



OHIO DEPARTMENT OF TRANSPORTATION

DISTRICT 12
5500 TRANSPORTATION BLVD. • GARFIELD HGTS., OH 44125 • 216-581-2100

Environmental Document

for

CUY US 422 16.20 Interchange PID 113889

Environmental Document Level: C2

Approved: 3/28/2022

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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.

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C2

PID:	113889
Project Sponsor:	Solon, City of
ODOT District:	12
Funding Source:	Federal
Private Funding:	No

Project Description:

The City of Solon has proposed a project that will include the reconfiguration of the US-422 interchange at Harper Road (CR-18) in Solon, Cuyahoga County, Ohio. Work will include the construction of a Diverging Diamond Interchange (DDI) to improve mobility, traffic flow, and safety. In addition, the proposed project will include the following:

- Removal of the US-422 west bound loop ramp.
- A newly constructed US-422 west bound ramp will be widened to two (2) lanes to allow for a left turn lane and a right lane onto Harper Road.
- Pavement along Harper Road will be removed and replaced with asphalt concrete pavement.
- The construction of a 6-foot-wide sidewalk on the west side and a 10-foot-wide dual-use-path on the east side of Harper Rd.

Mapping that depicts the project location and limits on the United States Geological Survey 7.5-Minute Topographic Quadrangle Mapping is included in the Project File/General/Project Information subsection.

The project will be constructed mostly within existing operational right-of-way; however, minor temporary (0.487 acres) and permanent (0.417 acres) right-of-way will be needed to complete the project. The Stage 2 Design plan sheets are included in the Project/File/General/Project Information subsection.

Electric, gas, water, sewer, lighting, and telecommunication utilities exist within the project study area. These utilities are located along overhead cables and underground conduits. An underground electric line, owned by First Energy, is located along the east side of Harper Road. The electric line is scheduled for relocation; however, plans are still in progress at this time. Overhead electric utilities will require some individual pole relocations to the construct the project. The water utility will require spot relocations to provide proper cover and clearance from the proposed storm sewer. Water distribution system improvements will also be included from the proposed storm sewer and will be included in the roadway construction drawings as the project progresses. Utility relocations will occur within the existing and new right of way. Utilities will not be permanently removed to construct the project. Coordination with the utility companies affected by the proposed construction activities was conducted for the project during the preliminary engineering phase and will continue during the detailed design phase.

The maintenance of traffic (MOT) for this project will be conducted in three phases:

Phase 1 A work zone traffic signal at the Harper Rd./Ramp 2/Ramp 4 intersection and the Harper Rd./Ramp 1/Ramp 3 intersection. Harper Rd will be closed north of the Ramp 1/Ramp 3/ Harper Rd intersection. Traffic will be detoured via Cannon Rd-> SOM Center Rd-> Solon Rd-> Bainbridge Rd. Traffic will be shifted to the east side of Harper Rd utilizing the existing pavement.

During Ramp 1 closure, traffic will be detoured from the North via Cannon Rd-> SOM Center Rd-> I-422 and from the South via Bainbridge Rd-> Solon Rd-> SOM Center Rd. During this closure roadway improvements up to and including the intermediate course and concrete island for Ramp 1 will be constructed. Traffic will be shifted to the left side of Ramp 2A. Roadway improvements up to and including the intermediate course to the right side of Ramp 2 will be constructed. Traffic will be shifted to the right side of Ramp 2A to include the intermediate course to the left side of Ramp 2.

Phase 2 Traffic will remain closed on Harper Rd and Ramp 1. Traffic will be shifted to the west side of Harper Rd and the newly constructed pavement will be utilized. Roadway improvements up to and including the intermediate course to the East side of Harper Rd will be constructed. Traffic will be maintained on the existing Ramp 3 utilizing the existing pavement and temporary pavement. Traffic will be shifted to the left side of Ramp 4 utilizing the existing pavement and temporary pavement. The contractor shall construct all roadway improvements up to and including



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the intermediate course to the right side of Ramp 4.

Traffic will be shifted to the right side of Ramp 4 utilizing the newly constructed pavement. Roadway improvements up to and including the intermediate course and the concrete island to the left side of Ramp 4 will be construction. Traffic will be maintained on existing Ramp 3 utilizing the existing pavement and the temporary pavement. Roadway improvements up to and including the intermediate course for Ramps 3A and 3B will be constructed. Traffic will be shifted East at the Harper Rd/Ramp 2/Ramp 4 intersection during the construction of the remaining concrete island.

Phase 3 Traffic on Harper Rd and all ramps within the project limits will be closed and traffic will be detoured as detailed in Sheets 26 -30 of the MOT. During the closures the proposed traffic signals will be installed and tested. Traffic will remain closed on Harper Rd and detoured via Bainbridge Rd -> Solon Rd -> SOM Center Rd -> Cannon Rd. Traffic will be shifted to the outside curb lanes for northbound and southbound traffic along Harper Rd. during the construction of center medians along Harper Rd. Traffic will be shifted toward the median of Ramp 3B during the construction of the curb ramp and remaining sidewalk along the East side of Harper Rd.

Phase 4 Traffic will remain closed on Harper Rd and detoured via Bainbridge Rd -> Solon Rd -> SOM Center Rd -> Cannon Rd. Traffic will be shifted to the right side of Ramp 3. The contractor shall construct all roadway improvements up to and including the intermediate course to the left side of Ramp 3. The traffic will be shifted to the left side of Ramp 3 and will include the intermediate course to the right side of Ramp 3.

Phase 5 Traffic on Harper Rd and all ramps within the project limits will be closed and traffic will be detoured as detailed in Sheets 26-30 of the MOT. During the closures the final asphalt course and the final pavement markings will be constructed. Pedestrian and property access will be maintained at all times during construction.

Based on information provided in the Regulated Materials Review (RMR) Screening, no sites within the project study area warranted further RMR investigation. ODOT reviewed the RMR Screening and on September 28, 2021, a determination was made that no further RMR or special material management is warranted for the project. The RMR documentation for the project can be found in the Project File/ESA/Reports subsection.

The Section 106 Records Check/Literature sure determined the project will not involve any architectural resources (OHIs) or known archaeological sites (OAls). No historic properties listed or eligible for the National Register are found in the proposed construction area or the area of potential effects (APE). Roadway upgrades, minor widenings, and improvements to divided highways and interchanges are project types exempt from further cultural resources consideration by the 11/8/17 Cultural Resource PA (Agreement 19319), if the project is not within the boundaries of any historic property or N.R. district. In accordance with Stipulation V(C)(1) and Appendix B of the Section 106 Programmatic Agreement executed on November 8, 2017 (Agreement No. 19319), amended on July 11, 2019, ODOT has determined that the proposed project is a type of undertaking that has 'minimal potential to cause effects' to historic properties and is not a part of a larger undertaking. See cultural resources documentation for the project in the Project File/Cultural Resources/Coordination subsection and the Cultural Resources Tab.

On 10/04/2021 (Revised 1/19/2022) a Level 1 Ecological Survey Report (ESR) was completed for the project. The proposed project will result in permanent impacts to two (2) Category 1 wetlands totaling 0.2 acres. The appropriate waterway permits will be needed prior to the construction of this project. In addition, the proposed project will impact approximately 0.13 acres of Suitable Wooded Habitat (SWH) for Federal and State listed bat species. SWH did not exhibit roosting characteristics and is located within 100' of existing edge of pavement. Coordination completed on August 12, 2021 with ODNR and USFWS, indicated that the project study area is located in an Indiana Bat swarming location. No other information provided by ODNR and USFWS would indicate that the proposed project would significantly impact federal threatened or endangered species habitat. See Project File/Ecological/Reports/Ecological Project.pdf and Ecological tab.

The project will not impact any other environmentally sensitive resources within the project study area.

Public comment received were addressed and responded too. No design revisions were made based on public comments received. The City has determined to proceed with the project as currently designed.

See continuation of the project description in the Project File/General/Project Information subsection as Project Description Continued.pdf.

STIP Reference #:

113889: 21-24 STIP

Select the appropriate project type:

(27) Highway safety or traffic operations improvement projects, including the installation of ramp metering control devices and lighting, if the project meets the constraints in paragraph (e) of this section. **Examples include: Lane reduction ("road diet") changes provided traffic analysis is completed; Railroad projects that close at-grade crossings to improve safety or traffic operations.**



In accordance with 23 CFR 771.117(e), the proposed project cannot be processed as a C2 CE, if it involves -

1. a. Acquisition of more than a minor amount of right-of-way
2. b. Residential or non-residential displacements
3. c. A Coast Guard, Individual Section 404 and/or a Section 10 permit
4. d. A Section 106 finding of *Adverse Effect*
5. e. A Section 4(f) Programmatic or Individual Evaluation
6. f. A finding of *May Affect, Likely to Adversely Affect* to Threatened and Endangered Species
7. g. Construction of temporary access, or the closure of existing road, bridge, or ramps, that would result in major traffic disruptions
8. h. Changes in access control
9. i. Floodplain encroachment other than functionally dependent uses (e.g., bridges, wetlands) or actions that facilitate open space use (e.g., recreational trails, bicycle and pedestrian paths)
10. j. Construction activities in, across or adjacent to a river component designated or proposed for inclusion in the National System of Wild and Scenic Rivers
11. k. No minor public or agency controversy on environmental grounds (no opposition from any organized groups or agencies and no unresolved environmental coordination)
12. l. If an EJ Analysis Report is required, the project must be processed as a D-level CE or higher level document

For certification purposes, documentation is required to illustrate no significant impacts will occur to the following environmental resources and that no unusual circumstances exist that would warrant a higher level of NEPA document. Upload all supporting documentation to the project file.

Waterways:	Present; No Coast Guard, Individual 404, and/or Section 10 Permit required
Waterways Permit Type:	Permit Determination and/or Permit Application Approval Pending
Isolated Wetland Permit	No
Will any wetlands be impacted?	Yes
Endangered Species:	Present; No finding of May Affect, Likely to Adversely Affect
Endangered Species - Coordination	May Affect, Not Likely to Adversely Affect
Endangered Species - Coordination Date	03/04/2022
Endangered Species - Critical Habitat Present/Impacted	
Indiana bat	
Northern long-eared bat	



Endangered Species - Other Critical Habitat Present/Impacted: No

100-Year Floodplain: Encroachment Within the SFHA is a Functionally Dependent Use

EO 11988/NFIP Coordination and Documentation Completed: Yes

NFIP Local Floodplain Coordinator Notification Date: 12/09/2021

Section 4(f): Not present

Section 6(f): Not present

Cultural Resources: Not Present

Cultural Resources Coordination - ODOT Approval/SHPO Concurrence Date: 11/05/2021

Since no Tribe was interested in this project based on their customized preferences, no further Tribal consultation was conducted.

Projects that meet C2 criteria are not anticipated to have impacts to the following environmental resources. If resources are present, documentation is only required if there is a potential for impacts.

Air Quality: Studies Not Required

Air Quality - Coordination with OES: No

Noise: Studies Not Required

Noise Coordination - OES Approval Date: 03/17/2022

Hazardous Materials - ESA Screening Conducted: Yes

Hazardous Materials - OES Approval Date: 09/28/2021

Phase I ESA Warranted Based on Coordination with OES: No Further Studies Warranted

Farmland: Urbanized Area; No Impacts in Accordance With the Farmland MOU and 7 CFR 658

Scenic Rivers: No National Wild and Scenic River Within 1000 Feet of the Proposed Project Area

Projects that meet C2 criteria must be in accordance with ODOT's UP Guidance and activities conducted for Public Involvement are commensurate to the project's type and scope of work.

Underserved Populations: Present; No UPIAR Required, Does Not Exceed UP Guidance Criteria, and No Issues Raised During Public Involvement

Identified Underserved Populations

Census Block Group #	% Minority	% Low Income	% Older Adults	% Limited English Proficiency (LEP)
152112	27	20	38	0
152110	15	10	21	6



Underserved Populations Remarks

The proposed project will have no disproportionately high and adverse effects to minority or low-income populations or disparate impacts to a Title VI population based upon the table above, the attached mapping, and the answers to the questions above. No concerns related to impacts on Environmental Justice or Title VI populations were raised as a result of public involvement activities conducted as part of the proposed project. Therefore, in accordance with the protections of Executive Order 12898, FHWA Order 6640.23A and Title VI of the Civil Rights Act of 1964, no further analysis is required.

Based on the above findings an UPIAR is not required.

Public Involvement:

Minimum PI Requirements Met; No
Minor Public or Agency Controversy
on Environmental Grounds

Environmental Commitments

Yes



Ecological

Wetlands

ESR Name:	Wetland ID:	Hydrologic connection:	Wetland category:	Estimated total size (ac.):	Total estimated impact area by alternative (ac.):
CUY-US 422-16.20 Interchange	Wetland 1	Adjacent	Category 1	0.069	0
	Wetland 2	Adjacent	Category 1	0.022	0
	Wetland 3	Adjacent	Category 1	0.055	0.05
	Wetland 4	Isolated	Category 1	0.037	0.0
	Wetland 5	Isolated	Category 1	0.047	0
	Wetland 6	Adjacent	Category 1	0.234	0.15

Has an Approved and/or Preliminary Jurisdictional Determination been made by the USACE? No

Total impact to all wetlands (ac.): 0.20

Total acres of non-isolated wetlands impacted: 0.20

Total acres of isolated wetlands impacted: 0.0

In accordance with Executive Order 11990 - USDOT Order 5660.1A, this Wetland Finding has been prepared to document that wetlands have been avoided to the extent possible to minimize the long and short term adverse impacts associated with the destruction or modification of wetlands, and to document that there are no practicable alternatives to avoid construction in wetlands.

An analysis of the 'Do Nothing' alternative indicates that it is not practicable because (check all that apply):

It Would Not Correct Existing or Projected Capacity Deficiencies.

It Would Not Correct Safety Hazards.

An analysis of improvements that avoid all wetland impacts indicates that they are not practicable because (check all that apply):

They Will Substantially Increase Project Costs.

They Will Result in Unique Engineering, Traffic, Maintenance, or Safety Problems.

They Will Not Meet the Identified Needs of the Project.

Include justification supporting the decisions noted above:

The purpose of the U.S. 422/Harper Road Interchange Modification is to provide long term operation and safety improvements by addressing the ongoing congestion issues along Harper Road. The proposed improvements include the



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construction of a Diverging Diamond Interchange (DDI) and is intended to minimize implementation costs by avoiding the reconstruction of existing bridge structures located along US-422. The proposed reconfiguration of Harper Road to a DDI allows the removal of the southbound left-turn lane at the Harper Road/US-422 eastbound ramps intersection. During this process a northbound right turn lane onto US-422 eastbound will be needed in order to remove vehicles from the future stream of traffic. This will allow vehicles to move through the DDI without inhibiting the flow of traffic. This recommended DDI design will result in additional capacity to accommodate present and future traffic demand and improve safety by reducing vehicular collisions caused by congestion. The construction of the DDI along with the addition of stormwater improvements will impact Wetlands 3 and 6 as outlined in the Level 1 ESR. Changing the design will not meet the identified needs of the project or correct safety hazards and will result in a substantial increase in project costs.

All practicable measures have been considered and incorporated into the project design to avoid, minimize, wetland impacts. The wetland impact minimization measures that will be followed for the project are documented in the environmental commitments for the project. Wetland mitigation for unavoidable impacts will be provided if required by the Clean Water Act or Ohio isolated wetland law, as regulated by the US Army Corps of Engineers and Ohio EPA regulations (33 CFR parts 325 and 332 and 40 CFR part 230, and OAC 3745-01-54), and (ORC 6111.027). No practicable alternatives exist for the proposed construction in wetlands, and the proposed action includes all practicable measures to minimize harm to the wetlands that may result from such use.

Remarks:

During the design phase, impacts to wetlands have been minimalized as much as possible. All practicable measures will be implemented to avoid additional wetland impacts during the construction of this project.



Environmental Commitments

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- 1) The Project Designer shall incorporate the following note into the plans: NO TREES SHALL BE REMOVED UNDER THIS PROJECT FROM APRIL 1 THROUGH SEPTEMBER 30. ALL NECESSARY TREE REMOVAL SHALL OCCUR FROM OCTOBER 1 THROUGH MARCH 31. THIS REQUIREMENT IS NECESSARY TO AVOID AND MINIMIZE IMPACTS TO FEDERALLY AND STATE LISTED BAT SPECIES AS REQUIRED BY THE ENDANGERED SPECIES ACT. FOR THE PURPOSE OF THIS NOTE, A TREE IS DEFINED AS A LIVE, DYING, OR DEAD WOODY PLANT WITH A TRUNK THREE INCHES OR GREATER IN DIAMETER AT A HEIGHT OF 4.5 FEET ABOVE THE GROUND SURFACE, AND WITH A MINIMUM HEIGHT OF 13 FEET.
- 2) The project is located within a FEMA flood zone and will be designed to comply with all applicable Local, State, and Federal floodplain protection standards. Appropriate floodplain permitting shall be obtained prior to the start of construction.
- 3) Do not perform any work within the jurisdictional boundaries of any waterway, including wetlands, until the City of Solon obtains the necessary waterway permit(s). Work includes the placement of any temporary or permanent fills.
- 4) Ensure tree removal is limited to that specified in project plans by clearly marking clearing limits. Ensure that contractors understand clearing limits and how they are marked in the field.
- 5) Modify all phases/aspects of the project (e.g., temporary work areas, alignments) to avoid tree removal in excess of what is required to implement the project safely.



Preparers and Approvals

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Eric Lopez

Approvals & Electronic Signatures

Approved & Electronically Signed By:	Approval Date:
Mark Carpenter (TRANS ENGR 3)	3/28/2022



Appendix

General

Aerial Map.pdf

County Map.pdf

Project Description Continued.pdf

USGS Quadrangle Topographical Map.pdf

ESA

OES Recommendations - Screening.pdf

Regulated Materials Review Form.pdf

Cultural Resources

Minimal Potential to Cause Effect - Appendix B

Records Check.pdf

Section 106 Scoping Request Form.pdf

Ecological

ODNR Scenic River MOA Conditions

USFWS/ODNR Ecological MOA Conditions

Other Resources

Site Specific Resource Mapping.pdf

Sole Source Aquifer Mapping.pdf

Water Source Protection Area Map.pdf

Underserved Populations

Census Mapping.pdf

Underserved Populations Documentation Form.pdf

Public Involvement

Press Release 1.pdf

Press Release 2.pdf

Project Exhibit .pdf

Property Owner Notification Letter.pdf

Public Comments Received.pdf

Public Notification Mailing List.pdf



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Response to Public Comments.pdf

Stakeholder Contact List.pdf

Permits

Coordination with Local Floodplain Administrator.pdf

FEMA FIRM.pdf

LD-51 Attachments .pdf

Letter of Compliance - ODOT Form LD-51.pdf

No Rise Certification - ODOT Form LD-50.pdf