

Muskingum Township, Ohio

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FEASIBILITY STUDY

WAS-DEVOLA MULTI-USE PATH STUDY

PID NO. 102092



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1. INTRODUCTION

The Devola Multi-Use Path Study has been commissioned by Muskingum Township to study alternatives for the improvement of pedestrian facilities in Washington County, Ohio, specifically extending the Marietta River Trail from Indian Acres Park in Marietta north to Devola. Improvement of the regional pedestrian facilities has been identified by the Wood Washington Wirt Interstate Planning Commission (WWWIPC) and the City of Marietta. WWWIPC identified the need to improve regional pedestrian facilities in their Long-Range Plan Update 2040, their Bicycle and Pedestrian Safety Study 2017, the 2014 City of Marietta Traffic Safety and Operations Study, and their Alternate Transportation Plan 2010. Additionally, the City of Marietta identified the need to extend the existing Marietta River Trail in the Mayor's Alternate Transportation Advisory Committee in the Marietta, Ohio Proposed Alternate Transportation Improvements.

A feasibility study was requested by Muskingum Township to determine the route for this potential multi-use trail improvement. The Study considered an array of corridors ranging from on-road facilities to new multi-use trails, exhibits of which can be found throughout the appendices. The preferred corridor was determined after series of Stakeholder's Meetings and Public Involvement Meetings, including a thorough analysis of the study area and corridors.

2. STUDY AREA

The study area is bounded by Marietta on the south, Devola on the north, the Muskingum River on the west, and IR-77 on the east. Within the study area the existing multi-use trail system consists of the Marietta River Trail system, the Devola Multi-Use Trail, and a series of mountain bike trails. The Marietta River Trail follows the banks of the Muskingum River from Indian Acres Park south to the Ohio River, and eastward along the Ohio River towards IR-77. The Devola Multi-Use Trail is located along the toe of the hillside on the Broughton Nature and Wildlife Education Area and follows SR-821 and SR-60 from the park's pavilion up to Millgate Road. The Broughton Nature and Wildlife Area also provides recreational facilities for public use, including a series of mountain bike trails, disc golf, and the pavilion. There are no connections between the Devola Multi-Use Trail and the Marietta River Trail and bicycles and pedestrians travelling between Marietta and Devola must use SR-60, which is a two-lane high-speed roadway with no pedestrian facilities.

Marietta is a historic urban environment with a rich history and Devola is modern community with large yards, an elementary school, and a community park. The Devola Soccer Complex is located along River Road between the residential area and the Muskingum River. Between these two communities the area is rural in nature, with isolated areas of prime farmland separated by forested areas. Lowlands and flood prone areas are located along the Marietta River, and upland areas are located along the eastern half of the study area.

3. CONCEPTUAL CORRIDORS

3.1 Preliminary Corridors and Stakeholder's Meeting #1

Preliminary corridors were developed based on the findings of previous studies prepared by WWWIPC and the City of Marietta. These studies provided valuable information, and potential corridors developed by these studies were identified as Preliminary Corridors for this study. These corridors were compiled on an exhibit and presented to the stakeholders at the first Stakeholder's Meeting held on August 10, 2017 at the pavilion on the Broughton Nature and Wildlife Education Area. Stakeholders present at this meeting included officials from Muskingum Township, the City of Marietta, ODOT, Washington County, the Wood-Washington-Wirt Interstate Planning Commission (WWWIPC), land owners, and the Devola Multi-Use Trail Committee. The purpose of this meeting was for the engineers to obtain stakeholder feedback on the

preliminary corridors and the status of the project. Feedback received included destinations that would be crucial for CMAQ funding, additional conceptual corridors to be studied, and obstructions to development of some of the corridors presented. The exhibit utilized during the first Stakeholder's Meeting is located in **Appendix A**.

3.2 Conceptual Corridors, Purpose and Need, and Stakeholder's Meeting #2

After the first Stakeholder's Meeting the preliminary corridors were revised and the Purpose and Need Statement, the Geotechnical Paper Study Phase 1, and the Environmental Overview were prepared. The Purpose and Need Statement was submitted to Muskingum Township and ODOT District 10 on November 15, 2017, and the preferred corridor selected at the conclusion of this study must meet the requirements established by this document. To meet these requirements the multi-use trail must improve connectivity, mobility, and livability for pedestrians and bicyclists travelling in Marietta and Devola.

Phase 1 of the Geotechnical Paper Study concluded that significant issues should be anticipated at all locations where the multi-use trail is routed into the upland areas. These issues are not anticipated in the lowland portions of the study area, but the presence of groundwater could require dewatering during construction of bridges and tunnels in these areas.

The environmental overview consisted of a desktop review of the project study area. The overview concluded that that large portions of the lowland areas are in FEMA Flood Zone A, and corridors in this area would be required to cross several creeks. The overview also noted that historical structures are scattered throughout the study area, with a higher concentration in Marietta, and several archeological sites were identified.

The revised corridors were compiled on an exhibit and presented at the second Stakeholder's Meeting held on January 25, 2018 at ODOT's District 10 office. Stakeholders present at this meeting included officials from Muskingum Township, the City of Marietta, ODOT, Washington County, the Wood-Washington-Wirt Interstate Planning Commission (WWWIPC), and the Devola Multi-Use Trail Committee. The purpose of this meeting was for the engineers to present the findings of the project to date, including Purpose and need, the findings of geotechnical study and how that would impact construction, and the environmental overview to the stakeholders and obtain feedback. Feedback included information regarding the potential use of the AEP easement for the multi-use trail, concerns over safety and access for emergency services, funding, and extending the trail north towards Zanesville.

Documents presented during the Stakeholder's Meeting are located in **Appendix B**.

3.3 Public Involvement Meeting #1

The conceptual corridors were revised based on feedback received during the second Stakeholder's Meeting. Significant revisions included the addition of a corridor near Jackson Hill Dog Park and the removal of corridors along SR-60 in Marietta, the Broughton Nature and Wildlife Educational Area, and on the Rudolph property. The revised exhibit was presented at the first Public Involvement meeting held on April 10, 2018 from 4:30 p.m. to 6:30 p.m. at the Devola Volunteer Fire Company. During this meeting representatives from the project team presented the corridors to the public and took questions in an open-house format. Following the presentation, the project team discussed the project with the public one-on-one and encouraged the public to provide comments on the corridors, including the identification of which corridor they would prefer.

The project team received 24 comments from the public on a variety of issues. Public feedback included comments on trail safety, areas of known landslides, and preferred corridor locations. Documents utilized during the Public Involvement meeting are included in **Appendix C**.

3.4 Key Issues for Conceptual Corridors

Key issues developed through the Stakeholder's Meetings and Public Involvement meeting included funding, trail safety, design, geotechnical issues and the location of the future corridor.

Funding

Funding the project will be difficult and Muskingum Township, the City of Marietta, and local citizens have raised concerns about costs associated with construction and future maintenance of the multi-use trail. During the second Stakeholder's Meeting it was noted that CMAQ funds could be used for the project, but these must be based on community needs, not recreational needs. Therefore, CMAQ funds might not be eligible for the longer corridors such as Corridors 6 and 7 on the eastern side of the study area. These corridors and trail spurs could be constructed through other funding mechanisms at a later date.

Trail Safety

Stakeholders provided feedback regarding the safety of the trail and were concerned about SR-60 and SR-821 due to high speeds and heavy traffic, and access to the trail for emergency medical services. Due to the existing topography the trail will be required to travel near and cross both SR-821 and SR-60. These locations will require further study as the project develops.

Emergency medical services will have access to the trail and stakeholders requested bollards be used to prevent errant motorists and vandals from driving on the trail. However, it has been noted that modern trail designs typically eliminate bollards from trail heads to eliminate potentially fatal bicycle crashes.

Additional comments received during the public involvement process discussed students walking to school in pre-dawn darkness along narrow roads and noted a strategically placed trail could be beneficial for the students.

Design

Design requirements for the trail were discussed during the second Stakeholder's Meeting and the Public Involvement Meeting. The design criteria document notes the width of a multi-use trail is 10-feet, while bicycle lanes added to the existing roadways would be 5-feet and shared lanes would be a minimum of 14-feet wide.

The multi-use trail will be required to meet the requirements set forth in the Americans with Disabilities Act (ADA.) To meet these requirements a newly constructed multi-use trail would be limited to a maximum grade of 5%. Therefore, meeting ADA requirements in the upland areas will require the multi-use trail to utilize switch-back alignments and retaining walls, thereby increasing the costs associated with construction. The design criteria document is included in **Appendix B**.

Geotechnical Issues

The Phase 1 geotechnical paper study provided a preliminary geotechnical assessment of the study area. The assessment concluded that geotechnical issues would not be anticipated in the lowland areas of the study areas, but significant issues should be anticipated for any trails extending into the upland areas. These issues would include historic landslides and weathered bedrock, which would require additional excavation to provide stable slopes or retaining walls with larger than normal foundation embedment. The geotechnical assessment is included in **Appendix B**.

Conceptual Corridor Locations

During the Public Involvement meeting the project team requested feedback regarding which corridor segments people preferred. The response varied and ranged from corridors located near the Muskingum River and SR-60, to corridors located entirely through the upland areas and tied into the existing Devola Multi-Use Trail, to rerouting the trail to the opposite side of the Muskingum River. However, the most requested corridor segments were found to be in areas that would improve access to parks, schools, and businesses. Some of these segments were specified by the public as safety improvements for pedestrians and cyclists, particularly kids going to school and the parks.

4. FEASIBLE CORRIDORS

4.1 Feasible Corridors and Stakeholder's Meeting #3

Following the first public involvement meeting the project team incorporated feedback provided by the public to determine which conceptual corridors to carry forward as potential routes for the feasible corridors. Corridor segments that were carried forward were analyzed for potential issues, aesthetics, utility impacts, right of way impacts and potential geotechnical issues. Following this analysis, the project team revised the conceptual corridor exhibit to include the most requested corridors segments, which were mostly located in lowland areas and provided connections to desirable destinations such as Indian Acres Park, the Broughton Nature and Wildlife Education Area, businesses and restaurants along SR-60, and through Devola to Devols Dam. Revisions also included the removal of the corridor along River Road due to safety and right of way impacts, and the longer upland corridors due to a lack of support, potential geotechnical issues, and funding.

The revised exhibit was presented to stakeholders at the third Stakeholders Meeting held on June 12, 2018 at the Muskingum Township Hall. Stakeholders present included officials from Muskingum Township, the City of Marietta, ODOT, Washington County, and the Devola Multi-Use Trail Committee. The purpose of this meeting was for engineers to present the findings of the public involvement meeting and revised corridors to the stakeholders for feedback. Stakeholder feedback included additional information on River Road and the corridors through Devola, the removal of a corridor on the Broughton Nature and Wildlife Educational Area, and discussion on safely crossing SR-60. Documents presented during the Stakeholder's Meeting are located in **Appendix D**.

4.2 Feasible Corridors and Stakeholder's Meeting #4

Stakeholder's Meeting #4 was held on August 28, 2018 at the Muskingum Township Hall. Stakeholders present included officials from Muskingum Township, the City of Marietta, ODOT, Washington County, the Wood-Washington-Wirt Interstate Planning Commission (WWWIPC), and the Devola Multi-Use Trail Committee. The purpose of this meeting was to provide a recap of the project to date and to obtain feedback on the revised corridors. Revisions to the corridors following Stakeholder's Meeting #3 were discussed, along with ADA compliance and the Phase 2 Geotechnical Paper Study. The geotechnical study concluded that significant geotechnical issues should be anticipated in any upland areas. Therefore, constructing an ADA compliant multi-use trail through the upland areas would result in significant increases in cost that would not be encountered in the lowland areas. It was also noted that the baseline corridor was not the preferred, and it could be revised based on additional stakeholder feedback.

Members of the Devola Multi-Use Trail expressed their disappointment that the full length of the existing Devola Multi-Use Trail was not being utilized and felt that constructing the new multi-use trail along AEP's 100-ft easement would provide an economically prudent trail that would draw bicyclists from outside the local community for recreational rides. Other stakeholders agreed that this would be a nice facility but

noted that the easement was routed through a remote location in the upland area of the project. Therefore, this option would not be supported by the purpose and need of the project.

Other topics of discussion included safety at the intersection of SR-60 and SR-821, signalization of crossings, right of way availability along SR-60, and further discussion regarding the corridors in Devola, including converting River Road to a one-way facility to provide additional room for the trail. Documents presented during the Stakeholder's Meeting are located in **Appendix E**.

On October 12, 2018 the Marietta Rowing and Cycling Club sent a letter to the engineer noting their disappointment in the location and route of the baseline corridor. In their opinion construction of the baseline corridor would be "a waste of time and money" and the conceptual corridors that were routed through the woods east of SR-60 between Colegate and SR-821 provided far superior alignment. Unfortunately, the Marietta Rowing and Cycling Club had not been involved in the Stakeholder's Meetings nor the public involvement meeting and did not provide these comments within the 30-day time frame following the first Public Involvement meeting. This letter is included in **Appendix E**.

4.3 Public Involvement Meeting #2

The corridor exhibit was revised based on feedback received during the fourth Stakeholder's Meeting. Significant revisions included the removal of corridors near Memorial Hospital and along the abandoned inner-urban rail line due to geological concerns. The corridors within Devola were modified again, including the addition of the previously removed corridor on River Road. Also, the corridor through Indian Acres Park was modified to improve access to facilities within the park. The revised exhibit was presented at the second Public Involvement meeting held on November 13, 2018 from 5:30 p.m. to 7:30 p.m. at the Devola Volunteer Fire Company. During this meeting representatives from the project team presented the preferred corridor to the public. Following the presentation, the project team discussed the corridor with the public one-on-one and encouraged the public to provide comments.

The project team received 17 comments from the public on a variety of issues. Key issues for the public were one-way traffic corridor along River Road and other corridors through Devola, potential uses for the trail including travel to local businesses and restaurants along SR-60, and safety of the trail crossing SR-60 and SR-821. Representatives from the Devola Multi-Use Trail Committee requested the preferred corridor be rerouted to utilize the full length of the existing Devola Multi-Use Trail and the recently acquired AEP easement. Documents utilized during the second Public Involvement meeting are included in **Appendix F**.

4.4 Key Issues for Feasible Corridors

Key issues developed through the Stakeholder's Meetings and second Public Involvement meeting included one-way traffic on River Road, corridors through Devola, trail safety, and incorporation of the existing Devola Multi-Use Trail.

One-Way Traffic on River Road

The one-way traffic concept along River Road was developed by stakeholders during the third Stakeholder's Meeting held on June 12th. This concept was discussed with the Devola Volunteer Fire Company who analyzed the impact to their operations. The fire department concluded the altered traffic patterns would increase response times for emergencies at the park and along River Road. Therefore, the fire department rejected this concept. Additionally, members of the community discussed the one-way option on the social website Nextdoor.com and commented on it during the Public Involvement Meeting. The citizens of Devola were concerned about the altered traffic patterns increasing traffic through their community and creating safety issues along the roadways. Due to these concerns the one-way concept was removed from further consideration.

Corridors through Devola

The residents of Devola support construction of a multi-use trail along SR-60 and have expressed an interest in using the multi-use trail to travel to businesses and parks along SR-60. However, most of the residents believe the residential streets within their community are safe for pedestrian use and construction of a multi-use trail between SR-60 and Devols Dam would be unnecessary. Therefore, the preferred alternative terminates at SR-60 and Chamberlain Drive, near Dough Boyz Pizzeria. Additional study will be required should the residents of Devola decide to pursue this trail in the future.

Trail Safety

Crossings of SR-821 and SR-60 present a concern to the residents of Marietta and Devola. These facilities carry heaving amounts of traffic and are often high-speed facilities. Due to existing topography the multi-use trail will be required to cross SR-821 in close proximity to SR-60. The intersection of these two state routes is an outdated design that allows motorists to travel through the intersection at a high rate of speed. This is not an ideal location for a multi-use trail to cross SR-821, therefore the project team has discussed reconstructing this intersection with the Ohio Department of Transportation (ODOT). If the intersection is redesigned it will utilize modern design criteria, which would require the removal of the high-speed movement from SR-821 to SR-60. Additionally, ODOT has a long-term plan to construct a bridge that will carry SR-821 across the Muskingum River, thereby making this an ideal location for the future multi-use trail crossing.

Due to funding limitations it is likely that at-grade crossings with signalization will be incorporated into the project, with grade separation crossings being constructed in the future if additional funds become available. Crossings such as SR-60 near Devola will include analysis of High-intensity Activated crossWalk (HAWK) beacons to improve safety.

Incorporation of the Existing Devola Multi-Use Trail

The Devola Multi-Use Trail Committee has requested that the entire length of the existing Devola Multi-Use Trail be incorporated into the preferred corridor. Unfortunately, incorporation of the entire length would require the preferred alternative be rerouted through the upland areas north of Marietta, away from SR-60 and many of the destinations that the preferred corridor will be required to connect to for the use of CMAQ funds. Additionally, during the first Public Involvement Meeting the most chosen corridors were found to be in the lowland areas that provided access to schools, businesses and parks. Unfortunately, the preferred corridor cannot be rerouted to incorporate the entire Devola Multi-Use Trail. However, the proposed multi-use trail provides an excellent connection to the existing trail and will allow residents from Marietta and Devola to walk or bike to the Broughton Nature and Wildlife Education Area. This connection could be used to demonstrate the use of pedestrian facilities in the region and might be able to support funding of a recreational trail that extends from Marietta to Zanesville as previously discussed.

5. PREFERRED CORRIDOR

The preferred corridor has been established and the final exhibit is included in **Appendix G**. The preferred corridor is shown in green on the exhibit, and any sections that will require additional study are shown in orange. Further studies will be required to determine if the multi-use trail is desired in Devola, and the trail could also be relocated to the east side of the WASCO facility prior to design. As currently shown the preferred corridor extends 3.6 miles from the Marietta River Trail head to the intersection of Chamberlain Drive and SR-60.

A conceptual cost estimate has been prepared for the preferred corridor. This estimate was prepared based on the awarded bid for the WAS-Marietta River Trail Phase V project and ODOT's Procedure for Construction

Budget Estimating (May 2013). The conceptual cost estimate is included in **Appendix G** and has been broken down by each segment of the multi-use trail. Costs associated with the corridor segments in Devola have been removed from the cost estimate to reflect the community's beliefs that the residential streets are adequate for pedestrian traffic and construction of a multi-use trail would be unnecessary. It is anticipated that construction

of this multi-use trail will occur in phases when funding is available and the opportunity to purchase property arises.