

**To:** Louis Agresta  
Clark County-Springfield TCC

February 20, 2024

**From:** Nate Lang, PE  
Burgess & Niple, Inc.

**Subject:** Simon Kenton Shared Use Trail Improvements

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### Background and Purpose

The Simon Kenton Trail (SKT) extends through Clark, Champaign, and Logan Counties in west central Ohio, from Springfield in the south to Bellefontaine in the north, and is paved with hot mix asphalt from Springfield through the City of Urbana. At the Urbana city limits, near the Urbana Airport and about 1.15 miles north of W Light Street, the Simon Kenton Trail transitions from asphalt pavement to a double chip sealed layer. The chip sealed portion of the trail continues to the north and terminates at Carter Avenue in Bellefontaine, where there is a trailhead with a chip sealed parking lot. The Simon Kenton Trail follows the former Pennsylvania Railroad route (now owned by the West Central Ohio Port Authority) and parallels a still-active rail line. As the final portion of the Simon Kenton Trail to remain chip sealed, the Logan-Union-Champaign Regional Planning Commission (LUC), working through the CCSTCC and the RTPO, contracted Burgess & Niple (B&N) to perform a preliminary study of the Simon Kenton Trail to evaluate the feasibility of overlaying the chip sealed portion of the trail with asphalt concrete pavement. This study consisted of a site visit to document the existing trail conditions; a preliminary alignment and graphic grade profile to assess existing geometric conditions; roll plot exhibits showing the proposed design; typical sections showing the proposed pavement design; a high-level right-of-way, environmental, and utility assessment; a construction cost estimate; and stakeholder engagement.

### Existing Trail Conditions

The site visit was conducted with B&N and two members of the Simon Kenton Pathfinders, a volunteer group with the mission of maintaining and providing amenities for the SKT within Logan and Champaign Counties. Another member of the Simon Kenton Pathfinders drove the length of the study area prior to the site visit and identified locations along the trail where there was pavement deterioration, which was primarily along the edges of the trail. The site visit team drove the length of the study area taking video using a dash cam and using a field collection application to take georeferenced photos. The purpose of the site visit was to document overall trail condition, areas of deterioration, condition of railing treatments at bridges, and existing roadway crossing infrastructure.

The Simon Kenton Trail typically runs parallel to the active railroad, with the cross section of the trail sloping away from the railbed. Edge deterioration was the primary defect observed along the chip sealed trail. Every defect that was found has been marked on the roll plot exhibits in Appendix A and is listed below in Table 1. Most cases of edge deterioration were minor, such as the that shown below in Photo 1. However, significant edge deterioration and erosion was observed at the northern end of the trail, at station 849+00 in the roll plot exhibit and shown below in Photo 2.

**Table 1: Pavement Defects**

Defect	Station
Edge Deterioration	256+00
Edge Deterioration	345+40
Edge Deterioration	354+30
Edge Deterioration	366+50
Edge Deterioration	377+25
Edge Deterioration	378+05
Edge Deterioration	392+20
Pothole	392+20
Edge Deterioration	434+85
Minor Depression	591+45
Minor Edge Deterioration	624+20
Edge Deterioration	745+70
Major Edge Deterioration	849+20



**Photo 1: Typical Edge Deterioration**



**Photo 2: Major Edge Deterioration at STA. 849+20**

In addition to the pavement defects, several potential maintenance and safety issues were noticed along the trail. Overhanging branches would necessitate substantial tree trimming along the entire length of the trail before any construction could be performed. There is a large junk and brush pile encroaching within the trail/railroad right-of-way at station 364+00, north of Lippincott Road. There are large concrete pole foundations along the length of

the trail, which are assumed to be part of the existing railroad infrastructure. There are 6 of these foundations within the study area, like the one shown below in Photo 3.



**Photo 3: Concrete Light Pole Foundation**

There are a total of nine at-grade crossings with county and state routes, four in Champaign County and five in Logan County. These intersections are signed with bike crossing signs along the county and state routes and stop signs along the Simon Kenton Trail. It is anticipated that three of the intersections in Champaign County, including W Herr Road, Lippincott Road, and Upper Valley Pike, will be improved with Champaign County safety grant funding. It is not anticipated that W State Route 296 will be improved with this funding. There are five driveway and farm crossings along the SKT, and one location where the bike trail crosses a railroad branch that is no longer in service and is unlikely to be put back into service.

There are nine bridge or culvert crossings within the study area where the trail goes over a road, creek, or the Mad River. Most of these structures are shared with the active railroad line, so it is assumed that they are all maintained and structurally sound. Most of the bridges have concrete decks with wooden or metal railings, while the culverts are concrete with earthwork covering them. The culverts typically have chain-link fencing on either side.

### Right-of-Way Assessment

A high-level right-of-way assessment was performed using GIS parcel information to identify any issues with the existing trail or proposed work.

It is anticipated that slope stabilization could be required at the location where major edge deterioration is occurring at station 849+00, the treatment for which is discussed in the Pavement Improvements section of this report. With 55 feet from the edge of the path to the adjacent property, it is anticipated that slope stabilization can be performed without a right-of-way easement.

At station 364+00 there is a junk and brush pile spilling over from the adjacent property onto the railroad right-of-way. Cost for removal of this pile is anticipated to be included in the clearing and grubbing lump sum item.

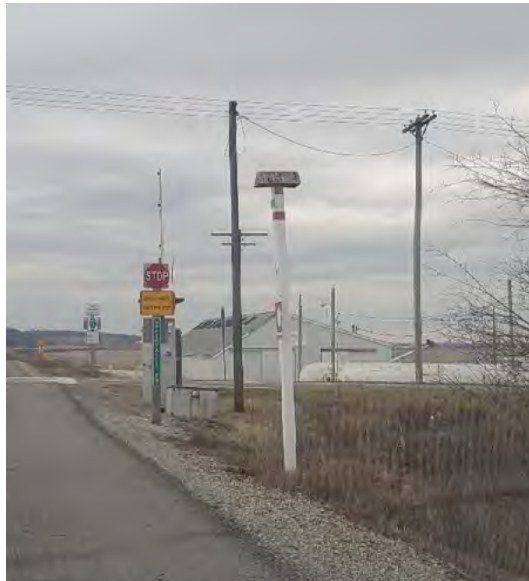
### Environmental Review

The trail enters the 100-year regulatory floodway at various locations within the study area. This will require floodplain coordination with local floodway administrators for Champaign and Logan Counties. It is not anticipated that any of the following areas within the 100-year regulatory floodway will require significant earthwork, although some embankment will be placed to improve the graded shoulders:

- From the lake owned by City of Urbana to W State Route 296
- At the Mad River crossing
- At the Mad Run Crossing
- At the McKees Creek Crossing

### Utility Assessment

There is a major AT&T Fiber Optic (FO) line running parallel with the Simon Kenton Trail within the length of the study area. The FO line is marked with white poles, as shown in Photo 4 below.



**Photo 4: AT&T Fiber Optic Marker**

Due to the importance of the FO line, its location should be marked using a high SUL quality level before any underground work is done in the study area. It is anticipated that the FO line cannot be relocated, so any of the potential improvements discussed in this study may have to be adjusted to account for the FO line.

Additional utility impacts may occur during construction of this project when excavation, sign placement, guardrail placement, or erosion protection occur. Three OUPS calls were placed for sections of roadway running parallel with the Simon Kenton Trail, which are described in Appendix D. Common utilities along the SKT corridor and at crossing locations include CT Communications, AES Ohio (Formerly Dayton Power & Light), Logan County Electric Coop, Lumen (Level 3 Communications), Fiber Farms, and Centerpoint Energy/ Gridhawk.

### Pavement Improvements

This study categorizes the recommended improvements to the Simon Kenton Trail as either “base improvements” or “supplemental improvements”, with the base improvements being the minimum recommended enhancements to implement a paved trail, and the supplemental improvements extending beyond the minimum requirements to

improve the trail's connectivity, longevity, or safety. The construction cost estimate, found in Appendix C, follows this categorization of improvements.

"Base" pavement improvements for this project include the asphalt overlay and spot repairs where pavement deterioration was recorded. It is anticipated that the asphalt overlay can be placed directly on to the existing chip seal, including 1.5 inches of intermediate course, 1 inch of 404LVT (low volume traffic) asphalt concrete surface course, and tack coat. At locations where edge deterioration was noted, the existing path will be excavated to a depth of one foot and backfilled with aggregate base. Each pavement repair location identified is assumed to be four feet by four feet, with the major deterioration at station 849+20 assumed to be four feet by fifty feet.

The graphic grade profile of the Simon Kenton Trail, shown in the roll plot exhibits in Appendix A, often falls below the desired minimum running slope of 0.3%, which could make the trail susceptible to ponding. Based on the observed cross section of the trail, it is assumed that stormwater sheet flows over the pavement at most locations in the study area, moving from the rail bed east of the trail to a slope or ditch west of the trail. If it is found that the cross slope of the path is less than the desired 1.6%, a leveling course could be applied to increase the trail cross slope and reduce ponding. The leveling course would replace the intermediate course and vary from 1.5" to 1.75". The additional cost to replace the intermediate course with the leveling course has been included as a supplemental improvement in the cost estimate.

The five farm and driveway crossings within the study area could be supplemented with 4 inches of 301 concrete base to account for infrequent heavy vehicle crossings. Additional pavement could be replaced or extended on either side of the Simon Kenton Trail and rail line to improve the durability of the crossings. A farm crossing line item has been included as a supplemental improvement in the cost estimate on a per-crossing basis.

A supplemental item has been added to the estimate to account for the removal of the concrete pole foundations found along the trail.

The significant edge deterioration and erosion at station 849+00 could be addressed by stabilizing the slope on the west side of the trail. It is assumed that most of the trees on the slope can remain. A low-cost solution would involve excavating out the top of the bank and placing gabions and timber guardrail. A more thorough solution would involve placing light rock aggregate on the slope, which would stabilize it without the need for tree removal. The light rock aggregate stabilization solution is included as a supplemental improvement in the cost estimate, and assumes that timber guardrail would be placed at the top of the slope to improve rider safety along this trail segment.

At several locations, edge deterioration and minor erosion was identified to be caused by deer crossings, distinguishable by the trails leading up to the trail embankment. Shallowing the embankment and applying compacted aggregate would decrease the effects of the deer traversing the Simon Kenton Trail and railroad tracks. One deer crossing has been identified in the roll plot exhibits at station 179+50, and it is assumed that additional crossings exist and may be identified in the future. It is anticipated that two deer crossing signs, one for each direction, would be placed at each crossing. A supplemental improvement line item has been added to the construction cost estimate on a per-crossing basis, with a quantity of three crossings.

### Trail Connection Improvements

There is a public lake owned by the City of Urbana located on N US-68 which has been identified as a potential point of interest along the trail by the Simon Kenton Pathfinders. A short connection between the Simon Kenton Trail and a trail circulating the lake could be constructed to provide access from the SKT, which has been added to the construction cost estimate as a supplemental improvement. This connection is located at station 171+75 in the roll plot exhibits, and would require a rail crossing.

The West Liberty Trailhead for the Simon Kenton Trail is located on Sidney Road (station 568+00 in the roll plot exhibits) and consists of a parking lot that is maintained by the Village of West Liberty. The trailhead parking lot lacks a direct connection for trail users to access the SKT, who must either cross the recycling plant and railroad tracks, or travel through the narrow underpass on Sidney Road and up a grassy slope to the trail. The underpass was flagged by stakeholders as being dangerous for pedestrians and bicyclists due to its narrow width and proximity to a sharp turn on CR-245, which becomes Sidney Road West of the underpass. A potential connection from the SKT to this trailhead could be made through the publicly owned West Liberty Recycling Center, which is shown in the roll plot exhibit. This connection would require crossing Sidney Road and the active railroad line. This connection, added to the cost estimate as a supplemental improvement, would include an asphalt path, striped crosswalk, signage, and railroad crossing.

A chip sealed parking lot functions as a Simon Kenton Trailhead on Carter Avenue in Bellefontaine, which the City of Bellefontaine helps to maintain. To access the trail from the parking lot, users must either walk over the railroad tracks or travel out onto Carter Ave and use the paved railroad crossing. Broken glass has been cited by the Simon Kenton Pathfinders as an issue for both options. Paving the parking lot with asphalt and adding a pavement crossing to the trail would improve user accessibility and safety. A cost for this work has been included as a supplemental improvement in the estimate.

### Long-Term Intersection Improvements

There are nine at-grade road crossings within the project area, all stop controlled for trail users. Of the four crossings in Champaign County, three are anticipated to be improved using safety grant funds, and one is a state route maintained by ODOT. Potential long-term improvements for the five remaining intersections within Logan County include upgrades to the signing and striping. The Simon Kenton Pathfinders and one trail user encountered during the site visit mentioned how the Township Road 200 crossing is dangerous. It is anticipated that restricted visual sight distance due to several crest vertical curves combined with high vehicle speeds is the reason for the perceived danger. A standard detail in Appendix B shows potential intersection improvements, included fluorescent and flashing bicycle crossing signs, flashing stop signs, flashing advanced warning signs, and high visibility crosswalk markings. These improvements are similar to those proposed in the Champaign County Simon Kenton Trail Crossing Safety Study to provide consistent high visibility trail crossing treatments. It is anticipated that these long-term intersection improvements are outside the scope of this project, and thus have not been included in the construction cost estimate. However, the cost of improving each intersection is estimated to be \$90,000.00.

### Bicycle Railing Improvements

Timber railing is often used as an aesthetically pleasing method to improve safety along trails. During the site visit, it was observed that the existing fencing and railing at the culverts and bridges did not extend past the limits of their structure. The bicycle railing standard detail in Appendix B shows the potential implementation of timber railing, with 50-foot flared segments at the approaches for added safety. It is assumed that the metal and wood railings on the bridges would be maintained, while the chain-link fencing on culverts would be replaced. Table 2 below shows the estimated railing length needed for each structure.

**Table 2: Timber Bicycle Railing Locations**

Bridge Crossing	Station	Bicycle Railing Length (FT)	Notes
Canal	185+40	200	Both sides, approaches only
Kings Creek	209+80	150	Left side, approaches and on deck
Unnamed creek	217+30	150	Left side, approaches and on deck
Macochee Creek	379+80	200	Both sides, approaches only
Mad River	491+00	300	Left side, approaches and on deck
Sidney Road	571+30	100	Left side, approaches only
Township Road 192	600+50	150	Left side, approaches and on deck
McKees Creek	778+00	200	Left side, approaches and on deck
Total		1450	

**Construction Cost Estimate**

The construction cost estimate located in Appendix C shows the base improvements needed to upgrade this segment of the Simon Kenton Trail to asphalt pavement, along with supplemental improvements to improve its connectivity, longevity, and safety.

Please contact us at [nate.lang@burgessniple.com](mailto:nate.lang@burgessniple.com) or 614-459-2050 if you have any questions.




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Appendix A  
Roll Plot Exhibits





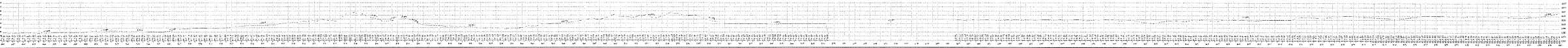
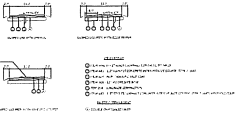
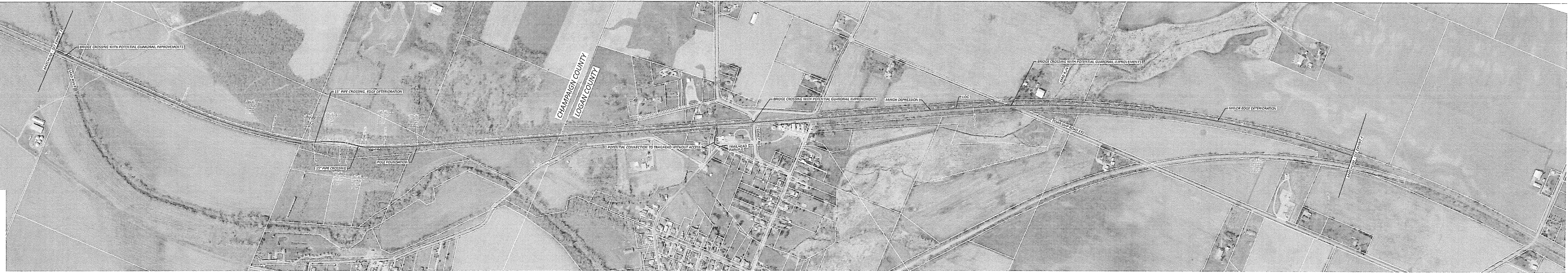


SIMON KENTON TRAIL  
URBANA TO BELLEFONTAINE

EXHIBIT 3/5

HORIZONTAL  
SCALE IN FEET

0 50 100







# Appendix B

## Typical Details

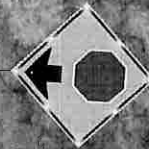
REPLACE SIGN WITH YELLOW-GREEN FLUORESCENT WITH LED FLASHING LIGHTS



REPLACE SIGN WITH YELLOW-GREEN FLUORESCENT



UPGRADE EXISTING SIGN TO INCLUDE LED FLASHING LIGHTS



NEW ADVANCED WARNING SIGN WITH LED FLASHING LIGHTS

871 872 873 874 875 876 877 878 879 880 881 882

N02°27'22"E  
1,273.49'

NEW ADVANCED WARNING SIGN WITH LED FLASHING LIGHTS



REPLACE SIGN WITH YELLOW-GREEN FLUORESCENT



UPGRADE EXISTING SIGN TO INCLUDE LED FLASHING LIGHTS

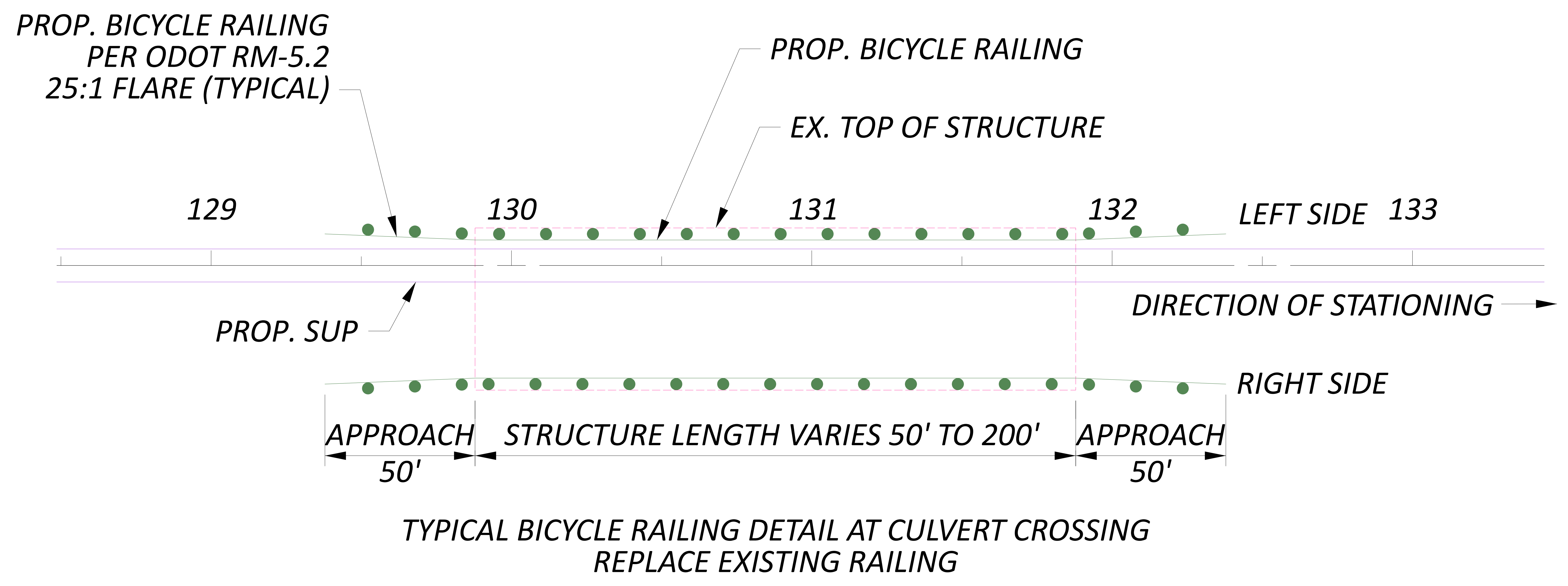
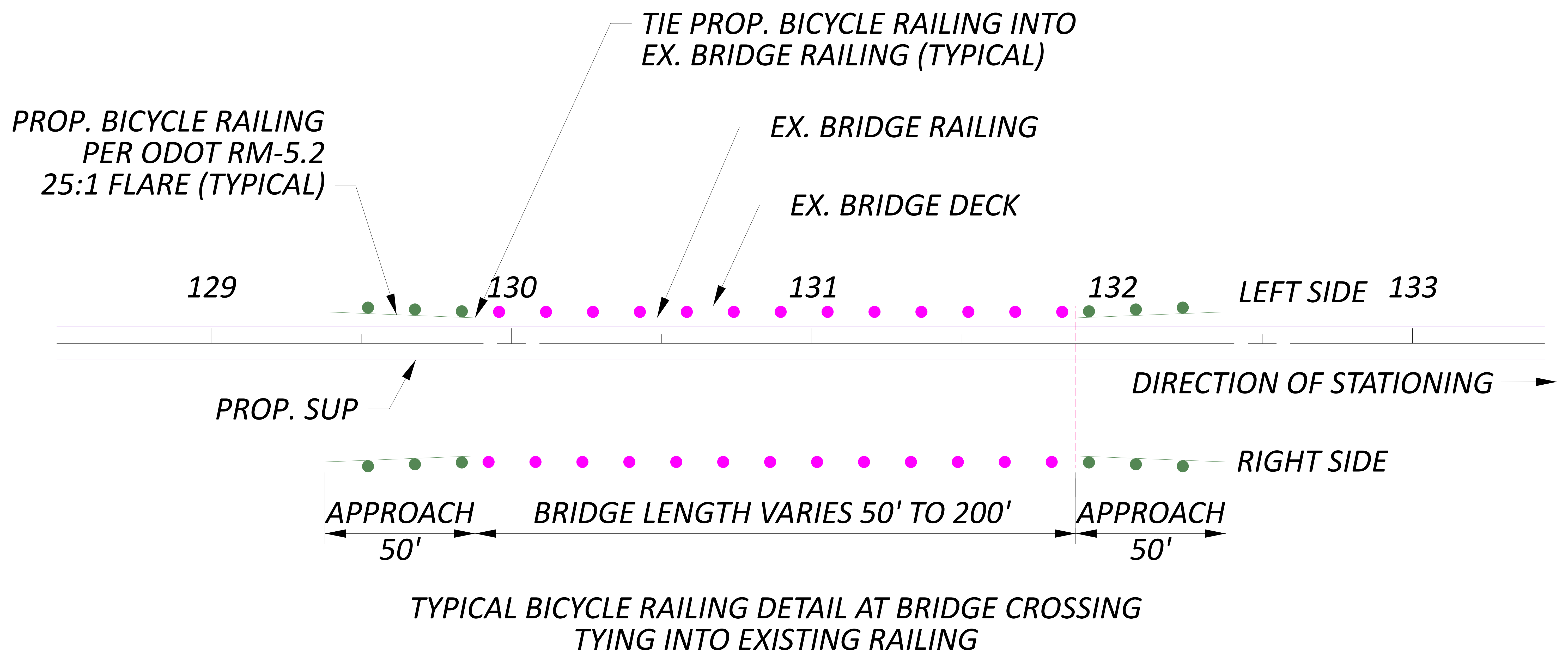


STOP BAR AND HIGH-VISIBILITY CROSSWALK STRIPING UPGRADES

REPLACE SIGN WITH YELLOW-GREEN FLUORESCENT WITH LED FLASHING LIGHTS



TOWNSHIP ROAD 200





Appendix C  
Construction Cost Estimate

**Simon Kenton Trail  
Preliminary Estimate  
2/3/2024**

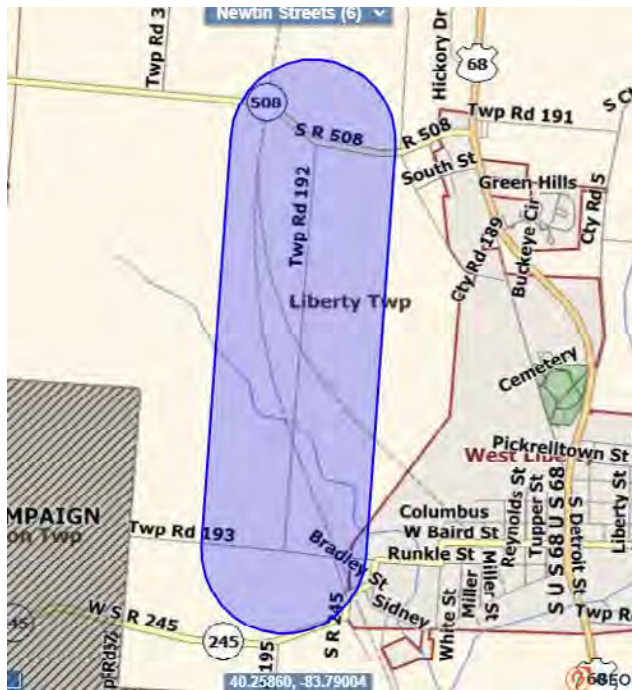
	Unit	Quantity	Unit Price	Item Cost
<b>BASE IMPROVEMENT ITEMS</b>				
CLEARING AND GRUBBING	LUMP	1	\$ 20,000.00	\$ 20,000.00
EMBANKMENT	C.Y.	600	\$ 25.00	\$ 15,000.00
1" 404LVT, ASPHALT CONCRETE, PG58-28	C.Y.	2840	\$ 275.00	\$ 781,000.00
1.5" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)	C.Y.	4261	\$ 200.00	\$ 852,200.00
NON-TRACKING TACK COAT	GAL	12271	\$ 3.00	\$ 36,812.00
AGGREGATE BASE (TRAIL REPAIR)	C.Y.	50	\$ 90.41	\$ 4,521.00
PAVEMENT REMOVED (TRAIL REPAIR)	S.Y.	100	\$ 21.04	\$ 2,104.00
PIPE REMOVED, 24" AND UNDER	FT	40	\$ 24.02	\$ 961.00
15" CONDUIT, TYPE B	FT	40	\$ 73.21	\$ 2,929.00
TRAIL MAINTENANCE OF TRAFFIC	LS	1	\$ 30,000.00	\$ 30,000.00
MOBILIZATION	LS	1	\$ 40,000.00	\$ 40,000.00
CONSTRUCTION LAYOUT STAKES AND SURVEYING	LS	1	\$ 13,379.60	\$ 13,380.00
			<b>SUBTOTAL, BASE IMPROVEMENT ITEMS</b>	\$ 1,798,907.00
			<b>Contingency (30%)</b>	\$ 539,672.10
			<b>2024 Base Improvement Total</b>	\$ 2,338,579.10
<b>SUPPLEMENTAL IMPROVMENTS (30% CONTINGENCY ADDED TO UNIT COST)</b>				
LEVELING COURSE	C.Y.	355	\$ 270.00	\$ 95,850.00
FARM CROSSING IMPROVEMENT	EACH	5	\$ 15,230.86	\$ 76,155.00
LIGHT POLE FOUNDATION REMOVED	EACH	6	\$ 1,300.00	\$ 7,800.00
MAJOR SLOPE EROSION PROTECTION	LS	1	\$ 20,800.00	\$ 20,800.00
DEER CROSSING EROSION PROTECTION	EACH	3	\$ 1,400.00	\$ 4,200.00
URBANA LAKE CONNECTION	LS	1	\$ 28,187.02	\$ 28,188.00
WEST LIBERTY TRAILHEAD CONNECTION	LS	1	\$ 58,295.36	\$ 58,296.00
CARTER AVE TRAILHEAD PARKING LOT AND CONNECTION	LS	1	\$ 22,870.66	\$ 22,871.00
TIMBER BIKE RAILING	FT	1450	\$ 50.00	\$ 72,500.00
			<b>SUBTOTAL, SUPPLEMENTAL IMPROVMENTS (30% CONTINGENCY ADDED TO UNIT COST)</b>	\$ 386,660.00
			<b>2024 Grand Total</b>	\$ 2,725,239.10

## Appendix D

### OUPS Request and Utility Owner List

OUPS Ticket #1

TWP Rd. 192 between TWP Rd 193 and SR 508



AT&T Transmission

CT Communications

Logan County Electric Coop

Centerpoint Energy/ Gridhawk

Brightspeed

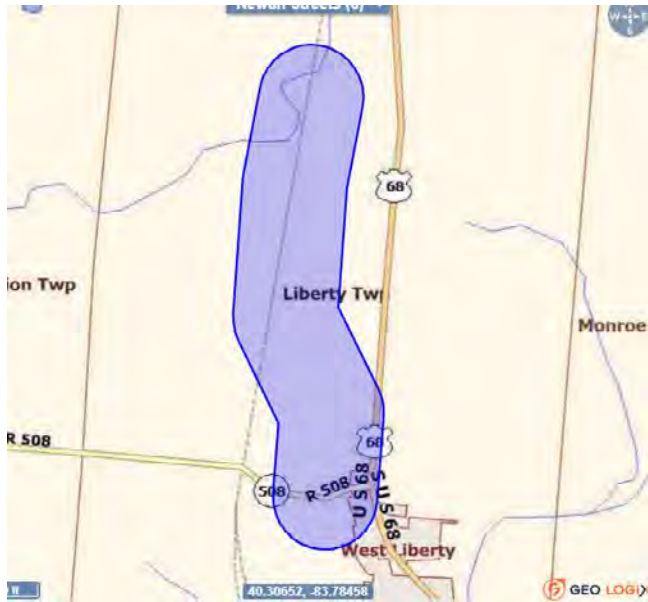
AES Ohio (Formerly Dayton Power & Light)

Lumen (Level 3 Communications)

Village of West Liberty

OUPS Ticket #2

TWP Rd. 188 between SR 508 and TWP Rd 190



AT&T Transmission

CT Communications

Fiber Farms

Lumen (Level 3 Communications)

Centerpoint Energy/ Gridhawk

Charter Communications (Spectrum/ Time Warner)

AES Ohio (Formerly Dayton Power & Light)

Logan County Electric Coop

Miami Valley Lighting

Village of West Liberty

OUPS Ticket #3

US 68 between TWP Rd 190 and Lake Ave



AT&T Transmission

City of Bellefontaine – Storm, Sewer, Water, Traffic

CT Communications

Fiber Farms

Lumen (Level 3 Communications)

Centerpoint Energy/ Gridhawk

Charter Communications (Spectrum/ Time Warner)

AES Ohio (Formerly Dayton Power & Light)

Logan County Electric Coop

Miami Valley Lighting

Zayo Fiber Solutions