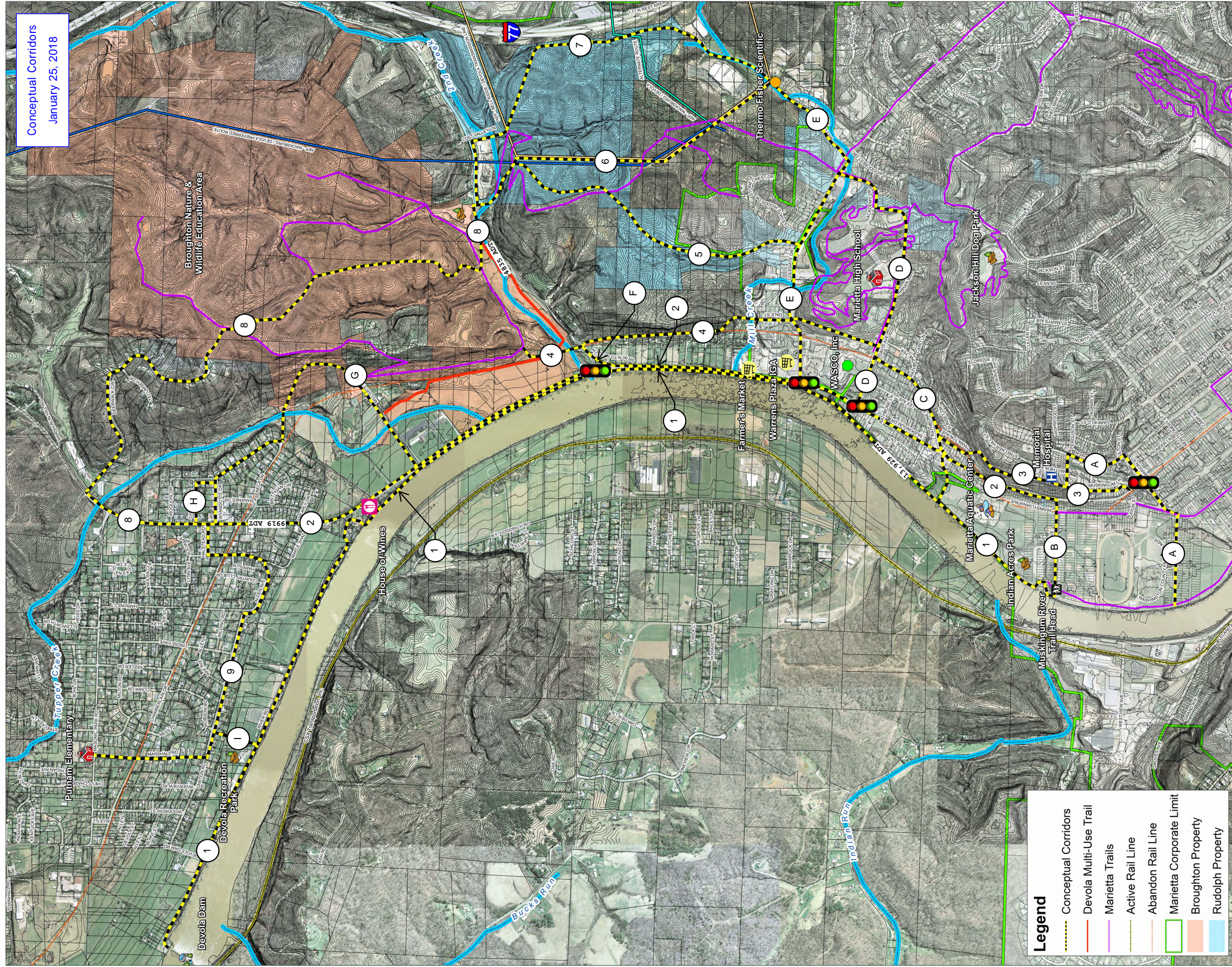
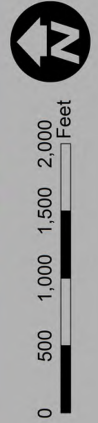


APPENDIX B:
CONCECPTUAL CORRIDORS AND STAKEHOLDER'S MEETING #2
PURPOSE AND NEED DOCUMENT
ENVIRONMENTAL OVERVIEW
DESIGN CRITERIA AND TYPICAL SECTIONS



Legend

- Conceptual Corridors
- Devola Multi-Use Trail
- Marietta Trails
- Active Rail Line
- Abandon Rail Line
- Marietta Corporate Limit
- Broughton Property
- Rudolph Property



Devola Multi-Use Trail

Washington County, Ohio



Meeting Minutes

Date of Meeting: January 25, 2018
10:00 AM

Re: Devola Multi-Use Trail Stakeholder Meeting #2

Location: ODOT D10 Construction Conference Room

Issue Date: January 29, 2018

Submitted By: Denny, Paul

Conference Call:

Joe Tucker - City of Marietta Engineer
Eric Lambert – City of Marietta Engineer’s Department
Tracy Brown – WWW Interstate Planning Commission
Ken Schilling – Muskingum Township

In Attendance: George Banziger -Devola Multi-Use Trail Committee
Roger Wright – Washington County Engineer
Alan Craig – ODOT District 10
Ron Mattox - Woolpert
Paul Denny - Woolpert

ITEMS DISCUSSED:

Ron Mattox kicked off the meeting with a discussion of the exhibit, noting that the alignments presented are broad corridors and that connect Marietta to Devola. He also noted the purpose of this meeting was to obtain stakeholder feedback on the corridors as presented.

1. The corridor exhibit is numbers so the north /south routes are labeled with a number, and east / west routes are labeled with a letter. This format will facilitate the discussion regarding alternatives.
2. The City noted the corporation limits north of the Marietta Aquatic Center appear to be incorrect. The Shrine has recently been incorporated, and City officials will investigate updating the GIS information.
3. George Broughton is in negotiations with AEP regarding the AEP easement on the nature preserve. There has been discussion about AEP grading this easement to provide a location for the multi-use trail. George Banziger provided contact information for the AEP representative who is negotiating with George Broughton. Woolpert has worked with AEP to obtain information regarding the location of their proposed lines.
4. Ron Mattox noted the geotechnical issues that will be encountered by routing the multi-use trail through rough terrain. The region has a history of localized landslides, and constructing the trail would require the slopes to be constructed at 4:1 or flatter slopes. Areas with steep grades that require switchback routes would require retaining walls. This will not preclude the trail from being in these regions, it will just be expensive to construct.
5. The trail will be ADA compliant.
6. Ron Mattox mentioned Carolyn Dempsey’s concerns regarding funds that will be required for future maintenance of the trail, and those concerns are still valid. The Township does not have the funds for future maintenance, and the existing

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roads should be used where possible. The City of Marietta also noted that maintaining the trail would be a challenge. Bridge maintenance is a major concern, especially considering future bridge replacements. Ron Mattox noted that State funds could be made available for future bridge replacements.

7. Ken Schilling discussed the potential for the trail to be extended further north in the future.
8. Many trail users would not be comfortable using the existing roadway system as the multi-use trail (parents with strollers, walkers, etc.) This is especially critical on roadways such as SR-60 and SR-821. Locating a trail along busy routes could require a barrier to be placed next to the trail, which would further increase costs.
9. Constructing a tunnel to cross SR-60 at Linwood Avenue has been discussed in the past. However, this tunnel would need to come back to grade on the east side of SR-60, which would require substantial amounts of earth to be removed. This option is feasible, but it would be very expensive to construct.
10. Emergency Medical Services (EMS) will need access to the trail after it is constructed. Ron Mattox noted that the existing bollards are being removed throughout the State due to safety concerns with bicyclists crashing into the bollards. Therefore, when this trail is being design solid bollards will not be used. The City of Marietta uses flexible bollards on the trail system.
11. The alternatives shown begin at the Muskingum River Trail Head and terminate at the Putnam Elementary School. It is not necessary for the trail to end at the elementary school but it is required to connect to the community of Devola. Therefore, Devols Dam, while it is a desirable location, will not meet the projects purpose and need.
12. All stakeholders have concerns about using River Road as the multi-use trail going to Devols Dam. The roadway becomes dangerous when children are being dropped off at soccer practice and the parents are speeding away. CMAQ funds could be used to place the trail next to River Road with a grass barrier separating the facilities.
13. The SR-821 crossing will be a challenge due to the number of cars and the speed of the roadway. Ron Mattox noted we have obtained the Conceptual Study for the Muskingum River bridge carrying SR-821 over the river. These plans will be incorporated into the multi-use trail project as the project develops.
14. The City of Marietta noted there are drainage issues around Rathbone Road, and they have submitted for funds to improve the storm sewer system in this area. Tying these two potential projects together could increase the likelihood of receiving funds.
15. Ron Mattox discussed the push to construct statewide bicycle routes that tie into a series of nationwide systems that are being developed. This could help fund the project and the Township’s desire to continue the trail up to Zanesville, Ohio. Joe Tucker noted the City of Marietta is trying to tie their trail system into the Industrial Heartland Trails Coalition trail system, which envisions a 1,450-mile system that will connect 48 counties across four states including Ohio, West Virginia, Pennsylvania, and New York.
16. Stakeholders noted the Marietta School Board has considered the Rudolph Property on SR-821 as a potential site for a new high school.
17. Tracy Brown noted that Corridors 6 and 7 are far away from the communities, and might not need the purpose and need of the project. There was also discussion regarding the feel of the trail in this area, and it was suggested that photos of similar trails be presented.
18. Travelling between Marietta and Devola along Corridor 7 and 8 would be difficult for some trail users. Corridor 7 was chosen because there is an old road that was abandoned after I-77 was constructed. The roadbed has the potential to provide adequate grades through rough terrain. Eric Lambert asked if the length of each corridor was known, which would help facilitate stakeholder decisions. Lengths are not known at this time.
19. Constructing this multi-use trail between Marietta and Devola will be a large expense, and will require funding. It is possible that the project will be constructed in phases, and CMAQ funds could be pursued for the entire project. Devola, Marietta, and Washington County could all work together to get the project funded, and then if needed, the trail could be constructed in separate phases by different governmental agencies. ODNR funds could be used for recreational sections, and Safe Routes to School fund could be used for connectors to schools. CMAQ funds were used to construct Phase 5 of the River Trail, and CMAQ funds must be based on community needs, not recreation. The connection between Devola and Marietta should provide adequate need for CMAQ funding.
20. Construction estimates presented will include the initial capital cost plus future maintenance costs.
21. A general discussion was held regarding carrying the trail across the Muskingum River which would allow the use of more open land and avoid the crossing at SR-821. However, trail bridges across the Hocking River cost \$2,000,000 each, so this alternative was considered not fiscally practical.
22. Stakeholders suggested that individual nodes at corridor intersections would make it easier to identify preferred alternatives, and ones that should be removed.
23. The owners of the Magnuson Hotel at SR-60 and Rathbone Road oppose the trail, and do not want it on their property.

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24. The City of Marietta felt Corridor 3 is better than Corridor A due to available roadway width. City officials also noted the Hospital is buying properties in the area and they have created a green space. The corridors should be presented to the Hospital. Woolpert has discussed the potential trail with Hospital representatives.
25. It was noted that Corridor E goes through an industrial area and would not be considered a scenic trail.
26. Corridor 4 follows the old inner-urban rail line. Further research is required on the location of this rail line to determine where it was located, and if the property has reverted to the original owners.
27. Longer corridors, such as Corridors 7 and 8 could be presented as future trails to be completed afterwards. Corridor B could be rerouted onto Pennsylvania Avenue to avoid this portion of Muskingum Drive, which is very tight. The City would like to avoid Muskingum Avenue if possible due to the limited width available.
28. The County Fair Board needs to be added as a stakeholder.
29. The sanitary sewer is a volatile political issue in the community, and we need to keep this project separate from the sanitary sewer issues. The County is being fined daily by the State, but they are planning to take this issue to higher level courts.

Public Involvement

The Public Involvement Meeting will be held at the Fire Station in Devola. The meeting will run from 4:00 to 7:00, and will be held on one day between April 10th and April 12th. This will be an open house meeting, and will not include open microphones for the public to speak. We will discuss the project in small groups and one-on-one with the public.

Woolpert will provide the following:

- 3 – Corridor Exhibits on Foam Core
- Images of various trails to demonstrate what the trail would look like.
- Hand-outs with project information on one side and the corridor map on the other.

During the meeting we will ask for input on which alternatives the public prefers. The public will be provided with colored stickers that they can use to identify the preferred corridors.

Action Items:

City of Marietta:

1. Verify corporation limits

Woolpert:

1. Update the exhibit to include nodes at each intersection for distribution.
2. Obtain photos of other multi-use trails to present to the public.
3. Measure the distance of the corridors and distribute to stakeholders.
4. Distribute updated mapping and information to Stakeholders.

All Stakeholders:

1. Provide four options for the preferred corridor based on updated mapping.
2. Provide any other comments regarding the corridor alignments and the Study.

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Project Name/Description: Devola Multi-Use Trail Stakeholder Meeting
Meeting Date/Time: January 25, 2018
Meeting Location: DDOT D10 Construction Conference Room

Name	Company	Email	Phone
ERIC LAMBERT	CITY OF MARIETTA	ELAMBERT@MARIETTAOHIO.NET	740.373.5495
Joe Tucker	"	joetucker@mariettach.net	740-373-5495
Tracy Brown	www IPC	tracy.brown@movrc.org	740-373-9993
Karl Schilling	Muskingum Twp	Kschilling@muskingum.org	740-629-1472
George Glasner	Dmv Comm. Hec	glasner2708@dot.ohio.gov	740-737-3357
Roger Wright	Muskingum Eng. Assoc	RWright@muskingum.org	740-376-1700
Alan Craig	DDOT	alan.craig@dot.ohio.gov	740-568-3954
PAUL DENNY	WOOLPERT	PAUL.DENNY@WOOLPERT.COM	WOOLPERT 6004

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PURPOSE AND NEED DOCUMENT



Purpose & Need Statement

Devola Multi-Use Path Alternatives Study

Muskingum Township, Ohio

November 15, 2017

Project History

Muskingum Township is located along the Muskingum River in Washington County, Ohio. At the time of the 2000 census, the Township had 4,627 people. The community of Devola, located beside the Muskingum River in Muskingum Township, consisted of 2,771 residents at the time of the 2000 census. Devola has an elementary school, churches, parks, and the historic Muskingum River Lock and Dam #2. Marietta, Ohio is directly south of Muskingum Township and is located at the confluence of the Ohio River and the Muskingum River. Marietta is the county seat of Washington County and with a population of over 14,000 people, Marietta provides much of the region's social and economic opportunities.

Motorists traveling from Marietta to Muskingum Township will travel SR-60 along the east side of the Muskingum River. Within Marietta, SR-60 is also identified as Third Street and Muskingum Drive. It has a 35 mph speed limit with two to three lanes, an average daily traffic volume of over 13,000 vehicles, and isolated sections of existing sidewalks. North of Marietta, the speed increases to 45 mph and the roadway is reduced to two lanes with paved shoulders. Here the average daily traffic volume is nearly 10,000 vehicles. No pedestrian or bicycle facilities are available between Marietta and Muskingum Township, therefore cyclists and pedestrians are required to share this heavily travelled roadway with motorists. SR 821 connects residents to the Broughton Nature and Wildlife Education Area. This is a two lane with a 55 mph speed limit and an average daily traffic volume of nearly 5000 vehicles. Therefore SR 821 is not safe for pedestrians and cyclists.

Existing trails are located in both Marietta and Muskingum Township. The Marietta Trail Network consists of both smooth paved trails and off-road gravel trails. These trails are available for biking, hiking, and off-road mountain biking. The paved trails include the Marietta Historic Loop (5.4 miles), Harmer Village Loop (5.0 miles), the Marietta River Trail (4.3 miles) and the Marietta to Belpre trail via SR-7 (11 miles). The mountain bike and hiking trails are located north of downtown Marietta and have been constructed and maintained by the River Valley Mountain Bike Association. There are also seven miles of mountain bike trails on the Rudolph Farm and Oakwood Park that connect to Colgate Dr. near Mill Creek Rd. These are all used mainly for recreation and do not connect to the walking paths. Figure 1 shows the current trails in Marietta.

Purpose Statement

The purpose of this project is to provide bicycle and pedestrian connectivity and safety by connecting and improving the existing trail system between Marietta and the Devola community.

Need Elements

The primary need is to increase pedestrian and cyclist mobility between the Marietta and Devola communities. The secondary need is livability.

Mobility

Currently, the communities are connected through the existing roadway network along SR-60, which is not a pedestrian friendly facility. Pedestrian friendly facilities will improve economic and social development among the communities in the region. Economic development will improve by allowing residents to reach small businesses and restaurants, such as the House of Wines, IGA, and Huck's Farm Market. Social development will improve by providing connections to Marietta High School, Devol's Dam, the WASCO facility, Putnam Elementary School, Washington County Fairgrounds, Memorial Hospital, Mill Creek Office Complex, and Marietta Bible Center Church.

The WWWIPC Transportation Plan Update 2040 Volume 1 details the need for connecting the existing trails and Marietta with the outlying community of Devola in the Alternative Transportation Programs section. Trails are needed to provide pedestrian and bicyclist mobility between residents in Devola and the existing trail system in Marietta, allowing residents to easily reach the trails.

Livability

People with limited access to a vehicle and those who are unable to drive are dependent upon transit, walking, or cycling to meet their transportation needs. Being able to reach destinations through these alternative methods improves the quality of life and livability for these people.

Goals and Objectives

The main goal of this project is to improve pedestrian and cyclist mobility between the communities of Marietta and Devola. Accommodating bicyclists and pedestrians with safe multi-use trails and on-road facilities that reach major destinations and connect to existing trails is the objective of the project. Trails should connect existing trails to the Marietta and Devola communities in order to allow residents to safely access and use the paths. Reaching these goals will improve the lives of residents and enhance both communities, while also reaching the social, environmental, transportation, and economic needs of the area as stated in the WWWIPC study.

Another goal is to improve air quality because poor air quality and air pollution have been issues for the region. In the past residents reported symptoms of exposure to pollution including headaches, burning eyes, nausea, difficulty breathing, fatigue, muscle aches, and sore throats. The U.S. Department of Health and Human Services first studied the area in 1969, and according to the WWWIPC Transportation Plan Update 2040, the area was designated as nonattainment of air quality standards in 2005. At this time most of the air quality issues were attributed to the Muskingum River Power Plant and Eramet Marietta Inc. (EMI). These facilities have invested in treatment equipment, reduced hazardous wastes, and updated their processes to reduce air pollution.

Improvements in air quality were first noted in 2009 when the Mid-Ohio Valley Air Quality Analysis reported Nitrogen Oxide and Volatile Organic Compound levels were lower than in 2002. This Analysis reported further reductions in 2015 and the 2025 levels are expected to be much lower. Through the improvements to the Muskingum River Power Plant and EMI, the region reached attainment of air quality standards in 2013. The goals of furthering reductions in air pollution and improvements in air quality are supported by the Congestion Mitigation & Air Quality (CMAQ) Improvement Program.

Logical Termini

Logical termini for this project are the existing Marietta River Trail path in Marietta and the community of Devola.

Independent Utility

The project has independent utility and will be a usable and reasonable expenditure of funds even if no additional improvements are made in the area. It is not dependent upon any other projects in order to function.

ENVIRONMENTAL OVERVIEW

WAS-DEVOLA MULTI-USE PATH STUDY ENVIRONMENTAL OVERVIEW

The environmental overview for the Devola Multi-Use Path Study involved a desk-top based upon literature searches, review of aerial photography, and other publicly available data. Maps of environmental resources within the study area have been prepared for this environmental overview.

Cultural Resources

The Muskingum River itself is a National Register of Historic Places (NRHP) historic district. Previous studies identified a number historic structures and archeological sites within the Devola Multi-Use Trail Study Area. There are numerous individual buildings that are NRHP-listed, as well as the Marietta Historic District, and dozens of older buildings that are in the Ohio Historic Inventory, but not on the NRHP. Any undisturbed, relatively flat fields hold the potential for archaeological deposits.

Ecological Resources

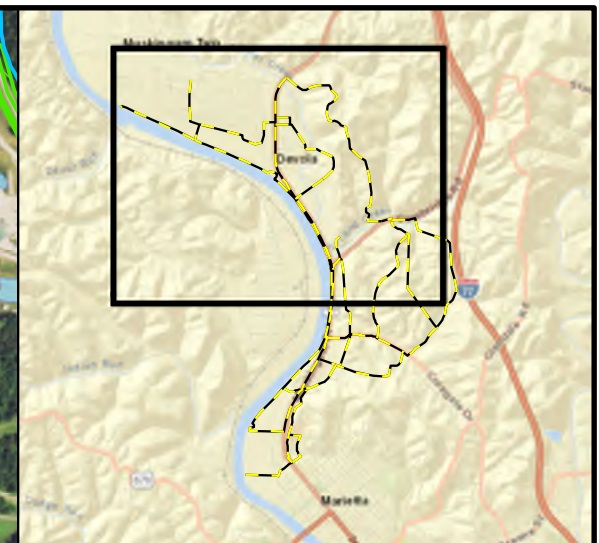
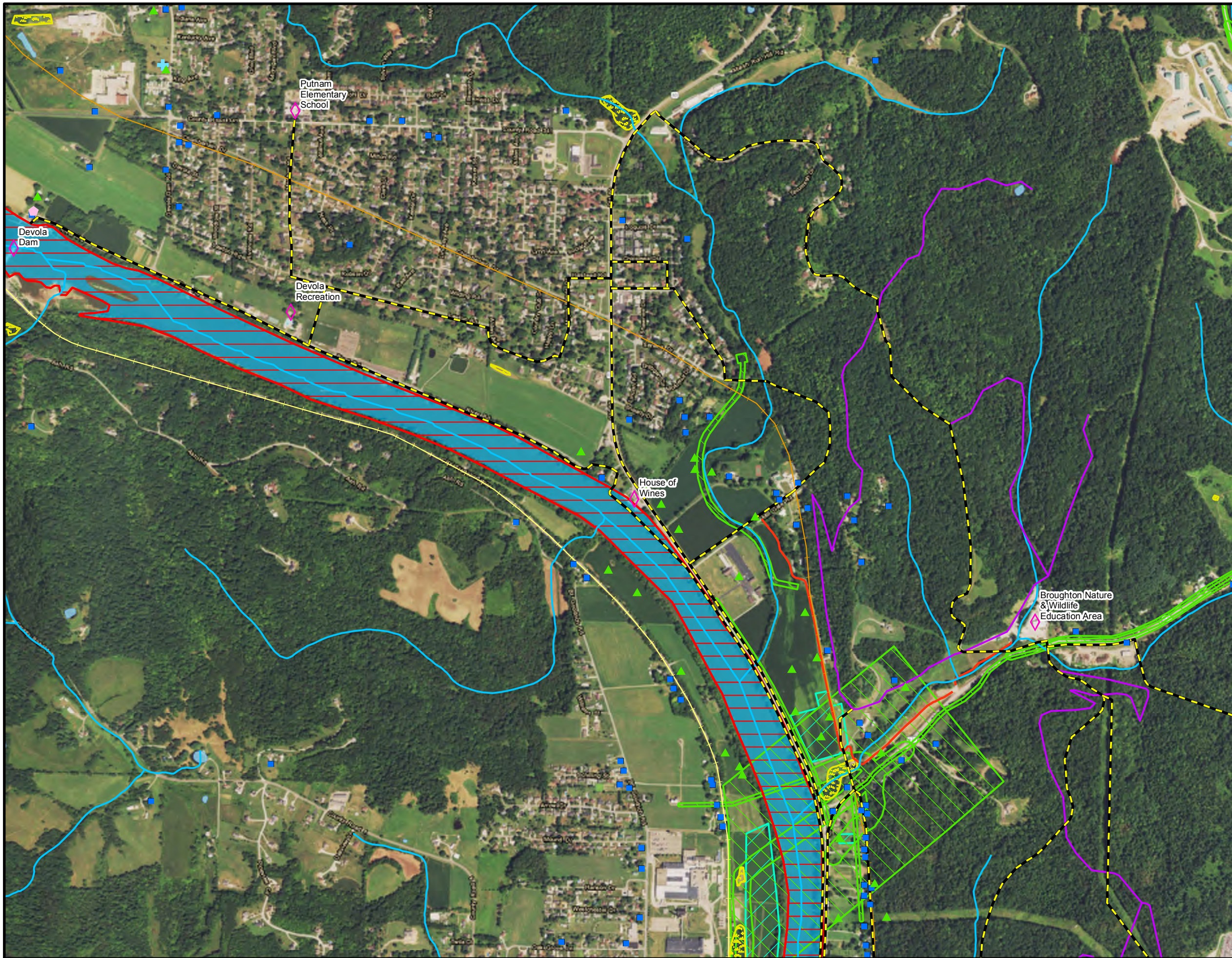
Background information about ecological resources has been obtained from a review of the USGS National Hydrography Dataset (NHD) and USFWS National Wetland Inventory (NWI). Streams in the study area include the Muskingum River, Tupper Creek, Second Creek, Mill Creek, and a number of unnamed tributaries.

Underserved Populations

Based on the USEPA EJSscreen data reviewed January 2019, the minority population in the census block groups within the study area ranges from 0 to 10% and the low-income population in the study area ranges from 12 to 53%. The population over age 64 ranges from 11 to 27% and the linguistically isolated population ranges from 0 to 6%. See Table 1 below for additional details. The preferred alternative evaluated in this feasibility study does not appear to have any disproportionately high and adverse impacts on underserved populations, but the potential for impacts to underserved populations will need to be reviewed in future phases of project development.

Table 1: Underserved Populations in Study Area

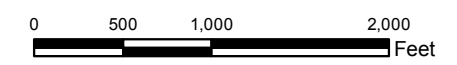
Census Block Group	% Minority	% Low Income	% Over Age 64	% Linguistically Isolated
391670214003	6	21	21	6
391670214001	10	15	24	0
391670209001	0	12	25	0
391670209002	7	53	27	0
391670208001	2	47	18	0
391670208002	0	32	11	0



Site Location Map

Legend

- Landmark
- DMUT
- Active Rail Line
- Abandoned Rail Line
- Marietta Trails
- Proposed Pathway
- River (NHD)
- Pond (NHD)
- Stream (NHD)
- NWI
- Archaeological Sites
- Historic Structures
- NR Determinations of Eligibility
- OGS Cemeteries
- NR Boundaries
- Phase 1
- Phase 2



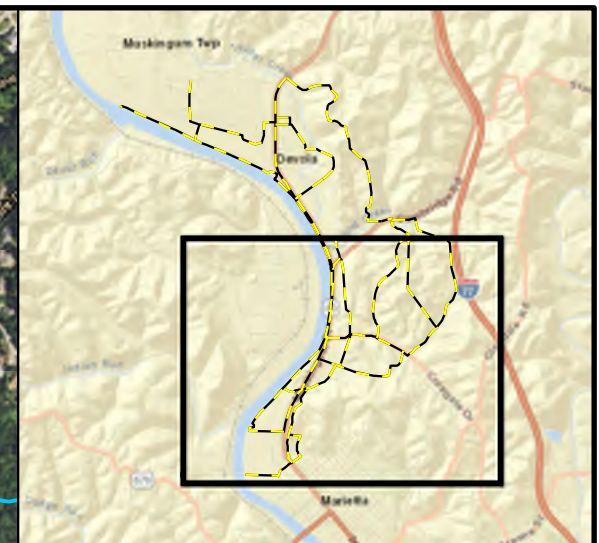
Devola Multi-Use Trail

Environmental/Cultural Resources Map



Lawton & Associates, Inc.

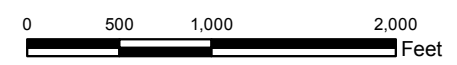
Date: Dec. 2017	Approved by: SD	L&A No. 17-0413	Figure 1a
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Site Location Map

Legend

-  Landmark
-  DMUT
-  Active Rail Line
-  Abandoned Rail Line
-  Marietta Trails
-  Proposed Pathway
-  River (NHD)
-  Pond (NHD)
-  Stream (NHD)
-  NWI
-  Archaeological Sites
-  Historic Structures
-  NR Determinations of Eligibility
-  OGS Cemeteries
-  Historic Previously Surveyed Areas
-  NR Boundaries
-  Phase 1
-  Phase 2



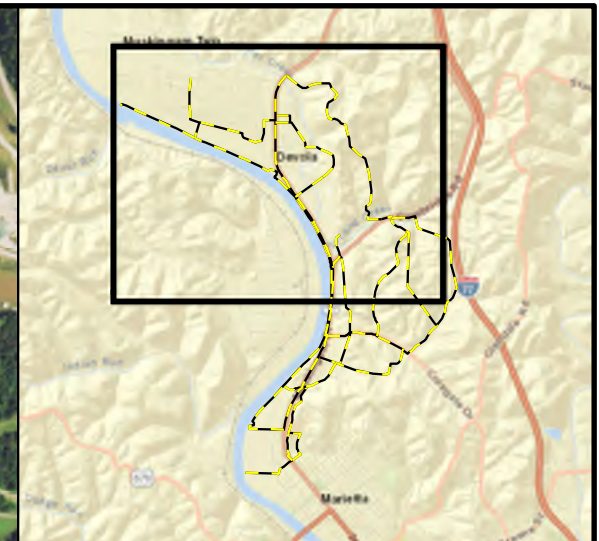
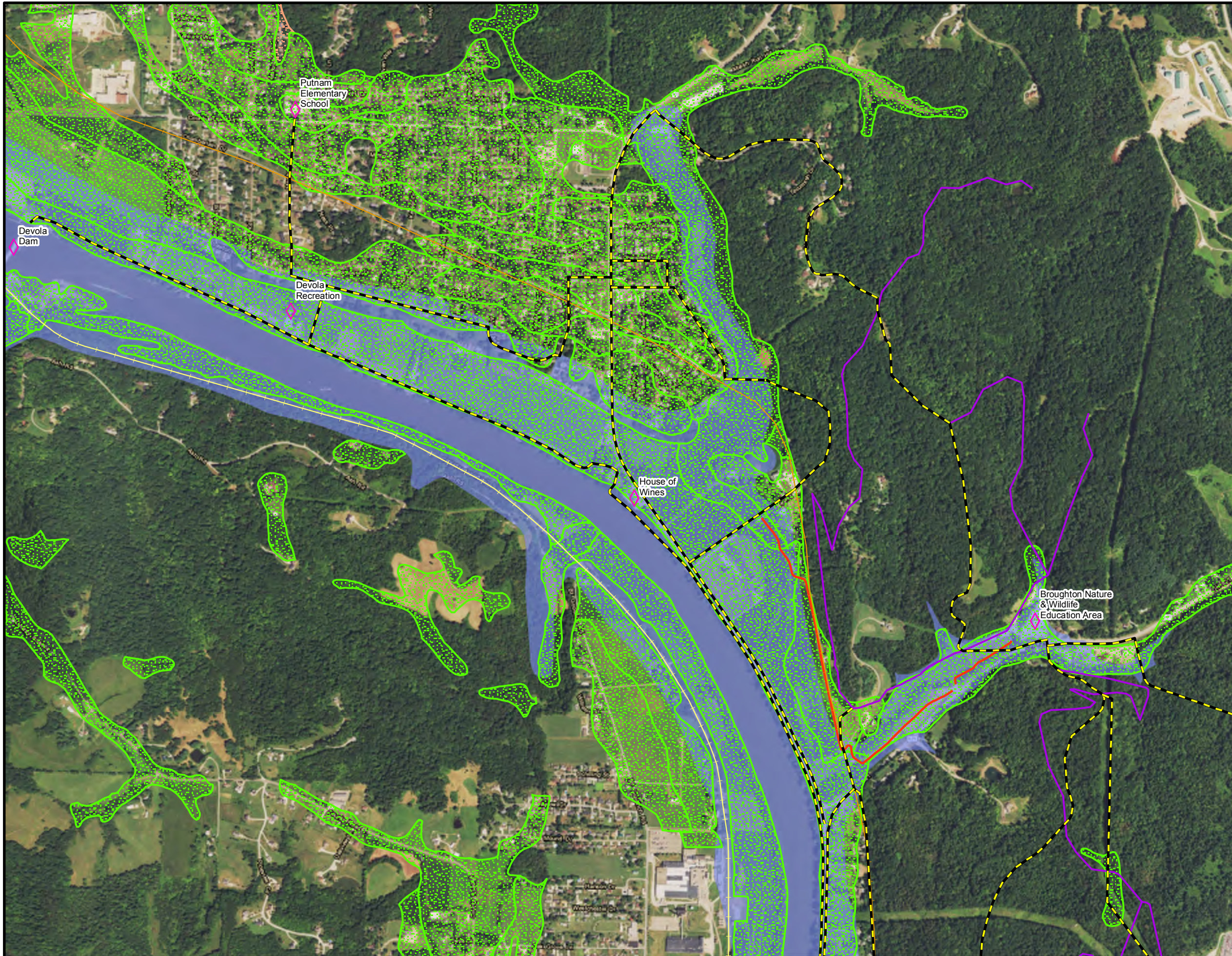
Devola Multi-Use Trail

Environmental/Cultural Resources Map



Lawton & Associates, Inc.

Date: Dec. 2017	Approved by: SD	L&A No. 17-0413	Figure 1b
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Site Location Map

Legend

- Landmark
- DMUT
- Active Rail Line
- Abandoned Rail Line
- Proposed Pathway
- Marietta Trails

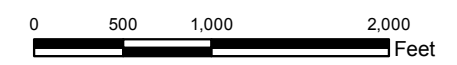


FEMA Flood Zone

- A

Prime Farmland

- Prime farmland if drained
- All areas are prime farmland

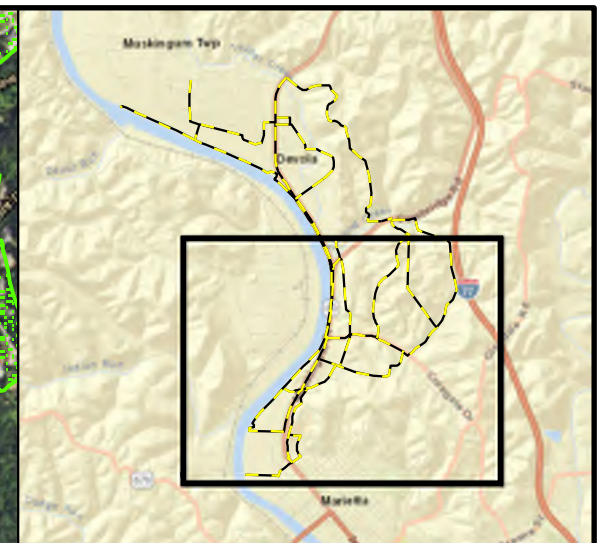
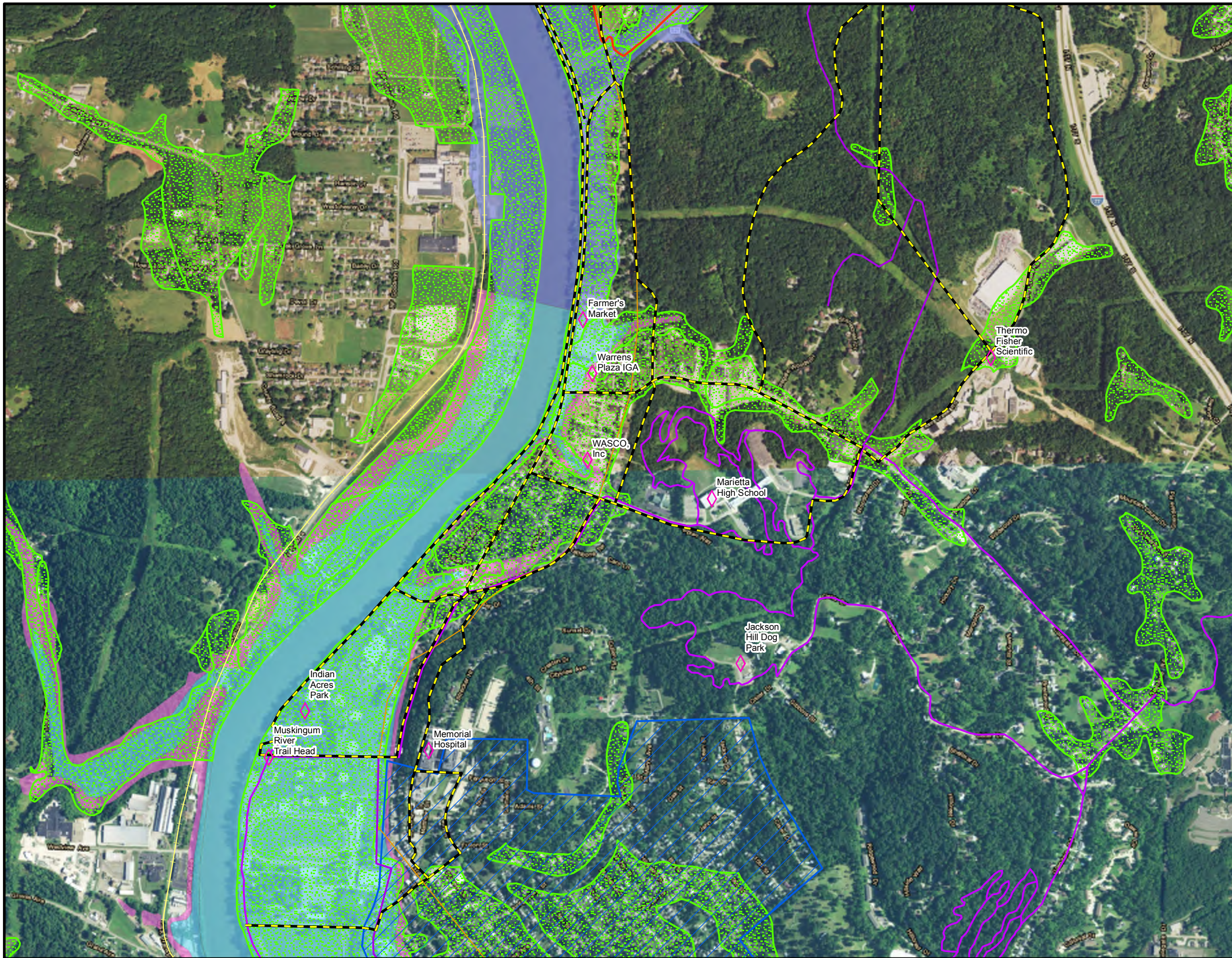


Devola Multi-Use Trail

Prime Farmland/
FEMA Flood Zone Map



Date: Dec. 2017	Approved by: SD	L&A No. 17-0413	Figure 2a
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Site Location Map

Legend

- Landmark
- DMUT
- Active Rail Line
- Abandoned Rail Line
- Proposed Pathway
- Marietta Trails
- Historic Previously Surveyed Areas

FEMA Flood Zone

- 0.2% Annual chance of flood hazard
- A
- AE

Prime Farmland

- All areas are prime farmland

N

0 500 1,000 2,000
Feet

Devola Multi-Use Trail

Prime Farmland/
FEMA Flood Zone Map

Date: Dec. 2017	Approved by: SD	L&A No. 17-0413	Figure 2b
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DESIGN CRITERIA AND TYPICAL SECTIONS



Devola Multi-Use Path

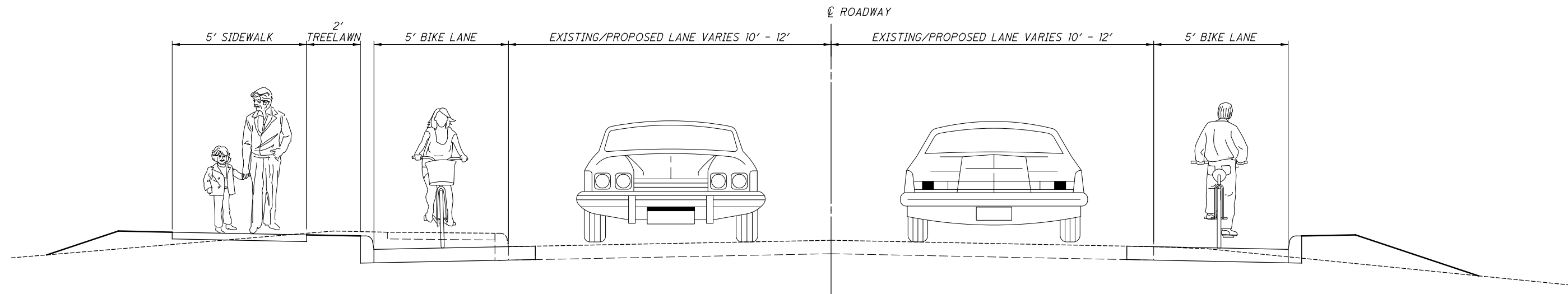
Design Criteria for Shared Use Paths, Bike Lanes and Shared Lanes

Design Criteria for Shared Use Paths		
Criterion	Proposed	Comments
Design Speed	18 MPH	Design speed can vary from 15 mph up to 30 mph depending upon surface material and grade.
Horizontal Alignment	60' Minimum Curve Radius	
Path Width	10'	(Paths range from 8' to 14' wide.)
Graded Shoulder Width	3'	Shoulder widths can vary between 3' and 5'
Grade	5% Maximum	Match existing grade if adjacent to roadway
Clearance from Lateral Obstructions	2'	
Stopping Sight Distance (SSD)	134' for Flat Slopes	Stopping sight distance varies from 110' to 221' based on the slope.
Barriers/Rails	42" Height	
Vertical Clearance	8' Min., 10' Desirable	Vertical clearance varies between 8' minimum and 10' preferred.
Bridges & Underpasses	2' Offset	

Design Criteria for Bike Lanes and Shared Lanes (On Roadway)		
Criterion	Proposed	Comments
Grade	≤ Grade Adjacent Roadway	
Bike Lane Width	5'	The bike lane will lie between the edge of the travelled way and the curb or parking lane.
Shared Lane Width (Outside Lane with Sharrows)	14' Min., 15' Max	The shared lane varies between 14' and 15' when there are sharrows.
Paved Shoulder	4' Min.	
Shared Bicycle/On-Street Parking Lane Width	12' Min.	

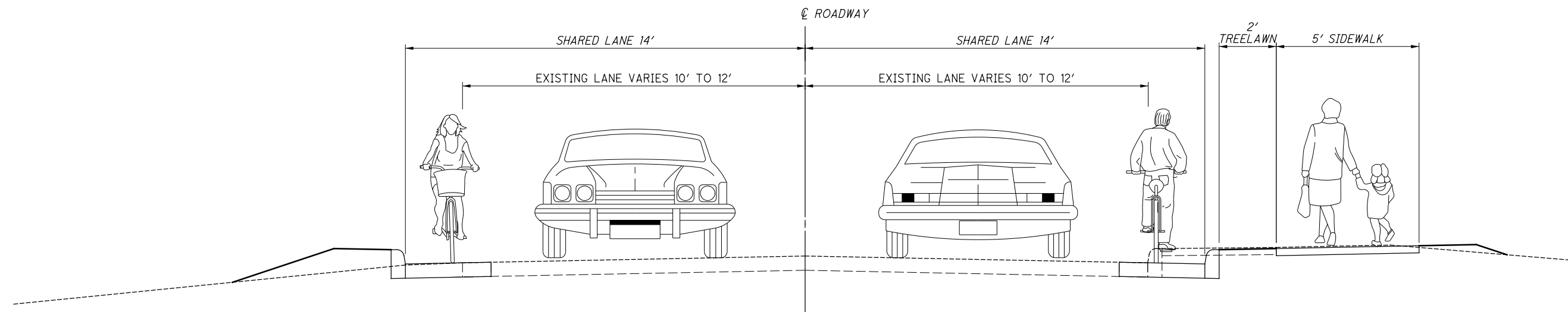
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CALCULATED
MWZ
CHECKED
GPD



EXISTING TWO LANE FACILITY, WITH OR WITHOUT SIDEWALKS
PROPOSED TWO VEHICULAR LANES WITH ADDED BIKE LANES AND SIDEWALK

DAVIS AVE
SR-60



EXISTING TWO LANE FACILITY, WITH OR WITHOUT SIDEWALKS
PROPOSED TWO SHARED VEHICULAR/BICYCLE LANES WITH ADDED SIDEWALK

RATHBONE RD

TYPICAL SECTIONS

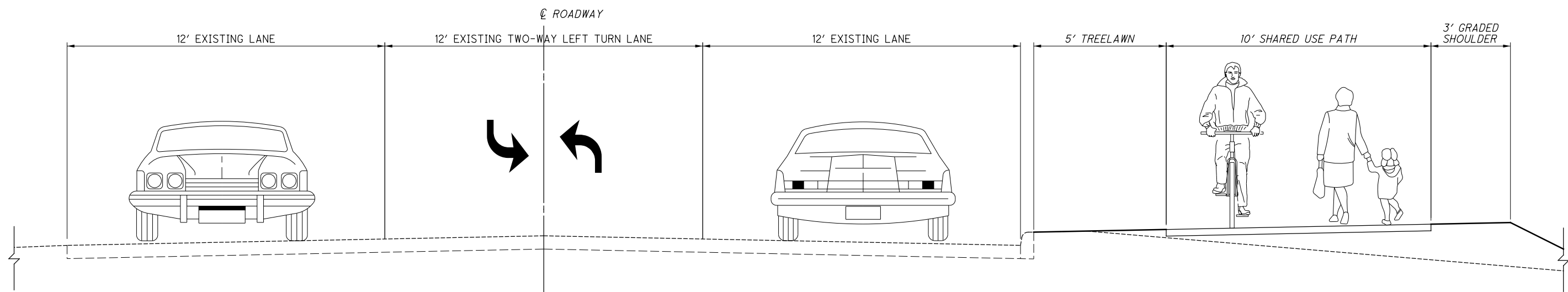
WAS-DEVOLA

1
2

NOTE: NOT TO SCALE. EXISTING AND PROPOSED ROADWAY CONFIGURATIONS ARE GENERALIZED AND NOT REPRESENTATIVE OF EXACT EXISTING CONDITIONS. WIDTHS AND LOCATIONS OF SIDEWALKS AND LANES MAY VARY.

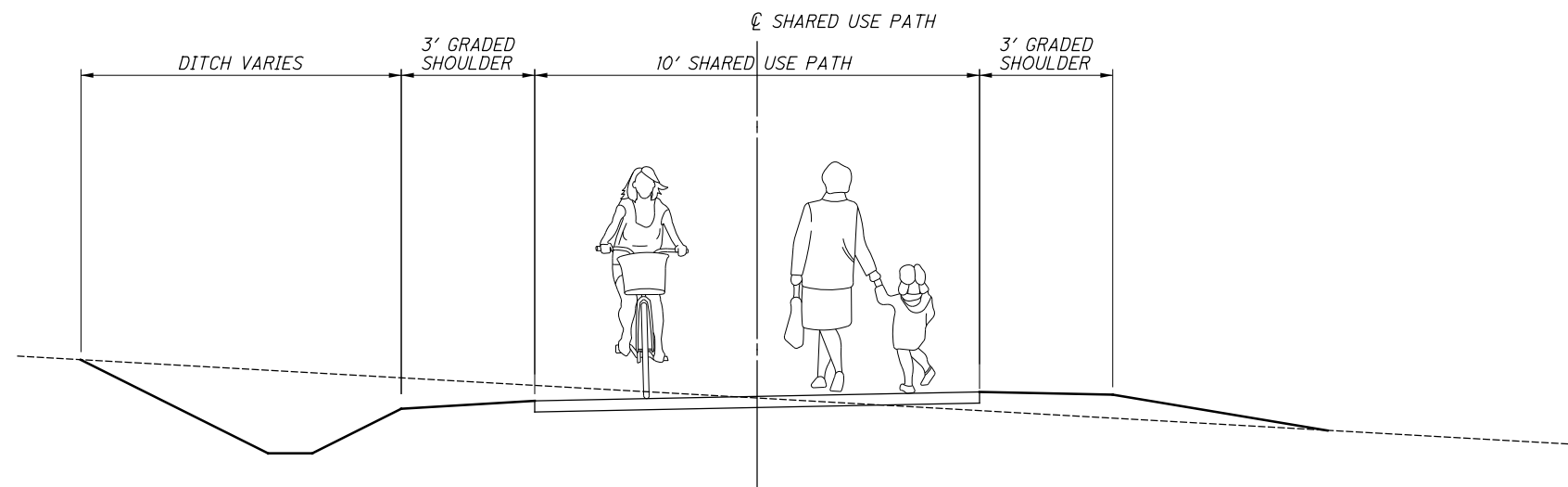
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CALCULATED
MWZ
CHECKED
GPD



EXISTING TWO/THREE LANE FACILITY, WITH OR WITHOUT SIDEWALKS
PROPOSED TWO/THREE VEHICULAR LANES WITH ADDED SHARED USE PATH (SIDEPATH)

COLEGATE DR
 MILLGATE RD
 SR-60
 RIVER RD



PROPOSED SHARED USE PATH

SEGMENTS NOT PARALLEL TO ROADWAYS

TYPICAL SECTIONS

WAS-DEVOLA

2
2

NOTE: NOT TO SCALE. EXISTING AND PROPOSED ROADWAY CONFIGURATIONS ARE GENERALIZED AND NOT REPRESENTATIVE OF EXACT EXISTING CONDITIONS. WIDTHS AND LOCATIONS OF SIDEWALKS AND LANES MAY VARY.