HAM Wasson Way to Otto Armleder

PID 113603

Feasibility Study

June 27, 2025

Prepared for:

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1.0 INTRODUCTION

The City of Cincinnati, in cooperation with the Ohio Department of Transportation (ODOT), is proposing a new shared use path connection from the Wasson Way Trail to Otto Armleder Park. The proposed project is located in the Village of Fairfax and the City of Cincinnati in southeast Hamilton County (See **Figures 1 and 2**). This project is divided into three separate contiguous sections, starting with the northern section of the trail (Segment 1), which extends from the existing Wasson Way Trail at Ault Park and travels generally south to Wooster Pike. The middle section of the trail (Segment 2) crosses over the existing Norfolk Southern Railroad using the Wooster Road bridge near the intersection of Wooster Pike, Wooster Road and Red Bank Road. The southern section of the trail (Segment 3) extends from the Wooster Road bridge to the Otto Armleder Memorial Park and Recreation Complex at Armleder Road. This Feasibility Study was prepared as part of ODOT's Project Development Process to document the process used to recommend a preferred alternative for the Wasson Way to Otto Armleder Project (PID 113603). This report summarizes the results of the engineering and environmental studies conducted to date, as well as input received from project stakeholders and the public throughout the development of the project.

1.1 PROJECT HISTORY

Project Development

In 2017, ODOT prepared a *Transportation Needs Analysis* for Segments II and III (PID 86462) of the Eastern Corridor Program, a multi-modal transportation improvement program extending from downtown Cincinnati and communities through eastern Hamilton County and into western Clermont County, Ohio. The Eastern Corridor Program is a coordinated series of regional transportation improvement studies and projects in varying stages of planning, construction, and completion. Transportation needs in the Segments II and III study area were identified through technical studies and confirmed and refined through community and stakeholder input and, in August of 2019, were compiled into the *Conceptual Alternatives Implementation Plan* for Segments II and III. The project team conducted extensive public and stakeholder outreach to learn how communities prioritized transportation needs with respect to community goals, objectives, and ongoing planning. The need to address bicycle connectivity along designated US Bicycle Route 21 was identified as a primary need by this study. The need for pedestrian and bicycle connectivity from across railroad tracks to existing Armleder and Lunken bike paths was identified as a secondary need. When these initial studies were conducted, US Bicycle Route 21 and Ohio Bicycle Route 1 followed Wooster Road. However, when the Little Miami Scenic Trail (LMST) connector at Beechmont was completed, the designated bicycle routes were modified to stay on the LMST and connect directly to the Lunken Trail System. Although Wooster Road is no longer designated as a bicycle route, there is still a need to address pedestrian and bicycle connectivity in the study area. Excerpts from the 2017 Transportation Needs Analysis relevant to this project can be found in **Attachment A**.

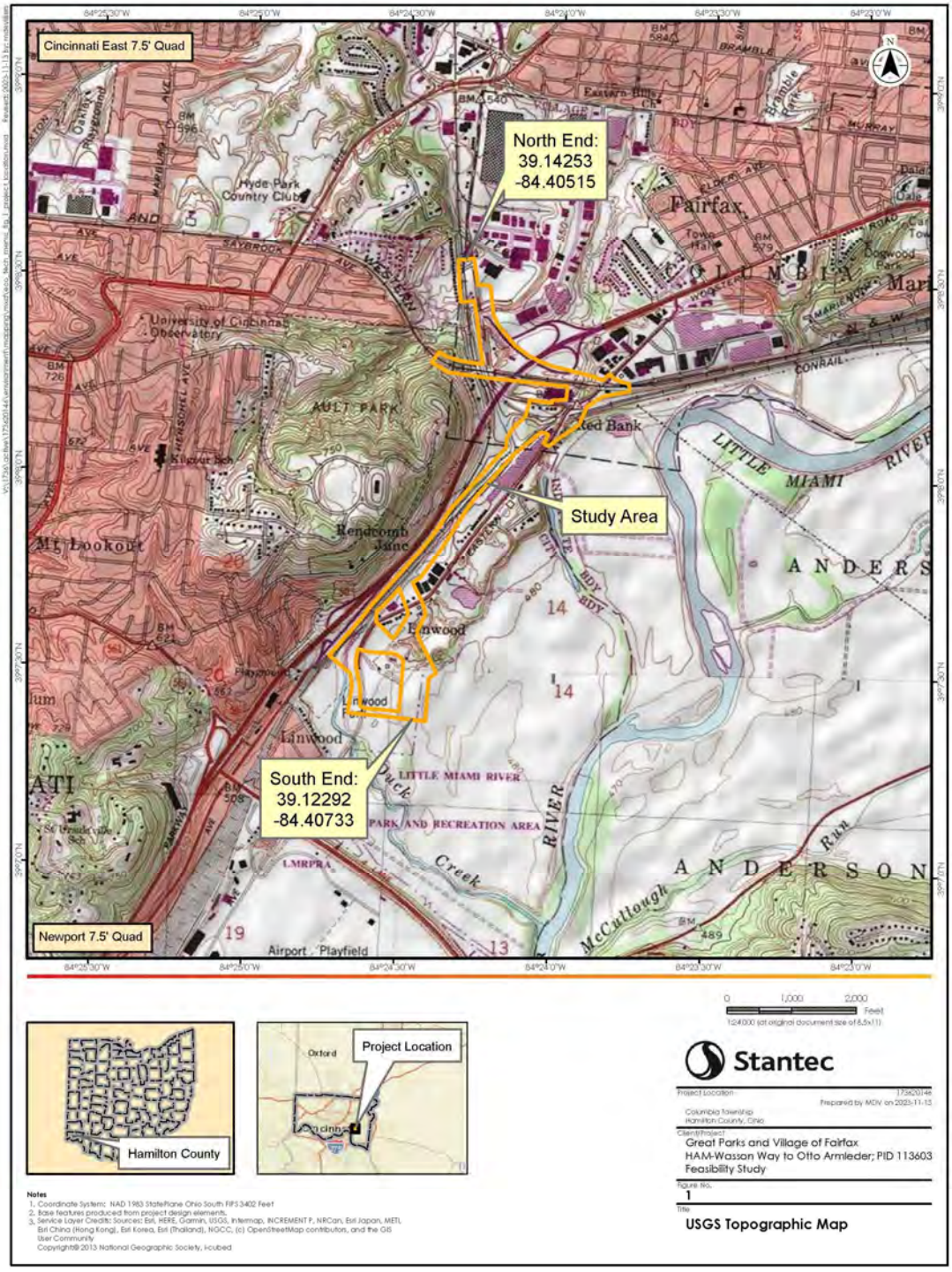

***Figure 1**: USGS Topographic Map*

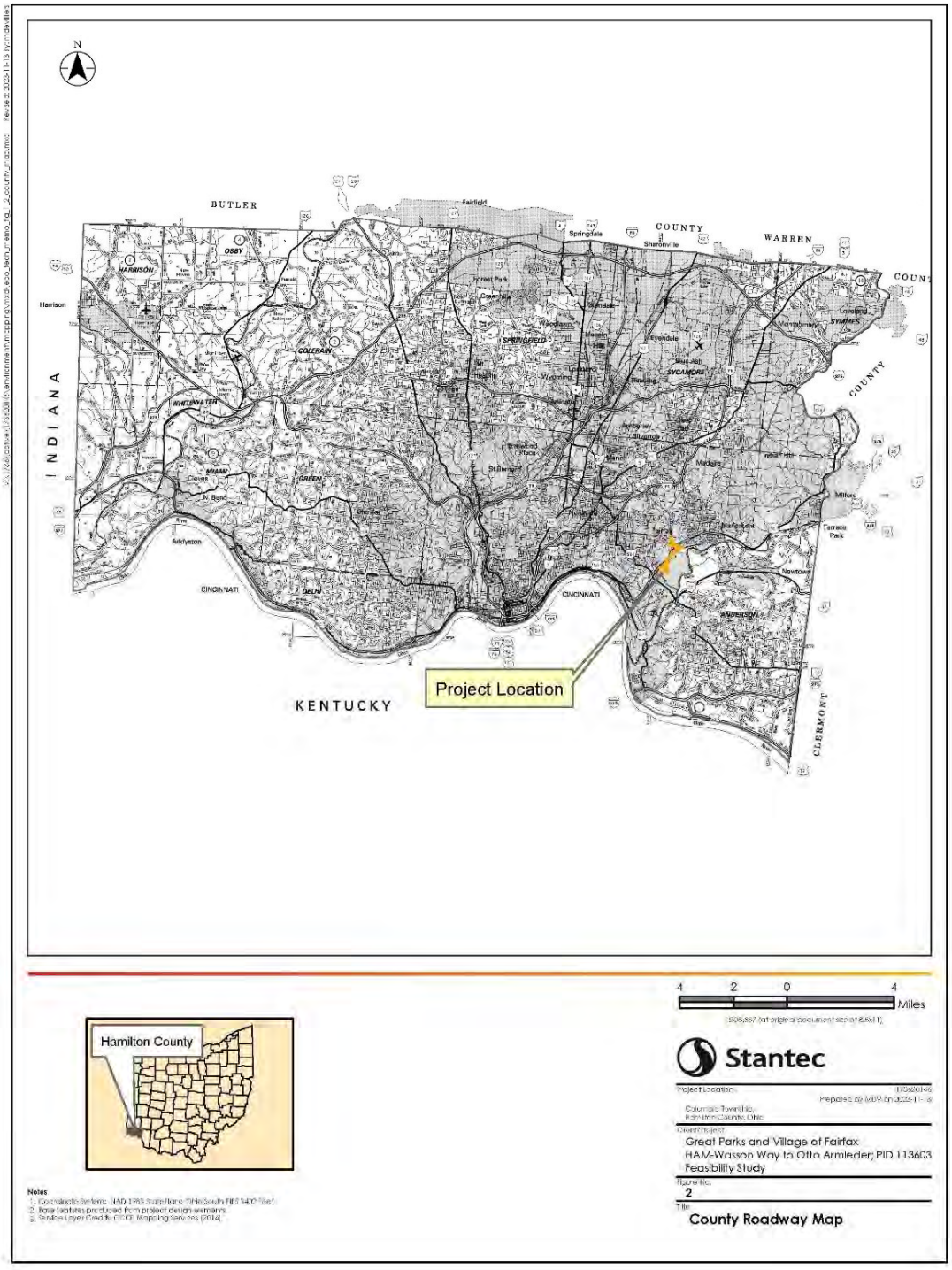

Figure 2: *County Roadway Map*

Based on the transportation needs identified in the 2017 Needs Analysis, ODOT began to develop project concepts which would address these needs. Concepts were developed through extensive input from five Advisory Committees comprised of stakeholders from six focus areas identified within the study area for Segments II and III. Advisory Committee members included elected officials, transportation planning professionals, and community and interest group representatives. Advisory Committee members assisted with identifying, evaluating, and prioritizing recommended solutions for transportation needs within their assigned focus area, as well as developing strategies for implementation.

Each Advisory Committee convened for four work sessions throughout this process for a combined total of 20 meetings. Two public meetings were also held throughout the development and refinement of the transportation concepts. Through this process, 68 transportation concepts were recommended for the Segments II and III study area and are identified in the *Conceptual Alternatives Implementation Plan* dated June 21, 2019. The Implementation Plan identified several concepts to improve pedestrian and bicycle connectivity in this area. These concepts would create a connection to Armleder Park from various starting points along Wooster Pike, Red Bank Road, or Ault Park meant to create a pedestrian/bicycle path that is separate from roadway traffic. Excerpts from the *Conceptual Implementation Plan* relevant to this project can be found in **Attachment B**. The purpose of this report is to complete a Feasibility Study (FS) to provide a recommended preferred alternative for this connection.

Consistency with Local and Regional Planning

This project is consistent with local and regional trail planning efforts underway by the City of Cincinnati and Great Parks of Hamilton County. The proposed trail extension will be part of the proposed CROWN (Cincinnati Riding or Walking Network), a planned 34-mile urban trail loop around Cincinnati. When it is complete, CROWN will connect regional trails currently in development including Wasson Way, Ohio River Trail East, Little Miami Scenic Trail (LMST), Ohio River Trail West, Mill Creek Greenway Trail, and Canal Bikeway and will provide a link to 54 communities (TriState Trails, 2023). The proposed trail is included in the Ohio-Kentucky-Indiana (OKI) 2050 Metropolitan Transportation Plan (approved June 11, 2020).

2.0 PURPOSE AND NEED

2.1 PROJECT PURPOSE

The purpose of the proposed project is to address pedestrian and bicycle connectivity from Wasson Way to the Otto Armleder Memorial Park Trail and subsequently the LMST.

2.2 NEED ELEMENTS

Pedestrian and Bicycle Connectivity

There is a need to improve pedestrian and bicycle connectivity between Wasson Way, Otto Armleder Memorial Park, and the LMST. This trail is a vital connection in the CROWN (Cincinnati Riding or Walking Network) which will connect Greater Cincinnati's regional trails to Downtown Cincinnati.

3.0 ALTERNATIVES

3.1 NO BUILD ALTERNATIVE

Under the No Build Alternative, there would be no improvement in pedestrian and bicycle connectivity along Wooster Pike between Wasson Way in Ault Park at the northern terminus and Otto Armleder Park at the southern terminus.

3.2 BUILD ALTERNATIVES

During the 2019 *Conceptual Alternatives Implementation Plan,* several concepts were developed to address pedestrian and bicycle connectivity between the Wasson Way Trail and Otto Armleder Park. Concept E7 was recommended for further study as a “Medium Priority” project in the *Conceptual Alternatives Implementation Plan*. This concept proposed various new shared use path alignments connecting to the gravel path in Ault Park, continuing west of Wooster Pike, then crossing the roadway to connect to the Wasson Way Trail and terminating at Otto Armleder Park. Using these concepts, several alternatives were developed and evaluated to improve bicycle and pedestrian connectivity in this area.

The Build Alternatives also help bridge the gap between two areas of high “Active Transportation Need”. Active Transportation Need uses several indicators to determine the level of need for bicycle and pedestrian facilities in a particular area. These indicators include concentrations of minority groups, youth, older adults, poverty, adults with no high school diploma, people with limited English proficiency, and people with no access to a motor vehicle. Building bicycling and walking facilities in these high need areas can help provide multiple transportation options and decrease some of the economic and health burdens experienced by residents (ODOT, 2020).

Each Build Alternative also provides a facility to and from areas of moderate “Active Transportation Demand”. Active Transportation Demand is determined by the following factors: employment density, population density, walk/bike commute mode share, park density, presence of college/university, retail employment density, and number of people 20% below poverty line. The areas within the project limits are both areas with relatively moderate Active Traffic Demand (ODOT, 2023). Therefore, each Build Alternative provides a safer facility that connects Ault Park to Otto Armleder Park.

As previously mentioned, this project is divided into three contiguous sections. Segment 1 extends from the existing Wasson Way Trail at Ault Park and travels generally south to Wooster Pike. Segment 2 crosses over the existing Norfolk Southern Railroad using the Wooster Road bridge near the intersection of Wooster Pike, Wooster Road, and Red Bank Road. Segment 3 extends from the Wooster Road bridge to the Otto Armleder Memorial Park and Recreation Complex at Armleder Road. Alternatives for each of these three sections are described and evaluated separately in this Feasibility Study. The Build Alternatives are described below and shown on **Figures 3.1 and 3.2**, as well as in **Attachment C**.

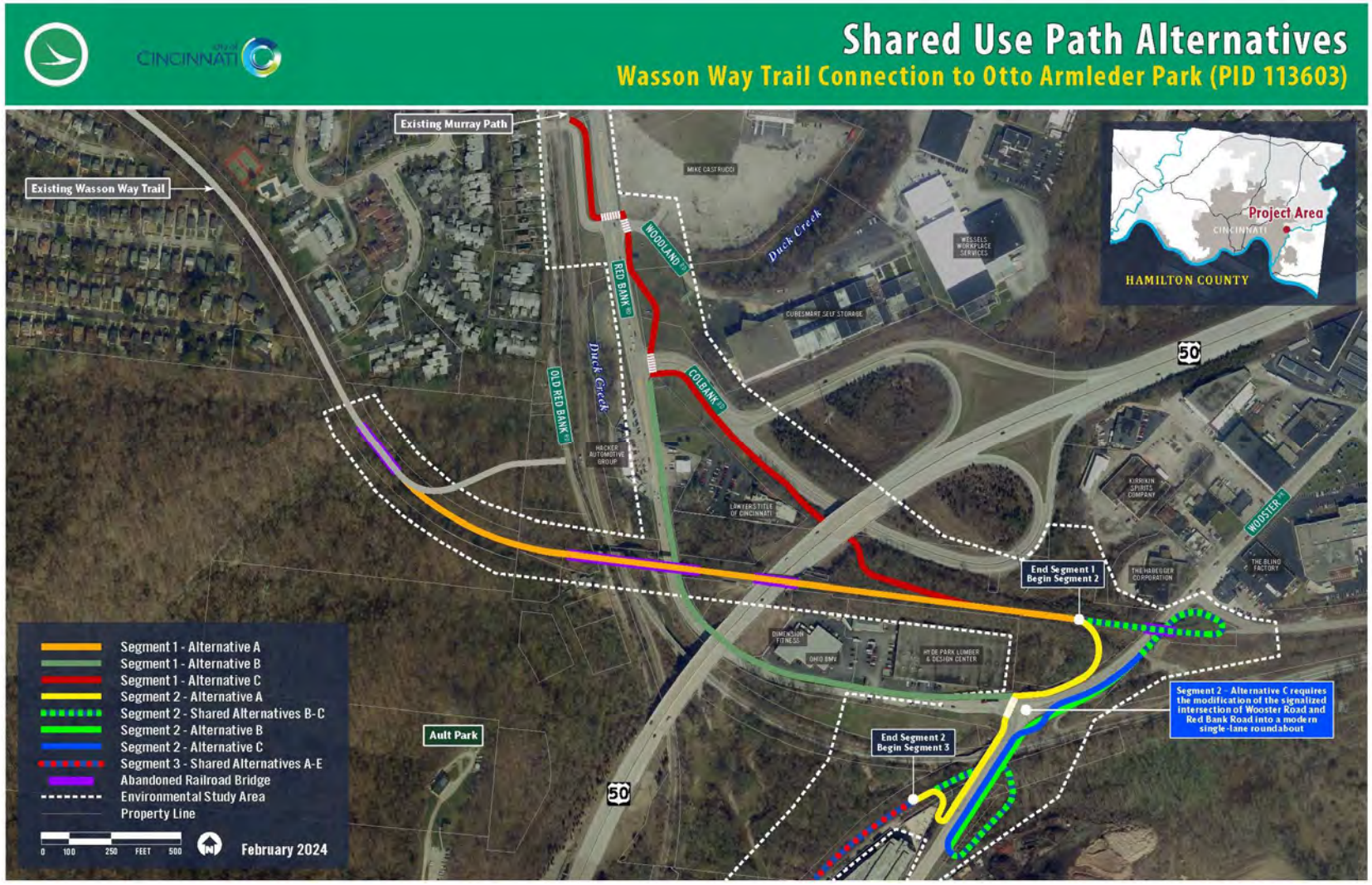

Figure 3.1: *Shared Use Path Alternatives Map*

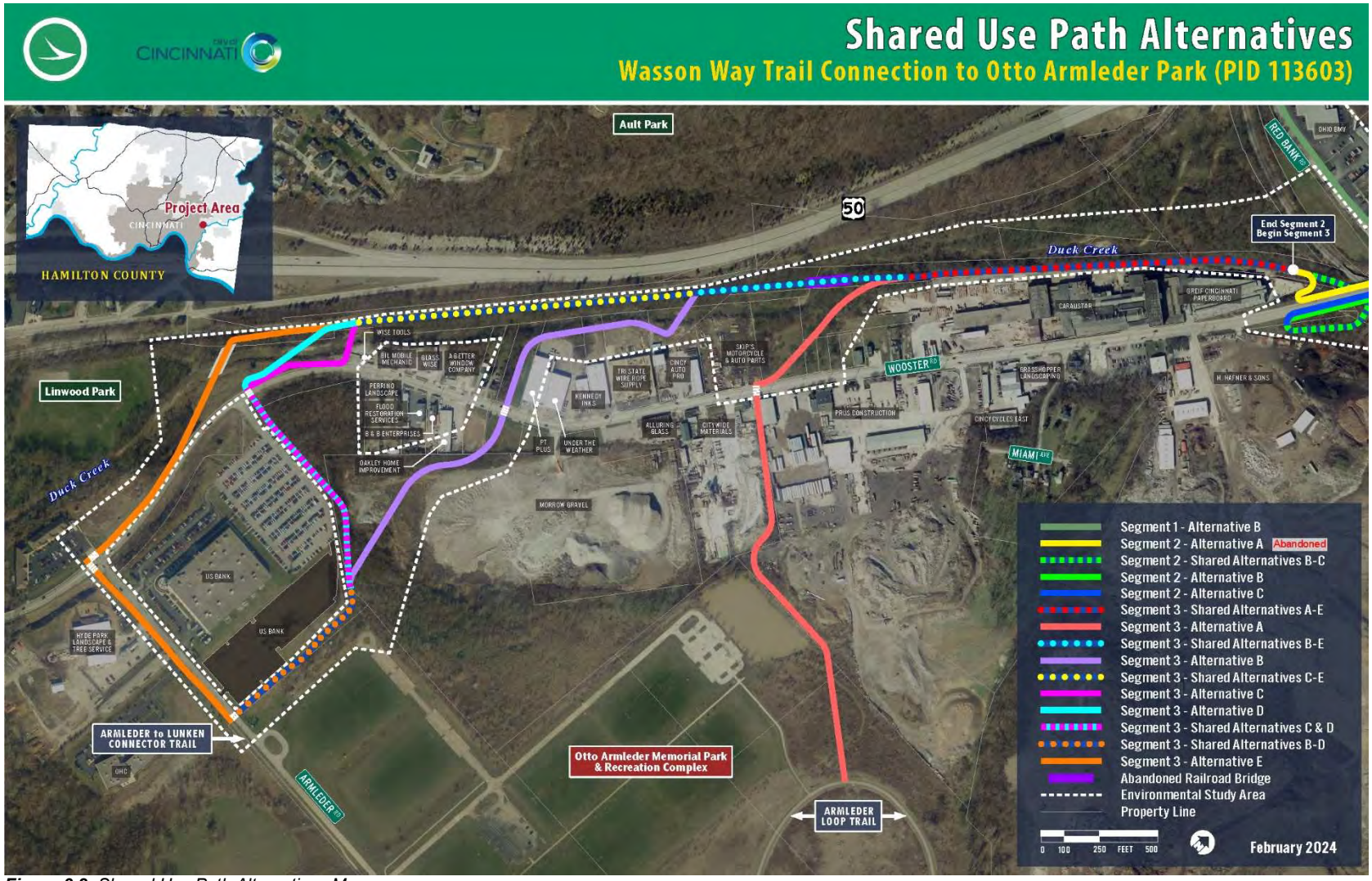

Figure 3.2: *Shared Use Path Alternatives Map*

Segment 1

Three build alternatives were developed for the Segment 1 portion of the project. These alternatives were:

Alternative A: This alternative starts at the existing Wasson Way Trail in Ault Park and continues southeast along the abandoned railroad line owned by the City of Cincinnati. The shared use path utilizes the existing railroad bridges to cross active rail lines, Red Bank Road, US 50, and Duck Creek. The trail crosses over Little Duck Creek by way of an existing culvert at the terminus point to Segment 2.

Alternative B: This alternative starts at the southern terminus of the Murray Path at the intersection of Woodland Road and Old Red Bank Road and follows along the east side of Red Bank Road to the intersection of Red Bank Road and Wooster Pike. The trail through this area would be a side path separated from the roadway by a five-foot-wide vegetated grass buffer. This alternative was advanced from the Implementation Plan and evaluated early in the feasibility study process but was dismissed from further consideration. One of the main issues with this alternative was the insufficient width between the existing railroad trestle pier and foundation and Red Bank Road as shown in **Figure 4**. The trestle creates an approximately 8-foot-wide pinch point which cannot accommodate the proposed 12-foot-wide shared use path on the east side of Red Bank Road. Additionally, the west side of Red Bank Road also has a railroad trestle pier and foundation as well as the floodwalls for Duck Creek and a guardrail which also creates a pinch point of approximately 5 feet, leaving neither side of Red Bank Road as a viable option. As such, **Alternative 1-B was excluded from resource specific evaluations and was not included in the evaluation matrix.**

Figure 4: *Pinch point between Railroad Bridge Trestles, the Duck Creek Floodwall, and Red Bank Road, facing south (Google Maps, 2022).*

Alternative C: This alternative starts at the southern terminus of the Murray Path at the intersection of Woodland Road and Old Red Bank Road. Alternative C then crosses Red Bank Road at the intersection with Woodland Road and continues down the east side of Red Bank Road to Colbank Road. At this intersection the trail crosses Colbank Road, then turns southeast to continue along the south side of Colbank Road, passing under US 50. East of US 50, the trail climbs the existing railroad embankment to connect to the existing abandoned railbed and follows the same alignment as Alternative 1-A to the Segment 2 connection. The shared use path will be separated from Woodland Road, Red Bank Road, and Colbank Road with a five-foot vegetated grass buffer.

Segment 2

Three build alternatives were developed for the Segment 2 portion of the project. These alternatives were:

Alternative A: From the connection with Segment 1, this alternative turns south and west along the north side of Wooster Pike and crosses Red Bank Road at the intersection with Wooster Pike. Alternative 2-A travels along the west side of the existing Wooster Pike Bridge over the Norfolk Southern railroad, then descends at a steep grade to a connection with Segment 3. This alternative was evaluated early in the process but dismissed from consideration for several reasons. The existing Wooster Road bridge cannot be widened to the west without adverse impacts to existing culverts, retaining walls, and other railroad infrastructure below the bridge. Additionally, a shared use path along the west side of the bridge would significantly exceed the Americans with Disabilities Act (ADA) compliant slopes in order to minimize impacts to adjacent properties. Finally, vehicular traffic moving westbound on Red Bank Road to southbound Wooster Road is the heaviest movement at this intersection. As such, it would be better to avoid placing a crosswalk on this approach. For these reasons, **Alternative 2-A was excluded from resource specific evaluations and was not included in the evaluation matrix.**

Alternative B: From the connection with Segment 1, this alternative continues east along the abandoned railroad over Wooster Pike, then turns north and west descending to meet Wooster Pike. The shared use path continues along the south side of Wooster Pike to the intersection with Red Bank Road. The shared use path would be separated from Wooster Pike by a five-foot vegetated grass buffer. The shared use path then continues south along the east side of Wooster Road. Widening of the Wooster Road Bridge over the railroad will be necessary to accommodate the trail. Once across the bridge and underlying active rail lines, the shared use path doubles back to descend the roadway embankment on the east side of Wooster Road, continues under Wooster Road, and terminates at the Segment 3 connection on the abandoned railroad.

Alternative C: This alternative follows the same general alignment as Alternative 2-B, however, instead of widening the Wooster Road bridge, it incorporates the construction of a single-lane roundabout at the Wooster and Red Bank Road intersection, thereby reducing the number of vehicular lanes required across the bridge from three to two and making room to accommodate the shared use path. The proposed roundabout would be designed to handle semi-truck traffic and is expected to improve vehicular safety and traffic flow at the current intersection. In addition, the introduction of the roundabout requires an extension of the existing box culvert under the intersection. Most other aspects of this alternative are the same as Alternative 2-B.

Segment 3

Five build alternatives were developed for the Segment 3 portion of the project. All five alternatives utilize the existing abandoned railroad from the connection at Segment 2 to travel southwest along Duck Creek, behind the existing businesses on Wooster Pike. These alternatives are described in further detail below:

Alternative A: This alternative turns south immediately before it crosses Duck Creek and crosses Wooster Pike, and travels along the Prus Construction property boundary to a connection with Armleder Loop Trail. This alternative was evaluated early in the process but was dismissed from more in-depth consideration for several reasons. The proximity and nature of the adjacent businesses would require long sections of this trail to be fenced in. Fencing on both sides creates security concerns for trail users. Another potential problem was the projected maintenance needs for a trail in this location, due to accumulation of construction debris from the adjacent properties. **Alternative 3-A was excluded from resource specific evaluations and was not included in the evaluation matrix.**

Alternative B: This alternative continues along the abandoned railroad and is carried across Duck Creek by the existing abandoned railroad bridge. The trail continues southwest for approximately 600 feet and then crosses Duck Creek a second time using a new bridge structure near the Cincy Auto Pro property. This alternative continues southwest along the left bank of Duck Creek, crosses Wooster Road at the Morrow Gravel property and continues through Morrow Gravel to the east side of the US Bank parking lot, reaching a terminus at Otto Armleder Memorial Park Trail.

Alternative C: Similar to Alternative 3-B, this alternative continues along the abandoned railroad and is carried across Duck Creek by the abandoned railroad bridge. Alternative C continues southwest for approximately 0.4 mile before crossing Duck Creek and following Wooster Road to the US Bank property. The route then crosses Wooster Pike and continues east and south along the US Bank property to a terminus at Otto Armleder Memorial Park Trail.

Alternative D: This alternative follows the same alignment as Alternative 3-C with one exception. Where Alternative 3-C turns sharply south to cross Duck Creek, Alternative 3-D continues generally straight (southwest) and crosses Duck Creek approximately 250 feet downstream from the proposed crossing for Alternative 3-C. It rejoins the Alternative 3-C alignment at the Wooster Road crossing and follows the same alignment described above to Otto Armleder Memorial Park Trail.

Alternative E: This alternative follows the same alignment as Alternative 3-C and Alternative 3-D but continues southwest and crosses Duck Creek adjacent to Linwood Park, with the opportunity for a potential future connection between the trail and the park. Alternative E then continues southwest along the west side of Wooster Road and crosses the road at the existing signalized intersection with Armleder Road. The trail continues along the south side of Armleder Road and connects with the Otto Armleder Memorial Park Trail.

Design maps that display each alternative alignment, along with plan and profile sheets for each, can be found in **Attachment C**.

4.0 KEY ISSUES

This section summarizes the technical studies and information that were considered as part of the evaluation and selection of a preferred alternative.

The design user for this proposed shared use path project is the "interested but concerned" user as defined by ODOT's Multimodal Design Guide (MDG). This user profile matches the user profile believed to be using the adjacent Little Miami Scenic Trail and includes users of all ages and skill levels. Based on Figure 3-1 of the MDG, "Bicyclist Design User Profiles", 51% to 56% of the total population are interested in using bike facilities but are concerned for their safety and may not use less protected bike facilities, such as bike lanes, if these facilities don't meet their perceived level of comfort (ODOT, 2024).

4.1 SAFETY ANALYSIS

4.1.1 No Build Alternative

Without construction of the proposed project, there would be no improvement in bicycle and pedestrian facilities between Wasson Way at Ault Park and the Otto Armleder Park Memorial Trail at Otto Armleder Park. Bicyclists traveling between these routes would continue to travel along Red Bank Road and Wooster Road, sharing lanes with vehicular traffic. There is an existing sidewalk which begins at Red Bank Road and continues along the west side of Wooster Road. Bicycle and pedestrian safety along Red Bank Road and Wooster Road within the study area was evaluated by reviewing five years of bicycle and pedestrian crash data from January 1, 2019, through December 31, 2023, using ODOT's GIS Crash Analysis Tool (GCAT). No bicycle or pedestrian crashes were reported in the five-year period. However, this may be partially or wholly attributed to the lack of existing bicycle and pedestrian facilities and connectivity. The "interested but concerned" user described above is unlikely to use this corridor, which would require sharing the roadway with vehicular traffic.

In general, there are potential safety issues for bicyclists traveling along Red Bank Road and Wooster Road because bicyclists must share the road with automobiles and trucks. Red Bank Road has a posted speed limit of 35 mph and an average daily traffic (ADT) volume ranging from approximately 12,000 to 18,000 vehicles per day. Wooster Road also has a posted speed limit of 35 mph and an ADT of approximately 12,000 vehicles per day, making them both heavily trafficked corridors. Additionally, as part of the *Transportation Needs Analysis*, ODOT crash screening data identified the portion of Wooster Road starting just south of Red Bank Road and extending 0.7 mile south as a "high hazard area" (Stantec, 2017).

Pedestrians have a dedicated sidewalk on the west side of Wooster Road; however, portions of the sidewalk are adjacent to the street without a tree lawn buffer. There are no sidewalks on Red Bank Road within the study area. This results in bicycles/pedestrians crossing or traveling next to vehicular traffic, which creates conflicts with vehicular traffic and puts bicycles and pedestrians at greater risk when compared to dedicated bicycle and pedestrian facilities that are physically separated from roadways.

Providing bicyclists and pedestrians with separated facilities also reduces the level of traffic stress of the facility. ODOT's Bicycle Level of Traffic Stress (LTS) calculator was used to quantify the level of stress or discomfort one may feel when biking close to traffic. LTS is determined by the posted speed of the roadway, daily volume

of the roadway (vehicles per day), the number of vehicular lanes, and the type of separation between vehicular traffic and bicyclists. There are four (4) levels of traffic stress:

- LTS 1 – Very low stress, suitable for all ages and abilities
- LTS 2 – Low stress, comfortable for most adults
- LTS 3 – Medium stress, ridden by enthused/confident cyclists
- LTS 4 – High stress, ridden by strong/fearless cyclists

Currently, there is an LTS 4 rating within the project area (ODOT, 2021). The No Build Alternative will not address this area of high LTS.

4.1.2 Build Alternatives

Each of the Build Alternatives include the construction of a shared use path which is physically separated from vehicular traffic and would, therefore, be safer for bicyclists and pedestrians than the No Build Alternative and result in a lower LTS rating of 1. The exception would be Alternative 1-C where approximately 950 feet of the alignment is shared with vehicular traffic on the low volume, Old Red Bank Road, which provides a LTS rating of 2. Connecting the Wasson Way Trail to Otto Armleder Park with a low LTS facility would be a substantial improvement to regional connectivity.

The safety differences between the Build Alternatives for Segments 1, 2, and 3 are described below.

Segment 1:

Alternative A: Alternative 1-A runs along the abandoned railway line and has no crossings where there are potential bicycle/pedestrian conflicts with automobiles.

Alternative B: As described in Section 3.2, this alternative was excluded from resource specific evaluations and was not included in the evaluation matrix.

Alternative C: This alternative shares approximately 950 feet of Old Red Bank Road with vehicular traffic before becoming a physically separated shared use path. This alternative crosses a commercial property driveway, Red Bank Road, and the Colbank Road Interchange ramp to US 50, which creates three potential sites of pedestrian/bicycle conflict with automobiles. All crossings would be signalized at existing traffic signals.

Segment 2:

Alternative A: As described in Section 3.2, this alternative was excluded from resource specific evaluations and was not included in the evaluation matrix.

Alternative B: There are no potential sites of pedestrian/bicycle conflict with automobiles along Alternative 2-B.

Alternative C: There are no potential sites of pedestrian/bicycle conflict with automobiles along Alternative 2-C. Additionally, the added roundabout is one of Federal Highway Administration's (FHWA) proven safety

countermeasures that would provide added safety benefits to vehicular traffic. Roundabouts feature channelized, curved approaches that reduce vehicle speed, entry yield control that gives right-of-way to circulating traffic, and counterclockwise flow around a central island that minimizes conflict points. The net result of lower speeds and reduced conflicts at roundabouts result in an 80% reduction in fatal and injury crashes compared to traditional stop-controlled and signalized intersections. While the Alternative 2-C alignment only runs adjacent to the proposed roundabout, roundabouts are also safer for pedestrians and cyclists compared to traditional stop-controlled or signalized intersections because the travel speeds are lower and crossing distance is shorter.

Segment 3:

Alternative A: As described in Section 3.2, this alternative was excluded from resource specific evaluations and was not included in the evaluation matrix.

Alternative B: This alternative has one site of pedestrian/bicycle conflict with automobiles where the alternative crosses Wooster Road. This would be an unsignalized mid-block crossing which has sight distance issues. This alternative would require local businesses to remove parking and signage from their storefronts in order to achieve a clear sight distance for the crossing.

Alternative C: There is one pedestrian/bicycle conflict site with automobiles where the alternative crosses Wooster Road. This would be an unsignalized mid-block crossing and, due to the curvature of Wooster Road, would also result in sight-distance concerns.

Alternative D: There is one pedestrian/bicycle conflict site with automobiles where the alternative crosses Wooster Road. This would be an unsignalized mid-block crossing and, due to the curvature of Wooster Road, would also result in sight-distance concerns.

Alternative E: There are four potential sites of pedestrian/bicycle conflict with automobiles with this alternative. These are where this alternative crosses Wooster Road, two driveway entrances for Hyde Park Landscape & Tree Service, and the driveway entrance for the OHC Corporate Office along Armleder Road. The Wooster Road crossing for this alternative would be signalized using existing traffic signals.

4.2 SHARED USE PATH DESIGN ISSUES

This section discusses design criteria and issues important in developing shared use path alternatives. The most demanding design challenge of this project was developing a trail through the project area which maintained horizontal and vertical alignments that would meet the requirements of ADA Accessibility Guidelines for Public Rights-of-Way (U.S. Access Board, 2024). All of the Segment 3 alternatives are adjacent to an active rail line and will require additional coordination with the Indiana & Ohio Railway. The Plan and Profile sheet for each alignment can be found in **Attachment C**. More in-depth information regarding Structure Type Studies can be found in **Attachment D**. Hydraulic Calculations can be found in **Attachment E**.

Segment 1

Alternative A: The length of Alternative 1-A is 2,350 feet from the connection between the existing Wasson

Way Trail and the proposed connection with Segment 2. It is anticipated that the width of the shared use path will be 12 feet throughout the length of the path. Fencing is proposed at the bridge locations, totaling 350 feet. This shared use path has a design speed of 20 mph. No new bridges will be required for this alternative; however, alterations to the two existing railroad bridges will be necessary. The first railroad bridge is located over the Norfolk Southern Railroad, Duck Creek, and Red Bank Road. The existing timber tie bridge deck would need to be replaced with a reinforced concrete bridge deck. Due to the height from the bridge to the ground below, tall railings will be required for the safety of cyclists and pedestrians. The second railroad bridge is over US 50. This bridge would be modified by maintaining the existing ballast and ties and overlaying the steel plate deck with asphalt. Due to the geometry of the existing structure, the trail would be narrower crossing the bridge. For additional discussion of the bridges, please see the Structure Type Studies in **Attachment D**. The proposed horizontal and vertical alignments do not present any variance from the current ADA accessibility guidelines.

Alternative B: As described in Section 3.2, this alternative was excluded from resource specific evaluations and was not included in the evaluation matrix.

Alternative C: The length of this shared use path is 2,900 feet from the connection between the existing Murray Path and the proposed connection with Segment 2. This alternative would require an additional 2,400 feet of travel distance to connect with Wasson Way Trail via Old Red Bank Road. The width is proposed to be 12 feet along Red Bank Road. A minor transition in width from 12 feet to 10 feet between the roadway and the existing auto dealership sign is expected. It crosses Red Bank Road, the driveway for Fairfax Self Storage, and Colbank Road, which are all signalized. This path maintains a design speed of 20 mph and width of 12 feet, along Colbank Road. As it approaches and passes under US 50, a 350-foot retaining wall with an approximate height of 10 feet is required, as construction draws closer to the existing right-of-way. Alternative 1-C generally mirrors the vertical alignment of the adjacent roadways and is compliant with the current ADA accessibility guidelines throughout. Currently, there is an ongoing project coordinated by the Village of Fairfax and ODOT to improve the intersection of Red Bank Road and the intersection between Colbank Road and the US 50 westbound ramp (PID 113600). This project proposes installing dual westbound right turn lanes from Colbank Road to Red Bank Road, installing dual northbound through lanes on Red Bank Road, lengthening storage lanes, and improving signal timing. Once the Colbank Road project is completed, Alternative 1-C for the HAM-Wasson Way to Otto Armleder project will need to be revised as there will be a new pattern of traffic along this intersection. The number of lanes requiring a crossing will increase from two to four, but a small traffic island will be embedded in the middle of the intersection that can be utilized as part of the shared use path. Depending on which alternative is selected as the Segment 1 preferred alternative, changes to 1-C will be required due to this concurrent project.

Segment 2

Alternative A: As described in Section 3.2, this alternative was excluded from resource specific evaluations and was not included in the evaluation matrix.

Alternative B: The length of Alternative 2-B is approximately 2,650 feet, and it is anticipated that the width of the shared use path will be 12 feet. This path has a reduced design speed of 12 mph, due to two 27-foot radius horizontal curves. Otherwise, Alternative 2-B maintains a design speed of 20 mph and is within the current ADA accessibility guidelines. This alignment would require modifications to two existing bridges. The first is a 75-foot-long abandoned railroad bridge over Wooster Pike. The modifications would include removing the

timber ties and replacing them with a reinforced concrete deck. 4.5-foot-high railings would be installed on each side of the trail. A retaining wall will also be required along the access road to the Norfolk Southern railroad yard and is expected to be approximately 100 feet long with an average 3-foot exposed height. This wall is provided to support the new fill required for the proposed shared use path with a 2:1 slope between the edge of the trail and the top of wall in lieu of encroaching on the roadway. A second retaining wall would be required from the end of the bridge widening to a point which protects the existing access road from Wooster Pike to the railroad active line. The wall is approximately 400 feet in length with an exposed height of 15 feet. As the path extends along Wooster Pike, it mirrors the vertical alignment of the roadway and provides a 4.5-foot vegetated buffer (5 feet from the face of curb) between the proposed trail and the roadway. It continues across the Wooster Road bridge over the railroad, which is the second bridge to be modified to accommodate the shared use path and then proceeds off and extends beneath the bridge to a point along the abandoned railroad alignment. This alternative would widen the Wooster Road bridge by 17 feet to the east and would include a bicycle railing. For additional discussion of the bridges, please see the Structure Type Studies in **Attachment D**. This point ends Segment 2 and is the beginning of Segment 3.

Alternative C: The length of Alternative 2-C is 2,650 feet, and it is anticipated that the width of the shared use path will be 12 feet. This alternative begins at the same point as Alternative 2-B near the existing Wooster Road bridge over the railroad, and would involve the same process for the existing railroad bridge modification as described for 2-B. A retaining wall will also be required along the access road to the Norfolk Southern railroad yard and is expected to be approximately 100 feet long with an average 3-foot exposed height, similar to what was done for Alternative 2-B. For additional discussion of the bridges, please see the Structure Type Studies in **Attachment D**. This alternative then extends onto the Wooster Road bridge, thus removing the need for widening. Instead, it reduces the number of lanes on the bridge and employs a proposed roundabout at the intersection, where the path follows adjacent to the roadway and ties to Alternative 2-B again along Wooster Pike. The introduction of the roundabout in this alternative requires a second retaining wall which is approximately 150 feet in length, with 15-foot exposed height. In addition, there is a proposed culvert extension on the north side of the proposed roundabout, totaling approximately 50 feet in length. This shared use path has a minimum design speed of 20 mph and is compliant with all the current ADA accessibility requirements. The path maintains a two-foot buffer from a concrete barrier along the Wooster Road bridge, and a 4.5-foot vegetated buffer (5 feet from the face of curb) along Wooster Pike.

Segment 3

Alternative A: As described in Section 3.2, this alternative was excluded from resource specific evaluations and was not included in the evaluation matrix.

Alternative B: This alternative follows the abandoned railroad and is carried across Duck Creek by the abandoned railroad bridge. The trail crosses Duck Creek a second time near the Cincy Auto Pro property, which will require a new bridge structure. It then continues parallel to Duck Creek where it turns to cross Wooster Road at a mid-block crossing. As this alternative travels alongside Duck Creek, it will require two retaining walls. One of the retaining walls will be approximately 250 feet in length and approximately less than 8 feet in exposed height, while the other wall will be approximately 235 feet in length and approximately less than 8 feet in exposed height. The path continues along to Otto Armleder Park and crosses Armleder Road, terminating on the existing shared use path. Alternative 3-B complies with all current ADA accessibility requirements and is 5,581 linear feet long with a uniform width of 12 feet. The existing railroad bridge over Duck

Creek will require some modifications which will include replacing the existing timber tie bridge deck with a reinforced concrete bridge deck, which is similar to the bridge modifications discussed for the Segment 1 alternatives. The new bridge crossing Duck Creek is located within the 100-year floodway and will be submerged during a 100-year flood event. To minimize impacts a bridge with a thin superstructure is required. A three-span reinforced concrete slab bridge is proposed. Alternative 3-B also traverses through an existing detention basin behind the US Bank building in order to stay out of the lower elevations prone to flooding. Additional coordination will be required to either avoid or mitigate anticipated impacts to the basin. For additional discussion, please see the Structure Type Studies in **Attachment D** and Hydraulic Calculations found in **Attachment E**.

Alternative C: This shared use path alignment also follows the abandoned railroad alignment to a proposed new crossing of Duck Creek, which requires a new bridge structure. It continues to Wooster Road and then parallels the roadway to proceed to a mid-block crossing at the existing drive to Riverside Electric, Inc. Once on the other side of Wooster Road, this alternative follows the same alignment as Alternative 3-B until it terminates at the existing shared use path at Otto Armleder Park. Alternative 3-C complies with all current ADA accessibility requirements. The total length of this shared use path is 6,443 linear feet and maintains a 12-foot width. The existing railroad bridge over Duck Creek will require some modifications which will include replacing the existing timber tie bridge deck with a reinforced concrete bridge deck, which is similar to the bridge modifications discussed for the Segment 1 alternatives. The new bridge crossing Duck Creek is located within the 100-year floodway and will be submerged during a 100-year flood event. To minimize impacts a bridge with a thin superstructure is required. A three-span reinforced concrete slab bridge is proposed. Alternative 3-C also traverses through an existing detention basin behind the US Bank building in order to stay out of the lower elevations prone to flooding. Additional coordination will be required to either avoid or mitigate anticipated impacts to the basin. For additional discussion, please see the Structure Type Studies in **Attachment D** and Hydraulic Calculations found in **Attachment E**.

Alternative D: Alternative 3-D follows the same alignment along the abandoned railroad alignment to a new crossing of Duck Creek, which requires a new bridge. As it passes alongside Duck Creek, a 250-foot retaining wall with an approximately less than 8 feet in exposed height is required. It then proceeds to a mid-block crossing of Wooster Road, and continues along the drive to Riverside Electric, Inc. Alternative 3-D follows the same alignment as both Alternatives 3-B and 3-C until it reaches the existing shared use trail at Otto Armleder Park where it terminates. This shared use path is 6,420 linear feet in length and maintains a 12-foot width. It also complies with the ADA accessibility requirements. The existing railroad bridge over Duck Creek will require some modifications, including replacing the existing timber tie bridge deck with a reinforced concrete bridge deck, which is similar to the bridge modifications discussed for the Segment 1 alternatives. The new bridge crossing Duck Creek is located within the 100-year floodway and will be submerged during a 100-year flood event. To minimize impacts a bridge with a thin superstructure is required. A three-span reinforced concrete slab bridge is proposed. Alternative 3-D also traverses through an existing detention basin behind the US Bank building in order to stay out of the lower elevations prone to flooding. Additional coordination will be required to either avoid or mitigate anticipated impacts to the basin. For additional discussion, please see the Structure Type Studies in **Attachment D** and Hydraulic Calculations found in **Attachment E**.

Alternative E: Alternative 3-E follows the same alignment as Alternatives 3-C and 3-D on the abandoned railroad and crosses Duck Creek adjacent to Linwood Park. This crossing will require a new bridge. It continues

along the west side of Wooster Road, providing a 5-foot vegetated buffer between the path and the road. This path continues across a commercial driveway at the signalized intersection with Wooster Road and Armleder Road. The alignment then crosses Wooster Road and continues along the south side of Armleder Road, providing a 5-foot vegetated buffer. It also crosses four commercial driveways before terminating at Otto Armleder Park. Alternative 3-E is a total length of 6,402 linear feet and maintains a 12-foot width. The existing railroad bridge over Duck Creek will require some modifications which will include replacing the existing timber tie bridge deck with a reinforced concrete bridge deck, which is similar to the bridge modifications discussed for the Segment 1 alternatives. This alternative will also require two retaining walls as it travels alongside Duck Creek. One of the retaining walls will be approximately 250 feet in length and approximately less than 8 feet in exposed height, while the other wall will be approximately 235 feet in length and approximately 10 feet in exposed height. The new bridge crossing Duck Creek is located within the 100-year floodway and will be submerged during a 100-year flood event. To minimize impacts a bridge with a thin superstructure is required. A three-span reinforced concrete slab bridge is proposed. For additional discussion, please see the Structure Type Studies in **Attachment D** and Hydraulic Calculations found in **Attachment E**.

4.3 POST-CONSTRUCTION STORM WATER BEST MANAGEMENT PRACTICES

This section discusses the preliminary post-construction stormwater best management practices (BMP). Post-Construction Storm Water Best Management Practices (BMPs) are provided for long-term management of storm water runoff quality and quantity so that a receiving stream's physical, chemical, and biological characteristics are protected, and stream functions are maintained. This analysis was performed to identify challenges associated with BMP installation and ensure that the construction limits for each alternative incorporate the BMP areas. The BMP analysis was conducted in accordance with the Ohio Department of Transportation, Location and Design Manual, Volume 2. Stantec also utilized several other ODOT BMP resources including the BMP calculation spreadsheet and the ODOT BMP tool. The BMP analysis is included in **Attachment F**. Each alternative was considered an individual project for the BMP analysis; however, final BMP analysis will need to match the construction phasing of the project.

4.3.1 No Build Alternative

No post-construction stormwater BMPs would be required under the No Build Alternative.

4.3.2 Build Alternatives

Segment 1

Post Construction Stormwater BMPs should not be a differentiator between the Segment 1 alternatives. BMPs will not be required for Alternative A; however, BMP credit will be relatively easy and inexpensive to obtain for Alternative C. See below and **Attachment F** for additional description and calculations.

Alternative A: The total project earth disturbed area for post-construction storm water BMP is 0.17 acre. Because the earth disturbed area is less than one-acre, permanent BMPs will not be required.

Alternative B: As described in Section 3.2, this alternative was excluded from resource specific evaluations and

was not included in the evaluation matrix.

Alternative C: The total project earth disturbed area for post construction storm water BMP is 1.99 acres. Because the earth disturbed area is larger than one-acre, permanent BMPs will be required. The overall treatment area required for Alternative C will be 0.46 acre. This alternative will utilize vegetated filter strips and enhanced bankfull width ditches (vegetated biofilters) to treat stormwater runoff, and it is anticipated that a combination of these can be used along Colbank Road. Narrow vegetated filter strips can be used in some areas since all improvements are pedestrian related.

Segment 2

Post Construction Stormwater BMPs should not be a differentiator between the Segment 2 alternatives, as it will be challenging to achieve all BMP credits through vegetative options with either alternative. A manufactured system will most likely be required for both alternatives because of the steep slopes, anticipated walls, and proposed curb. See below and **Attachment F** for additional description and calculations.

Alternative A: As described in Section 3.2, this alternative was excluded from resource specific evaluations and was not included in the evaluation matrix.

Alternative B: The total project earth disturbed area for post-construction storm water BMP is 2.89 acres. Because the earth disturbed area is larger than one-acre, permanent BMPs will be required. The required area for overall treatment is 0.94 acre. This alternative will utilize vegetated filter strips, enhanced bankfull width ditches (vegetated biofilters), and a manufactured system to treat stormwater runoff. It is anticipated that vegetated filter strips can be used inside the loop between Sta. 325+00 and Sta. 329+00, and towards the Segment 3 termini on the abandoned rail line. Narrow vegetated filter strips can be used where all improvements are pedestrian related. Where filter strips cannot be used, vegetated biofilters can be used, such as potentially on the east side of Wooster Road. Additional area can be treated with a manufactured system installed where the proposed curb is present, such as along Wooster Pike.

Alternative C: The total project earth disturbed area for post-construction storm water BMP is 2.89 acres. Because the earth disturbed area is larger than one-acre, permanent BMPs will be required. The required area for overall treatment is 0.94 acre. This alternative will utilize vegetated filter strips, enhanced bankfull width ditches (vegetated biofilters), and a manufactured system to treat stormwater runoff. It is anticipated that vegetated filter strips can be used inside the loop between Sta. 325+00 and Sta. 329+00, and towards the Segment 3 termini on the abandoned rail line. Narrow vegetated filter strips can be used where all improvements are pedestrian related. Where filter strips cannot be used, vegetated biofilters can be used, such as potentially on the east side of Wooster Road. Additional area can be treated with a manufactured system installed where the proposed curb is present, such as along Wooster Pike.

Segment 3

Post Construction Stormwater BMPs should not be a differentiator between the Segment 3 alternatives. Providing the required BMPs will be challenging for all four alternatives since several acres of quantity treatment is required. It is possible that construction phasing of the project will provide opportunities for extra treatment in Segments 1 or 2 to be used for Segment 3. As the project develops, additional coordination should

be conducted with project stakeholders to find creative and efficient ways to obtain the required treatment credit. See below and **Attachment F** for additional description and calculations.

Alternative A: As described in Section 3.2, this alternative was excluded from resource specific evaluations and was not included in the evaluation matrix.

Alternative B: The total project earth disturbed area for post-construction storm water BMP is 3.86 acres and, because the earth disturbed area is larger than one-acre, permanent BMPs will be required. The required area for overall treatment is 3.86 acres. In addition to quality treatment, quantity treatment will be required because more than 1 acre of new impervious area is being added in new right of way. This alternative will need to use bioretention cells or detention basins to treat stormwater runoff. Permeable pavement was considered but was determined not to be feasible due to strict performance requirements. It is anticipated that bioretention cells should be used along the trail side wherever possible. As previously mentioned, Alternative 3-B traverses through an existing detention basin behind the US Bank building in order to stay out of the lower elevations prone to flooding. Impacts to the detention basin would need to be addressed as part of the project.

Alternative C: The total project earth disturbed area for post-construction storm water BMP is 3.91 acres and, because the earth disturbed area is larger than one-acre, permanent BMPs will be required. The required area for overall treatment is 2.98 acres. In addition to quality treatment, quantity treatment will be required because more than 1 acre of new impervious area is being added in new right of way. This alternative will need to use bioretention cells or detention basins to treat stormwater runoff. Permeable pavement was considered but was determined not to be feasible due to strict performance requirements. As previously mentioned, Alternative 3-C traverses through an existing detention basin behind the US Bank building in order to stay out of the lower elevations prone to flooding. Impacts to the detention basin would need to be addressed as part of the project.

Alternative D: The total project earth disturbed area for post-construction storm water BMP is 3.83 acres and, because the earth disturbed area is larger than one-acre, permanent BMPs will be required. The required area for overall treatment is 3.31 acres. In addition to quality treatment, quantity treatment will be required because more than 1 acre of new impervious area is being added in new right of way. This alternative will need to use bioretention cells or detention basins to treat stormwater runoff. Permeable pavement was considered but was determined not to be feasible due to strict performance requirements. As previously mentioned, Alternative 3-D traverses through an existing detention basin behind the US Bank building in order to stay out of the lower elevations prone to flooding. Impacts to the detention basin would need to be addressed as part of the project.

Alternative E: The total project earth disturbed area for post-construction storm water BMP is 4.09 acres and, because the earth disturbed area is larger than one-acre, permanent BMPs will be required. The required area for overall treatment is 2.91 acres. In addition to quality treatment, quantity treatment will be required because more than 1 acre of new impervious area is being added in new right of way. This alternative will need to use bioretention cells or detention basins to treat stormwater runoff. Permeable pavement was considered but was determined not to be feasible due to strict performance requirements.

4.4 MAINTENANCE OF TRAFFIC (MOT)

This section discusses the temporary traffic impacts required to construct the various build alternatives.

4.4.1 No Build Alternative

There would be no Maintenance of Traffic (MOT) impacts under the No Build Alternative.

4.4.2 Build Alternatives

The following sections discuss MOT that would be required for the project alternatives.

Segment 1

Alternative A: The construction of Alternative 1-A will potentially cause temporary traffic impacts to the Wasson Way trail, Red Bank Road, US 50, and the Norfolk Southern Railroad. The existing Wasson Way trail will remain open, except for during work at the tie in point, when construction fencing and/or flaggers may be necessary to protect trail users from construction equipment. The remainder of temporary traffic impacts are the result of structures work over existing roads and railways. Structures work on the existing trestle may require short term closures, and/or lane closures of the underlying roadways and railways to add a new deck or replace structural members/repair abutments. Construction equipment will need to access the work from multiple access points; however, equipment access is not expected to be an issue with this alternative.

Alternative B: As described in Section 3.2, this alternative was excluded from resource specific evaluations and was not included in the evaluation matrix.

Alternative C: The construction of Alternative 1-C will potentially cause temporary traffic impacts to Red Bank Road, Woodland Road, and Colbank Road. While the majority of the alignment maintains a variable separation from the roadway and prevents the need to impact traffic, work near the intersections, which includes curb ramps and crosswalks, will require temporary lane closures. Curb cuts, drop curbs, and curb ramps will utilize drums to delineate the work zone during construction activities. This may require single lane closures on Red Bank Road, as well as shoulder closures and/or lane narrowing on Woodland Road and Colbank Road. No complete road closures will be necessary. Construction equipment access via Colbank Road would be recommended.

Segment 2

Alternative A: As described in Section 3.2, this alternative was excluded from resource specific evaluations and was not included in the evaluation matrix.

Alternative B: The construction of Alternative 2-B will cause temporary traffic impacts to Wooster Pike, Wooster Road, and the Norfolk Southern Railroad. Structure work on the existing bridge over Wooster Pike may require short term closures, and/or lane closures of Wooster Pike to add a new deck, replace structural members, and repair abutments. Daily lane closures on Wooster Pike will also be required to construct the path on the south side of the road up to the intersection with Red Bank Road. The lane closure may be accomplished using drums to delineate the work area. Lane closures will also be required along Wooster Road to widen the bridge and build the shared use path south of the existing bridge. Impacts to rail service may also be required for bridge widening, which will require close coordination with the railroad to provide minimal interruption to rail traffic. These lane closures will provide for the construction of the path, grading, and equipment access. No full road closures are anticipated.

Alternative C: The construction of Alternative 2-C will cause temporary traffic impacts to Wooster Pike,

Wooster Road, and the Norfolk Southern Railroad. Structures work on the existing bridge over Wooster Pike may require short term closures, and/or lane closures of Wooster Pike to add a new deck, replace structural members, and repair abutments. Lanes closures on Wooster Pike will also be required to construct the path on the south side of the road up to the intersection with Red Bank Road. Alternative 2-C requires the construction of a roundabout at the intersection of Red Bank Road and Wooster Pike, and lane shifts and closures should be expected during roundabout construction. Lane closures will also be required along Wooster Road to modify the bridge deck to accommodate the shared use path, and to construct the shared use path south of the existing Wooster Road bridge. It is not anticipated that there will be any impacts to rail service. It is anticipated that no full closures will be required to construct Alternative 2-C.

Segment 3

Alternative A: As described in Section 3.2, this alternative was excluded from resource specific evaluations and was not included in the evaluation matrix.

Alternative B: The construction of Alternative 3-B will include temporary traffic impacts to Wooster Road and Armleder Road. While most of the alignment maintains a large separation from roadways and prevents the need to impact traffic, work near the intersections, including curb ramps and crosswalks, will require temporary lane closures and/or shoulder closures. Curb cuts, drop curbs, and curb ramps will utilize drums to delineate the work zone during construction activities. No complete road closures will be necessary, no temporary rail traffic impacts are anticipated, and no existing pedestrian facilities will be impacted with this alternative. However, there is potential for the construction of this alternative to temporarily impact operations for some businesses along Wooster Road, as construction would occur in the backlots of several commercial properties.

Alternative C: The construction of Alternative 3-C will include temporary traffic impacts to Wooster Road and Armleder Road. While most of the alignment maintains a large separation from roadways and prevents the need to impact traffic, work near the intersections, including curb ramps and crosswalks will require temporary lane closures and/or shoulder closures. Curb cuts, drop curbs, and curb ramps will utilize drums to delineate the work zone during construction activities. No complete road closures will be necessary, however, given the proximity to an active rail line, some temporary impacts to rail traffic are anticipated. Railroad flaggers will likely be required on site during construction, and temporary railroad closures may be required when construction equipment is in the close vicinity. The existing sidewalk along the west side of Wooster Road is in direct conflict with the proposed shared use path and therefore pedestrian impacts are anticipated. A temporary pedestrian detour would be necessary for this alternative where the shared use path overlaps the existing sidewalk along Wooster Road.

Alternative D: The construction of Alternative 3-D will include temporary traffic impacts to Wooster Road and Armleder Road. While most of the alignment maintains a large separation from roadways and prevents the need to impact traffic, work near the intersections, including curb ramps and crosswalks, will require temporary lane closures and/or shoulder closures. Curb cuts, drop curbs, and curb ramps will utilize drums to delineate the work zone during construction activities. Given the proximity to an active rail line, some temporary impacts to rail traffic are anticipated. Railroad flaggers will likely be required on site during construction, and temporary railroad closures may be required when construction equipment is in the close vicinity. No complete road closures will be necessary, and no existing pedestrian facilities will be impacted with this alternative.

Alternative E: The construction of Alternative 3-E will include temporary traffic impacts to Wooster Road and Armleder Road. While most of the alignment maintains a large separation from roadways and prevents the need

to impact traffic, work near the intersections and crossings, as well as work along Wooster Road and Armleder Road may require temporary lane closures and/or shoulder closures. The four commercial property driveways along Armleder Road may require temporary part-width or full lane closures during construction. No complete road closures will be necessary, however, given the proximity to an active rail line, some temporary impacts to rail traffic are anticipated. Railroad flaggers will likely be required on site during construction, and temporary railroad closures may be required when construction equipment is in the close vicinity. The existing sidewalk along the west side of Wooster Road is in direct conflict with the proposed shared use path and therefore pedestrian impacts are anticipated. A temporary pedestrian detour would be necessary for this alternative where the shared use path overlaps the existing sidewalk along Wooster Road.

Vehicular and pedestrian access to all properties will be maintained at all times. A portion of sidewalk will be closed for the construction of Alternatives 3-C and 3-E. Temporary closures to roadways may be needed during construction of trail alignments.

4.5 RIGHT-OF-WAY REQUIREMENTS

This section discusses impacts to private property and provides an estimate of permanent property acquisition that would be required for the construction of each of the shared use path alternatives. The project sponsors have determined that no private property will be appropriated for this project. Therefore, the impacts shown below will need to be transferred willingly by each property owner. As the project continues to develop the project team will reach out to adjacent property owners to discuss the project.

4.5.1 No Build Alternative

There would be no right-of-way impacts under the No Build Alternative.

4.5.2 Build Alternatives

Segment 1

Alternative A: This alternative would potentially result in approximately 0.01 acre of temporary impact to private property owned by Hyde Park Lumber Company, which includes a small, wooded section of their lot. Much of this alternative utilizes the City of Cincinnati property along the abandoned rail line, which includes bridges that traverse active rail lines and roads.

Alternative B: As described in Section 3.2, this alternative was excluded from resource specific evaluations and was not included in the evaluation matrix.

Alternative C: This alternative would result in approximately 0.97 acre of temporary and permanent impacts to private property from four owners. These owners include Fairfax Self Storage, MCAS Cincinnati LLC, Oliver Bardes, and Hyde Park Lumber Company. Impacts to private property would include strip takes from lawns and parking lots along Red Bank Road but would not include any impacts to other structures such as monument or advertising signs. Much of this alternative utilizes property already owned by the City of Cincinnati and the Village of Fairfax.

Segment 2

Alternative A: As described in Section 3.2, this alternative was excluded from resource specific evaluations and was not included in the evaluation matrix.

Alternative B: This alternative would result in approximately 0.9 acre of temporary and permanent impacts to private property from five owners. These owners include Southwest Ohio Regional Transit Authority (SORTA), Consolidated Rail, Habegger Investment Group, Norfolk and Western Railway, and Norfolk and Southern Rail Company. Impacts to private property would include strip takes along Wooster Pike and Wooster Road to construct the shared use path. Retaining walls are utilized in this alternative to avoid impacts to existing structures on private property. A portion of this alternative utilizes the abandoned rail alignment owned by SORTA.

Alternative C: This alternative would result in approximately 1.66 acres of temporary and permanent impacts to private property from six owners. These owners include SORTA, Consolidated Rail, Habegger Investment Group, Norfolk and Western Railway, Norfolk and Southern Railway Company, and Hyde Park Lumber Company. Impacts to private property would include strip takes along Wooster Pike and Wooster Road to construct the roundabout and shared use path. Retaining walls are utilized in this alternative to avoid impacts to existing structures on private property. A portion of this alternative utilizes the abandoned rail alignment owned by SORTA.

Segment 3

All the alternative alignments for this segment utilize the abandoned railway that is owned by the SORTA. They also occur within the vicinity of an active railroad, which would require coordination with the rail companies as well as some form of fence or separation. **Figure 5** below provides a visual estimation of where a fence separating the railroad from the shared use path could be placed, as well as estimates on the buffer distances between the railroad, the fence, and the path.

Alternative A: As described in Section 3.2, this alternative was excluded from resource specific evaluations and was not included in the evaluation matrix.

Alternative B: This alternative would result in an estimated total of 5.41 acres of temporary and permanent impacts to private property from eleven owners. These owners include SORTA, Consolidated Rail, GDS Real Estate Inc, Park Ridge Estates LLC, Norfolk and Western Railway, K INK Properties LLC, the Morrow Gravel Company, US Bank National, Amjon LLC, Jeffery M Kachelmeyer, and Caraustar Mill Group Inc. Impacts to private property would include impacts to forested areas and strip takes along backlots and grass medians. This alternative utilizes the abandoned rail alignment owned by SORTA.

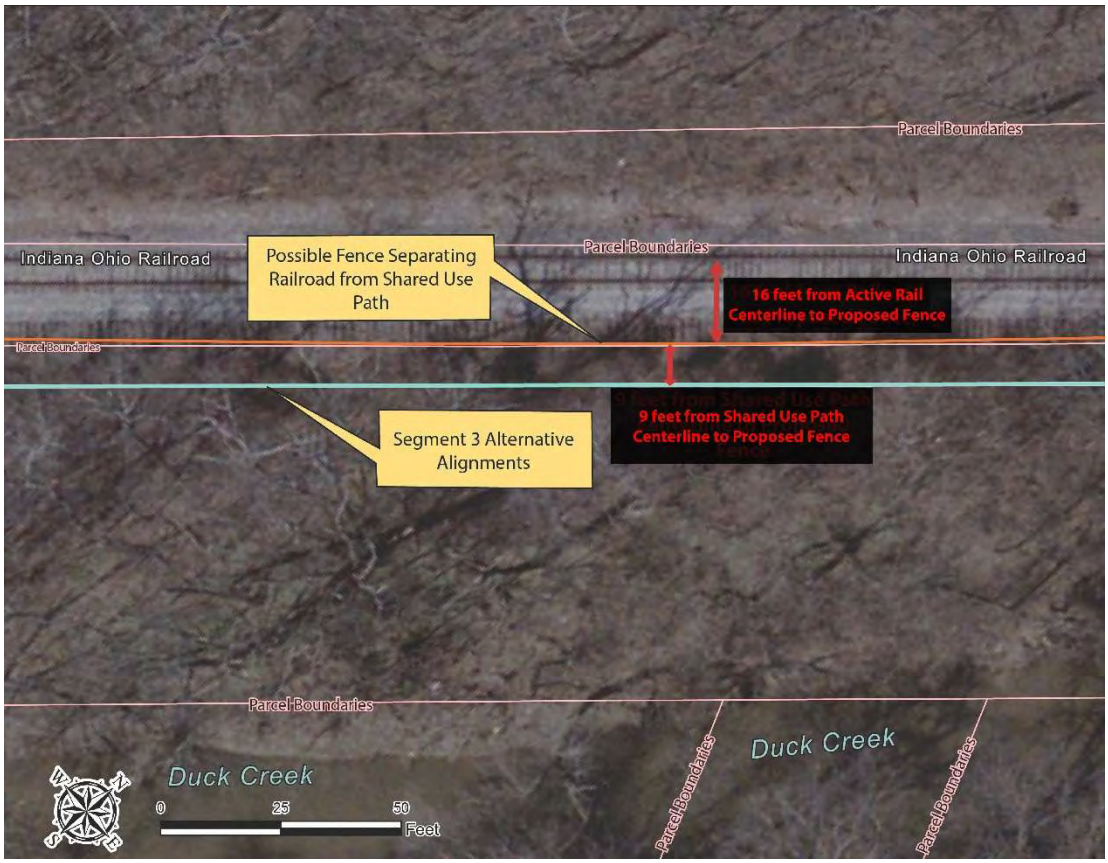

Figure 5: *Visual Representation of distance between railroad and shared use path.*

Alternative C: This alternative would result in a total of approximately 4.77 acres of temporary and permanent impacts to private property from seven owners. These owners include SORTA, Consolidated Rail, Norfolk and Western Railway, the Morrow Gravel Company, US Bank National, Caraustar Mill Group Inc, and Johnny Box Manufacturing Co. Impacts to private property would include forested areas and strip takes of grass medians and gravel lots for the construction of the trail. The Johnny Box Manufacturing Co would lose a small amount of parking for their business with this alternative. A portion of this alternative utilizes city-owned right-of-way along Wooster Road. This alternative utilizes the abandoned rail alignment owned by SORTA.

Alternative D: This alternative would result in an approximate total of 5.05 acres of temporary and permanent impacts to private property from six owners. These owners include SORTA, Norfolk and Western Railway, the Morrow Gravel Company, US Bank National, Caraustar Mill Group Inc, and Garner, Charles R TRS and James E TRS. Impacts to private property would include forested areas and strip takes of grass medians and gravel lots for the construction of the trail. A portion of this alternative utilizes city-owned right-of-way along Wooster Road. This alternative utilizes the abandoned rail alignment owned by SORTA.

Alternative E: This alternative would result in an estimated total of 4.26 acres of temporary and permanent impacts to private property from seven owners. These owners include SORTA, Consolidated Rail, Norfolk and Western Railway, Hyde Park Land LLC, Caraustar Mill Group Inc, Garner, Charles R TRS and James E TRS, and Mar Cinci LLC. Impacts to private property would include forested areas and strip takes of grass medians

and gravel lots for the construction of the trail. A portion of this alternative utilizes City of Cincinnati right-of-way along Wooster Road. This alternative utilizes the abandoned rail alignment owned by SORTA.

4.6 UTILITY ISSUES

Preliminary utility coordination was conducted as a part of this Feasibility Study. This coordination included design coordination with OHIO811 for information on utilities in the project area. Based on information received through OHIO811, it was revealed that Duke Energy has aerial electric distribution and transmission lines and underground gas lines in the project area. There are also aerial communication lines in the project area owned by Cincinnati Bell, Charter Communications, and MCI Communications/Verizon. Greater Cincinnati Water Works owns water distribution lines in the area. The Metropolitan Sewer District (MSD) owns sanitary and combined sewer facilities in the project area. The Cincinnati Stormwater Management Utility owns storm sewers in the project area. ODOT owns storm sewers along with underground and overhead traffic signal equipment in the project area. A brief description of utility impacts for each alternative is described below. Further coordination with the utility providers will occur throughout project development.

4.6.1 No Build Alternative

There would be no impacts to utilities due to the No Build Alternative.

4.6.2 Build Alternatives

Segment 1

Alternative A: There are no major utility impacts associated with Alternative A, which is located along the abandoned railroad right-of-way. Caution is warranted during construction due to existing overhead electric lines in the area.

Alternative B: As described in Section 3.2, this alternative was excluded from resource specific evaluations and was not included in the evaluation matrix.

Alternative C: Alternative C impacts multiple existing utilities. The alternative will be constructed along Red Bank Road within existing right-of-way where existing utilities are located. This alternative will impact the existing overhead electric lines, overhead communication lines, and water supply lines on the east side of Red Bank Road. It is anticipated that traffic signal support poles, and utility poles will need to be relocated for the proposed shared use path. The proposed shared use path is currently proposed within 6’ of an electric transmission pole within a Duke owned utility easement. Coordination with Duke Energy will be required to determine the acceptability of this alignment.

Segment 2

Alternative A: As described in Section 3.2, this alternative was excluded from resource specific evaluations and was not included in the evaluation matrix.

Alternative B: It is anticipated that Alternative 2-B will have minor impacts on existing storm and sanitary sewers, particularly in areas where the existing curb line is to be relocated.

Alternative C: It is anticipated that the construction of Alternative 2-C will require the relocation of at least one electric distribution pole. Additional utility conflicts include possible relocation of underground waterlines and gas lines for roundabout construction. Also, minor impacts to existing storm and sanitary sewers are likely.

Segment 3

Alternative A: As described in Section 3.2, this alternative was excluded from resource specific evaluations and was not included in the evaluation matrix.

Alternative B: There are no utility impacts associated with Alternative B.

Alternative C: Alternative 3-C has the potential for utility impacts to existing power lines.

Alternative D: It is likely that construction of the proposed bridge over Duck Creek will impact an existing gas line with this alternative. Potential utility conflicts are present at the non-signalized crossing of Wooster Road.

Alternative E: Alternative 3-E has minimal utility impacts to traffic signal support poles at the signalized crossing at Wooster Road and Armleder Road.

4.7 ENVIRONMENTAL ANALYSIS

The following is a summary of the environmental resources and potential impacts associated with each of the alternatives. Information for environmental features in the study area was obtained from secondary sources as well as a field survey of the project area. Environmental maps referenced in this section are included in **Attachment G**. The Ecological Resources Technical Memorandum is included as **Attachment H**.

4.7.1 No Build Alternative

There would be no impacts to ecological features (rivers, streams, wetlands, and habitat), Section 4(f)/6(f) resources, cultural resources, regulated materials, or drinking water resources as a result of the No Build Alternative.

4.7.2 Build Alternatives

The potential impacts of each Build Alternative are described below by resource category.

***Rivers, Streams, and Wetlands*:** The proposed project is located within the Duck Creek-Little Miami River watershed (HUC-12 050902021404) and within an Ohio Environmental Protection Agency (OEPA) Nationwide Permit “eligible” area. A 408 permit will be required for project construction due to work near the US Army Corps of Engineers (USACE) levee at Duck Creek. The project area contains two potentially jurisdictional streams, Duck Creek, and Little Duck Creek (See **Attachment G, Exhibits 1.1, 1.2, and 1.3**). In addition, two forested wetlands (Wetland A and Wetland D) and two emergent wetlands (Wetland B and Wetland C) were delineated within the project area. The project area contains approximately 6,294 linear feet (lf) of streams and 1.01 acres of wetland. Additional information regarding the ecological features in the project area, as well as photographs of these features, are provided in the Ecological Resources Technical Memorandum included in **Attachment H**. The potential impacts under each alternative are described below:

Segment 1

Alternative A: Impacts to approximately 26 linear feet of Duck Creek are anticipated to construct Alternative 1-A. There would be no wetland impacts.

Alternative B: As described in Section 3.2, this alternative was excluded from resource specific evaluations and was not included in the evaluation matrix.

Alternative C: Alternative 1-C is not expected to impact any streams or wetlands.

Segment 2

Alternative A: As described in Section 3.2, this alternative was excluded from resource specific evaluations and was not included in the evaluation matrix.

Alternative B: No stream impacts are anticipated for the construction of Alternative 2-B. This alternative would impact approximately 0.01 acre of Wetland A.

Alternative C: Alternative 2-C is anticipated to impact approximately 105 linear feet of Little Duck Creek. This alternative is also anticipated to impact approximately 0.01 acre of Wetland A.

Segment 3

Alternative A: As described in Section 3.2, this alternative was excluded from resource specific evaluations and was not included in the evaluation matrix.

Alternative B: Alternative 3-B is expected to impact approximately 110 linear feet of Duck Creek. This alternative is also expected to impact approximately 0.08 acre of Wetland B and 0.01 acre of Wetland D.

Alternative C: Alternative 3-C is expected to impact approximately 164 linear feet of Duck Creek. There would also be approximately 0.01 acre of Wetland C impact and 0.01 acre of Wetland D impact.

Alternative D: Alternative 3-D is expected to impact approximately 186 linear feet of Duck Creek. This alternative would also impact approximately 0.01 acre of Wetland C and 0.01 acre of Wetland D.

Alternative E: Alternative 3-E is expected to impact approximately 139 linear feet of Duck Creek. There would be no wetland impacts.

***Floodplains*:** Several portions of the alignments are located within the 1% and 0.2% Annual Chance Flood Hazard Areas for Duck Creek, Little Duck Creek, and the Little Miami River, as well as the regulated floodways for both Duck Creek and Little Duck Creek (See **Attachment G, Exhibits 2.1, 2.2, and 2.3)**. A limited hydraulic analysis was completed to determine the effects the proposed structures will have on the regulatory flood water surface elevations. Due to the location of this project, floodway encroachment is unavoidable. In Segment 3, the project area is subject to backwater from the Little Miami / Ohio Rivers which control the water surface elevation in the vicinity of the structures. However, the effects on the regulatory water surface elevation from all of the alternatives extend past this backwater. A detailed hydraulic study will be performed during final design of the preferred alternative to determine the extent of the impact to the regulatory flood water surface

elevation. A Conditional Letter of Map Revision/Letter of Map Revision (CLOMR/LOMR) is anticipated for this project; however, it is not anticipated that the construction of this project will place any new properties into a regulated flood hazard area. The potential impacts for each alternative are described below.

Segment 1

Alternative A: This alternative is not expected to impact the 1% Annual Chance Flood Hazard Area or the regulatory floodway of Duck Creek. This alternative crosses the Special Flood Hazard Area (SFHA) using existing bridge/culvert crossings that will not be modified for construction.

Alternative B: As described in Section 3.2, this alternative was excluded from resource specific evaluations and was not included in the evaluation matrix.

Alternative C: This alternative is not expected to impact the 1% Annual Chance Flood Hazard Area or the regulatory floodway of Duck Creek. This alternative crosses the SFHA using an existing culvert crossing that will not be modified for construction.

Segment 2

Alternative A: As described in Section 3.2, this alternative was excluded from resource specific evaluations and was not included in the evaluation matrix.

Alternative B: Construction of Alternative 2-B would result in 1.38 acres of encroachment to the combined 1% Annual Chance Flood Hazard Area of Duck Creek, Little Duck Creek, and the Little Miami River, and approximately 0.35 acre of encroachment to the 0.2% Annual Chance Flood Hazard Area. There would also be 0.11 acre of encroachment to the Duck Creek regulatory floodway.

Alternative C: This alternative would result in a total of 1.51 acres of encroachment to the combined 1% Annual Chance Flood Hazard Area of Duck Creek, Little Duck Creek, and the Little Miami River, and 0.35 acre of encroachment to the 0.2% Annual Chance Flood Hazard Area. There would also be 0.21 acre of encroachment to the Duck Creek regulatory floodway.

Segment 3

Alternative A: As described in Section 3.2, this alternative was excluded from resource specific evaluations and was not included in the evaluation matrix.

Alternative B: This alternative would result in a total of 2.95 acres of encroachment to the combined 1% Annual Chance Flood Hazard Area of Duck Creek, Little Duck Creek, and the Little Miami River, as well as a total of 0.8 acre of encroachment to the 0.2% Annual Chance Flood Hazard Area. There would also be approximately 1.38 acres of encroachment to the regulated floodway of Duck Creek. It is anticipated that there will be approximately 2.08 feet in water surface elevation rise with the implementation of this alternative. Bridge crossings were excluded from the total acreage as proposed bridges will be designed above the base flood elevation. The anticipated rise in water surface elevation for this alternative exceeds the Federal Emergency Management Agency (FEMA) back water surface elevation of 501 feet for 5,433 feet and is anticipated to impact 30 property owners. However, all the affected property owners already exist within the floodplain.

Alternative C: This alternative would result in a total of 1.91 acres of encroachment to the combined 1% Annual Chance Flood Hazard Area for Duck Creek, Little Duck Creek, and the Little Miami River. It would also result in 1.24 acres of encroachment to the regulated floodway of Duck Creek, and 1.04 acres of encroachment to the 0.2% Annual Chance Flood Hazard Area of Duck Creek. It is anticipated that there will be approximately 0.91 feet in water surface elevation rise with the implementation of this alternative. Bridge crossings were excluded from the total acreage as proposed bridges will be designed above the base flood elevation. The anticipated rise in water surface elevation for this alternative exceeds the FEMA back water surface elevation of 501 feet for 3,373 feet and is anticipated to impact 11 property owners. However, all the affected property owners already exist within the floodplain.

Alternative D: This alternative would result in a total of 1.91 acres of encroachment to the combined 1% Annual Chance Flood Hazard Area for Duck Creek, Little Duck Creek, and the Little Miami River. There would also be approximately 1.17 acres of encroachment to the regulated floodway for Duck Creek, as well as 1.08 acres of encroachment to the 0.2% Annual Chance Flood Hazard Area for Duck Creek. It is anticipated that there will be approximately 0.38 feet in water surface elevation rise with the implementation of this alternative. Bridge crossings were excluded from the total acreage as proposed bridges will be designed above the base flood elevation. The anticipated rise in water surface elevation for this alternative exceeds the FEMA back water surface elevation of 501 feet for less than 300 feet and is anticipated to impact 6 property owners. However, all the affected property owners already exist within the floodplain.

Alternative E: This alternative would result in approximately 1.48 acres of encroachment to the combined 1% Annual Chance Flood Hazard Area for Duck Creek, Little Duck Creek, and the Little Miami River. There would also be approximately 1.27 acres of encroachment to the regulated floodway for Duck Creek, as well as 1.43 acres of encroachment to the 0.2% Annual Chance Flood Hazard Area of Duck Creek. It is anticipated that there will be approximately 0.9 feet in water surface elevation rise with the implementation of this alternative. Bridge crossings were excluded from the total acreage as proposed bridges will be designed above the base flood elevation. The anticipated rise in water surface elevation for this alternative exceeds the FEMA back water surface elevation of 501 feet for less than 300 feet and is anticipated to impact 6 property owners. However, all the affected property owners already exist within the floodplain.

Threatened and Endangered Species: The project is located within Hamilton County, Ohio. Hamilton County is within the known habitat ranges of the following federally listed species:

- Northern long-eared bat (*Myotis septentrionalis*) - Threatened
- Indiana bat (*Myotis sodalis*) - Endangered
- Tricolored bat (*Perimyotis subflavus*) - Proposed Endangered
- Bald eagle (*Haliaeetus leucocephalus*) - Protected
- Fanshell (*Cyprogenia stegaria*) - Endangered
- Rayed bean (*Villosa fabalis*) - Endangered
- Sheepnose (*Plethobasus cyphyus*) - Endangered
- Snuffbox (*Epioblasma triquetra*) - Endangered
- Pink mucket pearly mussel (*Lampsilis orbiculata*) - Endangered

Suitable habitat for the federally listed mussel species was found within the project area in Duck Creek. A mussel reconnaissance survey conducted on September 8, 2022, found no mussel shells, including living and/or fresh dead mussel shells. Approximately 32 acres of suitable wooded habitat for the federally

endangered Indiana bat (*Myotis sodalis*) and federally threatened northern long-eared bat (*Myotis septentrionalis*) occurs within the project study area. Three Potential Maternity Roost Trees (PMRTs) for bats were observed within the study area 100 feet past the edge of pavement. No portals, openings, cracks, or crevices in rock outcrops that may be an entrance to a cave or mine that would be considered suitable winter hibernacula for Indiana bat or northern long-eared bat were found within the study area. A U.S. Fish and Wildlife Service (USFWS) records check found that the project area was not located within a known bat buffer. No bald eagle nests were observed within the project area (See **Attachment H**).

The Ohio Department of Natural Resources' Division of Wildlife Natural Heritage Database (ODNR-DOW NHDB) records check found seven records of state-listed species within a one-mile radius of the project area (See **Attachment H**).

- Loggerhead shrike (*Lanius ludovicianus*) - Endangered
- Mountain madtom (*Noturus eleutherus*) - Threatened
- Blue sucker (*Cycleptus elongatus*) - Threatened
- Running buffalo clover (*Trifolium stoloniferum*) - Potentially Threatened
- Fawnsfoot mussel (*Truncilla donaciformis*) - Species of Concern
- Eastern ringtail dragonfly (*Erpetogomphus designatus*) - Species of Concern
- Black sandshell mussel (*Ligumia recta*) - Species of Concern

The two state-listed mussel species, blue sucker, and mountain madtom, all occur in the Little Miami River, and no impacts to the Little Miami River are expected due to this project. Suitable habitat for the running buffalo clover, loggerhead shrike (in semi-open scrub/shrub habitat), fawnsfoot mussel, black sandshell mussel (Duck Creek), and the eastern ringtail dragonfly (Duck Creek) was observed within the study area. There is no suitable habitat for the mountain madtom and blue sucker within the study area.

Segment 1

Alternative A: The construction limits for Alternative 1-A are expected to impact approximately 0.25 acre of suitable wooded habitat for listed bats. No impacts to any PMRTs are anticipated.

Alternative B: As described in Section 3.2, this alternative was excluded from resource specific evaluations and was not included in the evaluation matrix.

Alternative C: The construction limits for Alternative 1-C are expected to impact approximately 0.9 acre of suitable wooded habitat for listed bats. No impacts to any PMRTs are anticipated.

Segment 2

Alternative A: As described in Section 3.2, this alternative was excluded from resource specific evaluations and was not included in the evaluation matrix.

Alternative B: The construction limits for Alternative 2-B are expected to impact approximately 0.50 acre of suitable wooded habitat for listed bats. No impacts to any PMRTs are anticipated.

Alternative C: The construction limits for Alternative 2-C are expected to impact approximately 0.64 acre of suitable wooded habitat for listed bats. No impacts to any PMRTs are anticipated.

Segment 3

Alternative A: As described in Section 3.2, this alternative was excluded from resource specific evaluations and was not included in the evaluation matrix.

Alternative B: The construction limits for Alternative 3-B are expected to impact approximately 2.62 acres of suitable wooded habitat for listed bats.

Alternative C: The construction limits for Alternative 3-C are expected to impact approximately 2.79 acres of suitable wooded habitat for listed bats.

Alternative D: The construction limits for Alternative 3-D are expected to impact approximately 2.95 acres of suitable wooded habitat for listed bats.

Alternative E: The construction limits for Alternative 3-E are expected to impact approximately 2.85 acres of suitable wooded habitat for listed bats.

Cultural Resources: Based on a review of the State Historic Preservation Office's online mapping, both of the Segment 2 alternatives are located within the National Register Boundary of the Village of Mariemont National Historic District (see **Attachment G, Exhibit 3.2**). According to the Cultural Resource Programmatic Agreement (Agreement 38503) dated May 26, 2023, coordination with ODOT's Office of Environmental Service (OES) will be required for this portion of the project. Alternatives 3-B, 3-C, and 3-D would cross into a portion of the project area that is located within a previously completed Phase 1 cultural resources survey that covers the majority of Otto Armleder Park. A literature search also found that the abandoned Norfolk Southern Railroad bridge that Alternatives 1-A, 1-C, 2-B, and 2-C utilize is on the Ohio Historic Inventories (OHI) list. No known Ohio Archeological Inventory (OAI) sites were found within the construction limits for any of the segments or alternatives.

Section 4(f)/6(f): Section 4(f)/6(f) properties include publicly owned parks, recreational areas, wildlife and waterfowl refuges, or public and private historical sites. Given the nature and location of the project, there will be impacts to Ault Park and Otto Armleder Park (see **Attachment G, Exhibits 4.1 and 4.3**). Tree clearing within Ault Park will require tree replacement. Another small park, the Linwood Hutton Recreational Area, is located adjacent to the southwest portion of the study area and would be very slightly impacted depending on the alternative chosen. Minor impacts are anticipated to the existing Wasson Way shared use path to connect the new trail. There are no Section 6(f) properties within the project area. Given the anticipated impacts to Section 4(f) properties, coordination with Officials with Jurisdiction (OWJs) will be required for various alternatives and portions of the project. Due to the project type and minimal impacts anticipated, this work will likely be classified as *de minimis*. The potential 4(f) impacts are described below.

Segment 1

Alternative 1-A would connect to the existing Wasson Way Trail within Ault Park, and Alternative 1-C would connect with the existing Murray Path. Section 4(f) coordination would be required for these alternatives.

Segment 2

There are no Section 4(f)/6(f) properties that would be impacted by any of the Segment 2 alternatives.

Segment 3

Alternative 3-E will result in approximately 0.03 acre of encroachment in Linwood Hutton Recreational Area, and approximately 0.27 acre in Otto Armleder Park. Alternatives 3-B, 3-C, and 3-D would also require approximately 0.02 acre of encroachment to Otto Armleder Park. All the Segment 3 alternatives would connect with the existing Otto Armleder Memorial Park Trail. Section 4(f) coordination would be required for these alternatives.

Air and Noise Quality: There would be no adverse air and noise quality impacts associated with this project. The project would have an overall beneficial impact on air and noise quality because of individuals biking and walking instead of driving. Overall emissions would decrease, and traffic noise would be reduced.

Regulated Materials: Based on a review of the project area using the Ohio Regulated Properties Search (ORPS) Tool, a total of 15 regulated material (RM) records occur within the project area (See **Attachment G, Exhibits 5.1, 5.2, and 5.3**). These include five Resource Conservation and Recovery Act (RCRA) records, one Division of Environmental Response and Revitalization record (DERR), nine underground storage tanks (UST), eight leaking underground storage tanks (LUST) and two spill records. Alternative 1-C and Alternative 3-B would be the only alternatives considered to have any regulated material impacts. Any work within 300 feet of landfills in the project area requires a 513 permit. The H. Hafner and Sons Inc. landfill buffer zone occurs within the construction limits for all of the Segment 2 and 3 alternatives, which means this project will require 513 coordination.

Drinking Water Resources: All the segments and alternatives are located within the boundaries of a designated sole source aquifer. Three ODNR water wells are also located within the HAM-Wasson Way to Otto Armleder Trail Extension project area, however, none of these wells are expected to be impacted by any of the proposed alternatives (See **Attachment G, Exhibits 6.1, 6.2 and 6.3**). The proximity of the project to a sole source aquifer requires that a plan note be included in the project's construction plans in accordance with ODOT's *Standard Operating Procedure for Drinking Water Resources* (ODOT, 2005). The plan note will require that contractors employ protective measures, such as avoiding refueling and maintenance activities in environmentally sensitive areas, to minimize the potential for contamination.

Farmland: The project is located entirely within an urbanized area and would not require coordination under the Farmland Protection Policy Act.

4.8 Public Involvement

As discussed in Section 1.1, the need to address pedestrian and bicycle connectivity along designated US Bicycle Route 21 was identified in the *Eastern Corridor Segments II and III (PID 86462) Transportation Needs Analysis*, which was prepared in July 2017. This study was followed by the *Conceptual Alternatives Implementation Plan for Eastern Corridor Segments II and III (PID 86462)* prepared in 2019, which identified the proposed shared use path along US 50 from Wasson Way Trail to Otto Armleder Park as one of 68 projects

that should be prioritized for implementation. The public involvement process for each of these studies is detailed in the reports cited above and summarized below. Additionally, a combined virtual/in-person public open house was held in November and December 2024 to solicit comments on the proposed Build Alternatives and preliminary recommendations of this Feasibility Study. This effort, as well as the comments received, are summarized below and detailed in **Attachment I.**

Transportation Needs Analysis*:* During the Needs Analysis study, stakeholder input was gathered through an Eastern Corridor Development Team (ECDT) meeting, which included Eastern Corridor Partners, community representatives, leadership of the Eastern Corridor communities, business associations, and other stakeholder groups that have an interest in the Eastern Corridor Program. In addition, a series of Focus Area Workshops were held for smaller geographic areas within Segments II and III of the Eastern Corridor area to gather public input regarding community values and priorities along with the transportation needs of the focus areas. To reach all residents within the Eastern Corridor area, an online interactive survey was conducted which solicited information from residents and commuters about transportation issues in Segments II and III of the Eastern Corridor. ODOT also held a Public Open House to update the public on the Eastern Corridor Segments II and III Transportation Needs Analysis Study and provide an opportunity for the public to provide comments on the needs identified for the six focus areas.

Conceptual Alternatives Implementation Plan: As part of the development of the Implementation Plan, Advisory Committees were established for the six Focus Areas within Segments II and III. These committees included elected officials, transportation planning professionals, and community and interest group representatives, including representatives of the Sierra Club, Tri-State Trails/Green Umbrella, and the Ohio-Kentucky-Indiana (OKI) Regional Council of Governments. Each Focus Group held four meetings with ODOT over the course of the study to further refine transportation needs in the Focus Areas and assist with developing solution concepts. Two Public Open House Meetings were also held throughout the development and refinement of the transportation concepts to ensure that the public had an opportunity to provide input at key decision points.

Public Open Houses: Additional public involvement activities for the Build Alternatives occurred as part of this project. On November 20, 2024, ODOT launched a Virtual Open House to share information with the public about the proposed project, as well as to gather information from the public as to which alternatives they prefer and why. The Virtual Open House was accessed through a project website developed and managed by the project team using the Public Input platform and was open for review for a period of 45 days. The draft Feasibility Study was presented in the Virtual Public Open House, and the Recommended Alternatives were identified to solicit public input on the project. During the meeting period, the public had the opportunity to review updated project materials, ask questions regarding aspects of the proposed work, and leave comments.

To compliment the Virtual Open House, an In-Person Open House was also held at Karrikin Spirits Company on December 5, 2024, from 5:00 pm to 7:00 pm. Visitors were encouraged to stop by at their own convenience during meeting hours. Participants were invited to review exhibits highlighting the project and the alternatives under consideration (the exhibits shared at the in-person meeting were the same exhibits featured on the Virtual Open House site). Project team members were available to discuss the proposed project in greater detail and answer questions. Participants were provided with a fact sheet about the project and a hardcopy version of the questions that were embedded into the virtual meeting site. All participants were encouraged to

complete either the hardcopy questionnaire or visit the Public Input site to submit their responses online. The Open Houses were advertised using various methods of outreach, including:

- Project website
- News release
- Social media posts using ODOT District 8 social media platforms
- Paid newspaper advertisements
- Notification letters
- Email e-blasts
- Open House Flyers
- Yard signs

Attachment I, **Appendix A** contains documentation of the Open House website, and the content shared on its pages. Questions were embedded throughout the pages of the Virtual Open House site. Also included are materials shared at the In-Person Open House, which included a fact sheet of the project and a hardcopy version of the questions that were embedded into the virtual meeting site. All participants of the in-person meeting were encouraged to complete either the hardcopy questionnaire or visit the Public Input site to submit their responses online. To ensure that project information was shared throughout the community, a comprehensive notification effort was implemented using the various methods listed above. These efforts are detailed in **Attachment I, Appendix B**.

As of January 5, 2025, the Virtual Open House had been viewed 4,728 times during the public review and comment period. A total of 14,276 responses were submitted to the survey, with 928 individuals answering at least one survey question, and 1,320 comments being recorded. In addition, 27 people subscribed for further updates about the project. More than 100 people attended the In-Person Open House, and 30 of these attendees completed the hardcopy question form. The project team entered the responses provided on the hardcopy forms into the Public Input response system so that all data received could be analyzed. The comments received were separated and organized based on category, and are included in **Attachment I, Appendix C**. In addition to open house public input materials, the project team received several letters and emails expressing support, concerns, suggestions, and criticisms of the proposed project. A petition expressing support for the project was also received and can be found in **Attachment I.**

Following is a summary of the key findings gathered from the public input. Additional details on the public input received is included in the Public Input Summary Report (**Attachment I**):

• Most respondents (99%) live and work in the Greater Cincinnati-Northern Kentucky region, with a concentration of respondents living and/or working near the project area. A majority of respondents are interested in the project either because they live in the area (75%), regularly bike or walk through the area (80%), and/or are frequent users of the regional shared use trail system (64%).

• For **Segment 1**, 95% of respondents agreed with selecting Alternative A, which utilizes the old railroad bridge over Red Bank Road, as the preferred alternative. When asked why, respondents most often said they perceived this option was safer since it is completely separated from vehicular traffic and eliminates conflicts between vehicles and pedestrians. Some commenters also appreciate the opportunity to revitalize an existing

historic structure. Alternatively, some commenters expressed concerns over the high cost of this alternative, as well as the height of the bridge.

• For **Segment 2**, 87% of respondents said they agreed with selecting Alternative C, which would involve the installation of a roundabout at the Red Bank/Wooster intersection, as the preferred alternative. When asked why, respondents most often cited improved traffic flow and enhanced safety at the intersection. Many also felt that Alternative C would be more cost effective and that the separated path will make the trail safer. Some concerns were expressed about drivers' ability to use a roundabout, as well as truck traffic in the area trying to navigate the roundabout.

• For **Segment 3**, 89% of respondents said they agreed with selecting Alternative E, which carries Segment 3 all the way down to the intersection of Wooster and Armleder Road before using an existing signalized intersection to cross Wooster Road to reach the entrance of Otto Armleder Park, as the preferred alternative. When asked why, respondents most often cited that Alternative E utilizes an existing signalized crosswalk, which makes it the safest option to cross Wooster Road. Commenters also noted the opportunity for a future connection to Linwood Hutton Recreational Area, and that Alternative E connects directly to the entrance of Otto Armleder Park.

• Approximately 81% of respondents said that adding the shared use path would encourage them to ride a bike or walk in the area more often. Additionally, 79% of respondents said they would be "extremely likely" to walk or ride a bike in this area if a shared use path was available.

• When asked what the project team should keep in mind as it moves forward with project planning, respondents offered a variety of responses, but many centered on creating more additional trail networks, adding amenities such as drinking fountains and bathrooms, and keeping the public updated on new developments with the project.

4.9 COST ESTIMATE

A preliminary construction cost estimate for each Build Alternative has been developed as a part of this study. The preliminary cost estimates are provided in **Attachment J** and shown in the evaluation matrices provided in **Tables 1, 2** and **3**. Detailed construction costs will be created during development of the Preferred Alternative.

5.0 COMPARISON OF ALTERNATIVES

Detailed evaluation matrices, which summarize purpose and need, environmental, engineering, safety, and public input evaluation criteria for the HAM Wasson Way to Otto Armleder (PID 113603) segment alternatives, are provided as **Tables 1, 2, and 3** on the following pages.

Table 1 – Evaluation Matrix for the Wasson Way to Otto Armleder (PID 113603) Project Alternatives – Segment 1

Evaluation Matrix: Wasson- Armleder Shared Use Path (PID 113603) Segment 1			
Feature Consideration	Preliminary Alternatives		
	No Build Alternative	Alternative A	Alternative C
Purpose and Need			
Improve bicycle and pedestrian connectivity between Wasson Way Trail and Otto Armleder Park	No	Yes	Yes
Safety Analysis			
Safety Issues	No bicycle facilities exist in this corridor. Traveling next to vehicular traffic is a safety concern.	No pedestrian/bicycle conflict points with vehicular traffic.	Three pedestrian/bicycle conflict points with vehicular traffic - at intersections and driveway entrance
Bicycle Level of Traffic Stress	LTS 4	LTS 1	LTS 2
Engineering Issues			
Length of Shared Use Path (ft)	N/A	2350	2900
Width of Shared Use Path (ft)	N/A	12	10 and 12
Design Speed (mph)	N/A	20	20
Trail Design Issues	N/A	None	None
Structures Required	None	2 existing rail bridges to be modified	1 retaining wall required
Utility Relocations/Issues	None	None	Electric relocations required; potential conflict with electric transmission easement
Right-of-Way Impacts			
Additional Right-of-Way Required (acres)	None	0.01	0.97
Ecological Resources			
Streams (lf)	No Impact	26 lf of impact	No Impact
Wetlands (acres)	No Impact	No Impact	No Impact
Threatened & Endangered Species	No Impact	Encroachment of 0.25 ac of suitable habitat for federally listed bats	Encroachment of 0.90 ac of suitable habitat for federally listed bats
Floodplain/Floodway Impacts			
100 Year Floodplain Encroachment (acres)	None	None	None
Floodway Encroachment (acres)	None	None	None
Cultural Resources			
NHRP-Listed Districts	None	None	None
NHRP-Listed Sites	None	None	None
Section 4(f)/6(f) Resources			
Section 4(f)/6(f) Impacts	None	Ault Park (minor)	None
Hazardous Materials			
Regulated Materials Review	None	None	3 UST sites, 2 LUST sites, 1 RCRA, 2 spill sites
Drinking Water			
Sole Source Aquifer	None	Within boundaries of sole source aquifer, plan note would be required	Within boundaries of sole source aquifer, plan note would be required
Preliminary Cost Estimates			
Estimated Construction Costs*	N/A	$7,050,000.00	$2,700,000.00
Estimated ROW Costs			
Conclusion			
Recommendation	Not recommended	Recommended as Preferred Alternative	Not recommended

Table 2 – Evaluation Matrix for the Wasson Way to Otto Armleder (PID 113603) Project Alternatives – Segment 2

Evaluation Matrix: Wasson- Armleder Shared Use Path (PID 113603) Segment 2			
Feature Consideration	**Preliminary Alternatives**		
	No Build Alternative	**Alternative B**	**Alternative C**
Purpose and Need			
Improve bicycle and pedestrian connectivity between Wasson Way Trail and Otto Armleder Park	No	Yes	Yes
Safety Analysis			
Safety Issues	No bicycle facilities exist in this corridor. Traveling next to vehicular traffic is a safety concern.	No pedestrian/bicycle conflict points with vehicular traffic.	No pedestrian/bicycle conflict points with vehicular traffic.
Bicycle Level of Traffic Stress	LTS 4	LTS 1	LTS 1
Engineering Issues			
Length of Shared Use Path (ft)	N/A	2650	2650
Width of Shared Use Path (ft)	N/A	12	12
Design Speed (mph)	N/A	12	12
Trail Design Issues	N/A	Tight curve requires slower speeds	Tight curve requires slower speeds
Structures Required	None	1 existing railroad bridge modified, 1 highway bridge widened, 2 retaining walls required	1 existing railroad bridge modified, 1 highway bridge modified (no widening required), 2 retaining walls required
Utility Relocations/Issues	None	Impacts to storm and sanitary sewers is anticipated	Impacts to storm and sanitary sewers is anticipated. Relocation of electric distribution pole, underground water and gas lines expected
Right-of-Way Impacts			
Additional Right-of-Way Required (acres)	None	0.9	1.66
Ecological Resources			
Streams (lf)	None	None	105 lf of impact
Wetlands (acres)	None	0.01 ac of impact	0.01 ac of impact
Threatened & Endangered Species	None	Encroachment of 0.50 ac of suitable habitat for federally listed bats	Encroachment of 0.64 ac of suitable habitat for federally listed bats
Floodplain/Floodway Impacts			
100 Year Floodplain Encroachment (acres)	None	1.38	1.51
100 Year Floodway Encroachment (acres)	None	0.11 (Additional hydraulic analysis required)	0.21 (Additional hydraulic analysis required)
Cultural Resources			
NHRP-Listed Districts	None	Village of Mariemont Historic District	Village of Mariemont Historic District
NHRP-Listed Sites	None	None	None
Section 4(f)/6(f) Resources			
Section 4(f)/6(f) Impacts	None	None	None
Hazardous Materials			
Regulated Materials Review	None	513 Landfill Permit may be required	513 Landfill Permit may be required
Drinking Water			
Sole Source Aquifer	None	Within boundaries of sole source aquifer, plan note would be required	Within boundaries of sole source aquifer, plan note would be required
Preliminary Cost Estimates			
Estimated Construction Costs	N/A	$6,400,000.00	$5,660,000.00
Estimated ROW Costs			
Conclusion			
Recommended as Preferred Alternative	Not recommended	Not recommended	Recommended as Preferred Alternative

Table 3 – Evaluation Matrix for the Wasson Way to Otto Armleder (PID 113603) Project Alternatives – Segment 3

Evaluation Matrix: Wasson- Armleder Shared Use Path (PID 113603) Segment 3					
Feature Consideration	Preliminary Alternatives				
	No Build Alternative	Alternative B	Alternative C	Alternative D	Alternative E
Purpose and Need					
Improve bicycle and pedestrian connectivity between Wasson Way Trail and Otto Armleder Park	No	Yes	Yes	Yes	Yes
Safety Analysis					
Safety Issues	No bicycle facilities exist in this corridor. Traveling next to vehicular traffic on Wooster Road is a safety concern.	One pedestrian/bicycle conflict points with vehicular traffic - at mid-block crossing	One pedestrian/bicycle conflict points with vehicular traffic - at mid-block crossing	One pedestrian/bicycle conflict points with vehicular traffic - at mid-block crossing	Five pedestrian/bicycle conflict points with vehicular traffic - at intersections and driveway entrances
Bicycle Level of Traffic Stress	LTS 4	LTS 1	LTS 1	LTS 1	LTS 1
Engineering Issues					
Length of Shared Use Path (lf)	N/A	5600	6450	6400	6400
Width of Shared Use Path (ft)	N/A	12	12	12	12
Design Speed (mph)	N/A	20	20	20	20
Trail Design Issues	None	None	None	None	None
Structures Required	None	1 existing railroad bridge modified, 1 new bridge structure required, 2 retaining walls required	1 existing railroad bridge modified, 1 new bridge structure required	1 existing railroad bridge modified, 1 new bridge structure required, 1 retaining wall required	1 existing railroad bridge modified, 1 new bridge structure required, 2 retaining walls required
Utility Relocations/Issues	None	None	Impacts to overhead electric lines likely	Minor impacts to gas line anticipated.	None
Right-of-Way Impacts					
Additional Right-of-Way Required (acres)	None	5.41	4.77	5.05	4.26
Ecological Resources					
Streams (lf)	None	110 lf of impact	164 lf of impact	186 lf of impact	139 lf of impact
Wetlands (acres)	None	0.09 ac of impact	0.02 ac of impact	0.02 ac of impact	None
Threatened & Endangered Species	None	Encroachment of 2.62 ac of suitable habitat for federally listed bats	Encroachment of 2.79 ac of suitable habitat for federally listed bats	Encroachment of 2.95 ac of suitable habitat for federally listed bats	Encroachment of 2.85 ac of suitable habitat for federally listed bats
Floodplain/Floodway Impacts					
100 Year Floodplain Encroachment (acres)	None	2.95	1.91	1.91	1.48
Floodway Encroachment (acres)	None	1.38 (CLOMR Anticipated)	1.24 (CLOMR Anticipated)	1.17 (CLOMR Anticipated)	1.27 (CLOMR Anticipated)
Impact of New Bridge on FEMA Flood Hazard Area	None	Rise 2.08', extends 5,433' upstream	Rise 0.91', extends 3,373' upstream	Rise 0.38', extends <300' upstream	Rise 0.90', extends <300' upstream
Anticipated Number of Affected Property Owners	None	30 properties	11 properties	6 properties	6 properties
Cultural Resources					
NHRP-Listed Districts	None	None	None	None	None
NHRP-Listed Sites	None	None	None	None	None
Section 4(f)/6(f) Resources					
Section 4(f)/6(f) Impacts	None	Otto Armleder Park (minor)	Otto Armleder Park (minor)	Otto Armleder Park (minor)	Otto Armleder Park (minor), Linwood Hutton Recreational Area (minor)
Hazardous Materials					
Regulated Materials Review	None	2 RCRA, 3 UST, 3 LUST, 513 Landfill Permit may be required	513 Landfill Permit may be required	513 Landfill Permit may be required	513 Landfill Permit may be required
Drinking Water					
Sole Source Aquifer	None	Within boundaries of sole source aquifer, plan note would be required	Within boundaries of sole source aquifer, plan note would be required	Within boundaries of sole source aquifer, plan note would be required	Within boundaries of sole source aquifer, plan note would be required
Preliminary Cost Estimates					
Estimated Construction Costs	N/A	$3,900,000.00	$4,050,000.00	$4,350,000.00	$5,850,000.00
Estimated ROW Costs					
Conclusion					
Recommended as Preferred Alternative	Not recommended	Not recommended	Not recommended	Not recommended	Recommended as Preferred Alternative

6.0 PREFERRED ALTERNATIVE/NEXT STEPS

The Preferred Alternatives for the HAM Wasson Way to Otto Armleder (PID 113603) were selected based on the results of the engineering and environmental studies summarized in this Feasibility Study, as well as the extensive public input received on this project. The Preferred Alternatives are summarized below by segment.

6.1 SEGMENT 1

Alternative 1-A was selected as the Preferred Alternative for the Segment 1 portion. This alternative was chosen based on the utilization of the existing railroad bridges and how the use of the rail bridges helps to improve safety and eliminate/minimize impacts. By utilizing these bridges, all the sites of potential vehicle/ pedestrian conflict are eliminated. This alternative also utilizes existing city-owned right of way, resulting in lower anticipated costs to acquire new right of way as compared to Alternative 1-C. It should be noted that the overall cost of this alternative is higher due to some required maintenance of the existing railroad bridges, but those costs would eventually need to be addressed by the City regardless of choosing this alternative.

6.2 SEGMENT 2

Alternative 2-C was selected as the Preferred Alternative for the Segment 2 portion. This alternative was selected due to the benefits of being able to utilize the existing Wooster Road bridge width by creating a new roundabout at the intersection of Wooster Pike and Red Bank Road. The new roundabout is also anticipated to help improve the safety and traffic flow of the intersection. Since this alternative doesn't require any widening of the existing Wooster Road bridge, the potential to impact railroad owned property is reduced, and the overall construction cost and amount of right of way needed is less compared to Alternative 2-B. Alternative 2-C will require the extension of the existing culvert through Little Duck Creek, resulting in slightly more utility, stream, and floodplain impacts.

6.3 SEGMENT 3

Alternative 3-E was selected as the Preferred Alternative for the Segment 3 portion. This alternative was selected for its safety benefits because it was the only alternative that crosses Wooster Road with a signalized crossing and minimized the potential conflicts with existing industrial and construction related businesses along Wooster Road. When compared to the other Segment 3 alternatives, this alternative doesn't have any wetland impacts, avoids impacts to the detention basin located on the US Bank property, and requires the least amount of new permanent right-of-way. This alternative also has less floodway rise upstream when compared to most of the other Segment 3 alternatives and the rise that does occur is largely under the regulatory flood elevation, which is controlled by Ohio River backwater flooding. In addition, the anticipated rise in water surface elevation for this alternative exceeds the FEMA back water surface elevation of 501 feet for a much shorter distance when compared with the other alternatives for Segment 3. As mentioned in section 4.7.2, this alternative meets the Linwood Hutton Recreational Area, which provides opportunity in the future for a connecting trail to be built between the shared use path and the park. Furthermore, since this park is connected to Eastern Avenue via a pedestrian bridge over the active railroad, access to Alternative 3-E could also be made to the homes and businesses along Eastern Avenue; further improving regional connectivity.

6.4 PHASING

This project can be constructed in two separate phases with logical termini. Phase 1 of the project would start at the beginning of Segment 1 and would terminate at Wooster Pike north of the abandoned railroad bridge near the access road to Norfolk/Southern rail yard. From this point, pedestrians can use the existing sidewalk, and cyclists can travel within the roadway on Wooster Pike and Wooster Road to travel down towards Otto Armleder Memorial Park. The second construction phase would begin at the terminus of Phase 1 and build the shared use path to Otto Armleder Memorial Park.

7.0 REFERENCES

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Attachments

Attachment A

Excerpts from *Transportation Needs Analysis*

EASTERN CORRIDOR SEGMENTS II and III (PID 86462)

TRANSPORTATION NEEDS ANALYSIS

Prepared for:
Ohio Department of Transportation
District 8
505 South State Route 741
Lebanon, OH 45036-9518

Prepared by:
Stantec Consulting Services, Inc.

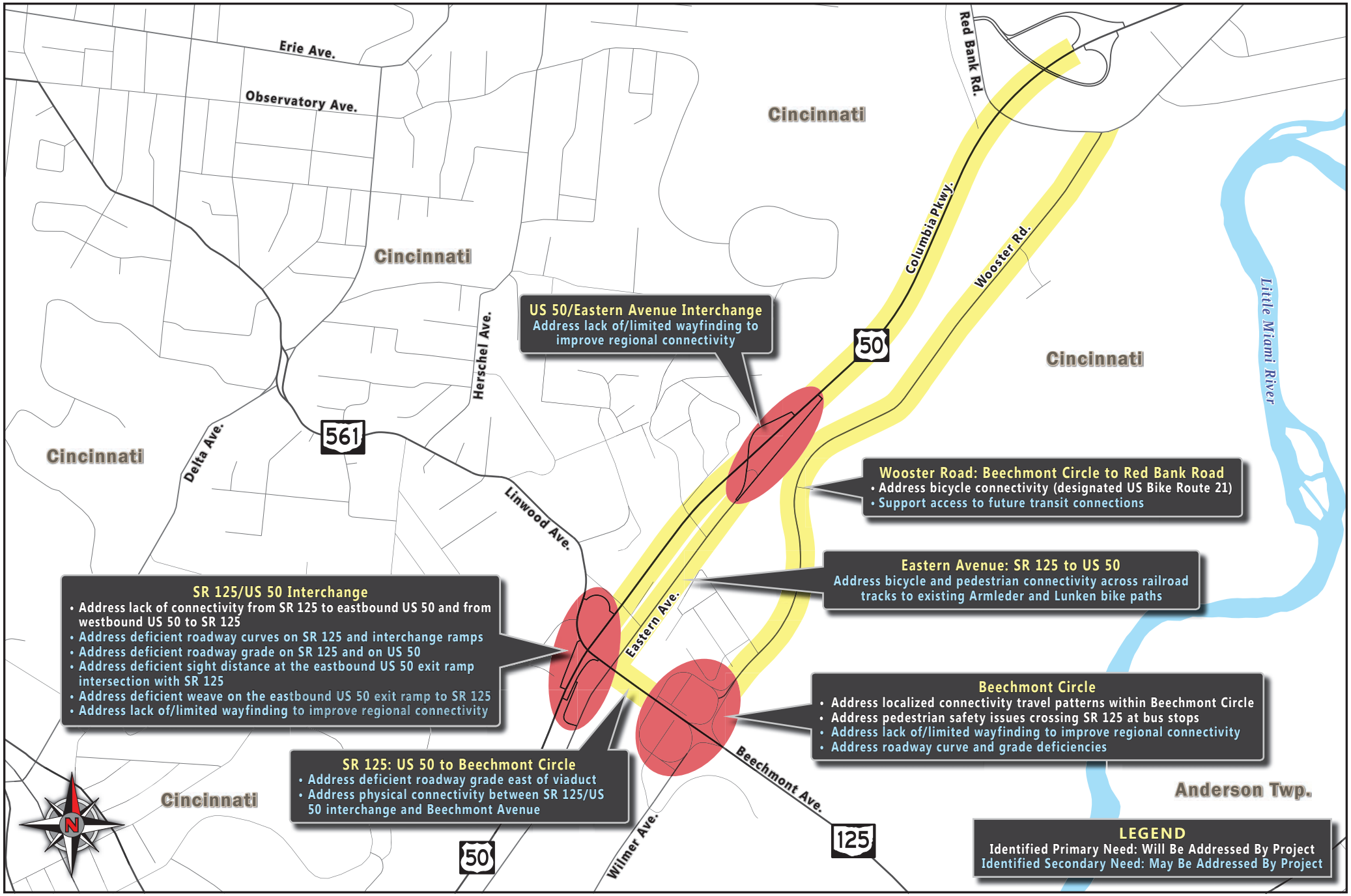
July 31, 2017

The Eastern Corridor

Figure ES-4

Eastern Corridor Segments II and III

Linwood/Eastern Interchange Focus Area



- Street calming is needed; Eastern Avenue between Linwood Avenue and US 50 is treated mostly as an on and off ramp and motorists go too fast. A solar radar sign would be beneficial in this location. (2 comments)

Three comments address bike issues:

- A pedestrian bridge is needed to get bikes over the railroad tracks (2 comments)
- Marked bike lanes are needed (1 comment).

One public transit comment identifies the need for a transit stop in this location.

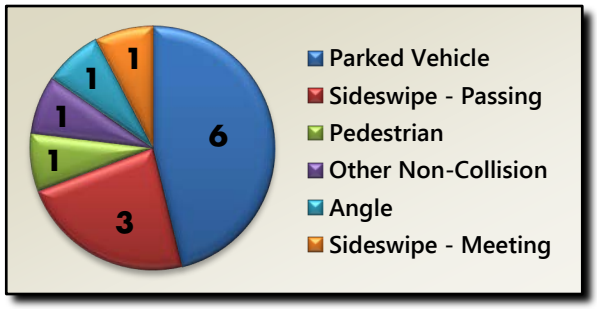


Figure 35: Frequency of Crashes by Crash Type Eastern Avenue: SR 125 to US 50

Crash Data: Eastern Avenue from south of SR 125 to US 50 was identified as a high hazard location through an ODOT crash screening of the Segments II and III roadway network.

As illustrated in **Figure 35**, there were 13 total crashes in this roadway section during the three-year period between 2013 and 2015. Parked vehicles and sideswipe crashes represent 75% of the total crashes. Although parked vehicle crashes are the most prevalent crashes, they do not occur at the same location. There is no correlation between the crash data and a specific contributing cause for the crashes. A plot of all 13 crashes is provided in **Attachment A-2**.

LOS Analysis: No level of service analysis was conducted for this segment.

Geometric Data: No geometric deficiencies were identified for this segment.

Pedestrian Data: No pedestrian data is available for this segment.

2.4.3.5 Wooster Road: Beechmont Circle to Red Bank Road

The section of Wooster Road between Beechmont Circle and Red Bank Road is a two-lane undivided roadway approximately 1.4 miles in length with a posted speed of 35 mph. There are numerous accesses to industrial businesses along this section of Wooster Road.

Stakeholder Input: Thirteen roadway comments identify concerns and needs at Wooster Road between Beechmont Circle and Red Bank Road. Of these concerns, four comments address congestion issues and indicate that extra lanes should be added to this roadway and truck traffic limited during rush hour. Other roadway concerns include the following:

- The road should be repaired (1 comment)
- The road should be repaved and restriped (1 comment)
- Wooster Road occasionally floods (1 comment)
- Air and noise pollution from traffic in this area are concerns at Ault Park (1 comment)
- Large delivery trucks and trailers to Hafner and Cincinnati Paperboard occasionally block Wooster Road as they back into loading docks (1 comment)

- Better signage is needed on Old Wooster Pike (1 comment)

Twenty-seven comments address bicycle access on Wooster Road:

- Although Wooster Road is an important route for cyclists, it is very dangerous (5 comments)
- A bike lane or bike path is needed along the Little Miami River between Lunken Park, Otto Armleder Park, Avoca Park, the Murray Avenue Trail, and the Little Miami Trail (10 comments)
- Marked bike lanes on Wooster are needed (8 comments)
- A bike/pedestrian crossing of the railroad tracks that parallel Eastern Avenue is needed (1 comment)
- A bike trail connection is needed across Wooster Pike from Armleder, along the Oasis Line ROW and connecting to the trail at Old Red Bank Road, which leads to the Murray Road Trail in Fairfax (1 comment).
- A bike path/trail is needed to connect with Downtown Cincinnati or to Hyde Park area (1 comment)
- Sharrows exist in Fairfax but disappear between Wooster Road and Otto Armleder Park (1 comment)

The following pedestrian comments were provided:

- A sidewalk is needed (1 comment)
- A crosswalk is needed at Carustar (1 comment)

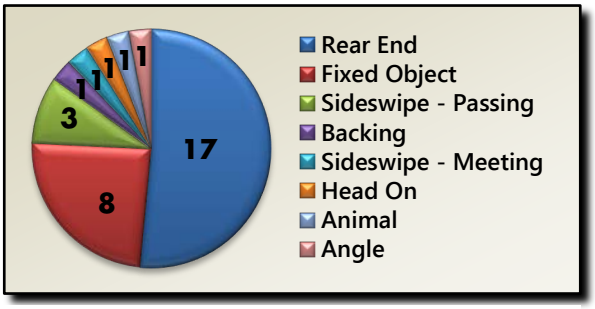


Figure 36: Frequency of Crashes by Crash Type Wooster Road: Beechmont Circle to Red Bank

Crash Data: The ODOT crash screening of the Segments II and III roadway network identified the sub-segment of Wooster Road from the Cincinnati City Limit to approximately 0.70 miles south as a high hazard area. Therefore, a detailed crash analysis of the entire segment from Beechmont Circle to Red Bank Road was completed.

As illustrated in **Figure 36**, there were 33 total crashes in this roadway section during the three-year period between 2013 and 2015. Rear-end and fixed object crashes represent 75% of the total crashes. Of the 33 total crashes on the segment, 25 (75%) occurred in the high hazard section. Within the high hazard segment, 12 of the 25 crashes were rear-end crashes and eight of the 25 were fixed object crashes. There was not a clustering of crashes at a particular location. Half of the rear end crashes occurred between 3:00 PM and 5:00 PM with the majority of crashes occurring during the day in clear conditions. Thirty-three percent (33%) of the rear-end crashes occurred in wet conditions. Other than the observations described above, there was no correlation between the crash data and a specific contributing cause for rear-end crashes.

Seven of the eight fixed object crashes occurred in clear weather, six involved a vehicle traveling southbound, and four occurred in the dark (lighted). Other than the observations described

above, there was no correlation between the crash data and a specific contributing cause for rear-end crashes. See **Attachment A-2** for a plot of all 33 crashes.

LOS Analysis: No level of service analysis was conducted for this segment.

Geometric Data: No geometric deficiencies were identified for this segment.

Pedestrian Data: No pedestrian data is available for this segment.

2.4.3.6 US 50: SR 125 to Eastern Avenue

The section of US 50 between SR 125 and Eastern Avenue is a four-lane divided, limited-access roadway approximately 0.7 miles in length with a posted speed of 50 mph.

Stakeholder Input: There are three public comments for the section of US 50 between SR 125 and Eastern Avenue:

- US 50 should be widened
- There are dangerous merges in this section of US 50
- There is a street lighting issue in this location

One transit comment indicates that public transit in this area is very limited and there should be more frequent bus service from Downtown Cincinnati.

Crash Data: ODOT's crash screening did not identify this segment as an area of high hazard. Crash data indicates that no crashes occurred over the three-year period (2013 – 2015).

LOS Analysis: A freeway analysis was performed using the HCS. During both the AM and PM peak hours, the eastbound and westbound directions operate at LOS A in 2015, the No Build opening year (2022), and No Build design year (2042) conditions. No improvements are required for the existing, No Build opening year, and No Build design year conditions. These results are supported by the travel time data which shows no significant increase in travel time during the peak hours compared to off-peak hours.

Geometric Data: No geometric deficiencies were identified for this segment.

Pedestrian Data: No pedestrian data is available for this segment.

2.4.3.7 US 50: Eastern Avenue to Red Bank Road

The section of US 50 between Eastern Avenue and Red Bank Road is a four-lane divided, limited-access roadway approximately 0.9 miles in length with a posted speed of 50 mph.

Stakeholder Input: Four roadway comments identify congestion as a concern along US 50 between Eastern Avenue and Red Bank Road. Representative comments are:

- Congestion is a problem (2 comments)
- Columbia Parkway should be widened (1 comment)

Table 12: Linwood/Eastern Avenue Interchange Focus Area Needs Analysis

Primary Needs	Secondary Needs
SR 125/US 50 Interchange	
Address lack of connectivity from SR 125 to eastbound US 50 and from westbound US 50 to SR 125	• Address deficient roadway curves on SR 125 and interchange ramps • Address deficient roadway grade on SR 125 and on US 50 • Address deficient sight distance at the eastbound US 50 exit ramp intersection with SR 125 • Address deficient weave on the eastbound US 50 exit ramp to SR 125 • Address lack of/limited wayfinding to improve regional connectivity
SR 125: US 50 to Beechmont Circle	
None	• Address deficient roadway grade east of viaduct • Address physical connectivity between SR 125/US 50 interchange and Beechmont Circle
Beechmont Circle	
• Address localized connectivity travel patterns within Beechmont Circle • Address pedestrian safety issues crossing SR 125 at bus stops	• Address lack of/limited wayfinding to improve regional connectivity • Address roadway curve and grade deficiencies
Eastern Avenue: SR 125 to US 50	
None	Address bicycle and pedestrian connectivity across railroad to existing Armleder and Lunken bike paths
Wooster Road: Beechmont Circle to Red Bank Road	
• Address bicycle connectivity (designated US Bicycle Route 21)	• Support access to future transit connections
US 50: SR 125 to Eastern Avenue	
None	None
US 50/Eastern Avenue Interchange	
None	Address lack of/limited wayfinding to improve regional connectivity
US 50: Eastern Avenue to Red Bank Road	
None	None

Attachment B

Excerpts from *Conceptual Alternatives Implementation Plan*

CONCEPTUAL ALTERNATIVES IMPLEMENTATION PLAN

Eastern Corridor Segments II and III

PID 86462

JULY 24, 2019

Prepared for:

Ohio Department of Transportation,
District 8
505 South SR 741
Lebanon, Ohio 45036

Prepared by:
Stantec Consulting Services Inc.

Focus Area	PI Mtg Identifier	Identifier	Website Link	Conceptual Project Description	Priority	Maintaining Agency	Phasing Recommendations	Next Steps	Construction Cost Range	Right-of-Way Cost Range
SR 32 / SR 125	A9	32-2a	Link	Connect Five Mile Trail using subdivision streets in Turpin Hills to the end of Patterson Farms Ln, and then by utilizing existing emergency access road connecting to Turpin Lake Place to Little Miami Trail. Final connection to use A7 or A8.	Medium Priority	Anderson Township		Eastern Corridor Study Analysis complete; turned over to local agency for future consideration.	$2,500 to $4,000	$30,000 to $60,000
SR 32 / SR 125	A7	32-1a	Link	Make connection from Turpin Lake subdivision to Little Miami Trail with "mid-block" at-grade pedestrian crossing. Perform speed study in conjuction and move crossing to the intersection.	Medium Priority	Anderson Township	Build after A9	Eastern Corridor Study Analysis complete; turned over to local agency for future consideration.	$35,000 to $50,000	%5,000 to $10,000
Newtown	B10	RB-3d	Link	Connect Riverside Park and Lake Barber with Little Miami Trail with shared use path. Golf course alignment.	Medium Priority	The Village of Newtown		Eastern Corridor Study Analysis complete; turned over to local agency for future consideration.	$1,175,000 to $1,775,000	$107,000 to $214,000
Newtown	B8	RB-3a	Link	Connect Riverside Park and Lake Barber with Little Miami Trail with shared use path. Portion of alignment along Valley.	Medium Priority	The Village of Newtown		Eastern Corridor Study Analysis complete; turned over to local agency for future consideration.	$160,000 to $240,000	$150,000 to $300,000
Ancor-SR 32 Hill	C10 C11	A-1 A-2	Link	Add access road from Newtown east corporation line to Broadwell Road. Includes adjacent shared use path.	Medium Priority	TBD		Eastern Corridor Study Analysis complete; turned over to local agency for future consideration. Next step will consist of developing alternatives before arriving at a recommended preferred alternative.	$9,100,000 to $16,850,000	$175,000 to $1,450,000
Ancor-SR 32 Hill	C6	I-3e	Link	New alignment and grade separation of eastbound SR 32 over Eight Mile; unsignalized continuous green tee intersection at Eight Mile and westbound SR 32. (Partial eastbound only grade improvements on hill). Includes grade adjustments on Eight Mile Rd.	Medium Priority	ODOT	Construct after C5	Re-evaluate after construction of C5 or if C10/C11 move forward.	$11,650,000 to $17,450,000	$1,850,000 to $3,700,000
Linwood-Eastern_US-50_Red_Bank	E5	BIKE-1a BIKE-2a	Link	Connect Wasson Trail to Eastern (at D2) with shared use path along US 50.	Medium Priority	The City of Cincinnati		Eastern Corridor Study Analysis complete; turned over to local agency for future consideration.	$5,100,000 to $7,700,000	$855,000 to $1,710,000
Linwood-Eastern_US-50_Red_Bank	E7	BIKE-2b X-4d-1 BIKE-4a	Link	Connect Wasson Trail to Armleder with shared use path from Ault Park to Red Bank to Wooster, behind Cincinnati Paperboard to Armleder Trail Loop.	Medium Priority	The City of Cincinnati		Eastern Corridor Study Analysis complete; turned over to local agency for future consideration. Shared use path connection without X-4d-1 could be considered.	$3,100,000 to $4,650,000	$830,000 to $1,660,000
Newtown	B8	RB-1	Link	Connect Riverside Park and Lake Barber with Little Miami Trail with shared use path. Portion of alignment from Riverside Park & Lake Barber to Valley.	Medium Priority	The Village of Newtown		Eastern Corridor Study Analysis complete; turned over to local agency for future consideration.	$820,000 to $1,230,000	$195,000 to $390,000
SR 32 / SR 125		I-22a		Improve signal timing at SR 125 & Elstun intersection.	Medium Priority	ODOT / Anderson Township		Due to planned redevelopement of the Skytop Pavilion, this intersection needs to be analyzed in conjunction with the new development's Traffic Impact Study.	Not available	Not available
SR 32 / SR 125		I-22b		Improve turn lanes at SR 125 & Elstun intersection.	Medium Priority	ODOT / Anderson Township		Due to planned redevelopement of the Skytop Pavilion, this intersection needs to be anlyzed in conjunction with the new development's Traffic Impact Study. Possible items to review would be: addition of westbound right turn lane and extension of northbound left turn lane.	Not available	Not available
US 50 Corridor		I-32b		Mariemont HS considering new access point to connect to US 50 Prominade signal.	Medium Priority	Columbia Township		This alternative is being considered by Mariemont Schools.	Not available	Not available

The Eastern Corridor

Eastern Corridor Segments II and III

Combined Linwood/Eastern Interchange and US 50/Red Bank Interchange Focus Area

Theme

Bicycle and Pedestrian

Primary Needs identified for this theme:

P9) Address pedestrian safety issues crossing SR 125 at bus stops.

P10) Address bicycle connectivity (designated US Bicycle Route 21).

Secondary Needs identified for this theme:

S16) Address bicycle and pedestrian connectivity across the railroad tracks to existing Armleder and Lunken bike paths.

Concept drawings are presented on the following pages.

DESCRIPTION

- Connect Wasson Way Trail to the Armleder Road entrance with a shared-use path along US 50.
  - This concept brings Wasson from Ault Park along Columbia Parkway to Eastern, where it could tie into Concept BIKE-1.

NEEDS ADDRESSED

P10) Address bicycle connectivity (designated US Bicycle Route 21).

5/22/18 MEETING DISCUSSION AND COMMENTS

- A barrier-protected shared-use path would be located along right side of westbound US 50.
- The path would follow the existing exit ramp (5% grade) from US 50 to Eastern Avenue, then cross to Armleder Road using the connection established in the BIKE-1 concept.
- No additional comments received following the 5/22 meeting.

9/7/18 MEETING DISCUSSION AND COMMENTS

- This concept requires construction of a new bridge crossing from Eastern Avenue to Wooster Road. The bridge would be located immediately east of Linwood Park.
- A shared-use path located next to US 50 would need to be separated by a physical barrier; concrete barriers are proposed. Installing concrete barriers would not impact the hillside or shoulder along US 50, but would require modification of the city gateway.
  - One Committee member expressed concern that cyclists would be traveling a long way without an option to exit the path. Another suggested that, even with the concrete barrier, cyclists might not feel safe, particularly with children traveling so close to vehicular traffic on US 50.
- The BIKE-2b, BIKE-4a and BIKE-4b concepts would need to be construction in conjunction with other projects to complete a full connection. Cost estimates for the necessary combinations are:
  - BIKE-2a: $3.1M to $4.7M
  - BIKE-2b, X-4d-1,BIKE-4a: $4.53M to $7M
- BIKE 2b, X-4d-1, BIKE-4b: $4.43M to $6.8M
- No additional comments received following the 9/7 meeting.

12/12/18 MEETING DISCUSSION AND COMMENTS

- This project would connect the bike path to Ault Park's hiking trails, which opens up a larger commuter network to local neighborhoods.
- Consider incorporating the spur to the Murray Trail (as outlined in concepts E6/E7) into this concept.
- The priority of this concept will depend on the status and advancement of the Wasson Way trail.

NEXT STEPS/RECOMMENDATION

- Include in the Implementation Plan as a medium priority, including BIKE-2a and BIKE-1a to fully connect Wasson Way Trail to Armleder Park.
- Consider connecting Murray Trail spur.

Safety ECAT Benefit /Cost Ratio	Location	Traffic Operations							Construction Cost	R/W Impacts		Environmental Impacts		Support and/or Facilitate Multi-Modal	Improve Regional Connectivity	Improve Local Access
		Time Period	HCS Results			TransModeler Results				Number of Relocations	R/W Cost	Anticipated Environmental Document	Red Flag Triggers			
			2042 Delay (seconds)	2042 LOS	% Reduction from No Build	2042 Delay (seconds)	2042 LOS	% Reduction from No Build								
									$5.1M to $7.6M	0		D1	Section 4(f)	Improves	Improves	Improves

PRIORITY: MEDIUM

Drawing was presented at the 5/22/2018 meeting.

0 200 400 FEET 800

March 2018

Stantec

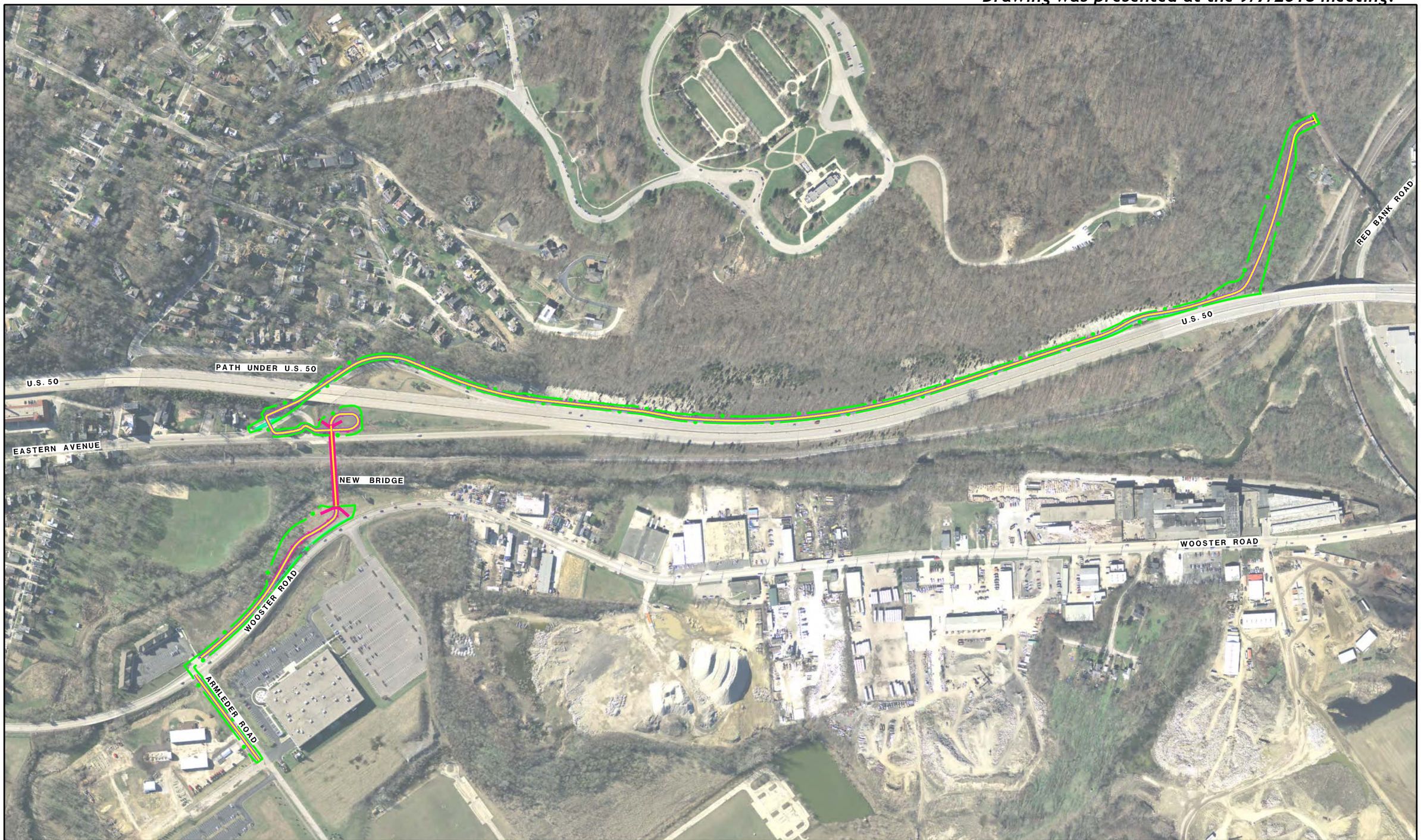
Concept Drawing

Eastern Corridor Multi-Modal Projects
Segment II-III (SR 32 Corridor)
HAM-32F-0.00; PID 86462

Figure BIKE-2A

SHARED USE PATH FROM WASSON TRAIL TO ARMLEDER ROAD

Drawing was presented at the 9/7/2018 meeting.



0 200 400 FEET 800

N

September 2018

Stantec

Concept Drawing

Eastern Corridor Multi-Modal Projects
Segment II-III (SR 32 Corridor)
HAM-32F-0.00; PID 86462

Figure BIKE-2A (Overall View)

SHARED USE PATH FROM WASSON TRAIL TO ARMLEDER ROAD

SEGMENTS II AND III CONCEPTS

COMBINED LINWOOD/EASTERN INTERCHANGE AND US 50/RED BANK INTERCHANGE FOCUS AREA

Theme: BICYCLE AND PEDESTRIAN

Identifier: BIKE-2b (E6/E7)

Concept drawings are presented on the following pages. Concept is also shown with BIKE-2a (E5).

DESCRIPTION

- Connect the Wasson Way Trail to Armleder Road with shared-use path running on a gravel path in Ault Park to Old Red Bank Road over to Red Bank.
  - This shared-use path would drop out of Ault Park at the first railroad trestle and follow the tracks north to a connection with Red Bank Road.
  - Path would then follow Red Bank south to Wooster Road. Path would continue southwest on Wooster Road to Armleder Road.

NEEDS ADDRESSED

P10) Address bicycle connectivity (designated US Bicycle Route 21).

5/22/18 MEETING DISCUSSION AND COMMENTS

- An on-street bike path on Wooster would be challenging because businesses are located close to the road on both sides in this area.
- Commercial use of the road would make it a challenge to keep the bike path clean. Road debris (gravel, dirt, sand, trash, etc.) would likely collect in the bike path.
- Running the bike path behind the businesses located on the north side of Wooster may be a challenge. Space availability is limited by a creek and old rail tracks (not used since 1982) and buildings. Ownership of the rail tracks may be split between SORTA and Norfolk Southern.
- The consultant team will confirm whether routing a bike path behind businesses on the north side of Wooster may be an option.
- The consultant team will determine who owns the railroad tracks in this area.
- No additional comments received following the 5/22/18 meeting.

9/7/18 MEETING DISCUSSION AND COMMENTS

- This concept would be part of a phased-approach to connecting the Wasson Way Trail to Armleder Road using X-4d-1 (Wooster extension to Colbank with roundabout at Red Bank Road and Wooster Road) and BIKE-4a or BIKE-4b.
- The path would connect with the gravel path in Ault Park, drop under the railroad trestle at the back of the park and go north parallel to Old Red Bank road, then over the creek before turning south to follow along the new X-4d or X-4d-1 connector.
- A Committee member asked if instead of following the new connector, would it be possible to continue the path along Old Red Bank Road US 50 of the US 50 ramp. ODOT shared that there is an existing abutment wall under US 50 that is a barrier to a bike path connection.
- The BIKE-2b, BIKE-4a and BIKE-4b concepts would need to be construction in conjunction with other projects to complete a full connection. Cost estimates for the necessary combinations are:
  - BIKE-2a: $3.1M to $4.7M
  - BIKE-2b, X-4d-1,BIKE-4a: $4.53M to $7M
  - BIKE 2b, X-4d-1, BIKE-4b: $4.43M to $6.8M
- No additional comments received following the 9/7 meeting.

12/12/18 MEETING DISCUSSION AND COMMENTS

- Of the three bike path options in this area [BIKE-2a (E5), BIKE-4b (E6) and BIKE-4a (E7)], E6 received the highest amount of support from the public.
  - The committee surmised that this is because, as drawn, the bike path would travel along a vegetated corridor and creek before linking with the Armleder bike path.
  - H. Hafner & Sons expressed concern with having the bike path cross the company's driveway. They reported that 800 trucks come in and out of the driveway on a daily basis and it is hard to see bikes from the trucks. There is also typically a lot of debris in area.
- E6/E7 estimates do not include the cost of constructing the proposed roundabout at Wooster and Red Bank. If that cost were to be added, the estimates for each would be closer to the cost estimates for concept BIKE-2a (E5).
- The committee discussed eliminating BIKE-4b (E6) due to the concerns of connecting the bike path across the Hafner driveway.
- The committee agreed that concept BIKE-4a (E7) needs to include the proposed roundabout at Wooster and Red Bank. Therefore, the cost estimates for the roundabout should be added to the estimate for BIKE-4a (E7). This will increase the cost significantly. Even so, the committee agreed that this option should still be included in the Implementation Plan for future consideration.
- The priority of this concept will depend on the status and advancement of the Wasson Way trail.
- No further study on E6; include E7 in the Implementation Plan as a medium priority.

NEXT STEPS/RECOMMENDATION

- No further study on concept E6.
- Include E7 in the Implementation Plan as a medium priority. This includes a connection from Wasson Way Trail to Murray Trail, a shared-use path on the X-4d-1 alignment without the roadway improvements and the roundabout at Wooster and Red Bank.

Safety ECAT Benefit /Cost Ratio	Location	Traffic Operations							Construction Cost	R/W Impacts		Environmental Impacts		Support and/or Facilitate Multi-Modal	Improve Regional Connectivity	Improve Local Access
		Time Period	HCS Results			TransModeler Results				Number of Relocations	R/W Cost	Anticipated Environmental Document	Red Flag Triggers			
			2042 Delay (seconds)	2042 LOS	% Reduction from No Build	2042 Delay (seconds)	2042 LOS	% Reduction from No Build								
									$530K to $800K	0	$380K to $760K	C2	R/W Impacts, Stream Impacts, Waterway Permit, Potential T&E, Section 4(f), ESA Issues	Improves	Improves	Improves

E6 PRIORITY: NO FURTHER STUDY; E7 PRIORITY: MEDIUM

Drawing was presented at the 5/22/2018 meeting.

0 200 400 FEET 800

March 2018

Stantec

Concept Drawing

Eastern Corridor Multi-Modal Projects
Segment II-III (SR 32 Corridor)
HAM-32F-0.00; PID 86462

Figure BIKE-2B

SHARED USE PATH FROM WASSON TRAIL TO ARMLEDER ROAD

Drawing was presented at the 9/7/2018 meeting.

0 150 300 FEET 600

September 2018

N

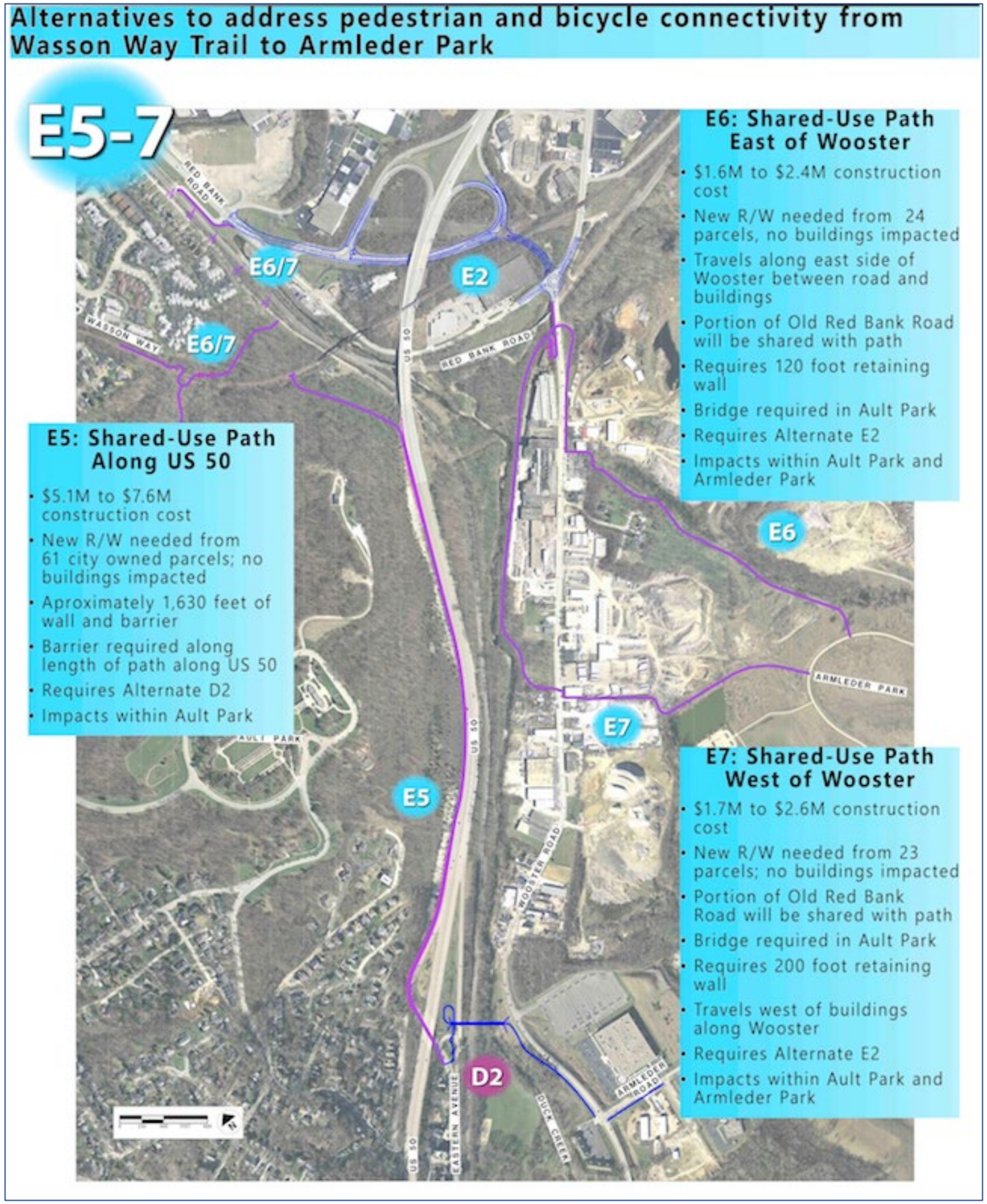
Stantec

Concept Drawing

Eastern Corridor Projects
Segment II-III (S.R. 32 Corridor)
HAM-32F-0.00; PID 86462

Figure BIKE-2B

SHARED USE PATH CONNECTION BETWEEN WASSON TRAIL AND ARMLEDER TRAIL



Drawing was presented at the October 24 & 25 2018 Open House meetings.

PUBLIC FEEDBACK RATINGS SUMMARY (E5)

Strongly Oppose	Dislike	Neutral	Like	Strongly Support
6%	11%	24%	23%	36%

(percentages have been rounded)

PUBLIC FEEDBACK RATINGS SUMMARY (E6)

Strongly Oppose	Dislike	Neutral	Like	Strongly Support
9%	2%	23%	25%	42%

(percentages have been rounded)

PUBLIC FEEDBACK RATINGS SUMMARY (E7)

Strongly Oppose	Dislike	Neutral	Like	Strongly Support
14%	3%	29%	20%	34%

(percentages have been rounded)

Concept drawing is presented on the following page.

DESCRIPTION

- Restripe Wooster Road to include bike lanes and/or sharrows.

NEEDS ADDRESSED

P10) Address bicycle connectivity (designated US Bicycle Route 21).

5/22/18 MEETING DISCUSSION AND COMMENTS

- This concept would require widening Wooster Road on both sides.
- Commercial use of the road would make it a challenge to keep the bike path clean. Road debris (gravel, dirt, sand, trash, etc.) would likely collect in the bike path.
- Is there any option to route the bike path between Miami Bluff in Mariemont to the back of Armleder?
  - Concern is that the grade is too steep.
  - The consultant team will determine who owns the railroad tracks in this area, and which of these, if any, could potentially be used for a bike path (City of Cincinnati may have some documentation).

Comments Submitted Following the 5/22/18 Meeting

(Comments are presented as submitted by Committee members; no edits to content were made.)

- Figure BIKE-3 shows a bike trail extension across Wooster towards Mariemont Avenue near the Mariemont Industrial District. Any proposed bike paths in Mariemont will require Village approval. Also, not bike path information has been provided for the US 50 segment. Mariemont reserves the right to additional comments as this information becomes available from ODOT.

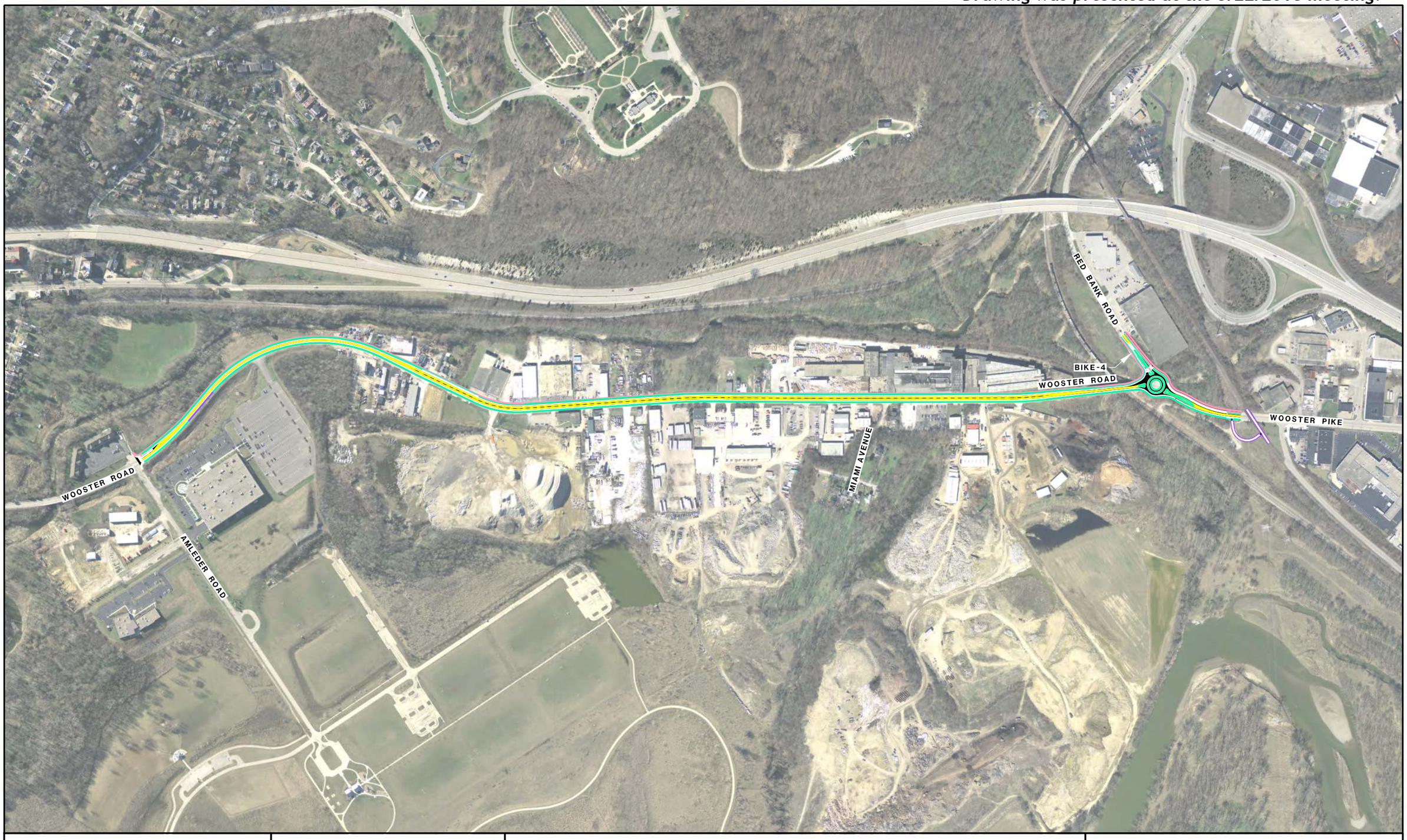
NEXT STEPS/RECOMMENDATION

- No further study due to the high cost of project and right-of-way impacts. Also, it would be difficult to keep the path clear of debris from local truck traffic.

Safety	Traffic Operations	Constructability Issues	Construction Cost	R/W Impacts	Environmental / Community Impacts	Supports and/or Facilitates Multi-Modal	Improve Regional Connectivity	Improve Local Access	RECOMMENDATION
IMPROVES	NEUTRAL	SIMPLE	< $5 MILLION	PROPERTY TAKES	MINIMAL (C1/C2)	IMPROVES	NEUTRAL	NEUTRAL	**NO FURTHER STUDY**

RECOMMENDATION: NO FURTHER STUDY

Drawing was presented at the 5/22/2018 meeting.



0 250 500 FEET 1000

MARCH 2018

Stantec

Concept Drawing

Eastern Corridor Projects
Segment II-III (S.R. 32 Corridor)
HAM-32F-0.00; PID 86462

Figure BIKE-3

WOOSTER ROAD TO INCLUDE BIKE LANES

Concept drawing is presented on the following page.

DESCRIPTION

- Improve Wooster Road to include a shared-use path.

NEEDS ADDRESSED

P10) Address bicycle connectivity (designated US Bicycle Route 21).

5/22/18 MEETING DISCUSSION AND COMMENTS

- None discussed.

Comments Submitted Following the 5/22/18 Meeting

(Comments are presented as submitted by Committee members; no edits to content were made.)

- Figure BIKE-4 shows a bike trail extension across Wooster towards Mariemont Avenue near the Mariemont Industrial District. Any proposed bike paths in Mariemont will require Village approval. Also, not bike path information has been provided for the US 50 segment. Mariemont reserves the right to additional comments as this information becomes available from ODOT.

9/7/18 MEETING DISCUSSION AND COMMENTS

- Concept advanced as BIKE-4a and BIKE-4b (described on following pages).
- No additional comment received following the 9/7 meeting.

NEXT STEPS/RECOMMENDATION

- Incorporate concept into BIKE-2b; BIKE-4a becomes part of BIKE-2b (E7), while BIKE-4b becomes part of BIKE-2b (E6).

Safety	Traffic Operations	Constructability Issues	Construction Cost	R/W Impacts	Environmental / Community Impacts	Supports and/or Facilitates Multi-Modal	Improve Regional Connectivity	Improve Local Access	RECOMMENDATION
IMPROVES	NEUTRAL	SIMPLE	< $5 MILLION	PROPERTY TAKES	MODERATE (D1/D2)	IMPROVES	NEUTRAL	IMPROVES	**ADVANCE**

RECOMMENDATION: ADVANCE WITH BIKE-2B (E6/E7).

Drawing was presented at the 5/22/2018 meeting.

0 250 500 FEET 1000

MARCH 2018

Stantec

Concept Drawing

Eastern Corridor Projects
Segment II-III (S.R. 32 Corridor)
HAM-32F-0.00; PID 86462

Figure BIKE-4

SHARED USE PATH ALONG WOOSTER ROAD

Concept drawing is presented on the following page; Concept also shown with BIKE-2b (E6 and E7).

DESCRIPTION

- Add shared-use path along Wooster Pike behind Cincinnati Paperboard and then crossing Wooster at the greenspace to the Armleder Trail loop.

NEEDS ADDRESSED

P10) Address bicycle connectivity (designated US Bicycle Route 21).

9/7/18 MEETING DISCUSSION AND COMMENTS

- This concept could be combined with X-4d-1 (Wooster extension to Colbank with roundabout at Red Bank Road and Wooster Road) and BIKE-2b to connect the Wasson Way Trail to the Armleder Trail Loop.
- This concept would include a mid-block crossing on Wooster (west of Cincinnati Paperboard's greenspace) with a rectangular rapid flash beacon (RRFB).
- Running the shared-use path behind Cincinnati Paperboard but south of the creek is a tight fit.
- A Committee member asked if it might be possible to take the trail through the existing Norfolk-Southern railyard in Mariemont (Clare Yard). It was reported however, that that area is being preserved for potential future rail use.
- A Committee member asked whether it was possible to rate Concept BIKE-4a and BIKE-4b as to which is more feasible from a construction standpoint. Additional engineering analysis would be required in order to make that determination.
- The BIKE-2b, BIKE-4a and BIKE-4b concepts would need to be construction in conjunction with other projects to complete a full connection. Cost estimates for the necessary combinations are:
  - BIKE-2a: $3.1M to $4.7M
  - BIKE-2b, X-4d-1,BIKE-4a: $4.53M to $7M
  - BIKE 2b, X-4d-1, BIKE-4b: $4.43M to $6.8M
- No additional comments received following the 9/7 meeting.

12/12/18 MEETING DISCUSSION AND COMMENTS

The following notes as the same as those documented under BIKE-2b (E6, E7):

- Of the three bike path options in this area (E5, E6 and E7), E6 received the highest amount of support from the public.
- The committee surmised that this is because, as drawn, the bike path would travel along a vegetated corridor and creek before linking with the Armleder bike path.
- H. Hafner & Sons expressed concern with having the bike path cross the company's driveway. They reported that 800 trucks come in and out of the driveway on a daily basis and it is hard to see bikes from the trucks. There is also typically a lot of debris in area.
- E6/E7 estimates do not include the cost of constructing the proposed roundabout at Wooster and Red Bank. If that cost were to be added, the estimates for each would be closer to the cost estimates for concept BIKE-1 (E6).
- The committee discussed eliminating E6 due to the concerns of connecting the bike path across the Hafner driveway.
- The committee agreed that concept E7 needs to be include the proposed roundabout at Wooster and Red Bank. Therefore, the cost estimates for the roundabout should be added to the estimate for E7. This will increase the cost significantly. Even so, the committee agreed that this option should still be included in the Implementation Plan for future consideration.
- The priority of this concept will depend on the status and advancement of the Wasson Way trail.

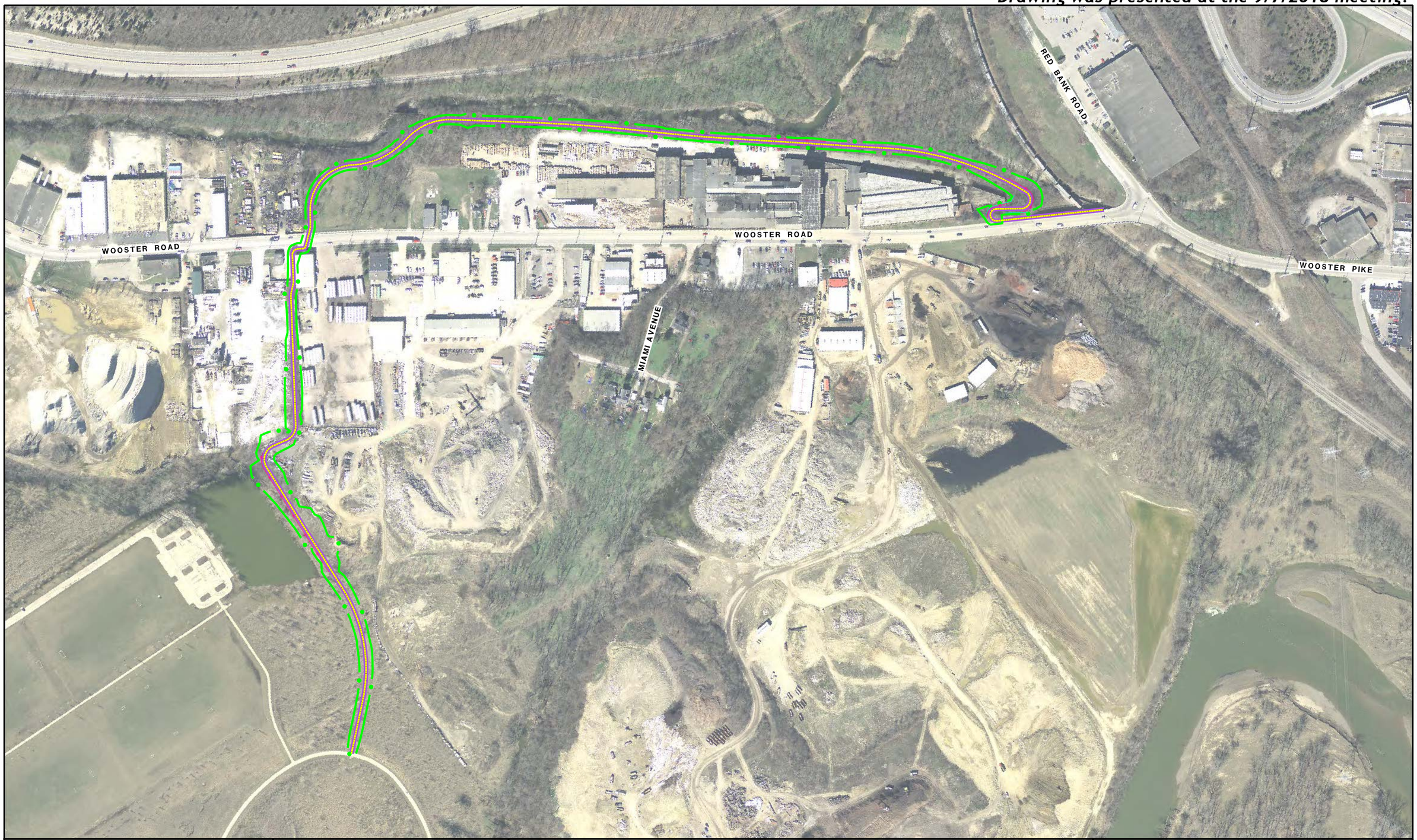
NEXT STEPS/RECOMMENDATION

- Include in the Implementation Plan as part of E7 as a medium priority.

Safety ECAT Benefit /Cost Ratio	Location	Traffic Operations							Construction Cost	R/W Impacts		Environmental Impacts		Support and/or Facilitate Multi-Modal	Improve Regional Connectivity	Improve Local Access
		Time Period	HCS Results			TransModeler Results				Number of Relocations	R/W Cost	Anticipated Environmental Document	Red Flag Triggers			
			2042 Delay (seconds)	2042 LOS	% Reduction from No Build	2042 Delay (seconds)	2042 LOS	% Reduction from No Build								
									$1.3M to $2M	0	$390K to $780K	C2	R/W Impacts, Stream Impacts, Waterway Permit, Potential T&E, Section 4(f), ESA Issues	Improves	Improves	Improves

PRIORITY: MEDIUM

Drawing was presented at the 9/7/2018 meeting.



0 150 300 FEET 600

September 2018

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Concept Drawing

Eastern Corridor Projects
Segment II-III (S.R. 32 Corridor)
HAM-32F-0.00; PID 86462

Figure BIKE-4A

SHARED USE PATH BETWEEN RED BANK ROAD AND ARMLEDER TRAIL

Concept drawing is presented on the following page. Concept is also shown with Concept BIKE-2b (E6 and E7).

DESCRIPTION

- Add shared-use path along the south side of Wooster Pike past Hafner parcel to Armleder Trail Loop.

NEEDS ADDRESSED

P10) Address bicycle connectivity (designated US Bicycle Route 21).

9/7/18 MEETING DISCUSSION AND COMMENTS

- This concept could be combined with X-4d-1 (Wooster extension to Colbank with roundabout at Red Bank Road and Wooster Road) and BIKE-2b to connect the Wasson Way Trail to the Armleder Trail Loop.
- This concept uses the existing Wooster bridge and then crosses under the bridge to get to the east side of Wooster, near the Hafner driveway.
- The path would weave between parking lots, past the Miami Avenue residential area and follow a swale to an eventual connection with the Armleder trail.
- A Committee member asked whether it was possible to rate Concept 4-a and Concept 4-b as to which was more feasible from a construction standpoint. However, additional engineering analysis would be required in order to make that determination.
- The BIKE-2b, BIKE-4a and BIKE-4b concepts would need to be construction in conjunction with other projects to complete a full connection. Cost estimates for the necessary combinations are:
  - BIKE-2a: $3.1M to $4.7M
  - BIKE-2b, X-4d-1,BIKE-4a: $4.53M to $7M
  - BIKE 2b, X-4d-1, BIKE-4b: $4.43M to $6.8M
- No additional comments received following the 9/7/18 meeting.

12/12/18 MEETING DISCUSSION AND NOTES

The following notes as the same as those documented under BIKE-2b (E6, E7):

- Of the three bike path options in this area (E5, E6 and E7), E6 received the highest amount of support from the public.
- The committee surmised that this is because, as drawn, the bike path would travel along a vegetated corridor and creek before linking with the Armleder bike path.
- H. Hafner & Sons expressed concern with having the bike path cross the company's driveway. They reported that 800 trucks come in and out of the driveway on a daily basis and it is hard to see bikes from the trucks. There is also typically a lot of debris in area.
- E6/E7 estimates do not include the cost of constructing the proposed roundabout at Wooster and Red Bank. If that cost were to be added, the estimates for each would be closer to the cost estimates for concept BIKE-1 (E6).
- The committee discussed eliminating E6 due to the concerns of connecting the bike path across the Hafner driveway.
- The committee agreed that concept E7 needs to be include the proposed roundabout at Wooster and Red Bank. Therefore, the cost estimates for the roundabout should be added to the estimate for E7. This will increase the cost significantly. Even so, the committee agreed that this option should still be included in the Implementation Plan for future consideration.
- The priority of this concept will depend on the status and advancement of the Wasson Way trail.

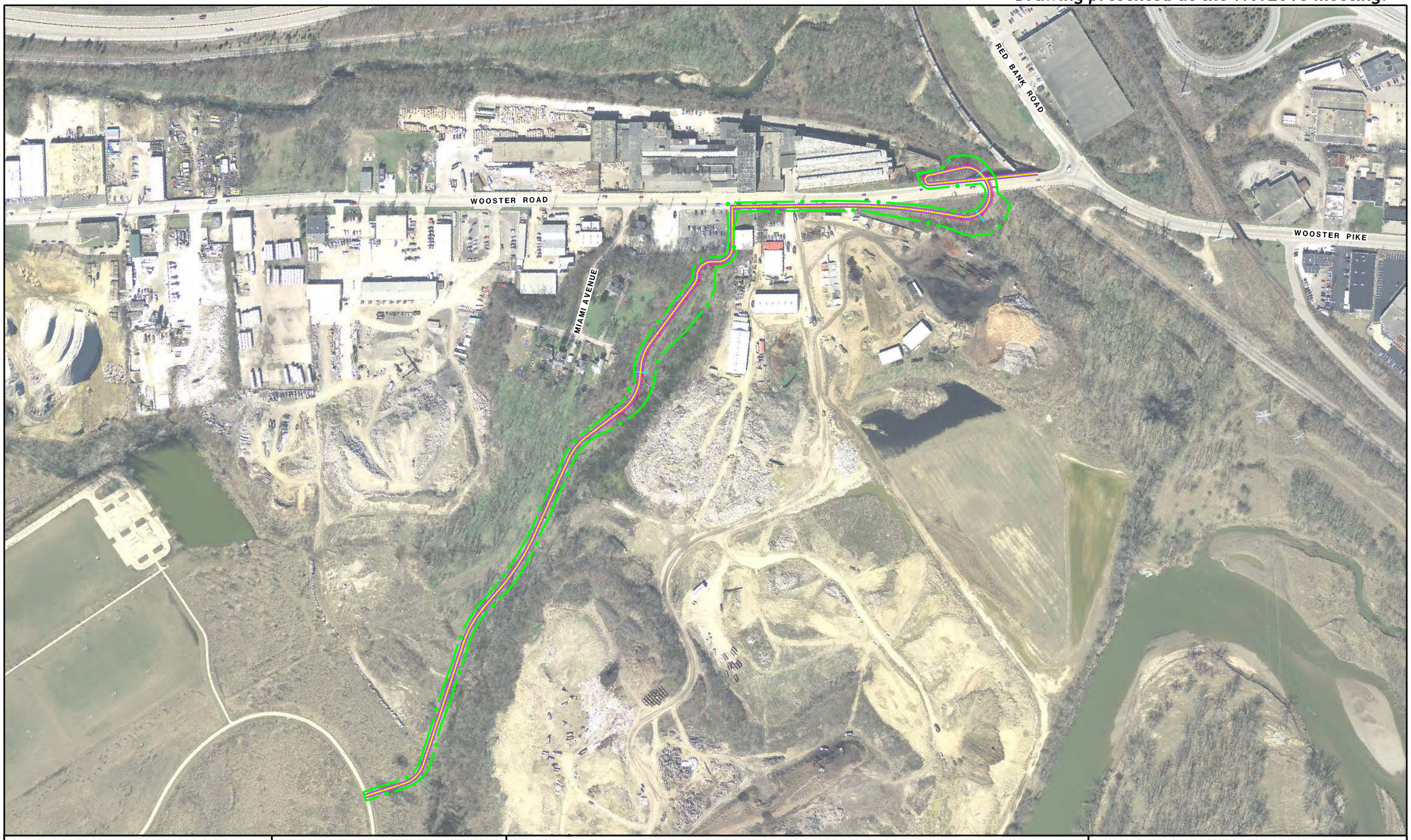
NEXT STEPS/RECOMMENDATION

- No further study.

Safety ECAT Benefit /Cost Ratio	Location	Traffic Operations							Construction Cost	R/W Impacts		Environmental Impacts		Support and/or Facilitate Multi-Modal	Improve Regional Connectivity	Improve Local Access
		Time Period	HCS Results			TransModeler Results				Number of Relocations	R/W Cost	Anticipated Environmental Document	Red Flag Triggers			
			2042 Delay (seconds)	2042 LOS	% Reduction from No Build	2042 Delay (seconds)	2042 LOS	% Reduction from No Build								
									$1.2M to $1.8M	0	$450K to $900K	C2	R/W Impacts, Stream Impacts, Waterway Permit, Potential T&E, Section 4(f), ESA Issues	Improves	Improves	Improves

RECOMMENDATION: NO FURTHER STUDY

Drawing presented at the 9/7/2018 meeting.



0 150 300 FEET 600

September 2018

Stantec

Concept Drawing

Eastern Corridor Projects
Segment II-III (S.R. 32 Corridor)
HAM-32F-0.00; PID 86462

Figure BIKE-4B

SHARED USE PATH BETWEEN RED BANK ROAD AND ARMLEDER TRAIL

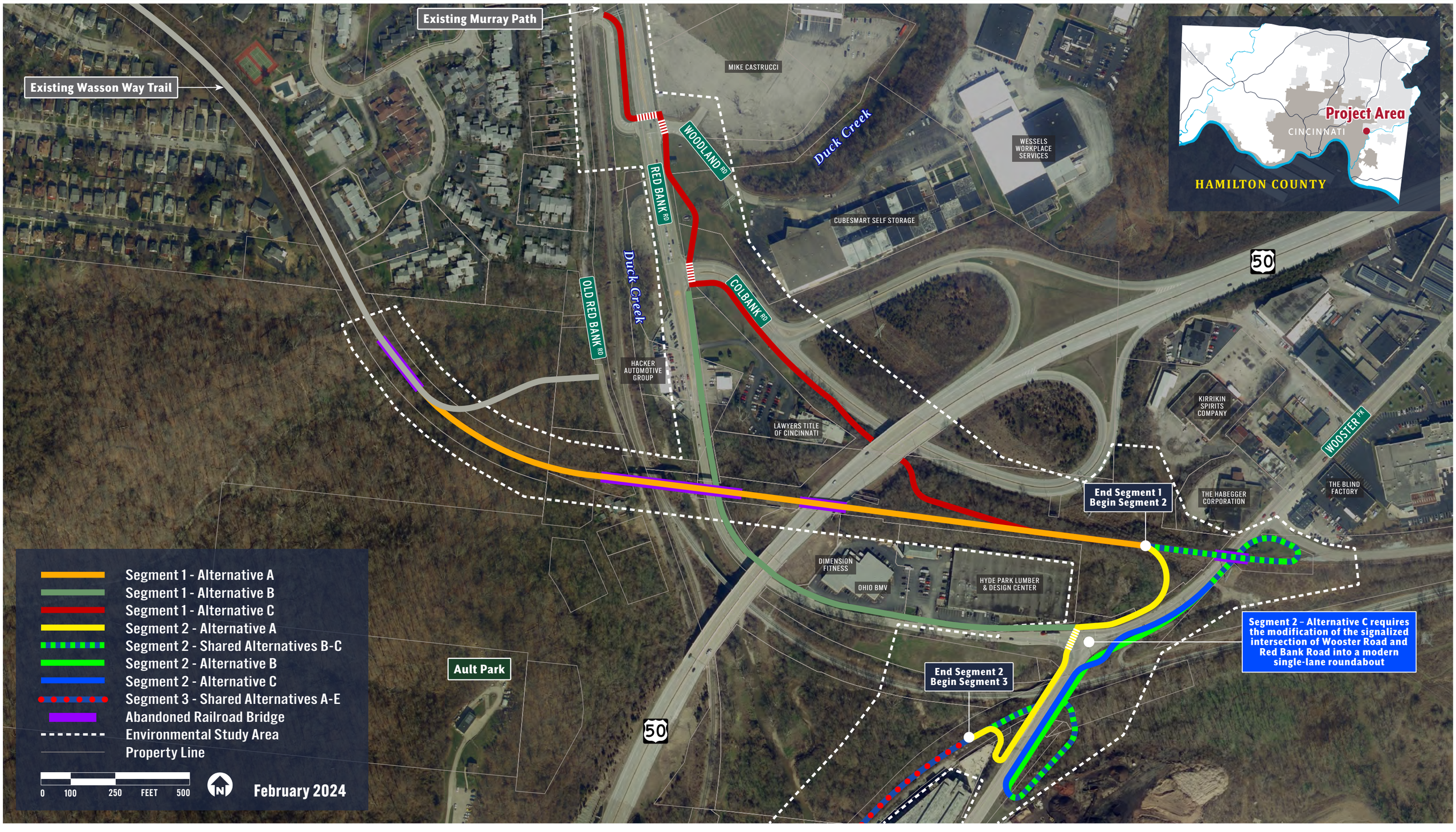
Attachment C

- Alternative Design Maps
- Plan and Profile Sheets

Alternative Design Maps

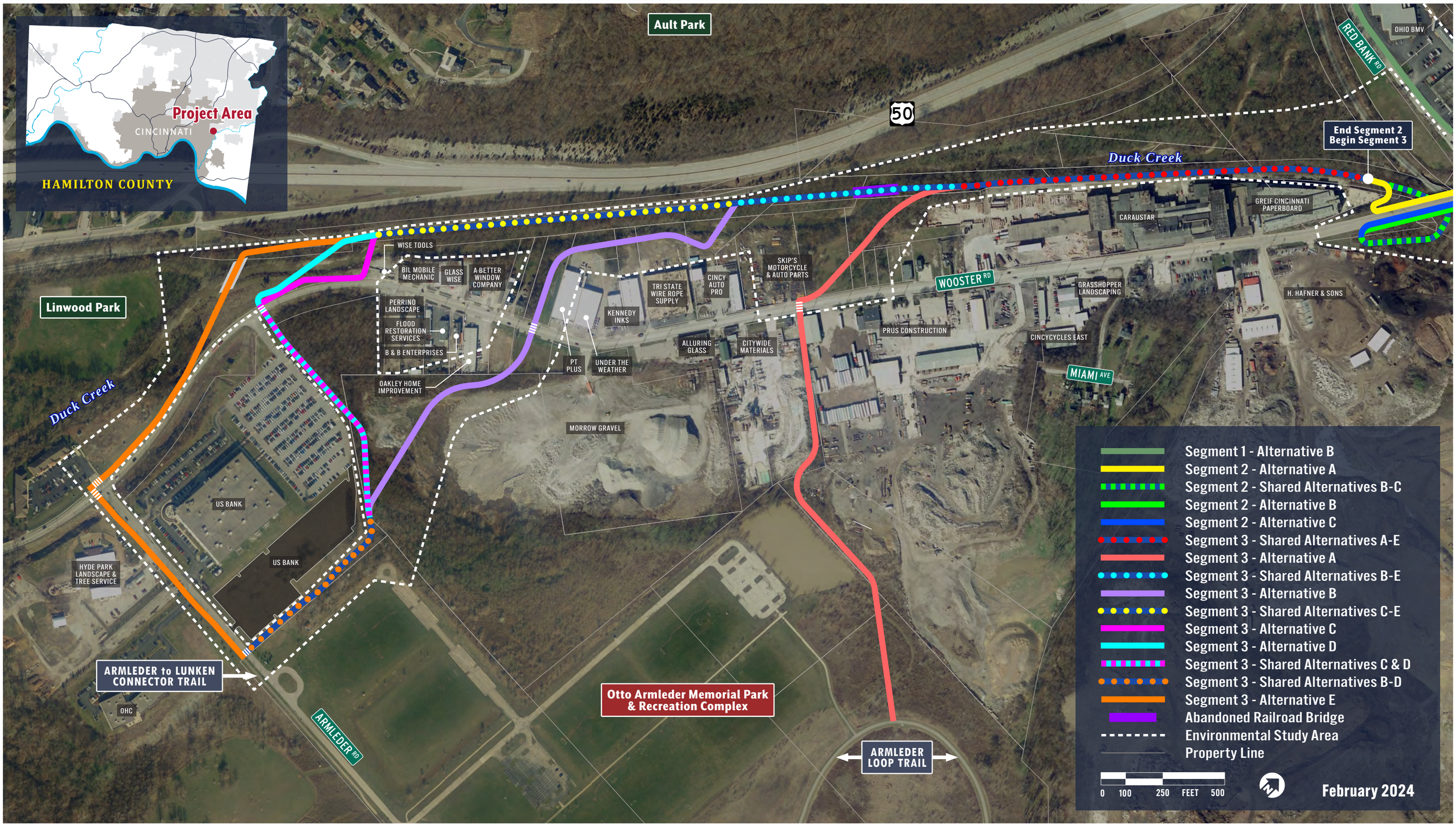
Shared Use Path Alternatives

Wasson Way Trail Connection to Otto Armleder Park (PID 113603)



Shared Use Path Alternatives

Wasson Way Trail Connection to Otto Armleder Park (PID 113603)



Plan and Profile Sheets

HAM-WASSON WAY TO OTTO ARMLEDER

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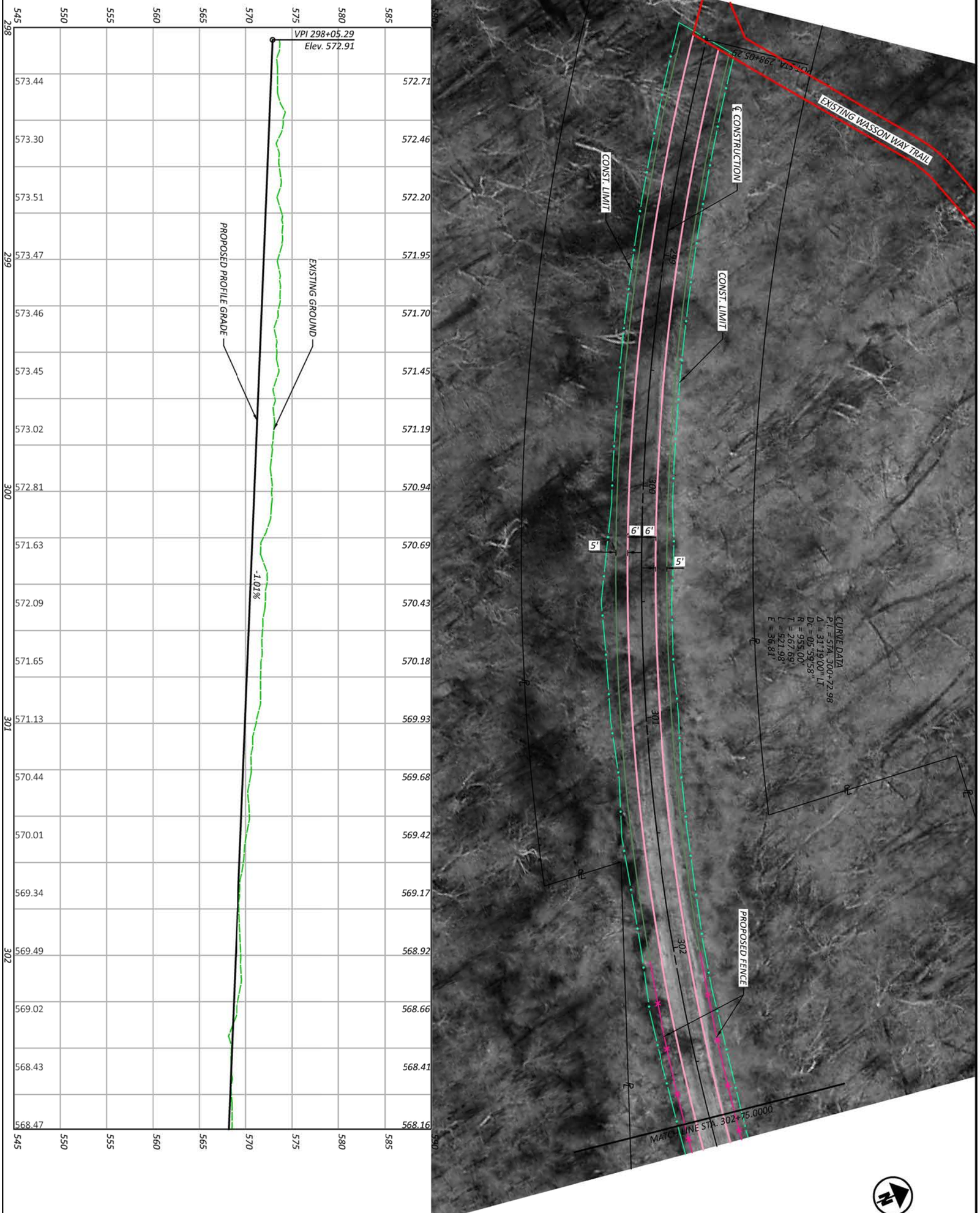

SEGMENT 1 - ALTERNATIVE A
STA. 298+05.29 TO STA. 302+75.00

HORIZONTAL SCALE IN FEET
0 20
10 40

SHEET	TOTAL
P.1	5

PROJECT ID: 113603
REVIEWER: SNS 01-26-24
DESIGNER: JGB

DESIGN AGENCY
Stantec
10200 Alliance Road,
Suite 300
Cincinnati, OH 45242
(513) 842-3200

HAM-WASSON WAY TO OTTO ARMLEDER

MODEL: CLP_BK1-A - Plan 2 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 3/6/2024 TIME: 12:36:06 PM USER: mmondlak
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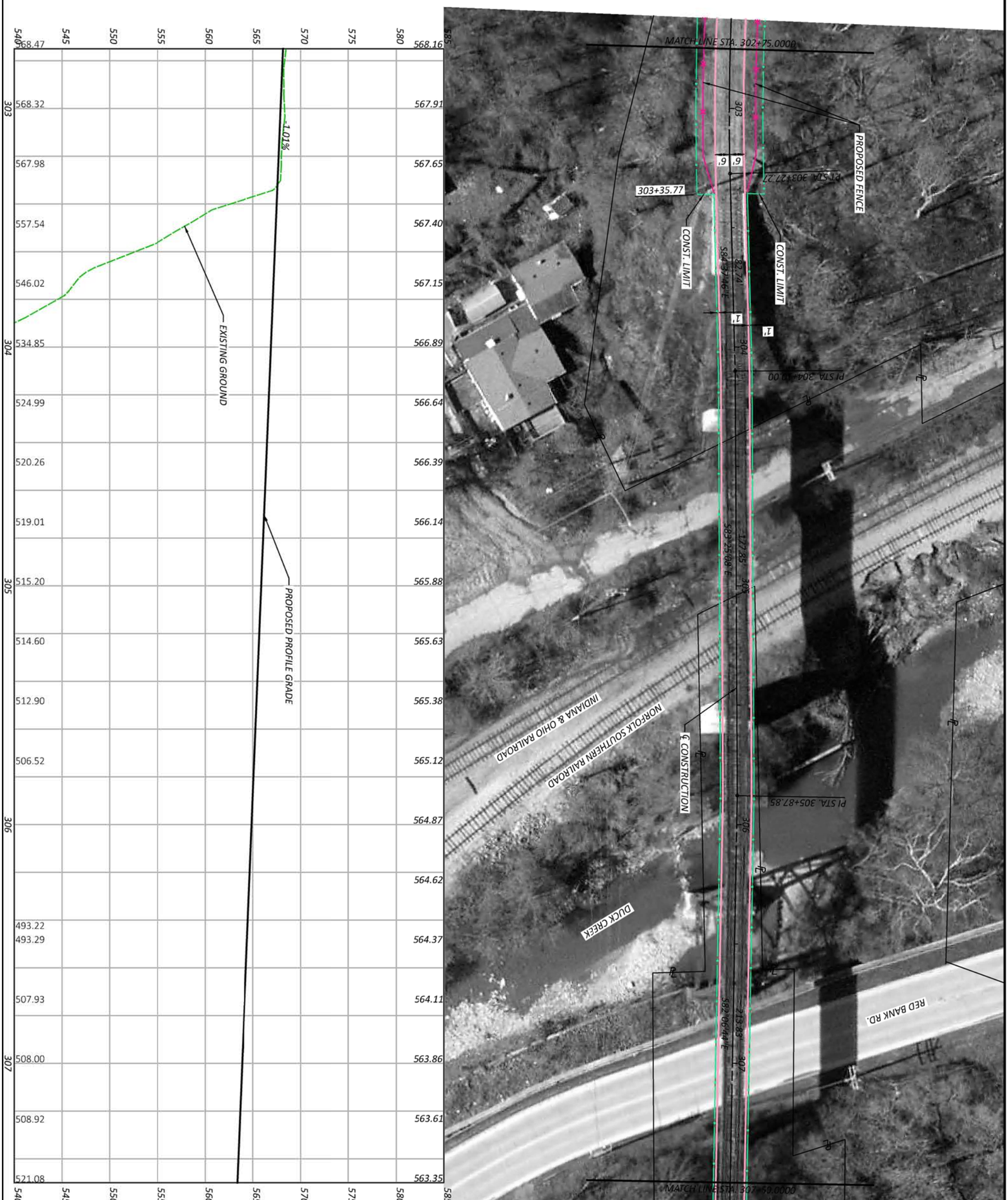

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DESIGN AGENCY

DESIGNER JGB

REVIEWER SNS 01-26-24

PROJECT ID 113603

SHEET P.2 TOTAL 5

SEGMENT 1 - ALTERNATIVE A
STA. 302+75.00 TO STA. 307+75.00

HORIZONTAL SCALE IN FEET
0 20
10 40

HAM-WASSON WAY TO OTTO ARMLEDER

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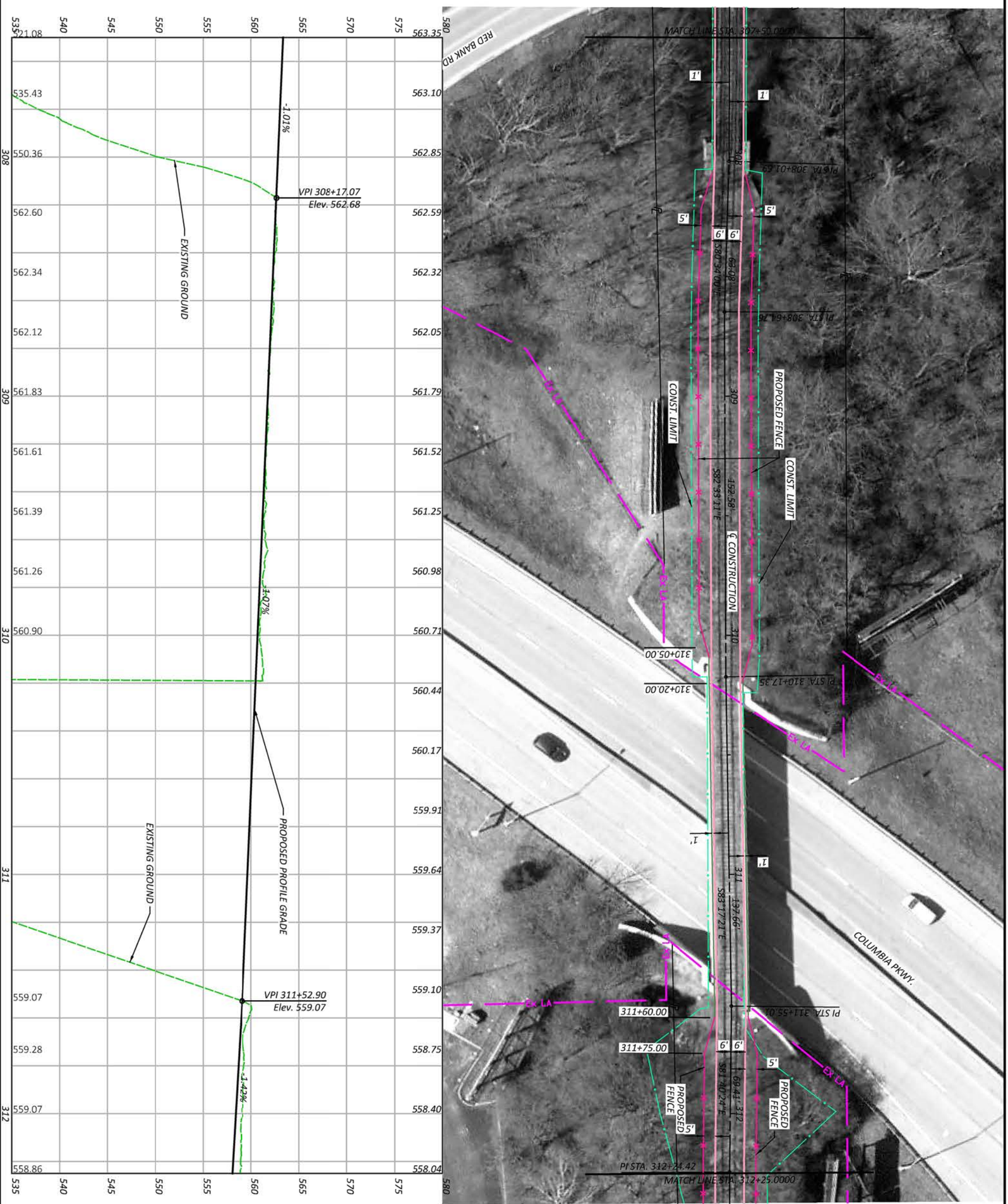

SEGMENT 1 - ALTERNATIVE A
STA. 307+75.00 TO STA. 312+25.00

HORIZONTAL SCALE IN FEET
0 20
10 40

HAM-WASSON WAY TO OTTO ARMLEDER

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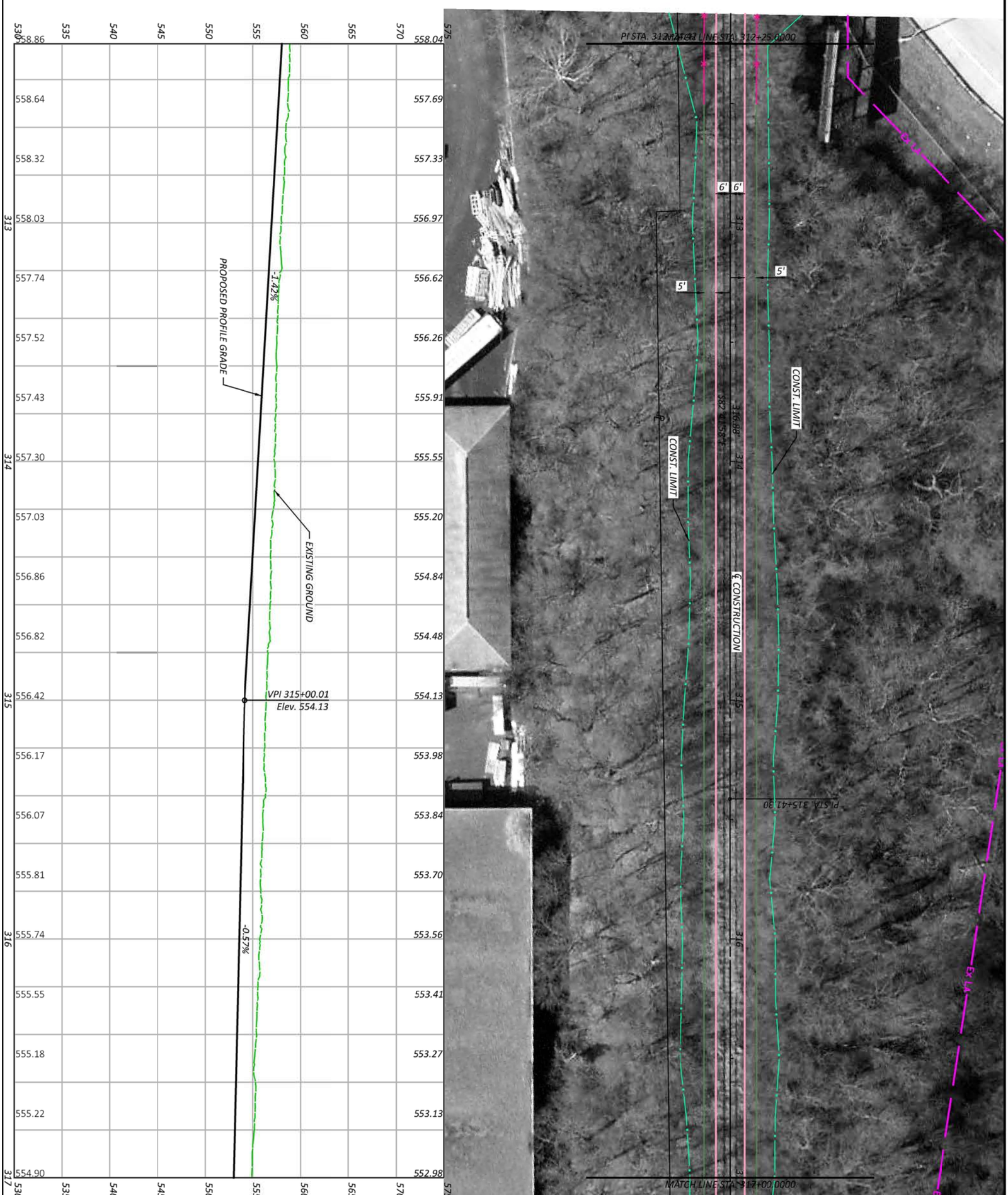

SEGMENT 1 - ALTERNATIVE A
STA. 312+25.00 TO STA. 317+00.00

HORIZONTAL SCALE IN FEET
0 20
10 40

SHEET P.4	TOTAL 5	PROJECT ID 113603	REVIEWER SNS 01-26-24	DESIGNER JGB

DESIGN AGENCY
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10200 Alliance Road, Suite 300
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HAM-WASSON WAY TO OTTO ARMLEDER

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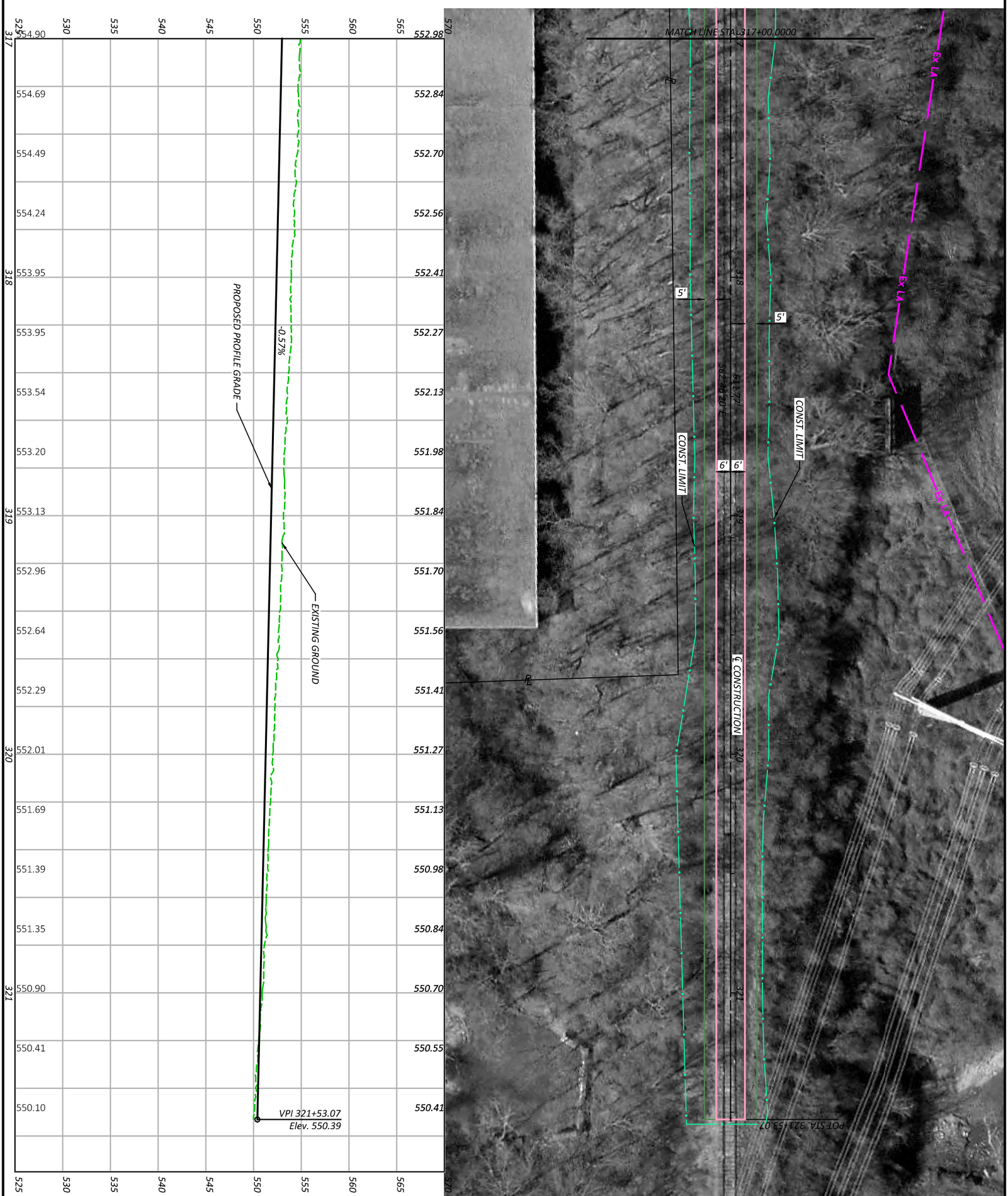

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DESIGN AGENCY

DESIGNER JGB

REVIEWER SNS 01-26-24

PROJECT ID 113603

SHEET P.5 TOTAL 5

SEGMENT 1 - ALTERNATIVE A
SHEET SUB-TITLE

HORIZONTAL SCALE IN FEET
0 20
10 40

HAM-WASSON WAY TO OTTO ARMLEDER

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HORIZONTAL SCALE IN FEET
0 10 20 40

SEGMENT 1 - ALTERNATIVE C
STA. 392+77.11 TO STA. 398+25.00

RED BANK ROAD
WOODLAND ROAD
NORFOLK SOUTHERN
EX. SHARED USE PATH
POT STA. 392+77.11
PT STA. 393+69.95
GRADED SHOULDER
CONST. LIMIT
℄ CONSTRUCTION
393
394
395
396
398
5'
6'
265.82'
S04°46'14"E
CURVE DATA
P.I. = STA. 393+30.76
Δ = 71°53'09" RT
Dc = 77°25'40"
R = 74.00'
T = 53.65'
L = 92.84'
E = 17.4'
CURVE DATA
P.I. = STA. 396+57.50
Δ = 94°44'12" LT
Dc = 286°28'44"
R = 20.00'
T = 21.73'
L = 33.07'
E = 9.53'
PC STA. 396+30.48
PT STA. 396+62.32
PI STA. 397+54.90
PI STA. 398+25.79
MATCH LINE STA. 398+25.00
70.89'
S16°07'25"E
86.05'
N80°29'34"E
106.16'
S02°53'45"E
PC STA. 399+11.94

PROPOSED PROFILE GRADE
EXISTING GROUND
-1.48%
+1.78%
-2.30%
-1.65%
+0.14%
1.41%
VPI 392+77.11 Elev. 520.05
VPI 396+83.00 Elev. 514.03
VPI 397+16.00 Elev. 514.61
VPI 397+40.00 Elev. 514.06
VPI 397+66.00 Elev. 513.63
VPI 397+86.00 Elev. 513.66

519.71 519.34 518.97 518.60 518.23 517.85 517.48 517.11 516.74 516.37 516.00 515.63 515.26 514.89 514.52 514.15 514.33 514.41 513.90 513.65 513.46 513.11
519.89 519.39 518.89 518.55 518.18 517.63 517.31 517.04 516.61 516.29 516.04 515.76 515.46 515.03 514.60 513.80 514.40 514.31 514.30 513.65 513.43 512.93
535 530 525 520 515 510 505 500 495 490
393 394 395 396 397 398

DESIGN AGENCY
Stantec
10200 Alliance Road, Suite 300
Cincinnati, OH 45242
(513) 842-8200

DESIGNER JGB
REVIEWER SNS 01-30-24
PROJECT ID 113603
SHEET P.1 TOTAL 6

HAM-WASSON WAY TO OTTO ARMLEDER

SEGMENT 1 - ALTERNATIVE C
STA. 398+25.00 TO STA. 403+66.65

HORIZONTAL SCALE IN FEET
0 10 20 40

CURVE DATA
P.I. = STA. 399+53.18
Δ = 32°01'31" LT
Dc = 77°25'36"
R = 74.00'
T = 21.24'
L = 41.36'
E = 2.99'

CURVE DATA
P.I. = STA. 401+26.15
Δ = 44°22'52" RT
Dc = 77°25'36"
R = 74.00'
T = 30.18'
L = 57.32'
E = 5.92'

CONST. LIMIT
℄ CONSTRUCTION
GRADED SHOULDER
12" STORM
PI STA. 398+25.00
PC STA. 399+31.94
PT STA. 399+73.30
PC STA. 400+95.97
PT STA. 401+53.29
PI STA. 402+86.10
POT STA. 403+23.35
COLBANK ROAD
RED BANK ROAD
DUCK CREEK
MATCH LINE STA. 398+25.00
106.16' S02°53'45"E
122.66' S34°55'16"E
132.82' S09°27'36"W
87.15' S08°50'01"E

DESIGN AGENCY
Stantec
10200 Alliance Road, Suite 300
Cincinnati, OH 45242
(513) 842-8200

DESIGNER JGB
REVIEWER SNS 01-30-24
PROJECT ID 113603
SHEET P.2 TOTAL 6

MODEL: CLP_BK1-BC1 - Plan 2 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 3/6/2024 TIME: 11:49:31 AM USER: mmondiak
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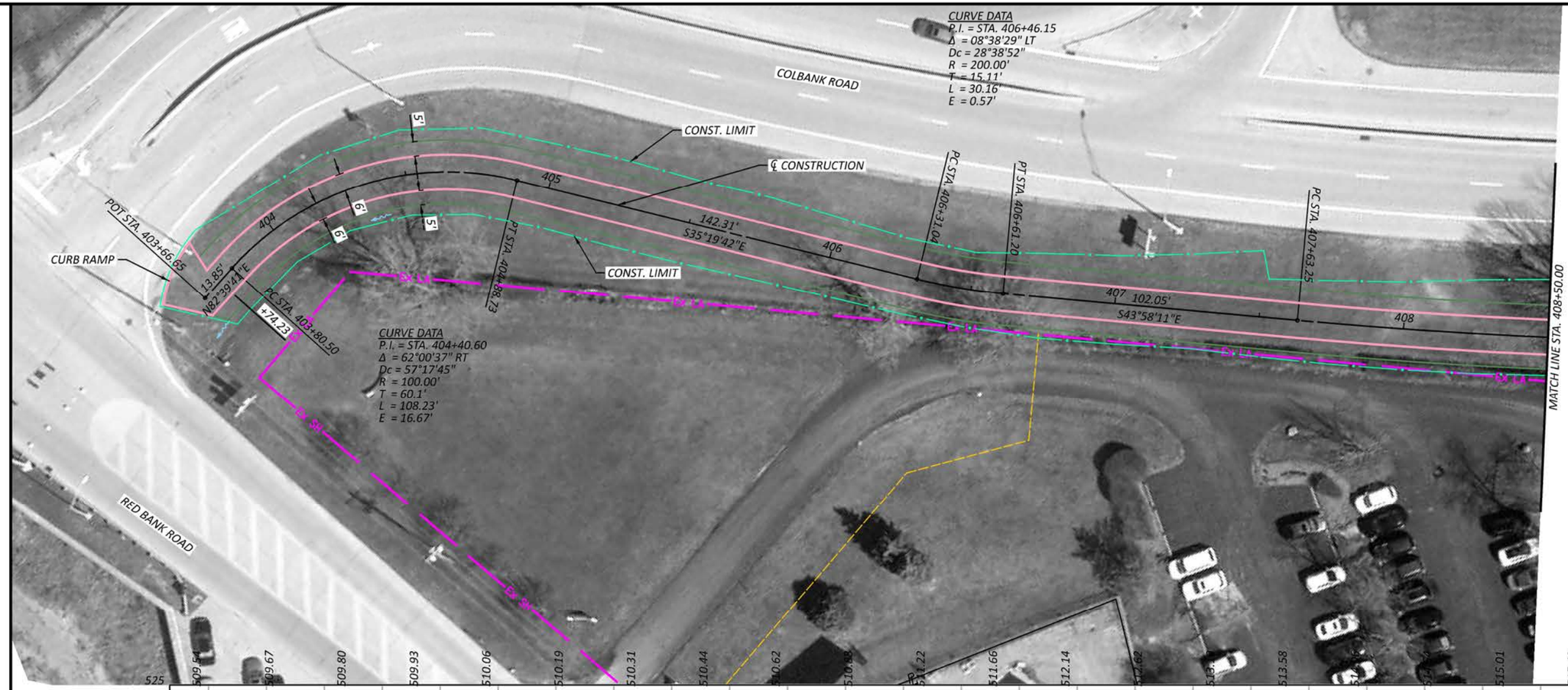

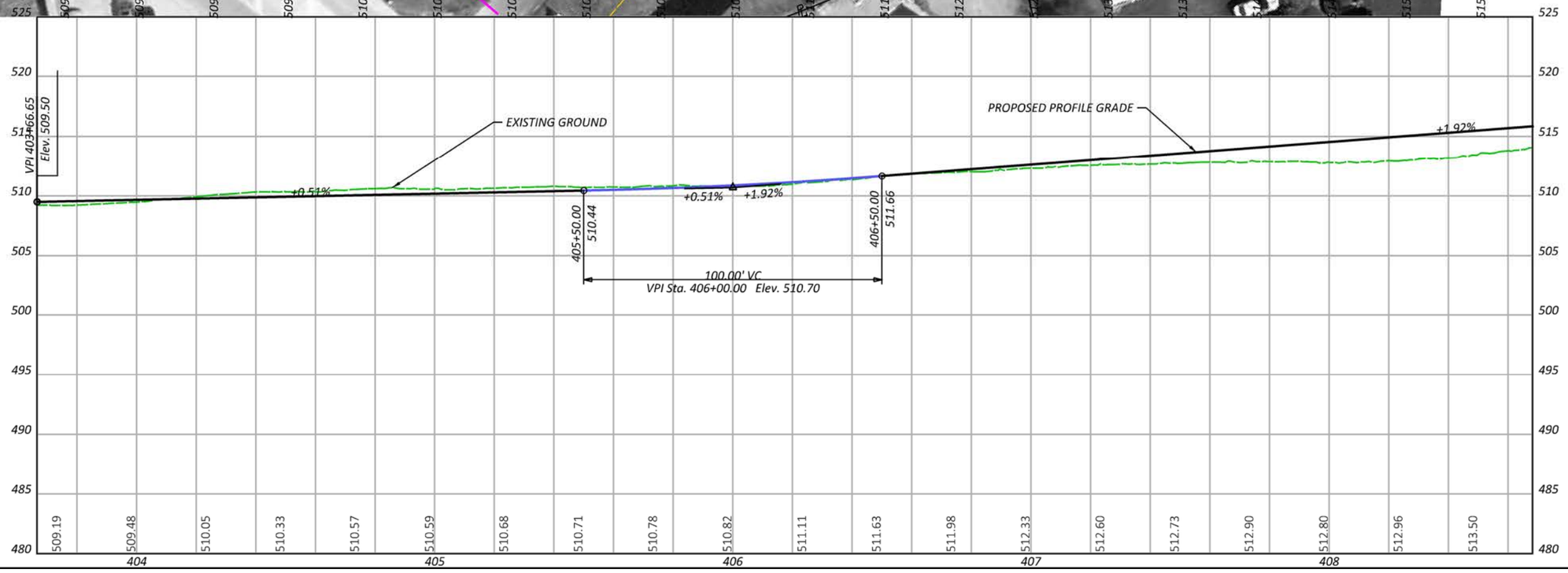

HAM-WASSON WAY TO OTTO ARMLEDER

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HORIZONTAL SCALE IN FEET
0 10 20 40

SEGMENT 1 - ALTERNATIVE C
STA. 403+66.65 TO STA. 408+50.00

DESIGN AGENCY
Stantec
10200 Alliance Road, Suite 300
Cincinnati, OH 45242
(513) 842-8200

DESIGNER JGB
REVIEWER SNS 01-30-24
PROJECT ID 113603
SHEET P.3 TOTAL 6

HAM-WASSON WAY TO OTTO ARMLEDER

MODEL: CLP_BK1-C2A-1 - Plan 2 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 3/6/2024 TIME: 11:49:53 AM USER: mmondlak
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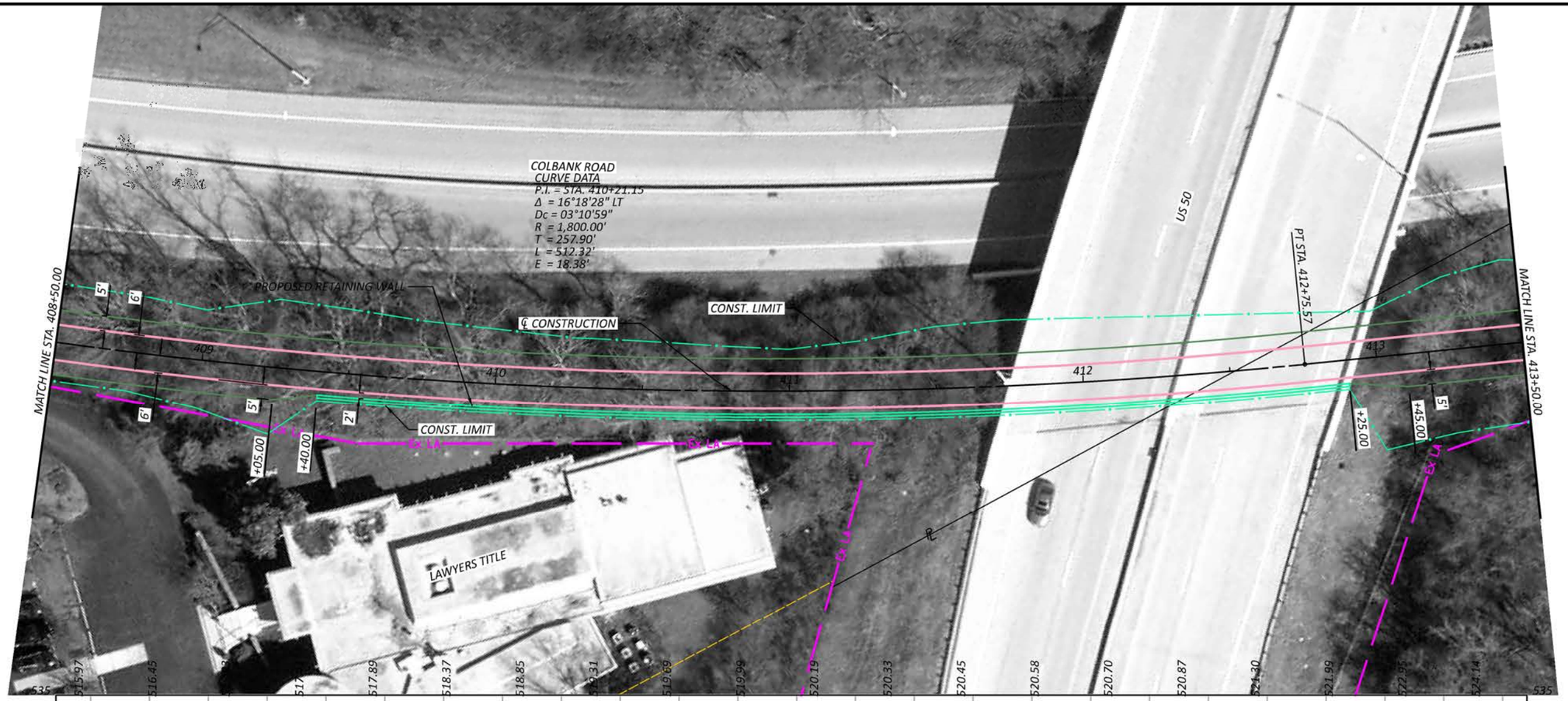

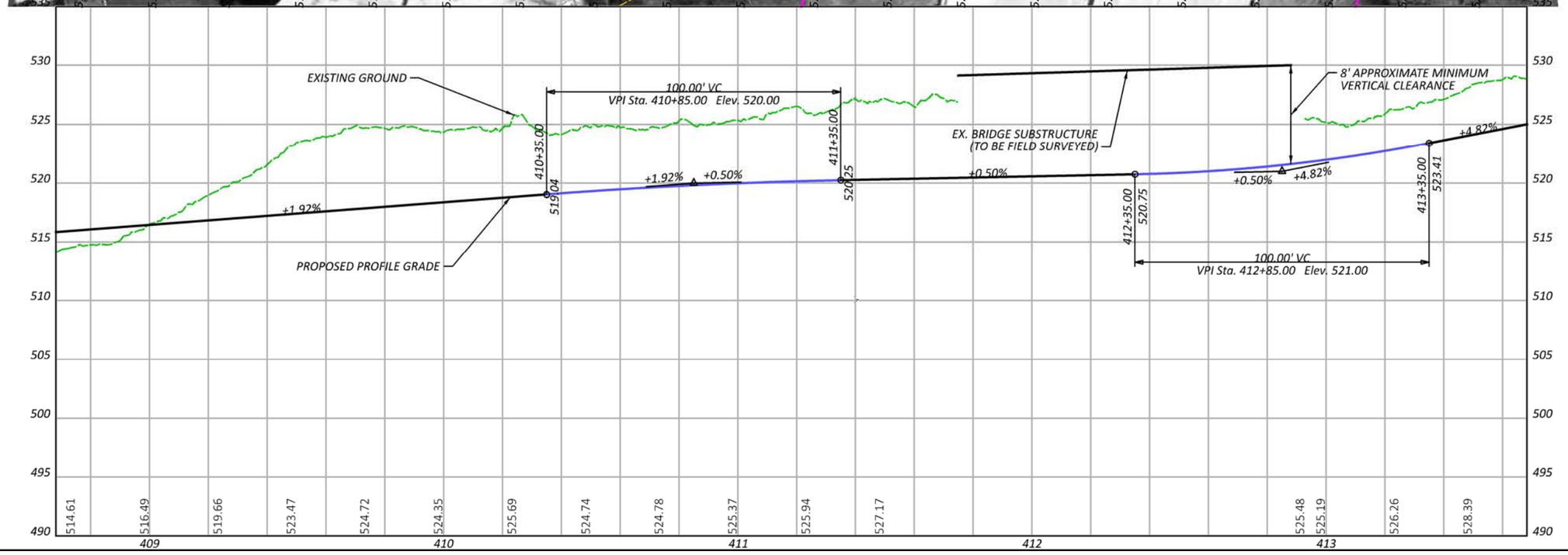

HORIZONTAL SCALE IN FEET
0 10 20 40

SEGMENT 1 - ALTERNATIVE C
STA. 408+50.00 TO STA. 413+50.00

DESIGN AGENCY
Stantec
10200 Alliance Road, Suite 300
Cincinnati, OH 45242
(513) 842-8200

DESIGNER	JGB
REVIEWER	SNS 01-30-24
PROJECT ID	113603
SHEET	P.4
TOTAL	6

HAM-WASSON WAY TO OTTO ARMLEDER

MODEL: CLP_BK1-C2A-1 - Plan 3 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 3/6/2024 TIME: 11:49:59 AM USER: mmondlak
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COLBANK ROAD

CURVE DATA
P.I. = STA. 417+74.10
Δ = 22°29'41" LT
Dc = 28°38'52"
R = 200.00'
T = 39.77'
L = 78.52'
E = 3.97'

Ex LA

CONST. LIMIT

℄ CONSTRUCTION

MATCH LINE STA. 413+50.00

MATCH LINE STA. 418+50.00

PC STA. 417+34.33

PT STA. 418+12.85

438.77'
S60°16'39"E

19'
5'

HORIZONTAL SCALE IN FEET
0 10 20 40

SEGMENT 1 - ALTERNATIVE C
STA. 413+50.00 TO STA. 418+50.00

DESIGN AGENCY
Stantec
10200 Alliance Road, Suite 300
Cincinnati, OH 45242
(513) 842-8200

DESIGNER JGB
REVIEWER SNS 01-30-24
PROJECT ID 113603
SHEET P.5 TOTAL 6

HAM-WASSON WAY TO OTTO ARMLEDER

MODEL: CLP_BK1-C2A-1 - Plan 4 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 3/6/2024 TIME: 11:50:03 AM USER: mmondiak
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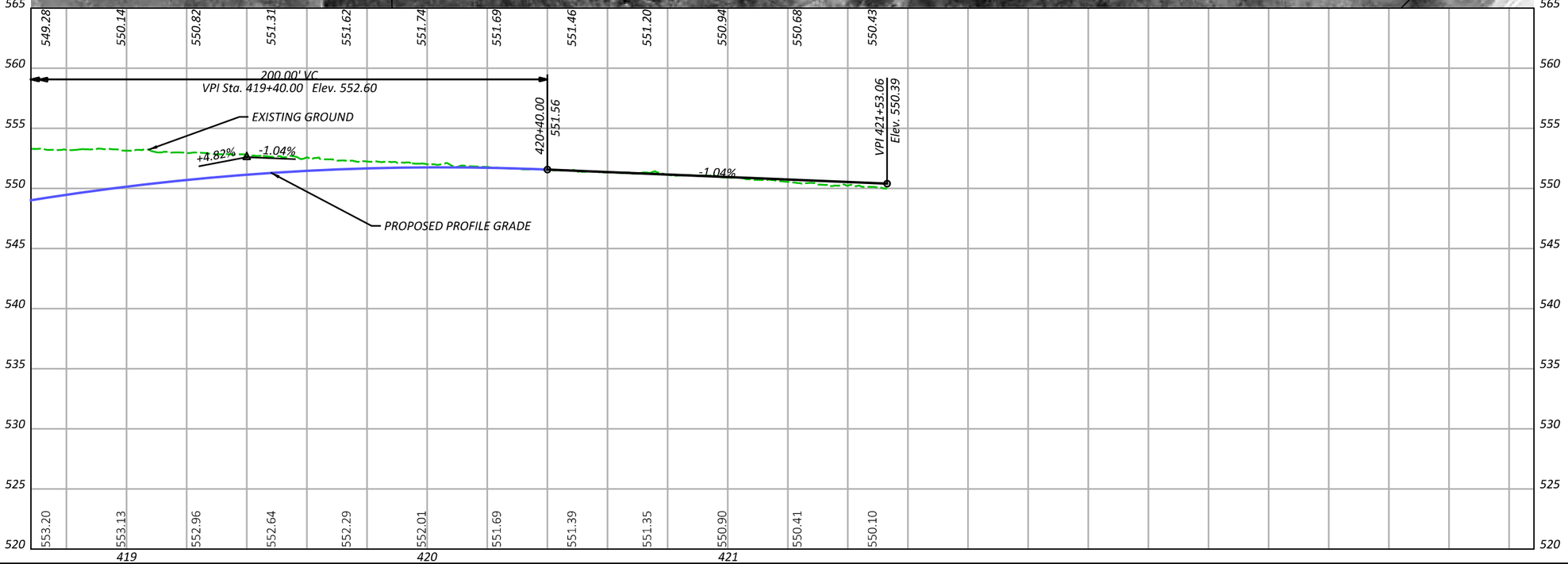
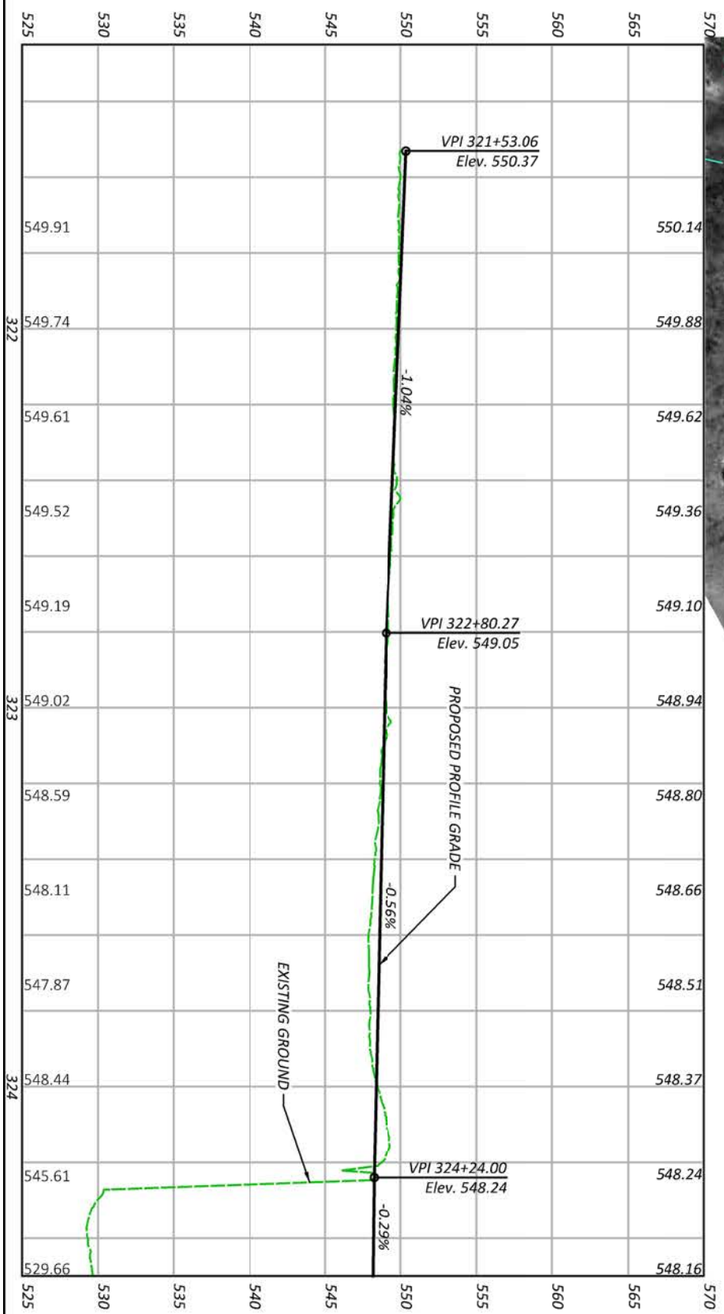


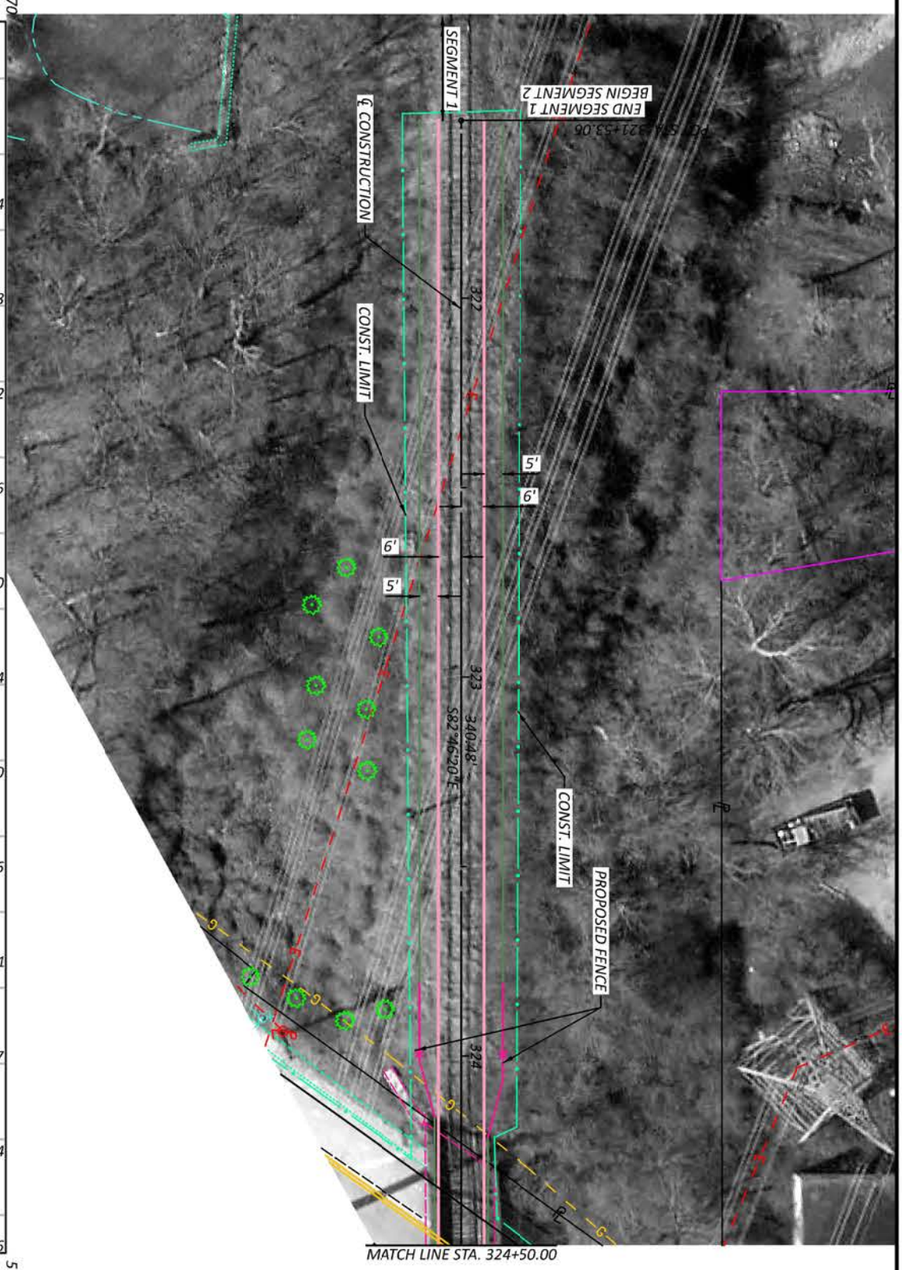
HORIZONTAL SCALE IN FEET
0 10 20 40

SEGMENT 1 - ALTERNATIVE C
STA. 418+50.00 TO STA. 421+53.06

DESIGN AGENCY
Stantec
10200 Alliance Road, Suite 300
Cincinnati, OH 45242
(513) 842-8200

DESIGNER JGB
REVIEWER SNS 01-30-24
PROJECT ID 113603
SHEET P.6 TOTAL 6



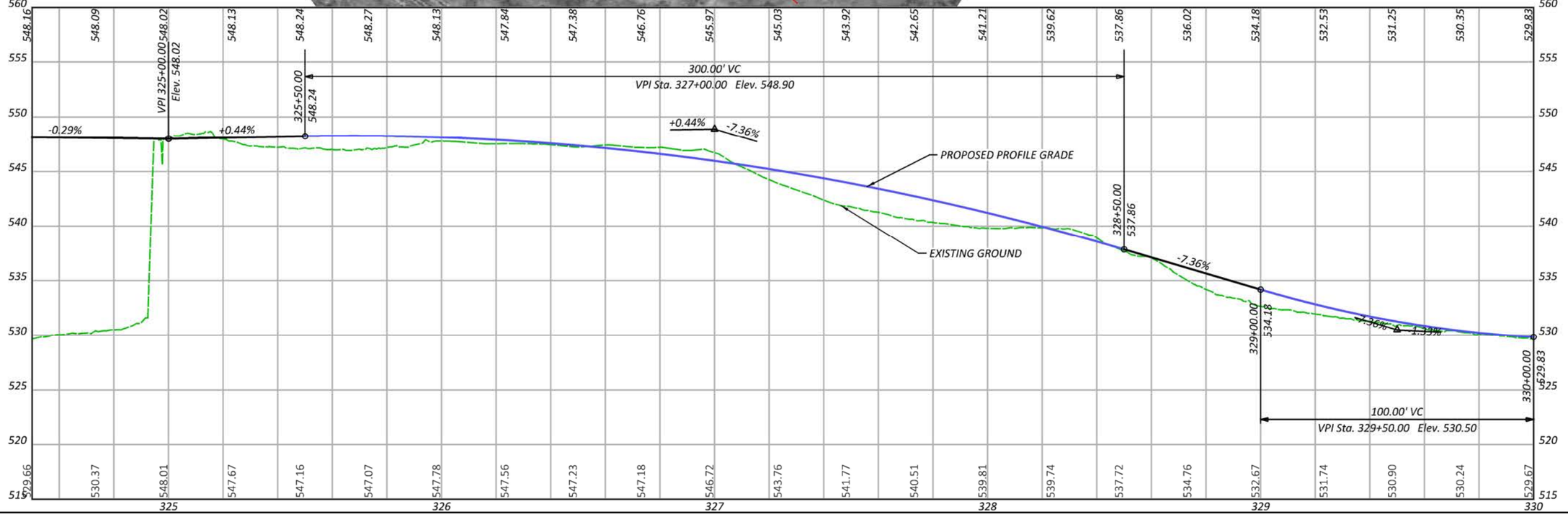


SEGMENT 2 - ALTERNATIVE B
STA. 321+53.06 TO STA. 324+50.00

HORIZONTAL SCALE IN FEET
0 20
10 40

SHEET	TOTAL
P.1	6

PROJECT ID: 113603
REVIEWER: SNS 07-01-23
DESIGNER: JGB
DESIGN AGENCY: Stantec
Stantec Ashland Road, Suite 300, Cincinnati, OH 45242, (513) 842-3400



HORIZONTAL SCALE IN FEET
0 10 20 40

SEGMENT 2 - ALTERNATIVE B
STA. 324+50.00 TO STA. 330+00.00

HAM-WASSON WAY TO OTTO ARMLEDER

MODEL: CLP_2-B-1 - Plan 3 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 3/6/2024 TIME: 12:25:40 PM USER: mmondlak
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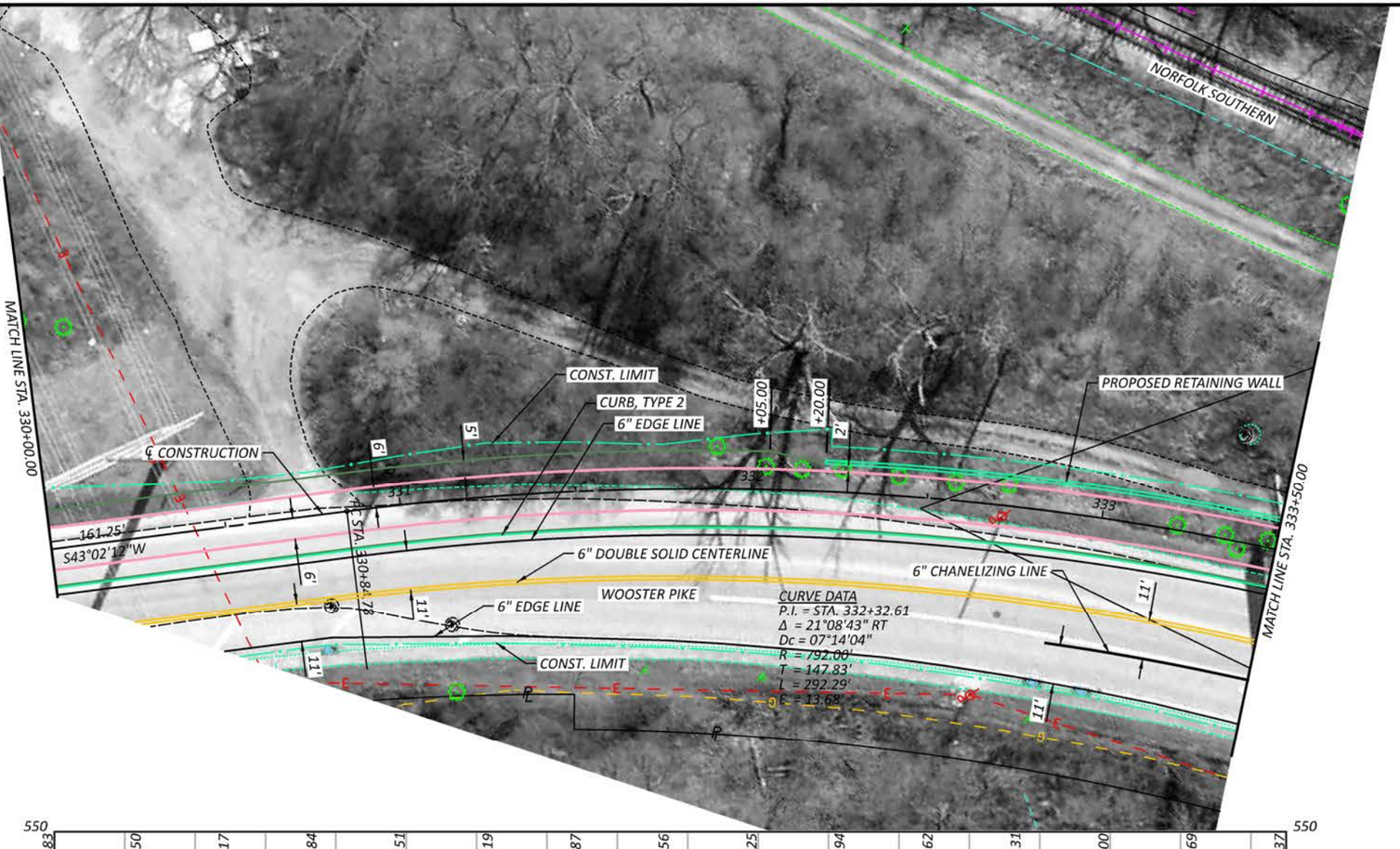
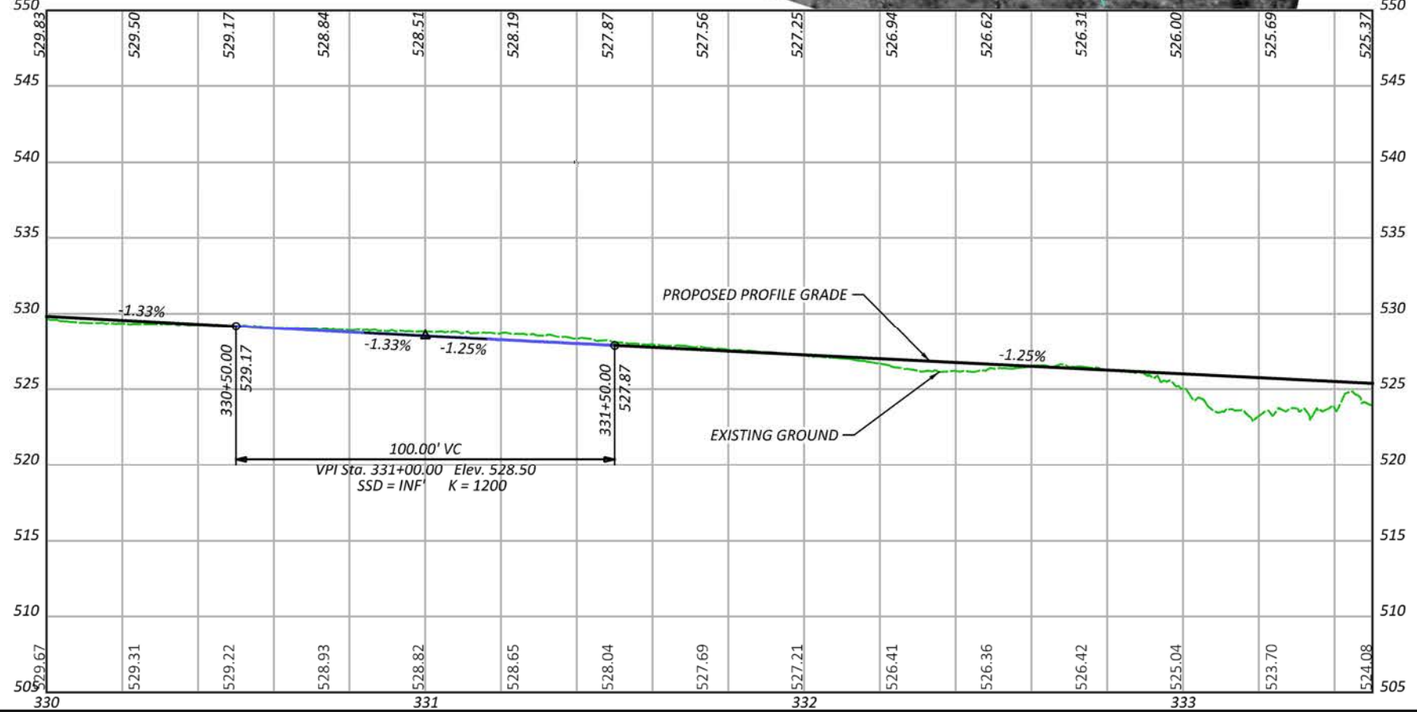
DESIGN AGENCY
Stantec
10200 Alliance Road, Suite 300
Cincinnati, OH 45242
(513) 842-8200

DESIGNER JGB
REVIEWER SNS 07-01-23
PROJECT ID 113603
SHEET P.2 TOTAL 6





HORIZONTAL SCALE IN FEET
0 10 20 40

SEGMENT 2 - ALTERNATIVE B
STA. 330+00.00 TO STA. 333+50.00

HAM-WASSON WAY TO OTTO ARMLEDER

MODEL: CLP_2-B-2 - Plan 4 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 3/6/2024 TIME: 12:25:44 PM USER: mmondlak
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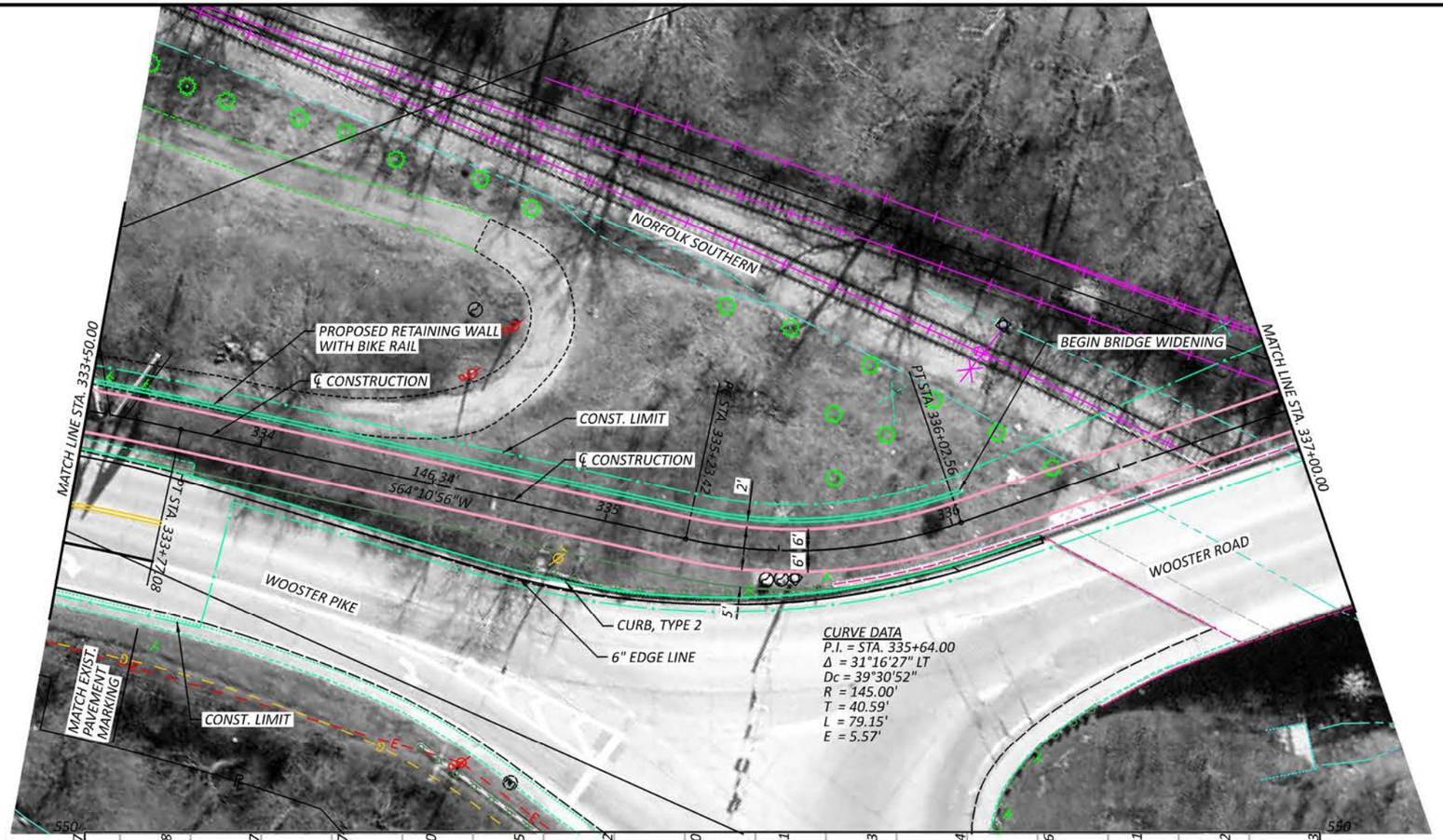
DESIGN AGENCY
Stantec
10200 Alliance Road, Suite 300
Cincinnati, OH 45242
(513) 842-8200

DESIGNER JGB
REVIEWER SNS 07-01-23
PROJECT ID 113603
SHEET P.3 TOTAL 6



HORIZONTAL SCALE IN FEET
0 10 20 40

SEGMENT 2 - ALTERNATIVE B
STA. 333+50.00 TO STA. 337+00.00

HAM-WASSON WAY TO OTTO ARMLEDER

MODEL: CLP_2-B-2 - Plan 5 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 3/7/2024 TIME: 5:02:49 PM USER: mmondiak
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DESIGN AGENCY
Stantec
10200 Alliance Road, Suite 300
Cincinnati, OH 45242
(513) 842-8200

DESIGNER	JGB
REVIEWER	SNS 07-01-23
PROJECT ID	113603
SHEET	P.4
TOTAL	6

HAM-WASSON WAY TO OTTO ARMLEDER

MODEL: CLP_2-B-4 - Plan 11 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 3/6/2024 TIME: 12:25:53 PM USER: rmondlak
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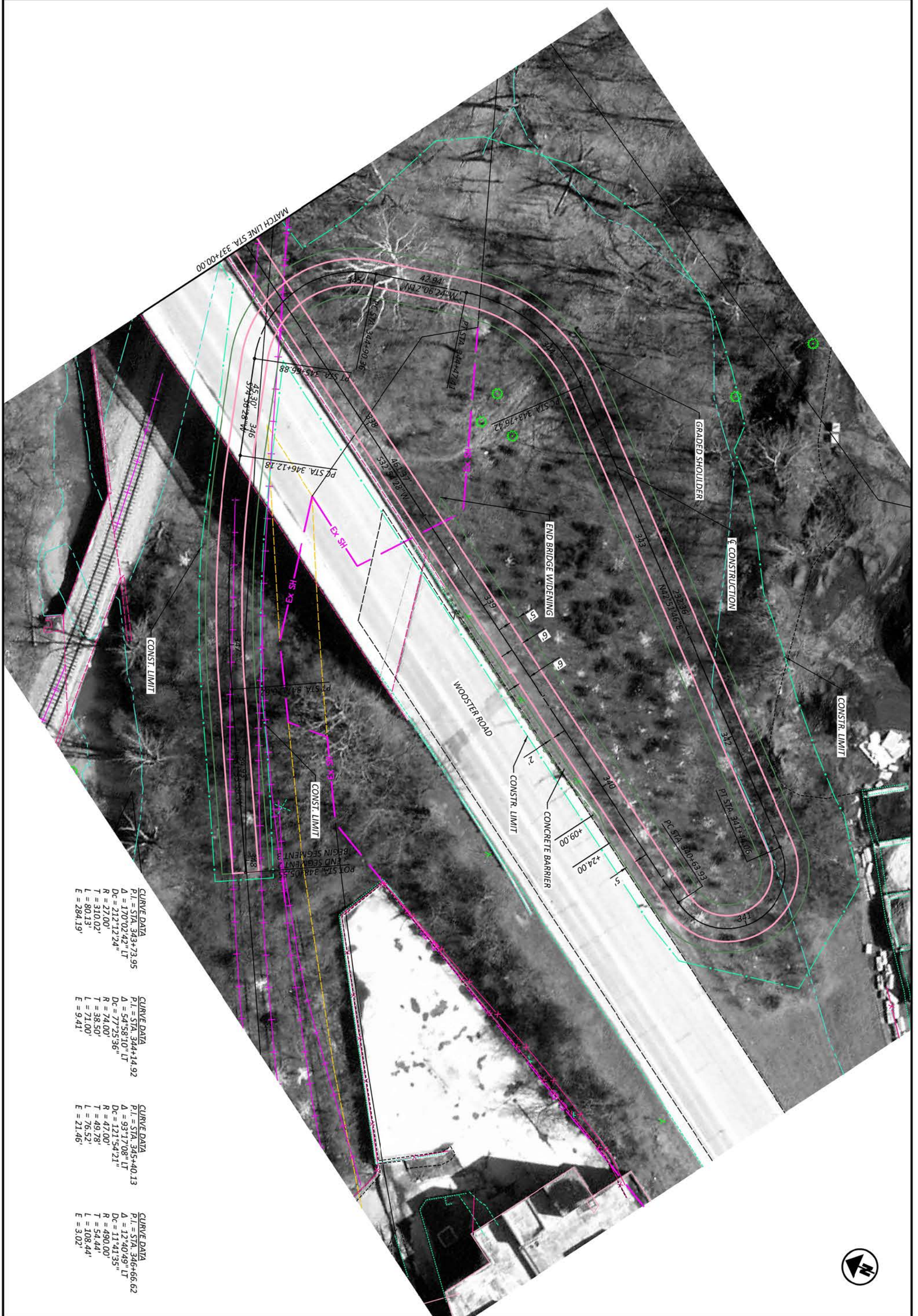


CURVE DATA
P.I. = STA. 343+73.95
Δ = 170°02'42" LT
Dc = 212°12'24"
R = 27.00'
T = 310.02'
L = 80.13'
E = 284.19'

CURVE DATA
P.I. = STA. 344+14.92
Δ = 54°58'10" LT
Dc = 77°25'36"
R = 74.00'
T = 38.50'
L = 71.00'
E = 9.41'

CURVE DATA
P.I. = STA. 345+40.13
Δ = 93°17'08" LT
Dc = 121°54'21"
R = 47.00'
T = 49.78'
L = 76.52'
E = 21.46'

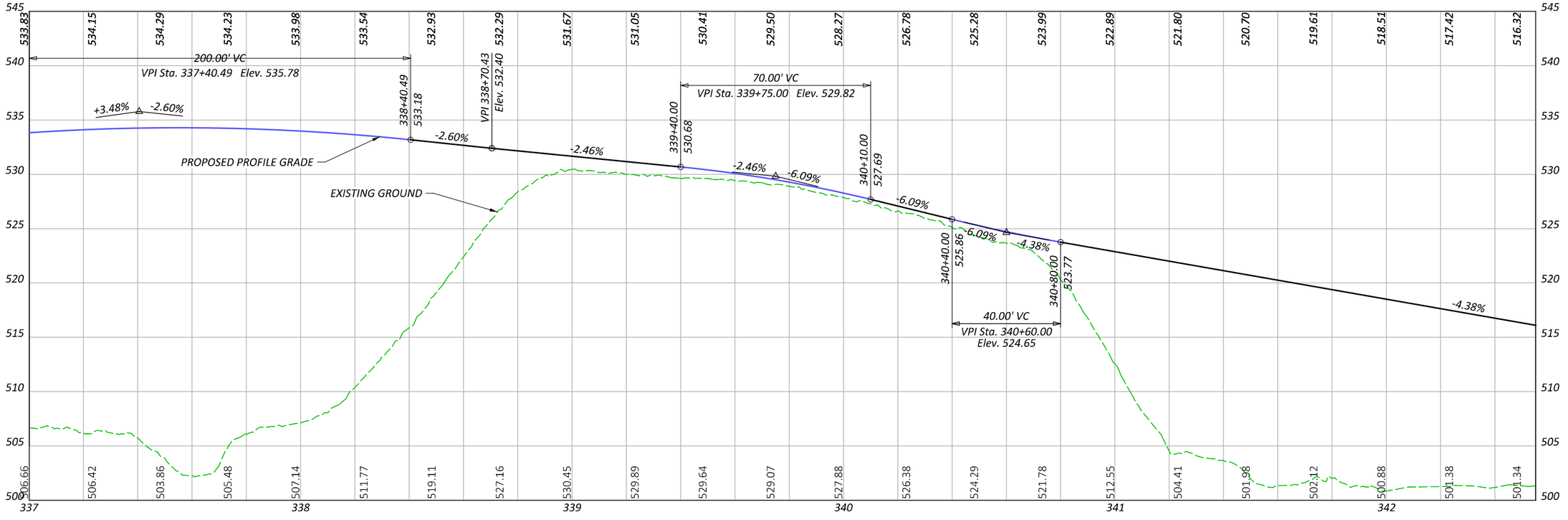
CURVE DATA
P.I. = STA. 346+66.62
Δ = 12°40'49" LT
Dc = 11°41'35"
R = 490.00'
T = 54.44'
L = 108.44'
E = 3.02'

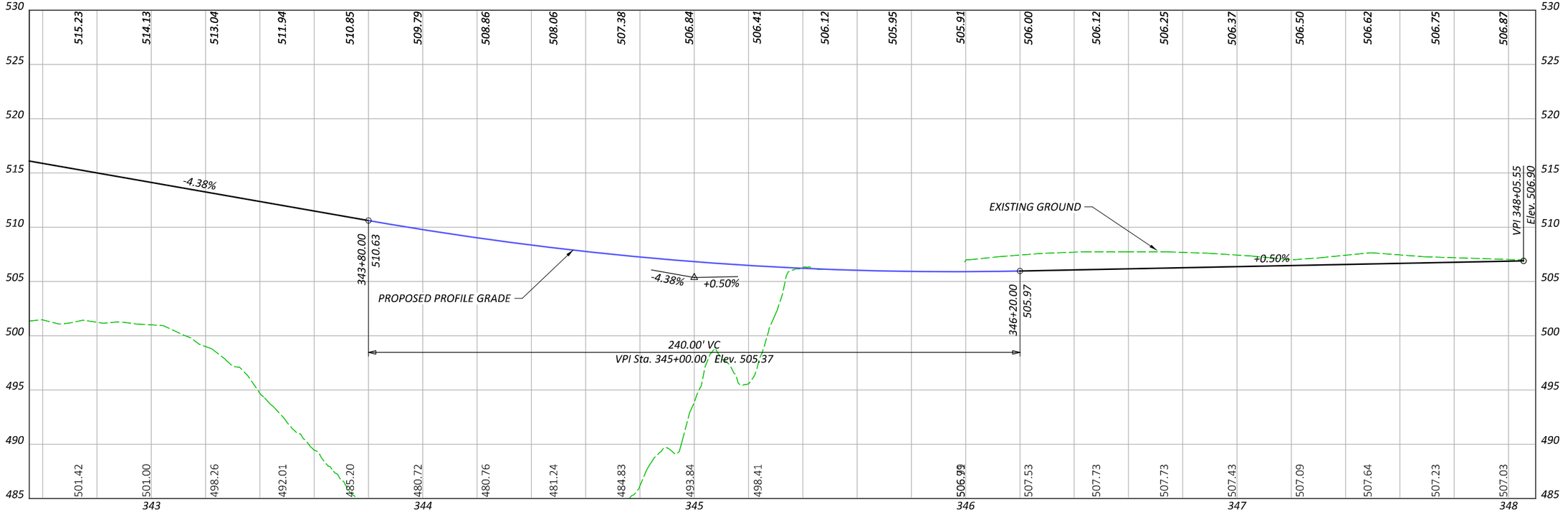
SEGMENT 2 - ALTERNATIVE B
STA. 337+00.00 TO STA. 348+05.55

HORIZONTAL SCALE IN FEET
0 20
10 40

DESIGN AGENCY
Stantec
10200 Alliance Road, Suite 200
Cincinnati, OH 45242
(513) 842-3400

DESIGNER JGB
REVIEWER SNS 07-01-23
PROJECT ID 113603
SHEET P.5 TOTAL 6





HAM-WASSON WAY TO OTTO ARMLEDER

SEGMENT 2 - ALTERNATIVE B
STA. 337+00.00 TO STA. 348+05.55

MODEL: PGL-2-B-3 - Profile 11 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 3/6/2024 TIME: 12:26:00 PM USER: mmondlak
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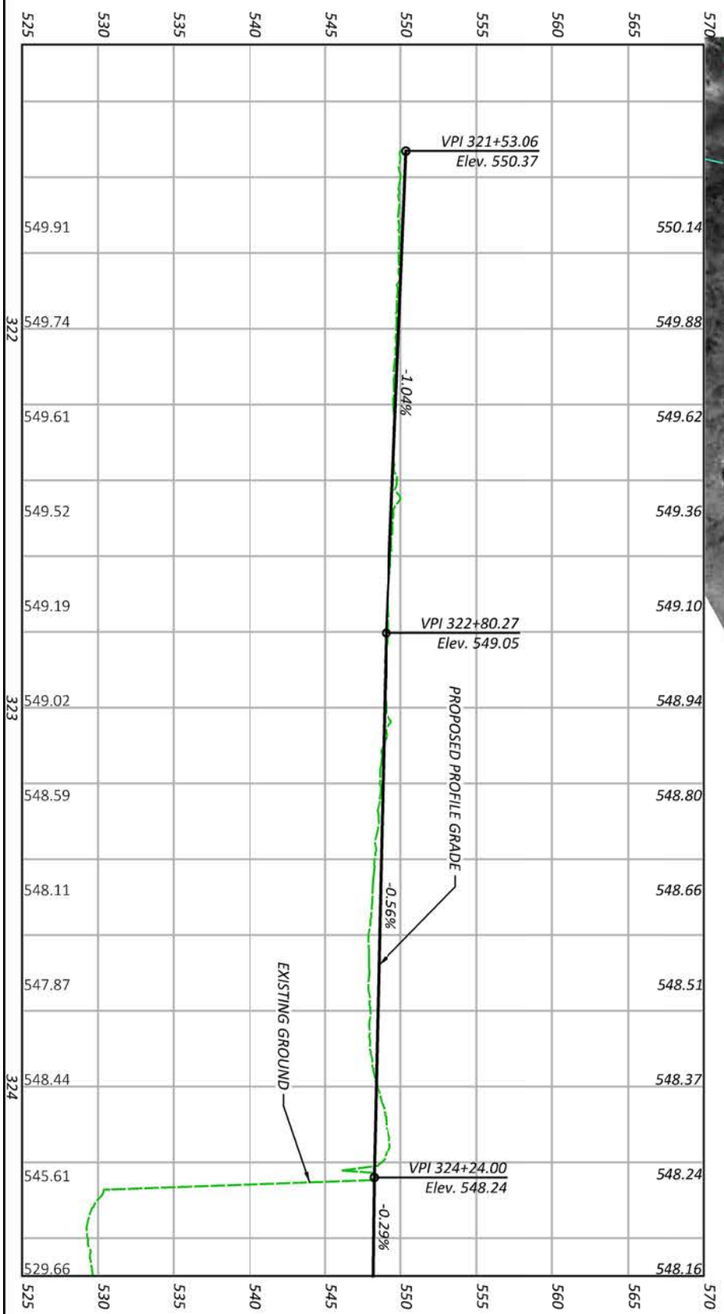
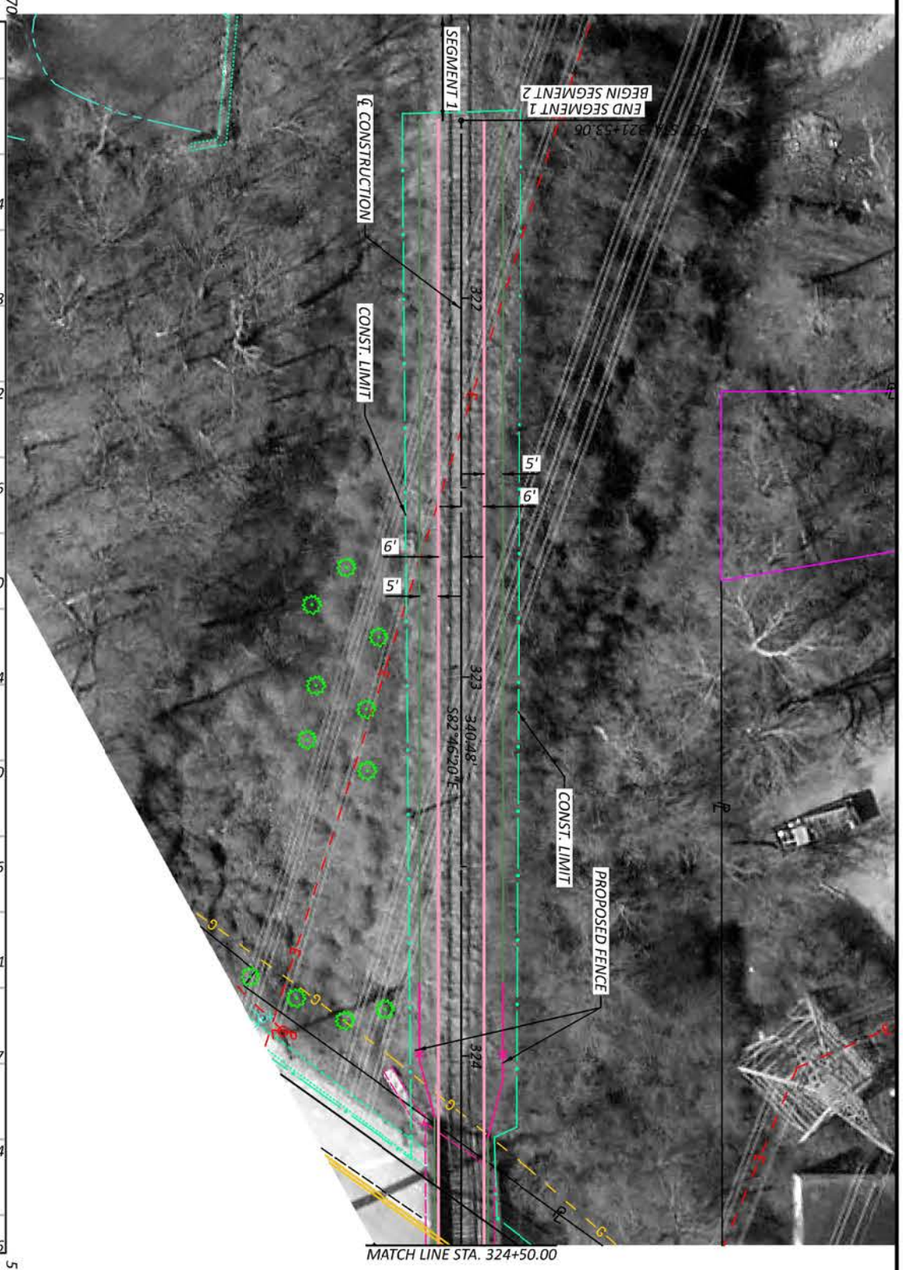
DESIGN AGENCY
Stantec
10200 Alliance Road,
Suite 300
Cincinnati, OH 45242
(513) 842-8200

DESIGNER	JGB
REVIEWER	SNS 02-01-24
PROJECT ID	113603
SHEET	P.6
TOTAL	6



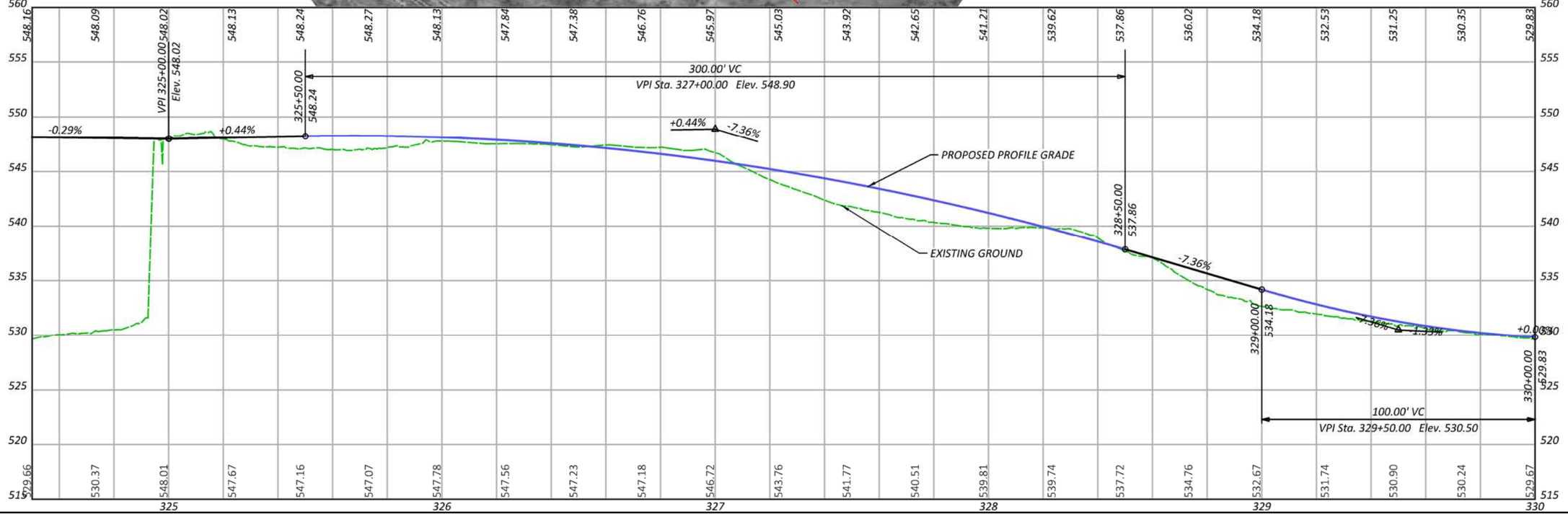


SEGMENT 2 - ALTERNATIVE C
STA. 321+53.06 TO STA. 324+50.00

HORIZONTAL SCALE IN FEET
0 20
10 40

SHEET	TOTAL	PROJECT ID	REVIEWER	DESIGNER	DESIGN AGENCY
P.1	6	113603	SNS 07-01-23	JGB	Stantec

Stantec
10200 Alliance Road,
Suite 300
Cincinnati, OH 45242
(513) 842-3000



HORIZONTAL SCALE IN FEET
0 10 20 40

SEGMENT 2 - ALTERNATIVE C
STA. 324+50.00 TO STA. 330+00.00

HAM-WASSON WAY TO OTTO ARMLEDER

MODEL: CLP_2-B-1 - Plan 3 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 3/7/2024 TIME: 1:57:34 PM USER: mmondiak
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DESIGN AGENCY
Stantec
10200 Alliance Road, Suite 300
Cincinnati, OH 45242
(513) 842-8200

DESIGNER	JGB
REVIEWER	SNS 07-01-23
PROJECT ID	113603
SHEET	P.2
TOTAL	6

HAM-WASSON WAY TO OTTO ARMLEDER

MODEL: CLP_BK2C - Plan 1 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 3/7/2024 TIME: 1:58:10 PM USER: mmondlak
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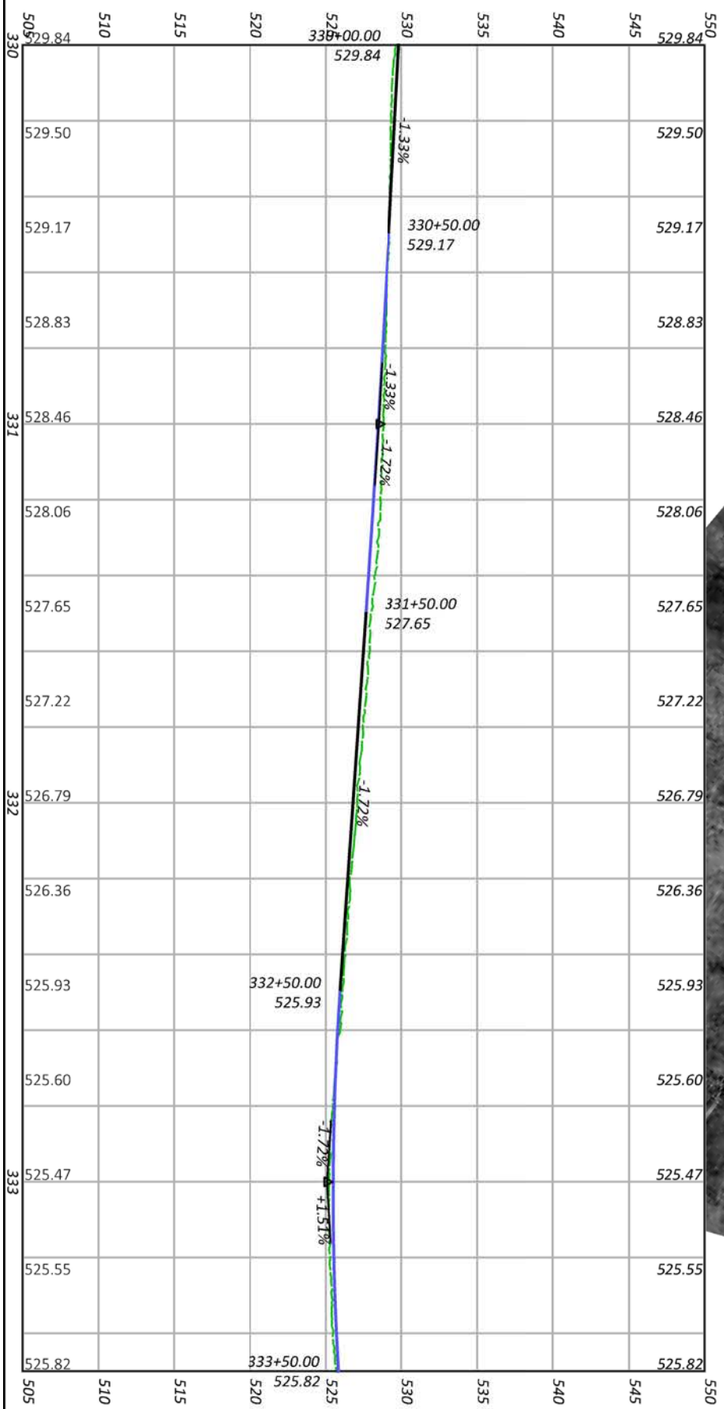

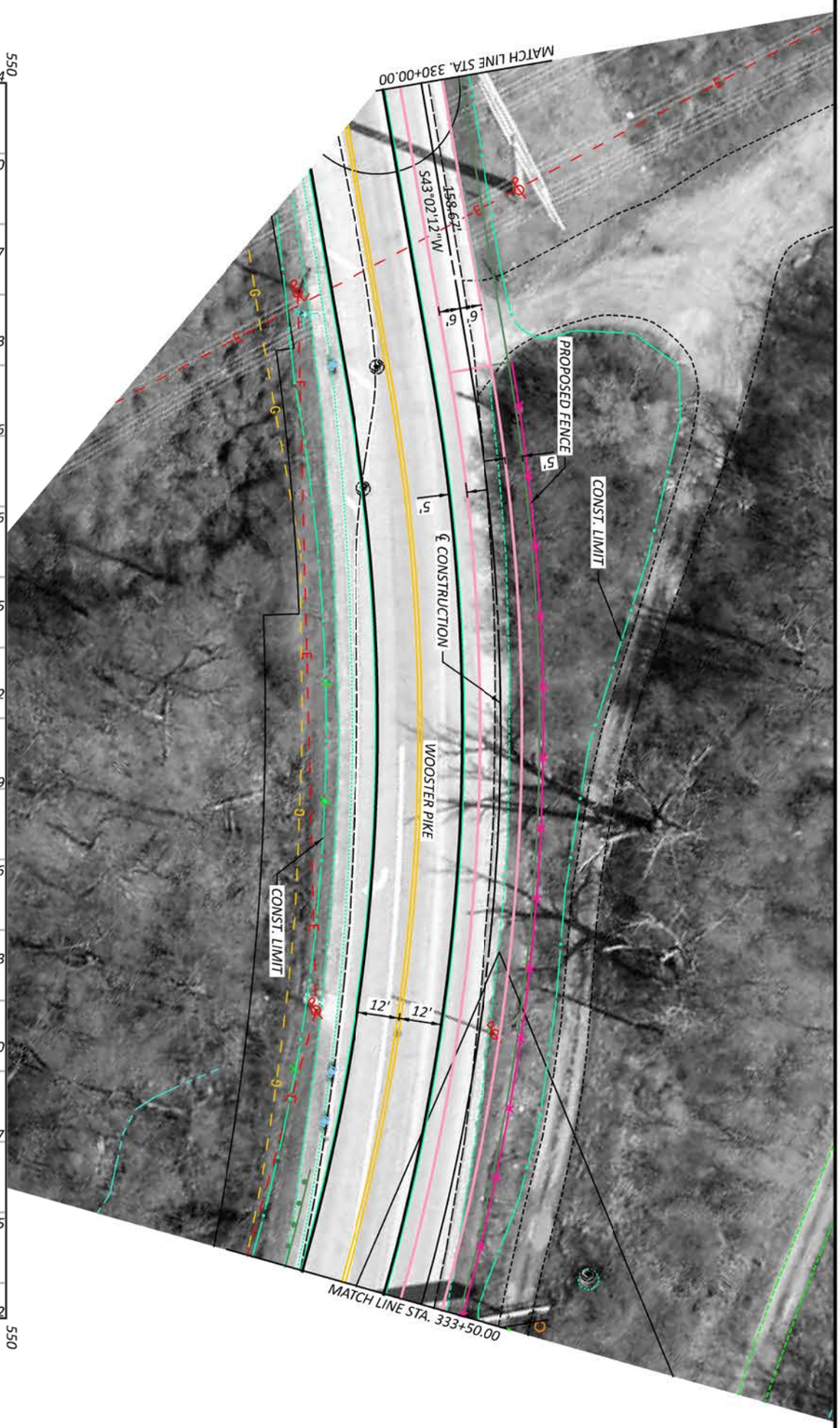

SEGMENT 2 - ALTERNATIVE C
STA. 330+00.00 TO STA. 333+50.00

HORIZONTAL SCALE IN FEET
0 20
10 40

SHEET	P.3
TOTAL	6
PROJECT ID	113603
PID	03-05-24
REVIEWER	
DESIGNER	JGB
DESIGN AGENCY	Stantec

Stantec
11687 Lebanon Road,
Suite 300
Cincinnati, OH 45241
(513) 842-3030

HAM-WASSON WAY TO OTTO ARMLEDER

MODEL: CLP_BK2C - Plan 2 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 3/7/2024 TIME: 1:58:15 PM USER: mmondlak
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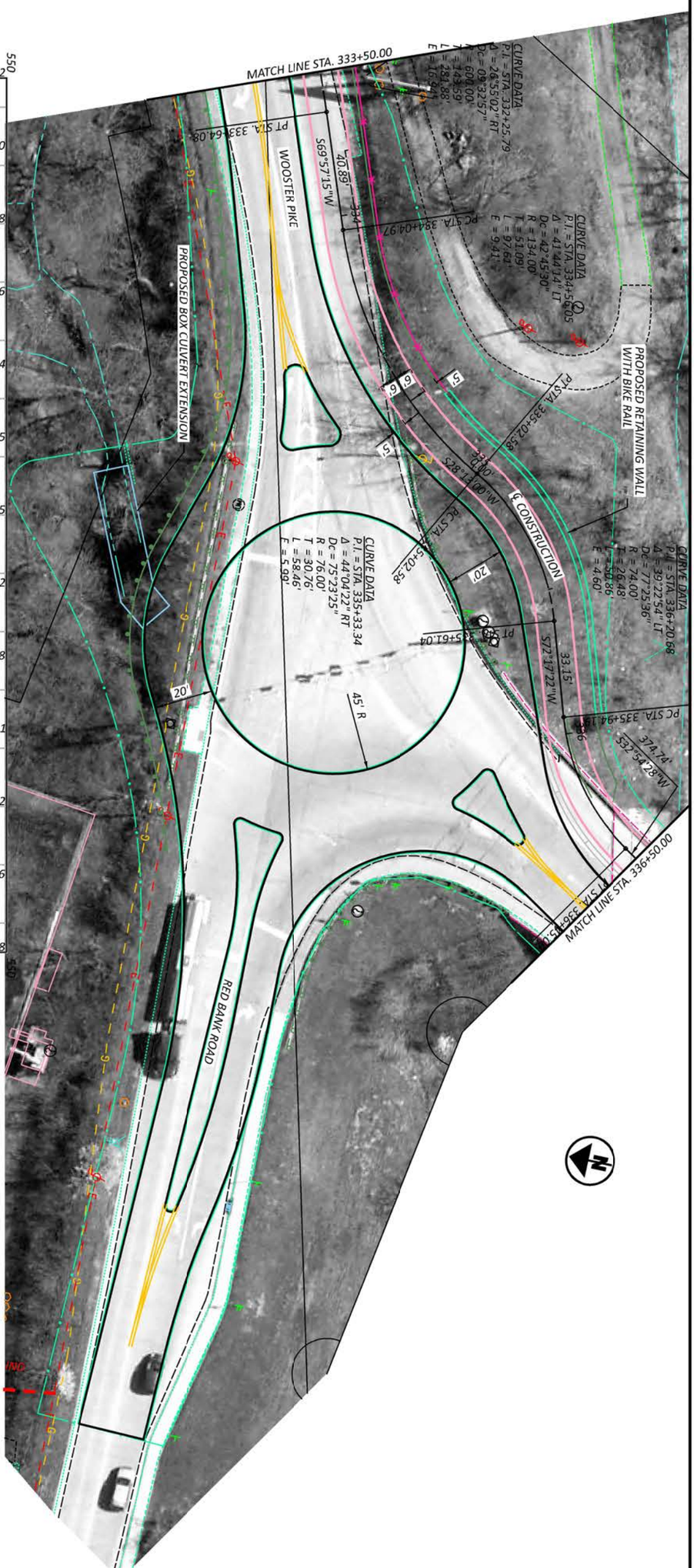

SEGMENT 2 - ALTERNATIVE C
SHEET SUB-TITLE

HORIZONTAL SCALE IN FEET
0 20
10 40

SHEET	P.4
TOTAL	6
PROJECT ID	113603
PID	03-05-24
REVIEWER	JGB
DESIGNER	
DESIGN AGENCY	Stantec

Stantec
10200 Alliance Road,
Suite 200
Cincinnati, OH 45242
(513) 842-3030

HAM-WASSON WAY TO OTTO ARMLEDER

MODEL: Untitled-2 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 3/7/2024 TIME: 1:58:20 PM USER: mmondlak
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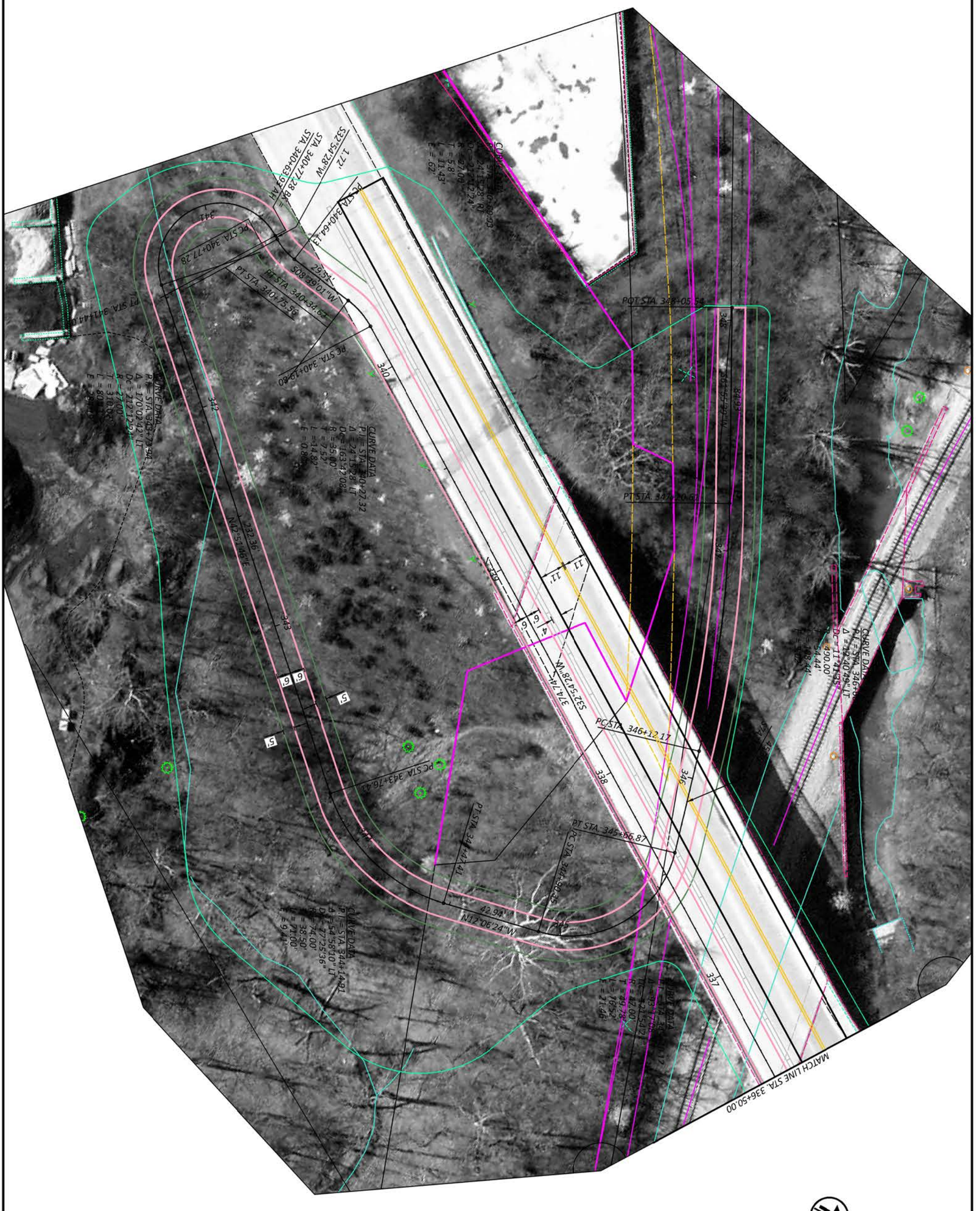


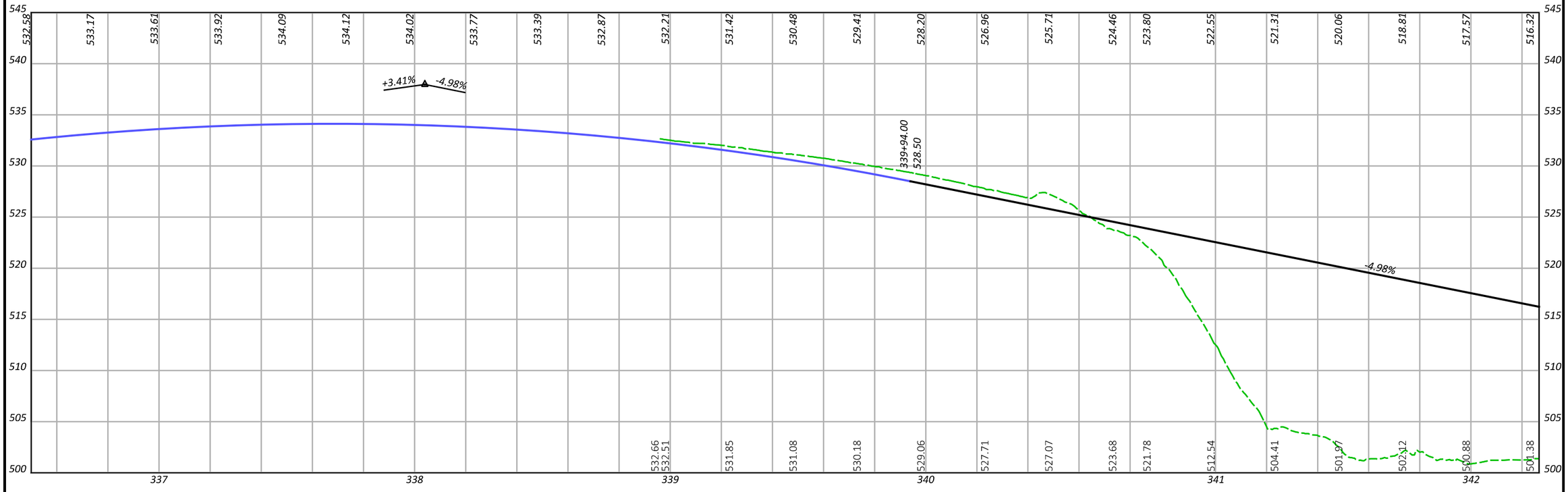
SHEET	TOTAL
P.5	6

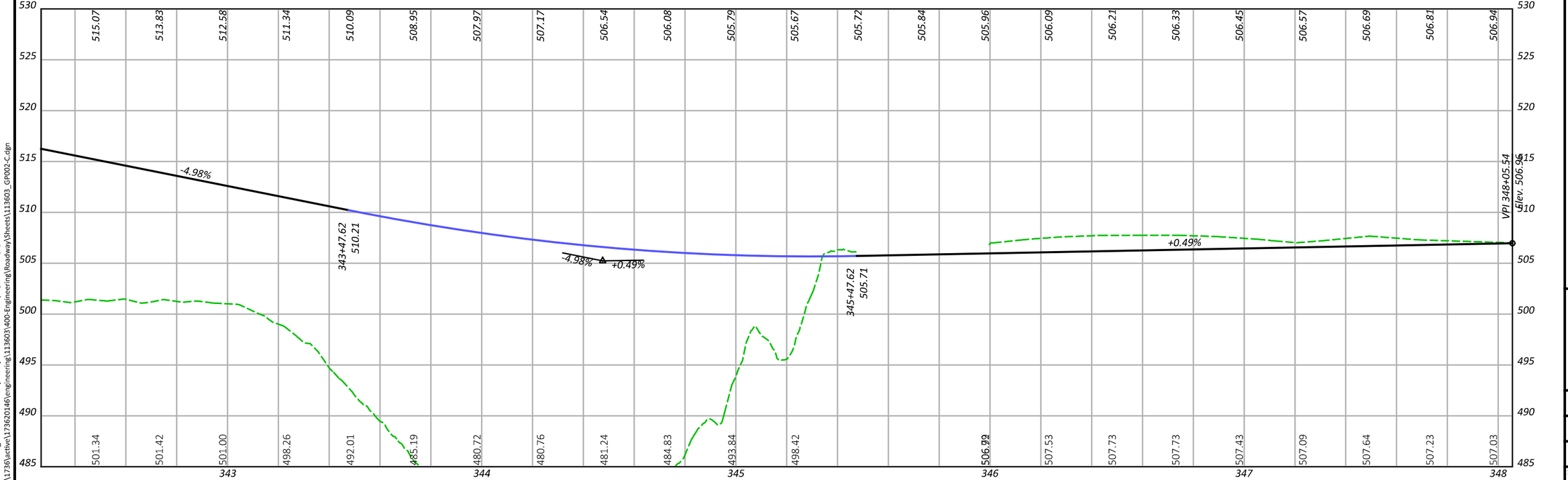
PROJECT ID: 113603
PID 03-05-24
REVIEWER
DESIGNER JGB

Stantec
DESIGN AGENCY
11687 Lebanon Road, Suite 300, Cincinnati, OH 45240 (513) 842-3030

SEGMENT 2 - ALTERNATIVE C
STA. 336+50.00 TO STA. 348+05.54

HORIZONTAL SCALE IN FEET
0 20
10 40





HAM-WASSON WAY TO OTTO ARMLEDER

SEGMENT 2 - ALTERNATIVE C
STA. 336+50.00 TO STA. 348+05.54

DESIGN AGENCY
Stantec
10200 Alliance Road, Suite 300
Cincinnati, OH 45242
(513) 842-8200

DESIGNER	JGB
REVIEWER	PJD 03-05-24
PROJECT ID	0113603
SHEET	P.6
TOTAL	6

MODEL: CLP_BK2C-4 - Profile 3 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 3/7/2024 TIME: 1:58:27 PM USER: mmondlak
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HAM-WASSON WAY TO OTTO ARMLEDER

MODEL: CLP_3-AB - Plan 7 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 8/1/2024 TIME: 9:57:56 AM USER: gregbrown
V:\1736\active\173620146\engineering\113603\400-Engineering\Roadway\Sheets\113603_GP003-AB.dgn

SEGMENT 3 - ALTERNATIVE B
STA. 00+06.35 TO STA. 4+00.00

HORIZONTAL SCALE IN FEET
0 20
10 40

SHEET	P.1
TOTAL	13
PROJECT ID	113603
REVIEWER	SNS 01-26-24
DESIGNER	JGB

DESIGN AGENCY
Stantec
10200 Alliance Road, Suite 300
Cincinnati, OH 45242
(513) 842-3400

HAM-WASSON WAY TO OTTO ARMLEDER

MODEL: CLP_3-AB - Plan 8 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 8/1/2024 TIME: 9:59:13 AM USER: gregbrown
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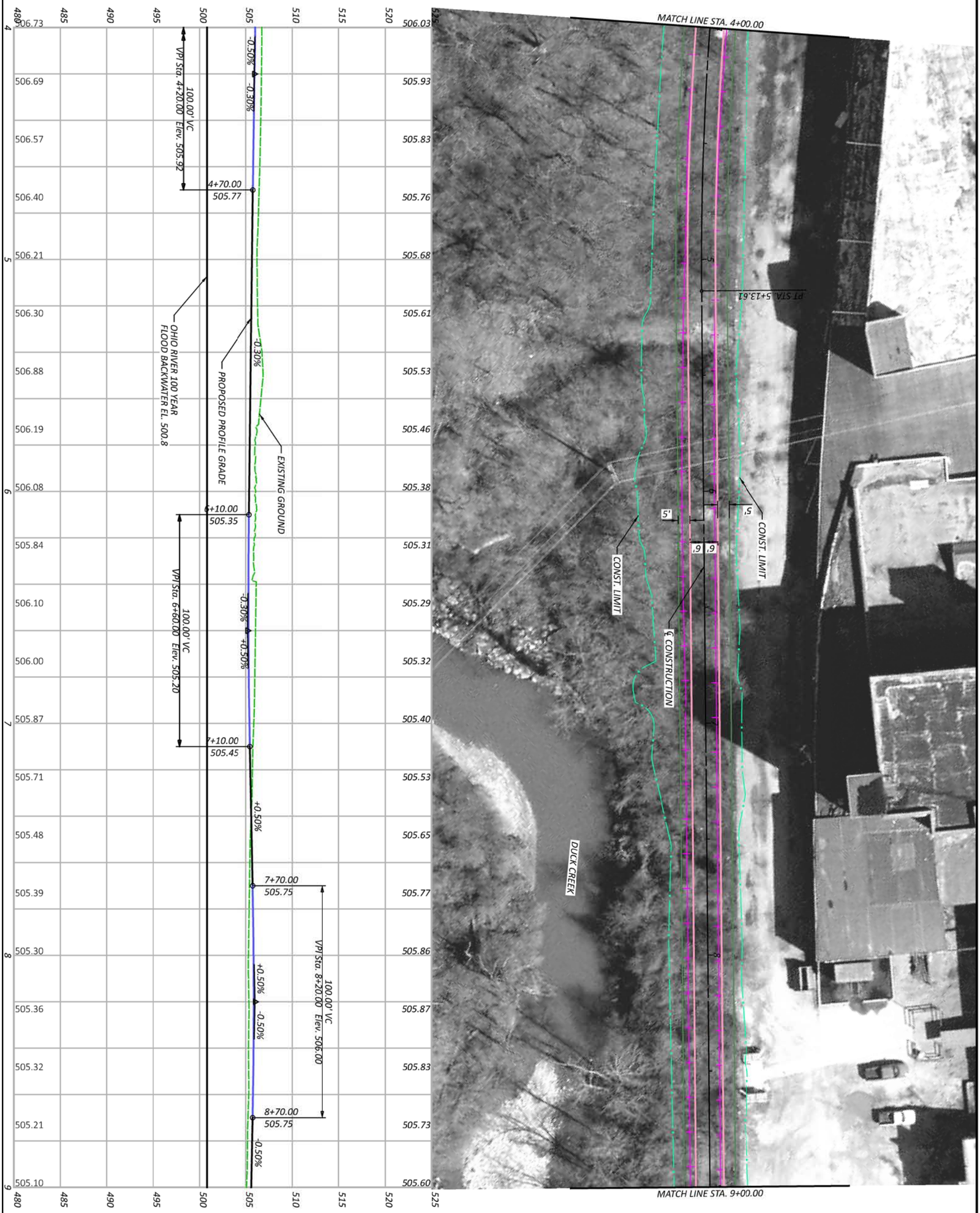

SEGMENT 3 - ALTERNATIVE B
STA. 4+00.00 TO STA. 9+00.00

HORIZONTAL SCALE IN FEET
0 20
10 40

DESIGN AGENCY
Stantec
10200 Alliance Road
Suite 200
Cincinnati, OH 45242
(513) 842-8200

DESIGNER: JGB
REVIEWER: SNS 01-26-24
PROJECT ID: 113603
SHEET: P.2 TOTAL: 13

HAM-WASSON WAY TO OTTO ARMLEDER

MODEL: CLP_3-AB - Plan 9 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 8/1/2024 TIME: 9:59:17 AM USER: gregbrown
V:\1736\active\173620146\engineering\113603\400-Engineering\Roadway\Sheets\113603_GP003-AB.dgn

SEGMENT 3 - ALTERNATIVE B
STA. 9+00.00 TO STA. 14+00.00

HORIZONTAL SCALE IN FEET
0 20
10 40

SHEET	TOTAL
P.3	13

PROJECT ID: 113603
REVIEWER: SNS 01-26-24
DESIGNER: JGB
DESIGN AGENCY

Stantec
10200 Alliance Road
Suite 200
Cincinnati, OH 45242
(513) 842-8200

HAM-WASSON WAY TO OTTO ARMLEDER

MODEL: CLP_3-AB - Plan 10 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 8/1/2024 TIME: 9:59:20 AM USER: gregbower
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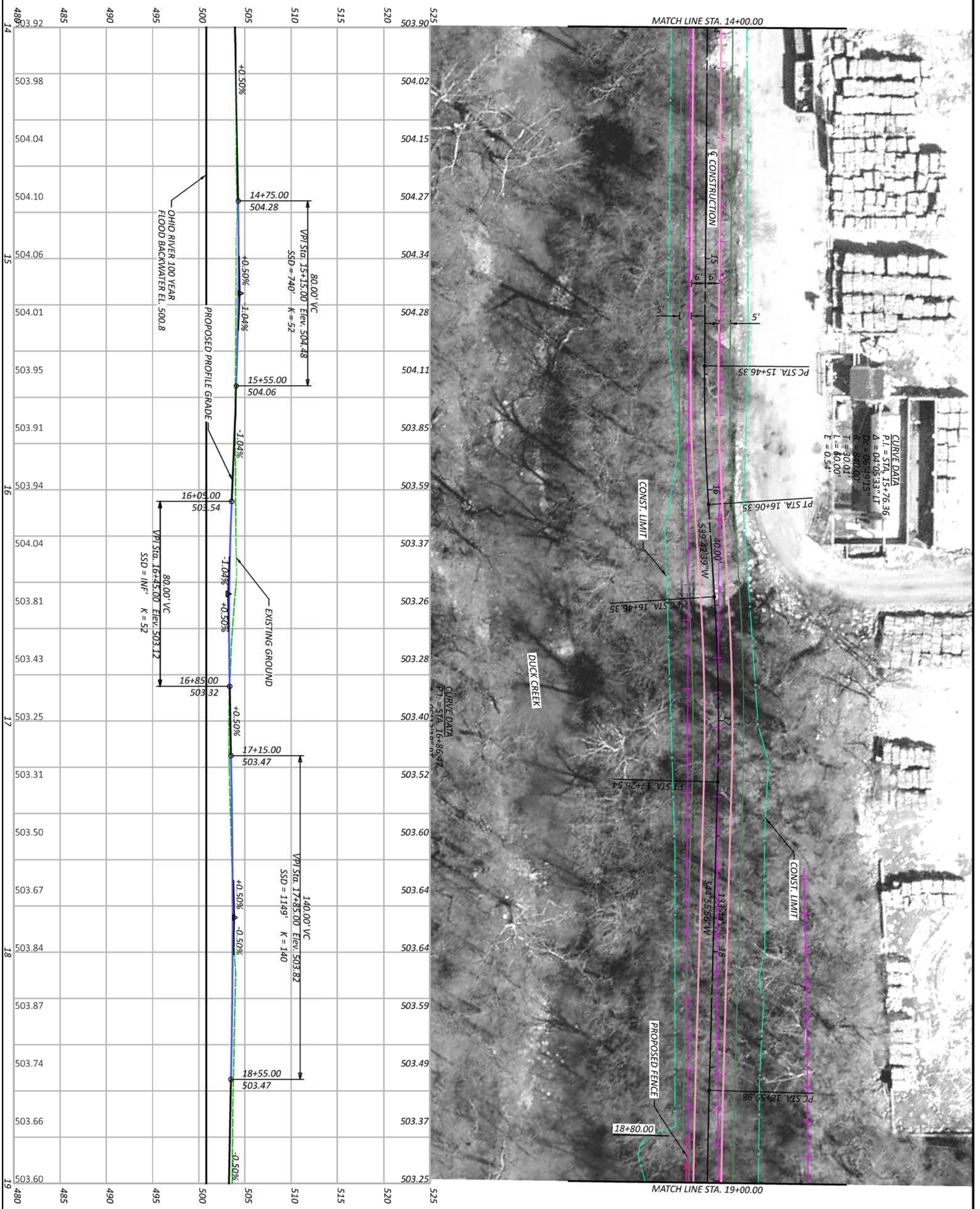

SEGMENT 3 - ALTERNATIVE B
STA. 14+00.00 TO STA. 19+00.00

HORIZONTAL SCALE IN FEET
0 20
10 40

DESIGNER	REVIEWER	PROJECT ID	SHEET	TOTAL
JGB	SNS 01-26-24	113603	P.4	13

Stantec
10200 Alliance Road
Suite 200
Cincinnati, OH 45242
(513) 842-8200

DESIGN AGENCY

HAM-WASSON WAY TO OTTO ARMLEDER

MODEL: CLP_3-AB - Plan 11 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 8/1/2024 TIME: 9:59:24 AM USER: gregbrown
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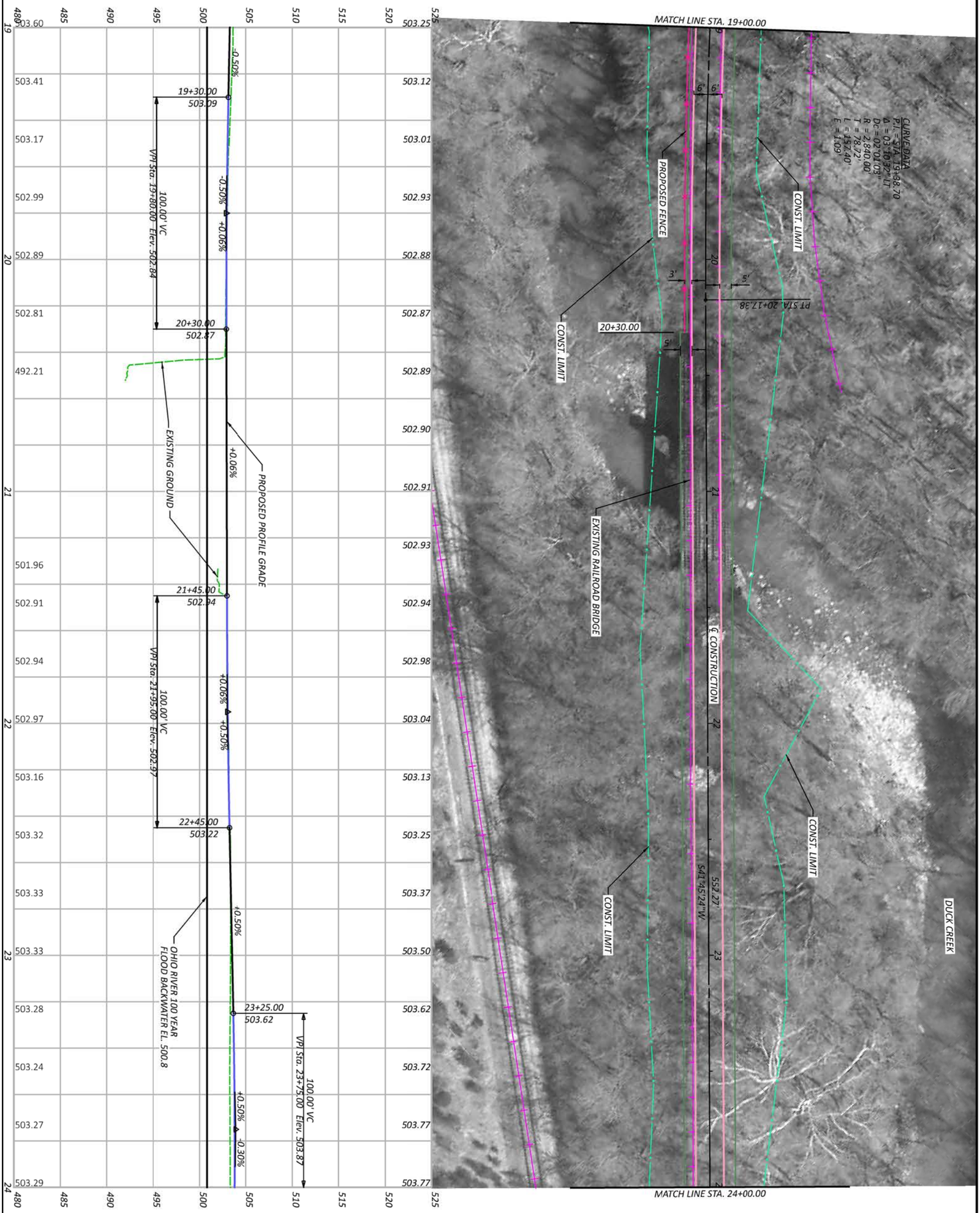

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HAM-WASSON WAY TO OTTO ARMLEDER

MODEL: CLP_3-AB - Plan 12 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 8/1/2024 TIME: 9:59:27 AM USER: gregbrown
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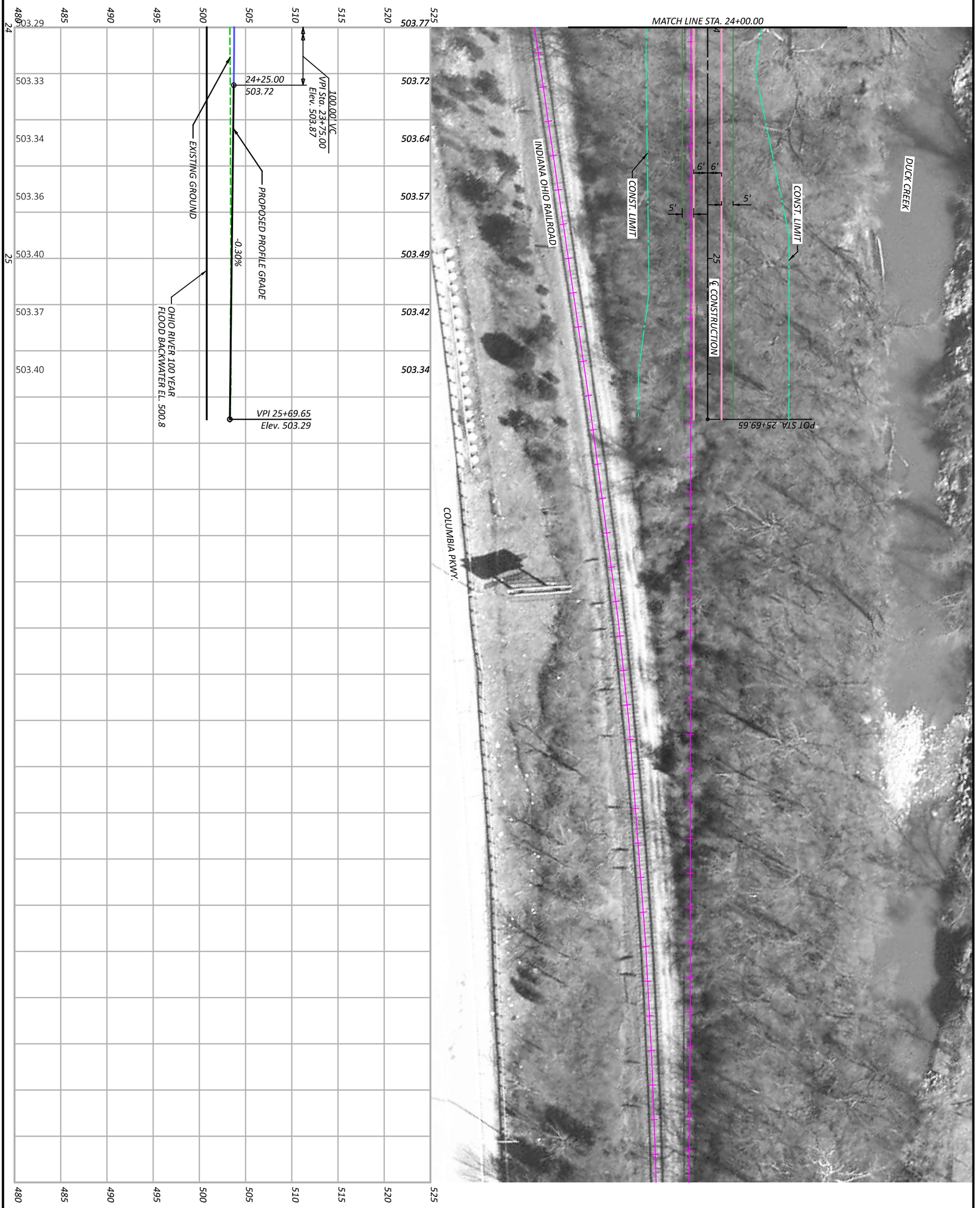
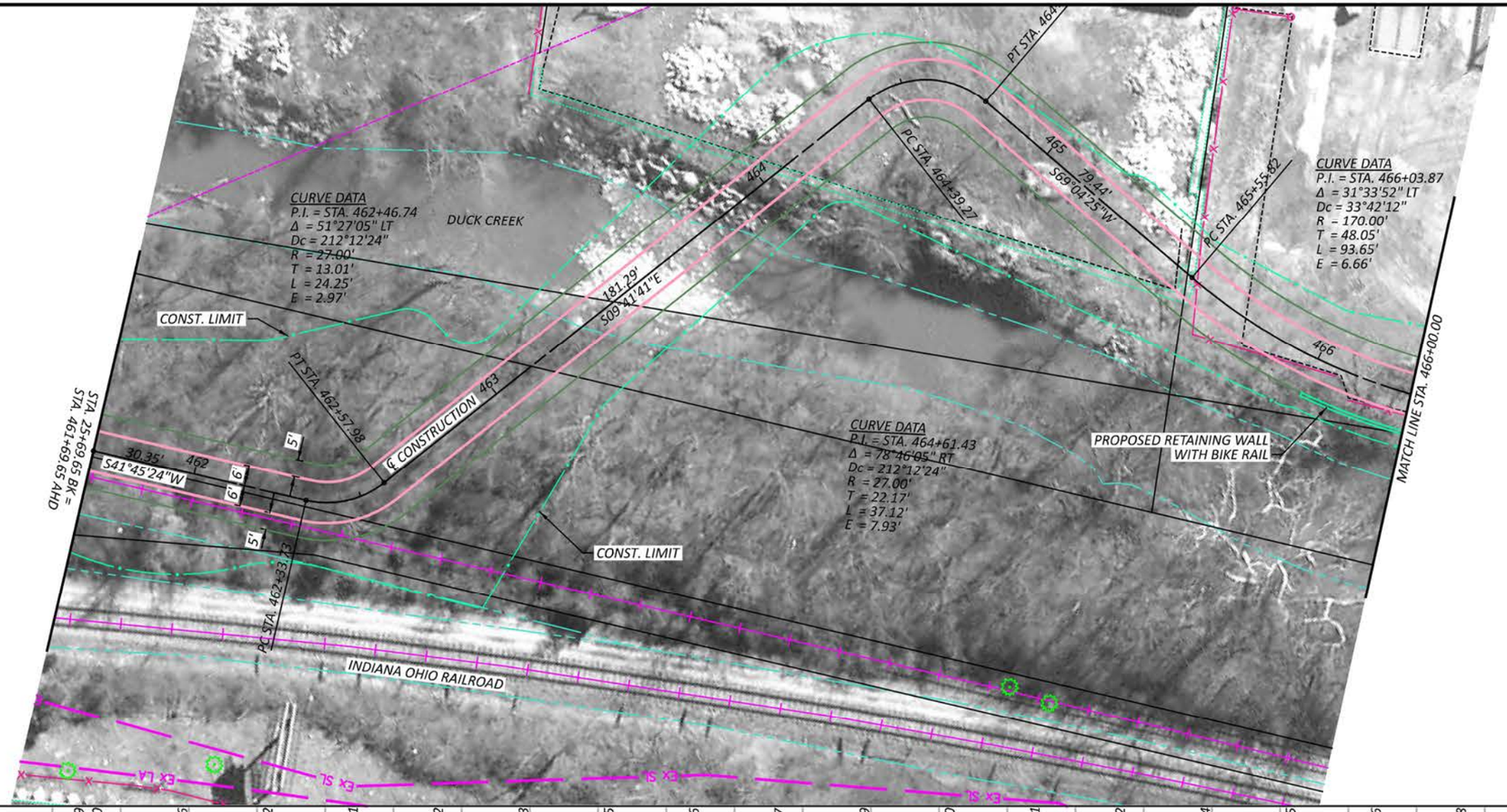


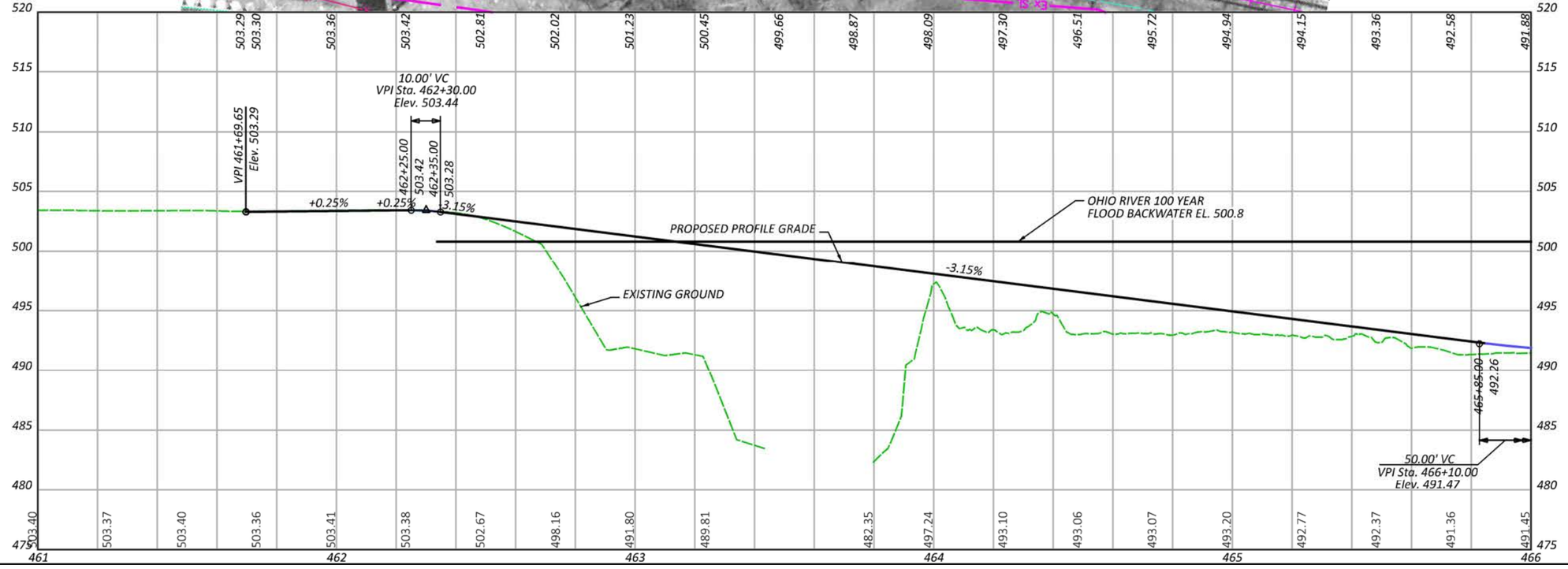
DESIGN AGENCY
Stantec
10200 Alliance Road
Suite 200
Cincinnati, OH 45242
(513) 842-8200

DESIGNER	REVIEWER	PROJECT ID	SHEET	TOTAL
JGB	SNS 01-26-24	113603	P.6	13

SEGMENT 3 - ALTERNATIVE B
STA. 19+00.00 TO STA. 24+00.00

HORIZONTAL SCALE IN FEET
0 20
10 40





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MODEL: CLP_3-8 - Plan 8 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 8/1/2024 TIME: 9:59:47 AM USER: gregbrown
V:\1736\active\173620146\engineering\113603\400-Engineering\Roadway\Sheets\113603_GP003-8.dgn

HORIZONTAL SCALE IN FEET
0 10 20 40

SEGMENT 3 - ALTERNATIVE B
STA. 461+69.65 TO STA. 466+00.00

DESIGN AGENCY
Stantec
10200 Alliance Road, Suite 300
Cincinnati, OH 45242
(513) 842-8200

DESIGNER JGB
REVIEWER SNS 01-26-24
PROJECT ID 113603
SHEET P.7 TOTAL 13

HAM-WASSON WAY TO OTTO ARMLEDER

MODEL: CLP_3-B - Plan 9 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 8/1/2024 TIME: 9:59:50 AM USER: gregbrown
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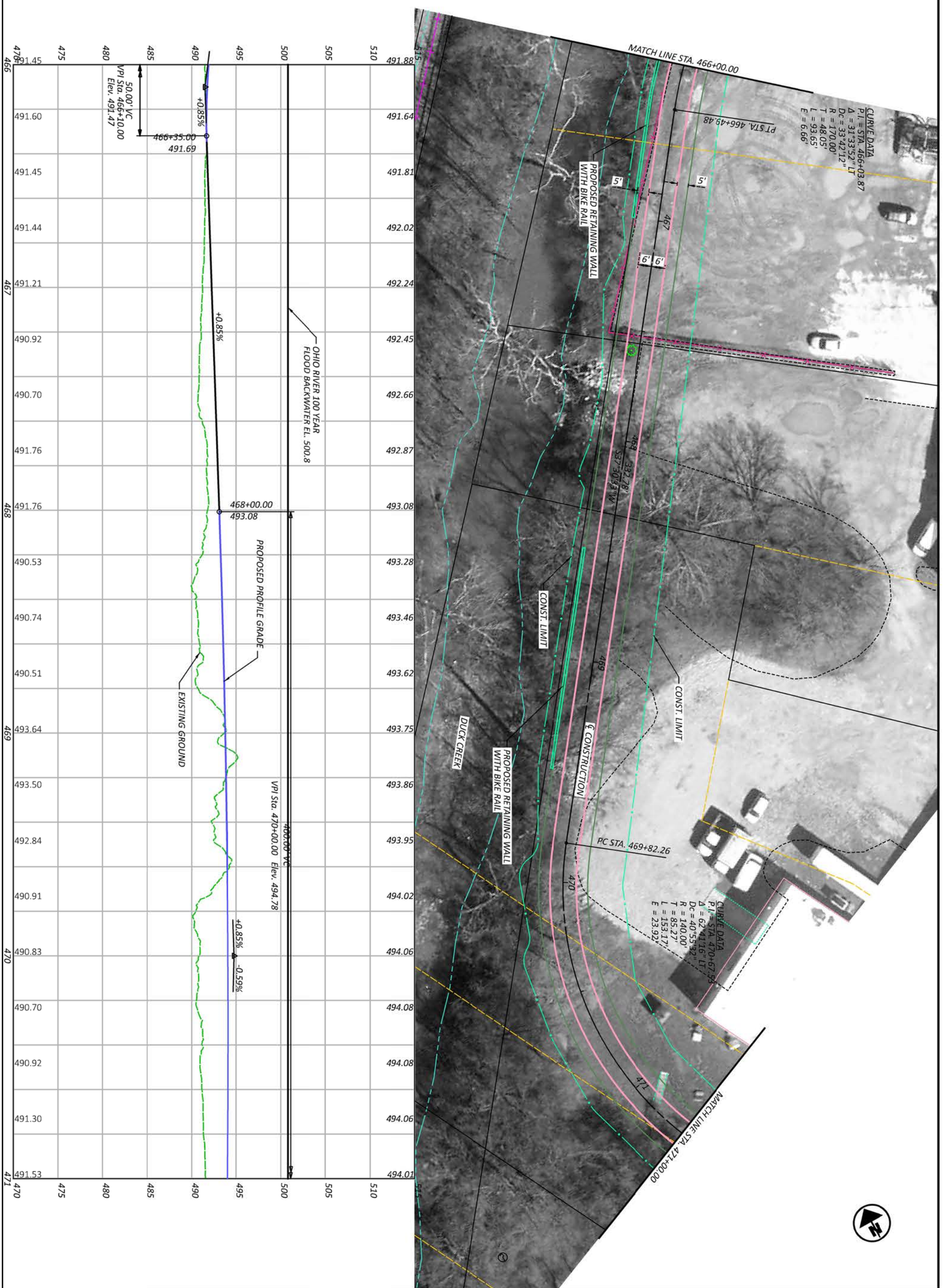

SEGMENT 3 - ALTERNATIVE B
STA. 466+00.00 TO STA. 471+00.00

HORIZONTAL SCALE IN FEET
0 20
10 40

SHEET	TOTAL
P.8	13

PROJECT ID: 113603
REVIEWER: SNS 01-26-24
DESIGNER: JGB
DESIGN AGENCY
Stantec
10200 Alliance Road, Suite 300
Cincinnati, OH 45242
(513) 842-3400

HAM-WASSON WAY TO OTTO ARMLEDER

MODEL: CLP_3-B - Plan 10 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 8/1/2024 TIME: 9:59:54 AM USER: gregbrown
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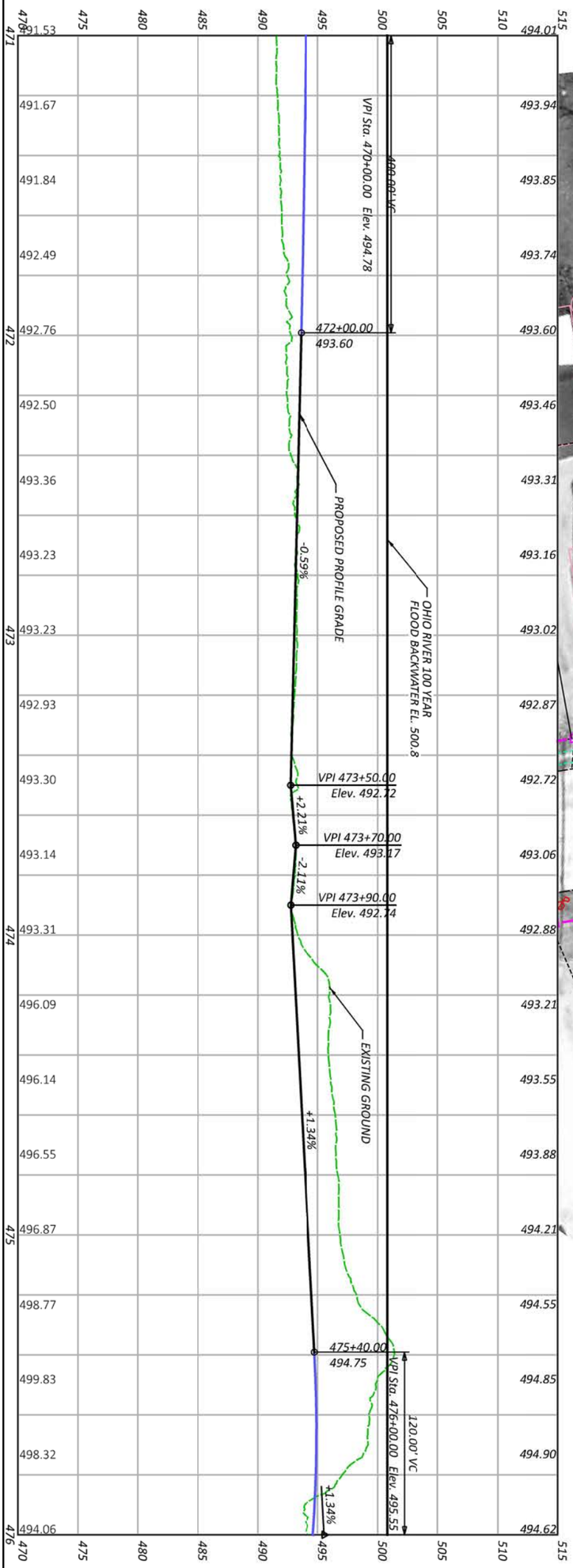

SEGMENT 3 - ALTERNATIVE B
STA. 471+00.00 TO STA. 476+00.00

HORIZONTAL SCALE IN FEET
0 20
10 40

SHEET	TOTAL
P.9	13

PROJECT ID: 113603
REVIEWER: SNS 01-26-24
DESIGNER: JGB
DESIGN AGENCY: Stantec
10200 Alliance Road, Suite 300, Cincinnati, OH 45242 (513) 842-3400

HAM-WASSON WAY TO OTTO ARMLEDER

MODEL: CLP_3-B - Plan 11 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 8/1/2024 TIME: 9:59:57 AM USER: gregbrown
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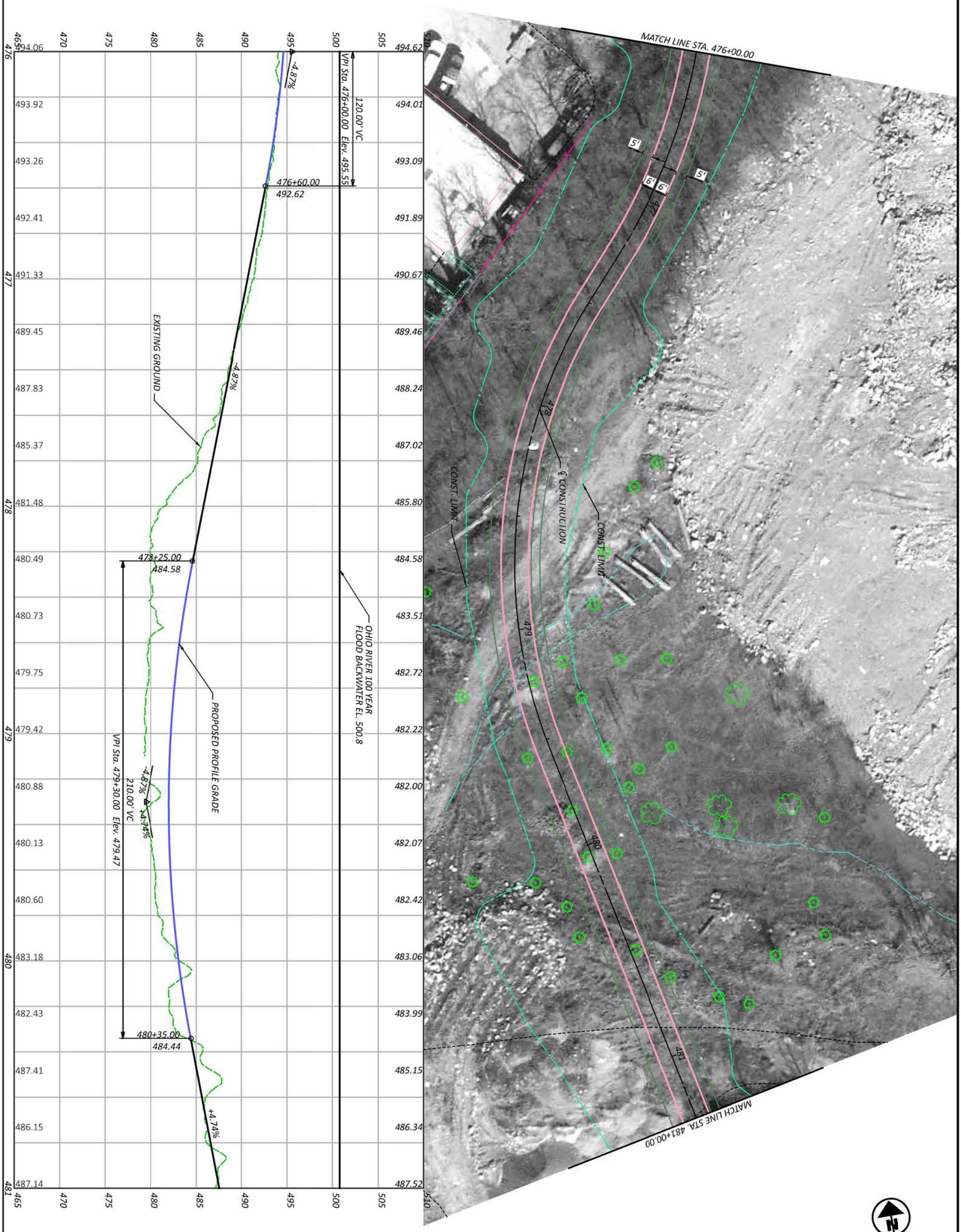

SEGMENT 3 - ALTERNATIVE B
STA. 476+00.00 TO STA. 481+00.00

HORIZONTAL SCALE IN FEET
0 20
10 40

SHEET	TOTAL
P.10	13

PROJECT ID: 113603
REVIEWER: SNS 01-26-24
DESIGNER: JGB
DESIGN AGENCY: Stantec
10200 Alliance Road, Suite 300, Cincinnati, OH 45242 (513) 842-3400

HAM-WASSON WAY TO OTTO ARMLEDER

MODEL: CLP_3-B - Plan 12 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 8/1/2024 TIME: 10:00:01 AM USER: gregbrown
V:\1736\active\173620146\engineering\113603\400-Engineering\Roadway\Sheets\113603_GP003-B.dgn

CONST. LIMIT
PROPOSED FENCE
MATCH LINE STA. 481+00.00
MATCH LINE STA. 486+00.00
℄ CONSTRUCTION
482
483
484
485
486
5'
6'
6'
5'
6'
6'
CONST. LIMIT
PROPOSED FENCE

OHIO RIVER 100 YEAR
FLOOD BACKWATER EL. 500.8
180.00' VC
VPI Sta. 482+15.00 Elev. 492.97
481+35.00
489.18
+4.74%
+4.74%
-0.34%
482+95.00
492.70
PROPOSED PROFILE GRADE
-0.34%
EXISTING GROUND
485+10.00
491.96
-0.34%
+1.64%
120.00' VC
VPI Sta. 485+70.00 Elev. 491.75

HORIZONTAL SCALE IN FEET
0 10 20 40

SEGMENT 3 - ALTERNATIVE B
STA. 481+00.00 TO STA. STA. 486+00.00

DESIGN AGENCY
Stantec
10200 Alliance Road, Suite 300
Cincinnati, OH 45242
(513) 842-8200

DESIGNER	JGB
REVIEWER	SNS 01-26-24
PROJECT ID	113603
SHEET	P.11
TOTAL	13

HAM-WASSON WAY TO OTTO ARMLEDER

MODEL: CLP_3-B - Plan 13 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 8/1/2024 TIME: 10:00:04 AM USER: gregbrown
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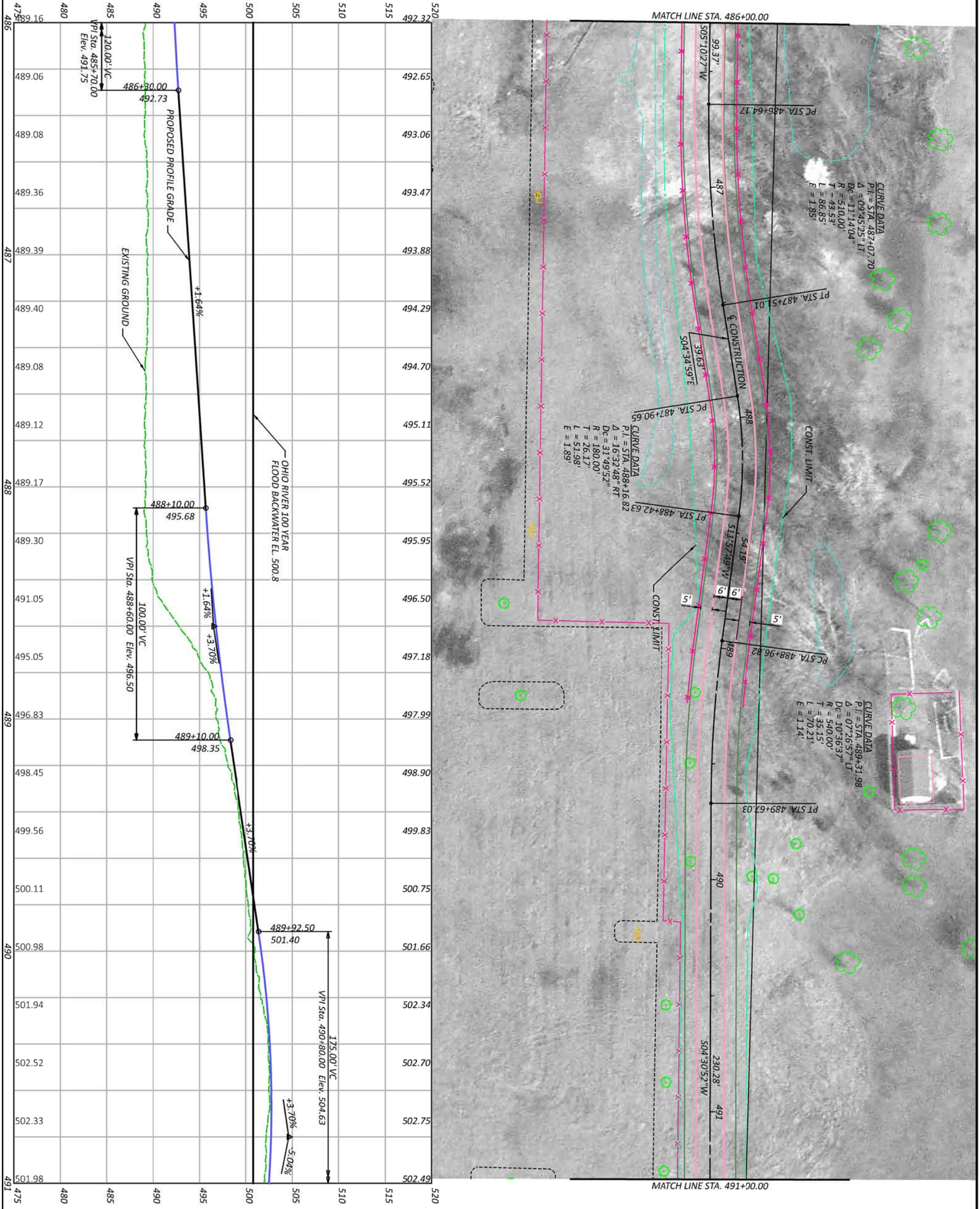

SEGMENT 3 - ALTERNATIVE B
STA. 486+00.00 TO STA. 491+00.00

HORIZONTAL SCALE IN FEET
0 20
10 40

SHEET	TOTAL
P.12	13

PROJECT ID: 113603
REVIEWER: SNS 01-26-24
DESIGNER: JGB
DESIGN AGENCY: Stantec
11687 Aerospace Road, Suite 300, Cincinnati, OH 45242 (513) 842-3030

HAM-WASSON WAY TO OTTO ARMLEDER

MODEL: CLP_3-B - Plan 14 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 8/1/2024 TIME: 10:00:07 AM USER: gregbrown
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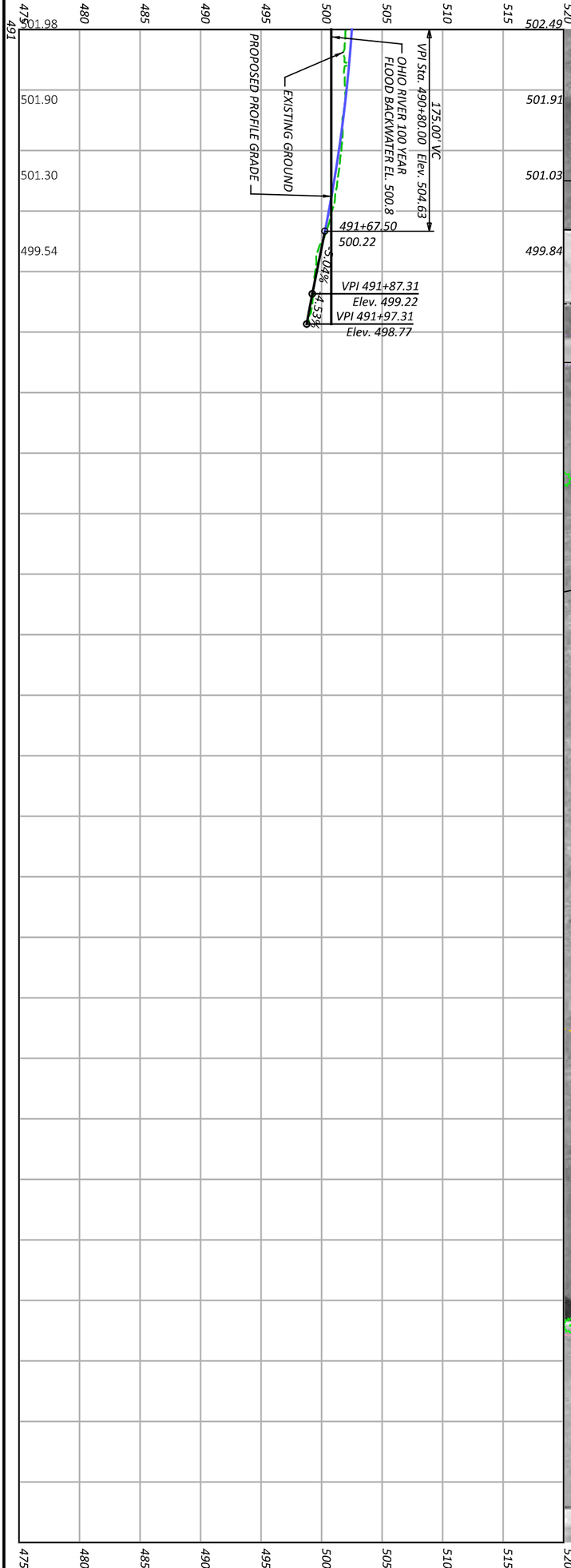

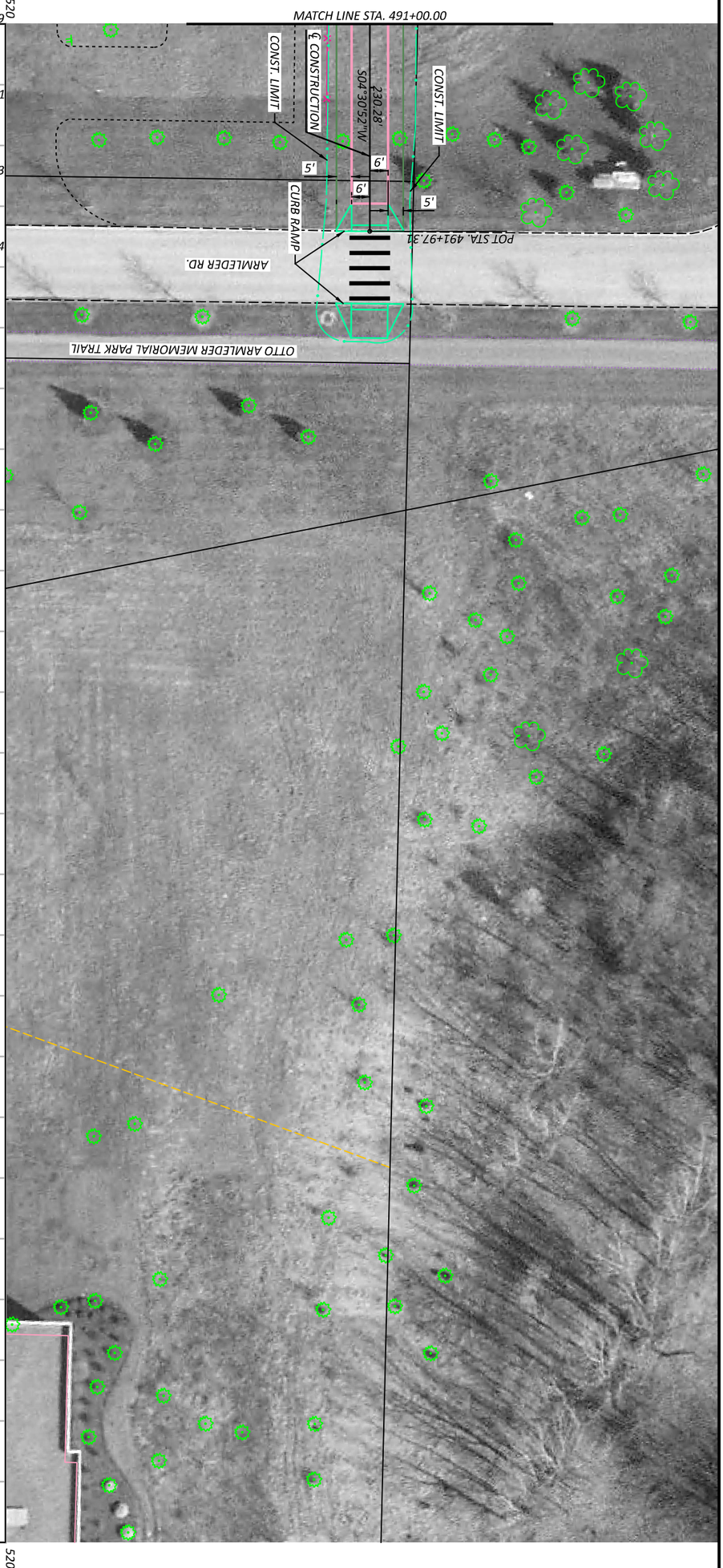

SEGMENT 3 - ALTERNATIVE B
STA. 491+00.00 TO STA. 491+68.23

HORIZONTAL SCALE IN FEET
0 20
10 40

SHEET	TOTAL
P.13	13

PROJECT ID: 113603
REVIEWER: SNS 01-26-24
DESIGNER: JGB
DESIGN AGENCY: Stantec
Stantec Alliance Road, Suite 300, Cincinnati, OH 45242, (513) 842-3400

MODEL: C&P_3-AB - Plan 7 [Sheet] PAPERSIZE: 17x11 (in.) DATE: 8/1/2024 TIME: 10:20:12 AM USER: gregbrown
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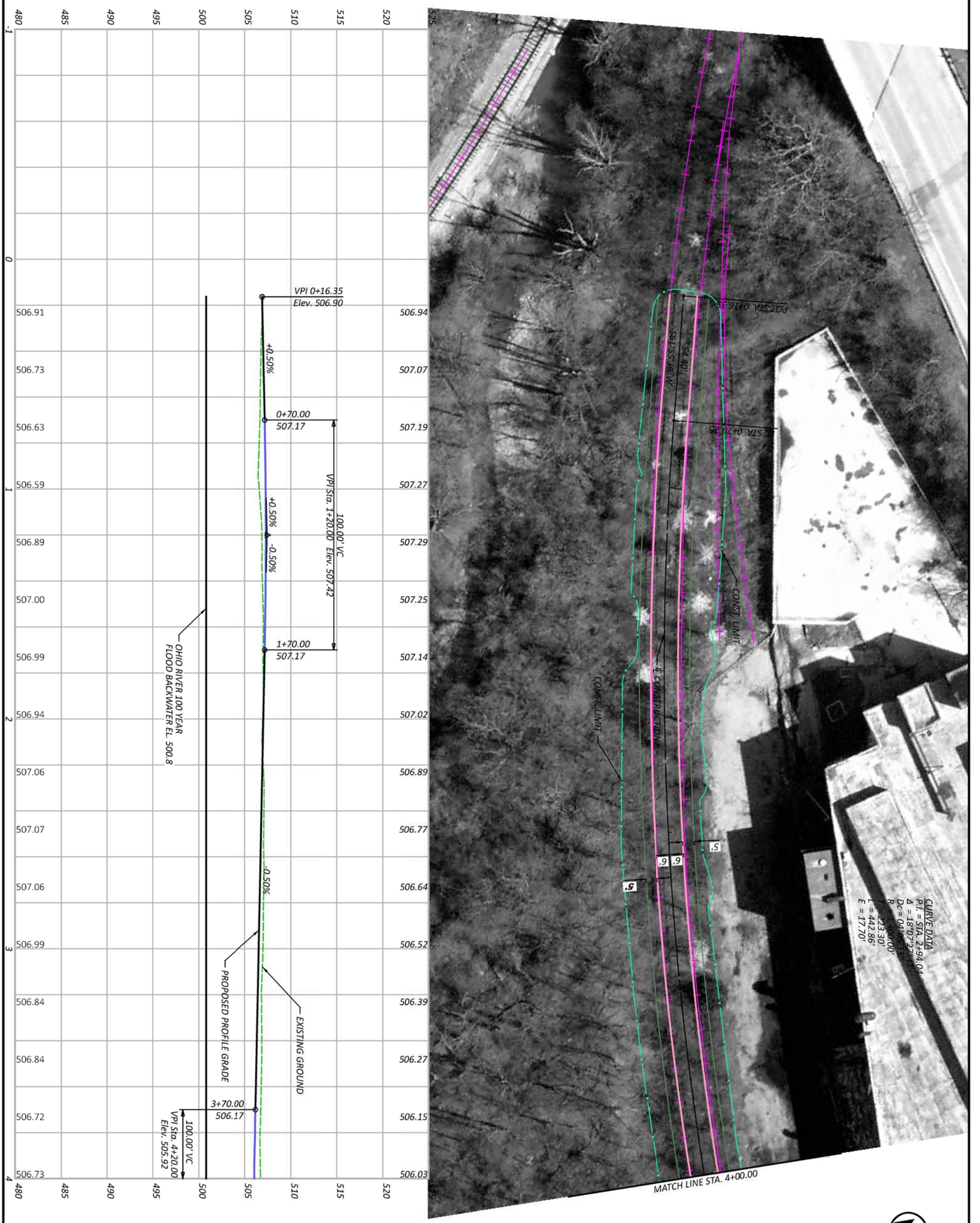

SEGMENT 3 - ALTERNATIVE C
STA. 00+06.35 TO STA. 4+00.00

HORIZONTAL SCALE IN FEET
0 20
10 40

SHEET	TOTAL
P.1	17

PROJECT ID: 113603
REVIEWER: SNS 01-26-24
DESIGNER: JGB

DESIGN AGENCY
Stantec
10200 Alliance Road, Suite 300
Cincinnati, OH 45242
(513) 842-3400

MODEL: C8_3-AB - Plan 8 [Sheet] PAPERSIZE: 17x11 (in.) DATE: 8/1/2024 TIME: 10:20:21 AM USER: gregbrown
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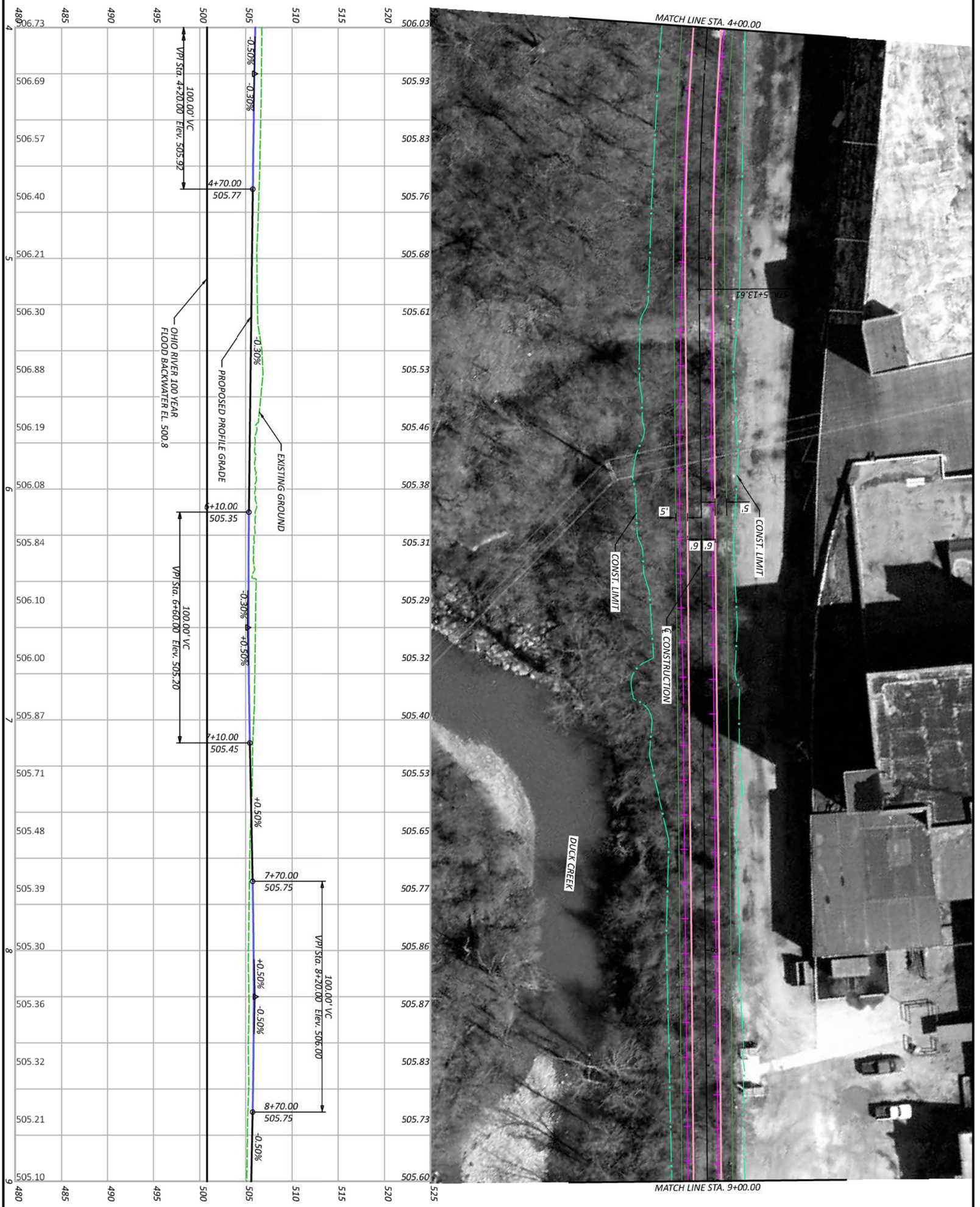

SEGMENT 3 - ALTERNATIVE C
STA. 4+00.00 TO STA. 9+00.00

HORIZONTAL SCALE IN FEET
0 20
10 40

SHEET	TOTAL
P.2	17

PROJECT ID: 113603
REVIEWER: SNS 01-26-24
DESIGNER: JGB
DESIGN AGENCY

Stantec
10200 Alliance Road
Suite 200
Cincinnati, OH 45242
(513) 842-8200

HAM-WASSON WAY TO OTTO ARMLEDER

MODEL: CLP_3-AB - Plan 9 [Sheet] PAPERSIZE: 17x11 (in.) DATE: 8/1/2024 TIME: 10:20:24 AM USER: gregbrown
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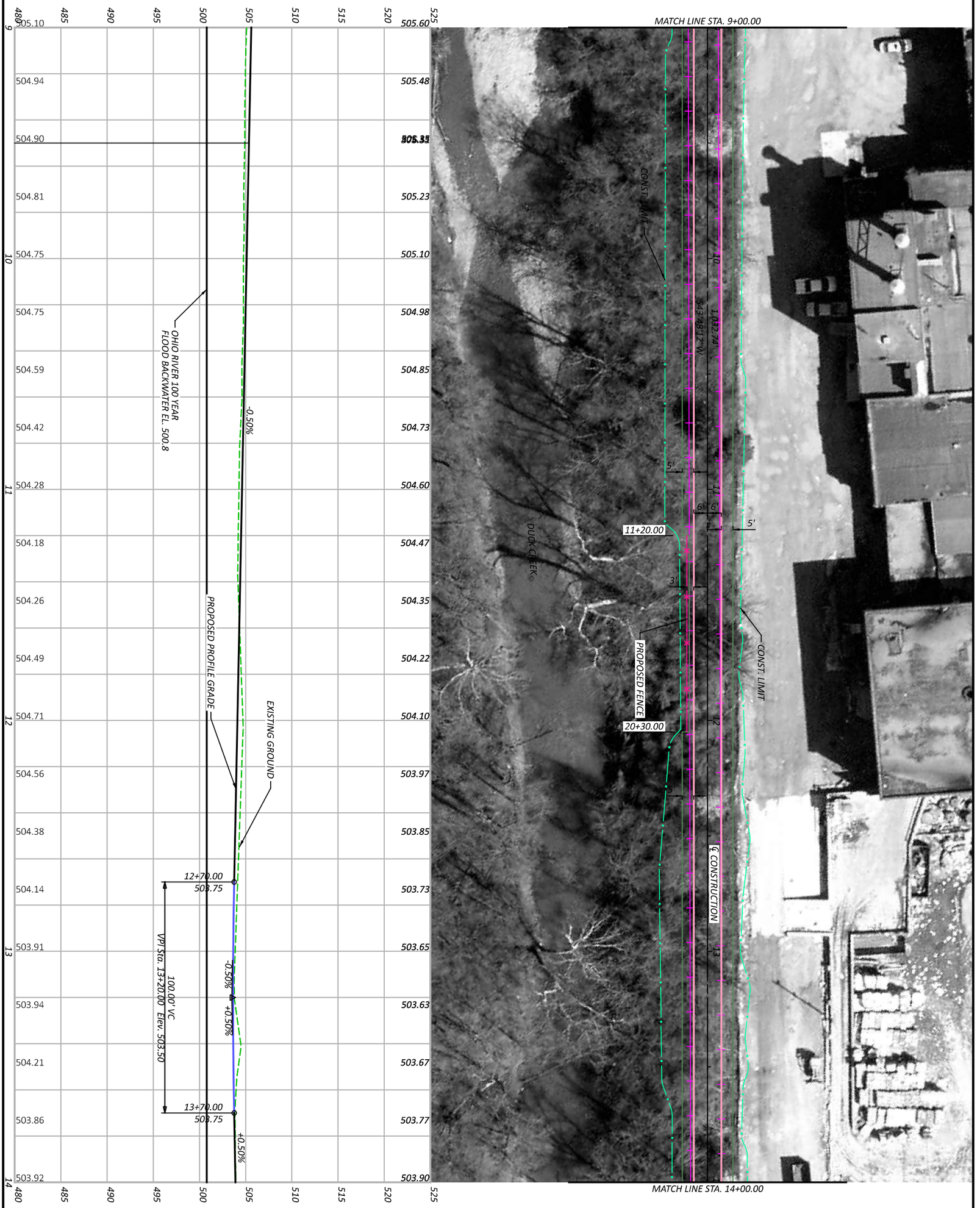

SEGMENT 3 - ALTERNATIVE C
STA. 9+00.00 TO STA. 14+00.00

HORIZONTAL SCALE IN FEET
0 20
10 40

SHEET	TOTAL
P.3	17

PROJECT ID: 113603
REVIEWER: SNS 01-26-24
DESIGNER: JGB
DESIGN AGENCY

Stantec
10200 Alliance Road
Suite 200
Cincinnati, OH 45242
(513) 842-8200

HAM-WASSON WAY TO OTTO ARMLEDER

MODEL: C&P_3-AB - Plan 10 [Sheet] PAPERSIZE: 17x11 (in.) DATE: 8/1/2024 TIME: 10:20:26 AM USER: gregbrown
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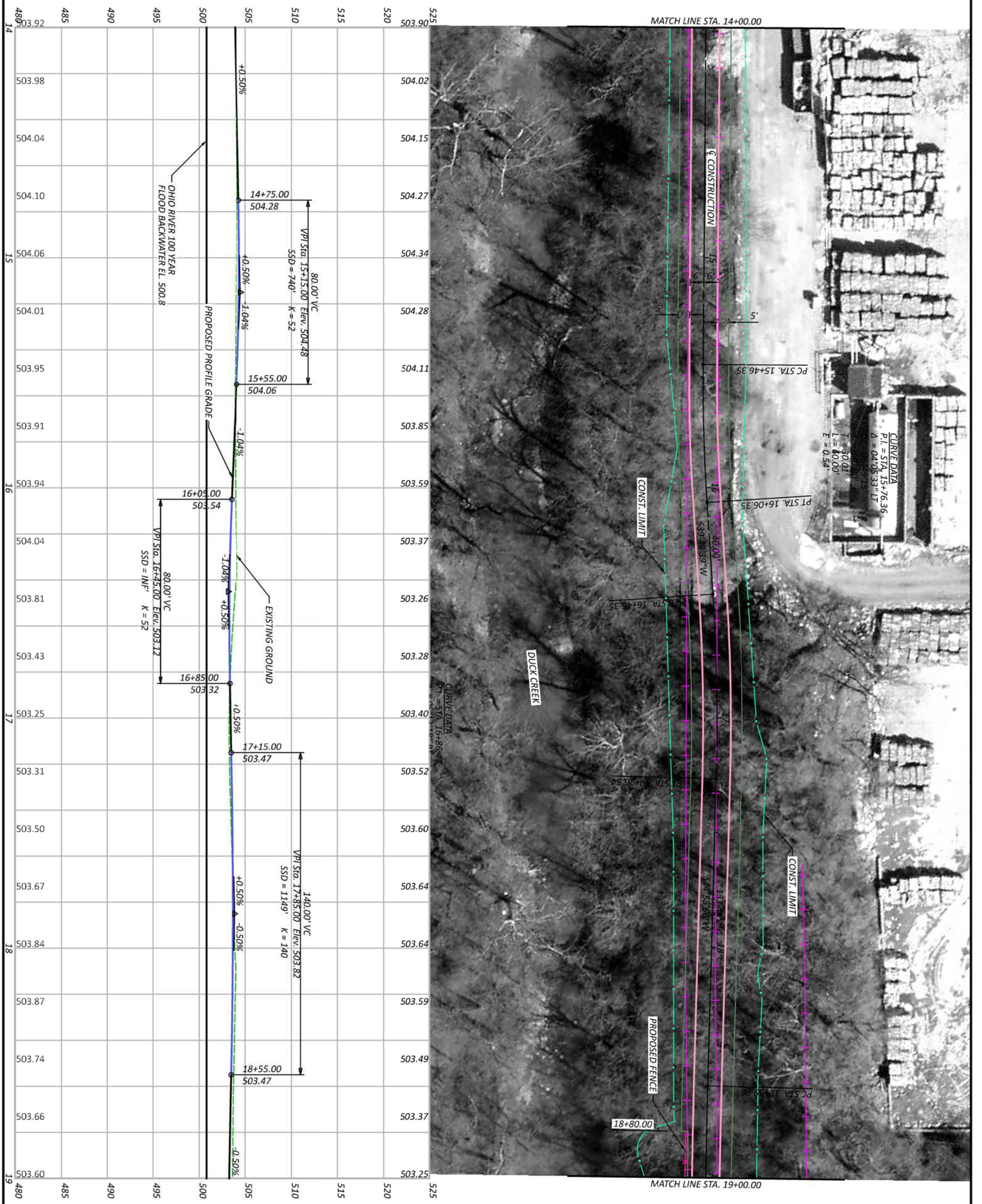
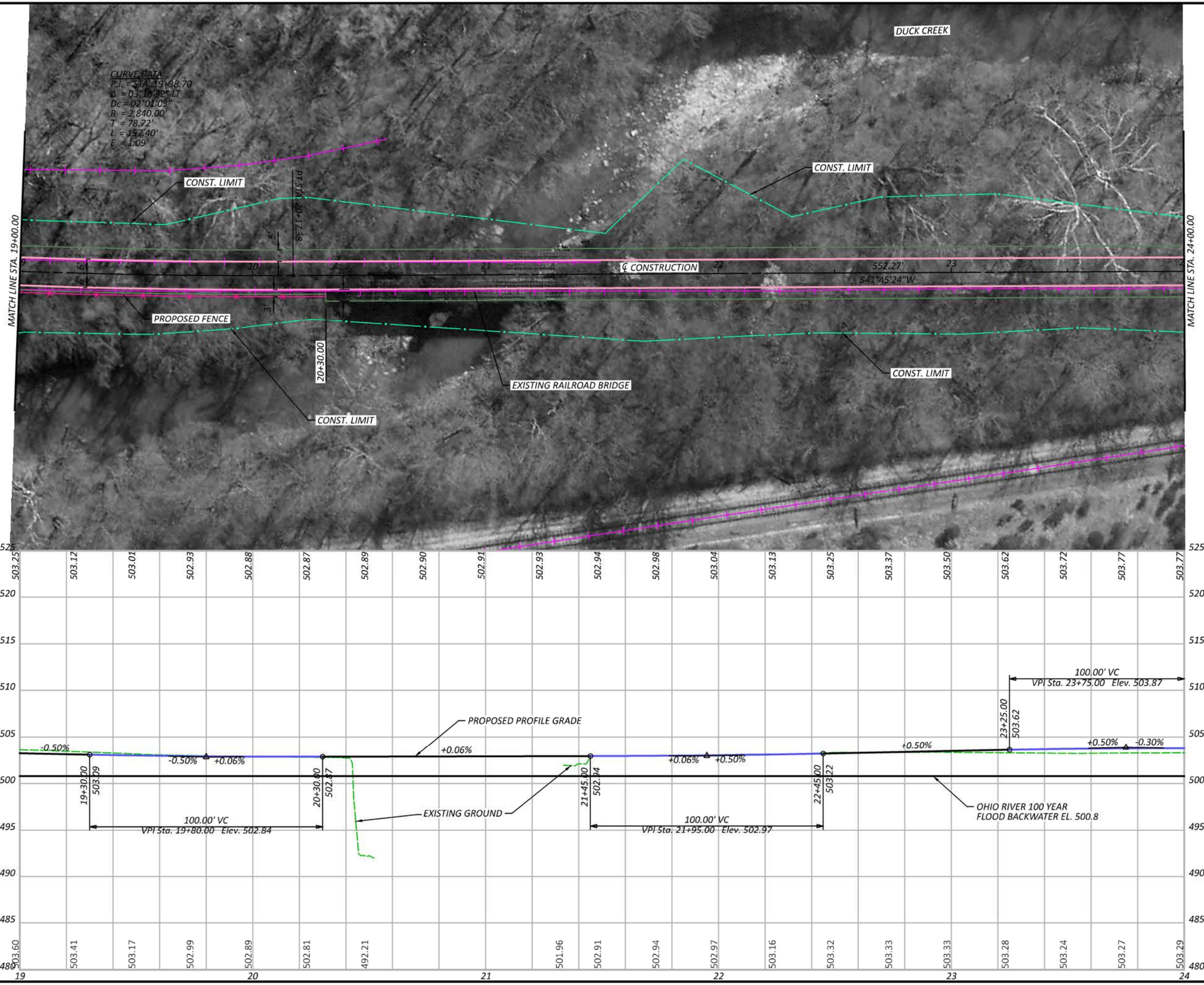


SEGMENT 3 - ALTERNATIVE C
STA. 14+00.00 TO STA. 19+00.00

HORIZONTAL SCALE IN FEET
0 20
10 40

SHEET	TOTAL
P.4	17

PROJECT ID: 113603
REVIEWER: SNS 01-26-24
DESIGNER: JGB
DESIGN AGENCY
Stantec
10200 Alliance Road, Suite 200
Cincinnati, OH 45242
(513) 842-8200



HORIZONTAL SCALE IN FEET
0 10 20 40

SEGMENT 3 - ALTERNATIVE C
STA. 19+00.00 TO STA. 24+00.00

HAM-WASSON WAY TO OTTO ARMLEDER

MODEL: DGP_3-AB - Plan 11 [Sheet] PAPERSIZE: 17x11 (in.) DATE: 8/1/2024 TIME: 10:20:29 AM USER: gregbrown
V:\1736\active\113603\engineering\113603\400-Engineering\Roadway\Sheets\113603_GP003-AB-C.dgn

DESIGN AGENCY
Stantec
10200 Alliance Road, Suite 300
Cincinnati, OH 45242
(513) 842-8200

DESIGNER JGB
REVIEWER SNS 01-26-24
PROJECT ID 113603
SHEET P.5 TOTAL 17

HAM-WASSON WAY TO OTTO ARMLEDER

MODEL: CLP_3-AB - Plan 12 [Sheet] PAPERSIZE: 17x11 (in.) DATE: 8/1/2024 TIME: 10:20:32 AM USER: gregbrown
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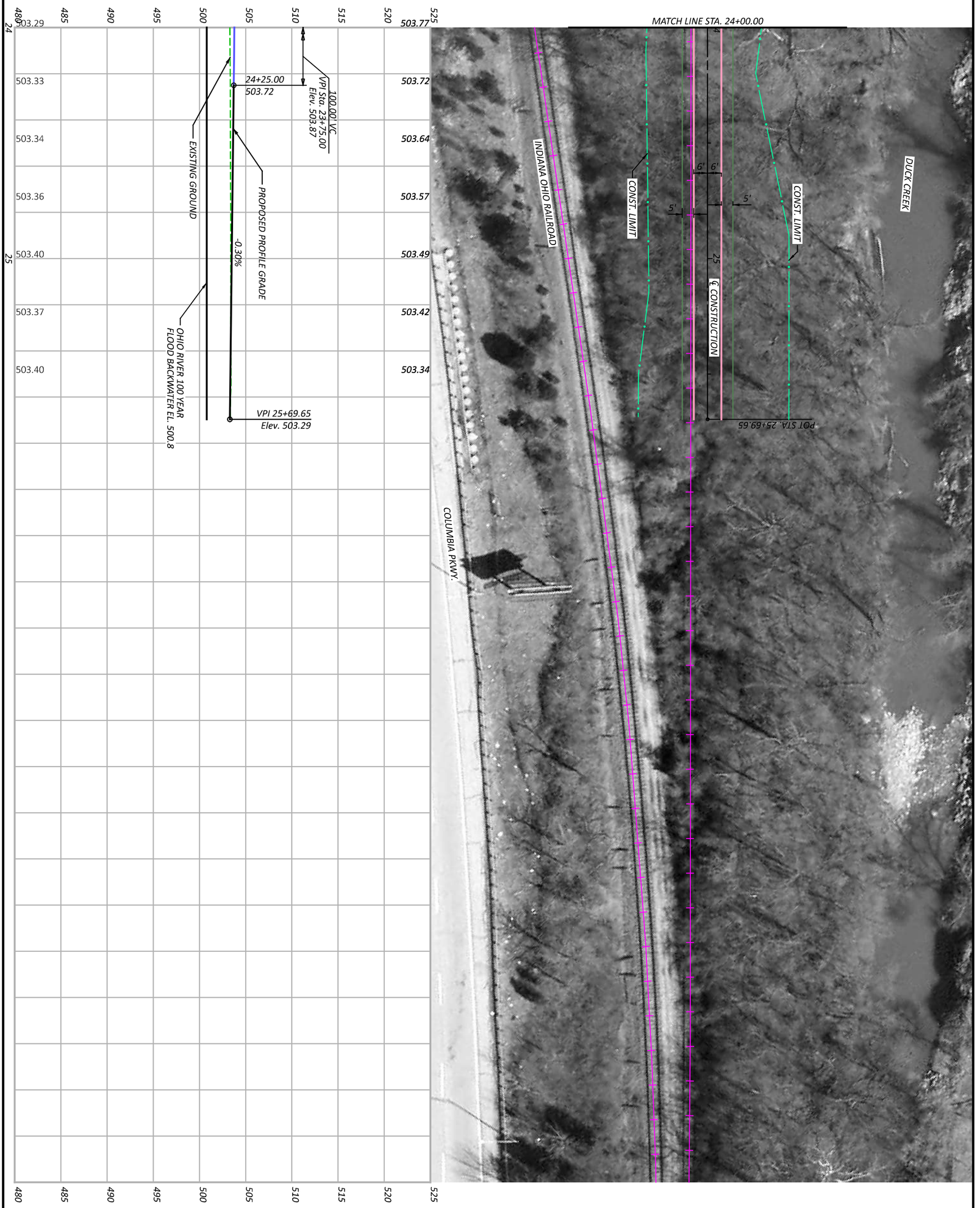
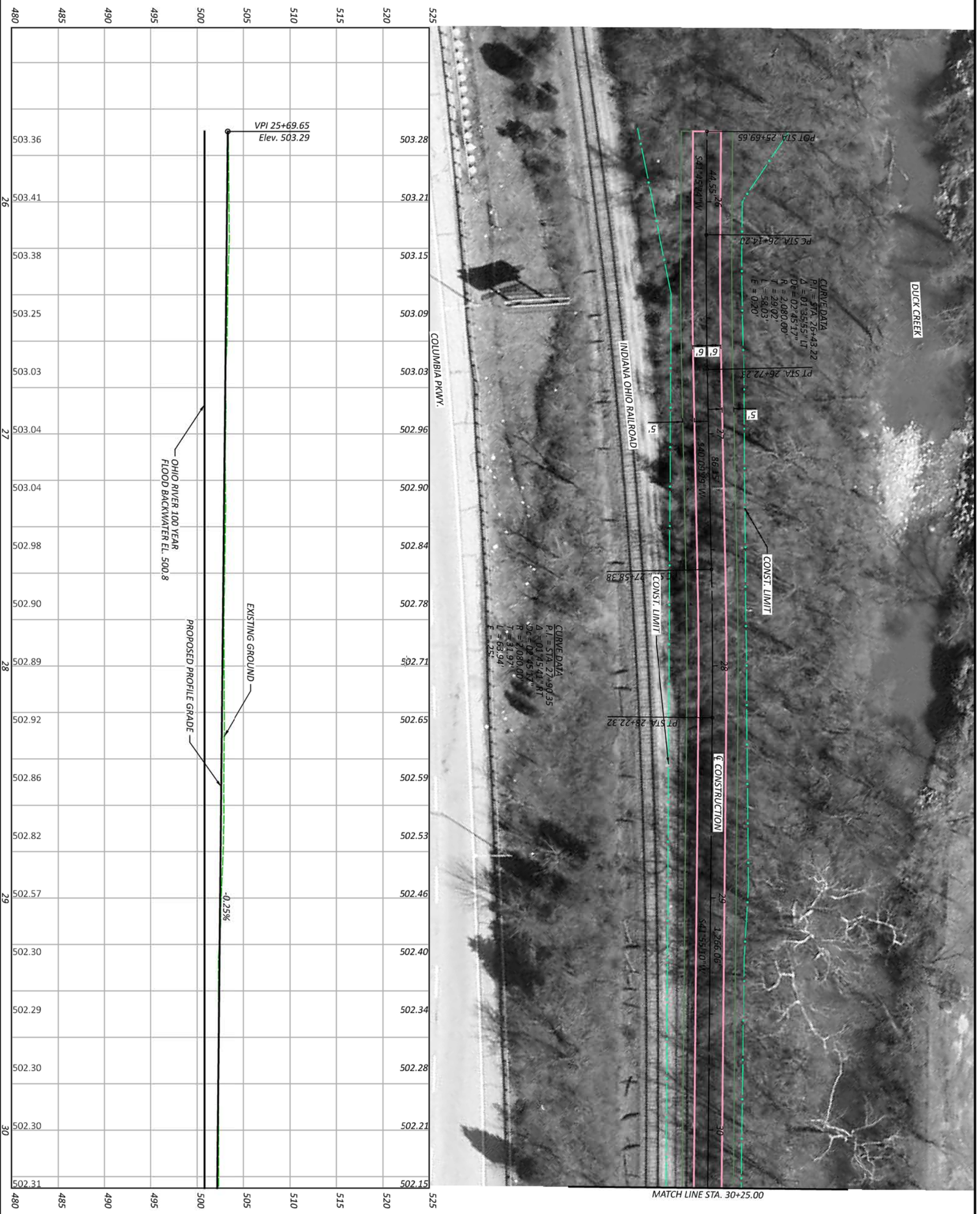


SHEET P.6	TOTAL 17	PROJECT ID 113603	REVIEWER SNS 01-26-24	DESIGNER JGB	DESIGN AGENCY Stantec 10200 Alliance Road Suite 200 Cincinnati, OH 45242 (513) 842-8200

SEGMENT 3 - ALTERNATIVE C
STA. 19+00.00 TO STA. 25+69.65

HORIZONTAL SCALE IN FEET
0 20
10 40



SEGMENT 3 - ALTERNATIVE C
STA. 25+69.65 TO STA. 30+25.00

HORIZONTAL SCALE IN FEET
0 20
10 40

SHEET	TOTAL
P.7	17

PROJECT ID: 113603
REVIEWER: SNS 02-02-24
DESIGNER: JGB

DESIGN AGENCY
Stantec
10200 Alliance Road, Suite 300
Cincinnati, OH 45242
(513) 842-3400

HAM-WASSON WAY TO OTTO ARMLEDER

MODEL: CLP_3-C - Plan 2 [Sheet] PAPERSIZE: 17x11 (in.) DATE: 8/1/2024 TIME: 10:20:54 AM USER: gregbrown
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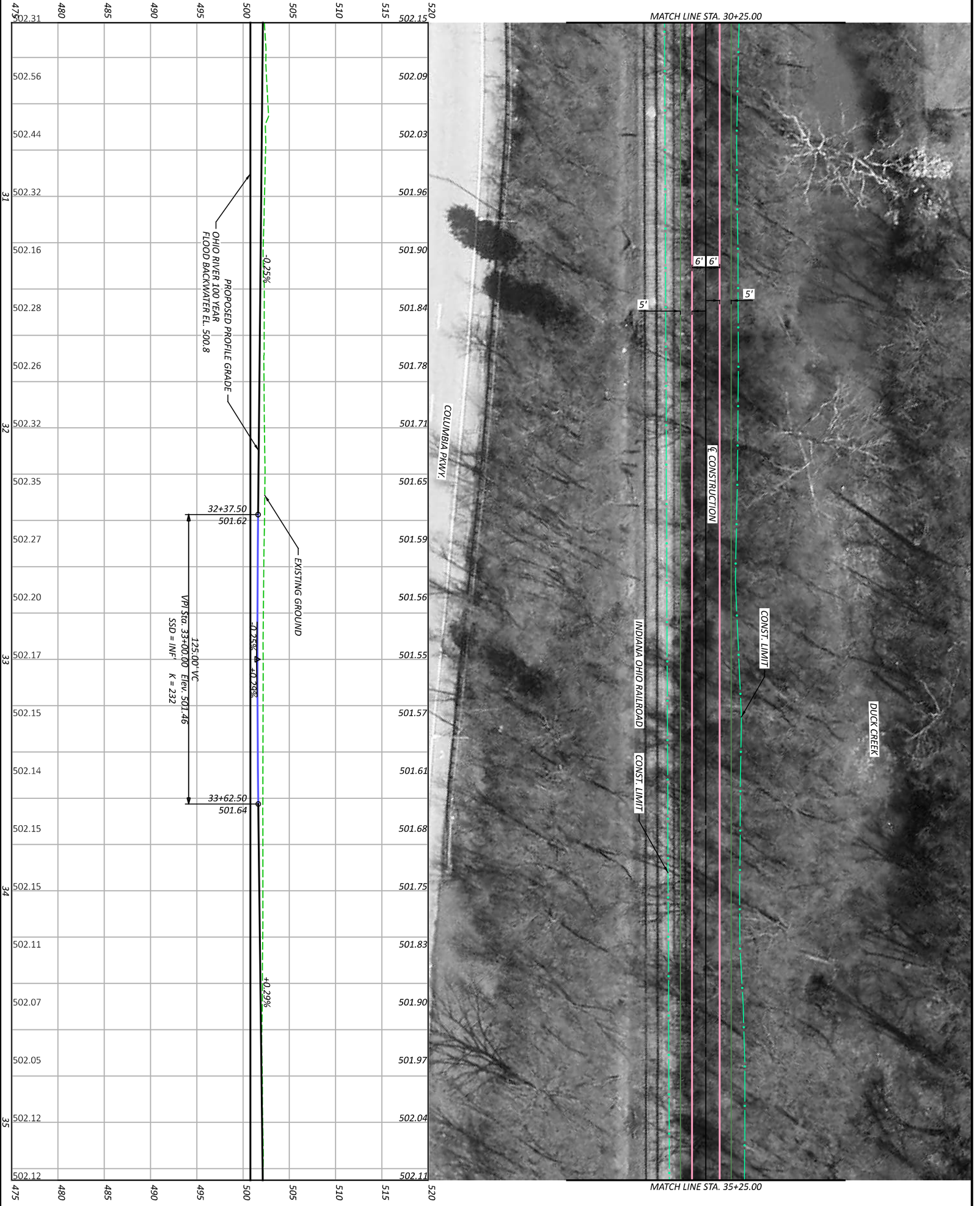

Stantec
Stantec Tower
Suite 300
Cincinnati, OH 45242
(513) 842-3400

DESIGN AGENCY

DESIGNER JGB

REVIEWER SNS 02-02-24

PROJECT ID 113603

SHEET P.8 TOTAL 17

SEGMENT 3 - ALTERNATIVE C
STA. 30+25.00 TO STA. 35+25.00

HORIZONTAL SCALE IN FEET
0 20
10 40

HAM-WASSON WAY TO OTTO ARMLEDER

MODEL: CLP_3-C - Plan 3 [Sheet] PAPERSIZE: 17x11 (in.) DATE: 8/1/2024 TIME: 10:20:57 AM USER: gregbrown
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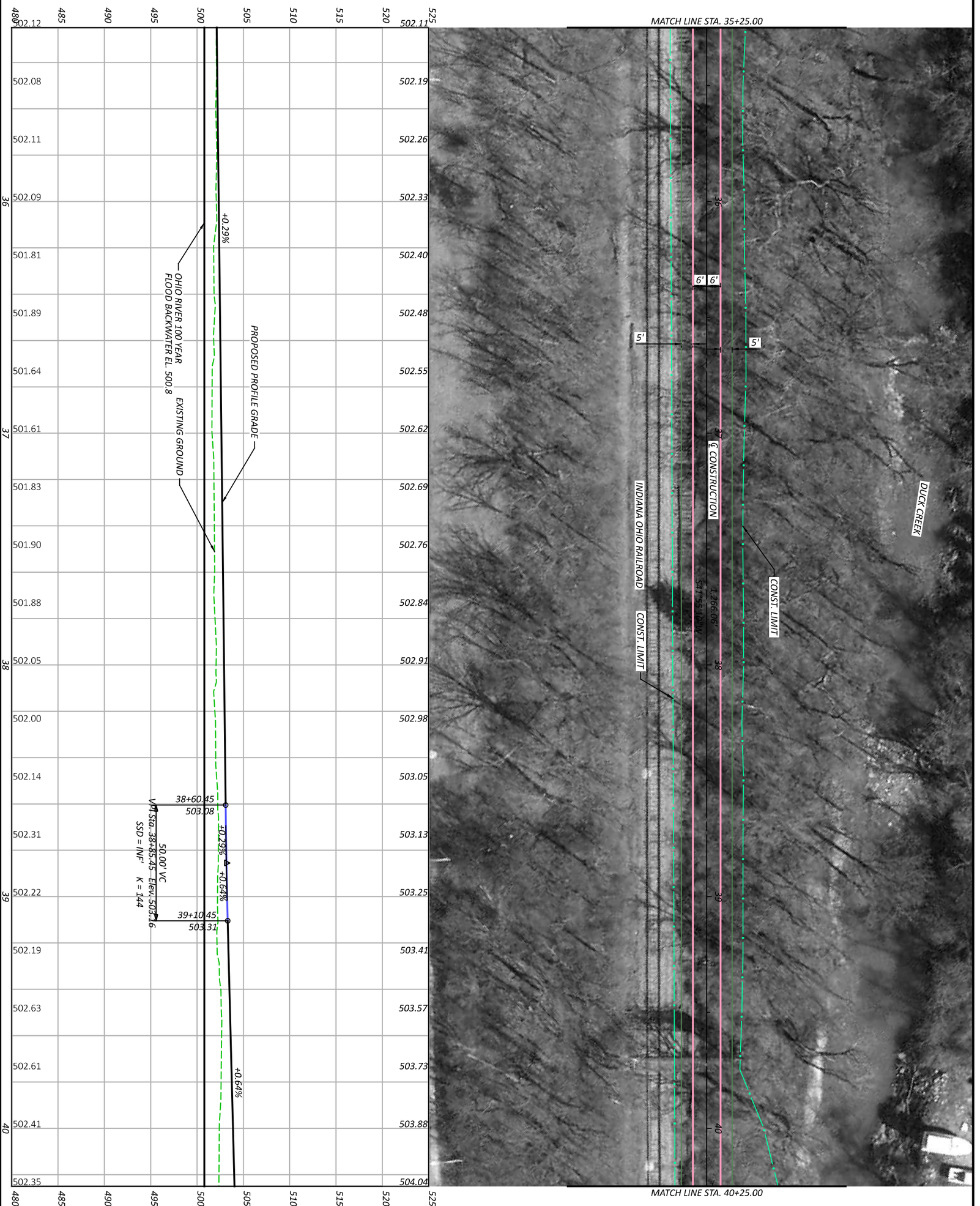

Stantec
Stantec Tower
100 Commerce Road
Suite 300
Cincinnati, OH 45242
(513) 842-3400

DESIGN AGENCY

DESIGNER JGB

REVIEWER SNS 02-02-24

PROJECT ID 113603

SHEET P.9 TOTAL 17

SEGMENT 3 - ALTERNATIVE C
STA. 35+25.00 TO STA. 40+25.00

HORIZONTAL SCALE IN FEET
0 20
10 40

HAM-WASSON WAY TO OTTO ARMLEDER

MODEL: CLP_3-C - Plan 4 [Sheet] PAPERSIZE: 17x11 (in.) DATE: 8/1/2024 TIME: 10:20:59 AM USER: gregbrown
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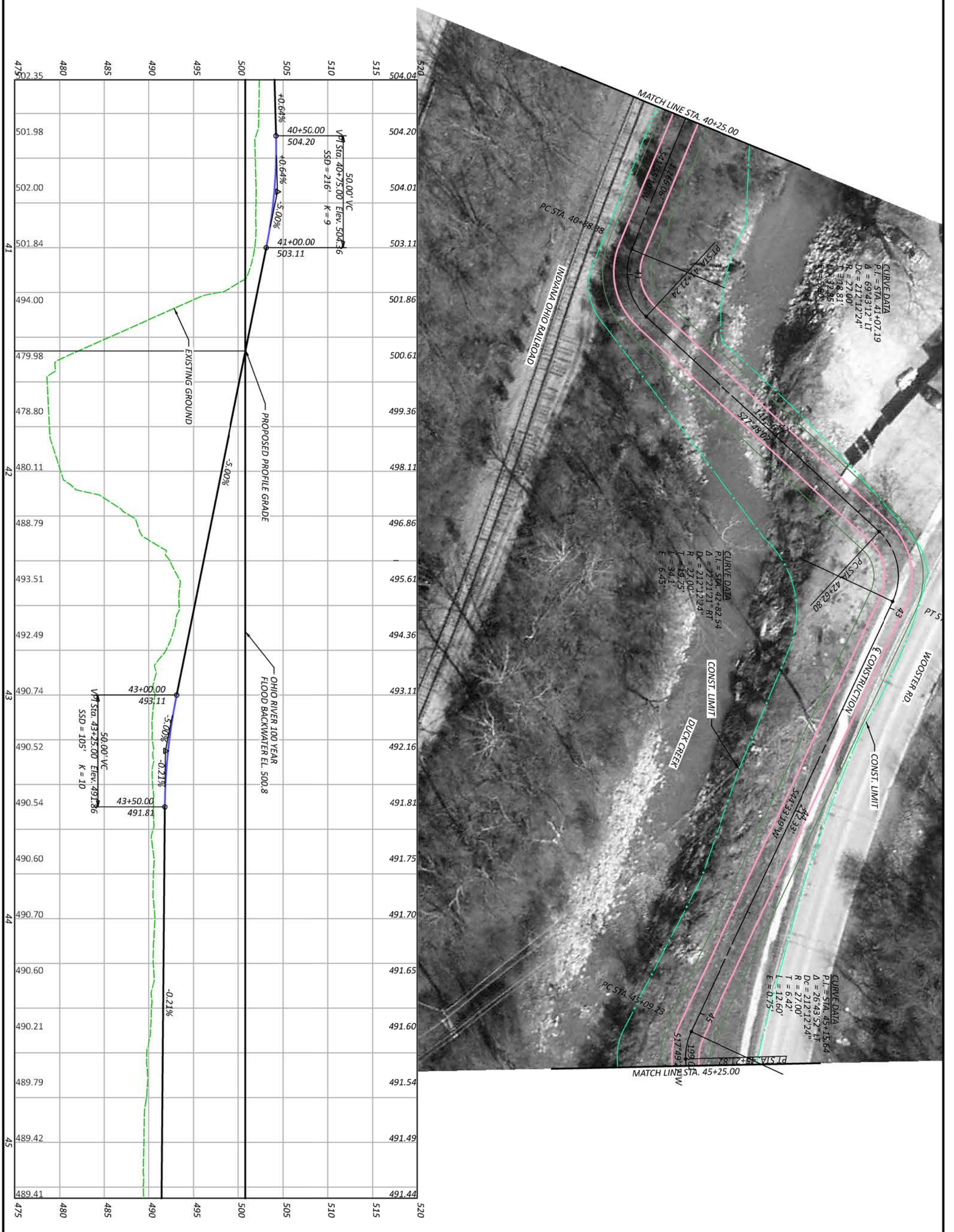

SEGMENT 3 - ALTERNATIVE C
STA. 40+25.00 TO STA. 45+25.00

HORIZONTAL SCALE IN FEET
0 0
0 0

SHEET P.10	TOTAL 17	PROJECT ID 113603	REVIEWER SNS 02-02-24
DESIGNER JGB	DESIGN AGENCY Stantec 10200 Alliance Road, Suite 300 Cincinnati, OH 45242 (513) 842-3400		

C-50

HAM-WASSON WAY TO OTTO ARMLEDER

MODEL: CLP_3-C - Plan 5 [Sheet] PAPERSIZE: 17x11 (in.) DATE: 8/1/2024 TIME: 10:21:02 AM USER: gregbrown
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SEGMENT 3 - ALTERNATIVE C
STA. 45+25.00 TO STA. 47+20.83

HORIZONTAL SCALE IN FEET
0 20
10 40

SHEET	P.11
TOTAL	17
PROJECT ID	113603
REVIEWER	SNS 02-02-24
DESIGNER	JGB
DESIGN AGENCY	Stantec

Stantec
10200 Alliance Road,
Suite 300
Cincinnati, OH 45242
(513) 842-3400

HAM-WASSON WAY TO OTTO ARMLEDER

MODEL: CLP_3D - Plan 5 [Sheet] PAPERSIZE: 17x11 (in.) DATE: 8/1/2024 TIME: 10:21:13 AM USER: gregbrown
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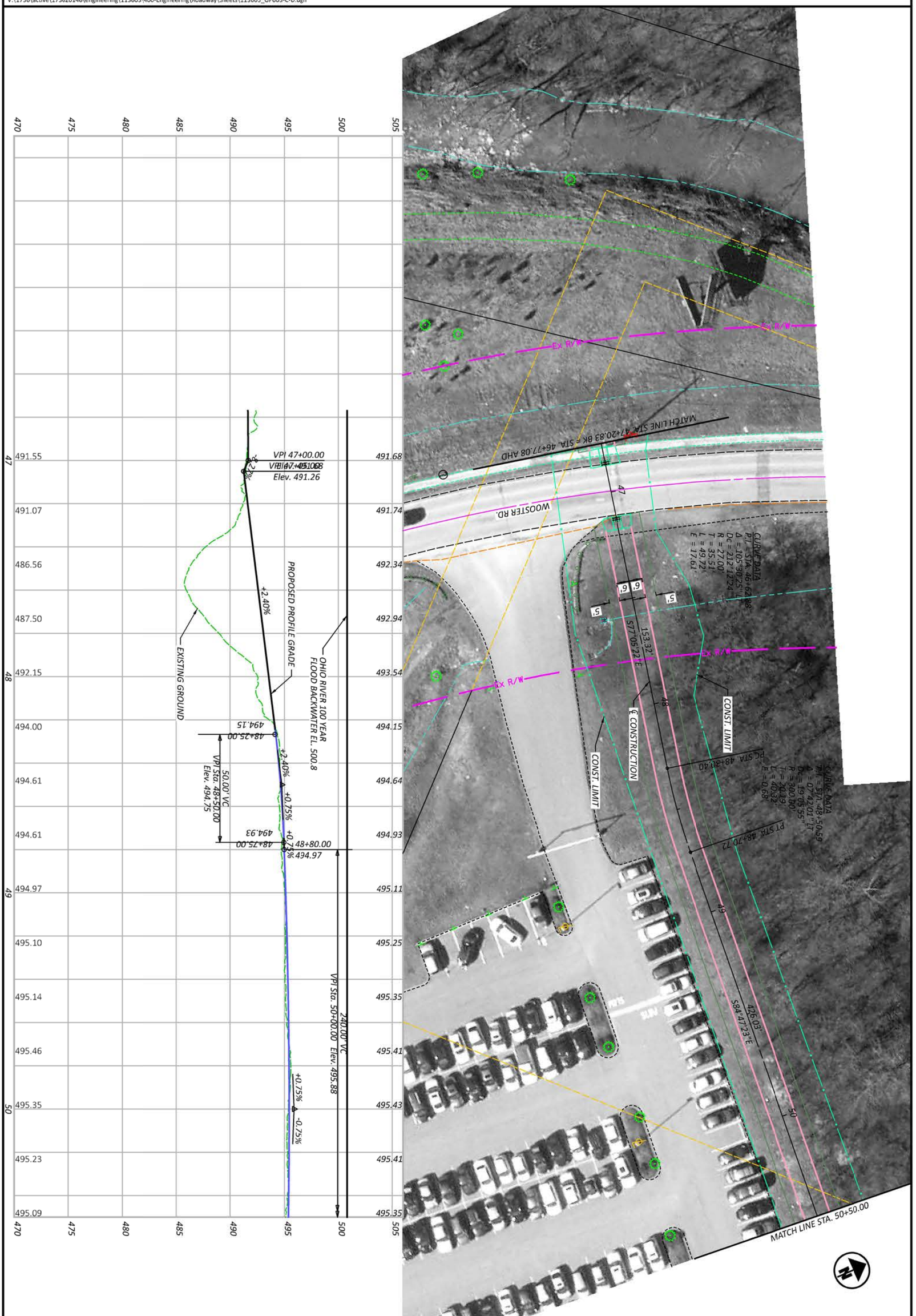
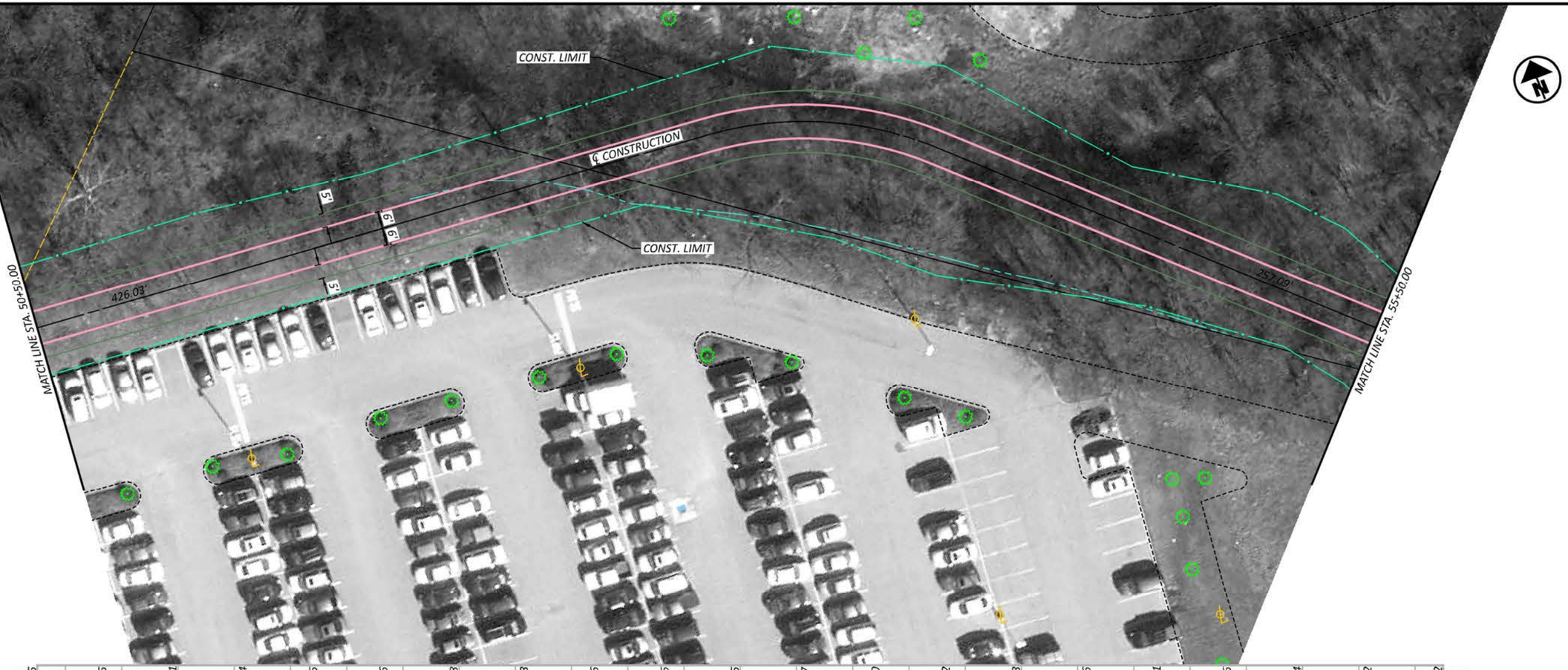


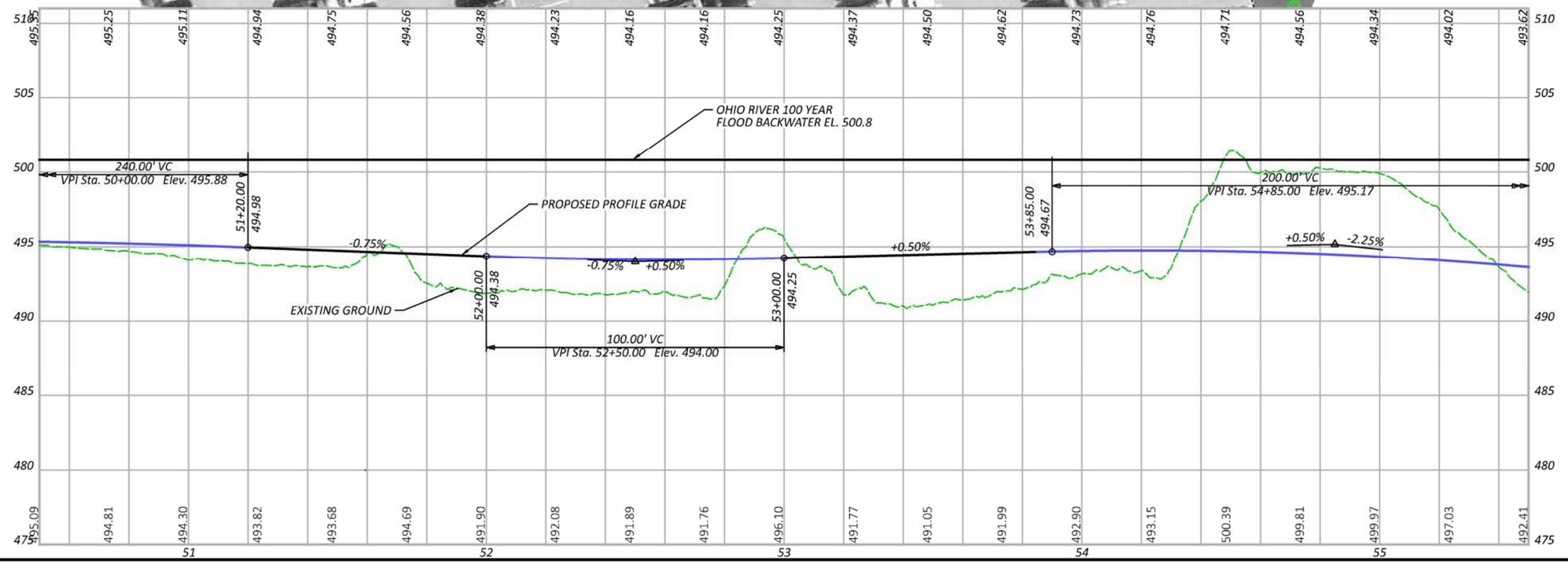
DESIGN AGENCY	DESIGNER	REVIEWER	PROJECT ID	SHEET	TOTAL
Stantec	JGB	SNS 01-26-24	113603	P.12	17

Stantec
10200 Alliance Road
Suite 200
Cincinnati, OH 45242
(513) 842-8200

SEGMENT 3 - ALTERNATIVE C
STA. 46+77.08 TO STA. 50+50.00

HORIZONTAL SCALE IN FEET
0 20
10 40





HAM-WASSON WAY TO OTTO ARMLEDER

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HORIZONTAL SCALE IN FEET
0 10 20 40

SEGMENT 3 - ALTERNATIVE C
STA. 50+50.00 TO STA. 55+50.00

DESIGN AGENCY
Stantec
10200 Alliance Road, Suite 300
Cincinnati, OH 45242
(513) 842-8200

DESIGNER	JGB
REVIEWER	SNS 01-26-24
PROJECT ID	113603
SHEET	P.13
TOTAL	17

HAM-WASSON WAY TO OTTO ARMLEDER

MODEL: CLP_3D - Plan 7 [Sheet] PAPERSIZE: 17x11 (in.) DATE: 8/1/2024 TIME: 10:21:17 AM USER: gregbrown
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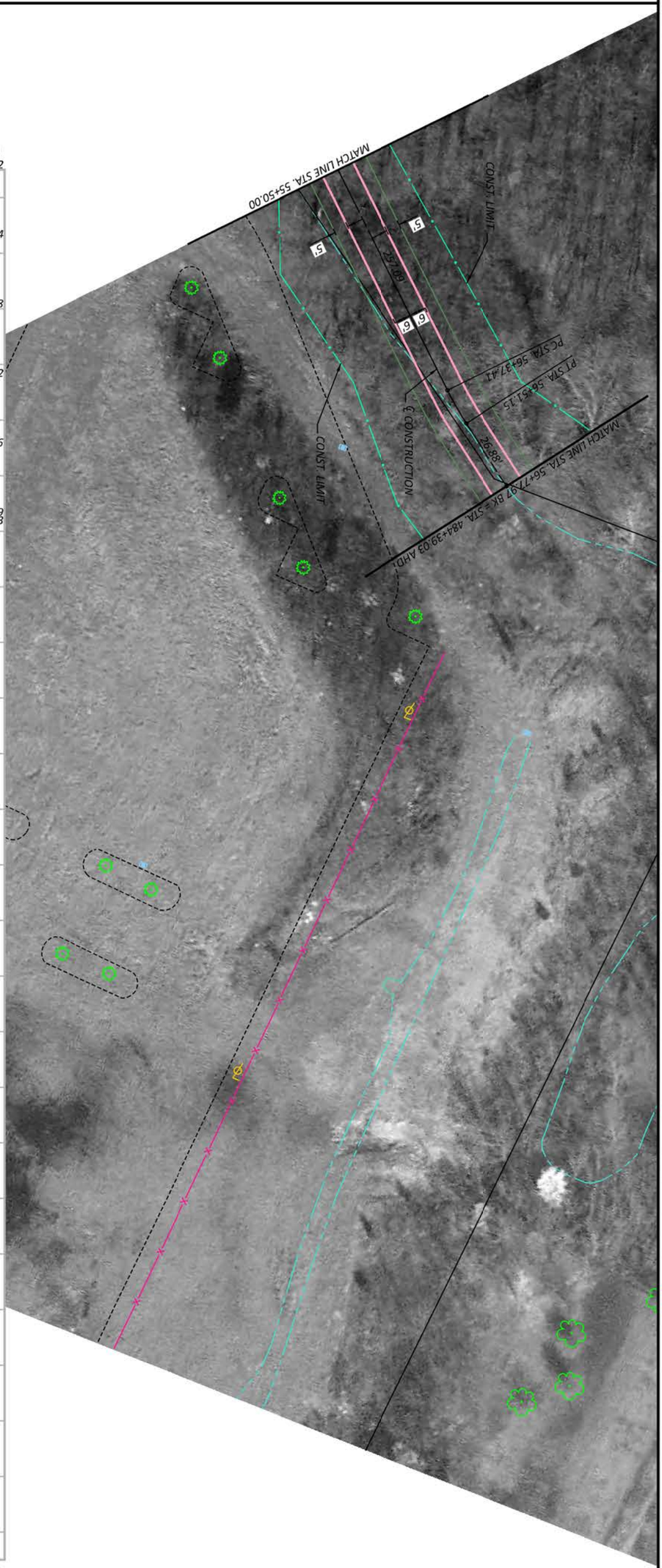

SEGMENT 3 - ALTERNATIVE C
STA. 55+50.00 TO STA. 56+79.09

HORIZONTAL SCALE IN FEET
0 20
10 40

SHEET	TOTAL
P.14	17

PROJECT ID: 113603
REVIEWER: SNS 01-26-24
DESIGNER: JGB
DESIGN AGENCY

Stantec
10200 Alliance Road
Suite 200
Cincinnati, OH 45242
(513) 842-8200

HAM-WASSON WAY TO OTTO ARMLEDER

MODEL: CLP_3-B - Pan 12 [Sheet] PAPERSIZE: 17x11 (in.) DATE: 8/1/2024 TIME: 10:21:24 AM USER: gregbrown
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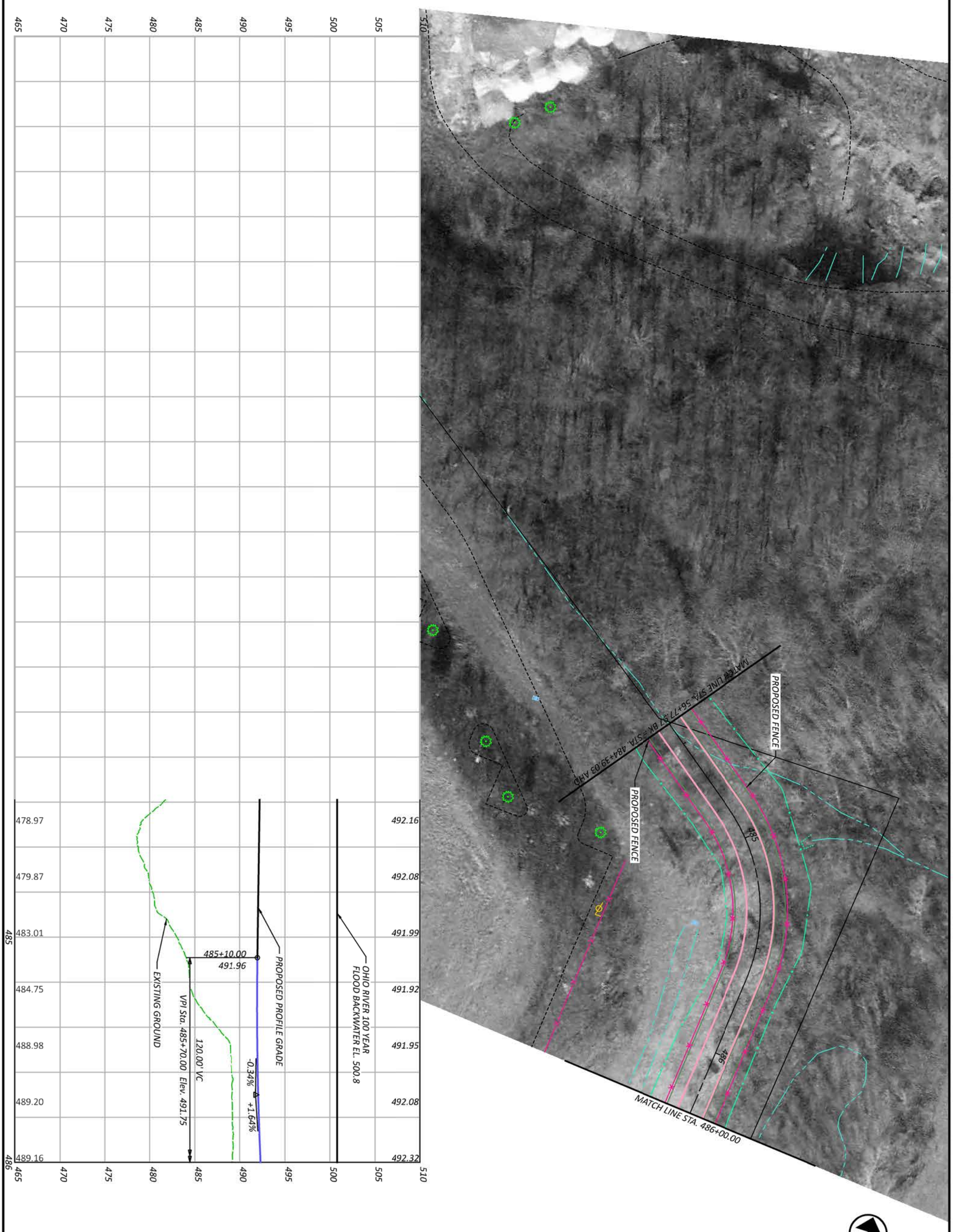

SHEET P.15	TOTAL 17	PROJECT ID 113603	REVIEWER SNS 01-26-24	DESIGNER JGB	DESIGN AGENCY Stantec 11687 Lebanon Road, Suite 300 Cincinnati, OH 45240 (513) 842-3400

SEGMENT 3 - ALTERNATIVE C
STA. 484+39.03 TO STA. STA. 486+00.00

HORIZONTAL SCALE IN FEET
0 20
10 40

HAM-WASSON WAY TO OTTO ARMLEDER

MODEL: CLP_3-B - Pan 13 [Sheet] PAPERSIZE: 17x11 (in.) DATE: 8/1/2024 TIME: 10:21:25 AM USER: gregbrown
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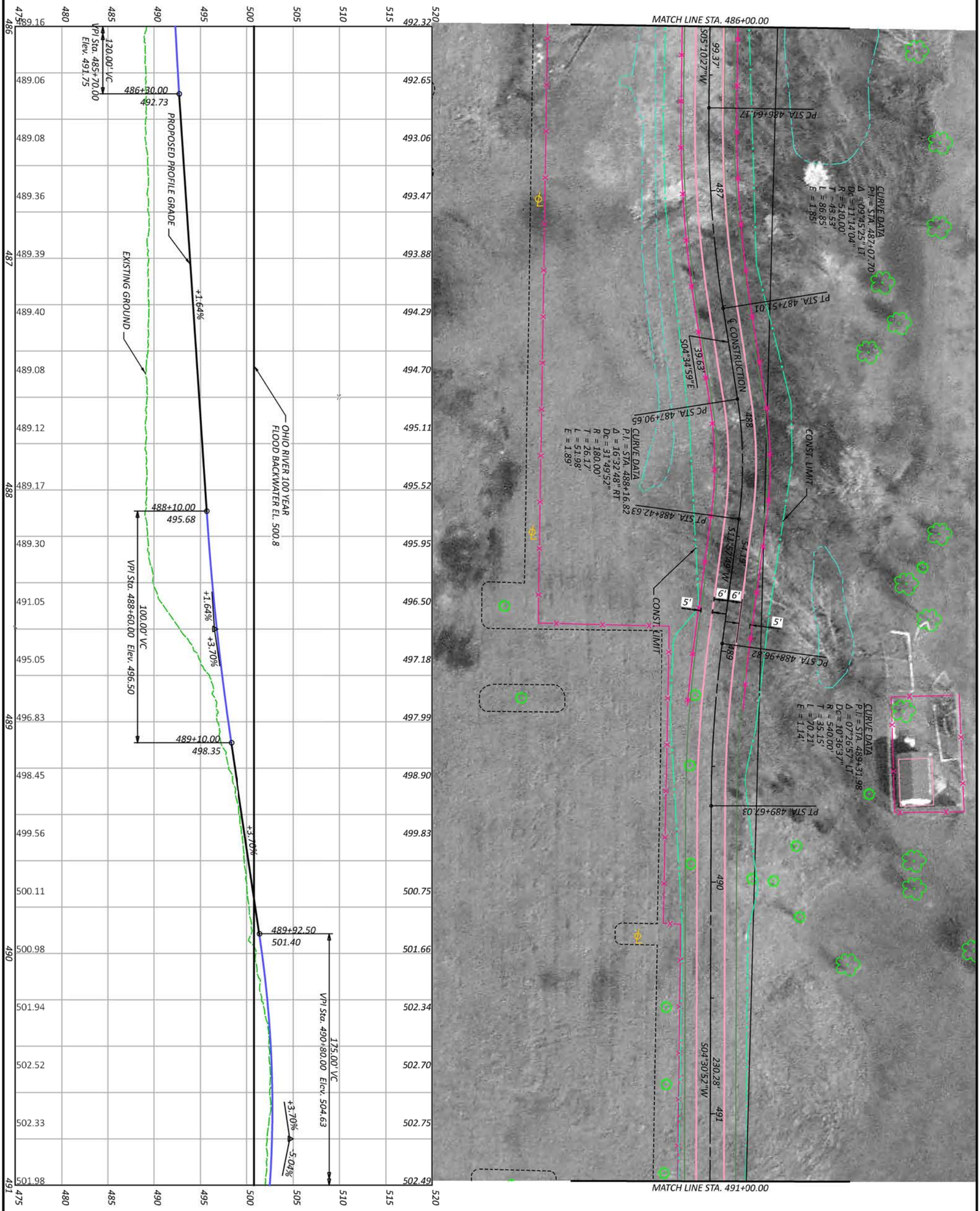

SEGMENT 3 - ALTERNATIVE C
STA. 486+00.00 TO STA. 491+00.00

HORIZONTAL SCALE IN FEET
0 20
10 40

DESIGN AGENCY	PROJECT ID	REVIEWER	DESIGNER	SHEET	TOTAL
Stantec	113603	SNS 01-26-24	JGB	P.16	17

Stantec
Eaton Allyn Green Road, Suite 300
Cincinnati, OH 45242
(513) 842-3400

HAM-WASSON WAY TO OTTO ARMLEDER

MODEL: CLP_3-B - Plan 14 [Sheet] PAPERSIZE: 17x11 (in.) DATE: 8/1/2024 TIME: 10:21:27 AM USER: gregbrown
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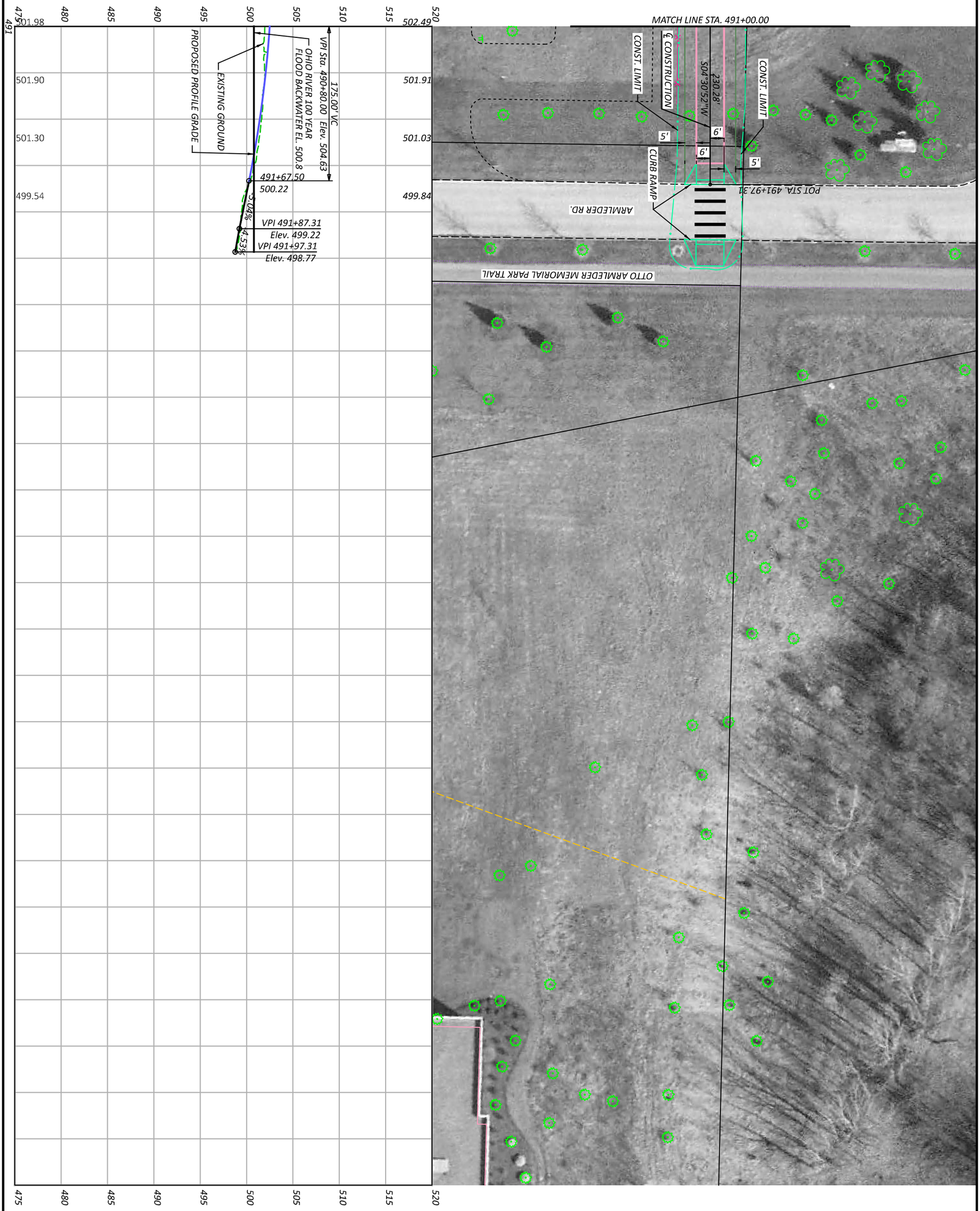

SEGMENT 3 - ALTERNATIVE C
STA. 491+00.00 TO STA. 491+68.23

HORIZONTAL SCALE IN FEET
0 20
10 40

SHEET	TOTAL
P.17	17

PROJECT ID: 113603
REVIEWER: SNS 01-26-24
DESIGNER: JGB
DESIGN AGENCY: Stantec
Stantec 10200 Alliance Road, Suite 300, Cincinnati OH 45242, (513) 842-8200

HAM-WASSON WAY TO OTTO ARMLEDER

MODEL: CLP_3-AB - Plan 7 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 8/1/2024 TIME: 10:37:28 AM USER: gregbrown
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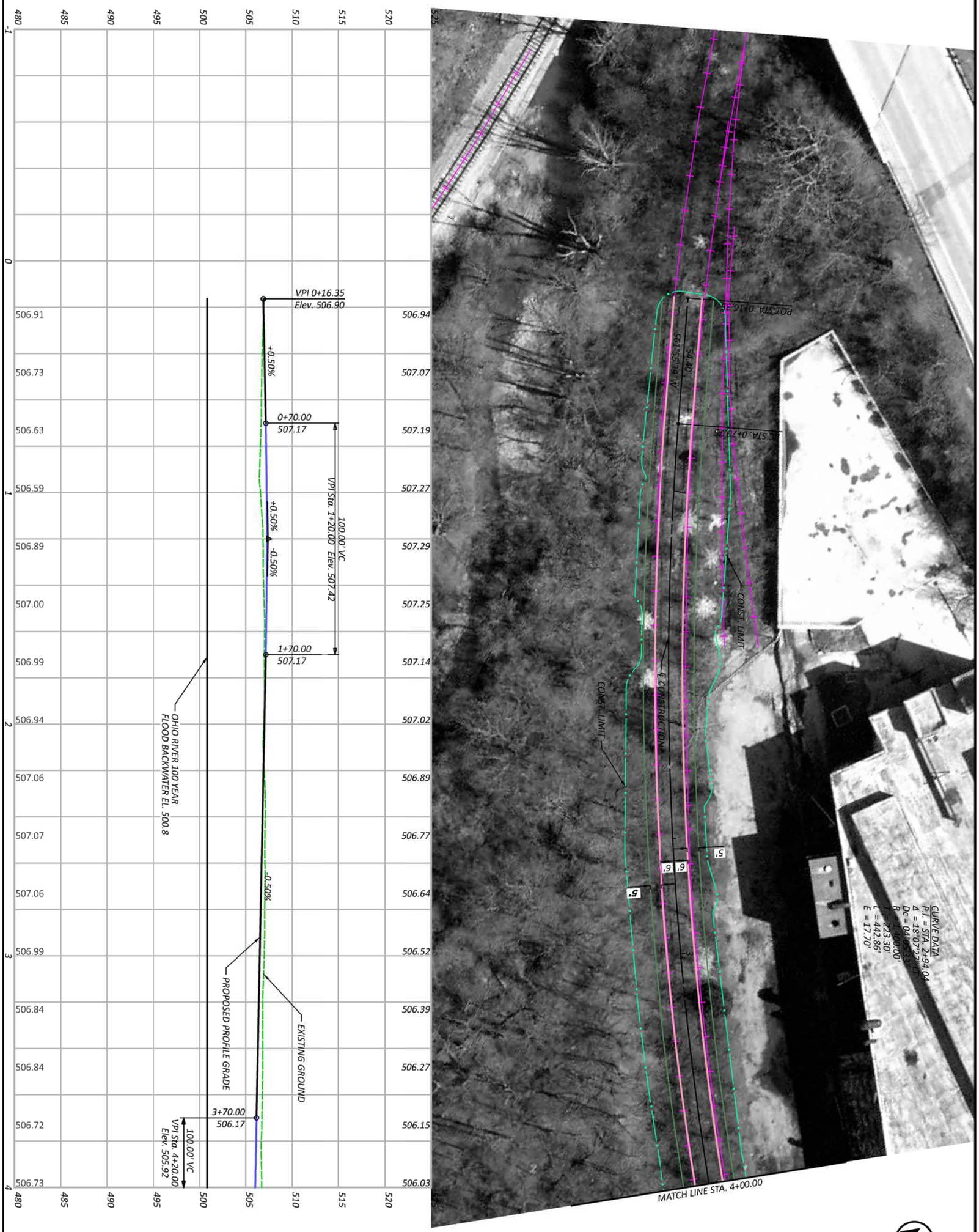

SEGMENT 3 - ALTERNATIVE D
STA. 00+06.35 TO STA. 4+00.00

HORIZONTAL SCALE IN FEET
0 20
10 40

SHEET	P.1
TOTAL	16
PROJECT ID	113603
REVIEWER	SNS 01-26-24
DESIGNER	JGB

DESIGN AGENCY
Stantec
10200 Alliance Road, Suite 300
Cincinnati, OH 45242
(513) 842-3400

HAM-WASSON WAY TO OTTO ARMLEDER

MODEL: CLP_3-AB - Plan 8 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 8/1/2024 TIME: 10:38:49 AM USER: gregbrown
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SEGMENT 3 - ALTERNATIVE D
STA. 4+00.00 TO STA. 9+00.00

HORIZONTAL SCALE IN FEET
0 20
10 40

DESIGN AGENCY	Stantec
	10200 Alliance Road, Suite 200, Cincinnati, OH 45242 (513) 842-8200
DESIGNER	JGB
REVIEWER	SNS 01-26-24
PROJECT ID	113603
SHEET	P.2
TOTAL	16

HAM-WASSON WAY TO OTTO ARMLEDER

MODEL: CLP_3-AB - Plan 9 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 8/1/2024 TIME: 10:38:52 AM USER: gregbrown
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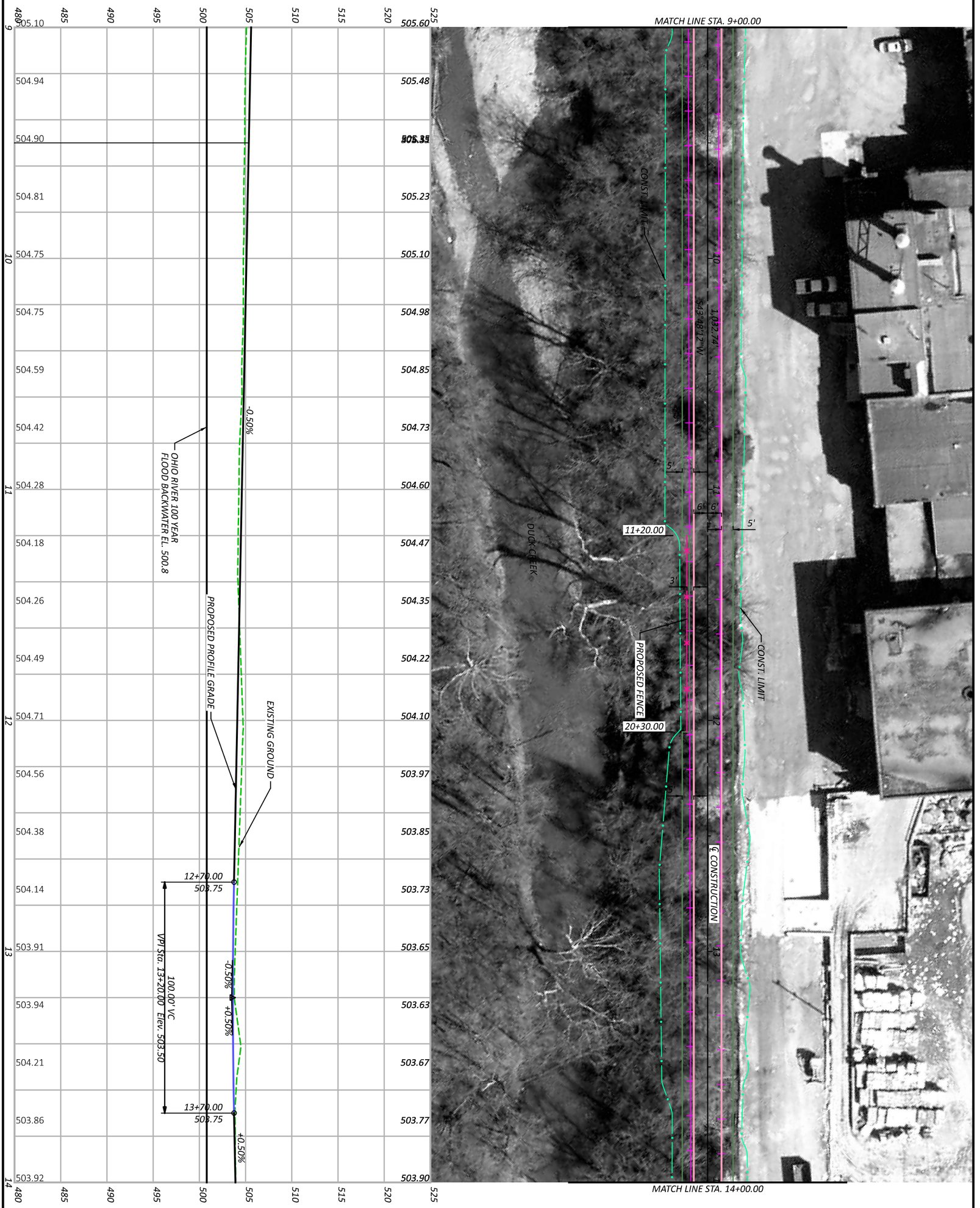

SHEET P.3	TOTAL 16	PROJECT ID 113603	REVIEWER SNS 01-26-24	DESIGNER JGB	DESIGN AGENCY Stantec 10200 Alliance Road Suite 200 Cincinnati, OH 45242 (513) 842-8200

SEGMENT 3 - ALTERNATIVE D
STA. 9+00.00 TO STA. 14+00.00

HORIZONTAL SCALE IN FEET
0 20
10 40

HAM-WASSON WAY TO OTTO ARMLEDER

MODEL: CLP_3-AB - Plan 10 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 8/1/2024 TIME: 10:38:55 AM USER: gregbrown
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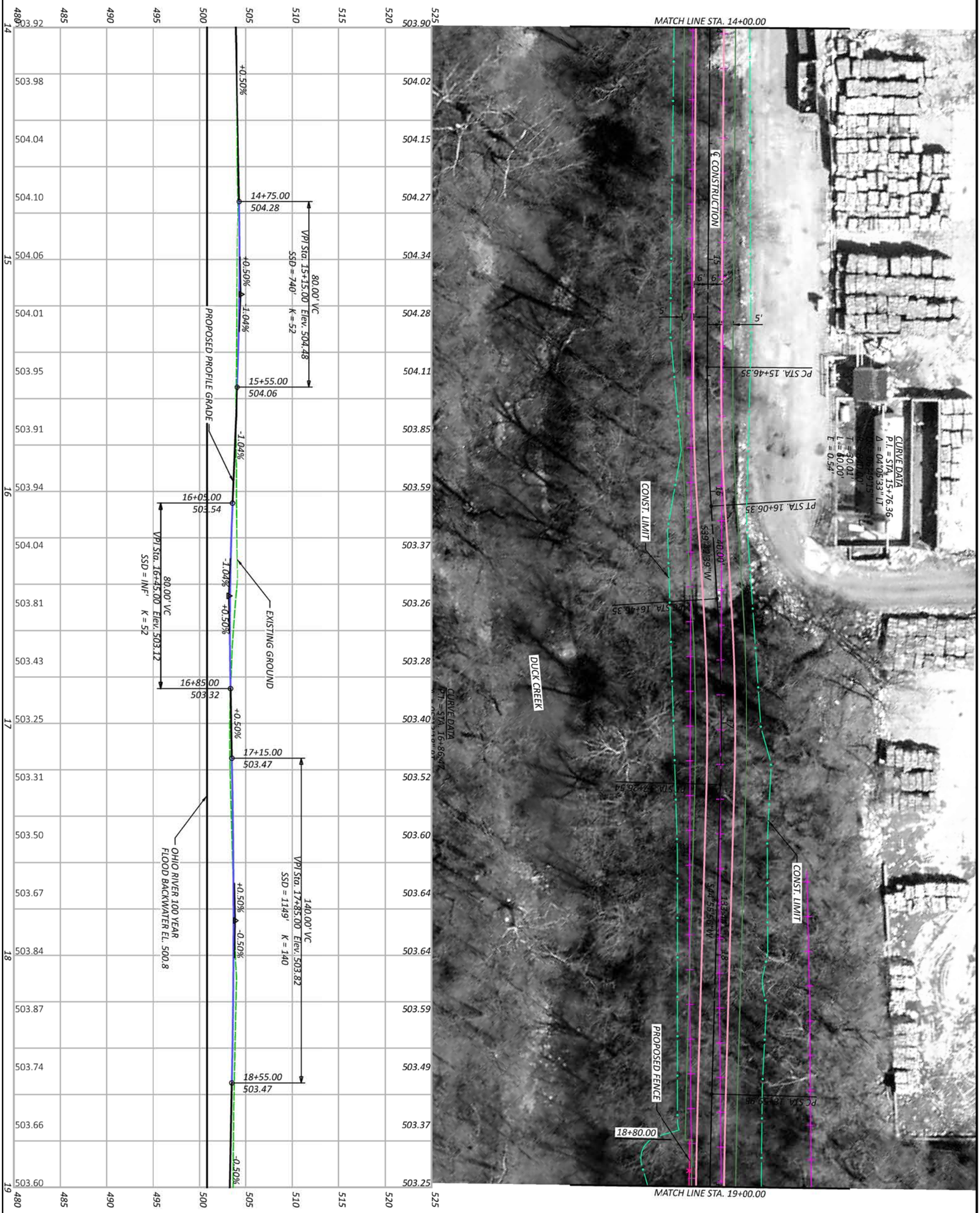

SHEET P.4	TOTAL 16	PROJECT ID 113603	REVIEWER SNS 01-26-24	DESIGNER JGB	DESIGN AGENCY Stantec 10200 Alliance Road Suite 200 Cincinnati, OH 45242 (513) 842-3030

SEGMENT 3 - ALTERNATIVE D
STA. 14+00.00 TO STA. 19+00.00

HORIZONTAL SCALE IN FEET
0 20
10 40

HAM-WASSON WAY TO OTTO ARMLEDER

MODEL: CLP_3-AB - Plan 11 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 8/1/2024 TIME: 10:38:59 AM USER: gregbrown
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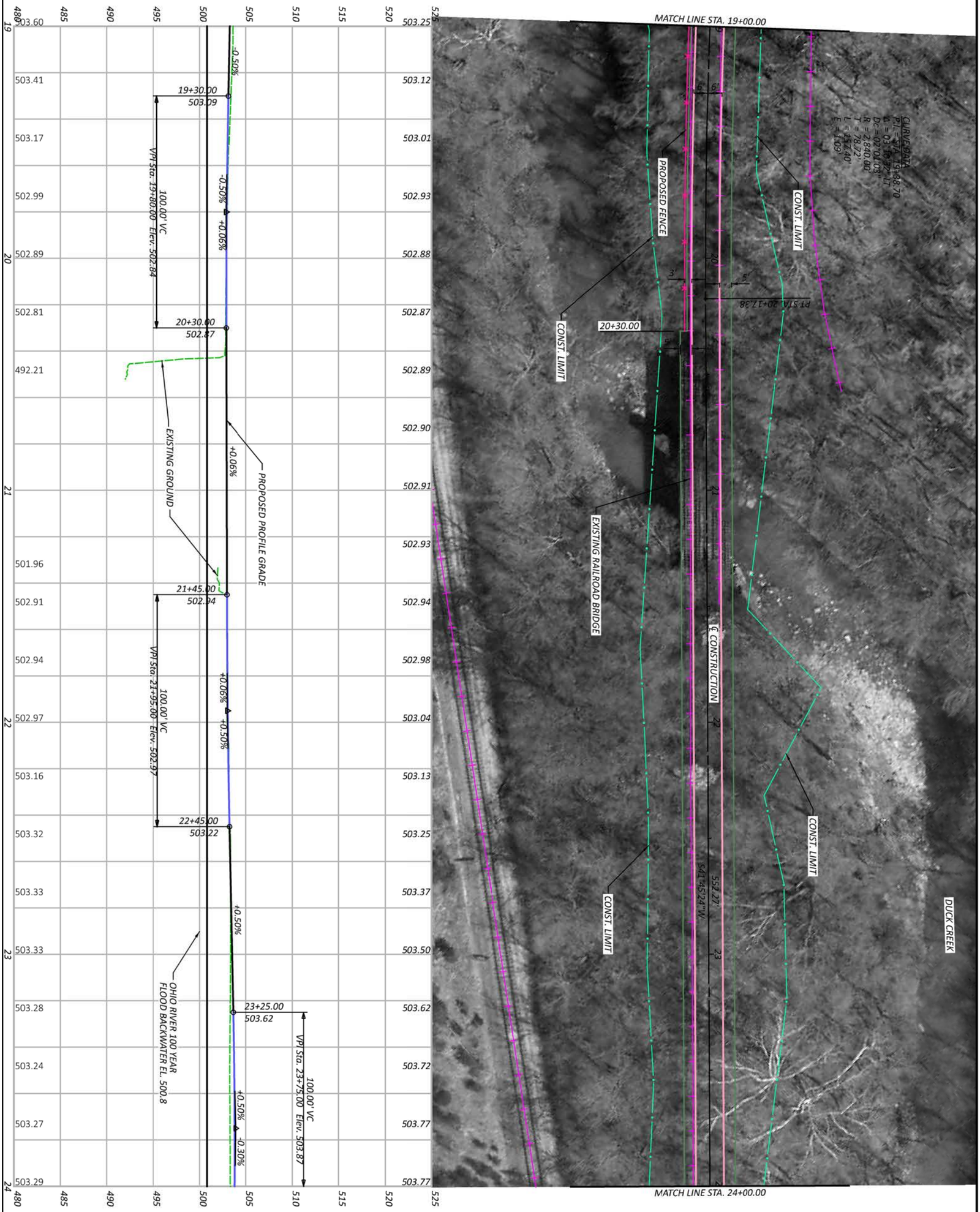

SEGMENT 3 - ALTERNATIVE D
STA. 19+00.00 TO STA. 24+00.00

HORIZONTAL SCALE IN FEET
0 20
10 40

DESIGNER	REVIEWER	PROJECT ID	SHEET	TOTAL
JGB	SNS 01-26-24	113603	P.5	16

Stantec
10200 Alliance Road
Suite 200
Cincinnati, OH 45242
(513) 842-8200

HAM-WASSON WAY TO OTTO ARMLEDER

MODEL: CLP_3-AB - Plan 12 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 8/1/2024 TIME: 10:39:02 AM USER: gregbrown
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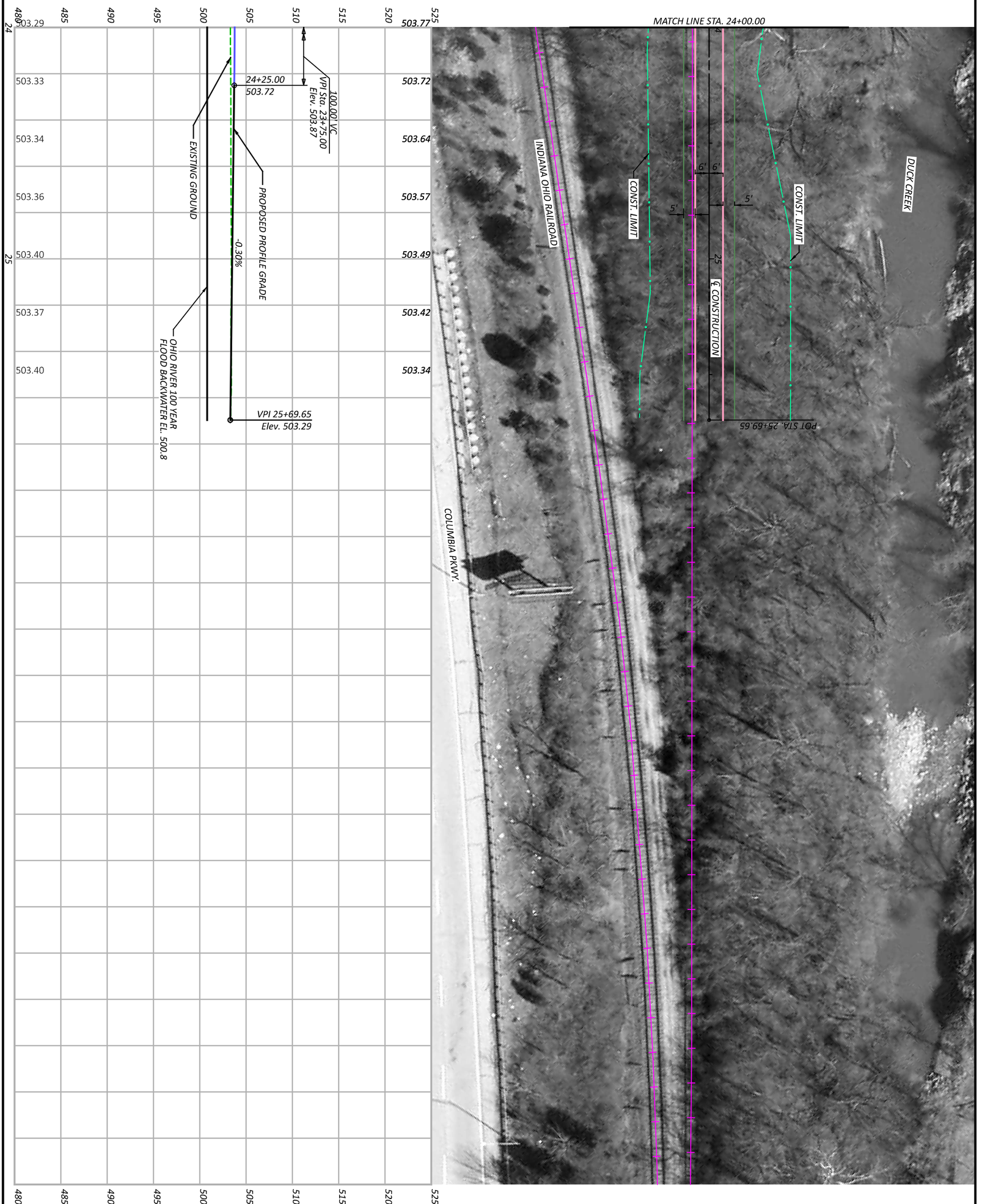

DESIGN AGENCY
Stantec
10200 Alliance Road
Suite 200
Cincinnati, OH 45242
(513) 842-8200

DESIGNER JGB
REVIEWER SNS 01-26-24
PROJECT ID 113603
SHEET P.6 TOTAL 16

SEGMENT 3 - ALTERNATIVE D
STA. 19+00.00 TO STA. 25+69.65

HORIZONTAL SCALE IN FEET
0 20
10 40

HAM-WASSON WAY TO OTTO ARMLEDER

MODEL: CLP_3D - Plan 1 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 8/1/2024 TIME: 10:39:22 AM USER: gregbrown
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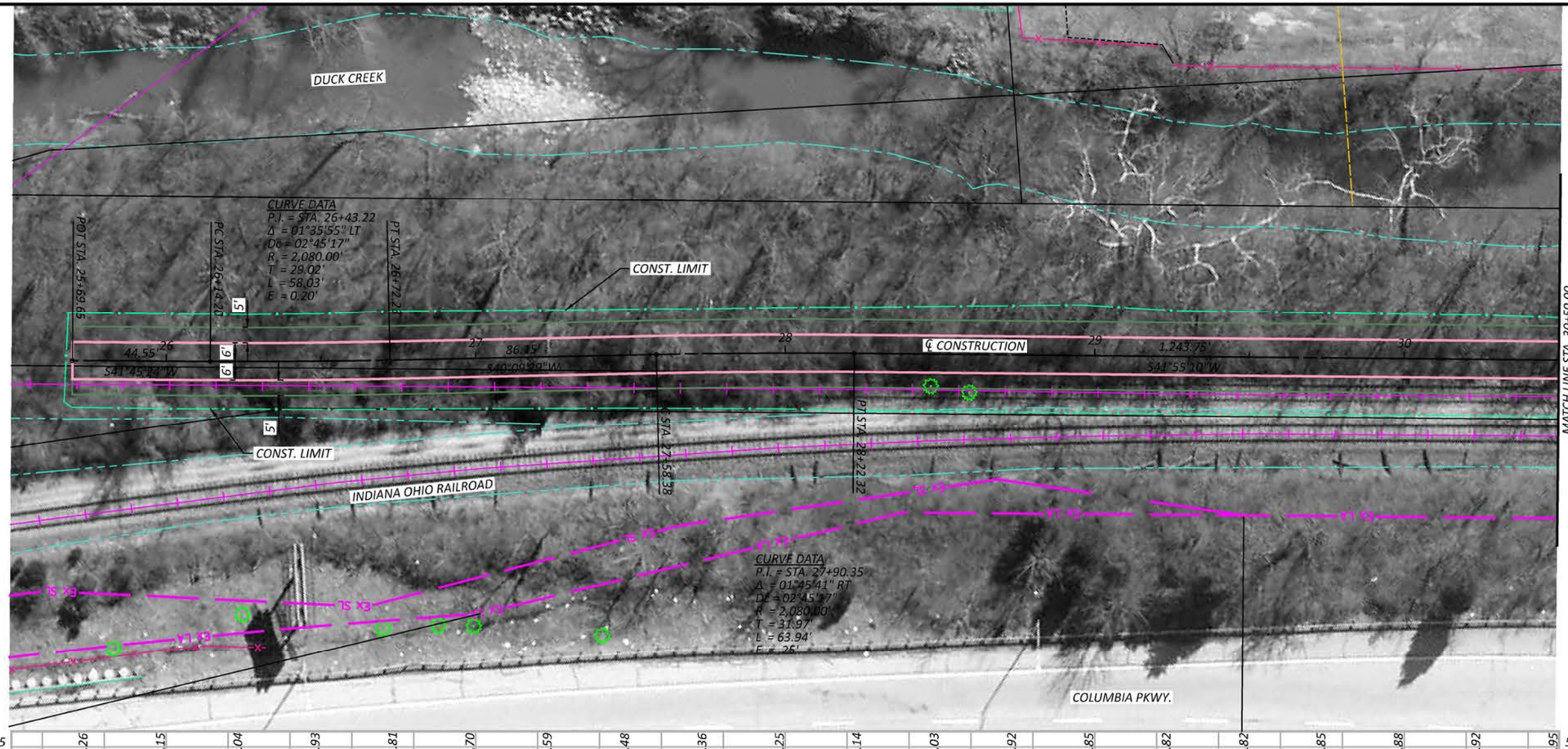

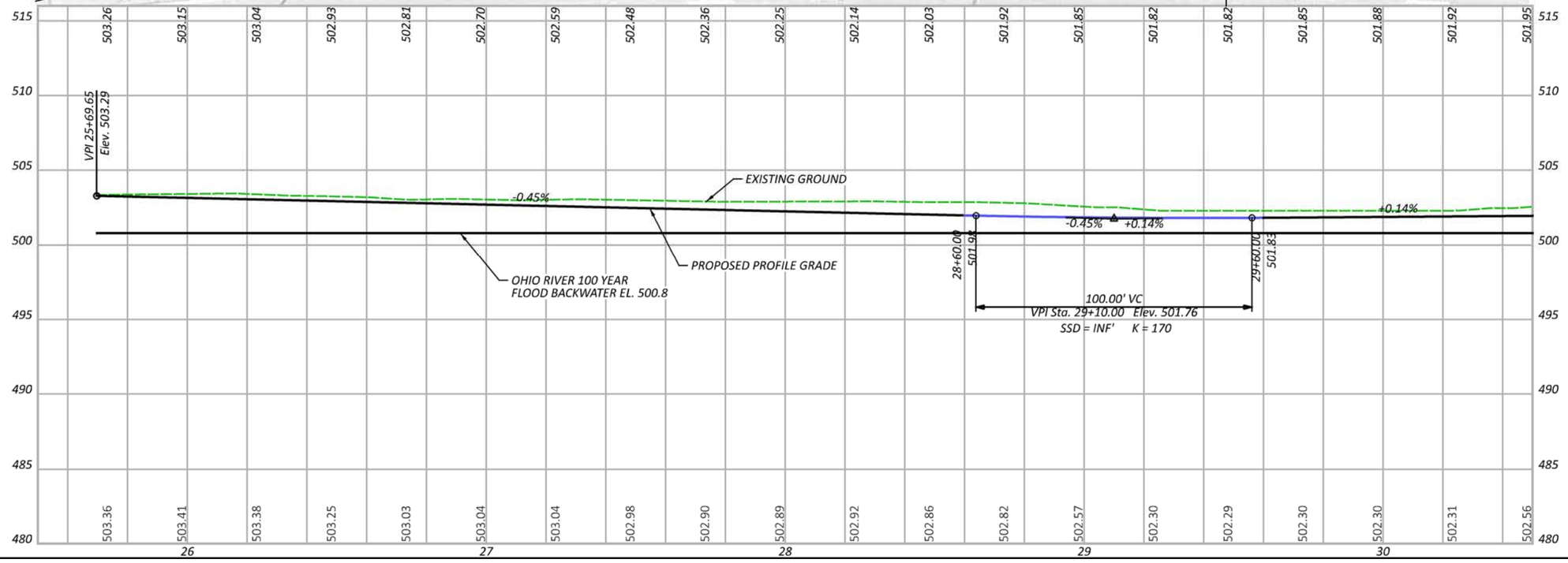

HORIZONTAL SCALE IN FEET
0 10 20 40

SEGMENT 3 - ALTERNATIVE D
STA. 25+69.65 TO STA. 30+50.00

DESIGN AGENCY
Stantec
10200 Alliance Road, Suite 300
Cincinnati, OH 45242
(513) 842-8200

DESIGNER JGB
REVIEWER SNS 01-26-24
PROJECT ID 113603
SHEET P.7 TOTAL 16

HAM-WASSON WAY TO OTTO ARMLEDER

MODEL: CLP_3D - Plan 2 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 8/1/2024 TIME: 10:39:25 AM USER: gregbrown
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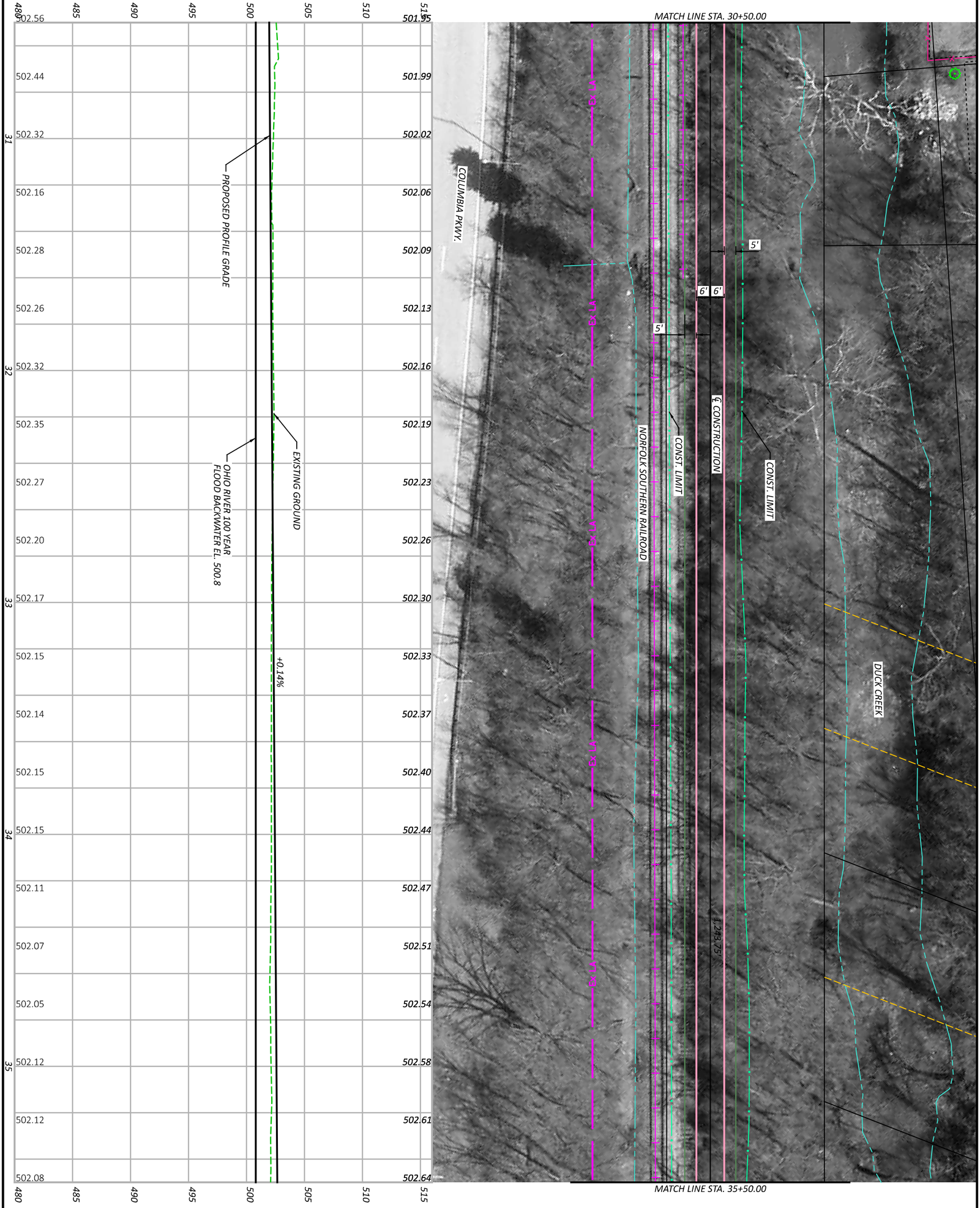

SHEET P.8	TOTAL 16	PROJECT ID 113603	REVIEWER SNS 01-26-24	DESIGNER JGB	DESIGN AGENCY Stantec 10200 Alliance Road Suite 200 Cincinnati, OH 45242 (513) 842-8200

SEGMENT 3 - ALTERNATIVE D
STA. 30+50.00 TO STA. 35+50.00

HORIZONTAL SCALE IN FEET
0 20
10 40

MODEL: CLP_3D - Plan 3 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 8/1/2024 TIME: 10:39:26 AM USER: gregbrown
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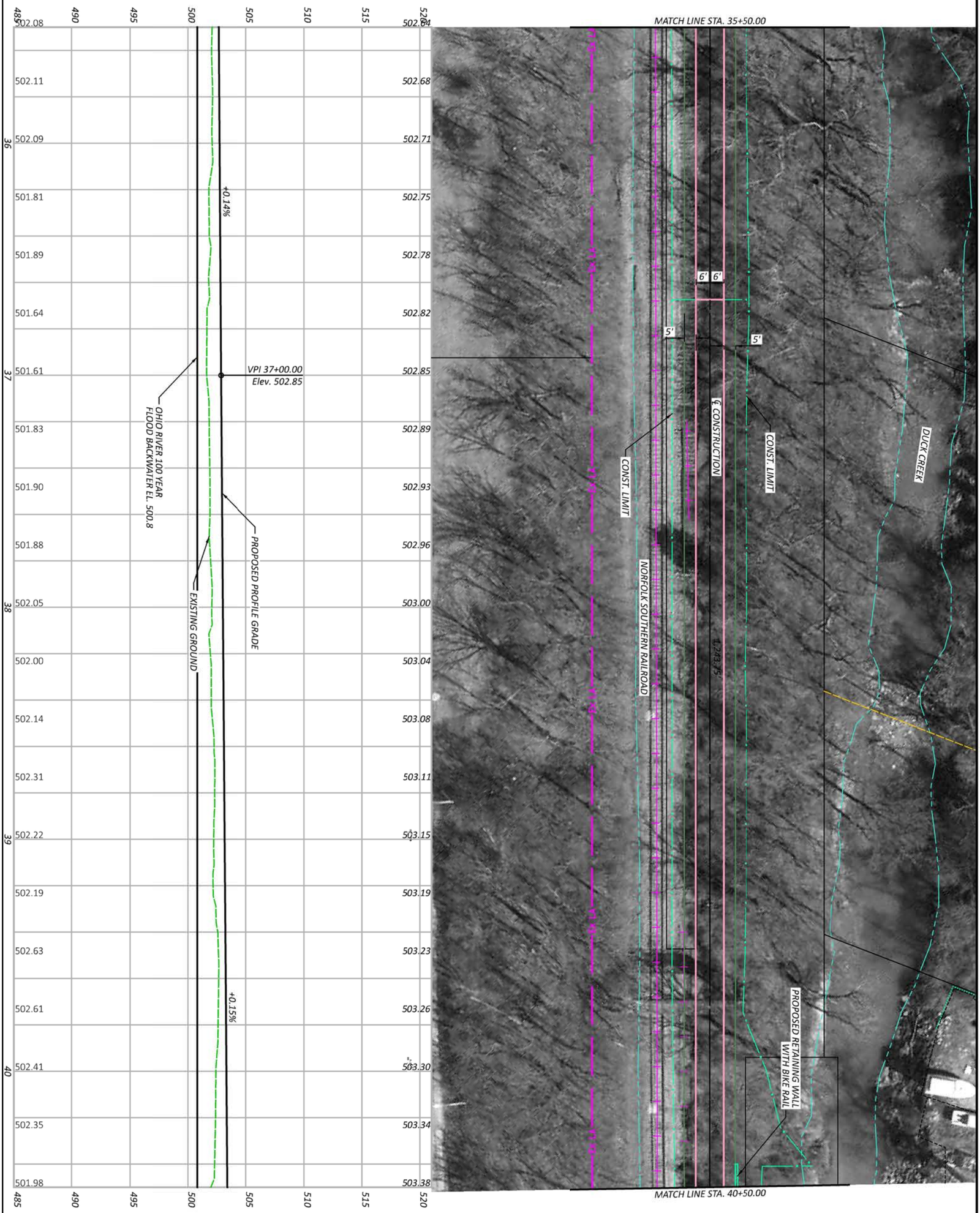

SEGMENT 3 - ALTERNATIVE D
STA. 35+50.00 TO STA. 40+50.00

HORIZONTAL SCALE IN FEET
0 20
10 40

SHEET	TOTAL
P.9	16

PROJECT ID: 113603
REVIEWER: SNS 01-26-24
DESIGNER: JGB
DESIGN AGENCY

Stantec
10200 Alliance Road
Suite 200
Cincinnati, OH 45242
(513) 842-8200

HAM-WASSON WAY TO OTTO ARMLEDER

MODEL: CLP_3D - Plan 4 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 8/1/2024 TIME: 10:39:31 AM USER: gregbrown
V:\1736\active\173620146\engineering\113603\400-Engineering\Roadway\Sheets\113603_GP003-D.dgn

CURVE DATA
P.I. = STA. 40+98.44
Δ = 07°24'23" LT
Dc = 11°27'33"
R = 500.00'
T = 32.36'
L = 64.63'
E = 1.05'

CURVE DATA
P.I. = STA. 42+36.17
Δ = 23°26'14" LT
Dc = 77°25'36"
R = 74.00'
T = 15.35'
L = 30.27'
E = 1.58'

WOOSTER RD.

DUCK CREEK

PC STA 40+34.01

℄ CONSTRUCTION

PROPOSED RETAINING WALL WITH BIKE RAIL

PT STA 41+37.71

PC STA 42+20.82

PT STA 42+51.09

CONST. LIMIT

MATCH LINE STA. 40+50.00

MATCH LINE STA. 45+50.00

90.11'
S34°30'47"W

307.37'
S11°04'34"W

1,243.75'
S41°55'10"W

NORFOLK SOUTHERN RAILROAD

CONST. LIMIT

HORIZONTAL SCALE IN FEET
0 10 20 40

SEGMENT 3 - ALTERNATIVE D
STA. 40+50.00 TO STA. 45+50.00

DESIGN AGENCY
Stantec
10200 Alliance Road, Suite 300
Cincinnati, OH 45242
(513) 842-8200

DESIGNER JGB
REVIEWER SNS 01-26-24
PROJECT ID 113603
SHEET P.10 TOTAL 16

HAM-WASSON WAY TO OTTO ARMLEDER

MODEL: CLP_3D - Plan 5 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 8/1/2024 TIME: 10:39:35 AM USER: gregbrown
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MATCH LINE STA. 45+50.00

CURVE DATA
P.I. = STA. 45+69.74
Δ = 17°20'29" RT
Dc = 77°25'36"
R = 74.00'
T = 11.28'
L = 22.4'
E = .86'

PC STA. 45+58.46
PT STA. 45+80.85

DUCK CREEK

PC STA. 46+27.37

CONST. LIMIT

CURVE DATA
P.I. = STA. 46+62.88
Δ = 105°30'25" LT
Dc = 212°12'24"
R = 27.00'
T = 35.51'
L = 49.72'
E = 17.61'

PT STA. 46+77.08

WOOSTER RD.

CONST. LIMIT

℄ CONSTRUCTION

CONST. LIMIT

CURVE DATA
P.I. = STA. 48+50.59
Δ = 07°42'01" LT
Dc = 19°05'55"
R = 300.00'
T = 20.19'
L = 40.32'
E = 0.68'

PT STA. 48+70.72
PC STA. 48+30.40

426.03'
S84°47'23"E

153.32'
S77°05'22"E

MATCH LINE STA. 50+50.00

HORIZONTAL SCALE IN FEET
0 10 20 40

SEGMENT 3 - ALTERNATIVE D
STA. 45+50.00 TO STA. 50+50.00

DESIGN AGENCY
Stantec
10200 Alliance Road, Suite 300
Cincinnati, OH 45242
(513) 842-8200

DESIGNER JGB
REVIEWER SNS 01-26-24
PROJECT ID 113603
SHEET P.11 TOTAL 16

HAM-WASSON WAY TO OTTO ARMLEDER

MODEL: CLP_3D - Plan & [Sheet] PAPERSIZE: 34x22 (in.) DATE: 8/1/2024 TIME: 10:39:39 AM USER: gregbrown
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HORIZONTAL SCALE IN FEET
0 10 20 40

SEGMENT 3 - ALTERNATIVE D
STA. 50+50.00 TO STA. 55+50.00

DESIGN AGENCY
Stantec
10200 Alliance Road, Suite 300
Cincinnati, OH 45242
(513) 842-8200

DESIGNER JGB
REVIEWER SNS 01-26-24
PROJECT ID 113603
SHEET P.12 TOTAL 16

HAM-WASSON WAY TO OTTO ARMLEDER

MODEL: CLP_3D - Plan 7 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 8/1/2024 TIME: 10:39:42 AM USER: gregbrown
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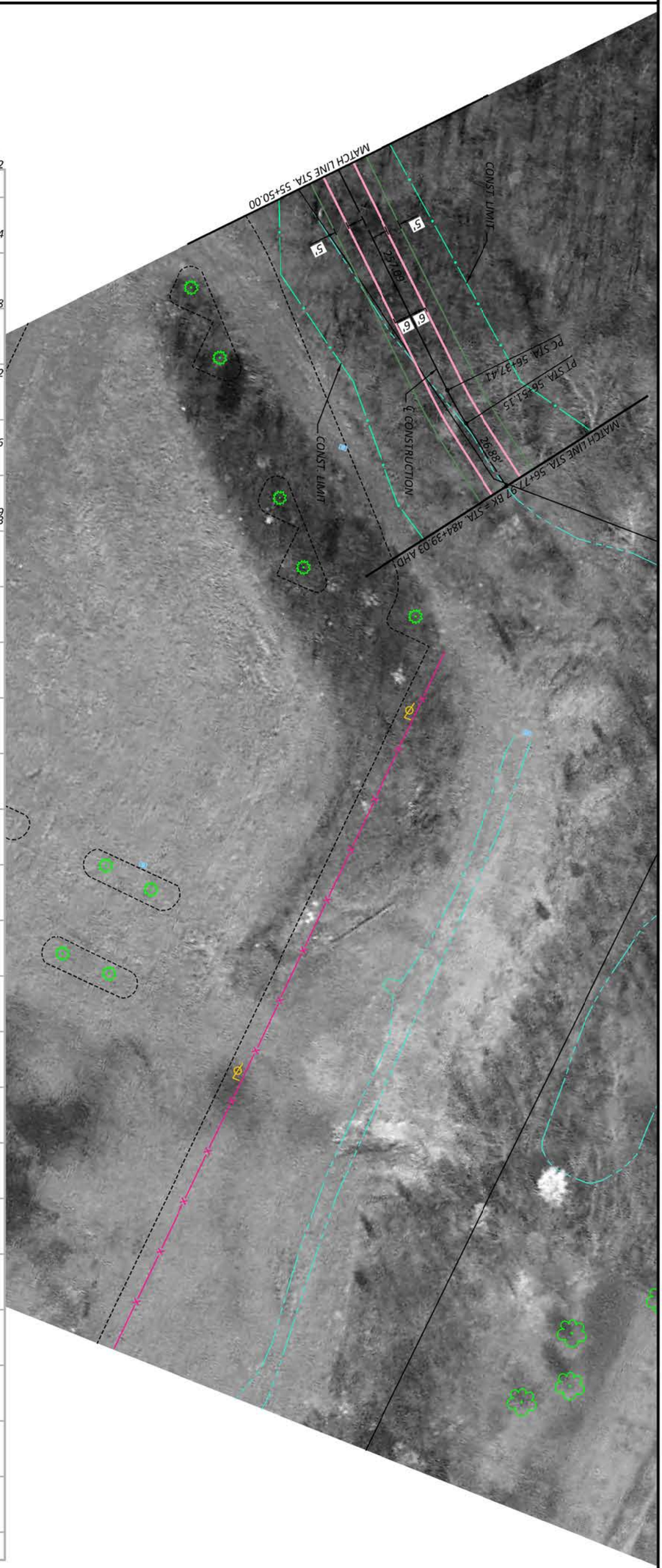

SEGMENT 3 - ALTERNATIVE D
STA. 55+50.00 TO STA. 56+79.09

HORIZONTAL SCALE IN FEET
0 20
10 40

SHEET	TOTAL
P.13	16

PROJECT ID: 113603
REVIEWER: SNS 01-26-24
DESIGNER: JGB
DESIGN AGENCY

Stantec
10200 Alliance Road
Suite 200
Cincinnati, OH 45242
(513) 842-8200

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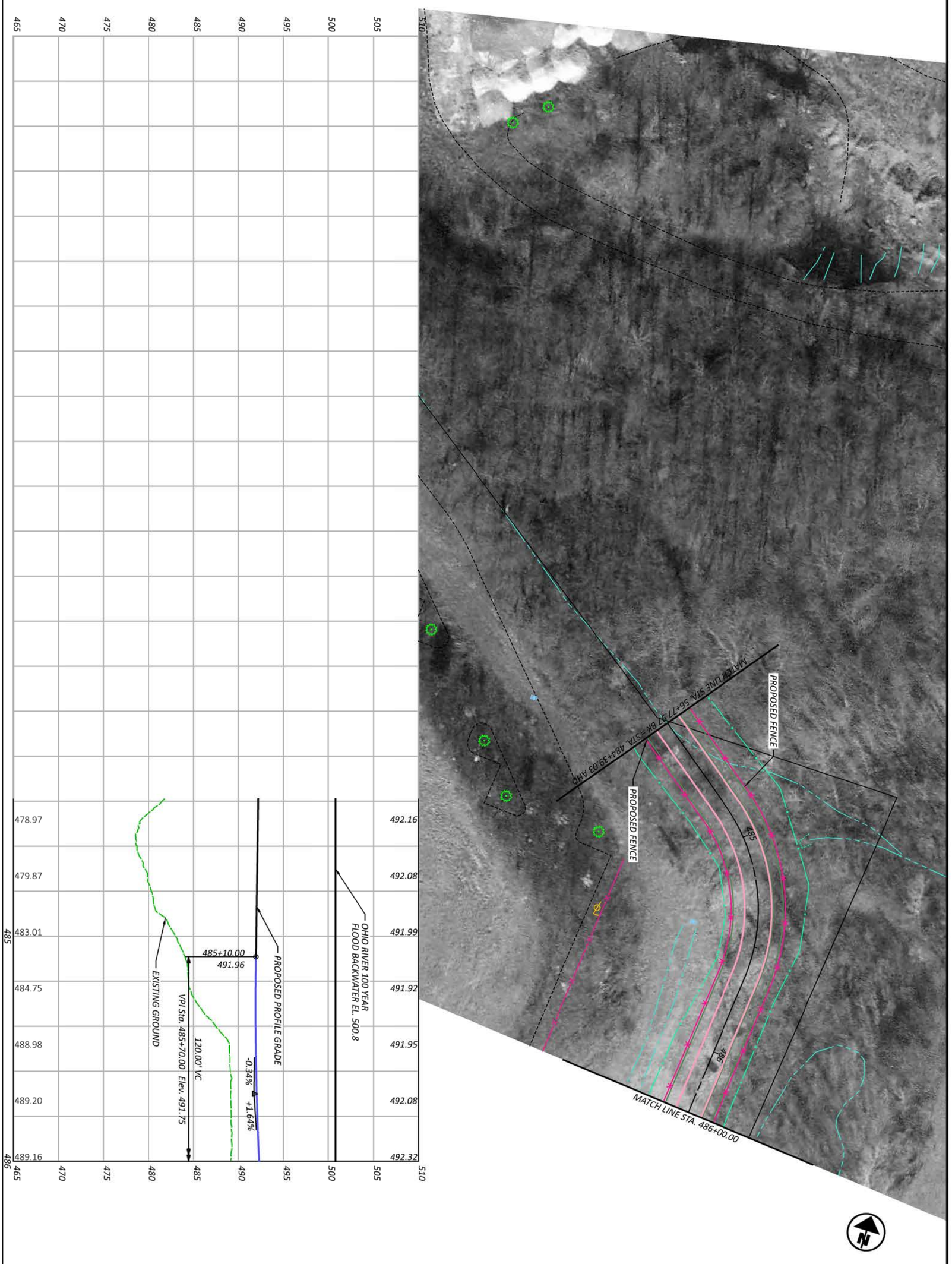

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SEGMENT 3 - ALTERNATIVE D
STA. 484+39.03 TO STA. STA. 486+00.00

HORIZONTAL SCALE IN FEET
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10 40

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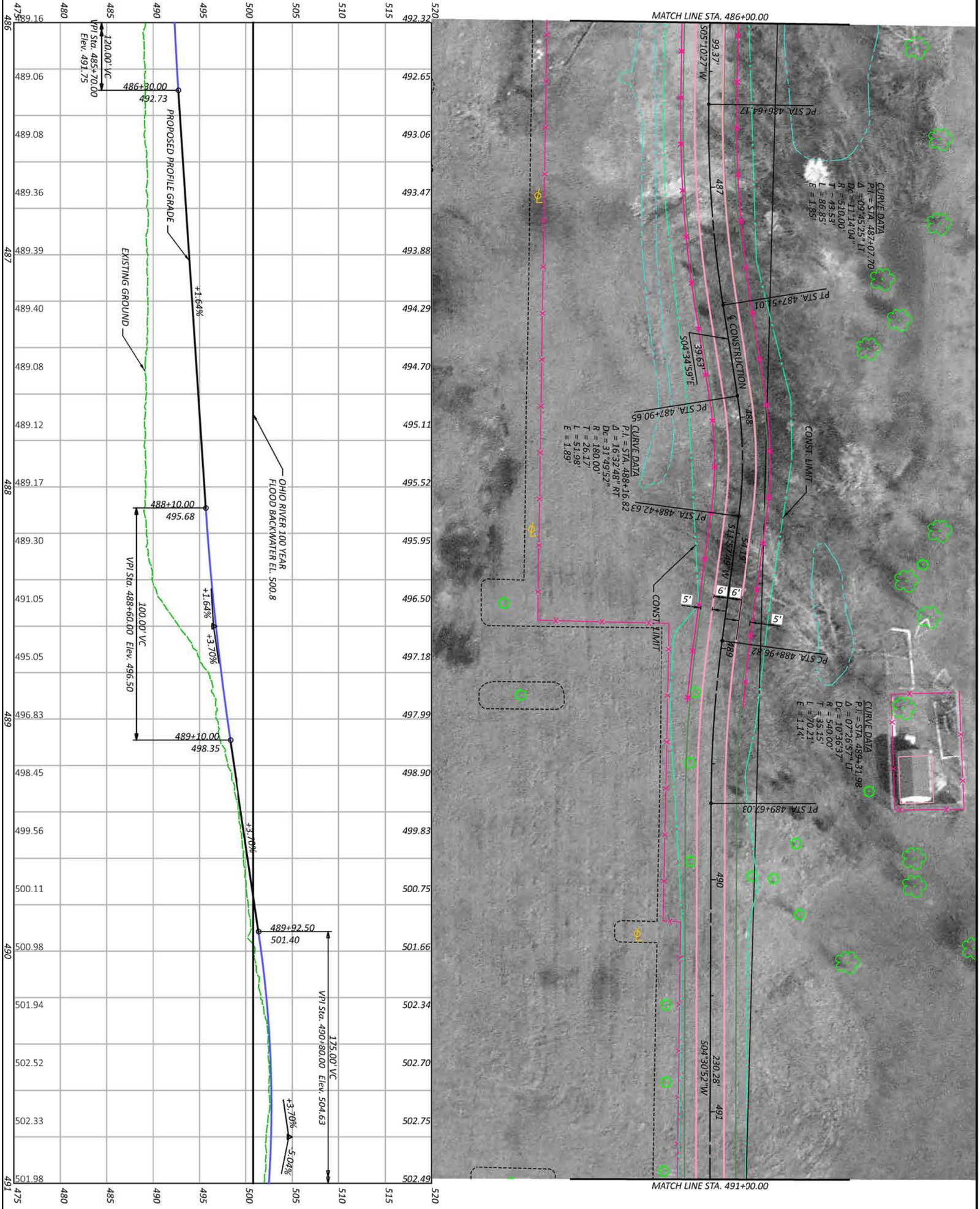

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SHEET	TOTAL
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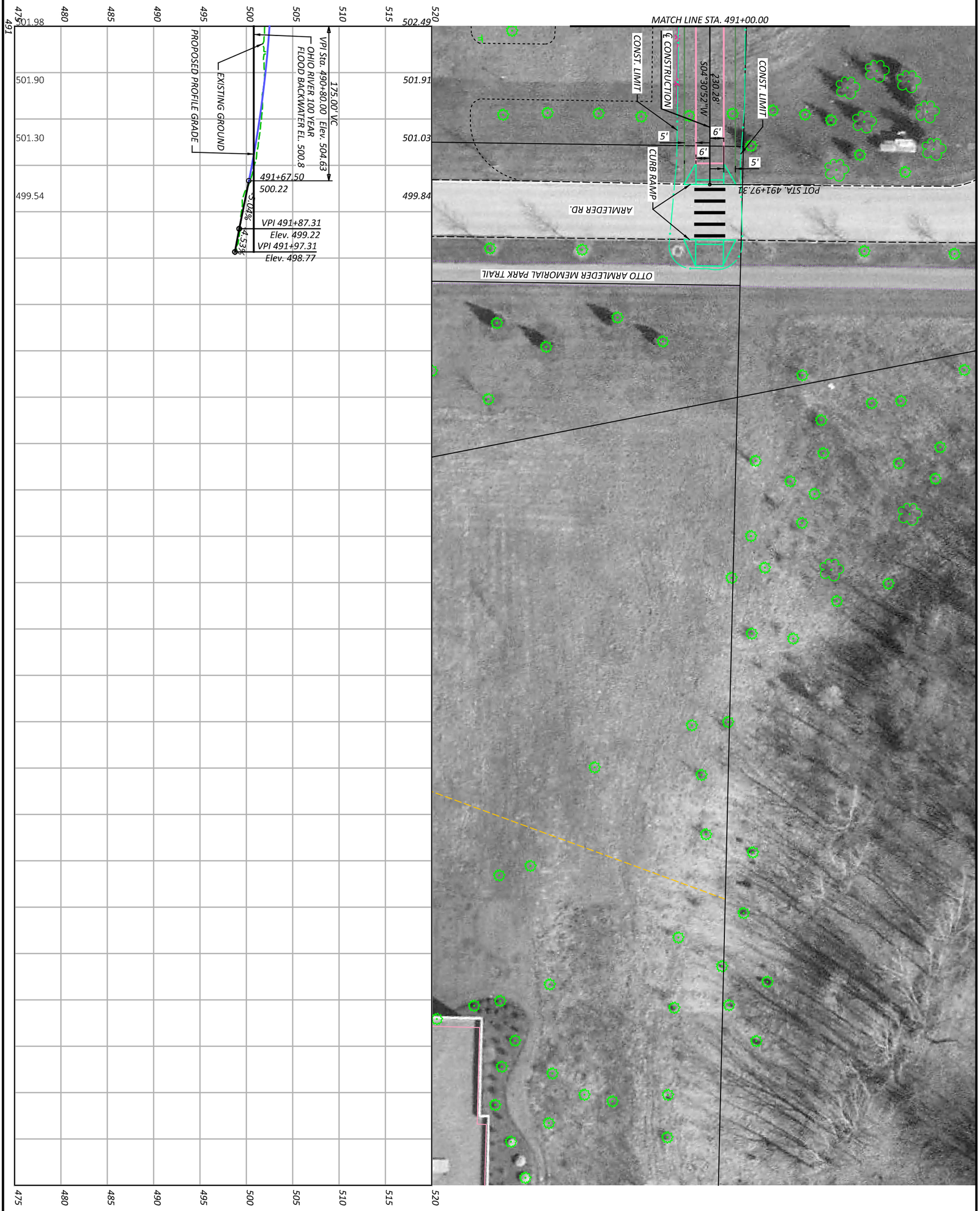

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HORIZONTAL SCALE IN FEET
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SHEET	TOTAL
P.16	16

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C-73

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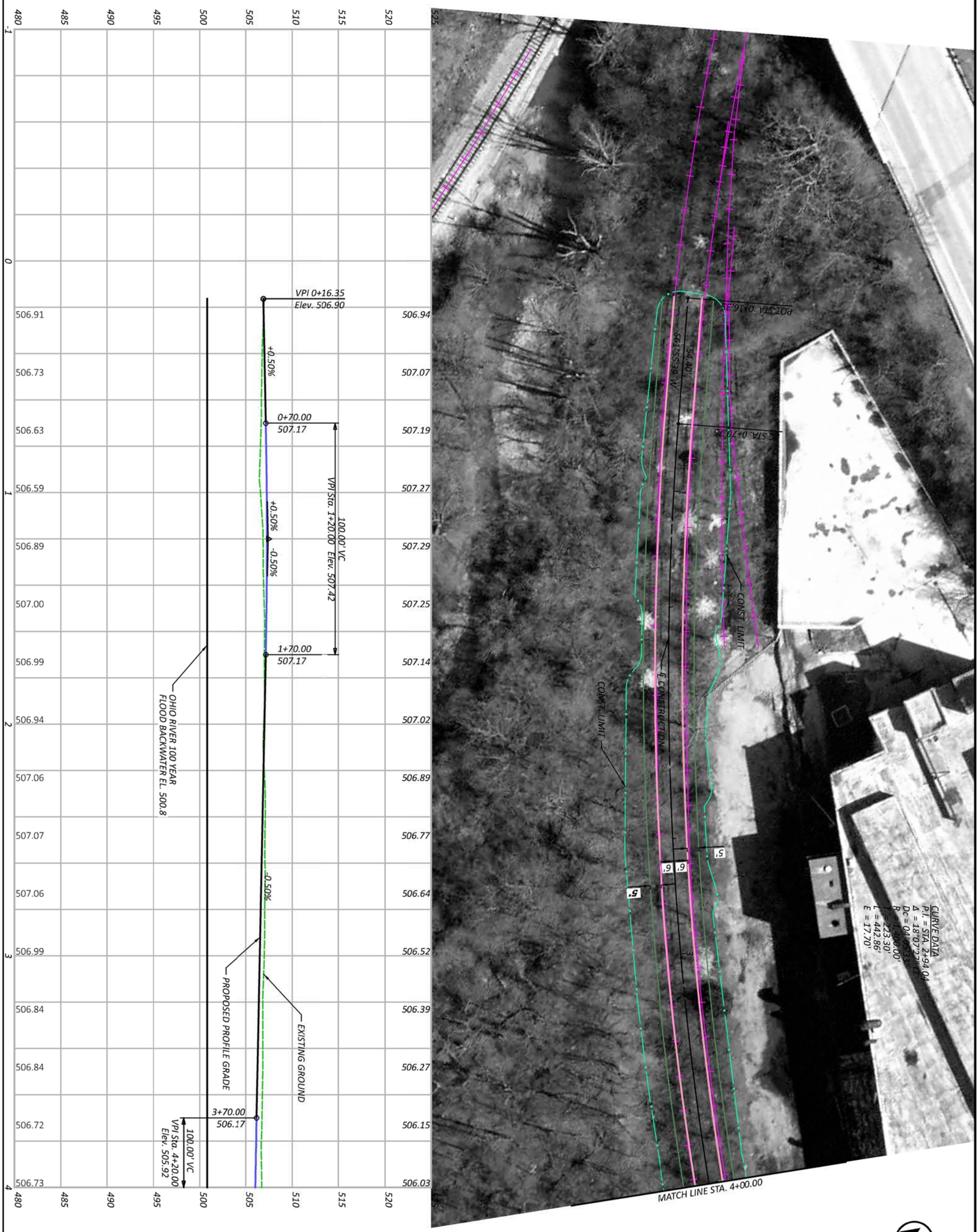

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STA. 00+06.35 TO STA. 4+00.00

HORIZONTAL SCALE IN FEET
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10 40

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PROJECT ID 113603
SHEET P.1 TOTAL 16

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REVIEWER: SNS 01-26-24
PROJECT ID: 113603
SHEET: P.2 TOTAL: 16

SEGMENT 3 - ALTERNATIVE E
STA. 4+00.00 TO STA. 9+00.00

HORIZONTAL SCALE IN FEET
0 20
10 40

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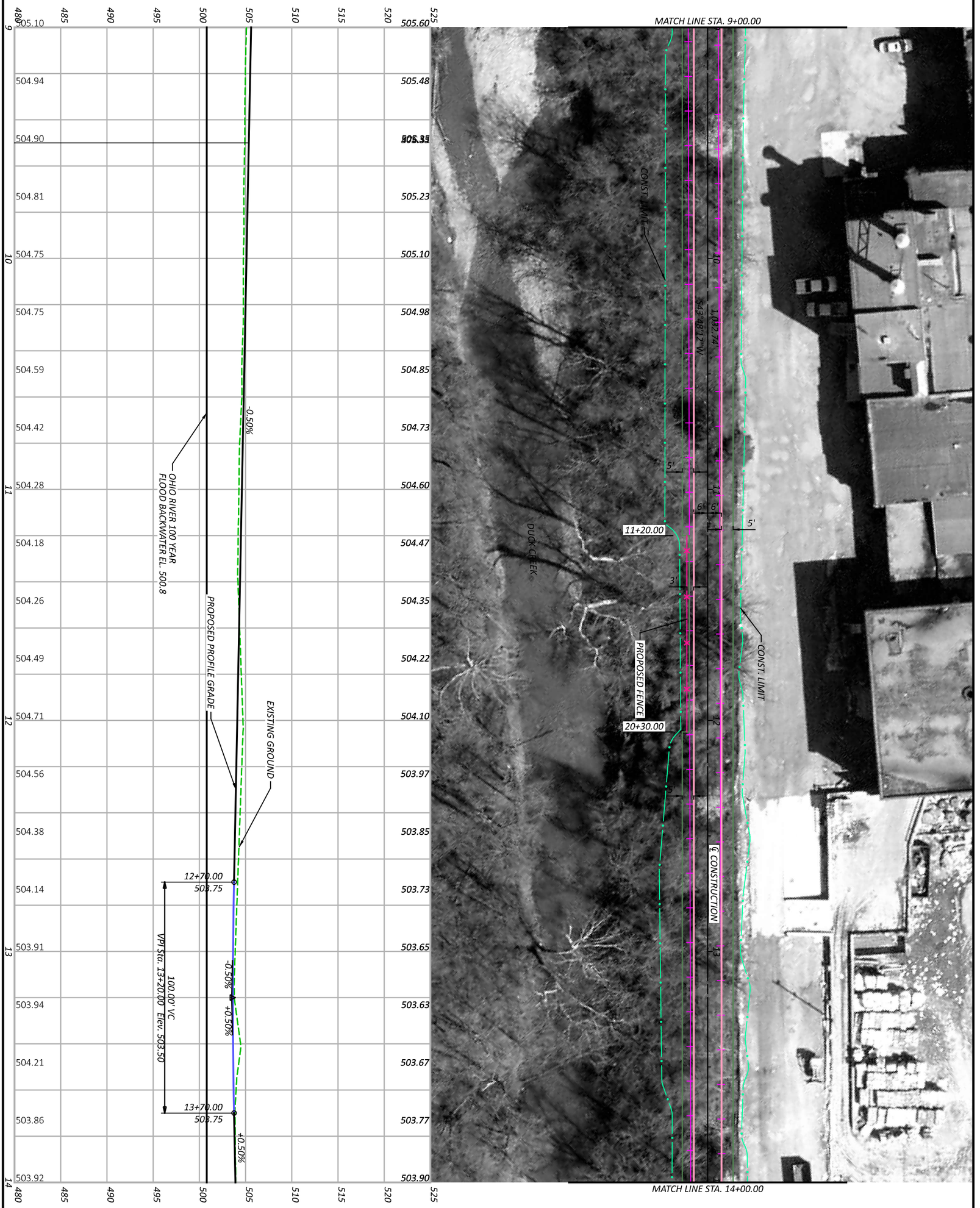

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SHEET	TOTAL
P.3	16

PROJECT ID: 113603

REVIEWER: SNS 01-26-24

DESIGNER: JGB

SEGMENT 3 - ALTERNATIVE E
STA. 9+00.00 TO STA. 14+00.00

HORIZONTAL SCALE IN FEET
0 20
10 40

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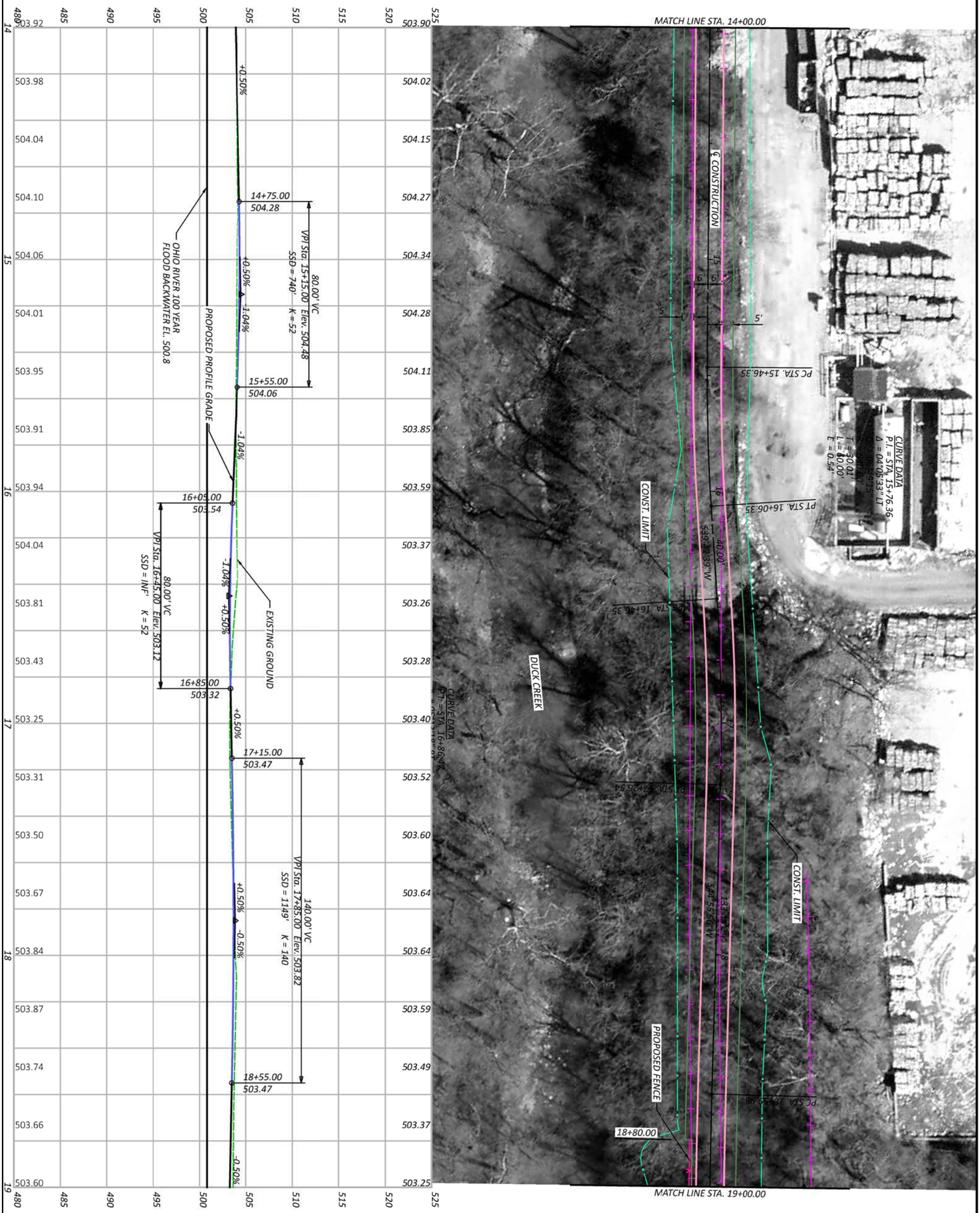

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HORIZONTAL SCALE IN FEET
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10 40

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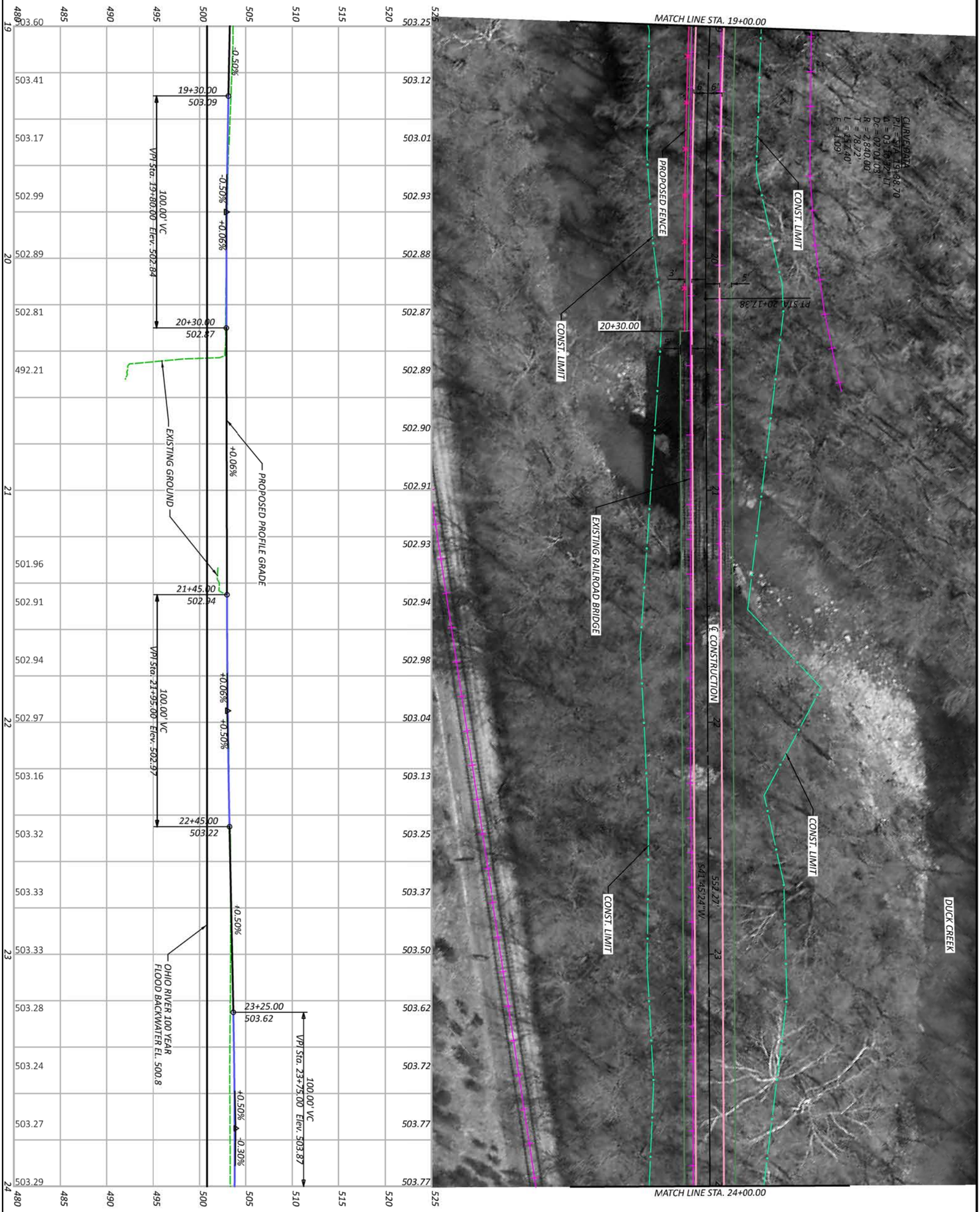

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HORIZONTAL SCALE IN FEET
0 20
10 40

HAM-WASSON WAY TO OTTO ARMLEDER

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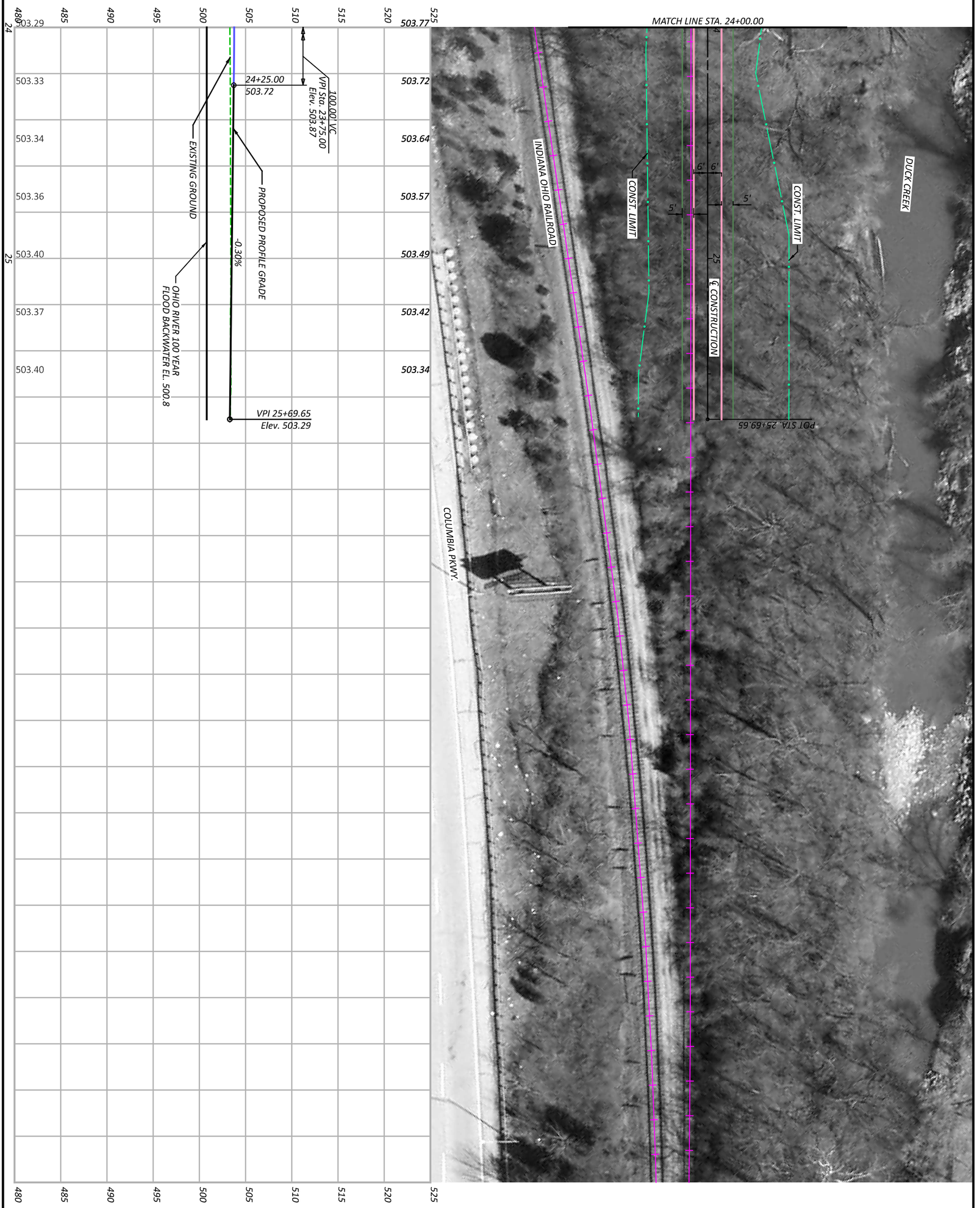

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JGB	SNS 01-26-24	113603	P.6	16

SEGMENT 3 - ALTERNATIVE E
STA. 19+00.00 TO STA. 25+69.65

HORIZONTAL SCALE IN FEET
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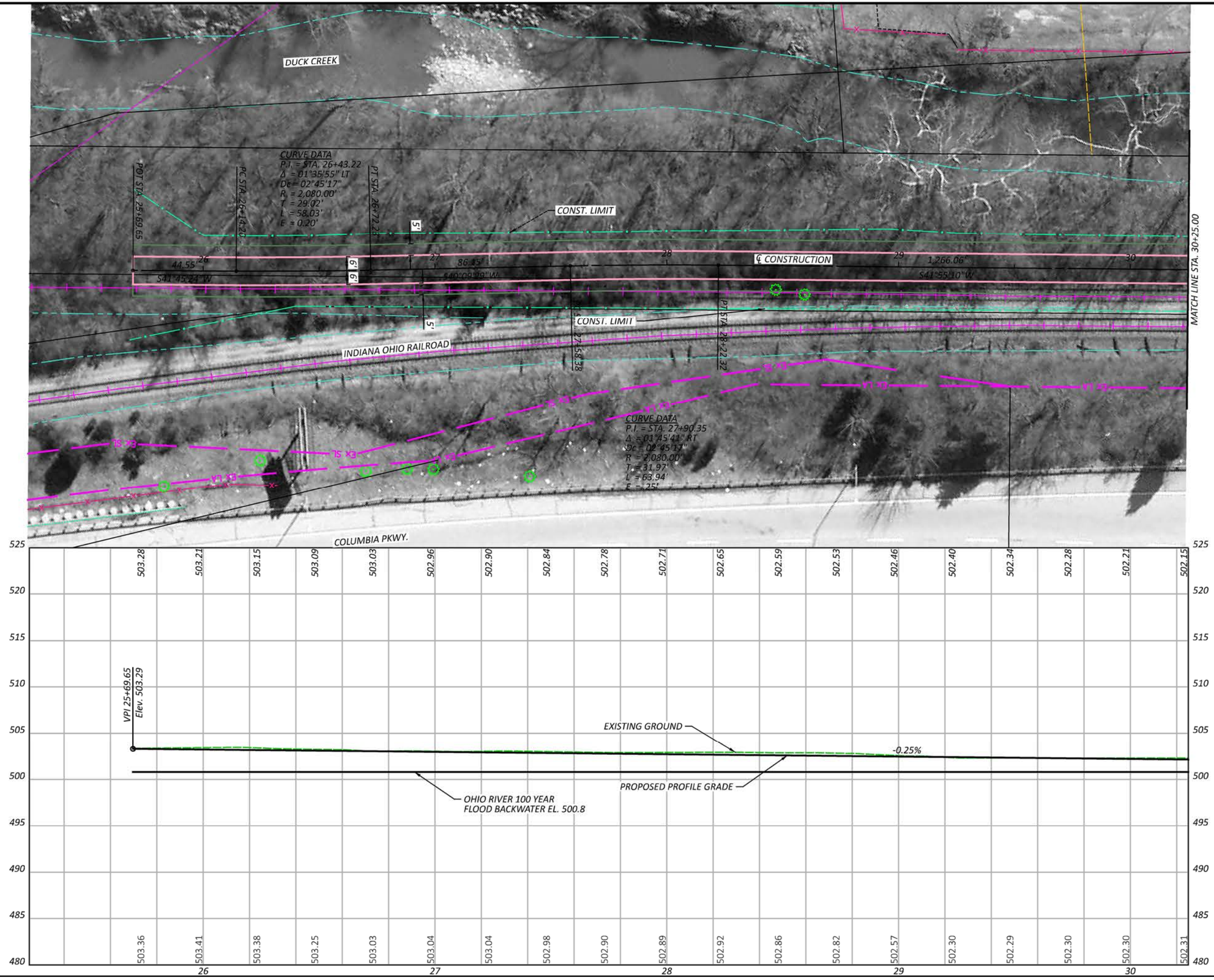

HORIZONTAL SCALE IN FEET
0 10 20 40

SEGMENT 3 - ALTERNATIVE E
STA. 25+69.65 TO STA. 30+25.00

HAM-WASSON WAY TO OTTO ARMLEDER

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PROJECT ID 113603
SHEET P.7 TOTAL 16

HORIZONTAL SCALE IN FEET
0 10 20 40

SEGMENT 3 - ALTERNATIVE E
STA. 30+25.00 TO STA. 35+25.00

HAM-WASSON WAY TO OTTO ARMLEDER

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DESIGNER JGB
REVIEWER SNS 02-02-24
PROJECT ID 113603
SHEET P.8 TOTAL 16

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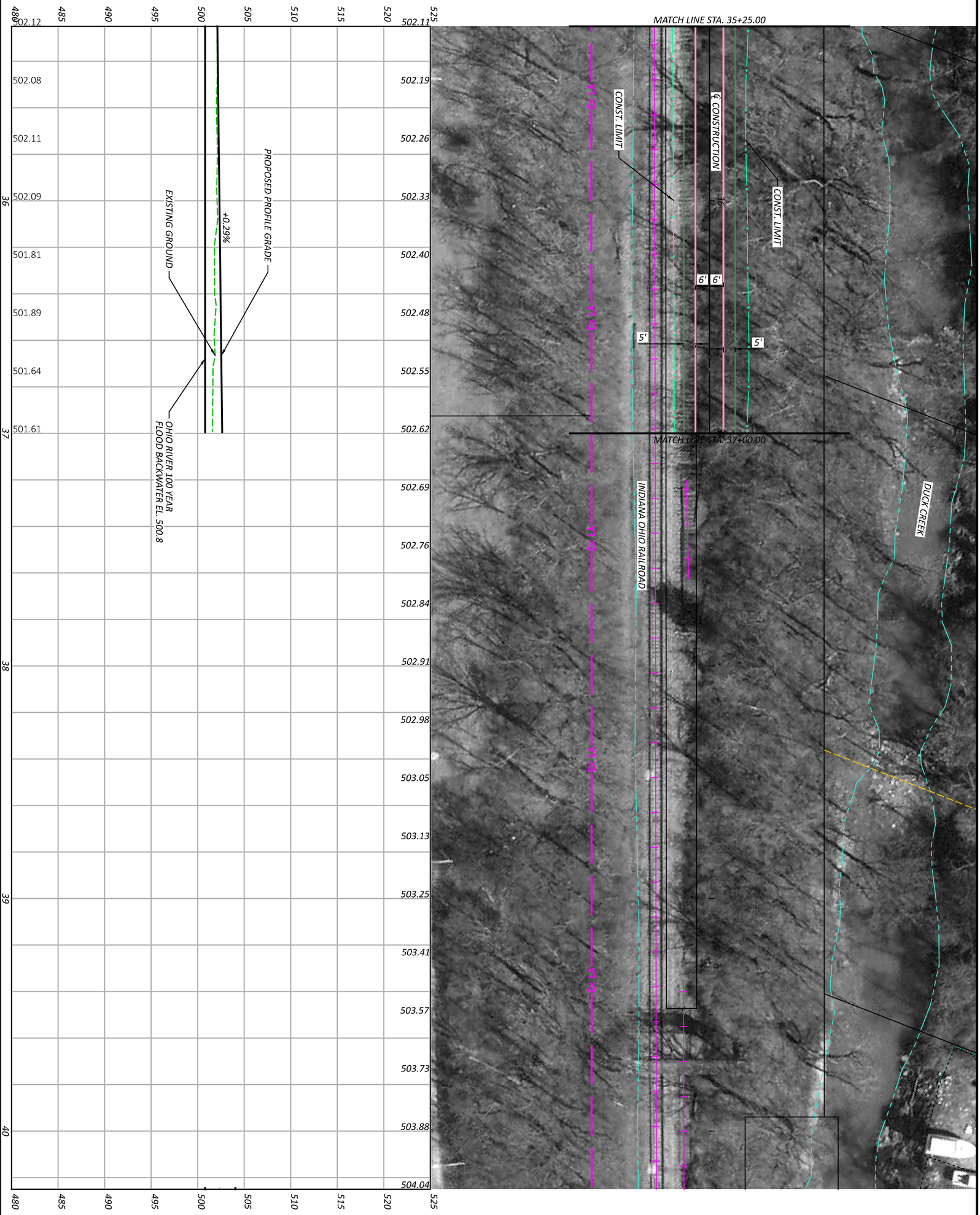

SEGMENT 3 - ALTERNATIVE E
STA. 35+25.00 TO STA. 37+00.00

HORIZONTAL SCALE IN FEET
0 20
10 40

SHEET P.9	TOTAL 16	PROJECT ID 113603	REVIEWER SNS 02-02-24	DESIGNER JGB	DESIGN AGENCY Stantec 10200 Alliance Road, Suite 300 Cincinnati, OH 45242 (513) 842-3400

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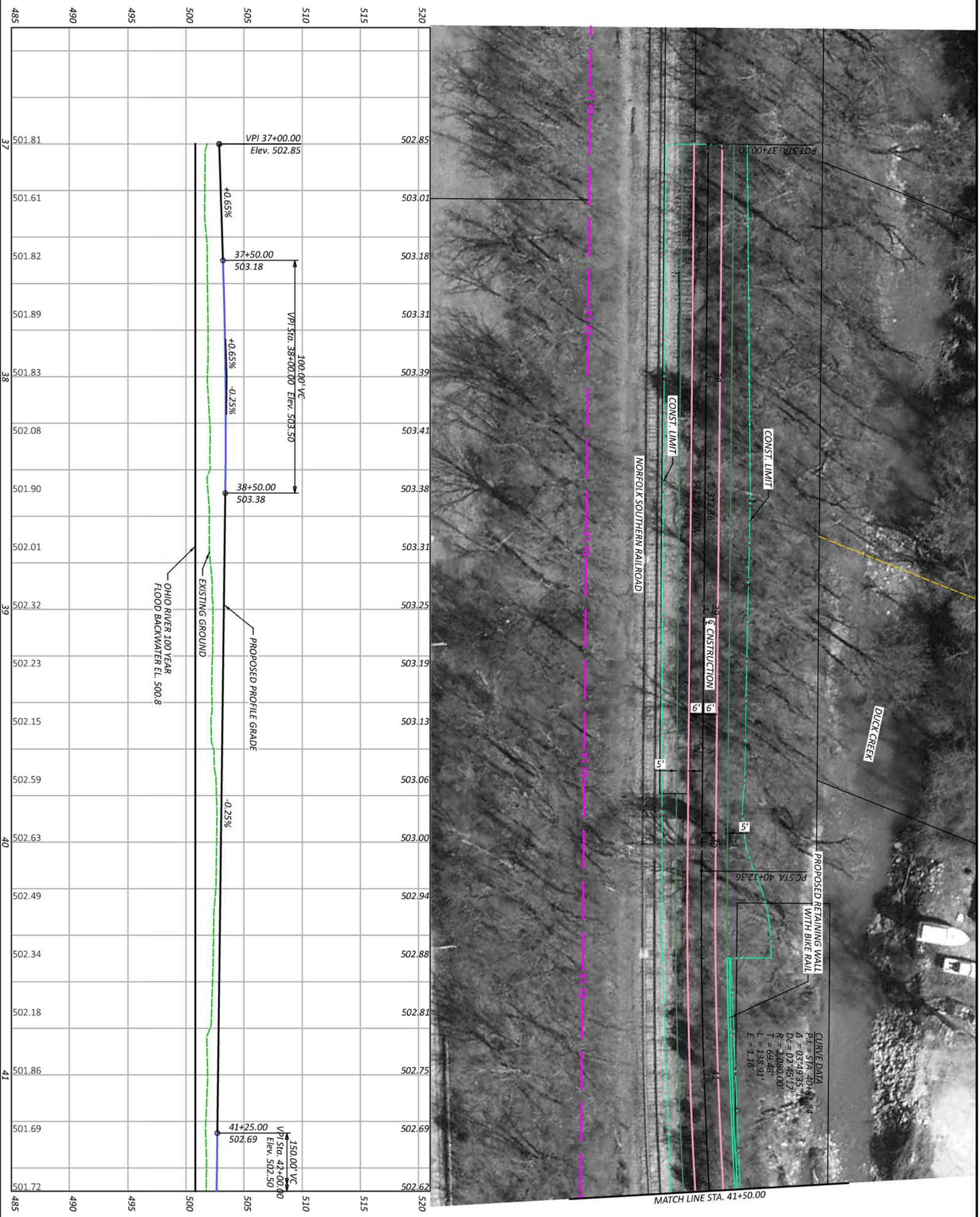

SEGMENT 3 - ALTERNATIVE E
STA. 37+00.00 TO STA. 41+50.00

HORIZONTAL SCALE IN FEET
0 20
10 40

DESIGNER	JGB
REVIEWER	SNS 01-26-24
PROJECT ID	113603
SHEET	P.10
TOTAL	15

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DUCK CREEK

CURVE DATA
P.I. = STA. 44+01.74
Δ = 03°41'20" LT
Dc = 11°27'33"
R = 500.00'
T = 16.10'
L = 32.19'
E = 0.26'

PROPOSED RETAINING WALL WITH BIKE RAIL

PT STA. 41+51.27

CONST. LIMIT

5'

82.81'
S38°05'35"W

42

43

6'

6'

65.34'
S41°51'51"W

PC STA. 43+85.05

PT STA. 44+17.83

44

℄ CONSTRUCTION

45

241.60'
S38°10'31"W

46

PROPOSED RETAINING WALL WITH BIKE RAIL

MATCH LINE STA. 41+50.00

MATCH LINE STA. 46+50.00

PC STA. 42+34.08

PT STA. 43+20.30

5'

CONST. LIMIT

Ex LA

Ex R/W

CURVE DATA
P.I. = STA. 42+77.20
Δ = 03°46'16" RT
Dc = 04°22'25"
R = 1,310.00'
T = 43.13'
L = 86.22'
E = .71'

502.64 502.56 502.49 502.43 502.36 502.29 502.21 502.14 502.07 502.00 501.93 501.86 501.78 501.71 501.64 501.53 501.36 501.11 500.79 500.43 500.08

501.72 501.48 501.11 501.46 501.44 501.26 501.39 501.59 501.82 501.78 501.44 501.60 501.73 501.08 500.93 497.87 497.53 497.59 497.04 494.50 493.41

515 510 505 500 495 490 485 480

150.00' VC
VPI Sta. 42+00.00 Elev. 502.50

100.00' VC
VPI Sta. 45+50.00 Elev. 501.50

42+75.00
502.29

45+00.00
501.64

46+00.00
500.79

PROPOSED PROFILE GRADE

-0.25% -0.29% -0.29% -0.29% -1.42% -1.42%

OHIO RIVER 100 YEAR
FLOOD BACKWATER EL. 500.8

EXISTING GROUND

42 43 44 45 46

HORIZONTAL SCALE IN FEET
0 10 20 40

SEGMENT 3 - ALTERNATIVE E
STA. 41+50.00 TO STA. 46+50.00

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SHEET P.11 TOTAL 15

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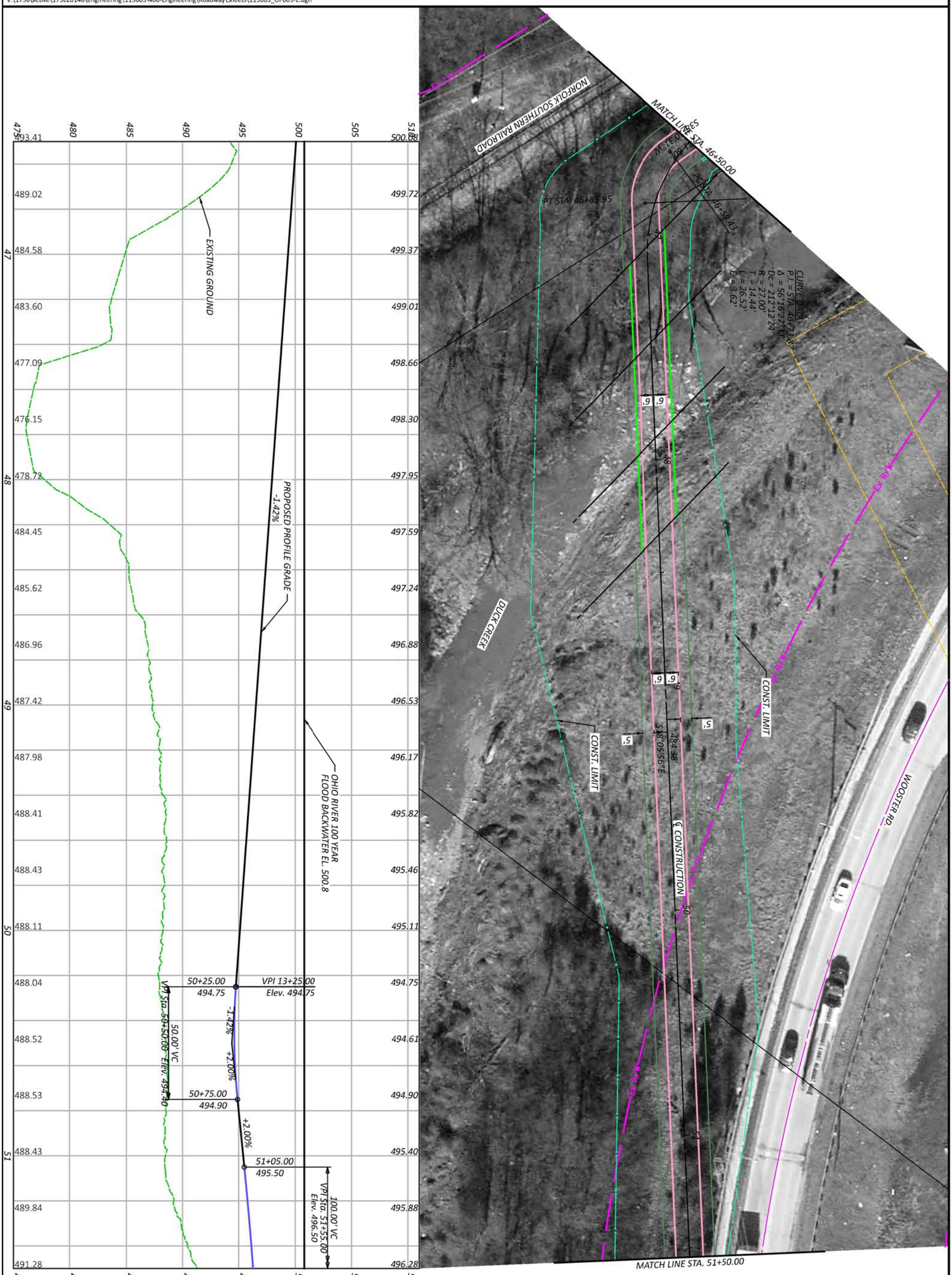

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SHEET P.12 TOTAL 15

SEGMENT 3 - ALTERNATIVE E
STA. 46+50.00 TO STA. 51+50.00

HORIZONTAL SCALE IN FEET
0 20
10 40

HORIZONTAL SCALE IN FEET
0 10 20 40

SEGMENT 3 - ALTERNATIVE E
STA. 51+50.00 TO STA. 56+50.00

HAM-WASSON WAY TO OTTO ARMLEDER

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PROJECT ID	
113603	
SHEET	TOTAL
P.13	15

HORIZONTAL SCALE IN FEET
0 10 20 40

SEGMENT 3 - ALTERNATIVE E
STA. 56+50.00 TO STA. 61+50.00

HAM-WASSON WAY TO OTTO ARMLEDER

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SHEET P.14 TOTAL 15

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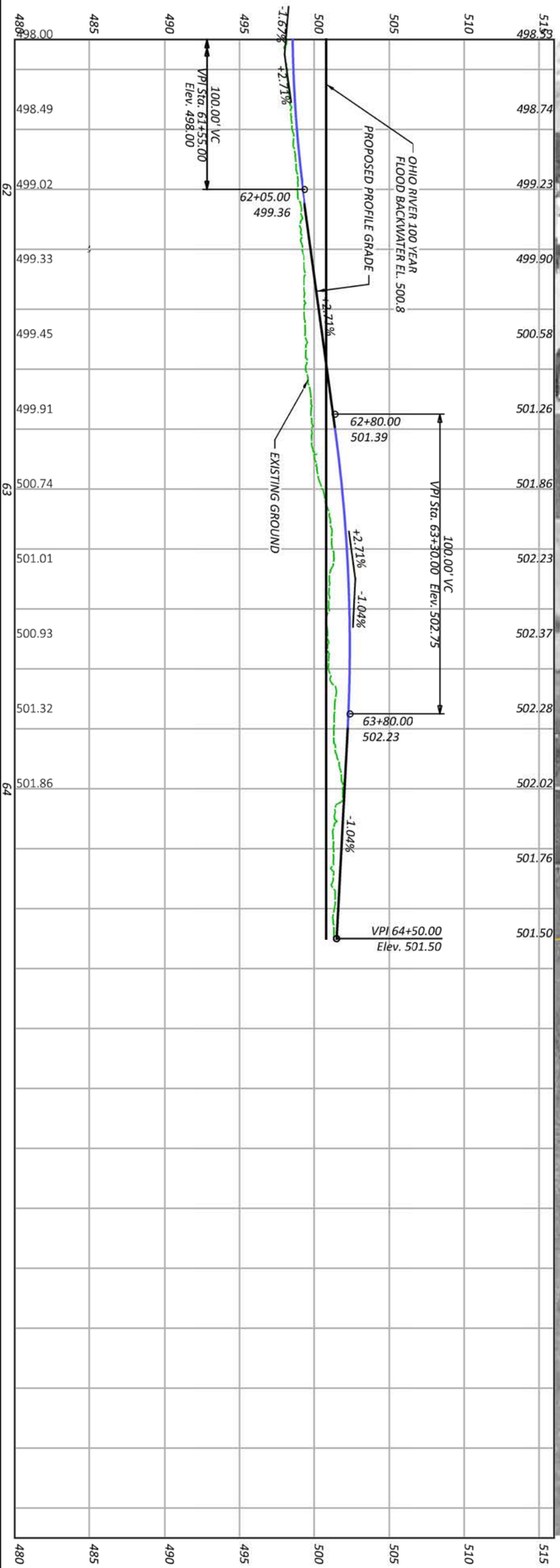

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SHEET P.15 | TOTAL 15

SEGMENT 3 - ALTERNATIVE E
STA. 61+50.00 TO STA. 66+50.00

HORIZONTAL SCALE IN FEET
0 20
10 40

Attachment D

Structures Type Studies

Segment 1 Structure Type Study

STRUCTURE TYPE STUDY
Wasson-Armleder Trail
Bridges on Segment 1

February 27, 2024

Prepared for:
ODOT - District 8

Prepared by:
Stantec

Project Number:
173620146

The conclusions in the Report titled Structure Type Study are Stantec's professional opinion, as of the time of the Report, and concerning the scope described in the Report. The opinions in the document are based on conditions and information existing at the time the scope of work was conducted and do not take into account any subsequent changes. The Report relates solely to the specific project for which Stantec was retained and the stated purpose for which the Report was prepared. The Report is not to be used or relied on for any variation or extension of the project, or for any other project or purpose, and any unauthorized use or reliance is at the recipient's own risk.

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This Report is intended solely for use by the Client in accordance with Stantec's contract with the Client. While the Report may be provided by the Client to applicable authorities having jurisdiction and to other third parties in connection with the project, Stantec disclaims any legal duty based upon warranty, reliance or any other theory to any third party, and will not be liable to such third party for any damages or losses of any kind that may result.

Prepared by: _____
Signature

_____
Printed Name

Reviewed by: _____
Signature

_____
Printed Name

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1 Introduction

The purpose of this report is to determine and evaluate the estimated construction cost for each of the two structures on alignment A proposed for the Segment 1 portion of the trail. The evaluation is to aid in determining the preferred alignment with which to move forward.

The proposed paved shared-use path will be 12 feet wide with 5-foot shoulders on each side. Segment 1-A provides an extension of the existing Wasson Armleder trail. This segment commences from a point where the existing trail leaves the abandoned railroad bed to connect to Old Red Bank Road and extends the trail across Duck Creek, Red Bank Road, and US 50 following the abandoned railroad bed and utilizing the two existing railroad bridges. This segment of the trail terminates at a point just west of Wooster Road.

2 Design Considerations

2.1 Design Specifications

All proposed structures will be designed in accordance with the 2020 ODOT Bridge Design Manual, the ODOT Multimodal Design Guide (2023), the AASHTO LRFD Bridge Design Specifications, 9th Edition (2020) and the AASHTO Guide Specifications for the Design of Pedestrian Bridges, 2nd Edition (2009).

2.2 Bridge Design Criteria

- Pedestrian Live Load of 90 psf
- H15-44 vehicle loading (Ambulance or maintenance vehicles) without dynamic load allowance
- No Future Wearing Surface
- The width of the bridges preferably should provide 16 feet face to face of the railings in accordance with the ODOT Mulitmodal Design Guide.

2.3 Geotechnical

No geotechnical borings will be performed for this segment since the trail utilizes existing structures. The structures appear to be stable without signs of settlement or movement in the substructures. The foundations supported railroad traffic for many years and the loadings from the proposed trail will not exceed the loadings from rail traffic.

2.4 Hydraulics

Hydraulics are not a consideration for these bridges since existing bridges will be utilized and none cross a body of water.

3 Alternatives

Alternatives have been considered for the utilization of the two abandoned railroad bridges on this segment. These alternatives are presented in this section.

3.1 Railroad Bridge over Duck Creek and Red Bank Road

3.1.1 EXISTING RAILROAD BRIDGE

The existing bridge is a steel plate girder structure with two steel girders spaced 6'-6" on center. Timber ties set directly on the steel stringers. The structure is 432'-8"± long with six spans, 65.75'± – 125.00'± – 76.58'± – 39.00'± – 63.00'± – 63.33'±. No protective coating is visible on any of the members. In general, the plate girders are 75.5"± deep except for Span 2 where the girders are 120.5" ± deep.

Piers 1 and 2 are concrete wall type piers. Span 4, and the end of Spans 3 and 5, is supported by a steel-framed trestle. The pier supporting Spans 5 and 6 is a steel A-frame. Both the trestle and the A-frame are supported on concrete foundations. All the steel members in both the superstructure and substructure appear to be in good condition with surface corrosion on all members.

3.1.1.1 Alternative 1

This alternative involves removing the timber ties and replacing them with a 9-inch± thick reinforced concrete deck supported on the steel stringers. The trail would be carried on top of the concrete slab with concrete barriers topped with steel tube railings. The height of the bridge from profile grade to the ground below varies from approximately 40 feet to 75 feet. Therefore, the railings will need to be taller than normal for the comfort and safety of cyclists and pedestrians.

The 2022 inspection report which was provided to us indicates the steel members of the superstructure are in fair condition with extensive surface corrosion. The concrete piers and abutments are in poor condition with significant amounts of cracking, efflorescence, and spalling. These will need to be cleaned and patched as part of this alternative.

3.1.1.2 Alternative 2

This alternative would involve the removal of the existing superstructure and providing a new superstructure with a length of approximately 432 feet. The existing abutments and piers would be modified to support the new superstructure. It is apparent this alternative would be much more expensive than Alternative 1 and will not be studied further at this time.

3.2 Railroad Bridge over US 50

3.2.1 EXISTING RAILROAD BRIDGE

The existing bridge is a two-span steel through-plate girder structure constructed in 1962 with spans of 67.00'± - 62.00'± and a total length of 129'±. All steel members are in good condition with the protective

coating intact. The concrete wall-type abutments and pier appear to be sound with no visible cracking or spalling.

Field measurements indicate the through-plate girders are spaced 15.5'± center to center with a clear distance between flanges of 12.5'±. The superstructure consists of steel floorbeams between the through-girders topped with a steel plate deck. The floorbeams are located approximately mid-height of the through-girders.

3.2.1.1 Alternative 1

This alternative utilizes the existing structure with minor modifications to accommodate the trail. The ballast and ties would be removed and the steel deck plate cleaned. An asphalt wearing surface would be placed on the steel deck plate to provide a wearing surface for the trail. Due to the geometry of the existing structure, the trail width would be reduced significantly while crossing the bridge. The existing structure provides only 12.5'± clear distance between the flanges of the girders. A rub rail would be required to protect cyclists from contacting the flanges, reducing the usable width to 11.5'±. This is less than the width of the trail off the bridge and well below the recommended minimum width of 14' for a 12' wide trail. A railing would be mounted on top of the flanges as fall protection for the riders.

3.2.1.2 Alternative 2

This alternative would involve the removal of the existing superstructure and providing a new superstructure with a width sufficient to accommodate the trail. The existing abutments would be modified to support the new superstructure. It is apparent this alternative would be much more expensive than Alternative 1 and will not be studied further at this time.

4 Cost Estimates

Preliminary construction cost estimates were developed for each proposed structure to aid in selecting a preferred trail alignment. Future maintenance costs are not included in these estimates, but will be significant over the life of the structures, particularly for the bridge over Duck Creek and Red Bank Road.

Alignment Segment	Estimated Construction Cost
1-A	
Bridge over Duck Creek/Red Bank Road	$935,500
RR Bridge over US 50	$151,200
Total Segment Cost	$1,086,700

APPENDIX A

Appendix A

A.1 Proposed Trail Alignments

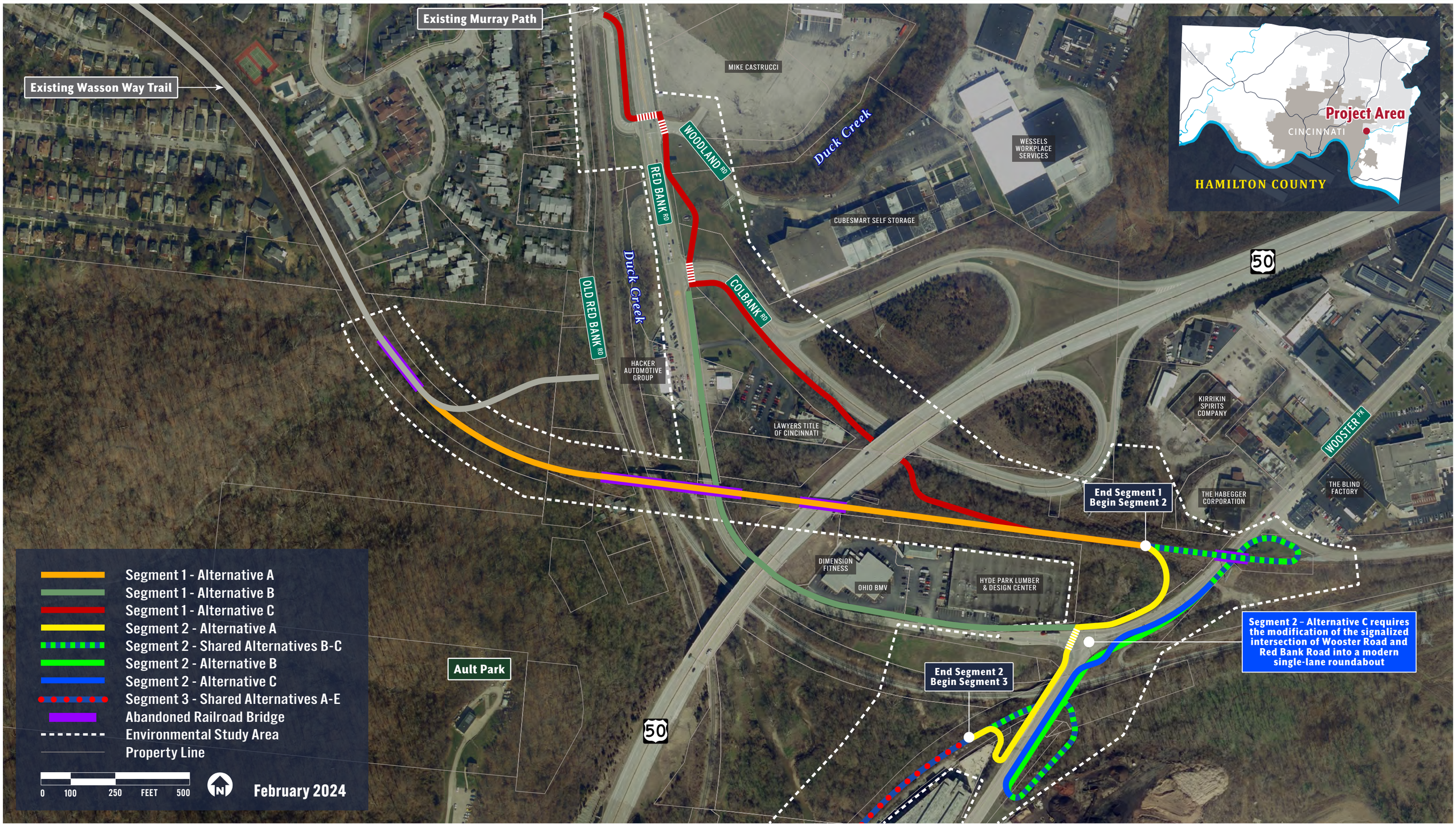
A.2 Estimated Construction Cost

A.3 Estimated Quantities

APPENDIX A.1

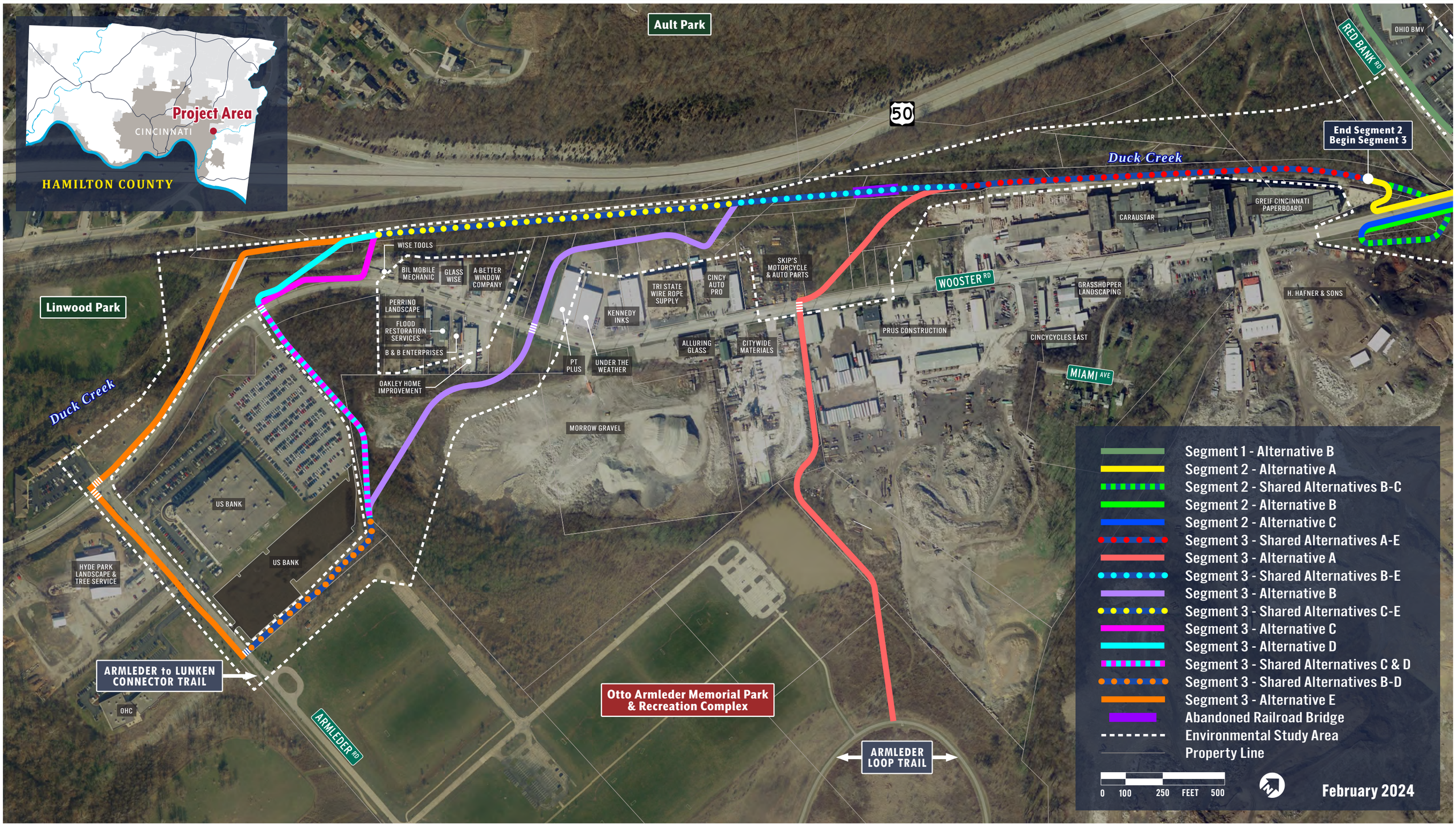
Shared Use Path Alternatives

Wasson Way Trail Connection to Otto Armleder Park (PID 113603)



Shared Use Path Alternatives

Wasson Way Trail Connection to Otto Armleder Park (PID 113603)



APPENDIX A.2

Estimate Seg 1-A RB

Estimated Cost:$779,588.48

Contingency: 20.00%

Estimated Total: $935,506.18

Wasson Armleder
Structure Type Study
Segment 1-A, Railroad Bridge
over Duck Creek & Red Bank

Base Date: 02/27/24

Spec Year: 23

Unit System: E

Work Type: GEN CONST: INVLVS 2 OR MOR MAJ WRK TYPE

Highway Type:

Urban/Rural Type: RURAL CLASS

Season: SUMMER

County: HAMILTON

Latitude of Midpoint: 0

Longitude of Midpoint: 0

District: 08

Federal/State Project Number:

Prepared by Stantec on 02/27/24

Line #	Item Number	Quantity	Units	Unit Price	Extension
	Description				
	Supplemental Description				

Group 0001: Initial Group

0005	202E11202	1.000	LS	$50,000.00000	$50,000.00
	PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN				
0009	509E10000	60,100.000	LB	$1.92291	$115,566.89
	EPOXY COATED STEEL REINFORCEMENT				
0010	511E34446	219.000	CY	$1,103.92587	$241,759.77
	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK				
0012	511E44110	17.000	CY	$1,497.25943	$25,453.41
	CLASS QC1 CONCRETE, ABUTMENT NOT INCLUDING FOOTING				
0015	517E75120	864.000	FT	$224.98307	$194,385.37
	RAILING (CONCRETE PARAPET WITH TWIN STEEL TUBE RAILING)				
0016	518E21200	28.000	CY	$125.96998	$3,527.16
	POROUS BACKFILL WITH GEOTEXTILE FABRIC				
0017	518E40000	50.000	FT	$10.49939	$524.97
	6" PERFORATED CORRUGATED PLASTIC PIPE				
0018	518E40010	30.000	FT	$19.30129	$579.04
	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIAL S				
0019	519E11100	1,000.000	SF	$97.79187	$97,791.87
	PATCHING CONCRETE STRUCTURE				
0020	519E12610	400.000	FT	$125.00000	$50,000.00
	SPECIAL - CONCRETE REPAIR BY EPOXY INJECTION INCLUDING SURFA CE PREPARATION				

Total for Group 0001:$779,588.48

Estimate Seg 1-A US 50

Estimated Cost:$125,969.65

Contingency: 20.00%

Estimated Total: $151,163.58

Wasson Armleder
Structure Type Study
Segment 1-A, Railroad Bridge
over US 50

Base Date: 02/27/24

Spec Year: 23

Unit System: E

Work Type: GEN CONST: INVLVS 2 OR MOR MAJ WRK TYPE

Highway Type:

Urban/Rural Type: RURAL CLASS

Season: SUMMER

County: HAMILTON

Latitude of Midpoint: 0

Longitude of Midpoint: 0

District: 08

Federal/State Project Number:

Prepared by Stantec on 02/27/24

Line #	Item Number	Quantity	Units	Unit Price	Extension
	Description				
	Supplemental Description				

Group 0001: Initial Group

0005	202E11202	1.000	LS	$25,000.00000	$25,000.00
	PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN				
0007	441E10100	9.000	CY	$300.00000	$2,700.00
	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (446), PG70-22M				
0008	441E10100	15.000	CY	$300.00000	$4,500.00
	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (446), PG70-22M				
0009	509E10000	2,200.000	LB	$2.56338	$5,639.44
	EPOXY COATED STEEL REINFORCEMENT				
0012	511E44110	17.000	CY	$1,497.25943	$25,453.41
	CLASS QC1 CONCRETE, ABUTMENT NOT INCLUDING FOOTING				
0015	517E75120	258.000	FT	$224.98307	$58,045.63
	RAILING (CONCRETE PARAPET WITH TWIN STEEL TUBE RAILING)				
0016	518E21200	28.000	CY	$125.96998	$3,527.16
	POROUS BACKFILL WITH GEOTEXTILE FABRIC				
0017	518E40000	50.000	FT	$10.49939	$524.97
	6" PERFORATED CORRUGATED PLASTIC PIPE				
0018	518E40010	30.000	FT	$19.30129	$579.04
	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIAL S				

Total for Group 0001:$125,969.65

APPENDIX A.3

	Length	Width	Height	Number	Total	Units
Item 507, 12" CIP Reinforced Piles, Driven						
Abutment	50.00	1.00	1.00	0	0	LF
Pier	63.00	1.00	1.00	0	0	
	62.00	1.00	1.00	0	0	
					0	LF
Item 507, 12" CIP Reinforced Piles, Furnished						
Abutment	55.00	1.00	1.00	0	0	LF
Pier	68.00	1.00	1.00	0	0	
	67.00	1.00	1.00	0	0	
					0	LF
Item 509, Epoxy Coated Reinforcing Steel						
Abutment	Assume 1% steel				2205	LB
Pier	Assume 2% steel				0	
Slab	Assume 2% steel				57859	
					60064	LB
Item 511, Class QC2 Concrete, Superstructure						
Slab	432.00	17.33	0.75	1	208	CY
Haunch	432.00	2.00	0.17	2	11	
					219	CY
Item 511, Class QC1 Concrete, Abutment Including Footing						
Footing	25.00	3.00	3.00	0	0	CY
Beam Seat	25.00	3.00	3.00	2	17	
Wingwalls	6.52	2.25	3.00	0	0	
					17	CY
Item 511, Class QC1 Concrete, Pier above Footing						
	16.47	3.00	2.00	0	0	CY
					0	CY
Item 517, Twin Steel Tube Railing, modified.						
	432.00	1.00	1.00	2	864	LF
Item 518, Porous Backfill with Geotextile Fabric						
	25.00	2.00	7.50	2	28	CY
Item 518, 6" Perforated Plastic Pipe						
	25.00	1.00	1.00	2	50	LF
Item 518, 6" Non-Perforated Plastic Pipe						
	15.00	1.00	1.00	2	30	LF

Designed by:_____Checked by:_____

	Length	Width	Height	Number	Total	Units
Item 519, Patching Concrete Structures (Assume 25% of surface area)						
rear abutment	13.00	1.00	15.00	1	49	SF
	34.50	1.00	15.00	2	259	
pier 1	16.00	1.00	33.00	2	264	
pier 2	16.00	1.00	41.00	2	328	
forward abutment	21.00	1.00	10.00	1	53	
	12.00	1.00	10.00	2	60	
					1012	SF
Item 519, Epoxy Injection (Assume 10% of surface area)						
rear abutment	13.00	1.00	15.00	1	20	LF
	34.50	1.00	15.00	2	104	
pier 1	16.00	1.00	33.00	2	106	
pier 2	16.00	1.00	41.00	2	131	
forward abutment	21.00	1.00	10.00	1	21	
	12.00	1.00	10.00	2	24	
					405	LF

		Length	Width	Height	Number	Total	Units
Item 441 Asphalt Surface Course							
		129.00	15.50	0.13	1	9	CY
Item 445 Asphalt Intermediate Course							
		129.00	15.50	0.21	1	15	CY
Item 507, 12" CIP Reinforced Piles, Furnished							
	Abutment	134.00	1.00	1.00	0	0	LF
	Pier	5.00	1.00	1.00	0	0	
		5.00	1.00	1.00	0	0	
						0	LF
Item 509, Epoxy Coated Reinforcing Steel							
	Abutment	Assume 1% steel				2205	LB
	Pier	Assume 2% steel				0	
	Slab	Assume 2% steel				0	
						2205	LB
Item 511, Class QC2 Concrete, Superstructure							
	Slab	129.00	17.33	0.75	0	0	CY
	Curb	129.00	0.50	0.50	0	0	
						0	CY
Item 511, Class QC1 Concrete, Abutment Including Footing							
	Footing	25.00	3.00	3.00	0	0	CY
	Beam Seat	25.00	3.00	3.00	2	17	
	Wingwalls	6.52	2.25	3.00	0	0	
						17	CY
Item 511, Class QC1 Concrete, Pier above Footing							
		16.47	3.00	2.00	0	0	CY
						0	CY
Item 517, Twin Steel Tube Railing, modified.							
		129.00	1.00	1.00	2	258	LF
Item 518, Porous Backfill with Geotextile Fabric							
		25.00	2.00	7.50	2	28	CY
Item 518, 6" Perforated Plastic Pipe							
		25.00	1.00	1.00	2	50	LF
Item 518, 6" Non-Perforated Plastic Pipe							
		15.00	1.00	1.00	2	30	LF

Designed by:_____Checked by:_____

Segment 2 Structure Type Study

Stantec

STRUCTURE TYPE STUDY
Wasson-Armleder Trail
Bridges on Segment 2

February 27, 2024

Prepared for:
ODOT - District 8

Prepared by:
Stantec

Project Number:
173620146

The conclusions in the Report titled Structure Type Study are Stantec's professional opinion, as of the time of the Report, and concerning the scope described in the Report. The opinions in the document are based on conditions and information existing at the time the scope of work was conducted and do not take into account any subsequent changes. The Report relates solely to the specific project for which Stantec was retained and the stated purpose for which the Report was prepared. The Report is not to be used or relied on for any variation or extension of the project, or for any other project or purpose, and any unauthorized use or reliance is at the recipient's own risk.

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Prepared by: _____
Signature

_____
Printed Name

Reviewed by: _____
Signature

_____
Printed Name

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1 Introduction

The purpose of this report is to determine and evaluate the estimated construction cost for each of the two alternative alignments (B and C) proposed for the Segment 2 portion of the trail. The evaluation is to aid in determining the preferred alignment with which to move forward. Segment 2 crosses the Wooster Road bridge over the Norfolk Southern tracks and this study will determine the recommended manner of accommodating the trail on the bridge and the cost of the proposed structure modification for each alternative.

The proposed paved shared-use path will be 12 feet wide with 5-foot shoulders on each side. Segment 2 begins at a point on the west side of Wooster Road, north of Red Bank Road and terminates on the west side of Wooster Road on the south side of the Norfolk Southern tracks. The trail will cross the existing railroad bridge over Wooster Road as well as the Wooster Road bridge over the Norfolk Southern tracks.

2 Design Considerations

2.1 Design Specifications

All proposed structures will be designed in accordance with the 2020 ODOT Bridge Design Manual, the ODOT Multimodal Design Guide (2023), the AASHTO LRFD Bridge Design Specifications, 9th Edition (2020) and the AASHTO Guide Specifications for the Design of Pedestrian Bridges, 2nd Edition (2009).

2.2 Bridge Design Criteria

- Pedestrian Live Load of 90 psf
- H15-44 vehicle loading (Ambulance or maintenance vehicles) without dynamic load allowance
- No Future Wearing Surface
- The width of the bridges preferably should provide 16 feet face to face of the railings in accordance with the ODOT Mulitmodal Design Guide.

2.3 Geotechnical

A geotechnical investigation has not been performed at this stage of the project. Geotechnical information is based on historical borings in the vicinity of the bridges. The historical borings indicate the presence of sand, gravel, and clay to a depth of approximately 80 feet. Rock was not encountered in any of the borings. Therefore, the assumption for this is that new foundations for widening the Wooster Road bridge will be deep foundations using CIP piling.

No geotechnical investigation will be performed for the existing railroad bridge. The substructures appear to be stable without signs of settlement or movement. The foundations supported railroad traffic for many years and the loadings from the proposed trail will not exceed the loadings from rail traffic.

2.4 Hydraulics

Hydraulics are not a consideration for these bridges since existing bridges will be utilized and none cross a body of water.

3 Alternatives

Alternatives have been considered for the utilization of the abandoned railroad bridge over Wooster Road. These alternatives are presented in this section along with discussions for modifications to the Wooster Road bridge over the Norfolk Southern tracks which will be required in Segments 2-B or 2-C.

3.1 Segment 2-B

3.1.1 ALIGNMENT

For this alignment, the trail begins at a point on the west side of Wooster Road, crosses over Wooster Road on an abandoned railroad bridge, then descends and runs along the east side of Wooster Road, crossing the active Norfolk Southern railroad tracks by widening the existing roadway bridge over the railroad before descending and crossing under Wooster Road alongside the active railroad tracks. The segment terminates at a point on the west side of Wooster Road, south of the railroad tracks. This alignment requires modifications to two structures, the abandoned railroad bridge over Wooster Road and the highway bridge carrying Wooster Road over the Norfolk Southern railroad tracks.

3.1.2 ABANDONED RAILROAD BRIDGE

The existing bridge is a single-span steel through-plate girder structure with a length of 75’±. The superstructure consists of two steel stringers and five steel floorbeams spanning between the through-girders. All the steel members appear to be in good condition with surface corrosion on all members. No protective coating is visible on any of the members.

Knee braces on the inside of each girder stiffen the girders at the floorbeams. Timber ties span between the stringers and originally supported the tracks which were placed on longitudinal timber members. Field measurements indicate the through-girders are spaced 16’-4”± center-to-center with 14’-10”± clear between the flanges. The knee braces each extend into the deck 2’-6”± at the level of the timber ties and 5”± at the level of the top flange. The girders extend 4’-9”± above the timber ties.

3.1.2.1 Alternative 1

This alternative involves removing the timber ties and replacing them with a 9-inch thick reinforced concrete deck supported on the steel stringers and floorbeams. The trail would be carried on top of the

concrete slab with curbs to contain drainage on the deck away from the steel through-girders. This alternative would only provide a clear distance between the knee braces of 11'-4"±. This would be significantly less than the 16'-0" recommended by the ODOT Multimodal Design Guide for a 12'-0" trail and less than the width of the trail off the bridge. A rub rail would be required inside of the knee braces to protect cyclists from contacting the steel braces. This would further reduce the available clear width.

3.1.2.2 Alternative 2

This alternative also involves removing the timber ties and replacing them with a 9-inch thick reinforced concrete deck supported on the steel stringers and floorbeams. However, fill material would be placed on the deck to raise the elevation of the trail to a point where 14'-0" of clearance could be provided between the knee braces. This would involve raising the profile of the trail 3'-0"± across the bridge and would provide the minimum shy distance of 1'-0" recommended by the ODOT Multimodal Design Guide for a trail on a bridge. Raising the trail would put the trail profile grade 1'-9"± below the top of the through-girders, therefore, railings would be required on each side of the trail. The railings would be installed in the fill material to provide a railing 4'-6" above the trail.

Lightweight fill would be used to minimize the additional dead load on the structure with asphalt paving on top of the fill. Based on the existing plans, we've determined the capacity of the structure is more than adequate to support the loading from the shared-use path.

3.1.2.3 Alternative 3

This alternative would involve the removal of the existing superstructure and providing a new superstructure with a width sufficient to accommodate the trail with the preferred shy distances. The existing abutments would be modified to support the new superstructure. It is apparent this alternative would be much more expensive than Alternatives 1 and 2 and will not be studied further at this time.

3.1.3 WOOSTER ROAD HIGHWAY BRIDGE

This concept involves widening to the east the existing three-span Wooster Road bridge over the Norfolk Southern railroad tracks to accommodate the proposed shared-use path. The existing superstructure consists of rolled steel beams with a composite concrete deck. The deflector shaped parapet on the east side would remain in place to separate traffic from the shared-use path. The widening would be constructed outside of the barrier with the deck extended at the same cross slope. A 16'-0" clear trail would be provided with a bicycle railing on the outside, for an overall widened width of 17'-0". The widening would require three new W30x148 steel beams spaced at 5'-0" center-to-center, matching the beam size and spacing on the existing bridge. The existing hammerhead piers would be widened to support the new beams by filling in below the cantilevered cap on the east side and creating a wall-type pier on the east end. The wall-type abutment on the north end of the bridge and the spill-thru abutment on the south end would also be extended to support the new beams.

The existing vertical clearance over the Norfolk Southern tracks is shown as 23.3 feet on the Bridge Inventory and Appraisal sheet from ODOT. The required minimum clearance over the tracks is 23 feet. Extending the normal cross slope of 0.0156 ft/ft/ on the bridge across the proposed widening would

reduce the vertical clearance to 23.05± feet. Therefore, after the tracks have been surveyed to determine the actual clearance, it may be necessary to reduce the cross slope on the widened portion, or reverse the cross slope on the widened portion, to maintain the required minimum clearance.

3.2 Segment 2-C

3.2.1 ALIGNMENT

For this alignment, the trail begins at a point on the west side of Wooster Road, crosses over Wooster Road on an abandoned railroad bridge, then descends and runs along the east side of Wooster Road, crossing the active Norfolk Southern railroad tracks by means of the existing roadway bridge over the railroad before descending and crossing under Wooster Road alongside the active railroad tracks. The segment terminates at a point on the west side of Wooster Road, south of the railroad tracks. This alignment requires modifications to two structures, the abandoned railroad bridge over Wooster Road and the highway bridge carrying Wooster Road over the Norfolk Southern railroad tracks.

3.2.2 ABANDONED RAILROAD BRIDGE

The existing bridge is a single-span steel through-plate girder structure with a length of 75'±. The superstructure consists of two steel stringers and five steel floorbeams spanning between the through-girders. All the steel members appear to be in good condition with surface corrosion on all members. No protective coating is visible on any of the members.

Knee braces on the inside of each girder stiffen the girders at the floorbeams. Timber ties span between the stringers and originally supported the tracks which were placed on longitudinal timber members. Field measurements indicate the through-girders are spaced 16'-4"± center-to-center with 14'-10"± clear between the flanges. The knee braces each extend into the deck 2'-6"± at the level of the timber ties and 5"± at the level of the top flange. The girders extend 4'-9"± above the timber ties.

3.2.2.1 Alternative 1

This alternative involves removing the timber ties and replacing them with a 9-inch thick reinforced concrete deck supported on the steel stringers and floorbeams. The trail would be carried on top of the concrete slab with curbs to contain drainage on the deck away from the steel through-girders. This alternative would only provide a clear distance between the knee braces of 11'-4"±. This would be significantly less than the 16'-0" recommended by the ODOT Multimodal Design Guide for a 12'-0" trail and less than the width of the trail off the bridge. A rub rail would be required inside of the knee braces to protect cyclists from contacting the steel braces. This would further reduce the available clear width.

3.2.2.2 Alternative 2

This alternative also involves removing the timber ties and replacing them with a 9-inch thick reinforced concrete deck supported on the steel stringers and floorbeams. However, fill material would be placed on the deck to raise the elevation of the trail to a point where 14'-0" of clearance could be provided between the knee braces. This would involve raising the profile of the trail 3'-0"± across the bridge and would

provide the minimum shy distance of 1'-0" recommended by the ODOT Multimodal Design Guide for a trail on a bridge. Raising the trail would put the trail profile grade 1'-9"± below the top of the through-girders, therefore, railings would be required on each side of the trail. The railings would be installed in the fill material to provide a railing 4'-6" above the trail.

Lightweight fill would be used to minimize the additional dead load on the structure with asphalt paving on top of the fill. Based on the existing plans, we've determined the capacity of the structure is more than adequate to support the loading from the shared-use path.

3.2.3 WOOSTER ROAD HIGHWAY BRIDGE

This concept involves utilizing the existing three-span Wooster Road bridge over the Norfolk Southern railroad tracks without widening the bridge to accommodate the proposed shared-use path. The existing superstructure consists of rolled steel beams with a composite concrete deck. A raised 5'-0" sidewalk is provided on the west side of the bridge with a deflector shaped parapet on the east side. This alternative proposes to remove the existing sidewalk, reduce the number of traffic lanes on Wooster Road across the bridge from three to two, and provide the shared-use path on the east side of the bridge. A new traffic barrier would be required on the west side of the bridge. A traffic barrier would also be provided on the east side of the two traffic lanes to separate the shared-use path from traffic. A new bicycle railing would be provided on the east side of the shared-use path. Both edges of the deck would be replaced to accommodate the new barriers, but no structural changes to the existing bridge are required.

4 Cost Estimates

Preliminary construction cost estimates were developed for each proposed structure on each alignment. Since all structure types are of similar material, future maintenance costs will be similar for each alternative and thus do not impact the selection of the preferred alternative.

Alignment Segment	Estimated Construction Cost
2-B	
Alternative 1 – CIP concrete slab	$252,231
Alternative 2 - CIP concrete slab with fill	$271,635 (recommended)
Wooster Road Bridge Widening	$1,640,272
Total Segment Cost using Alternative 2	$1,911,907

Alignment Segment	Estimated Construction Cost
2-C	
Alternative 1 – CIP concrete slab	$252,231
Alternative 2 - CIP concrete slab with fill	$271,635 (recommended)
Wooster Road Bridge Modification	$585,400
Total Segment Cost using Alternative 2	$857,035

5 Recommendation

This recommendation is only for the alternatives considered for rehabilitation of the railroad bridge. The costs for the Wooster Road bridge modifications will be used to determine the preferred trail alignment.

Based on the estimated initial construction cost, Alternative 1 is the less expensive alternative for each alignment. However, as noted above, it does not provide sufficient width to carry the trail across the bridge without significant reduction in the width of the trail. Considering that Alternative 2 is only 7.7% more expensive than Alternative 1, we recommend Alternative 2 be utilized in the rehabilitation of the railroad bridge for each alignment. The Total Segment Cost will be utilized for each alignment to determine the preferred trail alignment.

APPENDIX A

Appendix A

A.1 Proposed Trail Alignments

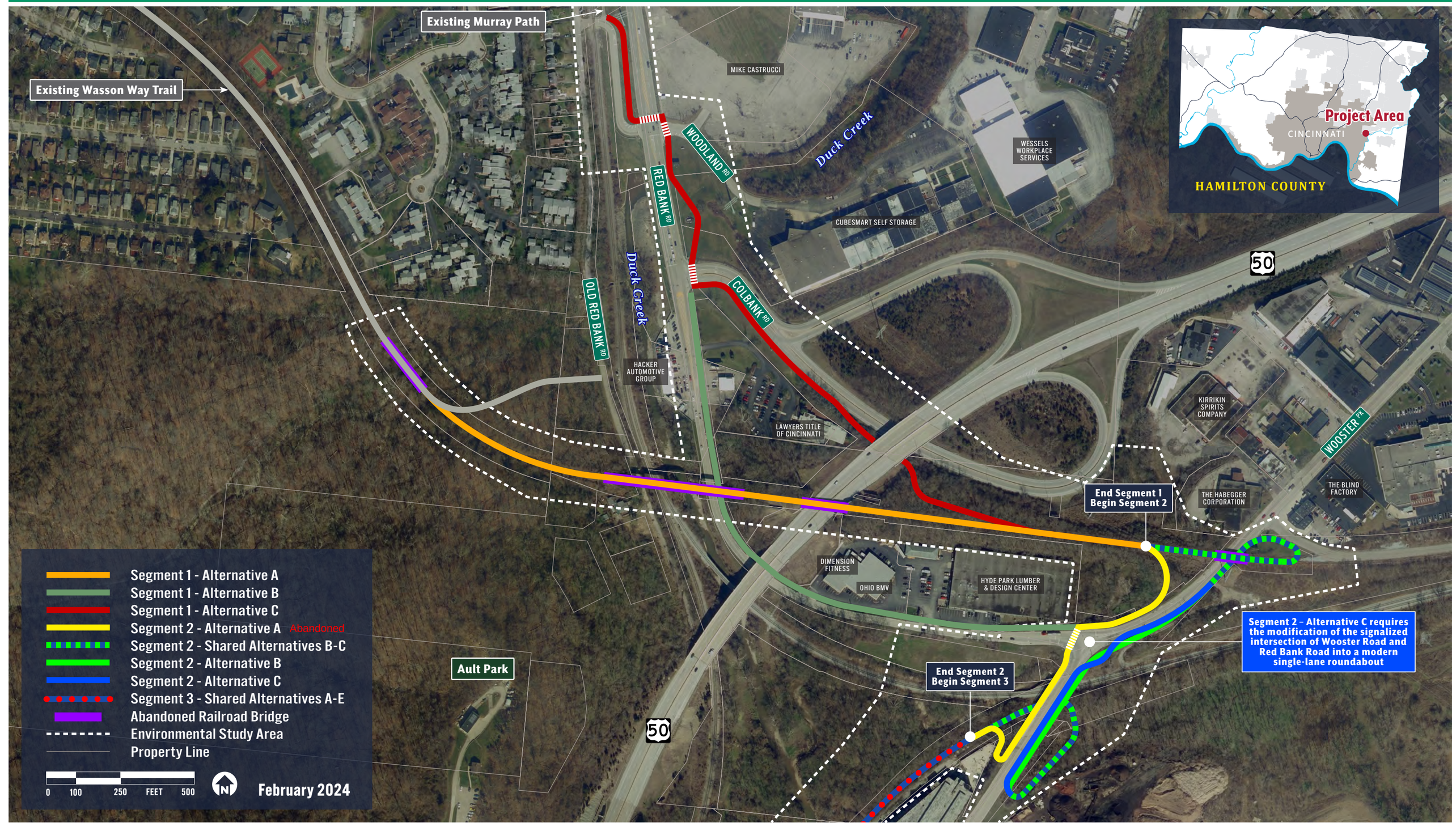
A.2 Segment 2-B Estimated Construction Costs and Quantities

A.3 Segment 2-C Estimated Construction Costs and Quantities

APPENDIX A.1

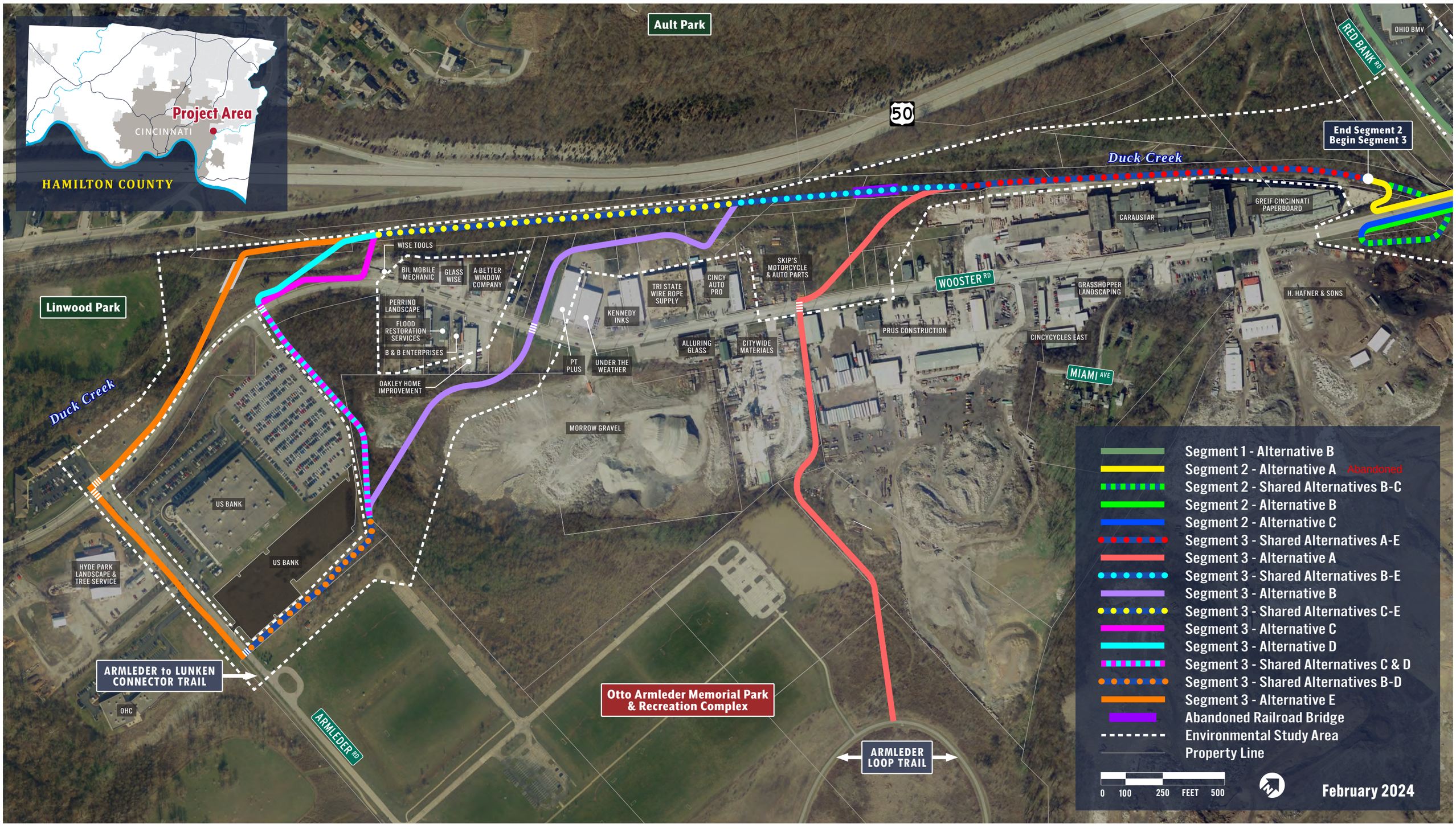
Shared Use Path Alternatives

Wasson Way Trail Connection to Otto Armleder Park (PID 113603)



Shared Use Path Alternatives

Wasson Way Trail Connection to Otto Armleder Park (PID 113603)



APPENDIX A.2

Estimate Seg 2-B, RR 1

Estimated Cost:$210,192.21

Contingency: 20.00%

Estimated Total: $252,230.65

Wasson Armleder
Structure Type Study
Segment 2-B, RR Bridge Rehab
Alternative 1

Base Date: 02/27/24

Spec Year: 23

Unit System: E

Work Type: GEN CONST: INVLVS 2 OR MOR MAJ WRK TYPE

Highway Type:

Urban/Rural Type: RURAL CLASS

Season: SUMMER

County: HAMILTON

Latitude of Midpoint: 0

Longitude of Midpoint: 0

District: 08

Federal/State Project Number:

Prepared by Stantec on 02/27/24

Line #	Item Number	Quantity	Units	Unit Price	Extension
	Description				
	Supplemental Description				

Group 0001: Initial Group

0005	202E11202	1.000	LS	$25,000.00000	$25,000.00
	PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN				
0009	509E10000	11,200.000	LB	$2.22525	$24,922.80
	EPOXY COATED STEEL REINFORCEMENT				
0010	511E34444	34.000	CY	$2,872.91304	$97,679.04
	CLASS QC2 CONCRETE, BRIDGE DECK				
0012	511E44110	17.000	CY	$1,497.25943	$25,453.41
	CLASS QC1 CONCRETE, ABUTMENT NOT INCLUDING FOOTING				
0015	517E75120	150.000	FT	$224.98307	$33,747.46
	RAILING (CONCRETE PARAPET WITH TWIN STEEL TUBE RAILING)				
0017	518E21200	19.000	CY	$129.47872	$2,460.10
	POROUS BACKFILL WITH GEOTEXTILE FABRIC				
0018	518E40000	50.000	FT	$10.49939	$524.97
	6" PERFORATED CORRUGATED PLASTIC PIPE				
0019	518E40010	20.000	FT	$20.22156	$404.43
	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIAL S				

Total for Group 0001:$210,192.21

Estimate Seg 2-B, RR 2

Estimated Cost:$226,363.03

Contingency: 20.00%

Estimated Total: $271,635.64

Wasson Armleder
Structure Type Study
Segment 2-B, RR Bridge Rehab
Alternative 2

Base Date: 02/27/24

Spec Year: 23

Unit System: E

Work Type: GEN CONST: INVLVS 2 OR MOR MAJ WRK TYPE

Highway Type:

Urban/Rural Type: RURAL CLASS

Season: SUMMER

County: HAMILTON

Latitude of Midpoint: 0

Longitude of Midpoint: 0

District: 08

Federal/State Project Number:

Prepared by Stantec on 02/27/24

Line #	Item Number	Quantity	Units	Unit Price	Extension
	Description				
	Supplemental Description				
Group 0001: Initial Group					
0005	202E11202	1.000	LS	$25,000.00000	$25,000.00
	PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN				
0007	441E10100	6.000	CY	$300.00000	$1,800.00
	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (446), PG70-22M				
0008	441E10100	9.000	CY	$300.00000	$2,700.00
	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (446), PG70-22M				
0009	509E10000	11,200.000	LB	$2.22525	$24,922.80
	EPOXY COATED STEEL REINFORCEMENT				
0010	511E34444	34.000	CY	$2,872.91304	$97,679.04
	CLASS QC2 CONCRETE, BRIDGE DECK				
0012	511E44110	17.000	CY	$1,497.25943	$25,453.41
	CLASS QC1 CONCRETE, ABUTMENT NOT INCLUDING FOOTING				
0015	517E75120	150.000	FT	$224.98307	$33,747.46
	RAILING (CONCRETE PARAPET WITH TWIN STEEL TUBE RAILING)				
0017	518E21200	19.000	CY	$129.47872	$2,460.10
	POROUS BACKFILL WITH GEOTEXTILE FABRIC				
0018	518E40000	50.000	FT	$10.49939	$524.97
	6" PERFORATED CORRUGATED PLASTIC PIPE				
0019	518E40010	20.000	FT	$20.22156	$404.43
	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIAL S				
0020	613E41200	136.000	CY	$85.81483	$11,670.82
	LOW STRENGTH MORTAR BACKFILL				

Total for Group 0001:$226,363.03

Estimate Seg 2-B Wstr

Estimated Cost:$1,366,893.32

Contingency: 20.00%

Estimated Total: $1,640,271.98

Wasson Armleder
Structure Type Study
Segment 2-B, Wooster Bridge

Base Date: 02/27/24

Spec Year: 23

Unit System: E

Work Type: GEN CONST: INVLVS 2 OR MOR MAJ WRK TYPE

Highway Type:

Urban/Rural Type: RURAL CLASS

Season: SUMMER

County: HAMILTON

Latitude of Midpoint: 0

Longitude of Midpoint: 0

District: 08

Federal/State Project Number:

Prepared by Stantec on 02/27/24

Line #	Item Number	Quantity	Units	Unit Price	Extension
	Description				
	Supplemental Description				

Group 0001: Initial Group

0005	202E11202	1.000	LS	$50,000.00000	$50,000.00
	PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN				
0006	505E11100	1.000	LS	$30,000.00000	$30,000.00
	PILE DRIVING EQUIPMENT MOBILIZATION				
0007	507E00500	760.000	FT	$14.46205	$10,991.16
	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN				
0008	507E00550	830.000	FT	$48.61848	$40,353.34
	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED				
0009	509E10000	100,800.000	LB	$1.83839	$185,309.71
	EPOXY COATED STEEL REINFORCEMENT				
0010	511E32212	113.000	CY	$992.10438	$112,107.79
	CLASS QC2 CONCRETE WITH QC/QA, SUPERSTRUCTURE				
0011	511E40512	239.000	CY	$820.93787	$196,204.15
	CLASS QC1 CONCRETE WITH QC/QA, PIER ABOVE FOOTINGS				
0012	511E44112	305.000	CY	$764.21792	$233,086.47
	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTIN G				
0013	511E46512	120.000	CY	$558.59356	$67,031.23
	CLASS QC1 CONCRETE WITH QC/QA, FOOTING				
0014	513E10240	121,400.000	LB	$2.29268	$278,331.35
	STRUCTURAL STEEL MEMBERS, LEVEL 2				
0015	516E44100	12.000	EACH	$1,398.56222	$16,782.75
	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE)				
0016	517E70100	241.000	FT	$482.03582	$116,170.63
	RAILING (THREE STEEL TUBE BRIDGE RAILING)				
0017	518E21200	256.000	CY	$107.68990	$27,568.61
	POROUS BACKFILL WITH GEOTEXTILE FABRIC				
0018	518E40000	157.000	FT	$10.04178	$1,576.56
	6" PERFORATED CORRUGATED PLASTIC PIPE				
0019	518E40010	80.000	FT	$17.24461	$1,379.57
	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIAL S				

Total for Group 0001:$1,366,893.32

	Length	Width	Height	Number	Total	Units
Item 507, 12" CIP Reinforced Piles, Driven						
Abutment	50.00	1.00	1.00	0	0	LF
Pier	63.00	1.00	1.00	0	0	
	62.00	1.00	1.00	0	0	
					0	LF
Item 507, 12" CIP Reinforced Piles, Furnished						
Abutment	55.00	1.00	1.00	0	0	LF
Pier	68.00	1.00	1.00	0	0	
	67.00	1.00	1.00	0	0	
					0	LF
Item 509, Epoxy Coated Reinforcing Steel						
Abutment	Assume 1% steel				2205	LB
Pier	Assume 2% steel				0	
Slab	Assume 2% steel				9004	
					11209	LB
Item 511, Class QC2 Concrete, Superstructure						
Slab	75.00	16.33	0.75	1	34	CY
Curb	75.00	0.50	0.50	0	0	
					34	CY
Item 511, Class QC1 Concrete, Abutment Including Footing						
Footing	25.00	3.00	3.00	0	0	CY
Beam Seat	25.00	3.00	3.00	2	17	
Wingwalls	6.52	2.25	3.00	0	0	
					17	CY
Item 511, Class QC1 Concrete, Pier above Footing						
	16.47	3.00	2.00	0	0	CY
					0	CY
Item 517, Twin Steel Tube Railing, modified.						
	75.00	1.00	1.00	2	150	LF
Item 518, Porous Backfill with Geotextile Fabric						
	25.00	2.00	5.00	2	19	CY
Item 518, 6" Perforated Plastic Pipe						
	25.00	1.00	1.00	2	50	LF
Item 518, 6" Non-Perforated Plastic Pipe						
	10.00	1.00	1.00	2	20	LF

Designed by:_____Checked by:_____

		Length	Width	Height	Number	Total	Units
Item 441 Asphalt Surface Course							
		75.00	16.33	0.13	1	6	CY
Item 445 Asphalt Intermediate Course							
		75.00	16.33	0.21	1	9	CY
Item 507, 12" CIP Reinforced Piles, Furnished							
	Abutment	80.00	1.00	1.00	0	0	LF
	Pier	5.00	1.00	1.00	0	0	
		5.00	1.00	1.00	0	0	
						0	LF
Item 509, Epoxy Coated Reinforcing Steel							
	Abutment	Assume 1% steel				2205	LB
	Pier	Assume 2% steel				0	
	Slab	Assume 2% steel				9004	
						11209	LB
Item 511, Class QC2 Concrete, Superstructure							
	Slab	75.00	16.33	0.75	1	34	CY
	Curb	75.00	0.50	0.50	0	0	
						34	CY
Item 511, Class QC1 Concrete, Abutment Including Footing							
	Footing	25.00	3.00	3.00	0	0	CY
	Beam Seat	25.00	3.00	3.00	2	17	
	Wingwalls	6.52	2.25	3.00	0	0	
						17	CY
Item 511, Class QC1 Concrete, Pier above Footing							
		16.47	3.00	2.00	0	0	CY
						0	CY
Item 517, Twin Steel Tube Railing, modified.							
		75.00	1.00	1.00	2	150	LF
Item 518, Porous Backfill with Geotextile Fabric							
		25.00	2.00	5.00	2	19	CY
Item 518, 6" Perforated Plastic Pipe							
		25.00	1.00	1.00	2	50	LF
Item 613, Low Strength Mortar Backfill							
		75.00	16.33	3.00	1	136	CY

Designed by:_____Checked by:_____

		Length	Width	Height	Number	Total	Units
Item 507, 12" CIP Reinforced Piles, Driven							
	Rear Abutment	50.00	1.00	1.00	4	200	LF
	Foward Abutment	65.00	1.00	1.00	4	260	
	Pier	50.00	1.00	1.00	3	150	
		50.00	1.00	1.00	3	150	
						760	LF
Item 507, 12" CIP Reinforced Piles, Furnished							
	Abutment	55.00	1.00	1.00	4	220	LF
		70.00	1.00	1.00	4	280	
	Pier	55.00	1.00	1.00	3	165	
		55.00	1.00	1.00	3	165	
						830	LF
Item 509, Epoxy Coated Reinforcing Steel							
	Abutment	Assume 1% steel				8090	LB
	Pier	Assume 2% steel				63195	
	Slab	Assume 2% steel				29473	
						100759	LB
Item 511, Class QC2 Concrete, Superstructure							
	Slab	241.00	17.00	0.71	1	107	CY
	Haunch	241.00	0.88	0.17	3	4	
						111	CY
Item 511, Class QC1 Concrete, Abutment Including Footing							
Fwd	Footing	23.25	6.50	3.00	1	17	CY
	Beam Seat	23.25	4.75	5.50	1	22	
	Wingwalls	15.00	1.50	9.50	2	16	
	Backwall	23.25	1.75	4.00	1	6	
						61	CY
Item 511, Class QC1 Concrete, Abutment not Including Footing							
Rear	Beam Seat	23.25	3.00	23.00	1	59	CY
	Wingwalls	40.00	3.00	27.00	2	240	
	Backwall	23.25	1.75	4.00	1	6	
						305	CY
Item 511, Class QC1 Concrete, Pier above Footing							
		15.00	3.00	18.00	4	120	CY
		23.25	3.00	23.00	2	119	
						239	CY
Item 511, Class QC1 Concrete, Footing							
	Rear Abutment	23.25	20.00	3.00	1	52	CY
	Piers	38.25	8.00	3.00	2	68	
						120	CY

Designed by:_____Checked by:_____

	Length	Width	Height	Number	Total	Units
Item 513, Structural Steel - Rolled beams						
Beams	241.00	148 lb/ft	1.00	3.00	107004	LB
Diaphragms	5.00	34 lb/ft	1.00	20.00	3390	
Miscellaneous (10%)					11039	
					121433	LB
Item 516, Elastomeric Bearings						
	1.00	1.00	1.00	12	12	EA
Item 517, Twin Steel Tube Railing, modified.						
	241.00	1.00	1.00	1	241	LF
Item 518, Porous Backfill with Geotextile Fabric						
Rear Abutment	23.25	2.00	27.00	1	47	CY
	40.00	2.00	27.00	2	160	
Forward Abutment	23.25	2.00	12.50	1	22	
	15.00	2.00	12.50	2	28	
					256	CY
Item 518, 6" Perforated Plastic Pipe						
Rear Abutment	23.25	1.00	1.00	1	23	LF
	40.00	1.00	1.00	2	80	
Forward Abutment	23.25	1.00	1.00	1	23	
	15.00	1.00	1.00	2	30	
					157	LF
Item 518, 6" Non-Perforated Plastic Pipe						
	20.00	1.00	1.00	4	80	LF

Designed by:_____Checked by:_____

APPENDIX A.3

Estimate Seg 2-C, RR 1

Estimated Cost:$210,192.21

Contingency: 20.00%

Estimated Total: $252,230.65

Wasson Armleder
Structure Type Study
Segment 2-B, RR Bridge Rehab
Alternative 1

Base Date: 02/27/24

Spec Year: 23

Unit System: E

Work Type: GEN CONST: INVLVS 2 OR MOR MAJ WRK TYPE

Highway Type:

Urban/Rural Type: RURAL CLASS

Season: SUMMER

County: HAMILTON

Latitude of Midpoint: 0

Longitude of Midpoint: 0

District: 08

Federal/State Project Number:

Prepared by Stantec on 02/27/24

Line #	Item Number	Quantity	Units	Unit Price	Extension
	Description				
	Supplemental Description				

Group 0001: Initial Group

0005	202E11202	1.000	LS	$25,000.00000	$25,000.00
	PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN				
0009	509E10000	11,200.000	LB	$2.22525	$24,922.80
	EPOXY COATED STEEL REINFORCEMENT				
0010	511E34444	34.000	CY	$2,872.91304	$97,679.04
	CLASS QC2 CONCRETE, BRIDGE DECK				
0012	511E44110	17.000	CY	$1,497.25943	$25,453.41
	CLASS QC1 CONCRETE, ABUTMENT NOT INCLUDING FOOTING				
0015	517E75120	150.000	FT	$224.98307	$33,747.46
	RAILING (CONCRETE PARAPET WITH TWIN STEEL TUBE RAILING)				
0017	518E21200	19.000	CY	$129.47872	$2,460.10
	POROUS BACKFILL WITH GEOTEXTILE FABRIC				
0018	518E40000	50.000	FT	$10.49939	$524.97
	6" PERFORATED CORRUGATED PLASTIC PIPE				
0019	518E40010	20.000	FT	$20.22156	$404.43
	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIAL S				

Total for Group 0001:$210,192.21

Estimate Seg 2-C, RR 2

Estimated Cost:$226,363.03

Contingency: 20.00%

Estimated Total: $271,635.64

Wasson Armleder
Structure Type Study
Segment 2-B, RR Bridge Rehab
Alternative 2

Base Date: 02/27/24

Spec Year: 23

Unit System: E

Work Type: GEN CONST: INVLVS 2 OR MOR MAJ WRK TYPE

Highway Type:

Urban/Rural Type: RURAL CLASS

Season: SUMMER

County: HAMILTON

Latitude of Midpoint: 0

Longitude of Midpoint: 0

District: 08

Federal/State Project Number:

Prepared by Stantec on 02/27/24

Line #	Item Number	Quantity	Units	Unit Price	Extension
	Description				
	Supplemental Description				

Group 0001: Initial Group

0005	202E11202	1.000	LS	$25,000.00000	$25,000.00
	PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN				
0007	441E10100	6.000	CY	$300.00000	$1,800.00
	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (446), PG70-22M				
0008	441E10100	9.000	CY	$300.00000	$2,700.00
	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (446), PG70-22M				
0009	509E10000	11,200.000	LB	$2.22525	$24,922.80
	EPOXY COATED STEEL REINFORCEMENT				
0010	511E34444	34.000	CY	$2,872.91304	$97,679.04
	CLASS QC2 CONCRETE, BRIDGE DECK				
0012	511E44110	17.000	CY	$1,497.25943	$25,453.41
	CLASS QC1 CONCRETE, ABUTMENT NOT INCLUDING FOOTING				
0015	517E75120	150.000	FT	$224.98307	$33,747.46
	RAILING (CONCRETE PARAPET WITH TWIN STEEL TUBE RAILING)				
0017	518E21200	19.000	CY	$129.47872	$2,460.10
	POROUS BACKFILL WITH GEOTEXTILE FABRIC				
0018	518E40000	50.000	FT	$10.49939	$524.97
	6" PERFORATED CORRUGATED PLASTIC PIPE				
0019	518E40010	20.000	FT	$20.22156	$404.43
	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIAL S				
0020	613E41200	136.000	CY	$85.81483	$11,670.82
	LOW STRENGTH MORTAR BACKFILL				

Total for Group 0001:$226,363.03

Estimate Seg 2-C Wstr

Estimated Cost:$487,869.63

Contingency: 20.00%

Estimated Total: $585,443.56

Wasson Armleder
Structure Type Study
Segment 2-C, Wooster Bridge

Base Date: 02/27/24

Spec Year: 23

Unit System: E

Work Type: GEN CONST: INVLVS 2 OR MOR MAJ WRK TYPE

Highway Type:

Urban/Rural Type: RURAL CLASS

Season: SUMMER

County: HAMILTON

Latitude of Midpoint: 0

Longitude of Midpoint: 0

District: 08

Federal/State Project Number:

Prepared by Stantec on 02/27/24

Line #	Item Number	Quantity	Units	Unit Price	Extension
	Description				
	Supplemental Description				
Group 0001: Initial Group					
0005	202E11202	1.000	LS	$75,000.00000	$75,000.00
	PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN				
0009	509E10000	26,400.000	LB	$2.06544	$54,527.62
	EPOXY COATED STEEL REINFORCEMENT				
0010	511E34444	100.000	CY	$2,381.71379	$238,171.38
	CLASS QC2 CONCRETE, BRIDGE DECK				
0015	517E70100	241.000	FT	$482.03582	$116,170.63
	RAILING (THREE STEEL TUBE BRIDGE RAILING)				
0016	847E10100	20.000	SY	$200.00000	$4,000.00
	LATEX MODIFIED CONCRETE OVERLAY				

Total for Group 0001:$487,869.63

	Length	Width	Height	Number	Total	Units
Item 507, 12" CIP Reinforced Piles, Driven						
Abutment	50.00	1.00	1.00	0	0	LF
Pier	63.00	1.00	1.00	0	0	
	62.00	1.00	1.00	0	0	
					0	LF
Item 507, 12" CIP Reinforced Piles, Furnished						
Abutment	55.00	1.00	1.00	0	0	LF
Pier	68.00	1.00	1.00	0	0	
	67.00	1.00	1.00	0	0	
					0	LF
Item 509, Epoxy Coated Reinforcing Steel						
Abutment	Assume 1% steel				2205	LB
Pier	Assume 2% steel				0	
Slab	Assume 2% steel				9004	
					11209	LB
Item 511, Class QC2 Concrete, Superstructure						
Slab	75.00	16.33	0.75	1	34	CY
Curb	75.00	0.50	0.50	0	0	
					34	CY
Item 511, Class QC1 Concrete, Abutment Including Footing						
Footing	25.00	3.00	3.00	0	0	CY
Beam Seat	25.00	3.00	3.00	2	17	
Wingwalls	6.52	2.25	3.00	0	0	
					17	CY
Item 511, Class QC1 Concrete, Pier above Footing						
	16.47	3.00	2.00	0	0	CY
					0	CY
Item 517, Twin Steel Tube Railing, modified.						
	75.00	1.00	1.00	2	150	LF
Item 518, Porous Backfill with Geotextile Fabric						
	25.00	2.00	5.00	2	19	CY
Item 518, 6" Perforated Plastic Pipe						
	25.00	1.00	1.00	2	50	LF
Item 518, 6" Non-Perforated Plastic Pipe						
	10.00	1.00	1.00	2	20	LF

Designed by:_____Checked by:_____

	Length	Width	Height	Number	Total	Units
Item 441 Asphalt Surface Course						
	75.00	16.33	0.13	1	6	CY
Item 445 Asphalt Intermediate Course						
	75.00	16.33	0.21	1	9	CY
Item 507, 12" CIP Reinforced Piles, Furnished						
Abutment	80.00	1.00	1.00	0	0	LF
Pier	5.00	1.00	1.00	0	0	
	5.00	1.00	1.00	0	0	
					0	LF
Item 509, Epoxy Coated Reinforcing Steel						
Abutment	Assume 1% steel				2205	LB
Pier	Assume 2% steel				0	
Slab	Assume 2% steel				9004	
					11209	LB
Item 511, Class QC2 Concrete, Superstructure						
Slab	75.00	16.33	0.75	1	34	CY
Curb	75.00	0.50	0.50	0	0	
					34	CY
Item 511, Class QC1 Concrete, Abutment Including Footing						
Footing	25.00	3.00	3.00	0	0	CY
Beam Seat	25.00	3.00	3.00	2	17	
Wingwalls	6.52	2.25	3.00	0	0	
					17	CY
Item 511, Class QC1 Concrete, Pier above Footing						
	16.47	3.00	2.00	0	0	CY
					0	CY
Item 517, Twin Steel Tube Railing, modified.						
	75.00	1.00	1.00	2	150	LF
Item 518, Porous Backfill with Geotextile Fabric						
	25.00	2.00	5.00	2	19	CY
Item 518, 6" Perforated Plastic Pipe						
	25.00	1.00	1.00	2	50	LF
Item 613, Low Strength Mortar Backfill						
	75.00	16.33	3.00	1	136	CY

Designed by:_____Checked by:_____

		Length	Width	Height	Number	Total	Units
Item 507, 12" CIP Reinforced Piles, Driven							
	Rear Abutment	50.00	1.00	1.00	0	0	LF
	Foward Abutment	65.00	1.00	1.00	0	0	
	Pier	50.00	1.00	1.00	0	0	
		50.00	1.00	1.00	0	0	
						0	LF
Item 507, 12" CIP Reinforced Piles, Furnished							
	Abutment	55.00	1.00	1.00	0	0	LF
		70.00	1.00	1.00	0	0	
	Pier	55.00	1.00	1.00	0	0	
		55.00	1.00	1.00	0	0	
						0	LF
Item 509, Epoxy Coated Reinforcing Steel							
	Abutment	Assume 1% steel				0	LB
	Pier	Assume 2% steel				0	
	Slab	Assume 2% steel				26373	
						26373	LB
Item 511, Class QC2 Concrete, Superstructure							
	Parapet	241.00	4.08 SF	1.00	2	73	CY
	Deck	241.00	2.00	0.75	2	27	
						100	CY
Item 511, Class QC1 Concrete, Abutment Including Footing							
Fwd	Footing	23.25	6.50	3.00	0	0	CY
	Beam Seat	23.25	4.75	5.50	0	0	
	Wingwalls	15.00	1.50	9.50	0	0	
	Backwall	23.25	1.75	4.00	0	0	
						0	CY
Item 511, Class QC1 Concrete, Abutment not Including Footing							
Rear	Beam Seat	23.25	3.00	23.00	0	0	CY
	Wingwalls	40.00	3.00	27.00	0	0	
	Backwall	23.25	1.75	4.00	0	0	
						0	CY
Item 511, Class QC1 Concrete, Pier above Footing							
		15.00	3.00	18.00	0	0	CY
		23.25	3.00	23.00	0	0	
						0	CY
Item 511, Class QC1 Concrete, Footing							
	Rear Abutment	23.25	20.00	3.00	0	0	CY
	Piers	38.25	8.00	3.00	0	0	
						0	CY

Designed by:_____Checked by:_____

	Length	Width	Height	Number	Total	Units
Item 517, Twin Steel Tube Railing, modified.						
	241.00	1.00	1.00	1	241	LF
Item 518, Porous Backfill with Geotextile Fabric						
Rear Abutment	23.25	2.00	27.00	0	0	CY
	40.00	2.00	27.00	0	0	
Forward Abutment	23.25	2.00	12.50	0	0	
	15.00	2.00	12.50	0	0	
					0	CY
Item 518, 6" Perforated Plastic Pipe						
Rear Abutment	23.25	1.00	1.00	0	0	LF
	40.00	1.00	1.00	0	0	
Forward Abutment	23.25	1.00	1.00	0	0	
	15.00	1.00	1.00	0	0	
					0	LF
Item 847, Concrete Overlay						
	241.00	6.00	0.13	1	20	SY

Segment 3 Structure Type Study

Stantec

STRUCTURE TYPE STUDY
Wasson-Armleder Trail
Bridges on Segment 3

February 27, 2024

Prepared for:
ODOT - District 8

Prepared by:
Stantec

Project Number:
173620146

The conclusions in the Report titled Structure Type Study are Stantec's professional opinion, as of the time of the Report, and concerning the scope described in the Report. The opinions in the document are based on conditions and information existing at the time the scope of work was conducted and do not take into account any subsequent changes. The Report relates solely to the specific project for which Stantec was retained and the stated purpose for which the Report was prepared. The Report is not to be used or relied on for any variation or extension of the project, or for any other project or purpose, and any unauthorized use or reliance is at the recipient's own risk.

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Prepared by: _____
Signature

_____
Printed Name

Reviewed by: _____
Signature

_____
Printed Name

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1 Introduction

The purpose of this report is to determine and evaluate the feasible structure types on each of the four alternative alignments (A-D) proposed for the Segment 3 portion of the trail. The evaluation is to aid in determining the preferred alignment with which to move forward. This study will determine the recommended structure type and the cost of the proposed structure for each alternative alignment.

The proposed paved shared-use path will be 12 feet wide with 5-foot shoulders on each side. Segment 3 extends from south of Red Bank Road to the Armleder-to-Lunken Connector Trail. The first portion of the segment runs along the west side of Duck Creek then crosses Duck Creek at one of four possible locations.

2 Design Considerations

2.1 Design Specifications

All proposed structures will be designed in accordance with the 2020 ODOT Bridge Design Manual, the ODOT Multimodal Design Guide (2023), the AASHTO LRFD Bridge Design Specifications, 9th Edition (2020) and the AASHTO Guide Specifications for the Design of Pedestrian Bridges, 2nd Edition (2009).

2.2 Bridge Design Criteria

- Pedestrian Live Load of 90 psf
- H15-44 vehicle loading (Ambulance or maintenance vehicles) without dynamic load allowance
- No Future Wearing Surface
- Bridges must minimize impacts to the 100-year recurrence backwater elevation from the Ohio River. The 100-year recurrence flood of Duck Creek does not control flooding in this area.
- The width of the bridges must provide 16 feet face to face of the railings in accordance with the ODOT Mulitmodal Design Guide.

2.3 Geotechnical

A geotechnical investigation has not been performed at this stage of the project. Geotechnical information is based on historical borings in the vicinity of the bridges. The historical borings indicate the presence of sand and gravel to a depth of approximately 20 feet, then clay and or sand to a depth of approximately 80 feet. Rock was not encountered in any of the borings. Therefore, the assumption for this study is that all foundations will be deep foundations using CIP piling.

2.4 Hydraulics

All four alignments, and thus all four bridges, lie in an area inundated by the 100-year flood. The FEMA 100-year water surface elevations at the bridges are controlled by backwater from the Ohio River by way of the Little Miami river. Based on the trail profiles all four of the bridges will be submerged for this condition

The four bridges also lie within the 100-year floodway of Duck Creek. The bridges will all be submerged for this condition as well.

To minimize the impact of the bridges on the 100-year floods, the waterway opening to the top of bank will be maintained with no fill being placed within the banks which would reduce the waterway opening.

A preliminary hydraulic analysis was performed on Duck Creek for this study. A summary of this analysis is included in the Feasibility Study. A detailed hydraulic study will be performed on the selected alternative and a separate report will be submitted.

3 Alternatives

The alternative structure types for Segments 3-B thru 3-E are presented in this section. Based on the hydraulic analysis results which indicate these bridges are subject to flooded conditions, the superstructure types have been limited to concrete or prestressed concrete. Steel has not been considered due to the potential for accelerated corrosion caused by frequent flooding.

3.1 Segment 3-B

3.1.1 ALIGNMENT

The trail runs parallel to the adjacent railroad on the ground between the railroad and Duck Creek. Prior to crossing the bridge, the trail makes a 212.21-degree curve to the left and crosses the creek on a tangent before making a 212.21-degree curve to the right. The tangent is skewed approximately 39 degrees to the flow of the creek.

3.1.2 SPAN ARRANGEMENT

The east bank of Duck Creek is sloped much steeper than 2:1. Therefore, to avoid disturbing the slope, the abutment on this side has been set back from the top of slope a reasonable distance while not extending further into the horizontal curve than is necessary. However, the extension into the curve is sufficient to require the end of the deck be curved. The west bank slopes up slightly steeper than 2:1, then levels out for a short distance. The proposed abutment was set by extending a 2:1 slope up from the top of this lower creek bank. However, this would require the deck be curved at the west end. Therefore, the abutment has been moved forward to allow the use of a straight deck while maintaining the minimum required horizontal clearances on the bridge.

The resulting length of the bridge is approximately 95 feet. As noted above, a continuous reinforced concrete slab bridge and a prestressed concrete box beam bridge will be considered for this alternative. Minimizing the superstructure depth is critical to reducing the impact of the bridge on the 100-year flood elevation. Therefore, a three-span will be considered since a single span bridge would require significantly deeper prestressed concrete box beams.

3.1.3 ALTERNATIVE 1

This alternative considers a three-span reinforced concrete slab bridge. The spans are set at 29-36.25-29 feet for an overall length of 94.25 feet. Based on Standard Drawing CS-1-08, the slab depth will be 18.5 inches. The standard drawing indicates the design is acceptable for skews up to 30 degrees, so the skew of the bridge substructure has been adjusted to be at 30 degrees to the centerline. This provides an acceptable alignment with the flow of the creek.

3.1.4 ALTERNATIVE 2

This alternative considers a three-span prestressed concrete box beam bridge with a composite concrete slab. The spans are set at 32-32-32 feet. Preliminary design indicates four CB17-48 composite prestressed box beams are required for this alternative. A 6-inch concrete slab will be utilized to minimize flooding impacts on the bridge.

3.2 Segment 3-C

3.2.1 ALIGNMENT

The trail runs parallel to the adjacent railroad on the ground between the railroad and Duck Creek. Prior to crossing the bridge, the trail makes a 212.21-degree curve to the left and crosses the creek on a tangent before making a 212.21-degree curve to the right. The tangent is skewed approximately 33 degrees to the flow of the creek.

3.2.2 SPAN ARRANGEMENT

For the initial layout, the overall length of bridge was set utilizing 2:1 slopes on the banks up from the creek bed. The existing west bank rise is steeper than 2:1, therefore, this bank will be maintained and the abutment footing placed at an elevation which allows for erosion of the bank to the 2:1 slope. The east bank is approximately at a 2:1 slope and the abutment will be placed near the top of the bank.

Setting the west abutment at the top of the existing slope caused the bridge to extend significantly into the horizontal curve on the west approach. Due to the skew and sharpness of the curve, the north edge of the deck did not reach the abutment. Therefore, this abutment was moved forward to a location where the bridge deck, while still within the curve, would be supported on the abutment and permit a straight bridge deck. The resulting overall length of the bridge is approximately 110 feet.

Due to the flooding concerns, only two superstructure types were considered, prestressed concrete box beams or a continuous reinforced concrete slab. Minimizing the superstructure depth is critical to

reducing the impact of the bridge on the 100-year flood elevation. Therefore, a three-span will be considered since a single span bridge would require significantly deeper prestressed concrete box beams.

3.2.3 ALTERNATIVE 1

This alternative considers a three-span reinforced concrete slab bridge. The spans are set at 34-42.5-34 feet for an overall length of 110.50 feet. Based on Standard Drawing CS-1-08, the slab depth will be 21 inches. The standard drawing indicates the design is acceptable for skews up to 30 degrees, so the skew of the bridge substructure has been adjusted to be 30 degrees to the centerline. This provides an acceptable alignment with the flow of the creek.

3.2.4 ALTERNATIVE 2

This alternative considers a three-span prestressed concrete box beam bridge with a composite concrete slab. The spans are set at 37-37-37 feet. Preliminary design indicates four CB17-48 beams are required for this alternative.

3.3 Segment 3-D

3.3.1 ALIGNMENT

The trail runs parallel to the adjacent railroad on the ground between the railroad and Duck Creek. Prior to crossing the bridge, the trail makes a 9.55-degree curve to the left and crosses the creek on a tangent before making a 57.3-degree curve to the right. The tangent is skewed approximately 57 degrees to the flow of the creek.

3.3.2 SPAN ARRANGEMENT

For the initial layout, the overall length of bridge was set utilizing a 2:1 slope extending up from the top of bank on the existing west bank. The existing east bank is approximately a 2:1 slope and the abutment will be placed near the top of the bank.

Setting the west abutment at the top of the 2:1 slope caused the bridge to extend into the horizontal curve on the west approach, requiring the deck to be curved at that end. By moving this abutment forward approximately 20 feet, a straight deck can be used with a resulting overall length of approximately 135 feet.

With a straight deck, the possible structure types were a three-span reinforced concrete slab bridge, and a single or three-span prestressed concrete bridge utilizing box beams or I-beams. Minimizing the superstructure depth is critical to reducing the impact of the bridge on the 100-year flood elevation. Therefore, the single span prestressed concrete I-beam structure was eliminated due to the depth of girder that would be required for a 135-foot span. The three-span prestressed concrete I-beam structure was determined to require a greater depth superstructure than a prestressed concrete box beam bridge.

Therefore, a three-span structure will be considered comparing composite prestressed box beams and a reinforced concrete slab structure.

3.3.3 ALTERNATIVE 1

This alternative considers a three-span reinforced concrete slab bridge. The spans are set at 42-52.5-42 feet for an overall length of 136.50 feet. Based on Standard Drawing CS-1-08, the slab depth will be 25 inches. The standard drawing indicates the design is acceptable for skews up to 30 degrees, so the final design will need to be analyzed for the skew of the bridge which is 57 degrees.

3.3.4 ALTERNATIVE 2

This alternative considers a three-span prestressed concrete box beam bridge with a composite concrete slab. The spans are set at 45-45-45 feet. Preliminary design indicates four CB21-48 beams are required for this alternative. Since the skew exceeds the maximum of 30 degrees permitted for the prestressed concrete box beams, the final design of the beams will require special detailing and design.

3.4 Segment 3-E

3.4.1 ALIGNMENT

The trail runs parallel to the adjacent railroad on the ground between the railroad and Duck Creek. Prior to crossing the bridge, the trail makes a 212.21-degree curve to the left and crosses the creek on a tangent which extends well beyond the creek. The tangent is skewed approximately 43.5 degrees to the flow of the creek.

3.4.2 SPAN ARRANGEMENT

For the initial layout, the overall length of bridge was set utilizing a 2:1 slope extending up from the toe of bank on the existing west bank. The existing east bank is approximately a 2:1 slope. The existing bank will be extended up and the abutment will be placed near the top of the bank. This results in a total length of 128 feet for the bridge.

With a straight deck for the full length of the bridge, the possible superstructure types were a single span prestressed concrete I-beam, a three-span reinforced concrete slab bridge, and a three-span prestressed concrete bridge utilizing box beams or I-beams.

With a straight deck, the possible structure types were a three-span reinforced concrete slab bridge, and a single or three-span prestressed concrete bridge utilizing box beams or I-beams. Minimizing the superstructure depth is critical to reducing the impact of the bridge on the 100-year flood elevation. Therefore, the single span prestressed concrete I-beam structure was eliminated due to the depth of girder that would be required for a 128-foot span. The three-span prestressed concrete I-beam structure was determined to require a greater depth superstructure than a prestressed concrete box beam bridge. Therefore, a three-span structure will be considered comparing composite prestressed box beams and a reinforced concrete slab structure.

3.4.3 ALTERNATIVE 1

This alternative considers a three-span reinforced concrete slab bridge. The spans are set at 40-50-40 feet for an overall length of 130 feet. Based on Standard Drawing CS-1-08, the slab depth will be 24 inches. The standard drawing indicates the design is acceptable for skews up to 30 degrees, so the final design of the slab will need to be checked since the 43.5 degree skew of the bridge exceeds this limit.

3.4.4 ALTERNATIVE 2

This alternative considers a three-span prestressed concrete box beam bridge with a composite concrete slab. The spans are set at 43.5-43.5-43.5 feet. Preliminary design indicates four CB21-48 beams are required for this alternative. Since the skew exceeds the maximum of 30 degrees permitted for the prestressed concrete box beams, the final design of the beams will require special detailing and design.

4 Cost Estimates

Preliminary construction cost estimates were developed for each alternative structure type on each alignment. Since all structure types are of similar material, future maintenance costs will be similar for each alternative and thus do not impact the selection of the preferred alternative.

Alignment Segment	Estimated Construction Cost
3-B	
Alternative 1 – CIP concrete slab	$528,179
Alternative 2 - PCBB	$688,012
3-C	
Alternative 1 – CIP concrete slab	$596,997
Alternative 2 - PCBB	$728,543
3-D	
Alternative 1 – CIP concrete slab	$682,020
Alternative 2 - PCBB	$862,899
3-E	
Alternative 1 – CIP concrete slab	$714,545
Alternative 2 - PCBB	$900,754

5 Recommendation

Based on the estimated initial construction cost, Alternative 1 is recommended for each of the proposed trail segments, 3-B, 3-C, 3-D, and 3-E. This bridge type is a continuous concrete slab superstructure.

APPENDIX A

Appendix A

A.1 Proposed Trail Alignments

A.2 Segment 3-B Estimated Construction Costs and Quantities

A.3 Segment 3-C Estimated Construction Costs and Quantities

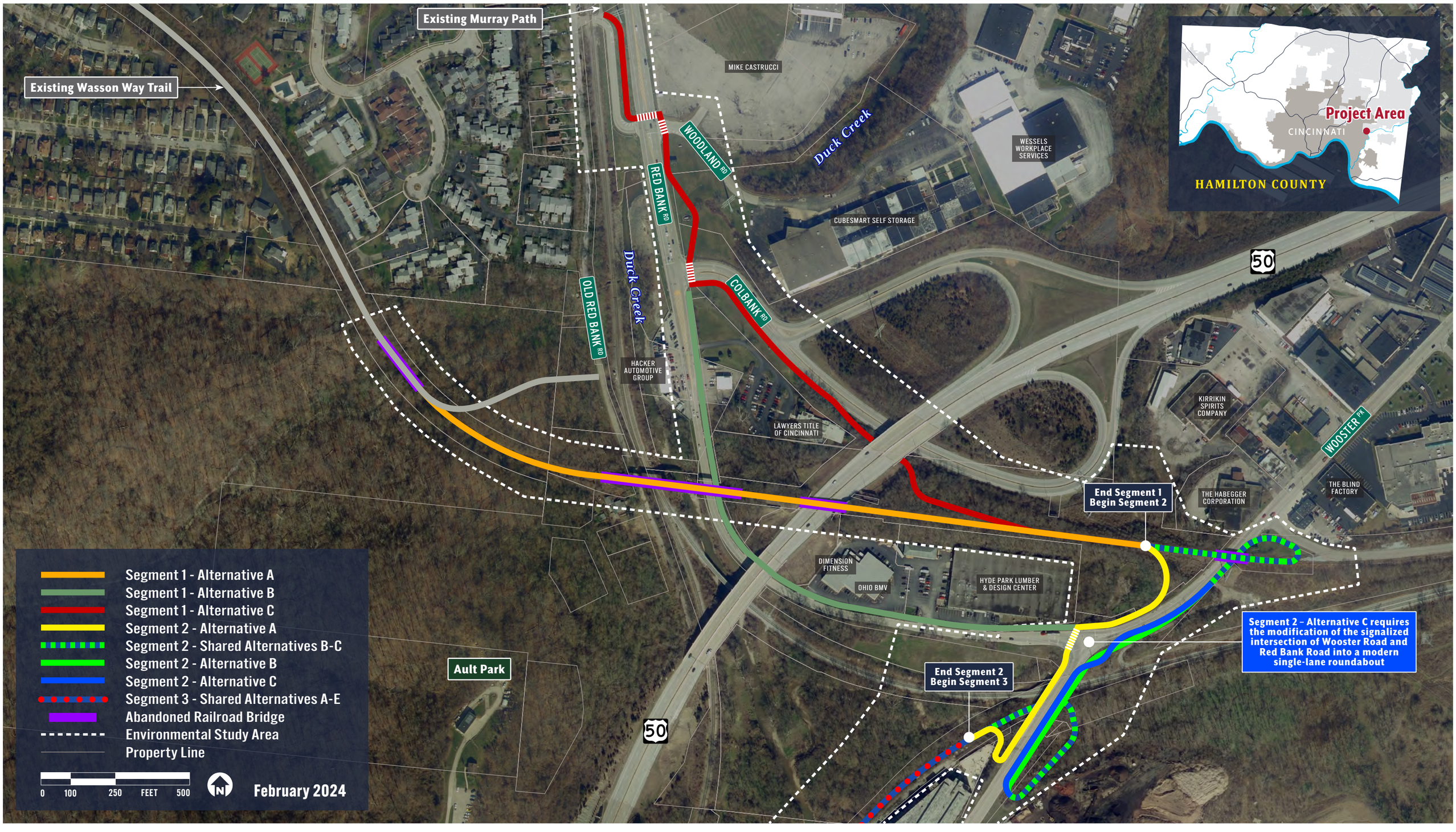
A.4 Segment 3-D Estimated Construction Costs and Quantities

A.5 Segment 3-E Estimated Construction Costs and Quantities

APPENDIX A.1

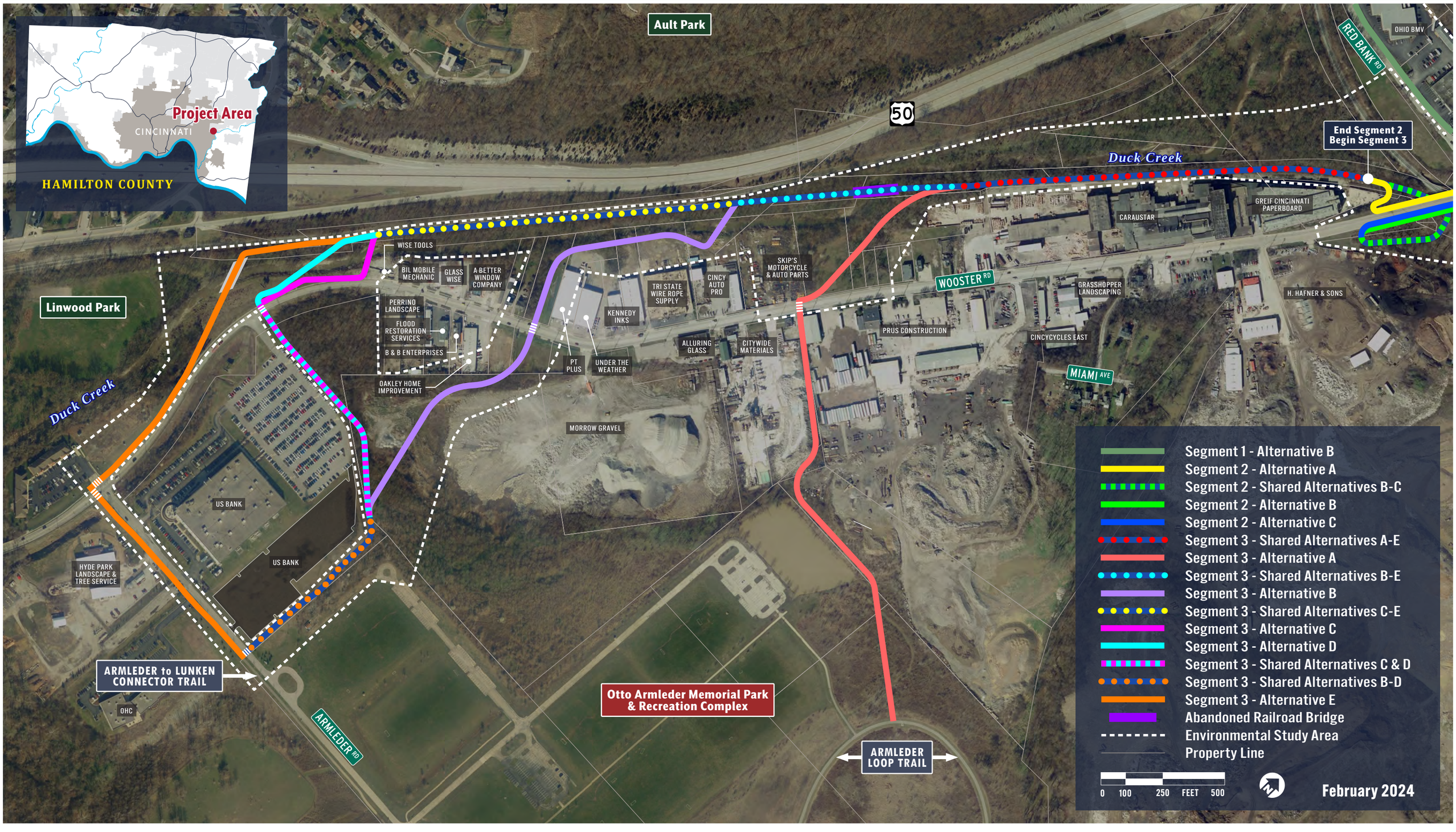
Shared Use Path Alternatives

Wasson Way Trail Connection to Otto Armleder Park (PID 113603)



Shared Use Path Alternatives

Wasson Way Trail Connection to Otto Armleder Park (PID 113603)



APPENDIX A.2

Estimate Seg 3-B, Alt. 1

Estimated Cost:$440,148.84

Contingency: 20.00%

Estimated Total: $528,178.61

Wasson Armleder
Structure Type Study
Segment 3-B, Alternative 1

Base Date: 02/27/24

Spec Year: 23

Unit System: E

Work Type: GEN CONST: INVLVS 2 OR MOR MAJ WRK TYPE

Highway Type:

Urban/Rural Type: RURAL CLASS

Season: SUMMER

County: HAMILTON

Latitude of Midpoint: 0

Longitude of Midpoint: 0

District: 08

Federal/State Project Number:

Prepared by Stantec on 02/27/24

Line #	Item Number	Quantity	Units	Unit Price	Extension
	Description				
	Supplemental Description				

Group 0001: Initial Group

0005	505E11100	1.000	LS	$30,000.00000	$30,000.00
	PILE DRIVING EQUIPMENT MOBILIZATION				
0006	507E00500	1,000.000	FT	$12.61283	$12,612.83
	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN				
0007	507E00550	1,090.000	FT	$48.61848	$52,994.14
	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED				
0008	509E10000	34,500.000	LB	$2.01795	$69,619.27
	EPOXY COATED STEEL REINFORCEMENT				
0009	511E32212	92.000	CY	$1,000.00000	$92,000.00
	CLASS QC2 CONCRETE WITH QC/QA, SUPERSTRUCTURE				
0011	511E42510	7.000	CY	$1,875.20968	$13,126.47
	CLASS QC1 CONCRETE, PIER CAP				
0012	511E44110	62.000	CY	$962.80458	$59,693.88
	CLASS QC1 CONCRETE, ABUTMENT NOT INCLUDING FOOTING				
0015	517E70100	192.000	FT	$482.03582	$92,550.88
	RAILING (THREE STEEL TUBE BRIDGE RAILING)				
0017	518E21200	138.000	CY	$112.50923	$15,526.27
	POROUS BACKFILL WITH GEOTEXTILE FABRIC				
0018	518E40000	62.000	FT	$10.41180	$645.53
	6" PERFORATED CORRUGATED PLASTIC PIPE				
0019	518E40010	80.000	FT	$17.24461	$1,379.57
	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIAL S				

Total for Group 0001:$440,148.84

Estimate Seg-3-B, Alt 2

Estimated Cost:$573,343.63

Contingency: 20.00%

Estimated Total: $688,012.36

Wasson Armleder
Structure Type Study
Segment 3-B, Alternative 2

Base Date: 02/27/24

Spec Year: 23

Unit System: E

Work Type: GEN CONST: INVLVS 2 OR MOR MAJ WRK TYPE

Highway Type:

Urban/Rural Type: RURAL CLASS

Season: SUMMER

County: HAMILTON

Latitude of Midpoint: 0

Longitude of Midpoint: 0

District: 08

Federal/State Project Number:

Prepared by Stantec on 02/27/24

Line #	Item Number / Description / *Supplemental Description*	Quantity	Units	Unit Price	Extension
Group 0001: Initial Group					
0005	505E11100 PILE DRIVING EQUIPMENT MOBILIZATION	1.000	LS	$30,000.00000	$30,000.00
0006	507E00500 12" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN	1,000.000	FT	$12.61283	$12,612.83
0007	507E00550 12" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED	1,090.000	FT	$48.61848	$52,994.14
0008	509E10000 EPOXY COATED STEEL REINFORCEMENT	19,900.000	LB	$2.11681	$42,124.52
0009	511E34444 CLASS QC2 CONCRETE, BRIDGE DECK	48.000	CY	$2,705.78029	$129,877.45
0011	511E42510 CLASS QC1 CONCRETE, PIER CAP	12.000	CY	$1,875.20968	$22,502.52
0012	511E43510 CLASS QC1 CONCRETE, ABUTMENT INCLUDING FOOTING	72.000	CY	$567.36696	$40,850.42
0014	515E12030 PRESTRESSED CONCRETE COMPOSITE BOX BEAM BRIDGE MEMBERS, LEVE L 1, CB17-48	12.000	EACH	$11,350.67337	$136,208.08
0016	516E43100 ELASTOMERIC BEARING WITH INTERNAL LAMINATES ONLY (NEOPRENE) <2" THICK	48.000	EACH	$117.70158	$5,649.68
0019	517E70100 RAILING (THREE STEEL TUBE BRIDGE RAILING)	193.000	FT	$482.03582	$93,032.91
0020	518E21200 POROUS BACKFILL WITH GEOTEXTILE FABRIC	45.000	CY	$121.80587	$5,481.26
0021	518E40000 6" PERFORATED CORRUGATED PLASTIC PIPE	62.000	FT	$10.41180	$645.53
0022	518E40010 6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIAL S	79.000	FT	$17.26955	$1,364.29

Total for Group 0001:$573,343.63

	Length	Width	Height	Number	Total	Units
Item 507, 12" CIP Reinforced Piles, Driven						
Abutment	50.00	1.00	1.00	10	500	LF
Pier	63.00	1.00	1.00	4	252	
	62.00	1.00	1.00	4	248	
					1000	LF
Item 507, 12" CIP Reinforced Piles, Furnished						
Abutment	55.00	1.00	1.00	10	550	LF
Pier	68.00	1.00	1.00	4	272	
	67.00	1.00	1.00	4	268	
					1090	LF
Item 509, Epoxy Coated Reinforcing Steel						
Abutment	Assume 1% steel				8151	LB
Pier	Assume 2% steel				1937	
Slab	Assume 2% steel				24424	
					34512	LB
Item 511, Class QC2 Concrete, Superstructure						
Slab	95.98	16.00	1.54	1	88	CY
Diaphragm	18.48	2.25	1.50	2	5	
					92	CY
Item 511, Class QC1 Concrete, Abutment Including Footing						
Footing	31.00	3.00	3.00	2	21	CY
Beam Seat	31.00	2.25	5.50	2	28	
Wingwalls	12.52	2.25	3.00	4	13	
					62	CY
Item 511, Class QC1 Concrete, Pier above Footing						
	16.47	3.00	2.00	2	7	CY
					7	CY
Item 517, Twin Steel Tube Railing, modified.						
	95.98	1.00	1.00	2	192	LF
Item 518, Porous Backfill with Geotextile Fabric						
	31.00	2.00	10.00	2	46	CY
Item 518, 6" Perforated Plastic Pipe						
	31.00	1.00	1.00	2	62	LF
Item 518, 6" Non-Perforated Plastic Pipe						
	20.00	1.00	1.00	4	80	LF

Designed by:_____Checked by:_____

	Length	Width	Height	Number	Total	Units
Item 507, 12" CIP Reinforced Piles, Driven						
Abutment	50.00	1.00	1.00	10	500	LF
Pier	63.00	1.00	1.00	4	252	
	62.00	1.00	1.00	4	248	
					1000	LF
Item 507, 12" CIP Reinforced Piles, Furnished						
Abutment	55.00	1.00	1.00	10	550	LF
Pier	68.00	1.00	1.00	4	272	
	67.00	1.00	1.00	4	268	
					1090	LF
Item 509, Epoxy Coated Reinforcing Steel						
Abutment	Assume 1% steel				9501	LB
Pier	Assume 1% steel				1630	
Slab	Assume 2% steel				8809	
					19939	LB
Item 511, Class QC2 Concrete, Superstructure						
Slab	96.31	16.00	0.58	1	33	CY
Diaphragm	18.48	3.00	1.83	0	0	
					33	CY
Item 511, Class QC1 Concrete, Abutment Including Footing						
Footing	31.00	3.00	3.00	2	21	CY
Beam Seat	31.00	3.00	5.00	2	34	
Wingwalls	12.52	3.00	3.00	4	17	
					72	CY
Item 511, Class QC1 Concrete, Pier above Footing						
	18.48	3.00	3.00	2	12	CY
					12	CY
Item 515, PCBB CB17-48						
	1.00	1.00	1.00	12	12	EA
Item 516, Elastomeric bearings with intenal laminates						
	1.00	1.00	1.00	48	48	EA

Designed by:_____Checked by:_____

	Length	Width	Height	Number	Total	Units
Item 517, Twin Steel Tube Railing, modified.	96.31	1.00	1.00	2	193	LF
Item 518, Porous Backfill with Geotextile Fabric	31.00	2.00	9.83	2	45	CY
Item 518, 6" Perforated Plastic Pipe	31.00	1.00	1.00	2	62	LF
Item 518, 6" Non-Perforated Plastic Pipe	19.67	1.00	1.00	4	79	LF

APPENDIX A.3

Estimate Seg 3-C, Alt. 1

Estimated Cost:$497,497.53

Contingency: 20.00%

Estimated Total: $596,997.04

Wasson Armleder
Structure Type Study
Segment 3-C, Alternative 1

Base Date: 02/27/24

Spec Year: 23

Unit System: E

Work Type: GEN CONST: INVLVS 2 OR MOR MAJ WRK TYPE

Highway Type:

Urban/Rural Type: RURAL CLASS

Season: SUMMER

County: HAMILTON

Latitude of Midpoint: 0

Longitude of Midpoint: 0

District: 08

Federal/State Project Number:

Prepared by Stantec on 02/27/24

Line #	Item Number	Quantity	Units	Unit Price	Extension
	Description				
	Supplemental Description				

Group 0001: Initial Group

0005	505E11100	1.000	LS	$30,000.00000	$30,000.00
	PILE DRIVING EQUIPMENT MOBILIZATION				
0006	507E00500	1,000.000	FT	$12.61283	$12,612.83
	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN				
0007	507E00550	1,090.000	FT	$48.61848	$52,994.14
	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED				
0008	509E10000	42,100.000	LB	$1.98333	$83,498.19
	EPOXY COATED STEEL REINFORCEMENT				
0009	511E32212	121.000	CY	$992.10438	$120,044.63
	CLASS QC2 CONCRETE WITH QC/QA, SUPERSTRUCTURE				
0011	511E42510	7.000	CY	$1,875.20968	$13,126.47
	CLASS QC1 CONCRETE, PIER CAP				
0012	511E44110	62.000	CY	$962.80458	$59,693.88
	CLASS QC1 CONCRETE, ABUTMENT NOT INCLUDING FOOTING				
0015	517E70100	224.000	FT	$482.03582	$107,976.02
	RAILING (THREE STEEL TUBE BRIDGE RAILING)				
0017	518E21200	138.000	CY	$112.50923	$15,526.27
	POROUS BACKFILL WITH GEOTEXTILE FABRIC				
0018	518E40000	62.000	FT	$10.41180	$645.53
	6" PERFORATED CORRUGATED PLASTIC PIPE				
0019	518E40010	80.000	FT	$17.24461	$1,379.57
	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIAL S				

Total for Group 0001:$497,497.53

Estimate Seg-3-C, Alt 2

Estimated Cost:$607,119.36

Contingency: 20.00%

Estimated Total: $728,543.23

Wasson Armleder
Structure Type Study
Segment 3-C, Alternative 2

Base Date: 02/27/24

Spec Year: 23

Unit System: E

Work Type: GEN CONST: INVLVS 2 OR MOR MAJ WRK TYPE

Highway Type:

Urban/Rural Type: RURAL CLASS

Season: SUMMER

County: HAMILTON

Latitude of Midpoint: 0

Longitude of Midpoint: 0

District: 08

Federal/State Project Number:

Prepared by Stantec on 02/27/24

Line #	Item Number	Quantity	Units	Unit Price	Extension
	Description				
	Supplemental Description				

Group 0001: Initial Group

0005	505E11100	1.000	LS	$30,000.00000	$30,000.00
	PILE DRIVING EQUIPMENT MOBILIZATION				
0006	507E00500	1,000.000	FT	$12.61283	$12,612.83
	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN				
0007	507E00550	1,090.000	FT	$48.61848	$52,994.14
	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED				
0008	509E10000	21,400.000	LB	$2.10348	$45,014.47
	EPOXY COATED STEEL REINFORCEMENT				
0009	511E34444	55.000	CY	$2,642.51050	$145,338.08
	CLASS QC2 CONCRETE, BRIDGE DECK				
0011	511E42510	12.000	CY	$1,875.20968	$22,502.52
	CLASS QC1 CONCRETE, PIER CAP				
0012	511E43510	72.000	CY	$567.36696	$40,850.42
	CLASS QC1 CONCRETE, ABUTMENT INCLUDING FOOTING				
0014	515E12030	12.000	EACH	$11,350.67337	$136,208.08
	PRESTRESSED CONCRETE COMPOSITE BOX BEAM BRIDGE MEMBERS, LEVE L 1, CB17-48				
0016	516E43100	48.000	EACH	$117.70158	$5,649.68
	ELASTOMERIC BEARING WITH INTERNAL LAMINATES ONLY (NEOPRENE) <2" THICK				
0019	517E70100	225.000	FT	$482.03582	$108,458.06
	RAILING (THREE STEEL TUBE BRIDGE RAILING)				
0020	518E21200	45.000	CY	$121.80587	$5,481.26
	POROUS BACKFILL WITH GEOTEXTILE FABRIC				
0021	518E40000	62.000	FT	$10.41180	$645.53
	6" PERFORATED CORRUGATED PLASTIC PIPE				
0022	518E40010	79.000	FT	$17.26955	$1,364.29
	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIAL S				

Total for Group 0001:$607,119.36

	Length	Width	Height	Number	Total	Units
Item 507, 12" CIP Reinforced Piles, Driven						
Abutment	50.00	1.00	1.00	10	500	LF
Pier	63.00	1.00	1.00	4	252	
	62.00	1.00	1.00	4	248	
					1000	LF
Item 507, 12" CIP Reinforced Piles, Furnished						
Abutment	55.00	1.00	1.00	10	550	LF
Pier	68.00	1.00	1.00	4	272	
	67.00	1.00	1.00	4	268	
					1090	LF
Item 509, Epoxy Coated Reinforcing Steel						
Abutment	Assume 1% steel				8151	LB
Pier	Assume 2% steel				1937	
Slab	Assume 2% steel				32019	
					42106	LB
Item 511, Class QC2 Concrete, Superstructure						
Slab	112.23	16.00	1.75	1	116	CY
Diaphragm	18.48	2.25	1.50	2	5	
					121	CY
Item 511, Class QC1 Concrete, Abutment Including Footing						
Footing	31.00	3.00	3.00	2	21	CY
Beam Seat	31.00	2.25	5.50	2	28	
Wingwalls	12.52	2.25	3.00	4	13	
					62	CY
Item 511, Class QC1 Concrete, Pier above Footing						
	16.47	3.00	2.00	2	7	CY
					7	CY
Item 517, Twin Steel Tube Railing, modified.						
	112.23	1.00	1.00	2	224	LF
Item 518, Porous Backfill with Geotextile Fabric						
	31.00	2.00	10.00	2	46	CY
Item 518, 6" Perforated Plastic Pipe						
	31.00	1.00	1.00	2	62	LF
Item 518, 6" Non-Perforated Plastic Pipe						
	20.00	1.00	1.00	4	80	LF

Designed by:_____Checked by:_____

	Length	Width	Height	Number	Total	Units
Item 507, 12" CIP Reinforced Piles, Driven						
Abutment	50.00	1.00	1.00	10	500	LF
Pier	63.00	1.00	1.00	4	252	
	62.00	1.00	1.00	4	248	
					1000	LF
Item 507, 12" CIP Reinforced Piles, Furnished						
Abutment	55.00	1.00	1.00	10	550	LF
Pier	68.00	1.00	1.00	4	272	
	67.00	1.00	1.00	4	268	
					1090	LF
Item 509, Epoxy Coated Reinforcing Steel						
Abutment	Assume 1% steel				9501	LB
Pier	Assume 1% steel				1630	
Slab	Assume 2% steel				10273	
					21403	LB
Item 511, Class QC2 Concrete, Superstructure						
Slab	112.31	16.00	0.58	1	39	CY
Diaphragm	18.48	3.00	1.83	0	0	
					39	CY
Item 511, Class QC1 Concrete, Abutment Including Footing						
Footing	31.00	3.00	3.00	2	21	CY
Beam Seat	31.00	3.00	5.00	2	34	
Wingwalls	12.52	3.00	3.00	4	17	
					72	CY
Item 511, Class QC1 Concrete, Pier above Footing						
	18.48	3.00	3.00	2	12	CY
					12	CY
Item 515, PCBB CB17-48						
	1.00	1.00	1.00	12	12	EA
Item 516, Elastomeric bearings with intenal laminates						
	1.00	1.00	1.00	48	48	EA

Designed by:_____Checked by:_____

	Length	Width	Height	Number	Total	Units
Item 517, Twin Steel Tube Railing, modified.	112.31	1.00	1.00	2	225	LF
Item 518, Porous Backfill with Geotextile Fabric	31.00	2.00	9.83	2	45	CY
Item 518, 6" Perforated Plastic Pipe	31.00	1.00	1.00	2	62	LF
Item 518, 6" Non-Perforated Plastic Pipe	19.67	1.00	1.00	4	79	LF

Designed by:_____Checked by:_____

APPENDIX A.4

Estimate Seg 3-D, Alt. 1

Estimated Cost:$568,349.79

Contingency: 20.00%

Estimated Total: $682,019.75

Wasson Armleder
Structure Type Study
Segment 3-D, Alternative 1

Base Date: 02/27/24

Spec Year: 23

Unit System: E

Work Type: GEN CONST: INVLVS 2 OR MOR MAJ WRK TYPE

Highway Type:

Urban/Rural Type: RURAL CLASS

Season: SUMMER

County: HAMILTON

Latitude of Midpoint: 0

Longitude of Midpoint: 0

District: 08

Federal/State Project Number:

Prepared by Stantec on 02/27/24

Line #	Item Number	Quantity	Units	Unit Price	Extension
	Description				
	Supplemental Description				

Group 0001: Initial Group

0005	505E11100	1.000	LS	$30,000.00000	$30,000.00
	PILE DRIVING EQUIPMENT MOBILIZATION				
0006	507E00500	1,325.000	FT	$10.96187	$14,524.48
	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN				
0007	507E00550	1,445.000	FT	$48.61848	$70,253.70
	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED				
0008	509E10000	48,400.000	LB	$1.95944	$94,836.90
	EPOXY COATED STEEL REINFORCEMENT				
0009	511E32212	125.000	CY	$992.10438	$124,013.05
	CLASS QC2 CONCRETE WITH QC/QA, SUPERSTRUCTURE				
0011	511E42510	11.000	CY	$1,875.20968	$20,627.31
	CLASS QC1 CONCRETE, PIER CAP				
0012	511E44110	95.000	CY	$832.32890	$79,071.25
	CLASS QC1 CONCRETE, ABUTMENT NOT INCLUDING FOOTING				
0015	517E70100	227.000	FT	$482.03582	$109,422.13
	RAILING (THREE STEEL TUBE BRIDGE RAILING)				
0017	518E21200	213.000	CY	$109.10208	$23,238.74
	POROUS BACKFILL WITH GEOTEXTILE FABRIC				
0018	518E40000	96.000	FT	$10.23601	$982.66
	6" PERFORATED CORRUGATED PLASTIC PIPE				
0019	518E40010	80.000	FT	$17.24461	$1,379.57
	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIAL S				

Total for Group 0001:$568,349.79

Estimate Seg-3-D, Alt 2

Estimated Cost:$719,082.49

Contingency: 20.00%

Estimated Total: $862,898.99

Wasson Armleder
Structure Type Study
Segment 3-D, Alternative 2

Base Date: 02/27/24

Spec Year: 23

Unit System: E

Work Type: GEN CONST: INVLVS 2 OR MOR MAJ WRK TYPE

Highway Type:

Urban/Rural Type: RURAL CLASS

Season: SUMMER

County: HAMILTON

Latitude of Midpoint: 0

Longitude of Midpoint: 0

District: 08

Federal/State Project Number:

Prepared by Stantec on 02/27/24

Line #	Item Number / Description / *Supplemental Description*	Quantity	Units	Unit Price	Extension
Group 0001: Initial Group					
0005	505E11100 PILE DRIVING EQUIPMENT MOBILIZATION	1.000	LS	$30,000.00000	$30,000.00
0006	507E00500 12" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN	1,325.000	FT	$10.96187	$14,524.48
0007	507E00550 12" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED	1,445.000	FT	$48.61848	$70,253.70
0008	509E10000 EPOXY COATED STEEL REINFORCEMENT	28,400.000	LB	$2.05237	$58,287.31
0009	511E34444 CLASS QC2 CONCRETE, BRIDGE DECK	43.000	CY	$2,758.01002	$118,594.43
0011	511E42510 CLASS QC1 CONCRETE, PIER CAP	20.000	CY	$1,875.20968	$37,504.19
0012	511E43510 CLASS QC1 CONCRETE, ABUTMENT INCLUDING FOOTING	110.000	CY	$547.39813	$60,213.79
0014	515E12050 PRESTRESSED CONCRETE COMPOSITE BOX BEAM BRIDGE MEMBERS, LEVE L 1, CB21-48	12.000	EACH	$17,001.84924	$204,022.19
0016	516E43100 ELASTOMERIC BEARING WITH INTERNAL LAMINATES ONLY (NEOPRENE) <2" THICK	48.000	EACH	$117.70158	$5,649.68
0019	517E70100 RAILING (THREE STEEL TUBE BRIDGE RAILING)	227.000	FT	$482.03582	$109,422.13
0020	518E21200 POROUS BACKFILL WITH GEOTEXTILE FABRIC	70.000	CY	$118.05197	$8,263.64
0021	518E40000 6" PERFORATED CORRUGATED PLASTIC PIPE	96.000	FT	$10.23601	$982.66
0022	518E40010 6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIAL S	79.000	FT	$17.26955	$1,364.29

Total for Group 0001:$719,082.49

	Length	Width	Height	Number	Total	Units
Item 507, 12" CIP Reinforced Piles, Driven						
Abutment	50.00	1.00	1.00	14	700	LF
Pier	63.00	1.00	1.00	5	315	
	62.00	1.00	1.00	5	310	
					1325	LF
Item 507, 12" CIP Reinforced Piles, Furnished						
Abutment	55.00	1.00	1.00	14	770	LF
Pier	68.00	1.00	1.00	5	340	
	67.00	1.00	1.00	5	335	
					1445	LF
Item 509, Epoxy Coated Reinforcing Steel						
Abutment	Assume 1% steel				12519	LB
Pier	Assume 2% steel				2872	
Slab	Assume 2% steel				33020	
					48411	LB
Item 511, Class QC2 Concrete, Superstructure						
Slab	113.25	16.00	1.75	1	117	CY
Diaphragm	29.38	2.25	1.50	2	7	
					125	CY
Item 511, Class QC1 Concrete, Abutment Including Footing						
Footing	48.00	3.00	3.00	2	32	CY
Beam Seat	48.00	2.25	5.50	2	44	
Wingwalls	18.62	2.25	3.00	4	19	
					95	CY
Item 511, Class QC1 Concrete, Pier above Footing						
	24.42	3.00	2.00	2	11	CY
					11	CY
Item 517, Twin Steel Tube Railing, modified.						
	113.25	1.00	1.00	2	227	LF
Item 518, Porous Backfill with Geotextile Fabric						
	48.00	2.00	10.00	2	71	CY
Item 518, 6" Perforated Plastic Pipe						
	48.00	1.00	1.00	2	96	LF
Item 518, 6" Non-Perforated Plastic Pipe						
	20.00	1.00	1.00	4	80	LF

Designed by:_____Checked by:_____

	Length	Width	Height	Number	Total	Units
Item 507, 12" CIP Reinforced Piles, Driven						
Abutment	50.00	1.00	1.00	14	700	LF
Pier	63.00	1.00	1.00	5	315	
	62.00	1.00	1.00	5	310	
					1325	LF
Item 507, 12" CIP Reinforced Piles, Furnished						
Abutment	55.00	1.00	1.00	14	770	LF
Pier	68.00	1.00	1.00	5	340	
	67.00	1.00	1.00	5	335	
					1445	LF
Item 509, Epoxy Coated Reinforcing Steel						
Abutment	Assume 1% steel				14575	LB
Pier	Assume 1% steel				2591	
Slab	Assume 2% steel				11264	
					28429	LB
Item 511, Class QC2 Concrete, Superstructure						
Slab	113.67	17.33	0.58	1	43	CY
Diaphragm	29.38	3.00	1.83	0	0	
					43	CY
Item 511, Class QC1 Concrete, Abutment Including Footing						
Footing	48.00	3.00	3.00	2	32	CY
Beam Seat	48.00	3.00	5.00	2	53	
Wingwalls	18.62	3.00	3.00	4	25	
					110	CY
Item 511, Class QC1 Concrete, Pier above Footing						
	29.38	3.00	3.00	2	20	CY
					20	CY
Item 515, PCBB CB21-48						
	1.00	1.00	1.00	12	12	EA
Item 516, Elastomeric bearings with intenal laminates						
	1.00	1.00	1.00	48	48	EA

Designed by:_____Checked by:_____

	Length	Width	Height	Number	Total	Units
Item 517, Twin Steel Tube Railing, modified.	113.67	1.00	1.00	2	227	LF
Item 518, Porous Backfill with Geotextile Fabric	48.00	2.00	9.83	2	70	CY
Item 518, 6" Perforated Plastic Pipe	48.00	1.00	1.00	2	96	LF
Item 518, 6" Non-Perforated Plastic Pipe	19.67	1.00	1.00	4	79	LF

Designed by:_____Checked by:_____

APPENDIX A.5

Estimate Seg 3-E, Alt. 1

Estimated Cost:$595,453.97

Contingency: 20.00%

Estimated Total: $714,544.76

Wasson Armleder
Structure Type Study
Segment 3-E, Alternative 1

Base Date: 02/27/24

Spec Year: 23

Unit System: E

Work Type: GEN CONST: INVLVS 2 OR MOR MAJ WRK TYPE

Highway Type:

Urban/Rural Type: RURAL CLASS

Season: SUMMER

County: HAMILTON

Latitude of Midpoint: 0

Longitude of Midpoint: 0

District: 08

Federal/State Project Number:

Prepared by Stantec on 02/27/24

Line #	Item Number / Description / *Supplemental Description*	Quantity	Units	Unit Price	Extension
Group 0001: Initial Group					
0005	505E11100 PILE DRIVING EQUIPMENT MOBILIZATION	1.000	LS	$30,000.00000	$30,000.00
0006	507E00500 12" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN	1,100.000	FT	$12.02755	$13,230.31
0007	507E00550 12" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED	1,200.000	FT	$48.61848	$58,342.18
0008	509E10000 EPOXY COATED STEEL REINFORCEMENT	54,500.000	LB	$1.93933	$105,693.49
0009	511E32212 CLASS QC2 CONCRETE WITH QC/QA, SUPERSTRUCTURE	162.000	CY	$992.10438	$160,720.91
0011	511E42510 CLASS QC1 CONCRETE, PIER CAP	8.000	CY	$1,875.20968	$15,001.68
0012	511E44110 CLASS QC1 CONCRETE, ABUTMENT NOT INCLUDING FOOTING	71.000	CY	$919.28532	$65,269.26
0015	517E70100 RAILING (THREE STEEL TUBE BRIDGE RAILING)	264.000	FT	$482.03582	$127,257.46
0017	518E21200 POROUS BACKFILL WITH GEOTEXTILE FABRIC	160.000	CY	$111.33629	$17,813.81
0018	518E40000 6" PERFORATED CORRUGATED PLASTIC PIPE	72.000	FT	$10.35134	$745.30
0019	518E40010 6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIAL S	80.000	FT	$17.24461	$1,379.57

Total for Group 0001:$595,453.97

Estimate Seg-3-E, Alt 2

Estimated Cost:$750,628.09

Contingency: 20.00%

Estimated Total: $900,753.71

Wasson Armleder
Structure Type Study
Segment 3-E, Alternative 2

Base Date: 02/27/24

Spec Year: 23

Unit System: E

Work Type: GEN CONST: INVLVS 2 OR MOR MAJ WRK TYPE

Highway Type:

Urban/Rural Type: RURAL CLASS

Season: SUMMER

County: HAMILTON

Latitude of Midpoint: 0

Longitude of Midpoint: 0

District: 08

Federal/State Project Number:

Prepared by Stantec on 02/27/24

Line #	Item Number / Description / *Supplemental Description*	Quantity	Units	Unit Price	Extension
Group 0001: Initial Group					
0005	505E11100 PILE DRIVING EQUIPMENT MOBILIZATION	1.000	LS	$30,000.00000	$30,000.00
0006	507E00500 12" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN	1,100.000	FT	$12.02755	$13,230.31
0007	507E00550 12" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED	1,200.000	FT	$48.61848	$58,342.18
0008	509E10000 EPOXY COATED STEEL REINFORCEMENT	30,000.000	LB	$2.04262	$61,278.60
0009	511E34444 CLASS QC2 CONCRETE, BRIDGE DECK	65.000	CY	$2,566.88732	$166,847.68
0011	511E42510 CLASS QC1 CONCRETE, PIER CAP	15.000	CY	$1,875.20968	$28,128.15
0012	511E43510 CLASS QC1 CONCRETE, ABUTMENT INCLUDING FOOTING	83.000	CY	$560.58823	$46,528.82
0014	515E12050 PRESTRESSED CONCRETE COMPOSITE BOX BEAM BRIDGE MEMBERS, LEVE L 1, CB21-48	12.000	EACH	$17,001.84924	$204,022.19
0016	516E43100 ELASTOMERIC BEARING WITH INTERNAL LAMINATES ONLY (NEOPRENE) <2" THICK	48.000	EACH	$117.70158	$5,649.68
0019	517E70100 RAILING (THREE STEEL TUBE BRIDGE RAILING)	266.000	FT	$482.03582	$128,221.53
0020	518E21200 POROUS BACKFILL WITH GEOTEXTILE FABRIC	52.000	CY	$120.56452	$6,269.36
0021	518E40000 6" PERFORATED CORRUGATED PLASTIC PIPE	72.000	FT	$10.35134	$745.30
0022	518E40010 6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIAL S	79.000	FT	$17.26955	$1,364.29

Total for Group 0001:$750,628.09

	Length	Width	Height	Number	Total	Units
Item 507, 12" CIP Reinforced Piles, Driven						
Abutment	50.00	1.00	1.00	12	600	LF
Pier	63.00	1.00	1.00	4	252	
	62.00	1.00	1.00	4	248	
					1100	LF
Item 507, 12" CIP Reinforced Piles, Furnished						
Abutment	55.00	1.00	1.00	12	660	LF
Pier	68.00	1.00	1.00	4	272	
	67.00	1.00	1.00	4	268	
					1200	LF
Item 509, Epoxy Coated Reinforcing Steel						
Abutment	Assume 1% steel				9386	LB
Pier	Assume 2% steel				2244	
Slab	Assume 2% steel				42876	
					54506	LB
Item 511, Class QC2 Concrete, Superstructure						
Slab	132.07	16.00	2.00	1	157	CY
Diaphragm	22.06	2.25	1.50	2	6	
					162	CY
Item 511, Class QC1 Concrete, Abutment Including Footing						
Footing	36.00	3.00	3.00	2	24	CY
Beam Seat	36.00	2.25	5.50	2	33	
Wingwalls	13.94	2.25	3.00	4	14	
					71	CY
Item 511, Class QC1 Concrete, Pier above Footing						
	19.08	3.00	2.00	2	8	CY
					8	CY
Item 517, Twin Steel Tube Railing, modified.						
	132.07	1.00	1.00	2	264	LF
Item 518, Porous Backfill with Geotextile Fabric						
	36.00	2.00	10.00	2	53	CY
Item 518, 6" Perforated Plastic Pipe						
	36.00	1.00	1.00	2	72	LF
Item 518, 6" Non-Perforated Plastic Pipe						
	20.00	1.00	1.00	4	80	LF

Designed by:_____Checked by:_____

	Length	Width	Height	Number	Total	Units
Item 507, 12" CIP Reinforced Piles, Driven						
Abutment	50.00	1.00	1.00	12	600	LF
Pier	63.00	1.00	1.00	4	252	
	62.00	1.00	1.00	4	248	
					1100	LF
Item 507, 12" CIP Reinforced Piles, Furnished						
Abutment	55.00	1.00	1.00	12	660	LF
Pier	68.00	1.00	1.00	4	272	
	67.00	1.00	1.00	4	268	
					1200	LF
Item 509, Epoxy Coated Reinforcing Steel						
Abutment	Assume 1% steel				10927	LB
Pier	Assume 1% steel				1945	
Slab	Assume 2% steel				12143	
					25015	LB
Item 511, Class QC2 Concrete, Superstructure						
Slab	132.76	16.00	0.58	1	46	CY
Diaphragm	22.06	3.00	1.83	0	0	
					46	CY
Item 511, Class QC1 Concrete, Abutment Including Footing						
Footing	36.00	3.00	3.00	2	24	CY
Beam Seat	36.00	3.00	5.00	2	40	
Wingwalls	13.94	3.00	3.00	4	19	
					83	CY
Item 511, Class QC1 Concrete, Pier above Footing						
	22.06	3.00	3.00	2	15	CY
					15	CY
Item 515, PCBB CB21-48						
	1.00	1.00	1.00	12	12	EA
Item 516, Elastomeric bearings with intenal laminates						
	1.00	1.00	1.00	48	48	EA

Designed by:_____Checked by:_____

	Length	Width	Height	Number	Total	Units
Item 517, Twin Steel Tube Railing, modified.	132.76	1.00	1.00	2	266	LF
Item 518, Porous Backfill with Geotextile Fabric	36.00	2.00	9.83	2	52	CY
Item 518, 6" Perforated Plastic Pipe	36.00	1.00	1.00	2	72	LF
Item 518, 6" Non-Perforated Plastic Pipe	19.67	1.00	1.00	4	79	LF

Designed by:_____Checked by:_____

Attachment E

Hydraulic Calculations

Stantec

Memo

To:	Mike Sturdevant Cincinnati, Ohio	From:	Eric Adkins Cincinnati
Project/File:	173620146	Date:	February 28, 2024

Reference: Wasson - Armleder Trail Extension Hydraulic Analysis for Feasibility Study

The hydraulic analysis started with the effective FEMA HEC-RAS model for Duck Creek. Average Cross section spacing in the approximately 1 mile long section of Duck Creek that our models were spread over was 300-400 feet. Interpolated cross sections were used between the model cross sections to bring the average spacing to approximately 100 feet. No Survey was performed for the feasibility study hydraulic analysis. A detailed stream survey will need to be conducted and an updated analysis performed once a preferred alternative is chosen.

Alternate 3B causes a rise in the 100 year water surface elevation of Duck Creek of 2.08 feet above the existing 100 year water surface elevation of 501.00' immediately upstream of the proposed bridge. The rise continues approximately 5400 feet upstream until it rejoins the existing profile.

Alternate 3C causes a rise in the 100 year water surface elevation of Duck Creek of 0.90 feet above the existing 100 year water surface elevation of 494.84' immediately upstream of the proposed bridge. The rise continues approximately 4900 feet upstream until it rejoins the existing profile.

Alternate 3D causes a rise in the 100 year water surface elevation of Duck Creek of 0.38 feet above the existing 100 year water surface elevation of 493.15' immediately upstream of the proposed bridge. The rise continues approximately 2000 feet upstream until it rejoins the existing profile.

Alternate 3E causes a rise in the 100 year water surface elevation of Duck Creek of 0.90 feet above the existing 100 year water surface elevation of 491.27' immediately upstream of the proposed bridge. The rise continues approximately 2200 feet upstream until it rejoins the existing profile.

A copy of the HEC-RAS Output for the 100-year flood of the Existing and all four alternates follows this memo.

Sincerely,

STANTEC CONSULTING SERVICES INC.

Eric Adkins PE, MS
Structural Engineer
Phone: (513) 619-6473
eric.adkins@stantec.com

stantec.com

Design with community in mind

HEC-RAS River: RIVER-1 Reach: Reach-1 Profile: 100 year

Reach	River Sta	Profile	Plan	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
				(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Reach-1	5.415	100 year	Existing Prelim	7700.00	538.90	561.57	554.47	565.24	0.001658	15.37	500.93	22.20	0.57
Reach-1	5.415	100 year	Proposed 3B	7700.00	538.90	561.57	554.47	565.24	0.001658	15.37	500.93	22.20	0.57
Reach-1	5.415	100 year	Proposed 3C	7700.00	538.90	561.57	554.47	565.24	0.001658	15.37	500.93	22.20	0.57
Reach-1	5.415	100 year	Proposed 3D	7700.00	538.90	561.57	554.47	565.24	0.001658	15.37	500.93	22.20	0.57
Reach-1	5.415	100 year	PR3E Raised	7700.00	538.90	561.57	554.47	565.24	0.001658	15.37	500.93	22.20	0.57
Reach-1	5.3675			Culvert									
Reach-1	5.32	100 year	Existing Prelim	7980.00	537.40	554.30	553.33	561.38	0.003671	21.34	374.03	22.20	0.92
Reach-1	5.32	100 year	Proposed 3B	7980.00	537.40	554.30	553.33	561.38	0.003671	21.34	374.03	22.20	0.92
Reach-1	5.32	100 year	Proposed 3C	7980.00	537.40	554.30	553.33	561.38	0.003671	21.34	374.03	22.20	0.92
Reach-1	5.32	100 year	Proposed 3D	7980.00	537.40	554.30	553.33	561.38	0.003671	21.34	374.03	22.20	0.92
Reach-1	5.32	100 year	PR3E Raised	7980.00	537.40	554.30	553.33	561.38	0.003671	21.34	374.03	22.20	0.92
Reach-1	5.308	100 year	Existing Prelim	7980.00	537.30	554.48	554.48	560.99	0.003177	20.47	389.86	30.00	1.00
Reach-1	5.308	100 year	Proposed 3B	7980.00	537.30	554.48	554.48	560.99	0.003177	20.47	389.86	30.00	1.00
Reach-1	5.308	100 year	Proposed 3C	7980.00	537.30	554.48	554.48	560.99	0.003177	20.47	389.86	30.00	1.00
Reach-1	5.308	100 year	Proposed 3D	7980.00	537.30	554.48	554.48	560.99	0.003177	20.47	389.86	30.00	1.00
Reach-1	5.308	100 year	PR3E Raised	7980.00	537.30	554.48	554.48	560.99	0.003177	20.47	389.86	30.00	1.00
Reach-1	5.213	100 year	Existing Prelim	7980.00	535.80	551.10	549.80	556.49	0.002501	18.62	428.64	30.00	0.87
Reach-1	5.213	100 year	Proposed 3B	7980.00	535.80	551.10	549.80	556.49	0.002501	18.62	428.64	30.00	0.87
Reach-1	5.213	100 year	Proposed 3C	7980.00	535.80	551.10	549.80	556.49	0.002501	18.62	428.64	30.00	0.87
Reach-1	5.213	100 year	Proposed 3D	7980.00	535.80	551.10	549.80	556.49	0.002501	18.62	428.64	30.00	0.87
Reach-1	5.213	100 year	PR3E Raised	7980.00	535.80	551.10	549.80	556.49	0.002501	18.62	428.64	30.00	0.87
Reach-1	5.14	100 year	Existing Prelim	7980.00	534.60	550.46	548.57	555.45	0.002258	17.92	445.39	30.00	0.82
Reach-1	5.14	100 year	Proposed 3B	7980.00	534.60	550.46	548.57	555.45	0.002258	17.92	445.39	30.00	0.82
Reach-1	5.14	100 year	Proposed 3C	7980.00	534.60	550.46	548.57	555.45	0.002258	17.92	445.39	30.00	0.82
Reach-1	5.14	100 year	Proposed 3D	7980.00	534.60	550.46	548.57	555.45	0.002258	17.92	445.39	30.00	0.82
Reach-1	5.14	100 year	PR3E Raised	7980.00	534.60	550.46	548.57	555.45	0.002258	17.92	445.39	30.00	0.82
Reach-1	5.113	100 year	Existing Prelim	8210.00	534.00	548.22	548.22	554.90	0.003276	20.72	396.16	29.97	1.00
Reach-1	5.113	100 year	Proposed 3B	8210.00	534.00	548.22	548.22	554.90	0.003276	20.72	396.16	29.97	1.00
Reach-1	5.113	100 year	Proposed 3C	8210.00	534.00	548.22	548.22	554.90	0.003276	20.72	396.16	29.97	1.00
Reach-1	5.113	100 year	Proposed 3D	8210.00	534.00	548.22	548.22	554.90	0.003276	20.72	396.16	29.97	1.00
Reach-1	5.113	100 year	PR3E Raised	8210.00	534.00	548.22	548.22	554.90	0.003276	20.72	396.16	29.97	1.00
Reach-1	5.104	100 year	Existing Prelim	8210.00	533.90	547.79	546.90	553.01	0.002397	18.32	448.07	34.97	0.90
Reach-1	5.104	100 year	Proposed 3B	8210.00	533.90	547.79	546.90	553.01	0.002397	18.32	448.07	34.97	0.90
Reach-1	5.104	100 year	Proposed 3C	8210.00	533.90	547.79	546.90	553.01	0.002397	18.32	448.07	34.97	0.90
Reach-1	5.104	100 year	Proposed 3D	8210.00	533.90	547.79	546.90	553.01	0.002397	18.32	448.07	34.97	0.90
Reach-1	5.104	100 year	PR3E Raised	8210.00	533.90	547.79	546.90	553.01	0.002397	18.32	448.07	34.97	0.90
Reach-1	5.095	100 year	Existing Prelim	8210.00	533.80	549.06		552.34	0.001300	14.54	564.64	39.98	0.68
Reach-1	5.095	100 year	Proposed 3B	8210.00	533.80	549.06		552.34	0.001300	14.54	564.64	39.98	0.68
Reach-1	5.095	100 year	Proposed 3C	8210.00	533.80	549.06		552.34	0.001300	14.54	564.64	39.98	0.68
Reach-1	5.095	100 year	Proposed 3D	8210.00	533.80	549.06		552.34	0.001300	14.54	564.64	39.98	0.68
Reach-1	5.095	100 year	PR3E Raised	8210.00	533.80	549.06		552.34	0.001300	14.54	564.64	39.98	0.68
Reach-1	5.076	100 year	Existing Prelim	8210.00	533.50	549.01		552.18	0.001238	14.29	574.73	39.98	0.66
Reach-1	5.076	100 year	Proposed 3B	8210.00	533.50	549.01		552.18	0.001238	14.29	574.73	39.98	0.66
Reach-1	5.076	100 year	Proposed 3C	8210.00	533.50	549.01		552.18	0.001238	14.29	574.73	39.98	0.66
Reach-1	5.076	100 year	Proposed 3D	8210.00	533.50	549.01		552.18	0.001238	14.29	574.73	39.98	0.66
Reach-1	5.076	100 year	PR3E Raised	8210.00	533.50	549.01		552.18	0.001238	14.29	574.73	39.98	0.66
Reach-1	5.029	100 year	Existing Prelim	8210.00	532.60	548.97		551.79	0.001055	13.48	608.91	39.98	0.61
Reach-1	5.029	100 year	Proposed 3B	8210.00	532.60	548.97		551.79	0.001055	13.48	608.91	39.98	0.61
Reach-1	5.029	100 year	Proposed 3C	8210.00	532.60	548.97		551.79	0.001055	13.48	608.91	39.98	0.61
Reach-1	5.029	100 year	Proposed 3D	8210.00	532.60	548.97		551.79	0.001055	13.48	608.91	39.98	0.61
Reach-1	5.029	100 year	PR3E Raised	8210.00	532.60	548.97		551.79	0.001055	13.48	608.91	39.98	0.61
Reach-1	5	100 year	Existing Prelim	8210.00	532.50	548.76		551.62	0.001075	13.58	604.61	39.98	0.62
Reach-1	5	100 year	Proposed 3B	8210.00	532.50	548.76		551.62	0.001075	13.58	604.61	39.98	0.62
Reach-1	5	100 year	Proposed 3C	8210.00	532.50	548.76		551.62	0.001075	13.58	604.61	39.98	0.62
Reach-1	5	100 year	Proposed 3D	8210.00	532.50	548.76		551.62	0.001075	13.58	604.61	39.98	0.62
Reach-1	5	100 year	PR3E Raised	8210.00	532.50	548.76		551.62	0.001075	13.58	604.61	39.98	0.62
Reach-1	4.994	100 year	Existing Prelim	8210.00	532.00	550.02		551.00	0.004518	6.83	1040.31	75.45	0.40
Reach-1	4.994	100 year	Proposed 3B	8210.00	532.00	550.02		551.00	0.004518	6.83	1040.31	75.45	0.40
Reach-1	4.994	100 year	Proposed 3C	8210.00	532.00	550.02		551.00	0.004518	6.83	1040.31	75.45	0.40
Reach-1	4.994	100 year	Proposed 3D	8210.00	532.00	550.02		551.00	0.004518	6.83	1040.31	75.45	0.40
Reach-1	4.994	100 year	PR3E Raised	8210.00	532.00	550.02		551.00	0.004518	6.83	1040.31	75.45	0.40
Reach-1	4.984	100 year	Existing Prelim	8210.00	530.00	550.16		550.78	0.001194	6.68	1408.49	90.00	0.28
Reach-1	4.984	100 year	Proposed 3B	8210.00	530.00	550.16		550.78	0.001194	6.68	1408.49	90.00	0.28
Reach-1	4.984	100 year	Proposed 3C	8210.00	530.00	550.16		550.78	0.001194	6.68	1408.49	90.00	0.28
Reach-1	4.984	100 year	Proposed 3D	8210.00	530.00	550.16		550.78	0.001194	6.68	1408.49	90.00	0.28
Reach-1	4.984	100 year	PR3E Raised	8210.00	530.00	550.16		550.78	0.001194	6.68	1408.49	90.00	0.28
Reach-1	4.975	100 year	Existing Prelim	8210.00	530.00	550.29		550.66	0.000798	5.49	1877.56	134.46	0.23
Reach-1	4.975	100 year	Proposed 3B	8210.00	530.00	550.29		550.66	0.000798	5.49	1877.56	134.46	0.23
Reach-1	4.975	100 year	Proposed 3C	8210.00	530.00	550.29		550.66	0.000798	5.49	1877.56	134.46	0.23
Reach-1	4.975	100 year	Proposed 3D	8210.00	530.00	550.29		550.66	0.000798	5.49	1877.56	134.46	0.23
Reach-1	4.975	100 year	PR3E Raised	8210.00	530.00	550.29		550.66	0.000798	5.49	1877.56	134.46	0.23
Reach-1	4.966	100 year	Existing Prelim	8210.00	530.00	549.98		550.59	0.001342	6.46	1414.02	139.83	0.29

HEC-RAS River: RIVER-1 Reach: Reach-1 Profile: 100 year (Continued)

Reach	River Sta	Profile	Plan	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
				(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Reach-1	4.966	100 year	Proposed 3B	8210.00	530.00	549.98		550.59	0.001342	6.46	1414.02	139.83	0.29
Reach-1	4.966	100 year	Proposed 3C	8210.00	530.00	549.98		550.59	0.001342	6.46	1414.02	139.83	0.29
Reach-1	4.966	100 year	Proposed 3D	8210.00	530.00	549.98		550.59	0.001342	6.46	1414.02	139.83	0.29
Reach-1	4.966	100 year	PR3E Raised	8210.00	530.00	549.98		550.59	0.001342	6.46	1414.02	139.83	0.29
Reach-1	4.895	100 year	Existing Prelim	8210.00	530.00	549.36		550.04	0.001560	6.78	1329.33	135.52	0.31
Reach-1	4.895	100 year	Proposed 3B	8210.00	530.00	549.36		550.04	0.001560	6.78	1329.33	135.52	0.31
Reach-1	4.895	100 year	Proposed 3C	8210.00	530.00	549.36		550.04	0.001560	6.78	1329.33	135.52	0.31
Reach-1	4.895	100 year	Proposed 3D	8210.00	530.00	549.36		550.04	0.001560	6.78	1329.33	135.52	0.31
Reach-1	4.895	100 year	PR3E Raised	8210.00	530.00	549.36		550.04	0.001560	6.78	1329.33	135.52	0.31
Reach-1	4.811	100 year	Existing Prelim	8210.00	530.00	548.66		549.35	0.001537	7.25	1355.51	95.00	0.32
Reach-1	4.811	100 year	Proposed 3B	8210.00	530.00	548.66		549.35	0.001537	7.25	1355.51	95.00	0.32
Reach-1	4.811	100 year	Proposed 3C	8210.00	530.00	548.66		549.35	0.001537	7.25	1355.51	95.00	0.32
Reach-1	4.811	100 year	Proposed 3D	8210.00	530.00	548.66		549.35	0.001537	7.25	1355.51	95.00	0.32
Reach-1	4.811	100 year	PR3E Raised	8210.00	530.00	548.66		549.35	0.001537	7.25	1355.51	95.00	0.32
Reach-1	4.788	100 year	Existing Prelim	5600.00	530.60	546.03	541.94	548.98	0.000917	13.77	406.58	123.37	0.62
Reach-1	4.788	100 year	Proposed 3B	5600.00	530.60	546.03	541.94	548.98	0.000917	13.77	406.58	123.37	0.62
Reach-1	4.788	100 year	Proposed 3C	5600.00	530.60	546.03	541.94	548.98	0.000917	13.77	406.58	123.37	0.62
Reach-1	4.788	100 year	Proposed 3D	5600.00	530.60	546.03	541.94	548.98	0.000917	13.77	406.58	123.37	0.62
Reach-1	4.788	100 year	PR3E Raised	5600.00	530.60	546.03	541.94	548.98	0.000917	13.77	406.58	123.37	0.62
Reach-1	4.783			Bridge									
Reach-1	4.778	100 year	Existing Prelim	5600.00	530.60	545.49	541.93	548.66	0.001034	14.28	392.18	121.86	0.66
Reach-1	4.778	100 year	Proposed 3B	5600.00	530.60	545.49	541.93	548.66	0.001034	14.28	392.18	121.86	0.66
Reach-1	4.778	100 year	Proposed 3C	5600.00	530.60	545.49	541.93	548.66	0.001034	14.28	392.18	121.86	0.66
Reach-1	4.778	100 year	Proposed 3D	5600.00	530.60	545.49	541.93	548.66	0.001034	14.28	392.18	121.86	0.66
Reach-1	4.778	100 year	PR3E Raised	5600.00	530.60	545.49	541.93	548.66	0.001034	14.28	392.18	121.86	0.66
Reach-1	4.775	100 year	Existing Prelim	5600.00	530.60	546.11		548.37	0.001755	12.06	464.19	30.00	0.54
Reach-1	4.775	100 year	Proposed 3B	5600.00	530.60	546.11		548.37	0.001755	12.06	464.19	30.00	0.54
Reach-1	4.775	100 year	Proposed 3C	5600.00	530.60	546.11		548.37	0.001755	12.06	464.19	30.00	0.54
Reach-1	4.775	100 year	Proposed 3D	5600.00	530.60	546.11		548.37	0.001755	12.06	464.19	30.00	0.54
Reach-1	4.775	100 year	PR3E Raised	5600.00	530.60	546.11		548.37	0.001755	12.06	464.19	30.00	0.54
Reach-1	4.772	100 year	Existing Prelim	5600.00	530.60	546.50		548.17	0.001176	10.38	539.42	34.00	0.46
Reach-1	4.772	100 year	Proposed 3B	5600.00	530.60	546.50		548.17	0.001176	10.38	539.42	34.00	0.46
Reach-1	4.772	100 year	Proposed 3C	5600.00	530.60	546.50		548.17	0.001176	10.38	539.42	34.00	0.46
Reach-1	4.772	100 year	Proposed 3D	5600.00	530.60	546.50		548.17	0.001176	10.38	539.42	34.00	0.46
Reach-1	4.772	100 year	PR3E Raised	5600.00	530.60	546.50		548.17	0.001176	10.38	539.42	34.00	0.46
Reach-1	4.769	100 year	Existing Prelim	5600.00	530.60	547.02		547.93	0.000483	8.12	923.94	96.38	0.35
Reach-1	4.769	100 year	Proposed 3B	5600.00	530.60	547.02		547.93	0.000483	8.12	923.94	96.38	0.35
Reach-1	4.769	100 year	Proposed 3C	5600.00	530.60	547.02		547.93	0.000483	8.12	923.94	96.38	0.35
Reach-1	4.769	100 year	Proposed 3D	5600.00	530.60	547.02		547.93	0.000483	8.12	923.94	96.38	0.35
Reach-1	4.769	100 year	PR3E Raised	5600.00	530.60	547.02		547.93	0.000483	8.12	923.94	96.38	0.35
Reach-1	4.743	100 year	Existing Prelim	5600.00	529.90	546.89		547.86	0.000464	8.24	987.52	115.80	0.35
Reach-1	4.743	100 year	Proposed 3B	5600.00	529.90	546.89		547.86	0.000464	8.24	987.52	115.80	0.35
Reach-1	4.743	100 year	Proposed 3C	5600.00	529.90	546.89		547.86	0.000464	8.24	987.52	115.80	0.35
Reach-1	4.743	100 year	Proposed 3D	5600.00	529.90	546.89		547.86	0.000464	8.24	987.52	115.80	0.35
Reach-1	4.743	100 year	PR3E Raised	5600.00	529.90	546.89		547.86	0.000464	8.24	987.52	115.80	0.35
Reach-1	4.736	100 year	Existing Prelim	8320.00	529.60	546.71	542.41	547.84	0.000240	9.99	1482.43	144.40	0.43
Reach-1	4.736	100 year	Proposed 3B	8320.00	529.60	546.71	542.41	547.84	0.000240	9.99	1482.43	144.40	0.43
Reach-1	4.736	100 year	Proposed 3C	8320.00	529.60	546.71	542.41	547.84	0.000240	9.99	1482.43	144.40	0.43
Reach-1	4.736	100 year	Proposed 3D	8320.00	529.60	546.71	542.41	547.84	0.000240	9.99	1482.43	144.40	0.43
Reach-1	4.736	100 year	PR3E Raised	8320.00	529.60	546.71	542.41	547.84	0.000240	9.99	1482.43	144.40	0.43
Reach-1	4.7315			Bridge									
Reach-1	4.727	100 year	Existing Prelim	8320.00	529.60	545.09	542.23	546.67	0.000372	11.62	1247.59	144.40	0.53
Reach-1	4.727	100 year	Proposed 3B	8320.00	529.60	545.09	542.23	546.67	0.000372	11.62	1247.59	144.40	0.53
Reach-1	4.727	100 year	Proposed 3C	8320.00	529.60	545.09	542.23	546.67	0.000372	11.62	1247.59	144.40	0.53
Reach-1	4.727	100 year	Proposed 3D	8320.00	529.60	545.09	542.23	546.67	0.000372	11.62	1247.59	144.40	0.53
Reach-1	4.727	100 year	PR3E Raised	8320.00	529.60	545.09	542.23	546.67	0.000372	11.62	1247.59	144.40	0.53
Reach-1	4.716	100 year	Existing Prelim	8320.00	529.30	541.05	541.05	546.27	0.002017	18.59	492.35	53.00	0.96
Reach-1	4.716	100 year	Proposed 3B	8320.00	529.30	541.05	541.05	546.27	0.002017	18.59	492.35	53.00	0.96
Reach-1	4.716	100 year	Proposed 3C	8320.00	529.30	541.05	541.05	546.27	0.002017	18.59	492.35	53.00	0.96
Reach-1	4.716	100 year	Proposed 3D	8320.00	529.30	541.05	541.05	546.27	0.002017	18.59	492.35	53.00	0.96
Reach-1	4.716	100 year	PR3E Raised	8320.00	529.30	541.05	541.05	546.27	0.002017	18.59	492.35	53.00	0.96
Reach-1	4.641	100 year	Existing Prelim	8200.00	527.40	539.31	538.93	543.88	0.001789	17.39	518.40	56.00	0.91
Reach-1	4.641	100 year	Proposed 3B	8200.00	527.40	539.31	538.93	543.88	0.001789	17.39	518.40	56.00	0.91
Reach-1	4.641	100 year	Proposed 3C	8200.00	527.40	539.31	538.93	543.88	0.001789	17.39	518.40	56.00	0.91
Reach-1	4.641	100 year	Proposed 3D	8200.00	527.40	539.31	538.93	543.88	0.001789	17.39	518.40	56.00	0.91
Reach-1	4.641	100 year	PR3E Raised	8200.00	527.40	539.31	538.93	543.88	0.001789	17.39	518.40	56.00	0.91
Reach-1	4.595	100 year	Existing Prelim	8040.00	526.70	539.56	538.10	543.25	0.001302	15.69	571.36	56.00	0.79
Reach-1	4.595	100 year	Proposed 3B	8040.00	526.70	539.56	538.10	543.25	0.001302	15.69	571.36	56.00	0.79
Reach-1	4.595	100 year	Proposed 3C	8040.00	526.70	539.56	538.10	543.25	0.001302	15.69	571.36	56.00	0.79
Reach-1	4.595	100 year	Proposed 3D	8040.00	526.70	539.56	538.10	543.25	0.001302	15.69	571.36	56.00	0.79
Reach-1	4.595	100 year	PR3E Raised	8040.00	526.70	539.56	538.10	543.25	0.001302	15.69	571.36	56.00	0.79

HEC-RAS River: RIVER-1 Reach: Reach-1 Profile: 100 year (Continued)

Reach	River Sta	Profile	Plan	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
				(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Reach-1	4.533	100 year	Existing Prelim	8040.00	526.10	539.97		542.55	0.000941	13.55	904.02	108.00	0.65
Reach-1	4.533	100 year	Proposed 3B	8040.00	526.10	539.97		542.55	0.000941	13.55	904.02	108.00	0.65
Reach-1	4.533	100 year	Proposed 3C	8040.00	526.10	539.97		542.55	0.000941	13.55	904.02	108.00	0.65
Reach-1	4.533	100 year	Proposed 3D	8040.00	526.10	539.97		542.55	0.000941	13.55	904.02	108.00	0.65
Reach-1	4.533	100 year	PR3E Raised	8040.00	526.10	539.97		542.55	0.000941	13.55	904.02	108.00	0.65
Reach-1	4.455	100 year	Existing Prelim	7780.00	525.20	538.99	536.68	542.08	0.001119	14.33	673.67	96.36	0.70
Reach-1	4.455	100 year	Proposed 3B	7780.00	525.20	538.99	536.68	542.08	0.001119	14.33	673.67	96.36	0.70
Reach-1	4.455	100 year	Proposed 3C	7780.00	525.20	538.99	536.68	542.08	0.001119	14.33	673.67	96.36	0.70
Reach-1	4.455	100 year	Proposed 3D	7780.00	525.20	538.99	536.68	542.08	0.001119	14.33	673.67	96.36	0.70
Reach-1	4.455	100 year	PR3E Raised	7780.00	525.20	538.99	536.68	542.08	0.001119	14.33	673.67	96.36	0.70
Reach-1	4.355	100 year	Existing Prelim	7780.00	524.40	539.52		541.29	0.000539	11.36	948.77	105.82	0.52
Reach-1	4.355	100 year	Proposed 3B	7780.00	524.40	539.52		541.29	0.000539	11.36	948.77	105.82	0.52
Reach-1	4.355	100 year	Proposed 3C	7780.00	524.40	539.52		541.29	0.000539	11.36	948.77	105.82	0.52
Reach-1	4.355	100 year	Proposed 3D	7780.00	524.40	539.52		541.29	0.000539	11.36	948.77	105.82	0.52
Reach-1	4.355	100 year	PR3E Raised	7780.00	524.40	539.52		541.29	0.000539	11.36	948.77	105.82	0.52
Reach-1	4.325	100 year	Existing Prelim	7780.00	524.00	540.04		540.84	0.002487	7.52	1134.36	110.70	0.36
Reach-1	4.325	100 year	Proposed 3B	7780.00	524.00	540.04		540.84	0.002487	7.52	1134.36	110.70	0.36
Reach-1	4.325	100 year	Proposed 3C	7780.00	524.00	540.04		540.84	0.002487	7.52	1134.36	110.70	0.36
Reach-1	4.325	100 year	Proposed 3D	7780.00	524.00	540.04		540.84	0.002487	7.52	1134.36	110.70	0.36
Reach-1	4.325	100 year	PR3E Raised	7780.00	524.00	540.04		540.84	0.002487	7.52	1134.36	110.70	0.36
Reach-1	4.242	100 year	Existing Prelim	7470.00	521.10	539.75		540.10	0.000899	5.00	1638.46	139.88	0.22
Reach-1	4.242	100 year	Proposed 3B	7470.00	521.10	539.75		540.10	0.000899	5.00	1638.46	139.88	0.22
Reach-1	4.242	100 year	Proposed 3C	7470.00	521.10	539.75		540.10	0.000899	5.00	1638.46	139.88	0.22
Reach-1	4.242	100 year	Proposed 3D	7470.00	521.10	539.75		540.10	0.000899	5.00	1638.46	139.88	0.22
Reach-1	4.242	100 year	PR3E Raised	7470.00	521.10	539.75		540.10	0.000899	5.00	1638.46	139.88	0.22
Reach-1	4.178	100 year	Existing Prelim	7470.00	519.40	539.34		539.76	0.001082	5.53	1496.55	118.36	0.23
Reach-1	4.178	100 year	Proposed 3B	7470.00	519.40	539.34		539.76	0.001082	5.53	1496.55	118.36	0.23
Reach-1	4.178	100 year	Proposed 3C	7470.00	519.40	539.34		539.76	0.001082	5.53	1496.55	118.36	0.23
Reach-1	4.178	100 year	Proposed 3D	7470.00	519.40	539.34		539.76	0.001082	5.53	1496.55	118.36	0.23
Reach-1	4.178	100 year	PR3E Raised	7470.00	519.40	539.34		539.76	0.001082	5.53	1496.55	118.36	0.23
Reach-1	4.166	100 year	Existing Prelim	7470.00	519.00	538.54	528.43	539.58	0.004179	8.17	914.25	235.37	0.33
Reach-1	4.166	100 year	Proposed 3B	7470.00	519.00	538.54	528.43	539.58	0.004179	8.17	914.25	235.37	0.33
Reach-1	4.166	100 year	Proposed 3C	7470.00	519.00	538.54	528.43	539.58	0.004179	8.17	914.25	235.37	0.33
Reach-1	4.166	100 year	Proposed 3D	7470.00	519.00	538.54	528.43	539.58	0.004179	8.17	914.25	235.37	0.33
Reach-1	4.166	100 year	PR3E Raised	7470.00	519.00	538.54	528.43	539.58	0.004179	8.17	914.25	235.37	0.33
Reach-1	4.165			Bridge									
Reach-1	4.164	100 year	Existing Prelim	7470.00	519.00	538.12	528.43	539.20	0.004501	8.35	894.10	234.07	0.34
Reach-1	4.164	100 year	Proposed 3B	7470.00	519.00	538.12	528.43	539.20	0.004501	8.35	894.10	234.07	0.34
Reach-1	4.164	100 year	Proposed 3C	7470.00	519.00	538.12	528.43	539.20	0.004501	8.35	894.10	234.07	0.34
Reach-1	4.164	100 year	Proposed 3D	7470.00	519.00	538.12	528.43	539.20	0.004501	8.35	894.10	234.07	0.34
Reach-1	4.164	100 year	PR3E Raised	7470.00	519.00	538.12	528.43	539.20	0.004501	8.35	894.10	234.07	0.34
Reach-1	4.142	100 year	Existing Prelim	7470.00	518.80	538.58		538.72	0.000890	3.64	2633.99	264.06	0.16
Reach-1	4.142	100 year	Proposed 3B	7470.00	518.80	538.58		538.72	0.000890	3.64	2633.99	264.06	0.16
Reach-1	4.142	100 year	Proposed 3C	7470.00	518.80	538.58		538.72	0.000890	3.64	2633.99	264.06	0.16
Reach-1	4.142	100 year	Proposed 3D	7470.00	518.80	538.58		538.72	0.000890	3.64	2633.99	264.06	0.16
Reach-1	4.142	100 year	PR3E Raised	7470.00	518.80	538.58		538.72	0.000890	3.64	2633.99	264.06	0.16
Reach-1	4.057	100 year	Existing Prelim	7060.00	518.10	537.98		538.28	0.000966	4.79	1707.20	134.96	0.20
Reach-1	4.057	100 year	Proposed 3B	7060.00	518.10	537.98		538.28	0.000966	4.79	1707.20	134.96	0.20
Reach-1	4.057	100 year	Proposed 3C	7060.00	518.10	537.98		538.28	0.000966	4.79	1707.20	134.96	0.20
Reach-1	4.057	100 year	Proposed 3D	7060.00	518.10	537.98		538.28	0.000966	4.79	1707.20	134.96	0.20
Reach-1	4.057	100 year	PR3E Raised	7060.00	518.10	537.98		538.28	0.000966	4.79	1707.20	134.96	0.20
Reach-1	4.041	100 year	Existing Prelim	7060.00	517.90	533.62	531.21	537.79	0.001583	16.38	430.98	104.18	0.76
Reach-1	4.041	100 year	Proposed 3B	7060.00	517.90	533.62	531.21	537.79	0.001583	16.38	430.98	104.18	0.76
Reach-1	4.041	100 year	Proposed 3C	7060.00	517.90	533.62	531.21	537.79	0.001583	16.38	430.98	104.18	0.76
Reach-1	4.041	100 year	Proposed 3D	7060.00	517.90	533.62	531.21	537.79	0.001583	16.38	430.98	104.18	0.76
Reach-1	4.041	100 year	PR3E Raised	7060.00	517.90	533.62	531.21	537.79	0.001583	16.38	430.98	104.18	0.76
Reach-1	4.0285			Bridge									
Reach-1	4.016	100 year	Existing Prelim	7060.00	517.90	531.21	531.21	537.22	0.002914	19.67	358.88	101.54	1.00
Reach-1	4.016	100 year	Proposed 3B	7060.00	517.90	531.21	531.21	537.22	0.002914	19.67	358.88	101.54	1.00
Reach-1	4.016	100 year	Proposed 3C	7060.00	517.90	531.21	531.21	537.22	0.002914	19.67	358.88	101.54	1.00
Reach-1	4.016	100 year	Proposed 3D	7060.00	517.90	531.21	531.21	537.22	0.002914	19.67	358.88	101.54	1.00
Reach-1	4.016	100 year	PR3E Raised	7060.00	517.90	531.21	531.21	537.22	0.002914	19.67	358.88	101.54	1.00
Reach-1	4.001	100 year	Existing Prelim	7060.00	517.60	532.02		533.57	0.000738	10.85	1005.44	102.41	0.52
Reach-1	4.001	100 year	Proposed 3B	7060.00	517.60	532.02		533.57	0.000738	10.85	1005.44	102.41	0.52
Reach-1	4.001	100 year	Proposed 3C	7060.00	517.60	532.02		533.57	0.000738	10.85	1005.44	102.41	0.52
Reach-1	4.001	100 year	Proposed 3D	7060.00	517.60	532.02		533.57	0.000738	10.85	1005.44	102.41	0.52
Reach-1	4.001	100 year	PR3E Raised	7060.00	517.60	532.02		533.57	0.000738	10.85	1005.44	102.41	0.52
Reach-1	3.948	100 year	Existing Prelim	7330.00	517.00	531.85		533.36	0.000691	10.73	1117.85	150.25	0.50
Reach-1	3.948	100 year	Proposed 3B	7330.00	517.00	531.85		533.36	0.000691	10.73	1117.85	150.25	0.50
Reach-1	3.948	100 year	Proposed 3C	7330.00	517.00	531.85		533.36	0.000691	10.73	1117.85	150.25	0.50
Reach-1	3.948	100 year	Proposed 3D	7330.00	517.00	531.85		533.36	0.000691	10.73	1117.85	150.25	0.50
Reach-1	3.948	100 year	PR3E Raised	7330.00	517.00	531.85		533.36	0.000691	10.73	1117.85	150.25	0.50

HEC-RAS River: RIVER-1 Reach: Reach-1 Profile: 100 year (Continued)

Reach	River Sta	Profile	Plan	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
				(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Reach-1	3.866	100 year	Existing Prelim	7330.00	516.10	531.77		533.01	0.000566	9.94	1375.15	242.97	0.46
Reach-1	3.866	100 year	Proposed 3B	7330.00	516.10	531.77		533.01	0.000566	9.94	1375.15	242.97	0.46
Reach-1	3.866	100 year	Proposed 3C	7330.00	516.10	531.77		533.01	0.000566	9.94	1375.15	242.97	0.46
Reach-1	3.866	100 year	Proposed 3D	7330.00	516.10	531.77		533.01	0.000566	9.94	1375.15	242.97	0.46
Reach-1	3.866	100 year	PR3E Raised	7330.00	516.10	531.77		533.01	0.000566	9.94	1375.15	242.97	0.46
Reach-1	3.82	100 year	Existing Prelim	7330.00	515.80	530.56	526.83	532.72	0.001146	12.15	799.27	134.99	0.57
Reach-1	3.82	100 year	Proposed 3B	7330.00	515.80	530.56	526.83	532.72	0.001146	12.15	799.27	134.99	0.57
Reach-1	3.82	100 year	Proposed 3C	7330.00	515.80	530.56	526.83	532.72	0.001146	12.15	799.27	134.99	0.57
Reach-1	3.82	100 year	Proposed 3D	7330.00	515.80	530.56	526.83	532.72	0.001146	12.15	799.27	134.99	0.57
Reach-1	3.82	100 year	PR3E Raised	7330.00	515.80	530.56	526.83	532.72	0.001146	12.15	799.27	134.99	0.57
Reach-1	3.79	100 year	Existing Prelim	7330.00	515.50	530.87		532.36	0.000820	10.55	1046.75	135.84	0.48
Reach-1	3.79	100 year	Proposed 3B	7330.00	515.50	530.87		532.36	0.000820	10.55	1046.75	135.84	0.48
Reach-1	3.79	100 year	Proposed 3C	7330.00	515.50	530.87		532.36	0.000820	10.55	1046.75	135.84	0.48
Reach-1	3.79	100 year	Proposed 3D	7330.00	515.50	530.87		532.36	0.000820	10.55	1046.75	135.84	0.48
Reach-1	3.79	100 year	PR3E Raised	7330.00	515.50	530.87		532.36	0.000820	10.55	1046.75	135.84	0.48
Reach-1	3.766	100 year	Existing Prelim	7330.00	515.30	530.54	525.82	532.22	0.001172	10.41	704.00	55.40	0.51
Reach-1	3.766	100 year	Proposed 3B	7330.00	515.30	530.54	525.82	532.22	0.001172	10.41	704.00	55.40	0.51
Reach-1	3.766	100 year	Proposed 3C	7330.00	515.30	530.54	525.82	532.22	0.001172	10.41	704.00	55.40	0.51
Reach-1	3.766	100 year	Proposed 3D	7330.00	515.30	530.54	525.82	532.22	0.001172	10.41	704.00	55.40	0.51
Reach-1	3.766	100 year	PR3E Raised	7330.00	515.30	530.54	525.82	532.22	0.001172	10.41	704.00	55.40	0.51
Reach-1	3.7645			Bridge									
Reach-1	3.763	100 year	Existing Prelim	7330.00	515.30	530.33	525.84	532.07	0.001229	10.58	692.63	55.37	0.53
Reach-1	3.763	100 year	Proposed 3B	7330.00	515.30	530.33	525.84	532.07	0.001229	10.58	692.63	55.37	0.53
Reach-1	3.763	100 year	Proposed 3C	7330.00	515.30	530.33	525.84	532.07	0.001229	10.58	692.63	55.37	0.53
Reach-1	3.763	100 year	Proposed 3D	7330.00	515.30	530.33	525.84	532.07	0.001229	10.58	692.63	55.37	0.53
Reach-1	3.763	100 year	PR3E Raised	7330.00	515.30	530.33	525.84	532.07	0.001229	10.58	692.63	55.37	0.53
Reach-1	3.754	100 year	Existing Prelim	7330.00	515.20	530.27		532.02	0.000941	10.63	705.63	60.33	0.51
Reach-1	3.754	100 year	Proposed 3B	7330.00	515.20	530.27		532.02	0.000941	10.63	705.63	60.33	0.51
Reach-1	3.754	100 year	Proposed 3C	7330.00	515.20	530.27		532.02	0.000941	10.63	705.63	60.33	0.51
Reach-1	3.754	100 year	Proposed 3D	7330.00	515.20	530.27		532.02	0.000941	10.63	705.63	60.33	0.51
Reach-1	3.754	100 year	PR3E Raised	7330.00	515.20	530.27		532.02	0.000941	10.63	705.63	60.33	0.51
Reach-1	3.71	100 year	Existing Prelim	7330.00	514.50	530.09		531.80	0.000905	10.53	744.37	75.97	0.50
Reach-1	3.71	100 year	Proposed 3B	7330.00	514.50	530.09		531.80	0.000905	10.53	744.37	75.97	0.50
Reach-1	3.71	100 year	Proposed 3C	7330.00	514.50	530.09		531.80	0.000905	10.53	744.37	75.97	0.50
Reach-1	3.71	100 year	Proposed 3D	7330.00	514.50	530.09		531.80	0.000905	10.53	744.37	75.97	0.50
Reach-1	3.71	100 year	PR3E Raised	7330.00	514.50	530.09		531.80	0.000905	10.53	744.37	75.97	0.50
Reach-1	3.686	100 year	Existing Prelim	7330.00	514.20	530.45		531.53	0.000448	8.43	971.43	103.10	0.40
Reach-1	3.686	100 year	Proposed 3B	7330.00	514.20	530.45		531.53	0.000448	8.43	971.43	103.10	0.40
Reach-1	3.686	100 year	Proposed 3C	7330.00	514.20	530.45		531.53	0.000448	8.43	971.43	103.10	0.40
Reach-1	3.686	100 year	Proposed 3D	7330.00	514.20	530.45		531.53	0.000448	8.43	971.43	103.10	0.40
Reach-1	3.686	100 year	PR3E Raised	7330.00	514.20	530.45		531.53	0.000448	8.43	971.43	103.10	0.40
Reach-1	3.628	100 year	Existing Prelim	7330.00	514.00	530.03		531.34	0.000643	9.61	1153.65	248.15	0.44
Reach-1	3.628	100 year	Proposed 3B	7330.00	514.00	530.03		531.34	0.000643	9.61	1153.65	248.15	0.44
Reach-1	3.628	100 year	Proposed 3C	7330.00	514.00	530.03		531.34	0.000643	9.61	1153.65	248.15	0.44
Reach-1	3.628	100 year	Proposed 3D	7330.00	514.00	530.03		531.34	0.000643	9.61	1153.65	248.15	0.44
Reach-1	3.628	100 year	PR3E Raised	7330.00	514.00	530.03		531.34	0.000643	9.61	1153.65	248.15	0.44
Reach-1	3.593	100 year	Existing Prelim	7330.00	513.40	529.19		531.07	0.000977	11.24	756.01	75.61	0.51
Reach-1	3.593	100 year	Proposed 3B	7330.00	513.40	529.19		531.07	0.000977	11.24	756.01	75.61	0.51
Reach-1	3.593	100 year	Proposed 3C	7330.00	513.40	529.19		531.07	0.000977	11.24	756.01	75.61	0.51
Reach-1	3.593	100 year	Proposed 3D	7330.00	513.40	529.19		531.07	0.000977	11.24	756.01	75.61	0.51
Reach-1	3.593	100 year	PR3E Raised	7330.00	513.40	529.19		531.07	0.000977	11.24	756.01	75.61	0.51
Reach-1	3.568	100 year	Existing Prelim	7330.00	513.20	528.28	524.30	530.86	0.001173	12.90	568.41	98.33	0.61
Reach-1	3.568	100 year	Proposed 3B	7330.00	513.20	528.28	524.30	530.86	0.001173	12.90	568.41	98.33	0.61
Reach-1	3.568	100 year	Proposed 3C	7330.00	513.20	528.28	524.30	530.86	0.001173	12.90	568.41	98.33	0.61
Reach-1	3.568	100 year	Proposed 3D	7330.00	513.20	528.28	524.30	530.86	0.001173	12.90	568.41	98.33	0.61
Reach-1	3.568	100 year	PR3E Raised	7330.00	513.20	528.28	524.30	530.86	0.001173	12.90	568.41	98.33	0.61
Reach-1	3.5635			Bridge									
Reach-1	3.559	100 year	Existing Prelim	7330.00	513.20	526.72	524.30	529.99	0.001736	14.51	505.34	90.35	0.72
Reach-1	3.559	100 year	Proposed 3B	7330.00	513.20	526.72	524.30	529.99	0.001736	14.51	505.34	90.35	0.72
Reach-1	3.559	100 year	Proposed 3C	7330.00	513.20	526.72	524.30	529.99	0.001736	14.51	505.34	90.35	0.72
Reach-1	3.559	100 year	Proposed 3D	7330.00	513.20	526.72	524.30	529.99	0.001736	14.51	505.34	90.35	0.72
Reach-1	3.559	100 year	PR3E Raised	7330.00	513.20	526.72	524.30	529.99	0.001736	14.51	505.34	90.35	0.72
Reach-1	3.548	100 year	Existing Prelim	7330.00	513.00	527.10		529.69	0.001565	13.08	673.34	91.91	0.63
Reach-1	3.548	100 year	Proposed 3B	7330.00	513.00	527.10		529.69	0.001565	13.08	673.34	91.91	0.63
Reach-1	3.548	100 year	Proposed 3C	7330.00	513.00	527.10		529.69	0.001565	13.08	673.34	91.91	0.63
Reach-1	3.548	100 year	Proposed 3D	7330.00	513.00	527.10		529.69	0.001565	13.08	673.34	91.91	0.63
Reach-1	3.548	100 year	PR3E Raised	7330.00	513.00	527.10		529.69	0.001565	13.08	673.34	91.91	0.63
Reach-1	3.462	100 year	Existing Prelim	7330.00	511.90	527.30		528.84	0.000938	10.70	1246.99	197.10	0.49
Reach-1	3.462	100 year	Proposed 3B	7330.00	511.90	527.30		528.84	0.000938	10.70	1246.99	197.10	0.49
Reach-1	3.462	100 year	Proposed 3C	7330.00	511.90	527.30		528.84	0.000938	10.70	1246.99	197.10	0.49
Reach-1	3.462	100 year	Proposed 3D	7330.00	511.90	527.30		528.84	0.000938	10.70	1246.99	197.10	0.49

HEC-RAS River: RIVER-1 Reach: Reach-1 Profile: 100 year (Continued)

Reach	River Sta	Profile	Plan	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
				(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Reach-1	3.462	100 year	PR3E Raised	7330.00	511.90	527.30		528.84	0.000938	10.70	1246.99	197.10	0.49
Reach-1	3.441	100 year	Existing Prelim	7330.00	511.80	525.56	522.56	528.57	0.001183	13.92	526.42	92.40	0.68
Reach-1	3.441	100 year	Proposed 3B	7330.00	511.80	525.56	522.56	528.57	0.001183	13.92	526.42	92.40	0.68
Reach-1	3.441	100 year	Proposed 3C	7330.00	511.80	525.56	522.56	528.57	0.001183	13.92	526.42	92.40	0.68
Reach-1	3.441	100 year	Proposed 3D	7330.00	511.80	525.56	522.56	528.57	0.001183	13.92	526.42	92.40	0.68
Reach-1	3.441	100 year	PR3E Raised	7330.00	511.80	525.56	522.56	528.57	0.001183	13.92	526.42	92.40	0.68
Reach-1	3.434			Bridge									
Reach-1	3.427	100 year	Existing Prelim	7330.00	511.80	525.19	522.57	528.38	0.001301	14.33	511.65	89.66	0.71
Reach-1	3.427	100 year	Proposed 3B	7330.00	511.80	525.19	522.57	528.38	0.001301	14.33	511.65	89.66	0.71
Reach-1	3.427	100 year	Proposed 3C	7330.00	511.80	525.19	522.57	528.38	0.001301	14.33	511.65	89.66	0.71
Reach-1	3.427	100 year	Proposed 3D	7330.00	511.80	525.19	522.57	528.38	0.001301	14.33	511.65	89.66	0.71
Reach-1	3.427	100 year	PR3E Raised	7330.00	511.80	525.19	522.57	528.38	0.001301	14.33	511.65	89.66	0.71
Reach-1	3.41	100 year	Existing Prelim	7330.00	511.60	525.58		528.04	0.001481	12.83	738.72	108.61	0.61
Reach-1	3.41	100 year	Proposed 3B	7330.00	511.60	525.58		528.04	0.001481	12.83	738.72	108.61	0.61
Reach-1	3.41	100 year	Proposed 3C	7330.00	511.60	525.58		528.04	0.001481	12.83	738.72	108.61	0.61
Reach-1	3.41	100 year	Proposed 3D	7330.00	511.60	525.58		528.04	0.001481	12.83	738.72	108.61	0.61
Reach-1	3.41	100 year	PR3E Raised	7330.00	511.60	525.58		528.04	0.001481	12.83	738.72	108.61	0.61
Reach-1	3.308	100 year	Existing Prelim	7330.00	510.60	525.15		526.29	0.005237	9.68	1020.15	129.28	0.46
Reach-1	3.308	100 year	Proposed 3B	7330.00	510.60	525.15		526.29	0.005237	9.68	1020.15	129.28	0.46
Reach-1	3.308	100 year	Proposed 3C	7330.00	510.60	525.15		526.29	0.005237	9.68	1020.15	129.28	0.46
Reach-1	3.308	100 year	Proposed 3D	7330.00	510.60	525.15		526.29	0.005237	9.68	1020.15	129.28	0.46
Reach-1	3.308	100 year	PR3E Raised	7330.00	510.60	525.15		526.29	0.005237	9.68	1020.15	129.28	0.46
Reach-1	3.219	100 year	Existing Prelim	7330.00	509.70	524.14		524.61	0.002086	5.54	1387.06	153.03	0.29
Reach-1	3.219	100 year	Proposed 3B	7330.00	509.70	524.14		524.61	0.002086	5.54	1387.06	153.03	0.29
Reach-1	3.219	100 year	Proposed 3C	7330.00	509.70	524.14		524.61	0.002086	5.54	1387.06	153.03	0.29
Reach-1	3.219	100 year	Proposed 3D	7330.00	509.70	524.14		524.61	0.002086	5.54	1387.06	153.03	0.29
Reach-1	3.219	100 year	PR3E Raised	7330.00	509.70	524.14		524.61	0.002086	5.54	1387.06	153.03	0.29
Reach-1	3.132	100 year	Existing Prelim	7330.00	508.30	523.22		523.66	0.001997	5.49	1469.63	178.82	0.29
Reach-1	3.132	100 year	Proposed 3B	7330.00	508.30	523.22		523.66	0.001997	5.49	1469.63	178.82	0.29
Reach-1	3.132	100 year	Proposed 3C	7330.00	508.30	523.22		523.66	0.001997	5.49	1469.63	178.82	0.29
Reach-1	3.132	100 year	Proposed 3D	7330.00	508.30	523.22		523.66	0.001997	5.49	1469.63	178.82	0.29
Reach-1	3.132	100 year	PR3E Raised	7330.00	508.30	523.22		523.66	0.001997	5.49	1469.63	178.82	0.29
Reach-1	3.038	100 year	Existing Prelim	7330.00	504.90	519.80		521.62	0.010300	10.81	678.29	67.42	0.60
Reach-1	3.038	100 year	Proposed 3B	7330.00	504.90	519.80		521.62	0.010300	10.81	678.29	67.42	0.60
Reach-1	3.038	100 year	Proposed 3C	7330.00	504.90	519.80		521.62	0.010300	10.81	678.29	67.42	0.60
Reach-1	3.038	100 year	Proposed 3D	7330.00	504.90	519.80		521.62	0.010300	10.81	678.29	67.42	0.60
Reach-1	3.038	100 year	PR3E Raised	7330.00	504.90	519.80		521.62	0.010300	10.81	678.29	67.42	0.60
Reach-1	3.03475*	100 year	Existing Prelim	7330.00	504.80	519.82		521.39	0.007516	10.05	729.28	70.27	0.55
Reach-1	3.03475*	100 year	Proposed 3B	7330.00	504.80	519.82		521.39	0.007516	10.05	729.28	70.27	0.55
Reach-1	3.03475*	100 year	Proposed 3C	7330.00	504.80	519.82		521.39	0.007516	10.05	729.28	70.27	0.55
Reach-1	3.03475*	100 year	Proposed 3D	7330.00	504.80	519.82		521.39	0.007516	10.05	729.28	70.27	0.55
Reach-1	3.03475*	100 year	PR3E Raised	7330.00	504.80	519.82		521.39	0.007516	10.05	729.28	70.27	0.55
Reach-1	3.0315*	100 year	Existing Prelim	7330.00	504.70	519.86		521.22	0.005316	9.35	784.42	73.15	0.50
Reach-1	3.0315*	100 year	Proposed 3B	7330.00	504.70	519.86		521.22	0.005316	9.35	784.42	73.15	0.50
Reach-1	3.0315*	100 year	Proposed 3C	7330.00	504.70	519.86		521.22	0.005316	9.35	784.42	73.15	0.50
Reach-1	3.0315*	100 year	Proposed 3D	7330.00	504.70	519.86		521.22	0.005316	9.35	784.42	73.15	0.50
Reach-1	3.0315*	100 year	PR3E Raised	7330.00	504.70	519.86		521.22	0.005316	9.35	784.42	73.15	0.50
Reach-1	3.02825*	100 year	Existing Prelim	7330.00	504.60	519.91		521.09	0.003898	8.73	841.91	78.00	0.45
Reach-1	3.02825*	100 year	Proposed 3B	7330.00	504.60	519.91		521.09	0.003898	8.73	841.91	78.00	0.45
Reach-1	3.02825*	100 year	Proposed 3C	7330.00	504.60	519.91		521.09	0.003898	8.73	841.91	78.00	0.45
Reach-1	3.02825*	100 year	Proposed 3D	7330.00	504.60	519.91		521.09	0.003898	8.73	841.91	78.00	0.45
Reach-1	3.02825*	100 year	PR3E Raised	7330.00	504.60	519.91		521.09	0.003898	8.73	841.91	78.00	0.45
Reach-1	3.025*	100 year	Existing Prelim	7330.00	504.50	519.96		520.99	0.002740	8.18	903.83	84.78	0.41
Reach-1	3.025*	100 year	Proposed 3B	7330.00	504.50	519.96		520.99	0.002740	8.18	903.83	84.78	0.41
Reach-1	3.025*	100 year	Proposed 3C	7330.00	504.50	519.96		520.99	0.002740	8.18	903.83	84.78	0.41
Reach-1	3.025*	100 year	Proposed 3D	7330.00	504.50	519.96		520.99	0.002740	8.18	903.83	84.78	0.41
Reach-1	3.025*	100 year	PR3E Raised	7330.00	504.50	519.96		520.99	0.002740	8.18	903.83	84.78	0.41
Reach-1	3.02175*	100 year	Existing Prelim	7330.00	504.40	520.00		520.92	0.001915	7.67	972.62	94.90	0.37
Reach-1	3.02175*	100 year	Proposed 3B	7330.00	504.40	520.00		520.92	0.001915	7.67	972.62	94.90	0.37
Reach-1	3.02175*	100 year	Proposed 3C	7330.00	504.40	520.00		520.92	0.001915	7.67	972.62	94.90	0.37
Reach-1	3.02175*	100 year	Proposed 3D	7330.00	504.40	520.00		520.92	0.001915	7.67	972.62	94.90	0.37
Reach-1	3.02175*	100 year	PR3E Raised	7330.00	504.40	520.00		520.92	0.001915	7.67	972.62	94.90	0.37
Reach-1	3.0185*	100 year	Existing Prelim	7330.00	504.30	520.06		520.86	0.001319	7.20	1053.87	103.92	0.34
Reach-1	3.0185*	100 year	Proposed 3B	7330.00	504.30	520.06		520.86	0.001319	7.20	1053.87	103.92	0.34
Reach-1	3.0185*	100 year	Proposed 3C	7330.00	504.30	520.06		520.86	0.001319	7.20	1053.87	103.92	0.34
Reach-1	3.0185*	100 year	Proposed 3D	7330.00	504.30	520.06		520.86	0.001319	7.20	1053.87	103.92	0.34
Reach-1	3.0185*	100 year	PR3E Raised	7330.00	504.30	520.06		520.86	0.001319	7.20	1053.87	103.92	0.34
Reach-1	3.01525*	100 year	Existing Prelim	7330.00	504.20	520.11		520.81	0.000947	6.77	1142.88	105.24	0.31
Reach-1	3.01525*	100 year	Proposed 3B	7330.00	504.20	520.11		520.81	0.000947	6.77	1142.88	105.24	0.31
Reach-1	3.01525*	100 year	Proposed 3C	7330.00	504.20	520.11		520.81	0.000947	6.77	1142.88	105.24	0.31
Reach-1	3.01525*	100 year	Proposed 3D	7330.00	504.20	520.11		520.81	0.000947	6.77	1142.88	105.24	0.31
Reach-1	3.01525*	100 year	PR3E Raised	7330.00	504.20	520.11		520.81	0.000947	6.77	1142.88	105.24	0.31

HEC-RAS River: RIVER-1 Reach: Reach-1 Profile: 100 year (Continued)

Reach	River Sta	Profile	Plan	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Reach-1	3.012	100 year	Existing Prelim	7330.00	504.10	520.04	512.45	520.78	0.000818	6.93	1058.47	106.55	0.32
Reach-1	3.012	100 year	Proposed 3B	7330.00	504.10	520.04	512.45	520.78	0.000818	6.93	1058.47	106.55	0.32
Reach-1	3.012	100 year	Proposed 3C	7330.00	504.10	520.04	512.45	520.78	0.000818	6.93	1058.47	106.55	0.32
Reach-1	3.012	100 year	Proposed 3D	7330.00	504.10	520.04	512.45	520.78	0.000818	6.93	1058.47	106.55	0.32
Reach-1	3.012	100 year	PR3E Raised	7330.00	504.10	520.04	512.45	520.78	0.000818	6.93	1058.47	106.55	0.32
Reach-1	3.011			Bridge									
Reach-1	3.01	100 year	Existing Prelim	7330.00	504.10	518.69	512.46	519.60	0.000284	7.65	958.33	106.55	0.37
Reach-1	3.01	100 year	Proposed 3B	7330.00	504.10	518.69	512.46	519.60	0.000284	7.65	958.33	106.55	0.37
Reach-1	3.01	100 year	Proposed 3C	7330.00	504.10	518.69	512.46	519.60	0.000284	7.65	958.33	106.55	0.37
Reach-1	3.01	100 year	Proposed 3D	7330.00	504.10	518.69	512.46	519.60	0.000284	7.65	958.33	106.55	0.37
Reach-1	3.01	100 year	PR3E Raised	7330.00	504.10	518.69	512.46	519.60	0.000284	7.65	958.33	106.55	0.37
Reach-1	3.008	100 year	Existing Prelim	7330.00	503.70	518.48		519.55	0.000295	8.31	882.48	63.98	0.39
Reach-1	3.008	100 year	Proposed 3B	7330.00	503.70	518.48		519.55	0.000295	8.31	882.48	63.98	0.39
Reach-1	3.008	100 year	Proposed 3C	7330.00	503.70	518.48		519.55	0.000295	8.31	882.48	63.98	0.39
Reach-1	3.008	100 year	Proposed 3D	7330.00	503.70	518.48		519.55	0.000295	8.31	882.48	63.98	0.39
Reach-1	3.008	100 year	PR3E Raised	7330.00	503.70	518.48		519.55	0.000295	8.31	882.48	63.98	0.39
Reach-1	3.006	100 year	Existing Prelim	7330.00	503.30	518.19	511.60	519.48	0.000235	9.36	858.53	59.00	0.43
Reach-1	3.006	100 year	Proposed 3B	7330.00	503.30	518.19	511.60	519.48	0.000235	9.36	858.53	59.00	0.43
Reach-1	3.006	100 year	Proposed 3C	7330.00	503.30	518.19	511.60	519.48	0.000235	9.36	858.53	59.00	0.43
Reach-1	3.006	100 year	Proposed 3D	7330.00	503.30	518.19	511.60	519.48	0.000235	9.36	858.53	59.00	0.43
Reach-1	3.006	100 year	PR3E Raised	7330.00	503.30	518.19	511.60	519.48	0.000235	9.36	858.53	59.00	0.43
Reach-1	2.850			Culvert									
Reach-1	2.800	100 year	Existing Prelim	7330.00	502.80	515.20	511.64	517.45	0.000771	12.04	608.67	49.10	0.60
Reach-1	2.800	100 year	Proposed 3B	7330.00	502.80	515.20	511.64	517.45	0.000771	12.04	608.67	49.10	0.60
Reach-1	2.800	100 year	Proposed 3C	7330.00	502.80	515.20	511.64	517.45	0.000771	12.04	608.67	49.10	0.60
Reach-1	2.800	100 year	Proposed 3D	7330.00	502.80	515.20	511.64	517.45	0.000771	12.04	608.67	49.10	0.60
Reach-1	2.800	100 year	PR3E Raised	7330.00	502.80	515.20	511.64	517.45	0.000771	12.04	608.67	49.10	0.60
Reach-1	2.700			Culvert									
Reach-1	2.519	100 year	Existing Prelim	7330.00	496.00	511.81		513.12	0.000213	9.28	912.59	59.00	0.41
Reach-1	2.519	100 year	Proposed 3B	7330.00	496.00	512.04		513.32	0.000203	9.15	926.18	59.00	0.40
Reach-1	2.519	100 year	Proposed 3C	7330.00	496.00	511.81		513.13	0.000213	9.28	912.85	59.00	0.41
Reach-1	2.519	100 year	Proposed 3D	7330.00	496.00	511.81		513.12	0.000213	9.28	912.62	59.00	0.41
Reach-1	2.519	100 year	PR3E Raised	7330.00	496.00	511.81		513.12	0.000213	9.28	912.62	59.00	0.41
Reach-1	2.481	100 year	Existing Prelim	7630.00	495.40	512.31		512.79	0.001113	5.92	1461.68	151.05	0.29
Reach-1	2.481	100 year	Proposed 3B	7630.00	495.40	512.54		512.99	0.001040	5.79	1495.56	151.56	0.28
Reach-1	2.481	100 year	Proposed 3C	7630.00	495.40	512.32		512.79	0.001112	5.92	1462.34	151.06	0.29
Reach-1	2.481	100 year	Proposed 3D	7630.00	495.40	512.31		512.79	0.001113	5.92	1461.76	151.06	0.29
Reach-1	2.481	100 year	PR3E Raised	7630.00	495.40	512.31		512.79	0.001113	5.92	1461.76	151.06	0.29
Reach-1	2.430	100 year	Existing Prelim	7630.00	495.10	512.38		512.58	0.000252	3.63	2144.50	190.70	0.18
Reach-1	2.430	100 year	Proposed 3B	7630.00	495.10	512.60		512.80	0.000238	3.56	2186.83	191.70	0.17
Reach-1	2.430	100 year	Proposed 3C	7630.00	495.10	512.38		512.59	0.000252	3.63	2145.30	190.72	0.18
Reach-1	2.430	100 year	Proposed 3D	7630.00	495.10	512.38		512.58	0.000252	3.63	2144.58	190.70	0.18
Reach-1	2.430	100 year	PR3E Raised	7630.00	495.10	512.38		512.58	0.000252	3.63	2144.58	190.70	0.18
Reach-1	2.410	100 year	Existing Prelim	7630.00	493.00	510.78		512.38	0.003152	10.15	751.87	73.74	0.56
Reach-1	2.410	100 year	Proposed 3B	7630.00	493.00	511.10		512.60	0.002878	9.83	775.89	74.21	0.54
Reach-1	2.410	100 year	Proposed 3C	7630.00	493.00	510.78		512.38	0.003146	10.14	752.34	73.75	0.56
Reach-1	2.410	100 year	Proposed 3D	7630.00	493.00	510.78		512.38	0.003151	10.15	751.92	73.74	0.56
Reach-1	2.410	100 year	PR3E Raised	7630.00	493.00	510.78		512.38	0.003151	10.15	751.92	73.74	0.56
Reach-1	2.38	100 year	Existing Prelim	7630.00	493.00	509.87		511.79	0.003835	11.11	686.50	68.23	0.62
Reach-1	2.38	100 year	Proposed 3B	7630.00	493.00	510.32		512.07	0.003602	10.63	718.05	73.06	0.60
Reach-1	2.38	100 year	Proposed 3C	7630.00	493.00	509.88		511.80	0.003826	11.10	687.13	68.25	0.62
Reach-1	2.38	100 year	Proposed 3D	7630.00	493.00	509.88		511.79	0.003834	11.11	686.57	68.23	0.62
Reach-1	2.38	100 year	PR3E Raised	7630.00	493.00	509.88		511.79	0.003834	11.11	686.57	68.23	0.62
Reach-1	2.347	100 year	Existing Prelim	7630.00	495.00	510.56		511.04	0.001086	5.70	1369.78	138.67	0.28
Reach-1	2.347	100 year	Proposed 3B	7630.00	495.00	510.94		511.38	0.000963	5.47	1422.60	139.80	0.26
Reach-1	2.347	100 year	Proposed 3C	7630.00	495.00	510.56		511.05	0.001083	5.69	1370.90	138.69	0.28
Reach-1	2.347	100 year	Proposed 3D	7630.00	495.00	510.56		511.04	0.001086	5.70	1369.90	138.67	0.28
Reach-1	2.347	100 year	PR3E Raised	7630.00	495.00	510.56		511.04	0.001086	5.70	1369.90	138.67	0.28
Reach-1	2.314	100 year	Existing Prelim	7630.00	489.70	510.34		510.86	0.000956	5.84	1465.23	206.00	0.25
Reach-1	2.314	100 year	Proposed 3B	7630.00	489.70	510.75		511.22	0.000863	5.64	1548.26	206.00	0.24
Reach-1	2.314	100 year	Proposed 3C	7630.00	489.70	510.35		510.87	0.000954	5.84	1467.01	206.00	0.25
Reach-1	2.314	100 year	Proposed 3D	7630.00	489.70	510.35		510.86	0.000955	5.84	1465.43	206.00	0.25
Reach-1	2.314	100 year	PR3E Raised	7630.00	489.70	510.35		510.86	0.000955	5.84	1465.43	206.00	0.25
Reach-1	2.312	100 year	Existing Prelim	7630.00	489.70	510.17		510.83	0.002089	6.66	1279.90	206.00	0.31
Reach-1	2.312	100 year	Proposed 3B	7630.00	489.70	510.60		511.20	0.001831	6.35	1369.45	206.00	0.29
Reach-1	2.312	100 year	Proposed 3C	7630.00	489.70	510.18		510.84	0.002083	6.65	1281.82	206.00	0.31
Reach-1	2.312	100 year	Proposed 3D	7630.00	489.70	510.17		510.83	0.002089	6.65	1280.11	206.00	0.31
Reach-1	2.312	100 year	PR3E Raised	7630.00	489.70	510.17		510.83	0.002089	6.65	1280.11	206.00	0.31
Reach-1	2.310	100 year	Existing Prelim	7630.00	489.70	510.25		510.78	0.000979	5.89	1445.88	206.00	0.26
Reach-1	2.310	100 year	Proposed 3B	7630.00	489.70	510.67		511.15	0.000880	5.68	1532.09	206.00	0.24

Limits of WSE effects from bridges for alt. 3B

Limits of WSE effects from bridges for alt. 3C

HEC-RAS River: RIVER-1 Reach: Reach-1 Profile: 100 year (Continued)

Reach	River Sta	Profile	Plan	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
				(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Reach-1	2.310	100 year	Proposed 3C	7630.00	489.70	510.26		510.78	0.000977	5.89	1447.71	206.00	0.26
Reach-1	2.310	100 year	Proposed 3D	7630.00	489.70	510.25		510.78	0.000979	5.89	1446.07	206.00	0.26
Reach-1	2.310	100 year	PR3E Raised	7630.00	489.70	510.25		510.78	0.000979	5.89	1446.07	206.00	0.26
Reach-1	2.28	100 year	Existing Prelim	7630.00	489.50	508.99		510.43	0.003294	9.83	832.70	70.83	0.42
Reach-1	2.28	100 year	Proposed 3B	7630.00	489.50	509.51		510.84	0.002929	9.46	870.30	72.96	0.40
Reach-1	2.28	100 year	Proposed 3C	7630.00	489.50	509.00		510.43	0.003285	9.82	833.49	70.88	0.42
Reach-1	2.28	100 year	Proposed 3D	7630.00	489.50	508.99		510.43	0.003293	9.83	832.78	70.83	0.42
Reach-1	2.28	100 year	PR3E Raised	7630.00	489.50	508.99		510.43	0.003293	9.83	832.78	70.83	0.42
Reach-1	2.265	100 year	Existing Prelim	7630.00	489.00	509.18		510.12	0.001338	7.77	981.90	69.59	0.36
Reach-1	2.265	100 year	Proposed 3B	7630.00	489.00	509.68		510.56	0.001214	7.50	1017.24	70.34	0.35
Reach-1	2.265	100 year	Proposed 3C	7630.00	489.00	509.19		510.13	0.001335	7.76	982.65	69.60	0.36
Reach-1	2.265	100 year	Proposed 3D	7630.00	489.00	509.18		510.12	0.001338	7.77	981.97	69.59	0.36
Reach-1	2.265	100 year	PR3E Raised	7630.00	489.00	509.18		510.12	0.001338	7.77	981.97	69.59	0.36
Reach-1	2.253	100 year	Existing Prelim	7630.00	489.20	509.38	498.66	509.90	0.001747	5.76	1324.08	176.02	0.24
Reach-1	2.253	100 year	Proposed 3B	7630.00	489.20	509.87	498.66	510.36	0.001593	5.61	1361.07	179.71	0.23
Reach-1	2.253	100 year	Proposed 3C	7630.00	489.20	509.39	498.66	509.91	0.001743	5.76	1324.87	176.10	0.24
Reach-1	2.253	100 year	Proposed 3D	7630.00	489.20	509.38	498.66	509.91	0.001746	5.76	1324.16	176.03	0.24
Reach-1	2.253	100 year	PR3E Raised	7630.00	489.20	509.38	498.66	509.91	0.001746	5.76	1324.16	176.03	0.24
Reach-1	2.252			Bridge									
Reach-1	2.251	100 year	Existing Prelim	7630.00	489.20	507.94	498.66	508.55	0.002326	6.28	1214.99	168.42	0.28
Reach-1	2.251	100 year	Proposed 3B	7630.00	489.20	508.40	498.66	508.98	0.002117	6.11	1249.78	170.56	0.26
Reach-1	2.251	100 year	Proposed 3C	7630.00	489.20	507.95	498.66	508.56	0.002322	6.28	1215.74	168.47	0.28
Reach-1	2.251	100 year	Proposed 3D	7630.00	489.20	507.94	498.66	508.55	0.002326	6.28	1215.07	168.43	0.28
Reach-1	2.251	100 year	PR3E Raised	7630.00	489.20	507.94	498.66	508.55	0.002326	6.28	1215.07	168.43	0.28
Reach-1	2.237	100 year	Existing Prelim	7630.00	488.50	507.93		508.38	0.001498	5.39	1446.40	103.27	0.24
Reach-1	2.237	100 year	Proposed 3B	7630.00	488.50	508.39		508.81	0.001364	5.23	1494.84	104.72	0.23
Reach-1	2.237	100 year	Proposed 3C	7630.00	488.50	507.94		508.38	0.001495	5.38	1447.43	103.30	0.24
Reach-1	2.237	100 year	Proposed 3D	7630.00	488.50	507.93		508.38	0.001497	5.39	1446.51	103.28	0.24
Reach-1	2.237	100 year	PR3E Raised	7630.00	488.50	507.93		508.38	0.001497	5.39	1446.51	103.28	0.24
Reach-1	2.209	100 year	Existing Prelim	7630.00	487.70	507.87		508.16	0.000918	4.43	1883.63	175.08	0.20
Reach-1	2.209	100 year	Proposed 3B	7630.00	487.70	508.35		508.61	0.000817	4.27	1968.89	180.42	0.19
Reach-1	2.209	100 year	Proposed 3C	7630.00	487.70	507.88		508.17	0.000915	4.43	1885.44	175.15	0.20
Reach-1	2.209	100 year	Proposed 3D	7630.00	487.70	507.87		508.16	0.000918	4.43	1883.81	175.09	0.20
Reach-1	2.209	100 year	PR3E Raised	7630.00	487.70	507.87		508.16	0.000918	4.43	1883.81	175.09	0.20
Reach-1	2.181	100 year	Existing Prelim	7630.00	486.70	507.88		508.01	0.000540	3.54	2935.13	335.02	0.15
Reach-1	2.181	100 year	Proposed 3B	7630.00	486.70	508.37		508.48	0.000463	3.34	3099.58	339.61	0.14
Reach-1	2.181	100 year	Proposed 3C	7630.00	486.70	507.89		508.02	0.000538	3.53	2938.66	335.12	0.15
Reach-1	2.181	100 year	Proposed 3D	7630.00	486.70	507.88		508.01	0.000540	3.54	2935.48	335.03	0.15
Reach-1	2.181	100 year	PR3E Raised	7630.00	486.70	507.88		508.01	0.000540	3.54	2935.48	335.03	0.15
Reach-1	2.112	100 year	Existing Prelim	10120.00	484.20	507.70		507.82	0.000480	3.54	4040.26	422.31	0.15
Reach-1	2.112	100 year	Proposed 3B	10120.00	484.20	508.21		508.32	0.000416	3.36	4258.34	429.68	0.14
Reach-1	2.112	100 year	Proposed 3C	10120.00	484.20	507.71		507.83	0.000479	3.54	4044.95	422.47	0.15
Reach-1	2.112	100 year	Proposed 3D	10120.00	484.20	507.70		507.82	0.000480	3.54	4040.72	422.32	0.15
Reach-1	2.112	100 year	PR3E Raised	10120.00	484.20	507.70		507.82	0.000480	3.54	4040.72	422.32	0.15
Reach-1	2.091	100 year	Existing Prelim	10120.00	483.90	506.16		507.57	0.005464	9.59	1111.17	118.67	0.42
Reach-1	2.091	100 year	Proposed 3B	10120.00	483.90	506.84		508.10	0.004659	9.10	1192.48	119.11	0.39
Reach-1	2.091	100 year	Proposed 3C	10120.00	483.90	506.18		507.58	0.005445	9.58	1112.96	118.68	0.42
Reach-1	2.091	100 year	Proposed 3D	10120.00	483.90	506.16		507.57	0.005462	9.59	1111.35	118.67	0.42
Reach-1	2.091	100 year	PR3E Raised	10120.00	483.90	506.16		507.57	0.005462	9.59	1111.35	118.67	0.42
Reach-1	2.084	100 year	Existing Prelim	10120.00	483.90	505.88		507.36	0.005841	9.80	1077.45	118.49	0.43
Reach-1	2.084	100 year	Proposed 3B	10120.00	483.90	506.61		507.92	0.004918	9.27	1164.75	118.96	0.40
Reach-1	2.084	100 year	Proposed 3C	10120.00	483.90	505.89		507.37	0.005818	9.79	1079.39	118.50	0.43
Reach-1	2.084	100 year	Proposed 3D	10120.00	483.90	505.88		507.36	0.005838	9.80	1077.64	118.49	0.43
Reach-1	2.084	100 year	PR3E Raised	10120.00	483.90	505.88		507.36	0.005839	9.80	1077.64	118.49	0.43
Reach-1	2.054	100 year	Existing Prelim	10120.00	483.60	505.88		506.54	0.002550	6.97	1861.04	335.58	0.32
Reach-1	2.054	100 year	Proposed 3B	10120.00	483.60	506.70		507.24	0.001968	6.35	2160.41	388.04	0.28
Reach-1	2.054	100 year	Proposed 3C	10120.00	483.60	505.90		506.56	0.002534	6.96	1867.47	336.37	0.32
Reach-1	2.054	100 year	Proposed 3D	10120.00	483.60	505.88		506.55	0.002549	6.97	1861.68	335.66	0.32
Reach-1	2.054	100 year	PR3E Raised	10120.00	483.60	505.88		506.55	0.002549	6.97	1861.67	335.66	0.32
Reach-1	1.944	100 year	Existing Prelim	10120.00	483.20	505.18		505.46	0.001177	4.62	2464.97	270.37	0.21
Reach-1	1.944	100 year	Proposed 3B	10120.00	483.20	506.17		506.40	0.000910	4.23	2734.68	277.87	0.18
Reach-1	1.944	100 year	Proposed 3C	10120.00	483.20	505.20		505.48	0.001170	4.61	2471.36	270.53	0.21
Reach-1	1.944	100 year	Proposed 3D	10120.00	483.20	505.18		505.46	0.001176	4.62	2465.61	270.39	0.21
Reach-1	1.944	100 year	PR3E Raised	10120.00	483.20	505.18		505.46	0.001176	4.62	2465.59	270.39	0.21
Reach-1	1.833	100 year	Existing Prelim	10120.00	482.80	503.38		504.22	0.004204	7.36	1375.77	113.91	0.37
Reach-1	1.833	100 year	Proposed 3B	10120.00	482.80	504.80		505.47	0.002979	6.56	1554.06	133.94	0.32
Reach-1	1.833	100 year	Proposed 3C	10120.00	482.80	503.41		504.25	0.004172	7.33	1379.85	114.09	0.37
Reach-1	1.833	100 year	Proposed 3D	10120.00	482.80	503.38		504.22	0.004201	7.35	1376.18	113.93	0.37
Reach-1	1.833	100 year	PR3E Raised	10120.00	482.80	503.38		504.22	0.004201	7.35	1376.17	113.92	0.37
Reach-1	1.801	100 year	Existing Prelim	10120.00	482.80	502.89	493.21	503.62	0.002705	6.84	1478.62	347.34	0.29
Reach-1	1.801	100 year	Proposed 3B	10120.00	482.80	504.91	493.21	505.10	0.000787	3.97	3233.03	352.30	0.16
Reach-1	1.801	100 year	Proposed 3C	10120.00	482.80	502.93	493.21	503.66	0.002685	6.83	1481.96	347.72	0.29

HEC-RAS River: RIVER-1 Reach: Reach-1 Profile: 100 year (Continued)

Reach	River Sta	Profile	Plan	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
				(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Reach-1	1.801	100 year	Proposed 3D	10120.00	482.80	502.90	493.21	503.63	0.002703	6.84	1478.95	347.38	0.29
Reach-1	1.801	100 year	PR3E Raised	10120.00	482.80	502.90	493.21	503.63	0.002703	6.84	1478.95	347.38	0.29
Reach-1	1.799		Bridge										
Reach-1	1.797	100 year	Existing Prelim	10120.00	482.80	501.34	493.20	502.22	0.003706	7.52	1345.33	332.10	0.34
Reach-1	1.797	100 year	Proposed 3B	10120.00	482.80	503.31	493.20	503.60	0.001320	4.86	2670.12	351.43	0.20
Reach-1	1.797	100 year	Proposed 3C	10120.00	482.80	501.38	493.20	502.25	0.003678	7.51	1348.38	332.45	0.33
Reach-1	1.797	100 year	Proposed 3D	10120.00	482.80	501.35	493.20	502.23	0.003703	7.52	1345.63	332.14	0.33
Reach-1	1.797	100 year	PR3E Raised	10120.00	482.80	501.35	493.20	502.23	0.003703	7.52	1345.63	332.14	0.33
Reach-1	1.771	100 year	Existing Prelim	10120.00	482.60	501.00		501.65	0.003791	6.87	1785.18	329.10	0.36
Reach-1	1.771	100 year	Proposed 3B	10120.00	482.60	503.08	495.50	503.40	0.001607	5.01	2488.37	349.13	0.24
Reach-1	1.771	100 year	Proposed 3C	10120.00	482.60	501.05		501.69	0.003711	6.82	1800.94	329.57	0.36
Reach-1	1.771	100 year	Proposed 3D	10120.00	482.60	501.01		501.65	0.003783	6.87	1786.76	329.15	0.36
Reach-1	1.771	100 year	PR3E Raised	10120.00	482.60	501.01		501.65	0.003783	6.87	1786.72	329.15	0.36
Reach-1	1.742	100 year	Existing Prelim	10120.00	482.50	499.44		500.72	0.008586	9.08	1148.85	179.78	0.53
Reach-1	1.742	100 year	Proposed 3B	10120.00	482.50	499.44		500.72	0.008586	9.08	1148.85	179.78	0.53
Reach-1	1.742	100 year	Proposed 3C	10120.00	482.50	499.53		500.77	0.008346	8.99	1164.36	183.78	0.52
Reach-1	1.742	100 year	Proposed 3D	10120.00	482.50	499.45		500.72	0.008562	9.08	1150.40	180.19	0.53
Reach-1	1.742	100 year	PR3E Raised	10120.00	482.50	499.45		500.72	0.008563	9.08	1150.35	180.17	0.53
Reach-1	1.7256*	100 year	Existing Prelim	10120.00	482.34	498.75		499.98	0.008149	8.98	1198.80	223.91	0.52
Reach-1	1.7256*	100 year	Proposed 3B	10120.00	482.34	498.75		499.98	0.008149	8.98	1198.80	223.91	0.52
Reach-1	1.7256*	100 year	Proposed 3C	10120.00	482.34	498.88		500.06	0.007732	8.83	1227.57	228.10	0.50
Reach-1	1.7256*	100 year	Proposed 3D	10120.00	482.34	498.76		499.99	0.008106	8.97	1201.71	224.33	0.51
Reach-1	1.7256*	100 year	PR3E Raised	10120.00	482.34	498.76		499.99	0.008107	8.97	1201.62	224.32	0.51
Reach-1	1.7092*	100 year	Existing Prelim	10120.00	482.18	498.17		499.29	0.007142	8.68	1300.76	267.61	0.49
Reach-1	1.7092*	100 year	Proposed 3B	10120.00	482.18	498.17		499.29	0.007142	8.68	1300.76	267.61	0.49
Reach-1	1.7092*	100 year	Proposed 3C	10120.00	482.18	498.34		499.40	0.006678	8.49	1348.79	294.46	0.47
Reach-1	1.7092*	100 year	Proposed 3D	10120.00	482.18	498.18		499.30	0.007095	8.66	1305.40	270.32	0.49
Reach-1	1.7092*	100 year	PR3E Raised	10120.00	482.18	498.18		499.30	0.007096	8.66	1305.28	270.25	0.49
Reach-1	1.6928*	100 year	Existing Prelim	10120.00	482.02	497.87		498.68	0.005072	7.66	1558.10	295.19	0.42
Reach-1	1.6928*	100 year	Proposed 3B	10120.00	482.02	497.87		498.68	0.005072	7.66	1558.10	295.19	0.42
Reach-1	1.6928*	100 year	Proposed 3C	10120.00	482.02	498.09		498.83	0.004559	7.36	1624.71	295.78	0.40
Reach-1	1.6928*	100 year	Proposed 3D	10120.00	482.02	497.89		498.69	0.005015	7.63	1565.05	295.25	0.41
Reach-1	1.6928*	100 year	PR3E Raised	10120.00	482.02	497.89		498.69	0.005017	7.63	1564.86	295.25	0.41
Reach-1	1.6764*	100 year	Existing Prelim	10120.00	481.86	497.67		498.25	0.003435	6.60	1768.11	263.95	0.35
Reach-1	1.6764*	100 year	Proposed 3B	10120.00	481.86	497.67		498.25	0.003435	6.60	1768.11	263.95	0.35
Reach-1	1.6764*	100 year	Proposed 3C	10120.00	481.86	497.92		498.45	0.003096	6.35	1832.46	264.48	0.33
Reach-1	1.6764*	100 year	Proposed 3D	10120.00	481.86	497.70		498.27	0.003397	6.57	1774.87	264.01	0.34
Reach-1	1.6764*	100 year	PR3E Raised	10120.00	481.86	497.70		498.27	0.003399	6.57	1774.68	264.00	0.34
Reach-1	1.66	100 year	Existing Prelim	10120.00	481.70	497.49		497.96	0.002545	5.92	1880.69	232.26	0.30
Reach-1	1.66	100 year	Proposed 3B	10120.00	481.70	497.49		497.96	0.002545	5.92	1880.69	232.26	0.30
Reach-1	1.66	100 year	Proposed 3C	10120.00	481.70	497.75		498.19	0.002310	5.72	1940.68	232.74	0.29
Reach-1	1.66	100 year	Proposed 3D	10120.00	481.70	497.52		497.99	0.002519	5.89	1887.03	232.31	0.30
Reach-1	1.66	100 year	PR3E Raised	10120.00	481.70	497.52		497.99	0.002520	5.89	1886.85	232.31	0.30
Reach-1	1.6450*	100 year	Existing Prelim	10120.00	481.53	497.31		497.76	0.002448	5.79	1924.94	240.74	0.30
Reach-1	1.6450*	100 year	Proposed 3B	10120.00	481.53	497.31		497.76	0.002448	5.79	1924.94	240.74	0.30
Reach-1	1.6450*	100 year	Proposed 3C	10120.00	481.53	497.58		498.00	0.002201	5.58	1991.94	241.26	0.28
Reach-1	1.6450*	100 year	Proposed 3D	10120.00	481.53	497.34		497.78	0.002420	5.77	1932.05	240.80	0.29
Reach-1	1.6450*	100 year	PR3E Raised	10120.00	481.53	497.34		497.78	0.002421	5.77	1931.86	240.80	0.29
Reach-1	1.6300*	100 year	Existing Prelim	10120.00	481.35	497.13		497.56	0.002346	5.67	1972.17	249.25	0.29
Reach-1	1.6300*	100 year	Proposed 3B	10120.00	481.35	497.13		497.56	0.002346	5.67	1972.17	249.25	0.29
Reach-1	1.6300*	100 year	Proposed 3C	10120.00	481.35	497.43		497.83	0.002090	5.44	2046.65	249.80	0.27
Reach-1	1.6300*	100 year	Proposed 3D	10120.00	481.35	497.16		497.59	0.002317	5.64	1980.11	249.31	0.29
Reach-1	1.6300*	100 year	PR3E Raised	10120.00	481.35	497.16		497.59	0.002318	5.64	1979.88	249.31	0.29
Reach-1	1.6150*	100 year	Existing Prelim	10120.00	481.17	496.97		497.37	0.002239	5.53	2022.79	257.76	0.28
Reach-1	1.6150*	100 year	Proposed 3B	10120.00	481.17	496.97		497.37	0.002239	5.53	2022.79	257.76	0.28
Reach-1	1.6150*	100 year	Proposed 3C	10120.00	481.17	497.28		497.66	0.001976	5.29	2105.30	258.35	0.27
Reach-1	1.6150*	100 year	Proposed 3D	10120.00	481.17	497.00		497.40	0.002209	5.50	2031.62	257.82	0.28
Reach-1	1.6150*	100 year	PR3E Raised	10120.00	481.17	497.00		497.40	0.002210	5.50	2031.37	257.82	0.28
Reach-1	1.6	100 year	Existing Prelim	9890.00	481.00	496.82		497.19	0.002018	5.25	2082.01	266.33	0.27
Reach-1	1.6	100 year	Proposed 3B	9890.00	481.00	496.82		497.19	0.002018	5.25	2082.01	266.33	0.27
Reach-1	1.6	100 year	Proposed 3C	9890.00	481.00	497.16		497.50	0.001765	5.00	2172.54	266.96	0.25
Reach-1	1.6	100 year	Proposed 3D	9890.00	481.00	496.86		497.22	0.001988	5.22	2091.85	266.40	0.27
Reach-1	1.6	100 year	PR3E Raised	9890.00	481.00	496.86		497.22	0.001989	5.22	2091.57	266.40	0.27
Reach-1	1.5814*	100 year	Existing Prelim	9890.00	480.64	496.61		496.98	0.002140	5.37	2065.95	276.69	0.27
Reach-1	1.5814*	100 year	Proposed 3B	9890.00	480.64	496.61		496.98	0.002140	5.37	2065.95	276.69	0.27
Reach-1	1.5814*	100 year	Proposed 3C	9890.00	480.64	496.98		497.32	0.001838	5.08	2169.29	277.41	0.26
Reach-1	1.5814*	100 year	Proposed 3D	9890.00	480.64	496.65		497.02	0.002104	5.34	2077.29	276.77	0.27
Reach-1	1.5814*	100 year	PR3E Raised	9890.00	480.64	496.65		497.02	0.002105	5.34	2076.96	276.76	0.27
Reach-1	1.5629*	100 year	Existing Prelim	9890.00	480.29	496.37		496.76	0.002316	5.54	2034.94	287.02	0.28
Reach-1	1.5629*	100 year	Proposed 3B	9890.00	480.29	496.37		496.76	0.002316	5.54	2034.94	287.02	0.28
Reach-1	1.5629*	100 year	Proposed 3C	9890.00	480.29	496.79		497.13	0.001942	5.19	2154.32	287.86	0.26
Reach-1	1.5629*	100 year	Proposed 3D	9890.00	480.29	496.42		496.80	0.002270	5.50	2048.20	287.11	0.28

Existing Rail Bridge

Limits of WSE effects from bridges for alts. 3D, 3E

Approximate limit of Little Miami Backwater

Bridge 3B

HEC-RAS River: RIVER-1 Reach: Reach-1 Profile: 100 year (Continued)

Reach	River Sta	Profile	Plan	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
				(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Reach-1	1.5629*	100 year	PR3E Raised	9890.00	480.29	496.42		496.80	0.002271	5.50	2047.83	287.11	0.28
Reach-1	1.5443*	100 year	Existing Prelim	9890.00	479.93	496.10		496.52	0.002560	5.76	1988.21	297.33	0.30
Reach-1	1.5443*	100 year	Proposed 3B	9890.00	479.93	496.10		496.52	0.002560	5.76	1988.21	297.33	0.30
Reach-1	1.5443*	100 year	Proposed 3C	9890.00	479.93	496.58		496.94	0.002079	5.33	2128.48	298.34	0.27
Reach-1	1.5443*	100 year	Proposed 3D	9890.00	479.93	496.16		496.57	0.002498	5.71	2004.09	297.44	0.29
Reach-1	1.5443*	100 year	PR3E Raised	9890.00	479.93	496.16		496.57	0.002500	5.71	2003.64	297.44	0.29
Reach-1	1.5257*	100 year	Existing Prelim	9890.00	479.57	495.79		496.25	0.002925	6.08	1918.03	307.57	0.32
Reach-1	1.5257*	100 year	Proposed 3B	9890.00	479.57	495.79		496.25	0.002925	6.08	1918.03	307.57	0.32
Reach-1	1.5257*	100 year	Proposed 3C	9890.00	479.57	496.34		496.72	0.002270	5.53	2087.36	308.84	0.28
Reach-1	1.5257*	100 year	Proposed 3D	9890.00	479.57	495.85		496.30	0.002837	6.01	1937.75	307.72	0.31
Reach-1	1.5257*	100 year	PR3E Raised	9890.00	479.57	495.85		496.30	0.002840	6.01	1937.20	307.72	0.31
Reach-1	1.5071*	100 year	Existing Prelim	9890.00	479.21	495.40		495.93	0.003511	6.54	1814.95	317.67	0.34
Reach-1	1.5071*	100 year	Proposed 3B	9890.00	479.21	495.40		495.93	0.003511	6.54	1814.95	317.67	0.34
Reach-1	1.5071*	100 year	Proposed 3C	9890.00	479.21	496.07		496.48	0.002534	5.78	2029.01	319.37	0.30
Reach-1	1.5071*	100 year	Proposed 3D	9890.00	479.21	495.48		495.99	0.003368	6.44	1841.26	317.88	0.34
Reach-1	1.5071*	100 year	PR3E Raised	9890.00	479.21	495.48		495.99	0.003372	6.44	1840.53	317.87	0.34
Reach-1	1.4886*	100 year	Existing Prelim	9890.00	478.86	494.84		495.52	0.004696	7.35	1644.30	327.31	0.39
Reach-1	1.4886*	100 year	Proposed 3B	9890.00	478.86	494.84		495.52	0.004696	7.35	1644.30	327.31	0.39
Reach-1	1.4886*	100 year	Proposed 3C	9890.00	478.86	495.74	490.81	496.21	0.002939	6.14	1942.94	329.89	0.32
Reach-1	1.4886*	100 year	Proposed 3D	9890.00	478.86	494.96		495.61	0.004388	7.16	1685.63	327.67	0.38
Reach-1	1.4886*	100 year	PR3E Raised	9890.00	478.86	494.96		495.60	0.004396	7.17	1684.52	327.66	0.38
Reach-1	1.47	100 year	Existing Prelim	8690.00	478.50	494.39		495.05	0.004638	7.15	1499.83	337.23	0.39
Reach-1	1.47	100 year	Proposed 3B	8690.00	478.50	494.39		495.05	0.004638	7.15	1499.83	337.23	0.39
Reach-1	1.47	100 year	Proposed 3C	8690.00	478.50	494.39		495.05	0.004638	7.15	1499.83	337.23	0.39
Reach-1	1.47	100 year	Proposed 3D	8690.00	478.50	494.56		495.17	0.004203	6.88	1558.75	337.81	0.37
Reach-1	1.47	100 year	PR3E Raised	8690.00	478.50	494.56		495.17	0.004214	6.89	1557.20	337.80	0.37
Reach-1	1.4550*	100 year	Existing Prelim	8690.00	478.17	493.96		494.69	0.004488	7.41	1437.84	309.81	0.40
Reach-1	1.4550*	100 year	Proposed 3B	8690.00	478.17	493.96		494.69	0.004488	7.41	1437.84	309.81	0.40
Reach-1	1.4550*	100 year	Proposed 3C	8690.00	478.17	493.96		494.69	0.004488	7.41	1437.84	309.81	0.40
Reach-1	1.4550*	100 year	Proposed 3D	8690.00	478.17	494.19		494.85	0.003964	7.07	1510.52	310.63	0.38
Reach-1	1.4550*	100 year	PR3E Raised	8690.00	478.17	494.19		494.84	0.003976	7.07	1508.69	310.61	0.38
Reach-1	1.4400*	100 year	Existing Prelim	8690.00	477.85	493.55		494.33	0.004391	7.60	1383.59	282.36	0.41
Reach-1	1.4400*	100 year	Proposed 3B	8690.00	477.85	493.55		494.33	0.004391	7.60	1383.59	282.36	0.41
Reach-1	1.4400*	100 year	Proposed 3C	8690.00	477.85	493.55		494.33	0.004391	7.60	1383.59	282.36	0.41
Reach-1	1.4400*	100 year	Proposed 3D	8690.00	477.85	493.86		494.54	0.003776	7.18	1469.58	283.46	0.38
Reach-1	1.4400*	100 year	PR3E Raised	8690.00	477.85	493.85		494.53	0.003789	7.19	1467.57	283.44	0.38
Reach-1	1.4250*	100 year	Existing Prelim	8690.00	477.53	493.15		493.99	0.004135	7.79	1333.17	254.85	0.42
Reach-1	1.4250*	100 year	Proposed 3B	8690.00	477.53	493.15		493.99	0.004135	7.79	1333.17	254.85	0.42
Reach-1	1.4250*	100 year	Proposed 3C	8690.00	477.53	493.15		493.99	0.004135	7.79	1333.17	254.85	0.42
Reach-1	1.4250*	100 year	Proposed 3D	8690.00	477.53	493.53	487.84	494.25	0.003480	7.31	1428.80	256.26	0.38
Reach-1	1.4250*	100 year	PR3E Raised	8690.00	477.53	493.52		494.24	0.003490	7.32	1427.29	256.24	0.38
Reach-1	1.41	100 year	Existing Prelim	8690.00	477.20	492.79		493.66	0.003936	7.90	1290.82	227.40	0.42
Reach-1	1.41	100 year	Proposed 3B	8690.00	477.20	492.79		493.66	0.003936	7.90	1290.82	227.40	0.42
Reach-1	1.41	100 year	Proposed 3C	8690.00	477.20	492.79		493.66	0.003936	7.90	1290.82	227.40	0.42
Reach-1	1.41	100 year	Proposed 3D	8690.00	477.20	492.79		493.66	0.003936	7.90	1290.82	227.40	0.42
Reach-1	1.41	100 year	PR3E Raised	8690.00	477.20	493.23		493.98	0.003268	7.39	1390.32	229.10	0.38
Reach-1	1.39	100 year	Existing Prelim	8690.00	477.20	491.86		493.12	0.005876	9.23	1046.53	182.62	0.50
Reach-1	1.39	100 year	Proposed 3B	8690.00	477.20	491.86		493.12	0.005876	9.23	1046.53	182.62	0.50
Reach-1	1.39	100 year	Proposed 3C	8690.00	477.20	491.86		493.12	0.005876	9.23	1046.53	182.62	0.50
Reach-1	1.39	100 year	Proposed 3D	8690.00	477.20	491.86		493.12	0.005876	9.23	1046.53	182.62	0.50
Reach-1	1.39	100 year	PR3E Raised	8690.00	477.20	492.51		493.54	0.004565	8.45	1177.04	206.38	0.45
Reach-1	1.3725*	100 year	Existing Prelim	8690.00	476.95	491.27		492.56	0.006100	9.37	1038.51	200.85	0.52
Reach-1	1.3725*	100 year	Proposed 3B	8690.00	476.95	491.27		492.56	0.006100	9.37	1038.51	200.85	0.52
Reach-1	1.3725*	100 year	Proposed 3C	8690.00	476.95	491.27		492.56	0.006100	9.37	1038.51	200.85	0.52
Reach-1	1.3725*	100 year	Proposed 3D	8690.00	476.95	491.27		492.56	0.006100	9.37	1038.51	200.85	0.52
Reach-1	1.3725*	100 year	PR3E Raised	8690.00	476.95	492.17	487.11	493.12	0.004149	8.18	1220.75	204.17	0.43
Reach-1	1.3550*	100 year	Existing Prelim	8690.00	476.70	490.71		492.00	0.006077	9.35	1042.93	194.48	0.52
Reach-1	1.3550*	100 year	Proposed 3B	8690.00	476.70	490.71		492.00	0.006077	9.35	1042.93	194.48	0.52
Reach-1	1.3550*	100 year	Proposed 3C	8690.00	476.70	490.71		492.00	0.006077	9.35	1042.93	194.48	0.52
Reach-1	1.3550*	100 year	Proposed 3D	8690.00	476.70	490.71		492.00	0.006077	9.35	1042.93	194.48	0.52
Reach-1	1.3550*	100 year	PR3E Raised	8690.00	476.70	490.71		492.00	0.006077	9.35	1042.93	194.48	0.52
Reach-1	1.3375*	100 year	Existing Prelim	8690.00	476.45	490.19		491.43	0.005954	9.24	1057.01	185.55	0.52
Reach-1	1.3375*	100 year	Proposed 3B	8690.00	476.45	490.19		491.43	0.005954	9.24	1057.01	185.55	0.52
Reach-1	1.3375*	100 year	Proposed 3C	8690.00	476.45	490.19		491.43	0.005954	9.24	1057.01	185.55	0.52
Reach-1	1.3375*	100 year	Proposed 3D	8690.00	476.45	490.19		491.43	0.005954	9.24	1057.01	185.55	0.52
Reach-1	1.3375*	100 year	PR3E Raised	8690.00	476.45	490.19		491.43	0.005954	9.24	1057.01	185.55	0.52
Reach-1	1.32	100 year	Existing Prelim	8690.00	476.20	489.69		490.87	0.005785	9.07	1077.02	179.99	0.52
Reach-1	1.32	100 year	Proposed 3B	8690.00	476.20	489.69		490.87	0.005785	9.07	1077.02	179.99	0.52
Reach-1	1.32	100 year	Proposed 3C	8690.00	476.20	489.69		490.87	0.005785	9.07	1077.02	179.99	0.52
Reach-1	1.32	100 year	Proposed 3D	8690.00	476.20	489.69		490.87	0.005785	9.07	1077.02	179.99	0.52
Reach-1	1.32	100 year	PR3E Raised	8690.00	476.20	489.69		490.87	0.005785	9.07	1077.02	179.99	0.52
Reach-1	1.26	100 year	Existing Prelim	8690.00	475.00	488.66		489.37	0.003332	7.11	1450.26	287.14	0.39

Bridge 3C

Bridge 3D

Bridge 3E

HEC-RAS River: RIVER-1 Reach: Reach-1 Profile: 100 year (Continued)

Reach	River Sta	Profile	Plan	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
				(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Reach-1	1.26	100 year	Proposed 3B	8690.00	475.00	488.66		489.37	0.003332	7.11	1450.26	287.14	0.39
Reach-1	1.26	100 year	Proposed 3C	8690.00	475.00	488.66		489.37	0.003332	7.11	1450.26	287.14	0.39
Reach-1	1.26	100 year	Proposed 3D	8690.00	475.00	488.66		489.37	0.003332	7.11	1450.26	287.14	0.39
Reach-1	1.26	100 year	PR3E Raised	8690.00	475.00	488.66		489.37	0.003332	7.11	1450.26	287.14	0.39
Reach-1	1.201	100 year	Existing Prelim	8690.00	474.50	488.68		488.80	0.000631	3.59	3404.12	558.49	0.17
Reach-1	1.201	100 year	Proposed 3B	8690.00	474.50	488.68		488.80	0.000631	3.59	3404.12	558.49	0.17
Reach-1	1.201	100 year	Proposed 3C	8690.00	474.50	488.68		488.80	0.000631	3.59	3404.12	558.49	0.17
Reach-1	1.201	100 year	Proposed 3D	8690.00	474.50	488.68		488.80	0.000631	3.59	3404.12	558.49	0.17
Reach-1	1.201	100 year	PR3E Raised	8690.00	474.50	488.68		488.80	0.000631	3.59	3404.12	558.49	0.17
Reach-1	1.2	100 year	Existing Prelim	8690.00	474.50	488.69		488.79	0.000710	2.99	3408.08	558.61	0.14
Reach-1	1.2	100 year	Proposed 3B	8690.00	474.50	488.69		488.79	0.000710	2.99	3408.08	558.61	0.14
Reach-1	1.2	100 year	Proposed 3C	8690.00	474.50	488.69		488.79	0.000710	2.99	3408.08	558.61	0.14
Reach-1	1.2	100 year	Proposed 3D	8690.00	474.50	488.69		488.79	0.000710	2.99	3408.08	558.61	0.14
Reach-1	1.2	100 year	PR3E Raised	8690.00	474.50	488.69		488.79	0.000710	2.99	3408.08	558.61	0.14
Reach-1	1.018	100 year	Existing Prelim	8690.00	471.20	487.80		487.97	0.000873	3.51	2647.24	311.80	0.17
Reach-1	1.018	100 year	Proposed 3B	8690.00	471.20	487.80		487.97	0.000873	3.51	2647.24	311.80	0.17
Reach-1	1.018	100 year	Proposed 3C	8690.00	471.20	487.80		487.97	0.000873	3.51	2647.24	311.80	0.17
Reach-1	1.018	100 year	Proposed 3D	8690.00	471.20	487.80		487.97	0.000873	3.51	2647.24	311.80	0.17
Reach-1	1.018	100 year	PR3E Raised	8690.00	471.20	487.80		487.97	0.000873	3.51	2647.24	311.80	0.17
Reach-1	0.998	100 year	Existing Prelim	8690.00	471.10	486.87	481.77	487.71	0.005444	7.34	1183.88	125.40	0.42
Reach-1	0.998	100 year	Proposed 3B	8690.00	471.10	486.87	481.77	487.71	0.005444	7.34	1183.88	125.40	0.42
Reach-1	0.998	100 year	Proposed 3C	8690.00	471.10	486.87	481.77	487.71	0.005444	7.34	1183.88	125.40	0.42
Reach-1	0.998	100 year	Proposed 3D	8690.00	471.10	486.87	481.77	487.71	0.005444	7.34	1183.88	125.40	0.42
Reach-1	0.998	100 year	PR3E Raised	8690.00	471.10	486.87	481.77	487.71	0.005444	7.34	1183.88	125.40	0.42
Reach-1	0.9945			Bridge									
Reach-1	0.991	100 year	Existing Prelim	8690.00	471.10	486.32	481.78	487.26	0.006456	7.80	1114.82	122.73	0.46
Reach-1	0.991	100 year	Proposed 3B	8690.00	471.10	486.32	481.78	487.26	0.006456	7.80	1114.82	122.73	0.46
Reach-1	0.991	100 year	Proposed 3C	8690.00	471.10	486.32	481.78	487.26	0.006456	7.80	1114.82	122.73	0.46
Reach-1	0.991	100 year	Proposed 3D	8690.00	471.10	486.32	481.78	487.26	0.006456	7.80	1114.82	122.73	0.46
Reach-1	0.991	100 year	PR3E Raised	8690.00	471.10	486.32	481.78	487.26	0.006456	7.80	1114.82	122.73	0.46
Reach-1	0.922	100 year	Existing Prelim	8690.00	469.30	483.16		484.44	0.009607	9.68	1036.95	185.43	0.54
Reach-1	0.922	100 year	Proposed 3B	8690.00	469.30	483.16		484.44	0.009607	9.68	1036.95	185.43	0.54
Reach-1	0.922	100 year	Proposed 3C	8690.00	469.30	483.16		484.44	0.009607	9.68	1036.95	185.43	0.54
Reach-1	0.922	100 year	Proposed 3D	8690.00	469.30	483.16		484.44	0.009607	9.68	1036.95	185.43	0.54
Reach-1	0.922	100 year	PR3E Raised	8690.00	469.30	483.16		484.44	0.009607	9.68	1036.95	185.43	0.54
Reach-1	0.79	100 year	Existing Prelim	8690.00	466.50	480.66		481.01	0.002916	5.57	2015.53	481.71	0.31
Reach-1	0.79	100 year	Proposed 3B	8690.00	466.50	480.66		481.01	0.002916	5.57	2015.53	481.71	0.31
Reach-1	0.79	100 year	Proposed 3C	8690.00	466.50	480.66		481.01	0.002916	5.57	2015.53	481.71	0.31
Reach-1	0.79	100 year	Proposed 3D	8690.00	466.50	480.66		481.01	0.002916	5.57	2015.53	481.71	0.31
Reach-1	0.79	100 year	PR3E Raised	8690.00	466.50	480.66		481.01	0.002916	5.57	2015.53	481.71	0.31
Reach-1	0.56	100 year	Existing Prelim	8690.00	463.00	477.91		478.10	0.002409	4.76	3205.71	1356.71	0.27
Reach-1	0.56	100 year	Proposed 3B	8690.00	463.00	477.91		478.10	0.002409	4.76	3205.71	1356.71	0.27
Reach-1	0.56	100 year	Proposed 3C	8690.00	463.00	477.91		478.10	0.002409	4.76	3205.71	1356.71	0.27
Reach-1	0.56	100 year	Proposed 3D	8690.00	463.00	477.91		478.10	0.002409	4.76	3205.71	1356.71	0.27
Reach-1	0.56	100 year	PR3E Raised	8690.00	463.00	477.91		478.10	0.002409	4.76	3205.71	1356.71	0.27
Reach-1	0.34	100 year	Existing Prelim	8690.00	460.00	475.30	468.86	475.58	0.002136	4.90	2894.23	1371.85	0.27
Reach-1	0.34	100 year	Proposed 3B	8690.00	460.00	475.30	468.86	475.58	0.002136	4.90	2894.23	1371.85	0.27
Reach-1	0.34	100 year	Proposed 3C	8690.00	460.00	475.30	468.86	475.58	0.002136	4.90	2894.23	1371.85	0.27
Reach-1	0.34	100 year	Proposed 3D	8690.00	460.00	475.30	468.86	475.58	0.002136	4.90	2894.23	1371.85	0.27
Reach-1	0.34	100 year	PR3E Raised	8690.00	460.00	475.30	468.86	475.58	0.002136	4.90	2894.23	1371.85	0.27

Attachment F

Conceptual BMP Memo

HAM-Wasson Way to Otto Armleder

Preliminary BMP Memo (PID# 113603)

Prepared for:
ODOT District 8

Prepared by:
Stantec Consulting Services Inc.

February 28, 2024

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1.0 BMP Summary

As a part of the feasibility study for the HAM-Wasson Way to Otto Armleder project, Stantec performed some preliminary post construction stormwater best management practice (BMP) calculations. These calculations we performed to identify challenges associated with BMP installation and ensure construction limits for each alternative incorporated the construction of BMP's. These calculations were conducted in accordance with the Ohio department of Transportation, Location and Design Manual, Volume 2. Stantec also utilized several other ODOT BMP resources including the BMP calculation spreadsheet and the ODOT BMP tool.

BMPs are provided for two reasons, to treat stormwater quality and stormwater quantity. Water quality treatment is providing for reduction of pollutants from storm water runoff before leaving the project site. Water quantity treatment is reducing the volume or peak flow rate of storm water runoff to protect the receiving stream's physical characteristics. Most projects, require water quality and quantity treatment. For segments of this project where greater than 1 acre of impervious area (pavement) is being added in new permanent right of way, quantity treatment will be required. Some segments will require quantity treatment, some segments will not.

It is anticipated that several different BMP treatments will be needed for the various alternatives. These include vegetated filter strips, enhanced bankful width ditches, bioretention cells, and manufactured systems. Vegetative based BMPs do not treat water quantity, but bioretention cells and manufactured systems do.

The calculations shown on subsequent pages are preliminary in nature and may change as the project progresses.

The following information should be kept in mind as the project moves forward:

- Earth disturbed areas where stormwater flows outside of the project right-of-way should not be channelized for the sole purpose of BMP construction. These areas can be eliminated from the calculations.

- Narrow vegetated filter strips may be utilized for areas only draining shared-use path pavement.

- There may be additional untreated roadway areas, not associated with the project earth disturbed area, within the existing right of way that can count towards bmp credit if treated.

- Off-site mitigation could be used as a BMP treatment if there are nearby untreated areas, such as parking lots or trailheads, owned by the City of

Cincinnati. This may be easier than constructing manufactured systems or other quantity treatment BMPs in Segment 3.

- Project requirements for shared-use path project can sometimes be quite high. While road construction projects often have treatment requirements between 20% and 30%, shared-use path projects can require nearly up to 100% depending on the setting. ODOT and the Ohio EPA recognize that there are some perimeter fringe areas with any development project that will be difficult to treat. Discussions should be have with these agencies if treatment percentages are above 90%.

- For the purposes of this analysis, each Segment and Alternative has been looked at individually. When constructed, the treatment requirements and types may change based on the configuration of the built phases. For example, if multiple segments are construction together, that will change the overall calculations.

2.0 Segment 1 Conceptual BMP Calculations

Post Construction Stormwater BMP Overview

Segment 1 consists of two alternatives, Alternative A and Alternative C.

Alternative A: The total project earth disturbed area for post construction storm water BMP is 1.29 acres, however, 1.12 acres of earth disturbed area sheet flows out of the project area and should not be collected for the sole purposes of stormwater treatment according to Location & Design Manual Section 1112.1. Because the earth disturbed area is less than the 1 acre threshold, BMP will be not be required and a NOI will not need to be submitted to Ohio EPA. The preliminary BMP calculations are shown on the following pages.

Alternative C: The total project earth disturbed area for post construction storm water BMP is 2.49 acres, however, 0.50 acres of earth disturbed area sheet flows out of the project area and should not be collected for the sole purposes of stormwater treatment according to Location & Design Manual Section 1112.1. Because the earth disturbed area is greater than the 1 acre threshold, BMP will be required and a NOI will need to be submitted to Ohio EPA. The overall required treatment percentage for Alternative 1C is 23.31% of the remaining 1.99 acres. This alternative will therefore be required to treat 0.46 acres for quality. Quantity treatment will not be required because less than 1 acre of new impervious area is being added in new right of way. This alternative will utilize vegetated filter strips and enhanced bankful width ditches to treat stormwater runoff. It is anticipated that a combination of these can be used along Colbank Rd. Narrow vegetated filter strips can be used in some areas since all improvements are pedestrian related. The preliminary BMP calculations are shown on the following pages.

Post Construction Stormwater BMPs should not be a differentiator between the Segment 1 alternatives. BMPs will not be required for Alternative A, however, BMP credit will be relatively easy and inexpensive to obtain for Alternative C.

3.0 Segment 2 Conceptual BMP Calculations

Post Construction Stormwater BMP Overview

Segment 2 consists of two alternatives, Alternative B and Alternative C.

Alternative B: The total project earth disturbed area for post construction storm water BMP is 2.52 acres, however, 0.70 acres of earth disturbed area sheet flows out of the project area and should not be collected for the sole purposes of stormwater treatment according to Location & Design Manual Section 1112.1. Because the earth disturbed area is greater than the 1 acre threshold, BMP will be required and a NOI will need to be submitted to Ohio EPA. The overall required treatment percentage for Alternative 2B is 38.87% of the remaining 1.82 acres. This alternative will therefore be required to treat 0.71 acres for quality. Quantity treatment will not be required because less than 1 acre of new impervious area is being added in new right of way. This alternative will utilize vegetated filter strips, enhanced bankful width ditches (vegetated biofilters), and potentially a manufactured system to treat stormwater runoff. It is anticipated that vegetated filter strips can be used inside the loop between Sta. 325+00 and Sta. 329+00 and towards the Segment 3 termini on the abandoned rail line. Narrow vegetated filter strips can be used where all improvements are pedestrian related. Where filter strips cannot be used, vegetated biofilters can be used, potentially on the east side of Wooster Rd. If additional treatment area is needed, a manufactured system will be installed where proposed curb is present, along Wooster Pike. The preliminary BMP calculations are shown on the following pages.

Alternative C: The total project earth disturbed area for post construction storm water BMP is 3.53 acres, however, 0.64 acres of earth disturbed area sheet flows out of the project area and should not be collected for the sole purposes of stormwater treatment according to Location & Design Manual Section 1112.1. Because the earth disturbed area is greater than the 1 acre threshold, BMP will be required and a NOI will need to be submitted to Ohio EPA. The overall required treatment percentage for Alternative 2C is 32.63% of the remaining 2.89 acres. This alternative will therefore be required to treat 0.94 acres for quality. Quantity treatment will not be required because less than 1 acre of new impervious area is being added in new right of way. This alternative will utilize vegetated filter strips, enhanced bankful width ditches, and potentially a manufactured system to treat stormwater runoff. It is anticipated that vegetated filter strips can be used inside the loop between Sta. 325+00 and Sta. 329+00 and towards the Segment 3 termini on the abandoned rail line. Narrow vegetated filter strips can be used where all improvements are pedestrian related. Where filter strips cannot be used, vegetated biofilters can be used,

potentially on the east side of Wooster Rd. If additional treatment area is needed, a manufactured system will be installed where proposed curb is present, along Wooster Pike. The preliminary BMP calculations are shown on the following pages.

Post Construction Stormwater BMPs should not be a differentiator between the Segment 2 alternatives. It will be challenging to achieve all BMP credits through vegetative options with either alternative. A manufactured system will most likely be required in both alternative because of the steep slopes, anticipated walls, and proposed curb.

4.0 Segment 3 Conceptual BMP Calculations

Post Construction Stormwater BMP Overview

Segment 3 consists of four alternatives, Alternative B, Alternative C, Alternative D, and Alternative E.

Alternative B: The total project earth disturbed area for post construction storm water BMP is 6.02 acres, however, 2.16 acres of earth disturbed area sheet flows out of the project area and should not be collected for the sole purposes of stormwater treatment according to Location & Design Manual Section 1112.1. Because the earth disturbed area is greater than the 1 acre threshold, BMP will be required and a NOI will need to be submitted to Ohio EPA. The overall required treatment percentage for Alternative 3B is 100% of the remaining 3.86 acres. This alternative will therefore be required to treat 3.86 acres. In addition to quality treatment, quantity treatment will be required because more than 1 acre of new impervious area is being added in new right of way. This alternative will need to use bioretention cells, detention basins, or permeable pavement to treat stormwater runoff. The listed BMPS are the most common options when quantity and quality treatment are needed. Additional discussions should be had with ODOT and OEPA to discuss reducing the treatment percent on this alternative as noted in the general discussion above. Discussions should also be had with the City of Cincinnati to determine if there are any untreated right of way areas that could be utilized for offsite mitigation such as at Otto Armleder Park or along Armleder Rd. Further refinement of the vertical profile of the shared use path could also be to potentially increase the sheet flow runoff, thereby reducing the required treatment amount. It is anticipated that after these options are explored, linear bioretention cells could be utilized in trail side ditches along the alignment. The preliminary BMP calculations are shown on the following pages.

Alternative C: The total project earth disturbed area for post construction storm water BMP is 6.01 acres, however, 2.1 acres of earth disturbed area sheet flows out of the project area and should not be collected for the sole purposes of stormwater treatment according to Location & Design Manual Section 1112.1. Because the earth disturbed area is greater than the 1 acre threshold, BMP will be required and a NOI will need to be submitted to Ohio EPA. The overall required treatment percentage for Alternative 3C is 76.21% of the remaining 3.91 acres. This alternative will therefore be required to treat 2.98 acres. In addition to quality treatment, quantity treatment will be required because more than 1 acre of new impervious area is being added in new right of way. This alternative will need to use bioretention cells, detention basins, or permeable pavement to treat stormwater runoff. The listed BMPS are the most common options when quantity and quality treatment are needed. Discussions should be had with the

City of Cincinnati to determine if there are any untreated right of way areas that could be utilized for offsite mitigation such as at Otto Armleder Park or along Armleder Rd. Further refinement of the vertical profile of the shared use path could also be done to potentially increase the sheet flow runoff, thereby reducing the required treatment amount. It is anticipated that after these options are explored, linear bioretention cells could be utilized in trail side ditches along the alignment. Permeable pavement may also be a good option for quantity treatment for this alternative. The preliminary BMP calculations are shown on the following pages.

Alternative D: The total project earth disturbed area for post construction storm water BMP is 5.90 acres, however, 2.07 acres of earth disturbed area sheet flows out of the project area and should not be collected for the sole purposes of stormwater treatment according to Location & Design Manual Section 1112.1. Because the earth disturbed area is greater than the 1 acre threshold, BMP will be required and a NOI will need to be submitted to Ohio EPA. The overall required treatment percentage for Alternative 3D is 86.31% of the remaining 3.83 acres. This alternative will therefore be required to treat 3.31 acres. In addition to quality treatment, quantity treatment will be required because more than 1 acre of new impervious area is being added in new right of way. This alternative will need to use bioretention cells, detention basins, manufactured systems, or permeable pavement to treat stormwater runoff. The listed BMPS are the most common options when quantity and quality treatment are needed. Discussions should be had with the City of Cincinnati to determine if there are any untreated right of way areas that could be utilized for offsite mitigation such as at Otto Armleder Park or along Armleder Rd. Further refinement of the vertical profile of the shared use path could also be done to potentially increase the sheet flow runoff, thereby reducing the required treatment amount. It is anticipated that after these options are explored, linear bioretention cells could be utilized in trail side ditches along the alignment. Permeable pavement may also be a good option for quantity treatment for this alternative. The preliminary BMP calculations are shown on the following pages.

Alternative E: The total project earth disturbed area for post construction storm water BMP is 6.01 acres, however, 1.92 acres of earth disturbed area sheet flows out of the project area and should not be collected for the sole purposes of stormwater treatment according to Location & Design Manual Section 1112.1. Because the earth disturbed area is greater than the 1 acre threshold, BMP will be required and a NOI will need to be submitted to Ohio EPA. The overall required treatment percentage for Alternative 3E is 71.13% of the remaining 4.09 acres. This alternative will therefore be required to treat 2.91 acres. In addition to quality treatment, quantity treatment will be required because more than 1 acre of new impervious area is being added in new right of way. This alternative will need to use bioretention cells, detention basins, or permeable pavement to treat stormwater runoff. The listed BMPS are the most common options when quantity and quality treatment are needed. Discussions should be had with the

City of Cincinnati to determine if there are any untreated right of way areas that could be utilized for offsite mitigation such as at Otto Armleder Park or along Armleder Rd. Further refinement of the vertical profile of the shared use path could also be done to potentially increase the sheet flow runoff, thereby reducing the required treatment amount. It is anticipated that after these options are explored, linear bioretention cells could be utilized in trail side ditches along the alignment. Permeable pavement may also be a good option for quantity treatment for this alternative. The preliminary BMP calculations are shown on the following pages.

Post Construction Stormwater BMPs should not be a differentiator between the Segment 3 alternatives. Providing the required BMPs will be challenging for all four alternatives since several acres quantity treatment is required. It is possible that construction phasing of the project will provide opportunities for extrea treatment in Segments 1 or 2 to be used for segment 3. As the project is developed, additional coordination should be conducted with project stakeholders to find creative and efficient ways to obtain the required treatment credit.

Post Construction - Project Summary
Segment 1A

Project Data

		Units
Project EDA	1.29	acres
Is the Project Routine Maintenance per L&D Vol. 2, Sec. 1112.2	No	
Sheet Flow (outside of right of way)	1.12	acres
BMPs Required?	**BMPs and NOI not required**	NA
Ain (New Impervious Area in New Permanent R/W	0	acres
Does Entire Site Drain to Large River (>100 sq. miles)?	No	
Water Quality Treatment Required	**No**	
Water Quantity Treatment Required	**No**	

Post Construction - Project Summary
Segment 1C

Project Data		Units
Project EDA	2.49	acres
Is the Project Routine Maintenance per L&D Vol. 2, Sec. 1112.2	No	
Sheet Flow (outside of right of way)	0.5	acres
BMPs Required?	**BMPs Required**	NA
Ain (New Impervious Area in New Permanent R/W	0.1	acres
Does Entire Site Drain to Large River (>100 sq. miles)?	No	
Water Quality Treatment Required	**Yes**	
Water Quantity Treatment Required	**No**	
Treatment Percent and Treatment Requirement		
Aix (Project EDA that is inside the existing right-of-way)	2.32	acres
Ain (New Impervious Area in New Permanent R/W)	0.1	acres
T% (Treatment Percent)	**23.31**	**%**
Treatment Requirement	**0.46**	**acres**

Ohio Department of Transportation - Office of Hydraulic Engineering

Post-Construction BMP Calculation Spreadsheet

Post Construction - Project Summary
Segment 2B

Project Data		Units
Project EDA	2.52	acres
Is the Project Routine Maintenance per L&D Vol. 2, Sec. 1112.2	No	
Sheet Flow (outside of right of way)	0.7	acres
BMPs Required?	**BMPs Required**	NA
Ain (New Impervious Area in New Permanent R/W	0.25	acres
Does Entire Site Drain to Large River (>100 sq. miles)?	No	
Water Quality Treatment Required	**Yes**	
Water Quantity Treatment Required	**No**	
Treatment Percent and Treatment Requirement		
Aix (Project EDA that is inside the existing right-of-way)	0.81	acres
Ain (New Impervious Area in New Permanent R/W)	0.25	acres
T% (Treatment Percent)	**38.87**	**%**
Treatment Requirement	**0.71**	**acres**

Spreadsheet Template
Updated January 2019

Ohio Department of Transportation - Office of Hydraulic Engineering

Post-Construction BMP Calculation Spreadsheet

Post Construction - Project Summary
Segment 2C

Project Data		Units
Project EDA	3.53	acres
Is the Project Routine Maintenance per L&D Vol. 2, Sec. 1112.2	No	
Sheet Flow (outside of right of way)	0.64	acres
BMPs Required?	**BMPs Required**	NA
Ain (New Impervious Area in New Permanent R/W	0.3	acres
Does Entire Site Drain to Large River (>100 sq. miles)?	No	
Water Quality Treatment Required	**Yes**	
Water Quantity Treatment Required	**No**	
Treatment Percent and Treatment Requirement		
Aix (Project EDA that is inside the existing right-of-way)	1.6	acres
Ain (New Impervious Area in New Permanent R/W)	0.3	acres
T% (Treatment Percent)	**32.63**	**%**
Treatment Requirement	**0.94**	**acres**

Spreadsheet Template
Updated January 2019

Post Construction - Project Summary
Segment 3B

Project Data		Units
Project EDA	6.02	acres
Is the Project Routine Maintenance per L&D Vol. 2, Sec. 1112.2	No	
Sheet Flow (outside of right of way)	2.16	acres
BMPs Required?	**BMPs Required**	NA
Ain (New Impervious Area in New Permanent R/W	1.53	acres
Does Entire Site Drain to Large River (>100 sq. miles)?	No	
Water Quality Treatment Required	**Yes**	
Water Quantity Treatment Required	**Yes**	
Treatment Percent and Treatment Requirement		
Aix (Project EDA that is inside the existing right-of-way)	0	acres
Ain (New Impervious Area in New Permanent R/W)	1.53	acres
T% (Treatment Percent)	**100.00**	**%**
Treatment Requirement	**3.86**	**acres**

Post Construction - Project Summary
Segment 3C

Project Data			Units
	Project EDA	6.01	acres
	Is the Project Routine Maintenance per L&D Vol. 2, Sec. 1112.2	No	
	Sheet Flow (outside of right of way)	2.1	acres
	BMPs Required?	**BMPs Required**	NA
	Ain (New Impervious Area in New Permanent R/W	1.63	acres
	Does Entire Site Drain to Large River (>100 sq. miles)?	No	
	Water Quality Treatment Required	**Yes**	
	Water Quantity Treatment Required	**Yes**	
Treatment Percent and Treatment Requirement			
	Aix (Project EDA that is inside the existing right-of-way)	0.69	acres
	Ain (New Impervious Area in New Permanent R/W)	1.63	acres
	T% (Treatment Percent)	**76.21**	**%**
	Treatment Requirement	**2.98**	**acres**

Ohio Department of Transportation - Office of Hydraulic Engineering

Post-Construction BMP Calculation Spreadsheet

Post Construction - Project Summary
Segment 3D

Project Data		Units
Project EDA	5.9	acres
Is the Project Routine Maintenance per L&D Vol. 2, Sec. 1112.2	No	
Sheet Flow (outside of right of way)	2.07	acres
BMPs Required?	**BMPs Required**	NA
Ain (New Impervious Area in New Permanent R/W	1.55	acres
Does Entire Site Drain to Large River (>100 sq. miles)?	No	
Water Quality Treatment Required	**Yes**	
Water Quantity Treatment Required	**Yes**	
Treatment Percent and Treatment Requirement		
Aix (Project EDA that is inside the existing right-of-way)	0.32	acres
Ain (New Impervious Area in New Permanent R/W)	1.55	acres
T% (Treatment Percent)	**86.31**	**%**
Treatment Requirement	**3.31**	**acres**

Spreadsheet Template
Updated January 2019

Post Construction - Project Summary
Segment 3E

Project Data		Units
Project EDA	6.01	acres
Is the Project Routine Maintenance per L&D Vol. 2, Sec. 1112.2	No	
Sheet Flow (outside of right of way)	1.92	acres
BMPs Required?	**BMPs Required**	NA
Ain (New Impervious Area in New Permanent R/W	1.47	acres
Does Entire Site Drain to Large River (>100 sq. miles)?	No	
Water Quality Treatment Required	**Yes**	
Water Quantity Treatment Required	**Yes**	
Treatment Percent and Treatment Requirement		
Aix (Project EDA that is inside the existing right-of-way)	0.83	acres
Ain (New Impervious Area in New Permanent R/W)	1.47	acres
T% (Treatment Percent)	**71.13**	**%**
Treatment Requirement	**2.91**	**acres**

Attachment G

Environmental Mapping

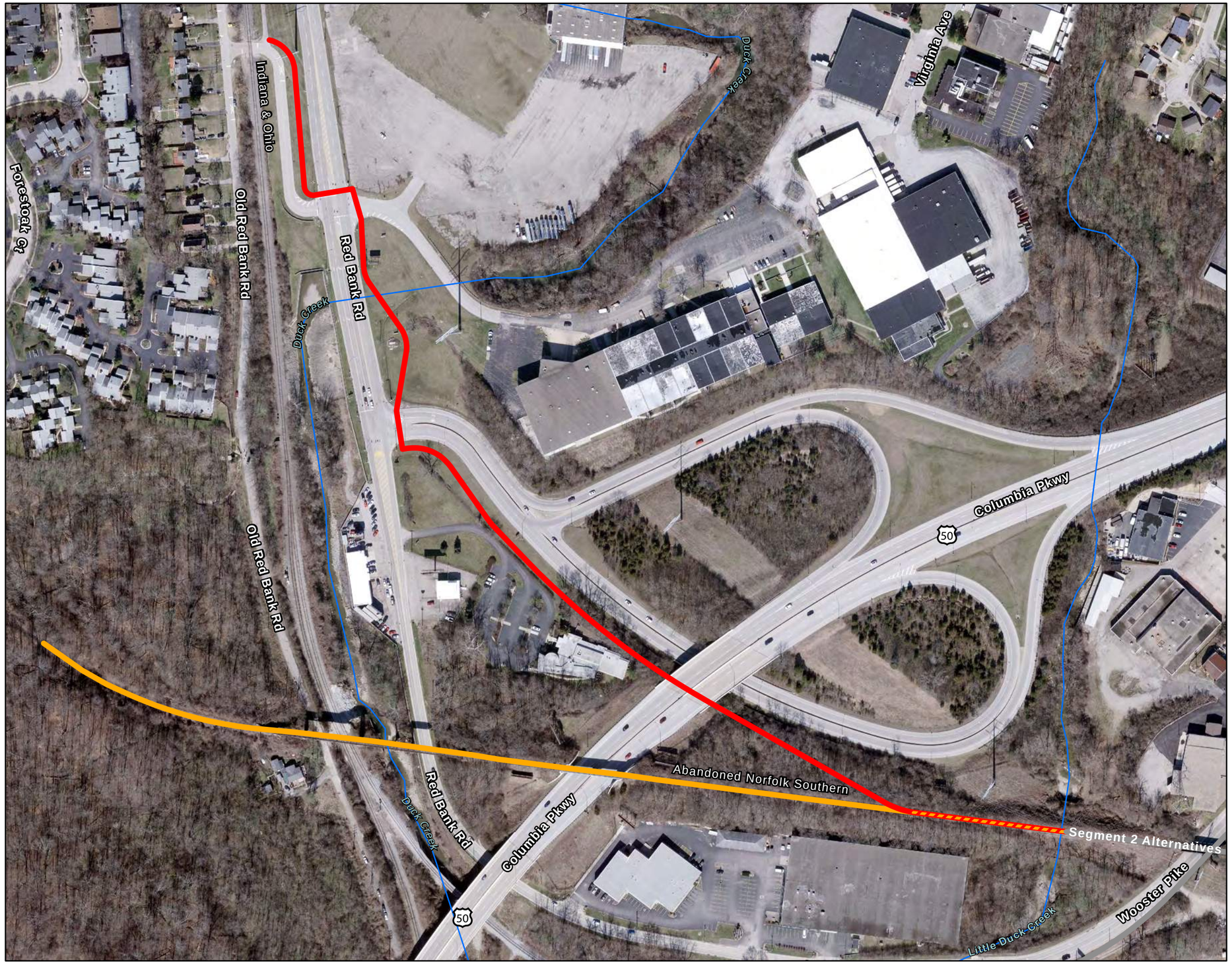


Exhibit No.

1.1

Title

Segment 1- Streams and Wetlands Map

Client/Project 173620146

HAM- Wasson Way to Otto Armleder
PID 113603

Project Location
Columbia Township
Hamilton County, OH

Prepared by RG on 2023-12-11

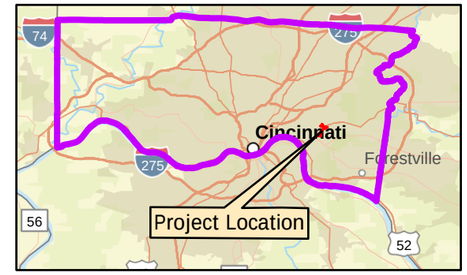
N

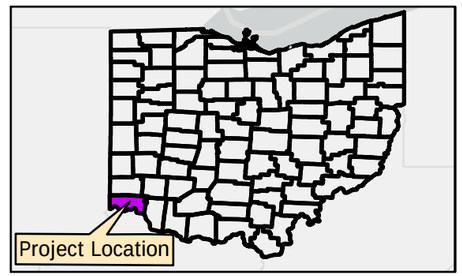
0 200 400 Feet

(At original document size of 11x17)
1:2,700

Legend

- Segment 1-Alternative A
- Segment 1-Alternative C
- Segment 1- Alternatives A & C
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Streams*





Notes

1. Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
2. Base Features Produced from Project Design Elements
3. Background: Light Gray Base: Esri, TomTom, Garmin, FAO, NOAA, USGS, EPA, USFWS
Hybrid Reference Layer: Esri Community Maps Contributors, City of Cincinnati, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS
World Street Map: Esri, TomTom, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NPS, USFWS
4. *All stream Lines drawn in from aerial imagery

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Exhibit No.
1.2

Title
Segment 2- Streams and Wetlands Map

Client/Project 173620146
HAM- Wasson Way to Otto Armleder
PID 113603

Project Location
Columbia Township
Hamilton County, OH

Prepared by RG on 2023-12-11

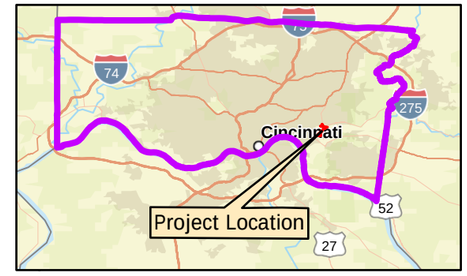
N

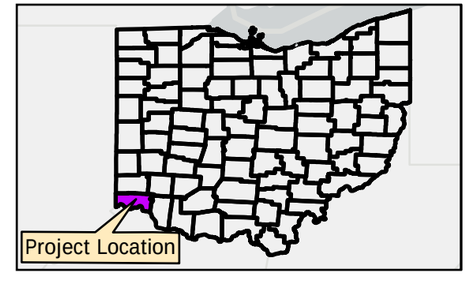
0 200 400 Feet

(At original document size of 11x17)
1:2,700

Legend

- Segment 2-Alternative B
- Segment 2-Alternative C
- Segment 2-Alternatives B & C
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Streams*





Notes
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World Street Map: Esri, HERE, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NPS
4. *All stream lines drawn in from aerial imagery

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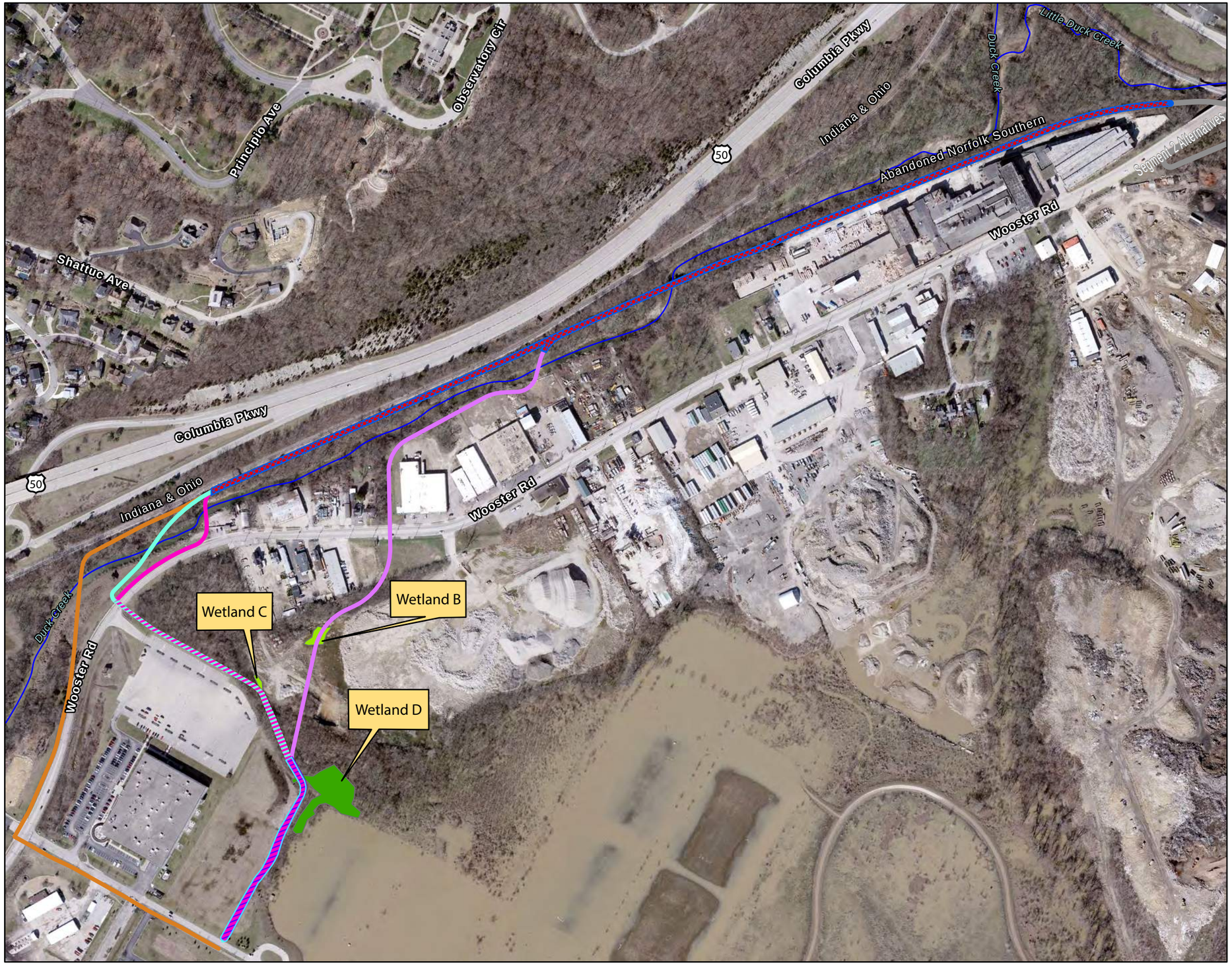


Exhibit No.

1.3

Title

Segment 3- Streams and Wetlands Map

Client/Project 173620146

HAM- Wasson Way to Otto Armleder
PID 113603

Project Location
Columbia Township
Hamilton County, OH

Prepared by RG on 2023-12-11

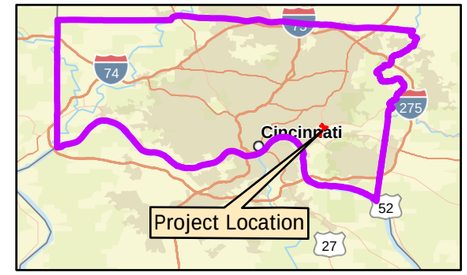
N

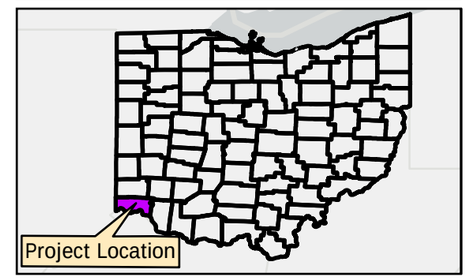
0 350 700 Feet

(At original document size of 11x17)
1:4,700

Legend

- Segment 3-Shared Alternatives B-E
- Segment 3-Alternative B
- Segment 3-Alternative C
- Segment 3-Alternative D
- Segment 3-Shared Alternatives B-D
- Segment 3-Shared Alternatives C-D
- Segment 3-Alternative E
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Streams*





Notes

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World Street Map: Esri, HERE, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NPS
4. *All stream lines drawn in from aerial imagery

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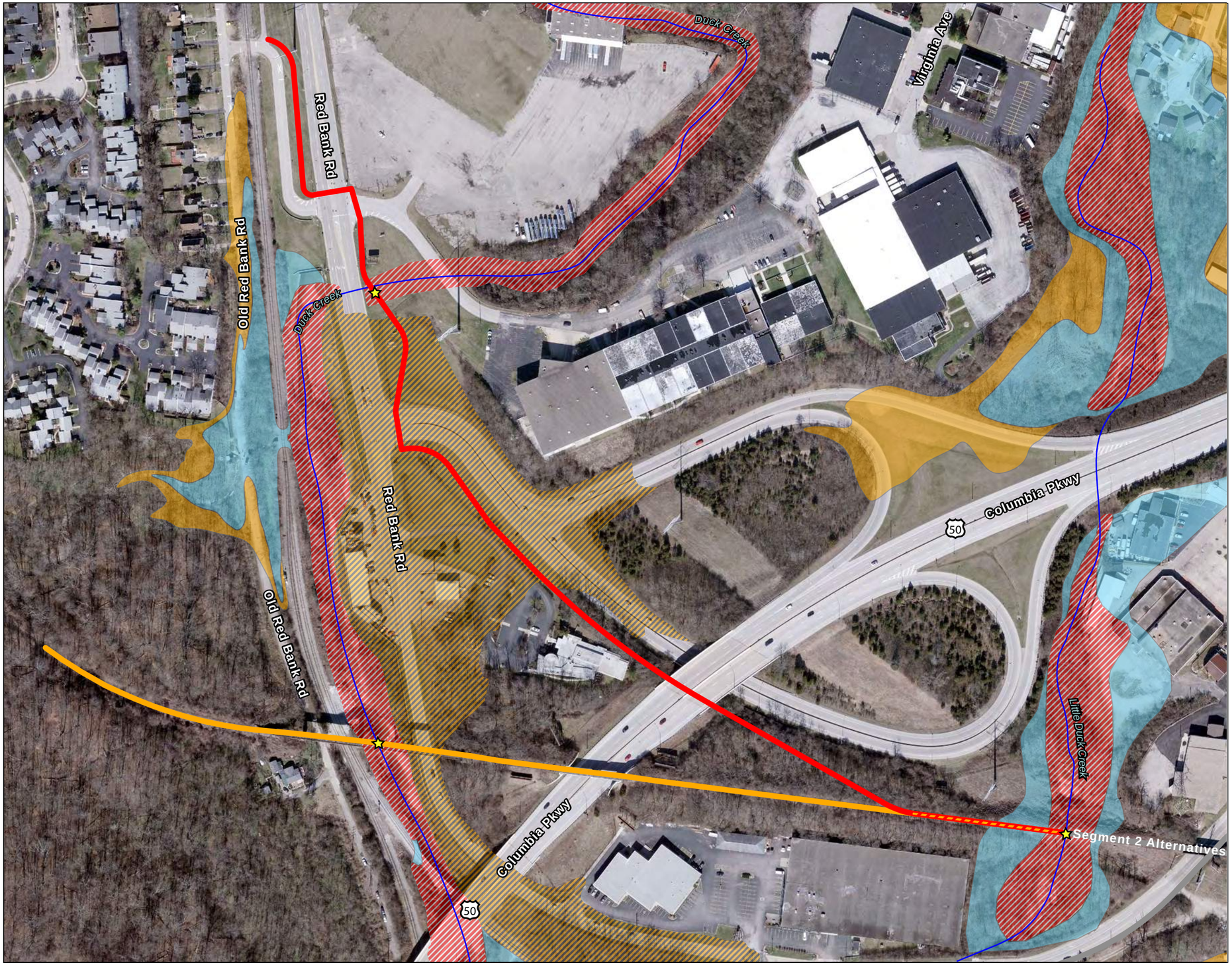


Exhibit No.
2.1

Title
Segment 1- FEMA Floodplains Map

Client/Project
173620146
HAM- Wasson Way to Otto Armleder
PID 113603

Project Location
Columbia Township
Hamilton County, OH

Prepared by RG on 2023-12-11

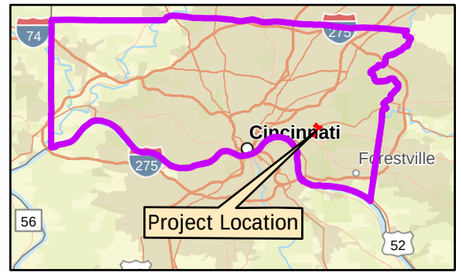
N

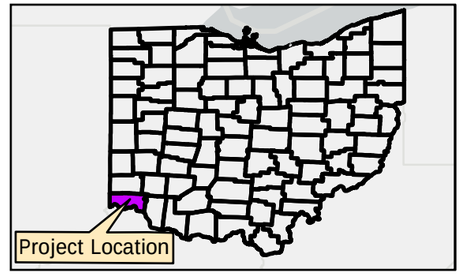
0 200 400 Feet

(At original document size of 11x17)
1:2,700

Legend

- Segment 1-Alternative A
- Segment 1-Alternative C
- Segment 1- Alternatives A & C
- 1.0% Annual Chance Flood Hazard
- 0.2% Annual Chance Flood Hazard
- Area with Reduced Risk Due to Levee
- Floodway ★
- Streams*





Notes
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2. FEMA (2023)
3. Background: Light Gray Base: Esri, TomTom, Garmin, FAO, NOAA, USGS, EPA, USFWS
World Street Map: Esri, TomTom, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NPS, USFWS
4. *All stream lines drawn in from aerial imagery

★ No Impacts to floodway anticipated

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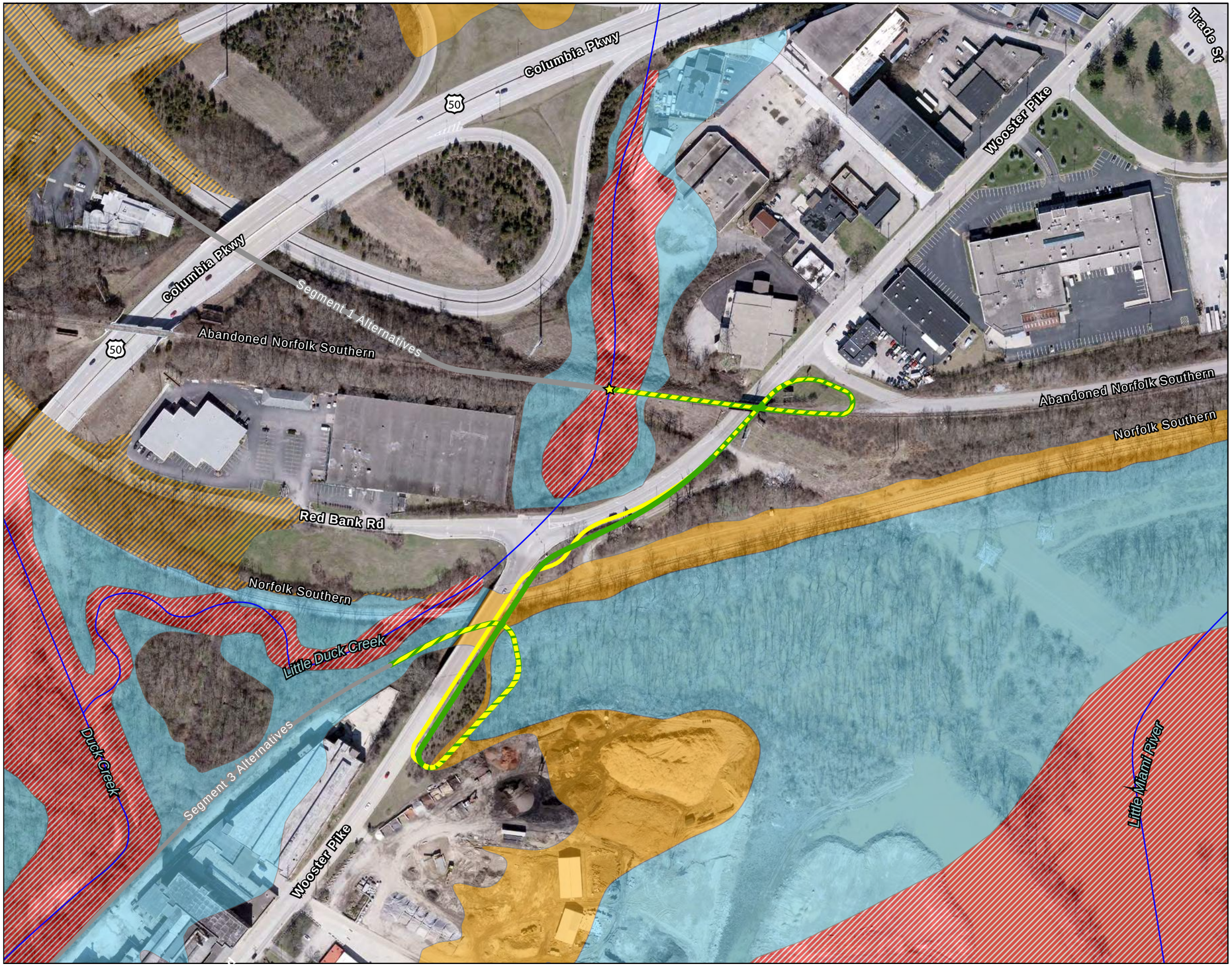


Exhibit No.
2.2

Title
Segment 2- FEMA Floodplains Map

Client/Project
HAM- Wasson Way to Otto Armleder
PID 113603

173620146

Project Location
Columbia Township
Hamilton County, OH

Prepared by RG on 2023-12-14

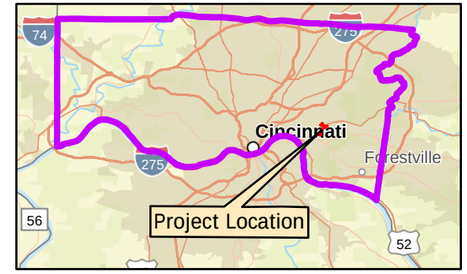
N

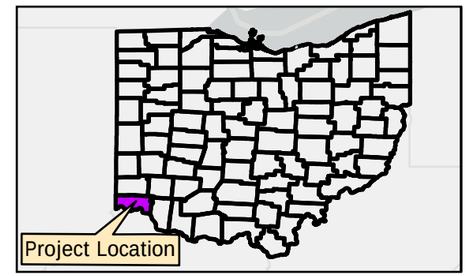
0 200 400 Feet

(At original document size of 11x17)
1:2,700

Legend

- Segment 2-Alternative B
- Segment 2-Alternative C
- Segment 2-Alternatives B & C
- 1.0% Annual Chance Flood Hazard
- 0.2% Annual Chance Flood Hazard
- Area with Reduced Risk Due to Levee
- Floodway★
- Streams*





Notes

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World Street Map: Esri, TomTom, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NPS, USFWS
4. All stream lines drawn in from aerial imagery

★ No Impacts to Floodway anticipated

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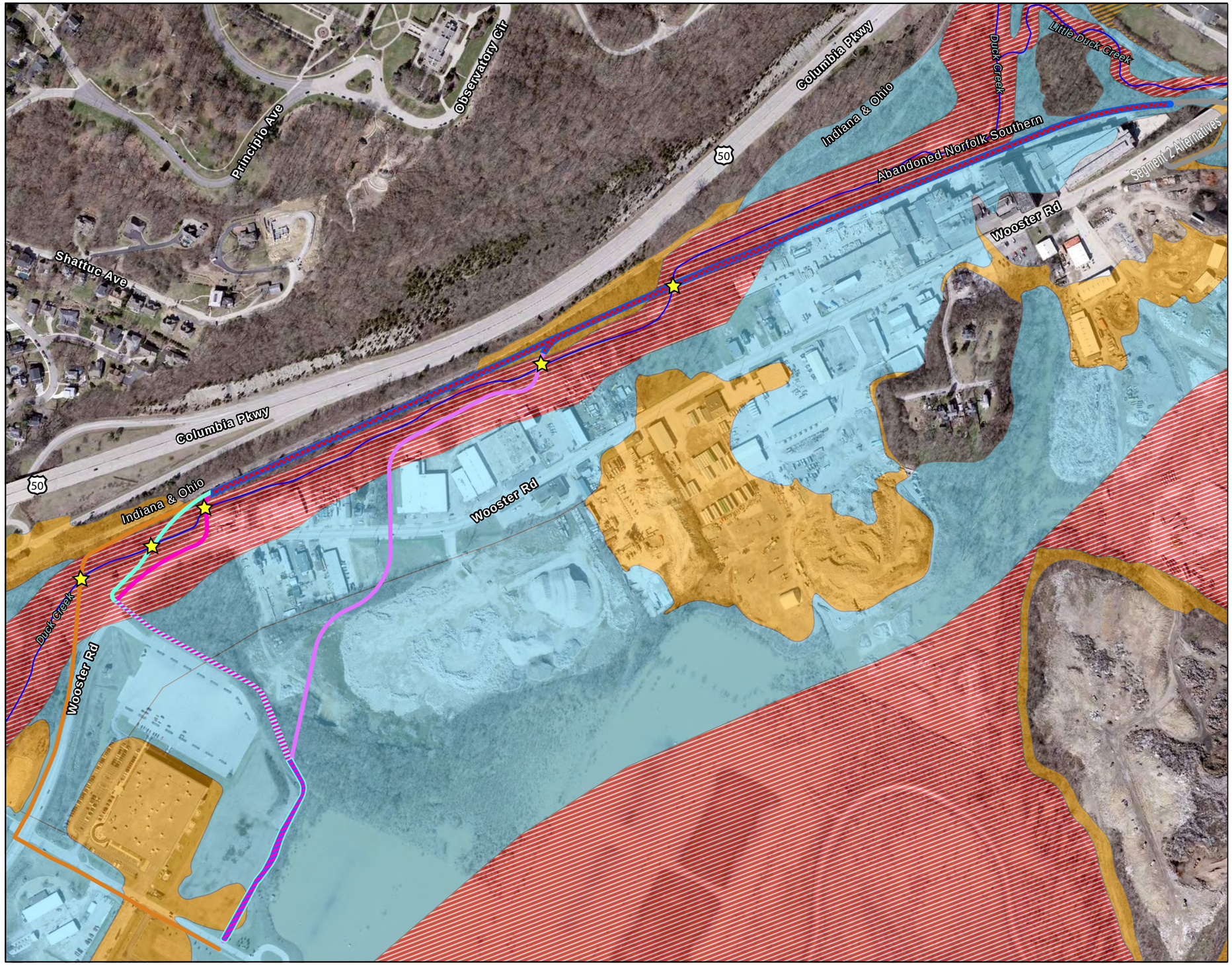


Exhibit No.

2.3

Title

Segment 3- FEMA Floodplains Map

Client/Project 173620146

HAM- Wasson Way to Otto Armleder
PID 113603

Project Location
Columbia Township
Hamilton County, OH

Prepared by RG on 2023-12-11

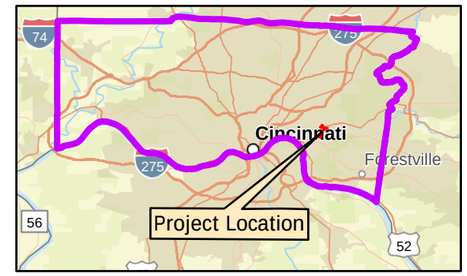
N

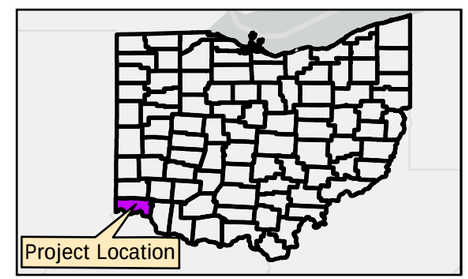
0 350 700 Feet

(At original document size of 11x17)
1:4,700

Legend

- Segment 3-Shared Alternatives B-E
- Segment 3-Alternative B
- Segment 3-Alternative C
- Segment 3-Alternative D
- Segment 3-Shared Alternatives B-D
- Segment 3-Shared Alternatives C-D
- Segment 3-Alternative E
- 1.0% Annual Chance Flood Hazard
- 0.2% Annual Chance Flood Hazard
- Area with Reduced Risk Due to Levee
- Floodway★
- Streams*





Notes

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World Street Map: Esri, TomTom, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NPS, USFWS
4. *All stream lines drawn in from aerial imagery

★ No Impacts to floodway anticiated

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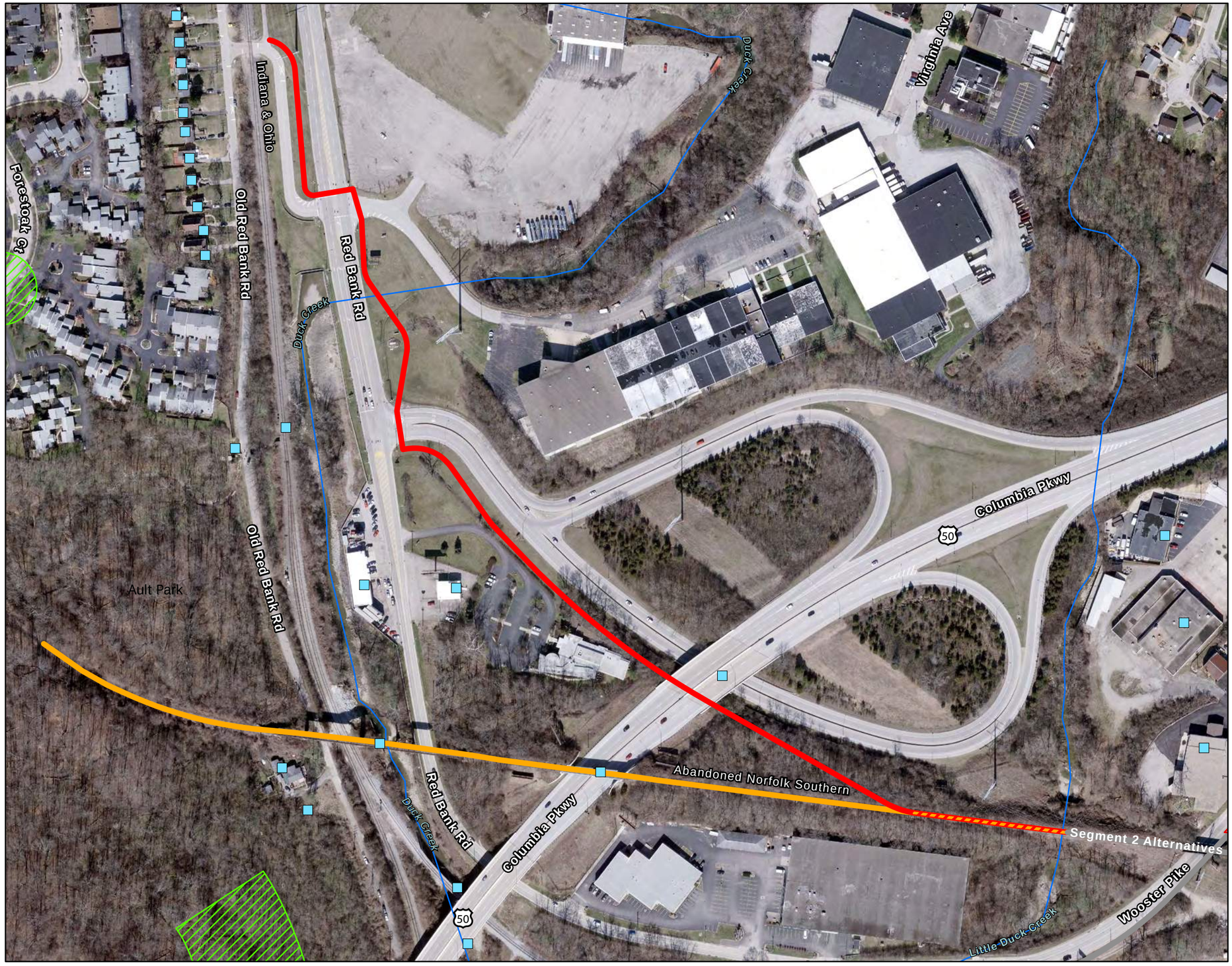


Exhibit No.

3.1

Title

Segment 1- Cultural Resources Map

Client/Project 173620146

HAM- Wasson Way to Otto Armleder
PID 113603

Project Location
Columbia Township
Hamilton County, OH

Prepared by RG on 2023-12-11

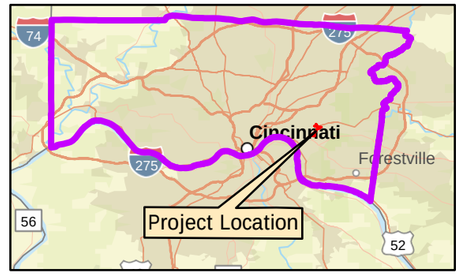
N

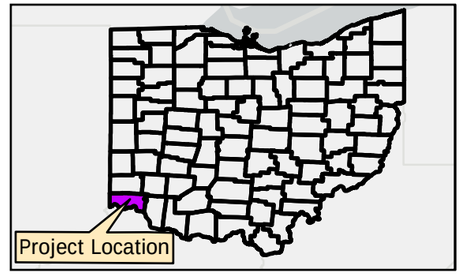
0 200 400 Feet

(At original document size of 11x17)
1:2,700

Legend

- Segment 1-Alternative A
- Segment 1-Alternative C
- Segment 1- Alternatives A & C
- Archaeological Inventory
- Ohio Historic Inventory
- National Register Listings
- OGS Cemeteries
- SHPO Determinations
- OAI Boundaries
- NR Boundaries
- Previously Surveyed Areas
- Streams*





Notes

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2. SHPO (2023)
3. Background: Light Gray Base: Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
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4. *All stream lines drawn in from aerial imagery

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Exhibit No.

3.2

Title

Segment 2- Cultural Resources Map

Client/Project 173620146

HAM- Wasson Way to Otto Armleder
PID 113603

Project Location
Columbia Township
Hamilton County, OH

Prepared by RG on 2023-12-11

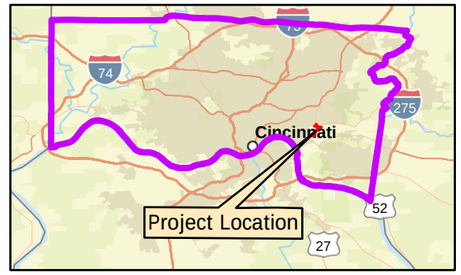
N

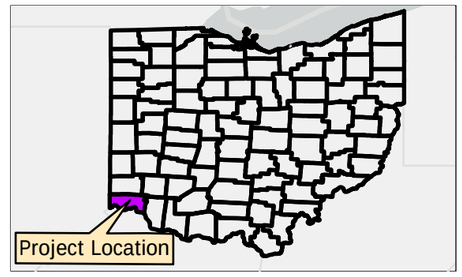
0 200 400 Feet

(At original document size of 11x17)
1:2,700

Legend

- Segment 2-Alternative B
- Segment 2-Alternative C
- Segment 2-Alternatives B & C
- Archaeological Inventory
- Ohio Historic Inventory
- National Register Listings
- OGS Cemeteries
- SHPO Determinations
- OAI Boundaries
- NR Boundaries
- Previously Surveyed Areas
- Streams*





Notes

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4. *All stream lines drawn in from aerial imagery

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Exhibit No.

3.3

Title

Segment 3- Cultural Resources Map

Client/Project 173620146

HAM- Wasson Way to Otto Armleder
PID 113603

Project Location
Columbia Township
Hamilton County, OH

Prepared by RG on 2023-12-11

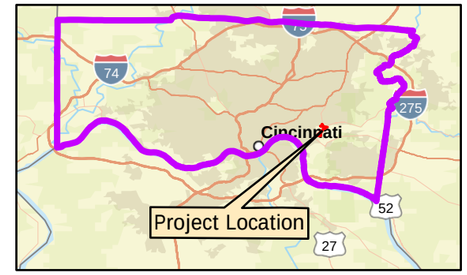
N

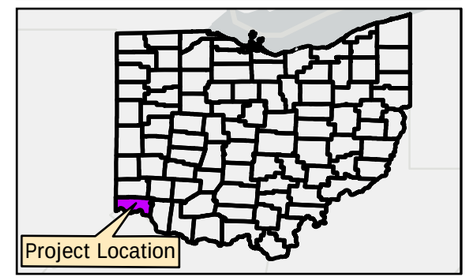
0 350 700 Feet

(At original document size of 11x17)
1:4,700

Legend

- Segment 3-Shared Alternatives B-E
- Segment 3-Alternative B
- Segment 3-Alternative C
- Segment 3-Alternative D
- Segment 3-Shared Alternatives B-D
- Segment 3-Shared Alternatives C-D
- Segment 3-Alternative E
- Archaeological Inventory
- Ohio Historic Inventory
- National Register Listings
- OGS Cemeteries
- SHPO Determinations
- OAI Boundaries
- NR Boundaries
- Previously Surveyed Areas
- Streams*





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2. SHPO (2023)
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4. *All stream lines drawn in from aerial imagery

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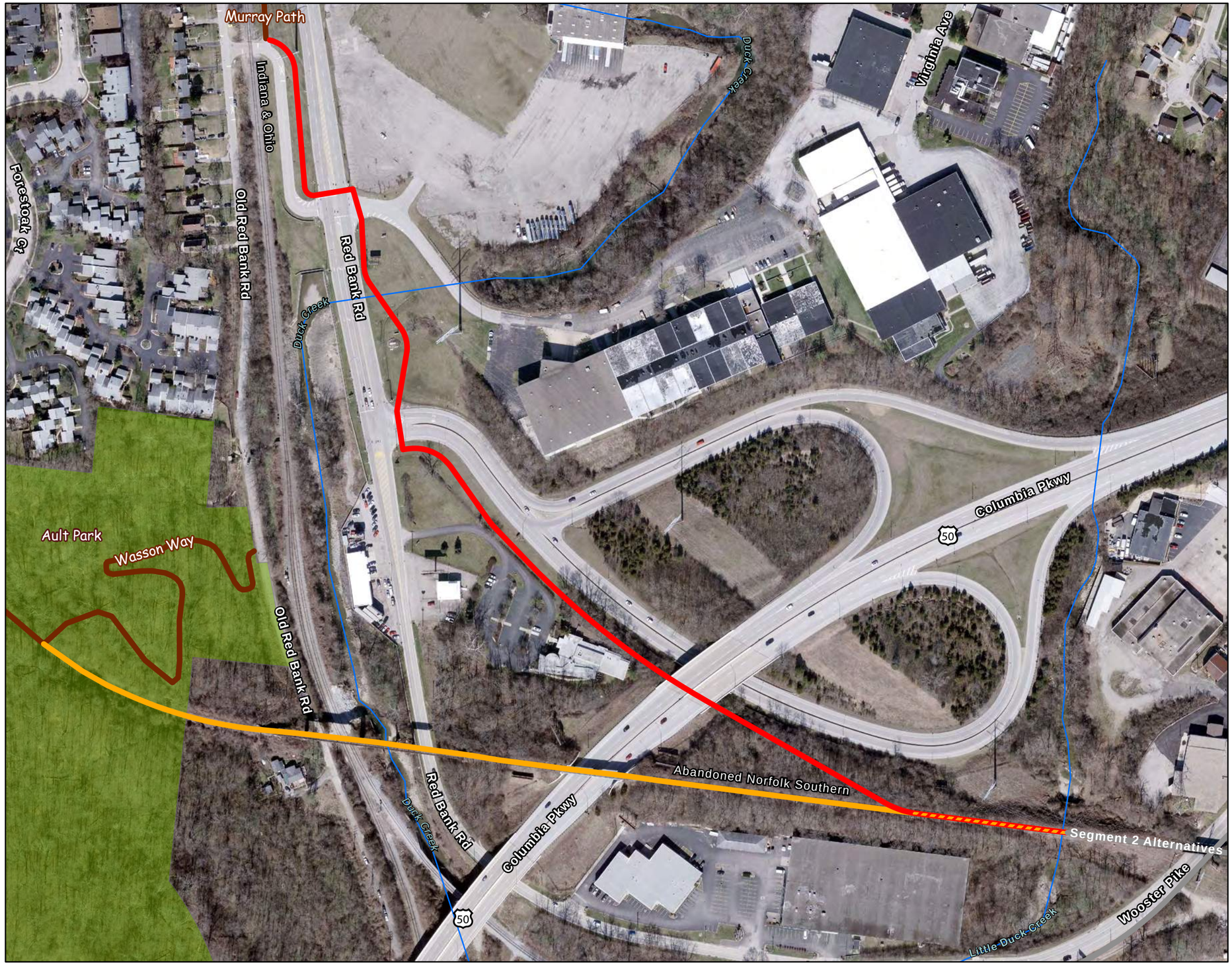


Exhibit No.

4.1

Title

Segment 1- Section 4(f) Properties Map

Client/Project 173620146

HAM- Wasson Way to Otto Armleder
PID 113603

Project Location
Columbia Township
Hamilton County, OH

Prepared by RG on 2023-12-11

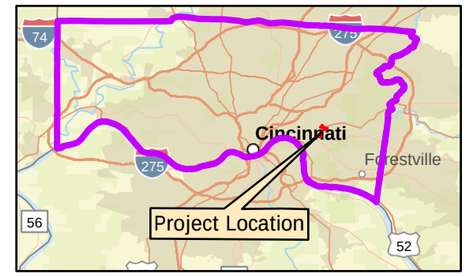
N

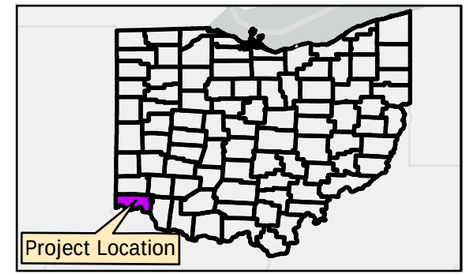
0 200 400 Feet

(At original document size of 11x17)
1:2,700

Legend

- Segment 1-Alternative A
- Segment 1-Alternative C
- Segment 1- Alternatives A & C
- Parks
- Existing Trail
- Streams*





Notes

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2. Base Features Produced from Project Design Elements
3. Background: Light Gray Base: Esri, TomTom, Garmin, FAO, NOAA, USGS, EPA, USFWS
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World Street Map: Esri, TomTom, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NPS, USFWS
4. *All stream lines drawn in from aerial imagery

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Exhibit No.

4.2

Title

Segment 2- Section 4(f) Properties Map

Client/Project 173620146

HAM- Wasson Way to Otto Armleder
PID 113603

Project Location
Columbia Township
Hamilton County, OH

Prepared by RG on 2023-12-11

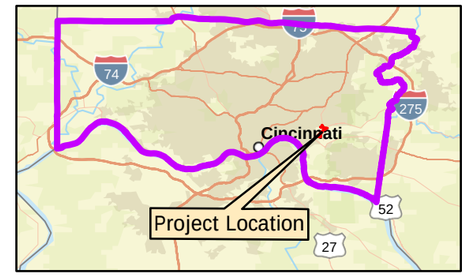
N

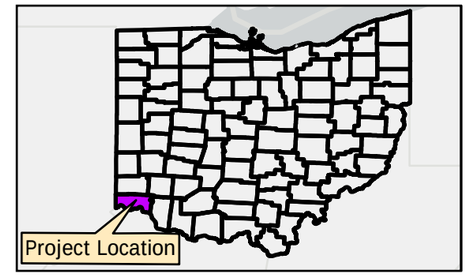
0 200 400 Feet

(At original document size of 11x17)
1:2,700

Legend

- Segment 2-Alternative B
- Segment 2-Alternative C
- Segment 2-Alternatives B & C
- Parks
- Trails
- Streams*





Notes

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4. *All stream lines drawn in from aerial imagery

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Exhibit No.

4.3

Title

Segment 3- Section 4(f) Properties Map

Client/Project 173620146

HAM- Wasson Way to Otto Armleder
PID 113603

Project Location
Columbia Township
Hamilton County, OH

Prepared by RG on 2023-12-11

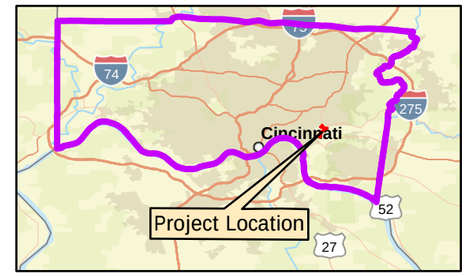
N

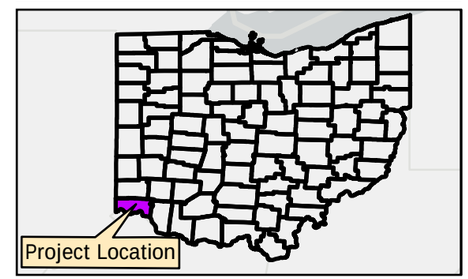
0 350 700 Feet

(At original document size of 11x17)
1:4,700

Legend

- Segment 3-Shared Alternatives B-E
- Segment 3-Alternative B
- Segment 3-Alternative C
- Segment 3-Alternative D
- Segment 3-Shared Alternatives B-D
- Segment 3-Shared Alternatives C-D
- Segment 3-Alternative E
- Parks
- Trails
- Streams*





Notes

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4. *All stream lines drawn in from aerial imagery

Stantec

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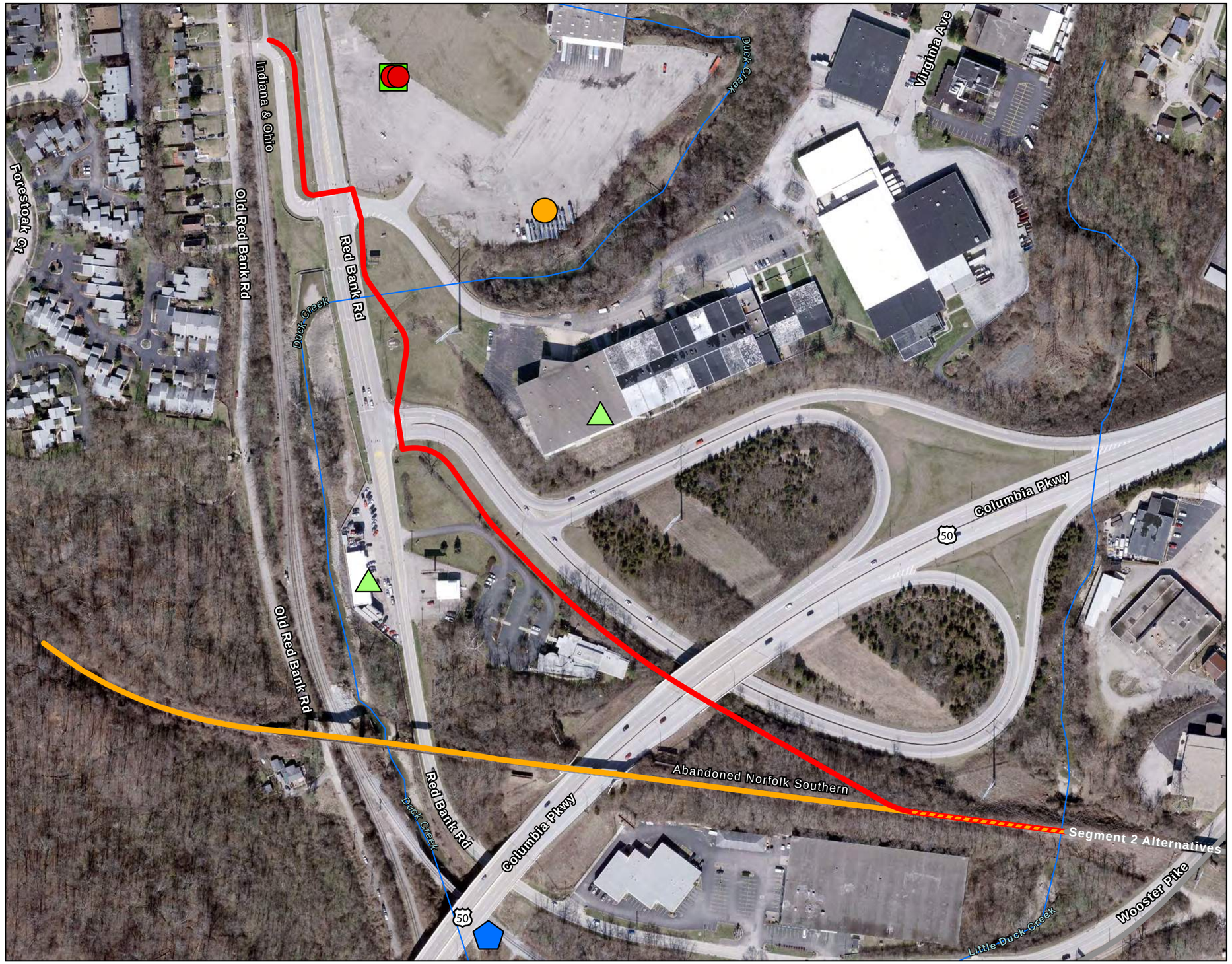


Exhibit No.

5.1

Title

Segment 1- Regulated Materials Map

Client/Project 173620146

HAM- Wasson Way to Otto Armleder
PID 113603

Project Location
Columbia Township
Hamilton County, OH

Prepared by RG on 2023-12-11

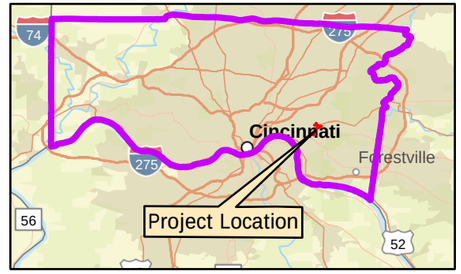
N

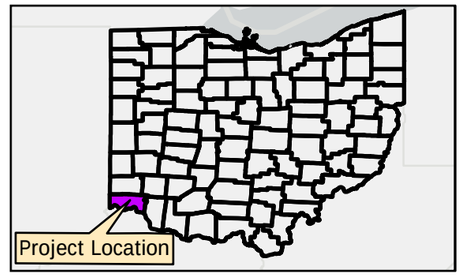
0 200 400 Feet

(At original document size of 11x17)
1:2,700

Legend

- Segment 1-Alternative A
- Segment 1-Alternative C
- Segment 1- Alternatives A & C
- LUST sites
- UST sites
- Active Solid Waste Site
- Solid Waste Site-1/4 mile buffer
- DERR sites
- RCRA sites
- Spill sites
- Streams*





Notes

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World Street Map: Esri, TomTom, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NPS, USFWS
4. *All stream lines drawn in from aerial imagery

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Exhibit No.

5.2

Title

Segment 2- Regulated Materials Map

Client/Project 173620146

HAM- Wasson Way to Otto Armleder
PID 113603

Project Location
Columbia Township
Hamilton County, OH

Prepared by RG on 2023-12-11

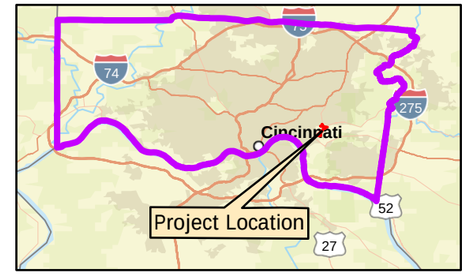
N

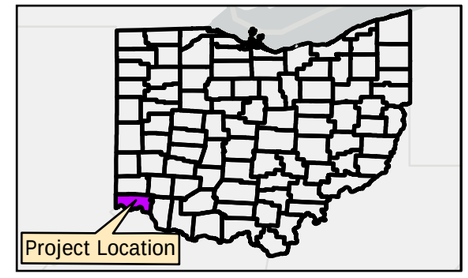
0 200 400 Feet

(At original document size of 11x17)
1:2,700

Legend

- Segment 2-Alternative B
- Segment 2-Alternative C
- Segment 2-Alternatives B & C
- LUST Sites
- UST Sites
- Active Solid Waste Site
- Solid Waste Site-1/4 mile buffer
- DERR Sites
- RCRA Sites
- Spill Sites
- Streams*





Notes

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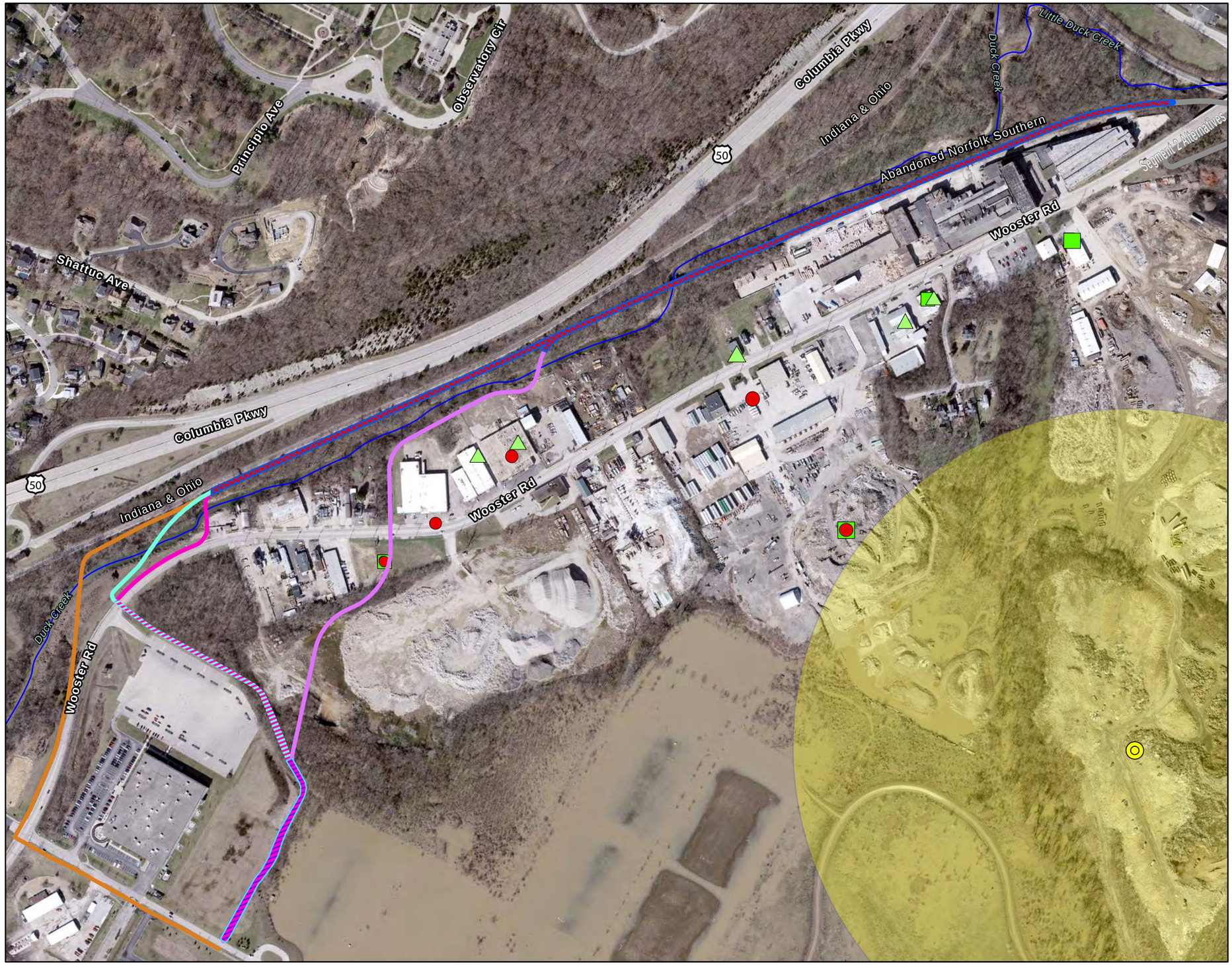


Exhibit No.

5.3

Title

Segment 3- Regulated Materials Map

Client/Project

173620146

HAM- Wasson Way to Otto Armleder
PID 113603

Project Location

Columbia Township
Hamilton County, OH

Prepared by RG on 2023-12-11

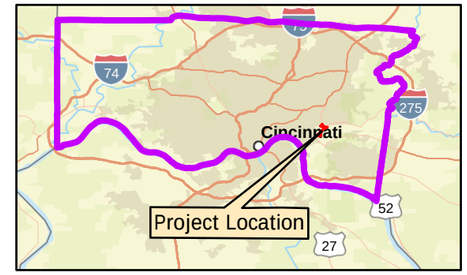
N

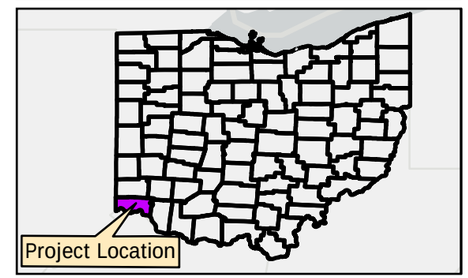
0 350 700 Feet

(At original document size of 11x17)
1:4,700

Legend

- Segment 3-Shared Alternatives B-E
- Segment 3-Alternative B
- Segment 3-Alternative C
- Segment 3-Alternative D
- Segment 3-Shared Alternatives B-D
- Segment 3-Shared Alternatives C-D
- Segment 3-Alternative E
- LUST sites
- UST sites
- Active Solid Waste Site
- Solid Waste Site-1/4 mile buffer
- DERR sites
- RCRA sites
- Spill sites
- Streams*





Notes

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4. *All stream lines drawn in from aerial imagery

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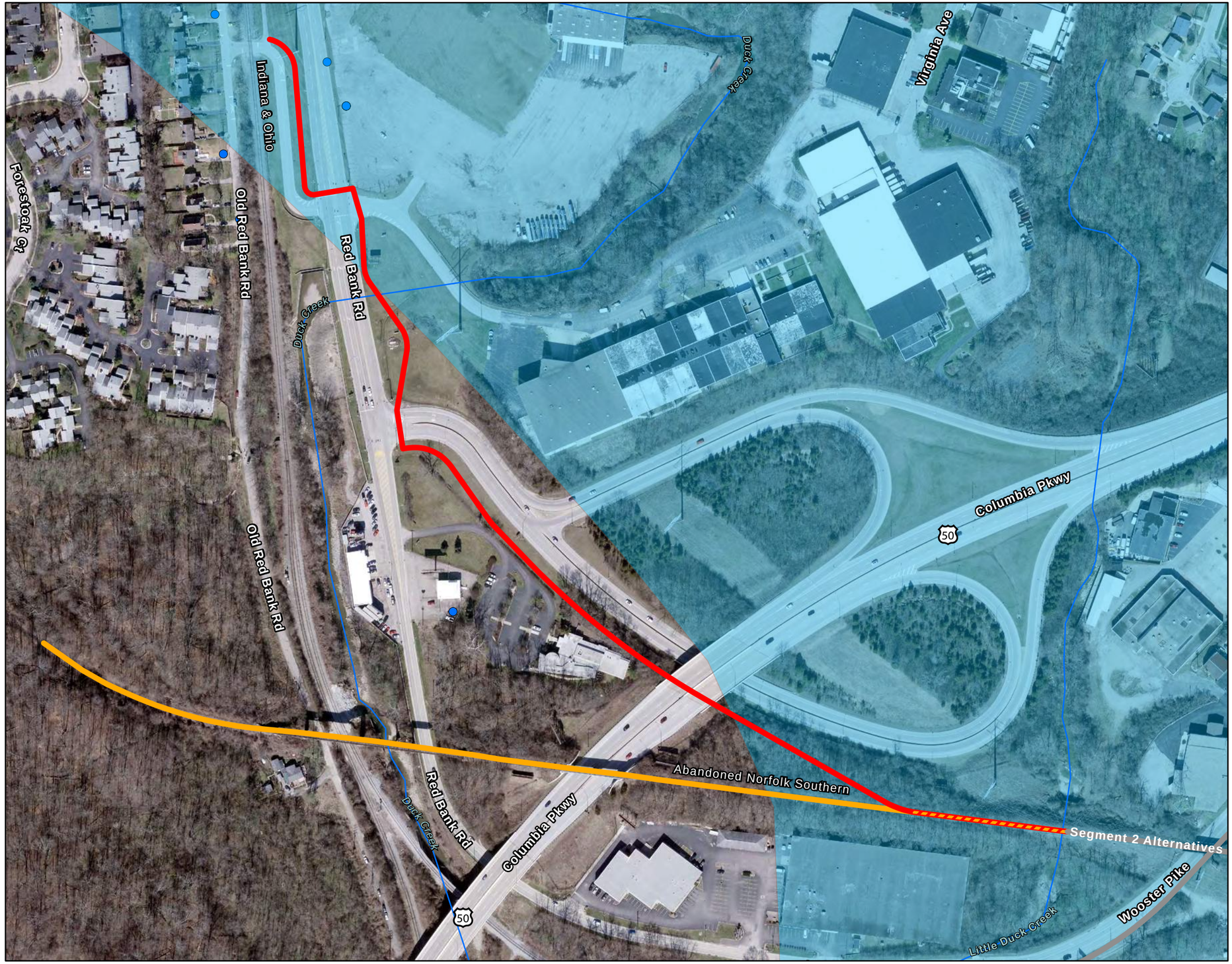


Exhibit No.

6.1

Title

Segment 1- Drinking Water Source Protection Map

Client/Project 173620146

HAM- Wasson Way to Otto Armleder
PID 113603

Project Location
Columbia Township
Hamilton County, OH

Prepared by RG on 2023-12-11

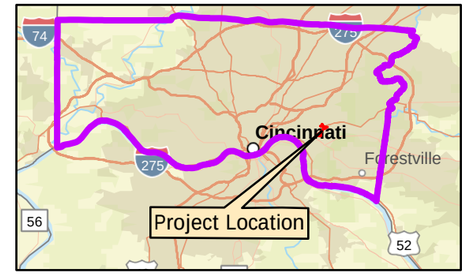
N

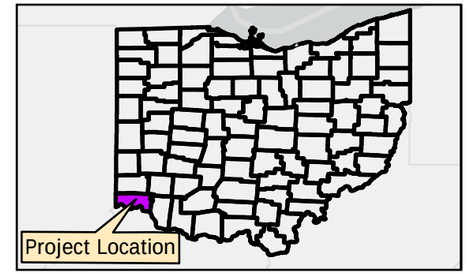
0 200 400 Feet

(At original document size of 11x17)
1:2,700

Legend

- Segment 1-Alternative A
- Segment 1-Alternative C
- Segment 1- Alternatives A & C
- Greater Miami Sole Source Aquifer
- Water Wells
- Streams*





Notes

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4. *All stream lines drawn in from aerial imagery

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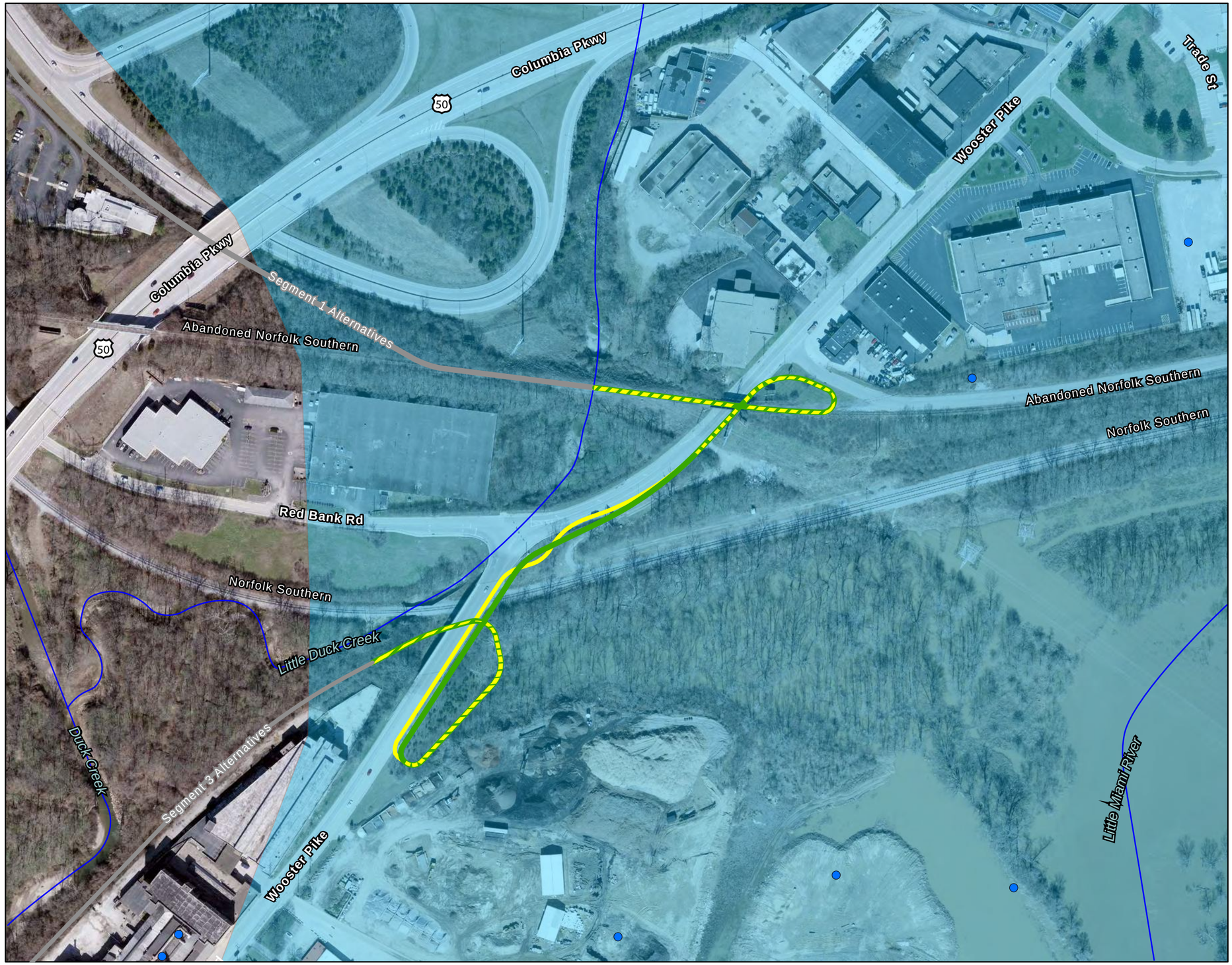


Exhibit No.

6.2

Title

Segment 2- Drinking Water Source Protection Map

Client/Project 173620146

HAM- Wasson Way to Otto Armleder
PID 113603

Project Location
Columbia Township
Hamilton County, OH

Prepared by RG on 2023-12-11

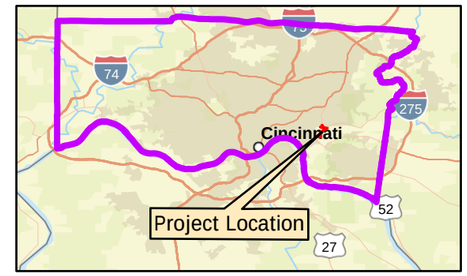
N

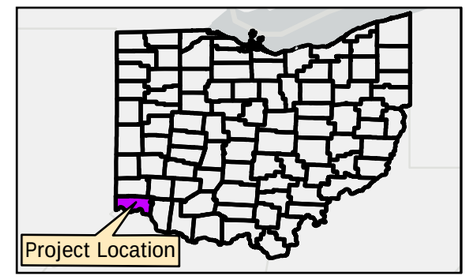
0 200 400 Feet

(At original document size of 11x17)
1:2,700

Legend

- Segment 2-Alternative B
- Segment 2-Alternative C
- Segment 2-Alternatives B & C
- Greater Miami Sole Source Aquifer
- Water Wells
- Streams*





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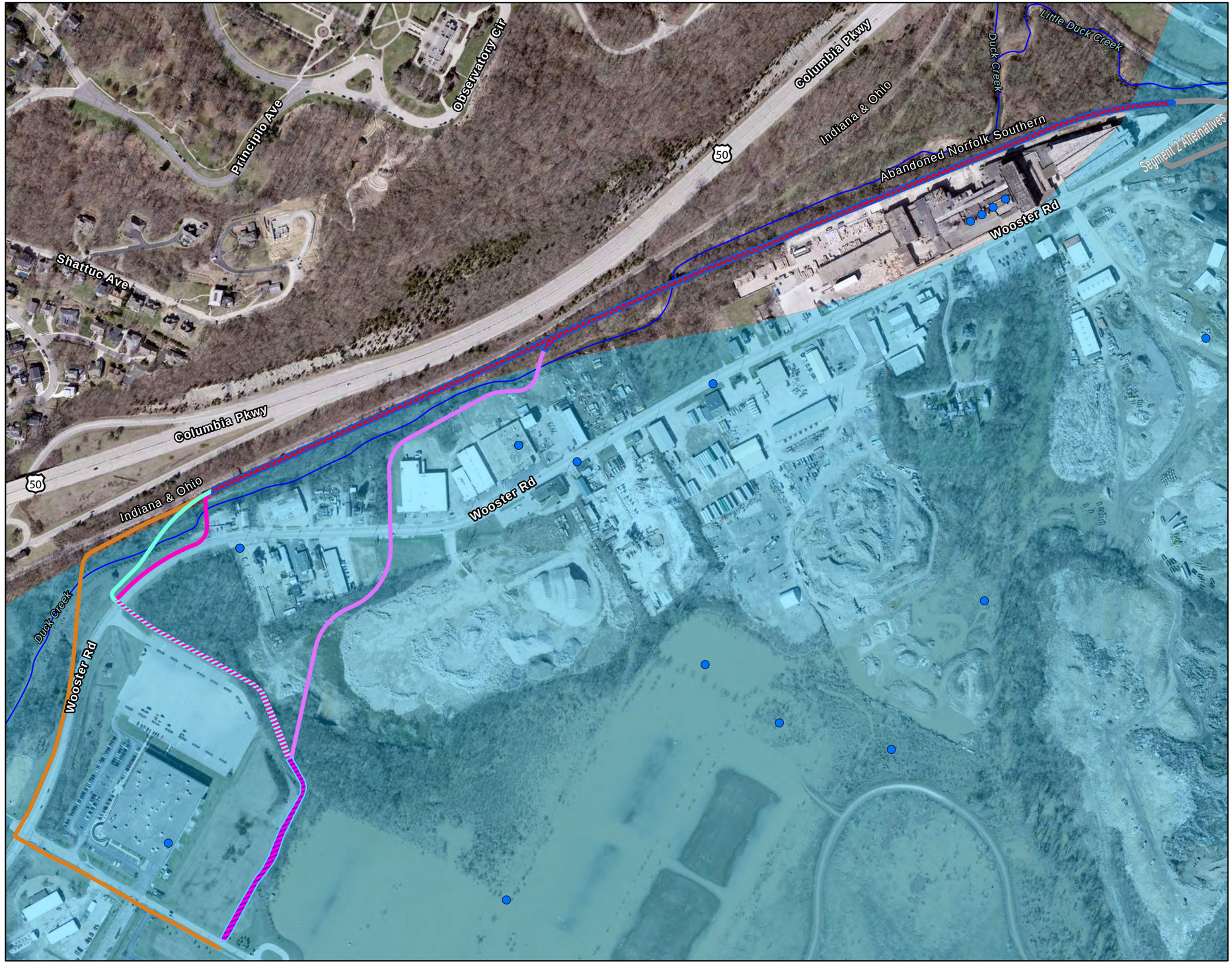


Exhibit No.

6.3

Title

Segment 3- Drinking Water Source Protection Map

Client/Project

173620146

HAM- Wasson Way to Otto Armleder
PID 113603

Project Location

Columbia Township
Hamilton County, OH

Prepared by RG on 2023-12-11

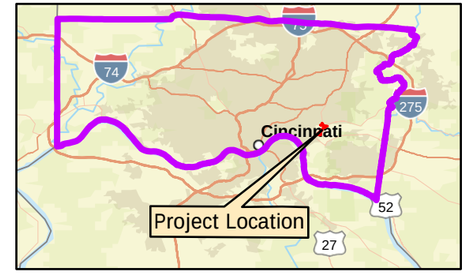
N

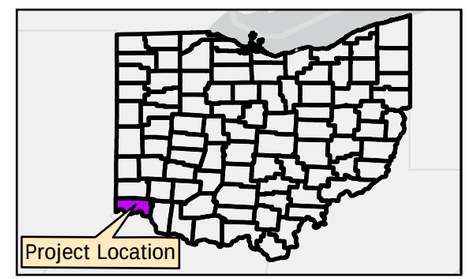
0 350 700 Feet

(At original document size of 11x17)
1:4,700

Legend

- Segment 3-Shared Alternatives B-E
- Segment 3-Alternative B
- Segment 3-Alternative C
- Segment 3-Alternative D
- Segment 3-Shared Alternatives B-D
- Segment 3-Shared Alternatives C-D
- Segment 3-Alternative E
- Water Wells
- Greater Miami Sole Source Aquifer
- Streams*





Notes

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Attachment H

Ecological Resources Technical Memorandum

Stantec

Memo

To:	Steve Shadix	From:	Michael de Villiers Cincinnati
Project/File:	173620146	Date:	January 2, 2024

Reference: HAM-Wasson Way to Otto Armleder; PID 113603

Introduction

The proposed trail extension project is in the Village of Fairfax, Columbia Township, Hamilton County, Ohio (See **Figures 1.1** and **1.2**). Great Parks of Hamilton County (Great Parks) and the Village of Fairfax, in cooperation with the Ohio Department of Transportation (ODOT) District 8 are proposing a new shared-use path connection from the end of US 50 at Wasson Way to the entrance to Otto Armleder Park at Wooster Road. This project is divided into three contiguous segments. The eastern section (Segment 1) begins at the existing Wasson Way near US 50 in Ault Park and continues to the intersection of Wooster Road and Red Bank Road. The middle portion of the study area (Segment 2) crosses the existing railroad at the intersection of Wooster Road and Red Bank Road. The southern section (Segment 3) continues from the south side of the existing railroad at the intersection of Wooster Road and Red Bank Road south to Armleder Road near the entrance to Otto Armleder Park. The project is needed to address safety and connectivity for pedestrians and bicyclists between Beechmont Circle and Red Bank Road and between Wasson Way and the Little Miami Scenic Trail at Otto Armleder Memorial Park. The study area is approximately 93.5 acres.

Ecological field surveys for the proposed project were conducted on September 8-9, 2022, and October 16-18, 2023. These surveys included wetland and stream delineations, a freshwater mussel reconnaissance survey, and documentation of vegetative communities within the study area. A total of two (2) streams and four (4) wetlands were found within the study area (See **Figure 2**). Ecological resources found within the study area are described below.

Streams

Two (2) streams were found within the study area including one perennial stream (Duck Creek) and one intermittent stream (Little Duck Creek). Both streams are in an area mapped by the Ohio Environmental Protection Agency (OEPA) as “Eligible” for Nationwide permitting. Table 1 below summarizes streams within the study area:

Table 1. Summary of Streams

Stream ID	Drainage Area (mi^2)	Stream Hydrology Type	Habitat Assessment	OEPA Aquatic Life Use Designation	Length in Study Area (LF)
Duck Creek	14.4	Perennial	QHEI 65.5	Warmwater Habitat	4,884
Little Duck Creek	1.71	Intermittent	QHEI 61.0	Warmwater Habitat	1,410

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Wetlands

Four (4) wetlands were found within the study area including two palustrine forested wetlands and two palustrine emergent wetlands. Table 2 summarizes wetlands within the study area:

Table 2. Summary of wetlands.

Wetland ID	Hydrologic Connection	ORAM Score (Category)	Wetland Type (Cowardin)	Estimated Total Size (Acre)*	Estimated Size in Study Area (Acre)
Wetland A	Adjacent	50 (Category 2)	Palustrine – Forested	4.97	0.21
Wetland B	Adjacent	29 (Category 1)	Palustrine – Emergent	0.10	0.10
Wetland C	Adjacent	21 (Category 1)	Palustrine – Emergent	0.02	0.02
Wetland D	Adjacent	48.5 (Category 2)	Palustrine – Forested	3.52	0.68

* Total size estimate using aerial imagery

Threatened and Endangered Species

Federally Listed Species

The Ohio Department of Natural Resources, Division of Wildlife (ODNR-DOW) conducted a Natural Heritage Database (NHDB) records check on December 8, 2023. This check found no records of Indiana bat (*Myotis sodalis*), Northern long-eared bat (*Myotis septentrionalis*), or tricolored bat (*Perimyotis subflavus*) captures or hibernacula within a 1-mile radius of the study area. According to a United States Fish and Wildlife Service (USFWS) email information request response on November 1, 2023, the project is not located within a bat buffer. Three potential maternity roost trees were identified within the study area 100 feet past edge of pavement. No portals, openings, cracks, or crevices in rock outcrops that may be an entrance to a cave or mine that would be considered suitable winter hibernacula for Indiana bat or northern long-eared bat were found within the study area. Approximately 32 acres of suitable wooded habitat is found within the study area.

The ODNR-DOW NHDB records check found no records of bald eagle (*Haliaeetus leucocephalus*) nests within a 1-mile radius of the study area and no nests were observed within the study area. Five federally listed mussel species have been found within Hamilton County: fanshell (*Cyprogenia stegaria*), pink mucket pearly mussel (*Lampsilis orbiculata*), rayed bean (*Villosa fabalis*), sheepnose (*Plethobasus cyphyus*), and snuffbox (*Epioblasma triquetra*). A mussel reconnaissance survey conducted on September 8, 2022, in Duck Creek found no live mussels or mussel shells.

State Listed Species

The ODNR-DOW NHDB records check found seven additional records of state-listed species within a 1-mile radius of the study area: state potentially threatened running buffalo clover (*Trifolium stoloniferum*), state endangered loggerhead shrike (*Lanius ludovicianus*), state threatened mountain madtom (*Noturus eleutherus*) and blue sucker (*Cycleptus elongatus*), and state species of concern fawnsfoot mussel (*Truncilla*

donaciformis), black sandshell mussel (*Ligumia recta*), and eastern ringtail dragonfly (*Erpetogomphus designatus*).

Running buffalo clover requires periodic disturbance and a somewhat open habitat to successfully flourish, but it cannot tolerate full-sun, full-shade, or severe disturbance. Historically running buffalo clover was found in rich soils in the ecotone between open forest and prairie. Those areas were probably maintained by the disturbance caused by bison. Today, the species is found in partially shaded woodlots, mowed areas (lawns, parks, cemeteries), and along streams and trails (USFWS, July 2020). The loggerhead shrike is found in semi-open grasslands, shrublands, grazed pastures, and agricultural areas with scrubby vegetation and lookout posts or perches. Their diet includes bugs, small animals, and other small birds, which they store on barbs, thorns, or forks between branches. The mountain madtom is found in the deep, rocky riffles of fast-flowing streams with gravel or cobble substrate and is very sensitive to pollution and siltation. The blue sucker is found in deep, swift, large rivers with cobble substrate and are bottom feeders. The fawnsfoot mussel occurs in both large and medium-sized rivers at normal depths varying from less than three feet up to 15 to 18 feet in big rivers such as the Tennessee. A substrate of either sand or mud is suitable and although it is typically found in moderate current, it can adapt to a lake or embayment environment lacking current. The black sandshell mussel is typically found in medium-sized to large rivers in locations with strong current and substrates of coarse sand and gravel with cobbles in water depths from several inches to six feet or more. It can be found in sand, gravel, or silt. The eastern ringtail dragonfly is found in rivers and streams with gravel bottoms.

Suitable habitat for the running buffalo clover, loggerhead shrike (in semi-open scrub/shrub habitat), fawnsfoot mussel and black sandshell mussel (Duck Creek), and the eastern ringtail dragonfly (Duck Creek) is found within the study area. There is no suitable habitat for the mountain madtom and blue sucker within the study area.

Mussels

A mussel reconnaissance survey was conducted on September 8, 2022, in Duck Creek. Duck Creek is an unlisted stream with a drainage area > 5 mi^2 as indicated by ODNR-DOW's *Ohio Mussel Survey Protocol* (meaning the stream has potential for mussels, but federally listed mussels not expected). No evidence of mussels was observed, including living mussels or dead mussel shells.

Land Cover

The study area was surveyed for vegetative communities on October 16, 17, and 18, 2023 (See **Figure 2**). Developed High Intensity (DH) and Developed Open Space (DS) vegetative communities account for approximately 27 percent and 17 percent of land cover within the study area, respectively. Approximately 14 percent of the land cover within the study area is Upland Forest (UF), which consists primarily of black locust (*Robinia pseudoacacia*), black cherry (*Prunus serotina*), hackberry (*Celtis occidentalis*), sugar maple (*Acer saccharum*), boxelder (*Acer negundo*), black walnut (*Juglans nigra*), white oak (*Quercus alba*), shagbark hickory (*Carya ovata*), American elm (*Ulmus americana*), redbud (*Cercis canadensis*), and Amur honeysuckle (*Lonicera maackii*). Approximately 20 percent of the land cover within the study area is Floodplain Forest (FF), which consists primarily of boxelder, silver maple (*Acer saccharinum*), red maple (*Acer rubrum*), cottonwood (*Populus deltoides*), sycamore (*Platanus occidentalis*), green ash (*Fraxinus pennsylvanica*), and black willow (*Salix nigra*). Approximately 15 percent of the land cover within the study area is Scrub/Shrub (SS), which consists of Amur honeysuckle, eastern red cedar (*Juniperus virginiana*), Callery pear (*Pyrus*

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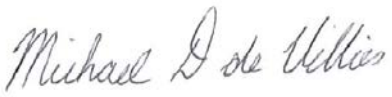
calleryana), flowering dogwood (*Cornus florida*), multiflora rose (*Rosa multiflora*), and sandbar willow (*Salix interior*). The remaining 7 percent of land cover within the study area is made up of streams and wetlands, of which approximately 6 percent is Open Water (OW), approximately 0.9 percent is Forested Wetland (FW), and approximately 0.1 percent is Marsh (MA).

Respectfully,

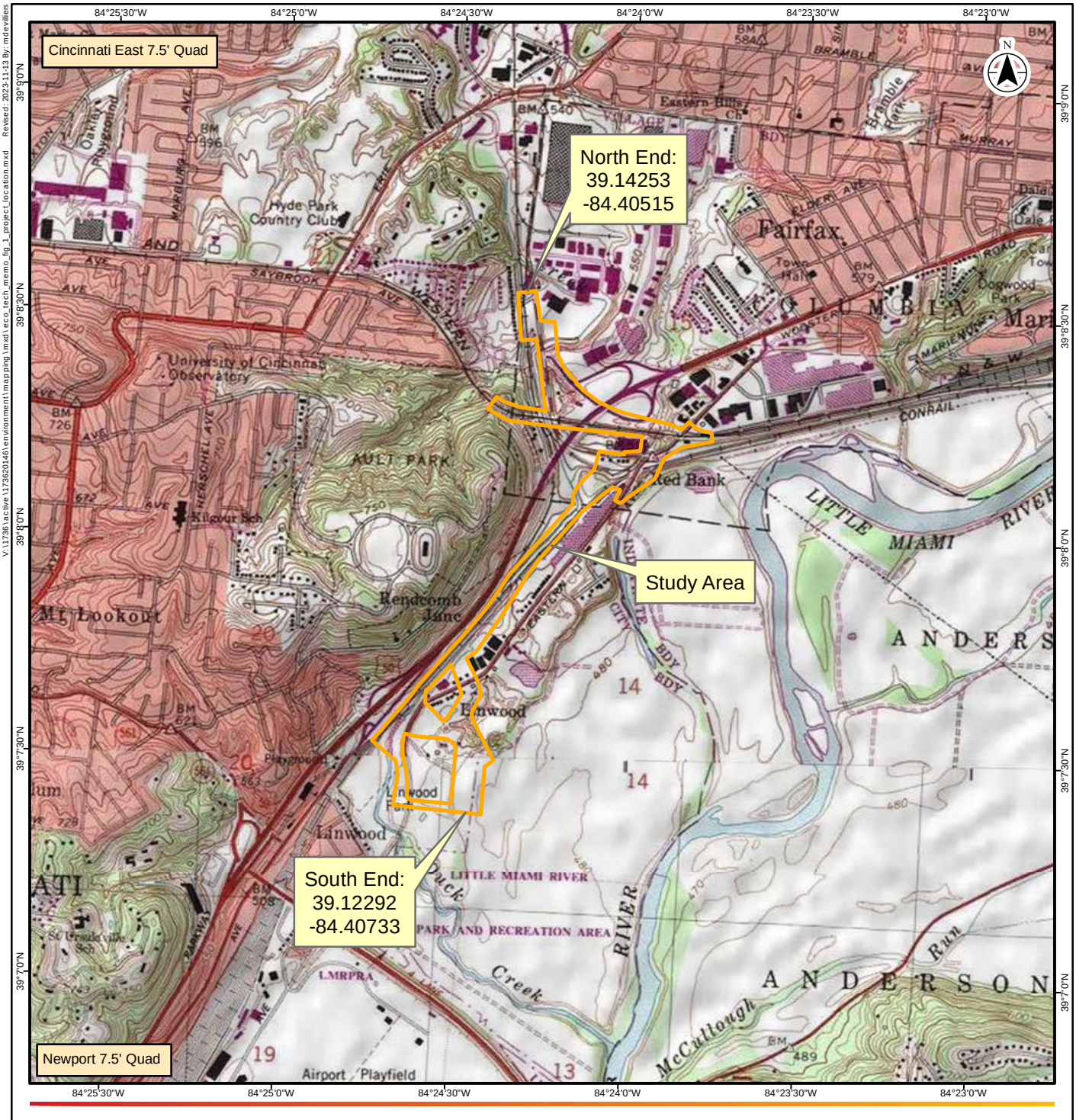
STANTEC CONSULTING SERVICES INC.



Michael de Villiers
Senior Environmental Specialist
Phone: (513) 619-6463
michael.devilliers@stantec.com

Attachment: Figures 1.1, 1.2, 2; Attachment A Ecological Resources Photolog

Figures



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Notes

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2. Base features produced from project design elements.
3. Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community
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Project Location 173620146

Prepared by MDV on 2023-11-13

Columbia Township
Hamilton County, Ohio

Client/Project
Great Parks and Village of Fairfax
HAM-Wasson Way to Otto Armleder; PID 113603
Technical Memorandum

Figure No.
1.1

Title
Project Location Map

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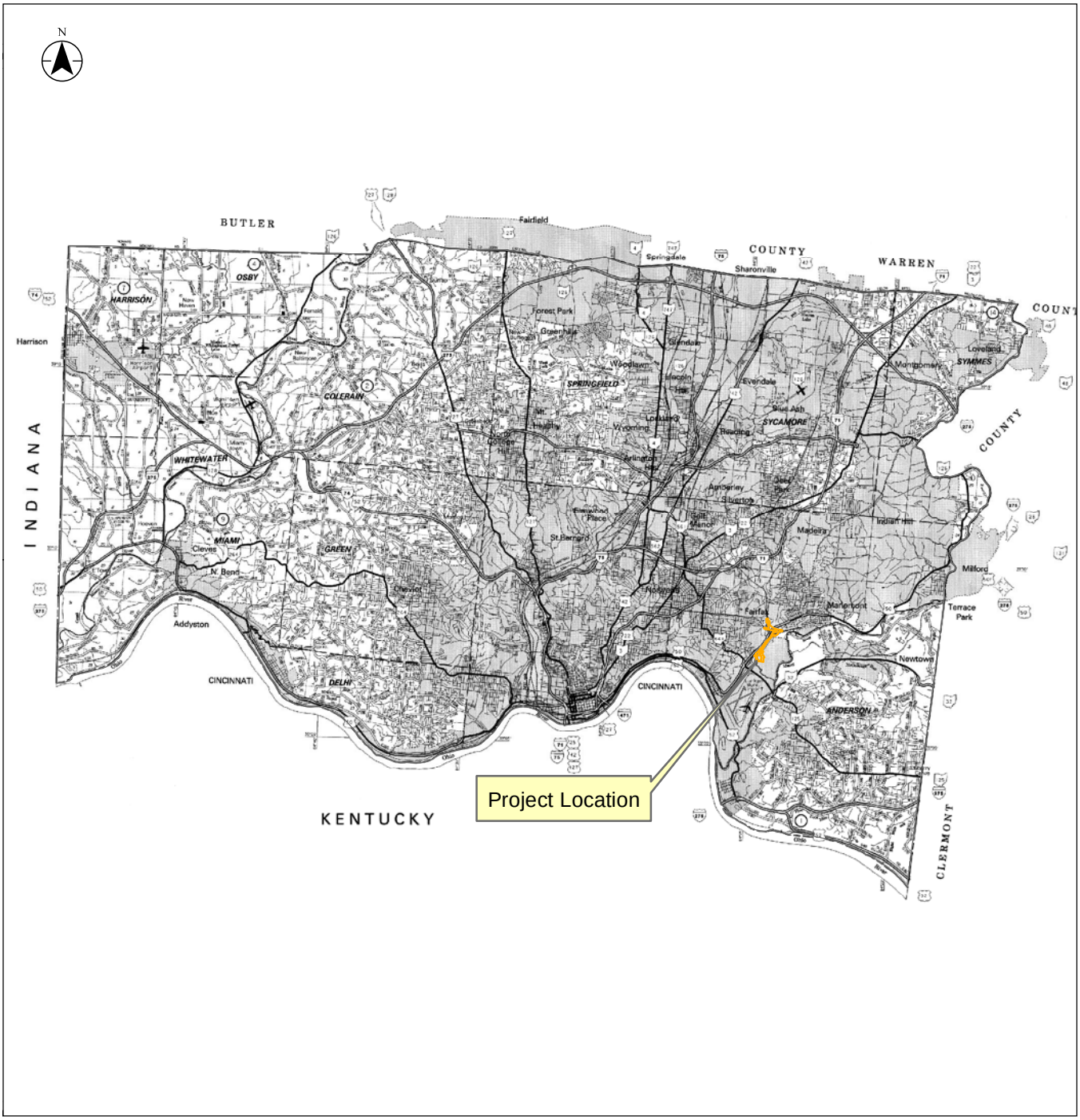

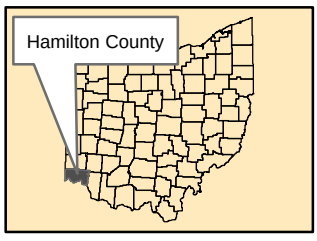

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2. Base features produced from project design elements.
3. Service Layer Credits: ODOT Mapping Services (2014)

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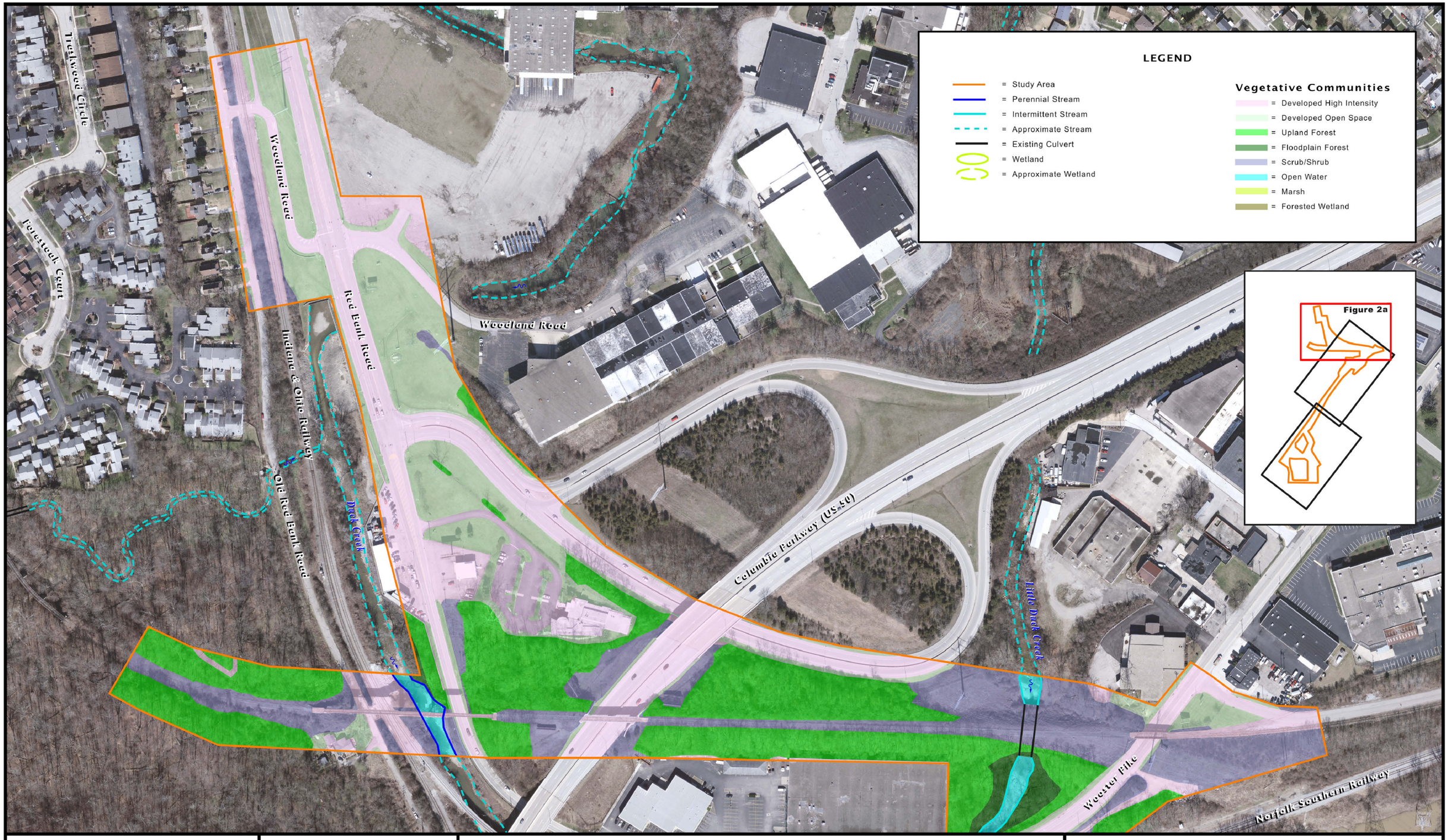
Project Location
173620146
Prepared by MDV on 2023-11-13
Columbia Township,
Hamilton County, Ohio

Client/Project
Great Parks and Village of Fairfax
HAM-Wasson Way to Otto Armleder; PID 113603
Techincal Memorandum

Figure No.
1.2

Title
Project Location Map
County Roadway Map Base



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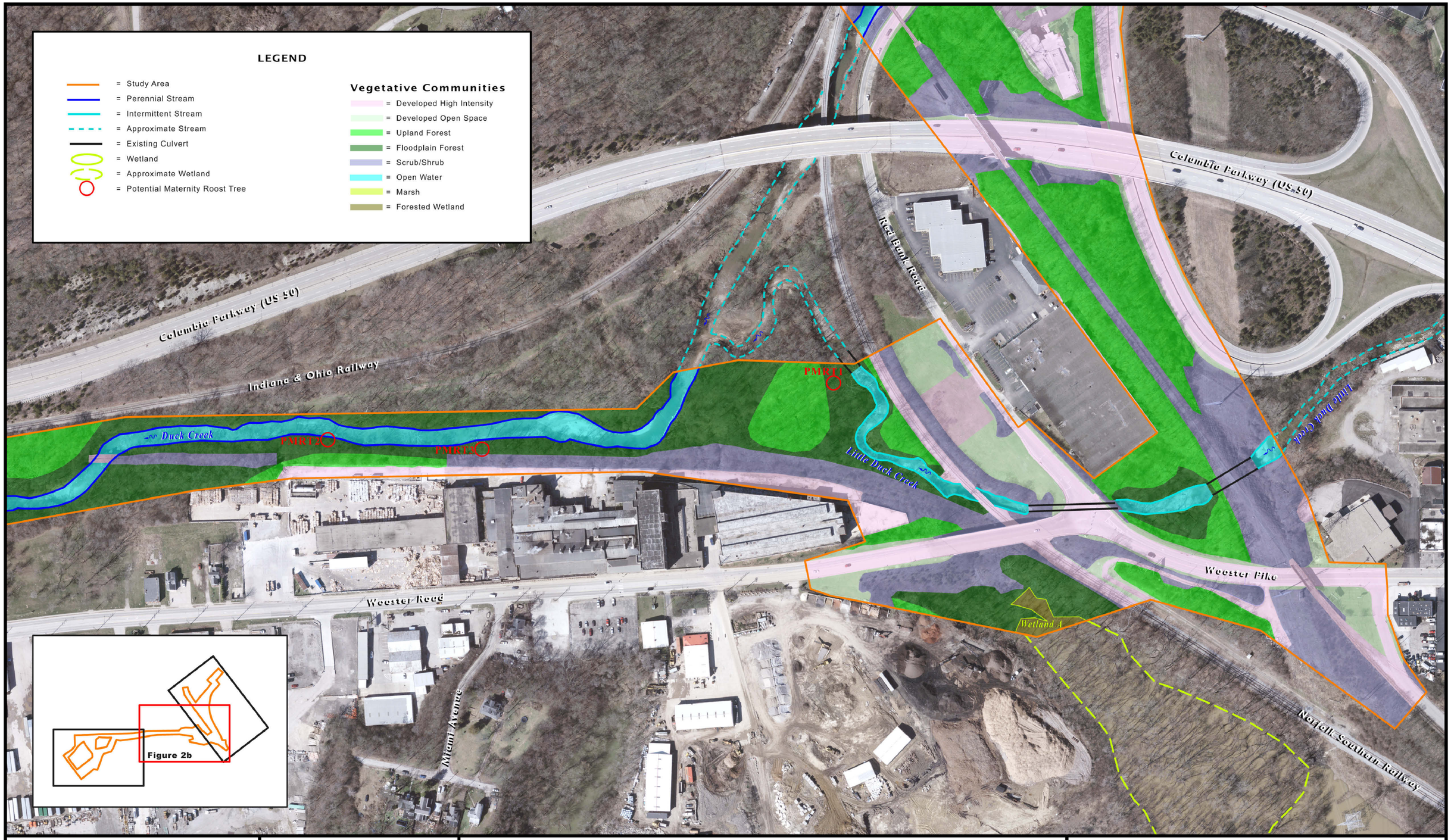
HAM-Wasson Way to Otto Armleder; PID 113603

Figure 2a

Ecological Resources


LEGEND
= Study Area
= Perennial Stream
= Intermittent Stream
= Approximate Stream
= Existing Culvert
= Wetland
= Approximate Wetland
= Potential Maternity Roost Tree
Vegetative Communities
= Developed High Intensity
= Developed Open Space
= Upland Forest
= Floodplain Forest
= Scrub/Shrub
= Open Water
= Marsh
= Forested Wetland
Columbia Parkway (US 50)
Indiana & Ohio Railway
Red Bank Road
Columbia Parkway (US 50)
Little Duck Creek
PMRT1
Duck Creek
PMRT2
PMRT3
Little Duck Creek
Wooster Pike
Wooster Road
Wetland A
Miami Avenue
Norfolk Southern Railway
Figure 2b
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Great Parks and Village of Fairfax, Hamilton County, Ohio
HAM-Wasson Way to Otto Armleder; PID 113603
Figure 2b
Ecological Resources

Columbia Parkway (US-50)

Eastern Avenue

Indiana & Ohio Railway

Duck Creek

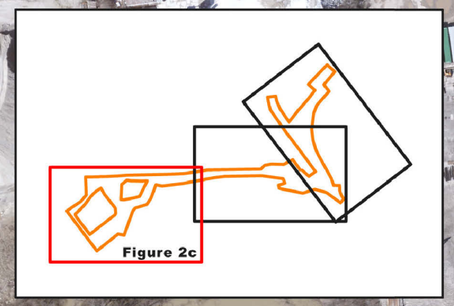
Wooster Road

Wetland C

Wetland B

Wetland D

Armleder Road



LEGEND

- = Study Area
- = Perennial Stream
- = Intermittent Stream
- = Approximate Stream
- = Existing Culvert
- = Wetland
- = Approximate Wetland

Vegetative Communities

- = Developed High Intensity
- = Developed Open Space
- = Upland Forest
- = Floodplain Forest
- = Scrub/Shrub
- = Open Water
- = Marsh
- = Forested Wetland

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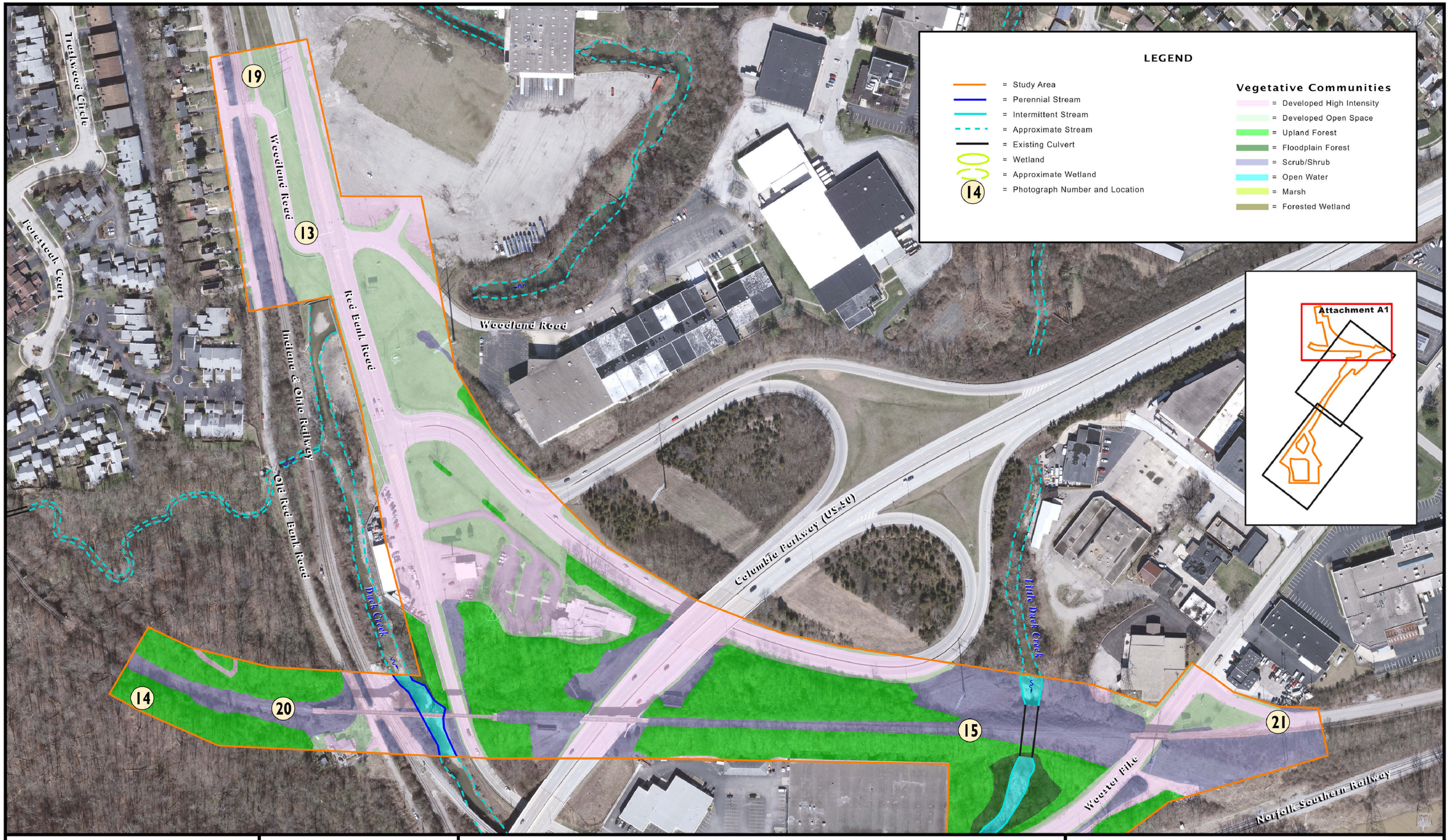
Figure 2c

Ecological Resources

Attachment A

Photo Log



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HAM-Wasson Way to Otto Armleder; PID 113603

Attachment A1

Photograph Location Map

LEGEND

- = Study Area
- = Perennial Stream
- = Intermittent Stream
- = Approximate Stream
- = Existing Culvert
- = Wetland
- = Approximate Wetland
- = Potential Maternity Roost Tree
- = Photograph Number and Location

Vegetative Communities

- = Developed High Intensity
- = Developed Open Space
- = Upland Forest
- = Floodplain Forest
- = Scrub/Shrub
- = Open Water
- = Marsh
- = Forested Wetland

Columbia Parkway (US 50)

Indiana & Ohio Railway

Red Bank Road

Columbia Parkway (US 50)

Duck Creek

PMRT1

PMRT2

PMRT3

Little Duck Creek

Little Duck Creek

Wetland A

Weaster Road

Miami Avenue

Weaster Pike

Norfolk Southern Railway

Attachment A2

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HAM-Wasson Way to Otto Armleder; PID 113603

Attachment A2

Photograph Location Map

Columbia Parkway (US-50)

Eastern Avenue

Indiana & Ohio Railway

Duck Creek

Wooster Road

Armleder Road

Wetland B

Wetland C

Wetland D

25

17

18

26

27

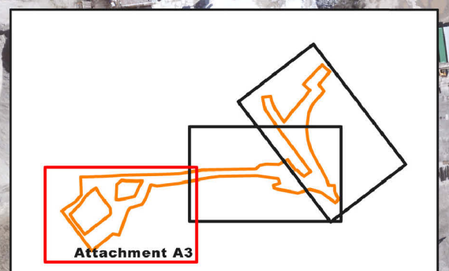
28

4

5

6

7



LEGEND

- = Study Area
- = Perennial Stream
- = Intermittent Stream
- = Approximate Stream
- = Existing Culvert
- = Wetland
- = Approximate Wetland
- 4 = Photograph Number and Location

Vegetative Communities

- = Developed High Intensity
- = Developed Open Space
- = Upland Forest
- = Floodplain Forest
- = Scrub/Shrub
- = Open Water
- = Marsh
- = Forested Wetland

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Great Parks and Village of Fairfax, Hamilton County, Ohio
HAM-Wasson Way to Otto Armleder; PID 113603

Attachment A3

Photograph Location Map

Photo Location 1: Duck Creek, perennial, facing upstream, northeast.

Photo Location 1: Duck Creek, perennial, facing downstream, south.

Photo Location 1: Duck Creek, perennial, typical substrates.

Photo Location 2: Little Duck Creek, intermittent, facing upstream, northeast.

Photo Location 2: Little Duck Creek, intermittent, facing downstream, north.

Photo Location 2: Little Duck Creek, intermittent, typical substrates.

Photo Location 3: Wetland A, Sample Point P1, facing east.

Photo Location 4: Wetland B, Sample Point P3, facing east.

Photo Location 5: Wetland C, Sample Point P7, facing south.

Photo Location 6: Wetland D (PFO), Sample Point P9, facing south.

Photo Location 7: Wetland D (PEM), Sample Point P10, facing east.

Photo Location 8: Potential Maternity Roost Tree 1, close-up.

Photo Location 8: Potential Maternity Roost Tree 1, overview, facing southwest.

Photo Location 9: Potential Maternity Roost Tree 2, close-up.

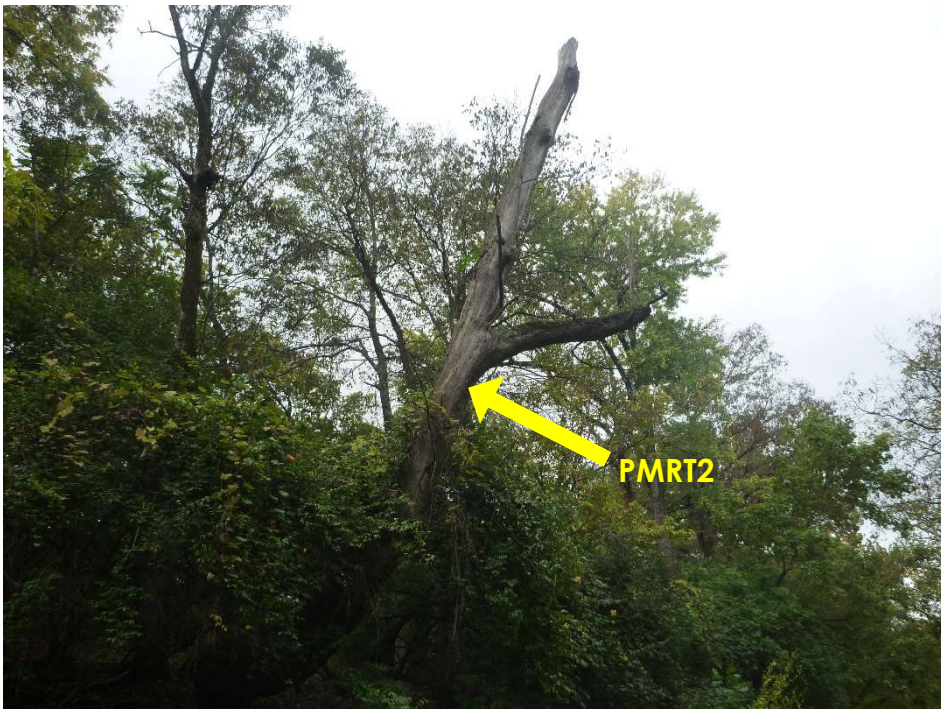

Photo Location 9: Potential Maternity Roost Tree 2, overview, facing south.

Photo Location 10: Potential Maternity Roost Tree 3, close-up.

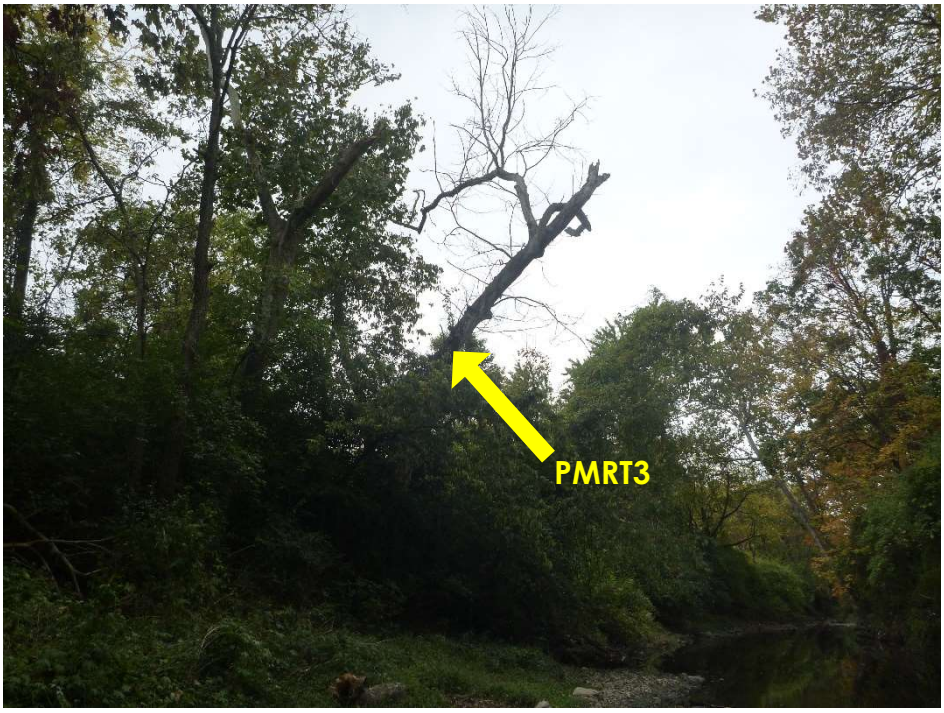

Photo Location 10: Potential Maternity Roost Tree 3, overview, facing south.

Photo Location 11: Abandoned structure foundation, facing southeast.

Photo Location 12: Abandoned well, facing northwest.

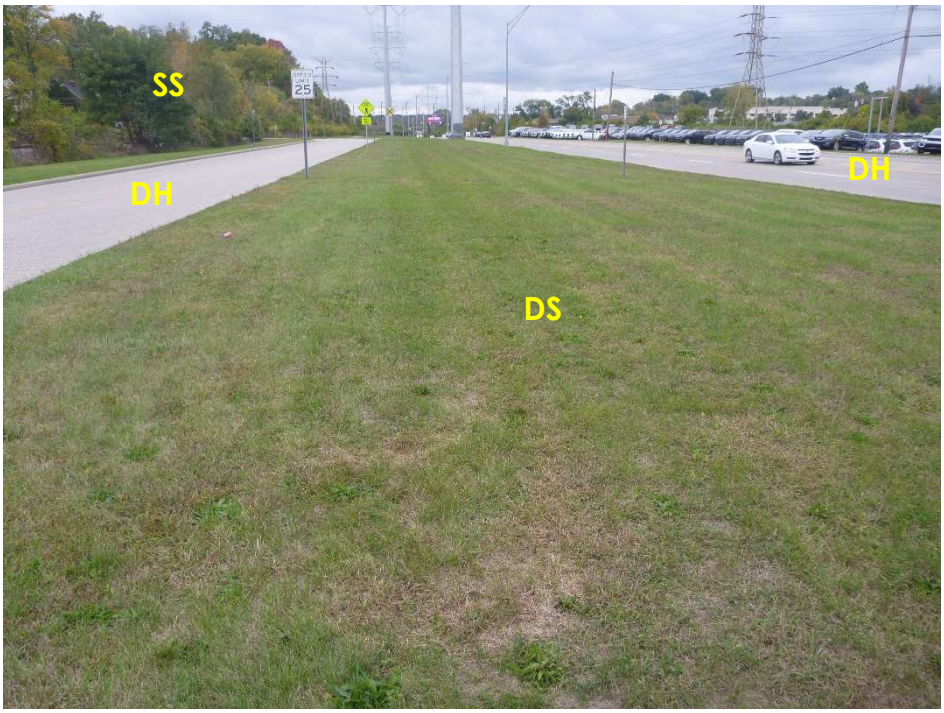

Photo Location 13: Developed High Intensity (DH), Developed Open Space (DS), and Scrub/Shrub (SS) vegetative communities, facing north.

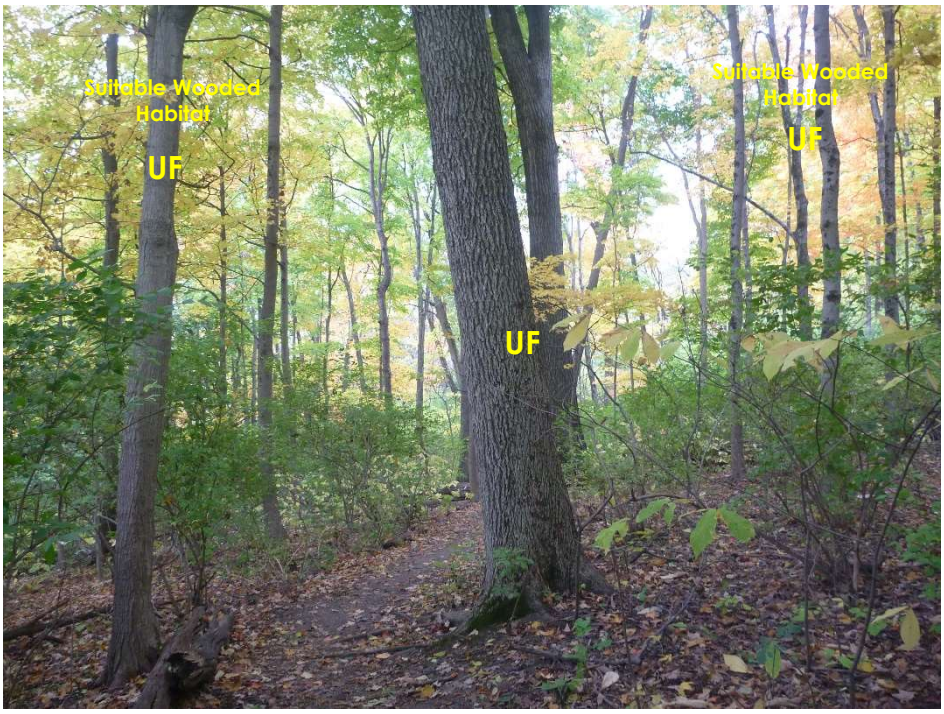

Photo Location 14: Upland Forest (UF) vegetative community, facing east.

Photo Location 15: Upland Forest (UF) and Scrub/Shrub (SS) vegetative communities, facing west.

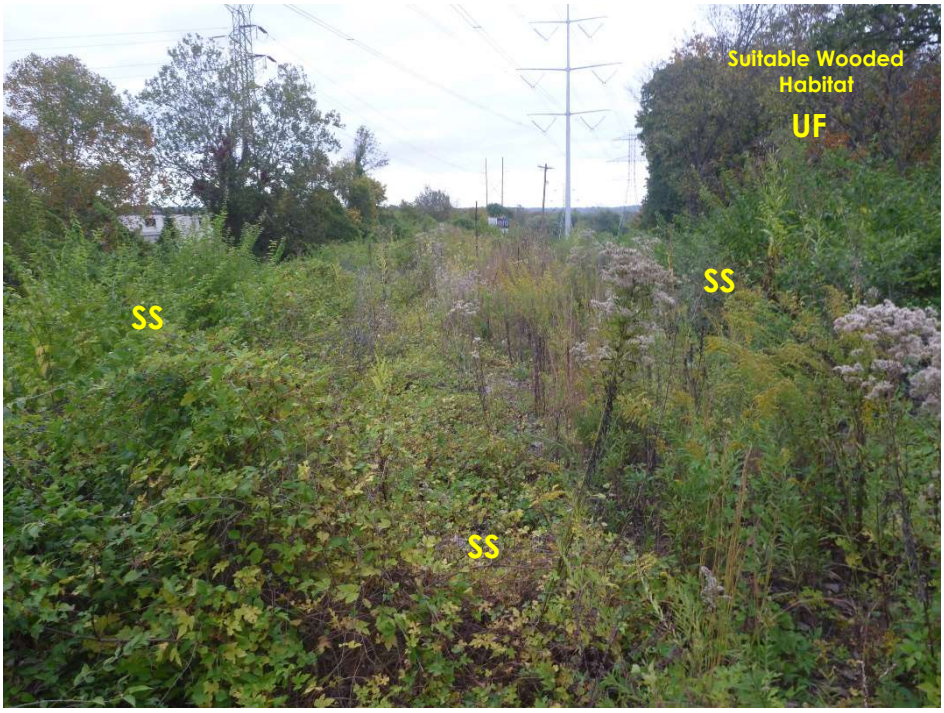

Photo Location 15: Upland Forest (UF) and Scrub/Shrub (SS) vegetative communities, facing east.

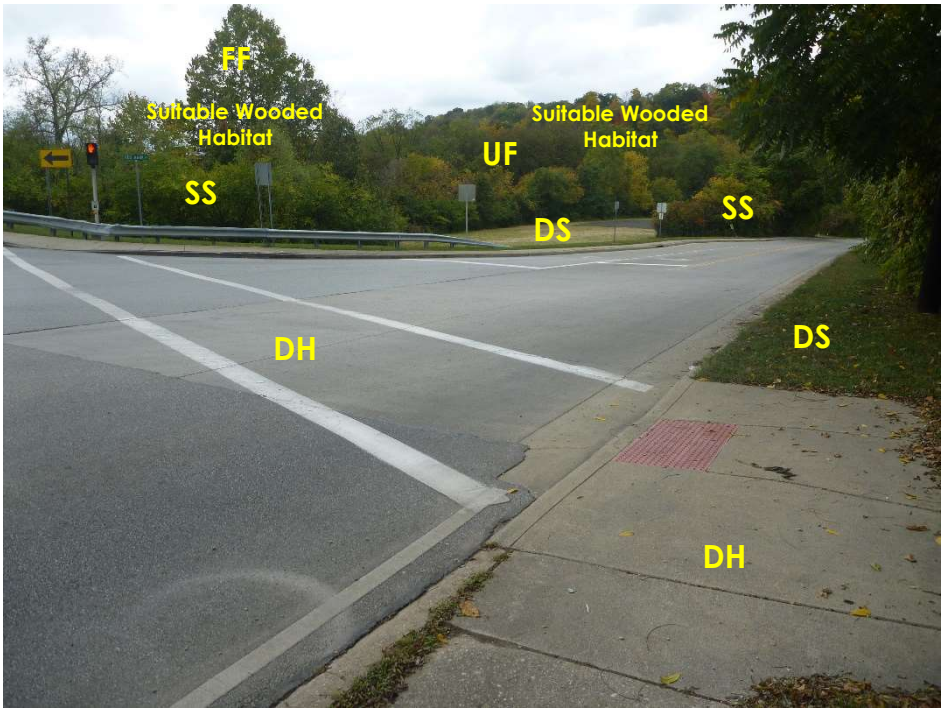

Photo Location 16: Developed High Intensity (DH), Developed Open Space (DS), Upland Forest (UF), Floodplain Forest (FF), and Scrub/Shrub (SS) vegetative communities, facing southwest.

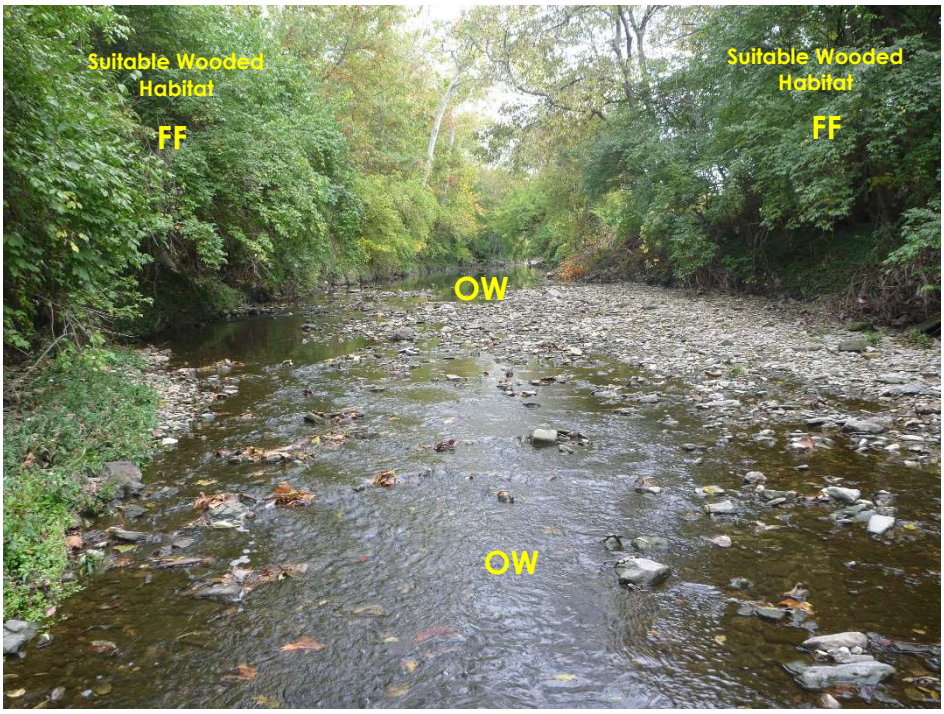

Photo Location 17: Floodplain Forest (FF) and Open Water (OW) vegetative communities, facing northeast.

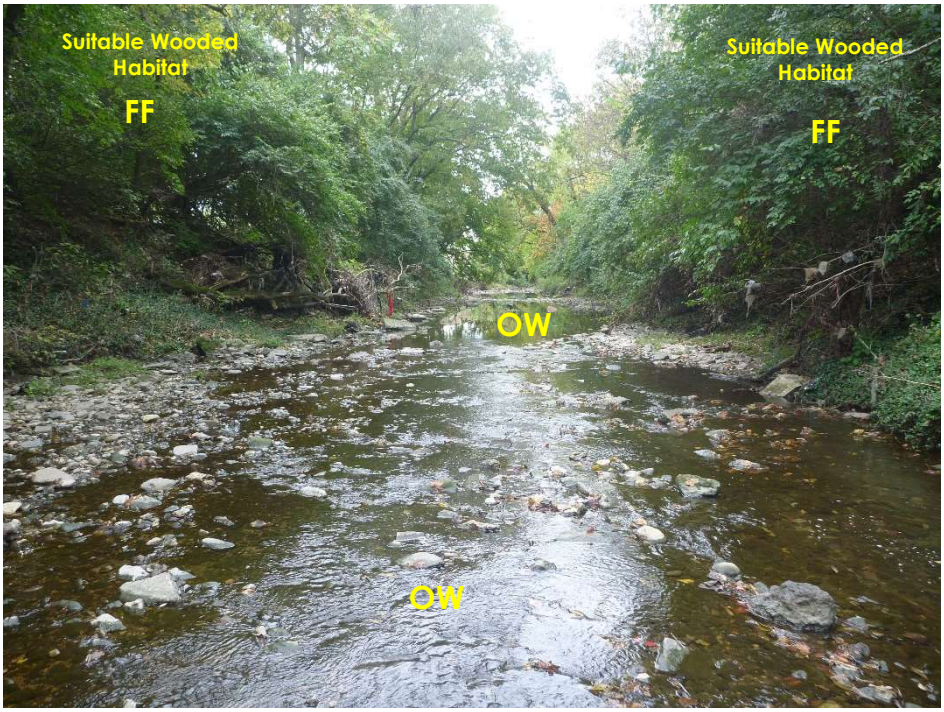

Photo Location 17: Floodplain Forest (FF) and Open Water (OW) vegetative communities, facing southwest.

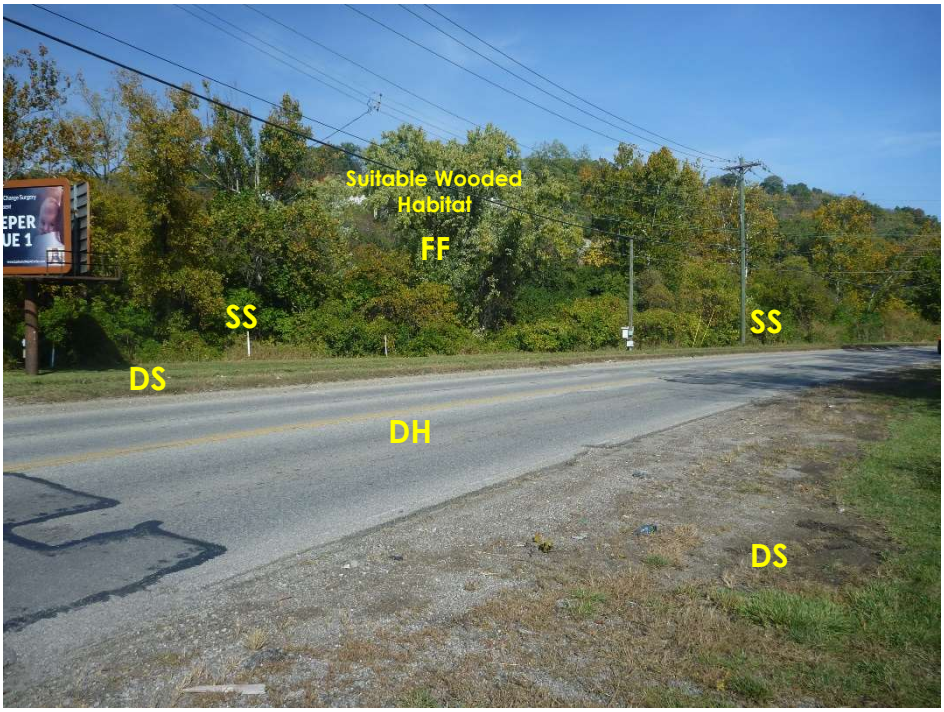

Photo Location 18: Developed High Intensity (DH), Developed Open Space (DS), Upland Forest (UF), and Scrub/Shrub (SS) vegetative communities, facing north.

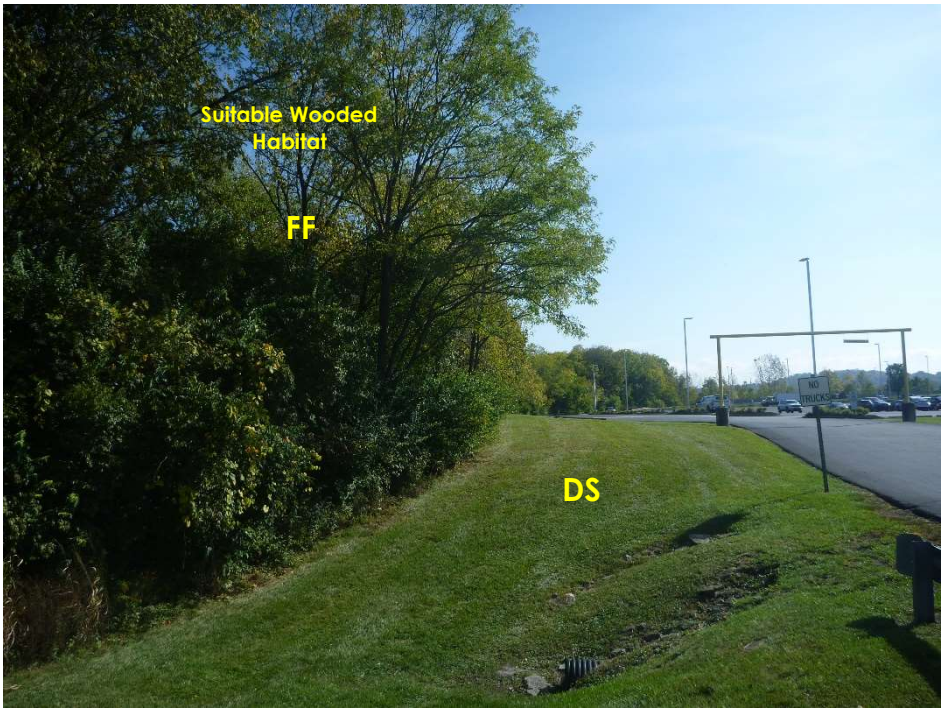

Photo Location 18: Floodplain Forest (FF)and Developed Open Space (DS) vegetative communities, facing east.

Photo Location 19: View along Woodland Road and Red Bank Road at north end of study area, facing south.

Photo Location 20: View along abandoned rail bridge crossing over Indiana & Ohio Railway, Duck Creek, and Red Bank Road at northwest end of study area, facing east.

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Photo Location 25: View along Indiana & Ohio Railway near the southwest end of the study area, facing northeast.

Photo Location 26: View of intersection of Wooster Road and Armleder Road at south end of study area, facing east.

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Photo Location 28: View along Armleder Road at southeast end of study area, facing west.

Attachment I

Public Involvement Summary Report

WASSON-ARMLEDER SHARED USE PATH

Public Input Summary Report

February 2025

Prepared by Rasor and Stantec
on behalf of ODOT District 8

Ohio Department of Transportation

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Overview

Department of Transportation

The City of Cincinnati, in conjunction with the Ohio Department of Transportation (ODOT), is developing plans to make it easier and safer for bicyclists and pedestrians to travel between the Wasson Way Trail in Ault Park and the Otto Armleder Memorial Park & Recreation Complex.

The concept for the Wasson–Armleder Shared Use Path grew out of discussions that the City of Cincinnati and ODOT held with local communities about how to improve local travel for drivers, bicyclists, and pedestrians on the east side of Greater Cincinnati, as part of the development of the Eastern Corridor Program.

ABOUT THE TRAIL

Located in the City of Cincinnati and the Village of Fairfax in southeast Hamilton County (see Figure 1, next page), the Wasson-Armleder Shared Use Path will address existing travel continuity and safety issues for pedestrians, runners, and bicyclists by establishing a new shared use trail that connects Wasson Way with Otto Armleder Memorial Park & Recreation Complex and other nearby trails, including the Little Miami Scenic Trail (LMST), Murray Path, and Lunken Airport Trail. It will also be part of Greater Cincinnati's 34-mile CROWN (Cincinnati Riding Or Walking Network) (see Figure 2, next page). When complete, the CROWN will encircle Greater Cincinnati and connect the city's iconic landmarks and downtown area with other regional trails.

The Wasson-Armleder Shared Use Path will be approximately 2.5 miles long and will follow its own dedicated alignment in the vicinity of Red Bank Road, Wooster Pike and Wooster Road. The path is envisioned to be a paved, 12-foot-wide trail. In areas where it must travel alongside a roadway, the path will be separated from the road by a minimum five-foot-wide buffer vegetated with grass, plants, and/or trees.

FEASIBILITY STUDY

In 2024, ODOT completed the Wasson Way to Otto Armleder Feasibility Study. This study developed and evaluated multiple routing options for three trail segments that, together, would comprise the Wasson-Armleder Shared Use Path. It also identified the potential costs and impacts of each route option. Using the results of the study, ODOT identified a preliminary Preferred Alternative for each of the three segments. Before finalizing the Preferred Alternative segments, however, ODOT shared the Feasibility Study and its recommendations with the public for review and input.

This report summarizes the public feedback received.

Figure 1: Map of the Wasson-Armleder Shared Use Path study area.

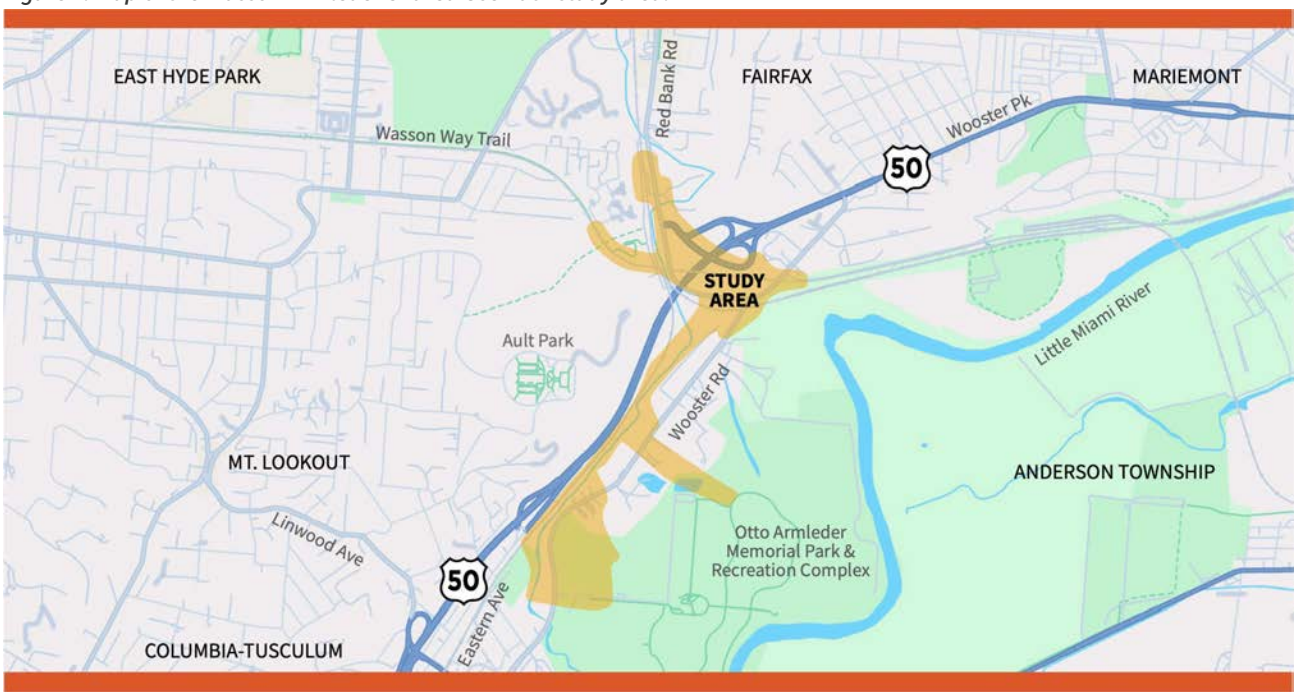
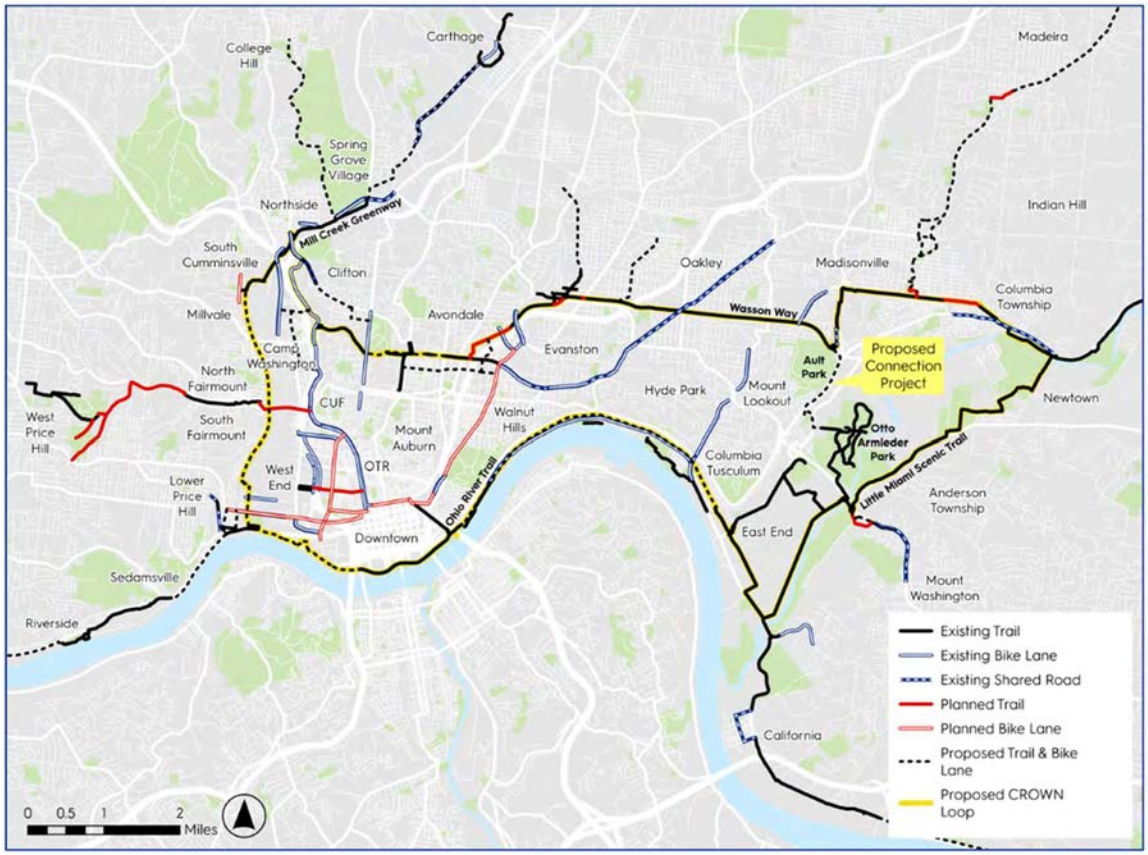


Figure 2: Map of Cincinnati's CROWN network. Map courtesy of Tri-State Trails.



Public Input Summary

Department of Transportation

PUBLIC INPUT REVIEW OPPORTUNITIES

To facilitate public review of the Wasson Way to Otto Armleder Feasibility Study, ODOT held an In-Person Open House and a 45-day-long Virtual Open House. The public was also invited to submit questions and comments to ODOT through email, mail, and phone. Contact information for ODOT's project manager was included on all notification materials, the Virtual Open House site, as well as materials produced for both open houses.

Virtual Open House

The Virtual Open House launched on November 20, 2024, and closed on January 4, 2024. Conducted through the web-based community engagement platform, Public Input, the Virtual Open House presented an overview of the Wasson-Armleder Shared Use Path. Maps and written descriptions provided detail about each of the trail's three segments and the alternatives studied within each of those segments. Content also included information about next steps and the Eastern Corridor Program. Interactive survey questions were interspersed throughout the site to capture participants' feedback regarding the concepts presented. Participants could visit the site any time of day using a smartphone, tablet, or desktop computer. A copy of the site's layout and content is provided in Appendix A: Meeting Materials.

As of January 5, 2025, the open house site had been viewed 4,728 times and 928 individuals answered at least one survey question. Together, they submitted 14,276 responses to the survey which included 1,320 comments (723 of these, however, simply identified where the respondents lived and worked). Twenty-seven people subscribed for updates about the project.

In-Person Open House

The In-Person Open House was held on Thursday, December 5, 2024, at Karrikin in Fairfax. Project information was shared with participants through a series of ten 51" x 33" information boards staffed by project team members. Content presented on the boards reflected the same content shared in the Virtual Open House, but focused on project purpose and need, alignment alternatives, preliminary recommendation and next steps.

More than 100 people attended the In-Person Open House. Each participant was provided with a project fact sheet and a comment form which contained questions and opportunities to share their thoughts (copies of these materials are provided in Appendix A). The comment form was an abbreviated version of the survey embedded into the Virtual Open House. Participants were invited to complete the abbreviated form or to visit the virtual event to participate in the extended online survey. Thirty people completed the abbreviated form; their responses were entered into the Public Input database to be documented and reviewed along with all responses submitted online. Copies of the completed hard copy surveys are included in Appendix A.

Comments Received by Email, Mail, Phone

Members of the project team received 16 email messages expressing their support (8 messages), concerns (3 messages), suggestions (one message) and in three cases, objections to the proposed shared use path. Of the three objections submitted, two were from the same person. Two letters were also received, both outlining their support for the project. The content of all emails received is provided in the Email Contact Log in Appendix C: Comments Received. Copies of the letters received are also provided in Appendix C. The themes of the emails and the letters have been included in the discussion for Question 19 in the following section. No phone calls were received.

Petition

In December 2024, the Wasson Way Trail group collected signatures from individuals using the Wasson Way Trail on a petition in support of the Wasson-Armleder Shared Use Path. The content of the petition read as follows:

> *"The Ohio Department of Transportation (ODOT) is drawing up plans regarding the connection of Wasson Way to the Armleder Trail and thus to the Little Miami Trail and to downtown Cincinnati. As a user of these trails, I support the efforts of ODOT and hope that this project moves forward."*

The group submitted seven pages of signatures (129 signatures) to ODOT. A copy of the petition is included in Appendix C.

KEY LEARNINGS

Key learnings from the feedback received from the community during the Feasibility Study's public review period include the following:

- *Participants in the public review and input process overwhelmingly support the idea of connecting the Wasson Way Trail with Otto Armleder Memorial Park and the shared use trails contained therein. They were particularly pleased that the proposed Wasson-Armleder Shared Use Path would travel on its own alignment and would not need to share the road with the fast-moving, heavy vehicles that regularly travel through the study area. They felt that the dedicated path would be a much easier and safer way for bicyclists, walkers, and runners to travel between trails in the local shared use trail system and that the path itself would improve the quality of life for those living in and near the study area.*

- *The public is excited and enthusiastic about the proposed alignment for the Wasson-Armleder Shared Use Path. Most open house participants agreed with ODOT's recommendations to select Alternatives 1A, 2C, and 3E as the Preferred Alternatives for Segments 1, 2, and 3, respectively.*
  - *Participants particularly liked that Alternative 1A would be more scenic and that users would not be required to cross any roads (many noted that they would not feel as safe if they had to use the road crossings required with Alternative 1C). Many also felt that 1A was the natural extension of the existing Wasson Way Trail and was a much more direct route to Segment 2.*
  - *Many participants felt that the railroad bridge crossings included in Alternative 1A have the potential to establish the Wasson-Armleder Shared Use Path as an iconic landmark for the region and would attract users from all over. Several participants noted, however, that the height of the bridge was beyond their comfort level and might deter them from using the path.*
  - *In general, participants were enthusiastic about the proposed roundabout that would be part of Alternative 2C. They felt that the roundabout would slow traffic, improve traffic flow and, overall, make travel in the area easier and safer. They also appreciated that the proposed shared use path would be separated from the roundabout and that path users would not need to be in or cross any vehicle travel lanes. A few respondents, however, were concerned that the roundabout would be a safety hazard for the large, heavy trucks moving through the area and for drivers who are not used to traveling through roundabouts.*
  - *Many participants preferred Alternative 3E because it was the only alternative in Segment 3 to have a signalized road crossing (participants tended to be less comfortable with the proposed mid-block, unsignalized crossings included in Alternatives 3B, 3C, and 3D). Some also liked that 3E uses more of the out-of-service rail corridor, travels behind the industrial businesses located on Wooster Road, and uses Armleder's main entrance to access the park.*
- *The few overall concerns shared about the proposed Wasson-Armleder Shared Use Path tended to focus on its estimated cost; several participants suggested that those funds should be spent either on other trails or other transportation projects entirely. Some respondents also wondered how much the path would actually benefit the overall community.*
- *Participants would like to see some amenities included along the shared use path and suggested water fountains, bathrooms, more access points, places to rest (including benches), more vegetation (trees, pollinators, flowers, etc.), directional signage, and trailhead markers.*

NOTIFICATION

Materials used to notify the public about the In-Person and Virtual Open Houses were distributed through a variety of communications channels, as discussed below.

- *News Release – ODOT District 8 distributed two news releases announcing the open houses and input opportunities. The first release was sent out on November 20, 2024, and a second reminder release was sent out on December 30, 2024. Stories about the open houses were tracked in the Greater Cincinnati media outlets listed below. Several outlets shared information about the open houses multiple times. Copies of the releases and a full media coverage summary report are included in Appendix B: Notification Materials.*
  - *Cincinnati Business Courier – Print & Digital News*
  - *Cincinnati Herald – Digital News*
  - *Movers & Shakers – Digital News*
  - *Register Publications – Digital News*
  - *The Register (Indiana) – Print*
  - *WCPO - Digital News*
  - *WCPO - TV (ABC)*
  - *WKRC – TV (CBS)*
  - *WVXU (NPR)*
  - *Yahoo! News*
- *Newspaper Ads – A print ad promoting the open houses was placed in the Cincinnati Enquirer and appeared the three days preceding the In-Person Open House: December 2, 3, and 4. A copy of the ad and an image showing its placement in the paper is provided in Appendix B.*
- *Social media – Notices about the open houses and input opportunities were posted on multiple social media platforms at the end of November 2024, throughout the month of December 2024, and during the first week of January 2025. Many posts were also shared by other organizations and individuals. Outlets on which notices were tracked include:*
  - *ODOT District 8 - Facebook and Twitter*
  - *Eastern Corridor - Facebook and Twitter*
  - *City of Cincinnati, We Move Cincy - Facebook*
  - *Wasson Way Project - Facebook*
  - *CROWN Cincinnati - Facebook*
  - *Tri-State Trails - Facebook*

  - *Pleasant Streets - Facebook*
  - *Rasor - Facebook*
  - *Reddit*
  - *Anderson Township, Ohio - Facebook*
  - *Greater Cincinnati Politics - Facebook*
  - *Enquirer – Cincinnati and Kentucky - Facebook*
  - *Cincinnati Public Radio - Facebook*
  - *Individual Facebook pages – Barbara Didrichsen, David Dawson, William Hopple, Jay Andress, Joe Groh, Jenn Prine, Natalie Wheeler Hastings*

- *Mailers – Double-sided mailers were sent to 2,635 residences and 477 businesses located along the alignments of the various alternatives. The mailers were distributed the week of November 18, 2024. A copy of the mailer is included in Appendix B.*
- *Property Owner Notification Letters – On November 20, 2024, letters were mailed to the owners of all properties that abut the proposed alternatives alignments. The letters introduced the project, provided information about the upcoming open houses, and invited participants to share comments by either participating in an open house or by contacting ODOT directly via email, mail, or phone. A total of 66 letters were sent. A copy of the letter, its enclosures, and list of recipients is included in Appendix B.*
- *Email – Two eblast notifications announcing the open houses and input opportunities were sent out to Eastern Corridor Stakeholders. The first was sent on November 21, 2024, and a reminder notice was sent on December 3, 2024. Copies of both email notices are included in Appendix B.*
- *Website postings – Announcements about the open houses were posted on the Eastern Corridor homepage and the Red Bank to I-275/SR 32 Overview page of the Eastern Corridor website. Information about the Wasson-Armleder Shared Use Path was also posted on ODOT's Projects page as well as under the News & Updates section of the Wasson Way website and on the Oakley Community Council website.*
- *Flyers & Yard Signs – Flyers promoting the open house events were placed at 27 locations throughout the project area. In addition, 29 yard signs were placed along roads, in shopping areas, and along existing shared use trails in or near the study area. Images of the flyers and yard signs, as well as a list of all flyer and yard sign locations, are provided in Appendix B.*

COMMENT & SURVEY SUMMARY

Input received from the public during the review process was submitted primarily as responses to the survey questions embedded into the Virtual Open House. Comments received during the In-Person Open House were input into the Public Input survey response system to facilitate analysis. Comments received via email and mail were combined with the responses received for Question 19: Is there anything we should keep in mind as planning for the Wasson-Armleder Shared Use Path advances in development?

The following pages summarize the input received for each of the questions asked in the survey.

(Note: survey participants were able to skip questions that either didn't pertain to them or they chose not to answer. Therefore, the total number of respondents is different for each question.)

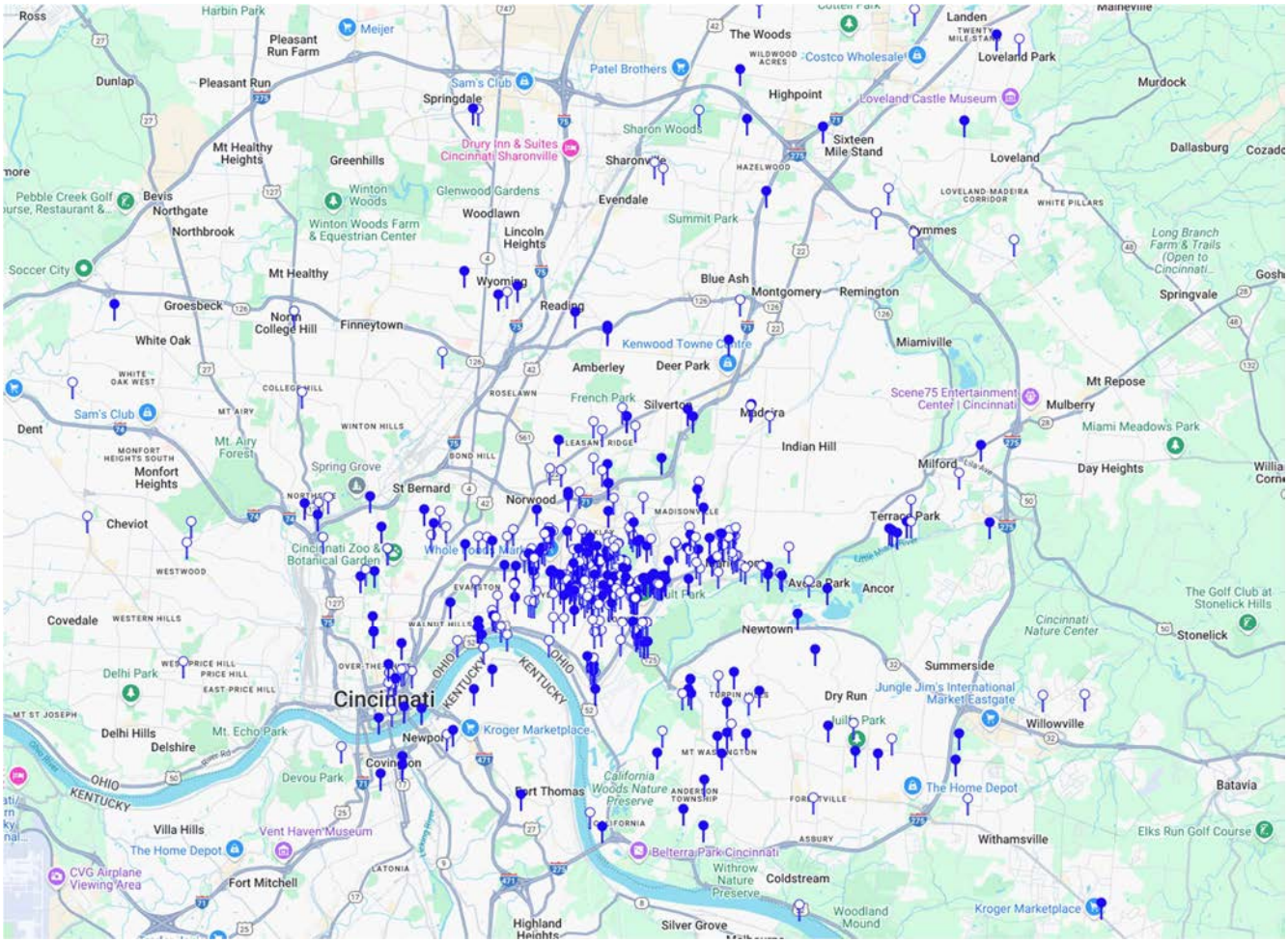
QUESTION 1: Where do you live?
438 Respondents

Respondents to this question were asked to place a pin on a map to indicate where they live. They were also asked to leave their zip code in the comment box that popped up once they placed their pin. More than 160 people provided their zip code, and Table 1 shows the five most frequently occurring zip codes. Others used the pop-up box to share other comments. These tended to center on their support for the project (9 comments); explain how the respondent uses shared-use trails and/or would use the proposed Wasson-Armleder Shared Use Path (14 comments); indicate generally where the respondent lives (19 comments). One comment asked about the general condition of the railroad bridge in Alternative 1A. Figure 3 shows the distribution of pins placed on the map.

Table 1: Where do you live? This table shows the five most frequently occurring zip codes.

Zip Code	Count
45208	47
45209	19
45227	17
45230	9
45212	8

Figure 3: Where do you live? This map shows the distribution of where respondents live. Blue pins indicate placements that included comments; white pins indicate placements without comments. Note: some pins were placed in locations beyond the boundary of the map shown below.



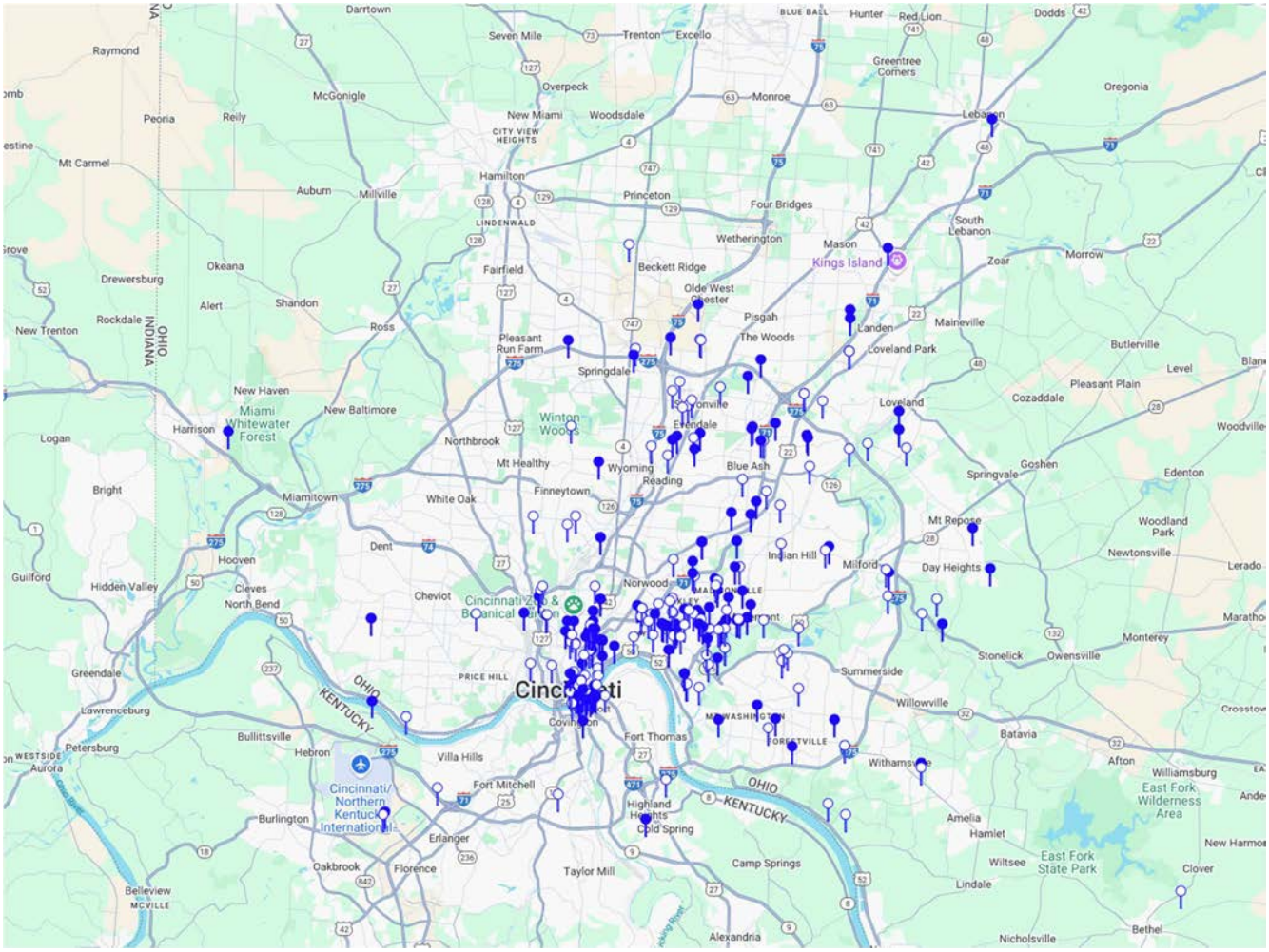
QUESTION 2: Where do you work?
285 Respondents

One hundred fourteen people provided their work zip code, and Table 2 shows the five most frequently occurring zip codes. Others used the pop-up box to say they lived "here" (12 comments); say they were retired (5 comments); explain how they use shared-use trails (4 comments); or say that they worked from home (2 comments). Figure 4 shows the distribution of pins placed on the map.

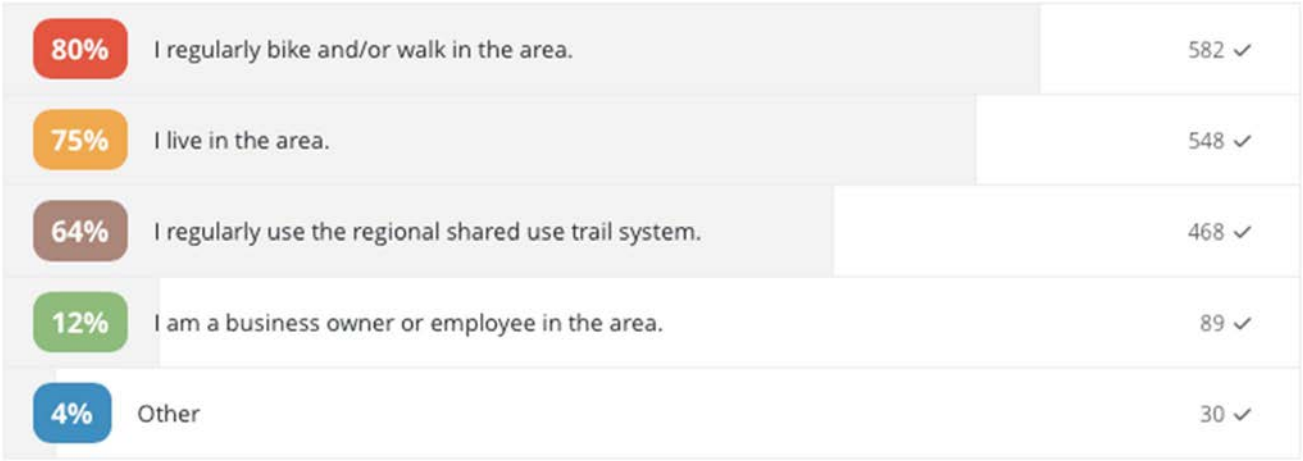
Table 2: Where do you live? This table shows the five most frequently occurring zip codes.

Zip Code	Count
45202	19
45208	16
45227	9
45229	6
45242	6

Figure 4: Where do you work? This map shows the distribution of where respondents work. Blue pins indicate placements that included comments; white pins indicate placements without comments. Note: some pins were placed in locations beyond the boundary of the map shown below.



QUESTION 3: What is your interest in the Wasson-Armleder project (check all that apply)?
726 Respondents



Responses offered for "Other" included biking (3), providing car-less transportation options (2), and walking (1).

QUESTION 4: How often do you use shared-use paths?
731 Respondents

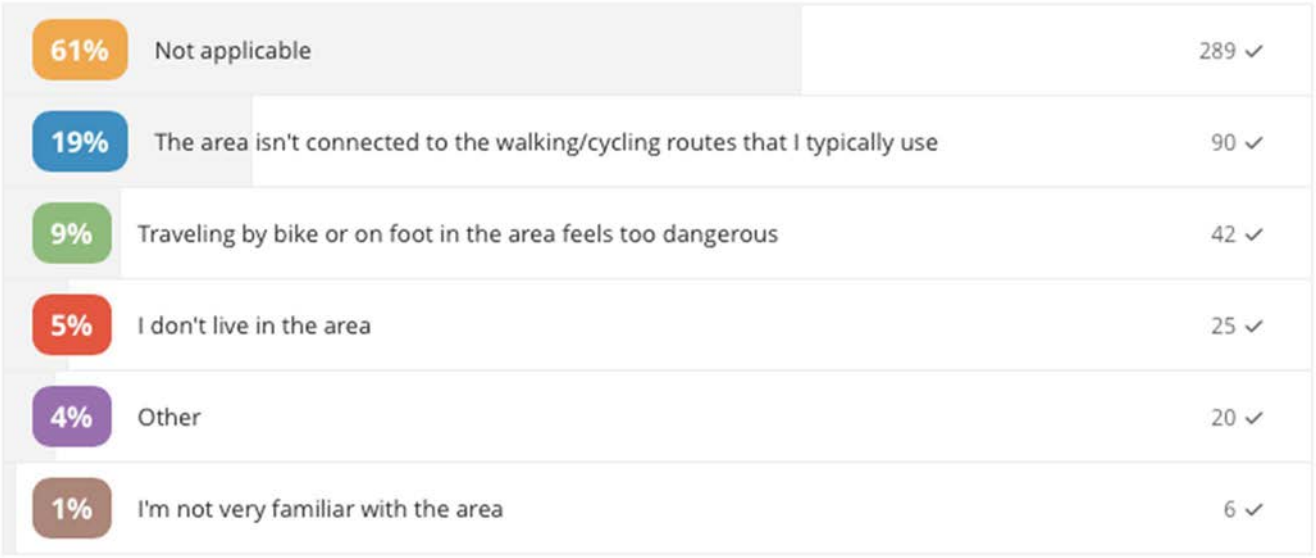
QUESTION 5: What activity do you use shared use paths for most often?
730 Respondents

Responses offered for "Other" included cycling (3), walking (2), commuting (1), wheelchair (1), and Not Applicable (1).

QUESTION 6: How often do you use shared-use paths?
666 Respondents

	Daily	Weekly	Several times a month	Several times a year	Rarely	Never
Wasson Way Trail	15% Daily	31% Weekly	24% Several times a month	21% Several times a year	6% Rarely	3% Never
Little Miami Scenic Trail	4% Daily	23% Weekly	26% Several times a month	33% Several times a year	10% Rarely	4% Never
Otto Armleder Memorial & Recreation Complex Trail	2% Daily	16% Weekly	23% Several times a month	38% Several times a year	15% Rarely	6% Never
Lunken Trail	2% Daily	15% Weekly	26% Several times a month	35% Several times a year	15% Rarely	6% Never
Murray Path	5% Daily	14% Weekly	18% Several times a month	22% Several times a year	22% Rarely	18% Never
Other nearby trails	5% Daily	17% Weekly	23% Several times a month	31% Several times a year	17% Rarely	6% Never

QUESTION 7: If you don't walk or ride in this area very much, why not?
472 Respondents



QUESTION 8: Would a new Wasson-Armleder Shared Use Path encourage you to walk or bike in this area more often?
680 Respondents

QUESTION 9: How likely would you be to walk or ride a bike in this area if a shared use path was available?
644 Respondents

QUESTION 10: Considering the discussion above, which alternative would you prefer to use in Segment 1?
520 Respondents

QUESTION 11: Do you agree with selecting Alternative 1A as the Preferred Alternative for Segment 1?
559 Respondents

QUESTION 12: Please use this space to share any comments you may have regarding the Segment 1 alternatives.
218 Respondents

All comments submitted for Question 12 were reviewed and categorized into themes. The most frequently recurring themes for Segment 1 were related to support for Alternative 1A; enthusiasm and excitement for Alternative 1A's proposed railroad bridge crossing; and concerns regarding Alternative 2C, particularly the proposed road crossings. Many respondents also used this opportunity to request that the shared-use path be completely separated from local roads. Each theme identified for Question 12 is listed in Table 3 along with the number of times it occurred. A brief description of the theme using respondents' words is also provided. All comments are shown in their entirety in Appendix C: Comments Received.

Table 3: Distribution of themes identified for responses to Question 12: Please use this space to share any comments you may have regarding the Segment 1 alternatives.
.

Theme	Count	Description
1A Benefits & Support	89	Comments offered overall support for 1A; 1A offers future connection opportunities to South 80 in Mariemont, is the safest option, is the "best" choice, keeps people away from traffic, would be a great asset for the community/would become known as a landmark destination, is scenic and efficient, extends Wasson Way as originally planned, will be quieter, is a better investment, has no conflicts with vehicles on major thoroughfares and no road crossings, is a lower-stress option, is the most direct route, effectively utilizes bridges and unused train lines, has less impact on bat habitat, is the best use of existing resources, is convenient and offers easy access; 1A's grade and elevation are easier to navigate; 1A is the most accessible option.
Railroad Bridge Benefits	32	Bridge would be a unique, iconic landmark; would attract users to the area; would allow modern reuse of a historic structure/landmark; would be more scenic; continues Wasson Way CROWN investments and will improve quality of life. The bridge route is more efficient, safer for children, and is reminiscent of the High Line in New York.
1C Concerns	27	1C would have multiple conflict points; the road crossings are a concern, would deter trail users, and pose safety concerns for children; 1C is circuitous; minimizing interactions with major roads is important; downhill switch backs would be a source of stress for bicyclists.
Miscellaneous	22	Comment could not easily be placed in another theme, or the comment didn't indicate which alternative to which it was referring.
Overall Support	20	Project will make travel through the area easier and safer for walkers/bicyclists/runners; would be amazing to travel so far on dedicated paths; just build it; excited for this path.
Separate	18	It's important to keep trails completely separated from roads; when trail users feel safe, usage will be higher; even signaled road crossings are dangerous to bicyclists/pedestrians; the value to the community outweighs the higher costs of constructing separated trails.
Cost Concerns	13	1A will cost more to maintain; all alternatives are too expensive; although 1A costs more, the benefit to the community is worth it; the cost of 1A is much

Theme	Count	Description
		lower than what is spent for car infrastructure; keeping the trail completely separate from the road is worth the increased cost; if the cost of 1A delays implementation, then go with 1C.
Needs Response	12	Comment included a question or otherwise needs a response from the project team.
Suggestion	8	Comment included a suggestion.
Response	5	Comment was a response to someone else's comment.
Thank you	5	Thank you for your work and advocacy.
1C Support	4	Prefer 1C if railroad security issues are evaluated and resolved; although 1C is appealing, removing the quantity of trees required is a concern.
Conflict Points	4	Reducing conflict points and/or completely separating trails from roads improves safety for all users
Railroad Bridge Concerns	4	Concerned about height of bridge
N/A	3	Comment either said N/A or was left blank
1A Concerns	2	Cost; safety, particularly during rainy/winter weather; more difficult access when coming from the Murray Trail; narrowing of trail as it crosses the bridge (but only when usage is heavy)
Amenities	2	Requested water fountains on trail; scenic overlook
Build other	1	Build other trails first
Complaint	1	Comment complained about process, alternative development & evaluation, cost, and timing of project
Funding	1	Would like to know more about the funding plan
Scenic	1	1A would offer incredible views; would be the most scenic

Eight respondents submitted suggestions for the project team to consider, and 12 comments needed to be addressed by ODOT. The comments and ODOT's responses to them are provided in Appendix D: Responses to Comments Received.

QUESTION 13: Considering the discussion above, which alternative would you prefer to use in Segment 2?
429 Respondents

QUESTION 14: Do you agree with selecting Alternative 2C as the Preferred Alternative for Segment 2?
464 Respondents

QUESTION 15: Please use this space to share any comments you may have regarding the Segment 2 alternatives.
101 Respondents

All comments submitted for Question 15 were reviewed and categorized into themes. The most frequently recurring themes pertaining to Segment 2 included support for replacing the Wooster Pike and Red Bank Road intersection with a roundabout (although some other respondents shared concerns about the roundabout); support for Alternative 2C; and requests that the shared use path be completely separated from the road (7 comments). Each theme identified is listed in Table 5 along with the number of times it occurred. A brief description of the theme, often using respondents' words, is also provided. All comments are shown in their entirety in Appendix C: Comments Received.

Table 4: Distribution of themes identified for responses to Question 15: Please use this space to share any comments you may have regarding the Segment 2 alternatives.

Theme	Count	Description
Roundabout Support	41	Roundabouts would improve traffic flow at intersection, make travel safer, smooth traffic flow, reduce travel speeds and are more efficient; adding a roundabout is a good idea, better alternative; adding a roundabout would be an improvement for all users; adding a roundabout is a good idea provided the shared-use path is separated from traffic lanes with a buffer.
2C Support	19	Appears to be a great option; will make cycling more accessible and will improve traffic flow; 2C will separate trail users from auto traffic; is less expensive than 2B; seems safer; roundabout will make travel in the area easier and safer.
Roundabout Concerns	14	Concerned about a lack of driver attention when using roundabouts; there's too much traffic in the area for a roundabout; concerned about the impact of heavy, industrial trucks using the roundabout; concerned about cars using the roundabout in conjunction with heavy trucks; the new traffic pattern might be hazardous for drivers; roundabouts aren't safe for cyclists and pedestrians;

Theme	Count	Description
		building a roundabout may delay shared-use path construction; there will be a lot of noise at the roundabout and bicyclists/pedestrians will have no cover; how will large truck drivers feel about the roundabout?
Miscellaneous	*9*	*Comment could not easily be placed in another theme; comment didn't indicate the alternative to which it was referring.*
Needs Response	*8*	*Comment included a question or otherwise needs a response from the project team.*
Separate	*7*	*Make sure bicyclists/pedestrians are separated from traffic, including in the roundabout; keep path in more natural areas, not on roads.*
Cost	*5*	*Like both alternatives 2C and 2B but prefer 2C due to lower cost; maintenance costs of 2C will be lower.*
Either	*5*	*Either 2B or 2C would be great; 2C is cheaper; either 2B or 2C would facilitate a future connection to the Little Miami Scenic trail through Clare Yard and the Columbia Connector.*
N/A	*4*	*Comment either said "N/A", "none", or was left blank.*
Response	*4*	*Comment is a response to someone else's comment.*
General	*2*	*Glad ADA accessibility is being considered; please build this!*
Suggestion	*2*	*Comment included a suggestion.*
Thank you	*2*	*Thank you for planning this project.*
2A Support	*1*	*Prefer 2A because it's the easiest to travel*
2B Support	*1*	*Would like to see it connect through the South 80 and to the Columbia Connector*

Two respondents submitted suggestions for the project team to consider, and eight comments needed to be addressed by ODOT. These comments and ODOT's responses to them are provided in Appendix D: Responses to Comments Received.

Note: It appeared that there was confusion among some Question 15 respondents about whether or not the shared-use path would be separated from the roundabout in Alternative 2C. If Alternative 2C is confirmed as the Preferred Alternative, future communications efforts for this project should clarify that the path will be completely separated from the road by a five-foot-wide (minimum) vegetated buffer and that path users will not need to cross the roundabout or share space with cars or trucks.

QUESTION 16: Considering the discussion above, which alternative would you prefer to use in Segment 3?
399 Respondents

QUESTION 17: Do you agree with selecting Alternative 3E as the Preferred Alternative for Segment 3?
432 Respondents

QUESTION 18: Please use this space to share any comments you may have regarding the Segment 3 alternatives.
82 Respondents

All comments submitted for Question 16 were reviewed and categorized into themes. The most frequently recurring themes pertaining to Segment 3 included overall support for Alternative 3E due in large part to the proposed signalized crossing at the Wooster Road/Armleder Road intersection and preferences for signalized crossings in general, as they are perceived to be safer than unsignalized crossings. Each theme identified is listed in Table 5 along with the number of times it occurred. A brief description of the theme,

often using respondents' words, is also provided. All comments are shown in their entirety in Appendix C: Comments Received.

Table 5: Distribution of themes identified for responses to Question 18: Please use this space to share any comments you may have regarding the Segment 3 alternatives.

Theme	Count	Description
3E Support	33	Alternative 3E is safest due to signalized crossing at Wooster Rd; signalized crossings are a must; I like the Linwood Park connection; 3E offers an opportunity to improve the Armleder Rd. and Wooster Rd. intersection; 3E will make riding in this area better and provides separation from traffic and industrial businesses; 3E has the fewest issues with property owners, sharp turns, and traffic; is the safest option but also the ugliest; 3E uses an out-of-service rail corridor to the best extent; connects directly with the main entrance of Armleder Park.
Signalize Crossings	15	Signalized crossings are important/a must; unsignalized crossings plus the debris on the road would create more safety issues than the trail would be worth; using traffic signals to cross Wooster is preferred.
Miscellaneous	10	Comment could not easily be placed in another theme; comment didn't indicate which alternative to which it was referring.
Suggestion	9	Comment included a suggestion.
Needs Response	6	Comment included a question or otherwise needs a response from the project team.
Linwood Park	5	Excited about possible connections to Linwood Park; would be good to connect directly to Linwood Park.
Response	4	Comment is a response to someone else's comment.
3B Support	3	3B is the most direct route to the path; could be made better by adding a refuge island for those crossing the street; has fewer conflict points.
Floodplain Concern	2	This area floods regularly which will affect trail use.
General	2	Please build this! Safety first.
N/A	2	Comment either said N/A or was left blank.
Scenic	2	The paths along Duck Creek will be most scenic and isolated from road noise; appreciate that most alternatives keep trail behind industrial businesses.
3A Support	1	Security concerns for 3A are overblown.
3C Support	1	3C would be preferred if a signalized crossing could be added.
Concerns	1	Speeding makes mid-block crossings dangerous for 3B, 3C and 3D.
Separate	1	Any path should be separated from roads.
Thank you	1	Thank you for your planning efforts.

Nine respondents submitted suggestions for the project team to consider, and six comments needed to be addressed by ODOT. The comments and ODOT's responses to them are provided in Appendix D: Responses to Comments Received.

QUESTION 19: Is there anything we should keep in mind as planning for the Wasson-Armleder Shared Use Path advances in development?
114 Respondents (survey)
18 Emails
2 Letters
129 Petition Signatures

All comments submitted for Question 19 were reviewed and categorized into themes. The content of the 18 emails, two letters, and petition was also categorized by theme and included as part of the Question 19 response analysis.

The most frequently recurring themes included overall support and enthusiasm for the project combined with requests that project planning continue to move forward; appreciation for planning the project and inviting public input. Other notable comments included requests for additional connections to other nearby trails and/or neighborhoods; requests for amenities to be included along the trail (i.e. water fountains, bathrooms, rest areas, and more access locations); and requests for continued project updates. Each theme identified is listed in Table 6 along with a description of the theme and the number of times it occurred. All comments are shown in their entirety in Appendix C: Comments Received.

Table 6: Distribution of themes identified for responses to Question 19: Is there anything we should keep in mind as planning for the Wasson-Armleder Shared Use Path advances in development?

Theme	Count	Description
Petition	129	Support for the project; hopes that it will move forward.
General Support	41	This will be a great project; recommendations look great; alternatives are well-thought out; all would be major improvements and benefit us all; the benefit to the community will likely be better than anticipated; this project makes living near the path more attractive; this project is needed; the success of similar projects might help with obtaining funding; the path will make recreation more accessible to everyone; the project increases trail connections for the region; the lower grade of the recommended alternatives will benefit more people; the trail will provide more opportunity for people to get out and experience nature which benefits health and well-being, and reduced carbon emissions.
Complete soon	15	Please move ahead; complete the path as soon as possible; keep project planning moving.
Thank you	14	Thank you; these kinds of improvements make Cincinnati a great place in which to live and work; thank you for inviting public input; keep up the good work.
Add More Connections	11	Would like to see connections to Red Bank/Madison, Oakley between Ridge and Red Bank, Kennedy Heights, Mariemont/50 West/Columbia Connector, Mariemont Gardens (South 80), Avoca trail, Kilgour/Mt. Lookout area, Newtown, 50 West [Columbia Connector]; a connection to the Murray Trail will make this a great commuting option; connect Segment 2 to bridge along Little Miami River.

Theme	Count	Description
Excited	10	Can't wait! So excited for this; way to go Cincy! Bravo!
Suggestion	9	Comment included a suggestion. Multiple suggestions were made relating to maintenance, desired amenities and providing progress updates.
Suggestion - Amenities	9	Include bathrooms, water fountains, more access points, rest areas, benches; plant greenery, trees, pollinators, flowers, along trail; allow e-bikes and include electric support; include signage, trailhead markers, and information about how to get to the trails on signage.
Suggestion - Updates	3	Continue communication; provide status updates.
N/A	7	Comment either said N/A or was left blank.
Needs Response	7	Comment included a question or otherwise needs a response from the project team.
Miscellaneous	6	Comment could not easily be placed in another theme; comment didn't indicate which alternative to which it was referring.
Response	5	Comment is a response to someone else's comment.
Study & Open House Format	5	Open House website was clear and well-designed; presentation of information was clear and well-done; the study appears to be thorough and well-thought out; appreciate the work and reasoning that went into the study.
Maintenance	3	Be sure to consider long-term maintenance costs; use community groups like Friends of the Little Miami for maintenance; tree roots cause maintenance issues.
Oppose	3	Funds should be redirected to other trails and/or transportation projects; perceived use of shared-use trails/bike lanes is "low."
Complaint	2	Alternative maps do not adequately show elevation changes; maps are somewhat difficult to read.
Concerns – Benefit	1	Would like to see quantifiable metrics on whether or not previous bike/shared-use projects met expectations of increasing the number of bicycle commuters and reducing the number of cars on the road.
Concerns - Cost	1	The estimated cost of the project seems extreme.
Eastern Corridor	1	This is a welcomed part of the Eastern Corridor Program.
Reduced Armleder Traffic	1	Project will potentially reduce the amount of car traffic at Armleder Park, particularly during soccer season

Twenty-one respondents submitted suggestions for the project team to consider, and seven comments needed to be addressed by ODOT. These comments and ODOT's responses to them are provided in Appendix D: Responses to Comments Received.

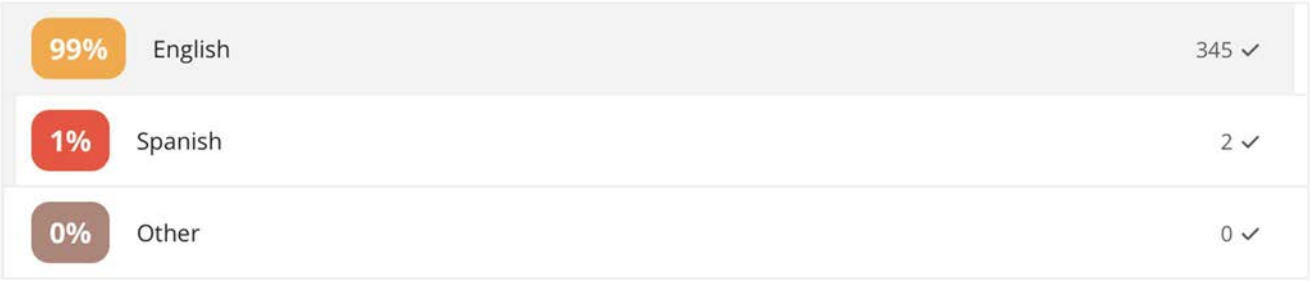
QUESTION 20: How did you hear about this Virtual Open House (check all that apply)?

382 Respondents

QUESTION 21: What is your race?

344 Respondents

QUESTION 22: What is the primary language spoken in your home?
347 Respondents



QUESTION 23: How many people live in your household?
342 Respondents

QUESTION 24: What are the age ranges of those living in your household (check all that apply)?
340 Respondents

QUESTION 25: What is your annual household income?
313 Respondents

QUESTION 26: What is the highest level of income completed by members of your household?
338 Respondents

All responses offered for "Other" were for post-graduate studies.

QUESTION 22: Please suggest additional ways you think ODOT can improve the inclusiveness of our public outreach efforts.
347 Respondents

All comments submitted for Question 22 were reviewed and categorized into themes, though most comments submitted were suggestions for additional outreach. The most frequently recurring suggestions included partnering with local interest groups, businesses, parks and recreations departments and community centers, athletic facilities, community councils and adaptability groups. Other comments suggested more online outreach. Multiple comments thanked and/or applauded ODOT and the project team for their efforts and offered overall support for the project. Each theme identified is listed in Table 7 along with a description of the theme and the number of times it occurred. All comments are shown in their entirety in Appendix C: Comments Received.

Table 7: Distribution of themes identified for responses to Question 22: Please suggest additional way you think ODOT can improve the inclusiveness of our public outreach efforts.

Theme	Count	Description
Partners	10	Partner with interest groups such as bike and running stores, Friends of the Little Miami, Wasson Way, Murray Trail; partner with local businesses and parks and recreation departments/outlets, local community centers, athletic facilities, community councils; include local adaptability groups such as the Bridge Adaptive Sports on outreach.
Miscellaneous	9	Comment could not easily be placed into theme; comment was more of a general statement about the project and/or concept, or was a complaint or compliment about ODOT initiatives.
General Project Support	4	Comments offered support for the proposed project.
Thank you/Kudos	4	Thank you; Good job!
Online Outreach	3	Continue online outreach that includes links to project info/surveys; use a newsletter or online database to share all public outreach events (not just ODOT); provide links to project sites via ODOT website.
More PR	2	Conduct more media relations demonstrating ODOT's leadership in bike path development and related benefits; demonstrate how PI helps shape projects.
N/A	2	Comment said N/A.
QR codes	2	Use QR codes to help drive people to information online.
Social media	2	More social media use; include reddit, Strava, RidewithGPS, Komoot.
Bill stuffers	1	Promote input opportunities in local utility bills, vehicle renewal notices.
Billboard	1	Use a billboard to promote project
Needs Response	1	Comment included a question or otherwise needs a response from the project team.
Suggestion	1	Comment included a suggestion.
Updates	1	Provide continued project updates

Most of the comments submitted for Question 22 were suggestions, and one comment needed to be addressed by ODOT. As such, all comments received for this question and ODOT's responses to them are provided in Appendix D: Responses to Comments Received.

Appendices

Department of Transportation

Appendix A

Meeting Materials

Department of Transportation

Public Input Site Content
(Virtual Open House)

WASSON–ARMLEDER SHARED USE PATH
Virtual Open House

city of CINCINNATI | Ohio Department of Transportation

PID 113603

Translate

Thank you for visiting!

The City of Cincinnati, in conjunction with the Ohio Department of Transportation (ODOT), is developing plans to make it easier and safer for bicyclists and pedestrians to travel between the Wasson Way Trail in Ault Park and the Otto Armleder Memorial Park & Recreation Complex. Multiple connection alternatives were studied. Through this Virtual Open House, we're sharing our study results and recommendations for your review and comment. Public input is important and will be used to confirm which route alternatives will be selected for further development.

UPDATE (January 5, 2025): The survey portion of this Virtual Open House is now closed. During the next few weeks, the project team will be reviewing all feedback received and preparing an input summary as well as responses to questions received and suggestions submitted. When complete, these materials will be posted under the **DOCUMENTS** section of this site. In the meantime, the information presented on this website will continue to be available for review. Any comments received via email, mail, and phone after January 4, 2025, will be reviewed by the project team, but will not be included in the public input summary report.

This site is a self-guided tour through a series of tabs that summarize key information about the alternatives explored in the Draft Wasson Way to Otto Armleder Feasibility Study and provide you with an opportunity to share your thoughts. A copy of the full study is provided in the **DOCUMENTS** section of this site (on desktop devices, this is located in the sidebar; on mobile devices, this can be found near the bottom of this page).

GETTING STARTED

Begin by reviewing the **CONCEPT** discussion. To advance between tabs, click on the blue **CONTINUE** button located at the bottom of the page. You can also move between pages by clicking the tabs located at the top of this discussion section. If you would like to view larger versions of any of the graphics, simply click on the image. You can share your thoughts by answering the questions that are embedded into the discussion on each tab.

This Virtual Open House will be open 24 hours a day for 45 days, closing on January 4, 2025. At that time, feedback received will be reviewed and considered by the ODOT and the City of Cincinnati, and answers to questions asked will be posted in the **DOCUMENTS** section soon after.

If you need interpretation or translation services or other reasonable accommodations to participate in this virtual Open House, to review materials or provide comment, please contact Katherine DeStefano, Senior Transportation Engineer, at (513) 933-6583 or Katherine.DeStefano@dot.ohio.gov.

QUESTIONS

COMMENTS

Comments submitted by Jan. 4, 2025, will be included in the public input summary portion of the final Wasson Way to Otto Armleder Feasbility Study report. Comments can be submitted through the open houses or to the Project Contact (listed below) by email, mail, or phone.

PROJECT CONTACT

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DOCUMENTS

DRAFT Wasson Way to Otto Armleder Feasibility Study

- Attachments A and B
- Attachment C Part 1
- Attachment C Part 2
- Attachments D through I

Project Fact Sheet

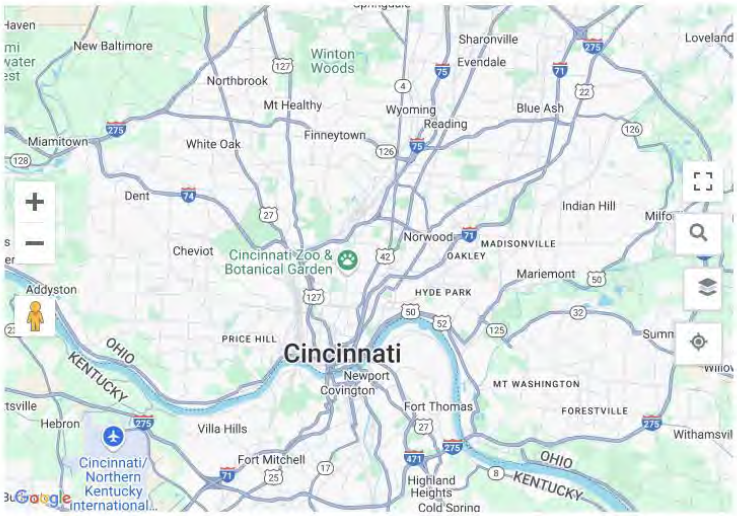
Printable Comment Form

Where do you live? We'd like to get an idea of where our Virtual Open House participants are from. You can tell us by dropping a point on the map to identify the general area where you live.

Use the +/- buttons on the left side of the map to zoom in to your desired location(s). Click on the blue Add Point button in the upper right-hand corner to drop a point on the map (a + sign will appear when you click on Add Point; move the + to your desired location and click to place your point). Add your zip code in the comment box.

Where do you work? Drop a point on the map to identify the general area where you work.

Use the +/- buttons on the left side of the map to zoom in to your desired location. Click on the blue Add Point button in the upper right-hand corner to drop a point on the map (a + sign will appear when you click on Add Point; move the + to your desired location and click to place your point). Add your zip code in the comment box.



What is your interest in the Wasson-Armleder project? (check all that apply)

I regularly bike and/or walk in the area.	80%
I live in the area.	75%
I regularly use the regional shared use trail system.	64%
I am a business owner or employee in the area.	12%
Other	4%

Closed to responses | 726 Responses

Continue

ACCESS DIFFICULTIES

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THE WASSON-ARMLEDER SHARED USE PATH CONCEPT

The concept for the Wasson–Armleder Shared Use Path grew out of discussions that the City of Cincinnati and ODOT held with local communities about how to make travel easier and safer on the east side of Greater Cincinnati. Known as the Eastern Corridor Program, this effort looked at not just making improvements to the local road network but also improving travel for pedestrians, bicyclists, and those using other transportation modes (more information about the Eastern Corridor Program is provided on the last tab of this open house).

Among other things, these discussions established that more multi-modal transportation links are needed throughout the Eastern Corridor region, particularly for pedestrians and bicyclists. They also established that travel between the Wasson Way Trail and Otto Armleder Memorial Park & Recreation Complex (which also connects with the Little Miami Scenic Trail) is difficult and can be dangerous for pedestrians and bicyclists. Sidewalks in the area are inconsistent, and bicyclists must often travel on the road alongside fast-moving cars.

The Wasson-Armleder Shared Use Path study area (click map to enlarge).

The Wasson–Armleder path will address existing continuity and safety issues by establishing a new, safer shared use trail for pedestrians, runners, bicyclists, and more moving between Wasson Way, Otto Armleder Memorial Park & Recreation Complex, and other trails nearby, like the Little Miami Scenic Trail (LMST). It's envisioned to be a paved, 12-foot-wide path and will be completely separated from the road by a five-foot wide vegetated buffer planted with grass, shrubs, and/or trees.

COMMENTS

Comments submitted by Jan. 4, 2025, will be included in the public input summary portion of the final Wasson Way to Otto Armleder Feasbility Study report. Comments can be submitted through the open houses or to the Project Contact (listed below) by email, mail, or phone.

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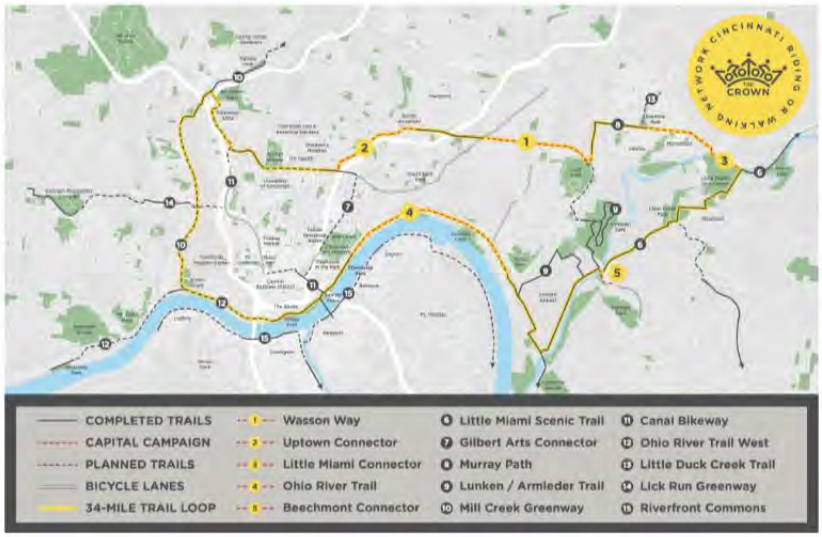
The Wasson–Armleder path will also be a part of Greater Cincinnati's 34-mile CROWN (Cincinnati Riding Or Walking Network); see map below. When completed, the CROWN will be a paved, shared use trail network encircling Greater Cincinnati and will connect the city's iconic landmarks and downtown area with other regional trails such as the Murray Path, Wasson Way Trail, Ohio River Way Trail, Mill Creek Greenway Trail, Canal Bikeway, Lunken Airport Trail, and the Armleder Trail at Otto Armleder Memorial Park & Recreation Complex.



Map of Cincinnati's CROWN shared use trail network. Courtesy of the University of Cincinnati.
(Click map to enlarge).

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QUESTIONS

How often do you use shared use paths?

Weekly	42%	Several times a month	25%
Daily	21%	Several times a year	10%
Rarely	2%	Never	1%

Closed to responses | 732 Responses

What activity do you use shared use paths for most often?

Cycling	46%
Walking	35%
Running	18%
Skating	1%
Other	1%

Closed to responses | 730 Responses

How often do you use the following shared use paths?

	Daily	Weekly	Several times a month	Several times a year	Rarely	Never
Wasson Way Trail	15% Daily	31% Weekly	24% Several times a month	21% Several times a year	6% Rarely	3% Never
Little Miami Scenic Trail	4% Daily	23% Weekly	26% Several times a month	33% Several times a year	10% Rarely	4% Never
Otto Armleder Memorial & Recreation Complex Trail	2% Daily	16% Weekly	23% Several times a month	38% Several times a year	15% Rarely	6% Never
Lunken Trail	2% Daily	15% Weekly	26% Several times a month	35% Several times a year	15% Rarely	6% Never
Murray Path	5% Daily	14% Weekly	18% Several times a month	22% Several times a year	22% Rarely	18% Never
Other nearby trails	5% Daily	17% Weekly	23% Several times a month	31% Several times a year	17% Rarely	6% Never

666 responses

If you *don't* walk or ride in this area very much, why not?

Not applicable	61%	The area isn't connected to the walking/cycling routes that I typically use	19%
Traveling by bike or on foot in the area feels too dangerous	9%	I don't live in the area	5%
Other	4%	I'm not very familiar with the area	1%

Closed to responses | 472 Responses

Continue

THE ALTERNATIVES

Build Alternatives

Multiple "Build" Alternatives were developed to provide an easier and safer way for pedestrians and bicyclists travel between the Wasson Way Trail and shared use trails in the Otto Armleder Memorial Park & Recreation Complex, and well as the trails they connect to. Some of the Build Alternatives were initially identified in the Eastern Corridor Program's *2019 Conceptual Alternatives Implementation Plan for Eastern Corridor Segments II and III*; others were developed using new information and new conditions that have arisen since the 2019 plan was completed.

No Build Alternative

In addition to the Build Alternatives, a No Build Alternative was also studied. The No Build Alternative primarily looked at existing conditions and the impacts of not making any improvements for pedestrians or bicyclists. Per federal requirements, ODOT must always consider a No Build Alternative when developing and evaluating transportation improvement options.

Project Segments

To help make studying and funding the Build Alternatives easier, the project area was divided into three segments, as shown in the map below:

- Segment 1: Extends from the existing Wasson Way Trail in Ault Park and travels south/southeast to Wooster Pike.
- Segment 2: Extends from the end of Segment 1 near Wooster Pike, across the Norfolk Southern railroad tracks using the existing Wooster Road bridge near the intersection of Wooster Pike, Wooster Road, and Red Bank Road, then travels southwest to connect with Segment 3, which is located approximately 600 feet south of the intersection.
- Segment 3: Travels southwest along Wooster Road from the end of Segment 2 to the Otto Armleder Memorial Park & Recreation Complex.

(Click map to enlarge)

COMMENTS

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Coming Up

The next three tabs of this Virtual Open house discuss the alternatives developed and evaluated for each of the three segments outlined above, the results of the studies performed, and ODOT's recommendations on which alternatives to advance for further development.

QUESTIONS

Would a new Wasson–Armleder Shared Use Path encourage you to walk or bike in this area more often?

Definitely	81%
I think so	15%
Not Sure	2%
Probably Not	1%
Definitely Not	0%

Closed to responses| 680 Responses

How likely would you be to walk or ride a bike in this area if a shared use path was available?

Extremely Likely	79%
Likely	19%
Not Sure	1%
Not Likely	1%
I won't walk or ride in the area	0%

Closed to responses| 644 Responses

Continue

SEGMENT 1

Segment 1 extends from the existing Wasson Way Trail in Ault Park to Wooster Pike, roughly 345 feet north of where it intersects with Red Bank Road. Three Build Alternatives were developed for Segment 1. Each of these alternatives is shown on the map below.

(Click map to enlarge)

Segment 1 - Alternative A (Orange line)

Alternative 1A starts at the existing Wasson Way Trail in Ault Park and continues southeast along the abandoned railroad line owned by the City of Cincinnati.

- Proposed Length: Approximately 3,250 feet
- Proposed Width: 12 feet wide (except when crossing the bridge over US 50 where the path would narrow to 10 feet)
- Estimated Cost: $7,050,000

Considerations for this alternative include:

- The trail would use the existing railroad bridges to cross active rail lines, Red Bank Road, US 50, and Duck Creek Road, and modifications to the bridges would be necessary.
  - The timber tie deck of bridge that crosses over Duck Creek and Red Bank Road would need to be replaced with a reinforced concrete deck. Due to its elevation, tall railings would be required for the safety of pedestrians and bicyclists.
  - The bridge over US 50 would be modified by maintaining the existing ballast and ties and overlaying the steel plate deck with asphalt. Due to the bridge's geometry, the shared use trail would be approximately two feet narrower (approximately 10' wide) as it travels over this bridge.
  - Fencing would be required at the bridge crossings (approximately 350 feet).

COMMENTS

Comments submitted by Jan. 4, 2025, will be included in the public input summary portion of the final Wasson Way to Otto Armleder Feasbility Study report. Comments can be submitted through the open houses or to the Project Contact (listed below) by email, mail, or phone.

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- The trail would cross over Little Duck Creek using an existing culvert near the connection with Segment 2.
- This alternative meets ADA requirements.

Segment 1 - Alternative B (Green line) - DISMISSED

Alternative 1B starts where the Murray Path ends at the intersection of Old Red Bank Road and Woodland Road, then follows the east side of Red Bank Road to the intersection of Red Bank Road and Wooster Pike.

Considerations include:

- Per standard design guidelines, any portion of a shared use path traveling alongside a roadway must have a five-foot-wide vegetated buffer between the path and the road. However, because the existing railroad trestles over Red Bank Road are too close to the road on both the east and west sides, there is not enough space is available for the required buffer. A floodwall along Duck Creek is also located on the west side of the road and further limits the space available for a buffer. **For these reasons, Alternative 1B was dismissed and will not be considered further.**

Pinch points between railroad bridge trestles, the Duck Creek floodwall, and Red Bank Road, looking south.
(Google Maps, 2024)

Segment 1 - Alternative C

Alternative 1C starts where the Murray Path ends at the intersection of Old Red Bank Road and Woodland Road. It crosses Red Bank Road at the intersection with Woodland Road and continues down the east side of Red Bank Road to Colbank Road. From there, it follows Colbank under US 50, then climbs up the embankment to the railroad corridor to connect with Segment 2.

- Proposed Length: Approximately 2,900 feet
- Proposed Width: 12-feet-wide along Red Bank Road and along Colbank Road. Some portions narrow to 10 feet due to limited available space.
- Estimated Cost: $2,700,000

Considerations include:

- Crossings at Red Bank Road and Colbank Road would be signalized.
- It would be necessary to construct a 350-foot retaining wall with an approximate height of 10 feet as the trail passes under US 50.
- This alternative meets ADA requirements.

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Note: The Village of Fairfax and ODOT are currently planning improvements to the intersection of Red Bank Road, Colbank Road, and US 50. If Alternative 1C is selected, its proposed design will need to be adjusted to respond to the new traffic pattern once planning is complete.

COMPARISON OF ALTERNATIVES FOR SEGMENT 1

Safety

All alternatives for this segment include the construction of a shared use path that would be physically separated from vehicular traffic with a five-foot vegetative buffer and would, therefore, be safer for bicyclists and pedestrians than the No Build Alternative. The paths would be very low stress and suitable for all ages and abilities. The primary safety differences between the alternatives include:

Alternative 1A: Alternative 1A runs along the abandoned railway line and has no road crossings and no conflict points with automobiles.

Alternative 1B: Due to its construction limitations, Alternative 1B was dismissed from consideration and not evaluated for safety.

Alternative 1C: Alternative 1C crosses a commercial property driveway, Red Bank Road, and the Colbank Road Interchange ramp to US 50, which creates three potential conflict points with automobiles. All crossings would be signalized at existing traffic signals.

No Build: No improvements for pedestrians and bicyclists. Bicyclists would continue to share lanes with vehicular traffic. Cycling in the area would remain high stress, and the route would likely only be used by strong, experienced cyclists. There currently are no sidewalks for pedestrians along Red Bank Road, and while there is a sidewalk on Wooster Road, portions travel alongside the road without a buffer between pedestrians, cyclists, and vehicles.

Environmental Impacts

Preliminary studies indicate that Alternative 1A would impact a small portion (26 feet) of Duck Creek due to the improvements needed on both the bridge deck that crosses over the creek, as well as support piers within the creek. Otherwise, neither Alternative 1A nor 1C will have any additional impacts to local streams or wetlands.

Construction limits for Alternative 1A are expected to impact approximately 0.25 acres of habitat suitable for federally-listed threatened or endangered bats. Construction limits for Alternative 1C would impact approximately 0.9 acres of potential bat habitat.

Other Considerations

The chart below summarizes the results of studies focused on impacts of the No Build Alternative and Alternatives 1A and 1C to Right-of-Way; ecological resources; floodplains/floodways; cultural resources (National Register of Historic Places); Section 4(f)/6(f) resources (such as parks); hazardous materials; drinking water; and community impacts.

Green highlights indicate issues of low concern; yellow highlights indicate moderate concern; red highlights identify issues of higher concern.

Shared Use Path Evaluation Matrix: Segment 1

Wasson Way Trail Connection to Otto Armleder Park | PID 113603

CATEGORY	PRELIMINARY ALTERNATIVES		
	NO BUILD ALTERNATIVE	ALTERNATIVE A	ALTERNATIVE C
PURPOSE AND NEED			
Improve bicycle and pedestrian connectivity between Wasson Way Trail and Otto Armleder Park	No	Yes	Yes
SAFETY ANALYSIS			
Safety Issues	No bicycle facilities exist in this corridor. Bicycle traffic alongside vehicular traffic on Wooster Road is a safety concern	No pedestrian/bicycle conflict points with vehicular traffic	Three pedestrian/bicycle conflict points with vehicular traffic (at intersections and driveway entrance)
Bicycle Level of Traffic Stress	High Stress	Low Stress	Low Stress
ENGINEERING ISSUES			
Length of Shared Use Path	--	0.45 mile	0.55 mile
Width of Shared Use Path	--	12 feet	10 feet and 12 feet
Design Speed	--	20 mph	20 mph
Trail Design Issues	--	None	None
Structures Required	None	2 existing railroad bridges to be modified	1 retaining wall required
Utility Relocations/Issues	None	None	Electric relocations required. Potential conflict with electric transmission easement.
RIGHT-OF-WAY IMPACTS			
Additional Right-of-Way Required	None	0.01 acres	0.97 acres
ECOLOGICAL RESOURCES			
Streams	No Impact	26 linear feet of impact	No Impact
Wetlands	No Impact	No Impact	No Impact
Threatened & Endangered Species	No Impact	0.25 acre of tree clearing	0.9 acre of tree clearing
FLOODPLAIN / FLOODWAY IMPACTS			
100 Year Floodplain Encroachment	None	None	None
Floodway Encroachment	None	None	None
CULTURAL RESOURCES			
NHRP-Listed Districts	None	None	None
NHRP-Listed Sites	None	None	None
SECTION 4(f) / 6(f) RESOURCES			
Section 4(f)/6(f) Impacts	None	Ault Park (minor)	None
HAZARDOUS MATERIALS			
Regulated Materials Review	None	None	Alignment in the vicinity of 3 UST, 2 LUST, and 1 RCRA record.
DRINKING WATER			
Sole Source Aquifer	None	Project work is within the boundaries of a sole source aquifer. Restrictions on refueling and similar activities would be implemented during construction to protect the groundwater from spills of fuels, oils, or chemicals.	Project work is within the boundaries of a sole source aquifer. Restrictions on refueling and similar activities would be implemented during construction to protect the groundwater from spills of fuels, oils, or chemicals.
COMMUNITY IMPACTS			
Environmental Justice (EJ) Populations	None	Improves pedestrian/bicycle connectivity for EJ populations	Improves pedestrian/bicycle connectivity for EJ populations
PRELIMINARY COST ESTIMATES			
Estimated Construction Costs	--	$7.1 million	$2.7 million
CONCLUSION			
Recommendation	Not Recommended	Recommended as Preferred Alternative	Not Recommended

Alternative 1B was not evaluated due to insufficient width for 12-foot wide shared use path between Red Bank Road and existing features (railroad trestle, Duck Creek floodwalls).

NHRP: National Register of Historic Places | UST: Underground Storage Tank | LUST: Leaking Underground Storage Tank | RCRA: Resource Conservation Recovery Act

(Click chart to enlarge)

*Level of Traffic Stress (LTS) - LTS for bicyclists is determined by the posted speed of the roadway, daily volume of the roadway (vehicles per day), the number of vehicular lanes and the type of separation between vehicular traffic and bicyclists. There are four (4) levels of traffic stress:

- LTS 1 – Very low stress, suitable for all ages and abilities
- LTS 2 – Low stress, comfortable for most adults
- LTS 3 – Medium stress, ridden by enthused/confident cyclists
- LTS 4 – High stress, ridden by strong/fearless cyclists.

SEGMENT 1 PRELIMINARY RECOMMENDATION

Based on the results of the studies conducted, ODOT has identified **Alternative 1A** as the preliminary Preferred Alternative for Segment 1, and expects to recommend it for further development, pending review of public comments.

In addition to the benefits noted above, other advantages to Alternative 1A are as follows.

- By using the existing railroad bridges, all potential conflict points between vehicles and bikes/pedestrians are eliminated.
- The route uses existing city-owned right-of-way, resulting in lower anticipated costs to acquire new right-of-way when compared to Alternative 1C.
- While the overall cost of Alternative 1A is higher due to some required maintenance of the existing railroad bridges, these costs would eventually need to be addressed by the City anyway and should not be considered as an additional cost.

QUESTIONS

Considering the discussion above, which alternative would you prefer to use in Segment 1?

Alternative 1A	97%
Alternative 1C	2%
No Build Alternative	1%
None of the above	1%

Closed to responses| 520 Responses

Do you agree with selecting Alternative 1A as the Preferred Alternative for Segment 1?

Yes	95%
Not sure yet	4%
No	1%

Closed to responses| 559 Responses

Please use this space to share any comments you may have regarding the Segment 1 alternatives.

Closed for Comments

The train bridge crossings themselves could become an attraction to make visitors more inclined to take advantage of the new trail, bringing people to the area to help the local economy.

2 months ago Reply 57 Agree

Alternative 1A would be a fantastic use of some of the historical train trestles and would greatly reinforce Cincinnati's abilities to showcase its landmarks through modern repurposing. Alternative 1C would conflict with multiple high-volume and high-speed automobile crossings.

2 months ago Reply 52 Agree

The old bridge is amazing and would a truly delightful path for cyclists, runners, and walkers.

2 months ago Reply 44 Agree

Alternative 1A will also allow connection to the Little Miami Trail past South 80 / Mariemont Gardens at some time in the future, if the railroad use ends. This was the original vision for the eastern end of the Wasson Way.

2 months ago Reply 31 Agree

As a cyclist, limiting contact points with automobiles and overall traffic offers greater safety for all segments and path users

Show all comments

Continue

SEGMENT 2

Extending from the end of Segment 1 near Wooster Pike, Segment 2 crosses over the Norfolk Southern railroad tracks using the existing Wooster Road bridge near the intersection of Wooster Pike, Wooster Road, and Red Bank Road. It then travels approximately 600 feet southwest of the intersection to connect with Segment 3.

Three Build Alternatives were developed for Segment 2. Each of these alternatives is shown on the map below.

(Click map to enlarge)

Segment 2 - Alternative A (Yellow line) - DISMISSED

From the connection with Segment 1, Alternative 2A turns south and west along the northside of Wooster Pike and crosses Red Bank Road at the intersection with Wooster Pike. It then travels along the west side of the Wooster Pike Bridge over the railroad track, then descends at a steep descent of 4.9% for more than 500 feet to connect with Segment 3.

Initially developed as part of the *2019 Conceptual Alternatives Implementation Plan for Eastern Corridor Segments II and III*, **Alternative 2A was evaluated early in the process but dismissed from consideration for several reasons:**

- The existing Wooster Road bridge cannot be widened to the west without negatively affecting existing culverts, retaining walls, and other railroad infrastructure below the bridge.
- To minimize impacts to adjacent properties, a shared use path along the west side of the bridge would have to be very steep and would not meet ADA requirements.
- A crosswalk would be needed from Red Bank Road to southbound Wooster Road. However, vehicular traffic moving westbound in this area is heavy, and it would be best to avoid placing a crosswalk at this location.

COMMENTS

Comments submitted by Jan. 4, 2025, will be included in the public input summary portion of the final Wasson Way to Otto Armleder Feasbility Study report. Comments can be submitted through the open houses or to the Project Contact (listed below) by email, mail, or phone.

PROJECT CONTACT

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DOCUMENTS

DRAFT Wasson Way to Otto Armleder Feasibility Study

- Attachments A and B
- Attachment C Part 1
- Attachment C Part 2
- Attachments D through I

Project Fact Sheet

Printable Comment Form

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*The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried-out by ODOT pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated December 14, 2020, and executed by FHWA and ODOT. For more information, please visit ODOT's NEPA Assignment Portal by clicking **here**.*

Segment 2 - Alternative B (Lime line)

Alternative 2B continues the shared use trail east along the abandoned railroad over Wooster Pike, then it circles north then west before descending to meet Wooster Pike. From there, the alternative follows the southeast side of Wooster Pike to just past the intersection with Red Bank Road. Once across the Wooster Road bridge and underlying active rail lines, the trail doubles back to descend the roadway embankment on the east side of Wooster Road, travels through a new Wooster Road underpass (to be built) and ends where it connects with abandoned railroad corridor.

- Proposed Length: Approximately 2,650 feet
- Proposed Width: 12 feet wide
- Estimated Cost: $6,250,000

Considerations for this alternative include:

- The shared use trail would be separated from Wooster Pike by a five-foot vegetated grass buffer.
- The trail would require modifications to two existing bridges:
  - The timber ties on the 75-foot-long bridge over Wooster Pike would be replaced with a reinforced concrete deck; 4.5-foot railings would be added on each side of the trail.
  - The Wooster Road bridge over the railroad would need to be widened by 17 feet to the east, and a bicycle railing would be added.
- A 100-foot-long, 3-foot-tall retaining wall would be added along the access road to the rail yard to support the new shared use trail.
- A second 3 to 15-foot-tall retaining wall would be required from the end of the bridge widening and would extend approximately 400 feet north. This will separate the shared use path from the existing access road to the railroad.
- This alternative meets ADA requirements.

Segment 2 - Alternative C (Blue line)

Similar to Alternative 2B, Alternative 2C continues east along the abandoned railroad over Wooster Pike, then circles north and west as it descends to meet Wooster Pike. Instead of widening the Wooster Road bridge over the abandoned railroad tracks, a single-lane roundabout would be constructed at the Wooster Pike and Red Bank Road intersection. The roundabout would reduce the number of vehicular lanes required across the bridge from three to two, thus providing room to accommodate the shared use path. The remaining route for this alternative is the same as Alternative 2B.

- Proposed Length: Approximately 2,650 feet
- Proposed Width: 12 feet wide
- Estimated Cost: $5,660,000

Considerations for this alternative include:

- The shared use path would be separated from Wooster Pike by a five-foot vegetated buffer.
- The trail would require replacing the existing timber tie deck to the 75-foot-long bridge that crosses over Wooster Pike with a reinforced concrete deck and 4.5-foot railings would be added on each side of the trail.
- A 100-foot long, 2-foot-tall retaining wall would be added along the access road to the rail yard to support the new shared use trail.
- The proposed roundabout eliminates the need to widen the Wooster Road bridge as it travels over the railroad (as would be required for Alternative 2B).
- Construction of the roundabout would require a second retaining wall, approximately 150 feet in length, and 15 feet tall.
- Construction of the roundabout would require a 50-foot extension of the existing box culvert under the intersection.
- This alternative meets ADA requirements.

SEGMENT 2 ALTERNATIVE COMPARISON

Safety

All alternatives for this segment include the construction of a shared use path that would be physically separated from vehicular traffic with a five-foot vegetative buffer and would, therefore, be safer for bicyclists and pedestrians than the No Build Alternative. The paths would be very low stress and suitable for all ages and abilities. The safety differences between the options evaluated include:

Alternative 2A
Due to its construction limitations and safety concerns, this alternative was dismissed and not evaluated for safety.

Alternative 2B
There are no potential conflict points between pedestrians/bicycles and automobiles.

Alternative 2C
There are no potential conflict points between pedestrians/bicycles and automobiles.

No Build
There would be no improvements for pedestrians and bicyclists. Anyone riding a bike would continue to share lanes with vehicular traffic traveling on a road with a speed limit of 35 mph. As a result, cycling in the area will remain high stress for inexperienced riders. There currently are no sidewalks for pedestrians along Red Bank Road within the study area and while there is a sidewalk on Wooster Road, portions travel alongside the road without a buffer. As a result, pedestrians and bicyclists must cross the road or travel next to vehicular traffic and are at greater risk than when traveling along roads using a dedicated shared use path.

Environmental Impacts

Preliminary studies indicate that Alternative 2C would impact approximately 105 feet of Little Duck Creek due to culvert extensions and roadway fill from the construction of the proposed roundabout, whereas there would be no impacts to the creek with Alternative 2B. Both Alternatives 2B and 2C would have minor wetland impacts, each affecting approximately 0.01 acres.

Construction limits for Alternative 2B are expected to impact approximately 0.5 acres of habitat suitable for federally-listed threatened or endangered bats; Alternative 2C would impact approximately 0.64 acres of potential bat habitat.

Other Considerations

The chart below summarizes the results of studies focused on impacts of the No Build Alternative and Alternatives 2B and 2C to Right-of-Way; ecological resources; floodplains/floodways; cultural resources (National Register of Historic Places); Section 4(f)/6(f) resources (such as parks); hazardous materials; drinking water; and community impacts.

Green highlights indicate issues of low concern; yellow highlights indicate moderate concern; red highlights identify issues of higher concern.

Shared Use Path Evaluation Matrix: Segment 2

Wasson Way Trail Connection to Otto Armleder Park | PID 113603

CATEGORY	PRELIMINARY ALTERNATIVES		
	NO BUILD ALTERNATIVE	ALTERNATIVE B	ALTERNATIVE C
PURPOSE AND NEED			
Improve bicycle and pedestrian connectivity between Wasson Way Trail and Otto Armleder Park	No	Yes	Yes
SAFETY ANALYSIS			
Safety Issues	No bicycle facilities exist in this corridor. Bicycle traffic alongside vehicular traffic on Wooster Road is a safety concern	No pedestrian/bicycle conflict points with vehicular traffic.	No pedestrian/bicycle conflict points with vehicular traffic.
Bicycle Level of Traffic Stress	High Stress	Low Stress	Low Stress
ENGINEERING ISSUES			
Length of Shared Use Path	--	0.5 mile	0.5 mile
Width of Shared Use Path	--	12 feet	12 feet
Design Speed	--	12 mph	12 mph
Trail Design Issues	--	Tight curve requires slower speeds	Tight curve requires slower speeds
Structures Required	None	1 existing railroad bridge modified 1 highway bridge widened 2 retaining walls required	1 existing railroad bridge modified 1 highway bridge modified (no highway bridge widening required) 2 retaining walls required
Utility Relocations/Issues	None	Impacts to storm and sanitary sewers anticipated	Impacts to storm and sanitary sewers anticipated. Relocation of electric distribution pole, underground water and gas lines expected
RIGHT-OF-WAY IMPACTS			
Additional Right-of-Way Required	None	0.9 acre	1.66 acres
ECOLOGICAL RESOURCES			
Streams	None	None	105 linear feet of impact
Wetlands	None	0.01 acre of impact	0.01 acre of impact
Threatened & Endangered Species	None	0.5 acre of tree clearing	0.6 acre of tree clearing
FLOODPLAIN / FLOODWAY IMPACTS			
100 Year Floodplain Encroachment	None	1.38 acres	1.51 acres
Floodway Encroachment	None	0.11 acre (Additional hydraulic analysis required)	0.21 acres (Additional hydraulic analysis required)
CULTURAL RESOURCES			
NHRP-Listed Districts	None	Village of Mariemont Historic District	Village of Mariemont Historic District
NHRP-Listed Sites	None	None	None
SECTION 4(f) / 6(f) RESOURCES			
Section 4(f)/6(f) Impacts	None	None	None
HAZARDOUS MATERIALS			
Regulated Materials Review	None	Permit may be required for work in vicinity of landfill (H. Hafner and Sons, Inc)	Permit may be required for work in vicinity of landfill (H. Hafner and Sons, Inc)
DRINKING WATER			
Sole Source Aquifer	None	Project work is within the boundaries of a sole source aquifer. Restrictions on refueling and similar activities would be implemented during construction to protect the groundwater from spills of fuels, oils, or chemicals.	Project work is within the boundaries of a sole source aquifer. Restrictions on refueling and similar activities would be implemented during construction to protect the groundwater from spills of fuels, oils, or chemicals.
COMMUNITY IMPACTS			
Environmental Justice (EJ) Populations	None	Improves pedestrian/bicycle connectivity for EJ populations	Improves pedestrian/bicycle connectivity for EJ populations
PRELIMINARY COST ESTIMATES			
Estimated Construction Costs	--	$6.4 million	$5.6 million
CONCLUSION			
Recommendation	Not Recommended	Not Recommended	Recommended as Preferred Alternative

Alternative 2A was not evaluated because the required widening of the Wooster Road bridge would result in extensive impacts to railroad infrastructure beneath the bridge (culverts, retaining walls, etc.). Furthermore, slopes designed to minimize impacts to adjacent properties along the path would not meet ADA compliance.

NHRP: National Register of Historic Places

(Click chart to enlarge)

*Level of Traffic Stress (LTS) - LTS for bicyclists is determined by the posted speed of the roadway, daily volume of the roadway (vehicles per day), the number of vehicular lanes and the type of separation between vehicular traffic and bicyclists. There are four (4) levels of traffic stress:

- LTS 1 – Very low stress, suitable for all ages and abilities
- LTS 2 – Low stress, comfortable for most adults
- LTS 3 – Medium stress, ridden by enthused/confident cyclists
- LTS 4 – High stress, ridden by strong/fearless cyclists.

SEGMENT 2 PRELIMINARY RECOMMENDATION

Based on the results of the studies conducted, ODOT has identified **Alternative 2C** as the preliminary Preferred Alternative for Segment 2, and ODOT expects to recommend it for further development, pending review of public comments.

Reasons why Alternative 2C has been selected a preliminary Preferred Alternative include:

- Construction of a new roundabout at the intersection of Wooster Pike and Red Bank Road will allow the shared use path to travel across the existing Wooster Road bridge; no widening or other structural modifications will be needed.
- The new roundabout will help improve the travel safety and traffic flow at the intersection.
- Since the Wooster Road bridge would not need to be widened, potential impacts to railroad-owned property is reduced, and the overall construction cost and amount of Right of Way needed is less compared to Alternative 2B.

Alternative C, however, will require the extension of the existing culvert through Little Duck Creek, resulting in slightly more utility, stream, and floodplain impacts.

QUESTIONS

Considering the discussion above, which alternative would you prefer to use in Segment 2?

Alternative 2C	85%
Alternative 2B	13%
None of the above	2%
No Build Alternative	1%

Closed to responses | 429 Responses

Do you agree with selecting Alternative 2C as the Preferred Alternative for Segment 2?

Yes	87%
Not sure yet	8%
No	5%

Closed to responses | 464 Responses

Please use this space to share any comments you may have regarding the Segment 2 alternatives.

Closed for Comments

A roundabout will improve this intersection for everybody: drivers, cyclists, and pedestrians. Cars will be forced to slow down as they approach the roundabout (instead of accelerating to get through a green light), and traffic will be able to flow at a steady pace, instead of al... See More

2 months ago Reply 23 Agree

The roundabout alternative makes sense to help traffic flow more smoothly and at lower speed, though I agree with the other commenters that this is only a preferred option if the shared-use path is separate from vehicle traffic

2 months ago Reply 15 Agree

A roundabout would actually improve vehicular flow at the Wooster/Red Bank intersection; I frequently find myself waiting at a red light when there is no other conflicting traffic. I would hope that this design physically separates the cycling path from car traffic in the roundab... See More

2 months ago Reply 9 Agree

A roundabout would make the intersection safer for everyone. My only question would be for more info regarding the buffer between the trail and the road. Admittedly I'm not sure whether the "5ft vegetated buffer" means a strip of grass, street trees, concrete planters, or somethi... See More

2 months ago Reply 6 Agree

It'll likely be a strip of grass aka a tree lawn. Street trees would fit, but they will likely want to keep it clear from any obstructions

2 months ago Agree

It would be great to change the intersection to a round-about at the same time. Everyone wins!

Show all comments

Continue

SEGMENT 3

Segment 3 travels roughly along Wooster Road from the end of Segment 2 to the Otto Armleder Memorial Park and Recreation Complex.

Five Build Alternatives were developed for Segment 3. Each alternative starts in the same location where Segment 2 ends and extends the shared use path along an abandoned railroad corridor that travels alongside Duck Creek, west of Wooster Pike and behind the Greif Cincinnati Paperboard and Carustar properties. The alternatives follow different alignments once past the Carustar property. Each Segment 3 Build Alternative is shown on the following map and discussed further below.

(Click map to enlarge)

Segment 3 - Alternative A (Coral line)

Once past the Carustar property, Alternative 3A turns south toward Wooster Pike, crosses the road near Skip's Motorcycle and & Auto Parts, then travels along the south side of Prus Construction's property, past the north side of the large pond (accessible from Otto Armleder Memorial Park), and connects with the north end of the Armleder Loop Trail.

This alternative was evaluated early in the Feasibility Study process but was dismissed following more in-depth consideration for several reasons.

- The proximity and nature of the adjacent businesses on Wooster Pike would require long sections of this path to be fenced in. Fencing on both sides creates security concerns for trail users.
- There is a greater maintenance need for a path in this location, due to accumulation of construction debris from the adjacent properties.

Segment 3 - Alternative B (Violet line)

COMMENTS

Comments submitted by Jan. 4, 2025, will be included in the public input summary portion of the final Wasson Way to Otto Armleder Feasbility Study report. Comments can be submitted through the open houses or to the Project Contact (listed below) by email, mail, or phone.

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DOCUMENTS

DRAFT Wasson Way to Otto Armleder Feasibility Study

- Attachments A and B
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Lebanon, OH 45036-09518

Segment 3 - Alternative B (Violet line)

Once past the Carustar property, Alternative 3B continues along the railroad corridor for an additional 1,500 feet, crossing Duck Creek twice using an existing abandoned railroad bridge and a new bridge that would be constructed near the City Auto Property. From there, the alignment turns south, crosses Wooster Road near the Morrow Gravel property (located on the south side of Wooster) and continues south between the US Bank parking lot and Otto Armleder Memorial Park's north soccer fields to connect with Armleder Road and the park.

- Proposed Length: Approximately 5,581 feet
- Proposed Width: 12 feet wide
- Estimated Cost: $3,900,000

Considerations include:

- Two large retaining walls will be needed along Duck Creek:
  - One would be 250 feet long and slightly less than 8 feet tall.
  - The other would be 235 feet long and slightly less than 8 feet tall.
- The timber tie bridge deck on the existing railroad bridge over Duck Creek will need to be replaced with a reinforced concrete deck.
- The new bridge across Duck Creek would be located within the 100-year floodway and could be submerged during flooding conditions.
- Additional coordination will be needed to avoid or minimize impacts to US Bank's detention basin.
- Pedestrians and bicyclists would conflict with moving vehicles at the Wooster Road crossing.
- The Wooster Road crossing would be an unsignalized, mid-block crossing which has sight-distance issues. Local businesses would need to remove parking and signage from their storefronts to achieve a clear sight distance at the crossing.
- Alternative 3B complies with all ADA requirements.

Segment 3 – Alternative C (Hot pink line)

Similar to Alternative 3B, Alternative 3C continues along the abandoned railroad and crosses to the west side of Duck Creek using the abandoned railroad bridge. It continues for another quarter mile before turning south towards Wooster Road, crosses Duck Creek again using a new bridge and follows Wooster Road south before crossing the street using a new crosswalk located just north of the entrance to the US Bank property. From there, the alignment continues east along the parking lot before turning south once again to connect with Armleder Road using an alignment that passes between the US Bank property and the park's north soccer fields.

- Proposed Length: Approximately 6,443 feet
- Proposed Width: 12 feet wide
- Estimated Cost: $4,050,000

Considerations include:

- The timber tie bridge deck on the existing railroad bridge over Duck Creek will need to be replaced with a reinforced concrete deck.
- The new bridge across Duck Creek would be located within the 100-year floodway and could be submerged during flooding conditions.
- Additional coordination will be needed to avoid or minimize impacts to US Bank's detention basin.
- Pedestrians and bicyclists would conflict with moving vehicles at the Wooster Road crossing.
- The Wooster Road crossing would be an unsignalized, mid-block crossing and due to the curve of the road, sight distance is a concern.

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- The Wooster Road crossing would be an unsignalized, mid-block crossing and due to the curve of the road, sight distance is a concern.
- Alternative 3C complies will all ADA requirements.

Segment 3 – Alternative D (Turquoise line)

Alternative 3D follows the same alignment as Alternative 3C with one exception. Where Alternative 3C turns sharply south to cross the Duck Creek, Alternative 3D continues generally straight (southwest) and crosses Duck Creek approximately 250 feet downstream from the proposed crossing for Alternative 3C. It rejoins the Alternative 3C alignment at the new crosswalk at Wooster Road and the US Bank property.

- Proposed Length: Approximately 6,420 feet
- Proposed Width: 12 feet wide
- Estimated Cost: $4,350,000

Considerations include:

- A 250-foot retaining wall, approximately 8 feet tall, will be needed as the trail nears Duck Creek, just before approaching the proposed new bridge.
- The timber tie bridge deck on the existing railroad bridge over Duck Creek will need to be replaced with a reinforced concrete deck.
- The new bridge across Duck Creek would be located within the 100-year floodway and could be submerged during flooding conditions.
- Additional coordination will be needed to avoid or minimize impacts to US Bank's detention basin.
- Pedestrians and bicyclists would conflict with moving vehicles at the Wooster Road crossing.
- The Wooster Road crossing would be an unsignalized, mid-block crossing and due to the curve in the road, sight distance is a concern.
- Alternative 3D complies will all ADA requirements.

Segment 3 – Alternative E (Orange line)

Alternative 3E follows the same alignment as Alternatives 3C and 3D but continues further southwest along the railroad corridor and crosses Duck Creek adjacent to Linwood Park. Alternative 3E then travels along the west side of Wooster Road and crosses the road at the existing signalized intersection with Armleder Road. The trail continues along the south side of Armleder Road and connects with the Otto Armleder Memorial Park Trail once inside the park.

- Proposed Length: Approximately 6,402 feet
- Proposed Width: 12 feet wide
- Estimated Cost: $5,850,000

Considerations include:

- Two 8- to 10-feet-tall retaining walls of approximately the same length and totaling roughly 480 feet will be needed as the shared use path passes alongside Duck Creek.
- The timber tie bridge deck on the existing railroad bridge over Duck Creek will need to be replaced with a reinforced concrete deck.
- The new bridge across Duck Creek would be located within the 100-year floodway and could be submerged during flooding conditions.
- Two large retaining walls will be needed along Duck Creek:
  - One would be 250 feet long, and slightly less than 8 feet tall.
  - The other would be 235 feet long and slightly less than 8 feet tall.

- Pedestrians and bicyclists would conflict with moving vehicles at multiple locations: the Wooster Road crossing and four commercial entrances.
- The Wooster Road crossing would be signalized using existing traffic signals.

SEGMENT 3 ALTERNATIVE COMPARISON

Safety

All alternatives in this segment include the construction of a shared use trail that would be physically separated from vehicular traffic with a five-foot vegetative buffer. However, all alternatives for this segment do include one crossing of Wooster Road, where conflict with traffic is possible. Despite this, the alternatives presented are still projected to be safer for bicyclists and pedestrians than the No Build Alternative. The paths would be very low stress and suitable for all ages and abilities. The safety differences between the options evaluated include:

Alternative 3A
Alternative 3A was dismissed and not evaluated for safety due to potential conflict with neighboring businesses and potential safety concerns.

Alternative 3B
Pedestrians and bicyclists would conflict with moving vehicles at the Wooster Road crossing. The Wooster Road crossing would also be an unsignalized, mid-block crossing which has sight-distance issues. Local businesses would need to remove parking and signage from their storefronts to achieve a clear sight distance at the crossing.

Alternative 3C
Pedestrians and bicyclists would conflict with moving vehicles at the Wooster Road crossing. The Wooster Road crossing would be an unsignalized, mid-block crossing and due to the curve of the road, sight distance is a concern.

Alternative 3D
Pedestrians and bicyclists would conflict with moving vehicles at the Wooster Road crossing. The Wooster Road crossing would be an unsignalized, mid-block crossing and due to the curve in the road, sight distance is a concern.

Alternative 3E
Pedestrians and bicyclists would conflict with moving vehicles at multiple locations: the Wooster Road crossing and four commercial entrances. The Wooster Road crossing would be signalized using existing traffic signals.

No Build
There would be no improvements for pedestrians and bicyclists. Anyone riding a bike would continue to share lanes with vehicular traffic traveling on a road with a speed limit of 35 mph. As a result, cycling in the area will remain high stress for inexperienced riders. While there is a sidewalk on Wooster Road, portions travel alongside the road without a buffer. As a result, pedestrians and bicyclists must cross the road or travel next to vehicular traffic and are at greater risk than when traveling along roads using a dedicated shared use path.

Environmental Impacts

Due to the need to construct and/or enhance existing crossings of Duck Creek, Alternatives 3B, 3C, 3D, and 3E would all affect portions of Duck Creek. Alternatives 3B, 3C, and 3D would also have some wetland impacts:

- Alternative 3B – approximately 110 linear feet; 0.09 acres of wetland impacts
- Alternative 3C – approximately 164 linear feet; 0.02 acres of wetland impacts
- Alternative 3D – approximately 186 linear feet; 0.02 acres of wetland impacts
- Alternative 3E – approximately 139 linear feet; no wetland impacts

Construction limits for Alternative 3B through 3E are also expected to affect some areas that are suitable habitat for federally-listed threatened or endangered bats:

- Alternative 3B – approximately 2.62 acres
- Alternative 3C – approximately 2.79 acres
- Alternative 3D – approximately 2.95 acres
- Alternative 3E – approximately 2.85 acres

Other Considerations

The chart below summarizes the results of studies focused on impacts of the No Build Alternative and Alternatives 3B through 3E to Right-of-Way; ecological resources; floodplains/floodways; cultural resources (National Register of Historic Places); Section 4(f)/6(f) resources (such as parks); hazardous materials; drinking water; and community impacts.

Green highlights indicate issues of low concern; yellow highlights indicate moderate concern; red highlights identify issues of higher concern.

Shared Use Path Evaluation Matrix: Segment 3

Wasson Way Trail Connection to Otto Armleder Park | PID 113603

CATEGORY	PRELIMINARY ALTERNATIVES				
	NO BUILD ALT	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D	ALTERNATIVE E
PURPOSE AND NEED					
Improve bicycle and pedestrian connectivity between Wasson Way Trail and Otto Armleder Park	No	Yes	Yes	Yes	Yes
SAFETY ANALYSIS					
Safety Issues	No bicycle facilities exist in this corridor. Bicycle traffic alongside vehicular traffic on Wooster Road is a safety concern.	One pedestrian/bicycle conflict point with vehicular traffic (at mid-block crossing)	One pedestrian/bicycle conflict point with vehicular traffic (at mid-block crossing)	One pedestrian/bicycle conflict point with vehicular traffic (at mid-block crossing)	Five pedestrian/ bicycle conflict points with vehicular traffic (at intersections and driveway entrances)
Bicycle Level of Traffic Stress	High Stress	Low Stress	Low Stress	Low Stress	Low Stress
ENGINEERING ISSUES					
Length of Shared Use Path	--	1.0 mile	1.2 miles	1.2 miles	1.2 miles
Width of Shared Use Path	--	12 feet	12 feet	12 feet	12 feet
Design Speed	--	20 mph	20 mph	20 mph	20 mph
Trail Design Issues	None	None	None	None	None
Structures Required	None	1 existing railroad bridge modified, 1 new bridge structure required, 2 retaining walls required	1 existing railroad bridge modified, 1 new bridge structure required	1 existing railroad bridge modified, 1 new bridge structure required, 1 retaining wall required	1 existing railroad bridge modified, 1 new bridge structure required, 2 retaining walls required
Utility Relocations/Issues	None	None	Impacts to overhead electric lines likely	Minor impacts to gas line anticipated	None
RIGHT-OF-WAY IMPACTS					
Additional Right-of-Way Required	None	5.41 acres	4.77 acres	5.05 acres	4.26 acres
ECOLOGICAL RESOURCES					
Streams	None	110 linear ft. of impact	164 linear ft. of impact	186 linear ft. of impact	139 linear ft. of impact
Wetlands	None	0.09 acre of impact	0.02 acre of impact	0.02 acre of impact	None
Threatened & Endangered Species	None	2.62 ac. of tree clearing	2.79 ac. of tree clearing	2.95 ac. of tree clearing	2.85 ac. of tree clearing
FLOODPLAIN / FLOODWAY IMPACTS					
100 Year Floodplain Encroachment	None	2.95 acres	1.91 acres	1.91 acres	1.48 acres
Floodway Encroachment	None	1.38 acres (CLOMR Anticipated)	1.24 acres (CLOMR Anticipated)	1.17 acres (CLOMR Anticipated)	1.27 acres (CLOMR Anticipated)
Impact of New Bridge on FEMA Flood Hazard Area	None	Flood elevation rise of 2.08 feet; extends 1.0 mile upstream	Flood elevation rise of 0.81 feet; extends 0.6 mile upstream	Flood elevation rise of 0.38 feet; extends <300 feet upstream	Flood elevation rise of 0.90 feet; extends <300 feet upstream
Anticipated Number of Affected Property Owners	None	10 properties	11 properties	6 properties	6 properties
CULTURAL RESOURCES					
NHRP-Listed Districts	None	None	None	None	None
NHRP-Listed Sites	None	None	None	None	None
SECTION 4(f) / 6(f) RESOURCES					
Section 4(f)/6(f) Impacts	None	Otto Armleder Park (minor)	Otto Armleder Park (minor)	Otto Armleder Park (minor)	Otto Armleder Park (minor), Linwood Hutton Recreational Area (minor)
HAZARDOUS MATERIALS					
Regulated Materials Review	None	Alignment in the vicinity of 3 UST, 3 LUST, and 2 RCRA records. Permit may be required for work in vicinity of landfill (H. Hafner and Sons, Inc)	Permit may be required for work in vicinity of landfill (H. Hafner and Sons, Inc)	Permit may be required for work in vicinity of landfill (H. Hafner and Sons, Inc)	Permit may be required for work in vicinity of landfill (H. Hafner and Sons, Inc)
DRINKING WATER					
Sole Source Aquifer	None	Project work is within the boundaries of a sole source aquifer	Project work is within the boundaries of a sole source aquifer	Project work is within the boundaries of a sole source aquifer	Project work is within the boundaries of a sole source aquifer
COMMUNITY IMPACTS					
Environmental Justice (EJ) Populations	None	Improves pedestrian/ bicycle connectivity for EJ populations	Improves pedestrian/ bicycle connectivity for EJ populations	Improves pedestrian/ bicycle connectivity for EJ populations	Improves pedestrian/ bicycle connectivity for EJ populations
PRELIMINARY COST ESTIMATES					
Estimated Construction Costs	--	$3.9 million	$4.1 million	$4.4 million	$5.9 million
CONCLUSION					
Recommendation	Not Recommended	Not Recommended	Not Recommended	Not Recommended	Recommended

Alternative 3A was not evaluated because of its proximity to adjacent businesses which would require fencing on both sides of the trail and create security concerns for trail users.

CLOMR: Conditional Letter of Map Revisions | NHRP: National Register of Historic Places | UST: Underground Storage Tank
LUST: Leaking Underground Storage Tank | RCRA: Resource Conservation Recovery Act

(Click map to enlarge)

* Level of Traffic Stress (LTS) - LTS for bicycles is determined by the posted speed of the roadway, daily volume of the roadway (vehicles per day), the number of vehicular lanes and the type of separation between vehicular traffic and bicyclists. There are four (4) levels of traffic stress:

- LTS 1 – Very low stress, suitable for all ages and abilities
- LTS 2 – Low stress, comfortable for most adults
- LTS 3 – Medium stress, ridden by enthused/confident cyclists
- LTS 4 – High stress, ridden by strong/fearless cyclists.

SEGMENT 3 PRELIMINARY RECOMMENDATION

Based on the results of the studies conducted, ODOT has identified **Alternative 3E** as the preliminary Preferred Alternative for Segment 3, and ODOT expects to recommend it for further development, pending review of public comments.

Reasons why Alternative 3E has been selected a preliminary Preferred Alternative include:

- Safety – it is the only alternative for Segment 3 that uses a signalized crossing to cross Wooster Road.
- It minimizes the potential conflicts with existing industrial and construction related businesses along Wooster Road.
- It does not have any wetland impacts, and it avoid impacts to US Bank's detention basin.
- It would be impacted less by flooding events when compared with the other alternatives.
- Because this alternative travels near Linwood Park, there is potential opportunity for a connecting trail to be built between the trail and park.
- There is future potential to provide access to the shared use trail from homes and businesses along Eastern Avenue, further improving regional connectivity.

QUESTIONS

Considering the discussion above, which alternative would you prefer to use in Segment 3?

Alternative 3E	84%	Alternative 3B	8%
Alternative 3D	3%	Alternative 3C	2%
No Build Alternative	2%	None of the above	1%

Closed to responses| 399 Responses

Do you agree with selecting Alternative 3E as the Preferred Alternative for Segment 3?

Yes	89%
Not sure yet	7%
No	4%

Closed to responses| 432 Responses

Please use this space to share any comments you may have regarding the Segment 3 alternatives.

Closed for Comments

As a cyclist, 3E offers the safest crossing alternative with a signalized crossing to Wooster Road.

2 months ago Reply 23 Agree

The mid-block crossings of Wooster Road in Alternatives 3B-D would be very dangerous, as cars are used to driving well above the posted speed limit along those stretches of road.

2 months ago Reply 21 Agree

This is a good consideration, "posted speed limit" and "actual speed of traffic" are not always the same

2 months ago 9 Agree

The path along Duck Creek will provide an isolated and scenic walk/ride along the creek and forest and isolated from noise of traffic along Wooster road for the longest stretch possible.

2 months ago Reply 12 Agree

The signalized crossing is a must on safety grounds, so 3E should be the only option on that alone. I also enjoy the potential Linwood park connection.

2 months ago Reply 5 Agree

Please consider traffic calming measures on Wooster regarding of choice selected

Show all comments

Continue

NEXT STEPS

During the next few months, ODOT and the City of Cincinnati will review the input received from the public through this virtual engagement opportunity. Feedback received will be used to help make final decisions regarding which of the proposed alternatives will be advanced for further study and development.

Once the preferred alternatives for each segment are confirmed, the Draft Wasson Way to Otto Armleder Feasibility Study will be finalized and the project's focus will turn toward identifying funding for construction. When construction funding has been secured, the project will advance into detailed design and later, construction.

(Click map to enlarge)

QUESTIONS

Is there anything we should keep in mind as planning for the Wasson–Armleder Shared Use Path advances in development?

Closed for Comments

Current use of Wasson Way from Montgomery Rd. to Ault park numbers in the range of 1000-3000 per day, with higher use on weekends. People who live close to the trail who might not otherwise get out and exercise, use it because it's convenient and safe. Extending it all the way t... See More

2 months ago — Reply — 29 Agree

While ambitious, this is a very welcomed aspect of the Eastern Corridor project. Here's to getting it done as soon as is practicable. Cheers.

2 months ago — Reply — 24 Agree

I have lived in this area for 30 years and have wished many, many times that something like this could happen. Please, please move ahead!

2 months ago — Reply — 18 Agree

I live next to Wasson Way, but drive when I go to Armleder/Lunken for safety reasons. Connecting our trails will increase recreation and transportation options for everyone in the region. Can't wait!

2 months ago — Reply — 15 Agree

I am always intrigued by the possibility of extending the path from the end of Section 1 toward and through the area by the Mariemont community garden plots area eventually connecting to the the Little Miami Trail at 50West, a sort of

Show all comments

Continue

COMMENTS

Comments submitted by Jan. 4, 2025, will be included in the public input summary portion of the final Wasson Way to Otto Armleder Feasbility Study report. Comments can be submitted through the open houses or to the Project Contact (listed below) by email, mail, or phone.

PROJECT CONTACT

Katherine DeStefano, P.E.
Senior Transportation Engineer
ODOT District 8
505 South State Route 741
Lebanon, OH 45036
Katherine.DeStefano@dot.ohio.gov
(513) 933-6583

DOCUMENTS

DRAFT Wasson Way to Otto Armleder Feasibility Study

- Attachments A and B
- Attachment C Part 1
- Attachment C Part 2
- Attachments D through I

Project Fact Sheet

Printable Comment Form

ACCESS DIFFICULTIES

We want to ensure that everyone has equal opportunity to review project information, provide comment, and ask questions. If you have difficulty accessing materials in this Virtual Open House, we will email or mail copies of the content and exhibits, or can discuss them by phone or in person. Requests for these alternate review methods should be submitted to Anthony Pankala using one of the following methods:

Mail
Anthony Pankala, P.E.
ODOT – District 8
505 South State Route 741
Lebanon, OH 45036-09518

Email
Anthony.Pankala@dot.ohio.gov

Phone
513.933.6640

*The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried-out by ODOT pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated December 14, 2020, and executed by FHWA and ODOT. For more information, please visit ODOT's NEPA Assignment Portal by clicking **here**.*

THE EASTERN CORRIDOR PROGRAM

The Wasson-Armleder Shared Use Trail is part of the Eastern Corridor Program. The Eastern Corridor Program is a series of transportation improvement projects that have been or are being planned across the eastern half of the Greater Cincinnati region to:

- Reduce vehicular congestion
- Improve mobility and access for motorists, bicyclists, and pedestrians
- Support economic development

The shared use trail will be located in Segments II and III of the Eastern Corridor, which extends between the Red Bank Corridor (Segment I) and the I-275/SR 32 Interchange in the Eastgate area of Clermont County (Segment IV). Segments II and III include US 50/Wooster Pike, SR 125 (Beechmont Avenue), and SR 32. This area is highlighted in green in the map below.

Map of the Eastern Corridor study area (click to enlarge).

Development of Proposed Transportation Improvements

Within Segments II and III, ODOT worked in close coordination with local community representatives, planners, and interest groups to evaluate and prioritize transportation needs, and to develop and evaluate possible solutions that:

- Focus on improving the transportation network
- Balance transportation needs with community values and available resources

After receiving input from the community following a 2018 public meeting, ODOT released the *2019 Conceptual Alternatives Implementation Plan for Eastern Corridor Segments II and III* which identified and prioritized 68 recommended transportation improvement projects for the Segments II and III study area.

Multiple projects were recommended to make walking and biking easier and safer. The proposed Wasson–Armleder Shared Use Path is an example of how those recommendations are being brought from concept to reality.

Before you go, we have just a few additional questions for you. Your responses will be extremely helpful in helping us ensure the fairness and equity of ODOT's public involvement process. Your answers will be kept confidential and separate from any personally identifiable information so that your responses will remain anonymous. These questions are in no particular order.

COMMENTS

Comments submitted by Jan. 4, 2025, will be included in the public input summary portion of the final Wasson Way to Otto Armleder Feasbility Study report. Comments can be submitted through the open houses or to the Project Contact (listed below) by email, mail, or phone.

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DRAFT Wasson Way to Otto Armleder Feasibility Study

Attachments A and B

Attachment C Part 1

Attachment C Part 2

Attachments D through I

et

Printable Comment Form

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QUESTIONS

How did you hear about this Virtual Open House? (Check all that apply.)

Social media	44%	Email	31%
Word-of-mouth	15%	Other	8%
Yard Signs	7%	Mailer	6%
Community/organization newsletter	6%	Newspaper ad	4%
Flyers	2%	TV/Radio	2%
ODOT website	1%		

Closed to responses| 382 Responses

What is your race?

White	88%	I prefer not to say	8%
Hispanic or Latino	1%	Asian	1%
Black or African American	1%	American Indian or Alaskan Native	0%
Native Hawaiian or Other Pacific Islander	0%	I prefer to self-describe	0%

Closed to responses| 344 Responses

What is the primary language spoken in your home?

English	99%
Spanish	1%
Other	0%

Closed to responses| 347 Responses

How many people live in your household?

1 - 2	68%
3 - 5	30%
6+	2%

Closed to responses| 342 Responses

What are the age ranges of those living in your household? (Check all that apply.)

19 - 44	55%
45 - 64	37%
Under 18	23%
65+	22%

Closed to responses| 340 Responses

What is your annual household income?

$150,000 +	45%	$100,000 - $149,999	30%
$75,000 - $99,999	12%	$25,000 - $49,999	5%
$50,000 - $74,999	5%	$10,000 - $24,999	1%
Less than $10,000	1%		

Closed to responses| 313 Responses

What is the highest level of education completed by members of your household?

College/university	93%	Other	5%
High school	2%	Middle school	0%
No	0%	Elementary school	0%

Closed to responses | 338 Responses

Please suggest additional ways you think ODOT can improve the inclusiveness of our public outreach efforts.

Closed for Comments

More engagement about ways that we can reduce car-dependent infrastructure (highway removal, road diets, etc)

2 months ago — 18 Agree

Have there been qr codes to this open house in laminated paper posted around the Wasson Way trail? I think that if that was the case it would get people that use the trail to make more comments on the proposed plans. Maybe that has already been done but I would assume that is a g... See More

2 months ago — 10 Agree

ODOT is primarily interested in building more highway lanes, especially through low-income neighborhoods. They have endless sessions of 'community engagement' when it comes to bike infrastructure and never get anything done. But they can spend 1000X the money on a new highway ... See More

2 months ago — 10 Agree

The more places I can go on a bicycle or e-bike, the less traffic I'm creating, which seems like a really smart investment on ODOT's part, since bike infrastructure is pennies on the dollar typically spent on vehicle infrastructure.

2 months ago — 4 Agree

Public outreach via reddit.com/r/cincinnati is an excellent way to get immediate quality feedback from a motivated and opinionated user base. Please continue to update (a thing

Show all comments

Submit Survey

Information Boards
(In Person Open House)

Department of Transportation

New Shared Use Path

Wasson Way Trail Connection to Otto Armleder Park | PID 113603

The City of Cincinnati, in cooperation with the Ohio Department of Transportation (ODOT), is proposing a new shared use path connection from the Wasson Way Trail to Otto Armleder Park in the Village of Fairfax and the City of Cincinnati in southeast Hamilton County.

The project is divided into the following sections from north to south:

Segment 1: Wasson Way Trail (at Ault Park) to Wooster Pike
Segment 2: Crosses the Norfolk Southern Railroad using the Wooster Road bridge near Red Bank Road
Segment 3: Wooster Road bridge to the Otto Armleder Memorial Park and Recreation Complex at Armleder Road

PROJECT PURPOSE

The purpose of the project is to address bicycle and pedestrian connectivity between the Wasson Way Trail and other regional trails within the CROWN (Cincinnati Riding or Walking Network).

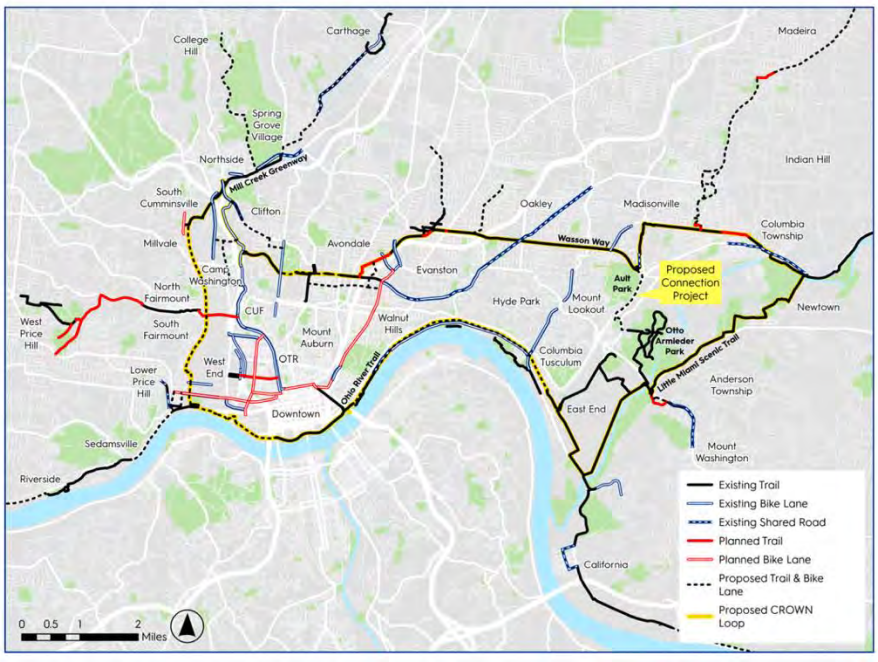
PROJECT NEED

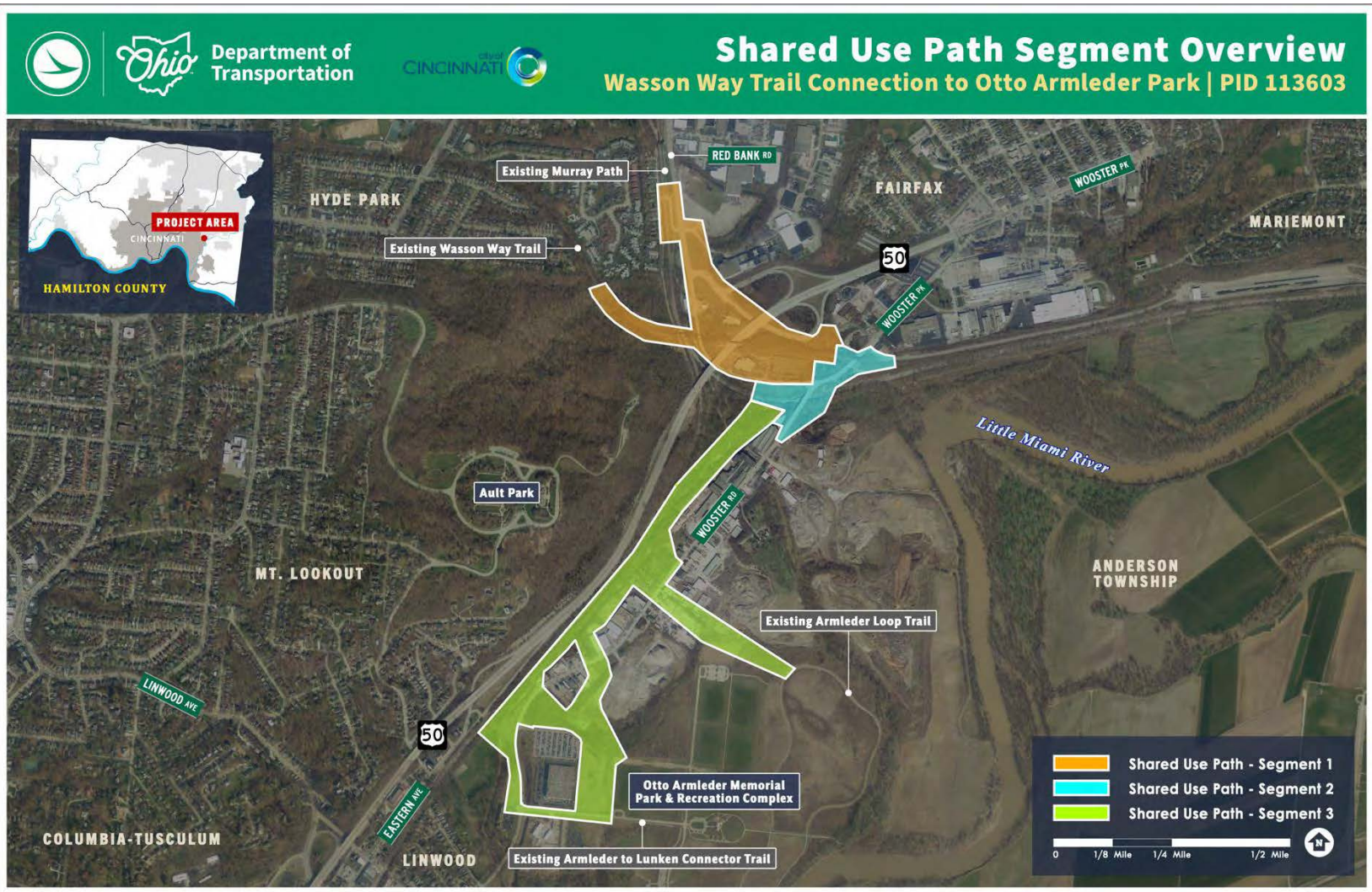
This project is needed to provide a safe bicycle and pedestrian connection between the Wasson Way Trail and the Otto Armleder Park Memorial Trail.

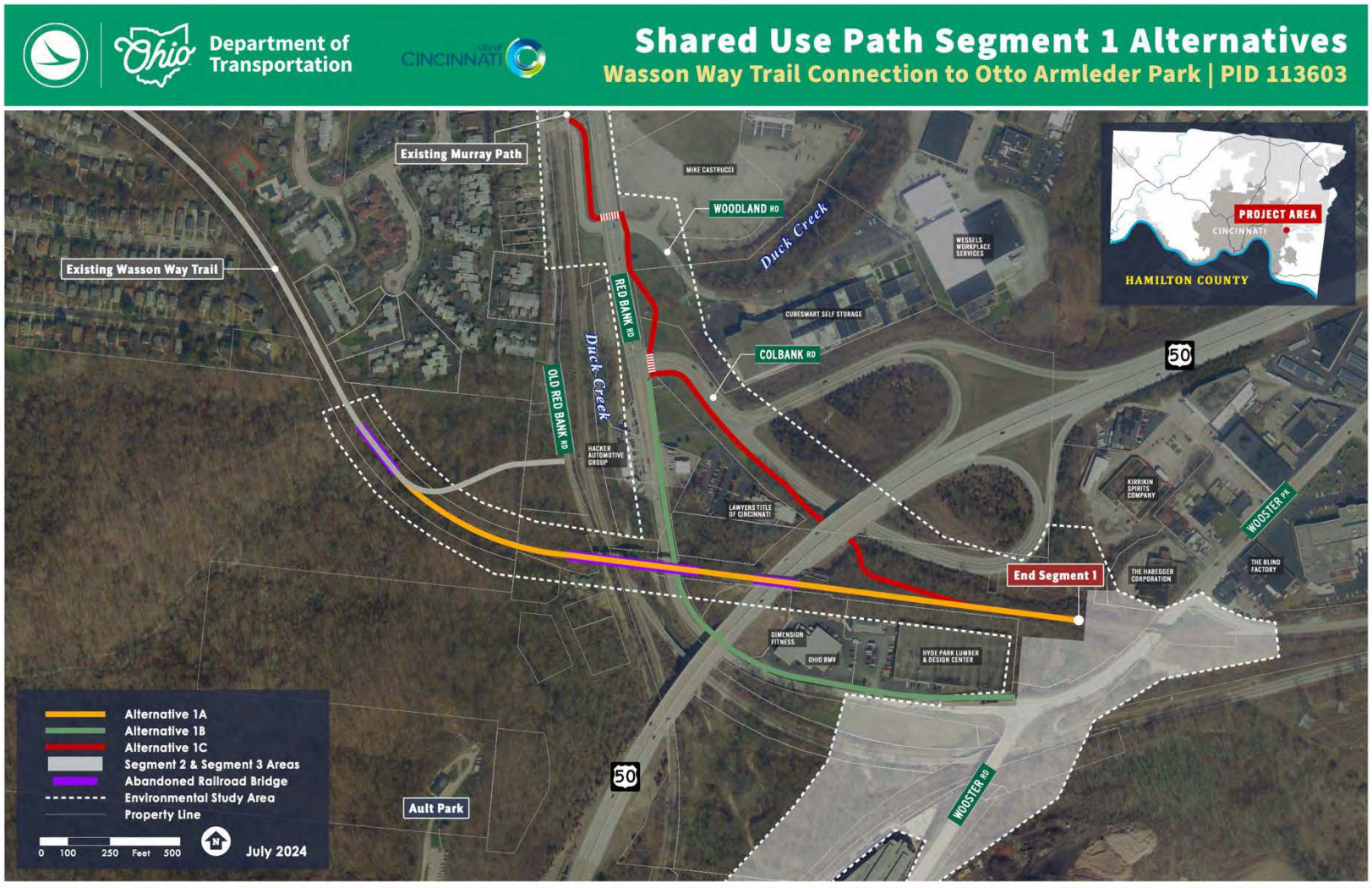
A Vital Link in the CROWN

The proposed trail connection will be part of the proposed CROWN (Cincinnati Riding or Walking Network) — a planned 34-mile urban trail loop around Cincinnati.

When complete, CROWN will connect regional trails currently under development including Wasson Way, Ohio River Trail East, Little Miami Scenic Trail, Ohio River Trail West, Mill Creek Greenway Trail, and Canal Bikeway — linking 54 communities in the Greater Cincinnati area.




Department of Transportation
CINCINNATI
Shared Use Path Segment Overview
Wasson Way Trail Connection to Otto Armleder Park | PID 113603
PROJECT AREA
CINCINNATI
HAMILTON COUNTY
Existing Murray Path
RED BANK RD
HYDE PARK
FAIRFAX
WOOSTER PK
MARIEMONT
Existing Wasson Way Trail
50
WOOSTER PK
Little Miami River
Ault Park
WOOSTER RD
MT. LOOKOUT
ANDERSON TOWNSHIP
Existing Armleder Loop Trail
LINWOOD AVE
50
Otto Armleder Memorial Park & Recreation Complex
EASTERN AVE
COLUMBIA-TUSCULUM
LINWOOD
Existing Armleder to Lunken Connector Trail
Shared Use Path - Segment 1
Shared Use Path - Segment 2
Shared Use Path - Segment 3
0
1/8 Mile
1/4 Mile
1/2 Mile


Department of Transportation
CINCINNATI
Shared Use Path Segment 1 Alternatives
Wasson Way Trail Connection to Otto Armleder Park | PID 113603
Existing Murray Path
Existing Wasson Way Trail
MIKE CASTRUCCI
WOODLAND RD
Duck Creek
WESSELS WORKPLACE SERVICES
CUBESMART SELF STORAGE
RED BANK RD
COLBANK RD
OLD RED BANK RD
HACKER AUTOMOTIVE GROUP
LAWYERS TITLE OF CINCINNATI
PROJECT AREA
CINCINNATI
HAMILTON COUNTY
50
KIRRIKIN SPIRITS COMPANY
WOOSTER PK
THE HABEGGER CORPORATION
THE BLIND FACTORY
End Segment 1
DIMENSION FITNESS
OHIO BMV
HYDE PARK LUMBER & DESIGN CENTER
WOOSTER RD
Ault Park
Alternative 1A
Alternative 1B
Alternative 1C
Segment 2 & Segment 3 Areas
Abandoned Railroad Bridge
Environmental Study Area
Property Line
0 100 250 Feet 500
N
July 2024

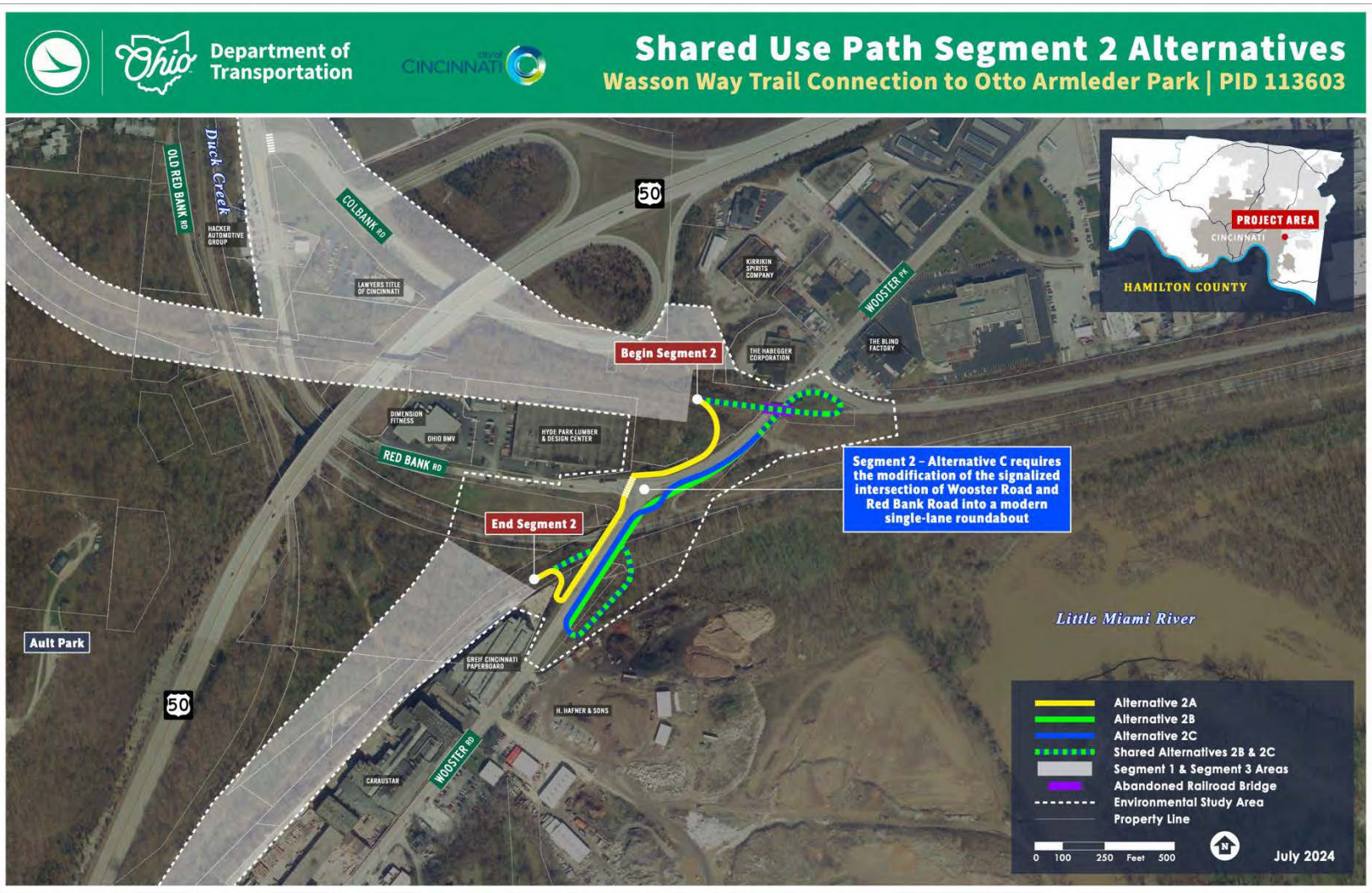
Shared Use Path Evaluation Matrix: Segment 1

Wasson Way Trail Connection to Otto Armleder Park | PID 113603

CATEGORY	PRELIMINARY ALTERNATIVES		
	NO BUILD ALTERNATIVE	ALTERNATIVE A	ALTERNATIVE C
PURPOSE AND NEED			
Improve bicycle and pedestrian connectivity between Wasson Way Trail and Otto Armleder Park	No	Yes	Yes
SAFETY ANALYSIS			
Safety Issues	No bicycle facilities exist in this corridor. Bicycle traffic alongside vehicular traffic on Wooster Road is a safety concern	No pedestrian/bicycle conflict points with vehicular traffic.	Three pedestrian/bicycle conflict points with vehicular traffic (at intersections and driveway entrance)
Bicycle Level of Traffic Stress	High Stress	Low Stress	Low Stress
ENGINEERING ISSUES			
Length of Shared Use Path	--	0.45 mile	0.55 mile
Width of Shared Use Path	--	12 feet	10 feet and 12 feet
Design Speed	--	20 mph	20 mph
Trail Design Issues	--	None	None
Structures Required	None	2 existing railroad bridges to be modified	1 retaining wall required
Utility Relocations/Issues	None	None	Electric relocations required. Potential conflict with electric transmission easement
RIGHT-OF-WAY IMPACTS			
Additional Right-of-Way Required	None	0.01 acres	0.97 acres
ECOLOGICAL RESOURCES			
Streams	No Impact	26 linear feet of impact	No Impact
Wetlands	No Impact	No Impact	No Impact
Threatened & Endangered Species	No Impact	0.25 acre of tree clearing	0.9 acre of tree clearing
FLOODPLAIN / FLOODWAY IMPACTS			
100 Year Floodplain Encroachment	None	None	None
Floodway Encroachment	None	None	None
CULTURAL RESOURCES			
NHRP-Listed Districts	None	None	None
NHRP-Listed Sites	None	None	None
SECTION 4(f) / 6(f) RESOURCES			
Section 4(f)/6(f) Impacts	None	Ault Park (minor)	None
HAZARDOUS MATERIALS			
Regulated Materials Review	None	None	Alignment in the vicinity of 3 UST, 2 LUST, and 1 RCRA record.
DRINKING WATER			
Sole Source Aquifer	None	Project work is within the boundaries of a sole source aquifer. Restrictions on refueling and similar activities would be implemented during construction to protect the groundwater from spills of fuels, oils, or chemicals.	Project work is within the boundaries of a sole source aquifer. Restrictions on refueling and similar activities would be implemented during construction to protect the groundwater from spills of fuels, oils, or chemicals.
COMMUNITY IMPACTS			
Environmental Justice (EJ) Populations	None	Improves pedestrian/bicycle connectivity for EJ populations	Improves pedestrian/bicycle connectivity for EJ populations
PRELIMINARY COST ESTIMATES			
Estimated Construction Costs	--	$7.1 million	$2.7 million
CONCLUSION			
Recommendation	Not Recommended	Recommended as Preferred Alternative	Not Recommended

Alternative 1B was not evaluated due to insufficient width for 12-foot wide shared use path between Red Bank Road and existing features (railroad trestle, Duck Creek floodwalls).

NHRP: National Register of Historic Places | UST: Underground Storage Tank | LUST: Leaking Underground Storage Tank | RCRA: Resource Conservation Recovery Act


Department of Transportation
Ohio
CINCINNATI
Shared Use Path Segment 2 Alternatives
Wasson Way Trail Connection to Otto Armleder Park | PID 113603
Duck Creek
OLD RED BANK RD
HACKER AUTOMOTIVE GROUP
COLBANK RD
LAWYERS TITLE OF CINCINNATI
50
KIRRIKIN SPIRITS COMPANY
WOOSTER PK
THE HABEGGER CORPORATION
THE BLIND FACTORY
Begin Segment 2
DIMENSION FITNESS
OHIO BMV
HYDE PARK LUMBER & DESIGN CENTER
RED BANK RD
Segment 2 – Alternative C requires the modification of the signalized intersection of Wooster Road and Red Bank Road into a modern single-lane roundabout
End Segment 2
Ault Park
Little Miami River
GREIF CINCINNATI PAPERBOARD
H. HAFNER & SONS
50
CARAUSTAR
WOOSTER RD
PROJECT AREA
CINCINNATI
HAMILTON COUNTY
Alternative 2A
Alternative 2B
Alternative 2C
Shared Alternatives 2B & 2C
Segment 1 & Segment 3 Areas
Abandoned Railroad Bridge
Environmental Study Area
Property Line
0 100 250 Feet 500
N
July 2024

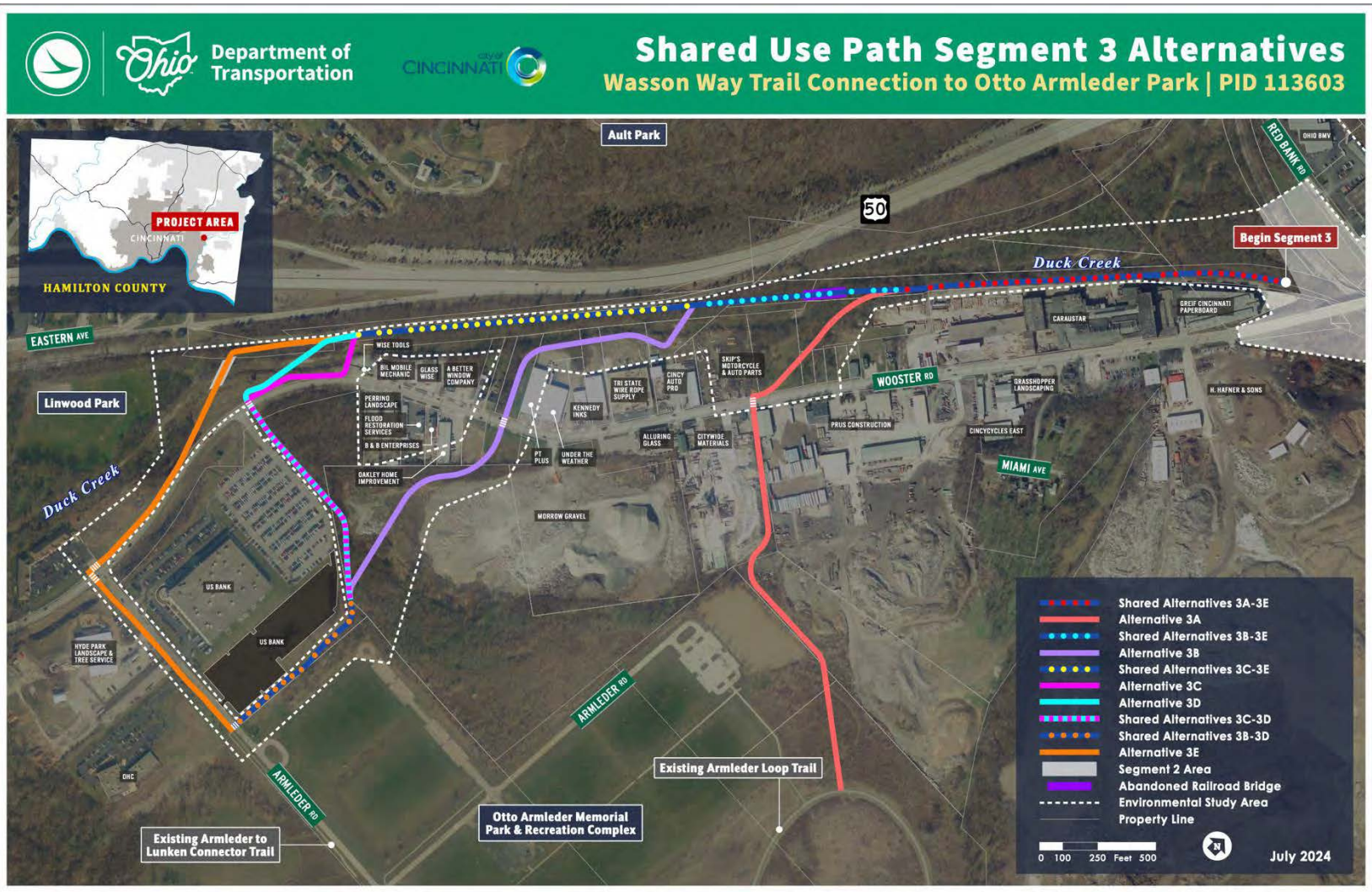
Shared Use Path Evaluation Matrix: Segment 2

Wasson Way Trail Connection to Otto Armleder Park | PID 113603

CATEGORY	PRELIMINARY ALTERNATIVES		
	NO BUILD ALTERNATIVE	ALTERNATIVE B	ALTERNATIVE C
PURPOSE AND NEED			
Improve bicycle and pedestrian connectivity between Wasson Way Trail and Otto Armleder Park	No	Yes	Yes
SAFETY ANALYSIS			
Safety Issues	No bicycle facilities exist in this corridor. Bicycle traffic alongside vehicular traffic on Wooster Road is a safety concern	No pedestrian/bicycle conflict points with vehicular traffic.	No pedestrian/bicycle conflict points with vehicular traffic.
Bicycle Level of Traffic Stress	High Stress	Low Stress	Low Stress
ENGINEERING ISSUES			
Length of Shared Use Path	--	0.5 mile	0.5 mile
Width of Shared Use Path	--	12 feet	12 feet
Design Speed	--	12 mph	12 mph
Trail Design Issues	--	Tight curve requires slower speeds	Tight curve requires slower speeds
Structures Required	None	1 existing railroad bridge modified 1 highway bridge widened 2 retaining walls required	1 existing railroad bridge modified 1 highway bridge modified (no highway bridge widening required) 2 retaining walls required
Utility Relocations/Issues	None	Impacts to storm and sanitary sewers anticipated	Impacts to storm and sanitary sewers anticipated. Relocation of electric distribution pole, underground water and gas lines expected
RIGHT-OF-WAY IMPACTS			
Additional Right-of-Way Required	None	0.9 acre	1.66 acres
ECOLOGICAL RESOURCES			
Streams	None	None	105 linear feet of impact
Wetlands	None	0.01 acre of impact	0.01 acre of impact
Threatened & Endangered Species	None	0.5 acre of tree clearing	0.6 acre of tree clearing
FLOODPLAIN / FLOODWAY IMPACTS			
100 Year Floodplain Encroachment	None	1.38 acres	1.51 acres
Floodway Encroachment	None	0.11 acre (Additional hydraulic analysis required)	0.21 acres (Additional hydraulic anaysis required)
CULTURAL RESOURCES			
NHRP-Listed Districts	None	Village of Mariemont Historic District	Village of Mariemont Historic District
NHRP-Listed Sites	None	None	None
SECTION 4(f) / 6(f) RESOURCES			
Section 4(f)/6(f) Impacts	None	None	None
HAZARDOUS MATERIALS			
Regulated Materials Review	None	Permit may be required for work in vicinity of landfill (H. Hafner and Sons, Inc)	Permit may be required for work in vicinity of landfill (H. Hafner and Sons, Inc)
DRINKING WATER			
Sole Source Aquifer	None	Project work is within the boundaries of a sole source aquifer. Restrictions on refueling and similar activities would be implemented during construction to protect the groundwater from spills of fuels, oils, or chemicals.	Project work is within the boundaries of a sole source aquifer. Restrictions on refueling and similar activities would be implemented during construction to protect the groundwater from spills of fuels, oils, or chemicals.
COMMUNITY IMPACTS			
Environmental Justice (EJ) Populations	None	Improves pedestrian/bicycle connectivity for EJ populations	Improves pedestrian/bicycle connectivity for EJ populations
PRELIMINARY COST ESTIMATES			
Estimated Construction Costs	--	$6.4 million	$5.6 million
CONCLUSION			
Recommendation	Not Recommended	Not Recommended	Recommended as Preferred Alternative

Alternative 2A was not evaluated because the required widening of the Wooster Road bridge would result in extensive impacts to railroad infrastructure beneath the bridge (culverts, retaining walls, etc.). Furthermore, slopes designed to minimize impacts to adjacent properties along the path would not meet ADA compliance.

NHRP: National Register of Historic Places


Department of Transportation
CINCINNATI
Shared Use Path Segment 3 Alternatives
Wasson Way Trail Connection to Otto Armleder Park | PID 113603
PROJECT AREA
CINCINNATI
HAMILTON COUNTY
Ault Park
50
RED BANK RD
OHIO BMV
Begin Segment 3
Duck Creek
EASTERN AVE
Linwood Park
WISE TOOLS
BIL MOBILE MECHANIC
GLASS WISE
A BETTER WINDOW COMPANY
PERRING LANDSCAPE
FLOOD RESTORATION SERVICES
B & B ENTERPRISES
OAKLEY HOME IMPROVEMENT
KENNEDY INKS
TRI STATE WIRE ROPE SUPPLY
CINCY AUTO PRO
SKIP'S MOTORCYCLE & AUTO PARTS
PT PLUS
UNDER THE WEATHER
ALLURING GLASS
CITYWIDE MATERIALS
MORROW GRAVEL
CARAUSTAR
GREIF CINCINNATI PAPERBOARD
WOOSTER RD
GRASSHOPPER LANDSCAPING
H. HAFNER & SONS
PRUS CONSTRUCTION
CINCYCYCLES EAST
MIAMI AVE
US BANK
US BANK
HYDE PARK LANDSCAPE & TREE SERVICE
DHC
ARMLEDER RD
ARMLEDER RD
Existing Armleder Loop Trail
Otto Armleder Memorial Park & Recreation Complex
Existing Armleder to Lunken Connector Trail
Shared Alternatives 3A-3E
Alternative 3A
Shared Alternatives 3B-3E
Alternative 3B
Shared Alternatives 3C-3E
Alternative 3C
Alternative 3D
Shared Alternatives 3C-3D
Shared Alternatives 3B-3D
Alternative 3E
Segment 2 Area
Abandoned Railroad Bridge
Environmental Study Area
Property Line
0 100 250 Feet 500
N
July 2024

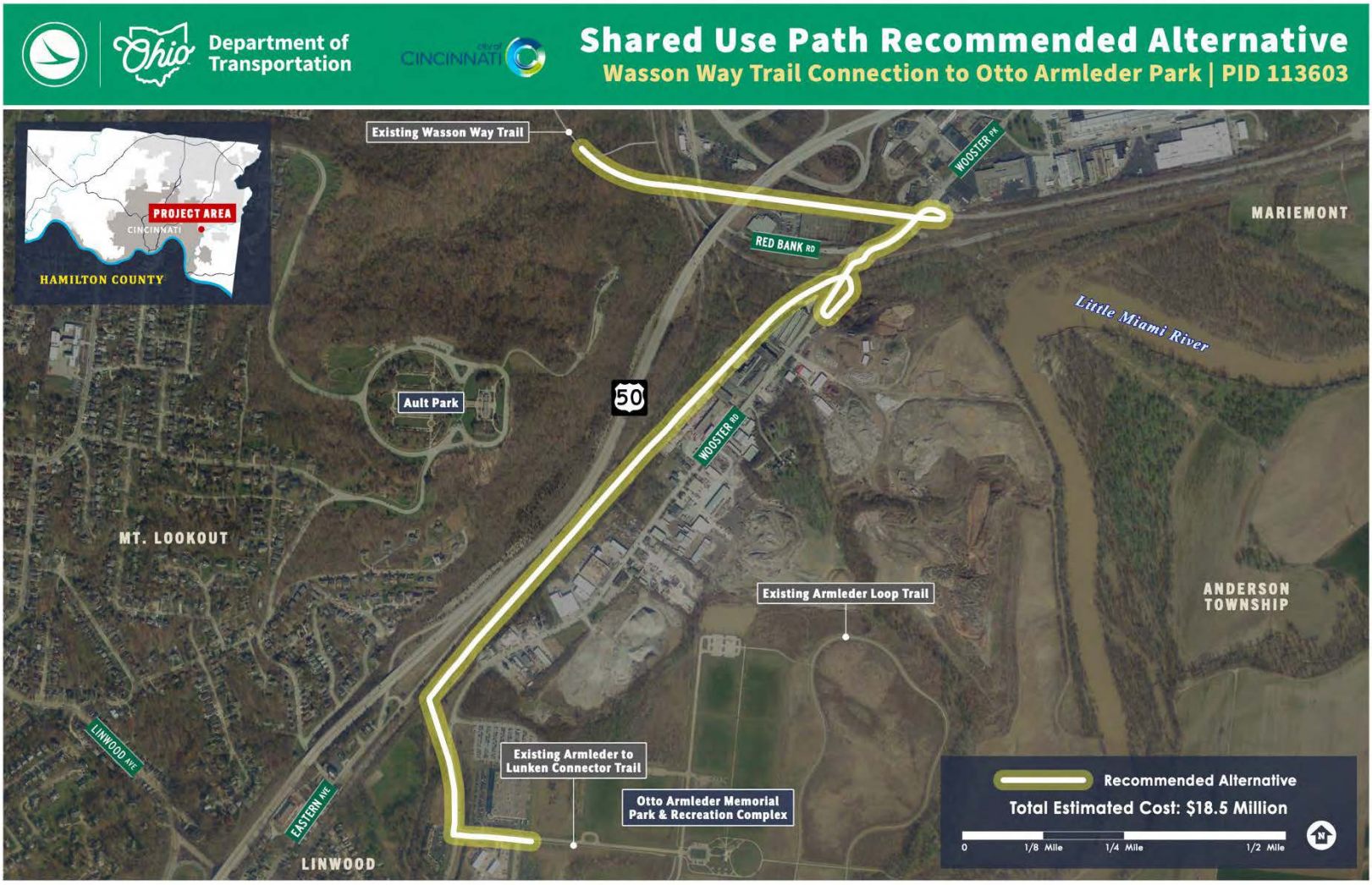
Shared Use Path Evaluation Matrix: Segment 3

Wasson Way Trail Connection to Otto Armleder Park | PID 113603

CATEGORY	PRELIMINARY ALTERNATIVES				
	NO BUILD ALT	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D	ALTERNATIVE E
PURPOSE AND NEED					
Improve bicycle and pedestrian connectivity between Wasson Way Trail and Otto Armleder Park	No	Yes	Yes	Yes	Yes
SAFETY ANALYSIS					
Safety Issues	No bicycle facilities exist in this corridor. Bicycle traffic alongside vehicular traffic on Wooster Road is a safety concern	One pedestrian/bicycle conflict point with vehicular traffic (at mid-block crossing)	One pedestrian/bicycle conflict point with vehicular traffic (at mid-block crossing)	One pedestrian/bicycle conflict point with vehicular traffic (at mid-block crossing)	Five pedestrian/ bicycle conflict points with vehicular traffic (at intersections and driveway entrances)
Bicycle Level of Traffic Stress	High Stress	Low Stress	Low Stress	Low Stress	Low Stress
ENGINEERING ISSUES					
Length of Shared Use Path	--	1.0 mile	1.2 miles	1.2 miles	1.2 miles
Width of Shared Use Path	--	12 feet	12 feet	12 feet	12 feet
Design Speed	--	20 mph	20 mph	20 mph	20 mph
Trail Design Issues	None	None	None	None	None
Structures Required	None	1 existing railroad bridge modified, 1 new bridge structure required, 2 retaining walls required	1 existing railroad bridge modified, 1 new bridge structure required	1 existing railroad bridge modified, 1 new bridge structure required, 1 retaining wall required	1 existing railroad bridge modified, 1 new bridge structure required, 2 retaining walls required
Utility Relocations/Issues	None	None	Impacts to overhead electric lines likely	Minor impacts to gas line anticipated	None
RIGHT-OF-WAY IMPACTS					
Additional Right-of-Way Required	None	5.41 acres	4.77 acres	5.05 acres	4.26 acres
ECOLOGICAL RESOURCES					
Streams	None	110 linear ft. of impact	164 linear ft. of impact	186 linear ft. of impact	139 linear ft. of impact
Wetlands	None	0.09 acre of impact	0.02 acre of impact	0.02 acre of impact	None
Threatened & Endangered Species	None	2.62 ac. of tree clearing	2.79 ac. of tree clearing	2.95 ac. of tree clearing	2.85 ac. of tree clearing
FLOODPLAIN / FLOODWAY IMPACTS					
100 Year Floodplain Encroachment	None	2.95 acres	1.91 acres	1.91 acres	1.48 acres
Floodway Encroachment	None	1.38 acres (CLOMR Anticipated)	1.24 acres (CLOMR Anticipated)	1.17 acres (CLOMR Anticipated)	1.27 acres (CLOMR Anticipated)
Impact of New Bridge on FEMA Flood Hazard Area	None	Flood elevation rise of 2.08 feet; extends 1.0 mile upstream	Flood elevation rise of 0.91 feet; extends 0.6 mile upstream	Flood elevation rise of 0.38 feet; extends <300 feet upstream	Flood elevation rise of 0.90 feet; extends <300 feet upstream
Anticipated Number of Affected Property Owners	None	30 properties	11 properties	6 properties	6 properties
CULTURAL RESOURCES					
NHRP-Listed Districts	None	None	None	None	None
NHRP-Listed Sites	None	None	None	None	None
SECTION 4(f) / 6(f) RESOURCES					
Section 4(f)/6(f) Impacts	None	Otto Armleder Park (minor)	Otto Armleder Park (minor)	Otto Armleder Park (minor)	Otto Armleder Park (minor), Linwood Hutton Recreational Area (minor)
HAZARDOUS MATERIALS					
Regulated Materials Review	None	Alignment in the vicinity of 3 UST, 3 LUST, and 2 RCRA records. Permit may be required for work in vicinity of landfill (H. Hafner and Sons, Inc)	Permit may be required for work in vicinity of landfill (H. Hafner and Sons, Inc)	Permit may be required for work in vicinity of landfill (H. Hafner and Sons, Inc)	Permit may be required for work in vicinity of landfill (H. Hafner and Sons, Inc)
DRINKING WATER					
Sole Source Aquifer	None	Project work is within the boundaries of a sole source aquifer	Project work is within the boundaries of a sole source aquifer	Project work is within the boundaries of a sole source aquifer	Project work is within the boundaries of a sole source aquifer
COMMUNITY IMPACTS					
Environmental Justice (EJ) Populations	None	Improves pedestrian/ bicycle connectivity for EJ populations	Improves pedestrian/ bicycle connectivity for EJ populations	Improves pedestrian/ bicycle connectivity for EJ populations	Improves pedestrian/ bicycle connectivity for EJ populations
PRELIMINARY COST ESTIMATES					
Estimated Construction Costs	--	$3.9 million	$4.1 million	$4.4 million	$5.9 million
CONCLUSION					
Recommendation	Not Recommended	Not Recommended	Not Recommended	Not Recommended	Recommended

Alternative 3A was not evaluated because of its proximity to adjacent businesses which would require fencing on both sides of the trail and create security concerns for trail users.

CLOMR: Conditional Letter of Map Revisions | NHRP: National Register of Historic Places | UST: Underground Storage Tank
LUST: Leaking Underground Storage Tank | RCRA: Resource Conservation Recovery Act


Department of Transportation
CINCINNATI
Shared Use Path Recommended Alternative
Wasson Way Trail Connection to Otto Armleder Park | PID 113603
PROJECT AREA
CINCINNATI
HAMILTON COUNTY
Existing Wasson Way Trail
WOOSTER PK
MARIEMONT
RED BANK RD
Little Miami River
Ault Park
50
WOOSTER RD
MT. LOOKOUT
Existing Armleder Loop Trail
ANDERSON TOWNSHIP
LINWOOD AVE
EASTERN AVE
Existing Armleder to Lunken Connector Trail
Otto Armleder Memorial Park & Recreation Complex
LINWOOD
Recommended Alternative
Total Estimated Cost: $18.5 Million
0
1/8 Mile
1/4 Mile
1/2 Mile

- **Assemble Comments and Responses from Public Meeting and Post on Project Website: *www.PublicInput.com/WassonArmleder***
- **Complete Feasibility Study and Post on Project Website**
- **Select Preferred Alternative**
- **Perform Detailed Engineering once Construction Funding is Secured**

Handouts

WASSON–ARMLEDER SHARED USE PATH
Project Fact Sheet

city of CINCINNATI | Ohio Department of Transportation

PID 113603

The City of Cincinnati, in cooperation with the Ohio Department of Transportation (ODOT), is proposing a new shared use path to make it easier and safer for bicyclists and pedestrians to travel between the Wasson Way Trail in Ault Park to Otto Armleder Memorial Park & Recreation Complex.

ABOUT THE PROJECT

Located in the City of Cincinnati and the Village of Fairfax in southeast Hamilton County, the Wasson-Armleder Shared Use Path will link two of the area's most popular shared use trails – the Wasson Way Trail and the Little Miami Scenic Trail via Armleder Park – and will provide new access opportunities to other nearby trails such as the Murray Path and Lunken Airport Trail, as well as Cincinnati's broader CROWN network.

PROCESS

The concept for the Wasson–Armleder Shared Use Path grew out of discussions that the City of Cincinnati and ODOT held with local communities about how to make travel easier and safer for drivers, bicyclists, and pedestrians on the east side of Greater Cincinnati.

Recent efforts have centered on developing and evaluating possible route alternatives for the path. The results of this work are documented in the draft Wasson Way to Otto Armleder Feasibility Study.

After a preferred alternative is identified, the Feasibility Study will be finalized, and the project's focus will turn toward identifying funding for construction. Once that's secured, the project can advance into detailed design, and later, construction.

Map of Cincinnati's CROWN shared use path network. Map courtesy of Tri-State Trails.

AT A GLANCE

The Wasson-Armleder Shared Use Path will follow its own alignment in the vicinity of Red Bank Road, Wooster Pike and Wooster Road.

In areas where it will run near a road, it will be separated by a minimum five-foot-wide vegetated buffer.

Estimated Length: 2.5 miles

Estimated Width: 12 feet (slightly narrower when crossing existing bridges)

Pavement Material: Asphalt

Estimated Cost: $18.5M (for the preliminary Preferred Alternative)

Department of Transportation

Shared Use Path Recommended Alternative

Wasson Way Trail Connection to Otto Armleder Park | PID 113603

PROJECT SEGMENTS & ALTERNATIVES

To help make studying and funding the shared use path easier, the path was divided into three segments:

Segment 1: Wasson Way Trail to Wooster Pike

Segment 2: Crosses the Norfolk Southern Railroad using the Wooster Road bridge near Red Bank Road

Segment 3: Wooster Road bridge to Otto Armleder Memorial Park and Recreation Complex at Armleder Road

Multiple alternatives were developed and evaluated within each segment area. Details about each alternative – such as route features, safety considerations, environmental impacts, and estimated costs – can be reviewed through tonight's exhibits and the project's Virtual Open House at www.PublicInput.com/WassonArmleder.

PRELIMINARY PREFERRED ALTERNATIVE

Based on the results of the studies conducted, ODOT has recommended a preliminary Preferred Alternative for each segment, as shown in the map above.

PUBLIC INPUT

Public input is important and will be used to identify which segment alternatives will be selected for further development.

Comments are due by Jan. 4, 2025, and can be shared through the open houses or by mail, phone, or email by contacting:

ODOT District 8
Katherine DeStefano, P.E., Senior Transportation Engineer
505 South State Route 741 | Lebanon, OH 45036
Katherine.DeStefano@dot.ohio.gov | (513) 933-6583

For more information, visit
www.PublicInput.com/WassonArmleder

Department of Transportation | city of CINCINNATI

Wasson-Armleder Shared Use Path (PID 113603)
PUBLIC COMMENT FORM

Name: _____

Mailing address: _____

Email/Phone: _____

Contact information is not required but will ensure you receive a response to any questions you have.

Where do you live? (List your zip code)

Where do you work? (List the zip code)

What is your interest in the Wasson-Armleder Shared Use Path? (Check all that apply)

☐ I live in the area ☐ I regularly bike and/or walk in the area ☐ I am a business owner or employee in the area

☐ I regularly use the regional shared use trail system ☐ Other (please describe)

How often do you use shared use paths?

☐ Daily ☐ Weekly ☐ Several times a month ☐ Several times a year ☐ Rarely ☐ Never

What activity do you use shared use paths for most often?

☐ Walking ☐ Running ☐ Cycling ☐ Skating ☐ Other (please describe)

Would a new Wasson-Armleder shared use path encourage you to walk or bike in this area more often?

☐ Definitely ☐ I think so ☐ Not sure ☐ Probably not ☐ Definitely not

(more questions on other side)

COMMENTS DUE BY JANUARY 4, 2025

Comments may be submitted by:

- Mailing this completed form to Katherine DeStefano, P.E., Project Manager, ODOT District 8, 505 S. SR 741, Lebanon, OH 45036
- Completing the online comment form at www.PublicInput.com/WassonArmleder
- Sending an email to Katherine.DeStefano@dot.ohio.gov
- Calling Katherine DeStefano at 513.933.6583

Do you agree with selecting Alternative 1A as the Preferred Alternative for Segment 1?

☐ Yes ☐ No ☐ Not sure yet

OPTIONAL: Please use this space to share any comments you may have regarding Segment 1.

Do you agree with selecting Alternative 2C as the Preferred Alternative for Segment 2?

☐ Yes ☐ No ☐ Not sure yet

OPTIONAL: Please use this space to share any comments you may have regarding Segment 2.

Do you agree with selecting Alternative 3E as the Preferred Alternative for Segment 3?

☐ Yes ☐ No ☐ Not sure yet

OPTIONAL: Please use this space to share any comments you may have regarding Segment 3.

Is there anything we should keep in mind as development of the Wasson-Armleder Shared Use Path advances?

How did you hear about the Wasson-Armleder Shared Use Path open houses? (Check all that apply)

☐ Social media ☐ Mailer/postcard ☐ Yard signs ☐ Email ☐ Flyer

☐ ODOT website ☐ Newspaper ad ☐ TV/Radio ☐ Newsletter ☐ Word-of-mouth

☐ Other (please describe)

Appendix B

Notification

Department of Transportation

News Releases & Coverage Summary

Public Input Sought For Wasson-Armleder Shared Use Path

Ohio Department of Transportation sent this bulletin at 11/20/2024 06:12 PM EST

Having trouble viewing this email? View it as a Web page.

OHIO DEPARTMENT OF TRANSPORTATION

Public Input South For Wasson-Armleder Shared Use Path

Virtual Public Open House Launched

Lebanon, Ohio (Wednesday, November 20, 2024) - The Ohio Department of Transportation and the city of Cincinnati are proposing a new shared use path between the Wasson Way Trail in Ault Park and Otto Armleder Memorial Park & Recreation Complex, and the team would like your feedback.

The Wasson-Armleder Shared Use Path will establish a new connection linking two of the area's most popular shared use trails - Wasson Way and the Little Miami Scenic Trail via Armleder Park - and will provide new access opportunities to other nearby trails such as the Murray Path and Lunken Airport Trail, as well as Cincinnati's broader CROWN network.

Multiple connection alternatives have been studied, and the City and ODOT are sharing their recommendations for public review and comment during two open house opportunities.

Currently under way is a virtual open house, which was launched today, November 20. Available online at Wasson Way-Otto Armleder Public Input, the Virtual Open House is a self-guided tour through exhibits highlighting the route alternatives. It also includes questions to capture public input and allows for comments to be posted online. The virtual open house will be accessible 24 hours a day through January 4, 2025.

In addition to the online format, the project team will host an in-person meeting on **Thursday, December 5, from 5 to 7 p.m.** at Karrikin, 3717 Jonlen Drive, Fairfax.

The in-person open house will feature the same route alternative exhibits, and representatives from the city and ODOT, as well as their consultants, will be available to discuss the options and answer questions.

Public input is important and will be used to confirm which route alternatives will be selected for further development. Comments are due by January 4, 2025, and can be shared through the open houses or by mail, phone, or email to:

Katherine DeStefano, P.E., Senior Transportation Engineer
ODOT District 8
505 South S.R. 741, Lebanon, OH 45036
Katherine.DeStefano@dot.ohio.gov
(513) 933-6583

The Wasson-Armleder Shared-Use Trail is part of the Eastern Corridor Program, which is a series of integrated transportation projects designed to make travel easier and safer between Greater Cincinnati's urban core and the communities in eastern Hamilton County and western Clermont County.

To learn more about the Eastern Corridor Program, visit EasternCorridor.org.

Individuals requiring interpretation or translation services or other reasonable accommodations to participate in the open house, review materials, or provide comments are asked to contact Kathleen Fuller at (513) 932-3030 or d08.pio@dot.ohio.gov.

Public participation is encouraged without regard to race, color, sex, age, national origin, or disability.

###

For more information contact:
Kathleen Fuller, 513-933-6517
Liz Lyons, 513-933-6534

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Public Input Sought For Wasson-Armleder Shared Use Path
Ohio Department of Transportation sent this bulletin at 12/30/2024 09:00 AM EST

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OHIO DEPARTMENT OF TRANSPORTATION

Public Input South For Wasson-Armleder Shared Use Path

Virtual Public Open House Continues Through Friday

Lebanon, Ohio (Monday, December 30, 2024) - A project to construct a new shared use path between the Wasson Way Trail in Ault Park and Otto Armleder Memorial Park & Recreation Complex is in development, and the project team would like your feedback.

The Ohio Department of Transportation and the city of Cincinnati are proposing to establish a new connection linking two of the area's most popular shared use trails - Wasson Way and the Little Miami Scenic Trail via Armleder Park. The Wasson-Armleder Shared Use Path will provide new access opportunities to other nearby trails such as the Murray Path and Lunken Airport Trail, as well as Cincinnati's broader CROWN network.

Multiple connection alternatives have been studied, and the recommendations for the project are available for public review and comment by way of a virtual open house that is accessible 24 hours a day at Wasson Way-Otto Armleder Public Input.

The Virtual Open House, which continues through Friday, is a self-guided tour with exhibits highlighting the route alternatives. It also includes questions to capture public input and allows for comments to be posted online.

Public input is important and will be used to confirm which route alternatives will be selected for further development. Comments are due by January 4, 2025, and can be shared through the open houses or by mail, phone, or email to:

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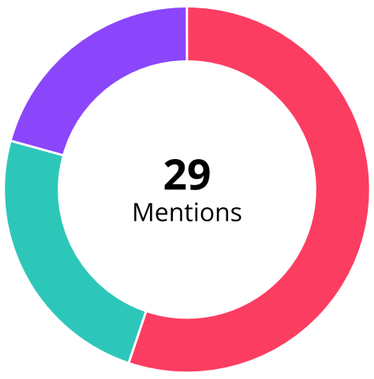
Wasson Way COMPLETE

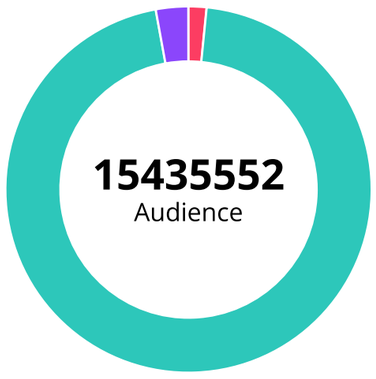
Mention Analytics

Mentions by Media Type



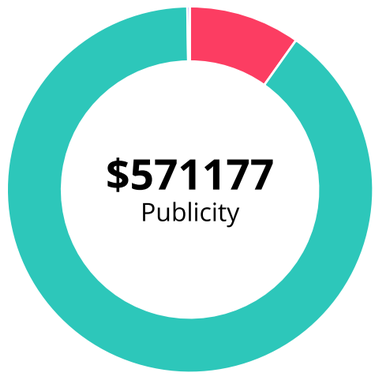
TV Online News Radio

Audience by Media Type



TV Online News Radio

Publicity by Media Type



TV Online News Radio

Total National TV Audience
244,565

Total National TV Publicity
USD $56,182

Total Local TV Audience
244,565

Total Local TV Publicity
USD $56,182

Total Radio Audience
442,323

Total Publicity Value
USD $1,267

Total Online + Print Audience
14,748,664

Total Online + Print Publicity
USD $513,728

Total Number of Clips 29

FOX19 NOW at 7

1

Time Dec 6, 2024 8:36 AM EST
Local Broadcast Time 8:36 AM EST
Category News
Call Sign WXIX (Fox)
Market DMA: 37 Cincinnati, OH
Language English

Est. National Audience 20,946
Est. National Publicity Value USD $2,641

Est. Local Audience 20,946
Est. Local Publicity Value USD $2,641

passed it would be refered to as aspen's law. also developing now- the ohio department of transportation and the city of cincinnati are proposing a major upgrade for **wasson way**. the project they're proposing would create a non-stop trail all the way up to xenia township 60- miles away. at a city meeting last night, officals said the main goal for this new route is to connect **wasson way** to massive trail networks, all while keeping pedestrians and cyclists safe from motor traffic. one of these connections would include the little miami trail. "this is a great opportunit to connect communities and connect the trails." th proposal originally came from within the community - who wanted this for the city. now- o-dot and the city have started looking at how to make it

FOX19 NOW at 7

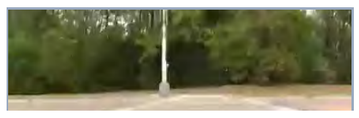
2

Time Dec 6, 2024 7:33 AM EST
Local Broadcast Time 7:33 AM EST
Category News
Call Sign WXIX (Fox)
Market DMA: 37 Cincinnati, OH
Language English

Est. National Audience 19,436
Est. National Publicity Value USD $2,625

Est. Local Audience 19,436
Est. Local Publicity Value USD $2,625

expexted to open by fall of 2027. also developing now- the ohio department of transportation and the city of cincinnati are proposing a major upgrade for **wasson way**. the project they're proposing would create a non-stop trail all the way up to xenia township 60-miles away. at a city meeting last night, officals said the main goal for this new route is to connect **wasson way** to massive trail networks, all while keeping pedestrians and cyclists safe from motor traffic. one of these connections would include the little miami trail. "this is a great opportunit to connect communities and connect the trails." th proposal originally came the proposal originally came from within the community - who wanted this for the city. now- o-dot and the city have started looking at how to make it happen.



FOX19 NOW at 5

3

© 2025 Critical Mention

Time Dec 6, 2024 5:35 AM EST
Local Broadcast Time 5:35 AM EST
Category News
Call Sign WXIX (Fox)
Market DMA: 37 Cincinnati, OH
Language English

Est. National Audience 7,433
Est. National Publicity Value USD $5,205

Est. Local Audience 7,433
Est. Local Publicity Value USD $5,205

it passes -- it would be refered to as aspen's law. the ohio department of transportation and the city of cincinnati are proposing a major upgrade for **wasson way**. the project they're proposing would create a non-stop trail all the way up to xenia township 60 miles away. our brady williams has a closer look at those plans... the folks designing this say this was really always the long- term goal of **wasson way**. tonight they held a meeting telling the public what they're looking to do. sot (anthony pankala) "there ha always been a long range plan to connect the wasson trail to **armleder**, which does ultimately connect to the little miami trail." anthon pankala is an environmental engineer, and he says he'd like to see this connection made between **wasson way** and **armleder** park by way of ault park. sot (pankala) "you coul bike, once this trail is built, all the way to xenia township." sean mcgrory, th board president for the **wasson way** organization says that's always been the main goal of the project. sot (sean mcgrory) "this is a grea opportunity to connect communities and connect the trails." right now, it's jus an idea. it's been planned in some detail, but they're informing the public now and taking feedback. when the exact route is chosen, they'll begin finding a way to fund it, and eventually they'll start to let it take shape. pankala says the main goal for the route is to connect **wasson way** to massive trail networks, all while keeping pedestrians and cyclists safe from motor traffic. sot (pankala) "w don't have to have people leave the trail to get on a road to then get on a trail again." this project reall originated with the community. enough people came forward to say they wanted this that the city and odot have started looking at how to make it happen. that's why they want folks to weigh in with their exciting new changes for exciting new changes for xavier university as they're

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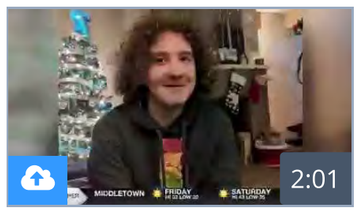

FOX19 NOW at 4:30

4

Time Dec 6, 2024 4:38 AM EST
Local Broadcast Time 4:38 AM EST
Category News
Call Sign WXIX (Fox)
Market DMA: 37 Cincinnati, OH
Language English

Est. National Audience 3,699
Est. National Publicity Value USD $2,538

Est. Local Audience 3,699
Est. Local Publicity Value USD $2,538

passes -- it would be refered to as aspen's law. the ohio department of transportation and the city of cincinnati are proposing a major upgrade for **wasson way**. the project they're proposing would create a non-stop trail all the way up to xenia township 60 miles away. our brady williams has a closer look at those plans...

FOX19 NOW at 11

5

Time Dec 5, 2024 11:08 PM EST
Local Broadcast Time 11:08 PM EST
Category News
Call Sign WXIX (Fox)
Market DMA: 37 Cincinnati, OH
Language English

Est. National Audience 11,669
Est. National Publicity Value USD $4,684

Est. Local Audience 11,669
Est. Local Publicity Value USD $4,684

the ohio department of transportation and the city of cincinnati are proposing a major upgrade for **wasson way**. the project they're proposing would create a non-stop trail all the way up to xenia township 60- miles away. our brady williams has a closer the folks designing this say this was really this was really always the long- term goal of **wasson way**. tonight they held a meeting telling the public what they're looking to do. sot (anthony pankala) "there ha always been a long range plan to connect the wasson trail to **armleder**, which does ultimately connect to the little miami trail." anthon pankala is an environmental engineer, and he says he'd like to see this connection made between **wasson way** and **armleder** park by way of ault park. sot (pankala) "you coul bike, once this trail is built, all the way to xenia township." sean mcgrory, th board president for the **wasson way** organization says that's always been the main goal of the project. sot (sean mcgrory) "this is a grea opportunity to connect communities and connect the trails." right now, it's jus an idea. it's been planned in some detail, but they're informing the public now and taking feedback. when the exact route is chosen, they'll begin finding a way to fund it, and eventually they'll start to let it take shape. pankala says the main goal for the route is to connect **wasson way** to massive trail networks, all while keeping pedestrians and cyclists safe from motor traffic. sot (pankala) "w don't have to have people leave the trail to get on a road to then get on a trail again." this project reall originated with the community. enough people came forward to say they wanted this that the city and odot have started looking at how to make it happen. that's why they want folks to weigh in with their ideas. there's a form you

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ODOT meets to discuss Wasson Way expansion plans

6

Date Collected Dec 5, 2024 11:04 PM EST
Category Digital News
Source Fox 19
Author Brady Williams

Est. Audience 39,671
Est. Publicity Value USD $1,416
Market Cincinnati, OH
Language English

CINCINNATI (WXIX) - The Ohio Department of Transportation and the City of Cincinnati are proposing a major upgrade for **Wasson Way**. The project would connect the Wasson trail to Otto **Armleder** Memorial Park, effectively creating a trail from Norwood to Xenia Township.

An event was held Thursday night to inform the public about the plan and take feedback.

Once all feedback is received and a proper route is chosen, the feasibility study portion of the project will be completed.

Anthony ... Pankala, an environmental engineer, explained that the end of **Wasson Way** near Ault Park would be connected to **Armleder** Park, which already connects to the Little Miami trail. All of this, he said, would create a motor traffic-free experience for pedestrians and cyclists.

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"We don't have to have people leave the trail to get on a road to then get on a trail again," he said.

To share feedback online, go to ODOT's ...

FOX19 NOW at 10

7

Time Dec 5, 2024 10:08 PM EST
Local Broadcast Time 10:08 PM EST
Category News
Call Sign WXIX (Fox)
Market DMA: 37 Cincinnati, OH
Language English

Est. National Audience 24,439
Est. National Publicity Value USD $12,034

Est. Local Audience 24,439
Est. Local Publicity Value USD $12,034

photos of him. the ohio department of transportation and the city of cincinnati are proposing a major upgrade for **wasson way**. the project they're proposing would create a non-stop trail all the way up to xenia township 60- miles away. our brady williams has a closer look. the folks designing this say this was really always the long- term goal of **wasson way**. tonight they held a meeting telling the public what they're looking to do. sot (anthony pankala) "there ha always been a long range plan to connect the wasson trail to **armleder**, which does ultimately connect to the little miami trail." anthon pankala is an environmental engineer, and he says he'd like to see this connection made between **wasson way** and **armleder** park by way of ault park. sot (pankala) "you coul bike, once this trail is built, all the way to xenia township." sean mcgrory, th board president for the **wasson way** organization says that's always been the main goal of the project. sot (sean mcgrory) "this is a grea opportunity to connect communities and connect the trails." right now, it's jus an idea. it's been planned in some detail, but they're informing the public now and taking feedback. when the exact route is chosen, they'll begin finding a way to fund it, and eventually they'll start to let it take shape. pankala says the main goal for the route is to connect **wasson way** to massive trail networks, all while keeping pedestrians and cyclists safe from motor traffic. sot (pankala) "w don't have to have people leave the trail to get on a road to then get on a trail again." this project reall originated with the community. enough people came forward to say they wanted this that the city and odot have started looking at how to make it happen. that's why they want folks to weigh in with their ideas. there's

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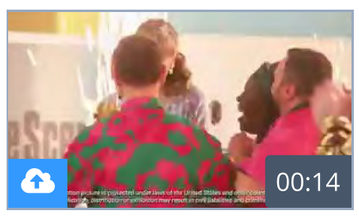

FOX19 NOW at 10

8

Time Dec 5, 2024 10:00 PM EST
Local Broadcast Time 10:00 PM EST
Category News
Call Sign WXIX (Fox)
Market DMA: 37 Cincinnati, OH
Language English

Est. National Audience 24,439
Est. National Publicity Value USD $6,017

Est. Local Audience 24,439
Est. Local Publicity Value USD $6,017

one's killer was denied parole. "this is a great opportunit to connect communities and connect the trails" a plan t expand -- with safety and community in mind... the changes

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Cincinnati officials, ODOT asking for input on plan to connect popular trails

9

Date Collected Dec 5, 2024 4:43 PM EST
Category Digital News
Source WLWT
Author Matthew Dietz

Est. Audience 65,212
Est. Publicity Value USD $1,783
Market Ohio, US
Language English

Cincinnati officials and the Ohio Department of Transportation are asking for the public's help to connect two popular trails.The goal of the project is to make it safer for bikers and people who are walking to use them.The project would connect Otto **Armleder** Memorial Park and **Wasson Way** Trail in Ault Park, linking two of the area's most popular shared use trails in Anderson Township.Currently, there is no connection between the trails.On Thursday night, officials are hosting an in-person open house for the public to weigh in on which connection is the best option. It is scheduled ... more information, click here.

CINCINNATI —

Cincinnati officials and the Ohio Department of Transportation are asking for the public's help to connect two popular trails.

The goal of the project is to make it safer for bikers and people who are walking to use them.

The project would connect Otto **Armleder** Memorial Park and **Wasson Way** Trail in Ault Park, linking two of the area's most popular shared use trails in Anderson Township.

Currently, there is no connection between the trails.

On Thursday night, officials are hosting an in-person open house for the public to weigh in on ...

FOX19 NOW at 3

10

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Time Dec 6, 2024 3:35 PM EST
Local Broadcast Time 3:35 PM EST
Category News
Call Sign WXIX (Fox)
Market DMA: 37 Cincinnati, OH
Language English

Est. National Audience 10,609
Est. National Publicity Value USD $1,153

Est. Local Audience 10,609
Est. Local Publicity Value USD $1,153

highs in developing now- the ohio department of transportation and the city of cincinnati are proposing a major upgrade for **wasson way**. the project they're proposing would create a non-stop trail all the way up to xenia township 60- miles away. at a city meeting last night, officals said the main goal for this new route is to connect **wasson way** to massive trail networks, all while keeping pedestrians and cyclists safe from motor traffic. one of these connections would include the little miami trail. "this is a great opportunit to connect communities and connect the trails." th proposal originally came from within the community - who wanted this for the city. now- o-dot and the city have started looking at how to make

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FOX19 NOW at 11

11

Time Dec 6, 2024 11:33 AM EST
Local Broadcast Time 11:33 AM EST
Category News
Call Sign WXIX (Fox)
Market DMA: 37 Cincinnati, OH
Language English

Est. National Audience 11,889
Est. National Publicity Value USD $1,403

Est. Local Audience 11,889
Est. Local Publicity Value USD $1,403

passed it would be refered to as aspen's law. also developing now- the ohio department of transportation and the city of cincinnati are proposing a major upgrade for **wasson way**. the project they're proposing would create a non-stop trail all the way up to xenia township 60- miles away. at a city meeting last night, officals said the main goal for this new route is to connect **wasson way** to massive trail networks, all while keeping pedestrians and cyclists safe from motor traffic. one of these connections would include the little miami trail. "this is a great opportunit to connect communities and connect the trails." th proposal originally came the proposal originally came from within the community - who wanted this for the city. now- o-dot and the city have started looking at

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WVXU

12

Time Jan 2, 2025 9:06 AM EST
Local Broadcast Time 9:06 AM EST
Call Sign WVXU (NPR)
Market DMA: 37 Cincinnati, OH
Language English

Est. Audience 69,540
Est. Publicity Value USD $246

farmland transportation officials are working on a big potential link in the region's trail system and they want your thoughts senior salesman someday cyclists and walkers could go from cincinnati's **wasson way** path through auto arm leader park to access a trail network that stretches across ohio a feasibility study for the two and a half mile connector that would provide that link is underway and the ohio department of transportation is taking public input on potential routes through friday as kathleen fuller says there's already been a lot of interest we've received quite a few comments already and we're very very happy that a lot of people have have taken note and you know we had a good turnout for our public meeting earlier this month really important to people that they provide these comments to us we really appreciate it and we want everyone to be a part of this process with us fuller says the three segment project is in its early stages after a preferred route is selected officials will need to find funding for its projected eighteen million dollar cost next

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FOX19 NOW at 7

13

Time Jan 2, 2025 8:37 AM EST
Local Broadcast Time 8:37 AM EST
Category News
Call Sign WXIX (Fox)
Market DMA: 37 Cincinnati, OH
Language English

Est. National Audience 18,733
Est. National Publicity Value USD $2,611

Est. Local Audience 18,733
Est. Local Publicity Value USD $2,611

seconds before the explosion. city officials are asking for your input on a new project that could connect ault and otto **armleder** memorial parks. this picture comes from the ohio department of transportation. our partners at the enquirer say the project would cost more than 18- million-dollars. it's aimed at making it easier and safer for bicyclists to travel between those parks -- by creating 2-and-a- half-mile long paths between them. it would connect the **wasson way** and little miami scenic river trails. no word

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WVXU

14

Time Jan 2, 2025 8:05 AM EST
Local Broadcast Time 8:05 AM EST
Call Sign WVXU (NPR)
Market DMA: 37 Cincinnati, OH
Language English

Est. Audience 64,600
Est. Publicity Value USD $238

transportation officials are working on plans for a potential walking and biking path in cincinnati and fairfax ohio department of transportation spokesperson kathleen fuller says the link between **wasson way** and auto arlette park would be a big deal for the region's biking and walking trail legs these two big areas that are very very popular that have shared use trails trails so you're linking wasson was real little my scenic trail by way of

© 2025 Critical Mention

the park and it's providing access to trails such as the murray path and the local airport trail and then of course it's kind of a part of that broader brown network for the city of cincinnati the project is broken up into three segments you can provide feedback on alternative routes for each segment online through tomorrow find out more a new

WVXU

15

Time Jan 2, 2025 6:49 AM EST
Local Broadcast Time 6:49 AM EST
Call Sign WVXU (NPR)
Market DMA: 37 Cincinnati, OH
Language English

Est. Audience 54,695
Est. Publicity Value USD $219

also transportation officials working on a big potential link in the region's trail system they want your thoughts it's all related to the **wasson way** it's all coming up right here on ninety one point seven

ODOT taking public comment on Wasson Way-Armleder Park connector trail

16

Date Collected Jan 2, 2025 1:16 AM EST
Category Digital News
Source WVXU
Author Nick Swartsell

Est. Audience 5,978
Est. Publicity Value USD $173
Market Cincinnati, OH
Language English

Transportation officials are studying the possibility of a connector that could link cyclists and walkers on Cincinnati's **Wasson Way** to a trail network that stretches across Ohio.

Planning for the 2.5-mile connector is in the early stages, but the Ohio Department of Transportation wants public input.

ODOT's Kathleen Fuller says the path would mean big things for the region's trail networks.

"It links these two big areas that ... are very, very popular," she says. "You're linking the **Wasson Way** Trail to the Little Miami Scenic Trail by way of the park. And it's part of that broader CROWN network for the city of Cincinnati."

The CROWN is a proposed network that rings the city. Many portions of it are already done or underway. The Little Miami Scenic Trail is connected to a statewide ...

FOX19 NOW at 11

17

Time Jan 1, 2025 11:14 PM EST
Local Broadcast Time 11:14 PM EST
Category News
Call Sign WXIX (Fox)
Market DMA: 37 Cincinnati, OH
Language English

Est. National Audience 12,117
Est. National Publicity Value USD $2,611

Est. Local Audience 12,117
Est. Local Publicity Value USD $2,611

- she was wanted for theft - so she was arrested as well. city officials are asking for your input on a new project that could connect ault and otto **armleder** memorial parks. this picture comes from the ohio department of transportation. our partners at the enquirer say the project would cost more than 18- million-dollars. it's aimed at making it easier and safer for bicyclists to travel between those parks -- by creating 2-and-a- half-mile long paths between them. it would connect the **wasson way** and little miami scenic river trails. no word on when construction

FOX19 NOW at 10

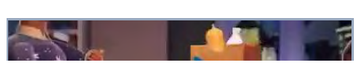
18

Time Jan 1, 2025 10:35 PM EST
Local Broadcast Time 10:35 PM EST
Category News
Call Sign WXIX (Fox)
Market DMA: 37 Cincinnati, OH
Language English

Est. National Audience 27,060
Est. National Publicity Value USD $7,665

Est. Local Audience 27,060
Est. Local Publicity Value USD $7,665

and more legitimate. city leaders are asking for your input on a new project that could connect ault and otto **armleder** memorial parks. our partners at the enquirer say the project would cost nearly 20- million dollars. it's aimed at making it easier and safer for bicyclists by creating 2-and-a- half-mile long paths between the two parks. it would connect the **wasson way** and little miami scenic river trails. no word on when construction



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FOX19 NOW at 6:30

19

Time Jan 1, 2025 6:39 PM EST
Local Broadcast Time 6:39 PM EST
Category News
Call Sign WXIX (Fox)
Market DMA: 37 Cincinnati, OH
Language English

Est. National Audience 13,533
Est. National Publicity Value USD $1,418

Est. Local Audience 13,533
Est. Local Publicity Value USD $1,418

what caused the fire. city officials are asking for your input on a new project that could connect ault and otto **armleder** memorial parks. this picture comes from the ohio department of transportation. our partners at the enquirer say the project would cost more than 18- million-dollars. it's aimed at making it easier and safer for bicyclists to travel between those parks -- by creating 2-and-a- half-mile long paths between them. it would connect the **wasson way** and little miami scenic river trails. no word on when

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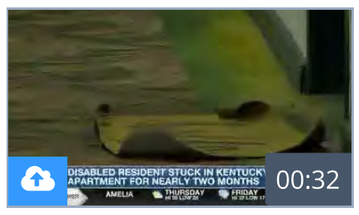

FOX19 NOW at 4

20

Time Jan 1, 2025 4:10 PM EST
Local Broadcast Time 4:10 PM EST
Category Special News
Call Sign WXIX (Fox)
Market DMA: 37 Cincinnati, OH
Language English

Est. National Audience 13,786
Est. National Publicity Value USD $1,254

Est. Local Audience 13,786
Est. Local Publicity Value USD $1,254

"within a few days" city officials are asking for your input on a new project that could connect ault and otto **armleder** memorial parks. this picture comes from the ohio department of transportation. our partners at the enquirer say the project would cost more than 18- million-dollars. it's aimed at making it easier and safer for bicyclists to travel between those parks -- by creating 2-and-a- half-mile long paths between them. it would connect the **wasson way** and little miami scenic river trails. no

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Local 12 News at 4pm

21

Time Jan 1, 2025 4:09 PM EST
Local Broadcast Time 4:09 PM EST
Category News
Call Sign WKRC (CBS)
Market DMA: 37 Cincinnati, OH
Language English

Est. National Audience 24,777
Est. National Publicity Value USD $2,323

Est. Local Audience 24,777
Est. Local Publicity Value USD $2,323

>>well, you have a few more days to make yourself heard on a local project. odot is working with the city of cincinnati to connect ault park to otto **armleder** memorial park. the parties are accepting comments through saturday on the shared use path. plans call for more than two miles of path. it would link the popular **wasson way** trail and the little miami scenic trail. it would also provide new access to the murray path and lunken airport.

ARC/Good Morning Cincinnati at 9am

22

Time Jan 1, 2025 9:03 AM EST
Local Broadcast Time 9:03 AM EST
Category News
Call Sign WSTRDT (MNT)
Market DMA: 37 Cincinnati, OH
Language English

everybody. >>we'll get you a canoe. and then just right across the river that way. bikers and hikers have a few more days to make themselves heard. the ohio department of transportation is working with the city of cincinnati to connect all park to otto **armleder** memorial park. the parties are accepting comments on the shared use path through saturday. plans call for more than two miles of 12 foot wide paths would cost about $18 million. the new pathway would link the popular **wasson way** trail and the little miami scenic trail. it would also provide new access to the murray path and the lunken airport trail. after the public input, session leaders will work on a funding plan and agree on a design and construction groups. we put up a link to the input form under the get a tab at local 12.com. i love all the trails. i like the more walkable and the more connected i think it's. i think it's great. i wish we had more of that over on the west side of town. yeah, it seems like a lot more of that happens over on the east side than has happened, at least so far. and it's not that there aren't some trails and some great parks and things, of course, on the west side, but i feel like it's been more on the east side so far. so more of that, please. sounds great. >>maybe in the future. yeah, obviously expanding further west in 18 as well. >>18 million. that's a

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Proposed Wasson-to-Armleder path would cost $18.5M; officials seek public input

23

Date Collected Dec 31, 2024 11:00 PM EST
Category Digital News
Source Yahoo! News
Author Patricia Gallagher Newberry, Cincinnati Enquirer

Est. Audience 13,913,761
Est. Publicity Value USD $496,920
Market United States
Language English

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Bikers and hikers with opinions about how to connect and can share them through Saturday.

Cincinnati and state transportation officials are accepting comments on the Wasson-**Armleder** Shared Use Path online, or by phone, mail or email.

The project is aimed at making it easier and safer for bicyclists and pedestrians to travel between the two eastside parks.

Plans call for about 2.5 miles of 12-foot wide asphalt paths at a total cost of $18.5 million.

The new pathway would ... link the popular **Wasson Way** Trail and Little Miami Scenic Trail. It would also provide new access to the Murray Path, Lunken Airport trail and broader Cincinnati bike-hike network known as

Construction dates have not been determined.

Three-phase plan proposed

Unless additional public comment changes the plan, the Wasson-to ... -**Armleder** connection would be built in three stages:

Transportation officials considered five other options, plus a "no-build alternative" before recommending those configurations as the "preliminary preferred alternatives."

"Public input ... will be used to identify which segment alternatives will be ...

Proposed Wasson-to-Armleder path would cost $18.5M; officials seek public input

24

Date Collected Dec 31, 2024 10:04 PM EST
Category Digital News
Source Cincinnati Enquirer
Author Patricia Gallagher Newberry

Est. Audience 97,818
Est. Publicity Value USD $2,007
Market Cincinnati, OH
Language English

Bikers and hikers with opinions about how to connect Ault Park and Otto **Armleder** Memorial Park can share them through Saturday.

Cincinnati and state transportation officials are accepting comments on the Wasson-**Armleder** Shared Use Path online, or by phone, mail or email.

The project is aimed at making it easier and safer for bicyclists and pedestrians to travel between the two eastside parks.

Plans call for about 2.5 miles of 12-foot wide asphalt paths at a total cost of $18.5 million.

The new pathway would ... link the popular **Wasson Way** Trail and Little Miami Scenic Trail. It would also provide new access to the Murray Path, Lunken Airport trail and broader Cincinnati bike-hike network known as CROWN or Cincinnati Riding or Walking Network.

Construction dates have not been determined.

Three-phase plan proposed

Unless ... additional public comment changes the plan, the Wasson-to-**Armleder** connection would be built in three stages:

Segment 1 would run from the **Wasson Way** Trail to Wooster Pike. It would cover about 2,350 feet and cost just more than $7 million.

Segment 2 would cross the Norfolk Southern Railroad using the Wooster Road bridge near Red Bank Road. It would run 2,650 feet and cost close to $5.7 million.

Segment 3 would run from the Wooster Road ... bridge to **Armleder** Road at Otto **Armleder** Memorial Park and Recreation Complex. It would cost close to $5.9 million and be the longest piece of the project, at 6,400 feet.

Transportation officials considered five other options, plus a "no-build alternative" before recommending those configurations as the "preliminary preferred ...

WVXU

25

Time Jan 2, 2025 6:06 PM EST
Local Broadcast Time 6:06 PM EST
Call Sign WVXU (NPR)
Market DMA: 37 Cincinnati, OH
Language English

Est. Audience 83,131
Est. Publicity Value USD $192

you can weigh in on a potential new link in the region's bike and walking network is taking public input through tomorrow on a proposed two and a half mile connector path between **wasson way** and auto arm letter park in cincinnati and fairfax kathleen fuller says the proposed project is broken down into three segments each with multiple potential routes looking for any and all feedback looking at multiple different pathways so to speak or alternatives here during this preliminary study phase and we are trying to get feedback from people about each of these three segment areas and find out how to provide input to a

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WVXU

26

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Time Jan 2, 2025 4:34 PM EST
Local Broadcast Time 4:34 PM EST
Call Sign WVXU (NPR)
Market DMA: 37 Cincinnati, OH
Language English

Est. Audience 88,078
Est. Publicity Value USD $186

you can weigh in on a potential new link in the region's bike and walking network the ohio department of transportation is taking public input through friday on a proposed two and a half mile connector path between **wasson way** and auto arm letter park in cincinnati and fairfax kathleen fuller says the proposed project is broken down into three segments each with multiple potential routes we're looking for any and all feedback we're looking at multiple different pathways so to speak or alternatives here during this preliminary study phase we are trying to get feedback from people this three segment area when finished the project would connect was on way to the little miami scenic trail via the park that would link two of the region's major bike and walking paths find out how to provide the input a vision

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WVXU

27

Time Jan 2, 2025 12:07 PM EST
Local Broadcast Time 12:07 PM EST
Call Sign WVXU (NPR)
Market DMA: 37 Cincinnati, OH
Language English

Est. Audience 82,279
Est. Publicity Value USD $186

you can weigh in on a potential new link in the region's bike and walking network the ohio department of transportation is taking public input through friday on a proposed two and a half mile connector path between walton way and auto arm letter park in cincinnati and fairfax odot kathleen fuller says the proposed segment has broken down into three segments each with multiple potential routes looking for any and all feedback we're looking at multiple different pathways so to speak or alternatives here during this preliminary study phase we are trying to get feedback from people about each of the three segment areas when finished the project would object would connect **wasson way** to the little miami scenic trail via the park that would link two of the region's major bike and walking paths you can find out how to provide input to

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Online News

(Requires Critical Mention login)

Public asked to weigh in on Ault to Armleder path

28

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Powered by LexisNexis

Date Collected Jan 3, 2025 9:36 AM EST
Category Print
Source The Cincinnati Enquirer (Ohio)
Author By, Patricia Gallagher Newberry, Cincinnati Enquirer

Est. Audience 44,750
Est. Publicity Value USD $809
Market Cincinnati, OH
Language English

Bikers and hikers with opinions about how to connect Ault Park and Otto Armleder Memorial Park can share them through Saturday.

Cincinnati and state transportation officials are accepting comments on the Wasson-Armleder Shared Use Path online, or by phone, mail or email.

The project is aimed at making it easier and safer for bicyclists and pedestrians to travel between the two eastside parks.

Plans call for about 2.5 miles of 12-foot wide asphalt paths at a total cost of $18.5 million.

The new pathway would link the popular Wasson Way Trail and Little Miami Scenic Trail. It would also ...

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City of Cincinnati, state of Ohio look to link Wasson Way to Little Miami Trail

29

Date Collected Jan 7, 2025 7:24 AM EST
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Source Cincinnati Business Journal
Author Chris Wetterich

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Market United States
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STORY HIGHLIGHTS

Cincinnati is considering plans to extend Wasson Way to Otto Armleder Park.
The project costs $18.6 million and spans 2.5 miles.
It connects Wasson Way to Little Miami Scenic Trail.

The city of **Cincinnati** and the state of Ohio are considering how to extend Wasson Way from its current terminus in Ault Park to the city's Otto Armleder Memorial Park in Linwood.

The project, which currently is estimated at $18.6 million, would connect two major **Cincinnati** parks and create another ... planned link between two of its major bicycle and pedestrian paths – Wasson Way and the Little Miami Scenic Trail.

Great Parks has its own plans to link the Murray Path, which connects to Wasson Way in the Red Bank Road corridor, to the Little Miami Trail.

Ohio and **Cincinnati**'s current plan calls for a route that proceeds along two separate segments of abandoned railroad right of way owned by the

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city and the Southwest Ohio Regional Transit Authority.

The city-owned railroad corridor proceeds southeast through Ault Park and has a bridge passing over Red Bank Road and ... tracks proceed southwest along Duck Creek between Columbia Parkway and Wooster Road.

The Wasson-Armleder shared-use path will run about 2.5 miles and is divided into three segments, with a 12-foot asphalt path to be built along the route.

The region has been making steady progress building the **Cincinnati** Riding or Walking Network (CROWN), a connected 34-mile loop of pedestrian/bicycle trails where riders, walkers and runners have minimal contact with cars.

The proposed connection is key to the overall CROWN vision. Once connected to Armleder, Wasson Way also would be connected to the Lunken ... Airport trail and the eventual Oasis Trail, which would run parallel to the Ohio River and connect Lunken to downtown **Cincinnati** along another set of SORTA-owned railroad tracks.

The project also eventually could connect to the Linwood Hutton Recreational Area, "which provides opportunity in the future for a connecting trail to be built between the shared use path and the park," according to project documents. "Furthermore ...

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NEW SHARED USE PATH PROPOSED BETWEEN WASSON WAY & ARMLEDER PARK

Learn more at our upcoming open houses!

Virtual Open House

Accessible at www.PublicInput.com/WassonArmleder
November 20, 2024 – January 4, 2025

In-Person Open House

December 5, 2024 | 5 – 7 pm
Karrikin | 3717 Jonlen Drive (Fairfax)

The City of Cincinnati, in conjunction with the Ohio Department of Transportation (ODOT), is developing plans to make it easier and safer for bicyclists and pedestrians to travel between the Wasson Way Trail in Ault Park and trails in the Otto Armleder Memorial Park & Recreation Complex. Learn about route alternatives under consideration and share your thoughts by visiting one of our open houses.

Public input is important and will be used to confirm which route alternatives will be selected for further development. Comments are due by Jan. 4, 2025, and can be shared at the open houses or by mail, phone, or email. Contact:

Katherine DeStefano, P.E., Senior Transportation Engineer
ODOT District 8 | 505 South State Route 741 | Lebanon, OH 45036
Katherine.DeStefano@dot.ohio.gov | (513) 933-6583

Department of Transportation

city of CINCINNATI

Individuals requiring interpretation or translation services or other reasonable accommodations to participate in the Open House, review materials, or provide comments are asked to contact Kathleen Fuller at d08.pio@dot.ohio.gov or (513) 932-3030. Public participation is encouraged without regard to race, color, sex, age, national origin, or disability.

Scott Wartman
CINCINNATI ENQUIRER / USA TODAY NETWORK

Cincinnati's Democratic congressman called President Joe Biden's pardon of his son "a setback."

"As a father, I get it," said Rep. Greg Landsman in a texted statement to The Enquirer. "But as someone who wants people to believe in public service again, it's a setback."

Biden on Sunday pardoned his son Hunter Biden, after previously pledging he wouldn't.

Hunter Biden was convicted of three federal gun felonies and federal tax charges earlier this year.

"I hope Americans will understand why a father and a President would come to this decision," Biden said.

What Greater Cincinnati Republicans say about the Hunter Biden pardon

Some local Republicans criticized the pardon.

Rep. Thomas Massie, a Republican who represents Northern Kentucky, said in a post on social media site X, formerly Twitter, that Biden should have pardoned Wikileaks founder Julian Assange instead. Assange in 2019 pleaded guilty to a violation of the Espionage Act for publishing a trove of classified information about the U.S. military in Iraq and Afghanistan.

Massie then posted a joint letter he wrote with Rep. James McGovern, a Democrat from Massachusetts, asking Biden to pardon Assange.

The Enquirer has reached out to Massie and Republican Reps. Warren Davidson and Brad Wenstrup and Rep.-elect David Taylor. None of them immediately responded Monday morning.

Sen. and Vice President-elect JD Vance and Kentucky Sens. Mitch McConnell and Rand Paul also hadn't immediately responded Monday morning.

Democratic U.S. Rep. Greg Landsman speaks at a debate in October.
FRANK BOWEN IV/THE ENQUIRER

Pardon

Continued from Page 1A

"I hope Americans will understand why a father and a President would come to this decision," Biden said.

Joe Biden previously said he would not pardon his son, who was the first child of a sitting president to be convicted of a crime.

NBC News first reported news of the pardon.

In June, Hunter Biden was found guilty of falsely filling out a federal form denying he was addicted to narcotics when he purchased a firearm, lying to a gun dealer and knowingly possessing the revolver despite restrictions against people addicted to drugs owning firearms. He was also found guilty of nine charges, including failing to pay his taxes from 2016 through 2019.

He was expected to be sentenced for both convictions in the coming weeks.

In a statement issued after his pardon, Hunter Biden said he has "admitted and taken responsibility for my mistakes during the darkest days of my addiction – mistakes that have been exploited to publicly humiliate and shame me and my family for political sport."

"In recovery, we can be given the opportunity to make amends where possible and rebuild our lives," he said. "I will never take the clemency I have been given today for granted and will devote the life I have rebuilt to helping those who are still sick and suffering."

Days after his son was found guilty, Joe Biden said he "would abide by the jury's decision" and "will not pardon him."

The pardon was met with backlash by several Republican lawmakers, including President-elect Donald Trump, as well as by some members of the Democratic Party. Joe Biden's party.

"Does the Pardon given by Joe to Hunter include the J-6 Hostages, who have now been imprisoned for years? Such an abuse and miscarriage of Justice!" Trump wrote on Truth Social, referencing those convicted for the Jan. 6, 2021, attack on the U.S. Capitol.

"Rather than come clean about their decades of wrongdoing, President Biden and his family continue to do everything they can to avoid accountability," Rep. James Comer, R-Ky., who led investigations into the Biden family's business dealings, said in a statement.

Democratic Colorado Gov. Jared Polis said he was disappointed with the president's decision.

Contributing: Bart Jansen, USA TODAY

struck in a police vehicle on Interstate 75 near Downtown early Thursday morning, Cincinnati Police Department officials confirmed.

The officer experienced minor injuries and has since been treated at University of Cincinnati Medical Center and released.

At about 12:20 a.m., the officer was inside her police cruiser on I-75 North when another driver struck her car from behind. The officer was at the scene of a different car crash, investigating.

"This morning a Cincinnati Police Officer was struck on I-75 while in their vehicle. While the injuries are relatively minor, this incident could have been much worse. This is a stark reminder of the dangers officers face daily," Officer Ken Kober, police union president, told Enquirer media partner Fox19.

Kober told Fox19 the officer was released from the hospital after treatment. No one else was injured in the crash, officials said.

Officials have not yet released the name of the officer.

The Cincinnati Police Department is investigating the cause of the incident.

— Bibe Hodges and Fox19

Police: Man killed in early morning College Hill shooting identified

A man was killed in an early morning shooting in College Hill on Friday, according to Cincinnati police.

Officers were dispatched just before 3 a.m. for a reported shooting in the 2100 block of West North Bend Road, where they found 33-year-old Jason Stewart with gunshot wounds, police said in a news release.

Stewart was taken by the Cincinnati Fire Department to the University of Cincinnati Medical Center, where he died of his injuries.

Police have yet to announce an arrest or release any information about a possible suspect.

Anyone with information is urged to contact the Cincinnati Police Department's homicide unit at 513-369-3542.

— Quinton Bentley

Social Media Posts

White background – Facebook posts
Black background – X (Twitter) posts

Eastern Corridor @EasternCorridor · Nov 20

The City of Cincinnati and ODOT are proposing a new shared use path between the Wasson Way Trail in Ault Park and Otto Armleder Park. Learn more and share your feedback at our in-person and virtual open houses PublicInput.com/WassonArmleder

Eastern Corridor
November 26, 2024 ·

The City of Cincinnati and ODOT are proposing a new shared use path between the Wasson Way Trail in Ault Park and Otto Armleder Park. There are multiple alternatives for the route this path can take. Learn more and share your feedback at our in-person and vi... **See more**

Ohio Department of Transportation - Cincinnati District 8
November 21, 2024 ·

Public Input Sought For Wasson-Armleder Shared Use Path

CONTENT.GOVDELIVERY.COM

Public Input Sought For Wasson-Armleder Shared Use Path

Public Input Sought For Wasson-Armleder Shared Use Path Ohio Department of Transportation sent this bulletin at 11/20/2024 06:12 PM EST Having trouble viewing this email? View it as a Web page. Public...

Like Comment Copy Share

Pleasant Streets
Barbara Didrichsen · November 22 at 2:06 PM ·

ODOT plans to connect Wasson Way to Otto Armleder. Details and information about a public meeting to discuss routes below. Thanks to Kerry Devery for alerting me to this.

PUBLICINPUT.COM

HAM Wasson Way to Otto Armleder PID 113603 - PublicInput

Thank you for visiting! The City of Cincinnati in conjunction with the Ohio Department of Trans...

Barbara Didrichsen
Admin · Yesterday at 6:26 AM ·

Virtual open house for new Wasson-Armleder shared use path.

PUBLICINPUT.COM

HAM Wasson Way to Otto Armleder PID 113603 - PublicInput

Thank you for visiting! The City of Cincinnati in conjunction with the Ohio Department of Trans...

David Dawson - Sibcy Cline Realtors · Follow
November 22, 2024 ·

https://www.publicinput.com/WassonArmleder

Opportunity to review plans (online) for connecting the Wasson Trail to Armleder Park. This project would really open up great bike/run/walk opportunities!

PUBLICINPUT.COM

HAM Wasson Way to Otto Armleder PID 113603 - PublicInput

Thank you for visiting! The City of Cincinnati in conjunction with the Ohio Department o...

William H Hopple
November 29, 2024 ·

Wasson Way extension opportunity

Ohio Department of Transportation has a proposal to dramatically improve Wasson Way by extending it across the trestle above Red Bank Expressway. This would continue straight past the Ault Park bridge and connect to Armleder Park and Little Miami Trail.

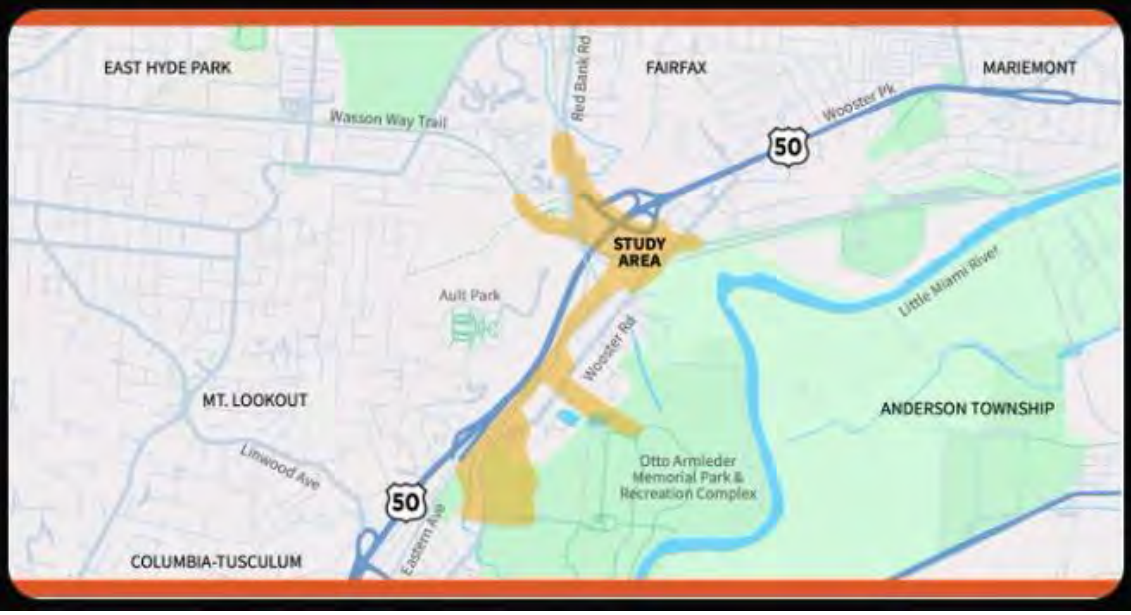
There are two routes under consideration. One follows the roadways and exit ramps along Red Bank Road Expressway (marked in red) and the other goes across the bridges marked in green (trest... **See more**

Eastern Corridor
November 29 at 10:00 AM ·

We're working to make it easier and safer for bicyclists and pedestrians to travel between the Wasson Way Trail and Otto Armleder Park. The team has identified multiple alternatives and wants your feedback. Visit our Virtual Open House to review the options under consideration or join us in person on Dec. 5 from 5 – 7 p.m. at Karrikin. www.PublicInput.com/WassonArmleder

Eastern Corridor @EasternCorridor · Nov 29

We're working to make it easier and safer for bicyclists and pedestrians to travel between the Wasson Way Trail and Otto Armleder Park. Visit our Virtual Open House or join us in person on Dec. 5 from 5-7 p.m. at Karrikin. PublicInput.com/WassonArmleder



Jay Andress
November 29 at 1:58 PM ·

For over a year, the Ohio Department of Transportation has been working on a proposal to extend the Wasson Way to Armleder Park and the Little Miami Trail. This was always the original plan...connect the residents of the City (all the way from Avondale and Clifton) along a linear urban greenway to the Little Miami Trail. Special thanks to ODOT, WW nonprofit, Crown, and the City of Cincinnati for pursuing this. The route would go over this bridge above Red Bank Road, over the bridge above Wooster Pike, and then head south along the Duck Creek stream (a beautiful natural setting) to Armleder Park. ODOT is holding a public event on Dec 5th at Karrikin's in Fairfax. Very important for you and your neighbors to attend...PLEASE SHARE...the more public support the sooner this project happens. http://www.publicinput.com/WassonArmleder

Joe Groh
December 3, 2024 ·

From the Wasson Way Team:

Dear Neighbor, The Ohio Department of Transportation has been working on a proposal to extend the Wasson Way to Armleder Park and the Little Miami Trail. It would use this trestle over Red Bank Expressway (and the bridge over Wooster Pike), go behind Hyde Park Lumber, and then go south along the Duck Creek stream. It would be a wonderful improvement for the east side of the City... a linear urban greenway going from Avondale to Armleder to Loveland and all the way to Columbus!

We need your support!!! ODOT is holding a public event on Dec. 5th from 5 to 7pm at Karrikin's in Fairfax. The community needs to show strong support.

details...https://www.publicinput.com/WassonArmleder If you can't attend the open house you can visit their site and register your support.

6

CROWN Cincinnati · Follow
December 2 at 4:43 PM ·

Wasson-Armleder Share Use Path - Public Open House

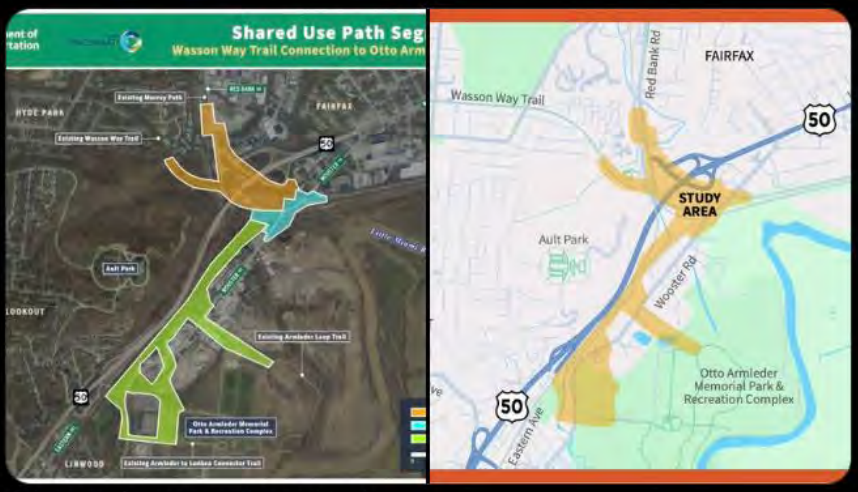
The City Of Cincinnati Government, in conjunction with the Ohio Department of Transportation, is developing plans to make it easier and safer for bicyclists and pedestrians to travel between the Wasson Way in Ault Park and the Otto Armleder Memorial Park & Recreation Complex. Multiple connection alternatives were studied.

They will share their study results and recommendations for your review and comment through an in-pers... **See more**

PUBLICINPUT.COM
HAM Wasson Way to Otto Armleder PID 113603 - PublicInput
Thank you for visiting! The City of Cincinnati in conjunction with the Ohio Department of Trans...

CROWN Cincinnati @CROWNcincinnati · Dec 2

@CityOfCincy and @ODOT_Statewide are working on safer travel for cyclists and pedestrians between Wasson Way Trail in Ault Park and Otto **Armleder** Memorial Park. Join their open houses to share feedback! publicinput.com/WassonArmleder...



Ohio Dept of Transportation and 3 others

4 73

Tri-State Trails · Follow
December 2, 2024

Share your experience & feedback!

The City Of Cincinnati Government, in conjunction with the Ohio Department of Transportation, is developing plans to make it easier and safer for bicyclists and pedestrians to travel between the Wasson Way Trail in Ault Pa... **See more**

CROWN Cincinnati · Follow
December 2, 2024

Wasson-Armleder Share Use Path - Public Open House

The City Of Cincinnati Government, in conjunction with the Ohio Department of Transportation, is developing plans to make it easier and safer for bicyclists and pedestrians to travel between the Wasson Way ... **See more**

PUBLICINPUT.COM

HAM Wasson Way to Otto Armleder PID 113603 - PublicInput

Thank you for visiting! The City of Cincinnati in conjunction with the Ohio Departme...

ODOT Cincinnati @ODOT_Cincinnati · 6h

The city of Cincinnati & ODOT are proposing a new shared use path between Wasson Way Trail in Ault Park and **Otto Armleder** Park. A virtual open house is under way & this Thursday is our in-person open house. See more at PublicInput.com/WassonArmleder

Ohio Department of Transportation - Cincinnati District 8
December 3, 2024 ·

We're working to make it easier & safer for bicyclists & pedestrians to travel between the Wasson Way Trail & Otto Armleder Park. Join us in-person this Thursday, 12/5, from 5-7pm at Karrikin, 3717 Jonlen Drive (Fairfax). http://PublicInput.com/WassonArmleder

Thu, Dec 5, 2024
Wasson Way Trail & Otto Armleder Park Connection Meeting
Cincinnati
3 people went
☆ Interested

11 2 shares

Ohio Department of Transportation - Cincinnati District 8 created an event.

Yesterday at 10:31 AM ·

Tomorrow at 5 PM

Wasson Way Trail & Otto Armleder Park Connection Meeting

☆ Interested

Cincinnati, OH

2 people going

Ohio Department of Transportation - Cincinnati District 8 updated the event cover photo in **Wasson Way Trail & Otto Armleder Park Connection Meeting**.

December 3, 2024 ·

Like Comment Copy

Rasor
December 3, 2024 ·

Excited to be a part of this project! Join us December 5.

Eastern Corridor
November 29, 2024 ·

We're working to make it easier and safer for bicyclists and pedestrians to travel between the Wasson Way Trail and Otto Armleder Park. The team has identified multiple alternatives and wants your feedback. Visit our Virtual Open House to review the options ... **See more**

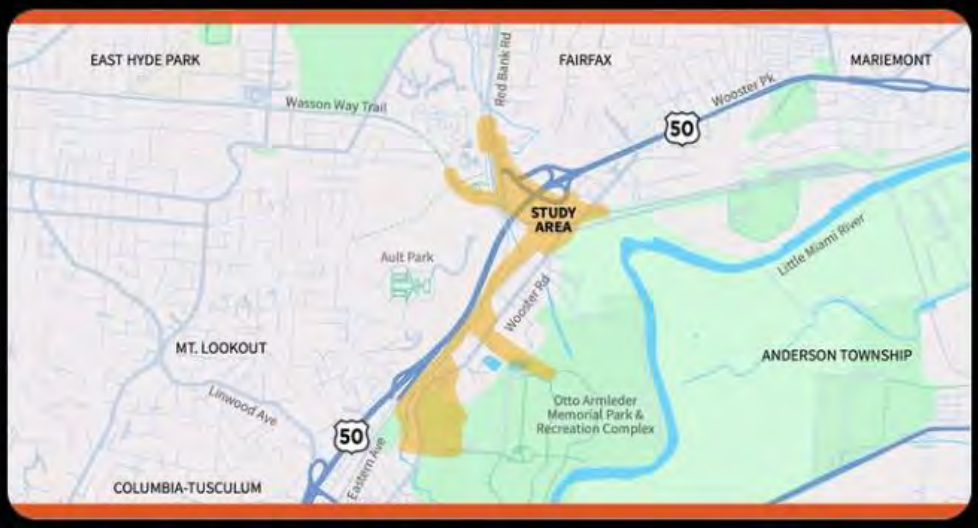
ODOT Cincinnati @ODOT_Cincinnati · 1h

We've developed several alternatives for the proposed Wasson-Armleder Shared Use Path & we want to hear from you! Stop by our virtual open house or join us this Thursday, 12/5, at Karrikin, 3717 Jonlen Drive (Fairfax) between 5 & 7pm. PublicInput.com/WassonArmleder

396

ODOT Cincinnati @ODOT_Cincinnati · Dec 3

We're working to make it easier & safer for bicyclists & pedestrians to travel between the Wasson Way Trail & Otto Armleder Park. Join us in-person this Thursday, 12/5, from 5-7pm at Karrikin, 3717 Jonlen Drive (Fairfax).
PublicInput.com/WassonArmleder



1 711

Eastern Corridor
December 5, 2024 ·

Tonight is our In-Person Open House about the Wasson-Armleder Shared Use Path. Come out to Karrikin between 5 – 7 p.m. Drop in at your convenience to review the route alternatives and give your feedback. We look forward to seeing you!

Ohio Department of Transportation - Cincinnati District 8
December 5, 2024 ·

Tonight is our in-person open house about the Wasson-Armleder Shared Use Path. Come out to Karrikin | 3717 Jonlen Drive (Fairfax) from 5-7pm. Drop in at your convenience to review the route alternatives and give your feedback. We look forward to seeing you!

ODOT Cincinnati @ODOT_Cincinnati · Dec 5

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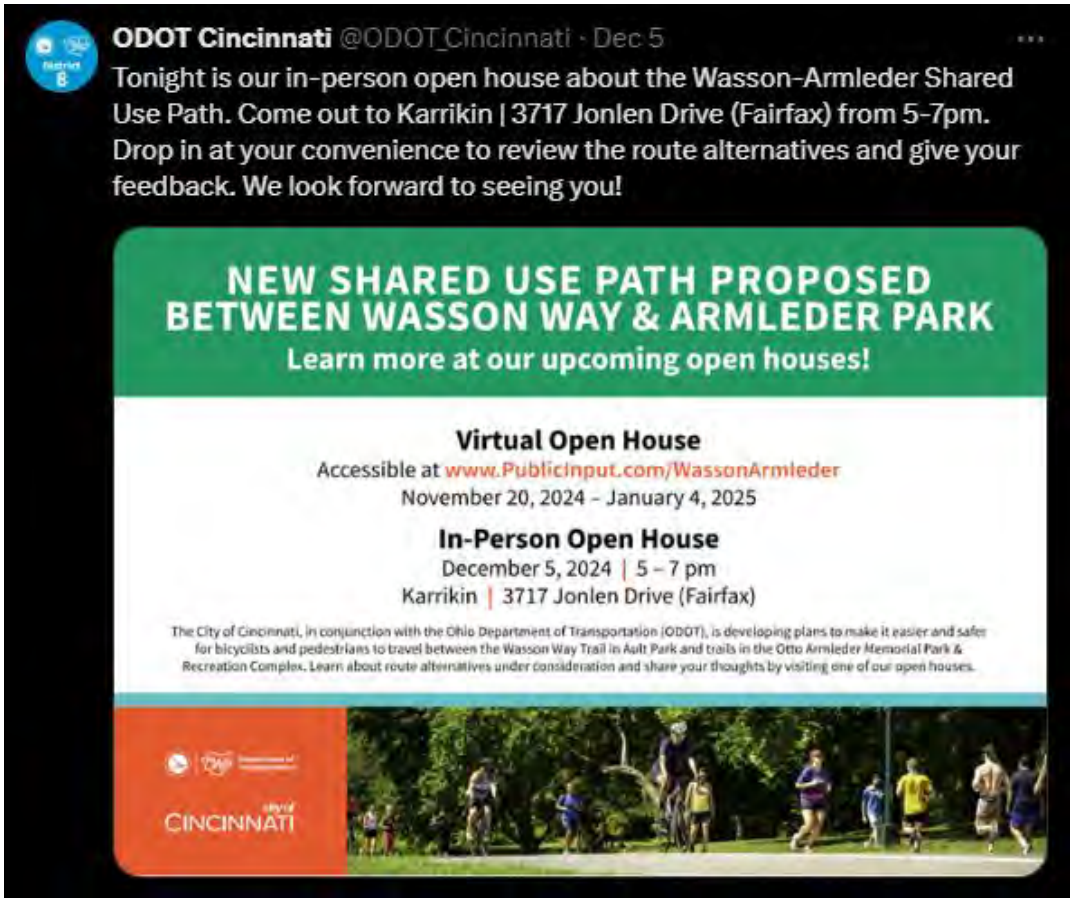


Ohio Department of Transportation - Cincinnati District 8 ▸ Wasson Way Trail & Otto Armleder Park Connection Meeting
December 5, 2024 ·

Tonight is our in-person open house about the Wasson-Armleder Shared Use Path. Come out to Karrikin | 3717 Jonlen Drive (Fairfax) from 5-7pm. Drop in at your convenience to review the route alternatives and give your feedback. We look forward to seeing you!

Like Comment Copy

ODOT Cincinnati @ODOT_Cincinnati · 22h

Several alternatives for the proposed Wasson-Armleder Shared Use Path have been developed & we want to hear from you! Stop by our virtual open house to learn more and share your thoughts at PublicInput.com/WassonArmleder

Rasor · Follow
a day ago ·

Great conversations were happening last week in Fairfax on possible alternatives for a connection between Wasson Way and Otto Armleder Park. If you missed us, don't worry – there's still time to give your input on the different alternatives through the Virtual Open House. Comment period ends January 4. https://publicinput.com/WassonArmleder

Anderson Township, Ohio - Government · Follow
December 6, 2024 at 7:45 AM ·

Weigh in on Proposed Wasson Way to Armleder Park Trail

The City of Cincinnati, in conjunction with the Ohio Department of Transportation (ODOT), is developing plans to make it easier and safer for bicyclists and pedestrians to travel between the nearby Wasson Way Trail in Ault Park and shared use trails in the Otto Armleder Memorial Park & Recreation Complex.

For more information, or to share your thoughts, visit www.PublicInput.com/WassonArmleder.

PUBLICINPUT.COM
HAM Wasson Way to Otto Armleder PID 113603 - PublicInput
Thank you for visiting! The City of Cincinnati in conjunction with the Ohio Department of Trans...

Jenn Prine is with **Mark Bowen**. · Follow
December 7, 2024 at 12:51PM ·

I attended an event at Karrikin Spirits Company the other night.

Here's the run down . . .

"The City of Cincinnati, in conjunction with the Ohio Department of Transportation (ODOT), is developing plans to make it easier and safer for bicyclists and pedestrians to travel between the Wasson Way Trail in Ault Park and the Otto Armleder Memorial Park & Recreation Complex. Multiple connection alternatives were studied. Through this Virtual Open House, we're sharing our study results and recommendations for your review and comment. Public input is important and will be used to confirm which route alternatives will be selected for further development."

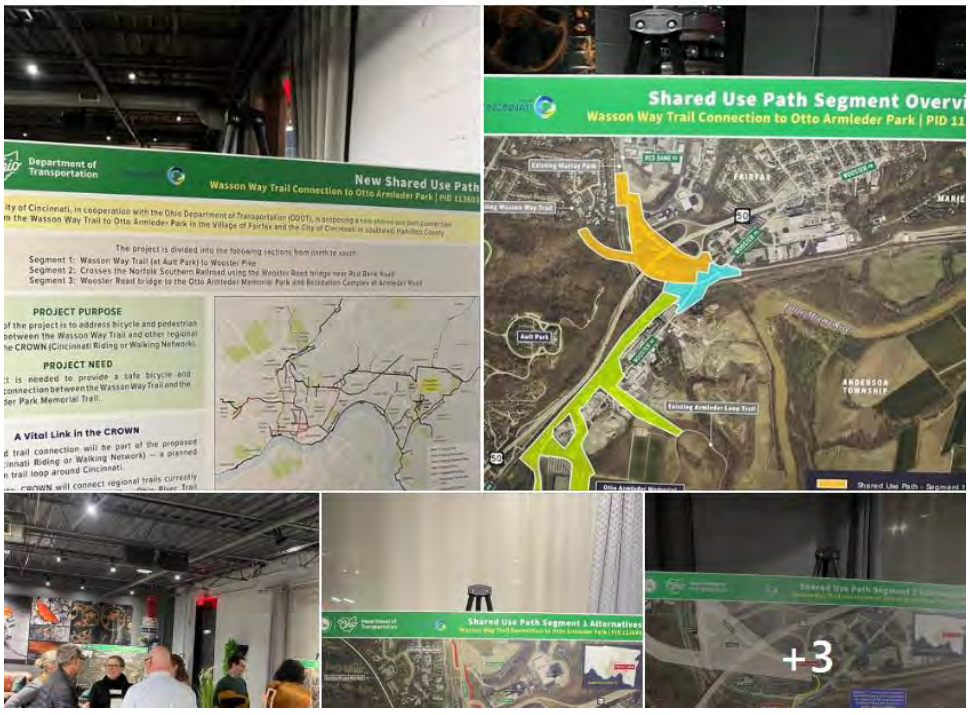
For more info and to give your input please visit their site here.

https://publicinput.com/odot113603factsheet

Wasson Way Project · Follow
December 11 at 6:28PM ·

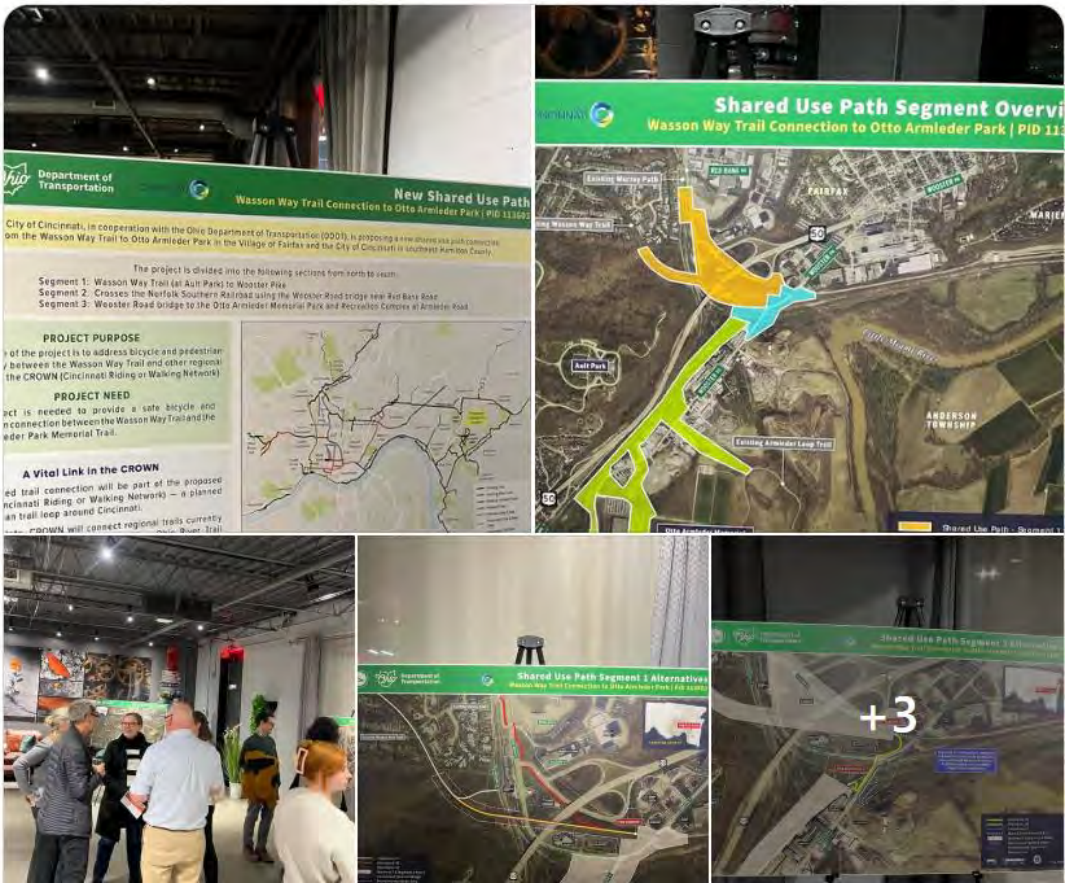
Thank you to everyone who joined us @karrikinspiritsco last week for the open house for the newly proposed shared used path connection from Wasson Way to Otto Armleder Park! This valuable addition would provide a safe and easy connection for pedestrians and cyclists traveling from the eastern end of Wasson Way to the vast trail network around Armleder Park!

We'd love your thoughts, and encourage your participation in our virtual open house, available until January 4th. Pleas... **See more**



Pleasant Streets
Barbara Didrichsen · December 12 at 9:28 AM ·

Still time to provide feedback.



ODOT Cincinnati @ODOT_Cincinnati · Dec 20, 2024

Multiple alternatives for a shared use path betw Wasson Way Trail & Otto Armleder Park are under consideration & we want your feedback! Visit our virtual open house at any time through Jan. 4 to review the options at PublicInput.com/WassonArmleder

1 958

ODOT Cincinnati @ODOT_Cincinnati · Dec 23, 2024

ODOT & the city of Cincinnati have developed multiple alternatives for a shared use path between Wasson Way Trail & Otto Armleder Park & we want your feedback! Visit our virtual open house to review the options under consideration at PublicInput.com/WassonArmleder

1 734

ODOT Cincinnati @ODOT_Cincinnati · Dec 28, 2024

Our Virtual Open House about the Wasson-Armleder Shared Use Path closes on January 4! Drop in soon to make sure your voice is heard as we work to make it safer and easier for bicyclists and pedestrians to travel in the area. PublicInput.com/WassonArmleder

803

Ohio Department of Transportation - Cincinnati District 8
December 30, 2024 at 1:50 PM ·

Public Input Sought For Wasson-Armleder Shared Use Path

CONTENT.GOVDELIVERY.COM

Public Input Sought For Wasson-Armleder Shared Use Path

Public Input Sought For Wasson-Armleder Shared Use Path
Ohio Department of Transportation sent this bulletin at 12/30/2024 09:00 AM EST Having trouble viewing this email?...

2

Like Comment Share

We Move Cincy · Follow
December 31, 2024 at 11:16 AM ·

We need your input! We're working with ODOT to plan a shared-use path that will connect the existing Wasson Trail and Otto Armleder Park. Visit https://publicinput.com/wassonarmleder by January 4th to give us your feedback on the preferred alignment.

16 2 comments 2 shares

We Move Cincy @WeMoveCincy · Dec 31, 2024

We need your input! We're working with ODOT to plan a shared use path that will connect the existing **Wasson** Trail and Otto Armleder Park. Visit publicinput.com/wassonarmleder by January 4th to give us your feedback on the preferred alignment.

3 10 679

We Move Cincy · Follow

December 31, 2024 at 11:16 AM ·

We need your input! We're working with ODOT to plan a shared-use path that will connect the existing Wasson Trail and Otto Armleder Park. Visit https://publicinput.com/wassonarmleder by January 4th to give us your feedback on the preferred alignment.

17 2 comments 3 shares

Greater Cincinnati Politics
Patti Gallagher Newberry · January 1 at 9:34 AM ·

Resolved to hike and bike more in 2025? Read this:

CINCINNATI.COM

Proposed Wasson-to-Armleder path would cost $18.5M; officials seek public input

2 4 comments

Enquirer - Cincinnati and Kentucky · Follow
January 1 at 3:00 AM ·

City and state transportation officials have a plan to connect Ault and Armleder parks. They want hikers and bikers to have a say.

CINCINNATI.COM

Proposed Wasson-to-Armleder path would cost $18.5M; officials seek public input

Cincinnati Public Radio · Follow
January 2 at 11:34 AM

ODOT's Kathleen Fuller says the path would mean big things for the region's trail networks.

WVXU.ORG

ODOT taking public comment on Wasson Way-Armleder Park connector trail

The potential connection could link Wasson Way to paths that stretch across Ohio.

10 2 shares

ODOT Cincinnati @ODOT_Cincinnati · 5h

ODOT & the city of Cincinnati have developed multiple alternatives for a shared use path betw Wasson Way Trail & Otto Armleder Park & we want your feedback! Visit our virtual open house to review the options under consideration at PublicInput.com/WassonArmleder

2 615

Natalie Wheeler Hastings
January 3 at 10:27 AM ·

See Eastern Corridor Plan updates & provide input for connection of Armleder Park to Wasson Way:

The Wasson-Armleder Shared Use Trail is part of the Eastern Corridor Program. The Eastern Corridor Program is a series of transportation improvement projects that have been or are being planned across the eastern half of the Greater Cincinnati region to:

Reduce vehicular congestion... **See more**

PUBLICINPUT.COM
HAM Wasson Way to Otto Armleder PID 113603 - PublicInput
Thank you for visiting! The City of Cincinnati in conjunction with the Ohio Department of Trans...

Pleasant Streets
Barbara Didrichsen · January 7 at 8:12 AM ·

(You can read the entire paywalled article by logging onto your Cincy Library account and going to News & Media. Excerpted paragraphs below.)

The city of Cincinnati and the state of Ohio are considering how to extend Wasson Way from its current terminus in Ault Park to the city's Otto Armleder Memorial Park in Linwood.

The project, which currently is estimated at $18.6 million, would connect two major Cincinnati parks and create another planned link between two of its major... **See more**

BIZJOURNALS.COM
City of Cincinnati, state of Ohio look to link Wasson Way to Little Miami Trail - Cincinnati Business Courier

9 1 comment

Reddit post:

r/cincinnati • 23 hr. ago
CyberData0709 Top 1% Commenter

Wasson Way to Armleder Park and the Little Miami Trail Proposed Extension

Photos

310 30 Share

https://www.reddit.com/r/cincinnati/comments/1h5snl7/wasson_way_to_armleder_park_and_the_little_miami/

Mailer

Mailer

NEW SHARED USE PATH PROPOSED BETWEEN WASSON WAY & ARMLEDER PARK

Learn more at our upcoming open houses!

Virtual Open House

Accessible at www.PublicInput.com/WassonArmleder

November 20, 2024 – January 4, 2025

In-Person Open House

December 5, 2024 | 5 – 7 pm

Karrikin | 3717 Jonlen Drive (Fairfax)

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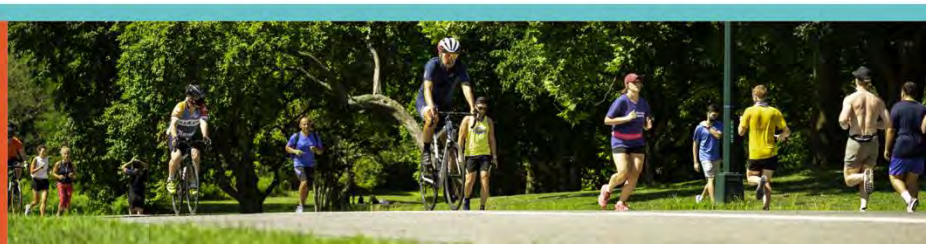
Ohio Department of Transportation

city of CINCINNATI



Public input is important and will be used to confirm which route alternatives will be selected for further development. Comments are due by Jan. 4, 2025, and can be shared at the open houses by contacting:

Katherine DeStefano, P.E., Senior Transportation Engineer
ODOT District 8 | 505 South State Route 741 | Lebanon, OH 45036
Katherine.DeStefano@dot.ohio.gov | (513) 933-6583

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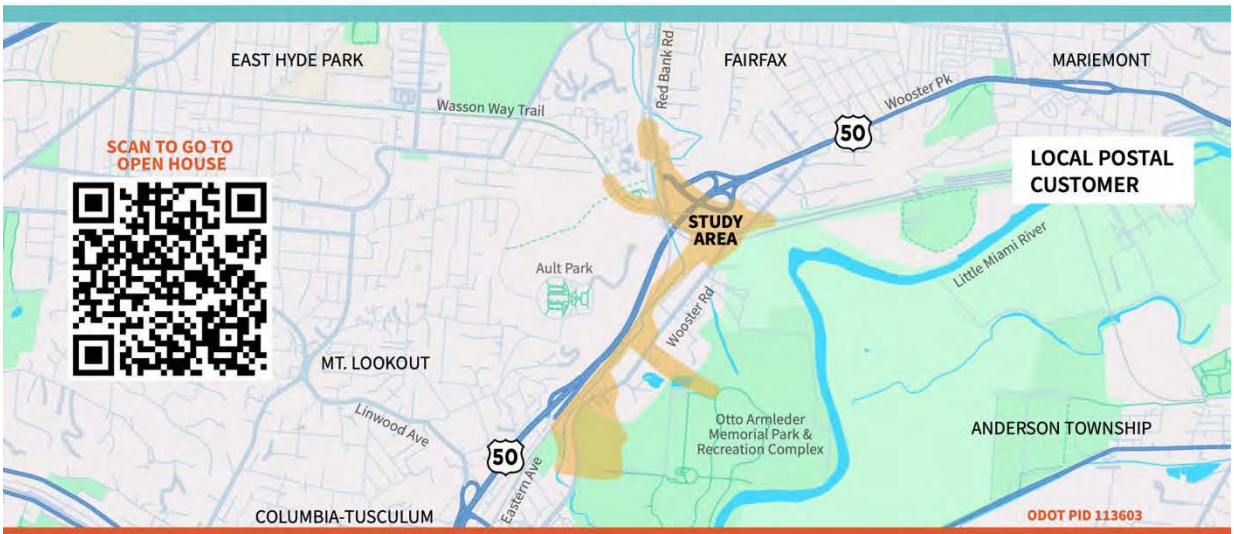

Ohio Department of Transportation

city of CINCINNATI

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Property Owner Notification Letter

November 20, 2024

RE: Public Meeting
Wasson Way to Otto Armleder Shared Use Path
HAM Wasson Way to Otto Armleder, PID 113603

Dear Neighbor,

The City of Cincinnati, in conjunction with the Ohio Department of Transportation (ODOT), is proposing to construct a new shared use path connecting Wasson Way to Otto Armleder Park in Hamilton County, Ohio. The path will complete another important piece of Greater Cincinnati's CROWN (Cincinnati Riding Or Walking Network), a 34-mile shared use trail network that will encircle the city and connect to other regional trails such as the Murray Path, Ohio River Way Trail, Mill Creek Greenway Trail, Canal Bikeway, and Lunken Airport Trail. The purpose of the project is to make it easier and safer for bicyclists and pedestrians to travel between the Wasson Way Trail in Ault Park and the Otto Armleder Memorial Park & Recreation Complex. An Aerial Map of the study area is included with this letter.

Multiple connection alternatives were studied, and ODOT is sharing their recommendations for public review and comment during two open house opportunities:

Virtual Open House
Accessible at www.PublicInput.com/WassonArmleder
November 20, 2024 – January 4, 2025

In-Person Open House
December 5, 2024| 5 – 7 p.m.
Karrikin
3717 Jonlen Drive, Fairfax, OH 45227

All materials presented during the public meeting will also be available on the project website. If you would like these materials mailed to you or if you have questions or comments about this project, please contact me at the address below. Comments may be submitted via email, phone, or mail, or you may leave comments on the project's website www.PublicInput.com/WassonArmleder. Comments should be directed to:

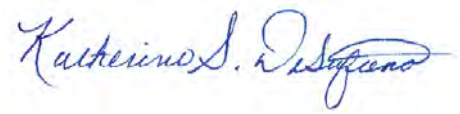
Katherine DeStefano, P.E.
ODOT District 8 Senior Transportation Engineer
505 South State Route 741, Lebanon OH 45036
Phone: 513-933-6583
Email: katherine.destefano@dot.ohio.gov

Issues you may wish to comment on include, but are not limited to, the effect of the project on residents and pedestrian and bicycle mobility, air quality, the local economy, floodplains, historic or cultural resources, and other environmental and community concerns. We ask that all comments be submitted **no later than** January 4, 2025.

Public participation is solicited without regard to race, color, sex, age, national origin or disability. The Ohio Department of Transportation is committed to providing access and inclusion and reasonable accommodation in its services, activities, programs and employment opportunities in accordance with the Americans with Disabilities Act (ADA) and other applicable laws. To request a reasonable accommodation due to a disability, or language interpretation or translation services to participate in this meeting please contact Kathleen Fuller at (513) 932-3030, no later than November 29, 2024. Public participation is solicited without regard to race, color, sex, age, national origin, or disability.

We sincerely appreciate your involvement!

Respectfully,



Katherine DeStefano, P.E.
ODOT District 8 Senior Transportation Engineer

For more information, go to
publicinput.com/wassonarmleder
or scan the QR code below.

Department of Transportation

city of CINCINNATI

Shared Use Path Recommended Alternative

Wasson Way Trail Connection to Otto Armleder Park | PID 113603

Existing Wasson Way Trail

WOOSTER PK

RED BANK RD

MARIEMONT

Little Miami River

Ault Park

50

WOOSTER RD

MT. LOOKOUT

Existing Armleder Loop Trail

ANDERSON TOWNSHIP

LINWOOD AVE

EASTERN AVE

Existing Armleder to Lunken Connector Trail

Otto Armleder Memorial Park & Recreation Complex

LINWOOD

Recommended Alternative

Total Estimated Cost: $18.5 Million

0 1/8 Mile 1/4 Mile 1/2 Mile

N

NAME	ADDRESS	ADDRESS 2	CITY, STATE, ZIP
5080 WOOSTER ROAD LLC	5080 WOOSTER RD	SUITE 300	CINCINNATI OH 45226
911 MOTORSPORTS LLC	525 VINE ST	SUITE 1605	CINCINNATI OH 45202
AMJON LLC	5246 WOOSTER RD		CINCINNATI OH 45226
CURRENT RESIDENT/TENANT	1160 BEVERLY HILLS DRIVE		CINCINNATI OH 45208
CURRENT RESIDENT/TENANT	4730 MADISON RD		CINCINNATI OH 45227
BLUE RIDGE ENTERPRISES LTD	5646 WAYSIDE AVE		CINCINNATI OH 45230
CURRENT RESIDENT/TENANT	3512 FORESTOAK CT		CINCINNATI OH 45208
CONREX	997 MORRISON DR	SUITE 402	CHARLESTON SC 29403
IVS	P.O. BOX 92108		AUSTIN TX 78709
CARUSTAR MILL GROUP INC	PO BOX 115		AUSTELL GA 30168
CINCINNATI CITY OF	801 PLUM ST	ROOM 122	CINCINNATI OH 452025704
CONSOLIDATED RAIL CORP	2001 MARKET ST	6E	PHILADELPHIA PA 19103
CINCINNATI PAPERBOARD	5500 WOOSTER PK		CINCINNATI OH 45226
DUKE ENERGY OHIO INC	550 SOUTH TRYON ST	MAIL CODE: DEC44P	CHARLOTTE NC 28202
EASTERN HILLS PROPERTIES LLC	7150 RAGLAND RD	#24	CINCINNATI OH 45244
FAIRFAX SELF STORAGE LP	75 COMMERCE DR P O BOX 8		GRAYSLAKE IL 60030
VILLAGE OF FAIRFAX	5903 HAWTHORNE AVE		CINCINNATI OH 45227
FCA REALTY LLC	1000 CHRYSLER DR		AUBURN HILLS MI 48326
FERGUSON REALTY CO	1372 THORNBIRD DR		CINCINNATI OH 45230
CURRENT RESIDENT/TENANT	3508 FORESTOAK CT		CINCINNATI OH 45208
CURRENT RESIDENT/TENANT	7575 WOOSTER PK		CINCINNATI OH 45227
GFMHF I LTD	3500 RED BANK ROAD		CINCINNATI OH 45227
HABEGGER INVESTMENT GROUP II LLC	4995 WINTON RD		CINCINNATI OH 45232
HAMILTON COUNTY BOARD OF COMMISSIONERS	138 E COURT ROOM	603	CINCINNATI OH 45202
CURRENT RESIDENT/TENANT	3905 BEECH ST		CINCINNATI OH 45227
HYDE PARK LAND LLC	C/O RYAN PTS DEPT	908	HOUSTON TX 77056
THE HYDE PARK LUMBER COMPANY	3360 RED BANK RD		CINCINNATI OH 45227
J K MEURER CORP	33 GLENDALE MILFORD RD		LOVELAND OH 45140
JOHN AND BRADLEY REALTY LLC	5171 WOOSTER PK		CINCINNATI OH 45226
JOHNNY BOX MANUFACTURING COMPANY	5150 WOOSTER PIKE		CINCINNATI OH 45226
K INK PROPERTIES LLC	5230 WOOSTER PIKE		CINCINNATI OH 45226
KARRIKIN HOLDINGS LLC	3717 JONLEN DR		CINCINNATI OH 45227
CORELOGIC	3001 HACKBERRY RD		IRVING TX 750630156
UNION SAVINGS BANK	8805 GOVERNERS HILL DRIVE	ATTN: ESCROW DEPT	CINCINNATI OH 45249
LITTLE MIAMI REAL ESTATE AND INVESTMENT CORP	3607 CHURCH ST		CINCINNATI OH 45244
WELLS FARGO REAL ESTATE-ATT TAX DEPT-MAC X2302-04D	1 HOME CAMPUS		DES MOINES IA 503280001
MAR CINCI, LLC	C/O ALTUS GROUP	PO BOX 92129	SOUTHLAKE TX 76092
MARCHAR PROPERTIES LLC	5084 WOOSTER PK	STE 100	CINCINNATI OH 45226
MORROW GRAVEL COMPANY THE	11641 MOSTELLER RD		CINCINNATI OH 45241
CORELOGIC	3001 HACKBERRY RD		IRVING TX 750630156
CURRENT RESIDENT/TENANT	5084 WOOSTER RD	SUITE 200	CINCINNATI OH 45226
NORFOLK & WESTERN RAILROAD COMPANY	110 FRANKLIN RD		ROANOKE VA 240420028
NORFOLK & SOUTHERN RAILWAY	ATTN TAX DEPARTMENT	PO BOX 5651	BISMARCK ND 58506
NORFOLK SOUTHERN RAIL COMPANY	P O BOX 209	3 COMMERICAL PL	NORFOLK VA 23510
PARKRIDGE ESTATES LLC	5600 GRAYDON MEADOW LN		CINCINNATI OH 45243
PERRINO PROPERTIES LLC	4120 33RD AVE		CINCINNATI OH 45206
POHL REALTY	2182 CABLECAR COURT	C/O ANDY FREY	CINCINNATI OH 45244
UNION SAVINGS BANK	8805 GOVERNERS HILL DRIVE	ATTN: ESCROW DEPT	CINCINNATI OH 45249
ROUND LAKE LLC	4078 HICKORY WOODS DR		MASON OH 45040
CURRENT RESIDENT/TENANT	3510 FORESTOAK CT		CINCINNATI OH 45208
SNIPEDOODLE PROPERTIES LLC	5194 WOOSTER PK		CINCINNATI OH 45226
GENESEE & WYOMING INC	200 MERIDIAN CENTER BLVD SUITE 300	ATTN: ACCOUNTS PAYABLE	ROCHESTER NY 14618
SOUTHWEST OHIO REGIONAL TRANSIT AUTHORITY	525 VINE ST	SUITE 500	CINCINNATI OH 45202
CURRENT RESIDENT/TENANT	5256 WOOSTER RD		CINCINNATI OH 45226
STORAGE FIVE FAIRFAX LLC	P O BOX 1042		SEABROOK TX 77586
CURRENT RESIDENT/TENANT	5824 CROSLIN ST		CINCINNATI OH 45228
WELLS FARGO REAL ESTATE-ATT TAX DEPT-MAC X2302-04D	1 HOME CAMPUS		DES MOINES IA 503280001
TOAD INC	5445 WOOSTER PIKE		CINCINNATI OH 45226
US BANK NATIONAL ASSOCIATION	C/O RYAN PTS DEPT	908	HOUSTON TX 77056
UNITED STATES OF AMERICA CORPS OF ENGINEER	PO BOX 59		LOUISVILLE KY 402010059
VILLAGE OF FAIRFAX	5903 HAWTHORNE AVE		CINCINNATI OH 45227
CURRENT RESIDENT/TENANT	3516 FORESTOAK CT		CINCINNATI OH 45208
WOCONDO LLC	570 CHASWIL DR		CINCINNATI OH 45255
WOOSTER 55 LLC	5591 WOOSTER PIKE		CINCINNATI OH 45227
WOOSTER REAL ESTATE INVESTMENTS II LLC	6548 ROLLY MEADE AVE		CINCINNATI OH 45243
XAMASS PARTNERS LLC	5080 WOOSTER ROAD	SUITE 200	CINCINNATI OH 45226

Email Notifications

NEW SHARED USE PATH PROPOSED BETWEEN WASSON WAY & ARMLEDER PARK

LEARN MORE AT OUR UPCOMING OPEN HOUSES

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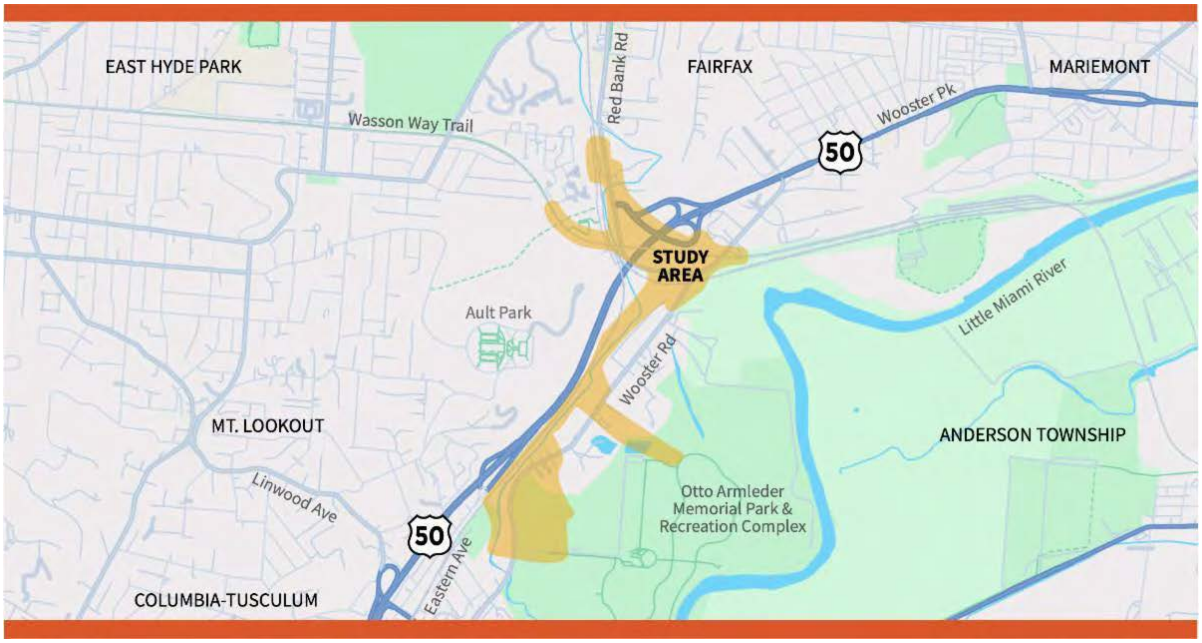
www.PublicInput.com/WassonArmleder

In-Person Open House
Thursday, December 5 | 5 – 7 p.m.
Karrikin | 3717 Jonlen Drive | Fairfax, OH 45227

ABOUT THE PROJECT

The Wasson-Armleder Shared Use Path will establish a new connection linking two of the area's most popular shared use trails – Wasson Way and the Little Miami Scenic Trail via Armleder Park – and will provide new access opportunities to other nearby trails such as the Murray Path and Lunken Airport Trail as well as Cincinnati's broader CROWN network. It will follow its own alignment in the vicinity of Red Bank Road, Wooster Pike and Wooster Road. Plans call for it to be approximately 2.5 miles long, 12-feet wide (whenever possible), and paved with asphalt.

Traffic in the project area can be fast and heavy, and sidewalks are inconsistent. This new shared use path will separate users from vehicular traffic, making travel in the area much easier and safer for everyone.



Wasson-Armleder Shared Use Path Study Area

YOUR INPUT IS IMPORTANT

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Katherine.DeStefano@dot.ohio.gov | (513) 933-6583

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AN EASTERN CORRIDOR PROJECT

The Wasson-Armleder Shared-Use Trail is an Eastern Corridor project. The Eastern Corridor Program is a series of integrated transportation projects designed to make travel easier and safer between Greater Cincinnati's urban core and the communities in eastern Hamilton County and western Clermont County. Eastern Corridor projects are also designed to support local goals for community enhancement, economic development, and sustainable regional growth. To learn more about the Eastern Corridor Program, visit EasternCorridor.org.

The Eastern Corridor

ODOT PID 113603

ODOT - Eastern Corridor | 505 South State Route 741 | Lebanon, OH 45036 US

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REMINDER:
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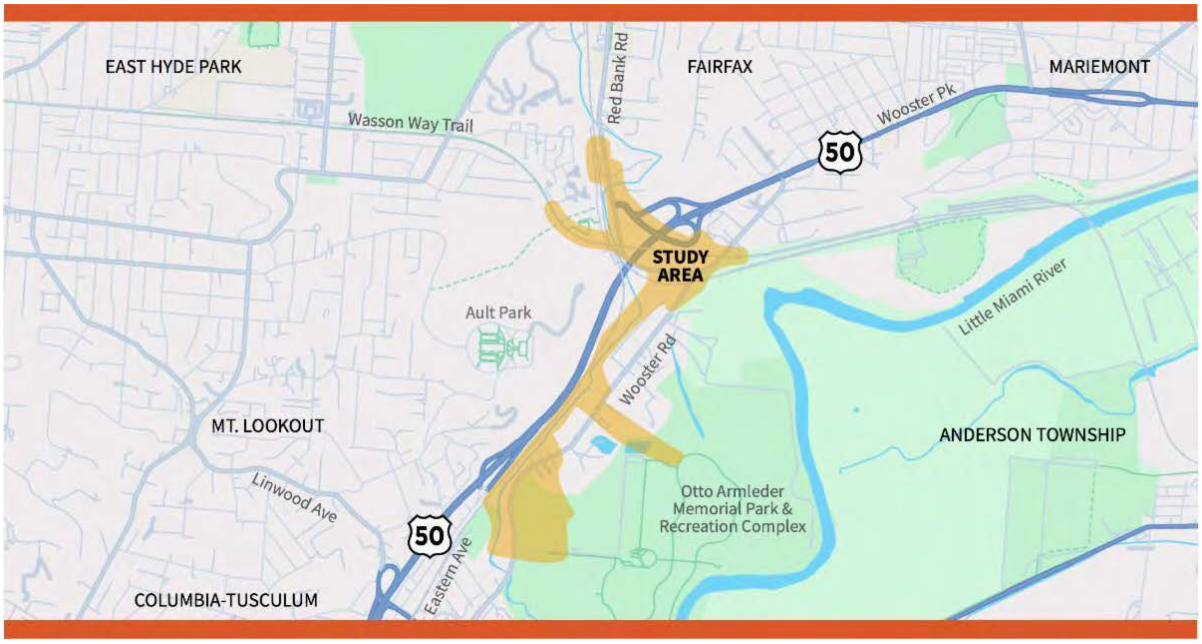

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The Eastern Corridor

ODOT PID 113603

Website Postings

Eastern Corridor Website - Homepage

The Eastern Corridor

Red Bank Corridor | Red Bank to I-275/SR 32 | Eastgate Area to Batavia | Oasis Rail Transit | News | Archive

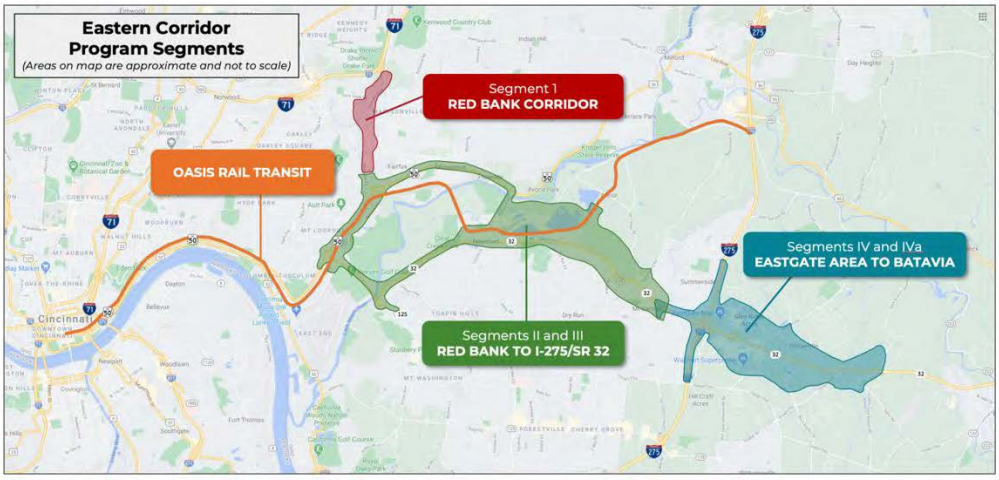
Click image to visit the Virtual Open House

Welcome to the Eastern Corridor Program

The Eastern Corridor Program is a series of integrated multi-modal transportation projects designed to make travel easier and safer between Greater Cincinnati's urban core and the communities in eastern Hamilton County and western Clermont County. This area covers approximately 165 square miles. Eastern Corridor projects are also designed to support local goals for community enhancement, economic development, and sustainable regional growth.

While each Eastern Corridor project is functionally independent and provides improvements to the transportation system, Eastern Corridor projects are also interrelated and complementary to each other. Together, they are designed to allow our region to realize the greatest benefit from these transportation investments.

Planning for Eastern Corridor improvements began in the 1990s. Since then, numerous projects have been undertaken, ranging in size and complexity from simple traffic signal upgrades to roadway, intersection, and interchange improvements. Currently, dozens more projects are in the planning, design, and construction phases or are awaiting sponsorship and funding.



Eastern Corridor Website – Red Bank to 1-275/SR 32 Page

The Eastern Corridor

Red Bank Corridor | Red Bank to I-275/SR 32 | Eastgate Area to Batavia | Oasis Rail Transit | News | Archive

Click image to visit the Virtual Open House

Red Bank to I-275/SR 32 Overview

Located at the center of the Eastern Corridor region, **Eastern Corridor Segments II and III** extend between the Red Bank Corridor (Segment I) and the I-275/SR 32 interchange in the Eastgate area of Clermont County (Segment IV). They also include US 50/Wooster Pike, SR 125 (Beechmont Levee), and SR 32.

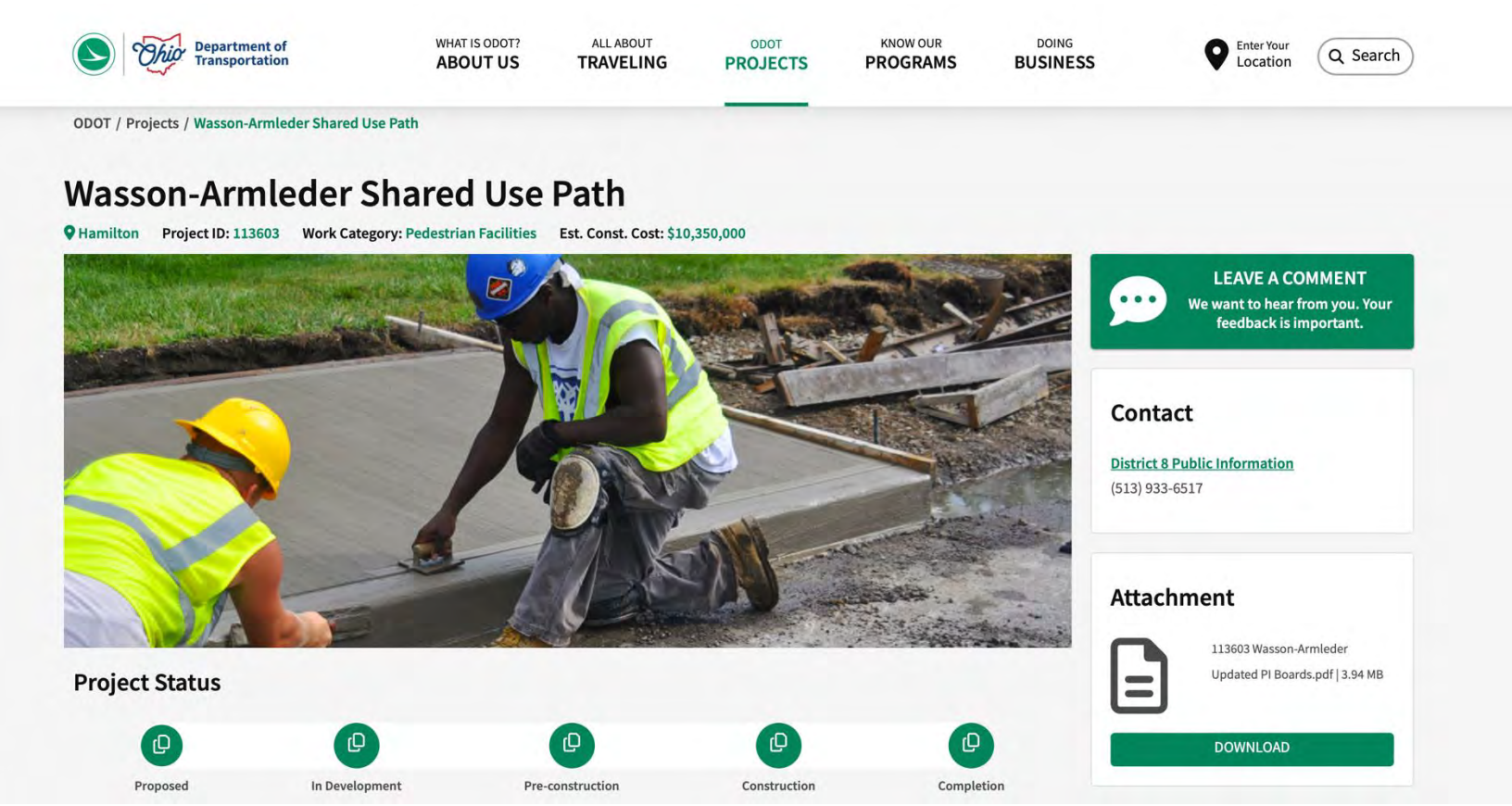
Previous recommendations for transportation improvements through this area focused on relocating SR 32 from where it currently meets SR 125 (Beechmont Levee) to create a new, direct connection with US 50 (Columbia Parkway) and the Red Bank corridor. After reviewing the results of in-depth studies, ODOT determined that relocating the roadway through the Little Miami River valley is not currently feasible due to potentially significant environmental impacts, and high construction costs.

STATUS

In 2017, ODOT completed a Transportation Needs Analysis for Eastern Corridor Segments II and III that used technical studies and public input to re-examine and reprioritize transportation needs and priorities within the study area. Throughout 2018, ODOT worked closely with multiple Advisory Committees made up of local community representatives, planners, and interest group members to develop and evaluate possible solutions for the needs identified in the report. Recommendations stemming from these efforts can be found in the 2019 Conceptual Alternatives Implementation Plan.

To date, several of the projects recommended in the Implementation Plan have been advanced for further planning and development. Click **here** for more information.

ODOT Website – Projects Page



https://www.transportation.ohio.gov/projects/projects/113603

Wasson Way Website – Homepage

WASSON WAY

Donate Phases Get Involved Gallery History About Us

WASSON WAY

Let's build our trail!

JOIN US in transforming one of the country's great undiscovered greenways — over 6 miles of mixed use trail that goes from Victory Parkway near Xavier University through twelve local neighborhoods. **The Wasson Way is now open from Ault Park to Montgomery Road on the edge of Xavier's campus and from Woodburn Avenue to Blair Court.**

Please help us by donating to the Wasson Way.

Wasson Way is a key east-west corridor in CROWN, the Cincinnati Riding Or Walking Network. CROWN will create a 34-mile trail loop connecting Wasson Way to the Murray Path, Little Miami Scenic Trail, Canal Bikeway, Ohio River Trail, Mill Creek Greenway Trail, and more.

Help us build a vibrant active community in Cincinnati!

News & Updates

New Shared Use Path Proposed Between Wasson Way & Armleder Park
November 24, 2024

Big News!

The City of Cincinnati, in conjunction with the Ohio Department of Transportation (ODOT), is developing plans to make it easier and safer for bicyclists and pedestrians to travel between the Wasson Way Trail in Ault Park and trails in the Otto Armleder Memorial Park & Recreation Complex.

Learn about route alternatives under consideration and share your thoughts by visiting one of our open houses. Public input is important and will be used to confirm which route alternatives will be selected for further development. Public participation is encouraged without regard to race, color, sex, age, national origin, or disability. Please see the attached flyer.

Learn more at the upcoming open houses!

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You can read about the in-person open house at www.PublicInput.com/WassonArmleder

Search

Connect with us

Oakley Community Council Website - Hoempage

OAKLEYCOMMUNITY COUNCIL

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Who is Oakley Community Council?

The Oakley Community Council is a non-profit entity for the purpose of preserving and improving the neighborhood of Oakley for its residents, businesses, institutions, and other community organizations.

Frequently Asked Questions

Wasson Way to Armleder Park and the Little Miami Trail Proposed Extension

From the Wasson Way Team:

Dear Neighbor, The Ohio Department of Transportation has been working on a proposal to extend the Wasson Way to Armleder Park and the Little Miami Trail. It would use this trestle over Red Bank Expressway (and the bridge over Wooster Pike), go behind Hyde Park Lumber, and then go south along the Duck Creek stream. It would be a wonderful improvement for the east side of the City... a linear urban greenway going from Avondale to Armleder to Loveland and all the way to Columbus!

We need your support!!! ODOT is holding a public event on Dec. 5th from 5 to 7pm at Karrikin's in Fairfax. The community needs to show strong support.

Input/Details: https://www.publicinput.com/WassonArmleder

If you can't attend the open house you can visit their site and register your support.

Flyers & Yard Signs

Flyer

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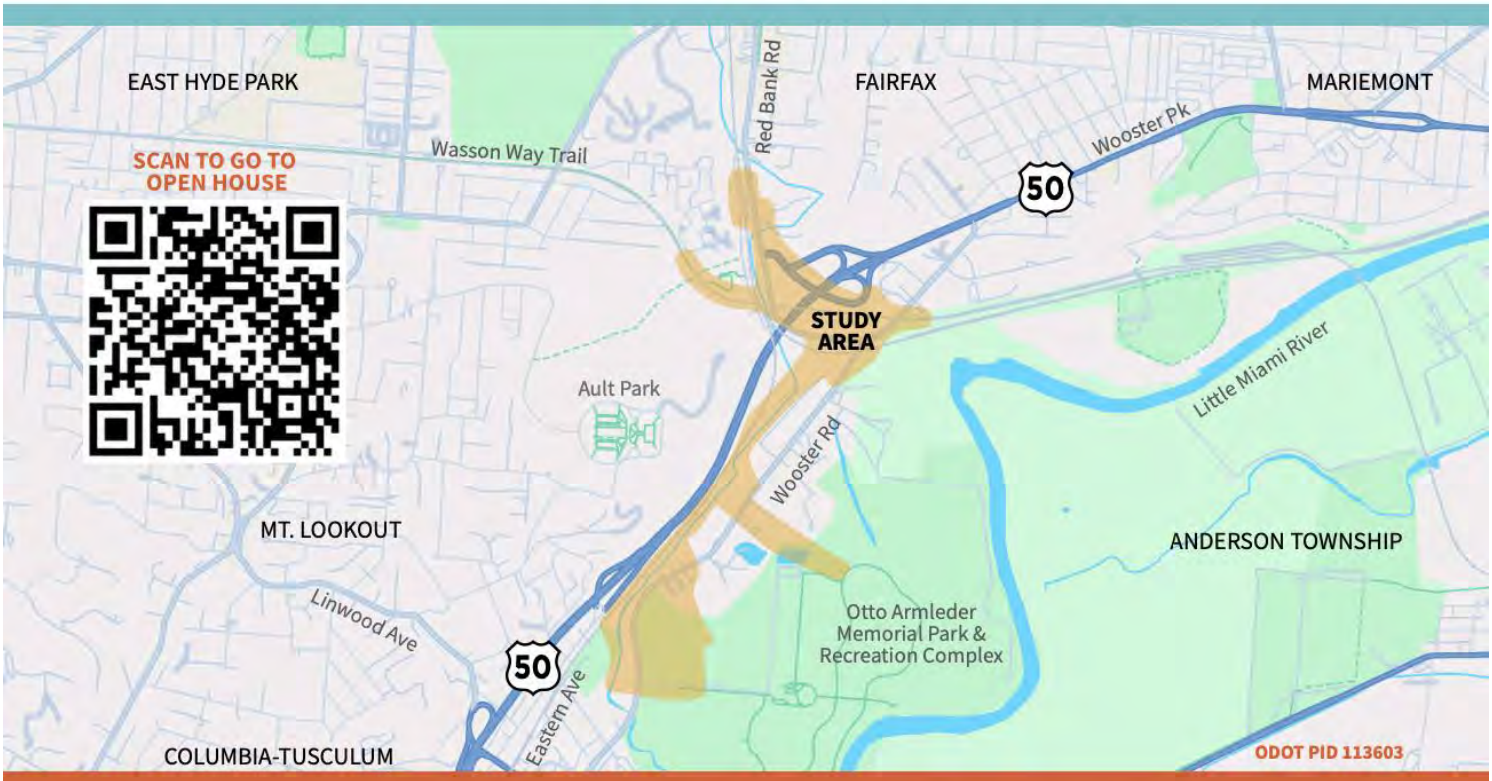

Department of Transportation

city of CINCINNATI

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Flyer Placement Locations

- Assembly Hair + Beauty Bar- 3340 Erie Ave
- Avoca Park Trailhead
- Cincinnati Sports Club- 3950 Red Bank Rd (took 10 flyers)
- Coffee Emporium- 3316 Erie Ave
- Dapper Gentleman's Grooming- 3665 Erie Ave
- Eastern Hills Tennis Club Inc- 669 Wilmer Ave
- Element Eatery- 5350 Medpace Way
- Intersection of Church St and Valley Ave
- Intersection of Murray Rd & La Crosse Ave
- Intersection of Murray Rd and Watterson Road
- Intersection of Newtown Rd & Valley Ave
- Karrikin Brewing- 3717 Jonlen Dr
- Kroger- 3760 Paxton Ave
- Little Miami Scenic Trail crossing at entrance to Little Miami Golf Center
- Little Miami Scenic Trail trailhead, near SR 32 and Beechmont Ave
- Lookout Joe- 3181 Linwood Ave
- Madison Quick Stop- 6004 Madison Rd
- Madisonville Public Library- 4910 Whetsel Ave (took 20 flyers)
- Madisonville Recreation Center- 5320 Stewart Ave
- Mariemont Theater- 6906 Wooster pike
- Pendleton Pilates- 3665 Erie Ave
- Ramundo's Pizzeria- 3166 Linwood Ave
- REI- 2643 Edmonton Rd (took 20 flyers)
- Rituals Beauty Studio- 3612 Marburg Ave
- The Children's Theater of Cincinnati- 4015 Red Bank Rd
- VV The Italian Experience- 1026 Delta Ave
- Wasson Way, at Burch Ave

Photos of Flyer Placements

STOP

NEW SHARED USE PATH PROPOSED
BETWEEN WASSON WAY & ARKLEDER PARK

STOP
TTLE MIAMI
LF CENTER
The
Ohio to Erie
Trail

1
Ohio to Erie
Little Miami Trail
Milford
3.2 mi
Miamiville
9.2 mi
Loveland
911
Great Parks
of Hamilton County

Lunken Airport 0.8
Armleder Park 1.6

BURCH
AVENUE

Yard Sign

NEW SHARED USE PATH PROPOSED BETWEEN WASSON WAY & ARMLEDER PARK

Learn more at our upcoming open houses!

Virtual Open House

Accessible at www.PublicInput.com/WassonArmleder

November 20, 2024 – January 4, 2025

In-Person Open House

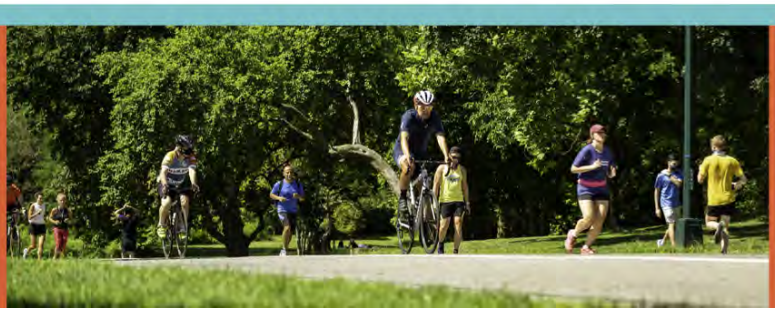
December 5, 2024 | 5 – 7 pm

Karrikin | 3717 Jonlen Drive (Fairfax)

Department of Transportation

city of CINCINNATI

Individuals requiring interpretation or translation services or other reasonable accommodations to participate in the Open House, review materials, or provide comments are asked to contact Kathleen Fuller at ODR.pio@dot.ohio.gov or (513) 932-3030. Public participation is encouraged without regard to race, color, sex, age, national origin, or disability.



ODOT PID 113603

Wasson Way to Otto Armleder Shared Use Path
Public Open House Sign Locations
HAM Wasson Way to Otto Armleder, PID 113603
November 22, 2024

Legend

- Sign Locations
- Study Area

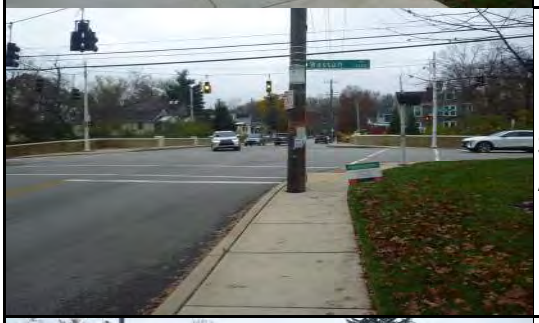
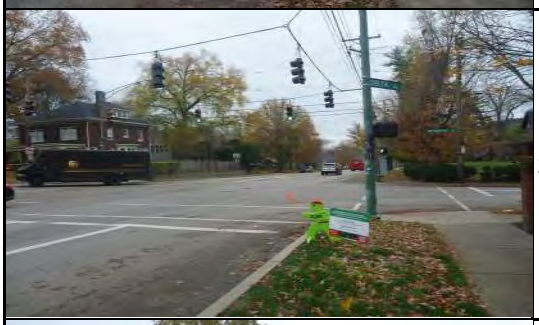
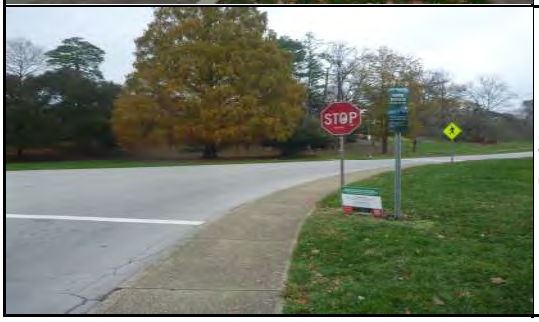
Daniel Drake
Columbia
Lester Rd
Kennedy Ave
71
Duck Creek Rd
Chandler St
Desmond St
Sierra St
Madison Rd
Madisonville
Red Bank Expy
Marburg Ave
Steel Pl
Robertson Ave
Beech St
Madison Rd
Erie Ave
Little Duck Creek Park
Madison Place
Brotherton Rd
Oakley
Millsbrae Ave
Eileen Dr
Minot Ave
Markbreit Ave
Simpson Ave
Windward St
Merwin Ave
Britton Ave
Bramble Ave
Murray Ave
Hyde Park Golf & Country Club
Wasson Rd
Wassan Way Bike Trail
Victoria Ave
Shaw Ave
Red Bank Rd
Virginia Ave
Elder St
Wooster Median
Fairfax
50
Erie Ave
Observatory Ave
Grace Ave
Linwood Ave
Delta Ave
Herschel Ave
Ault Park
Columbia Pkwy
South 80 Gardens and Walking Trails Park
Wooster Rd
Little Miami River
Fischer Purchase
Mt. Lookout
561
Columbia Pkwy
Clear Creek Park
Delta Ave
Kroger Ave
Grandin Rd
Otto Armleder Memorial Park
Little Miami Scenic Trail
Stanley Ave
Lunken Airport Playfields
32
Columbia Tusculum
Reeves Golf Course
Saddleback Dr
Crittenden Dr
Clough Pike
Beechmont Ave
Eastern Ave
Wilmer Ave
Kellogg Ave
Linwood
125
Cincinnati Municipal Airport
Airport Rd
Little Miami Scenic State Park
Turpin Hills
Stanbery Park
Corbly Rd
Corbly
Mt. Washington

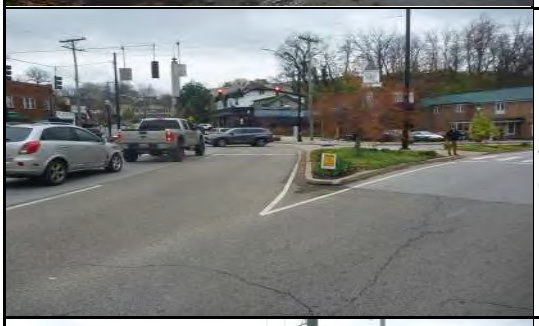
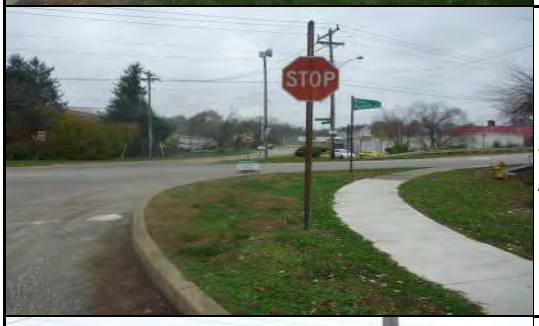
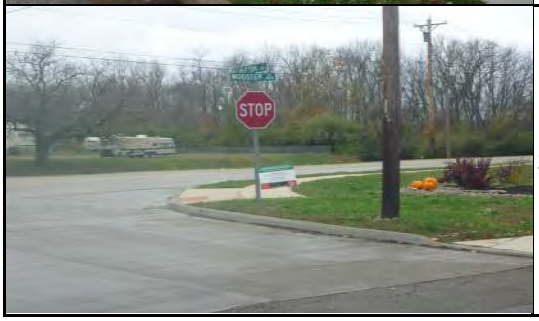
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29

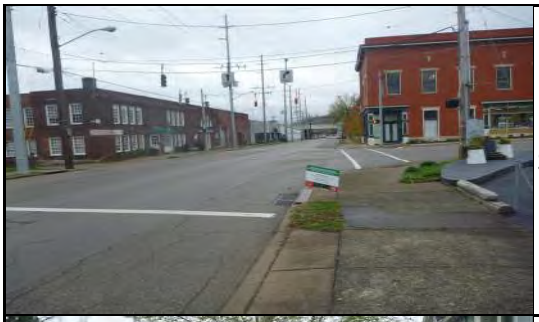
N W E S

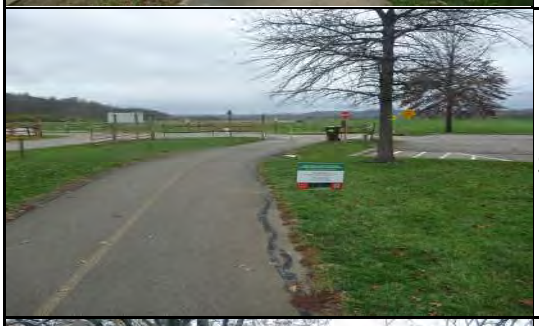
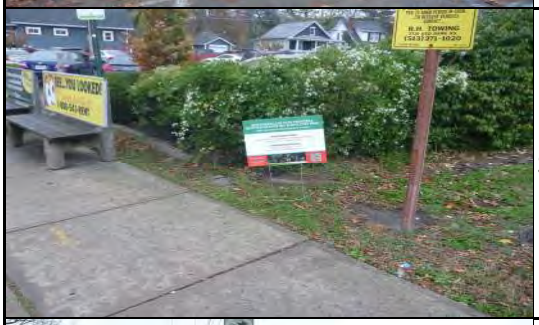
0 2,500 5,000 10,000 Feet

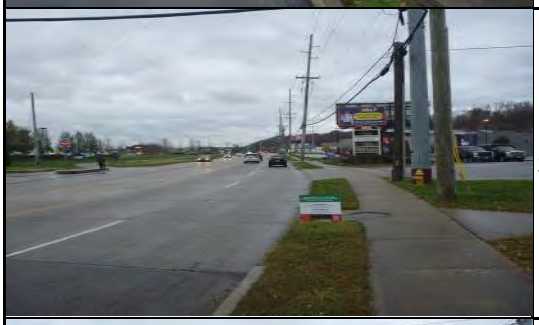
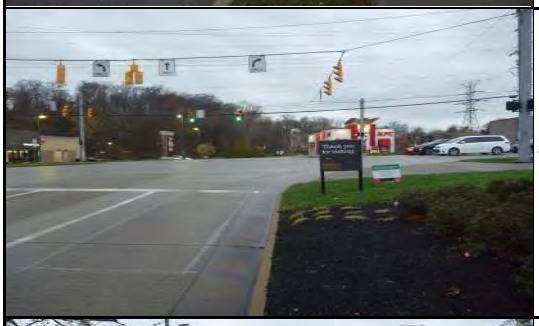
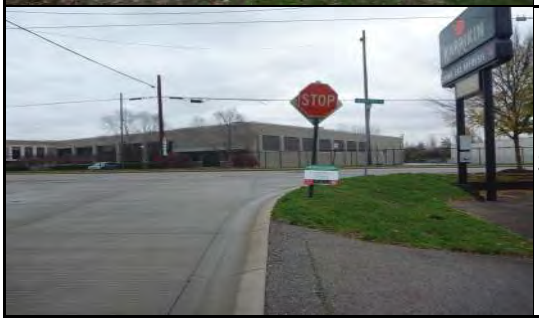
CAGIS, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS

Photograph	Comments
	Sign 1; On corner of Wasson Rd and Edwards Rd.
	Sign 2; On corner of Wasson Rd and Marlburg Ave.
	Sign 3; On corner of Erie Ave and Ault Park Ave.
	Sign 4; On corner of Delta Ave and Observatory Ave.
	Sign 5; On corner of Erie Ave and Ault Park Ave.
	Sign 6; Entrance to Ault Park loop from Observatory Ave.

	Sign 7; At northern parkling area along Observatiory Ave loop within Ault Park.
	Sign 8; Traffic Median between Herschel Ave and Hardisty Ave.
	Sign 9; Traffic Median in Mt Lookout business district.
	Sign 10; Corner pof Wilmer Ave and Airport Rd.
	Sign 11; Entrance to Lunken Playfield from Wilmer Ave.
	Sign 12; Corner of Hutton St and Wilmer Ave.

	Sign 13; Corner of Linwood Ave and Eastern Ave.
	Sign 14; Corner of Eastern Ave and Heekin Ave.
	Sign 15; Otto Armleder Park Shelter House.
	Sign 16; Otto Armleder Park Dog Park.
	Sign 17; Otto Armleder Park Trailhead.
	Sign 18; Corner of Armleder Rd and Wooster Rd.

	Sign 19; Little Miami Scenic Trail and Armleder/Lunken Connector Trail Convergence Point.
	Sign 20; Entrance to Skytop Apartments and Big Ash Brewing from Beechmont Ave.
	Sign 21; Clear Creek Park Bike Trail.
	Sign 22; Dogwood Park Playground.
	Sign 23; Bus Stop Along Plainville Rd.
	Sign 24; Roadway Median between Madison Rd and Plainville Rd.

	Sign 25; Corner of Corsica Pl and Red Bank Rd.
	Sign 26; Along Red Bank Rd near Erie Rd overpass.
	Sign 27; Exit from Regency Centers onto Red Bank Rd.
	Sign 28; Along Red Bank Rd, near old train bridge trestles.
	Sign 29; Corner of Wooster Pike and Jonlen Dr.

Appendix C

Comments Received

Department of Transportation

ALL COMMENTS RECEIVED

The following pages document all comments received for Questions 1*, 2*, 3, 5, 12, 15, 18, 19. 20, 22, and 26 (the remaining questions in the survey did not offer an opportunity to provide comments). **All comments are presented as they were submitted; no edits were made to spelling, punctuation, or otherwise.**

QUESTION 1: Where do you live?

	Question 1 Comments	*Upvotes*	*Themes*
1.	Avid cyclist on trails in this area	0	Use
2.	Connecting Armleder to Wasson Way means I can ride a bicycle to work on trails once the Elstun connector at the bottom of f Beechmont hill.	0	support
3.	I bicycle commute to downtown.	0	Use
4.	I often bike from Northern KY to Cincinnati to enjoy the bike lanes and bike trails including Wasson Way and the paths around Otto Armedler	0	Use
5.	I ride on the trail regularly	0	Use
6.	I walk or ride my bike every day, rain or shine.	0	Use
7.	I want to use the trails more often but there is currently not a safe way for me to get to them and home without using my car.	0	Use
8.	I work at The Christ Hospital and routinely commute by bike from Anderson Township. Connecting Armleder to the Wasson Way will give me another way (safer) to commute.	0	Use
9.	I work in Fairfax and have walked the trail before and after it was developed.	0	Use
10.	I would love to be able to ride my bike through these areas	0	
11.	I would love to see this extension	0	support
12.	Kennedy heights is extremely far from the path, this would bring it a good bit closer.	0	support
13.	Landen - Retired avid cyclist. Love the trail infrastructure that exists in the greater Cincinnati area. A great investment.	0	Use

* Comments that either listed zip codes, respondents' addresses, or otherwise identified where a respondent lived for Questions 1 and 2 are not included in the list of comments received.

Question 1 Comments		*Upvotes*	*Themes*
14.	Live in Anderson. Cycle from Little Miami Golf Course regularly. It's common for to head towards Lunken and Armleder. It seems like there are wild sidewalks along Red Bank and you're almost there, just some right of way somewhere. I mean yes, that bridge is cool. How much life is left in it? Will it become a white elephant? Love our bike paths!	0	Question, support
15.	Love this idea	0	support
16.	More bicycle safe routes needed for sure in Greater Cincinnati as there unfortunately is too much sprawl throughout the greater Cincinnati area making it extremely challenging to safely ride a bike!	0	support
17.	Use the Wasson Way regularly for exercise. Used to ride my bike on the streets but just not safe anymore with distracted driving. Extending this to Armleder would be wonderful since it would add so many miles of safe off-road pathways. Thanks	0	support, Use
18.	Very excited for the Wasson Way extension, armleder park is great. Ideally the extension would allow a rider or walker to stay on the trail all the way with limited interactions with heavy traffic (similar to the path between ault park and rookwood)	0	support
19.	Very exciting project. I hope it happens soon!	0	support
20.	Wheelchair accessible home	0	Use

QUESTION 2: Where do you work?

Question 2 Comments		*Upvotes*	*Themes*
1.	Cycle to work regularly	0	Use
2.	I am retired but enjoy walking and riding my ebike on the bike trail.	0	Retired, Use
3.	I have walked on the trail before and after it was developed.	0	Use
4.	I normally take the bus and red bike from government square to get to work but I would like to start bike from home more when the weather is nicer.	0	Use
5.	I'd love for a safer way to ride to work	0	Miscellaneous

QUESTION 3: What is your interest in the Wasson-Armleder project (check all that apply)?

	Question 3 Comments	*Upvotes*	*Themes*
1.	Retired, living in Mexico but I vote in Walnut Hills	0	Miscellaneous
2.	I regularly use Armleder Dog Park but have to drive there	0	Non car use
3.	I hate cars	0	Non car use
4.	My daughter attended Xavier University and now lives in Loveland, OH. I have ridden across Ohio on the Ohio to Erie Trail 4 times. I have ridden over 85 percent of the Ohio trails listed on TrailLink.com, including Wasson Way everytime it has completed and opened a new phase. I am interested in seeing the Crown loop trail project be completed and expanded to give more access residents in the Greater Cincinnati metropolitan arew.	0	Biking
5.	I use biking and walking trails in the area.	0	Biking, Walking
6.	I bike the LMST	0	Biking

QUESTION 5: What activity do you use shared use paths for most often?

	Question 5 Comments	*Upvotes*	*Themes*
1.	I'm disabled; I use a powered chair on the trails.	0	Wheelchair
2.	I walk on the paths in bad weather (wet and/or cold), and cycle on the paths in good weather (dry and not too cold). I don't keep track of which I do most often. I prefer cycling but the weather may disagree, especially in winter.	0	Cycling, Walk
3.	N/A	0	N/A
4.	Onewheel	0	Cycling
5.	Walking, Cycling, Commuting	0	Commute, Cycling, Walk

QUESTION 12: Please use this space to share any comments you may have regarding the Segment 1 alternatives.

	Question 12 Comments	*Upvotes*	*Themes*
1.	The train bridge crossings themselves could become an attraction to make visitors more inclined to take advantage of the new trail, bringing people to the area to help the local economy.	57	Railroad Bridge
2.	Alternative 1A would be a fantastic use of some of the historical train trestles and would greatly reinforce Cincinnati's abilities to showcase its landmarks through modern repurposing. Alternative 1C would conflict with multiple high-volume and high-speed automobile crossings.	52	1C Concerns, Railroad Bridge
3.	The old bridge is amazing and would a truly delightful path for cyclists, runners, and walkers.	44	Railroad Bridge
4.	Alternative 1A will also allow connection to the Little Miami Trail past South 80 / Mariemont Gardens at some time in the future, if the railroad use ends. This was the original vision for the eastern end of the Wasson Way.	31	1A Benefits
5.	As a cyclist, limiting contact points with automobiles and overall traffic offers greater safety for all segment and path users.	24	Conflict Points
6.	Shared use paths should be direct and low-stress. Alternative 1C is circuitous and has more conflict points with vehicle traffic. The bridge structure & right of way is existing and waiting to be used. Riding & walking on the bridge will be a fun and unique experience for users. Alternative 1A is the best choice.	18	1A Benefits, 1C Concerns, Miscellaneous, Railroad Bridge
7.	My young children have learned the rules of cycling on a path with wasson way and the railroad trestles would allow them to be safe while getting to Armleder. I don't think children would be safe with the other proposed option.	14	1A Benefits, 1C Concerns, Railroad Bridge
8.	1A is the safest and easiest to ride on. It would be an amazing addition to the trail.	12	1A Benefits, Railroad Bridge
9.	Putting the railroad bridge to good use would be the most efficient, and would preserve a historic structure.	12	Railroad Bridge
10.	This would be a direct path, fully protected from cars with minimal street crossings. The railroad bridges will create a feature that turns the Wasson Way / CROWN / Connector into a destination for bikers from around the region.	9	Railroad Bridge
11.	1A is the safest and most accessible option.	8	1A Benefits
12.	Segment 1A continues to treat Wasson Way and the CROWN as an INVESTMENT in civic infrastructure that improves quality of life and created shared spaces worthy for all to enjoy at their own pace and in their own way.	8	1A Benefits
13.	Safety first! Option 1A is by far the safest option for trail users as it limits exposure to busy roads. When a trail feels safe, usage will be higher.	7	1A Benefits, Separate

	Question 12 Comments	*Upvotes*	*Themes*
14.	With two small children, I would be much less likely to use the path if 1C was selected due to the crossing at red bank. I would be very excited if 1A is developed and it would be a great asset for the community.	7	1A Benefits, 1C Concerns
15.	I ride this area frequently and restrict my workouts to very early mornings (5am) because of the traffic on Wooster and Red Bank Roads. This new extension would open up the area for all walkers/bikers/runners and increase usage purely from a safety perspective. Great option!	7	Overall support
16.	In addition to being far better/safer owing to the lack of road crossings, the bridge retrofit would be iconic!	6	Railroad Bridge
17.	1A is the far better choice and an excellent investment for current and future generations.	6	1A Benefits
18.	We've been dreaming of being able to cross the bridge across Duck Creek and Red Bank since we moved to a house nearby. We've often joked how if we could use that bridge, we could get to that area faster by bike than by car from our house. My wide and I are 100% for this option and hope it becomes a reality. Option 1A provides the most scenic and efficient long-term route. It also connects two areas of Cincinnati that today don't generally interact as pedestrian/bike neighbors. Given connections to the Murray path are already available, a new intersection at the top at the Ault Park trestle is a wonderful addition to the trail system. Keep up the great work!	6	1A Benefits, Railroad Bridge
19.	Alternative 1a is clearly the best option but a direct route for Murray Trail users should still be considered in the future	5	Suggestion
20.	Alternative 1A would be a signature element of this shared use path and an achievement for both ODOT and the City of Cincinnati.	5	Railroad Bridge
21.	Using the existing train bridges would be wonderful! Not having to wait at multiple crossings so much better for walkers/cyclers.	5	1A Benefits, Railroad Bridge
22.	There is currently not safe, convenient path from Wasson Way to the Little Miami Trail, Alternative 1A would be a seamless connection providing zero conflict between bicycles/pedestrians and car traffic on major thoroughfares.	5	1A Benefits
23.	Need to address the increase in e-bike traffic. Many of these people come barreling through at dangerous speeds for pedestrians. This is a major safety concern as you move forward due to the sheer weight and momentum that these bikes/riders carry. These are vehicles!	4	Suggestion
24.	How much would the following reduce the actual project cost? "While the overall cost of Alternative 1A is higher due to some required maintenance of the existing railroad bridges, these costs would eventually need to be addressed by the City anyway and should not be considered as an additional cost."	4	Needs Response
25.	1A was the original intent / goal of Wasson Way.	4	1A Benefits

	Question 12 Comments	*Upvotes*	*Themes*
26.	I love the idea of Alternative 1A because it connects so seamlessly with the wasson way trail. The abandoned railing is the exact path it follows and it makes the most sense to extend it along that same path. Also, I'm biased but I know I would absolutely love to take the path further along to Lunken and other places. I'm sure many would say this is the best alignment for the Wasson way connection to Armleder.	4	1A Benefits, Railroad Bridge
27.	Alternative 1A will become known as a landmark element of an increasingly world-class multi-use recreational trail, offering incredible views and memorable experiences for all who use it. Such an opportunity should not go unexploited.	4	1A Benefits, Scenic
28.	1A is the way to go. As with the bridge in Ault Park that was converted to Wasson walk/bike path, utilizing the other bridges keeps them from continuing to be wasted space. Also the trails connected would continue to use the old train line (after converting it near South 80/behind Kroger, etc) as their pathway, much like the Little Miami Scenic Trail has successfully done (again using currently wasted space). Then the only missing link to connect the Little Miami Scenic Trail behind Carriage House Car Wash at 7489 Wooster Pike to the rest of the former train line/walk and bike path of the future would be to build a bridge over the creek there...at which point the trail/path would be completely connected.	3	1A Benefits, Needs Response, Railroad Bridge
29.	Using the trestle overbred Bank Road would be spectacular and noteworthy.	3	Railroad Bridge
30.	I've lived and frequently run around this area (Oakley-based marathoner) for over a decade. I occasionally travel by car to utilize the Lunken and Armleder loops, but most often use Wasson Way and other surrounding surface street sidewalks. If Alternate 1A were implemented (and eventually further connected to Armleder), this would instantly become one of my most utilized routes. On the contrary, if 1C were used, I'd probably avoid it, because I don't feel particularly safe with traffic on Red Bank or those entering/exiting Route 50.	3	1A Benefits, 1C Concerns
31.	Love the use of the train bridge crossings... it's a huge highlight of the current Wasson Way. Plus it keeps everyone away from traffic.	3	1A Benefits, Railroad Bridge
32.	1A would be much more appealing for running/walking than the other options since it avoids more roads, thus less noise and more immersion into nature. Also being the most direct route is a huge bonus	3	1A Benefits
33.	Alternative 1a would be a dream come true. Getting through that area by the DMV can be done, but is always hair-raising. Getting over to lower stress Wilmer via a safe route like 1a would be fantastic!	3	1A Benefits
34.	Would be amazing to be able to travel so far on a dedicated path vs street crossings.	3	Overall support
35.	Love using to old train bridges	3	Railroad Bridge

	Question 12 Comments	*Upvotes*	*Themes*
36.	One of the biggest reasons people don't venture beyond the current end of Wasson Way is because the interaction with cars picks up along Red Bank Road (cars driving into the back entrance of Walmart and into KFC). Segment 1A is completely separate use and would eliminate this.	3	1A Benefits
37.	1A is the way to go, and after the old railroad is converted to trail--above South 80, behind Kroger, etc.--then the only missing connection would be the building of a bridge over the creek behind Carriage House Car Wash at 7489 Wooster Pike where there is now a gap in the trail.	2	1A Benefits, Needs Response
38.	Its a drop in the bucket compared to the cost of roadway projects	2	Response
39.	We live in Columbia Tusculum and would love to have a way to access these bike paths without using exiting roadways.	2	Miscellaneous
40.	fewer chances for car interaction = much safer and more likely to be used by casual walkers/bikers, etc.	2	Separate
41.	This would be a great way to showcase our area.	2	1A Benefits
42.	The intersection crossing in 1c near red bank and Cree exit for Columbia pkwy would be extremely dangerous for pedestrians and people riding bikes.	2	1C Concerns
43.	1a is the safest option for our neighborhood. When this is complete, I can safely ride my bike to work in Norwood!	2	1A Benefits
44.	We bike in this area a lot and the road crossings can be cumbersome and unnerving. I also like 1A for affecting a lot smaller potential bat habitat.	2	1A Benefits, 1C Concerns
45.	The train trestle is a historical gem for the area.	2	Railroad Bridge
46.	Agree that 1A is the best choice. It is more direct and has significantly less interactions with traffic, which would promote more use, especially by inexperienced cyclists traveling between Wasson Way to Otto Armleder Park and beyond to the Little Miami Trail.	2	1A Benefits
47.	While I understand the challenges with its high cost, I believe A1A would help firmly establish the trails in this area as some of the best urban trails in the U.S. Crossing the Red Bank trestle and Rt 50 bridge would be unique and iconic additions to an already great trail network in this area.	2	1A Benefits, Railroad Bridge
48.	I'm nearing 6k cycling miles in 2024 including many nationally-regarded rails-to-trails routes. 1A is "the path of least resistance" for pedestrians/cyclists. Having to cross roads and commercial property on 1C makes me sad and creates safety issues. I've witnessed the scenery on option 1C and it stinks - lots of weekday industrial traffic. I imagine, based on riding Wasson Way to the end, that the scenery on 1A will be an asset and something that draws people to the trail.	2	1A Benefits, 1C Concerns
49.	Crossing roads is more dangerous than ever with people texting and driving. Red Bank is a speedway and dangerous.	2	Miscellaneous

	Question 12 Comments	*Upvotes*	*Themes*
50.	This would benefits family biking trips where high traffic road crossings can be challenging. Option 1A would be one of the highlights of the trail system and make excellent marketing images for "bike to cincy" ads.	2	1A Benefits
51.	I much prefer 1a to the alternatives, but don't see what happens at the end? How does it connect to roads, bike paths, etc at the end?	1	Needs Response
52.	The choices you show are not comparable because one connects the Murray Path to the section 1 endpoint while the other connects Wasson Way to the section 1 endpoint. The two routes serve different functions. For a person at the end of the Murray path, alternative 1 does not serve them at all. Since your project's purpose is connecting Wasson Way to Otto Armleder, you really only give one choice. But I think a safe route from Murray to Armleder is equally vital to improving safely and access along the eastern corridor. Why am I having to choose between them now?	1	Needs Response
53.	theyre all too expensive	1	Cost Concerns
54.	We need to remember that 1A not only cost significantly more to build, but it will also cost significantly more to maintain.	1	Cost Concerns
55.	Alternative! 1A is a smoother transition to Wasson Way at the end of the existing bridge, before descending to Old Red Bank Road.	1	1A Benefits
56.	I like the added safety if the dedicated trail path without road crossings. I think it is worth the added cost.	1	1A Benefits, Cost Concerns
57.	1A is the safest, most direct route. It should be the preferred alternative regardless of price. No doubt if this was a road being built for cars, there would be no consideration for 1C.	1	1A Benefits
58.	Segment 1 would be the easiest as a wheelchair user as it has the most gradual change in slope.	1	Miscellaneous
59.	The railroad trestles are the most costly but the safest alternatives and it would be a spectacular trail segment that would be something that could be advertised as a destination ride and a cycling achievement in teh city	1	1A Benefits, Railroad Bridge
60.	I agree that Alternative 1A is the best of the proposal but comes with a significant cost. It also was not clear how long it would take to complete the section of the project. If the total cost or total time significantly impacts the entire project, alternative 1C seems like a reasonable imperfect option.	1	Cost Concerns
61.	A solution that minimizes potential interactions between cars and path users is worth the extra money. It also repurposes existing infrastructure.	1	1A Benefits, Separate
62.	OK but which segment do you prefer	1	Response
63.	Using the trestle would improve the aesthetic and functional continuation of the trail, and could be a great promotional aspect for the trail and exercise in general, even if just including the name of the trail.	1	Railroad Bridge

	Question 12 Comments	*Upvotes*	*Themes*
64.	1A is a no brainer. Best route.	1	1A Benefits
65.	As an old railroad right-of-way the grade would be under 2% and east	1	Miscellaneous
66.	I wouild love to see a stopping place on the railway itself so that cyclists and walkers could enjoy a vantage ponit. If it adds to the cost, I would be willing to pitch in extra for this!	1	Amenities
67.	segment 1 has the least issues	1	Miscellaneous
68.	1A all the way!	1	1A Benefits
69.	What a game change it would be to connect to Armleder from Ault safely!	1	Overall support
70.	a bridge over busy streets is preferred to having to cross the streets at a signal	1	1A Benefits
71.	Have been looking forward to further development of the Wasson Way via the bridge. Both for sight seeing and exercise.	1	Overall support
72.	no interaction of pedestrians, bicyclists with cars. Even signaled road crossings are dangerous to pedestrians/bicyclists.	1	1A Benefits, Separate
73.	Please put water fountains on the trail	1	Amenities
74.	Alternate 1A looks like the best use of existing resources by refurbishing them rather than waiting until the degrade to the point of needing to be removed at expense with no benefit to the community.	1	1A Benefits
75.	Copy and include volunteers and trail sentinels from the nearby Little Miami Bike trail as it would become part of their route anyway.	0	Suggestion
76.	I love the eastern section of WW (Marburg east) especially because there are no roads next to it, and it has natural flora. Please remove the ugly and unnecessary cyclone fencing on other sections. Even though the paths down the hill to the trail from Ashworth Dr and connecting streets are unofficial, please install hand rails!!! The only things limiting my use can't be helped -- too hot, too cold, or Il out of town.	0	Suggestion
77.	The view from the bridge will be lovely and will add safety by not using existing roadways. I would like to see elements of historic trains used in the design to convert the bridge for pedestrian and cyclist use.	0	Railroad Bridge, Suggestion
78.	1) Please provide signage in Madisonville, Fairfax, and Mariemont about train locations 2) Improve signage for Wasson Way Ault Park Trailhead	0	Suggestion
79.	Option1A is far preferred, but that should not preclude the future development of option 1C in addition. They could both be very useful path connections to different neighborhoods.	0	Suggestion

	Question 12 Comments	*Upvotes*	*Themes*
80.	I like alternative 1A due to the direct route it permits to connecting other trails. It is a quicker and more efficient route. As a cyclist I have mild concerns about the narrow width of 1A as it crosses the trestle/bridge, but only during busy times of heavy usage where it could get congested. If there is a way to keep the rails/fence narrow with no internal railings or other encumbrances back into the trail as it crosses the bridge, it would be appreciated.	0	1A Benefits, 1A Concerns, Suggestion
81.	1A looks good, but I'm concerned that it's projected to cost 2.5 times more than 1C. I'd like to see updated cost projections based on anticipated increases in construction costs (labor and material).	0	Cost Concerns, Needs Response
82.	I have some concerns about the height of the railroad bridge and possible danger of falling. Also it's unclear to me how the route will return to ground level.	0	Needs Response, Railroad Bridge Concerns
83.	How could we incorporate a canal type structure with Alternative 1A similar to what is in downtown Indianapolis? This would further beautify the area, encouraging more use.	0	Needs Response
84.	I love this idea, and think expanding the trails is a great thing. The only thing to be concerned about is when Armleder floods during periods of heavy rain during the fall/spring. This would mean that the Lunken Trail and Little Miami Trail would be inaccessible at these times.	0	Needs Response
85.	I am surprised an alternative was not investigated to extend Wasson Trail south from the intersection with Old Wooster and then run parallel to the existing rail bed to Segment 2. Old Wooster in the pinch point picture shown only serves one residence and is closed further south. Will either of the rail beds to the east or south be abandoned in the near future? Also, the connection to the Murry trail and Wasson trail along Old Wooster should be better marked and widened in the northern residential section. The 1C crossing of Colebank will be a safety problem with the high traffic volume turning from Red Bank Expressway and will increase driver frustration with that intersection..	0	1C Concerns, Needs Response
86.	Curious on how the incremental cost will be funded. There is a comment that the city needs to pay bridge maintenance already. Would like this to be further detailed. The crossing at Colbank has a ton of traffic - increased concern on pedestrian safety. Also, I thought the train bridge at one point was the tallest trestle bridge? If yes, and this option is chosen, would be great to have historic market with these details.	0	1C Concerns, Funding, Needs Response, Railroad Bridge
87.	How will it connect from that end-point? And to the Little Miami Bike Trail?	0	Needs Response
88.	no comment	0	N/A
89.	I live near the Murray Path, so 1C would acutally be easier for me to use. But I also see the advantages of 1A	0	1C Support
90.	Great and safe connection	0	Miscellaneous

	Question 12 Comments	*Upvotes*	*Themes*
91.	Only concern is the bridge with the high elevation as I have a healthy fear of heights. Otherwise very excited for this.	0	Railroad Bridge Concerns
92.	I will not use a bridge that old & high off the ground.	0	Railroad Bridge Concerns
93.	Great, than don't use it.	0	Response
94.	In my years as a cyclist, I have crossed over many high and fantastic bridges. I really love riding my bike over bridges.	0	Response
95.	Great point	0	Response
96.	1 A is Safest and will also be the most scenic. Safety should be the priority and just because it's more expensive shouldn't matter. It's an investment into the city that benefits the health and wellness of all.	0	1A Benefits
97.	safety concerns of crossing Red Bank would be a huge deterrent to me using this section of the path	0	1C Concerns
98.	Keep everyone away from motor traffic	0	Separate
99.	this makes the most sense	0	Miscellaneous
100.	Thank you!	0	Thank you
101.	Thanks	0	Overall support
102.	Having to cross Redbank Expressway at Woodland would be a major issue.	0	1C Concerns
103.	Thank you. Excited to have this attribute to our community wellness.	0	Overall support, Thank you
104.	1A would provide both a path of least conflict for automobiles and bikers/pedestrians as well as a landmark-type crossing over the bridge. The obvious downside here is cost as well as longer/uphill path for anyone coming from the Murray Trail.	0	1A Benefits, 1A Concerns, Railroad Bridge
105.	Uses RR bed and less road crossings. If the increased cost can be covered, it's a much better alternative.	0	
106.	I voted for 1A but also don't mind 1C. Weather will affect a high bridge with fencing / a new and different surface / and new surface usage / than it has over the years as a train bridge. Think freezing rain or large snow events or other anomalies of nature / What will that bring? Precautions built in to withstand snow/wind/lightning to consider. But on the flip side an opportunity for creativity to be showcased in spectacular bridge experience with added rotating community involvement displays built into the fencing. Exciting / exhilarating / Done right safe too! I see 1C as a no brainer alternative with no guts no glory.	0	1C Support, Railroad Bridge
107.	Elevation ease	0	1A Benefits
108.	It is the natural continuation of wasson way	0	1A Benefits

	Question 12 Comments	*Upvotes*	*Themes*
109.	safest for pedestrians especially with dogs, runners, and cyclists. avoiding intersections where a car might hit you is important	0	1A Benefits
110.	It's the safest. No sharing path with cars	0	1A Benefits
111.	1A seems to be the safest	0	1A Benefits
112.	It is not clear to me how to get from Wasson Way to 1c.	0	Miscellaneous
113.	This alternative also keeps intact a level surface for the eventual Wasson Way connection into Mariemont, and the hookup with Little Miami Trail plans.	0	
114.	1A is exciting to imagine but I wonder if the cost is prohibitive, both the building and maintaining. If it prevents building *any* segment, than the lower cost option would be better than the no build option.	0	1A Benefits, Cost Concerns
115.	1C is appealing for its lower costs, but much less appealing in terms of how much tree clearance it will require. That's a significant concern for me. Let's not create a new heat island on the way to building this path.	0	1C Support
116.	So excitied for this next phase!	0	Overall support
117.	One a is the safest.	0	Miscellaneous
118.	One is the safest and most scenic and withdraw more customers to local businesses and restaurants	0	1A Benefits
119.	One is the safest and most desirable. I would attract and enable more citizens to travel.	0	1A Benefits
120.	Safest	0	Miscellaneous
121.	Great use of tax dollars	0	Miscellaneous
122.	.	0	N/A
123.	The less people have to cross roads the better. It completely eliminates a hazard.	0	Separate
124.	Please build this!	0	Overall support
125.	It'll be awesome	0	Overall support
126.	Reminiscent of the high line in New York	0	Railroad Bridge
127.	Like the avoidance of streets in this area. Those roads are terrifying even to ride next to and even for a short distance	0	Separate
128.	It is always the best option to have no traffic/road crossing interference spots on a trail	0	Separate
129.	This would be a great addition and make something very unique to the area.	0	Overall support
130.	I agree with avoiding the heavily used traffic areas along Red Bank and the Exit ramps, and possible accidents it may cause.	0	Separate

	Question 12 Comments	*Upvotes*	*Themes*
131.	1A is an inspiring use of old infrastructure—similar to the genius of New York City's High Line project. Cincinnati can join other cities in leading the way to improve walking/biking accessibility. Municipal features like this are a driver of local and tourist economies, and this would be a welcome use of the railway.	0	1A Benefits, Railroad Bridge
132.	The ability to safely navigate from Wasson Trail to nearby Fairfax and Mariemont will be huge for that local community.	0	Overall support
133.	Kyle Martin supports this	0	Overall support
134.	Anything to keep cyclists and pedestrians away from auto traffic should be prioritized. Our separated rail trails in the area and across Ohio are some of the best in the nation. Let's add to that infrastructure and make it even better.	0	Separate
135.	Not only does 1a make the most sense from a safety perspective, but the end of the trail and its connection would become an attraction for the area. Amazing views!	0	1A Benefits
136.	Echo all the comments about limiting interaction with vehicles.	0	Conflict Points
137.	Our rail trails in Cincinnati and all around Ohio are some of the best in the nation. Let'a add to this network and completely separate cyclists and pedestrians from the road and autos.	0	1A Benefits
138.	I think it is important to eliminate all spaces that would be shared by cars. The cost difference is significant and I don't really have enough information to factor that in, so I am only stating what I think is the best safety and enjoyment alternative.	0	Separate
139.	Please keep expanding this. It helps make Cincinnati a more desirable place to move and to have a family. I love everything that has been done so far with the trails and really appreciate everyone's work.	0	Overall support
140.	Alternate 1A would eliminate bikes / pedestrians / runners, walkers, and other means of movement having to cross intersections and interact with cars / vehicles.	0	1A Benefits
141.	1C is not preferred because in addition to requiring road crossings, the route is very circuitous and would be less likely to be utilized, especially by pedestrians. The path from Wasson Way down to Red Bank is winding and relatively steep.	0	1C Concerns
142.	Na	0	N/A
143.	Down hill switch backs add to the level of stress for bikers for 1C. 1A is the best and much more scenic	0	1A Benefits, 1C Concerns
144.	Alternative 1A would add a scenic portion to an already great trail	0	1A Benedits
145.	1A has the least issues and the least amount of interactions with cars and busy roads	0	1A Benefits
146.	1B is favorite choice.	0	Miscellaneous

	Question 12 Comments	*Upvotes*	*Themes*
147.	This will be amazing to connect our trails!	0	Overall support
148.	Using the existing bridge would be ideal. No road. It would awesome for families riding bikes or walking. Also connecting Hyde Park and oakley to places like 50 west brewery	0	Overall support, Railroad Bridge
149.	As is usually the case in these ODOT/developer-steered alternative analyses, any compelling low cost alternatives are excluded.. strawmen explored begrudgingly--or not at all in the case of 1B!-- while big shortcomings of the $13M+ (yikes!) build options are buried in Appendices. It's headline news that 1B is ruled out because of a "pinch point" (which could presumably be addressed by demolition of the decrepit, costly-to-maintain, already-county-owned Railroad Bridge trestles and/or rethinking of the 4' vegetated separation).. but we need to read into Appendix D to learn that maintaining the recommended trail width across preliminarily-recommended 1A is also cost-prohibitive! And that tall fences will be required on both sides of 1A; it's going to look and feel like a claustrophobic hamster tube when it's done. The study area is drawn so narrowly it excludes all existing walking and bike paths through Ault Park and surrounding neighborhoods. Look at Strava heat maps for this area and you will see there is a *lot* of cycling traffic on Erie, Observatory, and down bicycle-friendly Heekin.. not to mention within Ault Park itself. Say, isn't a direct Wasson Way bike connection into Ault Park an end unto itself? 800' of path from Wasson terminus to Ault Operations would accomplish half the job of getting to Armleder at 10% of the cost.. the remainder being a simple pedestrian bridge in Linwood Park as was proposed back in the Eastern Corridor study.. not here considered. You can't make a study this biased if you try. ODOT really, really wants to spend $13M of our money to rehabilitate and maintain these dilapidated railroad bridges in perpetuity. Another low cost, totally unexplored sub-alternative of No Build is to "wait and see" in 3-5 years whether I&O RR is yet abandoned from Old Red Bank to Linwood, which would *directly* connect the Wasson Way terminus to within a stone's throw of Armleder and basically obviate the entire effort. But no, we will build 1A because it'll look "cool" and make a statement. A $13M jewel for "CROWN".	0	Complaint
150.	This plan is a great idea, we always take the path down to the Murray segment, but turn around to avoid hitting traffic, a new route that avoids traffic would make me feel much safer to take this path with my family.	0	1A Benefits
151.	The 1A is more expensive, but it's much more likely to be used as well.	0	

	Question 12 Comments	*Upvotes*	*Themes*
152.	Despite the initial investment, 1A provides the best long-term solution. It will be quieter, safer, and much more likely to be used recreationally. Projects like these are what inspired me to move back into area. Thank you.	0	1A Benefits, Thank you
153.	Love option A, wish it were less expensive.	0	1A Benefits, Cost Concerns
154.	While expensive it is the most comprehensive solution for avoiding auto traffic.	0	Cost Concerns
155.	Thank you and YES!!!	0	Overall support, Thank you
156.	Traffic in the Red Bank area is already fairly dangerous. Having participated in a running club leaving from a business on Red Bank, I'm aware of one person who was hit by a car as they crossed traffic, and my dog was almost hit as someone turned onto Madison. Putting bikes and walkers close to drivers is a recipe for more pedestrian/car conflicts.	0	Conflict Points
157.	Keeping pedestrian traffic wholly separate from vehicular traffic is always going to be the best idea. Drivers do not always decide to stop for lights. The more contact points between cars and vulnerable road users there are, the higher probability there is that someone is going to be injured or killed. And it's not going to be a driver.	0	Conflict Points
158.	I feel that this option has a greater potential for a future connector to the Little Miami Scenic trail.	0	Miscellaneous
159.	1A is the safest option	0	1A Benefits
160.	1A would be substantially more utilized than any of the alternative options.	0	1A Benefits
161.	1a is a no brainer	0	1A Benefits
162.	I hoped for years that the trestle could be used for cycling ! It will be beautiful, and popular.	0	Railroad Bridge
163.	Love the idea of 1A!	0	1A Benefits
164.	Alternative 1A seems way more convenient to use as a cyclist and pedestrian. I wouldn't want to have any conflict with cars at all.	0	1A Benefits
165.	Stay in nature!	0	Miscellaneous
166.	1C still keeps the crossings of major roadways. While a significant improvement over the current/no-build, it still has decent risk for pedestrians. Long term the cost increase is well worth having completely separate pedestrain/bike paths from the roadway.	0	1C Concerns
167.	Didn't know this bridge over 50 existed!	0	Railroad Bridge
168.	I don't want to go out of war and cross 2 crosswalks (Alternative 1c). 1a far better	0	1A Benefits, 1C Concerns

Question 12 Comments		*Upvotes*	*Themes*
169.	I prefer 1C if railroad security issues are evaluated/resolved. Alternative 1A is pretty but is costly.	0	1C Support, Cost Concerns
170.	Please, no pedestrian crossings on Red Bank! These are high stress and confusing for drivers turning out of big box stores. I am met with aggravation often here. Please use our Red Bank train bridge!	0	1A Benefits, 1C Concerns
171.	Really appreciate the reuse of existing infastructure!	0	1A Benefits
172.	Great use of the city-owned bridge. Very safe by keeping peds/bikes separated from vehicular traffic. Aesthetically superior - great experience for users	0	1A Benefits, Railroad Bridge
173.	Car headlights can be blinding in the evening, depending on the vegetation separating trail from the road	0	Miscellaneous
174.	Alternative 1A is the best option for all my activities on the trail (run, bike, walk) with a smooth gradient. Hopefully it also means that the old rail bridge gets preserved in case it's deemed useful for any future light rail/tram alignment	0	1A Benefits
175.	Minimizing points where major cycling trails interact with major roadways is incredibly valuable for getting people to use these trails. I actively do not use the trail network for cycling outside of the Scenic trail and that's a common sentiment among my network.	0	1C Concerns
176.	1A is the safest in my opinion which more people will prefer	0	1A Benefits
177.	I get nervous with road crossings, especially with red bank road. Limiting them makes the trail far safer for everyone	0	1C Concerns, Separate
178.	While more expensive, Option 1A is clearly better in safety and overall user experience.	0	1A Benefits
179.	Red Bank & SR50 are both heavy traffic areas and any plan that avoid these congestions are necessary.	0	1C Concerns
180.	Let's build 1A and keep going! Keep bikes and pedestrians as far away from automobile traffic as possible. Excited. Thanks!	0	1A Benefits, Overall support, Separate
181.	This would be attractive use of the existing structure.	0	
182.	great for safety,	0	1A Benefits
183.	Evaluation comparison is very thorough & easy to understand	0	Miscellaneous
184.	Alternative 1C, while cheaper, would reinforce moderate to high stress while walking, running, and cycling. Alternative 1A is the better option for the long term and would encourage more use of the path overall. Thank you for all of your work and advocacy!	0	1A Benefits, 1C Concerns, Thank you
185.	I am nervous about being on a path with such high elevation.	0	Railroad Bridge Concerns

	Question 12 Comments	*Upvotes*	*Themes*
186.	Although its clear to me that 1A is the best option for the trail, I am severely concerned about both the high upfront cost and the significant maintenance costs referenced on Attachment D. I'm not convinced that I can ignore the extra costs without a more in-depth discussion on what exactly will need to be addressed by the City anyway. Additionally, although this project would undeniably be an improvement, there are other sections of proposed multipurpose trail that I would prefer to see funded first.	0	Build other, Cost Concerns
187.	All options were well-thought-out. 1A is most expensive, but it's clearly the safest and most accommodating option.	0	1A Benefits
188.	All options were well-thought-out. Option 1A is the most expensive, but it's clearly the safest and most accommodating option.	0	1A Benefits
189.	I feel the convenience and ease of access across the various roadways/barriers will significantly increase trail use and the livability of this area	0	Separate
190.	Lower cost	0	Miscellaneous
191.	the new wasson way 1a needs to connect into Otto Armleder park	0	Miscellaneous
192.	that road is already too dangerous, even in a car as the tractor trailers coming from Kellogg's, the paperboard factory on Wooster, etc. all go too fast and often cross the center line. It's a blind corner with fast cars.	0	
193.	1A seems like the safest and highest quality build. 1C could work but wouldn't be as safe/separated as 1A. One other consideration with 1C -- given how some of the other signalized crossings have turned out, pedestrians generally are not prioritized and see long wait times to cross; I'd expect a similar situation to arise if 1C were built, which would diminish the quality of the corridor.	0	1A Benefits, 1C Concerns
194.	1A does cost more, but $7M is generally low cost to build a transportation corridor when compared to the cost to build car infrastructure, so I don't think the higher cost should be considered too much of a drawback when compared to 1C.	0	Cost Concerns
195.	1A is much more expensive but certainly seems to make the most sense. The lack of road conflicts and the scenic nature of the bridges are a big plus.	0	1A Benefits
196.	Agree it is the preferred solution	0	Miscellaneous
197.	Any option that keeps the path away from roads is best for pedestrian safety in my opinion.	0	Separate
198.	Using the bridge adds a spectacular feature to the trail.	0	Railroad Bridge
199.	This would allow bikers / walkers to maintain the same elevation.	0	Miscellaneous
200.	Rail trails are already common for bike paths and feel normal.	0	Miscellaneous
201.	Avoiding points of conflicts with vehicles is important.	0	1C Concerns

Question 12 Comments		*Upvotes*	*Themes*
202.	One really important use of shared paths is for children to ride with parents. Reducing the number of times the path crosses vehicular traffic is important. Cost will be recuperated in value to community.	0	Separate
203.	Alternative 1A is the safest option and would make good use of the abandoned railway bridges.	0	1A Benefits
204.	Option 1C is not viable. It's similar to the current path along Red Bank Rd which I almost never use because of all the road crossings and conflict points. Bike paths that make you sit and wait for a bunch of prioritized cars are not useful. It would be better to fundraise or wait for funding to become available for option 1A than half ass it with 1C. Don't even waste time on 1C. It would be better to do nothing than that.	0	1C Concerns
205.	It would be better to wait until finding becomes available or do fundraising efforts for option 1A than to half ass it with 1C. 1C is similar to the existing "path" a long Red Bank road which most of us just avoid because of all of the conflict points, obnoxiously loud cars and trucks, and having to sit and wait while the obnoxious cars and trucks are prioritized by the traffic lights. Option 1C would be a complete waste of money and is not worth doing. Option 1A is the only way forward. Do it right and do it once.	0	1A Benefits, 1C Concerns, Cost Concerns
206.	Able to ride bike from Wasson to Little Miami without getting on busy streets. I would not have to drive with bike on car to Newtown or Lunken.	0	1A Benefits
207.	1A would be a great example of structure reuse and a major scenic feature of the trail. 1C would not be an enjoyable setting for path users.	0	1A Benefits, 1C Concerns
208.	Key to maximizing the future use of the trail is the achievement of providing a safe, secure, environment which is to say complete separation from vehicular traffic. Wasson Way proves this.	0	Separate
209.	Alternative A is clearly the safest option. The driveway and road crossings in Alternative B will be dangerous, especially for families with little kids.	0	1A Benefits, 1C Concerns
210.	Please do this.	0	Overall support
211.	this would be an amazing tie in for the trail, another jewel for the city	0	1A Benefits
212.	I like not having any contact points with cars, therefore 1A	0	1A Benefits
213.	1A All the Way	0	1A Benefits
214.	Build something !	0	Overall support
215.	Limiting the number of crossings, along with interactions with cars will improve safety for everyone. With the improved safety you attract more families to enjoy the trails and parks.	0	Separate

Question 12 Comments		*Upvotes*	*Themes*
216.	Cost of 1A is high, but ultimately it is the best alternative.	0	1A Benefits, Cost Concerns
217.	Thanks	0	Overall support

QUESTION 15: Please use this space to share any comments you may have regarding the Segment 2 alternatives.

Question 15 Comments		*Upvotes*	*Themes*
1.	A roundabout will improve this intersection for everybody: drivers, cyclists, and pedestrians. Cars will be forced to slow down as they approach the roundabout (instead of accelerating to get through a green light), and traffic will be able to flow at a steady pace, instead of alternating between FAST and STOPPED traffic.	23	Roundabout Support
2.	The roundabout alternative makes sense to help traffic flow more smoothly and at lower speed, though I agree with the other commenters that this is only a preferred option if the shared-use path is separate from vehicle traffic	15	Roundabout Support, Separate
3.	A roundabout would actually improve vehicular flow at the Wooster/Red Bank intersection; I frequently find myself waiting at a red light when there is no other conflicting traffic. I would hope that this design physically separates the cycling path from car traffic in the roundabout, otherwise I would agree with an earlier comment that 2C would be extremely dangerous for cyclists and pedestrians.	9	Roundabout Support, Separate
4.	A roundabout would make the intersection safer for everyone. My only question would be for more info regarding the buffer between the trail and the road. Admittedly I'm not sure whether the "5ft vegetated buffer" means a strip of grass, street trees, concrete planters, or something else separating road and trail. I prefer the most rigid buffer possible to protect trail users.	6	Needs Response, Roundabout Support
5.	The description above clearly states that the path would be separated from the roundabout by a five foot vegetated buffer so cyclists will not have to use the new roundabout at all	4	Response
6.	It would be great to change the intersection to a round-about at the same time. Everyone wins!	2	Roundabout Support
7.	As a cyclist, I worry about the roundabout and Cincinnati's drivers sometimes lack of attention when using these alternative traffic systems/plans. Moreover, if cyclists are expected to use the new roundabout with the traffic (not sure when reviewing the map), the results could be extremely dangerous.	1	Roundabout Concerns, Separate
8.	There are plenty of roundabouts that are designed to handle commercial truck traffic	1	Response

	Question 15 Comments	*Upvotes*	*Themes*
9.	Good alternative with positive impact to all traveling public.	1	Roundabout Support
10.	2C appears to be a great option	1	2C Support
11.	Roundabout is a better alternative.	1	Roundabout Support
12.	Roundabouts have proven benefits. Alternative 2C makes the most sense.	1	2C Support, Roundabout Support
13.	2C (and 2B) make a facilitate a future connection to the LMRT by building a trail through the old railroad yard and behind the Kroger store.	1	Either
14.	roundabouts on a curved (blind) road where for years there was not one presents the element of surprise and dangerous miscues. That area of Wooster Road is used by a lot of trucks too. Would prefer to steer clear of mingling with trucks caught off guard	1	Roundabout Concerns
15.	2B is congruent with segment one. Ideally don't even go direct to Otto armleder but straight through marriamont south bottom 80 to then backside 50 West.	1	2B Support
16.	Alternative 2C is an excellent design. Not only will it make cycling far more accessible through there than it currently is, it should improve traffic flow for vehicles, too.	1	2C Support
17.	The roundabout is the main reason I chose this option because it's a prime candidate to have one to relieve traffic congestion.	1	Roundabout Support
18.	My comment is totally an opinion not based on any scientific data. I feel safer cycling near traffic using traffic circles than intersections. I prefer areas where drivers are not incentivized to "make a light" or at risk of plowing through an intersection when distracted.	1	Roundabout Support
19.	There is so much semi and dump-truck traffic, a roundabout will be a nightmare.	1	Roundabout Concerns
20.	I would like to see how the large trucks in the area feel about a roundabout	1	Roundabout Concerns
21.	Assuming the roundabout can accommodate the volume of large trucks from the companies along Wooster Road (Grief, Hafner and Sons, Prus, etc.), then Alternative 2C appears to be the best option.	1	2C Support
22.	An alternate 2D should be considered to run from the Wasson/Old Redbank terminus , south on abandoned Old Redbank and running parallel with the rail bed with a crossing across the track to the tie point with Segment 3. This is	0	Suggestion

	Question 15 Comments	*Upvotes*	*Themes*
	overall shorter and avoids the problem with the Wooster road rail bridge. The rail crossing would be over a little used track with very slow rail service with less trains than the Murry trail termination at Old Redbank.		
23.	Build something with adequate signage.	0	Suggestion
24.	What is the slope of the proposed loopy segments at the beginning and end of this segment? If a roundabout is used, a single-lane roundabout is preferred not just because it avoids additional bridge modifications, but also because it significantly reduces confused drivers and resulting errors!	0	Needs Response
25.	I am generally VERY pro-roundabout, but I do wonder whether the heavy semi-truck traffic in the area would be able to effectively negotiate it	0	Needs Response, Roundabout Concerns
26.	A route following the western bank of the Little Miami could be constructed in a conservation easement across the back of Hafner and Sons property and tie in directly to Armleder paths, with no further road crossings, and no need for the proposed roundabout. Was it considered?	0	Needs Response
27.	I'd like to see more information regarding how the roundabout would impact traffic in the area	0	Needs Response
28.	The intersection of Red Bank and Wooster has limited sight-lines currently and would be vastly improved by a roundabout. I'm not clear on how the trail shares the roundabout, though.	0	Needs Response, Roundabout Support
29.	While gaining favor among many, roundabouts are very challenging for drivers not familiar with the intersection. That and the reduction in vehicle lanes suggested by option 2C would back up vehicle traffic in an area that already gets congested.	0	Needs Response
30.	I like the roundabout idea, but will it really be safer? It's been a while since I crossed the bridge on a bike. Will there be enough room without widening the bridge?	0	Needs Response
31.	1A is the best solution for all ages. Making biking easy for kids, parents and grandparents is a godsend. Planting the "get out and move seed" is good for the mind and body at any age.	0	1A Benefits
32.	I think the question about this one should ask if I confirm my selection of Alternative 2B. Knowing this intersection at Redbank and Wooster Rd. I think 2B is the safest, quietest and most peaceful option	0	Miscellaneous
33.	Thank you for pointing this out. The question should have asked if you agree with selecting Alternative 2C as the Preferred Alternative for Segment 2. That edit has been made to the question.	0	Response
34.	Heavy truck traffic from industrial uses on Wooster Road will struggle to navigate a roundabout	0	Roundabout Concerns

	Question 15 Comments	*Upvotes*	*Themes*
35.	It'll likely be a strip of grass aka a tree lawn. Street trees would fit, but they will likely want to keep it clear from any obstructions	0	Response
36.	Roundabouts are popping up all over Cincinnati. It seems. At first it seem to cause a lot of confusion to drivers that hadn't use them, but I believe people are starting to get used to them and recognizing it is a more efficient intersection. Alternative to see seems to get two birds with one stone.	0	2C Support, Roundabout Support
37.	Glad that ADA accessibility is being considered in the alternatives!	0	General
38.	I drive through the area often and a roundabout makes a lot of sense in this location. Reduces the need for a traffic light while also slowing cars passing through	0	Roundabout Support
39.	I like 2c better because the creation of a roundabout at this intersection will not only provide room for the path but improve vehicular traffic flow through this intersection.	0	Roundabout Support
40.	Thank you	0	Thank you
41.	The roundabout would be an improvement for all users of Red Bank/Wooster	0	Roundabout Support
42.	M8	0	Miscellaneous
43.	Personally, I prefer the first option, which was ruled out - easiest to travel... I also do NOT like roundabouts, this one, because of the high traffic, would really be frustrating!	0	2A Support, Roundabout Concerns
44.	none	0	N/A
45.	The roundabout improves traffic for many - runners, cyclists, autos...	0	Roundabout Support
46.	Whatever has no sharing with cars. High speeds on Wooster	0	Separate
47.	2B and 2C are both good ideas but maybe save some $ with 2C	0	Cost, Either
48.	This area needs street improvements and a a roundabout would be a nice potential solution	0	Roundabout Support
49.	I like the idea of a roundabout for traffic.	0	Roundabout Support
50.	It makes the most sense	0	Miscellaneous
51.	2C makes the most sense	0	2C Support
52.	2C makes the most sense.	0	2C Support

	Question 15 Comments	*Upvotes*	*Themes*
53.	Safest	0	Miscellaneous
54.	A roundabout will also be helpful for cars, should improve traffic flow.	0	Roundabout Support
55.	Please build this!	0	General
56.	Roundabout seems like a better option for everybody	0	Roundabout Support
57.	Actually either option looks good, so I will go with the least expensive on this one.	0	Cost, Either
58.	Although a roundabout might cause issues with large trucks that use the space, i think it's a practical solution for an already troublesome light intersection. At some times of the day you can spend minutes waiting for the light to change even without traffic, and it's been that way for years.	0	Roundabout Support
59.	If the cycling path is physically separated from the traffic lane, then the roundabout is a good idea.	0	Roundabout Support
60.	NA	0	N/A
61.	Roundabout will help traffic safety - so in addition to building out cycling infrastructure, it will help existing car infrastructure as well. Win-win	0	Roundabout Support
62.	As a trail user, I do not have a preference between 2B and 2C. But 2C is better because of lower cost and the added benefit of calming traffic through the road intersection. I consider that a win-win.	0	Cost, Either, Roundabout Support
63.	Cheaper, and no highway bridge widening required, Alternative 2C seems to be the way to go.	0	2C Support
64.	.	0	N/A
65.	Cheaper and it adds a roundabout? Yes, please.	0	2C Support, Cost
66.	The three-way vehicular intersection makes a good case for a roundabout. It sounds as though it will also present the lower maintenance cost.	0	Cost, Roundabout Support
67.	Thanks	0	Thank you
68.	A roundabout will improve this intersection for everybody: drivers, cyclists, and pedestrians	0	Roundabout Support
69.	You're never gonna get me to vote against a roundabout, tbh. This segment of the trail is going to suck because it'll be loud and there will be no cover, but I don't really see a way to get down under Wooster without running into that problem, unless we get rid of cars. Which is ridiculous...haha unless....	0	Roundabout Concerns,

	Question 15 Comments	*Upvotes*	*Themes*
			Roundabout Support
70.	Trees will help prevent bikes from veering off the path into Wooster Pike and will keep cars from Wooster Pike from careening into the path. Trees convert CO2 into O2. Trees are pretty. The city needs to reconsider their tree policies.	0	Miscellaneous
71.	Love the idea of 2C as it doesn't involve interacting with traffic, and by including the roundabout the wait times when trying to turn left from Wooster onto redbank should be reduced in non rush hour times. There have many times where I'm waiting at that red light when there's no traffic and it is frustrating.	0	2C Support
72.	A roundabout will solve multiple problems and improve the intersection for everyone.	0	Roundabout Support
73.	Concern about truck traffic with roundabout. Area has heavy truck traffic.	0	Roundabout Concerns
74.	Stay in nature! Off the roads	0	Separate
75.	Only hesitation here is that creating a roundabout would delay the project. But I'm all for more roundabouts!	0	Roundabout Concerns, Roundabout Support
76.	I am still unsure about the impacts of 2B vs. 2C. A new bridge and roundabout w/ 2C seems like it could face more hurdles, but it would my priorities from safety.	0	2C Support
77.	Area for Seg 2 is a clustercuss. Proposed trail seems like the least stressful though.	0	2C Support
78.	Minimizes contact with roads. No street crossings required	0	Miscellaneous
79.	The 2C alternative seems best as the roundabout will hopefully slow down traffic speeds at the intersection	0	2C Support, Roundabout Support
80.	The roundabout alternative makes sense to help traffic flow more smoothly and at lower speed, though I agree with the other commenters that this is only a preferred option if the shared-use path is separate from vehicle traffic	0	Roundabout Support, Separate
81.	A roundabout would be safest for cyclists and pedestrians	0	Roundabout Support
82.	best for safety for all folks using trails and road	0	Miscellaneous
83.	Seems like either B or C would work great.	0	Either

Question 15 Comments		*Upvotes*	*Themes*
84.	Having ridden the Ohio to Erie trail several times. I found this segment of the trail to be highly stressful before the OTET trail segment from Lunken Airport to Avoca Park opened. The intersection of Red Bank Road and Wooster Pike/Wooster Road at the Bridge can get very busy with cars at rush hour. The best alternative here would be 2C as it appears to do the most to separate trail users from automobile traffic.	0	2C Support
85.	The Wooster/Red Bank intersection is one of my least favorite intersections in the city, mainly due to poor visibility. If making it a roundabout improves safety, I am in favor of it independent of the proposed path segment. For the path itself, I am only interested in the path continuing across the abandoned rail bridge, and I would not expect to use any of the other trail.	0	Roundabout Support
86.	Option 2C is lower cost. The roundabout is superior to traffic signals for safety, traffic flow, efficiency and energy use.	0	2C Support, Roundabout Support
87.	Seems like it is a win/win. With the addition of a roundabout, automobile traffic improves while it permits the bike path. Also, it is less expensive. Like other comments, the buffer is key. Making sure it truly feels like the automobile traffic is separate from the bike path .	0	2C Support
88.	A roundabout is not safe for cyclists or pedestrians	0	Roundabout Concerns
89.	as a cyclist I would not want to be in a roundabout with cars and trucks. Very dangerous! That roundabout has existing heavy truck traffic.	0	Roundabout Concerns
90.	raised shared path	0	Miscellaneous
91.	I think a roundabout here works; although even with roundabouts being more common, I still find a surprising number of drivers aren't used to them yet. It would improve traffic flow, especially as the vast majority of traffic is from 2 of the 3 potential directions.	0	Roundabout Concerns, Roundabout Support
92.	I really like the extra space on the bridge in 2C and the roundabout would improve intersection safety and traffic flow. Long term maintenance of a roundabout would be less due to lack of mechanical equipment.	0	2C Support
93.	Agree with the proposed solution	0	2C Support
94.	Rotaries provide for smooth traffic flow, but, generally are not good for pedestrians and bicyclists.	0	Roundabout Concerns

Question 15 Comments		*Upvotes*	*Themes*
95.	Roundabout makes sense and is common for improving all traffic.	0	Roundabout Support
96.	The roundabout will benefit all users of the Wooster-Red Bank intersection. Great idea.	0	Roundabout Support
97.	The round a bout will improve traffic and be easier to accomplish. As more of these are being created around town, drivers are becoming accustomed.	0	Roundabout Support
98.	2C is the clear choice here. Regardless of the bike path work, that intersection should be a roundabout anyway.	0	2C Support, Roundabout Support
99.	As a building contractor, I frequent Hyde Park Lumber and am familiar with the traffic patterns in this area. The intersection in question is miserable, esp. if you are on a bike. The introduction of a roundabout makes perfect sense for all forms of transport. Safe and efficient use of space.	0	Roundabout Support
100.	Agree that the roundabout vehicle traffic should be separated from cyclists and pedestrians.	0	Roundabout Support, Separate
101.	Completion of this section should be a slam dunk as it also provides a vital connection into Mariemont. A much better connection than what is currently available by traveling down to the bottom of Wasson Way and onto Old Red Bank.	0	Miscellaneous
102.	no comment	0	N/A

QUESTION 18: Please use this space to share any comments you may have regarding the Segment 3 alternatives.

Question 18 Comments		*Upvotes*	*Themes*
1.	As a cyclist, 3E offers the safest crossing alternative with a signalized crossing to Wooster Road.	23	3E Support
2.	The mid-block crossings of Wooster Road in Alternatives 3B-D would be very dangerous, as cars are used to driving well above the posted speed limit along those stretches of road.	21	Concerns
3.	The path along Duck Creek will provide an isolated and scenic walk/ride along the creek and forest and isolated from noise of traffic along Wooster road for the longest stretch possible.	12	Scenic
4.	This is a good consideration, "posted speed limit" and "actual speed of traffic" are not always the same	9	Response

Question 18 Comments		*Upvotes*	*Themes*
5.	The signalized crossing is a must on safety grounds, so 3E should be the only option on that alone. I also enjoy the potential Linwood park connection.	5	3E Support, Linwood Park, Signalize crossings
6.	Please consider traffic calming measures on Wooster regarding of choice selected	3	Suggestion
7.	3E is the safest configuration	2	3E Support
8.	Wooster pike traffic is too heavy to not have a signal for crossing. 3E is the only safe option	2	3E Support, Signalize crossings
9.	Chance for connection to Hutton street.	2	Miscellaneous
10.	The signal is also the major way vehicles access Armleder, so it is a known entryway. But there are lots of vans filled with soccer kids entering Armleder there. It would be good to separate bike and pedestrian traffic once entering the park, which may require extension of the Otto Armleder Memorial Park Trail.	1	Suggestion
11.	Supporters of Alternative 3E cite their concern for an unsignaled crossing and the speed of cars traveling along Wooster Road. Why can't the other pathway alternatives have signaled crossings in addition to the Crossing at Armleder Road? An additional signaled crossing would slow traffic speed down due to the short distance between signals.	1	Needs Response
12.	Wooster is a busy road with a 35 mph speed limit. The signalized crossing in option 3E is key! Also, many of the businesses on this road are industrial in nature. I appreciate that most options keep trail traffic behind those businesses and away from the business entrances and road.	1	Scenic, Signalize crossings
13.	Safest crossing alternative is imperative.	1	3E Support, Signalize crossings
14.	The tradeoff between conflict with moving vehicles at the four commercial entrances with having a signalized crossing at Wooster Road seems fair.	1	3E Support
15.	Please build this!	1	General
16.	Signaled crossing is important.	1	Signalize crossings
17.	I have seen a reported need for a better intersection at the current entrance to Otto for several years and this would be a good opportunity to improve that space for cars and pedestrians as well as the new shared path.	1	3E Support
18.	The traffic signal is a must-have for safety.	1	Signalize crossings
19.	Using an existing signalized crossing is likely the best move. Crossing mid-block when you can't see any potential drivers coming is dangerous, and cyclists already have a low amount of trust in drivers.	1	Signalize crossings

	Question 18 Comments	*Upvotes*	*Themes*
20.	The entrance to Armleder (3E) gets very busy during spring and fall soccer. Adding bike and pedestrian traffic to the mix will require a dedicated signal for path users and/or extra long lights for people exiting Armleder or trying to enter Armleder from the east.	0	Suggestion
21.	3E is fine but another alternative to save money now and accomplish 3E in the future would be to resurface Wooster Rd and put a bike share lane on the road. Wooster Rd is one of the worst roads in Cincinnati.	0	3E Support, Suggestion
22.	I ride my bike a lot and make it to Armleder twice a week in the spring/summer/fall. To get elevation, I ride up Armleder road (hill), around the US Bank parking lot, and back down Armleder road. My one concern with 3E is that you can have lots of car traffic on that single park entry/exit point. During soccer practice season this can be problematic when combined with nice-day dog park traffic (which can be an issue unto itself). I assume you will expand on the existing path along Armleder Road. At the bottom of the hill in front of the pavillion parking lot, make sure you have extra visibility and safety measures for people (like me) bombing down Armleder road (hill). I was really hoping the orange 3A route would be selected as it enters the park at a minimal traffic point where I usually encounter sketchy activity (more people present would reduce this).	0	Suggestion
23.	I think 3E and 3B both have benefits. My choice would be 3B due to fewer car/pedestrian interaction points. Despite the mid block crossing, there are methods to slow that traffic down. The crossing at 3E though much safer will slow the pedestrian traffic down so I would like to see some sort of signal priority there. But option 3E is a great option too, just not the one I would choose initially	0	3B Support, 3E Support, Suggestion
24.	While a conflict point with traffic is never ideal, alternative 3E looks like the safest option. I hope trail users get right-of-way at the intersection so that they are free to cross within a few seconds with minimal disruption. An instant yellow-red light cycle for cars facilitated by a “push to cross” button would be ideal	0	3E Support, Suggestion
25.	Of those alternatives that were left, I actually liked 3B better with one modification. Not sure about feasibility but would it be possible to tunnel beneath Wooster Pike to connect the path without direct crossing at the road? If not, is another alternative a pedestrian initiated light being installed with option 3B which would allow a walker/cyclist to initiate a red light to temporarily halt traffic? I just like a more direct route to the path.	0	3B Support, Suggestion
26.	Build with appropriate signage .	0	Suggestion
27.	i don't understand why a signal can't be added for the other options. pedestrian/bicycle safety should be our primary concern!	0	Needs Response
28.	The more we can do to protect cyclists and pedestrians along the path the better. I don’t believe that crossing at a light is necessarily safer since we will be crossing 4 other intersections that could cause more danger. Would it be possible to add a flashing crossing signal light for the non signaled crossing of Wooster?	0	Needs Response

	Question 18 Comments	*Upvotes*	*Themes*
29.	Question: the premise of this discussion involves an abandoned railway, but this is still in use. Is it being retired, or is the path to exist in parallel to the railway?	0	Needs Response
30.	Were tunnels under Wooster considered as a means to minimize conflicts between cars and bike/peds?	0	Needs Response
31.	Once again, car and truck traffic is being prioritized over pedestrians and cyclists. It seems crazy to me that all of these options were designed to tiptoe quietly around the all important cars and trucks. Only an existing signal can be used! No, we can't have an option for an activated light crosswalk for the other options. Yes, we'll have to wait for a long traffic light that prioritizes the drivers of cars and trucks speeding down Wooster Pike looking down at their cell phones. All of that said, 3E is the best option because it stays away from the road the longest and could connect to Linwood Park and Eastern Ave. I'm a little confused as to why this option doesn't just continue into Linwood Park and then turn to head to the signal crossing of Wooster Rd??	0	3E Support, Needs Response, Signalize crossings
32.	I can't see an unsignalized crossing on Wooster as serious	0	Signalized crossings
33.	I agree with crossing Wooster only at a signalized crossing. That is a very busy road.	0	Signalized crossings
34.	Using traffic signal to cross Wooster Road is preferred way to enhance safety.	0	Signalized crossings
35.	This route goes to the “main entrance” that people think about when they think about entering Otto Armleder	0	3E Support
36.	Yes, there is only one entrance to Otto Armleder Park. This is the only entrance people think about.	0	Response
37.	The signalized crossing is worth it. And the ability to more easily connect with Linwood Park is great.	0	3E Support, Linwood Park
38.	Signaled crossing is a much given the heavy traffic and speeding traffic. 3E is the only option that makes sense	0	3E Support, Signalized crossings
39.	This area floods regularly as it is a levee and an upper by-pass trail is needed for use when the lower tail is flooded out. This can happen 5-10 times per year and people still need to get through.	0	Floodplain Concern
40.	Expect higher flood levels.	0	Floodplain Concern
41.	Thank you	0	Thank you

	Question 18 Comments	*Upvotes*	*Themes*
42.	Bike lanes on the road are just suggestions for drivers to not kill cyclists. Any path needs to be separate and protected, imo.	0	Response, Separate
43.	I've literally had to dodge a car while running on the *sidewalk* there...	0	Response
44.	A signalized crossing is absolutely essential to get across Wooster Rd -- people fly through there and sightlines are very short in many areas. Using the existing traffic light is a smart move. One alternative to maybe consider would be a variation of 3D that brings a gradually elevating bridge from north of Duck Creek across the creek and peaking as it crosses Wooster Rd above traffic, then descending to the south of Wooster Rd as it proceeds next to the US Bank parking lot. This would avoid all conflicts with traffic, providing the safest possible trail, while also reducing traffic hassles from increased signal triggering. Could be done in the future as it would intercept option 3E, which should work OK.	0	Signalized crossings
45.	The rationale here for selecting 3E over other alternatives despite the higher cost makes sense.	0	3E Support
46.	I have crossed Wooster with my two kids while biking from Red Bank Rd to Armleder and it's a dangerous stretch without a signal. Especially given how many families will bike to Armleder from Hyde Park for soccer games and other activities.	0	Signalize crossings
47.	Best choice	0	Miscellaneous
48.	.	0	N/A
49.	Don’t worry about flooding. Armleder is always underwater during flood events, so a dry path to a lake is of little concern	0	Miscellaneous
50.	Least environmental impact and the nicest option for the trail.	0	Miscellaneous
51.	Depite more conflicts with driveways I think this is better. I HATE biking on the road in this stretch because of the crazy speed of the traffic all along wooster (so usually ride on crappy sidewalk where there is one). A signals crossing would be great and ease bike vs car emotional conflict.	0	Miscellaneous
52.	While other options are more appealing due to their reduced number of interactions with vehicles, the lack of signaled crossings is a huge problem. Therefore, 3E is the best option.	0	3E Support
53.	A signalized crossing is needed across Wooster. Traffic speeds are too high to rely on drivers to be paying attention to a mid-block crosswalk.	0	3E Support
54.	The sitelines at 3B aren't that bad, and if the crosswalk could incorporate a good refuge island, crossing Wooster wouldn't be the worst, and could be done while traveling in a straight line, rather than adding a 90 degree turn in with the crossing. That said, 3E would make the trail more legible for people accessing the park from the main entrance.	0	3B Support, 3E Support

	Question 18 Comments	*Upvotes*	*Themes*
55.	A signalized crossing of Wooster is essential for safety, so Alternative 3E is the best of the listed options. If a signalized crossing were added to Alternative 3C then it may be superior.	0	3C Support, 3E Support
56.	Thr number of pedestrian and traffic overlaps listed above make it seem like 3E is the less safe option with 5x the number of vehicle/pedestrian crossings.	0	3E Support
57.	3E, with the ability for future access to Linwood Park and more residences is a BIG plus,along with the safer Wooster crossing.	0	3E Support, Linwood Park
58.	Concern about bridge in flood plain is minimal as Armleder Trail will also be flooded. 3E avoids Wooster Road impacts (and excessive speeds over the speed limit) except at the signal.	0	3E Support
59.	3E is the only one with a signal, so it should be the only option. But its route is also the ugliest. What I think we really want is a safe way to cross Wooster, plus a scenic, quiet route where we don't have to stare at the worst excesses of urban development (stunted tees, ugly buildings, parking lots)	0	3E Support
60.	This is the minimally invasive to existing businesses and residents. Agree this is the safest alternative for users of the trail. Would have concerns about bringing additional car traffic into	0	Miscellaneous
61.	At first I thought it felt less direct, but I would much rather stay off the road and enjoy the trail for longer! I would use this for fun, not commuting, after all	0	3E Support
62.	I do think many of the other alternatives seem viable if budget becomes an issue. They all face similar road crossing requirements.	0	Miscellaneous
63.	Uses out-of-service rail corridor to the greatest extent. Minimizes contact with Wooster Rd	0	3E Support
64.	The signaled crossing is critical as many motorists speed through Wooster Road	0	Signalize crossings
65.	safety first	0	General
66.	Signalized crossing is essential.	0	Signalize crossings
67.	I would not use this segment, and I would prefer this money to be spent elsewhere. However, of the proposed alternatives I recognize that E is likely the best. B is a good second choice, but I believe that the opinions of the businesses impacted by it should be given extra weight.	0	3E Support, Miscellaneous
68.	3E has the fewest issues with property owners, sharp turns and traffic.	0	3E Support
69.	An unsignalled crossing is a BAD idea. I do wish that it connected with the Armleder loop trail, but agree that an unsignalled crossing + all the debris would create more safety issues than it's worth.	0	Signalize crossings

	Question 18 Comments	*Upvotes*	*Themes*
70.	I am puzzled by the expressed concerns from ODOT about sections of bridge or trail in the 100 year flood plain. The entirety of Armleder Park floods at about 45 feet so the trail will not be usable into Armleder during times of high water, which is not all that often. The signalized intersection of 3E certainly makes the most sense.	0	3E Support
71.	Feel crossing Wooster Rd at a light is important	0	Signalize crossings
72.	Crossing at a signalized crossing ensures all users included the traffic can progress with confidence.	0	Signalize crossings
73.	I live in the neighborhood that is connected to Linwood Park. Connecting Linwood Park to Armleder Park via the Segment 3 alternative would be great for the community and would increase safety when crossing Wooster Road to get to Otto Armleder Park.	0	Linwood Park
74.	Regardless of whether Alternative 3E is selected, we absolutely need a crosswalk at the main park entrance and to extend the existing path on Armleder road all the way to Wooster (in front of Hyde Park Landscaping). I already regularly walk to Otto Armleder Park using this entrance and find those to be more pressing safety concerns than the business driveways.	0	3E Support
75.	This is the safest choice.	0	Miscellaneous
76.	I am a somewhat fearless cyclist and do not mind riding in traffic. That being said, there is not a shared use road in the Greater Cincinnati area that scares me as much as this section of Wooster Road. Traffic is largely commercial and the road bed is lousy. Site lines are challenging. It makes sense to take advantage of a existing traffic signal as a crossing point.	0	3E Support, Signalize crossings
77.	Alternative E has the safest crossing of all the options. I love the potential to connect Linwood Park to the trail!	0	3E Support, Linwood Park
78.	It's the safest for cyclists.	0	Miscellaneous
79.	no comment	0	N/A
80.	A glance at the other comments capture the apparent benefits of option 3E: safety, separation from traffic and industrial areas, the safety of a signaled road crossing. Great approach.	0	3E Support
81.	Riding a bicycle on Wooster Road is very undesirable. 3E will make riding in this area much better.	0	3E Support
82.	prefer Alternative 3A. Security concerns are overblown.	0	3A Support

QUESTION 19: Is there anything we should keep in mind as planning for the Wasson-Armleder Shared Use Path advance in development?

	Question 19 Comments	*Upvotes*	*Themes*
1.	Current use of Wasson Way from Montgomery Rd. to Ault park numbers in the range of 1000-3000 per day, with higher use on weekends. People who live close to the trail who might not otherwise get out and exercise, use it because it's convenient and safe. Extending it all the way to Armleder Park will open up an even greater opportunity for exercise as well as transportation. The proposed pathways also continue through green spaces that are currently underutilized and not very accessible to most in the area. Installing the path along the proposed segments and especially segment 3E , will expose people to more trees, plants waterfoul, and other animals within an urban setting. What a great use for the space.	29	General support
2.	While ambitious, this is a very welcomed aspect of the Eastern Corridor project. Here's to getting it done as soon as is practicable. Cheers.	24	Complete Soon, Eastern Corridor
3.	I have lived in this area for 30 years and have wished many, many times that something like this could happen. Please, please move ahead!	18	Complete Soon
4.	I live next to Wasson Way, but drive when I go to Armleder/Lunken for safety reasons. Connecting our trails will increase recreation and transportation options for everyone in the region. Can't wait!	15	Excited, General support
5.	The preferred alternatives outlined here are well thought out and would make a very positive impact to the regional bike network by connecting two of the best paths in the area. This is a tricky area and the use of the railroad bridge over Red Bank, the roundabout at Wooster Pike, and the new bridge over the Duck Creek would all be major improvements that would lead to long term benefits for all.	4	General support, Open House Format
6.	This is a very exciting project that would build a crucial link in the CROWN network. Let's hope for funding and speedy implementation	4	Complete Soon, Excited
7.	I am always intrigued by the possibility of extending the path from the end of Section 1 toward and through the area by the Mariemont community garden plots area eventually connecting to the the Little Miami Trail at 50West, a sort of 'southern alternative' to the Red Bank/Murray Path/Hiawatha route through Mariemont.	4	Connections
8.	When riding the Little Miami Trail, the constant buckling of the path is a concern due to ingrown tree roots. If possible, please make sure than when this path is created, that the excavation of tree roots (including adjacent roots) is a priority for cyclists' and walkers' safety.	2	Maintenance
9.	With the connection to the Murray Trail this will make for a great commuting option for people who live in 45227 zip code	2	Connections

	Question 19 Comments	*Upvotes*	*Themes*
10.	The analysis appears to be thorough and well-thought out, and I appreciate the opportunity to understand the options and how we arrived at the final recommendation. Great work and thank you!	2	Open House Format, Thank you
11.	I would love to see considerations about how to build connections from the Red Bank/Madison Road area into that portion of the city that so far has no plans for paved multiuse trails -- Oakley between Ridge and Red Bank; and Kennedy Heights (and on to Pleasant Ridge). I hope someone is looking into future connections that will link these city suburbs.	2	Connections
12.	This would require crossings with 2 active rail lines, which are not under public control. Bad idea	1	Response
13.	The proposed plan looks well thought out with many considerations given. I am excited about this project!	1	Excited, General support
14.	A benefit of this connection could be a potential reduction in the unsafe parking situation at armleder during soccer seasons. More families/spectators could bike to games, reducing the number of cars in and out during those high traffic times.	1	Reduced Arm Traffic
15.	Super excited to see this part of the bike path getting serious. Connect areas and currently slow or dangerous to get to my bike or foot.	1	Excited
16.	This project makes living near the path much more attractive.	1	General support
17.	Learn from and integrate with the friends of the little Miami. Their trails are cleaner and better kept.	1	Maintenance
18.	I would love it if there was some consideration for planting greenery, trees, pollinator plants and flowers, etc, as well as benches and the like for peoples enjoyment. It is extra cost but the entire community benefits. These things also significantly increase trail usage and encourage people to explore more which also means that these people inevitably will also support local businesses nearby by buying snacks and etc. trees and flowers are beautiful and attract people to the area as well as the trees providing heat and shade in the ever more hotter months. I would like if there was a plan to add these feautures at some point if not by ODOT then through Wasson Way.	1	Amenities
19.	This is absolutely spectacular. I use Wasson daily... and this will enable me to connect my two most used run locations ... Wasson and Lunken. Bravo!	1	Excited
20.	Should be wasson to 50 West backside. Then if one wants to by existing to lunken/armleder.	1	Connections
21.	This connection is as important as the Wasson Way itself, since it opens up what is currently an isolated trail to connect with the larger metro area. This just has to move forward, so thank you for doing whatever is needed to advance the project.	1	Complete Soon, Thank you
22.	Thank you for soliciting public input. I found this website to be very clear and well designed.	1	Thank you

	Question 19 Comments	*Upvotes*	*Themes*
23.	this trail would greatly enhance use and safety of Ault and Armleder. Get this project going !	1	Complete Soon
24.	If at all possible, have some bathrooms in the budget.	1	Amenities
25.	Thank you for undertaking the work to get this done. Improvements like this continue to make Cincinnati such a great place in which to live and work.	1	Thank you
26.	I'm an avid Wasson Way user and have often wanted to connect to the little Miami, but there is no safe way to do so currently. Sooooo excited for this! Way to go Cincy, love to see projects like this being proposed to further biking infrastructure in our city!	1	Excited
27.	When thinking about adding landscaping, keep in mind line of sight. My wife and I rollerblade at least a few times a week down at Armleder or up at Wasson. The curves that go around corners such as the one under the Beechmont Levy bridge going over the Little Miami, present a rather fast moving blind spot on a curve. Difficult to navigate safely on blades with whizzing bikers coming the other way. Not sure blading between Wasson and Armleder will even be in the cards due too much elevation change to blade safely at all. Can always walk our blades down though. Thanks for considering this project for our community's future!	0	Suggestion, Thank you
28.	Not posting publicly. Funding matters. This all sounds great for my rides, as I live in this area. Might this deplete funding for trails for the west side of Cincinnati? We'll need to decide what to prioritize in attempts to fund.	0	Suggestion
29.	Please explore a protected lane or shared use trail into fairfax/mariemont. That little stretch on wooster is still a pain sometimes and scary once you get into town. Overall, these improvements would make biking the long distance from Northside a little more doable as I could follow the upper crown/wasson most of the way instead of having to cut into neighborhoods or ride on gravel or go all the way downtown to and from (not that I mind some days).	0	Suggestion
30.	I'd be happy if they just repaved and cleaned up Wooster Road. It would be a safer bike ride if that could happen SOON. The road is a mess. And it stinks (smells) in the section along the paperboard factory. Can't they do something to reduce the nasty odors they emit? Difficult to appreciate all the natural beauty when it smells like a sweaty armpit. Or is that part of the natural beauty?	0	Suggestion
31.	As much off road, rail trail as possible please!	0	Suggestion
32.	Keep up the good work and let's make it happen. In addition to all of the planning we as a community need to understand that these paths are "shared" and they are not intended for folks who are in a hurry! Battery bikers and Tour de France trainers need to be more courteous!	0	Suggestion, Thank you
33.	Further consider the use of tunnel under Wooster to minimize conflict between vehicles and bikes/peds.	0	Suggestion

	Question 19 Comments	*Upvotes*	*Themes*
34.	If there are any areas of the trail that could flood, consider adding dirt to raise the elevation of the trail, thereby reducing or eliminating flooding of the trail. Obviously additional dirt/grading adds to the construction cost, however there could be annual savings in maintenance clean up costs from spring flooding	0	Suggestion
35.	Please preserve as many trees as possible	0	Suggestion
36.	Can we eliminate Segment 2 completely by adding a Segment 1D that proceeds along old Red Bank road, crossing under Route 50, and then crossing Duck Creek on a new bridge that connects with Segment 3. This be a more direct path that eliminates several interactions with vehicles and maybe cost less.	0	Needs Response
37.	Is an easier (potentially less expensive) way to do this to stay on the west side of us 50 until the eastern Ave exit, then cross the active rail at the Linwood school/linwood bridge?	0	Needs Response
38.	I hope that the rest of Wooster Pike heading towards the airport will be addressed. We live in Mariemont, often bike downtown, so a safer route to Wilmer Ave is needed because of heavy traffic and poor road condition. There is a sidewalk, which perhaps can be incorporated into these plans and upgraded as well.	0	Needs Response
39.	Linwood Park if trail were extended into the park. Parking on Hutton is at a premium and would not want to encourage additional cars in the park. The park is currently an area of drug activity that requires the park to be locked in the evenings. Parked cars would require the park to remain unlocked past hours and would lead to increased drug activity	0	Needs Response
40.	Segment 1/Comments: Railroad crossing at the intersection between Old Red Bank Rd and Woodbend is not properly adapted to cyclists/pedestrians - There is no barrier or safety lights - Train sometimes stops for several minutes blocking the railroad crossing - Train approaches from both sides, schedule is unpredictable	0	Needs Response
41.	In addition to safety, selecting alternatives that can provide direct routes is important. Options like 1C add unnecessary distance.	0	Needs Response
42.	The flatness of the Armleder loop prioritzes the safety of adaptive cyclists and new riders. How will bridge grades account for accessibility?	0	Needs Response
43.	As someone who lives in 45227 and uses Murray Path daily, I am so excited with this opportunity. We visit Amleder often but drive given there is no safe way to walk or bike there. This investment will provide a safe option for outdoor recreation for years to come. Thank you for the hard work to make this happen!	0	Excited, Thank you

	Question 19 Comments	*Upvotes*	*Themes*
44.	This would be a tremendous benefit to the community and allow for future connections to additional sections of trails. This particular segment is a major challenge for pedestrian and cyclist when trying to connect from Wasson and is a very welcome addition.	0	General support
45.	Thank you	0	Thank you
46.	The more trails the better our city is a desired place to live!	0	General support
47.	The eventual connection to the trail to either Newtown or preferably to the 50 West juncture to follow the Little Miami River north/northeast	0	Connections
48.	Amen. Ridge is a death trap. It's currently basically impossible use Madison in Oakley	0	Response
49.	I live near the Wasson Way, but have to drive every time I go to Otto Armleder Memorial Park. This would allow me and my family an alternative to driving to go to recreation activities.	0	General support
50.	Go for it! I don't like the idea of going out of one's way to use the trail, so if one option is to follow the existing trail to the north, just to cross over Red Band Xpway then get on a new trail to come back south, I would not be in favor of that. At the same time, I realize building the trail over the bridges is complicated and expensive. I bicycle this basic route – from trail's end at Old Red Bank Rd. and to locations such as the. BMV, and Karrikin. It's just riding on the grass and straddling the concrete drainage feature though, or perhaps in the downhill direction blasting along the roadway with the motorists.	0	General support
51.	Thank you for looking to continue the shared use path. Keeping pedestrians/pets/runners/cyclists safe from motor vehicles is much appreciated	0	Thank you
52.	This is a safer route to Wilmer. Armleder connects to the Lunken Trail	0	Response
53.	Very thoughtful and well-done presentation.	0	Open House Format
54.	Please consider including some benches periodically throughout the trail- preferably in the shade. Sometimes on a long outing our kids and us parents need to stop for a water break.	0	Amenities
55.	No comment	0	N/A
56.	But this is a comment	0	Response
57.	No comment.	0	N/A
58.	No additional comment	0	N/A
59.	I have no additional comment.	0	N/A
60.	It would be a great project and help citizens and businesses make the area make more attractive	0	General support
61.	That’s a great idea. Let’s get it done.	0	General support

	Question 19 Comments	*Upvotes*	*Themes*
62.	Could not be more supportive of this plan and the impact it will have	0	General support
63.	No need for more area to be littered or accosted on	0	Miscellaneous
64.	What.	0	Response
65.	This would be a dream.	0	General support
66.	Can't wait to use it, get going tomorrow!	0	Complete Soon
67.	I ride my bike a lot and make it to Armleder twice a week in the spring/summer/fall. It's a hidden gem in our region and this connection will expose it's beauty and access to the Little Miami for lots of people. Thanks and looking forward to seeing it completed!	0	General support, Thank you
68.	A separated bike connection to Lunken/Amleder will save me half an hour of cycling time and prevent me from having to ride up a steep hill with car traffic. This project is a slam dunk and you have my support.	0	General support
69.	I hope that you will go ahead with the recommended version of the trail. It minimizes road crossings, utilizes many spaces that are not directly next to the road, and at the same time will improve traffic flow by building the roundabout at the Red Bank/Old Wooster intersection. It would be a great asset to have the Wasson Way extended in this manner.	0	General support
70.	The path needs a public restroom along it. As well as more water fountains but a bathroom somewhere would be nice.	0	Amenities
71.	The high traffic intersection of the Murray path crossing makes me much less likely to access Murray path even though I love that segment and they way it provides me access to the businesses of Fairfax and Mariemont.	0	Miscellaneous
72.	This is a safer but less direct route for me to pick up the Little Miami Trail at 50W. I 100% support this, but I hope we can also explore a connector from the Segment 2 bridge along Little Miami River.	0	Connections, General support
73.	Please move ahead as soon as you can!!	0	Complete Soon
74.	Please do fast	0	Complete Soon
75.	Be sure a connection is possible in the future through Mariemont gardens and to the north to Avoca.	0	Connections
76.	Based on the recommendations, it seems like the team is coming at this from the right direction. Limiting vehicular/pedestrian interactions is prioritized every time, which is hands down the most important thing to create safe and accessible infrastructure. The thing I am happy to have not seen is any type of crosswalk that relies on drivers *choosing* to stop for pedestrians. Yes I'm talking about those extremely silly press-button-to-flash-yellow-lights crossings. The kind that I regularly feel like I'm going to die using in Oakley, and the kind near Fifty West where they went so far as to say what we all know to be true and put up signs that say CARS MAY NOT STOP. So good on you	0	General support

	Question 19 Comments	*Upvotes*	*Themes*
	all for not falling for that idiotic trap. Please continue to keep vulnerable travelers away from vehicular traffic wherever possible. Good work.		
77.	You are appreciated! Let's make this happen together!	0	Complete Soon, Thank you
78.	It is important to add even more value by developing the path as a linear greenspace, which will significantly increase the impact that sustainability can have throughout the community.	0	Miscellaneous
79.	Thank you for studying this and getting our feedback! I love Wasson Way, and because I use it I've cut my car trips significantly. It's saved me a lot of money, and extending it will provide further savings and reduced carbon emissions.	0	General support, Thank you
80.	Communication!	0	Updates
81.	Status updates may keep the attention on the excitement	0	Updates
82.	Keep it moving	0	Complete Soon
83.	Please install water fountains. Also, please connect the Kilgour area to the trail. Thank you!	0	Amenities, Connections
84.	Thank you for your efforts	0	Thank you
85.	Do it	0	Complete Soon
86.	1. Getting on/off the trail at places other than the endpoints. 2. Rest areas and toilet facilities	0	Amenities
87.	The displays showing the alternatives and preferred routes are horrible. Great changes in elevation are ignored without explanation. One has to find a docent to understand the possible routes. I can't believe how bad the presentations are.	0	Complaint
88.	To be honest, the proposed maps are a bit difficult to read. However, I am in favor of adding more access to Wasson Way and think this is a wonderful initiative!	0	Complaint, General support
89.	I approve!	0	General support
90.	As quickly as possible - don't let perfect be the enemy of better and safety. We know that if we built it people will come - from near and far	0	Complete Soon
91.	SIGNAGE. TRAILHEAD MARKERS. Many of my neighbors have no idea the Wasson Way trailhead at Ault Park exists. Please make it as easy as possible for the surrounding community to locate and access the trail	0	Amenities
92.	Give considerations to access points and places where peds/bikes can utilize street grid and other pathways to get to trail	0	Amenities

	Question 19 Comments	*Upvotes*	*Themes*
93.	Hopefully there is a plan to connect segment 1 with the trail spur in Plainville behind 50 West brewing	0	Connections
94.	Thank you for doing this. We appreciate the effort and are excited for the trail.	0	Excited, Thank you
95.	Nothing comes to mind right now.	0	N/A
96.	I'd love to see every proposed trail shown on the Crown Loop developed into actual trail. The sooner the better for all Cincinnatians.	0	General support
97.	I live near wasson way and bike on little miami trail at least once a week. I currently drive from my home to otto. This would be a wonderful addition.	0	General support
98.	I would prefer that this money go to other shared use paths in the Cincinnati area. However, I am always happy to see any expansion of shared use paths. Please ensure that long term maintenance costs are considered, because I would like to see whatever is built last for decades to come.	0	Maintenance
99.	The biggest factor impacting my current usage of Wasson Way Trail is the path's ability to connect with the Little Miami Bike Trail. The most efficient way to do that would be to route off Murray Path through Mariemont . I recognize that a link to Armleder will permit a connection to the Little Miami Bike Trail too, but it will do so in a less direct manner. That doesn't mean I wouldn't use this new path to Armleder. I definitely would and really applaud all the efforts on this project. This expansion into Armleder gives access to Lunken which connects to the Ohio River Trail and Little Miami Trail and creates a very robust trail network and access to communities and businesses in the East End which should enhance property values and create more retail business traffic.	0	Connections
100.	Appreciate the work and reasoning that went into this study. Looking forward to the quality of life this trail will bring.	0	General support, Open House Format
101.	100% supportive of connecting these trails and look forward to using them one day soon!	0	General support
102.	I think the biggest challenge to non-powered transportation in Cincinnati is the steep terrain. Anytime we can create a path with easy/minimal grade it will get much more use, thus benefitting more citizens.	0	General support
103.	This is very exciting, to connect Wasson Way into uptown all the way with the LMT will give riders on the trails access to numerous business and accommodations. This is very exciting. Please move ahead!	0	Complete Soon, Excited
104.	Looks great!	0	General support
105.	The success of the Wasson Way trail should always be top of mind. If you build it, they will come. You can take that to the bank…..or legislature.	0	General support
106.	Linking WW to Arm and Little Miami is vital! Please do it!	0	Complete Soon
107.	This is such a needed and missing addition to the East side…	0	General support

Question 19 Comments		*Upvotes*	*Themes*
108.	no comment	0	N/A
109.	Keep moving forward with broad connections in adjoining communities and constituencies.	0	Connections
110.	Electricity options / available for E-bikes.	0	Amenities
111.	Continued liaison with user groups.	0	Updates
112.	No further comment	0	N/A
113.	This was not only a well thought out project, but the presentation of options and the clear reasons behind them was wonderfully done. The community benefits of this project will likely be greater than expected. I think that's what happened with Wasson Way from the initial push back to its current success. The same can be said for the initial difficulties extending the Little Miami trial through Terrace Park. Hopefully funds and right of ways can be secured quickly to start in 2025.	0	Complete Soon, General support, Open House Format
114.	I currently utilize Murray Trial and Wasson Way weekly. I'm looking forward to have a new alternate route connecting with Armleder, to Lunken, to Riverside and downtown.	0	Excited

The following comments were received via email and analyzed as part of Question 19:

Question 19 – Comments Received via Email		*Upvotes*	*Themes*
1.	On behalf of the City of Norwood, I am pleased to express my full support for the proposal to connect the Wasson Way trail extension at Old Red Bank Road to the Armleder and Little Miami trails. This critical connection will enhance the regional trail network, linking our community to the Little Miami Scenic Trail and providing Norwood residents with a continuous, accessible pathway to downtown Cincinnati and beyond. Norwood has long envisioned a more connected and vibrant city, where safe, active transportation options are readily available for all residents. The proposed link between Wasson Way and the Armleder trail is an essential component of this vision, offering a unique opportunity to promote health, increase mobility, and support economic growth within our city and neighboring areas. The benefits of this project are significant. By connecting Wasson Way to the Armleder trail, we will enable thousands of residents to commute, exercise, and explore our region's natural and urban amenities without reliance on motorized transportation. This expanded network will support our goals to promote sustainable transportation and provide enhanced recreational opportunities for residents of all ages and abilities. Additionally, the trail extension will bolster our local economy by drawing new visitors, increasing foot traffic for local businesses, and strengthening our connections to greater Cincinnati. We anticipate that this project will also attract future investments in housing, retail, and other developments that will further enhance Norwood's appeal as a	N/A	Support

	Question 19 – Comments Received via Email	*Upvotes*	*Themes*
	dynamic, accessible city. We recognize that successful partnerships are vital to achieving these goals. The City of Norwood is committed to collaborating with the Ohio Department of Transportation and other key stakeholders to advance this project. We are prepared to support and contribute to planning, outreach, and funding efforts to help make this vision a reality. This truly is a collaborative effort to connect our communities, improve quality of life, and create lasting opportunities for Norwood and the entire region. Thank you for considering our support for this transformative project.		
2.	I strongly oppose this expansion! The reasons are many. However, there is an aggressive few who are pushing for many trails - even when here is low usage. Even in Hyde Park, in summer, I see very little activity on Wasson Way. Furthermore, there are increasingly concerns about safety - especially when Wasson Way cuts through more isolated areas. :People who ride bicycles have many trails to ride in this area - it's time to stop spending more tax payer dollars on creating more of them- and fix our damn streets and bridges!	N/A	Oppose
3.	I think this is an excellent idea and should be undertaken as soon as possible. Everybody benefits from greater access to walking and cycling paths. This project ties in to local neighborhoods, businesses, and cultures - cycling and running in particular. This is a unique opportunity!	N/A	Support
4.	I strongly oppose this effort. There are already numerous bike/walking trails here. Our tax payer dollars need to shift focus to the roads and bridges in our area. I am sick and tired of your efforts to impede travel by car. Yet, the city is determine to increase our population - while moving around via car is being impeded by unused bike lanes! Safety is another concern. The Wasson Way has low foot/bike traffic - and criminal activity is clearly happening there too - especially where parts of it are more isolated. Stop spending tax dollars to benefit a few while the vast majority is moving around via our roads - and a number of these are in terrible condition. . Even if a person doesn't' town a car, they use UBER and other transportation modes. Business travel is also being impeded. Needless to say, what happened to the Big Mac bridge should not have happened - especially after the federal government warned ODOT twice about getting inflammable materials out from under bridges. The mistake is costing millions of tax payer dollars to fix and look what happened to the traffic!! Get real, ODOT!	N/A	Oppose
5.	I just read through the virtual open house materials. As a regular user of Wasson Way, Lunken and Little Miami trails, I am delighted to see the thoroughness and transparency of this project. I'm a little disappointed there isn't a more	N/A	Support

Question 19 – Comments Received via Email	*Upvotes*	*Themes*
direct way to connect the Wasson and Little Miami trails through the Clare Rd. rail yard area, but the Armleder connection is a great alternative with interesting features along the way. Thank you for leading this effort.		
6. Attached are 7 pages of a signed petition that I collected from people while standing on Wasson Way. As you may know, I am a member of Wasson Way Board. We appreciate your efforts regarding this project.	N/A	Petition
7. Please finish the CROWN loop in Cincinnati before building another trail on the east side. There are very few trails on the west side of Cincinnati, and the CROWN and Mill Creek trails need to be extended. Thanks for your consideration.	N/A	Oppose
8. Please find a letter of support attached for the Wasson Way connection to Armleder Park. Thanks for your efforts and those of your team so far in developing the plans for this project. Please let me know what the next steps are in prioritizing the project and what kind of support or activity you need from me or The Wasson Way organization.	N/A	Support
9. The plan was to build it and they will bike. Cincinnati's 15-year Bicycle Transportation Plan was adopted in 2010. It called for legislation and investments in new trails, pathways and protected lanes. Did the plan work? Did Cincinnati increase the bicycle traffic beyond red bikes, increase the number of bicycle commuters, reduce congestion or the number of motorists on any road or reduce the number of accidents? Show us metrics. Prove the first ideas worked before spending another $18 million dollars. Thank you.	N/A	Concerns - benefit
10. I want to register strong approval for this project. As a frequent bicycle rider, asphalt paths are the best way for me to get in a lot of miles without riding on city streets.	N/A	Support
11. I vigorously support the three-phase plan proposed for this path extension.	N/A	Support
12. My wife and I are writing to confirm our strong support for the planned Ault to Armleder bike path extension. Our home at backs up to the beautiful Ault Park cherry trees, and we have been enthusiastic users of the Little Miami bike trail system for several decades. We donated multiple times to construction of the Wasson Way Trail, and use that frequently as a 3-mile walking loop from our house to the Marburg bridge and back up to our home. We have also biked and walked the Murray Path into Mariemont and back many times. With a concerning increase these past few years of bikers being hit by cars, we are also very excited about an expansion of this Eastside trail system to provide an uninterrupted path for bikers (and walkers!) away from the noise and dangers of automobile traffic. We are also glad that projects like this offer the community another important fee-free recreation option, and another attractive way to get more exercise. We appreciate the opportunity to comment on this new project, and believe the many benefits of this infrastructure project far out-weigh the costs.	N/A	Support

Question 19 – Comments Received via Email		*Upvotes*	*Themes*
13.	I don't know much about walking or biking paths, but $7,000,000 to contruct 2350 feet of it seems extreme. It seems like it would take A LOT of biking/walking to justify spending that much money.	N/A	Concerns - cost
14.	I am writing to you to let you know how important I feel it is for the next proposed 3 segments of wasson way from Ault park to the armeader park system is to me and my family. We all love to bike and walk ad use the wasson way daily. Right now to access those parks we have to bike on many roads, some with bike lanes and some without. Having the brew trail segments completed would make the area safer for both bikers walkers and drivers. The wasson way and the new Crown is such a gem for Cincinnati and has help our community and our property values. I live on Michigan Ave in Hyde park and the trail is such a benefit over the old overgrown rail line. I am hopeful you can help to continue to prioritize the trail extensions and completing the Crown!	N/A	Support
15.	In regard to the above project. In my opinion this is a 'nice to have' project. Considering the current state of our streets this money would be better used to repair or resurface streets used by the general public, not a few. There are several trails recently installed that should be enough until more pressing needs are met.	N/A	Concerns - redirect funding
16.	I would like to support the 3-phase plan to connect Ault and Armleder Parks. I live very close to Ault park and think this allows a great way to connect Wasson Way to the Hiking /Biking trails of Ohio. The plan promotes health and community. Thank you for your consideration.	N/A	Support
17.	I read an article in the January 3rd Cincinnati Enquirer about the proposed path connecting Ault Park and Otto Armleder Park and was shocked at the cost of $18.5 million for a 2.5 mile path. That is about $7.4 million per mile. I researched the cost to build a 2 lane highway in an urban area and the cost was estimated at $3-5 million per mile. How can this project cost more than building a road? While I do enjoy the outdoors and parks in the Cincinnati area, I question the need to spend so much money on this project. Who will be paying for this, the State, the City, or the County. If the cost is shared, what % will each government entity pay? Ultimately it is me, the taxpayer, who will be paying for this. Is it wise to spend so much money on something that probably less than 10% of the residents of Hamilton County will ever use? Could the money be better spent on affordable housing or other efforts to help the homeless in the area? I am in favor of the no-build alternative.	N/A	Concerns - cost
18.	A suggestion for the trail. I am a long time runner. Hope it is possible to have an outside or center lane with a crushed limestone section. This is much easier on the legs, but also eases congestion. Many trails around the country are entirely crushed limestone. My experience is they hold up pretty well. I would support this for the entire trail if it is cost effective. Overall the trails are a great addition to the community & I applaud your efforts. Thanks & please feel free to contact me if I can assist your efforts.	N/A	Suggestion

Question 19 – Comments Received via Email	*Upvotes*	*Themes*

QUESTION 20: How did you hear about this Virtual Open House (check all that apply)?

Question 20 Comments	*Upvotes*	*Themes*
1. Personal research	0	Miscellaneous
2. Cincinnati Sports Center e-mail	0	Email
3. Found it on Wesson way website	0	Wasson Way
4. Attended event at Karrikin 5 Dec 2024	0	Karrikin
5. CIWWN	0	Crown
6. Newspaper article	0	Newspaper article
7. cincinnati.com article	0	Newspaper article
8. WVXU	0	Radio
9. Enquirer	0	Newspaper article
10. Internet	0	Internet
11. newspaper story	0	Newspaper article
12. newspaper article	0	Newspaper article

QUESTION 22: Please suggest additional ways you think ODOT can improve the inclusiveness of our public outreach efforts.

Question 22 Comments	*Upvotes*	*Themes*
1. More engagement about ways that we can reduce car-dependent infrastructure (highway removal, road diets, etc)	18	Miscellaneous
2. ODOT is primarily interested in building more highway lanes, especially through low-income neighborhoods. They have endless sessions of 'community engagement' when it comes to bike infrastructure and never get anything done. But they can spend 1000X the money on a new highway interchanges with no feedback. They are only interested in the speed of traffic not the safety and health of communities.	10	Miscellaneous
3. Have there been qr codes to this open house in laminated paper posted around the Wasson Way trail? I think that if that was the case it would get people that use the trail to make more comments on the proposed plans. Maybe that has already been done but I would assume that is a great way to have some outreach to those using the trail.	10	QR codes
4. The more places I can go on a bicycle or e-bike, the less traffic I'm creating, which seems like a really smart investment on ODOT's part, since bike infrastructure is pennies on the dollar typically spent on vehicle infrastructure.	4	Miscellaneous
5. The connected trails would be a huge improvement, to many are not connected so can be tough for the average person.	3	General support
6. Ask local bike shops and run stores to post information about it. Also associate social media like Strava, RidewithGPS and Komoot.	3	Partners
7. Public outreach via reddit.com/r/cincinnati is an excellent way to get immediate quality feedback from a motivated and opinionated user base. Please continue to update via this outlet.	3	Social media, Updates
8. Make the virtual open house available through the public libraries in the area and have the libraries encourage patrons to comment	2	Needs Response
9. This development is taking forever.	2	Miscellaneous
10. Posts at local bike shops	2	Partners
11. Advertise your public outreach programs on one website and share a link to that website on every ODOT website.	1	Needs Response, Online outreach
12. I'm concerned that this type of form is only filled out by people interested in the topic of the form. This creates a fairly significant bias, which I hope ODOT is aware of.		
If I could be added to an email newsletter, or a similar centralized location, to notify me whenever there's a new public	1	Needs Response, Online outreach

Question 22 Comments	*Upvotes*	*Themes*
outreach event like this I would be more inclined to fill out every one. Ideally this newsletter would be show all government public outreach events relevant to me, not just ones from ODOT.		
13. Include and share with the other trail groups in your area such as the friends of the little Miami.	1	Partners
14. Keep sending out links, and asking onions, but provide easy links to share the questionnaires to reach more people	1	Online outreach
15. Billboard on Redbank road.	1	Billboard
16. Social media campaigns	1	Social media
17. Please build this. Thank you for the studies.	1	General support, Kudos
18. Connecting lower income neighbourhoods like walnut hills to trail systems	0	Suggestion
19. Let's extend the crown to the University of Cincinnati, which is the second largest employer in the city, the the largest if the student population is included in that figure.	0	Needs Response
20. The Cincinnati Enquirer printed an article today, the same day as the close of public input- 13-25. WVXU ran a story yesterday-the day before input closes. More timely notices would be great.	0	Needs Response
21. This survey and general digital overview of this proposed pathway(s) are EXCELLENT!	0	Kudos
22. Reach out to local adaptability groups such as The Bridge Adaptive Sports!	0	Partners
23. Thank you	0	Kudos
24. Safe connections between existing bike infrastructure and shopping centers would do more to encourage biking and reduce traffic. While recreation connections are nice, more trips are taken between home and businesses, so biking to/from grocery, retail, and office centers would be a better focus.	0	Miscellaneous
25. The Murray path zigzag access seemed a waste. Get to little Miami trail from wasson as direct as possible.	0	Miscellaneous
26. Connect with local businesses/organizations to consider posting the link to this survey on their social media sites for exposure and input from their customers. Hyde Park/Oakely/Mt Lookout/Mariemont/Newtown Community Councils, Ault Park, Armleder Park, Little Miami Golf Course, 50 West Brewery, etc is a good start.	0	Partners
27. Keep flammable structures from under the 471 bridge as was mandated years ago	0	Miscellaneous
28. n/A	0	N/A
29. It is important to add even more value by developing the path as a linear greenspace, which will significantly increase the impact that sustainability can have throughout the community.	0	Miscellaneous
30. Engaging with local businesses near the trail. Many business owners still have this fear that adding cycling/shared use infrastructure will hurt their business when the exact opposite is true.	0	Partners

Question 22 Comments	*Upvotes*	*Themes*
31. Would love to see actual work on the OASIS rail alignment. Columbia Parkway during rush hour mornings and evenings is a place no one wants to be in but everyone is forced to use the same corridor. A well designed rail line with decent frequency and speed should be able to carry several times the capacity of Columbia Parkway (even better than an Interstate) while being safer for many neighborhoods east of downtown. The bus options currently are not viable at all unless you need to go to work around 7-8am in downtown and get back around 5-6pm. The bus routes (e.g. 25 in my case) need to run the whole day with a minimum 15 min frequency (smaller vehicles outside of rush hours would be okay) to be viable as a preferred mode of transport. I live right by a bus stop and yet do not find the bus feasible despite wanting to use it to go to work everyday. My choices are a 45min bus ride with one transfer or a 10min drive. This difference needs to be reduced.	0	Need Response
32. Don't know	0	N/A
33. Include brochures in auto tag renewal envelopes	0	Bill stuffers
34. Go to local community centers, athletic facilities.	0	Partners
35. ODOT can show how the public input has shaped the outcomes.	0	More PR
36. News coverage on our leadership in bike path development. Celebrate the livability of our area for families.	0	More PR
37. good job!	0	Kudos
38. I like the Wasson to Armleder connection. Riding your bike on Red Bank and Wooster road is very dangerous. Overall, I would like to see more bike infrastructure built. Many of the new trails built are used regularly for mental and physical wellness, transportation, and are an asset to the city. there are other Midwest cities i.e. Minneapolis that have embraced this culture and their cities have really benefitted, particularly with young professionals who demand this type of amenities.	0	General support
39. I do not like the use of existing roads and prefer a dedicated or walled off lane. An example of bad design is the Ohio River Trail between Riverbend and New Richmond where you need to dodge cars traveling over 55 mph. Hardly anyone travels the bike lanes due to road surface hazards on the berm bike lane and the threat of car/truck vehicles.	0	Miscellaneous
40. Expanded Outreach to local parks and rec departments focused on walk/bike / skate / runner options.	0	Partners
41. More / continued liaison with local parks & recreation depts with focus on walk/ hike / biking/ skating/ running on local trails.	0	Partners
42. Posting on Wasson Way and Murray Trial about this open house and QR code would be helpful.	0	Partners, QR codes
43. Build it, they will come.	0	General support

QUESTION 26: What is the highest level of income completed by members of your household?

	Question 26 Comments	*Upvotes*	*Themes*
1.	Post-college	0	Post Grad
2.	MA+	0	Post Grad
3.	Graduate School	0	Post Grad
4.	Masters Degree	0	Post Grad
5.	Professional degree	0	Post Grad
6.	Ph.D	0	Post Grad
7.	M.A./J.D.	0	Post Grad
8.	doctorate	0	Post Grad
9.	jd	0	Post Grad
10.	Graduate School	0	Post Grad
11.	MD	0	Post Grad
12.	Professional school	0	Post Grad
13.	Post Graduate	0	Post Grad
14.	Masters Degree	0	Post Grad
15.	Master's	0	Post Grad
16.	graduate school	0	Post Grad

Appendix D

Responses to Comments Received

Department of Transportation

RESPONSES TO COMMENTS RECEIVED

The majority of comments received provided a direct answer to the questions asked and did not require a response. However, some comments included a suggestion or question or otherwise warranted a response from ODOT. Those comments are compiled in the tables below and responses from ODOT are provided.

The comments below are presented exactly as they were received. No edits were made to content, abbreviations, spelling, grammar, capitalization, or punctuation.

Question 1: Where do you live?

Q1: Comments Needing Response	*ODOT Response*
1. Live in Anderson. Cycle from Little Miami Golf Course regularly. It's common for to head towards Lunken and Armleder. It seems like there are wild sidewalks along Red Bank and you're almost there, just some right of way somewhere. I mean yes, that bridge is cool. How much life is left in it? Will it become a white elephant? Love our bike paths!	Having the trail along Wooster Road was considered. However, the nature of the businesses on this corridor results in a considerable amount of gravel, mulch, and other debris on Wooster and adjacent sidewalks that are unlikely to change and are not considered compatible with a safe bike path. We expect the railroad trestle would have 50-75 years remaining after modifications are made to accommodate the bike path.

Question 12: Please use this space to share any comments you may have regarding the SEGMENT 1 alternatives.

Q12: Comments Needing Response	*ODOT Response*
1. 1A looks good, but I'm concerned that it's projected to cost 2.5 times more than 1C. I'd like to see updated cost projections based on anticipated increases in construction costs (labor and material).	Costs, for each alternative, are only one aspect that is considered when developing a preferred alternative. The cost estimates provided in the alternative evaluation matrices shared in both the virtual and in-person open houses are the most current estimates. Updated cost projections will be developed during the detailed design phase, which is the next phase of project development.
2. I have some concerns about the height of the railroad bridge and possible danger of falling. Also it's unclear to me how the route will return to ground level.	Appropriate railings will be provided to protect bicycle riders from falling on the bridge. Railings would likely be similar to the railings on the existing Wasson Way trail over the railroad trestle in Ault Park. Segment 1A would follow the existing railroad bed eastward across the trestle, over Columbia

	Parkway, and over Wooster Road. The trail then loops back down to Wooster Road along existing driveway (see Segment 2).
3. How much would the following reduce the actual project cost? "While the overall cost of Alternative 1A is higher due to some required maintenance of the existing railroad bridges, these costs would eventually need to be addressed by the City anyway and should not be considered as an additional cost."	The piers and abutments on the abandoned railroad bridges will require repairs and upkeep to be maintained even if not used for the bike path. Detailed costs will be developed as the project advances.
4. How could we incorporate a canal type structure with Alternative 1A similar to what is in downtown Indianapolis? This would further beautify the area, encouraging more use.	Adding a canal similar to Indianapolis' Central Canal Towpath would nearly be impossible due to the topography of the land crossed by Alternative 1A. Even if the topography were more conducive to a towpath, its construction would require the acquisition of significantly more right-of-way, and the engineering needed would make the effort cost prohibitive.
5. I much prefer 1a to the alternatives, but don't see what happens at the end? How does it connect to roads, bike paths, etc at the end?	Alternative 1A would follow the old railroad path and cross over local roads using the existing but abandoned railroad bridges. 1A ends nears Wooster Pike, roughly 345 feet north of where Wooster Pike intersects with Red Bank Road. From there, it would connect with Segment 2, which would cross over the railroad tracks using the existing Wooster Road bridge near the intersection of Wooster Pike, Wooster Road, and Red Bank Road.
6. 1A is the way to go. As with the bridge in Ault Park that was converted to Wasson walk/bike path, utilizing the other bridges keeps them from continuing to be wasted space. Also the trails connected would continue to use the old train line (after converting it near South 80/behind Kroger, etc) as their pathway, much like the Little Miami Scenic Trail has successfully done (again using currently wasted space). Then the only missing link to connect the Little Miami Scenic Trail behind Carriage House Car Wash at 7489 Wooster Pike to the rest of the former train line/walk and bike path of the future would be to build a bridge over the creek there...at which point the trail/path would be completely connected.	ODOT, Great Parks, Columbia Township and the Village of Mariemont have already developed a plan for extending the Columbia Connector, which currently ends approximately 300 feet west of Fifty West Brewing Company, to the Murray Trail Connector near Pocahontas Avenue in Mariemont. More information about this extension (known as Columbia Connector Phase 3) can be reviewed at www.PublicInput.com/ColumbiaConnector.

7. 1A is the way to go, and after the old railroad is converted to trail--above South 80, behind Kroger, etc.--then the only missing connection would be the building of a bridge over the creek behind Carriage House Car Wash at 7489 Wooster Pike where there is now a gap in the trail.	ODOT, Great Parks, Columbia Township and the Village of Mariemont have already developed a plan for extending the Columbia Connector, which currently ends approximately 300 feet west of Fifty West Brewing Company, to connect with the Murray Trail near Pocahontas Avenue in Mariemont. More information about this extension (known as Columbia Connector Phase 3) can be reviewed at www.PublicInput.com/ColumbiaConnector.
8. The choices you show are not comparable because one connects the Murray Path to the section 1 endpoint while the other connects Wasson Way to the section 1 endpoint. The two routes serve different functions. For a person at the end of the Murray path, alternative 1 does not serve them at all. Since your project's purpose is connecting Wasson Way to Otto Armleder, you really only give one choice. But I think a safe route from Murray to Armleder is equally vital to improving safely and access along the eastern corridor. Why am I having to choose between them now?	There is an existing connection from the point on the Wasson Way Trail to the end of Murray Trail coming down the hill from Ault Park and then running along Old Red Bank Road. That connection will remain in either scenario, making the alternative comparable. The trail user will just need to travel on this existing connection between the two start points. As a part of ODOT's Project Development Process, canvassing for public input, and the selection of a preferred alternative, occurs prior to detail design.
9. I love this idea, and think expanding the trails is a great thing. The only thing to be concerned about is when Armleder floods during periods of heavy rain during the fall/spring. This would mean that the Lunken Trail and Little Miami Trail would be inaccessible at these times.	Periodic flooding of the shared-use path is a possibility following heavy wet weather or Ohio River flood events. The trail cannot be raised without worsening the flood events.
10. I am surprised an alternative was not investigated to extend Wasson Trail south from the intersection with Old Wooster and then run parallel to the existing rail bed to Segment 2. Old Wooster in the pinch point picture shown only serves one residence and is closed further south. Will either of the rail beds to the east or south be abandoned in the near future? Also, the connection to the Murry trail and Wasson trail along Old Wooster should be better marked and widened in the northern residential section. The 1C crossing of Colebank will be a safety problem with the high traffic volume turning from Red Bank Expressway and will increase driver frustration with that intersection..	The rail lines in this area do still carry active freight service and we are not aware of plans to abandon them. There is a pinch point at the end of Old Red Bank Road when it reaches the Columbia Parkway overpass. There is no room to place the trail along the railroad in that area. Your comment about marking on the trail connection between Wasson Way and the Murray Trail has been noted, along with your comment about potential safety issues at Colbank where Alternative 1C crosses at the intersection. Thank you.

11. Curious on how the incremental cost will be funded. There is a comment that the city needs to pay bridge maintenance already. Would like this to be further detailed. The crossing at Colbank has a ton of traffic - increased concern on pedestrian safety. Also, I thought the train bridge at one point was the tallest trestle bridge? If yes, and this option is chosen, would be great to have historic market with these details.	Funding will be determined as the project proceeds. Measures will be taken to ensure pedestrian safety, however, your concerns at this intersection will be noted. Consideration will be given to including a historical marker about the original bridge.
12. How will it connect from that end-point? And to the Little Miami Bike Trail?	Alternative 1A ends nears Wooster Pike, roughly 345 feet north of where Wooster Pike intersects with Red Bank Road. From there, it would connect with Segment 2, which would cross over the railroad tracks using the existing Wooster Road bridge near the intersection of Wooster Pike, Wooster Road, and Red Bank Road before traveling approximately 600 feet southwest of the intersection to connect with Segment 3. Segment 3 would bring the path into Armleder Park. The Little Miami Scenic Trail (LMST) can be accessed from Armleder Park by following the Otto Armleder Memorial Park Trail west.

Q12: Suggestions

13. Alternative 1a is clearly the best option but a direct route for Murray Trail users should still be considered in the future	There is an existing connection from the point on the Wasson Way trail to the end of Murray Trail coming down the hill from Ault Park and then running along Old Red Bank Road. That connection will remain.
14. Copy and include volunteers and trail sentinels from the nearby Little Miami Bike trail as it would become part of their route anyway.	Thank you for this suggestion.
15. Need to address the increase in e-bike traffic. Many of these people come barreling through at dangerous speeds for pedestrians. This is a major safety concern as you move forward due to the sheer weight and momentum that these bikes/riders carry. These are vehicles!	Currently, only Class 1 and Class 2 e-bikes, which have top speeds of 20 mph, are allowed on shared-use paths in Cincinnati.
16. I love the eastern section of WW (Marburg east) especially because there are no roads next to it, and it has natural flora. Please remove the ugly and unnecessary cyclone fencing on other sections. Even though the paths down the hill to the trail from Ashworth Dr and connecting streets are unofficial, please install hand rails!!! The only things limiting my use	The City will review locations of fence in the existing Wasson Way sections to evaluate if there are any City owned temporary or erosion fencing needing removal. The 'unofficial' pathways have been created by trail users, frequently on private property such as along Ashworth, therefore the City can't build on them.

can't be helped -- too hot, too cold, or Il out of town.	
17. The view from the bridge will be lovely and will add safety by not using existing roadways. I would like to see elements of historic trains used in the design to convert the bridge for pedestrian and cyclist use.	Thank you for this suggestion. It will be considered in more depth in the detailed design phase of project development.
18. 1) Please provide signage in Madisonville, Fairfax, and Mariemont about train locations 2) Improve signage for Wasson Way Ault Park Trailhead	Thank you for these suggestions. They will be considered in more depth in the detailed design phase of project development.
19. Option1A is far preferred, but that should not preclude the future development of option 1C in addition. They could both be very useful path connections to different neighborhoods.	Thank you for your comment.
20. I like alternative 1A due to the direct route it permits to connecting other trails. It is a quicker and more efficient route. As a cyclist I have mild concerns about the narrow width of 1A as it crosses the trestle/bridge, but only during busy times of heavy usage where it could get congested. If there is a way to keep the rails/fence narrow with no internal railings or other encumbrances back into the trail as it crosses the bridge, it would be appreciated.	Thank you for this suggestion. It will be considered in more depth in the detailed design phase of project development.

Question 15: Please use this space to share any comments you may have regarding the SEGMENT 2 alternatives.

Q15: Comments Needing Response	*ODOT Response*
2. A roundabout would make the intersection safer for everyone. My only question would be for more info regarding the buffer between the trail and the road. Admittedly I'm not sure whether the "5ft vegetated buffer" means a strip of grass, street trees, concrete planters, or something else separating road and trail. I prefer the most rigid buffer possible to protect trail users.	Current plans call for a five-foot wide (minimum) buffer which would be vegetated with grass, plants, and/or street trees. It will be important that any vegetation does not impact sight distance for road or trail users.

3. What is the slope of the proposed loopy segments at the beginning and end of this segment? If a roundabout is used, a single-lane roundabout is preferred not just because it avoids additional bridge modifications, but also because it significantly reduces confused drivers and resulting errors!	The maximum slope on the northern segment equals 7.36% and the maximum slope on the southern segment equals 6.09%. Both segments total less than 100 feet each. The roundabout is proposed to be a single lane.
4. I am generally VERY pro-roundabout, but I do wonder whether the heavy semi-truck traffic in the area would be able to effectively negotiate it	The roundabout will be designed to appropriately accommodate heavy vehicles and trucks.
5. A route following the western bank of the Little Miami could be constructed in a conservation easement across the back of Hafner and Sons property and tie in directly to Armleder paths, with no further road crossings, and no need for the proposed roundabout. Was it considered?	That alternative was reviewed early in the process but dismissed as the conservation easement strip along the river was believed to be too narrow and too steep to support the trail. Adjusting the terrain in this area would have negative impacts on the riparian corridor along the Little Miami River and would also have floodway/floodplain impacts.
6. I'd like to see more information regarding how the roundabout would impact traffic in the area	An operational analysis of the roundabout was performed for the opening and design year traffic volumes and indicated that the roundabout will operate within acceptable level-of-service standards.
7. The intersection of Red Bank and Wooster has limited sight-lines currently and would be vastly improved by a roundabout. I'm not clear on how the trail shares the roundabout, though.	The shared-use path would travel alongside the southeast quarter of the roundabout but would be completely separated from the road by a five-foot wide (minimum) buffer that would be vegetated with grass, plants, and/or street trees. Bicyclists, pedestrians and other path users will not be in the roundabout nor mixed in with cars and trucks using the roundabout.
8. While gaining favor among many, roundabouts are very challenging for drivers not familiar with the intersection. That and the reduction in vehicle lanes suggested by option 2C would back up vehicle traffic in an area that already gets congested.	Roundabouts are not only a safer type of intersection; they are also efficient in terms of keeping people moving. Even while calming traffic, they can reduce delay and queuing when compared to other intersection alternatives. Furthermore, the lower vehicular speeds and reduced conflict environment can create a more suitable environment for walking and bicycling. The shared-use path would travel alongside the southeast quarter of the roundabout but would be completely separated from the road by a five-foot wide (minimum) buffer that would be vegetated with grass, plants, and/or trees. Bicyclists, pedestrians and other path users will not be in the roundabout nor mixed in with cars and trucks using the roundabout.

9. I like the roundabout idea, but will it really be safer? It's been a while since I crossed the bridge on a bike. Will there be enough room without widening the bridge?	The trail would be separated from the roadway by a five-foot minimum planted buffer. On the bridge, the trail would be separated by a concrete barrier wall to protect trail users. Roundabouts are not only a safer type of intersection; they are also efficient in terms of keeping people moving. Even while calming traffic, they can reduce delay and queuing when compared to other intersection alternatives. Furthermore, the lower vehicular speeds and reduced conflict environment can create a more suitable environment for walking and bicycling.

Q15: Suggestions

10. An alternate 2D should be considered to run from the Wasson/Old Redbank terminus , south on abandoned Old Redbank and running parallel with the rail bed with a crossing across the track to the tie point with Segment 3. This is overall shorter and avoids the problem with the Wooster road rail bridge. The rail crossing would be over a little used track with very slow rail service with less trains than the Murry trail termination at Old Redbank.	The rail lines in this area do still carry active freight service and we are not aware of plans to abandon them. There is a pinch point at the end of Old Red Bank Road when it reaches the Columbia Parkway overpass. There is no room to place the trail along the railroad in that area.
11. Build something with adequate signage.	Thank you for this suggestion. It will be considered in more depth in the detailed design phase of project development.

Question 18: Please use this space to share any comments you may have regarding the SEGMENT 3 alternatives.

Q18: Comments Needing Response	***ODOT Response***
1. i don't understand why a signal can't be added for the other options. pedestrian/bicycle safety should be our primary concern!	Traffic signals, whether for vehicular access or pedestrian crossings, need to meet certain thresholds (warrants) for the amount of traffic that they serve. The usage of the trail connection is expected to be good based on interest expressed in the trail, however the amount may not be sufficient to meet the threshold numbers at a pedestrian only crossing. The existing signal at Wooster and Armleder already meets the threshold and makes for an easy place to modify and to add the pedestrian crossing.

2. The more we can do to protect cyclists and pedestrians along the path the better. I don't believe that crossing at a light is necessarily safer since we will be crossing 4 other intersections that could cause more danger. Would it be possible to add a flashing crossing signal light for the non signaled crossing of Wooster?	The recommended alternative has only one at-grade crossing, which would be at the signal. Crossings on the other alternatives would be investigated to provide flashing lights or a signal if possible.
3. Question: the premise of this discussion involves an abandoned railway, but this is still in use. Is it being retired, or is the path to exist in parallel to the railway?	The portions of the railroad where the trail is proposed are currently abandoned or in some cases only adjacent to the active rail lines. The design should allow for rail service to be maintained while also providing for the trail users.
4. Were tunnels under Wooster considered as a means to minimize conflicts between cars and bike/peds?	A tunnel under Wooster was not considered because the entire area is within the 100-year floodplain which would result in potential flooding of a tunnel crossing and likely have drainage issues, potentially requiring pumps to keep them dry.
5. Supporters of Alternative 3E cite their concern for an unsignaled crossing and the speed of cars traveling along Wooster Road. Why can't the other pathway alternatives have signaled crossings in addition to the Crossing at Armleder Road? An additional signaled crossing would slow traffic speed down due to the short distance between signals.	Traffic signals, whether for vehicular access or pedestrian crossings, need to meet certain thresholds (warrants) for the amount of traffic that they serve. The usage of the trail connection is expected to be good based on interest expressed in the trail, however the amount may still not be sufficient to meet the threshold numbers at a pedestrian only crossing. The existing signal at Wooster and Armleder already meets the threshold and makes for an easy place to modify to add the pedestrian crossing.
6. Once again, car and truck traffic is being prioritized over pedestrians and cyclists. It seems crazy to me that all of these options were designed to tiptoe quietly around the all important cars and trucks. Only an existing signal can be used! No, we can't have an option for an activated light crosswalk for the other options. Yes, we'll have to wait for a long traffic light that prioritizes the drivers of cars and trucks speeding down Wooster Pike looking down at their cell phones.	Traffic signals, whether for vehicular access or pedestrian crossings, need to meet certain thresholds (warrants) for the amount of traffic that they serve. The usage of the trail connection is expected to be good based on interest expressed in the trail, however the amount may still not be sufficient to meet the threshold numbers at a pedestrian only crossing. The existing signal at Wooster and Armleder already meets the threshold and makes for an easy place to modify and to add the pedestrian crossing.
All of that said, 3E is the best option because it stays away from the road the longest and could connect to Linwood Park and Eastern Ave. I'm a little confused as to why this option doesn't just continue into Linwood Park and then turn to head to the signal crossing of Wooster Rd??	The decision to not fully enter Linwood Park was based on not disturbing the existing recreational uses of Linwood Park with the trail and in not adding more cost to Alternative 3E, however, as development moves forward, there would be opportunity to integrate the trail with Linwood Park if so desired.

Q18: Suggestions

7. Please consider traffic calming measures on Wooster regarding of choice selected	Thank you for this suggestion. It will be considered in more depth in the detailed design phase of project development.
8. The entrance to Armleder (3E) gets very busy during spring and fall soccer. Adding bike and pedestrian traffic to the mix will require a dedicated signal for path users and/or extra long lights for people exiting Armleder or trying to enter Armleder from the east.	Thank you for this suggestion. It will be considered in more depth in the detailed design phase of project development.
9. 3E is fine but another alternative to save money now and accomplish 3E in the future would be to resurface Wooster Rd and put a bike share lane on the road. Wooster Rd is one of the worst roads in Cincinnati.	Having the trail on Wooster Road was considered, and it is acknowledged that Wooster is coming due for resurfacings. However, due to the industrial nature of the corridor, the heavy truck traffic was determined to be concerning for an on-street bike option. Additionally, the nature of the businesses on this corridor result in a considerable amount of gravel, mulch, and other debris on Wooster that are unlikely to change and are not considered compatible with a safe bike path.
10. I ride my bike a lot and make it to Armleder twice a week in the spring/summer/fall. To get elevation, I ride up Armleder road (hill), around the US Bank parking lot, and back down Armleder road. My one concern with 3E is that you can have lots of car traffic on that single park entry/exit point. During soccer practice season this can be problematic when combined with nice-day dog park traffic (which can be an issue unto itself). I assume you will expand on the existing path along Armleder Road. At the bottom of the hill in front of the pavillion parking lot, make sure you have extra visibility and safety measures for people (like me) bombing down Armleder road (hill). I was really hoping the orange 3A route would be selected as it enters the park at a minimal traffic point where I usually encounter sketchy activity (more people present would reduce this).	The trail would be separated from the roadway by a five-foot minimum planted buffer along Armleder Road, just as it would be on other locations along roadways. This ties into the current separated path that runs along the south side of Armleder Road just after you pass Hyde Park Landscape & Tree.

11. I think 3E and 3B both have benefits. My choice would be 3B due to fewer car/pedestrian interaction points. Despite the mid block crossing, there are methods to slow that traffic down. The crossing at 3E though much safer will slow the pedestrian traffic down so I would like to see some sort of signal priority there. But option 3E is a great option too, just not the one I would choose initially	Thank you for your comment.
12. The signal is also the major way vehicles access Armleder, so it is a known entryway. But there are lots of vans filled with soccer kids entering Armleder there. It would be good to separate bike and pedestrian traffic once entering the park, which may require extension of the Otto Armleder Memorial Park Trail.	An extension of the existing path out to Wooster is exactly what is planned. The trail would be separated from the roadway by a five-foot minimum planted buffer along Armleder Road just as it would be on other locations along roadways. This ties into the current separated path that runs along the south side of Armleder Road just after you pass Hyde Park Landscape & Tree.
13. While a conflict point with traffic is never ideal, alternative 3E looks like the safest option. I hope trail users get right-of-way at the intersection so that they are free to cross within a few seconds with minimal disruption. An instant yellow-red light cycle for cars facilitated by a “push to cross” button would be ideal	The traffic signal operation will be analyzed and modified to provide some level of priority for pedestrian crossing, likely a leading interval for pedestrian crossing that has been used successfully in many locations to provide safe crossing opportunities for pedestrians.
14. Of those alternatives that were left, I actually liked 3B better with one modification. Not sure about feasibility but would it be possible to tunnel beneath Wooster Pike to connect the path without direct crossing at the road? If not, is another alternative a pedestrian initiated light being installed with option 3B which would allow a walker/cyclist to initiate a red light to temporarily halt traffic? I just like a more direct route to the path.	A tunnel under Wooster was not considered because the entire area is within the 100-year floodplain which would result in potential flooding of a tunnel crossing and likely would have drainage issues, potentially requiring pumps to keep them dry. Traffic signals, whether for vehicular access or pedestrian crossings, need to meet certain thresholds (warrants) for the amount of traffic that they serve. The usage of the trail connection is expected to be good based on interest expressed in the trail, however the amount may still not be sufficient to meet the threshold numbers at a pedestrian only crossing. The existing signal at Wooster and Armleder already meets the threshold and makes for an easy place to modify to add the pedestrian crossing.
15. Build with appropriate signage.	Thank you for this suggestion. It will be considered in more depth in the detailed design phase of project development.

Question 19: Is there anything we should keep in mind as planning for the Wasson–Armleder Shared Use Path advances in development?

Q19: Comments Needing Response	*ODOT Response*
1. Can we eliminate Segment 2 completely by adding a Segment 1D that proceeds along old Red Bank road, crossing under Route 50, and then crossing Duck Creek on a new bridge that connects with Segment 3. This be a more direct path that eliminates several interactions with vehicles and maybe cost less.	The rail lines in this area do still carry active freight service and we are not aware of plans to abandon them. There is a pinch point at the end of Old Red Bank Road when it reaches the Columbia Parkway overpass. There is no room to place the trail along the railroad in that area.
2. Is an easier (potentially less expensive) way to do this to stay on the west side of us 50 until the eastern Ave exit, then cross the active rail at the Linwood school/linwood bridge?	This option was evaluated early in the planning process and was eliminated because it would involve placing the trail alongside Columbia Parkway. The stakeholders were not comfortable with that solution, even with the trail separated from vehicles by using a concrete barrier. That crossing also had issues as it crossed the ramps to Columbia Parkway/Eastern Avenue. Also, to keep this alignment ADA (Americans with Disabilities Act) compliant, it would need to include a crossing of the railroad that didn't have steps but constructing that would likely have residential property impacts along Eastern Avenue.
3. I hope that the rest of Wooster Pike heading towards the airport will be addressed. We live in Mariemont, often bike downtown, so a safer route to Wilmer Ave is needed because of heavy traffic and poor road condition. There is a sidewalk, which perhaps can be incorporated into these plans and upgraded as well.	Improving access for bicyclists and pedestrians along Wilmer to Lunken is beyond the scope of this project. However, this project will provide safer access into Armleder Park and from there, you can use the Otto Armleder Memorial Park Trail to connect directly with the Lunken Airport Trail (this trail connection was completed several years ago).
4. Linwood Park if trail were extended into the park. Parking on Hutton is at a premium and would not want to encourage additional cars in the park. The park is currently an area of drug activity that requires the park to be locked in the evenings. Parked cars would require the park to remain unlocked past hours and would lead to increased drug activity	The current design for Segment 3 of the Wasson-Armleder Shared Use Path turns south just before it gets to Linwood Park and will not require access to the park.

5. Segment 1/Comments: Railroad crossing at the intersection between Old Red Bank Rd and Woodbend is not properly adapted to cyclists/pedestrians - There is no barrier or safety lights - Train sometimes stops for several minutes blocking the railroad crossing - Train approaches from both sides, schedule is unpredictable	If this alternative were developed, additional planning to improve the safety of this at-grade rail crossing would be included in the design. Thank you for bringing these concerns to the team.
6. In addition to safety, selecting alternatives that can provide direct routes is important. Options like 1C add unnecessary distance.	The circuitous route of Alternative 1C is one of the factors we considered when comparing 1A and 1C. 1A is a more direct and scenic route and is the route we've identified as the preliminary Preferred Alignment for Segment 1.
7. The flatness of the Armleder loop prioritzes the safety of adaptive cyclists and new riders. How will bridge grades account for accessibility?	All alternatives were designed to meet Americans with Disabilities Act (ADA) requirements which ensure accessibility for all users.

Q19: Suggestions

8. When thinking about adding landscaping, keep in mind line of sight. My wife and I rollerblade at least a few times a week down at Armleder or up at Wasson. The curves that go around corners such as the one under the Beechmont Levy bridge going over the Little Miami, present a rather fast moving blind spot on a curve. Difficult to navigate safely on blades with whizzing bikers coming the other way. Not sure blading between Wasson and Armleder will even be in the cards due too much elevation change to blade safely at all. Can always walk our blades down though. Thanks for considering this project for our community's future!	Thank you for this suggestion. It will be considered in more depth in the detailed design phase of project development.
9. Not posting publicly. Funding matters. This all sounds great for my rides, as I live in this area. Might this deplete funding for trails for the west side of Cincinnati? We'll need to decide what to prioritize in attempts to fund.	The City's goal is to provide safe transportation and recreational facilities for all parts of the city. Implementing those is an ongoing effort to balance the needs of all along the way to meeting that goal. The City currently is building a 2.4 mile extension of the Lick Run trails in South Fairmount connecting Price Hill and Westwood in 2028, which along with the Western Hills Viaduct, will connect to bikeways in the east side of the City.

10. Please explore a protected lane or shared use trail into fairfax/mariemont. That little stretch on wooster is still a pain sometimes and scary once you get into town. Overall, these improvements would make biking the long distance from Northside a little more doable as I could follow the upper crown/wasson most of the way instead of having to cut into neighborhoods or ride on gravel or go all the way downtown to and from (not that I mind some days).	Adding a protected lane or shared use trail into Fairfax/Mariemont is beyond the scope of this project.
11. I'd be happy if they just repaved and cleaned up Wooster Road. It would be a safer bike ride if that could happen SOON. The road is a mess. And it stinks (smells) in the section along the paperboard factory. Can't they do something to reduce the nasty odors they emit? Difficult to appreciate all the natural beauty when it smells like a sweaty armpit. Or is that part of the natural beauty?	Having the trail on Wooster Road was considered and it is acknowledged that Wooster is coming due for resurfacings. However, the industrial nature of the corridor, the heavy truck traffic, locations of sporadic on street parking, and horizontal site distance issues were determined to be concerns for an on-street bike option. Additionally, the nature of the businesses on this corridor result in a considerable amount of gravel, mulch, and other debris on Wooster that are unlikely to change and are not considered compatible with a safe bike path/lane. The odors surrounding the paperboard facility are unfortunately inherent to that operation.
12. As much off road, rail trail as possible please!	All alternatives under consideration for the Wasson-Armleder Shared Use Path are separated from local roads. In the few instances where the alternatives must travel alongside a road, the road and path would be separated by a five-foot (minimum) buffer vegetated with grass, plants and/or street trees.
13. Keep up the good work and let's make it happen. In addition to all of the planning we as a community need to understand that these paths are "shared" and they are not intended for folks who are in a hurry! Battery bikers and Tour de France trainers need to be more courteous!	Thank you for your comment.
14. Further consider the use of tunnel under Wooster to minimize conflict between vehicles and bikes/peds.	A tunnel under Wooster was not considered because the entire area is within the 100-year floodplain which would result in potential flooding of a tunnel crossing and likely would have drainage issues, potentially requiring pumps to keep them dry.

15. If there are any areas of the trail that could flood, consider adding dirt to raise the elevation of the trail, thereby reducing or eliminating flooding of the trail. Obviously additional dirt/grading adds to the construction cost, however there could be annual savings in maintenance clean up costs from spring flooding	Adding fill in the floodplain will cause an additional increase to the FEMA (Federal Emergency Management Agency) base flood elevation. Therefore, adding fill in the floodplain has been minimized so that existing property owners don't experience increased flooding caused by the shared use trail.
16. Please preserve as many trees as possible	Thank you for your suggestion. It will be considered in more depth in the detailed design phase of project development.

Question 22: Please suggest additional ways you think ODOT can improve the inclusiveness of our public outreach efforts.

Q22: Comments Needing Response	*ODOT Response*
1. Advertise your public outreach programs on one website and share a link to that website on every ODOT website.	We post information for all projects online and include URLs to those sites in all related notification materials. Also, information about ODOT's current projects can be found on ODOT's website at: https://www.transportation.ohio.gov/projects
2. Make the virtual open house available through the public libraries in the area and have the libraries encourage patrons to comment	Public libraries are good sources of information. We post information for all projects online and include URLs to those sites in all related notification materials. These sites can be accessed through the public computers provided at most libraries.
3. Let's extend the crown to the University of Cincinnati, which is the second largest employer in the city, the the largest if the student population is included in that figure.	Future plans exist to extend the CROWN through the Uptown and University of Cincinnati area. To find out more about the CROWN and the areas it will travel through, visit www.crowncincinnati.org.
4. I'm concerned that this type of form is only filled out by people interested in the topic of the form. This creates a fairly significant bias, which I hope ODOT is aware of. If I could be added to an email newsletter, or a similar centralized location, to notify me whenever there's a new public outreach event like this I would be more inclined to fill out every one. Ideally this newsletter would be show all government public outreach events relevant to me, not just ones from ODOT.	ODOT is committed to conducting broad and thorough outreach regarding our project input opportunities. To notify the public about both the In-Person Open House and Virtual Open House for the Wasson-Armleder Shared Use Path, we distributed a news release 45 days prior to the close of the Virtual Open House, sent multiple email announcements to stakeholders, placed three ads in the *Enquirer* in early December, sent letters and mailers to property owners located along the proposed alignments in November, shared information through social media throughout the public comment period, posted flyers and yard signs in the study area and along nearby shared use

	trails, and coordinated with local interest groups. You can sign up to receive email notices about local ODOT projects by going to ODOT District 8's home page (https://www.transportation.ohio.gov/about-us/districts/district-8-lebanon) and sharing your email address under the Email Sign Up section. You can also visit ODOT's website to learn more about local projects and projects throughout the state by going here: https://www.transportation.ohio.gov/projects.
5. The Cincinnati Enquirer printed an article today, the same day as the close of public input- 13-25. WVXU ran a story yesterday-the day before input closes. More timely notices would be great.	We agree, but unfortunately, we can't control when local media shares information about upcoming input opportunities. However, to help get the word out about both the In-Person Open House and Virtual Open House for the Wasson-Armleder Shared Use Path, we distributed a news release 45 days prior to the close of the Virtual Open House, sent multiple email announcements out to stakeholders, placed three ads in the *Enquirer* in early December, sent letters and mailers to property owners located along the proposed alignments in November, shared information through social media throughout the public comment period, posted flyers and yard signs in the project area and along nearby shared use trails, and coordinated with local interest groups. We confirmed local media coverage of the Virtual Open House in the *Enquirer* on December 31 and January 3, and in other local media outlets throughout December and early January.
Q22: Suggestion	
6. Connecting lower income neighbourhoods like walnut hills to trail systems	Thank you for your suggestion. It will be shared with City and Tri-State Trails leaders for consideration.

Comments received via Email (*Sender names and addresses included in the emails have been removed for privacy.)*

Email Comments	*ODOT Response*
1. I strongly oppose this expansion! The reasons are many. However, there is an aggressive few who are pushing for many trails - even when here is low usage. Even in Hyde Park, in summer, I see very little activity on Wasson Way. Furthermore, there are increasingly concerns about safety - especially when Wasson Way cuts through more isolated areas. :People who ride bicycles have many trails to ride in this area - it's time to stop spending more tax payer dollars on creating more of them- and fix our damn streets and bridges!	Thank you for your comment. It will be documented in our public comment record for the project and included in the public input summary report.
2. I think this is an excellent idea and should be undertaken as soon as possible. Everybody benefits from greater access to walking and cycling paths. This project ties in to local neighborhoods, businesses, and cultures - cycling and running in particular. This is a unique opportunity!	Thank you for your comment. It will be documented in our public comment record for the project and included in the public input summary report.
3. I strongly oppose this effort. There are already numerous bike/walking trails here. Our tax payer dollars need to shift focus to the roads and bridges in our area. I am sick and tired of your efforts to impede travel by car. Yet, the city is determine to increase our population - while moving around via car is being impeded by unused bike lanes! Safety is another concern. The Wasson Way has low foot/bike traffic - and criminal activity is clearly happening there too - especially where parts of it are more isolated. Stop spending tax dollars to benefit a few while the vast majority is moving around via our roads - and a number of these are in terrible condition. . Even if a person doesn't' town a car, they use UBER and other transportation modes. Business travel is also being impeded. Needless to say, what happened to the Big Mac bridge should not have happened - especially after the federal government warned ODOT twice about getting inflammable materials out from under bridges. The mistake is costing millions of tax payer dollars to fix and look what happened to the traffic!! Get real, ODOT!	Thank you for your comment. It will be documented in our public comment record for the project and included in the public input summary report.

4.	I just read through the virtual open house materials. As a regular user of Wasson Way, Lunken and Little Miami trails, I am delighted to see the thoroughness and transparency of this project. I'm a little disappointed there isn't a more direct way to connect the Wasson and Little Miami trails through the Clare Rd. rail yard area, but the Armleder connection is a great alternative with interesting features along the way. Thank you for leading this effort.	Thank you for your comment. It will be documented in our public comment record for the project and included in the public input summary report.
5.	Attached are 7 pages of a signed petition that I collected from people while standing on Wasson Way. As you may know, I am a member of Wasson Way Board. We appreciate your efforts regarding this project.	Thank you for coordinating the petition. Your results will be documented in our public comment record for the project and included in the public input summary report.
6.	Please finish the CROWN loop in Cincinnati before building another trail on the east side. There are very few trails on the west side of Cincinnati, and the CROWN and Mill Creek trails need to be extended. Thanks for your consideration.	Thank you for your comment. It will be documented in our public comment record for the project and included in the public input summary report.
7.	Please find a letter of support attached for the Wasson Way connection to Armleder Park. Thanks for your efforts and those of your team so far in developing the plans for this project. Please let me know what the next steps are in prioritizing the project and what kind of support or activity you need from me or The Wasson Way organization.	Thank you for your comment. It will be documented in our public comment record for the project and included in the public input summary report.
8.	The plan was to build it and they will bike. Cincinnati's 15-year Bicycle Transportation Plan was adopted in 2010. It called for legislation and investments in new trails, pathways and protected lanes. Did the plan work? Did Cincinnati increase the bicycle traffic beyond red bikes, increase the number of bicycle commuters, reduce congestion or the number of motorists on any road or reduce the number of accidents? Show us metrics. Prove the first ideas worked before spending another $18 million dollars. Thank you.	Thank you for your comment. The ideas and recommendations from 2010 bike plan are still an ongoing effort citywide. The connections made with this project are a part of that plan. To date we have implemented about 50% of its Ph 1 goal of 100 miles of bikeway, and about 20% of the total recommended 445 miles of bikeways. This project would be a part of the necessary network continuity and connectivity that has been proven to provide more comfortable and safe bicycling and pedestrian experiences for users.
9.	I want to register strong approval for this project. As a frequent bicycle rider, asphalt paths are the best way for me to get in a lot of miles without riding on city streets.	Thank you for your comment. It will be documented in our public comment record for the project and included in the public input summary report.

10. I vigorously support the three-phase plan proposed for this path extension.	Thank you for your comment. It will be documented in our public comment record for the project and included in the public input summary report.
11. My wife and I are writing to confirm our strong support for the planned Ault to Armleder bike path extension. Our home backs up to the beautiful Ault Park cherry trees, and we have been enthusiastic users of the Little Miami bike trail system for several decades. We donated multiple times to construction of the Wasson Way Trail, and use that frequently as a 3-mile walking loop from our house to the Marburg bridge and back up to our home. We have also biked and walked the Murray Path into Mariemont and back many times. With a concerning increase these past few years of bikers being hit by cars, we are also very excited about an expansion of this Eastside trail system to provide an uninterrupted path for bikers (and walkers!) away from the noise and dangers of automobile traffic. We are also glad that projects like this offer the community another important fee-free recreation option, and another attractive way to get more exercise. We appreciate the opportunity to comment on this new project, and believe the many benefits of this infrastructure project far out-weigh the costs.	Thank you for your comment. It will be documented in our public comment record for the project and included in the public input summary report.
12. I don't know much about walking or biking paths, but $7,000,000 to contruct 2350 feet of it seems extreme. It seems like it would take A LOT of biking/walking to justify spending that much money.	Thank you for your comment. It will be documented in our public comment record for the project and included in the public input summary report.
13. Hi! I am writing to you to let you know how important I feel it is for the next proposed 3 segments of wasson way from Ault park to the armeader park system is to me and my family. We all love to bike and walk ad use the wasson way daily. Right now to access those parks we have to bike on many roads, some with bike lanes and some without. Having the brew trail segments completed would make the area safer for both bikers walkers and drivers. The wasson way and the new Crown is such a gem for Cincinnati and has help our community and our property values. I live on Michigan Ave in Hyde park and the trail is such a benefit over the old overgrown rail line. I am hopeful you can help to continue to prioritize the trail extensions and completing the Crown! Thank you	Thank you for your comment. It will be documented in our public comment record for the project and included in the public input summary report.

14. In regard to the above project. In my opinion this is a 'nice to have' project. Considering the current state of our streets this money would be better used to repair or resurface streets used by the general public, not a few. There are several trails recently installed that should be enough until more pressing needs are met.	Thank you for your comment. It will be documented in our public comment record for the project and included in the public input summary report.
15. I would like to support the 3-phase plan to connect Ault and Armleder Parks. I live very close to Ault park and think this allows a great way to connect Wasson Way to the Hiking /Biking trails of Ohio. The plan promotes health and community. Thank you for your consideration.	Thank you for your comment. It will be documented in our public comment record for the project and included in the public input summary report.
16. I read an article in the January 3rd Cincinnati Enquirer about the proposed path connecting Ault Park and Otto Armleder Park and was shocked at the cost of $18.5 million for a 2.5 mile path. That is about $7.4 million per mile. I researched the cost to build a 2 lane highway in an urban area and the cost was estimated at $3-5 million per mile. How can this project cost more than building a road? While I do enjoy the outdoors and parks in the Cincinnati area, I question the need to spend so much money on this project. Who will be paying for this, the State, the City, or the County. If the cost is shared, what % will each government entity pay? Ultimately it is me, the taxpayer, who will be paying for this. Is it wise to spend so much money on something that probably less than 10% of the residents of Hamilton County will ever use? Could the money be better spent on affordable housing or other efforts to help the homeless in the area? I am in favor of the no-build alternative.	Thank you for your comment. It will be documented in our public comment record for the project and included in the public input summary report.
17. A suggestion for the trail. I am a long time runner. Hope it is possible to have an outside or center lane with a crushed limestone section. This is much easier on the legs, but also eases congestion. Many trails around the country are entirely crushed limestone. My experience is they hold up pretty well. I would support this for the entire trail if it is cost effective. Overall the trails are a great addition to the community & I applaud your efforts. Thanks & please feel free to contact me if I can assist your efforts.	Thank you for your comment. It will be documented in our public comment record for the project and included in the public input summary report.

Attachment J

Preliminary Cost Estimates

Wasson - Armleder Alternate 1-A Cost Estimate

ITEM	UNIT	UNIT PRICE	QTY	COST
ROADWAY				
Clearning & Grubbing	ACRE	$ 20,000	1.40	$ 28,000.00
Excavation	CY	$ 25.00	2,100	$ 52,490.25
Embankment	CY	$ 25.00	473	$ 11,828.00
Seeding & Mulching	SY	$ 5.00	2,872	$ 14,359.50
Guardrail, Type MGS	FT	$ 35.00	-	$ -
Fence, Misc.: Wood	FT	$ 75.00	681	$ 51,092.25
5'- 7' Sidewalk	SF	$ 8.00	-	$ -
10' or 12' Shared Use Path	SY	$ 70.00	3,130	$ 219,126.13
Concrete Barrier, Type D	FT	$ 150.00		
Curb	FT	$ 25.00	-	$ -
Curb Ramp	SF	$ 20.00	-	$ -
4" Concrete Traffic Island	SY	$ 120.00	-	$ -
Subgrade Stabilization	SY	$ 45.00	-	$ -
			-	
DRAINAGE & EROSION CONTROL			-	
Underdrains	FT	$ 15.00	-	$ -
Culvert Type A, <5'	FT	$ 200	-	$ -
Culvert Type D, 12"	FT	$ 100	-	$ -
Closed Storm System	FT	$ 375	-	$ -
Erosion Control	FT	$ 20	2,350	$ 47,000.00
Post Construction Stormwater BMPs	LUMP	3%		$ 128,313.07
			-	
PAVEMENT			-	
Pavement, Mainline	SY	$ 120	-	$ -
Pavement, Salvage	SY	$ 60	-	$ -
			-	
UTILITIES			-	
Electric Transmission Line Relocation	FT	$ 500	-	$ -
Electric Distribution Line Relocation	FT	$ 100	-	$ -
Water Line Relocation	FT	$ 500	-	$ -
Sanitary Sewer Relocation	FT	$ 300	-	$ -
			-	
TRAFFIC CONTROL			-	
Signs, Ground Mounted	MILE	$ 25,000	0.50	$ 12,500.00
Traffic Signals	EA	$ 200,000	-	$ -
Pavement Markings	FT	$ 5	2,141	$ 10,706.19
Lighting	LUMP		-	$ -
			-	
STRUCTURES			-	
Segmental Block Wall	LUMP		-	$ -
Cast In Place Concrete Wall	LUMP			
Precast Box Culvert	EA	$ 250,000	-	$ -
Precast Arch Culvert	EA	$ 750,000	-	$ -
Rehabilitate Red Bank Road/Duck Creek Bridge	LUMP	$ 3,000,000	1	$ 3,000,000.00
Rehabilitate Columbia Parkway Bridge	LUMP	$ 600,000	1	$ 600,000.00
INCIDENTALS				
Field Office	MONTH	$ 2,500.00	12	$ 30,000.00
Mobilization	LUMP	$ 200,000.00	1	$ 200,000.00
Construction Layout & Stakes	LUMP	0.50%	4,405,415	$ 22,027.08
Maintaining Traffic	LUMP	3%	4,405,415	$ 132,162.46
Contingency	LUMP	30%	4,559,605	$ 1,367,881.48
Inflation Factor	LUMP	19%	5,927,486	$ 1,135,113.65
TOTAL			**$**	**7,062,600.05**

Wasson - Armleder Alternate 1-C Cost Estimate

ITEM	UNIT	UNIT PRICE	QTY	COST
ROADWAY				
Clearning & Grubbing	ACRE	$ 20,000	2.50	$ 50,000.00
Excavation	CY	$ 25.00	5,171	$ 129,266.00
Embankment	CY	$ 25.00	1,939	$ 48,463.50
Seeding & Mulching	SY	$ 5.00	7,805	$ 39,025.55
Guardrail, Type MGS	FT	$ 35.00	-	$ -
Fence, Misc.: Wood	FT	$ 75.00	-	$ -
5'- 7' Sidewalk	SF	$ 8.00	-	$ -
10' or 12' Shared Use Path	SY	$ 70.00	3,437	$ 240,611.17
Concrete Barrier, Type D	FT	$ 150.00	-	$ -
Curb Ramp	SF	$ 25.00	1,733	$ 43,337.14
4" Concrete Traffic Island	SY	$ 120.00	-	$ -
Subgrade Stabilization	SY	$ 45.00	-	$ -
			-	
DRAINAGE & EROSION CONTROL			-	
Underdrains	FT	$ 15.00	-	$ -
Culvert Type A, <5'	FT	$ 200	-	$ -
Culvert Type D, 12"	FT	$ 100	85	$ 8,500.00
Closed Storm System	FT	$ 375	-	$ 30,000.00
Erosion Control	FT	$ 20	2,575	$ 51,500.00
Post Construction Stormwater BMPs	LUMP	3%		$ 49,877.36
			-	
PAVEMENT			-	
Pavement, Mainline	SY	$ 120	-	$ -
Pavement, Salvage	SY	$ 60	-	$ -
			-	
UTILITIES			-	
Electric Transmission Line Relocation	FT	$ 500	-	$ -
Electric Distribution Line Relocation	FT	$ 100	650	$ 65,000.00
Water Line Relocation	FT	$ 500	-	$ -
Sanitary Sewer Relocation	FT	$ 300	-	$ -
			-	
TRAFFIC CONTROL			-	
Signs, Ground Mounted	MILE	$ 25,000	0.50	$ 12,500.00
Traffic Signal Modifications for Crosswalk	EA	$ 50,000	2	$ 100,000.00
Pavement Markings	FT	$ 5	2,875	$ 14,375.32
Lighting	LUMP		-	$ -
			-	
STRUCTURES			-	
Soldier Pile & Lagging Wall	LUMP		-	$ -
Segmental Block Wall	LUMP		-	$ -
Sheetpiling Wall	LUMP		-	
Cast In Place Concrete Wall	LUMP		-	
Precast Box Culvert	EA	$ 250,000	-	$ -
Precast Arch Culvert	EA	$ 750,000	-	$ -
Drilled Shaft Concrete Wall	LF	$ 2,000.00	350	$ 700,000.00
INCIDENTALS				
Field Office	MONTH	$ 2,500.00	12	$ 30,000.00
Mobilization	LUMP	$ 100,000.00	1	$ 100,000.00
Construction Layout & Stakes	LUMP	0.50%	1,712,456	$ 8,562.28
Maintaining Traffic	LUMP	3%	1,712,456	$ 51,373.68
Contingency	LUMP	30%	1,712,456	$ 513,736.81
Inflation Factor (From ODOT Calculator)	LUMP	19%	2,286,129	$ 437,793.67
TOTAL			**$**	**2,723,922.47**

Wasson - Armleder Alternate 2-B Cost Estimate

ITEM	UNIT	UNIT PRICE	QTY	COST
ROADWAY				
Clearning & Grubbing	ACRE	$ 20,000	2.58	$ 51,622.91
Excavation	CY	$ 25.00	1,485	$ 37,128.00
Embankment	CY	$ 25.00	3,896	$ 97,389.25
Seeding & Mulching	SY	$ 5.00	1,997	$ 9,986.33
Guardrail, Type MGS	FT	$ 35.00	-	$ -
Fence, Misc.: Wood	FT	$ 75.00	243	$ 18,225.00
5'- 7' Sidewalk	SF	$ 8.00	-	$ -
10' or 12' Shared Use Path	SY	$ 70.00	3,464	$ 242,506.73
Concrete Barrier, Type D	FT	$ 150.00	670	$ 100,500.00
Curb	FT	$ 25.00	866	$ 21,640.40
Curb Ramp	SF	$ 20.00	-	$ -
4" Concrete Traffic Island	SF	$ 120.00	-	$ -
Subgrade Stabilization	SY	$ 45.00	-	$ -
			-	
DRAINAGE & EROSION CONTROL			-	
Underdrains	FT	$ 15.00	-	$ -
Culvert Type A, <5'	FT	$ 200	-	$ -
Culvert Type D, 12"	FT	$ 100	-	$ -
Closed Storm System	FT	$ 375	750	$ 281,250.00
Erosion Control	FT	$ 20	2,600	$ 52,000.00
Post Construction Stormwater BMPs	LUMP	3%		$ 116,496.52
			-	
PAVEMENT			-	
Pavement, Mainline	SY	$ 120	-	$ -
Pavement, Salvage	SY	$ 60	-	$ -
			-	
UTILITIES			-	
Electric Transmission Line Relocation	FT	$ 500	-	$ -
Electric Distribution Line Relocation	FT	$ 100	-	$ -
Water Line Relocation	FT	$ 500	-	$ -
Sanitary Sewer Relocation	FT	$ 300	-	$ -
			-	
TRAFFIC CONTROL			-	
Signs, Ground Mounted	MILE	$ 25,000	0.50	$ 12,559.14
Traffic Signals	EA	$ 200,000	-	$ -
Pavement Markings	FT	$ 5	3,000	$ 15,002.45
Lighting	LUMP	$ -	-	$ -
			-	
STRUCTURES			-	
Segmental Block Wall	LUMP		-	$ -
Cast In Place Concrete Wall	SF	$ 125.00	300	$ 37,500.00
Precast Box Culvert	EA	$ 250,000	-	$ -
Precast Arch Culvert	EA	$ 750,000	-	$ -
Drilled Shaft Concrete Wall	LF	$ 2,000.00	382	$ 764,000.00
Railroad Bridge Modifications	LUMP	$ 271,635.00	1	$ 271,635
Wooster Road Bridge Widening	LUMP	$ 1,640,272.00	1	$ 1,640,272
INCIDENTALS				
Field Office	MONTH	$ 2,500.00	12	$ 30,000.00
Mobilization	LUMP	$ 200,000.00	1	$ 200,000.00
Construction Layout & Stakes	LUMP	0.50%	3,896,199	$ 19,998.57
Maintaining Traffic	LUMP	3%	3,896,199	$ 119,991.41
Contingency	LUMP	30%	4,032,566	$ 1,241,911.11
Inflation Factor	LUMP	19%	5,242,335	$ 1,030,579.24
TOTAL			**$**	**6,412,194.06**

Wasson - Armleder Alternate 2-C Cost Estimate

ITEM	UNIT	UNIT PRICE	QTY	COST
ROADWAY				
Clearning & Grubbing	ACRE	$ 20,000	2	$ 43,386.34
Excavation	CY	$ 25.00	768	$ 19,201.11
Embankment	CY	$ 25.00	2,192	$ 54,807.08
Seeding & Mulching	SY	$ 5.00	6,311	$ 31,555.92
Guardrail, Type MGS	FT	$ 35.00	300	$ 10,500.00
Fence, Misc.: Wood	FT	$ 75.00	392	$ 29,376.75
5'- 7' Sidewalk	SF	$ 8.00	-	$ -
10' or 12' Shared Use Path	SY	$ 70.00	3,500	$ 245,000.00
Concrete Barrier, Type D	FT	$ 150.00	490	$ 73,500.00
Curb	FT	$ 25.00	2,550	$ 63,746.00
Curb Ramp	SF	$ 20.00	-	$ -
4" Concrete Traffic Island	SF	$ 120.00	200	$ 24,000.00
Subgrade Stabilization	SY	$ 45.00	3,044	$ 136,985.36
DRAINAGE & EROSION CONTROL				
Underdrains	FT	$ 15.00	2,225	$ 33,372.60
Culvert Type A, <5'	FT	$ 200	-	$ -
Culvert Type D, 12"	FT	$ 100	-	$ -
Closed Storm System	FT	$ 375	1,000	$ 375,000.00
Erosion Control	FT	$ 20	2,625	$ 52,500.00
Post Construction Stormwater BMPs	LUMP	3%		$ 98,713.71
PAVEMENT				
Pavement, Mainline	SY	$ 120	2,844	$ 341,280.00
Pavement, Salvage	SY	$ 60	-	$ -
UTILITIES				
Electric Transmission Line Relocation	FT	$ 500	-	$ -
Electric Distribution Line Relocation	FT	$ 100	450	$ 45,000.00
Water Line Relocation	FT	$ 500	450	$ 225,000.00
Sanitary Sewer Relocation	FT	$ 300	-	$ -
TRAFFIC CONTROL				
Signs, Ground Mounted	MILE	$ 25,000	0.50	$ 12,500.00
Traffic Signals	EA	$ 200,000	-	$ -
Pavement Markings	FT	$ 5	2,780	$ 13,898.37
Lighting	LUMP	$ 120,000	1	$ 120,000.00
STRUCTURES				
Segmental Block Wall	LUMP		-	$ -
Cast In Place Concrete Wall	LUMP		-	
Drilled Shaft Concrete Wall	LF	$ 2,000.00	121	$ 242,000.00
Precast Box Culvert	EA	$ 250,000	-	$ -
12' X 12' Box Culvert Extension	LF	$ 3,500.00	54	$ 189,000.00
Extended Culvert Headwall	LUMP			$ 60,000.00
Railroad Bridge Modifications	LUMP	$ 271,635.00	1	$ 271,635
Wooster Road Bridge Modification	LUMP	$ 585,400.00	1	$ 585,400
INCIDENTALS				
Field Office	MONTH	$ 2,500.00	12	$ 30,000.00
Mobilization	LUMP	$ 100,000.00	1	$ 100,000.00
Construction Layout & Stakes	LUMP	0.50%	3,529,626	$ 17,648.13
Maintaining Traffic	LUMP	3%	3,529,626	$ 105,888.79
Contingency	LUMP	30%	3,653,163	$ 1,095,948.95
Inflation Factor	LUMP	19%	4,749,112	$ 909,454.97
TOTAL			**$**	**5,658,567.07**

Wasson - Armleder Alternate 3-B Cost Estimate

ITEM	UNIT	UNIT PRICE	QTY	COST
ROADWAY				
Clearning & Grubbing	ACRE	$ 20,000	5.98	$ 119,560.41
Excavation	CY	$ 25.00	10,328	$ 258,210.63
Embankment	CY	$ 25.00	5,499	$ 137,484.82
Seeding & Mulching	SY	$ 5.00	19,735	$ 98,673.67
Guardrail, Type MGS	FT	$ 35.00	-	$ -
Fence, Misc.: Wood	FT	$ 75.00	1,407	$ 105,525.00
5'- 7' Sidewalk	SF	$ 8.00	-	$ -
10' or 12' Shared Use Path	SY	$ 70.00	7,364	$ 515,455.40
Concrete Barrier, Type D	FT	$ 150.00	-	
Curb	FT	$ 22.00	-	$ -
Curb Ramp	SF	$ 8.00	316	$ 2,525.50
4" Concrete Traffic Island	SY	$ 120.00	-	$ -
Subgrade Stabilization	SY	$ 45.00	-	$ -
DRAINAGE & EROSION CONTROL				
Underdrains	FT	$ 15.00	-	$ -
Culvert Type A, <5'	FT	$ 200	-	$ -
Culvert Type D, 12"	FT	$ 100	-	$ -
Closed Storm System	FT	$ 375	-	$ -
Erosion Control	FT	$ 20	5,525	$ 110,500.00
Post Construction Stormwater BMPs	LUMP	3%		$ 71,034.22
			-	
PAVEMENT			-	
Pavement, Mainline	SY	$ 120	-	$ -
Pavement, Salvage	SY	$ 60	-	$ -
			-	
UTILITIES			-	$ -
Electric Transmission Line Relocation	FT	$ 500	-	$ -
Electric Distribution Line Relocation	FT	$ 100	-	$ -
Water Line Relocation	FT	$ 500	-	$ -
Sanitary Sewer Relocation	FT	$ 300	-	$ -
			-	
TRAFFIC CONTROL				
Signs, Ground Mounted	MILE	$ 25,000	1	$ 26,425.00
Traffic Signals	EA	$ 200,000	-	$ -
Pavement Markings	FT	$ 5	5,581	$ 27,904.80
Lighting	LUMP		-	$ -
			-	
STRUCTURES			-	
Segmental Block Wall	LUMP		-	$ -
Cast In Place Concrete Wall	SF	$ 350.00	200	$ 70,000.00
Precast Box Culvert	EA	$ 250,000	-	$ -
Precast Arch Culvert	EA	$ 750,000	-	$ -
Modify Abandoned RR Bridge over Duck Creek	LUMP	$ 237,363.20	1	$ 237,363.20
Concrete Slab Bridge over Duck Creek	LUMP	$ 528,179	1	$ 528,179.00
				$ -
INCIDENTALS				
Field Office	MONTH	$ 2,500.00	12	$ 30,000.00
Mobilization	LUMP	$ 100,000.00	1	$ 100,000.00
Construction Layout & Stakes	LUMP	0.50%	2,438,842	$ 12,194.21
Maintaining Traffic	LUMP	3%	2,438,842	$ 73,165.25
Contingency	LUMP	30%	2,524,201	$ 757,260.33
Inflation Factor	LUMP	19%	3,281,461	$ 628,399.87
TOTAL			**$**	**3,909,861.30**

Wasson - Armleder Alternate 3-C Cost Estimate

ITEM	UNIT	UNIT PRICE	QTY	COST
ROADWAY				
Clearning & Grubbing	ACRE	$ 20,000	5.86	117,145
Excavation	CY	$ 25.00	4,621	$ 115,536.14
Embankment	CY	$ 25.00	10,013	$ 250,314.62
Seeding & Mulching	SY	$ 5.00	20,623	$ 103,113.68
Guardrail, Type MGS	FT	$ 35.00	-	$ -
Fence, Misc.: Wood	FT	$ 75.00	1,230	$ 92,257.50
5'- 7' Sidewalk	SF	$ 8.00	-	$ -
10' or 12' Shared Use Path	SY	$ 70.00	8,556	$ 598,914.40
Concrete Barrier, Type D	FT	$ 150.00	-	$ -
Curb	FT	$ 25.00	-	$ -
Curb Ramp	SF	$ 20.00	184	$ 3,684.22
4" Concrete Traffic Island	SY	$ 120.00	-	-
Subgrade Stabilization	SY	$ 45.00	-	-
			-	
DRAINAGE & EROSION CONTROL			-	
Underdrains	FT	$ 15.00	-	-
Culvert Type A, <5'	FT	$ 200	-	-
Culvert Type D, 12"	FT	$ 100	-	-
Closed Storm System	FT	$ 375	-	-
Erosion Control	FT	$ 20	6,400	$ 128,000.00
Post Construction Stormwater BMPs	LUMP	3%		$ 73,664.91
			-	
PAVEMENT			-	
Pavement, Mainline	SY	$ 120	-	-
Pavement, Salvage	SY	$ 60	-	-
			-	
UTILITIES			-	-
Electric Transmission Line Relocation	FT	$ 500	-	-
Electric Distribution Line Relocation	FT	$ 100	200	20,000
Water Line Relocation	FT	$ 500	-	-
Sanitary Sewer Relocation	FT	$ 300	-	-
			-	
TRAFFIC CONTROL			-	
Signs, Ground Mounted	MILE	$ 25,000	1	$ 30,238.97
Traffic Signals	EA	$ 200,000	-	$ -
Pavement Markings	FT	$ 5	6,386	$ 31,932.35
Lighting	LUMP		-	$ -
			-	
STRUCTURES			-	
Segmental Block Wall	LUMP		-	-
Cast In Place Concrete Wall	SF			
Precast Box Culvert	EA	$ 250,000	-	-
Precast Arch Culvert	EA	$ 750,000	-	-
Modify Abandoned RR Bridge over Duck Creek	LUMP	$ 237,363.20	1	$ 237,363.20
Concrete Slab Bridge over Duck Creek	LUMP	$ 596,997	1	$ 596,997.00
INCIDENTALS				
Field Office	MONTH	$ 2,500.00	12	$ 30,000.00
Mobilization	LUMP	$ 100,000.00	1	$ 100,000.00
Construction Layout & Stakes	LUMP	0.50%	2,529,162	$ 12,645.81
Maintaining Traffic	LUMP	3%	2,529,162	$ 75,874.86
Contingency	LUMP	30%	2,617,683	$ 785,304.77
Inflation Factor	LUMP	19%	3,402,987	$ 651,672.08
TOTAL			**$**	**4,054,659.41**

Wasson - Armleder Alternate 3-D Cost Estimate

ITEM	UNIT	UNIT PRICE	QTY	COST
ROADWAY				
Clearning & Grubbing	ACRE	$ 20,000	5.91	$ 118,276.39
Excavation	CY	$ 25.00	5,340	$ 133,507.55
Embankment	CY	$ 25.00	7,272	$ 181,805.78
Seeding & Mulching	SY	$ 5.00	23,729	$ 118,644.26
Guardrail, Type MGS	FT	$ 35.00	-	$ -
Fence, Misc.: Wood	FT	$ 75.00	1,530	$ 114,750.00
5'- 7' Sidewalk	SF	$ 8.00	-	$ -
10' or 12' Shared Use Path	SY	$ 70.00	8,583	$ 600,814.67
Concrete Barrier, Type D	FT	$ 150.00	-	$ -
Curb	FT	$ 25.00	-	$ -
Curb Ramp	SF	$ 20.00	184	$ 3,684.22
4" Concrete Traffic Island	SY	$ 120.00	-	$ -
Subgrade Stabilization	SY	$ 45.00	-	$ -
			-	
DRAINAGE & EROSION CONTROL			-	
Underdrains	FT	$ 15.00	-	$ -
Culvert Type A, <5'	FT	$ 200	-	$ -
Culvert Type D, 12"	FT	$ 100	-	$ -
Closed Storm System	FT	$ 375	-	$ -
Erosion Control	FT	$ 20	6,400	$ 128,000.00
Post Construction Stormwater BMPs	LUMP	3%		$ 78,812.30
			-	
PAVEMENT			-	
Pavement, Mainline	SY	$ 120	-	$ -
Pavement, Salvage	SY	$ 60	-	$ -
			-	
UTILITIES			-	$ -
Electric Transmission Line Relocation	FT	$ 500	-	$ -
Electric Distribution Line Relocation	FT	$ 100	-	$ -
Water Line Relocation	FT	$ 500	-	$ -
Sanitary Sewer Relocation	FT	$ 300	-	$ -
Gas Line Relocation	FT	$ 300	200	$ 60,000.00
			-	
TRAFFIC CONTROL			-	
Signs, Ground Mounted	MILE	$ 25,000	1	$ 30,440.44
Traffic Signals	EA	$ 200,000	-	$ -
Pavement Markings	FT	$ 5	6,429	$ 32,145.10
Lighting	LUMP		-	$ -
			-	
STRUCTURES			-	
Segmental Block Wall	LUMP		-	$ -
Sheetpiling Wall	LUMP			
Cast In Place Concrete Wall	LUMP	$ 125.00	445	$ 55,625.00
Precast Box Culvert	EA	$ 250,000	-	$ -
Precast Arch Culvert	EA	$ 750,000	-	$ -
Modify Abandoned RR Bridge over Duck Creek	LUMP	$ 237,363.20	1	$ 237,363.20
Concrete Slab Bridge over Duck Creek	LUMP	$ 682,020.00	1	$ 682,020.00
INCIDENTALS				
Field Office	MONTH	$ 2,500.00	12	$ 30,000.00
Mobilization	LUMP	$ 100,000.00	1	$ 100,000.00
Construction Layout & Stakes	LUMP	0.50%	2,705,889	$ 13,529.44
Maintaining Traffic	LUMP	3%	2,705,889	$ 81,176.67
Contingency	LUMP	30%	2,800,595	$ 840,178.50
Inflation Factor	LUMP	19%	3,640,774	$ 697,208.13
TOTAL			**$**	**4,337,981.63**

Wasson - Armleder Alternate 3-E Cost Estimate

ITEM	UNIT	UNIT PRICE	QTY	COST
ROADWAY				
Clearning & Grubbing	ACRE	$ 20,000	5.78	$ 115,672.24
Excavation	CY	$ 25.00	5,078	$ 126,954.97
Embankment	CY	$ 25.00	9,407	$ 235,169.87
Seeding & Mulching	SY	$ 5.00	19,423	$ 97,115.78
Guardrail, Type MGS	FT	$ 22.00	-	$ -
Fence, Misc.: Wood	FT	$ 75.00	360	$ 27,000.00
5'- 7' Sidewalk	SF	$ 8.00	-	$ -
10' or 12' Shared Use Path	SY	$ 70.00	8,570	$ 599,866.86
Concrete Barrier, Type D	FT	$ 150.00	-	$ -
Curb	FT	$ 22.00	-	$ -
Curb Ramp	SF	$ 8.00	381	$ 3,051.14
4" Concrete Traffic Island	SY	$ 120.00	-	$ -
Subgrade Stabilization	SY	$ 45.00	-	$ -
			-	
DRAINAGE & EROSION CONTROL			-	
Underdrains	FT	$ 15.00	-	$ -
Culvert Type A, <5'	FT	$ 200	-	$ -
Culvert Type D, 12"	FT	$ 100	-	$ -
Closed Storm System	FT	$ 375	-	$ -
Erosion Control	FT	$ 20	6,425	$ 128,500.00
Post Construction Stormwater BMPs	LUMP	3%		$ 102,528.51
			-	
PAVEMENT			-	
Pavement, Mainline	SY	$ 120	-	$ -
Pavement, Salvage	SY	$ 60	-	$ -
			-	
UTILITIES			-	$ -
Electric Transmission Line Relocation	FT	$ 500	-	$ -
Electric Distribution Line Relocation	FT	$ 100	-	$ -
Water Line Relocation	FT	$ 500	-	$ -
Sanitary Sewer Relocation	FT	$ 300	-	$ -
			-	
TRAFFIC CONTROL			-	
Signs, Ground Mounted	MILE	$ 25,000	1	$ 31,683.52
Traffic Signals	EA	$ 50,000	1	$ 50,000.00
Pavement Markings	FT	$ 5	5,594	$ 27,969.05
Lighting	LUMP		-	$ -
			-	
STRUCTURES			-	
Segmental Block Wall	LUMP		-	$ -
Cast In Place Concrete Wall	SF	$ 350.00	2,918	$ 1,021,215.20
Precast Box Culvert	EA	$ 250,000	-	$ -
Precast Arch Culvert	EA	$ 750,000	-	$ -
Modify Abandoned RR Bridge over Duck Creek	LUMP	$ 237,363.20	1	$ 237,363.20
Concrete Slab Bridge over Duck Creek	LUMP	$ 714,555.00	1	$ 714,555.00
INCIDENTALS				
Field Office	MONTH	$ 2,500.00	12	$ 30,000.00
Mobilization	LUMP	$ 100,000.00	1	$ 100,000.00
Construction Layout & Stakes	LUMP	0.50%	3,648,645	$ 18,243.23
Maintaining Traffic	LUMP	3%	3,648,645	$ 109,459.36
Contingency	LUMP	30%	3,776,348	$ 1,132,904.38
Inflation Factor	LUMP	19%	4,909,252	$ 940,121.82
TOTAL			**$**	**5,849,374.12**

FY 2024-2028 Business Plan Inflation Calculator:

Not sure if you have the latest calculator? Click here.

Last Modified: 7/20/2023

Today's Date:
February 28, 2024

Please Enter Values in the Yellow Areas Only:

Estimation Start Date:
Less than or Equal to Today's Date
(mm/dd/yyyy)

2/28/2024
Start Date:

Enter Construction Mid-Point Date:
(cannot exceed 02/28/2049)
(mm/dd/yyyy)

1/1/2028
Construction Mid-Point Date:

Present-Day Estimated Cost:

$3,000,000.00
Estimated Dollar Amount:

Estimate Start Date to Construction Mid-Point Date: **47** **Months**

Inflation - Start to Mid-Point of Construction:

	(compounded growth rate)	**Inflated Dollar Amount:**
Business Plan	**19.2%**	**$3,574,574.05**

Estimator's Name:

County - Route - Section: HAM-Wasson Way to Otto Armleder

PID: 113603

Estimator's Notes: Feasibility Study Estimates