



OHIO DEPARTMENT OF TRANSPORTATION

Level 1 Ecological Survey Report
(Version: 10-19)

for

HAM IR 71/75 0.00/0.22 PID 75119

ESR: HAM IR 71/75 000/022 Re-Eval

Accepted: 10/11/2022 1:47:02 PM

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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: Len Mikles

Responsible party title: Principal Ecologist

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1 General Project Information

1.1 Project Information

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| <p>Project Location Details:</p> <p>County(ies): HAMILTON Township(s): Cincinnati Latitude (DD.ddddd): 39.10189 Longitude (-DD.ddddd): -84.52293 Study area size (ac.): 175.167</p> |
| <p>Survey Conditions:</p> <p>Field investigator name(s): Len Mikles and Stuart Jennings Date(s) of survey work: 06/27/2022, 06/01/2022</p> |
| <p>Survey Area Designations:</p> <p>USGS quadrangle(s): Cincinnati West, Ohio and Covington, Kentucky-Ohio Impacting or adjacent to ODNR property: No</p> <p>Project description:</p> <p>ASC Group, Inc. (ASC) has completed a Level 1 Ecological Survey Report (ESR) for the Brent Spence Bridge (BSB) Project (HAM-71/75-0.00/0.22; PID 89068) in the City of Cincinnati, Hamilton County, Ohio. The project proposes to improve the BSB crossing over the Ohio River. Previous activities related to the project were documented in the project's Environmental Assessment (March 2012). On August 9, 2012, the Federal Highway Administration (FHWA) issued a Finding of No Significant Impact (FONSI) identifying Alternative I as the preferred alternative for the BSB project.</p> <p>Since the approval of the FONSI, additional studies have refined Preferred Alternative I, which have been designated as Concept I-W. Concept I-W follows the Preferred Alternative I design for the I-71/I-75 alignment from the Dixie Highway interchange to 12th Street in Kentucky; north of Freeman Avenue in Ohio; and the local collector-distributor (C-D) roads along both sides of I-75 in Ohio. In addition, a companion bridge will be built just west of the existing BSB with all I-71 and I-75 traffic on the new bridge and all local C-D traffic on the existing BSB. The new bridge will carry five lanes of southbound (SB) I-71 and I-75 on the lower deck and five lanes of northbound (NB) I-71 and I-75 traffic on the upper deck. The existing BSB will be rehabilitated to carry three lanes for NB local traffic on the lower deck and three lanes for SB local traffic on the upper deck.</p> <p>The Kentucky Transportation Cabinet (KYTC) and ODOT are currently re-evaluating the project's Environmental Assessment to reflect the refined preferred alternative (Concept I-W). The re-evaluation efforts also involve updating resource-specific studies, including the Level 1 ESR, to reflect any changes in conditions that have occurred since they were originally prepared. ASC conducted field visits on June 1 and 27, 2022, to locate waterways, wetlands, listed species habitat, and other sensitive ecological areas within the proposed Concept I-W construction limits. No wetlands were identified, which is similar to the findings present in the original 2010 ESR. The Ohio River is located in the project area. This was also the only waterway identified in the 2010 ESR. Impacts to the Ohio River are estimated to be 633 ft. Impacts to Suitable Wooded Habitat (SWH) for the Indiana Bat (<i>Myotis sodalis</i>) and Northern Long-Eared Bat (<i>Myotis septentrionalis</i>) are anticipated. Approximately 15.80 acres (ac) of SWH was identified in the project area and has the potential to be impacted. All of the SWH is located within 100 feet (ft) from the edge of existing pavement. Impacts to potential habitat for the State Endangered Little Brown Bat (<i>Myotis lucifugus</i>), Tricolored Bat (<i>Perimyotis subflavus</i>), Washboard (<i>Megaloniaias nervosa</i>), Elephant-ear (<i>Elliptio crassidens</i>), Monkeyface (<i>Theliderma metanevra</i>), Butterfly (<i>Ellipsaria lineolata</i>), Ebonyshell (<i>Reginaia ebena</i>), and Ohio Pigtoe (<i>Pleurobema cordatum</i>) are anticipated. Impacts to potential habitat for the State Threatened Black-Crowned Night Heron (<i>Nycticorax nycticorax</i>), Channel Darter (<i>Percina copelandi</i>), and River Darter (<i>Percina shumardi</i>) are also likely.</p> |

List of Project Alternatives:

| Alternative name | Area of construction limits (ac.) | Preferred alternative |
|------------------|-----------------------------------|-----------------------|
| Concept I-W | 175.167 | Yes |

2 Aquatic Ecology

2.1 Streams:

Streams present: Yes

Total length of streams within the project study area (ft.): 633

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 |
|-------------|---------------------|-----------------------|----------|-------------------------|---------------------------------|--------------|-----------------------------------|-----------------------|----------------------------|--------------------|---------------|----------|----------------------|---------------|--------------------------------------|-----------------------------------|-------------------------------------|-----------------------------|---|--|--|---|--|--|----------------------------------|------------------|---|---|---|
| Ohio River | 39.09259 | -84.52240 | 6 | 76580 | 510.2 | 050902030202 | No | Perennial | TNW | None | | N/A | Not Surveyed | Not Surveyed | Not Surveyed | WWH | Official from OAC | General High Quality Water | Eligible | No | | Percid Streams | 633 | 0 | 633 | Concept I-W | 350 | 283 | 633 |

Flow path to TNW:

The Ohio River is considered a TNW.

Details on stream impact or other information (if known):

The Ohio River could not be accessed during the ecological survey field visits. The river is fenced off and is only accessible by boat. The drainage area of the Ohio River at the location of the Brent Spence Bridge could not be obtained from StreamStats.

The preferred alternative will build a new double-decker companion bridge west of the existing Brent Spence Bridge (BSB). There are two bridge types under consideration, an arch bridge and a cable-stayed bridge. The preferred alternative described in the 2012 EA/FONSI provides a span length over the main navigation channel for the Ohio River of approximately 1,000 feet from center to center of the proposed piers for the new bridge. However, coordination with the U.S. Coast Guard is on-going, and the required length of the main span may be reduced from 1,000 feet to 870 feet during final design. Permanent impacts to the Ohio River will occur from pier construction for the new companion bridge. Construction is anticipated to be completed primarily from barges, and cofferdams will be used to dewater the areas surrounding the proposed piers. Temporary impacts to the Ohio River are anticipated due to construction and barge staging and cofferdam construction. No in-stream work will occur during the rehabilitation of the existing BSB. The total impacts to the Ohio River are estimated to be 633 feet. Area of direct impact is estimated to be 6.92 acres. Construction details and impacts will be finalized during detailed design of the new companion bridge.

| 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.): |
|-------------|--|--|--|
| Concept I-W | 350 | 283 | 633 |

| 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.): |
|--------------|--|--|--|
| Concept I-W | 0 | 0 | 0 |

| 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 |
|-------------|--|--|--|
| Concept I-W | 0 | 0 | 0 |

2.2 Wetlands:

Wetlands present: No

2.3 Ditches:

Potentially jurisdictional ditches or non-jurisdictional conveyances for adjacent wetlands present: No

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: Yes - Stream(s) Listed as Group 2 or 4 in the Ohio Mussel Survey Protocol. Reconnaissance Not Acceptable. Include a Survey by a Federally Permitted Malacologist. Complete Table.

Mussels:

| Stream name | Group listing | Evidence of mussels | Level of effort | Documentation attached |
|-------------|---------------|--|----------------------------------|------------------------|
| Ohio River | Group 4 | Living Mussels and/or Fresh Dead Mussel Shell(s) | Professional Malacologist Survey | Survey Report |

Summary of results:

Stantec conducted a Group 4 Phase1/Phase 2 survey per the requirements set forth in the Ohio Mussel Survey Protocol. No live or fresh dead FLS were noted during the survey efforts. Most mussels were found on the southern side of the river. The Ohio portion of the river was dominated by large chunks of rubble and silt.

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 | 172.897 | | Concept I-W | 172.897 |
| 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 | 2.27 | | Concept I-W | 2.27 |

| | | |
|----------------------|-------------|----------------|
| Total Impacts | Concept I-W | 175.167 |
|----------------------|-------------|----------------|

Additional Information:

The project area is located in a highly urbanized area consisting of industrial, commercial, and residential properties. The majority of the project area is developed and paved over. The areas containing vegetation are primarily confined to the road right-of-way. These areas consist of plant species adapted to high levels of disturbance. Impacts to rare, unique, or high quality plant communities are not anticipated.

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> | Threatened |

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: Eastern Management Unit

The project is in a known bat buffer: No

Record type(s) (color):

Date of records request: 06/03/2022

4.1.1.1 Bat Impacts Per Alternative

Concept I-W

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

Acreage of SWH impacts within 100 feet of the edge of pavement: 15.80

All SWH to be impacted is within 100 feet of the edge of pavement: Yes

The impact to SWH is less than or equal to 0.10 acre: No

The alternative will impact a bridge spanning 20 feet and located over water: Yes (Complete the Bridge Bat Inspection grid below)

The bridge inspection showed the evidence of bats: No

Consultation category: CC1

Effect determination: May Affect, Not Likely to Adversely Affect

Discussion including impacts to suitable habitat:

All of the SWH located in the project area is located within 100 ft from the edge of pavement and is all within the existing right-of-way, except for a small portion along the Ohio River. Impacts to SWH from the project area expected. ODOT-OES provided some additional guidance for determining SWH in the project area. See attachments. Wooded areas in the right-of way were considered continuous to one another and collectively exceed the 0.5 ac threshold. The SWH observed in the right-of way is primarily dominated by White Mulberry (*Morus alba*), Northern Catalpa (*Catalpa speciosa*), Tree-of-Heaven (*Ailanthus altissima*), Black Locust (*Robinia pseudoacacia*), Honey-Locust (*Gleditsia triacanthos*), Callery Pear (*Pyrus calleryana*), Staghorn Sumac (*Rhus typhina*), Amur Honeysuckle (*Lonicera maackii*), and River-Bank Grape (*Vitis riparia*). Dead ash (*Fraxinus* spp.) trees were readily observed. The bank of the Ohio River under the Brent Spence Bridge was historically paved with concrete. The portions of SWH by the Ohio River are growing in large pavement cracks. The dominant species observed along the river included many of the species mentioned above as well as Silver Maple (*Acer saccharinum*), American Sycamore (*Platanus occidentalis*), and Asian Bittersweet (*Celastrus orbiculatus*).

Bridge Bat Inspection:

| Structure C-R-S | Select the Alternative(s) in which the structure is found | Inspector(s) | Date of inspection | Waterbody | Factors negatively affecting habitat suitability for bats | Intensity of human disturbance |
|---|---|-----------------------------|--------------------|------------|---|--------------------------------|
| HAM IR 71/75 000/022 | Concept I-W | Len Mikles, Stuart Jennings | 06/27/2022 | Ohio River | Human Disturbance or Traffic Under the Bridge. | High |
| <p>Factors negatively affecting habitat suitability for bats: Human Disturbance or Traffic Under the Bridge.</p> <p>Intensity of human disturbance: High</p> <p>Areas inspected on the bridge structure: Difficulty Surveying Underside of Structure (Safety or Other Reasons)</p> <p>Other Information: Only a small portion of the bridge was examined for bats. The portion of the bridge examined was elevated greater than 50 feet above the ground surface and located adjacent to the Duke Energy substation property. The bat investigation took place from the ground. Bridge crevices could not be examined. The bridge and area under the bridge were primarily examined for bat sounds, bat guano droppings, and bat urine staining on concrete supports. None of these indicators were observed during the field survey.</p> <p>Results of observations for bats: No Evidence of Bats Observed. (Only select when no other options below apply)</p> | | | | | | |

4.1.2 Bald Eagles

Bald Eagle:

| Species common name | Species scientific name | Listing status |
|--|---------------------------------|--------------------|
| Bald Eagle | <i>Haliaeetus leucocephalus</i> | Species of Concern |
| <p>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.</p> | | |

4.1.2.1 Bald Eagle Impacts Per Alternative

Concept I-W

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:

Evidence of Bald Eagles or suitable habitat in the project area was not observed. Impacts to potential habitat are not expected.

4.1.3 Other Federally Listed Species

Other Federally Listed Species:

| Species common name | Species scientific name | Listing status |
|---|--|----------------|
| Fanshell | Cyprogenia stegaria | Endangered |
| Suitable habitat: The Fanshell mussel is found in large streams and rivers in sand or gravel substrates in deep water of moderate current. In Ohio, this species is only known from certain high-quality waterways (designated in the Ohio Mussel Survey Protocol as Group 2 and 4 streams) with drainages larger than 5 square miles. | | |
| Concept I-W | Discussion including impacts to suitable habitat: Potentially suitable habitat for this species is likely present in the Ohio River. A Group 4 Phase I/II hybrid survey was conducted by Stantec, a firm with federally permitted biologists to determine presence or probable absence of FLS within the bridge study area. No live individuals or fresh dead shells of federally listed mussels were found during the survey. | |
| | Effect Determination: May Affect, Not Likely to Adversely Affect | |

| Species common name | Species scientific name | Listing status |
|---|--|----------------|
| Pink Mucket Pearly Mussel | Lampsilis abrupta | Endangered |
| Suitable habitat: The Pink Mucket Pearly Mussel is found large rivers in a variety of substrates including mud and sand, an in shallow riffles and shoals swept free of silt. In Ohio, this species is only known from the Ohio River and lower Muskingum River. | | |
| Concept I-W | Discussion including impacts to suitable habitat: Potentially suitable habitat for this species is likely present in the Ohio River. A Group 4 Phase I/II hybrid survey was conducted by Stantec, a firm with federally permitted biologists to determine presence or probable absence of FLS within the bridge study area. No live individuals or fresh dead shells of federally listed mussels were found during the survey. | |
| | Effect Determination: May Affect, Not Likely to Adversely Affect | |

| Species common name | Species scientific name | Listing status |
|--|--|----------------|
| Rayed Bean | Villosa fabalis | Endangered |
| Suitable habitat: The Rayed Bean mussel is usually found in streams but can also live in large rivers and wave-washed areas of glacial lakes. The rayed bean mussel prefers gravel or sand substrates and is often found in and around roots of aquatic vegetation. In Ohio, this species is only known from certain high-quality waterways (designated in the Ohio Mussel Survey Protocol as Group 2 and 4 streams) with drainages larger than 5 square miles. | | |
| Concept I-W | Discussion including impacts to suitable habitat: Potentially suitable habitat for this species is likely present in the Ohio River. A Group 4 Phase I/II hybrid survey was conducted by Stantec, a firm with federally permitted biologists to determine presence or probable absence of FLS within the bridge study area. No live individuals or fresh dead shells of federally listed mussels were found during the survey. | |
| | Effect Determination: May Affect, Not Likely to Adversely Affect | |

| Species common name | Species scientific name | Listing status |
|---|-------------------------|----------------|
| Sheepnose | Plethobasus cyphus | Endangered |
| Suitable habitat: The Sheepnose mussel is found in very large streams to large rivers where they are most often found in shallow areas with moderate to swift currents that flow | | |

| Species common name | Species scientific name | Listing status |
|---------------------|--|----------------|
| Concept I-W | Discussion including impacts to suitable habitat: Potentially suitable habitat for this species is likely present in the Ohio River. A Group 4 Phase I/II hybrid survey was conducted by Stantec, a firm with federally permitted biologists to determine presence or probable absence of FLS within the bridge study area. No live individuals or fresh dead shells of federally listed mussels were found during the survey. | |
| | Effect Determination: May Affect, Not Likely to Adversely Affect | |

| Species common name | Species scientific name | Listing status |
|--|--|----------------|
| Snuffbox | Epioblasma triquetra | Endangered |
| Suitable habitat: The Snuffbox mussel is usually found in streams and small rivers, although they can also be found in Lake Erie and some larger rivers. Snuffbox mussels prefer areas with a swift current, and can be found in sand, gravel, or cobble substrates. In Ohio, this species is only known from certain high-quality waterways (designated in the Ohio Mussel Survey Protocol as Group 2 and 4 streams) with drainages larger than 5 square miles. | | |
| Concept I-W | Discussion including impacts to suitable habitat: Potentially suitable habitat for this species is likely present in the Ohio River. A Group 4 Phase I/II hybrid survey was conducted by Stantec, a firm with federally permitted biologists to determine presence or probable absence of FLS within the bridge study area. No live individuals or fresh dead shells of federally listed mussels were found during the survey. | |
| | Effect Determination: May Affect, Not Likely to Adversely Affect | |

4.2 State Listed Species

Date of the ONHDB check: 06/12/2022

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.) |
|--|---|--|----------------|---|--------------------------------|
| Riverbank Paspalum | Paspalum repens | Yes | Threatened | Yes | 2000 |
| Description of suitable habitat: Shallow water or wet muddy soils; margins of temporary pools, riverbanks and riverine woodlands. A portion of the bank of the Ohio River is within the study area for this project. This bank is mostly armored with concrete and contains very little vegetation. The study area was searched for this species by OES in 2008 and was not found during the initial ecological survey in 2010. This species was not observed during the 2022 survey. | | | | | |
| Concept I-W | The species or its suitable habitat will be impacted by this project: No | | | | |
| | 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.) |
|---------------------|---------------------------|--|------------------------|---|--------------------------------|
| Virginia-mallow | Ripariosida hermaphrodita | Yes | Potentially Threatened | Yes | 0 |

Description of suitable habitat:

Open to semi-open disturbed situations in sandy soils along rivers. All of the southern Ohio plants grow either along or very near the bank of the Ohio River. The Williams County site is near a stream.

| | |
|-------------|---|
| Concept I-W | The species or its suitable habitat will be impacted by this project: Yes |
| | Discussion of impacts to suitable habitat or species: Marginal habitat for this species exists within the project study area near the edge of the water on the Ohio River. Most of the bank within the project area is armored with concrete and has tree of heaven and vines growing out of the cracks. OES personnel looked for this species in the project area in 2008 and did not observe it. It was also not noted during the 2010 and 2022 ecological surveys. |
| | 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.) |
|---------------------|-------------------------|--|------------------------|---|--------------------------------|
| Smooth Buttonweed | Spermacoce glabra | Yes | Potentially Threatened | Yes | 2000 |

Description of suitable habitat:

Swamps, wet woods and openings; in Ohio found mostly on muddy shores and low banks of the Ohio River.

The banks of the Ohio River within the project area have little to no suitable habitat for this species. The bank along the Ohio side is mostly armored in concrete with vines and invasive species growing out of the cracks in the concrete. This species was not noted during the 2010 or 2022 ecological surveys.

| | |
|-------------|---|
| Concept I-W | The species or its suitable habitat will be impacted by this project: No |
| | Effect determination: No Impact |

| Species common name | Species scientific name | The species or its suitable habitat is present within the project study area |
|---------------------|-------------------------|--|
| Kirtland's Snake | Clonophis kirtlandii | 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.) |
|---------------------------|-------------------------|--|----------------|---|--------------------------------|
| Black-crowned Night-heron | Nycticorax nycticorax | Yes | Threatened | Yes | 2000 |

| 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.) |
|---------------------|-------------------------|--|----------------|---|--------------------------------|
|---------------------|-------------------------|--|----------------|---|--------------------------------|

Description of suitable habitat:

The Black-Crowned Night Heron (*Nycticorax nycticorax*) once occurred in marshes and swamps throughout Ohio. The species has been eliminated as a mainland nester and presently is relegated to the Lake Erie Islands. They presently nest on West Sister Island National Wildlife Refuge and Turning Point Island in Sandusky Bay. These herons are often found roosting in thick vegetation along streams, lakes, and wetlands. Suitable roosting habitat is located along the Ohio River and has the potential to be impacted.

| | |
|-------------|--|
| Concept I-W | The species or its suitable habitat will be impacted by this project: Yes |
| | Discussion of impacts to suitable habitat or species: Some marginally suitable nesting habitat is present within the study area, mostly on the Kentucky side of the river. No nesting activity was noted during the ecological survey. |
| | 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.) |
|---------------------|--------------------------|--|----------------|---|--------------------------------|
| Channel Darter | <i>Percina copelandi</i> | Yes | Threatened | Yes | 1 |

Description of suitable habitat:

Channel darters are found large course sand or fine gravel bars in large rivers or along the shore of Lake Erie. There is a record for this species in the Ohio River under the Brent Spence Bridge. Potentially suitable habitat for this species is likely present in the Ohio River.

| | |
|-------------|--|
| Concept I-W | The species or its suitable habitat will be impacted by this project: Yes |
| | Discussion of impacts to suitable habitat or species: A record for this species was identified in the study area and suitable habitat is likely present in the Ohio River within the project area. In-stream work for this project will be limited to the pier locations and along the edge of the stream for barge moorings. Most of the stream bottom will remain undisturbed. As most of the project area impacts will be in the portion of the river controlled by Kentucky, this project will not automatically have in-stream work restrictions applied. As this species is mobile, it will likely relocate from any impact areas during construction. |
| | 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.) |
|---------------------|-------------------------|--|----------------|---|--------------------------------|
| River Darter | <i>Percina shumardi</i> | Yes | Threatened | Yes | 1 |

Description of suitable habitat:

The River Darter is found in very large rivers typically in areas of swift current. They are found over a gravel or rocky bottom in depths of 3 feet or more. In Ohio this species has historically been found in some of the larger western Lake Erie tributaries. They have also been found in the Ohio River and the lower portion of larger tributaries such as the Scioto, Hocking, and Muskingum Rivers. There is a record for this species in the Ohio River under the Brent Spence Bridge. Potentially suitable habitat for this species is likely present in the Ohio River.

| 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.) |
|---------------------|---|--|----------------|---|--------------------------------|
| Concept I-W | The species or its suitable habitat will be impacted by this project: Yes | | | | |
| | Discussion of impacts to suitable habitat or species: A record for this species was identified in the study area and suitable habitat is likely present in the Ohio River within the project area. In-stream work for this project will be limited to the pier locations and along the edge of the stream for barge moorings. Most of the stream bottom will remain undisturbed. As most of the project area impacts will be in the portion of the river controlled by Kentucky, this project will not automatically have in-stream work restrictions applied. As this species is mobile, it will likely relocate from any impact areas during construction. | | | | |
| | 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.) |
|---------------------|-------------------------|--|----------------|---|--------------------------------|
| Washboard | Megalonaias nervosa | Yes | Endangered | Yes | 200 |

Description of suitable habitat:
This species primarily inhabits large rivers with a good current; occasionally medium-sized streams in mud, sand, or gravel. Potentially suitable habitat for this species is present in the Ohio River.

| | | | | | |
|-------------|--|--|--|--|--|
| Concept I-W | The species or its suitable habitat will be impacted by this project: Yes | | | | |
| | Discussion of impacts to suitable habitat or species: Potentially suitable habitat for this species is present in the Ohio River. A mussel survey was conducted for the project. A total of 101 live individuals were documented during the survey. An environmental commitment to relocate the mussels to areas outside of the construction limits will be added to the environmental document. Impacts to this species are not expected due to the relocation efforts that will take place. | | | | |
| | 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 | Myotis lucifugus | 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 is within the range of the little brown bat. During spring and summer (April 1 through September 30), this species of bat predominately roosts in trees behind loose, exfoliating bark, in crevices and cavities of living or dead trees, although they also use structures such as barns and bridges. In the winter, this species hibernates in caves, mines, and other underground structures that provide cool, humid areas with stable temperature. | | | | | |
| Concept I-W | The species or its suitable habitat will be impacted by this project: Yes | | | | |
| | Discussion of impacts to suitable habitat or species: Potential habitat is located in the project area and is within 100 ft from the edge of pavement. All potential habitat is within the existing right-of-way, except for a small portion along the Ohio River. Impacts to potential habitat from the project area expected. The project is not likely to impact the species since tree cutting is likely to take place from October 1 through March 31. | | | | |
| | 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.) |
|--|--|--|----------------|---|--------------------------------|
| Tricolored Bat | Perimyotis subflavus | Yes | Endangered | No | |
| Description of suitable habitat: | | | | | |
| The entire state is within the range of the tricolored bat. During spring and summer (April 1 through September 30), this species of bat predominately roosts 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 temperature. | | | | | |
| Concept I-W | The species or its suitable habitat will be impacted by this project: Yes | | | | |
| | Discussion of impacts to suitable habitat or species: Potential habitat is located in the project area and is within 100 ft from the edge of pavement. All potential habitat is within the existing right-of-way, except for a small portion along the Ohio River. Impacts to potential habitat from the project area expected. In order to protect this species during the active roosting/brood-rearing period, tree removal will only occur between October 1 and March 31. | | | | |
| | 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.) |
|---|-------------------------|--|----------------|---|--------------------------------|
| Elephantear | Elliptio crassidens | Yes | Endangered | Yes | 1 |
| 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.) |
|---|--|--|----------------|---|--------------------------------|
| This species inhabits muddy sand, sand and rocky substrates in moderate currents. | | | | | |
| Concept I-W | The species or its suitable habitat will be impacted by this project: Yes | | | | |
| | Discussion of impacts to suitable habitat or species: Potentially suitable habitat for this species is present in the Ohio River. A mussel survey was conducted for the project. One live individual was documented during the survey. An environmental commitment to relocate the mussel to an area outside of the construction limits will be added to the environmental document. Impacts to this species are not expected due to the relocation efforts that will take place. | | | | |
| | 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.) |
|---------------------|-------------------------|--|----------------|---|--------------------------------|
| Monkeyface | Theliderma metanevra | Yes | Endangered | Yes | 1 |

Description of suitable habitat:
This species is typically found in medium to large rivers in gravel or mixed sand and gravel.

| | | | | | |
|-------------|--|--|--|--|--|
| Concept I-W | The species or its suitable habitat will be impacted by this project: Yes | | | | |
| | Discussion of impacts to suitable habitat or species: Potentially suitable habitat for this species is present in the Ohio River. A mussel survey was conducted for the project. One live individual was documented during the survey. An environmental commitment to relocate the mussel to an area outside of the construction limits will be added to the environmental document. Impacts to this species are not expected due to the relocation efforts that will take place. | | | | |
| | 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.) |
|---------------------|-------------------------|--|----------------|---|--------------------------------|
| Wartyback | Cyclonaias nodulata | Yes | Endangered | Yes | 1 |

Description of suitable habitat:
This species is frequently found in in large streams or rivers in firm sand and mud.

| | | | | | |
|---|--|--|--|--|--|
| The species or its suitable habitat will be impacted by this project: Yes | | | | | |
|---|--|--|--|--|--|

| 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.) |
|--|---|--|----------------|---|--------------------------------|
| Concept I-W | <p>Discussion of impacts to suitable habitat or species: Potentially suitable habitat for this species is present in the Ohio River. A mussel survey was conducted for the project. A total of 108 live individuals were documented during the survey. An environmental commitment to relocate the mussels to areas outside of the construction limits will be added to the environmental document. Impacts to this species are not expected due to the relocation efforts that will take place.</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 |
|---------------------|-------------------------|--|
| Cave Salamander | <i>Eurycea lucifuga</i> | No |

| Species common name | Species scientific name | The species or its suitable habitat is present within the project study area |
|---------------------|---|--|
| Eastern Hellbender | <i>Cryptobranchus alleganiensis alleganiensis</i> | No |

| Species common name | Species scientific name | The species or its suitable habitat is present within the project study area |
|---------------------|------------------------------|--|
| American Bittern | <i>Botaurus lentiginosus</i> | 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 |
|---------------------|----------------------------|--|
| Loggerhead Shrike | <i>Lanius ludovicianus</i> | 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 |
|---------------------|-------------------------|--|
| Least Bittern | Ixobrychus exilis | 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.) |
|---------------------|-------------------------|--|----------------|---|--------------------------------|
| Butterfly | Elliparia lineolata | Yes | Endangered | Yes | 0 |

Description of suitable habitat:

The butterfly mussel usually inhabits areas of large rivers with swift currents in sand or gravel substrates. This species has adapted to living in reservoirs and impoundments in some parts of its range.

| | |
|--------------------|--|
| Concept I-W | The species or its suitable habitat will be impacted by this project: Yes |
| | Discussion of impacts to suitable habitat or species: A Group 4 Phase 1/Phase 2 survey was conducted at this site during the summer of 2022 by Stantec federally permitted biologists. A single living specimen was found within the project study area. A mussel relocation following the methods in the Ohio Mussel Survey Protocol will be conducted prior to construction in order to protect this species and common mussels found within the project area. |
| | 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.) |
|---------------------|-------------------------|--|----------------|---|--------------------------------|
| Ebonysell | Reginaia ebena | Yes | Endangered | Yes | 0 |

Description of suitable habitat:

. The ebonysell mussel primarily inhabits large rivers in sand or gravel

| | |
|--------------------|---|
| Concept I-W | The species or its suitable habitat will be impacted by this project: Yes |
| | Discussion of impacts to suitable habitat or species: A Group 4 Phase 1/Phase 2 survey was conducted at this site during the summer of 2022 by Stantec federally permitted biologists. Two living specimens were found within the project study area. A mussel relocation following the methods in the Ohio Mussel Survey Protocol will be conducted prior to construction in order to protect this species and common mussels found within the project area. |
| | 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.) |
|---|---|--|----------------|---|--------------------------------|
| Ohio Pigtoe | Pleurobema cordatum | Yes | Endangered | Yes | 0 |
| Description of suitable habitat: | | | | | |
| Medium to large rivers in sand or gravel in areas with moderate flow. | | | | | |
| Concept I-W | The species or its suitable habitat will be impacted by this project: Yes | | | | |
| | Discussion of impacts to suitable habitat or species: A Group 4 Phase 1/Phase 2 survey was conducted at this site during the summer of 2022 by Stantec federally permitted biologists. Two living specimens were found within the project study area. A mussel relocation following the methods in the Ohio Mussel Survey Protocol will be conducted prior to construction in order to protect this species and common mussels found within the project area. | | | | |
| | Effect determination: Not Likely to Impact | | | | |

5 Literature Cited

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6 Appendices

Appendix 1: Mapping:

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

Appendix 2: Photo Log:

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

Appendix 3: Plans:

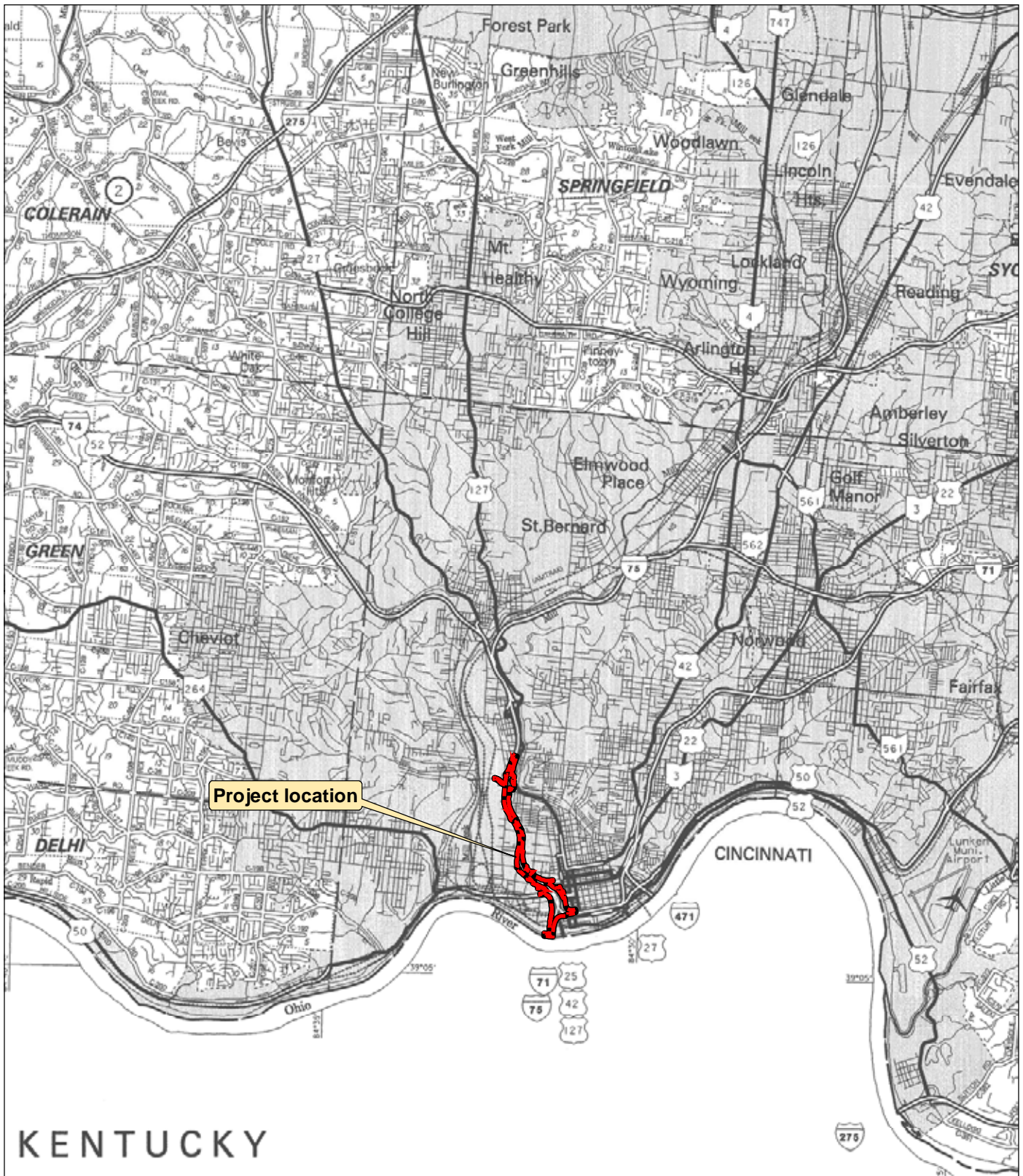
Appendix 4: Forms:

Appendix 5: Agency Data Requests:

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

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

Brent Spence Bridge Replacement/Rehabilitation Project Level One Ecological Survey Report, ODOT PID No. 75119. HAM-71/75-0.00/0.22. March 2010. Prepared by Parsons Brinckerhoff.



Project location

KENTUCKY

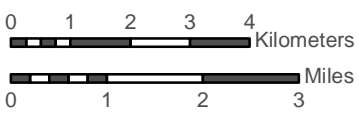
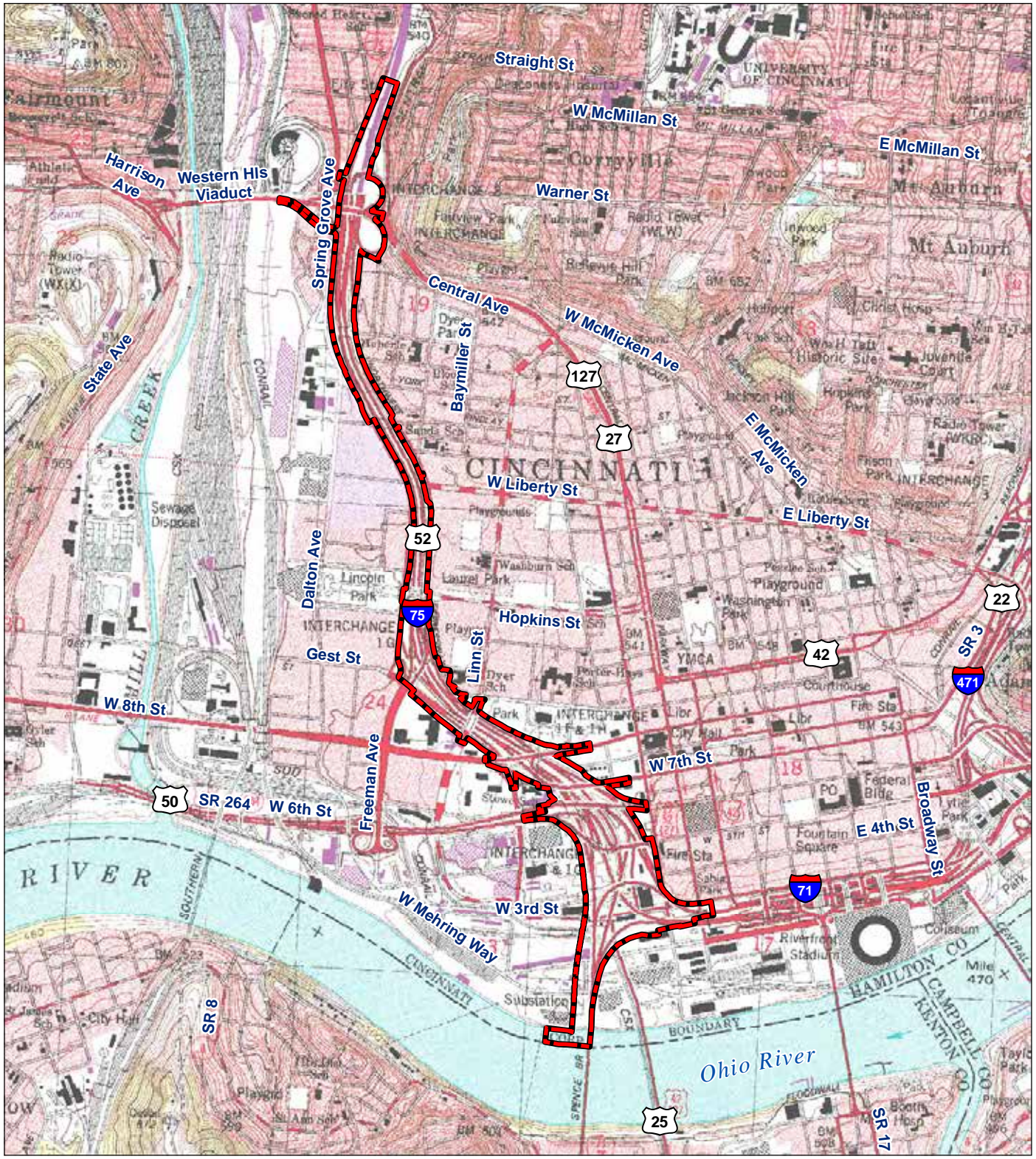


Figure 1

Portion of the Hamilton County highway map showing the vicinity of the HAM IR 71/75 0.00/0.22 Re-Eval 2022 construction limits.



 Construction limits

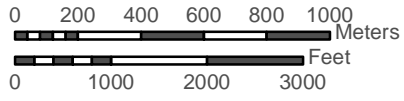
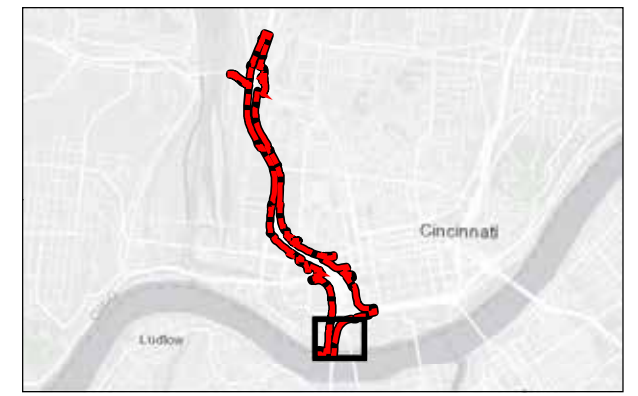


Figure 2
 Portions of the 1981 Cincinnati West, Ohio and 1987 Covington KY-OH quadrangles (USGS 7.5' topographic maps) showing the HAM IR 71/75 0.00/0.22 Re-Eval 2022 construction limits.

Base: USGS Cincinnati West, OH, and Covington, KY-OH, 7.5' series quadrangles



- Construction limits
- Suitable Wooded Habitat (SWH)

Base: Aerial photograph 2018 and Microsoft Corporation 2022

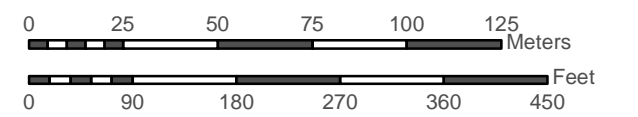
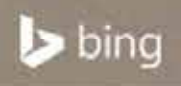
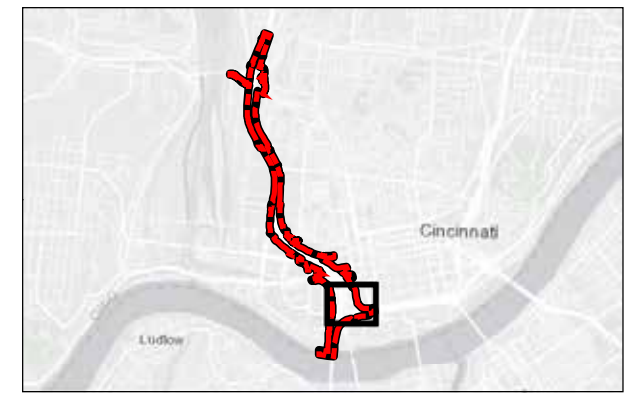




Figure 3 **Sheet 1 of 11**

Aerial photograph showing the ecological resources for the HAM IR 71/75 0.00/0.22 Re-Eval 2022 construction limits.





-  Construction limits
-  Suitable Wooded Habitat (SWH)

Base: Aerial photograph 2018 and Microsoft Corporation 2022

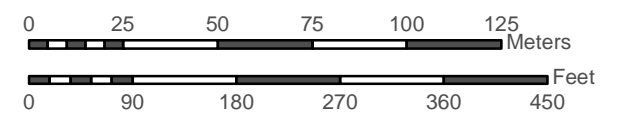
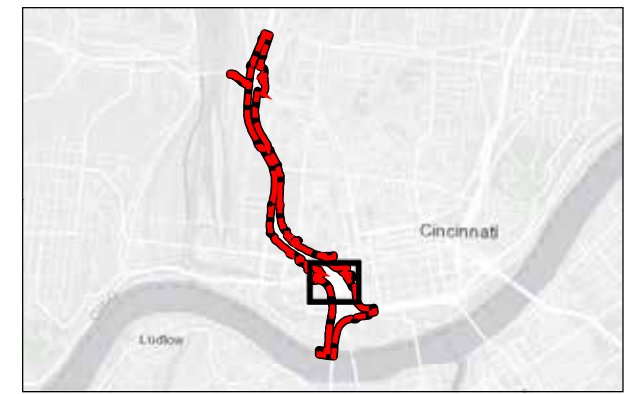
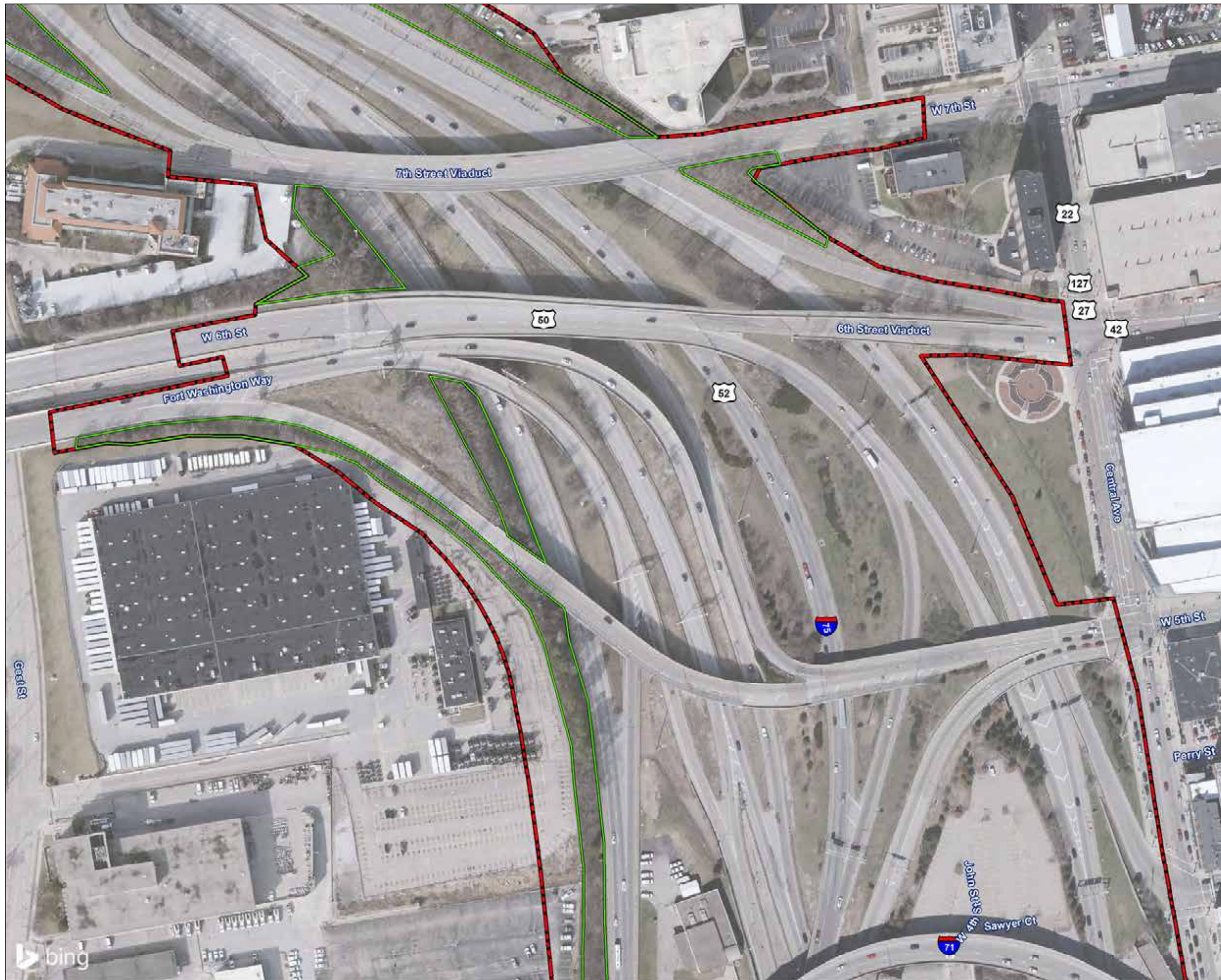


Figure 3 **Sheet 2 of 11**

Aerial photograph showing the ecological resources for the HAM IR 71/75 0.00/0.22 Re-Eval 2022 construction limits.



- Construction limits
- Suitable Wooded Habitat (SWH)

Base: Aerial photograph 2018 and Microsoft Corporation 2022

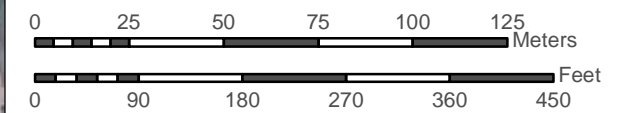
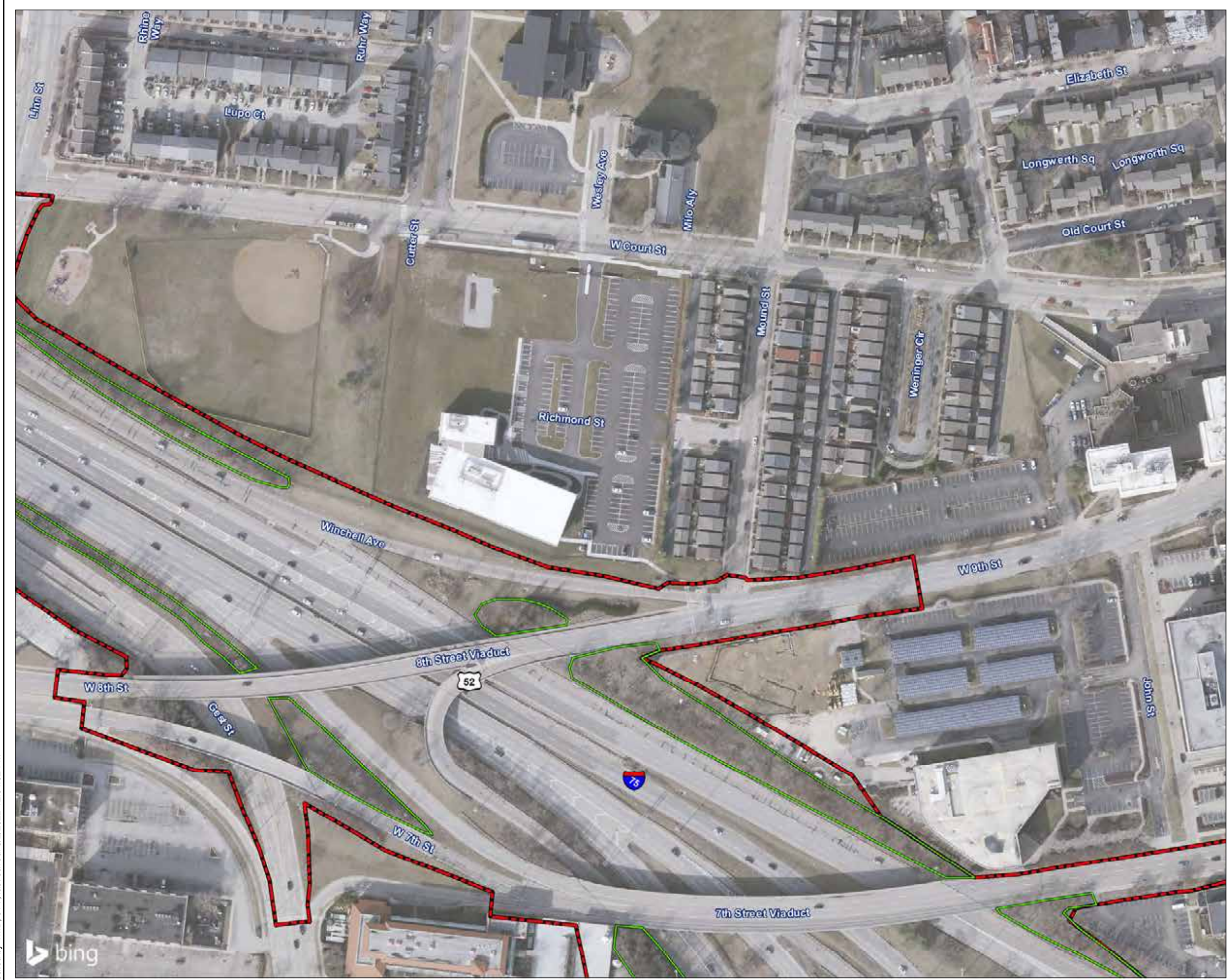


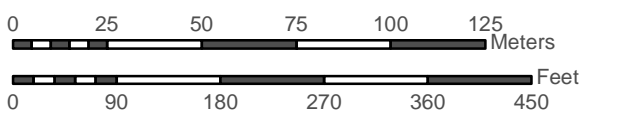
Figure 3

Aerial photograph showing the ecological resources for the HAM IR 71/75 0.00/0.22 Re-Eval 2022 construction limits.



- Construction limits
- Suitable Wooded Habitat (SWH)

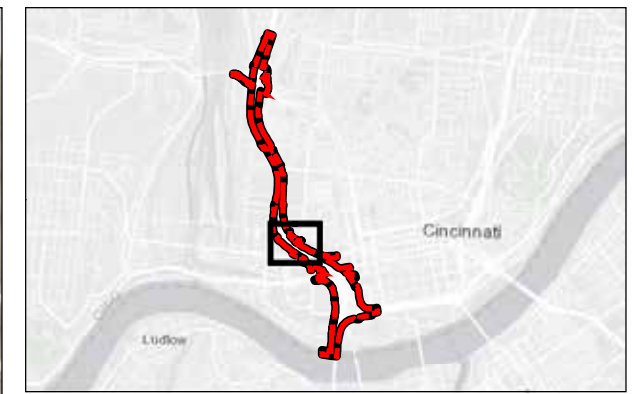
Base: Aerial photograph 2018 and Microsoft Corporation 2022



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Figure 3 **Sheet 4 of 11**

Aerial photograph showing the ecological resources for the HAM IR 71/75 0.00/0.22 Re-Eval 2022 construction limits.



- Construction limits
- Suitable Wooded Habitat (SWH)

Base: Aerial photograph 2018 and Microsoft Corporation 2022

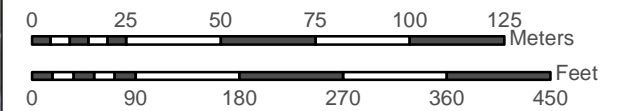
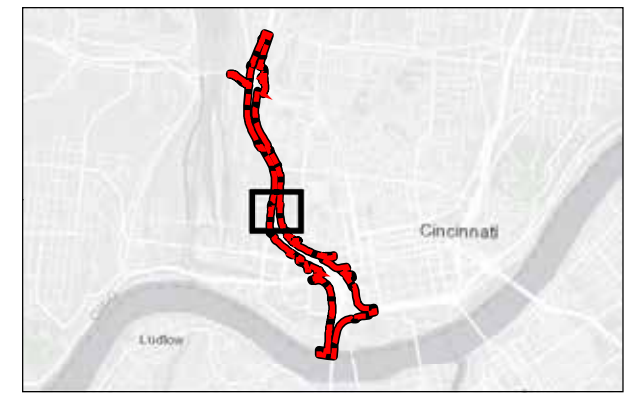


Figure 3 **Sheet 5 of 11**

Aerial photograph showing the ecological resources for the HAM IR 71/75 0.00/0.22 Re-Eval 2022 construction limits.



- Construction limits
- Suitable Wooded Habitat (SWH)

Base: Aerial photograph 2018 and Microsoft Corporation 2022

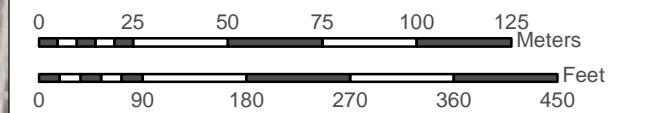
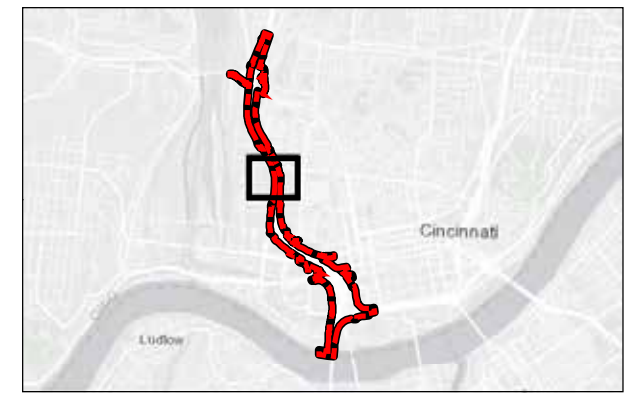




Figure 3 **Sheet 6 of 11**

Aerial photograph showing the ecological resources for the HAM IR 71/75 0.00/0.22 Re-Eval 2022 construction limits.



-  Construction limits
-  Suitable Wooded Habitat (SWH)

Base: Aerial photograph 2018 and Microsoft Corporation 2022

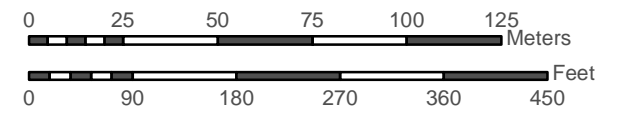




Figure 3 **Sheet 7 of 11**

Aerial photograph showing the ecological resources for the HAM IR 71/75 0.00/0.22 Re-Eval 2022 construction limits.



-  Construction limits
-  Suitable Wooded Habitat (SWH)

Base: Aerial photograph 2018 and Microsoft Corporation 2022

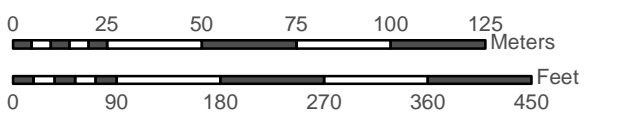
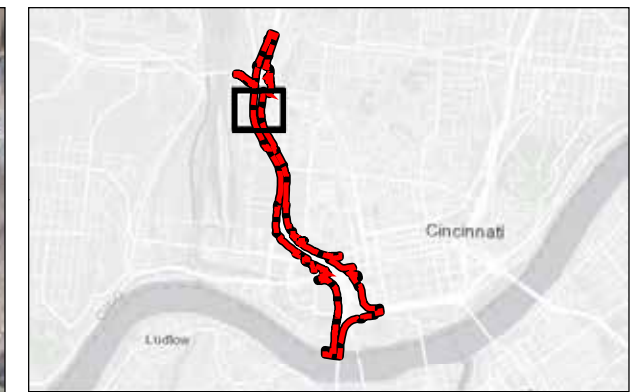
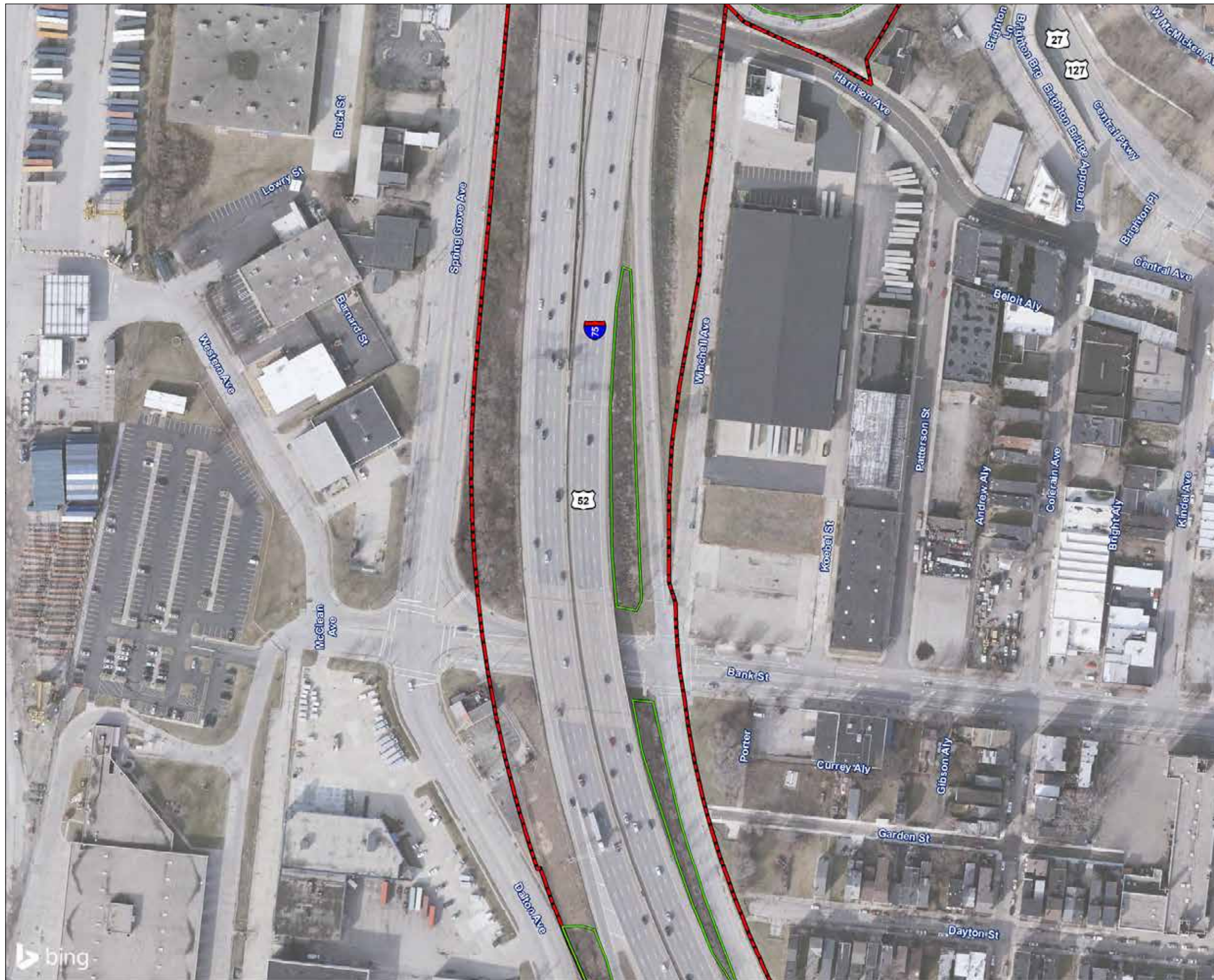




Figure 3 **Sheet 8 of 11**

Aerial photograph showing the ecological resources for the HAM IR 71/75 0.00/0.22 Re-Eval 2022 construction limits.





-  Construction limits
-  Suitable Wooded Habitat (SWH)

Base: Aerial photograph 2018 and Microsoft Corporation 2022

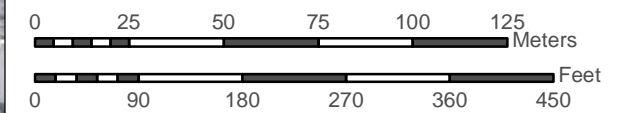
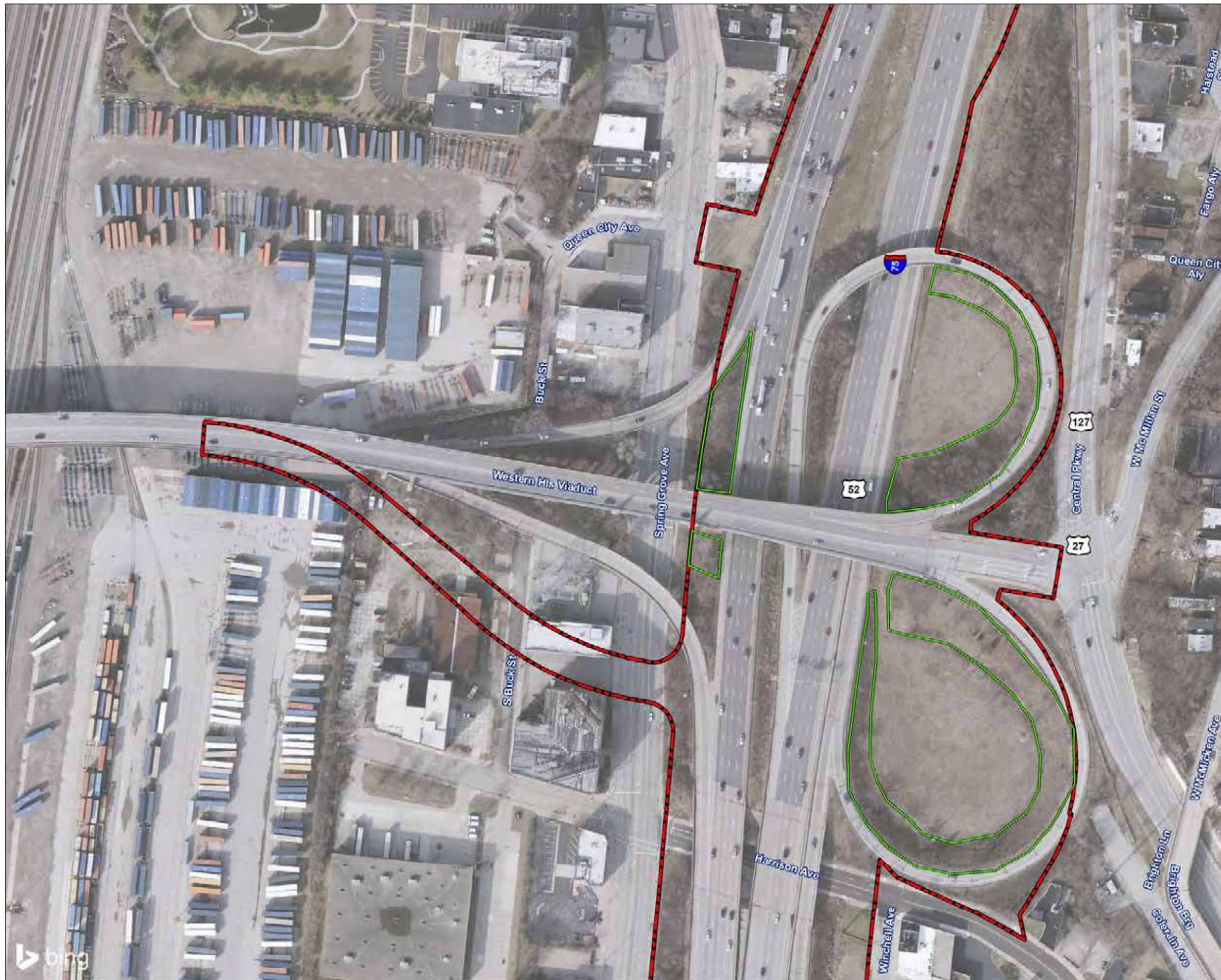




Figure 3

Aerial photograph showing the ecological resources for the HAM IR 71/75 0.00/0.22 Re-Eval 2022 construction limits.



-  Construction limits
-  Suitable Wooded Habitat (SWH)

Base: Aerial photograph 2018 and Microsoft Corporation 2022

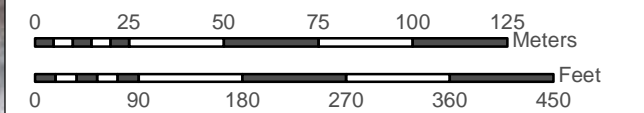
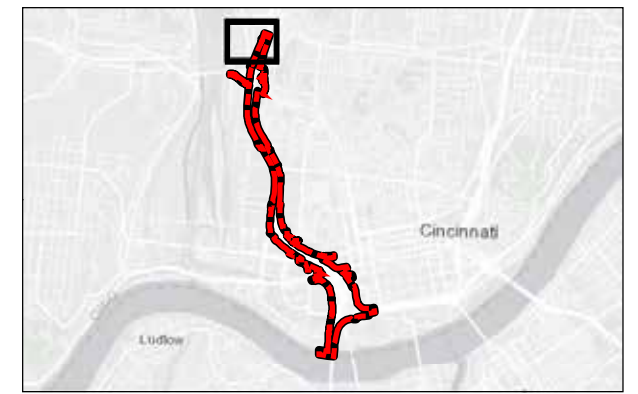


Figure 3 **Sheet 10 of 11**

Aerial photograph showing the ecological resources for the HAM IR 71/75 0.00/0.22 Re-Eval 2022 construction limits.



- Construction limits
- Suitable Wooded Habitat (SWH)

Base: Aerial photograph 2018 and Microsoft Corporation 2022

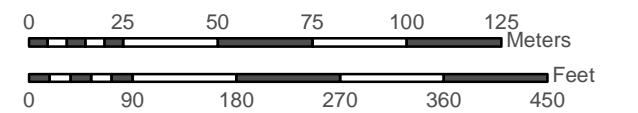
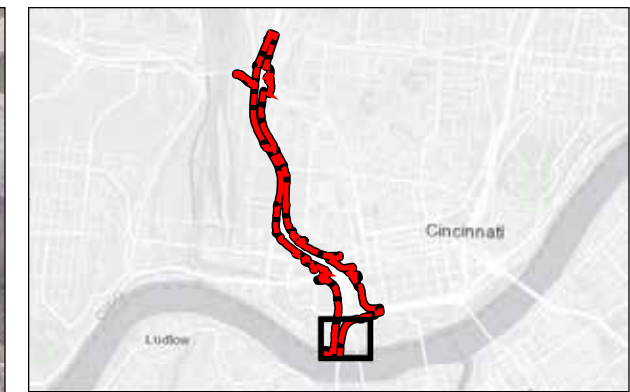
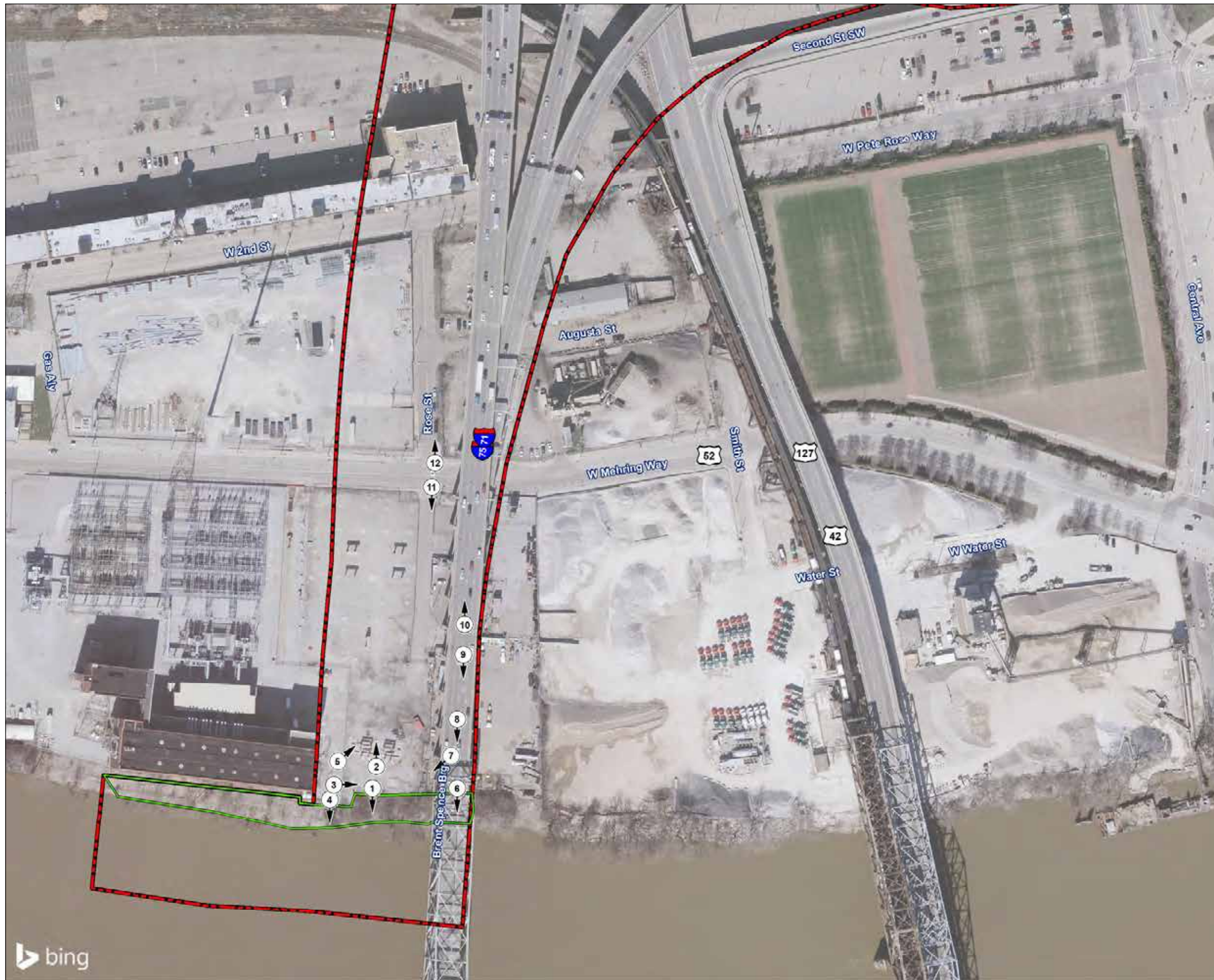





Figure 3

Aerial photograph showing the ecological resources for the HAM IR 71/75 0.00/0.22 Re-Eval 2022 construction limits.



-  Construction limits
-  Suitable Wooded Habitat (SWH)
-  Photograph location

Base: Aerial photograph 2018 and Microsoft Corporation 2022

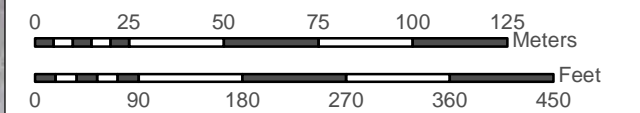
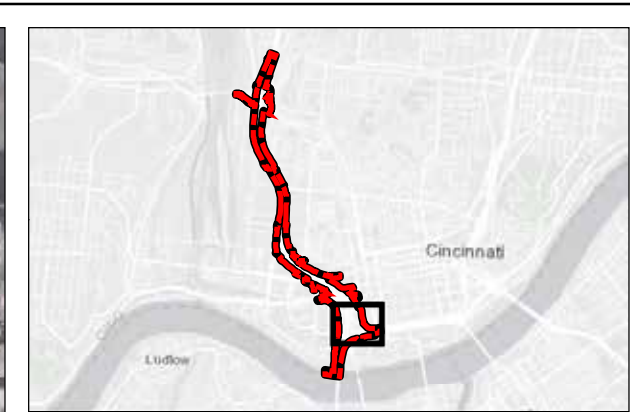





Figure 4 **Sheet 1 of 11**

Aerial photograph showing the ecological resources and photograph locations for the HAM IR 71/75 0.00/0.22 Re-Eval 2022 construction limits. (11 Sheets)



-  Construction limits
-  Suitable Wooded Habitat (SWH)
-  Photograph location

Base: Aerial photograph 2018 and Microsoft Corporation 2022

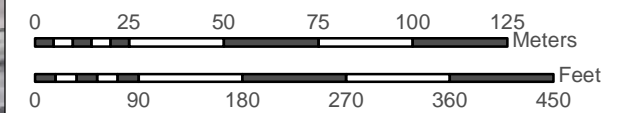
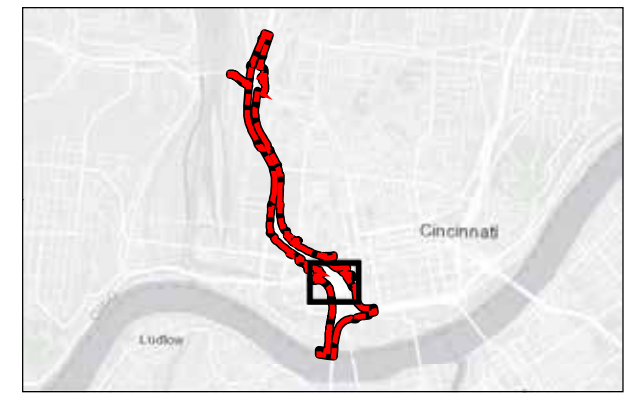
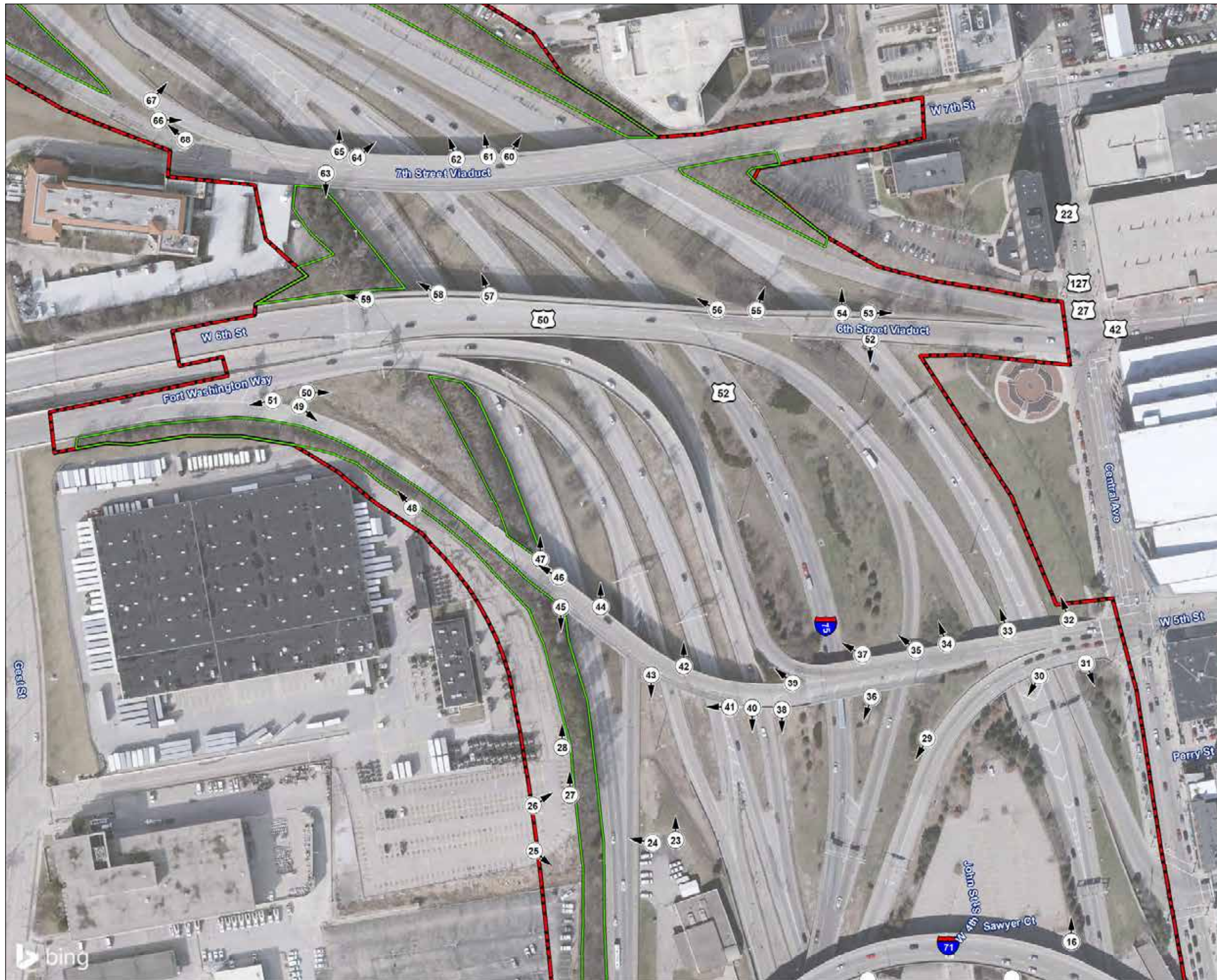





Figure 4 Sheet 2 of 11

Aerial photograph showing the ecological resources and photograph locations for the HAM IR 71/75 0.00/0.22 Re-Eval 2022 construction limits. (11 Sheets)



-  Construction limits
-  Suitable Wooded Habitat (SWH)
-  Photograph location

Base: Aerial photograph 2018 and Microsoft Corporation 2022

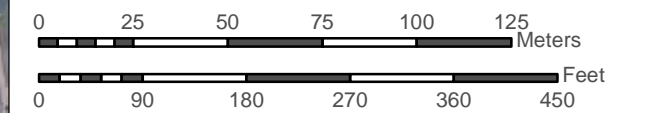
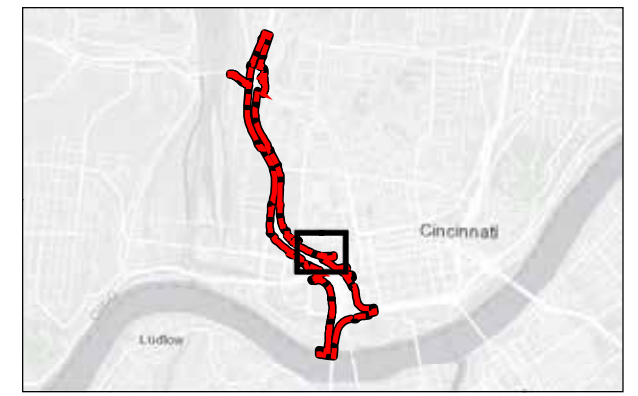
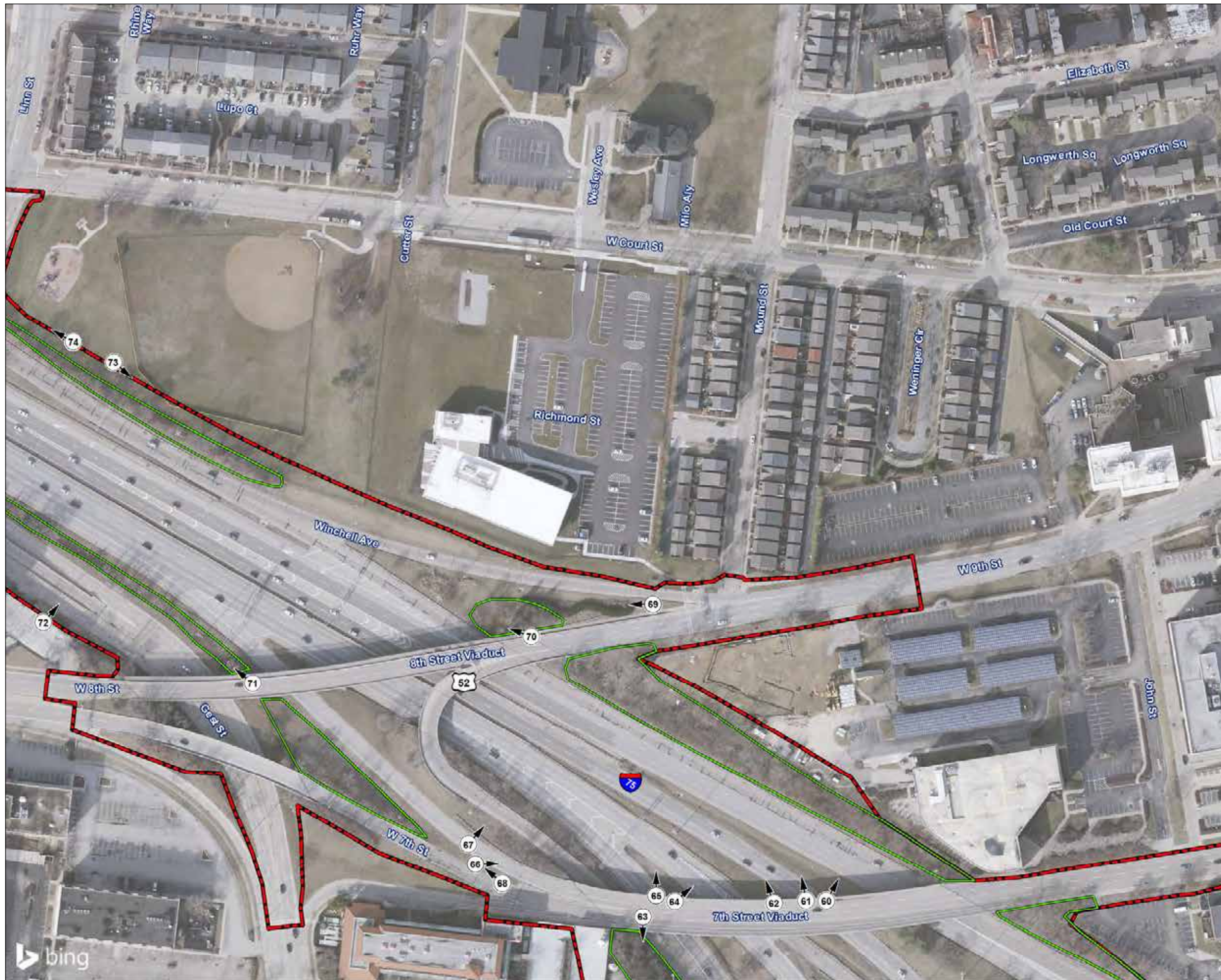





Figure 4 **Sheet 3 of 11**

Aerial photograph showing the ecological resources and photograph locations for the HAM IR 71/75 0.00/0.22 Re-Eval 2022 construction limits. (11 Sheets)



-  Construction limits
-  Suitable Wooded Habitat (SWH)
-  Photograph location

Base: Aerial photograph 2018 and Microsoft Corporation 2022

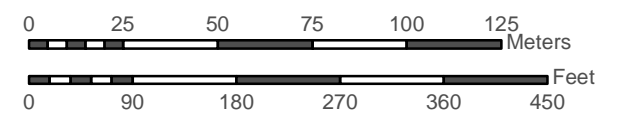
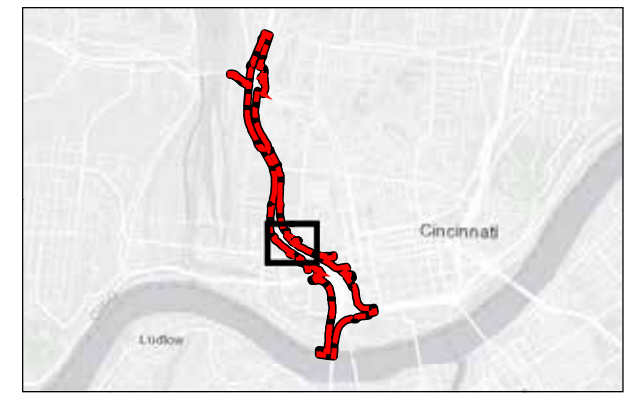





Figure 4 **Sheet 4 of 11**


Aerial photograph showing the ecological resources and photograph locations for the HAM IR 71/75 0.00/0.22 Re-Eval 2022 construction limits. (11 Sheets)



-  Construction limits
-  Suitable Wooded Habitat (SWH)
-  Photograph location

Base: Aerial photograph 2018 and Microsoft Corporation 2022

N

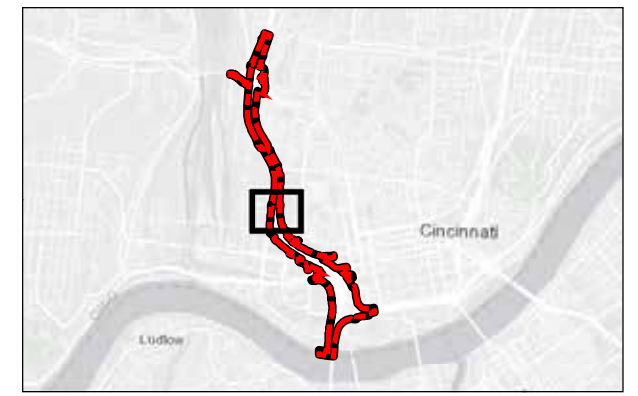





0 25 50 75 100 125 Meters

0 90 180 270 360 450 Feet

Figure 4 **Sheet 5 of 11**

Aerial photograph showing the ecological resources and photograph locations for the HAM IR 71/75 0.00/0.22 Re-Eval 2022 construction limits. (11 Sheets)



-  Construction limits
-  Suitable Wooded Habitat (SWH)
-  Photograph location

Base: Aerial photograph 2018 and Microsoft Corporation 2022

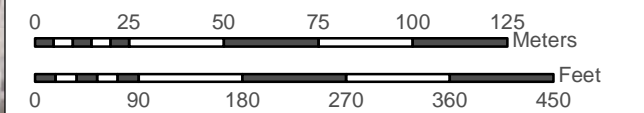
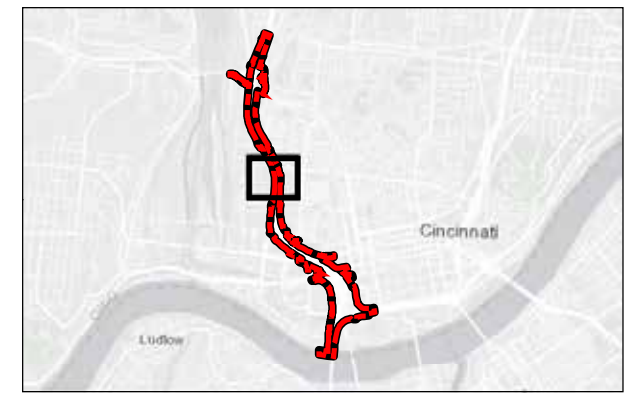
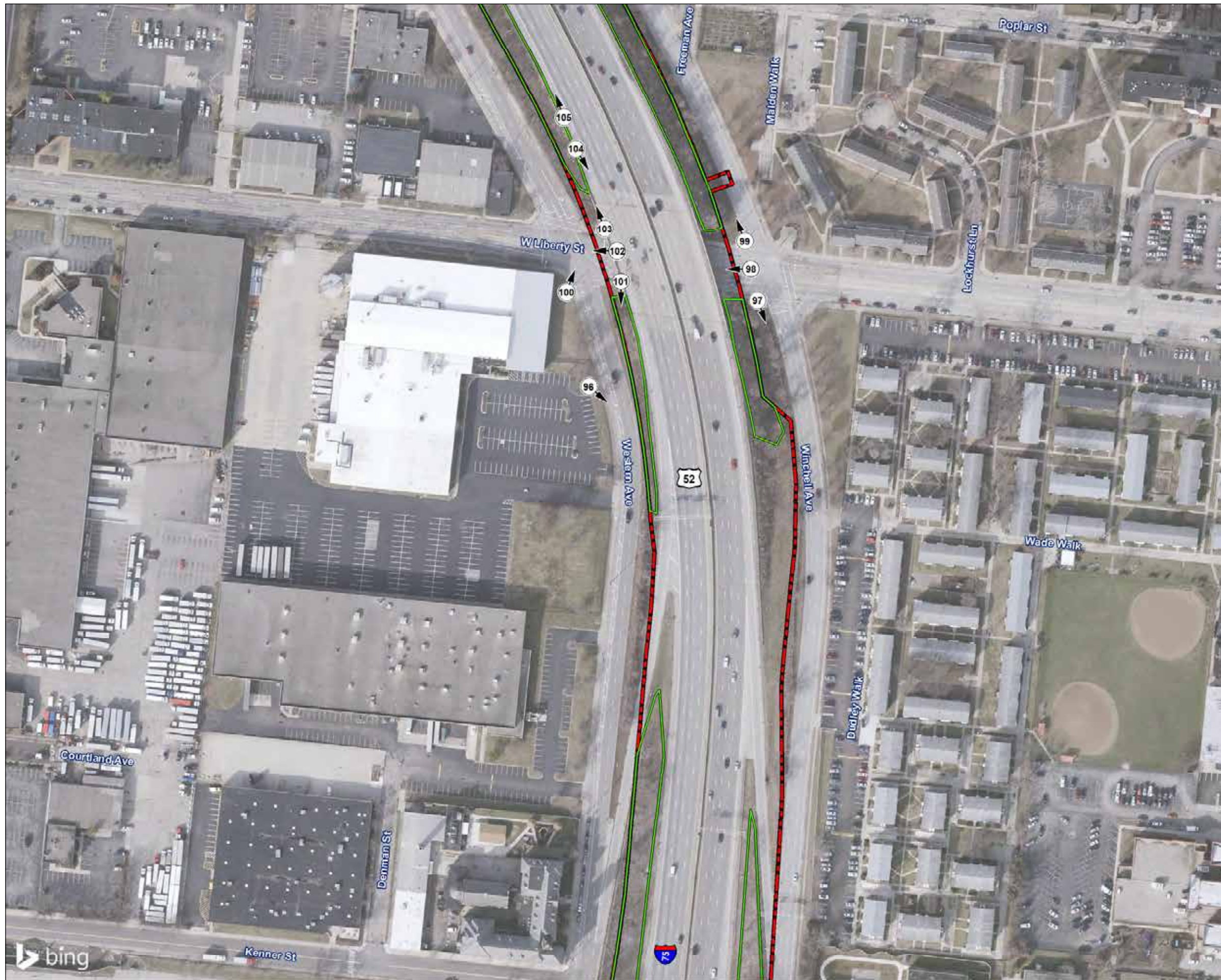





Figure 4 **Sheet 6 of 11**


Aerial photograph showing the ecological resources and photograph locations for the HAM IR 71/75 0.00/0.22 Re-Eval 2022 construction limits. (11 Sheets)



-  Construction limits
-  Suitable Wooded Habitat (SWH)
-  Photograph location

Base: Aerial photograph 2018 and Microsoft Corporation 2022

N






0 25 50 75 100 125 Meters

0 90 180 270 360 450 Feet

Figure 4 **Sheet 7 of 11**

Aerial photograph showing the ecological resources and photograph locations for the HAM IR 71/75 0.00/0.22 Re-Eval 2022 construction limits. (11 Sheets)



-  Construction limits
-  Suitable Wooded Habitat (SWH)
-  Photograph location

Base: Aerial photograph 2018 and Microsoft Corporation 2022

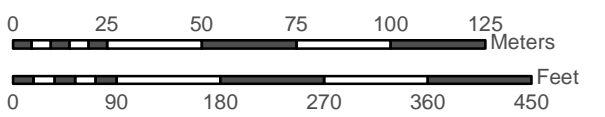
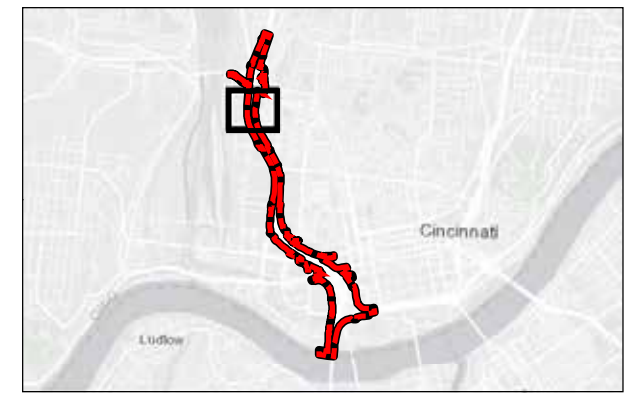
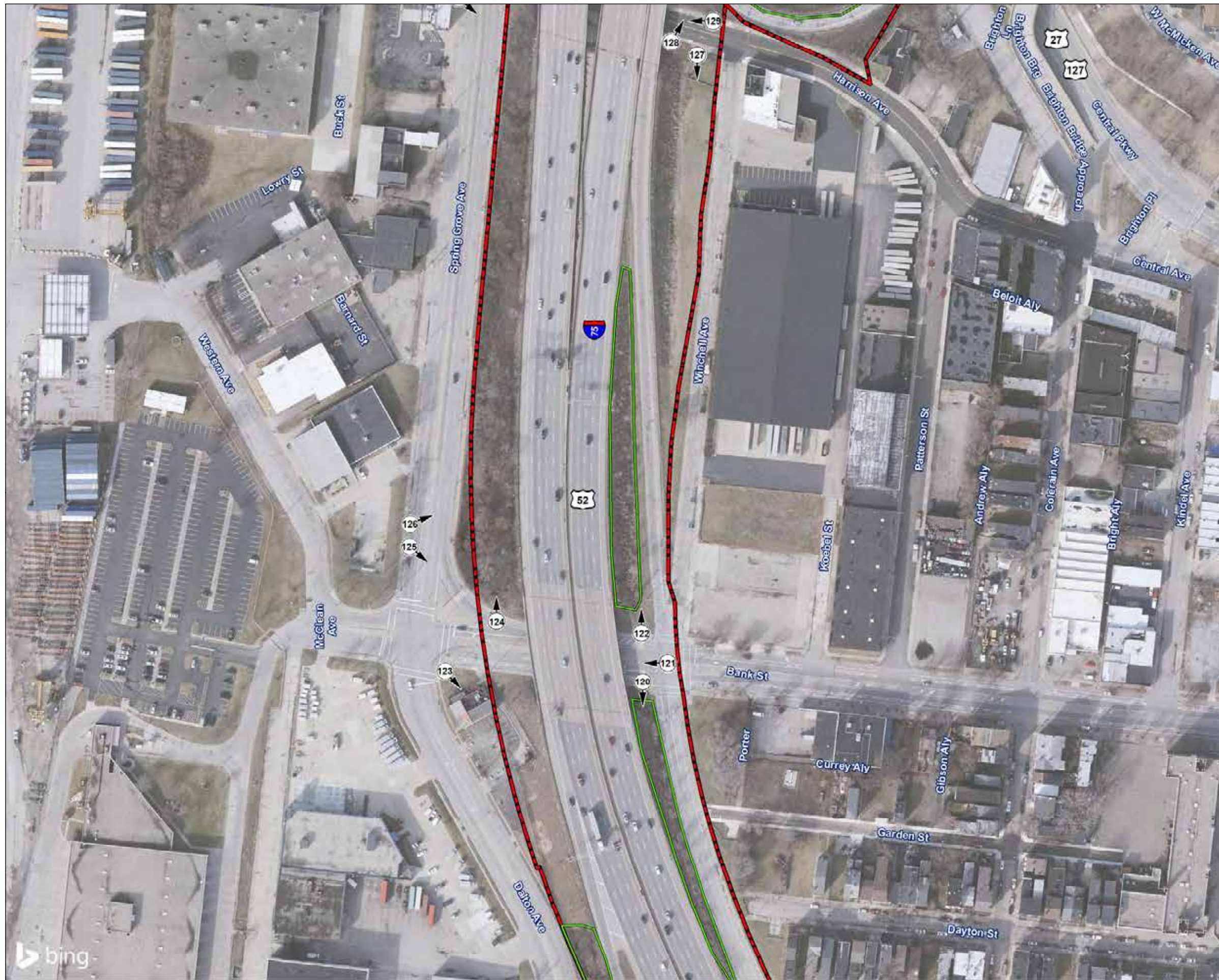





Figure 4 **Sheet 8 of 11**

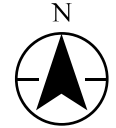
Aerial photograph showing the ecological resources and photograph locations for the HAM IR 71/75 0.00/0.22 Re-Eval 2022 construction limits. (11 Sheets)



-  Construction limits
-  Suitable Wooded Habitat (SWH)
-  Photograph location

Base: Aerial photograph 2018 and Microsoft Corporation 2022

N

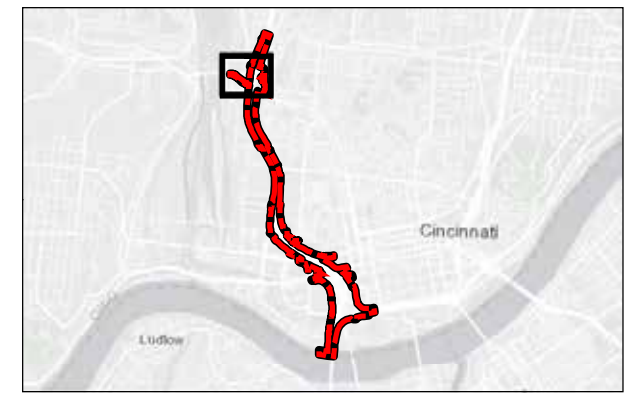
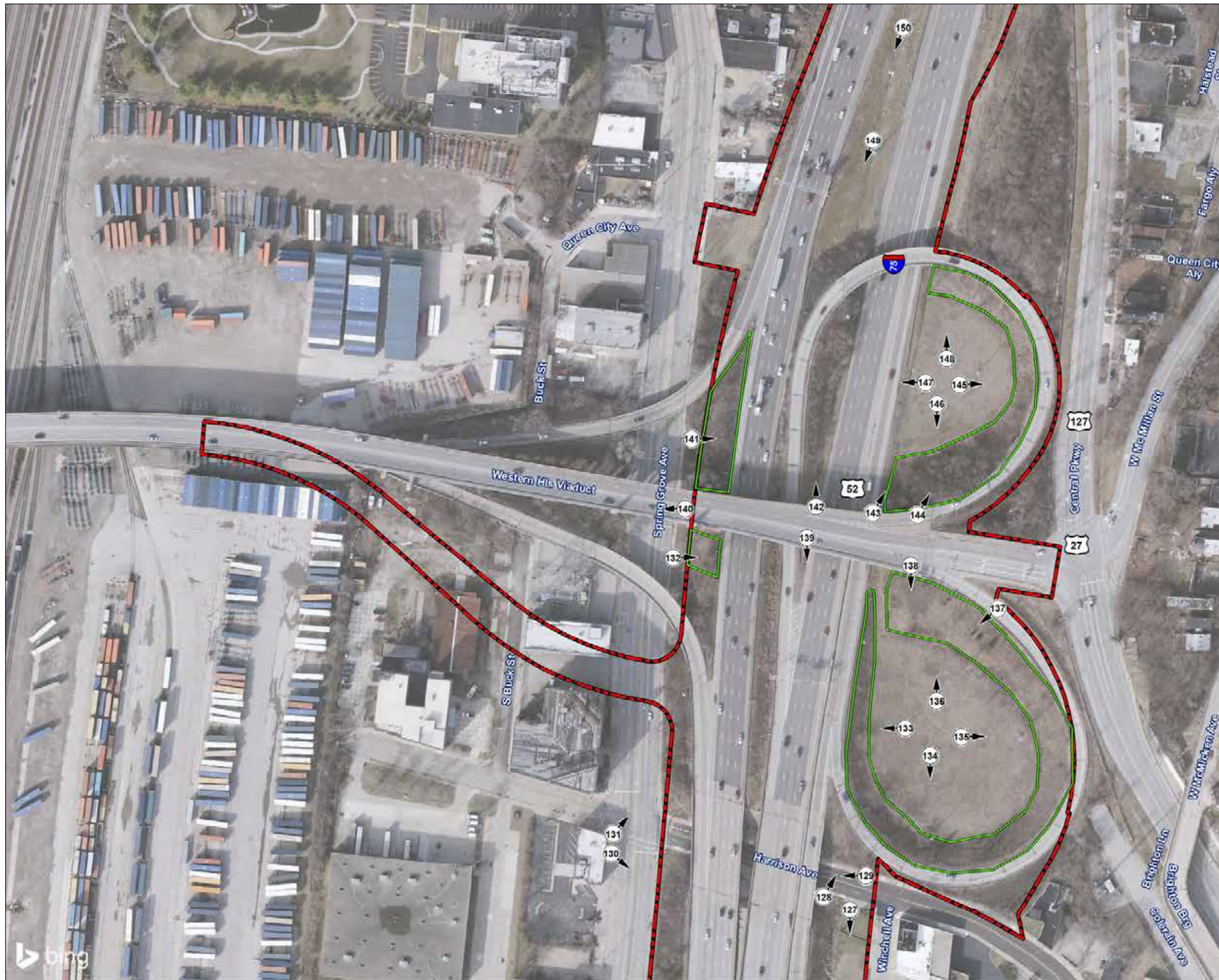


0 25 50 75 100 125 Meters

0 90 180 270 360 450 Feet

Figure 4 **Sheet 9 of 11**

Aerial photograph showing the ecological resources and photograph locations for the HAM IR 71/75 0.00/0.22 Re-Eval 2022 construction limits. (11 Sheets)



- Construction limits
- Suitable Wooded Habitat (SWH)
- Photograph location

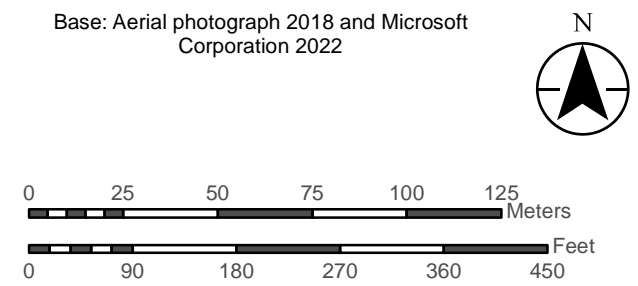
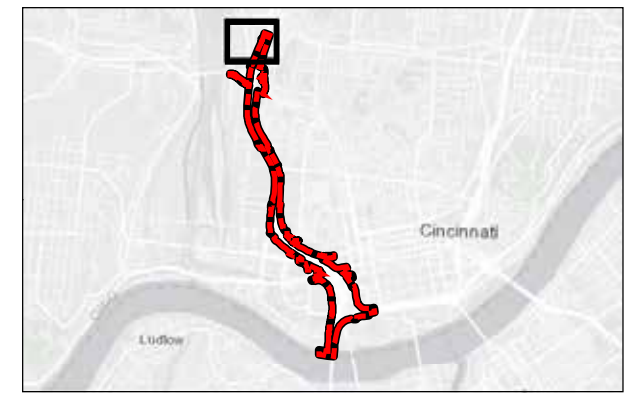





Figure 4 **Sheet 10 of 11**

Aerial photograph showing the ecological resources and photograph locations for the HAM IR 71/75 0.00/0.22 Re-Eval 2022 construction limits. (11 Sheets)



-  Construction limits
-  Suitable Wooded Habitat (SWH)
-  Photograph location

Base: Aerial photograph 2018 and Microsoft Corporation 2022

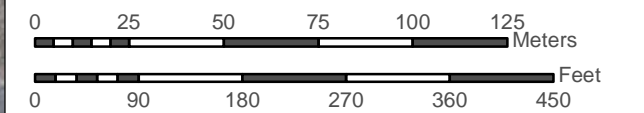


Figure 4 **Sheet 11 of 11**

Aerial photograph showing the ecological resources and photograph locations for the HAM IR 71/75 0.00/0.22 Re-Eval 2022 construction limits. (11 Sheets)



Photograph 1. View of Suitable Wooded Habitat (SWH) adjacent to the Brent Spence Bridge, looking south.



Photograph 2. View of the study area adjacent to the Brent Spence Bridge, looking north.



Photograph 3. View of SWH (right) adjacent to the Brent Spence Bridge, looking east.



Photograph 4. View of SWH and concrete armored slopes along the Ohio River, looking south.



Photograph 5. View of the study area adjacent to the Brent Spence Bridge, looking northeast.



Photograph 6. View of SWH under the Brent Spence Bridge, looking south.



Photograph 7. View of SWH adjacent to the Brent Spence Bridge, looking southwest.



Photograph 8. View of the underside of the Brent Spence Bridge showing no signs of bat usage, looking south.



Photograph 9. View of the underside of the Brent Spence Bridge showing no signs of bat usage, looking south.



Photograph 10. View of the underside of the Brent Spence Bridge showing no signs of bat usage, looking north.



Photograph 11. View of study area, looking south.



Photograph 12. View of study area, looking north.



Photograph 13. View of study area, looking northwest.



Photograph 14. View of study area, looking northeast.



Photograph 15. View of mowed grass in the study area, looking south.



Photograph 16. View of I-75 right-of-way with a mix of deciduous and pine trees, looking north.



Photograph 17. View of study area with disturbed ground, looking south-southeast.



Photograph 18. View of I-75 right-of-way with shrubs, looking southwest.



Photograph 19. View of study area, looking south.



Photograph 20. View of I-75 right-of-way with SWH, looking southeast.



Photograph 21. View of I-75 right-of-way with SWH, looking northeast.



Photograph 22. View of I-75 right-of-way, looking south.



Photograph 23. View of mowed grass in the study area, looking north.



Photograph 24. View of study area with SWH, looking west-northwest.



Photograph 25. Distant view of SWH along the I-75 right-of-way, looking southeast.



Photograph 26. View of SWH along the I-75 right-of-way, looking northeast.



Photograph 27. View of SWH along the I-75 right-of-way and UPS parking area, looking north.



Photograph 28. View of SWH along the I-75 right-of-way and UPS parking area, looking north.



Photograph 29. View of I-75 right-of-way, looking southwest.



Photograph 30. View of I-75 right-of-way with pine trees and shrubby growth, looking southwest.



Photograph 31. View of I-75 right-of-way with pine trees and shrubby growth, looking southeast.



Photograph 32. View of I-75 right-of-way with mowed grass and shrubby growth, looking northwest.



Photograph 33. View of I-75 right-of-way with mowed grass, looking northwest.



Photograph 34. View of I-75 right-of-way with mowed grass, looking northwest.



Photograph 35. View of I-75 right-of-way with mowed grass and pine trees, looking northwest.



Photograph 36. View of shrubby I-75 right-of-way, looking southwest.



Photograph 37. View of I-75 right-of-way with mowed grass, shrubby growth, and pine trees, looking northwest.



Photograph 38. View of I-75 right-of-way, looking south.



Photograph 39. View of I-75 right-of-way, looking northwest.



Photograph 40. View of I-75 right-of-way, looking south.



Photograph 41. View of I-75 right-of-way with mowed grass, shrubs, and SWH (distant), looking west.



Photograph 42. View of I-75 right-of-way, looking north.



Photograph 43. View of shrubby I-75 right-of-way, looking south.



Photograph 44. View of I-75 right-of-way, looking north.



Photograph 45. View of I-75 right-of-way with SWH (right), looking south.



Photograph 46. View of SWH along the 6th Street Expressway, looking northwest.



Photograph 47. View of I-75 right-of-way with SWH, looking north.



Photograph 48. View of SWH along the I-75 right-of-way and UPS parking area, looking northwest.



Photograph 49. View of SWH along the 6th Street Expressway, looking southeast.



Photograph 50. View of I-75 right-of-way with mowed grass, shrubby area, and SWH (distant), looking east.



Photograph 51. View of SWH along Fort Washington Way, looking west-southwest.



Photograph 52. View of study area, looking south.



Photograph 53. View of along the 6th Street Viaduct with SWH, looking east.



Photograph 54. View of I-75 right-of-way with SWH (distant), looking north.



Photograph 55. View of I-75 right-of-way with SWH (distant), looking northeast.



Photograph 56. View of study area, looking northwest.



Photograph 57. View of study area, looking northwest.



Photograph 58. View along West 6th Street and I-75 right-of-way with SWH (distant), looking northwest.



Photograph 59. View along West 6th Street with SWH (right), looking west-northwest.



Photograph 60. View of a snag and SWH in the I-75 right-of-way, looking northeast.



Photograph 61. View of a snag and SWH in the I-75 right-of-way, looking north-northwest.



Photograph 62. View of study area, looking northwest.



Photograph 63. View of I-75 right-of-way with SWH, looking south.



Photograph 64. View of I-75 right-of-way with SWH (distant), looking northeast.



Photograph 65. View of I-75 right-of-way with SWH (distant), looking north.



Photograph 66. View of I-75 right-of-way with SWH, looking east.



Photograph 67. View of I-75 right-of-way with SWH (distant), looking northeast.



Photograph 68. View of I-75 right-of-way with SWH (distant), looking northwest.



Photograph 69. View of study area, looking west.



Photograph 70. View of I-75 right-of-way with SWH (right side), looking west-northwest.



Photograph 71. View of I-75 right-of-way with SWH, looking northwest.



Photograph 72. View of I-75 right-of-way with SWH (distant), looking northeast.



Photograph 73. View of I-75 right-of-way with SWH (right side) and mowed grass, looking southeast.



Photograph 74. View of I-75 right-of-way with SWH (left side) and mowed grass, looking northwest.



Photograph 75. View of I-75 right-of-way with SWH (distant) and mowed grass, looking southwest.



Photograph 76. View of study area along West Court Street, I-75 right-of-way with SWH (distant), and mowed grass, looking northwest.



Photograph 77. View of study area along West Court Street, I-75 right-of-way with SWH (right side), looking south-southeast.



Photograph 78. View of study area along West Court Street, looking south.



Photograph 79. View of study area along West Court Street, I-75 right-of-way with SWH (left side), looking north-northwest.



Photograph 80. View of I-75 right-of-way with SWH and mowed grass, looking southeast.



Photograph 81. View of I-75 right-of-way with SWH and mowed grass, looking northeast.



Photograph 82. View of I-75 right-of-way with SWH (distant) and mowed grass, looking north.



Photograph 83. View of I-75 right-of-way with SWH and mowed grass, looking north.



Photograph 84. View of I-75 right-of-way with mowed grass, looking south.



Photograph 85. View of I-75 right-of-way with SWH, looking north-northwest.



Photograph 86. View of I-75 right-of-way, looking north



Photograph 87. View along Western Avenue and I-75 right-of-way, looking south.



Photograph 88. View along Western Avenue and I-75 right-of-way with SWH (right side), looking north.



Photograph 89. View of I-75 right-of-way with SWH, looking south.



Photograph 90. View along I-75 and right-of-way, looking west.



Photograph 91. View along I-75 and right-of-way with SWH, looking south.



Photograph 92. View of I-75 right-of-way with SWH, looking north.



Photograph 93. View along I-75 and right-of-way, looking east.



Photograph 94. View of I-75 right-of-way with SWH, looking north.



Photograph 95. View along I-75 and right-of-way with SWH (right side), looking north.



Photograph 96. View of Western Avenue with SWH, looking southeast.



Photograph 97. View of I-75 right-of-way with SWH, looking southeast.



Photograph 98. View along West Liberty Street, looking west.



Photograph 99. View of I-75 right-of-way with SWH, looking northwest.



Photograph 100. View of I-75 right-of-way with SWH, looking northeast.



Photograph 101. View along I-75 and right-of-way with SWH, looking south.



Photograph 102. View along West liberty Street, looking west.



Photograph 103. View along I-75 and right-of-way with SWH, looking northwest.



Photograph 104. View along I-75 and right-of-way with SWH, looking southeast.



Photograph 105. View along I-75 and right-of-way with SWH, looking north-northwest.



Photograph 106. View of I-75 right-of-way with SWH, looking southeast.



Photograph 107. View along Findlay Street, looking west.



Photograph 108. View of I-75 right-of-way with SWH, looking north-northwest.



Photograph 109. View of I-75 right-of-way with SWH, looking southeast.



Photograph 110. View of I-75 right-of-way with SWH, looking north



Photograph 111. View along I-75 and right-of-way with SWH, looking south.



Photograph 112. View along Findlay Street, looking west.



Photograph 113. View along I-75 and right-of-way with SWH, looking northwest.



Photograph 114. View along I-75 and right-of-way with SWH, looking southeast.



Photograph 115. View along I-75 and right-of-way with SWH, looking north-northwest.



Photograph 116. View of I-75 right-of-way with SWH, looking southeast.



Photograph 117. View of trees in the study area, looking northwest.



Photograph 118. View of I-75 right-of-way and Winchell Avenue, looking southeast.



Photograph 119. View of I-75 right-of-way and Winchell Avenue, looking northwest.



Photograph 120. View of I-75 right-of-way with SWH, looking south



Photograph 121. View along Banks Street, looking west.



Photograph 122. View of I-75 right-of-way with SWH, looking north.



Photograph 123. View of mowed grass, looking southeast.



Photograph 124. View of I-75 right-of-way with shrubby vegetation, looking north.



Photograph 125. View of I-75 right-of-way with shrubby vegetation, looking southeast.



Photograph 126. View of I-75 right-of-way with shrubby vegetation, looking northeast.



Photograph 127. View of mowed right-of-way, looking south.



Photograph 128. View of I-75 right-of-way with SWH, looking northeast.



Photograph 129. View along Harrison Avenue, looking west.



Photograph 130. View of I-75 right-of-way with shrubby vegetation, looking southeast.



Photograph 131. View of I-75 right-of-way with shrubby vegetation, looking northeast.



Photograph 132. View of I-75 right-of-way with shrubby vegetation, looking east.



Photograph 133. View of I-75 interchange with upland shrubby and grassy vegetation and SWH (distant), looking west



Photograph 134. View of I-75 interchange with upland shrubby and grassy vegetation and SWH (distant), looking south.



Photograph 135. View of I-75 interchange with upland shrubby and grassy vegetation and SWH (distant), looking east.



Photograph 136. View of I-75 interchange with upland shrubby and grassy vegetation and SWH (distant), looking north.



Photograph 137. View of I-75 right-of-way with SWH (in foreground), looking southwest.



Photograph 138. View of I-75 right-of-way with SWH (along perimeter of interchange), looking south.



Photograph 139. View of I-75 right-of-way, looking south.



Photograph 140. View along Western Hills Viaduct, looking west.



Photograph 141. View of I-75 right-of-way with SWH, looking east.



Photograph 142. View of I-75 right-of-way, looking north.



Photograph 143. View of I-75 right-of-way with SWH (along perimeter of interchange), looking northeast.



Photograph 144. View of I-75 right-of-way with SWH, looking northeast.



Photograph 145. View of I-75 interchange with upland grassy vegetation and SWH (distant), looking east.



Photograph 146. View of I-75 interchange with upland grassy vegetation and SWH (distant), looking south.



Photograph 147. View of I-75 interchange with upland grassy vegetation and shrubby vegetation (distant), looking west.



Photograph 148. View of I-75 interchange with upland grassy vegetation and SWH (distant), looking north.



Photograph 149. View of I-75 right-of-way with grassy vegetation, looking southwest.



Photograph 150. View of a non-jurisdictional drainage ditch with hydrophytic vegetation, looking southwest.



Photograph 151. View of a non-jurisdictional drainage ditch, looking north-northeast.



Photograph 152. View of a non-jurisdictional drainage ditch with hydrophytic vegetation, looking southwest.



Photograph 153. View along I-75 and right-of-way, looking southwest.



Photograph 154. View of adjacent right-of-way and properties, looking west.



Photograph 155. View along I-75 and right-of-way, looking north-northeast.

From: [Hallberg, Karen J](#)
To: [Len Mikles](#)
Cc: [Korfel, Lindsey M](#)
Subject: HAM - IR 71/75-0.00/0.22 - PID 89068- Bat and Eastern Massasauga Buffer Request
Date: Wednesday, July 6, 2022 5:05:03 PM
Attachments: [image.png](#)
[image.png](#)

Hello Len,

It seems there may have been some confusion with your bat/EMR buffer request. I'm responding here to the follow up email you sent to me on June 20, in case you have not otherwise received a response from us.

I checked our records against the shapefile you provided and found that the project does not lie within any bat buffer or within an EMR range polygon. I've indicated that finding in the buffer options listed immediately below. Please note that we can only provide information on species' presence within the project limits on the Ohio side of the Ohio River. Please request information regarding the presence of federally listed species within the Kentucky portion of the project area from the USFWS Ecological Services Field Office in Frankfort, Kentucky. The POC in that office is Phil DeGarmo, phil_degarmo@fws.gov.

If you have any questions or require additional information, please let me know.
thank you,
Karen

The project is located within the following bat buffer:

- BLUE (IBAT hibernaculum)
- PURPLE (NLEB hibernaculum)
- RED (IBAT swarming location)
- YELLOW (Acoustic IBAT detection)
- GOLD (IBAT maternity colony)
- BROWN (NLEB maternity roost)
- GREEN (Male/Non-repro female IBAT)
- X** Project is not located within a bat buffer

This project is located within an eastern massasauga range polygon:

Yes

X No

From: Len Mikles <lmikles@ascgroup.net>

Sent: Monday, June 20, 2022 5:05 PM

To: Hallberg, Karen I <Karen_Hallberg@fws.gov>

Subject: [EXTERNAL] FW: HAM - IR 71/75-0.00/0.22 - PID 89068- Bat and Eastern Massasauga Buffer Request

Hi Karen.

I just wanted to follow up on this request. See below. This is a big area so I have included a shapefile for you to do your buffer analysis. Please let me know if you need anything.

Thank you.

Len Mikles, PWS
Principal Ecologist

ASC Group, Inc.

800 Freeway Drive North, Suite 101
Columbus, Ohio 43229
614.268.2514 (Office)
614.396.7369 (Direct)

[Facebook](#) | [LinkedIn](#) | [Web](#)



CULTURAL • ENVIRONMENTAL • HAZARDOUS
EVALUATION & CONSULTING

Reply

Forward

From: Len Mikles

Sent: Friday, June 10, 2022 8:49 AM

To: 'Korfel, Lindsey M' <lindsey_korfel@fws.gov>

Subject: RE: HAM - IR 71/75-0.00/0.22 - PID 75119 - Bat and Eastern Massasauga Buffer Request

Hi Lindsey.

When you send the letter can you please use the following PID number in your correspondence?

PID 89068

I was informed by ODOT to use this number instead of the 75119 PID.

Thank you. Have a good weekend.

Len Mikles, PWS
Principal Ecologist

ASC Group, Inc.

800 Freeway Drive North, Suite 101
Columbus, Ohio 43229
614.268.2514 (Office)
614.396.7369 (Direct)

[Facebook](#) | [LinkedIn](#) | [Web](#)

ASC_New email logo_web



From: Len Mikles

Sent: Friday, June 3, 2022 10:46 AM

To: Korfel, Lindsey M <lindsey_korfel@fws.gov>

Cc: Len Mikles <lmikles@ascgroup.net>

Subject: HAM - IR 71/75-0.00/0.22 - PID 75119 - Bat and Eastern Massasauga Buffer Request

This project is a federal aid highway project, and will be coordinated with your office (if coordination is required) through the ODOT-OES Ecological MOA process and 2017 PBO. This is a request for bat and Eastern Massasauga buffer information only, and a technical guidance letter is not required.

Project coordinates:

Start

Lat.: 39.1313

Long.: -84.5327

End

Lat.: 39.0932

Long.: -84.5225

The project is located within the following bat buffer:

- BLUE (IBAT hibernaculum)
- PURPLE (NLEB hibernaculum)
- RED (IBAT swarming location)
- YELLOW (Acoustic IBAT detection)
- GOLD (IBAT maternity colony)
- BROWN (NLEB maternity roost)
- GREEN (Male/Non-repro female IBAT)
- Project is not located within a bat buffer

This project is located within an eastern massasauga range polygon:

Yes

No

Thanks for your help.

Len Mikles, PWS
Principal Ecologist

ASC Group, Inc.

800 Freeway Drive North, Suite 101
Columbus, Ohio 43229
614.268.2514 (Office)
614.396.7369 (Direct)

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[Karen I. Hallberg, Ph.D.](#) (she/her)
Wildlife Biologist / Transportation Liaison
U.S. Fish & Wildlife Service
Ohio Ecological Services Field Office
4625 Morse Road, Suite 104
Columbus, OH 43230
karen_hallberg@fws.gov

Direct Line: (614) 528-9697 *(see statement below)*

Main Office Phone: (614) 416-8993 ext. 123*(see statement below)*

*Please note I am currently on a full-time telework schedule due to the Covid-19 pandemic and am not checking my office voicemail daily. **Therefore, please contact me via email to ensure your questions and/or concerns are brought to my immediate attention.***



Ohio Department of Natural Resources

MIKE DeWINE, GOVERNOR

MARY MERTZ, DIRECTOR

Jeff Johnson, Chief
Division of Natural Areas & Preserves
2045 Morse Rd, Building H
Columbus, Ohio 43229

June 12, 2022

Len Mikles
ASC Group, Inc.
800 Freeway Dr. N, Suite 101
Columbus, OH 43229

Dear Len,

I have reviewed the Natural Heritage Database for the Brent Spence Bridge (PID 89068) project area in the City of Cincinnati, Hamilton County, Ohio. We have records for ten rare species within a mile of the project area. They are listed below and shown on the attached map by number in blue:

1. Riverbank Paspalum (*Paspalum repens*), T
2. Virginia-mallow (*Ripariosida hermaphrodita*), P
3. Smooth Buttonweed (*Spermacoce glabra*), P
4. Kirtland's Snake (*Clonophis kirtlandii*), T [four locations]
5. Black-crowned Night-heron (*Nycticorax nycticorax*), T
6. Channel Darter (*Percina copelandi*), T
7. River Darter (*Percina shumardi*), T
8. Black Sandshell (*Ligumia recta*), T **
9. Washboard (*Megalonaias nervosa*), E
10. Threehorn Wartyback (*Obliquaria reflexa*), T **

Common name, scientific name and status are given for each species. Conservation status abbreviations are as follows: E = state endangered; T = state threatened; P = state potentially threatened; SC = state species of concern; SI = state special interest; U = state status under review; X = presumed extirpated in Ohio; FE = federal endangered, and FT = federal threatened. ** Note that state conservation status should be re-checked for possible changes on July 1, 2022 at the following website: <https://ohiodnr.gov/discover-and-learn/safety-conservation/about-ODNR/wildlife/state-listed-species>

Our inventory program has not completely surveyed Ohio and relies on information supplied by many individuals and organizations. Therefore, a lack of records for any particular area is not a statement that rare species or unique features are absent from that area. This letter only represents a review of rare species and natural features data within the Ohio Natural Heritage Database. It does not fulfill coordination under the National Environmental Policy Act (NEPA) or the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S. C. 661 et seq.) and does not supersede or

replace the regulatory authority of any local, state or federal agency nor relieve the applicant of the obligation to comply with any local, state or federal laws or regulations.

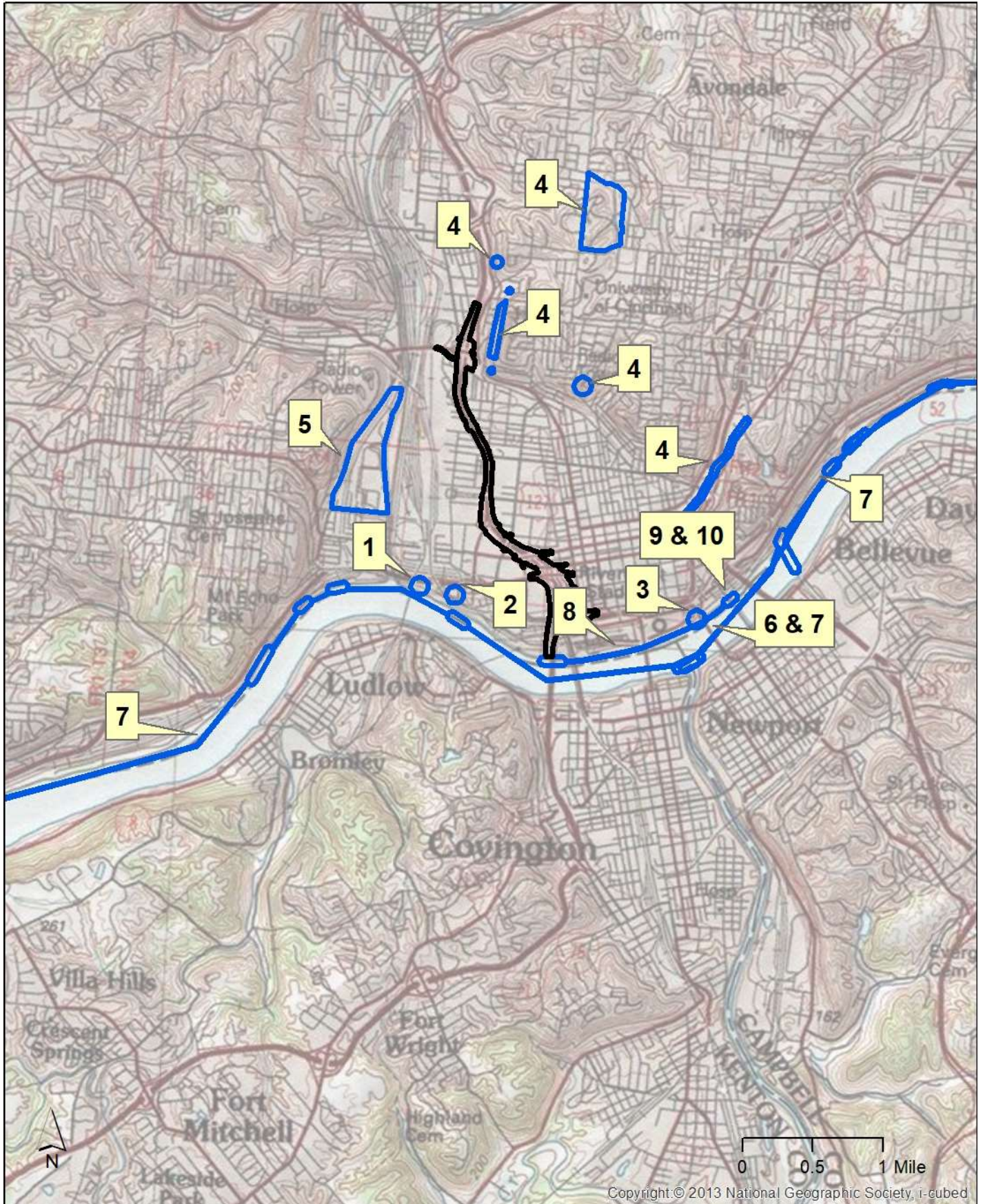
Please contact me by email or voicemail at 614-265-6818 if I can be of further assistance.

Sincerely,

A handwritten signature in black ink, appearing to read "Kendra Millam". The signature is fluid and cursive, with a long horizontal flourish extending to the right.

Kendra Millam
Ohio Natural Heritage Program

 Brent Spence Bridge PID89068



From: Megan.Michael@dot.ohio.gov
To: [Len Mikles](#)
Cc: Matt.Raymond@dot.ohio.gov
Subject: RE: Brent Spence Bridge - Suitable Wooded Habitat
Date: Tuesday, June 14, 2022 11:25:36 AM

Hi Len,

Per our phone call, if the areas are pretty much connected, consider the patches SWH. Overpasses are not a disconnect based on my conversation with USFWS. I wanted to send the follow up email to document the conversation since this project is such a high priority for both Ohio and Kentucky.

Here are areas that should be considered SWH

- Single trees and small patches of trees (less than 0.5 acre) that do possess roosting characteristics may be considered SWH if they are within 1,000 feet of forested areas, or are connected to forested patches via travel corridors or a line of trees.
- Any trees that are part of a wooded area larger than 0.5 acre

Areas that can be eliminated include:

- Large patches of honeysuckle with no trees or only small trees under 3" dbh
- Patches of cedar or other evergreens
- Patches of ornamental plantings
- Areas smaller than 0.5 acres that are obviously isolated from any other areas.

As you noted, trying to determine if all of the little patches of trees are connected or not and determining if they have a snag or a tree with roosting habitat is not really feasible for this size of project and the lack of access along the highway. If the patches of trees are close to a larger strip of trees, count them as SWH. As noted, this would include most of the strips of trees in the ROW along the east and west side of the project corridor. If they are obviously isolated (like no doubt in your mind), don't include them. You can also eliminate stands of evergreens or patches of just honeysuckle and saplings. After the ESR is in, we can always ask USFWS to do a field review and see if they would eliminate other areas based on habitat quality. Coordination seems to go easier if we have been conservative (toward the species) in our calls.

Thanks so much for contacting me and ensuring that we are all on the same page. Have a great afternoon!

Megan Michael

Environmental Specialist 3
Office of Environmental Services
1980 W. Broad Street, Mail Stop 4170
Columbus, Ohio 43223
(p) 614.644-7099
transportation.ohio.gov

From: Len Mikles <lmikles@ascgroup.net>
Sent: Tuesday, June 14, 2022 10:25 AM
To: Michael, Megan <Megan.Michael@dot.ohio.gov>
Subject: RE: Brent Spence Bridge - Suitable Wooded Habitat

Hi Megan.

Sorry for all the questions. I need to go back in the field to look at the area by the Ohio River. It would be good to know if I need to look at some of these smaller wooded areas a little more. What I am thinking from our conversation is that essentially any treed area with snags located in the project footprint needs to be documented as SWH, regardless of size? Please correct me if I am wrong. Below is the approach I have been using.

My approach so far has been to identify the areas 0.5 acres in size. If the area contains snags I consider it SWH and I put a 1,000 ft buffer on it and try to identify smaller areas in the buffer, under a half acre, that might contain snags. If these smaller areas contain snags I consider them SWH.

- Any areas that are half acre or greater and do not contain snags are not considered SWH.
- Smaller areas, under a half acre, not within a 1,000 foot SWH buffer, that do or don't contain snags are NOT considered SWH since they do not meet the PBO half acre threshold. (I am thinking this approach/interpretation of the PBO guidance is not correct based on what you are saying.) There were no PMRT's observed in the project foot print and it looks like there is only riparian buffer by the Ohio River. None of these areas under a half acre are connected to the riparian buffer along the Ohio River.

If it is easier to talk on the phone you can call me at 614-598-3228. Thank you for the help.

Len Mikles, PWS
Principal Ecologist

ASC Group, Inc.

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From: Megan.Michael@dot.ohio.gov [<mailto:Megan.Michael@dot.ohio.gov>]

Sent: Monday, June 13, 2022 10:37 AM

To: Len Mikles <lmikles@ascgroup.net>

Subject: RE: Brent Spence Bridge - Suitable Wooded Habitat

If snags exist in the smaller areas, the entire treed area is SWH. You do not have to document the snags.

Thanks,

Megan

From: Len Mikles <lmikles@ascgroup.net>

Sent: Monday, June 13, 2022 10:15 AM

To: Michael, Megan <Megan.Michael@dot.ohio.gov>

Subject: RE: Brent Spence Bridge - Suitable Wooded Habitat

Thanks Megan. I just want to make sure I understand correctly. Areas under a half acre need to be verified for snags. If these smaller areas, under a half acre, contain snags you would like me to document them as SWH or just document the snags?

Thanks.

Len Mikles, PWS
Principal Ecologist

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From: Megan.Michael@dot.ohio.gov [<mailto:Megan.Michael@dot.ohio.gov>]

Sent: Monday, June 13, 2022 10:00 AM

To: Len Mikles <lmikles@ascgroup.net>

Subject: RE: Brent Spence Bridge - Suitable Wooded Habitat

Hi Len,

In order to eliminate SWH because it is a patch less than 0.5 acre, you will need to look at those areas to determine if they contain snags. I am fine with you using cut-offs as described, but you will have to confirm that they do not contain snags. I have contacted District 8 to see if they can commit to winter clearing (either with or without a separate tree clearing contractor). If they can commit to winter clearing, you won't have to be as particular with trying to eliminate patches of potential SWH. We get unlimited acreage of clearing within 100 feet EOP.

Obviously, the areas that you are looking at are not good bat habitat, but I don't want to turn in a document with any questionable calls. If you think an area may count as SWH, go ahead and count it as SWH. We have the option of a field review with the Ohio USFWS, so if we do end up having to do summer clearing, we may take them out to the site and try to argue against mitigating for poor habitat.

One other caveat: The SWH definition does not count for state listed bats. If an area contains trees, that acreage needs to be counted for at least little brown bat (tricolor tend to use large living trees in woodlots, which may not exist within this study area). When doing the write-ups in the ESR, do not use the OHPBO terms or definitions for state listed bats.

Let me know if you have any questions or concerns.

Thanks,

Megan

From: Len Mikles <lmikles@ascgroup.net>

Sent: Friday, June 10, 2022 11:51 AM

To: Michael, Megan <Megan.Michael@dot.ohio.gov>

Subject: RE: Brent Spence Bridge - Suitable Wooded Habitat

Thanks Megan. I appreciate the help. Is it okay if I use over pass bridges and areas cut over with shrubby vegetation as breaks for determining if an area meets the 0.5 acreage threshold? That is what I have been doing so far. I have attached some aerials with notes.

Thank you.

Len Mikles, PWS
Principal Ecologist

ASC Group, Inc.

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From: Megan.Michael@dot.ohio.gov [<mailto:Megan.Michael@dot.ohio.gov>]
Sent: Friday, June 10, 2022 11:18 AM
To: Len Mikles <lmikles@ascgroup.net>
Subject: RE: Brent Spence Bridge - Suitable Wooded Habitat

I think the areas that are 0.5 acre and greater with snags definitely count. You will have to look at the areas less than 0.5 acre with snags to see if they are further than 1000 feet from other patches of SWH or travel corridors, per the definitions in the OHPBO. All of the acreage is within 100 feet EOP, so the amount is not as important unless they decide to cut in the summer. If you aren't sure for some areas, I would err on the side of calling them habitat. Even if we have to mitigate, I would rather have everything accounted for in the project than have to go back later.

Thanks,

Megan Michael

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1980 W. Broad Street, Mail Stop 4170
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(p) 614.644-7099
transportation.ohio.gov

From: Len Mikles <lmikles@ascgroup.net>
Sent: Friday, June 10, 2022 11:10 AM
To: Michael, Megan <Megan.Michael@dot.ohio.gov>
Subject: Brent Spence Bridge - Suitable Wooded Habitat

Hi Megan.

I hope all is well. I wanted to follow up on the meeting yesterday regarding SWH in the Brent Spence Bridge corridor. When I conducted the fieldwork for the project we ran into a couple areas in the I-75 ROW that were slightly greater than a half-acre between overpass bridges and they contained snags with exfoliating bark. The areas are very shrubby with a lot of honeysuckle. Since the areas do have trees, woody growth, snags, and are over a half acre I am inclined to call it SWH for the bats. I am not documenting areas as SWH if they are under a half-acre and contain snags. I attached some pictures of the area in question. Your conformation would be appreciated. I figure it is better to ask now then have this cause a problem down the road.

Thank you. Have a good weekend.

Len Mikles, PWS
Principal Ecologist

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