



OHIO DEPARTMENT OF TRANSPORTATION

Level 1 Ecological Survey Report

(Version: 10-19)

for

LOR IR 0090 10.76 PID 107714

ESR: LOR-90-10.76

Accepted: 5/31/2024 7:28:32 AM

Report author: Erin VanNort

Email: evannort@trccompanies.com

Affiliation: TRC Companies

Phone: (216) 347-3342

I certify that I have personally examined and am familiar with the information in this report and all attachments, and that the data collection was supervised by an individual(s) prequalified to conduct ecological surveys for ODOT or by trained ODOT Environmental staff. Based on my inquiry of those persons immediately responsible for obtaining the information contained in the report, I believe that the information has been collected in accordance with the ODOT Ecological Manual current at the time of the report preparation, and is true, accurate, and complete.

Responsible party name: Erin Van Nort

Responsible party title: Senior Wetland Scientist

Table of Contents

General Project Information..... 3
General Project..... 3
Aquatic Ecology..... 8
Streams..... 8
Wetlands..... 12
Ditches..... 15
Ponds, Lakes, Reservoirs, Retention/Detention Basins..... 16
Mussels..... 17
Terrestrial Ecology..... 18
Vegetative Communities and Land Cover..... 18
Birds..... 19
Listed Species..... 20
Federally Listed Species..... 20
Federally Listed Bats..... 20
Bald Eagles..... 21
Other Federally Listed Species..... 21
State Listed Species..... 23
Literature Cited..... 29
Appendices..... 31

1 General Project Information

1.1 Project Information

Reason for amended ESR:

The ESR was amended incorporate comments from the United States Army Corps of Engineers (USACE) which changed the jurisdictional status of features within the project area. The updated jurisdictional status of the features is reflected in this updated ESR.

<p>Project Location Details:</p> <p>County(ies): LORAIN Township(s): Elyria Latitude (DD.ddddd): 41.41974 Longitude (-DD.ddddd): -82.08468 Study area size (ac.): 421.42</p>
<p>Survey Conditions:</p> <p>Field investigator name(s): Erin Van Nort, Jenna Slabe, Emma Given, Michael Whitacre Date(s) of survey work: 07/31/2023, 08/01/2023, 08/02/2023, 08/04/2023, 08/08/2023, 08/10/2023, 08/11/2023, 08/14/2023, 08/15/2023, 08/03/2023, 08/07/2023, 08/09/2023, 04/11/2024</p>
<p>Survey Area Designations:</p> <p>USGS quadrangle(s): Lorain, Avon Impacting or adjacent to ODNR property: No Within the Coastal Zone Management area: No</p> <p>Project description: LOR-90-10.76 (PID 107714) is a major rehabilitation of I-90 including complete pavement replacement and adding one lane in each direction (inside median) from the merge/diverge with State Route 2 (SR 2) to the State Route 611 (SR 611) interchange. The project will include placement of noise walls along existing roadway within ODOT right-of-way. During the project, 33 culverts will be repaired (no replacement), all within existing ODOT right-of-way as well. This project is located in Elyria Township, the City of Elyria, Sheffield Village, and the City of Avon, Lorain County, Ohio. The project limits on I-90 will be from the Ohio Turnpike Toll Booth to the existing 6-lane section at the SR 611 interchange, a distance of roughly eight (8) miles. The section of I-90 between the Ohio Turnpike Toll Booth to SR 2 will be repaved but will remain a 4-lane roadway. The project will also involve some bridge work (resurfacing) and full replacement of the existing right-of-way fence. This project is a design build and as such no alternatives have been developed and all water resources have been assumed impacted with the exception of the Black River and French Creek. The Black River is a Group 2 mussel stream and French Creek has a watershed greater than 5 square miles. No mussel surveys and no mussel reconnaissance have been performed as no work is proposed within the Black River and French Creek and is why "No Streams with 5 mile drainage area or greater" was chosen for Line 187 below.</p>

List of Project Alternatives:

Alternative name	Area of construction limits (ac.)	Preferred alternative
Design Build 1	421.42	Yes

2 Aquatic Ecology

2.1 Streams:

Streams present: Yes

Total length of streams within the project study area (ft.): 14354

Streams:

Stream name	Latitude (DD.ddddd)	Longitude (-DD.ddddd)	Photo ID	Drainage area (sq. mi.)	OEPA River Mile (if applicable)	12-Digit HUC	Captured within the roadway ditch	Stream hydrology type	USACE flow characteristics	Habitat assessment	Habitat score	pH value	Salamanders observed	Fish observed	Aquatic macro-invertebrates observed	OEPA aquatic life use designation	Provisional or official designation	Antidegradation designation	401 WQC for nationwide permit eligibility	National or state scenic rivers or NRI streams	Potential in-water work restriction based on proximity to scenic river	Designation for potential in-water work restriction	Length within open channel (ft.) in the study area	Length within existing culvert (ft.) in the study area	Total length in study area (ft.)	Alternative Name	Permanent estimated impact length (ft.) by alternative construction limits (Include temporary impact within the permanent impact area) (if known)	Temporary estimated impact length (ft.) by alternative construction limits (Only include temporary impact outside the permanent impact area) (if known)	Total estimated impact length (ft.) for the preferred alternative construction limits
01 Martin Run	41.40185	-82.15062	11,12,13	0.63		041100010703	No	Perennial	RPW-Perennial	HHEI	69	7.8	Not Surveyed	Not Surveyed	Not Surveyed	WWH	Official from OAC	General High Quality Water	Eligible	No		None Applicable	97	278	375	Design Build 1	97	0	97

Flow path to TNW:
Stream 1 Martin Run -> Lake Erie
Details on stream impact or other information (if known):
Impacts are assumed for the length of stream delineated within right of way since LOR-90-10.76 is a design build project.

02	41.40286	-82.14566	29, 30, 31	0.01	N/A	041100010703	No	Perennial	RPW-Perennial	HHEI	63	9	Not Surveyed	Not Surveyed	Not Surveyed	Small Drainage Warmwater (Class II)	Provisional Based on Project Field Assessment	General High Quality Water	Eligible	No		None Applicable	60	600	660	Design Build 1	60	0	60
----	----------	-----------	------------	------	-----	--------------	----	-----------	---------------	------	----	---	--------------	--------------	--------------	-------------------------------------	---	----------------------------	----------	----	--	-----------------	----	-----	-----	----------------	----	---	----

Flow path to TNW:
Stream 2 -> Stream 1 Martin Run -> Lake Erie
Details on stream impact or other information (if known):
Impacts are assumed for the length of stream delineated within right of way since LOR-90-10.76 is a design build project.

04	41.40331	-82.13316	50, 51, 52	0.09	N/A	041100010602	No	Intermittent	RPW-Seasonal	HHEI	62	8.2	Not Surveyed	Not Surveyed	Not Surveyed	Small Drainage Warmwater (Class II)	Provisional Based on Project Field Assessment	General High Quality Water	Ineligible	No		None Applicable	66	255	321	Design Build 1	66	0	66
----	----------	-----------	------------	------	-----	--------------	----	--------------	--------------	------	----	-----	--------------	--------------	--------------	-------------------------------------	---	----------------------------	------------	----	--	-----------------	----	-----	-----	----------------	----	---	----

Flow path to TNW:
Stream 4 -> Stream 25 -> Stream 2 -> Black River
Details on stream impact or other information (if known):
Impacts are assumed for the length of stream delineated within right of way since LOR-90-10.76 is a design build project.

06	41.40352	-82.11432	85, 86, 87	1.74	.3	041100010602	No	Perennial	RPW-Perennial	QHEI	59.5	8.2	Not Surveyed	Not Surveyed	Not Surveyed	MWH	Provisional Based on Project Field Assessment	General High Quality Water	Ineligible	No		None Applicable	361	754	1115	Design Build 1	361	0	361
----	----------	-----------	------------	------	----	--------------	----	-----------	---------------	------	------	-----	--------------	--------------	--------------	-----	---	----------------------------	------------	----	--	-----------------	-----	-----	------	----------------	-----	---	-----

Flow path to TNW:
Stream 6 -> Stream 7-> Black River
Details on stream impact or other information (if known):
Impacts are assumed for the length of stream delineated within right of way since LOR-90-10.76 is a design build project.

07	41.40444	-82.11135	104, 105, 106	0.17	0.7	041100010602	No	Perennial	RPW-Perennial	HHEI	65	8.4	Not Surveyed	Not Surveyed	Not Surveyed	Small Drainage Warmwater (Class II)	Provisional Based on Project Field Assessment	General High Quality Water	Ineligible	No		None Applicable	65	342	407	Design Build 1	65	0	65
----	----------	-----------	---------------	------	-----	--------------	----	-----------	---------------	------	----	-----	--------------	--------------	--------------	-------------------------------------	---	----------------------------	------------	----	--	-----------------	----	-----	-----	----------------	----	---	----

Flow path to TNW:
Stream 7 -> Black River
Details on stream impact or other information (if known):
Impacts are assumed for the length of stream delineated within right of way since LOR-90-10.76 is a design build project.

Stream name	Latitude (DD.ddddd)	Longitude (-DD.ddddd)	Photo ID	Drainage area (sq. mi.)	OEPA River Mile (if applicable)	12-Digit HUC	Captured within the roadway ditch	Stream hydrology type	USACE flow characteristics	Habitat assessment	Habitat score	pH value	Salamanders observed	Fish observed	Aquatic macro-invertebrates observed	OEPA aquatic life use designation	Provisional or official designation	Antidegradation designation	401 WQC for nationwide permit eligibility	National or state scenic rivers or NRI streams	Potential in-water work restriction based on proximity to scenic river	Designation for potential in-water work restriction	Length within open channel (ft.) in the study area	Length within existing culvert (ft.) in the study area	Total length in study area (ft.)	Alternative Name	Permanent estimated impact length (ft.) by alternative construction limits (Include temporary impact within the permanent impact area) (if known)	Temporary estimated impact length (ft.) by alternative construction limits (Only include temporary impact outside the permanent impact area) (if known)	Total estimated impact length (ft.) for the preferred alternative construction limits
08	41.40706	-82.10246	116, 117, 118	0.49	0.3	041100010602	No	Perennial	RPW-Perennial	HHEI	65	8.2	Not Surveyed	Not Surveyed	Not Surveyed	Small Drainage Warmwater (Class II)	Provisional Based on Project Field Assessment	General High Quality Water	Ineligible	No		None Applicable	290	305	595	Design Build 1	290	0	290

Flow path to TNW:
Stream 8 -> Black River
Details on stream impact or other information (if known):
Impacts are assumed for the length of stream delineated within right of way since LOR-90-10.76 is a design build project.

10 Black River	41.41119	-82.10053	132, 133, 134	414	9.5	041100010602	No	Perennial	TNW	QHEI	68.7	8.2	Not Surveyed	Not Surveyed	Not Surveyed	WWH	Official from OAC	General High Quality Water	Ineligible	No		WWH Greater than 20 sq. mi. Drainage Area	190	0	190	Design Build 1	0	0	0
----------------	----------	-----------	---------------	-----	-----	--------------	----	-----------	-----	------	------	-----	--------------	--------------	--------------	-----	-------------------	----------------------------	------------	----	--	---	-----	---	-----	----------------	---	---	---

Flow path to TNW:
Stream 10 Black River is a TNW
Details on stream impact or other information (if known):
No work below OHWM is expected

11	41.41280	-82.09953	139,140, 141	0.01		041100010602	No	Perennial	RPW-Perennial	HHEI	59	7.8	Not Surveyed	Not Surveyed	Not Surveyed	Small Drainage Warmwater (Class II)	Provisional Based on Project Field Assessment	General High Quality Water	Ineligible	No		None Applicable	89	0	89	Design Build 1	89	0	89
----	----------	-----------	--------------	------	--	--------------	----	-----------	---------------	------	----	-----	--------------	--------------	--------------	-------------------------------------	---	----------------------------	------------	----	--	-----------------	----	---	----	----------------	----	---	----

Flow path to TNW:
Stream 11 -> Black River
Details on stream impact or other information (if known):
Impacts are assumed for the length of stream delineated within right of way since LOR-90-10.76 is a design build project.

12	41.41185	-82.09845	149, 150, 151	0.01	N/A	041100010602	No	Intermittent	RPW-Seasonal	HHEI	22	8.1	Not Surveyed	Not Surveyed	Not Surveyed	Ephemeral Stream (Class I)	Provisional Based on Project Field Assessment	General High Quality Water	Ineligible	No		None Applicable	2212	319	2531	Design Build 1	2212	0	2212
----	----------	-----------	---------------	------	-----	--------------	----	--------------	--------------	------	----	-----	--------------	--------------	--------------	----------------------------	---	----------------------------	------------	----	--	-----------------	------	-----	------	----------------	------	---	------

Flow path to TNW:
Stream 12 -> Black River
Details on stream impact or other information (if known):
Impacts are assumed for the length of stream delineated within right of way since LOR-90-10.76 is a design build project.

13	41.40816	-82.10076	123, 124, 125	0.09	N/A	041100010602	No	Intermittent	RPW-Seasonal	HHEI	56	8.1	Not Surveyed	Not Surveyed	Not Surveyed	Small Drainage Warmwater (Class II)	Provisional Based on Project Field Assessment	General High Quality Water	Ineligible	No		None Applicable	141	80	221	Design Build 1	141	0	141
----	----------	-----------	---------------	------	-----	--------------	----	--------------	--------------	------	----	-----	--------------	--------------	--------------	-------------------------------------	---	----------------------------	------------	----	--	-----------------	-----	----	-----	----------------	-----	---	-----

Flow path to TNW:
Stream 13 -> Stream 31 -> Stream 8 -> Black River
Details on stream impact or other information (if known):
Impacts are assumed for the length of stream delineated within right of way since LOR-90-10.76 is a design build project.

14	41.40874	-82.10056	129, 130, 131	0.01	N/A	041100010602	No	Ephemeral	Non-RPW	HHEI	31	N/A	Not Surveyed	Not Surveyed	Not Surveyed	Small Drainage Warmwater (Class II)	Provisional Based on Project Field Assessment	General High Quality Water	Ineligible	No		None Applicable	56	0	56	Design Build 1	56	0	56
----	----------	-----------	---------------	------	-----	--------------	----	-----------	---------	------	----	-----	--------------	--------------	--------------	-------------------------------------	---	----------------------------	------------	----	--	-----------------	----	---	----	----------------	----	---	----

Flow path to TNW:
Stream 14 -> Stream 13 -> Stream 31 -> Stream 8 -> Black River
Details on stream impact or other information (if known):
Impacts are assumed for the length of stream delineated within right of way since LOR-90-10.76 is a design build project.

Stream name	Latitude (DD.ddddd)	Longitude (-DD.ddddd)	Photo ID	Drainage area (sq. mi.)	OEPA River Mile (if applicable)	12-Digit HUC	Captured within the roadway ditch	Stream hydrology type	USACE flow characteristics	Habitat assessment	Habitat score	pH value	Salamanders observed	Fish observed	Aquatic macro-invertebrates observed	OEPA aquatic life use designation	Provisional or official designation	Antidegradation designation	401 WQC for nationwide permit eligibility	National or state scenic rivers or NRI streams	Potential in-water work restriction based on proximity to scenic river	Designation for potential in-water work restriction	Length within open channel (ft.) in the study area	Length within existing culvert (ft.) in the study area	Total length in study area (ft.)	Alternative Name	Permanent estimated impact length (ft.) by alternative construction limits (Include temporary impact within the permanent impact area) (if known)	Temporary estimated impact length (ft.) by alternative construction limits (Only include temporary impact outside the permanent impact area) (if known)	Total estimated impact length (ft.) for the preferred alternative construction limits
16	41.41884	-82.09430	156, 157, 158	0.01	N/A	041100010602	No	Ephemeral	Non-RPW	HHEI	17	8.1	Not Surveyed	Not Surveyed	Not Surveyed	Ephemeral Stream (Class I)	Provisional Based on Project Field Assessment	General High Quality Water	Ineligible	No		None Applicable	40	0	40	Design Build 1	40	0	40

Flow path to TNW:
Stream 16 -> Stream 12 -> Black River
Details on stream impact or other information (if known):
Impacts are assumed for the length of stream delineated within right of way since LOR-90-10.76 is a design build project.

17	41.41807	-82.08521	161, 162, 163	0.06	N/A	041100010602	No	Intermittent	RPW-Seasonal	HHEI	60	8.1	Not Surveyed	Not Surveyed	Not Surveyed	Small Drainage Warmwater (Class II)	Provisional Based on Project Field Assessment	General High Quality Water	Ineligible	No		None Applicable	95	493	588	Design Build 1	95	0	95
----	----------	-----------	---------------	------	-----	--------------	----	--------------	--------------	------	----	-----	--------------	--------------	--------------	-------------------------------------	---	----------------------------	------------	----	--	-----------------	----	-----	-----	----------------	----	---	----

Flow path to TNW:
Stream 17 -> Black River
Details on stream impact or other information (if known):
Impacts are assumed for the length of stream delineated within right of way since LOR-90-10.76 is a design build project.

18 Walker Ditch	41.44729	-82.07189	191, 192, 193	0.75	N/A	041100010601	No	Perennial	RPW-Perennial	HHEI	68	7.7	Not Surveyed	Not Surveyed	Not Surveyed	Small Drainage Warmwater (Class II)	Provisional Based on Project Field Assessment	General High Quality Water	Potentially Eligible	No		None Applicable	150	272	422	Design Build 1	150	0	150
-----------------	----------	-----------	---------------	------	-----	--------------	----	-----------	---------------	------	----	-----	--------------	--------------	--------------	-------------------------------------	---	----------------------------	----------------------	----	--	-----------------	-----	-----	-----	----------------	-----	---	-----

Flow path to TNW:
Stream 18 Walker Ditch -> French Creek -> Black River
Details on stream impact or other information (if known):
Impacts are assumed for the length of stream delineated within right of way since LOR-90-10.76 is a design build project.

19 French Creek	41.46094	-82.05695	207, 208, 209	26.2	4.5	041100010601	No	Perennial	RPW-Perennial	QHEI	64	8.5	Not Surveyed	Not Surveyed	Not Surveyed	WWH	Official from OAC	General High Quality Water	Potentially Eligible	No		WWH Greater than 20 sq. mi. Drainage Area	385	0	385	Design Build 1	0	0	0
-----------------	----------	-----------	---------------	------	-----	--------------	----	-----------	---------------	------	----	-----	--------------	--------------	--------------	-----	-------------------	----------------------------	----------------------	----	--	---	-----	---	-----	----------------	---	---	---

Flow path to TNW:
Stream 19 French Creek -> Black River
Details on stream impact or other information (if known):
no work below OHWM is expected

21	41.45267	-82.06748	199, 200, 201	0.01	N/A	041100010601	No	Perennial	RPW-Perennial	HHEI	54	7.8	Not Surveyed	Not Surveyed	Not Surveyed	Small Drainage Warmwater (Class II)	Provisional Based on Project Field Assessment	General High Quality Water	Potentially Eligible	No		None Applicable	79	289	368	Design Build 1	79	0	79
----	----------	-----------	---------------	------	-----	--------------	----	-----------	---------------	------	----	-----	--------------	--------------	--------------	-------------------------------------	---	----------------------------	----------------------	----	--	-----------------	----	-----	-----	----------------	----	---	----

Flow path to TNW:
Stream 21 -> Walker Ditch -> French Creek -> Black River
Details on stream impact or other information (if known):
Impacts are assumed for the length of stream delineated within right of way since LOR-90-10.76 is a design build project.

22 Kline Ditch	41.45624	-82.06324	203, 204, 205	2.79	0.7	041100010601	No	Perennial	RPW-Perennial	QHEI	51	8.2	Not Surveyed	Not Surveyed	Not Surveyed	MWH	Provisional Based on Project Field Assessment	General High Quality Water	Potentially Eligible	No		None Applicable	70	238	308	Design Build 1	70	0	70
----------------	----------	-----------	---------------	------	-----	--------------	----	-----------	---------------	------	----	-----	--------------	--------------	--------------	-----	---	----------------------------	----------------------	----	--	-----------------	----	-----	-----	----------------	----	---	----

Flow path to TNW:
Stream 22 Kline Ditch -> French Creek -> Black River
Details on stream impact or other information (if known):
Impacts are assumed for the length of stream delineated within right of way since LOR-90-10.76 is a design build project.

Stream name	Latitude (DD.ddddd)	Longitude (-DD.ddddd)	Photo ID	Drainage area (sq. mi.)	OEPA River Mile (if applicable)	12-Digit HUC	Captured within the roadway ditch	Stream hydrology type	USACE flow characteristics	Habitat assessment	Habitat score	pH value	Salamanders observed	Fish observed	Aquatic macro-invertebrates observed	OEPA aquatic life use designation	Provisional or official designation	Antidegradation designation	401 WQC for nationwide permit eligibility	National or state scenic rivers or NRI streams	Potential in-water work restriction based on proximity to scenic river	Designation for potential in-water work restriction	Length within open channel (ft.) in the study area	Length within existing culvert (ft.) in the study area	Total length in study area (ft.)	Alternative Name	Permanent estimated impact length (ft.) by alternative construction limits (Include temporary impact within the permanent impact area) (if known)	Temporary estimated impact length (ft.) by alternative construction limits (Only include temporary impact outside the permanent impact area) (if known)	Total estimated impact length (ft.) for the preferred alternative construction limits
23 Jungbluth Ditch	41.43742	-82.07952	183, 184, 185	3.36	2.5	041100010601	No	Perennial	RPW-Perennial	QHEI	54.5	8.2	Not Surveyed	Not Surveyed	Not Surveyed	MWH	Provisional Based on Project Field Assessment	General High Quality Water	Potentially Eligible	No		None Applicable	135	251	386	Design Build 1	135	0	135

Flow path to TNW:
Stream 23 Jungbluth Ditch -> French Creek -> Black River
Details on stream impact or other information (if known):
Impacts are assumed for the length of stream delineated within right of way since LOR-90-10.76 is a design build project.

25 (PER)	41.40636	-82.11866	74, 75, 76	0.33	N/A	041100010602	No	Perennial	RPW-Perennial	HHEI	51	7.8	Not Surveyed	Not Surveyed	Not Surveyed	Small Drainage Warmwater (Class II)	Provisional Based on Project Field Assessment	General High Quality Water	Ineligible	No		None Applicable	3473	298	3771	Design Build 1	3473	0	3473
----------	----------	-----------	------------	------	-----	--------------	----	-----------	---------------	------	----	-----	--------------	--------------	--------------	-------------------------------------	---	----------------------------	------------	----	--	-----------------	------	-----	------	----------------	------	---	------

Flow path to TNW:
Stream 25 -> Unnamed Direct Tributary -> Black River
Details on stream impact or other information (if known):
Impacts are assumed for the length of stream delineated within right of way since LOR-90-10.76 is a design build project.

26	41.40640	-82.11897	68, 69, 70	0.01	N/A	041100010602	No	Ephemeral	Non-RPW	HHEI	12	N/A	Not Surveyed	Not Surveyed	Not Surveyed	Ephemeral Stream (Class I)	Provisional Based on Project Field Assessment	General High Quality Water	Ineligible	No		None Applicable	153	0	153	Design Build 1	153	0	153
----	----------	-----------	------------	------	-----	--------------	----	-----------	---------	------	----	-----	--------------	--------------	--------------	----------------------------	---	----------------------------	------------	----	--	-----------------	-----	---	-----	----------------	-----	---	-----

Flow path to TNW:
Stream 26 -> Stream 25 -> Unnamed Direct Tributary -> Black River
Details on stream impact or other information (if known):
Impacts are assumed for the length of stream delineated within right of way since LOR-90-10.76 is a design build project.

27	41.40590	-82.11995	71, 72, 73	0.01	N/A	041100010602	No	Ephemeral	Non-RPW	HHEI	18	7.8	Not Surveyed	Not Surveyed	Not Surveyed	Ephemeral Stream (Class I)	Provisional Based on Project Field Assessment	General High Quality Water	Ineligible	No		None Applicable	33	0	33	Design Build 1	33	0	33
----	----------	-----------	------------	------	-----	--------------	----	-----------	---------	------	----	-----	--------------	--------------	--------------	----------------------------	---	----------------------------	------------	----	--	-----------------	----	---	----	----------------	----	---	----

Flow path to TNW:
Stream 27 -> Stream 25 -> Unnamed Direct Tributary -> Black River
Details on stream impact or other information (if known):
Impacts are assumed for the length of stream delineated within right of way since LOR-90-10.76 is a design build project.

28	41.40539	-82.12056	61, 62, 63	0.06	N/A	041100010602	No	Ephemeral	Non-RPW	HHEI	28	7.8	Not Surveyed	Not Surveyed	Not Surveyed	Ephemeral Stream (Class I)	Provisional Based on Project Field Assessment	General High Quality Water	Ineligible	No		None Applicable	59	0	59	Design Build 1	59	0	59
----	----------	-----------	------------	------	-----	--------------	----	-----------	---------	------	----	-----	--------------	--------------	--------------	----------------------------	---	----------------------------	------------	----	--	-----------------	----	---	----	----------------	----	---	----

Flow path to TNW:
Stream 28 -> Stream 25 -> Unnamed Direct Tributary -> Black River
Details on stream impact or other information (if known):
Impacts are assumed for the length of stream delineated within right of way since LOR-90-10.76 is a design build project.

31	41.40892	-82.10179	126, 127, 128	0.01	N/A	041100010602	No	Intermittent	RPW-Seasonal	HHEI	55	7.6	Not Surveyed	Not Surveyed	Not Surveyed	Small Drainage Warmwater (Class II)	Provisional Based on Project Field Assessment	General High Quality Water	Ineligible	No		None Applicable	88	0	88	Design Build 1	88	0	88
----	----------	-----------	---------------	------	-----	--------------	----	--------------	--------------	------	----	-----	--------------	--------------	--------------	-------------------------------------	---	----------------------------	------------	----	--	-----------------	----	---	----	----------------	----	---	----

Stream name	Latitude (DD.ddddd)	Longitude (-DD.ddddd)	Photo ID	Drainage area (sq. mi.)	OEPA River Mile (if applicable)	12-Digit HUC	Captured within the roadway ditch	Stream hydrology type	USACE flow characteristics	Habitat assessment	Habitat score	pH value	Salamanders observed	Fish observed	Aquatic macro-invertebrates observed	OEPA aquatic life use designation	Provisional or official designation	Antidegradation designation	401 WQC for nationwide permit eligibility	National or state scenic rivers or NRI streams	Potential in-water work restriction based on proximity to scenic river	Designation for potential in-water work restriction	Length within open channel (ft.) in the study area	Length within existing culvert (ft.) in the study area	Total length in study area (ft.)	Alternative Name	Permanent estimated impact length (ft.) by alternative construction limits (Include temporary impact within the permanent impact area) (if known)	Temporary estimated impact length (ft.) by alternative construction limits (Only include temporary impact outside the permanent impact area) (if known)	Total estimated impact length (ft.) for the preferred alternative construction limits
-------------	---------------------	-----------------------	----------	-------------------------	---------------------------------	--------------	-----------------------------------	-----------------------	----------------------------	--------------------	---------------	----------	----------------------	---------------	--------------------------------------	-----------------------------------	-------------------------------------	-----------------------------	---	--	--	---	--	--	----------------------------------	------------------	---	---	---

Flow path to TNW:
Stream 31 -> Stream 8 -> Black River
Details on stream impact or other information (if known):
Impacts are assumed for the length of stream delineated within right of way since LOR-90-10.76 is a design build project.

25 (INT)	41.40636	-82.11867	74, 75, 76	0.33	N/A	041100010602	No	Intermittent	RPW-Seasonal	HHEI	51	7.8	Not Surveyed	Not Surveyed	Not Surveyed	Small Drainage Warmwater (Class II)	Provisional Based on Project Field Assessment	General High Quality Water	Ineligible	No	None Applicable	630	421	1051	Design Build 1	630	0	630
----------	----------	-----------	------------	------	-----	--------------	----	--------------	--------------	------	----	-----	--------------	--------------	--------------	-------------------------------------	---	----------------------------	------------	----	-----------------	-----	-----	------	----------------	-----	---	-----

Flow path to TNW:
Stream 25 -> Unnamed Direct Tributary -> Black River
Details on stream impact or other information (if known):
Impacts are assumed for the length of stream delineated within right of way since LOR-90-10.76 is a design build project.

03	41.40283	-82.14057	36, 37, 38	0.05	N/A	041100010602	No	Intermittent	RPW-Seasonal	HHEI	37	8.3	Not Surveyed	Not Surveyed	Not Surveyed	Small Drainage Warmwater (Class II)	Provisional Based on Project Field Assessment	General High Quality Water	Potentially Eligible	No	None Applicable	142	0	142	Design Build 1	142	0	142
----	----------	-----------	------------	------	-----	--------------	----	--------------	--------------	------	----	-----	--------------	--------------	--------------	-------------------------------------	---	----------------------------	----------------------	----	-----------------	-----	---	-----	----------------	-----	---	-----

Flow path to TNW:
Stream 3 -> Unnamed Tributary -> Unnamed Direct Tributary -> Black River
Details on stream impact or other information (if known):
Impacts are assumed for the length of stream delineated within right of way since LOR-90-10.76 is a design build project.

PERENNIAL	Total estimated permanent impact length to all streams by alternative (ft.):	Total estimated temporary impact length to all streams by alternative (ft.):	Total estimated (temporary + permanent) impact length to all streams by alternative (ft.):
Design Build 1	4869	0	4869

INTERMITTENT	Total estimated permanent impact length to all streams by alternative (ft.):	Total estimated temporary impact length to all streams by alternative (ft.):	Total estimated (temporary + permanent) impact length to all streams by alternative (ft.):
Design Build 1	3374	0	3374

EPHEMERAL	Total estimated permanent impact length to all streams by alternative (ft.):	Total estimated temporary impact length to all streams by alternative (ft.):	Total estimated (temporary + permanent) impact length to all streams by alternative (ft.):
Design Build 1	341	0	341

2.2 Wetlands:

Wetlands present: Yes

Total acreage of wetlands within the project study area (ac): 5.469

Wetlands identified on figure(s):

Wetlands:

Wetland ID	Latitude (DD.ddddd)	Longitude (-DD.ddddd)	Photo ID	Hydrologic connection	12-Digit HUC	ORAM score	Wetland category	Known high quality wetland	Primary wetland type (Cowardin)	Secondary wetland type (Cowardin)	Estimated hydroperiod (Cowardin)	Estimated total size (ac.)	Estimated size in study area (ac.)	Alternative Name	Permanent estimated impact area (ac.) by alternative construction limits (Include temporary impact within the permanent impact area) (if known)	Temporary estimated impact area (ac.) by alternative (Only include temporary impact outside the permanent impact area) (if known)	Total estimated impact area (ac.) for the preferred alternative construction limits
01	41.39561	-82.15856	2, 3, 4, 5	Adjacent	041100010703	23	Category 1	No	Palustrine - Forested Wetland	Palustrine - Emergent Wetland Persistent	Semipermanently Flooded	8.0	0.208	Design Build 1	0.208	0	0.208

Flow path to TNW:
The northern extent of wetland 1 drains to an existing 3x5 concrete inlet. No outlet within the project area was observed.

Details on wetland impact or other information (if known):
Impacts are assumed for the amount of wetland delineated within right of way since LOR-90-10.76 is a design build project.

02	41.40048	-82.15476	14, 15, 16, 17	Adjacent	041100010703	26	Category 1	No	Palustrine - Emergent Wetland Persistent	Not applicable	Semipermanently Flooded	5.0	1.441	Design Build 1	1.441	0	1.441
----	----------	-----------	----------------	----------	--------------	----	------------	----	--	----------------	-------------------------	-----	-------	----------------	-------	---	-------

Flow path to TNW:
Wetland 2 -> Stream 1 Martin Run -> Lake Erie

Details on wetland impact or other information (if known):
Impacts are assumed for the amount of wetland delineated within right of way since LOR-90-10.76 is a design build project.

03	41.40265	-82.14790	18, 19, 20, 21	Adjacent	041100010703	23.5	Category 1	No	Palustrine - Emergent Wetland Persistent	Palustrine - Scrub/Shrub Wetland	Semipermanently Flooded	3.0	0.490	Design Build 1	0.490	0	0.490
----	----------	-----------	----------------	----------	--------------	------	------------	----	--	----------------------------------	-------------------------	-----	-------	----------------	-------	---	-------

Flow path to TNW:
Wetland 3 -> Stream 2 -> Stream 1 Martin Run -> Lake Erie; Wetland 3 flow path may also include Wetland 24 and an off-site stream.

Details on wetland impact or other information (if known):
Impacts are assumed for the amount of wetland delineated within right of way since LOR-90-10.76 is a design build project.

04	41.40269	-82.14741	32, 33, 34, 35	Adjacent	041100010602	29	Category 1	No	Palustrine - Forested Wetland	Palustrine - Emergent Wetland Persistent	Semipermanently Flooded	2.0	0.812	Design Build 1	0.812	0	0.812
----	----------	-----------	----------------	----------	--------------	----	------------	----	-------------------------------	--	-------------------------	-----	-------	----------------	-------	---	-------

Flow path to TNW:
Wetland 4 -> Stream 3 -> Unnamed Tributary -> Unnamed Direct Tributary -> Black River

Details on wetland impact or other information (if known):
Impacts are assumed for the amount of wetland delineated within right of way since LOR-90-10.76 is a design build project.

05	41.40306	-82.13773	43, 44, 45, 46	Adjacent	041100010602	22	Category 1	No	Palustrine - Forested Wetland	Palustrine - Emergent Wetland Persistent	Semipermanently Flooded	0.50	0.293	Design Build 1	0.293	0	0.293
----	----------	-----------	----------------	----------	--------------	----	------------	----	-------------------------------	--	-------------------------	------	-------	----------------	-------	---	-------

Flow path to TNW:
Wetland 5 -> wetland 4 -> Stream 3 -> Unnamed Tributary -> Unnamed Direct Tributary -> Black River
ODOT is presuming this may be a jurisdictional water of the US for waterway permit purposes.

Details on wetland impact or other information (if known):
Impacts are assumed for the amount of wetland delineated within right of way since LOR-90-10.76 is a design build project.

06	41.40374	-82.12741	57, 58, 59, 60	Adjacent	041100010602	22	Category 1	No	Palustrine - Emergent Wetland Persistent	Not applicable	Semipermanently Flooded	0.30	0.201	Design Build 1	0.201	0	0.201
----	----------	-----------	----------------	----------	--------------	----	------------	----	--	----------------	-------------------------	------	-------	----------------	-------	---	-------

Flow path to TNW:
Wetland 6 -> roadside ditch -> culvert under I-90 -> Stream 25 -> Un-named Direct Tributary -> Black River

Details on wetland impact or other information (if known):
Impacts are assumed for the amount of wetland delineated within right of way since LOR-90-10.76 is a design build project.

Wetland ID	Latitude (DD.ddddd)	Longitude (-DD.ddddd)	Photo ID	Hydrologic connection	12-Digit HUC	ORAM score	Wetland category	Known high quality wetland	Primary wetland type (Cowardin)	Secondary wetland type (Cowardin)	Estimated hydroperiod (Cowardin)	Estimated total size (ac.)	Estimated size in study area (ac.)	Alternative Name	Permanent estimated impact area (ac.) by alternative construction limits (Include temporary impact within the permanent impact area) (if known)	Temporary estimated impact area (ac.) by alternative (Only include temporary impact outside the permanent impact area) (if known)	Total estimated impact area (ac.) for the preferred alternative construction limits
07	41.40368	-82.11411	88, 89, 90, 91	Adjacent	041100010602	22	Category 1	No	Palustrine - Emergent Wetland Persistent	Not applicable	Sempermanently Flooded	0.20	0.152	Design Build 1	0.152	0	0.152

Flow path to TNW:
Wetland 7 -> Stream 6 -> Stream 7 -> Black River
Details on wetland impact or other information (if known):
Impacts are assumed for the amount of wetland delineated within right of way since LOR-90-10.76 is a design build project.

08	41.40435	-82.11270	100, 101, 102, 103	Adjacent	041100010602	20.5	Category 1	No	Palustrine - Scrub/Shrub Wetland	Palustrine - Emergent Wetland Persistent	Sempermanently Flooded	0.08	0.075	Design Build 1	0.075	0	0.075
----	----------	-----------	--------------------	----------	--------------	------	------------	----	----------------------------------	--	------------------------	------	-------	----------------	-------	---	-------

Flow path to TNW:
Wetland 8 -> ditch conveyance outside of study area -> Stream 7 -> Black River
Details on wetland impact or other information (if known):
Impacts are assumed for the amount of wetland delineated within right of way since LOR-90-10.76 is a design build project.

09	41.40784	-82.10298	112, 113, 114, 115	Adjacent	041100010602	13	Category 1	No	Palustrine - Emergent Wetland Persistent	Not applicable	Saturated	0.009	0.009	Design Build 1	0.009	0	0.009
----	----------	-----------	--------------------	----------	--------------	----	------------	----	--	----------------	-----------	-------	-------	----------------	-------	---	-------

Flow path to TNW:
Wetland 9 -> Stream 9 -> Stream 8 -> Black River
Details on wetland impact or other information (if known):
Impacts are assumed for the amount of wetland delineated within right of way since LOR-90-10.76 is a design build project.

10	41.40691	-82.10248	119, 120, 121, 122	Adjacent	041100010602	24	Category 1	No	Palustrine - Emergent Wetland Persistent	Not applicable	Sempermanently Flooded	0.004	0.004	Design Build 1	0.004	0	0.004
----	----------	-----------	--------------------	----------	--------------	----	------------	----	--	----------------	------------------------	-------	-------	----------------	-------	---	-------

Flow path to TNW:
Wetland 10 -> Stream 8 -> Black River
Details on wetland impact or other information (if known):
Impacts are assumed for the amount of wetland delineated within right of way since LOR-90-10.76 is a design build project.

11	41.41272	-82.09945	135, 136, 137, 138	Adjacent	041100010602	18	Category 1	No	Palustrine - Emergent Wetland Persistent	Not applicable	Saturated	0.04	0.035	Design Build 1	0.035	0	0.035
----	----------	-----------	--------------------	----------	--------------	----	------------	----	--	----------------	-----------	------	-------	----------------	-------	---	-------

Flow path to TNW:
Wetland 11 -> Potentially Jurisdictional RPW-Intermittent Ditch -> Stream 11 -> Black River
Details on wetland impact or other information (if known):
Impacts are assumed for the amount of wetland delineated within right of way since LOR-90-10.76 is a design build project.

12	41.41210	-82.09854	142, 143, 144, 145	Adjacent	041100010602	20	Category 1	No	Palustrine - Emergent Wetland Persistent	Not applicable	Seasonally Flooded	0.10	0.094	Design Build 1	0.094	0	0.094
----	----------	-----------	--------------------	----------	--------------	----	------------	----	--	----------------	--------------------	------	-------	----------------	-------	---	-------

Flow path to TNW:
Wetland 12 -> Stream 12 -> Black River
Details on wetland impact or other information (if known):
Impacts are assumed for the amount of wetland delineated within right of way since LOR-90-10.76 is a design build project.

13	41.41500	-82.09400	152, 153, 154, 155	Adjacent	041100010602	34	Category 2	No	Palustrine - Scrub/Shrub Wetland	Palustrine - Emergent Wetland Nonpersistent	Sempermanently Flooded	0.203	0.203	Design Build 1	0.203	0	0.203
----	----------	-----------	--------------------	----------	--------------	----	------------	----	----------------------------------	---	------------------------	-------	-------	----------------	-------	---	-------

Flow path to TNW:
Wetland 13 -> Stream 12 -> Black River
Details on wetland impact or other information (if known):
Impacts are assumed for the amount of wetland delineated within right of way since LOR-90-10.76 is a design build project.

14	41.41885	-82.08518	164, 165, 166, 167	Adjacent	041100010602	34	Category 2	No	Palustrine - Forested Wetland	Palustrine - Emergent Wetland Persistent	Seasonally Flooded	0.20	0.148	Design Build 1	0.148	0	0.148
----	----------	-----------	--------------------	----------	--------------	----	------------	----	-------------------------------	--	--------------------	------	-------	----------------	-------	---	-------

Wetland ID	Latitude (DD.ddddd)	Longitude (-DD.ddddd)	Photo ID	Hydrologic connection	12-Digit HUC	ORAM score	Wetland category	Known high quality wetland	Primary wetland type (Cowardin)	Secondary wetland type (Cowardin)	Estimated hydroperiod (Cowardin)	Estimated total size (ac.)	Estimated size in study area (ac.)	Alternative Name	Permanent estimated impact area (ac.) by alternative construction limits (Include temporary impact within the permanent impact area) (if known)	Temporary estimated impact area (ac.) by alternative (Only include temporary impact outside the permanent impact area) (if known)	Total estimated impact area (ac.) for the preferred alternative construction limits
------------	---------------------	-----------------------	----------	-----------------------	--------------	------------	------------------	----------------------------	---------------------------------	-----------------------------------	----------------------------------	----------------------------	------------------------------------	------------------	---	---	---

Flow path to TNW:
Wetland 14 -> Stream 17 -> Black River
Details on wetland impact or other information (if known):
Impacts are assumed for the amount of wetland delineated within right of way since LOR-90-10.76 is a design build project.

19	41.43772	-82.08016	186, 187, 188, 189	Adjacent	041100010601	24	Category 1	No	Palustrine - Emergent Wetland Persistent	Not applicable	Seasonally Flooded	0.05	0.039	Design Build 1	0.039	0	0.039
----	----------	-----------	--------------------	----------	--------------	----	------------	----	--	----------------	--------------------	------	-------	----------------	-------	---	-------

Flow path to TNW:
Wetland 19 -> Stream 23 Jungbluth Ditch -> French Creek -> Black River
Details on wetland impact or other information (if known):
Impacts are assumed for the amount of wetland delineated within right of way since LOR-90-10.76 is a design build project.

20	41.43601	-82.08147	176, 177, 178, 179	Adjacent	041100010601	34	Category 2	No	Palustrine - Forested Wetland	Not applicable	Seasonally Flooded	6.0	0.641	Design Build 1	0.641	0	0.641
----	----------	-----------	--------------------	----------	--------------	----	------------	----	-------------------------------	----------------	--------------------	-----	-------	----------------	-------	---	-------

Flow path to TNW:
Wetland 20 -> Potentially Jurisdictional Ditch RPW-perennial -> Stream 23 Jungbluth Ditch -> French Creek -> Black River
Details on wetland impact or other information (if known):
Impacts are assumed for the amount of wetland delineated within right of way since LOR-90-10.76 is a design build project.

24	41.40364	-82.14758	22, 23, 24, 25	Adjacent	041100010703	28.5	Category 1	No	Palustrine - Emergent Wetland Persistent	Not applicable	Semipermanently Flooded	0.15	0.109	Design Build 1	0.109	0	0.109
----	----------	-----------	----------------	----------	--------------	------	------------	----	--	----------------	-------------------------	------	-------	----------------	-------	---	-------

Flow path to TNW:
Wetland 24 -> Off-site stream between Wetland 24 & Stream 2 -> Stream 2 is culverted under I-90 and outlets outside of study area; the open channel that flows behind 6697 Murray Ridge Rd is downstream segment of Stream 2 -> Martin Run -> Lake Erie
Details on wetland impact or other information (if known):
Impacts are assumed for the amount of wetland delineated within right of way since LOR-90-10.76 is a design build project.

25	41.40242	-82.15138	6, 7, 8, 9	Adjacent	041100010703	26	Category 1	No	Palustrine - Scrub/Shrub Wetland	Palustrine - Emergent Wetland Persistent	Semipermanently Flooded	2.0	0.134	Design Build 1	0.134	0	0.134
----	----------	-----------	------------	----------	--------------	----	------------	----	----------------------------------	--	-------------------------	-----	-------	----------------	-------	---	-------

Flow path to TNW:
Wetland 25 -> Stream 1 Martin Run -> Lake Erie
Details on wetland impact or other information (if known):
Impacts are assumed for the amount of wetland delineated within right of way since LOR-90-10.76 is a design build project.

26	41.40351	-82.14054	39, 40, 41, 42	Adjacent	041100010602	19	Category 1	No	Palustrine - Emergent Wetland Persistent	Not applicable	Semipermanently Flooded	0.022	0.022	Design Build 1	0.022	0	0.022
----	----------	-----------	----------------	----------	--------------	----	------------	----	--	----------------	-------------------------	-------	-------	----------------	-------	---	-------

Flow path to TNW:
Wetland 26 -> Stream 3 -> Unnamed Tributary -> Unnamed Direct Tributary -> Black River
Details on wetland impact or other information (if known):
Impacts are assumed for the amount of wetland delineated within right of way since LOR-90-10.76 is a design build project.

27	41.40654	-82.11827	77, 78, 79, 80	Adjacent	041100010602	29	Category 1	No	Palustrine - Emergent Wetland Persistent	Palustrine - Forested Wetland	Seasonally Flooded	0.027	0.027	Design Build 1	0.027	0	0.027
----	----------	-----------	----------------	----------	--------------	----	------------	----	--	-------------------------------	--------------------	-------	-------	----------------	-------	---	-------

Flow path to TNW:
Wetland 27 -> Stream 25-> Unnamed Direct Tributary -> Black River
Details on wetland impact or other information (if known):
Impacts are assumed for the amount of wetland delineated within right of way since LOR-90-10.76 is a design build project.

28	41.40575	-82.11985	64, 65, 66, 67	Adjacent	041100010602	28.5	Category 1	No	Palustrine - Emergent Wetland Persistent	Palustrine - Forested Wetland	Seasonally Flooded	0.018	0.018	Design Build 1	0.018	0	0.018
----	----------	-----------	----------------	----------	--------------	------	------------	----	--	-------------------------------	--------------------	-------	-------	----------------	-------	---	-------

Wetland ID	Latitude (DD.ddddd)	Longitude (-DD.ddddd)	Photo ID	Hydrologic connection	12-Digit HUC	ORAM score	Wetland category	Known high quality wetland	Primary wetland type (Cowardin)	Secondary wetland type (Cowardin)	Estimated hydroperiod (Cowardin)	Estimated total size (ac.)	Estimated size in study area (ac.)	Alternative Name	Permanent estimated impact area (ac.) by alternative construction limits (Include temporary impact within the permanent impact area) (if known)	Temporary estimated impact area (ac.) by alternative (Only include temporary impact outside the permanent impact area) (if known)	Total estimated impact area (ac.) for the preferred alternative construction limits
------------	---------------------	-----------------------	----------	-----------------------	--------------	------------	------------------	----------------------------	---------------------------------	-----------------------------------	----------------------------------	----------------------------	------------------------------------	------------------	---	---	---

Flow path to TNW:
Wetland 28 -> Stream 25 -> Unnamed Direct Tributary -> Black River
Details on wetland impact or other information (if known):
Impacts are assumed for the amount of wetland delineated within right of way since LOR-90-10.76 is a design build project.

29	41.40545	-82.11329	92, 93, 94, 95	Adjacent	041100010602	17	Category 1	No	Palustrine - Emergent Wetland Persistent	Not applicable	Semipermanently Flooded	0.082	0.082	Design Build 1	0.082	0	0.082
----	----------	-----------	----------------	----------	--------------	----	------------	----	--	----------------	-------------------------	-------	-------	----------------	-------	---	-------

Flow path to TNW:
Wetland 29 -> Stream 32 -> Stream 6 -> Unnamed Direct Tributary -> Black River
Details on wetland impact or other information (if known):
Impacts are assumed for the amount of wetland delineated within right of way since LOR-90-10.76 is a design build project.

30	41.40539	-82.11262	96, 97, 98, 99	Adjacent	041100010602	19	Category 1	No	Palustrine - Emergent Wetland Persistent	Not applicable	Saturated	0.20	0.157	Design Build 1	0.157	0	0.157
----	----------	-----------	----------------	----------	--------------	----	------------	----	--	----------------	-----------	------	-------	----------------	-------	---	-------

Flow path to TNW:
Wetland 30 -> Stream 6 -> Stream 7 Unnamed Direct Tributary -> Black River
Details on wetland impact or other information (if known):
Impacts are assumed for the amount of wetland delineated within right of way since LOR-90-10.76 is a design build project.

32	41.45328	-82.06814	194, 195, 196, 197	Adjacent	041100010601	25	Category 1	No	Palustrine - Forested Wetland	Palustrine - Emergent Wetland Persistent	Saturated	1.20	0.075	Design Build 1	0.075	0	0.075
----	----------	-----------	--------------------	----------	--------------	----	------------	----	-------------------------------	--	-----------	------	-------	----------------	-------	---	-------

Flow path to TNW:
Wetland 32 -> Stream 21 -> Walker Ditch -> French Creek -> Black River
Details on wetland impact or other information (if known):
Impacts are assumed for the amount of wetland delineated within right of way since LOR-90-10.76 is a design build project.

	Total estimated permanent impact area to all wetlands by alternative (ac.):	Total estimated temporary impact area to all wetlands by alternative (ac.):	Total estimated (temporary + permanent) impact area to all wetlands by alternative (ac.):
Design Build 1	5.469	0	5.469

2.3 Ditches:

Potentially jurisdictional ditches or non-jurisdictional conveyances for adjacent wetlands present: Yes

Total acreage of ditches within the project study area (ac): 0.179

Ditches identified on figure(s):

Ditches:

Ditch ID	Latitude (DD.ddddd)	Longitude (-DD.ddddd)	Photo ID	12-Digit HUC	USACE flow characteristics	Ordinary high water mark present	Constructed within an adjacent wetland	Flows between two or more potential waters of the US	Ditch is potentially jurisdictional	Wetted width (ft.)	Length within project study area (ft.)	Acreage within project study area (ac.)	Alternative Name	Permanent estimated impact area (ac.) by alternative construction limits (Include temporary impact within the permanent impact area) (if known)	Temporary estimated impact area (ac.) by alternative construction limits (Only include temporary impact outside the permanent impact area) (if known)	Total estimated impact area (ac.) for the preferred alternative construction limits
09	41.40773	-82.10311	109, 110, 11	041100010602	RPW-Seasonal/Intermittent	Yes	No	No	Yes	3	195	0.013	Design Build 1	0.013	0	0.013
<p>Flow path to TNW: Potentially Jurisdictional Ditch 9 -> Stream 8 -> Black River</p> <p>Details on ditch impact (if known): Impacts are assumed for the acreage of potentially jurisdictional ditch identified within the right-of-way since LOR-90-10.76 is a design build project.</p>																
05	41.40272	-82.11591	82, 83, 84	041100010602	RPW-Seasonal/Intermittent	Yes	No	No	Yes	8	28	0.005	Design Build 1	0.005	0	0.005
<p>Flow path to TNW: Potentially Jurisdictional Ditch 5 -> Stream 6 -> Unnamed Direct Tributary -> Black River</p> <p>Details on ditch impact (if known): Impacts are assumed for the acreage of potentially jurisdictional ditch identified within the right-of-way since LOR-90-10.76 is a design build project.</p>																
20	41.46102	-82.05687	210, 211, 212	041100010601	RPW-Seasonal/Intermittent	Yes	No	No	Yes	3	65	0.004	Design Build 1	0.004	0	0.004
<p>Flow path to TNW: Potentially Jurisdictional Ditch 20 -> French Creek -> Black River</p> <p>Details on ditch impact (if known): Impacts are assumed for the acreage of potentially jurisdictional ditch identified within the right-of-way since LOR-90-10.76 is a design build project.</p>																
24	41.43722	-82.08064	180, 181, 182	041100010601	RPW-Perennial	Yes	Yes	Yes	Yes	4	796	0.073	Design Build 1	0.073	0	0.073
<p>Flow path to TNW: Potentially Jurisdictional Ditch 24 -> Jungbluth Ditch -> French Creek -> Black River</p> <p>Details on ditch impact (if known): Impacts are assumed for the acreage of potentially jurisdictional ditch identified within the right-of-way since LOR-90-10.76 is a design build project.</p>																
29	41.40449	-82.12734	54, 55, 56	041100010602	RPW-Seasonal/Intermittent	Yes	No	No	Yes	3	40	0.003	Design Build 1	0.003	0	0.003
<p>Flow path to TNW: Potentially Jurisdictional Ditch 29 -> Stream 25 -> Unnamed Direct Tributary -> Black River</p> <p>Details on ditch impact (if known): Impacts are assumed for the acreage of potentially jurisdictional ditch identified within the right-of-way since LOR-90-10.76 is a design build project.</p>																

Ditch ID	Latitude (DD.ddddd)	Longitude (-DD.ddddd)	Photo ID	12-Digit HUC	USACE flow characteristics	Ordinary high water mark present	Constructed within an adjacent wetland	Flows between two or more potential waters of the US	Ditch is potentially jurisdictional	Wetted width (ft.)	Length within project study area (ft.)	Acreage within project study area (ac.)	Alternative Name	Permanent estimated impact area (ac.) by alternative construction limits (Include temporary impact within the permanent impact area) (if known)	Temporary estimated impact area (ac.) by alternative construction limits (Only include temporary impact outside the permanent impact area) (if known)	Total estimated impact area (ac.) for the preferred alternative construction limits
30	41.40410	-82.13309	47, 48, 49	041100010602	RPW-Seasonal/Intermittent	Yes	No	Yes	Yes	3	666	0.046	Design Build 1	0.046	0	0.046

Flow path to TNW:
Potentially Jurisdictional Ditch 30 -> Stream 4 -> Stream 25 -> Unnamed Direct Tributary -> Black River

Details on ditch impact (if known):
Impacts are assumed for the acreage of potentially jurisdictional ditch identified within the right-of-way since LOR-90-10.76 is a design build project.

32	41.40545	-82.11322	215, 216, 217	041100010602	RPW-Seasonal/Intermittent	Yes	Yes	Yes	Yes	3	187	0.013	Design Build 1	0.013	0	0.013
----	----------	-----------	---------------	--------------	---------------------------	-----	-----	-----	-----	---	-----	-------	----------------	-------	---	-------

Flow path to TNW:
Potentially Jurisdictional Ditch 32 -> Stream 6 -> Stream 7 -> Black River

Details on ditch impact (if known):
Impacts are assumed for the acreage of potentially jurisdictional ditch identified within the right-of-way since LOR-90-10.76 is a design build project.

33	41.40698	-82.11658	221, 222, 223	041100010602	RPW-Seasonal/Intermittent	Yes	No	No	Yes	2	122	0.006	Design Build 1	0.006	0	0.006
----	----------	-----------	---------------	--------------	---------------------------	-----	----	----	-----	---	-----	-------	----------------	-------	---	-------

Flow path to TNW:
Potentially Jurisdictional Ditch 33 -> Stream 25 -> Unnamed Direct Tributary -> Black River

Details on ditch impact (if known):
Impacts are assumed for the acreage of potentially jurisdictional ditch identified within the right-of-way since LOR-90-10.76 is a design build project.

34	41.40682	-82.11666	218, 219, 220	041100010602	RPW-Seasonal/Intermittent	Yes	No	No	Yes	4	107	0.010	Design Build 1	0.010	0	0.010
----	----------	-----------	---------------	--------------	---------------------------	-----	----	----	-----	---	-----	-------	----------------	-------	---	-------

Flow path to TNW:
Potentially Jurisdictional Ditch 34 -> Stream 25 -> Unnamed Direct Tributary -> Black River

Details on ditch impact (if known):
Impacts are assumed for the acreage of potentially jurisdictional ditch identified within the right-of-way since LOR-90-10.76 is a design build project.

11	41.41273	-82.09955	139,140,141	041100010602	RPW-Seasonal/Intermittent	Yes	No	No	Yes	2	129	0.006	Design Build 1	0.006	0	0.006
----	----------	-----------	-------------	--------------	---------------------------	-----	----	----	-----	---	-----	-------	----------------	-------	---	-------

Flow path to TNW:
Potentially Jurisdictional Ditch 11 -> Stream 11 -> Black River

Details on ditch impact (if known):
Impacts are assumed for the acreage of potentially jurisdictional ditch identified within the right-of-way since LOR-90-10.76 is a design build project.

Ditch ID	Latitude (DD.ddddd)	Longitude (-DD.ddddd)	Photo ID	12-Digit HUC	USACE flow characteristics	Ordinary high water mark present	Constructed within an adjacent wetland	Flows between two or more potential waters of the US	Ditch is potentially jurisdictional	Wetted width (ft.)	Length within project study area (ft.)	Acreage within project study area (ac.)	Alternative Name	Permanent estimated impact area (ac.) by alternative construction limits (Include temporary impact within the permanent impact area) (if known)	Temporary estimated impact area (ac.) by alternative construction limits (Only include temporary impact outside the permanent impact area) (if known)	Total estimated impact area (ac.) for the preferred alternative construction limits
														Total estimated permanent impact area to all potentially jurisdictional ditches by alternative (ac.):	Total estimated temporary impact area to all potentially jurisdictional ditches by alternative (ac.):	Total estimated (temporary + permanent) impact area to all potentially jurisdictional ditches by alternative
													Design Build 1	0.179	0	0.179

2.4 Ponds, Lakes, Reservoirs, Retention/Detention Basins:

Other water bodies present: No

2.7 Mussels

The project includes a stream(s) greater than or equal to 5 square miles in drainage area: No - Stream(s) are Not Likely Suitable for Mussel Populations and No Mussels Were Observed During Other Survey Activities

3 Terrestrial Ecology

3.1 Vegetative Communities and Land Cover

Vegetative Communities and Land Cover:

Vegetative communities and land cover found within the project study area	Degree of man induced ecological disturbance	Unique, rare, or high quality	Within project study area(s) (ac.)	Vegetation and land cover areas identified on figure(s)	Alternative Name	Alternative impacts (ac.)
Developed, High Intensity (DH) - Includes Highly Developed Areas Where People Reside or Work in High Numbers. Examples Include Apartment Complexes, Row Houses and Commercial/Industrial. Impervious Surfaces Account for 80 to 100% of the Total Cover.	Extreme Disturbance/Ruderal Community (Dominated by Opportunistic Invaders or Native Highly Tolerant Taxa)	No	137.38		Design Build 1	137.38
Developed Open Space - DS - (Mown Right-of-Way, Large-Lot Single-Family Housing Units, Parks, Golf Courses, and Vegetation Planted in Developed Settings for Recreation, Erosion control, or Aesthetic Purposes)	Extreme Disturbance/Ruderal Community (Dominated by Opportunistic Invaders or Native Highly Tolerant Taxa)	No	202.19		Design Build 1	202.19
Upland Forest - UF - (Uplands Dominated by Trees)	Intermediate Disturbance (Dominated by Plants that Typify a Stable Phase of a Native Community that Persists Under Some Disturbance)	No	52.11		Design Build 1	52.11
Scrub/Shrub - SS - (True Shrubs, and Young Trees in an Early Successional Stage)	Intermediate Disturbance (Dominated by Plants that Typify a Stable Phase of a Native Community that Persists Under Some Disturbance)	No	22.46		Design Build 1	22.46
Marsh - MA - (Wetland Dominated by Submergent, Floating, and/or Emergent Vegetation)	Extreme Disturbance/Ruderal Community (Dominated by Opportunistic Invaders or Native Highly Tolerant Taxa)	No	2.67		Design Build 1	2.67
Open Water - All Areas of Open Water, Generally with Less Than 25% Cover of Vegetation or Soil.	Extreme Disturbance/Ruderal Community (Dominated by Opportunistic Invaders or Native Highly Tolerant Taxa)	No	1.78		Design Build 1	1.78
Forested Swamp - FS - (Wetland Dominated by Trees)	Intermediate Disturbance (Dominated by Plants that Typify a Stable Phase of a Native Community that Persists Under Some Disturbance)	No	2.39		Design Build 1	2.39

Vegetative communities and land cover found within the project study area	Degree of man induced ecological disturbance	Unique, rare, or high quality	Within project study area(s) (ac.)	Vegetation and land cover areas identified on figure(s)	Alternative Name	Alternative impacts (ac.)
Shrub Swamp - SH - (Wetland Dominated by True Shrubs, and Young Trees in an Early Successional Stage)	Intermediate Disturbance (Dominated by Plants that Typify a Stable Phase of a Native Community that Persists Under Some Disturbance)	No	0.44		Design Build 1	0.44

Total Impacts	Design Build 1	421.42
---------------	----------------	--------

Additional Information:

As shown on Figure 5, for the LOR-90-10.76 project, the Developed, High Intensity (DH) community consists of existing paved road, including Interstate 90 as well as on-ramps and off-ramps. The Developed Open Space (DS) community consists of the mowed and maintained medians and shoulders along both westbound and eastbound lanes. None of the observed communities can be classified as unique, rare, or high quality.

3.4 Birds

Colony nesting birds or any peregrine falcon sightings on bridges or culverts: No

4 Listed Species

4.1 Federally Listed Species

ODOT is the lead Federal action agency for this project: Yes

4.1.1 Federally Listed Bats

Federally Listed Bats:

Species common name	Species scientific name	Listing status
Indiana Bat	<i>Myotis sodalis</i>	Endangered
Northern Long-eared Bat	<i>Myotis septentrionalis</i>	Endangered

Suitable habitat:
 The 2016 PBO defines suitable wooded habitat (SWH) for these species as any tree covered area that is 0.5 ac or larger, containing any potential roosts (i.e., live trees and/or snags 3 inches dbh that have exfoliating bark, cracks, crevices, and/or cavities) greater than 13 ft tall and at least 3 in dbh, or any patch of trees with these characteristics that is less than ½ acre in size but is within 1,000 feet of or connected by a travel corridor to a PMRT, ½-acre or larger stand of SWH, or any patch of wooded riparian buffer. Additionally, these species may use bridges over streams as summer roosting habitat. During the winter months these species inhabit hibernacula (typically caves, or abandoned mines that provide cool, humid, stable conditions for hibernation).

Bat management unit: Western Management Unit

The project is in a known bat buffer: No

Record type(s) (color):

Date of records request: 08/18/2023

4.1.1.1 Bat Impacts Per Alternative

Design Build 1

The alternative will impact suitable wooded habitat (SWH): Yes

Acreage of SWH impacts within 100 feet of the edge of pavement: 46.89

All SWH to be impacted is within 100 feet of the edge of pavement: No

Acreage of impacted SWH within 50 feet of a perennial stream but outside 100 feet of the roadway: 0.61

Acreage of impacted SWH between 100 and 300 feet from the edge of pavement and not located within 50 feet of a perennial stream: 5.49

Acreage of impacted SWH further than 300 feet from the edge of pavement: 0

PMRTs located further than 100 feet from the edge of pavement will be impacted: No

The alternative will impact a bridge spanning 20 feet and located over water: No

Consultation category: CC3

Effect determination: May Affect, Likely to Adversely Affect

Discussion including impacts to suitable habitat:

During the field study SWH was identified within the Project Study Area. Figure 6 SWH shows the location of the 46.89-acres of suitable habitat within 100-feet of the edge of pavement and an additional 6.10-acres of SWH outside of the 100-foot edge of pavement. This figure has been uploaded to the Project File/Ecological/ESR/Appendices. The August 23, 2023 Bat Buffer request response from FWS indicates the Project Study Area is not located within a Bat Buffer. This project is a design build & will require tree cutting. As such this project is anticipated to impact all of the SWH within the Project Study Area. A photographic log showing representative photos of potential roost trees as well as existing conditions can be found in the Project File/Ecological/ESR/Appendices. Tree removal will only occur between October 1 and March 31 when the species would not be present.

52.99ac of SWH will be impacted for this project. This project exceeds the thresholds by removing 6.10 ac of SWH further than 100ft from the edge of pavement. Of this 0.61ac is also within 50ft of a perennial stream. This project is CC3b, May Affect, and is Likely to Adversely Affect the Indiana bat and Northern long-eared bat. Per the 2016 OHPBO (rev. 12/17), 10.68 acres of credit will be deducted from the SCCC2 pooled mitigation site.

46.89ac of SWH impacts within 100ft from EOP = 46.89ac * NA = 0
 6.10ac of SWH impact from 100-300ft from EOP= 6.10ac * 1.75 = 10.68ac
 Total deducted from SCCC2 pooled mitigation site = 10.68ac

However, this is a design build project and SWH is being cut for ROW fence repair. Not all of the SWH here will be impacted as this ESR was written as worst case scenario.

4.1.2 Bald Eagles

Bald Eagle:

Species common name	Species scientific name	Listing status
Bald Eagle	Haliaeetus leucocephalus	Species of Concern
Suitable habitat: The Bald Eagle is protected under the Bald and Golden Eagle Protection Act which prohibits taking bald eagles, including disturbance. The preferred habitat includes mature forests adjacent to open water for nesting and foraging. Within Ohio bald eagles use the tops of large trees to build nests, which they typically use and enlarge each year.		

4.1.2.1 Bald Eagle Impacts Per Alternative

Design Build 1

A nest (a known record or an observed nest) is located within 0.5 mile of the roadway alternative: No

Effect determination: No Effect

The project will take an eagle nest: No

The project will require a non-purposeful take permit: No

Discussion including impacts to suitable habitat:

No suitable habitat for Bald Eagles (i.e., mature forested areas) was observed within the LOR-90 Project Study area. The August 23, 2023 records review response from the FWS indicated that the Project Study Area is not within a know Bald Eagle nest buffer. During the course of the typical field investigation there was no sightings of Bald Eagles and no nests were observed. As a result, this Project is not anticipated to have an impact on the Bald Eagle.

4.1.3 Other Federally Listed Species

Other Federally Listed Species:

Species common name	Species scientific name	Listing status
Piping Plover	Charadrius melodus	Endangered
<p>Suitable habitat: The Piping Plover lives the majority of its life on open sandy beaches or rocky shores containing very little grass or other vegetation, often in high, dry sections away from the water. Nesting territories often include small creeks or wetlands. In Ohio, this species nests in sand and/or gravel beaches along Lake Erie. Designated critical habitat for piping plovers consists of Sheldon Marsh State Natural Area in Erie County and Headland Dunes Nature Preserve in Lake County.</p>		
Design Build 1	<p>Discussion including impacts to suitable habitat: The northeastern project terminus is located approximately 2.7-miles (straight-line distance) from the shores of Lake Erie. Critical habitat for this species has not been identified in Lorain County (LOR-90-10.76 project location) and no suitable habitat was observed within the Project Study Area for the Piping Plover. As a result, this project is not anticipated to impact this species or its habitat.</p>	
	<p>Effect Determination: No Effect</p>	

Species common name	Species scientific name	Listing status
Round Hickorynut	Obovaria subrotunda	Threatened
<p>Suitable habitat: The Round Hickorynut mussel can be found in small streams to big rivers and in Lake Erie. This species prefers areas with slow to moderate current and can be found in sand and gravel substrates. It is generally found in areas with less than 6 feet of water. In Ohio, this species is only known from certain high-quality waterways with drainages larger than 5 square miles.</p>		
Design Build 1	<p>Discussion including impacts to suitable habitat: Within the LOR-90-10.76 Project Study Area, two resources, Stream 10 Black River and Stream 19 French Creek have the potential to offer habitat (i.e., over 5-square mile watershed) to the Round Hickorynut mussel. No work will be performed within the Black River and French Creek. The remaining streams within the Project Study Area do not offer suitable habitat for this mussel species. Therefore, this Project is not anticipated to have an impact on the Round Hickorynut mussel.</p>	
	<p>Effect Determination: No Effect</p>	

Species common name	Species scientific name	Listing status
Rufa Red Knot	Calidris canutus rufa	Threatened
<p>Suitable habitat: The Rufa Red Knot is not known to nest in Ohio. Migratory stop-over habitat in Ohio consists of sand, gravel, and/or cobble beaches and/or mudflats along the shores of Lake Erie.</p>		
Design Build 1	<p>Discussion including impacts to suitable habitat: No suitable habitat was observed for the Rufa Red Knot within the Project Study Area and the northeastern project terminus is located approximately 2.7-miles (straight-line distance) from the shores of Lake Erie. As a result, this Project is not anticipated to have an impact on this species or its habitat.</p>	
	<p>Effect Determination: No Effect</p>	

Species common name	Species scientific name	Listing status
Salamander Mussel	Simpsonia ambigua	Proposed Endangered
<p>Suitable habitat: The salamander mussel is found in rivers and streams with natural flow regimes where the species' host, the mudpuppy (Necturus</p>		

Species common name	Species scientific name	Listing status
Design Build 1	<p>Discussion including impacts to suitable habitat: Within the LOR-90-10.76 Project Study Area, two resources, Stream 10 Black River and Stream 19 French Creek have the potential to offer habitat (i.e., over 5-square mile watershed) to the Salamander Mussel. No work will be performed within the Black River and French Creek. The remaining streams within the Project Study Area do not offer suitable habitat for this mussel species. Therefore, this Project is not anticipated to have an impact on the Salamander Mussel.</p>	
	<p>Effect Determination: No Effect</p>	

Species common name	Species scientific name	Listing status
Tricolored Bat	Perimyotis subflavus	Proposed Endangered
<p>Suitable habitat: During the spring and summer (April 1 through September 30), this species of bat predominately roost in living or dead clusters of leaves near the top of the crown of larger live trees. They also may rarely roost in structures, including bridges. In the winter, this species hibernates in caves, mines, and other underground structures that provide cool, humid areas with stable temperatures. In the Discussion below describe: The number of acres of wooded habitat and a brief summary of age and quality of the stand, noting if there are any larger living trees possessing roosting habitat (living or dead clusters of leaves) for the species. If bridge structures are present within the project limits that will be impacted, and were inspected for the evidence/presence of bats (per the guidance for the Indiana and northern long-eared bats), summarize the results of the inspection. Additionally, note if any known hibernacula are near the project area or if areas suitable for hibernation were identified during a survey of the project area. Known or suspect hibernacula for the Indiana and northern long-eared bats would also be suitable for the tricolored bat.</p>		
Design Build 1	<p>Discussion including impacts to suitable habitat: During the field study suitable habitat for the tricolored bat was identified within the Project Study Area. Figure 6 shows the location of the 46.89-acres of suitable habitat within 100-feet of the edge of pavement and an additional 6.10-acres of suitable habitat outside of the 100-foot edge of pavement. This figure has been uploaded to the Project File/Ecological/ESR/Appendices.PDF. The August 23, 2023 Bat Buffer request response from FWS indicates the Project Study Area is not located within a Bat Buffer and ODNR has no Tricolor bat record within 1 mile of the project area. This project is a design build and will require tree cutting. As such this project is anticipated to impact all of the suitable tricolored bat habitat within the Project Study Area. A photographic log showing representative photos of potential roost trees and as well as existing conditions can be found in the Project File/Ecological/ESR/Appendices.PDF. Tree removal will only occur between October 1 and March 31 when the species would not be present. All of the pertinent AMMs listed in the OHPBO for Indiana bat and Northern long-eared bat will be followed, which will also protect this species from take.</p> <p>This project May Affect this species but is not going to jeopardize the continued existence of the species. Per the 11/15/2022 letter from USFWS outlining conferencing requirements for this species, this project does not need to be submitted for individual conferencing.</p>	
	<p>Effect Determination: May Affect, Likely to Adversely Affect</p>	

4.2 State Listed Species

Date of the ONHDB check: 09/18/2023

State listed species considered include:

- All of the endangered, threatened, or potentially threatened species records from the Ohio Natural Heritage Database for any animal species located within 1 mile of the project, and any plant species records within 0.5 mile of the project.

- Any state endangered and threatened animals suspected of being within the county (from the county range list provided by the DOW).

- Does not include species that have already been included in the Federally Listed Species table

Project is within the range: Within the Range of the Following State Listed Species

State Listed Species:

Species common name	Species scientific name	The species or its suitable habitat is present within the project study area	Listing status	A record is within 1 mile of the project if it is an animal species, or within 0.5 mile of the project if it is a plant species	Proximity to the project (ft.)
Round-leaved Dogwood	Cornus rugosa	Yes	Threatened	Yes	0

Description of suitable habitat:

Round-leaved Dogwood (*Cornus rugosa*) is a perennial woody plant, with a preferred habitat consisting of upland deciduous and mixed forest, thickets, and/or rocky slopes in part shade to sun.

Design Build 1	The species or its suitable habitat will be impacted by this project: Yes				
	Discussion of impacts to suitable habitat or species: Suitable habitat, including upland mixed deciduous woods and scrub/shrub communities were observed within the LOR-90-10.76 Project Area; however, a species specific plant survey was not conducted. The ODNR record locations identified within the LOR-90-10.76 Project Area for Round-leaved Dogwood is located within the Lorain County Metro Parks' Black River Reservation - Bur Oak Picnic Area. Both the eastbound and westbound lanes currently span (bridge) the Reservation Picnic Area. This Design Build project will not impact below the existing bridges over the Black River, nor within the Black River Reservation, therefore impacts to this species are not likely.				
	Effect determination: Not Likely to Impact				

Species common name	Species scientific name	The species or its suitable habitat is present within the project study area	Listing status	A record is within 1 mile of the project if it is an animal species, or within 0.5 mile of the project if it is a plant species	Proximity to the project (ft.)
Canada Buffalo-berry	Shepherdia canadensis	Yes	Threatened	Yes	0

Description of suitable habitat:

Canada Buffalo-berry is a perennial woody plant, with habitat preferences that include dry, rocky soil in either part shade or sun within open woods, along forest edges and/or riverbanks. This plant can also be found growing on rocky shores and outcrops.

	The species or its suitable habitat will be impacted by this project: Yes				
	Discussion of impacts to suitable habitat or species:				

Species common name	Species scientific name	The species or its suitable habitat is present within the project study area	Listing status	A record is within 1 mile of the project if it is an animal species, or within 0.5 mile of the project if it is a plant species	Proximity to the project (ft.)
Design Build 1	<p>Suitable habitat, including forest edges and riverbanks were observed within the LOR-90-10.76 Project Area; however, a species specific plant survey was not conducted. The ODNR record locations identified within the LOR-90-10.76 Project Area for Canada Buffalo-berry is located within the Lorain County Metro Parks' Black River Reservation - Bur Oak Picnic Area. Both the eastbound and westbound lanes currently span (bridge) the Reservation Picnic Area. This Design Build project will not impact below the existing bridges over the Black River, nor within the Black River Reservation, therefore impacts are not likely to this species.</p>				
Effect determination: Not Likely to Impact					

Species common name	Species scientific name	The species or its suitable habitat is present within the project study area	Listing status	A record is within 1 mile of the project if it is an animal species, or within 0.5 mile of the project if it is a plant species	Proximity to the project (ft.)
Tower Mustard	<i>Turritis glabra</i>	Yes	Potentially Threatened	Yes	2400

Description of suitable habitat:

Tower Mustard (*Turritis glabra*) prefers to grow in full sun to light shade in mesic to dry conditions, within loam, clay-loam, or rocky soils. Habitat includes rocky open woodlands, barren savannas, limestone glades, rocky bluffs, prairies, and abandoned fields. These perennials bloom late spring into summer, approximately May-July.

Design Build 1	The species or its suitable habitat will be impacted by this project: Yes				
	Discussion of impacts to suitable habitat or species:				
	<p>The developed open space community within the LOR-90-10.76 project limits offers little habitat for the potentially state threatened perennial Tower Mustard plant. A plant specific survey was not conducted regarding the Tower Mustard. The 201.21-acres of developed open space within the LOR-90-10.76 project limits consists of a seasonally mowed plant community, which is dominated by herbaceous ruderal species. The developed open space community is mostly located within the median of Interstate 90, within the median of the entrance and exit ramps, and along the shoulder of the existing westbound and eastbound lanes. This Project is a design-build, but there is no work proposed on the bridge carrying I-90 across the Black River or within the Black River Reservation which would have the highest chance of harboring this species.</p>				
Effect determination: Not Likely to Impact					

Species common name	Species scientific name	The species or its suitable habitat is present within the project study area	Listing status	A record is within 1 mile of the project if it is an animal species, or within 0.5 mile of the project if it is a plant species	Proximity to the project (ft.)
Little brown bat	<i>Myotis lucifugus</i>	Yes	Endangered	No	

Description of suitable habitat:

Species common name	Species scientific name	The species or its suitable habitat is present within the project study area	Listing status	A record is within 1 mile of the project if it is an animal species, or within 0.5 mile of the project if it is a plant species	Proximity to the project (ft.)
---------------------	-------------------------	--	----------------	---	--------------------------------

The entire state of Ohio is within range of the little brown bat (*Myotis lucifugus*), a state endangered species. During the spring

Design Build 1	The species or its suitable habitat will be impacted by this project: Yes				
	Discussion of impacts to suitable habitat or species: Figure 8 shows the location of the 52.99 acres of wooded habitat within the study area. This figure has been uploaded to the Project File/Ecological/ESR/Appendices.PDF. The August 23, 2023 Bat Buffer request response from FWS indicates the Project Study Area is not located within a Bat Buffer. This project is a design build and will require tree cutting. As such this project is anticipated to impact all of the wooded habitat within the Project Study Area. A photographic log showing representative photos of potential roost trees and as well as existing conditions can be found in the Project File/Ecological/ESR/Appendices.PDF. Tree removal will only occur between October 1 and March 31 when the species would not be present.				
	Effect determination: No Impact				

Species common name	Species scientific name	The species or its suitable habitat is present within the project study area	Listing status	A record is within 1 mile of the project if it is an animal species, or within 0.5 mile of the project if it is a plant species	Proximity to the project (ft.)
Blanding's turtle	<i>Emydoidea blandingii</i>	Yes	Endangered	No	

Description of suitable habitat:

The Blanding's turtle inhabits marshes, ponds, lakes, streams, wet meadows, and swampy forests. Although essentially aquatic, the Blanding's turtle will travel over land as it moves from one wetland to the next.

Design Build 1	The species or its suitable habitat will be impacted by this project: Yes				
	Discussion of impacts to suitable habitat or species: Blanding's turtle habitat includes wetlands, which are anticipated to be impacted by the project. Blanding's turtles are essentially aquatic; however, the wetlands within the project area are not documented as being connected to ground water, therefore, are expected to be dry at different times throughout the year. The lack of water makes the wetland unusable for foraging Blanding's turtles. The wetlands proposed to be impacted by the project are also low quality (Category 1 wetlands) along an urban roadway. Based on the items discussed and that the work is expected to occur while the turtles are mobile (not hibernating), impacts are not likely to the Blanding's turtle.				
	Effect determination: Not Likely to Impact				

Species common name	Species scientific name	The species or its suitable habitat is present within the project study area
Sandhill crane	<i>Grus canadensis</i>	No

Species common name	Species scientific name	The species or its suitable habitat is present within the project study area	Listing status	A record is within 1 mile of the project if it is an animal species, or within 0.5 mile of the project if it is a plant species	Proximity to the project (ft.)
Spotted turtle	Clemmys guttata	Yes	Threatened	No	

Description of suitable habitat:

The spotted turtle prefers shallow waters of wetlands including fens, bogs, marches, wet prairies and meadows, as well as small ponds, ditches, and small streams with large amounts of vegetation.

Design Build 1	The species or its suitable habitat will be impacted by this project: Yes
	Discussion of impacts to suitable habitat or species: There is no record within 1 mile of the project area. Spotted turtle habitat includes wetlands, which are anticipated to be impacted by the project. Spotted turtles are essentially aquatic; however, the wetlands within the project area are not documented as being connected to ground water, therefore, are expected to be dry at different times throughout the year. This was confirmed by later site visits in Nov by OES. The lack of water makes the wetland unusable for foraging spotted turtles. The wetlands proposed to be impacted by the project are also low quality (Category 1 wetlands) along an urban roadway with lighter amounts of vegetation and occasional mowing. The portions of streams that will be impacted are already impacted by the culverts already present that will be repaired. Based on the items discussed and that the work is expected to occur while the turtles are mobile (not hibernating), impacts are not likely to the spotted turtle.
	Effect determination: Not Likely to Impact

Species common name	Species scientific name	The species or its suitable habitat is present within the project study area
Upland sandpiper	Bartramia longicauda	No

Species common name	Species scientific name	The species or its suitable habitat is present within the project study area
Northern harrier	Circus hudsonius	No

Species common name	Species scientific name	The species or its suitable habitat is present within the project study area
American bittern	Botaurus lentiginosus	No

Species common name	Species scientific name	The species or its suitable habitat is present within the project study area
Trumpeter swan	Cygnus buccinator	No

Species common name	Species scientific name	The species or its suitable habitat is present within the project study area
Lark sparrow	<i>Chondestes grammacus</i>	No

Species common name	Species scientific name	The species or its suitable habitat is present within the project study area
Least bittern	<i>Ixobrychus exilis</i>	No

Species common name	Species scientific name	The species or its suitable habitat is present within the project study area
Black-crowned night-heron	<i>Nycticorax nycticorax</i>	No

5 Literature Cited

- Anderson, D. M. 1982, unpublished. Plant communities of Ohio: a preliminary classification and description. Division of Natural Areas and Preserves, Ohio Department of Natural Resources, Columbus. 183p. Unpublished.
- Andreas, B. K., J.J Mack, and J.S. McCormac. 2004. Floristic Quality Assessment Index (FQAI) for vascular plants and mosses for the State of Ohio. Ohio Environmental Protection Agency, Division of Surface Water, Wetland Ecology Group, Columbus, Ohio. 219 p.
- Cowardin, L. M., V. Carter, F.C. Golet, and E. T. LaRoe. 1979. Classification of Wetlands and Deepwater Habitats of the United States. U.S. Fish and Wildlife Service. Biological Services Program Rept. FWS/OBS-79/31. 103 p.
- Environmental Laboratory. 2012. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region (Version 2.0). ERDC/EL TR-12-9. U.S. Army Engineer Research and Development Center, Vicksburg, MS.
- Environmental Laboratory. 2012. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0). ERDC/EL TR-12-1. U.S. Army Engineer Research and Development Center, Vicksburg, MS.
- Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS.
- Environmental Laboratory. 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0). ERDC/EL TR-10-16, U.S. Army Engineer Research and Development Center, Vicksburg, MS.
- Ohio Bird Records Committee (OBRC). 2004. Annotated Checklist of Ohio's Birds. Columbus, OH. Available at: <https://ohiobirds.org/wp-content/uploads/2015/11/OBRClst.pdf>
- Ohio Department of Natural Resources (ODNR), Division of Wildlife U.S. Fish and Wildlife Service (USFWS). Ohio Mussel Survey Protocols. Columbus, OH. Available at: <https://ohiodnr.gov/static/documents/wildlife/permits/dow-protocol-ohio-mussel-survey.pdf>
- Ohio Department of Transportation (ODOT). 2014. Ecological Manual. Columbus, OH. Available at: https://www.dot.state.oh.us/environmental-services/manuals_guidance/Ecological/Ecological%20Manual%202014.pdf
- Ohio Environmental Protection Agency (OEPA). 2006. Methods for Assessing Habitat in Flowing Waters: Using the Qualitative Habitat Evaluation Index (QHEI). OHIO EPA Technical Bulletin EAS/2006-06-1. Ecological Assessment Section, Division of Surface Water Groveport, OH.
- Ohio Environmental Protection Agency (OEPA). (revised) 2015. Biological Criteria for the Protection of Aquatic Life: Volume III, Standardized Biological Field Sampling and Laboratory Methods for Assessing Fish and Macroinvertebrate Communities. Ohio EPA Technical Report EAS/2015-06-01. Division of Surface Water Ecological Assessment Section, Columbus, OH.
- Ohio Environmental Protection Agency (OEPA). 1987a. Biological Criteria for the Protection of Aquatic Life: Volume I, The Role of Biological Data in Water Quality Assessment. Division of Water Quality Monitoring and Assessment, Surface Water Section, Columbus, OH.
- Ohio Environmental Protection Agency (OEPA). 1987b. Biological Criteria for the Protection of Aquatic Life: Volume II, Users Manual for Biological Field Assessment of Ohio Surface Waters. Division of Water Quality Monitoring and Assessment, Surface Water Section, Columbus, OH.

Ohio Environmental Protection Agency (OEPA). 2001. Ohio Rapid Assessment Method for Wetlands v. 5.0, User's Manual and Scoring Forms. Ohio EPA Technical Report WET/2001-1. Ohio EPA, Division of Surface Water. Columbus, Ohio.

Ohio Environmental Protection Agency (OEPA). 2014. 2014 updates to Biological Criteria for the Protection of Aquatic Life: Volume II and Volume II Addendum. Users manual for biological field assessment of Ohio surface waters. Division of Surface Water, Ecological Assessment Section, Columbus, OH.

6 Appendices

Appendix 1: Mapping:

- Topographic Map*
- County Map
- Aerial Photo*
- Water Resource Map*
- Suitable Wooded Habitat

Appendix 2: Photo Log:

- Photo Location Map*
- Project Photos*
- Bat Habitat Photos

Appendix 3: Plans:

Appendix 4: Forms:

- QHEI*
- HHEI*
- Wetland Delineation*
- ORAM*

Appendix 5: Agency Data Requests:

- ODNR - Ohio Natural Heritage Database Search Results
- USFWS - Bat Record Search Results

Appendix 6: List of Supporting Survey Report Titles or Literature Sources: