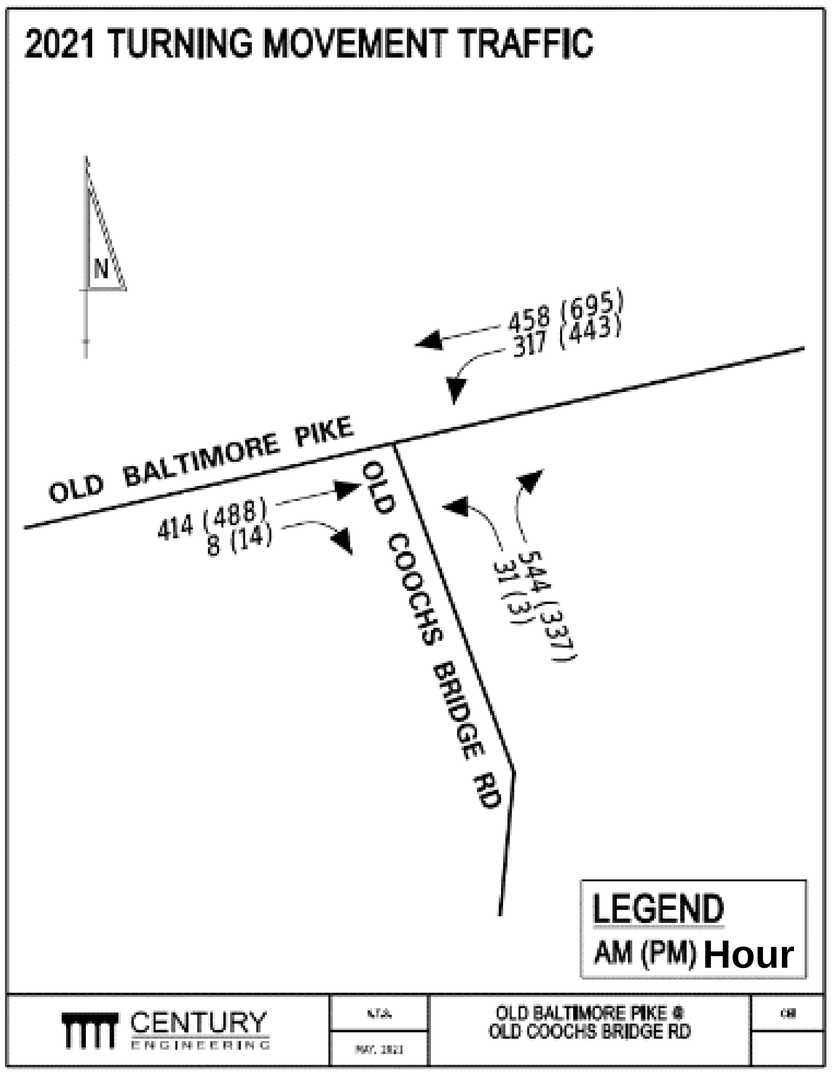
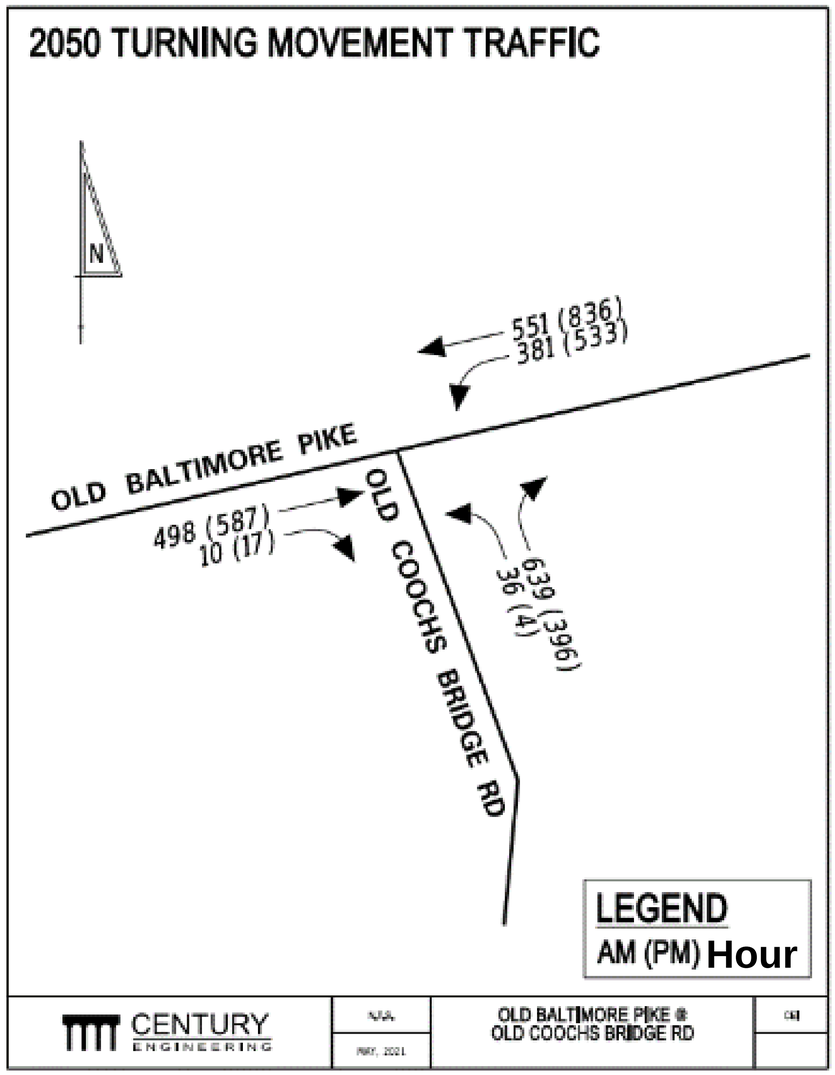
Intersection Capacity and Traffic Operations

Average Daily Traffic 2021 & 2050

Road	2021 AADT (veh/day)	2050 AADT (veh/day)
OBP	15,080	18,141
OCB Road	8,121	9,534





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Old Coochs Bridge Road

2021 Traffic Conditions

AM Peak: Northbound Approach
LOS F (228.4 seconds delay)
95th Percentile queue of 758 feet

PM Peak: Northbound Approach
LOS E (41.7 seconds delay)
95th percentile queue of 190 feet

Overall intersection delay 75.8 seconds

2050 No-Build Traffic Conditions

AM Peak: Northbound Approach
LOS F (659.4 seconds delay)
95th Percentile queue of 1,415 feet

PM Peak: Northbound Approach
LOS E (44.7 seconds delay)
95th percentile queue of 238 feet

Overall intersection delay 211.8 Seconds

The intersection experiences significant delays on the northbound OCB Road approach and results in lengthy queues due to the limited capacity as a result of the geometric conditions.

Old Baltimore Pike

2021 Traffic Conditions

AM Peak: Westbound Left-turn
LOS A (9.6 seconds delay)
95th percentile queue of 33 feet

PM Peak: Westbound Left-turn
LOS B (11.0 seconds delay)
95th percentile queue of 33 feet

Overall intersection delay 9.6 seconds

2050 No-Build Traffic Conditions

AM Peak: Westbound Left-turn
LOS B (10.7 seconds delay)
95th percentile queue of 48 feet

PM Peak: Westbound Left-turn
LOS B (13.6 seconds delay)
95th percentile queue of 33 feet

Overall intersection delay 10.9 seconds

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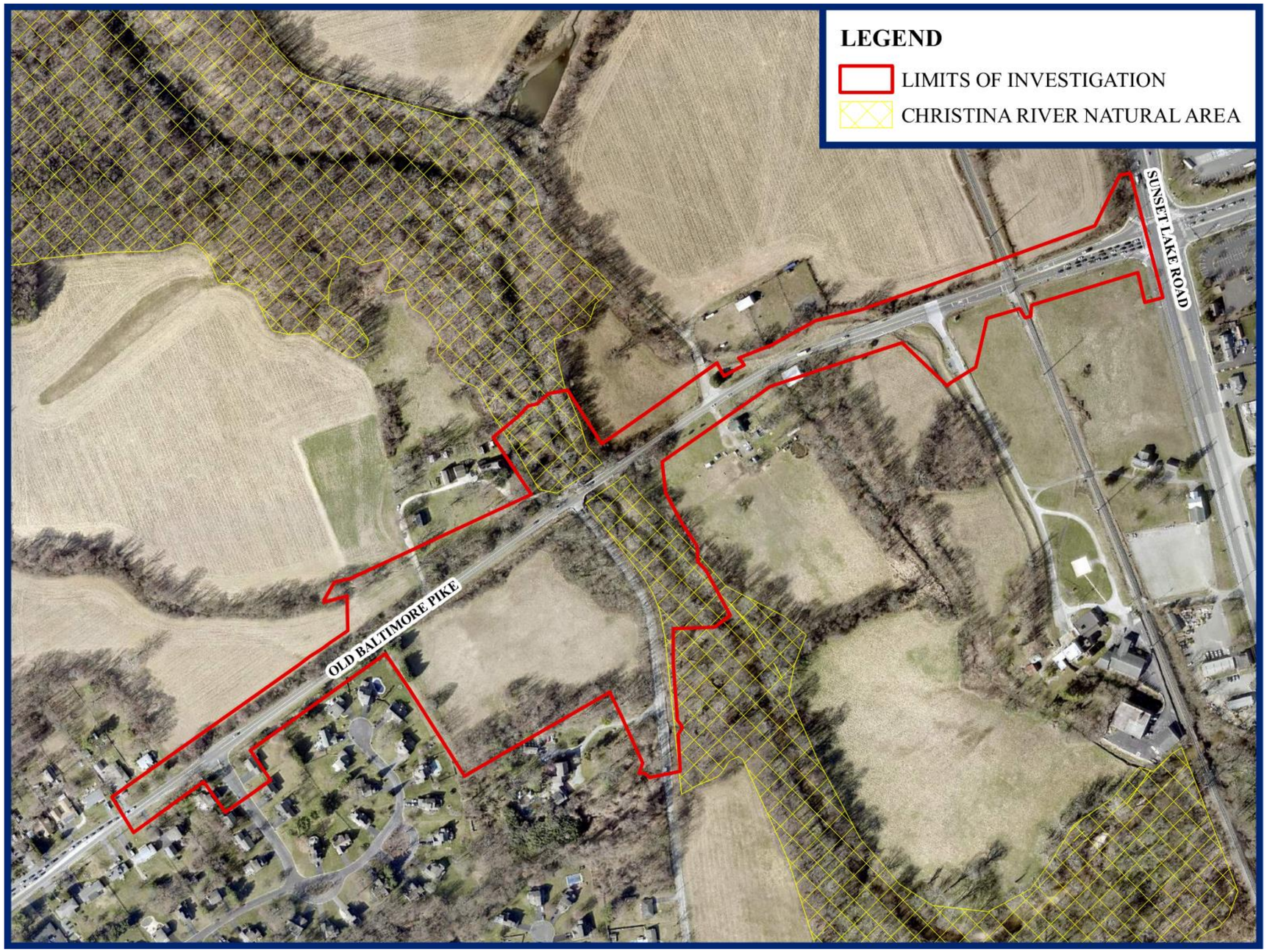
DELAWARE STATE PARKS
YOUR OUTDOOR ADVENTURE STARTS HERE
DELAWARE Natural Areas



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STATE OF DELAWARE
DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL
DIVISION OF FISH & WILDLIFE

October 30, 2023

No State-Rare or Federally Listed Plants, Animals or Natural Communities

Does Not Lie within State Heritage Site or within Delaware National Estuarine Research Reserve

May be suitable Habitat for Federally-Listed Bog Turtle
- Best to Conduct Work during Hibernation Period Nov 15th – Feb 28th
- Active Season Guidance March 1st – November 14th includes use of a Silt Fence around LOD, and Search of LOD Prior to Use of Heavy Equipment
- All work Conducted by a Qualified Bog Turtle Surveyor

Fisheries-Smalley's Pond Dam, No Fish Ladder, No Time of Year Restrictions for Anadromous or Resident Gamefish

Bridges Not Surveyed for Nesting Migratory Birds
- Barn Swallow
- Eastern Phoebe

Survey to be Performed if Construction During Breeding Season
- April 15 – August 1

Tree Survey required to Identify High Ecological Quality Prior to Tree Clearing

STATE OF DELAWARE
DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL
DIVISION OF PARKS & RECREATION

July 6, 2021

Avoid Impacts to Christina River Natural Area to Best Ability

Make Efforts to Avoid Impacts to State Rare and/or Federally Listed Plants, Animals, and /or Natural Communities

Design of Culverts Shall Promote Passage of Aquatic Organisms

U.S. FISH & WILDLIFE SERVICE

July 2021

No Effect on Endangered, Threatened, or Candidate Species

Coordination continuing with DNREC, USFWS & DelDOT ESO, including potential for Northern Long Eared Bat Habitat

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Wetlands & Waters of the US

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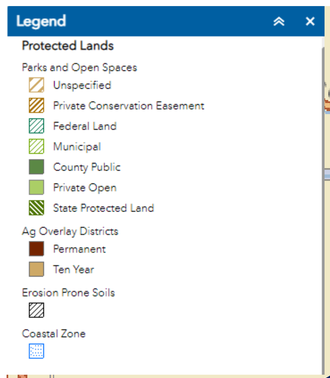
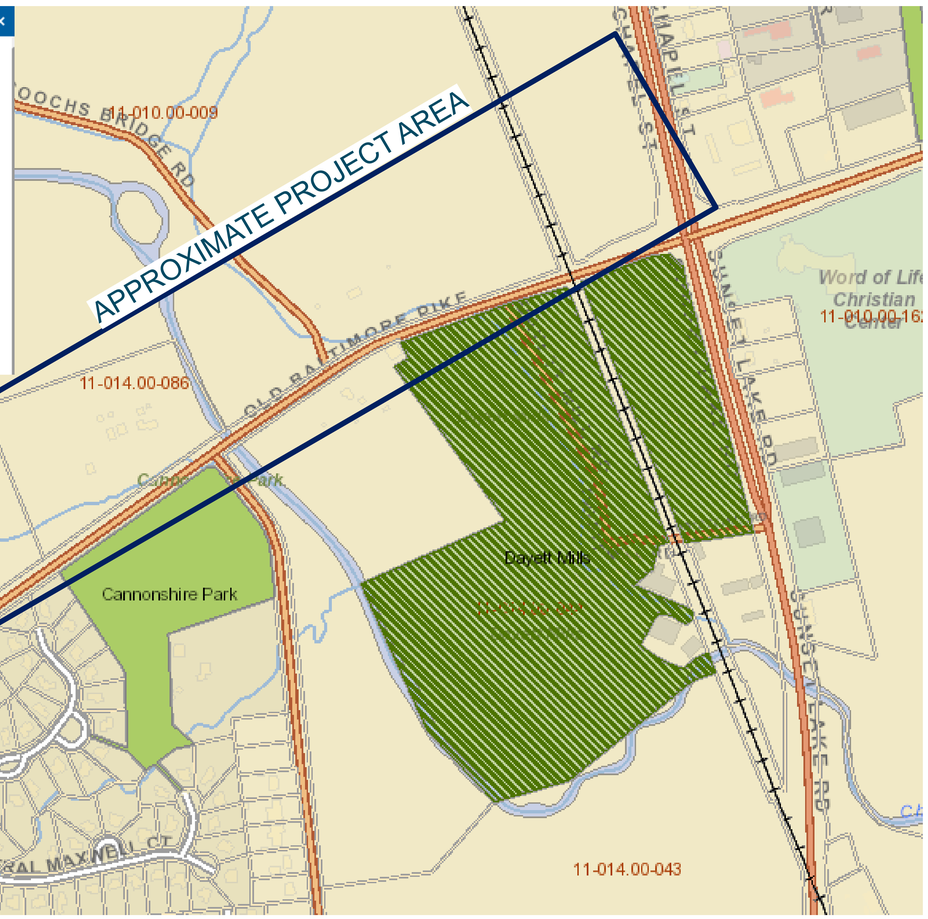
Active Farmlands and Other Protected Lands





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Historic Architectural Resources

Portions of the National Register Cooch's Bridge Historic District are included in the Area of Potential Effects (APE) for the project. The district is associated with the Revolutionary War Battle of Cooch's Bridge and the prominent family who owned the property and engaged in agricultural and early industrial pursuits.

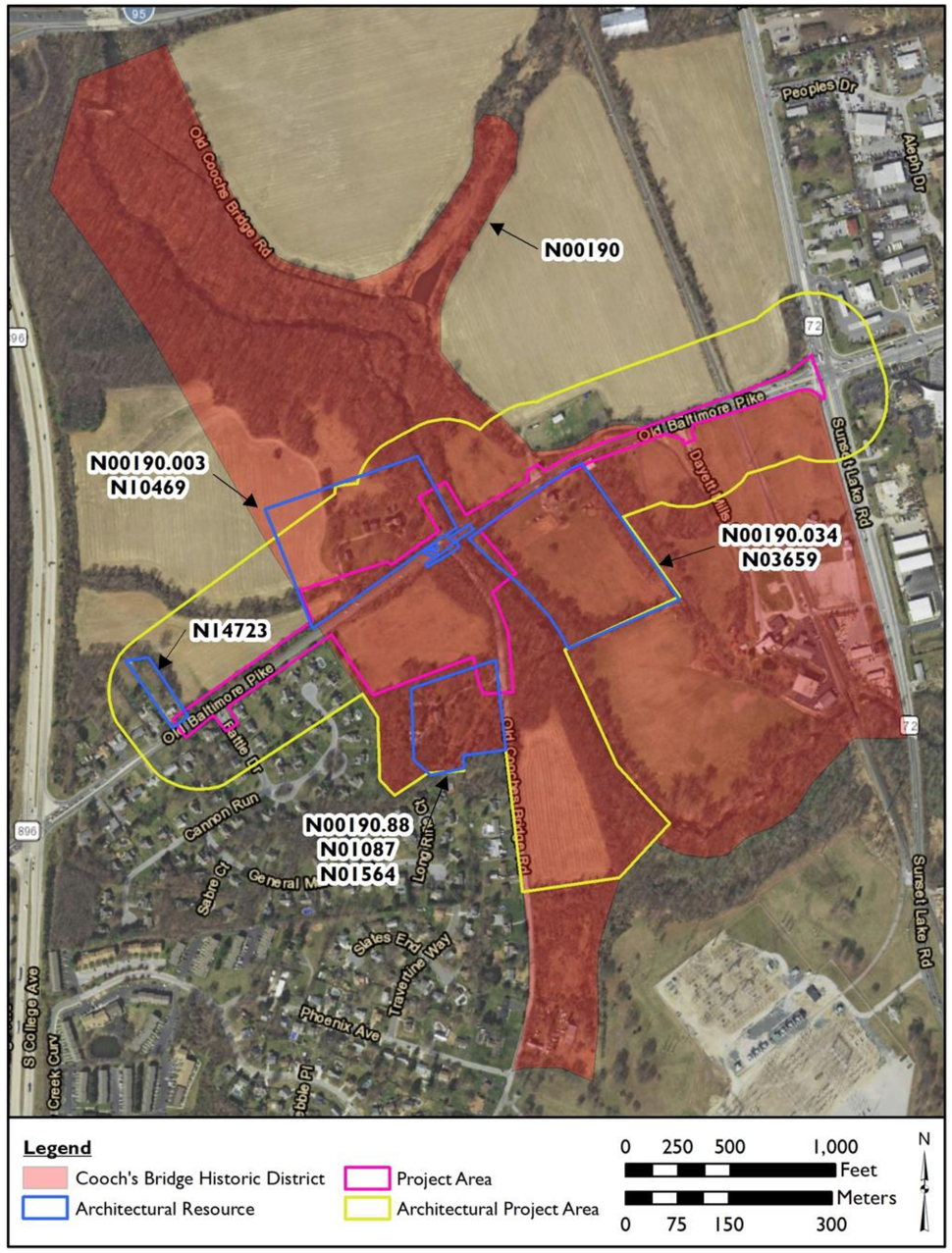
While there are resources within the district that are individually eligible, such as the Cooch House and Cooch's Bridge (Br 1-336), all contributing elements to the historic district are treated the same by Section 106 of the National Historic Preservation Act.

Phase I Historic Architecture report recommended that 7 of the identified 44 resources within the APE be evaluated for individual eligibility.

One house is located outside the historic district. SHPO concurred on April 12, 2021.

SHPO concurred that the Cooch House, Baynard House, and Br 1-337 are individually eligible on January 13, 2023.

The tenant house at 934 Old Baltimore Pike along with the others are contributing elements to the historic district.



Archaeology Next Steps

Phase IA Archaeological Reconnaissance Survey was conducted of the 17.8 acre potential limit of disturbance for the project.

The final report submitted to SHPO August 31, 2022, addressing SHPO comments and recommending three areas with a potential to contain intact archaeological deposits totaling 11.7 acres for further investigation.

The areas and recommended testing are:

- Zone 1: Systematic shovel tests and metal detecting
- Zone 2: Systematic shovel tests and metal detecting
- Zone 3: Deep testing

Testing to be performed as needed when a preferred alternative is identified.

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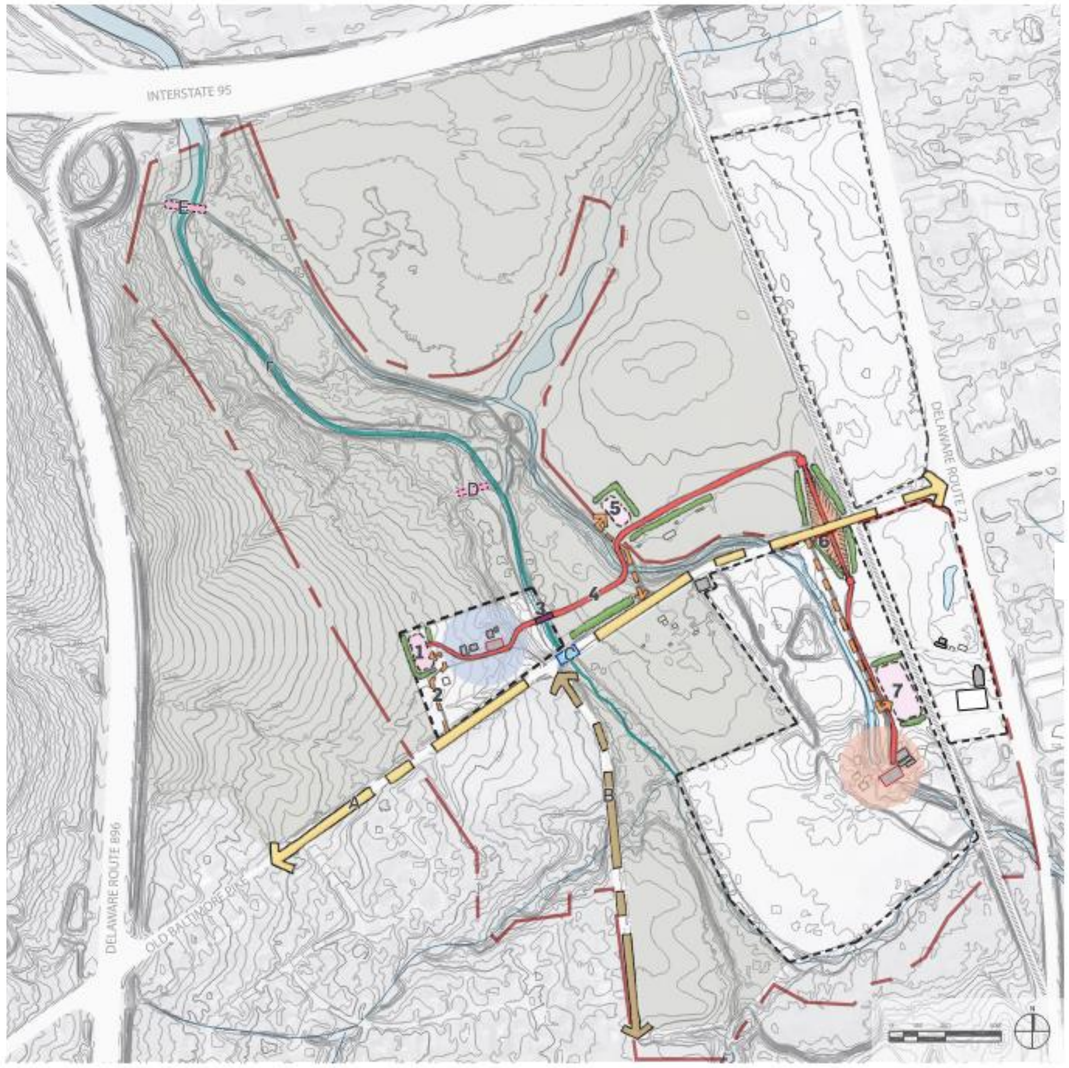
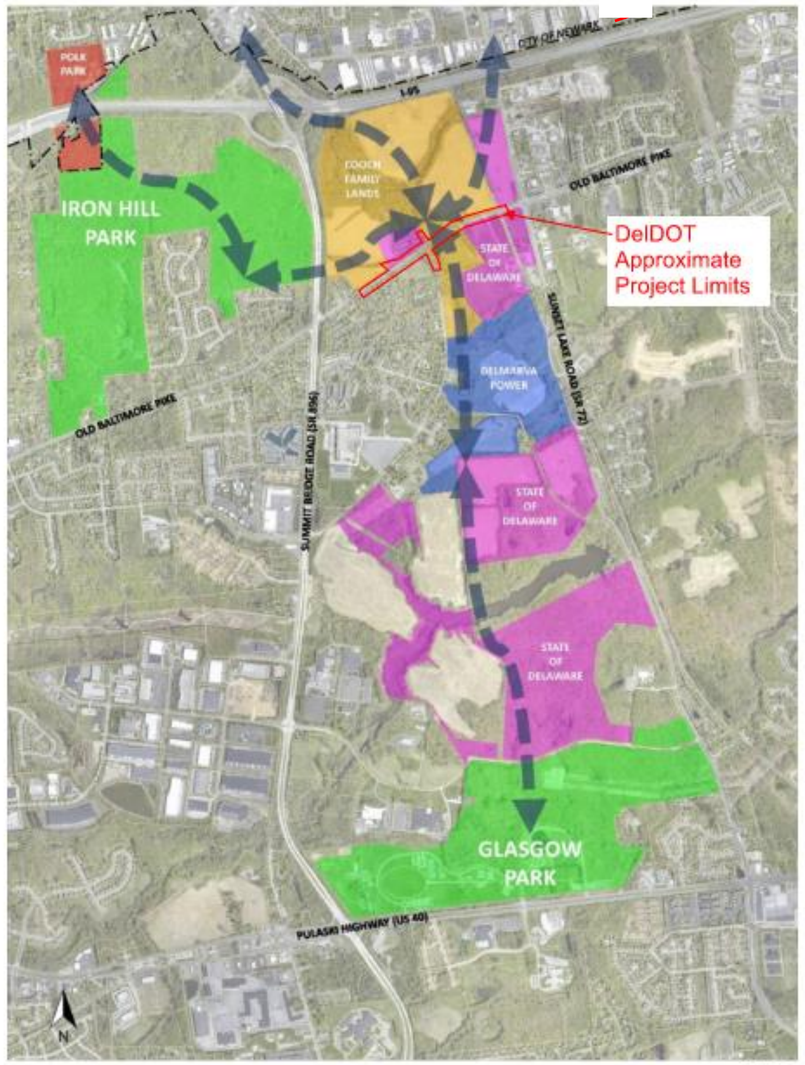
Area Project Coordination

Delaware Division of Historical and Cultural Affairs
2021 MASTER PLAN



Iron Hill Park to Glasgow Park
Corridor Pathways Concept



Note: Addressing the project's Purpose and Need has the potential to help meet the project goals of these projects.

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12 Alternatives Evaluated

The Following 7 Alternatives Were Considered & Dismissed*

- **Alternative 1B: Old Coochs Bridge Road Shifted 150 Feet West; Widen About Centerline**
  Shared Use Path on South Side of Old Baltimore Pike

- **Alternative 2B: Improvements at Existing Intersection; Widen North**
  Shared Use Path on South Side of Old Baltimore Pike

- **Alternative 3A: Improvements at Existing Intersection; Widen South**
  Shared Use Path on North Side of Old Baltimore Pike

- **Alternative 3B: Improvements at Existing Intersection; Widen South**
  Shared Use Path on South Side of Old Baltimore Pike

- **Alternative 4B: Improvements at Existing Intersection; Widen South**
  Similar to Alternative 3B, but Avoids Block Mill Building
  Shared Use Path on South Side of Old Baltimore Pike

- **Alternative 5A: Roundabout - Improvements at Existing Intersection**
  Shared Use Path on North Side of Old Baltimore Pike

- **Alternative 5B: Roundabout - Improvements at Existing Intersection**
  Shared Use Path on South Side of Old Baltimore Pike

* Dismissed because:
- Inability to adequately meet project need and/or
- Significant Impacts to Resources
- Standard procedure to initially develop and review multiple alternatives and identify those to not pursue further.

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Alternative Carried Forward

Alternative 1A: Old Coochs Bridge Road Shifted 150 West

Shared Use Path North Side of Old Baltimore Pike

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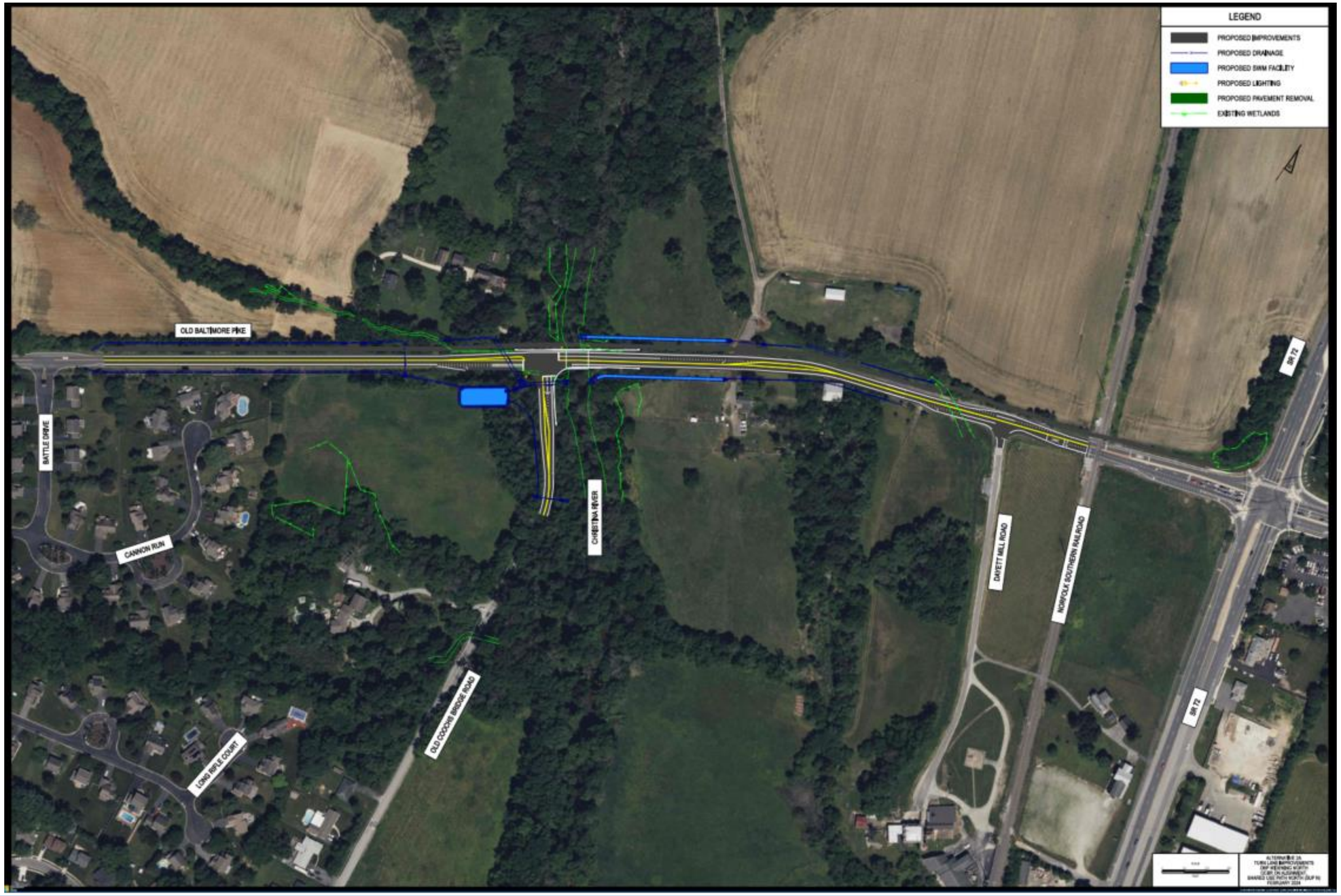
Alternative Carried Forward

Alternative 2A: Improvements at Existing Intersection

Shared Use Path North Side of Old Baltimore Pike



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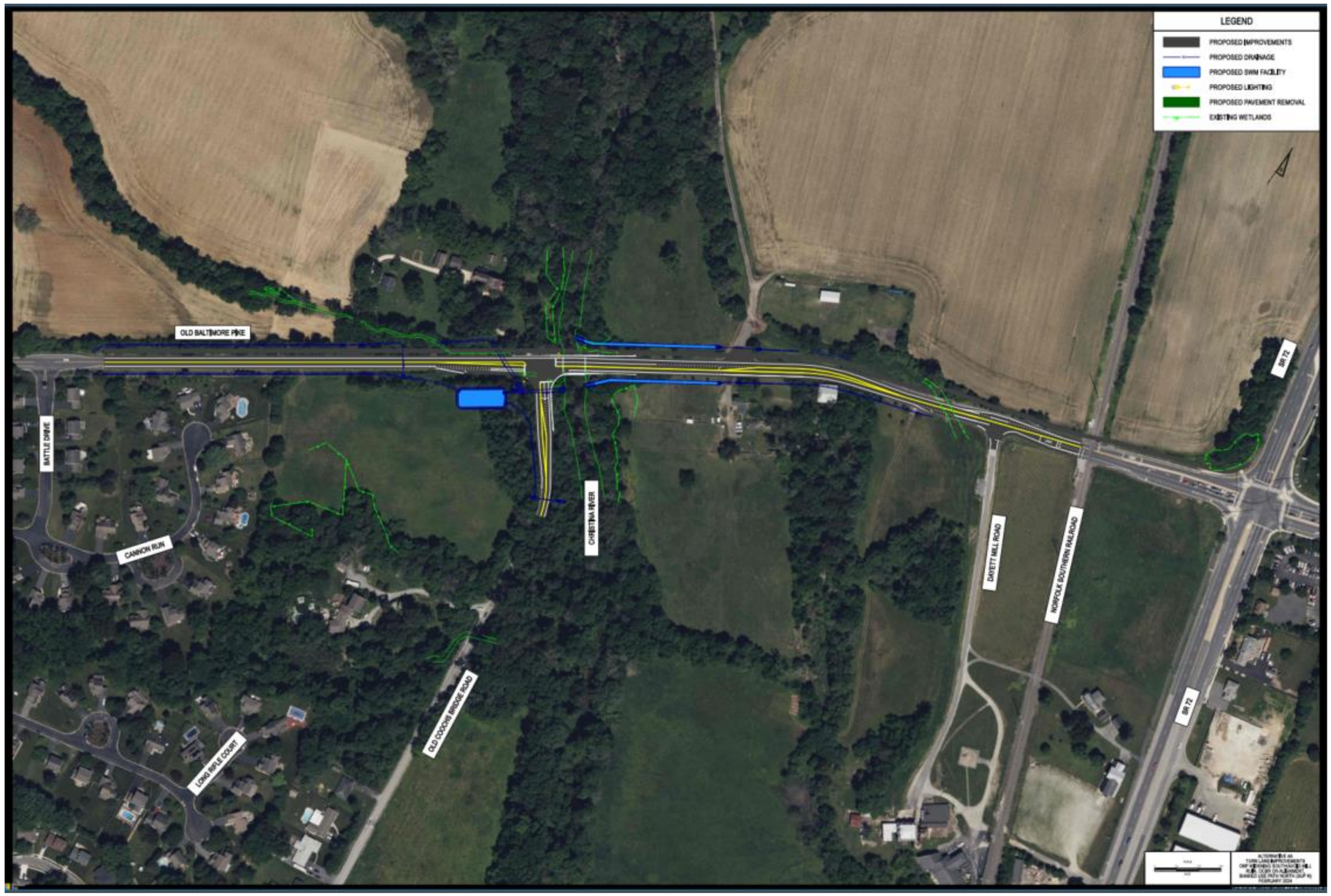
Alternative Carried Forward

Alternative 4A: Improvements at Existing Intersection
(Similar to Alternative 2A but Old Baltimore Pk widened 5-8 feet south)

Shared Use Path North Side of Old Baltimore Pike



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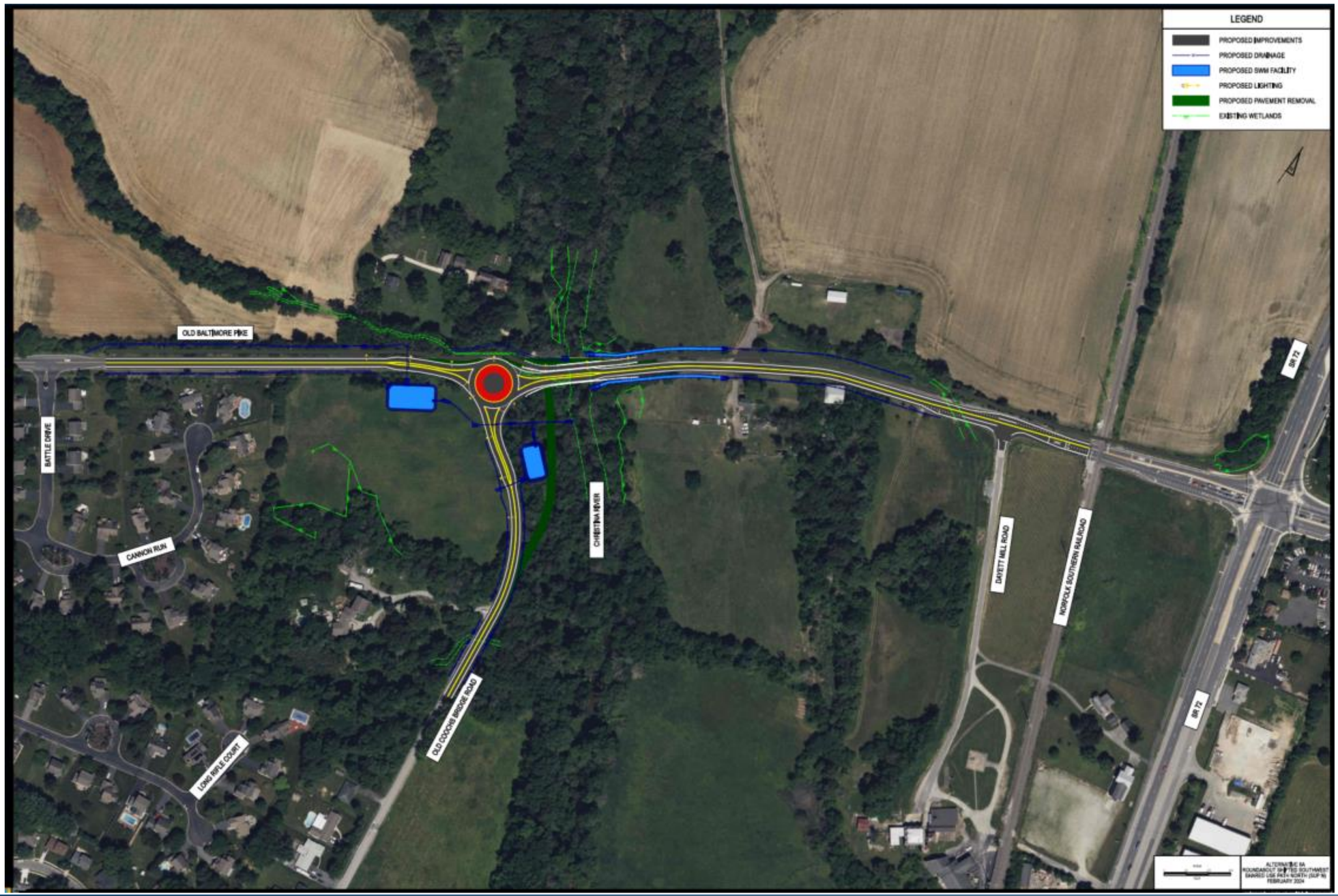
Alternative Carried Forward

Alternative 6A: Roundabout – Old Coochs Bridge Road Shifted 150 Feet West

Shared Use Path North Side of Old Baltimore Pike



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Alternative Carried Forward

Alternative 6B: Roundabout – Old Coochs Bridge Road Shifted 150 Feet West

Shared Use Path South Side of Old Baltimore Pike

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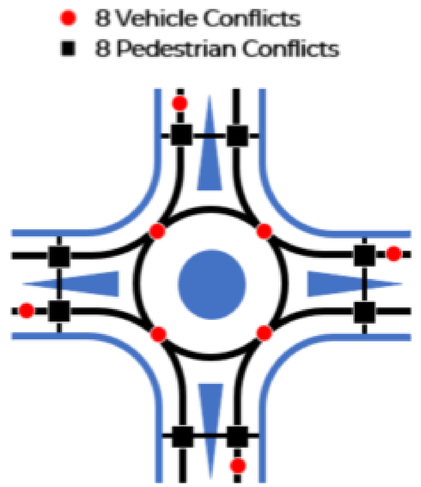
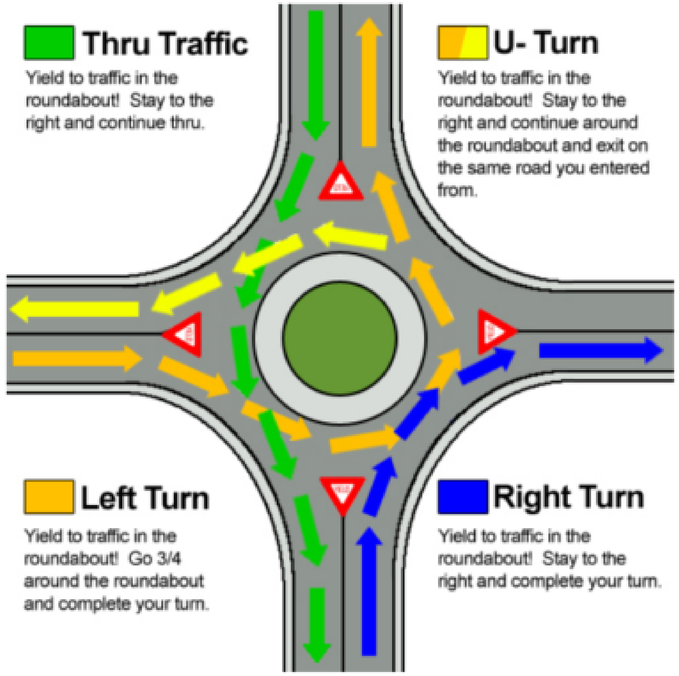
Roundabout Advantages

- Speeding
  - With channelized, curved approaches; vehicle speed is reduced on the entry and exit points.
- Turning Movements
  - 75% fewer conflict points than a typical 4-way intersection; which reduces the amount of crash types.
  - The reduced speed also means a 78%-82% reduction in fatal and injury crashes.
- Visibility
  - Only have a single counterclockwise flow of traffic which reduces the amount of roadway a driver needs to review prior to entering, which is improved over having to check for vehicles in multiple directions.

DelDOT





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Impacts Matrix

RESOURCE		UNIT	NO BUILD	BUILD ALTERNATIVES				
				1A	2A	4A	6A	6B
				Turn Lane Improvements OBP on Alignment, widening split, OCBR shifted 150' West, SUP N	Turn Lane Improvements OBP Widening North OCBR on Alignment, SUP N	Turn Lane Improvements OBP Widening South/Avoid Block Building, OCBR on Alignment SUP N	Roundabout Shifted SW SUP N	Roundabout Shifted Southwest SUP S
Watercourses (Christina River)		Number	0	1	1	1	1	1
		Linear Feet	0	140	140	140	140	140
Watercourses (Tributaries)		Number	0	1	1	1	1	1
		Linear Feet	0	370	415	415	390	390
Floodplain Encroachment		Acres	0	3	2	2	3	3
Wetlands		Number	0	1	1	1	1	1
		Acres	0	0.06	0.07	0.09	0.01	0.01
Forests		Acres	0	1.72	1.09	1.30	1.68	1.88
Potential Hazardous and Residual Waste Sites		Number	0	2	2	2	2	2
Environmental Justice Communities		Number	0	0	0	0	0	0
Above-Ground Historic Resources Section 106*		Number	0	5	4	4	4	4
Archaeology Section 106*		Number	0	1	1	1	1	1
Section 4(f) Resources**		Number	0	7	6	6	6	6
Natural Areas		Acres	0	0.27	0.29	0.25	0.19	0.26
ROW Acquisition Residential	Partial	Number	0	6	5	5	6	6
	Full	Number	0	0	0	0	0	0
ROW Acquisition Commercial	Partial	Number	0	0	0	0	0	0
	Full	Number	0	0	0	0	0	0
Estimated Total Project Cost		$ million		$14 million	$14 million	$14 million	$15 million	$15 million
Does this Alternative meet the Purpose and Need?			**No**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**

* These resources are protected under Section 106 of the National Historic Preservation Act of 1966 (NHPA)

** Includes ony resources previously recorded. These resources are protected under Section 4(f) of the USDOT Act of 1966 (49 U.S.C., Section 103)

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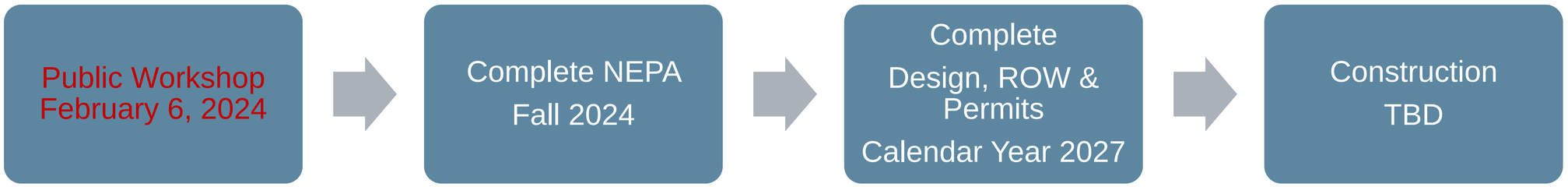
TENTATIVE PROJECT SCHEDULE



Thank You

The Delaware Department of Transportation would like to thank you for your participation and contribution to this important project. Your comments and opinions are very important. All information received tonight will be carefully reviewed by the Project Team. Comments will be received during the workshop, submitted online or can be mailed to DelDOT Community Relations, P.O. Box 778, Dover, DE 19903 or sent via email to dotpr@state.de.us. Under state law, this information is public domain, and if requested, a copy of it must be provided to the media or public.

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