If you require assistance accessing this information or require it in an alternative format, contact the Michigan Department of Transportation's (MDOT) Americans with Disabilities Act (ADA) coordinator at www.Michigan.gov/MDOT-ADA.

Finding of No Significant Impact and Supporting Documentation for the I-94 Connected and Automated Vehicle Corridor Project

from Ann Arbor Saline Road in Ann Arbor to M-10 (Lodge Freeway) in Detroit

April 2025

Prepared by the Michigan Department of Transportation in cooperation with the U.S Department of Transportation Federal Highway Administration.

GRETCHEN WHITMER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF TRANSPORTATION
LANSING

BRADLEY C. WIEFERICH, P.E.
DIRECTOR

April 16, 2025

Theodore Burch, P.E.
Division Administrator
Federal Highway Administration, Michigan Division
315 West Allegan St. Room 201
Lansing, MI 48933

Dear Theodore Burch:

The Michigan Department of Transportation (MDOT) requests a Finding of No Significant Impact (FONSI) for the proposed I-94 Connected and Automated Vehicle Corridor Project (Proposed Project) from Ann Arbor Saline Road in Ann Arbor to M-10/Lodge Expressway in Detroit, an approximately 39.3 miles of I-94, in Washtenaw and Wayne Counties, Michigan.

The Environmental Assessment (EA) for the Proposed Project was approved by the Federal Highway Administration (FHWA) on November 6, 2024. Copies of the EA were distributed to potentially affected or interested parties and were made available online. A legal notice announcing the availability of the EA for public review, and announcing the public hearing was sent out on November 15, by MDOT. The public hearing was held on December 2, 2024 at Van Buren Township Hall, 46425 Tyler Rd, Van Buren Twp, MI 48111, and was attended by 33 people.

In summary, the following infrastructure could be installed within the existing public right-of-way:

- **Physical separation** – physical separation separating general-purpose traffic from the lane with access points between each exit along I-94 within the Project Limits;
- **Access points** – merging points for vehicles to enter and exit the lane to facilitate merges;
- **Pavement** – rehabilitation and widening of existing lanes into the existing I-94 median at select locations;
- **Pavement markings** – pavement markings that help visually separate general-purpose traffic and the lane;
- **Signage** – road signages to help road users identify lane entrance and exits; and,
- **Pole-mounted roadside sensors** – proprietary sensor hardware mounted on poles with a height of approximately 60 feet, installed approximately every 650 feet.

Enclosed with this FONSI request is a summary of comments, questions, and suggestions made during the public comment period, which officially ended on December 19, 2024.

Based on the enclosed documentation, we request a FONSI be issued. We also request that FHWA post the enclosed Notice of Limitation on Claims for Judicial Review of Actions in the Federal Register.

If you have any questions, please contact me by phone at 517-937-1279 or by email ParkerD9@Michigan.gov.

Sincerely,

E-SIGNED by Demetrius Parker
on 2025-04-16 09:52:15 EDT

Demetrius A. Parker, PE
Director
Bureau of Development
Michigan Department of Transportation

Enclosures

cc: Michele Mueller, MDOT
Elise Feldpausch, MDOT
Deena Woodward, MDOT
Bradley Peterson, MDOT
Ruth Clark, MDOT
Taryn Nance, FHWA
Andy Pickard, FHWA
Thomas Fisher, FHWA

U.S. Department of Transportation
Federal Highway Administration

Michigan Division

April 24, 2025

315 W. Allegan St., Rm. 201
Lansing, MI 48933
517-377-1844 (office)
Michigan.FHWA@dot.gov

In Reply Refer To:
HDA-MI

Mr. Bradley C. Wieferich, P.E.
Director
Michigan Department of Transportation
425 W. Ottawa St.
Lansing, MI 48933

Environmental Assessment (EA)/Finding of No Significant Impact (FONSI) for the I-94 Connected and Automated Vehicle Corridor Project from Ann Arbor Saline Road to M-10 in Detroit, Michigan

Dear Director Wieferich,

The Federal Highway Administration (FHWA) received the Michigan Department of Transportation's letter dated April 16, 2025, requesting a Finding of No Significant Impact (FONSI) for the Connected and Automated Vehicle Corridor Project in Ann Arbor and Detroit, Michigan.

In accordance with 23 CFR 771, the FHWA has determined the selected alternative will not have significant adverse impacts on the human or natural environment. This determination is based on the November 6, 2024, Environmental Assessment (EA), a summary of the virtual public engagement, an in-person public hearing held on December 2, 2024, and responses to comments received during the public comment period, which ended on December 19, 2024.

The FHWA independently evaluated this information and determined the documentation adequately and accurately discusses the purpose and need, relevant environmental issues, impacts of the proposed project, and appropriate mitigation measures. The EA and supporting materials provide sufficient evidence and analysis to determine that an Environmental Impact Statement (EIS) is not required.

If you have any questions, please contact Andy Pickard, Team Leader for Planning Environment, and Realty, at Andy.Pickard@dot.gov or (517) 702-1827.

Sincerely,

ERIC J PURKISS
Digitally signed by ERIC J PURKISS
Date: 2025.04.24 15:56:05 -04'00'

Eric J. Purkiss
Program Development Director

For: Theodore G. Burch, P.E.
Division Administrator

GEF
Enclosure: MDOT Finding of No Significant Impact Determination Request 4.16.25_signed.pdf

By e-mail
cc: Demetrius Parker, MDOT
Hal Zweng, MDOT
Michelle Mueller, MDOT
Elise Feldpausch, MDOT
Monica Monsma, MDOT
Brad Peterson, MDOT
Thomas Fisher, FHWA
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Rachael Tupica, FHWA
Eric Purkiss, FHWA
Mark Dionise, FHWA

File Directory: O:\FHWA Records\ENVI Environmental - Planning and Program Development\ENVI 2 National Environmental Policy Act (NEPA) and Related Documents
File Name: CAV-C FONSI_TJN_APR242025

Table of Contents

Appendices

DOCUMENTATION SUPPORTING A FINDING OF NO SIGNIFICANT IMPACT FOR THE PROPOSED I-94 CONNECTED AND AUTOMATED VEHICLE CORRIDOR PROJECT IN WASHTENAW AND WAYNE COUNTIES, MICHIGAN

1.0 Project

1.1 Introduction

The Michigan Department of Transportation (MDOT), in cooperation with the Federal Highway Administration (FHWA), is proposing the I-94 Connected and Automated Vehicle (CAV) Corridor Project (i.e., the Project). An Environmental Assessment (EA) for the Project was prepared in accordance with the requirements under the National Environmental Policy Act (NEPA). The preparation and publication of this document is for the purpose of helping the agencies complete their analysis of anticipated effects of the Project on the natural and human environment.

NEPA requires federal agencies to prepare an EA when they are planning a project that may significantly affect the environment. The EA describes why the project is needed, the alternatives studied, potential effects, and public and agency comments. This allows environmental effects to be considered equally in decisions made about a project.

The EA was made available for public review and a public hearing was held on Dec. 2, 2024, to present its conclusions. MDOT and FHWA considered all the comments received during this process and determined that the Project would not have significant adverse impacts on the human or natural environment. Less than significant impacts are anticipated for the following areas: Traffic, Water Resources, Contaminated Hazardous Waste, Visual Conditions, Construction Impacts, and Public Controversy. As such, this Finding of No Significant Impacts (FONSI) is being issued to conclude the EA and is the final decision document identifying the Build Alternative that will proceed to final design.

This FONSI includes the EA revision sheet to describe changes made to the Project or mitigation measures due to comments received during the public hearing and the document availability period. The issuance of a FONSI will also begin the mitigation follow-up process to ensure that the mitigation commitments identified in the EA are included in the design and implemented during construction of the Project. See Section 3.0 – Project Mitigation Summary (Green Sheet), which describes the proposed mitigation measures and associated enhancements for the Project.

1.2 Project Location

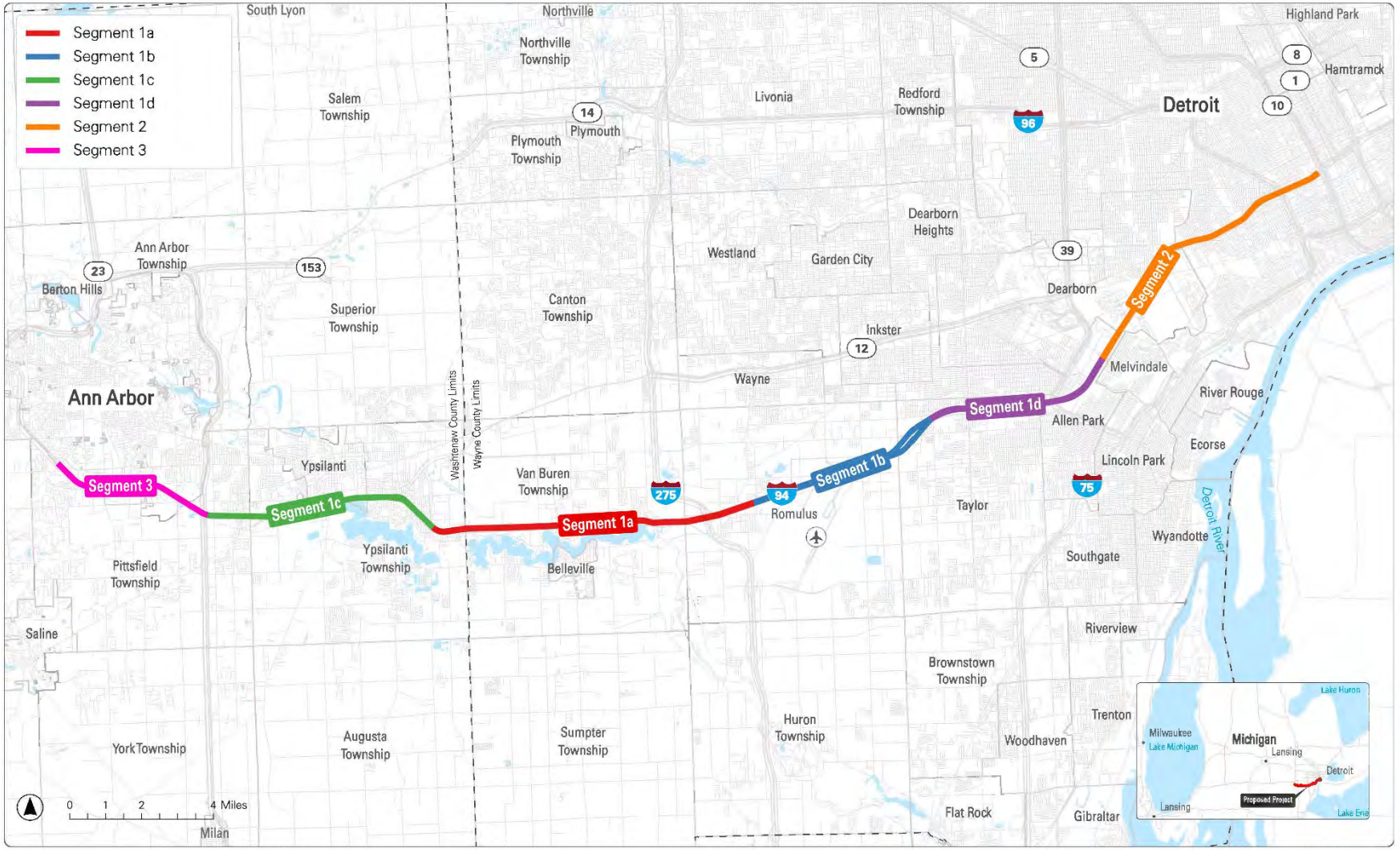
The Project is an approximately 39.3-mile segment of I-94 between Ann Arbor to the west, and Detroit to the east (Project Corridor). The Project would include equipping a general-purpose lane with Cavnue's digital infrastructure and a series of physical improvements. Vehicles would be able to access the lane through access points, which are breaks between physical separation that are at least 2,000 feet in length to facilitate vehicle merges.

I-94 within the Project Corridor is a median-divided, at-grade highway ranging from two lanes to four lanes in each direction. Surface streets along the I-94 Project Corridor are connected by 46 overpasses and 61 underpasses. Segment, length, and existing conditions are shown in Table 1 below. Figure 1 below provides a map of the Project.

Table 1 - Project Limits, Segments, and Existing Conditions

Segment	Western Limit	Eastern Limit	Segment Length (Miles)	Number of Lanes	Outside Shoulder Width (Feet)	Inside Shoulder Width (Feet)	Median Width (Feet)
1A	Wiard Road	Wayne Road	9.2	3	10-12	9-12	2-103
1B	Wayne Road	Beech Daly Road	5.5	3	10	6	90-930
1C	US-23	Wiard Road	6.6	2-3	8-12	4-22	2-196
1D	Beech Daly Road	Oakwood Boulevard	5.4	3-4	12	12	26-150
2	Oakwood Boulevard	M-10 (Lodge Freeway)	8.1	3	4-20	4-14	2-112
3	Ann Arbor Saline Road	US-23	4.5	2	8-12	8-10	2

Figure 1 - Project Location Map



1.3 EA Publication, Public Hearing, and Agency and Public Review

Legal notices were placed on Nov. 15, 2024, to announce the availability of the EA for review and a public hearing to provide comment. The legal notice was included in the following publications:

- Detroit Free Press
- Detroit News
- Michigan Chronicle
- Lansing State Journal
- Ann Arbor News

In addition, MDOT announced the availability of the EA on its website at Michigan.gov/MDOT under News and Outreach, and at Michigan.gov/CAVProject and shared to 25,000 followers on social media. The announcement was also translated in Spanish, Arabic, Bengali, and Simplified Chinese, and was posted on the project website. The Project received local news media coverage to remind and encourage the public to attend the public hearing, including publications from WEMU and WDIV on radio and television, respectively, and through articles on the Internet. There was also social media coverage by Roads and Bridges magazine and the American Association of State Highway and Transportation Officials (AASHTO). A public hearing was held during the 34-day comment period, pursuant to the requirements under NEPA. The in-person public hearing was held on Dec. 2, 2024, from 10 a.m. to 6:30 p.m. at the Van Buren Township Hall at 46425 Tyler Road, Van Buren Township, MI 48111 and attended by 33 people. The public hearing included a narrated presentation, materials and information on the Project, and opportunities to offer comments. A court reporter was present at the public hearing, and the hearing was held in accordance with federal and state Public Involvement/Public Hearing Procedures. The 34-day comment period ended on Dec. 19, 2024. A full summary of the event, along with the public noticing and announcement process ahead of the event, can be found in Appendix A.

1.4 Consistency with Stated Purpose and Need

The Project meets the stated purpose and need documented in the EA in that it creates an innovative project to maximize benefits of advanced vehicles and encourage similar integration of technologies across the state of Michigan, upgrade I-94 with smart road technology, improve pavement conditions and operations, bridge the technology gap between advanced vehicles and roads, reduce fatalities from crashes, and enhance road maintenance and incident response. The purpose and need for the Project have not changed from what was published in the EA. This section provides a summary of the Purpose and Need statement found in Chapter 2.0 of the EA. Project Mitigation Commitments addressing this purpose and need are included in Section 3.0 (Green Sheet).

1.4.1 Project Purpose

The purpose for the Project is to develop and implement an integrated advanced roadway that would:

- Create an innovative project to maximize benefits of advanced vehicles and encourage similar integration of technologies across the state of Michigan - The technology deployed as part of the

Project enables V2V and V2X communications that could allow vehicles to achieve throughput and emissions benefits;

- Upgrade roadways with smart road technology - The Project would provide MDOT with a suite of always-on, artificial intelligence (AI)-driven, automated sensing systems that target precise issues such as hazardous road surfaces, near misses, and incidents in real time along the entire length of the Project; and,
- Improve pavement conditions, and operations - The Project would rehabilitate the pavement and pavement markings for the left-most general-purpose lane and install technology that would reduce emergency services response times and enhance roadway operations as a result.

1.4.2 Project Need

The Project will address the following needs:

- Bridge the technology gap between advanced vehicles and roads - The Project calls for the installation of infrastructure that would eventually allow for full functionality of CAVs, including hands-off eyes-off (HOEO) driving, along the lane; and,
- Enhance road maintenance and incident response - The Project calls for the installation of infrastructure that would eventually allow for full functionality of CAVs, including HOEO driving, along the lane.

1.5 Selected Alternative

Build and No-Build alternatives were evaluated in the EA. The Build Alternative would equip the existing inside (left) general-purpose lane with Cavnue's digital infrastructure and a series of physical improvements. In some areas, the existing pavement is wide enough to accommodate the restriping. In other areas, minor pavement widening of between 2 to 4 feet will be required to the inside. Vehicles will be able to access the lane through access points, to be at least 2,000 feet in length, to facilitate merging. The components of the Project are listed below. Each of these components would be installed within the existing public right of way.

- Physical separation - Physical separation between the general-purpose traffic and CAV lane users with access points between each exit along I-94 within the Project Limits;
- Access points - Merging points for vehicles to enter and exit the lane, to be at least 2,000 feet in length, to facilitate merges;
- Pavement - Rehabilitation and widening of existing lanes into the existing I-94 median at select locations within Project Limits;
- Pavement markings - Updated pavement markings that help visually separate general-purpose traffic and the lane;
- Signs - Road signs to help road users identify lane entrance and exits;
- Pole-mounted roadside cameras and sensors: Proprietary camera and sensor hardware mounted on poles with a height of approximately 60 feet, installed approximately every 650 feet in the median; and
- Lighting - At locations where existing lighting poles are not available to meet the spacing requirement, new poles may be installed.

The Build Alternative would operate similarly to that of a managed lane found in other states. The Build Alternative would meet the purpose of the Project to:

- Create an innovative project to maximize benefits of advanced vehicles and encourage similar integration of technologies across the state of Michigan;
- Upgrade roadways with smart road technology;
- Improve safety, pavement conditions, and operations; and
- Encourage new and reliable transit routes and transit use.

In addition, the Build Alternative would be the need of the Project to:

- Bridge the technology gap between advanced vehicles and roads;
- Reduce fatalities resulting from crashes;
- Enhance road maintenance and incident response; and
- Provide opportunities to address lack of transit access.

The Build Alternative would not have significant adverse impacts on the human or natural environment. Less than significant impacts are anticipated for the following areas: Traffic, Water Resources, Contaminated Hazardous Waste, Visual Conditions, Construction Impacts, and Public Controversy. See Section 3.0 – Project Mitigation Summary (Green Sheet), which describes the proposed mitigation measures and associated enhancements for the Project.

1.6 Permits

The Project would require several permits. MDOT will obtain the applicable permits and/or certifications prior to the start of construction. Appropriate permit conditions will be included in the construction documents, and all conditions of the permits will be followed during construction. Table 2 below provides a list of permits anticipated for the Project.

Table 2 - Anticipated Permits

Regulatory Agency	Permit	Description/Purpose
USACE	Nationwide Permit 7	Any construction or modification of outfall structures and associated intake structures would require a Nationwide Permit 7.
U.S. Environmental Protection Agency (EPA)	National Pollutant Discharge Elimination System (NPDES) Permit	Projects that disturb greater than 5 acres of soil would require an NPDES permit.
EPA	Statewide MS4 Permit	Projects that disturb greater than 1 acre of soil must comply with MDOT's Statewide MS4 Permit (Permit No. MI0057364) for stormwater discharges.
Michigan Department of Environment, Great Lakes, and Energy (EGLE)	Part 31 Floodplain Permit (Joint Permit Between USACE and EGLE)	Any alteration of floodplains would require an EGLE floodplain permit. The purpose of this permit is to assure that channels and floodways are not

Regulatory Agency	Permit	Description/Purpose
		inhibited, and that the capacity of the floodway is not unduly restricted.
EGLE	Part 301 Permit	Any construction needed to occur below the ordinary high-water mark (OHWM) of the list of potential streams and drains on Table 4.11.2 would require a Part 301 permit.
EGLE	Part 303 Permit	Any construction needed to occur within a regulated wetland would require a Part 303 permit.
MDOT	Construction Permits	Standard permits required before construction.

1.7 Summary of FHWA Project Determination

An EA for the Project was completed by MDOT and approved by the FHWA on Nov. 6, 2024. Given the analysis documented in the EA, FHWA has concluded that there are no significant environmental impacts projected to occur upon implementation of the Project.

2.0 Comments and Responses

The following sections summarize the comments received during the public comment period for the I-94 CAV Corridor Project EA. The comment period lasted 34 days and ended on Dec. 19, 2024. During that time, MDOT received 96 written or verbal comments, including three verbal comments and one written comment at the Public Hearing held on Dec 2, 2024. See Appendix A for the public hearing summary. See Appendix B for all public and resource agency comments received during the 34-day comment period.

2.1 Resource Agencies

MDOT received two letters from resource agencies. The comment letters were received from the Michigan Department of Agriculture and Rural Development (MDARD) and United States Environmental Protection Agency (EPA). MDARD reviewed the EA and provided no additional comments. The agency letters and responses to comments can be found in Appendix B.

2.2 State Representative

MDOT did not receive any letters from state representatives on the Project.

2.3 Comments from the Public

In addition to the agency letters, there were 96 additional comments recorded from the public during the 34-day comment period. There were 92 comments received online, and three verbal comments and one

written comment were recorded during the Public Hearing held on Dec. 2, 2024. A summary table of the comments can be found in Table 3. A full list of comments can be found in Appendix B.

Table 3 - Public Comment Summary

Topic	Comment	Response
General Support	Excitement about smart infrastructure being built in Michigan. Support for project and its potential to improve commute. Support for project and its potential to improve safety. Support for user fees. Support for infrastructure that promotes self-driving cars.	Comments recorded.
General Opposition	Concerns about safety of automated vehicles and distracted drivers.	Comments recorded.
Pilot Project	Opposition to the Pilot Project operating between Belleville and Rawsonville roads. Concerns about construction impacts from the Pilot Project.	The 3-mile pilot is part of a separate initiative to test some of the technologies that could be used as part of the corridor project. Section 4.6 of the EA evaluates the traffic impacts of the Project and provides a comparison of the ultimate travel speeds between the Build and No-Build scenarios. While temporary construction impacts are unavoidable, there will be minimal impacts on travel speeds once the full project is operational.
Funding	Concerns about public funds being utilized for the project. Concerns about MDOT funding priorities. Concerns about funds for public transit being diverted to the Project.	As outlined in page ii of the EA, the Project is anticipated to be privately funded by Cavnue.

Topic	Comment	Response
Lane Use Eligibility	Concerns about who can use the lane and equity. Concerns about restricting a lane to a particular vehicle type.	As discussed in Section 1.4, vehicles will not pay a user fee. The timing in which a user fee may be implemented is subject to agreement between MDOT and Cavnue, subject to federal approval. User fee rates would generally be set at a level to encourage lane usage and not disrupt general-purpose lane operations. As CAVs become more common in the future, and CAV usage on the lane exceeds a certain threshold, the lane may be open to CAVs only. The thresholds would be determined after relevant studies, including traffic and revenue modeling, are complete. Transit vehicles would always have access to the lane at no charge. MDOT and Cavnue will explore an assistance program to address potential impacts associated with tolling to communities along the CAV corridor.
Vehicle Technology	Objections to electric vehicles using the lane only.	As stated in Section 1.1.1 of the EA, CAVs refer to vehicles with compatible advanced driver assistance systems (ADAS) and automated driving systems (ADS) such as automatic emergency braking, advanced lane detection, lane keep assist, and adaptive cruise control. Connected vehicles receive information to and from outside sources to help them navigate the road environment. A revision has been issued to clarify in this section that CAV technology is equipped in both electric vehicles (EVs) and non-Evs. As such, CAVs are not limited to EVs only.
User Fees	Concerns about equity and affordability with the potential user fees.	As discussed in Section 1.4, vehicles will not pay a user fee. The timing in which a user fee may be implemented is subject to agreement between MDOT and Cavnue, subject to federal approval. User fee rates would generally be set at a level to encourage lane usage and not disrupt general-purpose lane operations. As CAVs become more common in the future, and CAV usage on the lane exceeds a certain threshold, the lane may be open to CAVs only. The thresholds would be determined after relevant studies, including traffic and revenue modeling, are complete. Transit vehicles would always have access to the lane at no charge. MDOT and Cavnue will explore an assistance program to address

Topic	Comment	Response
		potential impacts associated with tolling to communities along the CAV corridor.
Purpose and Need	Questions about the purpose of the project, and if self-driving cars need the roadside technology.	Section 2 of the EA provides a full description of the purpose and need for the Project. The purpose is to develop and implement an integrated advanced roadway that would: • Maximize the benefits of advanced vehicles and encourage similar integration of technologies across Michigan, • Upgrade roadways with smart road technology, • Improve safety, pavement conditions and operations, and • Encourage new and reliable transit routes and transit use.
Project Alternatives	There should be no expansion of the highway to accommodate the project. Suggestion to add a lane to accommodate the project.	As discussed in Section 3 of the EA, the Build Alternative would not require any expansion of the highway to accommodate the Project.
Project Location	Concerns about the project potentially being on M-10.	As discussed in Section 1.1 of the EA, the Project would be located along an approximately 39.3-mile segment of I-94 between Ann Arbor to the west and Detroit to the east. No modification to M-10 is proposed.
Public Engagement	Public engagement was inadequate. Concerns about locations of public meetings. Residents did not know about the project.	As outlined in Section 5 of the EA, a robust and comprehensive public outreach effort was conducted for the project, including multiple public open houses, virtual open houses and surveys to ensure adequate engagement due to the long length of the corridor. The first open house was held in August 2023 at Belleville High School and the second at Dearborn Public Library in April 2024. For all public involvement opportunities, a notice is sent to media outlets and more than 7,600 email addresses. MDOT shared the information with local municipalities and on social media. Section 5 of the EA provides more details on the efforts undertaken to conduct robust public outreach, including steps

Topic	Comment	Response
		taken above and beyond the standard-required public hearing as part of the NEPA process.
Safety	The design of the entrance and exit merge lanes may pose safety concerns.	As stated in Section 4.6 of the EA, as the design of the Project progresses, relevant safety analysis will be conducted to ensure the facilitation of safe lane merge and operations.
Design	How would the Project interact with the existing left lane entrance and exit at Ecorse Road?	This left exit will be reconfigured to a right exit as part of a separate MDOT project.
Maintenance	How will the Project impact winter maintenance?	The Project would provide MDOT with a suite of sensors that would automatically identify road incidents and areas requiring maintenance. Snow plowing and salting operations will not be impacted during the winter.
Emergency Vehicle Access	How will emergency vehicles access the left lane?	Emergency vehicles would be able to enter and exit the express lane through designated entrance and exit locations along the corridor, which are anticipated to be positioned between every existing I-94 on and off ramp. If delineators are incorporated into the Project as part of final design, emergency vehicles can safely drive over the plastic delineators, if needed. A revision has been issued to clarify this under Section 1.4 of the EA.
Transit	MDOT should focus on transit investments, such as bus and rail, instead.	As stated in Section 1.4 of the EA, transit vehicles would always have access to the lane at no charge. Section 1.5.3 of the EA provides further information on how the project would encourage other modes of mobility and support transit projects.
Suggestions for Future Operations	The lane should be focused on commercial vehicles. Rumble strips should be installed at merges.	As stated in Section 1.4 of the EA, the Project would not change the existing lane usage for heavy trucks, which would continue to use the two general-purpose lane furthest to the right, except for hazards that require the use of an alternative lane for safety reasons, consistent with Chapter 257.634 of the Michigan Vehicle Code.

Topic	Comment	Response
		Rumble strips are not anticipated to be utilized for the Project. This will be confirmed in final design.
Operations	The segment between Ann Arbor-Saline Road and US-23 are two lanes only. How would the Project operate there?	Section 4.6, Traffic, of the EA assumes that this segment of the Project will not be restricted to CAV-only both in the initial phase and the ultimate phase. Along this segment of the project, only Cavnue's pole-mounted sensors will be installed.
Truck Traffic	How would the Project affect truck or commercial vehicle traffic?	As stated in Section 1.4 of the EA, the Project would not change the existing lane usage for heavy trucks, which would continue to use the two general-purpose lane furthest to the right, except for hazards that requires the use of an alternative lane for safety reasons, consistent with Chapter 257.634 of the Michigan Vehicle Code.
Enforcement	Enforcement action should be taken against multiple lane changes.	Enforcement is outside the scope of this EA.
Traffic Impacts	Concerns about traffic impacts resulting from the full buildout of the Project, including converting the left-most general-purpose lane into a CAV lane.	The traffic study conducted as part of Section 4.6 of the EA takes into account the full buildout of the project and evaluates the ultimate travel speeds between the Build and No-Build scenarios. While temporary construction impacts are unavoidable, there will be minimal impacts on travel speeds once the full project is operational.
Air Quality	Air quality concerns during construction.	As discussed in Section 4.8.4 of the EA, the Project may cause short-term, localized impacts on air quality within the project area. A temporary increase in vehicle emissions is expected as a result of heavy equipment activity, hauling materials and idling vehicles. Additionally, fugitive dust would be generated through construction activities such as excavation, heavy equipment operation and other traffic activity. Fugitive dust emissions would vary depending on the level of activity, specific construction techniques, soil characteristics, and weather conditions.
Page Limit	40 CFR 1501.5(f), which set forth an EA page limit of 75 pages, but this EA is 83 pages.	40 CFR 1501.5(f) sets forth a page limit of 75 pages; however, this limit does not apply to figures, images, and appendices. As such, the text portion of this EA falls within the requirement of 40 CFR 1501.5(f).

3.0 Project Mitigation Summary (Green Sheet)

Project Mitigation and Community Enhancements Summary "Green Sheet" For the Project

January 2025

Finding of No Significant Impact (FONSI)

This mitigation summary "Green Sheet" contains the Project-specific mitigation measures being considered at this time. The mitigation items and commitments identified below may be modified during the final design or construction phases of the Project. The Project mitigation will be tracked and sign-off on the mitigation commitments will occur as the Project progresses through the various phases: design, construction and maintenance. Only resources with mitigation commitments are included in this summary.

3.1.1 Traffic

If implemented, the user fee program will be adjusted to encourage and ensure the attractiveness of the Project in order to alleviate localized congestion between Middle Belt Road and Ecorse Road in the 2035 AM Peak period.

3.1.2 Water Resources

a) Floodplain - Prior to construction of the Project, a watercourse delineation within all project work areas will be conducted using criteria provided in NREPA Part 301, Inland Lakes and Streams, and coordination with EGLE
b) Wetlands - Compensatory mitigation is required to replace the loss of wetland functions within the watershed for unavoidable wetland impacts. To address the 50.21-acre impact on regulated wetlands, wetland impacts will be mitigated at ratios of 1.5-to-1 for palustrine emergent (PEM), 1.5-to-1 for palustrine scrub shrub (PSS), and 2-to-1 for palustrine forested (PFO). Based on these mitigation ratios, a total of 75.64 acres of mitigated wetland would be required. It is expected that most of the potential wetlands identified in the EA will be deemed man-made, roadside ditches not regulated under Part 303 of NREPA. As a result, the total amount of wetland impacts will be significantly reduced to likely less than 5 acres of total wetland impacts.

   The River Raisin Bank Site services the VI.1.1 Maumee Lake Plain Ecoregion and is proposed to be utilized for the required compensatory mitigation. EGLE coordination and approval of the mitigation credits will occur during the design phase of the project prior to construction. Approval by the EGLE Water Resources Division staff is a prerequisite for each wetland permit issued in the state of Michigan.

   During the design phase, the construction limits (edge of disturbance line) will be minimized to the greatest extent possible to lessen wetland impacts while meeting the MDOT design requirements for the highway shoulder and lane delineators and the spacing needs of the CAV

equipment. MDOT will also investigate the feasibility and reasonableness of steepened fill embankments and avoidance measures to reduce wetland impacts.

c) Water Quality - The selection and design of the BMPs will be evaluated during final design and the drainage design will meet the requirements of MDOT's Road Design Manual, Drainage Manual, MDOT-Statewide MS4 Permit and Standard Specifications for Construction as well as applicable local stormwater permit requirements.

3.1.3 Contaminated Hazardous Waste Sites

a) Preliminary Site Investigation - Prior to the commencement of earth moving or constriction activities, a preliminary site investigation testing of the soil and groundwater at the 35 medium risk sites will be conducted.
b) Contaminated Sites -
    1. Area of contamination should be identified in the plans.
    2. An estimated quantity (i.e., pay item) for the appropriate handling and disposal of non-hazardous contaminated media should be included in the project plans.
    3. The Special Provision for Non-Hazardous Contaminated Material Handling and Disposal must be included in the final plan package.
    4. Contaminated groundwater cannot be discharged directly to the ground surface or a surface water body, and monitoring wells must be properly adjusted to protect well casings from damage or abandoned in accordance with EGLE standards.

3.1.4 Visual Conditions

During final design, an effort would be made to evaluate and identify sensitive habitats native to Scarlett Mitchell Woods, and lighting design shall avoid adverse effects to sensitive receptors native to this area.

3.1.5 Construction Impacts

MDOT will follow MDOT Standard Specifications for Construction for mitigation regarding maintenance of traffic, soil erosion and sedimentation control, construction air quality, construction noise and construction vibration.

a) Maintenance of Traffic - During the Project's design phase, MDOT will develop a detailed traffic management plan that will outline how the Project will be built and how traffic will be managed during construction, including detour routes if needed. To the greatest extent possible, access to the service drives and adjacent properties will be maintained throughout construction.
b) Emergency Services - Local and state police, fire departments, ambulance services, school districts and transit providers will be notified in advance of construction activities to minimize disruption of services. Traffic signs and notices published in the local media will alert the public early about major construction activities that could disrupt the community.
c) Soil and Erosion Control - Earth disturbance activities associated with the Project will require a National Pollutant Discharge Elimination System permit from EGLE to discharge storm water from the construction site. Both the MDOT Metro Region Soils Unit and Construction Field Services Division will review the soil erosion and sedimentation control measures developed for

the Project for compliance with Part 91 of the Soil Erosion and Sedimentation Control, of the Natural Resources Environmental Protection Act, 1994 Public Act 451, as amended. Construction Field Services will apply for the NPDES permit. Construction sites must be inspected every seven days or within 24 hours, including weekend days, regardless if the contractor is working or not, after a precipitation event that results in a discharge of sediment from the site.

d) Construction Air Quality - The Project will be constructed in accordance with MDOT's 2020 Standard Specifications for Construction provisions for dust control to minimize impacts on air quality during construction.
e) Construction Noise - Construction noise will be minimized by measures such as requiring that construction equipment have mufflers, that portable compressors meet federal noise standards for that equipment, and that portable equipment be placed away from or shielded from sensitive noise receptors to the greatest extent possible. Temporary noise impacts from construction activities will be minimized through compliance with applicable local, state and federal noise control and ordinance requirements.
f) Construction Vibration - MDOT will develop a vibration monitoring program prior to construction that will identify locations sensitive to vibration, conduct preliminary review of vibration sensitive structures, and make reparations if construction-related damage occurs.
g) Utilities - MDOT will continue coordination with utility providers prior to and during construction to avoid and minimize service disruptions. Utility owners will be responsible for relocating utility infrastructure prior to and during construction.

3.1.6 Public Controversy

A robust public outreach effort will continue to be conducted to ensure that the public, including but not limited to residents, businesses, institutions (churches, schools, etc.), special interest groups, and commuters, are well informed about the Project, its goals, purpose and need.

4.0 Revisions

4.1 Environmental Assessment (EA) Main Document

This Revisions section lists the updates and corrections made to the EA by page number, including clarifications to the document from questions received from the public during the public comment period.

Page i

Language was modified in Section 1.1 to clarify the timeframe for submitting public comments.

Published:

Comments on this environmental assessment should be received within 30 days of the date of publication and should be sent to: Monica Monsma, Public Involvement and Hearings Officer, Michigan Department of Transportation, P.O. Box 30050, Lansing, MI 48909, Phone: 517-335-4381, E-mail: MonsmaM@Michigan.gov.

Amended:

Comments on this environmental assessment should be received before the end of the public comment period and should be sent to: Monica Monsma, Public Involvement and Hearings Officer, Michigan Department of Transportation, P.O. Box 30050, Lansing, MI 48909, Phone: 517-335-4381, E-mail: MonsmaM@Michigan.gov.

Page 1-3

Language was modified in Section 1.1.1 to clarify that CAVs include both EVs and non-EVs, in response to public comments.

Published:

CAVs refer to vehicles with compatible advanced driver assistance systems (ADAS) and automated driving systems (ADS) such as automatic emergency braking, advanced lane detection, lane keep assist, and adaptive cruise control. Connected vehicles receive information to and from outside sources to help them navigate the road environment.

Amended:

CAVs refer to vehicles with compatible advanced driver assistance systems (ADAS) and automated driving systems (ADS) such as automatic emergency braking, advanced lane detection, lane keep assist, and adaptive cruise control. Connected vehicles receive information to and from outside sources to help them navigate the road environment. CAV technology is equipped in both electric vehicles (EVs) and non-EVs; and as such, CAVs are not limited to EVs only.

Page 1-6

Language was updated in Section 1.3 to clarify that a user fee may occur, subject to federal approvals.

Published:

A user fee is a charge collected for the purpose of covering the cost of providing a service or as a condition for using a certain facility. A user fee for driving in the CAV lane will occur in the future. The fee will fund the ongoing operations and maintenance of the lane. The ability to charge a user fee is subject to both state and federal approvals, as described below.

Amended:

A user fee is a charge collected for the purpose of covering the cost of providing a service or as a condition for using a certain facility. A user fee for driving in the CAV lane may occur in the future. The fee would fund the ongoing operations and maintenance of the lane. This EA evaluates the potential impacts assuming that a user fee would be in place in the future, including traffic impacts and potential diversion effects. This EA will assist with future decision-making and approvals on user fees; however, this EA does not serve as an approval for user fees. The ability to charge a user fee is subject to both state and federal approvals, as described below.

Page 1-7

Language in the last paragraph of Section 1.3.2 was revised to clarify that a separate NEPA action is needed to approve any future user fees.

Published:

Federal approval is anticipated to be pursued in parallel with the NEPA process, and no user fee would be charged until federal approval is received.

Amended:

Potential impacts associated with tolling will be analyzed in the future under a separate NEPA action, and federal approval is anticipated to be pursued in parallel with the NEPA process. ~~, and no~~ No user fee would be charged until federal approval is received.

Page 1-7

Language was modified in Section 1.4 to clarify how emergency vehicles will be able to safely access the lane, as well as the approach for winter maintenance, in response to public comments. In addition, revisions were made to this section in response to the signing of Executive Order 14148, entitled *Initial Rescissions of Harmful Executive Orders and Actions* and Executive Order 14173, entitled *Ending Illegal Discrimination and Restoring Merit-Based Opportunity*,

Published:

The Project would equip the existing left-most general-purpose lane with Cavnue's digital infrastructure and a series of physical improvements. The Project will initially be open to vehicles regardless of vehicle make and model. Initially, vehicles will not pay a user fee. The timing in which a user fee may be implemented is subject to agreement between MDOT and Cavnue, subject to federal approval. User fee rates will generally be set at a level to encourage lane usage and not disrupt general-purpose lane operations. As CAVs become more common in the future, and CAV usage on the lane exceeds a certain threshold, the lane may be open to CAVs only. The thresholds would be determined after relevant studies, including traffic and revenue modeling, are complete. Transit vehicles would always have access to the lane at no charge. MDOT and Cavnue would develop a low-income assistance program to ensure that low-income and disadvantaged persons/communities would not be disproportionately affected by the Project.

The Project would not change the existing lane usage for heavy trucks, which would continue to use the two general-purpose lane furthest to the right, except for hazards that requires the use of an alternative lane for safety reasons, consistent with Chapter 257.634 of the Michigan Vehicle Code.

Amended:

The Project would equip the existing left-most general-purpose lane with Cavnue's digital infrastructure and a series of physical improvements. The Project will initially be open to vehicles regardless of vehicle make and model. Initially, vehicles will not pay a user fee. The timing in which a user fee may be implemented is subject to agreement between MDOT and Cavnue, subject to federal approval. User fee rates will generally be set at a level to encourage lane usage and not disrupt general-purpose lane operations. As CAVs become more common in the future, and CAV usage on the lane exceeds a certain threshold, the lane may be open to CAVs only. The thresholds would be determined after relevant studies, including traffic and revenue modeling, are complete. Transit vehicles would always have access to the lane at no charge. MDOT and Cavnue will explore an assistance program to address potential impacts associated with tolling to communities along the CAV corridor. ~~MDOT and Cavnue would develop a low-income assistance program to ensure that low-income and disadvantaged persons/communities would not be disproportionately affected by the Project.~~

The Project would not change the existing lane usage for heavy trucks, which would continue to use the two general-purpose lane furthest to the right, except for hazards that requires the use of an alternative lane for safety reasons, consistent with Chapter 257.634 of the Michigan Vehicle Code.

Emergency vehicles would be able to enter and exit the express lane through designated entrance and exit locations along the corridor, which are anticipated to be positioned between every existing I-94 on and off ramp. If delineators are incorporated into the Project as part of final design, emergency vehicles can safely drive over the plastic delineators, if needed.

MDOT and Cavnue are working with Wayne and Washtenaw counties to develop a plan for winter operations and maintenance. The project would also maintain the existing left shoulders (where available) for emergency vehicles or to allow stalled vehicles to come to a stop.

Page 4-4

Consistent with Executive Order 14148, entitled *Initial Rescissions of Harmful Executive Orders and Actions* and Executive Order 14173, entitled *Ending Illegal Discrimination and Restoring Merit-Based Opportunity*, References to Section 4.5 – Demographics and Environmental Justice in relation to the Project have been deleted entirely.

Published:

Median household income within census tracts along the Proposed Project ranges from $12,000 to $156,875. Figure 5 of Appendix A – Social and Economic Maps provides a map of the distribution of median household income along the Proposed Project. Appendix F provides a summary table of median household income along the Proposed Project. In general, higher incomes are concentrated in the west of the corridor in Ann Arbor, Pittsfield Township, Ypsilanti Township, and toward the center in Van Buren Township. The average median household income along the Proposed Project as a whole is $54,377, which is higher than the Washtenaw County median of $52,830 and lower than the Wayne County median at $63,202. There are a number of households with a median household income below the federal poverty level. Section 4.5 – Demographics and Environmental Justice of this EA provides a detailed discussion of households under the poverty level within the study area.

Amended:

Median household income within census tracts along the Proposed Project ranges from $12,000 to $156,875. Figure 5 of Appendix A – Social and Economic Maps provides a map of the distribution of median household income along the Proposed Project. Appendix F provides a summary table of median household income along the Proposed Project. In general, higher incomes are concentrated in the west of the corridor in Ann Arbor, Pittsfield Township, Ypsilanti Township, and toward the center in Van Buren Township. The average median household income along the Proposed Project as a whole is $54,377, which is higher than the Washtenaw County median of $52,830 and lower than the Wayne County median at $63,202. There are a number of households with a median household income below the federal poverty level. ~~Section 4.5 – Demographics and Environmental Justice of this EA provides a detailed discussion of households under the poverty level within the study area.~~

Page 4-4

Consistent with Executive Order 14148, entitled *Initial Rescissions of Harmful Executive Orders and Actions* and Executive Order 14173, entitled *Ending Illegal Discrimination and Restoring Merit-Based Opportunity*, Sections 4.5 through 4.5.4 that discuss Environmental Justice in relation to the Project have been deleted entirely.

Page 4-13

Language was modified in Section 4.6 to clarify the assumptions made to the traffic study between Ann Arbor-Saline Road and US-23, in response to public comments.

Published:

A comparison of the analysis results for the No Build versus Build conditions shows that travel speeds in the general-purpose lanes remain generally consistent with the No Build Alternative for all analyzed peak hours, and no congestion or flow breakdown is projected to occur in the technology-enabled express lane or at any of the access points.

Amended:

A comparison of the analysis results for the No Build versus Build conditions shows that travel speeds in the general-purpose lanes remain generally consistent with the No Build Alternative for all analyzed peak hours, and no congestion or flow breakdown is projected to occur in the technology-enabled express lane or at any of the access points. Note: The Project Segment between Ann Arbor-Saline Road and US-23 will not be restricted to CAV-only both in the initial phase and the ultimate phase. Along this segment of the project, only Cavnue's pole-mounted sensors will be installed.

Page 4-18 and 19

Consistent with Executive Order 14154, entitled *Unleashing American Energy*, Section 4.9 – Greenhouse Gas and Climate Change has been deleted entirely.

Page 4-37

Consistent with Executive Order 14148, entitled *Initial Rescissions of Harmful Executive Orders and Actions* and Executive Order 14173, entitled *Ending Illegal Discrimination and Restoring Merit-Based Opportunity*, along with Executive Order 14154, entitled *Unleashing American Energy*, Section 4.9 – Greenhouse Gas and Climate Change has been deleted entirely, references to Environmental Justice and Greenhouse Gas have also been deleted.

Published:

Indirect effects are impacts that a project causes; however, the effects occur at a later time or in an area that is farther away from the project. Indirect effects must be "reasonably foreseeable," or highly likely to occur because of the project. This EA has studied the potential for adverse environmental effects from the following resource areas:

- Land Use
- Relocation and Right of Way Impacts
- Social
- Economic
- Demographic and Environmental Justice
- Traffic
- Pedestrians, Bicycles and Transit
- Air Quality
- Greenhouse Gas
- Noise
- Water Resources

- Threatened and Endangered Species
- Historic and Archaeological Resources
- Section 4(f) and 6(f) Properties
- Contaminated Hazardous Waste Sites
- Visual Conditions
- Construction Impacts

Amended:

Indirect effects are impacts that a project causes; however, the effects occur at a later time or in an area that is farther away from the project. Indirect effects must be "reasonably foreseeable," or highly likely to occur because of the project. This EA has studied the potential for adverse environmental effects from the following resource areas:

- Land Use
- Relocation and Right of Way Impacts
- Social
- Economic
- ~~Demographic and Environmental Justice~~
- Traffic
- Pedestrians, Bicycles and Transit
- Air Quality
- ~~Greenhouse Gas~~
- Noise
- Water Resources
- Threatened and Endangered Species
- Historic and Archaeological Resources
- Section 4(f) and 6(f) Properties
- Contaminated Hazardous Waste Sites
- Visual Conditions
- Construction Impacts

Page 4-43

Consistent with Executive Order 14148, entitled *Initial Rescissions of Harmful Executive Orders and Actions* and Executive Order 14173, entitled *Ending Illegal Discrimination and Restoring Merit-Based Opportunity*, mitigation measure 4.21.1 – Demographics/Environmental Justice has been deleted entirely.

Page 4-45

Language was modified in Section 4.21.6 to address a typo erroneously referencing MDOT's 2020 Standard Specifications for Construction as 2012 Standard Specifications for Construction, in response to EPA comments.

Published:

MDOT will follow MDOT Standard Specifications for Construction for mitigation regarding maintenance of traffic, soil erosion and sedimentation control, construction air quality, construction noise, and construction vibration.7

a) Maintenance of Traffic - During the Project's design phase, MDOT will develop a detailed traffic management plan that will outline how the project will be built and how traffic will be managed during construction, including detour routes, if needed. To the greatest extent possible, access to the service drives and adjacent properties will be maintained throughout construction.
b) Emergency Services - Local and state police, fire departments, ambulance services, school districts, and transit providers will be notified in advance of construction activities to minimize disruption of services. Traffic signs and notices published in the local media will alert the public early about major construction activities that could disrupt the community.
c) Soil and Erosion Control - Earth disturbance activities associated with the Project will require a National Pollutant Discharge Elimination System permit from EGLE to discharge storm water from the construction site. Both the MDOT Metro Region Soils Unit and Construction Field Services Division will review the soil erosion and sedimentation control measures developed for the project for compliance with Part 91 of the Soil Erosion and Sedimentation Control of the Natural Resources Environmental Protection Act, 1994 Public Act 451, as amended. Construction Field Services will apply for the NPDES permit. Construction sites must be inspected every seven days or within 24 hours, including weekend days, regardless of whether the contractor is working or not, after a precipitation event that results in a discharge of sediment from the site.
d) Construction Air Quality - The Project will be built in accordance with MDOT's 2012 Standard Specifications for Construction provisions for dust control to minimize impacts on air quality during construction.
e) Construction Noise - Construction noise will be minimized by measures such as requiring that construction equipment have mufflers, that portable compressors meet federal noise standards for that equipment, and that portable equipment be placed away from or shielded from sensitive noise receptors to the greatest extent possible. Temporary noise impacts from construction activities will be minimized through compliance with applicable local, state and federal noise control and ordinance requirements.
f) Construction Vibration - MDOT will develop a vibration monitoring program prior to construction that will identify locations sensitive to vibration, conduct preliminary review of vibration sensitive structures, and make reparations if construction-related damage occurs.
g) Utilities - MDOT will continue coordination with utility providers prior to and during construction to avoid and minimize service disruptions. Utility owners will be responsible for relocating utility infrastructure prior to and during construction.

Corrected (typographical error):

MDOT will follow MDOT Standard Specifications for Construction for mitigation regarding maintenance of traffic, soil erosion and sedimentation control, construction air quality, construction noise, and construction vibration.

a) Maintenance of Traffic - During the Project's design phase, MDOT will develop a detailed traffic management plan that will outline how the project will be built and how traffic will be managed during construction, including detour routes, if needed. To the greatest extent possible, access to the service drives and adjacent properties will be maintained throughout construction.
b) Emergency Services - Local and state police, fire departments, ambulance services, school districts, and transit providers will be notified in advance of construction activities to minimize disruption of services. Traffic signs and notices published in the local media will alert the public early about major construction activities that could disrupt the community.
c) Soil and Erosion Control - Earth disturbance activities associated with the Project will require a National Pollutant Discharge Elimination System permit from EGLE to discharge storm water from the construction site. Both the MDOT Metro Region Soils Unit and Construction Field Services Division will review the soil erosion and sedimentation control measures developed for the project for compliance with Part 91 of the Soil Erosion and Sedimentation Control of the Natural Resources Environmental Protection Act, 1994 Public Act 451, as amended. Construction Field Services will apply for the NPDES permit. Construction sites must be inspected every seven days or within 24 hours, including weekend days, regardless of whether the contractor is working or not, after a precipitation event that results in a discharge of sediment from the site.
d) Construction Air Quality - The Project will be built in accordance with MDOT's 2020 Standard Specifications for Construction provisions for dust control to minimize impacts on air quality during construction.
e) Construction Noise - Construction noise will be minimized by measures such as requiring that construction equipment have mufflers, that portable compressors meet federal noise standards for that equipment, and that portable equipment be placed away from or shielded from sensitive noise receptors to the greatest extent possible. Temporary noise impacts from construction activities will be minimized through compliance with applicable local, state and federal noise control and ordinance requirements.
f) Construction Vibration - MDOT will develop a vibration monitoring program prior to construction that will identify locations sensitive to vibration, conduct preliminary review of vibration sensitive structures, and make reparations if construction-related damage occurs.
g) Utilities - MDOT will continue coordination with utility providers prior to and during construction to avoid and minimize service disruptions. Utility owners will be responsible for relocating utility infrastructure prior to and during construction.

Page 5-3

Language was modified in Section 5.5 to clarify what happens to the comments received during the public comment period, in response to EPA comments.

Published:

Public hearings allow members of the community to be formally heard and have their comments recorded. The public hearing for this project will be held following the circulation of the EA for public and agency review. Prior to the public hearing, the public will be notified and be given a minimum of 30 days, and no more than 45 days, to provide public comment on the EA per NEPA guidelines. The public hearing for this project is projected to take place in October 2024.

Formal hearings may intimidate community members who are not used to providing public comments and can be an obstacle to participation, especially as part of a public record. The US Department of Transportation recommends using the following techniques to ensure equitable opportunity for participation at the public hearing:

- Allow written comments and provide the opportunity for a private session that includes a transcriber for recording purposes.
- Provide qualified interpreters for people who use languages other than spoken English, including American Sign Language (ASL) or other sign language.
- Prioritize outreach to underserved communities by advertising in local media outlets that are culture and/or ethnicity-specific. Include both print and online media.
- Use a postcard mailer to advertise a public hearing to hard-to-reach and rural communities.
- Prioritize intentional outreach to communities who have not participated in the organization's public participation processes in the past.
- Provide multilingual staff or interpreters to interact with community members who use languages other than English.
- Use multiple formats in print, online, and through electronic communications for event announcements, including using media to advertise for audiences that use languages other than English, and ethnic or cultural media.
- For online open houses, consider technology limitations, including mobile phone data limits, access to broadband and Internet, and access to personal computers.
- Ensure presentations and online materials are 508-compliant and that print materials are accessible to those with a range of disabilities or who speak languages other than English.
- Provide more than one engagement tool for people who may have alternative access needs.
- Be aware of weather and health advisories and have a plan for cancellation or rescheduling of in-person events.

Amended:

Public hearings allow members of the community to be formally heard and have their comments recorded. The public hearing for this project will be held following the circulation of the EA for public and agency review. Prior to the public hearing, the public will be notified and be given a minimum of 30 days, and no more than 45 days, to provide public comment on the EA per NEPA guidelines. The public hearing for this project is projected to take place in December 2024.

Formal hearings may intimidate community members who are not used to providing public comments and can be an obstacle to participation, especially as part of a public record. The US Department of Transportation recommends using the following techniques to ensure equitable opportunity for participation at the public hearing:

- Allow written comments and provide the opportunity for a private session that includes a transcriber for recording purposes.
- Provide qualified interpreters for people who use languages other than spoken English, including American Sign Language (ASL) or other sign language.
- Prioritize outreach to underserved communities by advertising in local media outlets that are culture and/or ethnicity-specific. Include both print and online media.

- Use a postcard mailer to advertise a public hearing to hard-to-reach and rural communities.
- Prioritize intentional outreach to communities who have not participated in the organization's public participation processes in the past.
- Provide multilingual staff or interpreters to interact with community members who use languages other than English.
- Use multiple formats in print, online, and through electronic communications for event announcements, including using media to advertise for audiences that use languages other than English, and ethnic or cultural media.
- For online open houses, consider technology limitations, including mobile phone data limits, access to broadband and Internet, and access to personal computers.
- Ensure presentations and online materials are 508-compliant and that print materials are accessible to those with a range of disabilities or who speak languages other than English.
- Provide more than one engagement tool for people who may have alternative access needs.
- Be aware of weather and health advisories and have a plan for cancellation or rescheduling of in-person events.

As part of the public comment period, all comments received from the public, local, state, and federal agencies will be documented in a spreadsheet and included as part of the public record. Comments and responses will be documented and summarized in the FONSI document.

Page 6-1

Language was added to clarify that the public review period is a minimum of 30 days, consistent with NEPA requirements.

Published:

This EA and other project information will be available for the public and agencies to review for 30 days either online or via e-mail. Hard copies will be available upon request. MDOT will publish a legal notice in local newspapers that the EA is available for review at least 15 days before the public hearing. Comments will continue to be collected for a minimum of 15 days following the public hearing, which will mark the end of the public comment.

Amended:

This EA and other project information will be available for the public and agencies to review for a minimum of 30 days either online or via e-mail. Hard copies will be available upon request. MDOT will publish a legal notice in local newspapers that the EA is available for review at least 15 days before the public hearing. Comments will continue to be collected for a minimum of 15 days following the public hearing, which will mark the end of the public comment.

Page 6-2

Language was added to clarify the triggers for a written re-evaluation.

Published:

A re-evaluation is a review conducted by the agency of any proposed change in an action, affected environment, anticipated impact, applicable requirements, or mitigation measure as they relate to the environmental document or decision. Should there be changes in the action, such as design changes, a re-evaluation would be conducted.

Amended:

If there are any changes in the proposed action (such as design changes), the affected environment, anticipated impact, applicable requirements, or mitigation measures as they relate to the environmental document or decision, a written re-evaluation will be conducted by the agency.

Page 7-1

Consistent with Executive Order 14148, entitled *Initial Rescissions of Harmful Executive Orders and Actions* and Executive Order 14173, entitled *Ending Illegal Discrimination and Restoring Merit-Based Opportunity*, the following reference is deleted:

EPA. (2023, January). Methodology. Retrieved from Climate and Economic Justice Screening Tool: https://screeningtool.geoplatform.gov/en/methodology#5.46/19.809/-50.942

4.2 Appendix D - Ecological Desktop Review

The Ecological Desktop Review now includes the Michigan Natural Features Inventory (MNFI), agency correspondence, and United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) report for the Project.

4.3 Appendix F - Social and Economic Indicators

Social and Economic Indicators tables have been revised to enhance reader clarity and comprehension of the data.

4.4 Appendix H - MOVES Results

Consistent with Executive Order 14154, entitled *Unleashing American Energy*, Appendix H has been deleted in its entirety.

MEMO

TO: Tony Hui, Cavnue

FROM: Bruce Jones, PWS, CPG/Jason Whitten - WSP USA Inc.

SUBJECT: **Ecological Desktop Review, I-94 Connected and Automated Vehicle Corridor Project**

DATE: September 7, 2023

BACKGROUND

WSP USA Inc. (WSP) completed an Ecological Desktop Review for a 39.1-mile segment of Interstate-94 (I-94) between Ann Arbor Saline Road in Ann Arbor, Michigan and M-10/Lodge Expressway in Detroit, Michigan (Project Area, Figure 1). The project proposes to equip the existing inside general-purpose lane with technology that supports Connected and Automated Vehicle (CAV) use.

INFORMATION REVIEW/RESULTS

WSP requested a Rare Species Review (RSR) of the Project Area from the Michigan Natural Features Inventory (MNFI) (Appendix A) and reviewed results from the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) database (Appendix B) to assist with Section 7 compliance of the federal Endangered Species Act. Special status (protected) species identified within the IPaC and RSR are listed in Table 1. WSP reviewed the species identified to assess the potential effects of the proposed project on threatened or endangered species (TES). Federal or state-listed species not having protected status (e.g., candidate, special concern) were not reviewed.

Table 1: Threatened or Endangered Species

County	Listed Species	Federal Status	State Status	IPaC	RSR
Washtenaw and Wayne County	Cup plant (*Silphium perfoliatum*)	NL	T		X
	Eastern massasauga (*Sistrurus catenatus catenatus*)	T	T	X	X
	Eastern prairie fringed orchid (*Platanthera leucophaea*)	T	NL	X	
	Indiana bat (*Myotis sodalis*)	E	E	X	X
	Mitchell's satyr butterfly (*Neonympha mitchellii michellii*)	E	E	X	X
	Northern long-eared bat (*Myotis septentrionalis*)	E	T	X	X
	Northern riffleshell (*Epioblasma rangiana*)	E	E	X	X
	Piping plover (*Charadrius melodus*)	E	E	X	X
	Rayed bean (*Villosa fabalis*)	E	E		X
	Rufa red knot (*Calidris canutus rufa*)	T	NL	X	X
	Snuffbox (*Epioblasma triquetra*)	E	E	X	X
	Tricolored bat (*Perimyotis subflavus*)	PE	T	X	
Washtenaw County	Poweshiek skipperling (*Oarisma poweshiek*)	E	E		X
	Purple wartyback (*Cyclonaias tuberculat*)	NL	T		X
Wayne County	Three-awned grass (*Aristida longespica*)	NL	SC		X
	Karner blue butterfly (*Lycaeides melissa samuelis*)	E	T		X

E = Endangered T = Threatened NL = Not Listed PE = Proposed Endangered SC = Special Concern

On March 20, 2023, a Rule updating the Michigan list of TES was filed with the Michigan Secretary of State. The updated list changed the state status of the following species:

- Eastern massasauga rattlesnake SC to T
- Northern long-eared bat SC to T
- Poweshiek skipperling T to E
- Tricolored bat SC to T
- Three-awned grass T to SC

Note that three-awned grass was downlisted from threatened to special concern and is no longer a protected species in Michigan.

DISCUSSION

The IPaC review indicated that no USFWS-designated critical habitat for TES is located within the Project Area. WSP is of the opinion that the project is generally not likely to affect federal or state-listed TES that occur within Washtenaw and Wayne Counties due to: 1) the project being constructed in an already highly developed and routinely maintained area along the right-of-way of a major interstate roadway and; 2) the habitat within the right-of-way is largely unsuitable for the species listed in Table 1.

This technical memorandum provides baseline information that can be used to: 1) provide an initial assessment of the potential for impacts to listed species based on current knowledge of the project; and 2) guide the completion of an effects determination and/or additional tasks that may be required. WSP's initial assessment of potential for impacts to each species listed in Table 1 is discussed in the threatened and endangered species section below.

This technical memorandum can be used to assist in completing an effects determination for the project. Additional information may be required regarding project construction methods/details and best management practices (BMPs) that will/may be employed by the project. IPaC provides two ways to approach evaluating a proposed project for effects to federal species and critical habitat based on the official species list:

1. IPaC Determination Keys (D-keys)
2. IPaC Consultation Package Builder (CPB)

A third option is to evaluate the effects outside of IPaC with an Internal Evaluation Process (IEP). Each of the approaches may require follow-up field investigation as part of the Environmental Assessment (EA) process. Field investigation to further evaluate the potential presence of federal or state-listed species has not been completed, and may be required for any of the options. Concurrence for effects determinations to state-listed species, if necessary, will require coordination the Michigan Department of Natural Resources (MDNR), Wildlife Division.

Further discussion of each species listed in Table 1, and the potential need for species/resource specific surveys is discussed below.

Threatened/Endangered Species

- **Cup plant:** Cup plant was listed on the MNFI RSR with known presence in Washtenaw County near the intersection of South Huron Street, and in Wayne County just north of the intersection in S30, T2S, R11E. In Michigan, cup plant is found in river floodplains in forest openings and edges. Recommended survey time ranges from early July through late October. I-94 at the intersection of South Huron Street has no median; therefore, it is assumed that no ground disturbance will occur at this location and impacts to the species is unlikely. I-94 in S30, T2S, R11E appears to be elevated overpasses and roadway at grade with little to no median; therefore, it is assumed that no ground disturbance will occur in this

area and impacts to the species are unlikely. No cup plant surveys are recommended at this time; however, further assessment may be warranted if ground disturbance or other construction activity occurs in areas having known/potential presence of the cup plant.

- **Eastern massasauga rattlesnake (EMR):** The IPaC and MNFI RSR results indicate that the proposed project falls outside of EMR tiered habitat, as designated by the USFWS. Because the project does not intersect identified habitats and BMPs, specifically silt fence, will be used on the project, WSP concludes the project is not likely to affect the EMR. Although no tiered habitat is present within the proposed Project Area, potentially suitable habitat may occur in adjacent areas containing wetlands or forested corridors at stream/river crossings. The nearest mapped tiered habitat is northeast of Ann Arbor within the Huron River watershed. Given that the project crosses the Huron River, and potentially suitable wetland and forested habitat occurs adjacent to portions of the Project Area, field investigations may be warranted at select portions of the project, unless it can be determined that no habitat disturbance will occur in these areas. The preferred field investigation window is between April and mid-June during the spring emergence period for EMR. WSP recommends that the project comply with the General and Activity-Specific BMPs listed in the Environmental Screening for EMR in Michigan, dated March 14, 2017. In non-tiered EMR habitat, this includes use of wildlife-safe materials for erosion control and site restoration, and having contractors watch the Michigan Department of Natural Resources (MDNR) video entitled *60 Second Snakes: The Eastern Massasauga Rattlesnake identification* (https://www.youtube.com/watch?v=-PFnXe_e02w). In the event EMR are observed during construction activities, snakes should be relocated by a qualified and permitted individual.

- **Eastern prairie fringed orchid:** Eastern prairie fringed orchid appeared on the IPaC results but not on the MNFI RSR. Mapped critical habitat for the eastern prairie fringed orchid was not identified within the Project Area; however, suitable habitat appears to be present within areas adjacent to the project, particularly in wetland areas, or where wetlands occur within the right-of-way. WSP understands that eastern prairie fringed orchid can persist in disturbed roadside habitats. Given that eastern prairie fringed orchid has been observed in both Washtenaw and Wayne Counties and that they are known to persist in similar habitat to portions of the Project Area, WSP recommends visual surveys within the species' flowering period (late June – early July); and additional coordination with USFWS to determine if areas of potential presence can be more specifically identified.

- **Indiana bat**: The IPaC and MNFI RSR indicate that suitable habitat for the Indiana bat occurs within 1.5 miles of the Project Area. Indiana bats typically utilize mature trees with exfoliating bark, cracks, or crevices that are >5-inch DBH for summer roosting habitat. It is possible Indiana bats may be present in trees within or immediately adjacent to the Project Area during summer months. However, impacts to bat habitat is not anticipated since trees do not appear to be present within proposed areas of disturbance. No tree clearing or direct disturbance to potential bat roosts is expected; however, if tree clearing needs to occur, WSP recommends clearing during winter months (November 1 – March 31) when Indiana bats are within their hibernacula (i.e., caves and/or mines) should it be necessary. If no tree clearing occurs or is limited strictly to the winter, inactive period for Indiana bats, WSP does not anticipate that the proposed project will adversely affect this bat species and no species-specific field surveys are recommended at this time.

- **Karner blue butterfly:** The MNFI RSR indicates that no suitable habitat for the Karner blue butterfly occurs within 1.5 miles of the Project Area. This butterfly species utilizes wild lupine (*Lupinus perennis*) as its host plant. Wild lupine prefers sunny areas with well-drained, sandy, or bare sand soils, including black oak sand savannas. WSP concludes the proposed project will not affect the Karner blue butterfly the interstate right-of-way is unlikely to contain wild lupine, rather it appears to contain grass like habitat within the Project Area, therefore no Karner blue butterfly surveys are recommended at this time. However, if during other field surveys, WSP identifies suitable habitat containing wild lupine, further assessment may be warranted.

- **Mitchell's satyr butterfly:** The IPaC and MNFI RSR indicate that no suitable habitat for Mitchell's satyr butterfly occurs within 1.5 miles of the Project Area. Accordingly, WSP concludes the proposed project will not affect the Mitchell's satyr butterfly. Mitchell's satyr butterfly utilizes sedges (*Carex* sp.) as its host plant. No surveys are recommended for Mitchell's satyr butterfly at this time. However, if during other field surveys, WSP identifies suitable habitat containing large stands of sedges, further assessment may be warranted.

- **Northern long-eared bat**: The IPaC and MNFI RSR indicate that suitable habitat for the northern long-eared bat occurs within 1.5 miles of the Project Area. Northern long-eared bats typically utilize trees with exfoliating bark, cracks, or crevices that are >3-inch DBH for summer roosting habitat. It is possible northern long-eared bats may be present in trees within or immediately adjacent to the Project Area during summer months. However, impacts to bat habitat is not anticipated since trees do not appear to be present within proposed areas of disturbance. No tree clearing or direct disturbance to potential bat roosts is expected; however, if tree clearing needs to occur, WSP recommends clearing during the winter (November 1 – March 31) when northern long-eared bats are within their hibernacula (i.e., caves and/or mines) should it be necessary. If no tree clearing occurs or is limited strictly to the winter, inactive period for northern long-eared bats, WSP does not anticipate that the proposed project will adversely affect this bat species and no species-specific surveys are recommended at this time.

- **Northern riffleshell:** The IPaC and MNFI RSR indicates that suitable habitat for northern riffleshell may be present within 1.5 miles of the Project Area. Northern riffleshell is a species of freshwater mussel that is typically found in medium to large rivers with beds consisting of pebble and gravel. Threats to freshwater mussels include habitat degradation through various means, e.g., siltation, bed disturbance, pollution, and/or invasive species. There are two waterways mapped on the MNFI Michigan Mussels Web App that cross the Project Area, i.e., the Huron River and the Rouge River. WSP understands that no in-stream work will be required for this project. However, if in-stream work becomes necessary at these crossings, WSP recommends conducting mussel surveys at the crossings. If threatened or endangered mussel species are observed, mussel relocations may be required. These surveys should follow MDNR mussel survey protocols.

- **Piping plover:** The IPaC and MNFI RSR indicate that no suitable habitat (i.e., Great Lakes shoreline) for piping plover occurs within 1.5 miles of the Project Area. Accordingly, WSP concludes the proposed project will not affect the piping plover.

- **Poweshiek skipperling:** The MNFI RSR indicates that no suitable habitat for Poweshiek skipperling occurs within 1.5 miles of the Project Area. Poweshiek skipperling utilizes native prairie grasses such as big bluestem (*Andropogon gerardii*) and little bluestem (*Schizachyrium scoparium*) as its host plant. The interstate right-of-way is unlikely to contain native prairie grasses, and no survey is recommended for Poweshiek skipperling at this time. However, if during other field surveys, WSP identifies adjacent suitable habitat containing large areas of native prairie grasses, further assessment may be warranted.

- **Purple wartyback:** The MNFI RSR indicates that purple wartyback mussel has been known to occur in the Huron River near the mouth of Ford Lake. The purple wartyback is found in medium to large rivers with gravel or mixed sand and gravel substrates. There are two waterways, the Huron and Rouge Rivers, mapped on the MNFI Michigan Mussels Web App that cross the Project Area. WSP understands that no in-stream work will be required for this project. However, if in-stream work becomes necessary at these crossings, WSP recommends conducting mussel surveys at the crossings. If threatened or endangered mussel species are observed, mussel relocations may be required. These surveys should follow MDNR mussel survey protocols.

- **Rayed bean:** The MNFI RSR indicates that there may be suitable habitat for the rayed bean within 1.5 miles of the Project Area. Rayed bean is a species of freshwater mussel that is typically found in lotic systems with beds consisting of fine sediments including silt and sands. There are two waterways, the Huron and Rouge Rivers, mapped on the MNFI Michigan Mussels Web App that cross the Project Area. WSP understands that no in-stream work will be required for this project. However, if in-stream work becomes necessary at these crossings, WSP recommends conducting mussel surveys at the crossings. If threatened or endangered mussel species are observed, mussel relocations may be required. These surveys should follow MDNR mussel survey protocols.

- **Rufa red knot:** The IPaC and MNFI RSR indicate that no suitable habitat (i.e., Great Lakes shoreline and tidal flat areas) for rufa red knot occurs within 1.5 miles of the Project Area. Accordingly, WSP concludes the proposed project will not affect the rufa red knot.

- **Snuffbox:** The IPaC and MNFI RSR indicates that suitable habitat for snuffbox may be present within 1.5 miles of the Project Area. Snuffbox is a species of freshwater mussel that is typically found in medium to large rivers with beds consisting of sand, pebble, cobble, or gravel. There are two waterways, the Huron and Rouge Rivers, mapped on the MNFI Michigan Mussels Web App that cross the Project Area. WSP understands that no in-stream work will be required for this project. However, if in-stream work becomes necessary at these crossings, WSP recommends conducting mussel surveys at the crossings. If threatened or endangered mussel species are observed, mussel relocations may be required. These surveys should follow MDNR mussel survey protocols.

- **Three-awned grass:** The MNFI RSR indicates three-awned grass has been known to occur near the project site in S12, T3S, R9E, Wayne County. The RSR indicates that the species is state threatened. However, recently published updates to the Michigan list of protected species indicates that the species was downlisted in 2023 to special concern and therefore does not have protected status. Since the species is no longer protected, additional evaluation of this species should not be necessary.

- **Tricolored bat:** Tricolored bat was listed on the IPaC results but not on the MNFI RSR. Tricolored bats typically utilize trees, primarily living or recently dead deciduous trees, as roosting habitat during the summer months. Like Indiana and northern long-eared bats, it is possible that tricolored bats may be present in trees within or immediately adjacent to the Project Area during summer months. However, impacts to bat habitat is not anticipated since trees do not appear to be present within proposed areas of disturbance. No tree clearing or direct disturbance to potential bat roosts is expected; however, if tree clearing needs to occur, WSP recommends clearing during the winter months (November 1 – March 31) when tricolored bats are within their hibernacula (i.e., caves and/or mines). If no tree clearing occurs or is limited strictly to the winter, inactive period for tricolored bats, WSP does not anticipate that the proposed project will adversely affect this bat species and no species-specific surveys are recommended at this time.

Sensitive Resources

WSP also reviewed readily available public information to assess current and past conditions of the Project Area, including:

- USGS Topography (Figure 1)
- Natural Resources Conservation Service (NRCS) Soil Survey Mapping (Figure 2)
- Federal Emergency Management Agency (FEMA) Flood Insurance Mapping (Figure 3)
- Michigan Wetland Inventory (MWI) Map (Michigan Department of Environment, Great Lakes, and Energy (EGLE) Wetlands Map Viewer) and National Wetlands Inventory (NWI) Map (Figure 4)
- Aerial Photography – Nearmap Imagery Service, imagery dates 3/26/2023, 3/28/2023, 4/7/2023, 6/10/2023, 6/17/2023 (Figure 5)

- Google Street View Photography – imagery caputured 5/2023
- LIDAR Topography – Contours developed from U.S. Geological Survey, 20200330, USGS one meter DEM MI Wayne Co 2017 and Washtenaw Co 2016 (Figure 5).

This review indicated potential wetlands, hydric soils, and floodplains are present within or directly adjacent to the Project Area. NRCS Soils, NWI, and MWI maps are prepared using information from sources that typically rely on remote sensing techniques. It is not unusual for the results of fieldwork to identify areas with conditions different from those depicted on the NRCS Soils, NWI, or MWI maps, particularly in areas of historical development.

Soils

Many different soil type map units occur within the Project Area (Figure 2). Map units are composed of one or more components or soil types. The soils mapped within the Project Area consisted of both hydric and non-hydric soils types as determined by the National Technical Committee on Hydric Soils (NTCHS). A hydric soil is defined as a soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (typically wetland soils). Hydric soils occur more often on the western reaches of the Project Area. No hydric soils were mapped east of Telegraph Road/U.S. Highway 24. Mapped areas of hydric soil may not accurately represent actual areas of hydric soil that are present in the field. The presence/absence of hydric soils are not a definitive indication of the presence/absence of wetlands. Soils data are provided for planning purposes only to indicate areas that may be more likely to contain wetlands due to the presence of mapped hydric soils. Only a field wetland delineation can identify the presence/absence of wetlands.

Wetlands

The MWI and NWI maps indicate the potential presence of wetlands adjacent to and within the Project Area (Figure 4). Mapped wetlands include freshwater emergent (PEM), freshwater forested/shrub (PFO/PSS), as well as freshwater pond, lake, and riverine wetlands. Multiple riverine wetlands are mapped through the Project Area, but generally correspond with culverted or bridged stream crossings. Like hydric soils, wetlands are mapped less often on the eastern reaches of the Project Area. Few wetlands are mapped east of Telegraph Road/U.S. Highway 24 along the Project Area and no wetlands are mapped east of Greenfield Road within or directly adjacent to the Project Area. The NRCS Soils map, MWI, and NWI maps indicate the presence of hydric soils or potential wetlands along and within the Project Area. The MWI wetland mapping utilized an older version of NWI; therefore, current NWI mapping has been provided for review in conjunction with MWI mapping.

WSP created a geographic information systems (GIS) on-line mapping application using ArcGIS Web AppBuilder (Esri) to view and map approximate areas estimated by WSP to contain potential wetlands within the Project Area. The application combined overlays of Nearmap aerial photography, Google Earth Street View photography, and LIDAR topography (1 foot contour interval) into a seamless database where these features could be simultaneously viewed, and estimated potential wetland areas mapped. Elevations on Figure 5 are shown at a five-foot contour interval. Street View photos were incorporated approximately every 25 feet along the I-94 corridor. The following sections (17.1 cumulative miles) of the Project Area appear to have a paved median and, therefore, it was assumed wetlands were not presence:

- Ann Arbor Saline Road to West of South Harris Road (approximately 9.7 miles)
- East of South Harris Road to McCartney Avenue (approximately 1.0 mile)
- Rouge River to South of West Warren Avenue (approximately 5.2 miles)
- East of West Grand Boulevard to west of Milwaukee Avenue/Trumbull Street. (approximately 1.2 miles)

WSP was provided with wetland delineation reports from DLZ, Inc. in .pdf format that illustrate the location of wetlands mapped in the field along the following sections of the Project area:

- Northeast of the intersection of Greenfeld Road and I-94 (there is no vegetated median at this location)
- From the intersection of Shook Road and I-94 to southwest of the intersection of Ecorse Road and I-94 (approximately 4.4 miles)
- Northeast and southwest of the intersection of Ecorse Road and I-94 (approximately 1.6 miles)
- East of the intersection of M-39 and I-94 (approximately 0.60 mile)

Wetlands delineated in the field by others, and illustrated in wetland delineation reports provided to WSP in these areas, are shown on Figure 5 (Wetlands Delineated by DLZ).

Potential wetland areas were mapped by WSP in all other segments of the Project area where vegetated median was present to provide an initial estimate of potential wetland impacts for the project to be reported in an EA under the National Environmental Policy Act (NEPA). The goal of the mapping effort was to provide a general estimate of potential wetland areas within the Project Area, thus minimizing possible underestimation of potential wetland impacts for the EA.

WSP panned through the seamless Street View photography of each section of the Project Area where a median was present to assess if the photography indicated wetlands may be present. Some areas of the median could not be fully viewed due to obstacles including concrete barriers, elevated ground surface, or tall vegetation. Aerial photography was then used to map areas where the photography indicated wetland may potentially be present, including photographic signatures potentially indicating wet areas or changes in vegetation. LIDAR topography was also used during this initial mapping stage to identify topographic depressions where wetlands are more likely to be present. The initial mapping was then refined based on a more thorough evaluation of LIDAR topography to generally encompass areas approximately 1 to 2 feet above the base elevation of the mapped potential wetland areas, if those areas had not been captured by the initial mapping.

Areas estimated by WSP to potentially contain wetlands are shown on Figure 5, including areas of hydric soil, areas mapped by MWI and/or NWI, and streams/waterbodies. Until a field delineation is conducted, it is recommended that these areas be considered potential wetlands for use in the EA. As discussed below, use of MWI/NWI mapping to identify potential wetlands, and estimation of potential wetland areas by desktop methods, is not a definitive indication of the presence/absence of wetlands. Potential wetlands indicated on Figure 5 may not actually be wetland. Additional wetlands may be present that are not indicated, although WSP believes that the mapped potential wetland areas provide a liberal estimate of actual wetland presence.

Estimated potential wetland areas mapped on Figure 5 are suitable for planning purposes only and should not be used for regulatory/permitting purposes. Neither MWI/NWI or the desktop mapping effort indicate the potential jurisdictional status of wetlands that are mapped (i.e., regulated or non-regulated). WSP recommends conducting a wetland delineation within all project work areas using criteria provided in the *1987 US Army Corps of Engineers (USACE) Wetland Delineation Manual* and *Regional Supplement,* and coordination with EGLE to discuss the project including:

- EGLE criteria for determining jurisdictional status of wetlands that may be contiguous to roadside ditches present in the Project Area (i.e., will ditches be considered streams for the purpose of evaluating potentially contiguous wetland), and
- EGLE criteria for differentiating ditches/streams from linear wetlands that may be present (within ditches) in the Project Area.

A wetland delineation would be required to identify wetland boundaries within the Project Area. A field delineation of wetlands within the Project Area would likely require one to two weeks of field effort, depending upon the number of staff involved, and results of consultation with EGLE regarding the items

above. Field work in high-traffic areas, such as I-94, will require project-specific safety measures that may also affect the time required to complete field delineations. Wetland delineations require on-site analysis of vegetation, soils, and hydrology during the growing season, and should typically be conducted in Michigan from mid-April through early November when site conditions allow for accuracy. EGLE can provide a jurisdictional review of delineated wetlands for a fee, if desired, through the Wetland Identification Program (WIP) to confirm the location and regulatory status of wetlands identified by a consultant's on-site wetland delineation. A Level 3 WIP Service would be required for the project, if desired. Applications for WIP review are accepted year-round, but a WIP review application may be held over-winter until onset of the spring growing season. EGLE will review wetland boundaries and jurisdictional status as part of an EGLE permit application if project activities will impact wetlands.

Wetlands Data Limitations

The EGLE MWI is intended to be used as one tool to assist in identifying wetlands and provides only potential and approximate location of wetlands and wetland conditions. EGLE produced this map from the following data obtained from other agencies or organizations:

1. The NWI conducted by the USFWS through interpretation of aerial photos and topographic data.
2. Land Cover as mapped by the Michigan Resource Inventory System (MIRIS), Michigan Department of Natural Resources, through interpretation of aerial photographs.
3. Soils as mapped by the United States Department of Agriculture, Natural Resource Conservation Service (NRCS).

The EGLE Wetlands Map Viewer is not intended to be used to determine the specific locations and jurisdictional boundaries of wetland areas subject to regulation under Part 303, Wetlands Protection, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA). Only an on-site evaluation performed by EGLE in accordance with Part 303 shall be used for jurisdictional determinations. A Part 303 wetlands permit is required from EGLE to conduct certain activities in regulated wetlands.

The USFWS NWI objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems. Wetlands or other mapped features may have changed since the date of the imagery and/or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Desktop mapping of potential wetlands by WSP using the Web AppBuilder is subject to the same limitations as MWI and NWI mapping and cannot be used to determine presence/absence of wetland, wetland boundaries, or jurisdictional status.

Local Wetland Ordinances

The EGLE website contains a list of local governments that have notified EGLE of their wetland ordinance (revised June 22, 2010). The project occurs within the boundaries of the following local governments that have a wetland ordinance; project activities must conform to conditions/requirements of the ordinances as applicable:

- City of Ann Arbor (Washtenaw County)
- Pittsfield Charter Township (Washtenaw County)

Floodplains: Floodplains occur within and adjacent to the Project Area (Figure 3). These floodplains are generally associated with streams or riverine wetlands, as well as culverted or bridged stream crossings. There are some locations near Chalmers Drain, Swift Drain, Paint Creek, Huron River, Ecorse River, and the Rouge River where floodplains are mapped on the previously disturbed I-94 right-of-way. Similar to the mapped wetlands, no floodplains are mapped east of Greenfield Road within the Project Area. The State of Michigan's Floodplain Regulatory Authority requires that a permit be obtained prior to any alteration or occupation of a 100-year floodplain of a river, stream or drain (i.e., prior to construction). As part of the EA, WSP recommends conducting a watercourse delineation within all project work areas using criteria provided in NREPA Part 301, Inland Lakes and Streams, and coordination with EGLE to discuss the project including:

- EGLE criteria for determining the jurisdictional status of roadside ditches (i.e., differentiating jurisdictional streams from non-jurisdictional ditches)
- EGLE criteria for evaluating roadside ditches in terms of the definition of a waterbody that may be used to classify a wetland as contiguous under Part 303 (see wetland section above)

WSP QUALIFICATIONS

- Bruce Jones, PWS, CPG, Assistant Vice President, Lead Environmental Scientist. M.Sc. Geophysics (Wright State University), Graduate Studies in Hydrogeology (Western Michigan University), B.Sc. Geology (Grand Valley State University). Thirty-seven (37) years of technical experience in geophysics/hydrogeology and wetland/natural resource consulting.

- Zach Kaiser, Senior Wildlife Biologist/USFWS-permitted Bat Biologist. M.Sc. Biology (Indiana State University), B.A. Conservation Biology and Environmental Studies (University of Wisconsin-Madison). Seventeen (17) years of fish and wildlife experience.

- Keith Tollenaere, PWS, Assistant Vice President, Senior Ecologist. M.Sc. Biology (Central Michigan University), B.Sc. Animal Ecology (Iowa State University). Eighteen (18) years of fish and wildlife experience.

- Nathan Ring, WPIT, Associate Consultant, Ecologist. M.Sc. Biology: Conservation (Central Michigan University), B.Sc. Biology: Natural Resources (Central Michigan University). Five (5) years of fish and wildlife experience.

REFERENCES

DLZ Michigan, Inc. April 6, 2023. Final Report of Waters of the US Delineation. MDOT Project #JN208609, Wayne County, MI.

DLZ Michigan, Inc. March 7, 2023. Final Report of Waters of the US Delineation. MDOT Project #JN201225, Wayne County, MI.

DLZ Michigan, Inc. February 20, 2023. Final Report of Waters of the US Delineation. MDOT Project #JN202486, Wayne County, MI.

DLZ Michigan, Inc. January 26, 2023. Draft Report of Waters of the US Delineation. MDOT Project #JN211426, Wayne County, MI.

LEGEND

- APPROXIMATE SITE LIMITS
- STREAM/RIVER
- WETLANDS DELINEATED BY DLZ
- MDOT
- POTENTIAL WETLAND AREA

KEY MAP

0 125 250 500 Feet

REFERENCE

1. AERIAL IMAGERY: NEARMAP IMAGERY SERVICE. COPYRIGHT NEARMAP 2023. IMAGERY CAPTURED THROUGH THE FOLLOWING DATES: 3/26/2023, 3/28/2023, 4/7/2023, 6/10/2023, & 6/17/2023.
2. STREAMS DATASET: NATIONAL HYDROGRAPHY DATASET (NHD), USGS.

CLIENT
MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT)

PROJECT
I-94 CONNECTED AND AUTOMATED VEHICLE CORRIDOR PROJECT

TITLE
POTENTIAL WETLANDS DETAIL MAP
1 OF 35

CONSULTANT

YYYY-MM-DD	2023-12-04
PREPARED	RHG
DESIGN	RHG
REVIEW	-
APPROVED	-

PROJECT No.
30902432.001

FIGURE
1

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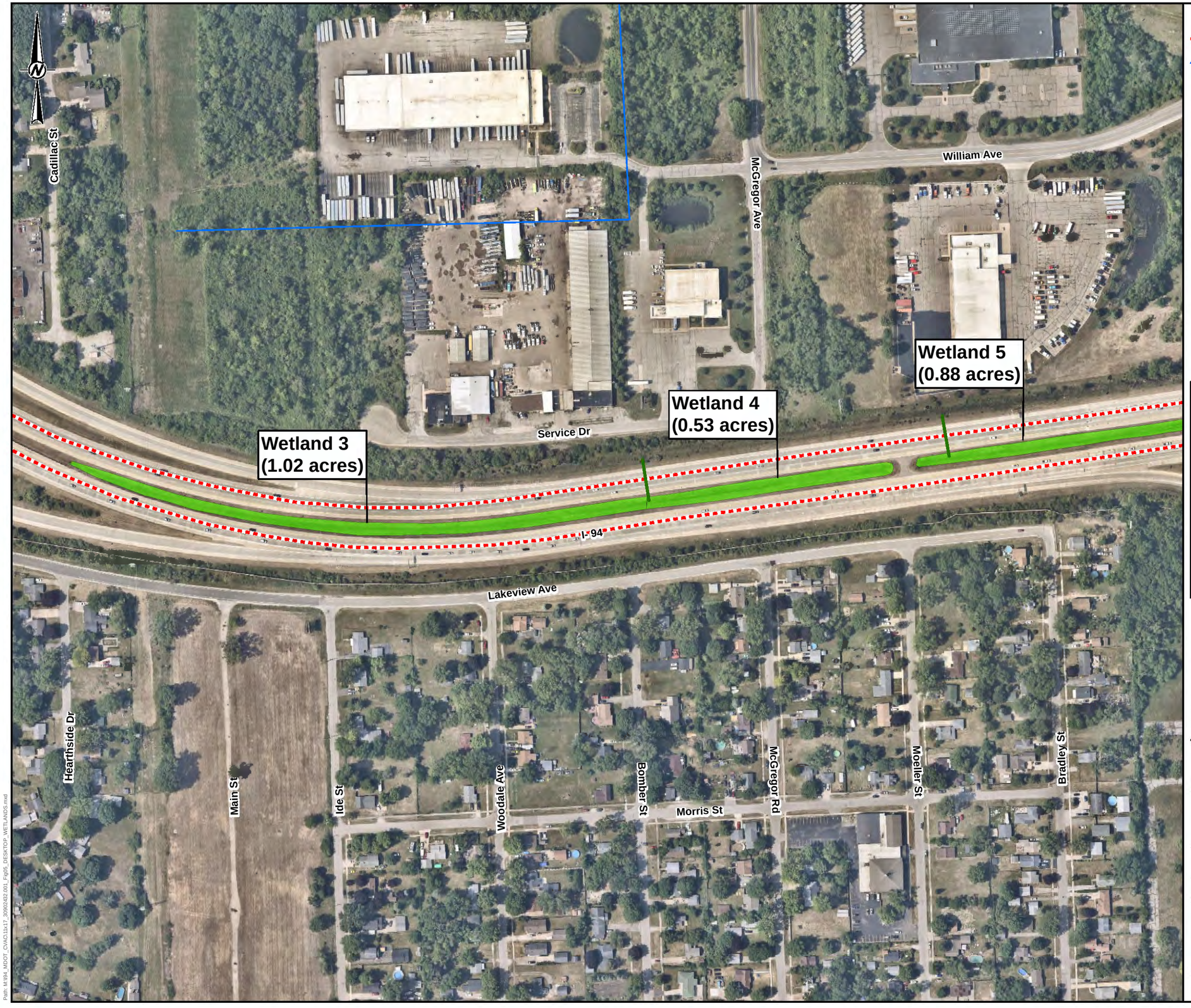

LEGEND

- APPROXIMATE SITE LIMITS
- STREAM/RIVER
- WETLANDS DELINEATED BY DLZ
- MDOT
- POTENTIAL WETLAND AREA

KEY MAP

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CLIENT
MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT)

PROJECT
I-94 CONNECTED AND AUTOMATED VEHICLE CORRIDOR PROJECT

TITLE
POTENTIAL WETLANDS DETAIL MAP
2 OF 35

CONSULTANT
wsp

YYYY-MM-DD	2023-12-04
PREPARED	RHG
DESIGN	RHG
REVIEW	-
APPROVED	-

PROJECT No.
30902432.001

FIGURE
2

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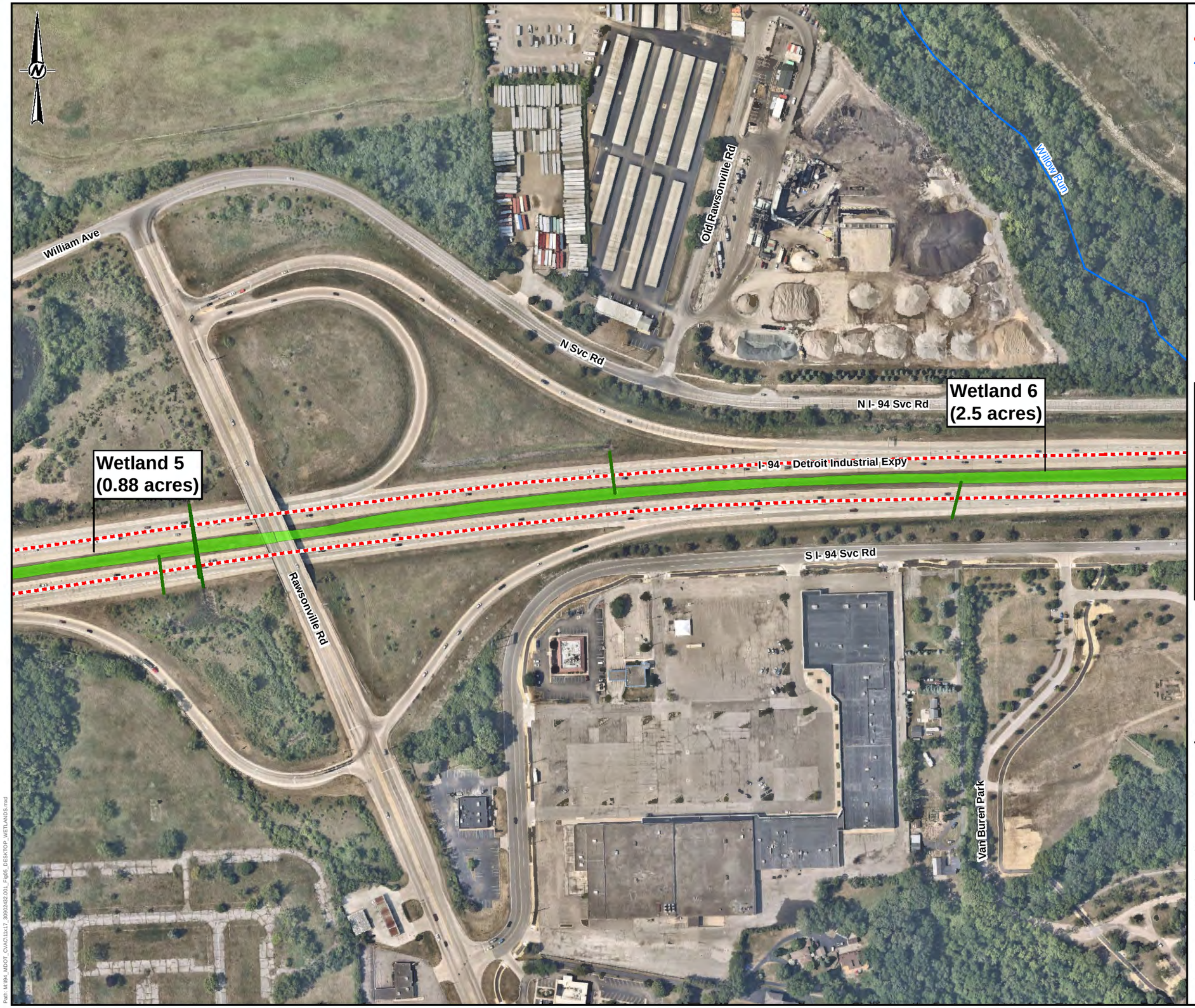

LEGEND

- APPROXIMATE SITE LIMITS
- STREAM/RIVER
- WETLANDS DELINEATED BY DLZ
- MDOT
- POTENTIAL WETLAND AREA

KEY MAP

0 125 250 500 Feet

REFERENCE

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2. STREAMS DATASET: NATIONAL HYDROGRAPHY DATASET (NHD), USGS.

CLIENT
MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT)

PROJECT
I-94 CONNECTED AND AUTOMATED VEHICLE CORRIDOR PROJECT

TITLE
POTENTIAL WETLANDS DETAIL MAP
3 OF 35

CONSULTANT

YYYY-MM-DD	2023-12-04
PREPARED	RHG
DESIGN	RHG
REVIEW	-
APPROVED	-

PROJECT No.
30902432.001

FIGURE
3

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: 1 in 0

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LEGEND

- APPROXIMATE SITE LIMITS
- STREAM/RIVER
- WETLANDS DELINEATED BY DLZ
- MDOT
- POTENTIAL WETLAND AREA

KEY MAP

0 125 250 500 Feet

REFERENCE

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2. STREAMS DATASET: NATIONAL HYDROGRAPHY DATASET (NHD), USGS.

CLIENT
MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT)

PROJECT
I-94 CONNECTED AND AUTOMATED VEHICLE CORRIDOR PROJECT

TITLE
POTENTIAL WETLANDS DETAIL MAP
4 OF 35

CONSULTANT

YYYY-MM-DD	2023-12-04
PREPARED	RHG
DESIGN	RHG
REVIEW	-
APPROVED	-

PROJECT No.
30902432.001

FIGURE
4

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: 1 in 0

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LEGEND

- APPROXIMATE SITE LIMITS
- STREAM/RIVER
- WETLANDS DELINEATED BY DLZ
- MDOT
- POTENTIAL WETLAND AREA

KEY MAP

0 125 250 500 Feet

REFERENCE

1. AERIAL IMAGERY: NEARMAP IMAGERY SERVICE. COPYRIGHT NEARMAP 2023. IMAGERY CAPTURED THROUGH THE FOLLOWING DATES: 3/26/2023, 3/28/2023, 4/7/2023, 6/10/2023, & 6/17/2023.
2. STREAMS DATASET: NATIONAL HYDROGRAPHY DATASET (NHD), USGS.

CLIENT
MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT)

PROJECT
I-94 CONNECTED AND AUTOMATED VEHICLE CORRIDOR PROJECT

TITLE
POTENTIAL WETLANDS DETAIL MAP
5 OF 35

CONSULTANT

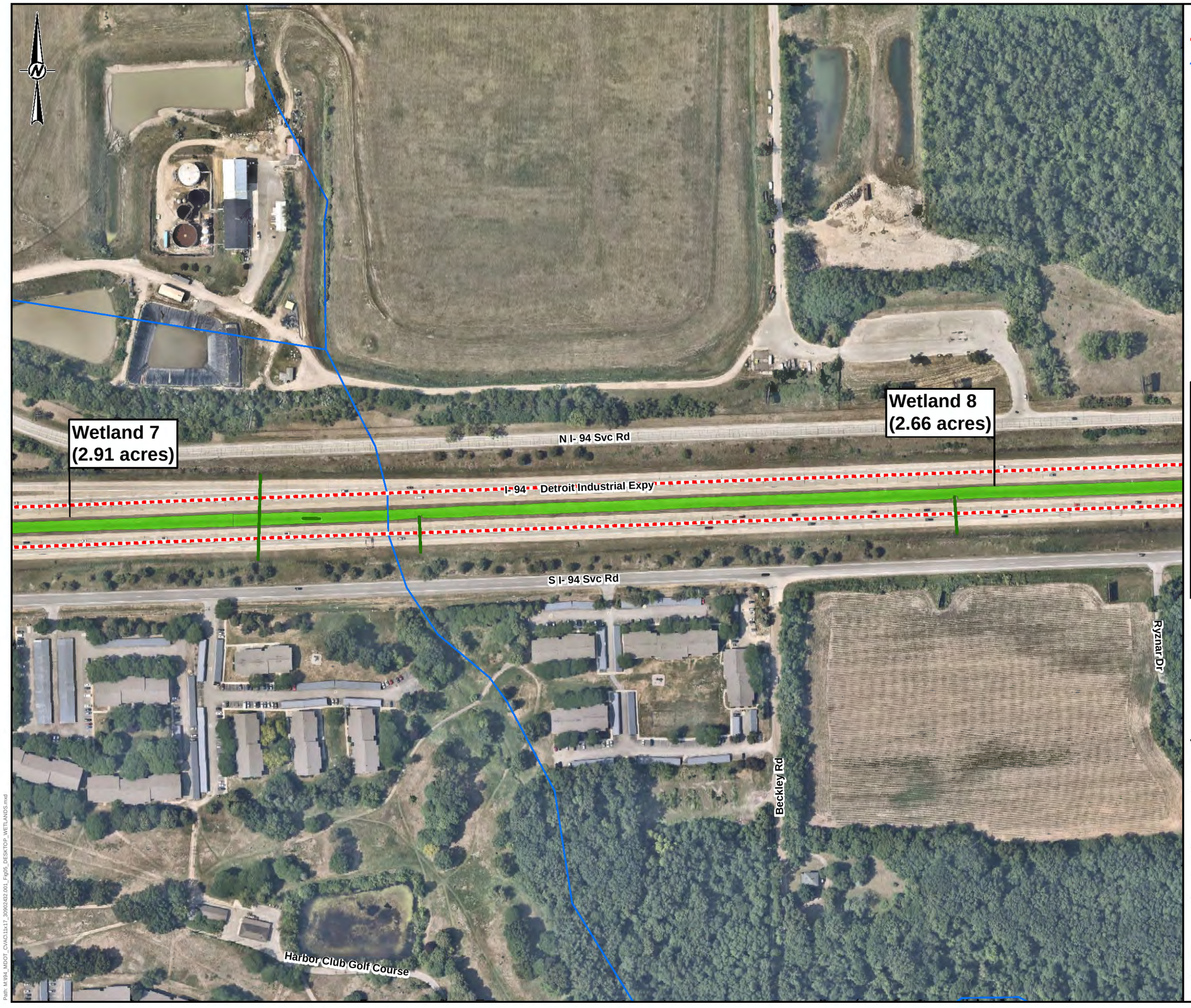
YYYY-MM-DD	2023-12-04
PREPARED	RHG
DESIGN	RHG
REVIEW	-
APPROVED	-

PROJECT No.
30902432.001

FIGURE
5

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: 1 in 0

Path: M:\I94_MDOT_CVAC\11x17_30902432.001_Fig05_DESKTOP_WETLANDS.mxd



LEGEND

- APPROXIMATE SITE LIMITS
- STREAM/RIVER
- WETLANDS DELINEATED BY DLZ
- MDOT
- POTENTIAL WETLAND AREA

KEY MAP

0 125 250 500 Feet

REFERENCE

1. AERIAL IMAGERY: NEARMAP IMAGERY SERVICE. COPYRIGHT NEARMAP 2023. IMAGERY CAPTURED THROUGH THE FOLLOWING DATES: 3/26/2023, 3/28/2023, 4/7/2023, 6/10/2023, & 6/17/2023.
2. STREAMS DATASET: NATIONAL HYDROGRAPHY DATASET (NHD), USGS.

CLIENT
MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT)

PROJECT
I-94 CONNECTED AND AUTOMATED VEHICLE CORRIDOR PROJECT

TITLE
POTENTIAL WETLANDS DETAIL MAP
6 OF 35

CONSULTANT

YYYY-MM-DD	2023-12-04
PREPARED	RHG
DESIGN	RHG
REVIEW	-
APPROVED	-

PROJECT No.
30902432.001

FIGURE
6

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: 1 in 0

Path: M:\94_MDOT_CVAC\11x17_30902432.001_Fig06_DESKTOP_WETLANDS.mxd

LEGEND

- APPROXIMATE SITE LIMITS
- STREAM/RIVER
- WETLANDS DELINEATED BY DLZ
- MDOT
- POTENTIAL WETLAND AREA

KEY MAP

0 125 250 500 Feet

REFERENCE

1. AERIAL IMAGERY: NEARMAP IMAGERY SERVICE. COPYRIGHT NEARMAP 2023. IMAGERY CAPTURED THROUGH THE FOLLOWING DATES: 3/26/2023, 3/28/2023, 4/7/2023, 6/10/2023, & 6/17/2023.
2. STREAMS DATASET: NATIONAL HYDROGRAPHY DATASET (NHD), USGS.

CLIENT
MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT)

PROJECT
I-94 CONNECTED AND AUTOMATED VEHICLE CORRIDOR PROJECT

TITLE
POTENTIAL WETLANDS DETAIL MAP
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CONSULTANT

YYYY-MM-DD	2023-12-04
PREPARED	RHG
DESIGN	RHG
REVIEW	-
APPROVED	-

PROJECT No.
30902432.001

FIGURE
7

Path: M:\94_MDOT_CVAC\11x17_30902432.001_Fig06_DESKTOP_WETLANDS.mxd

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM:
1 in
0

LEGEND

- APPROXIMATE SITE LIMITS
- STREAM/RIVER
- WETLANDS DELINEATED BY DLZ
- MDOT
- POTENTIAL WETLAND AREA

KEY MAP

0 125 250 500 Feet

REFERENCE

1. AERIAL IMAGERY: NEARMAP IMAGERY SERVICE. COPYRIGHT NEARMAP 2023. IMAGERY CAPTURED THROUGH THE FOLLOWING DATES: 3/26/2023, 3/28/2023, 4/7/2023, 6/10/2023, & 6/17/2023.
2. STREAMS DATASET: NATIONAL HYDROGRAPHY DATASET (NHD), USGS.

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CONSULTANT

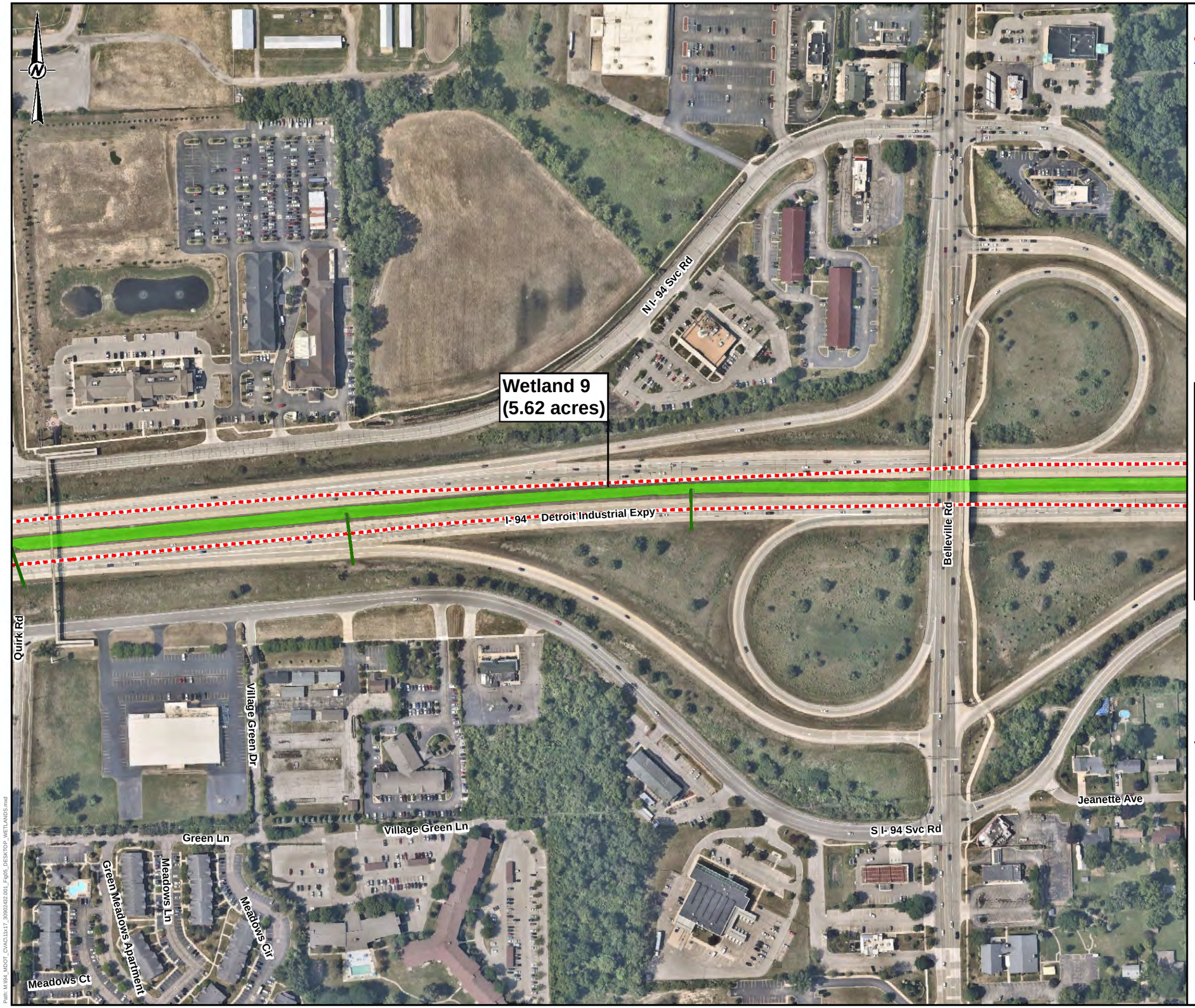
YYYY-MM-DD	2023-12-04
PREPARED	RHG
DESIGN	RHG
REVIEW	-
APPROVED	-

PROJECT No.
30902432.001

FIGURE
8

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM:

Path: M:\I94_MDOT_CVAC\11x17_30902432.001_Fig05_DESKTOP_WETLANDS.mxd



LEGEND

- APPROXIMATE SITE LIMITS
- STREAM/RIVER
- WETLANDS DELINEATED BY DLZ
- MDOT
- POTENTIAL WETLAND AREA

KEY MAP

0 125 250 500 Feet

REFERENCE

1. AERIAL IMAGERY: NEARMAP IMAGERY SERVICE. COPYRIGHT NEARMAP 2023. IMAGERY CAPTURED THROUGH THE FOLLOWING DATES: 3/26/2023, 3/28/2023, 4/7/2023, 6/10/2023, & 6/17/2023.
2. STREAMS DATASET: NATIONAL HYDROGRAPHY DATASET (NHD), USGS.

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POTENTIAL WETLANDS DETAIL MAP
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CONSULTANT

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PREPARED	RHG
DESIGN	RHG
REVIEW	-
APPROVED	-

PROJECT No.
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FIGURE
9

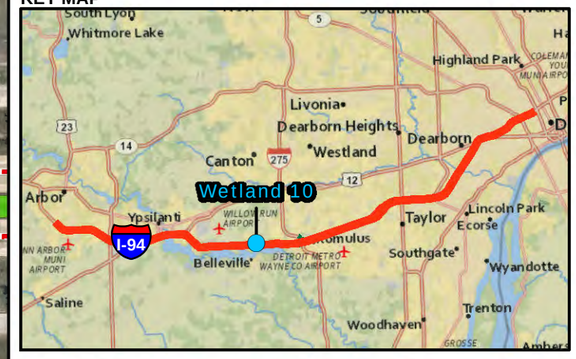
IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: 1 in 0

Path: M:\94_MDOT_CVAC\13\17_30902432.001_Fig09_DESKTOP_WETLANDS.mxd

LEGEND

- APPROXIMATE SITE LIMITS
- STREAM/RIVER
- WETLANDS DELINEATED BY DLZ
- MDOT
- POTENTIAL WETLAND AREA

KEY MAP



0 125 250 500 Feet

REFERENCE

1. AERIAL IMAGERY: NEARMAP IMAGERY SERVICE. COPYRIGHT NEARMAP 2023. IMAGERY CAPTURED THROUGH THE FOLLOWING DATES: 3/26/2023, 3/28/2023, 4/7/2023, 6/10/2023, & 6/17/2023.
2. STREAMS DATASET: NATIONAL HYDROGRAPHY DATASET (NHD), USGS.

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CONSULTANT
wsp

YYYY-MM-DD	2023-12-04
PREPARED	RHG
DESIGN	RHG
REVIEW	-
APPROVED	-

PROJECT No.
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FIGURE
10

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM:
1 in
0

Path: M:\I94_MDOT_CVAC\11x17_30902432.001_Fig05_DESKTOP_WETLANDS.mxd

LEGEND

- APPROXIMATE SITE LIMITS
- STREAM/RIVER
- WETLANDS DELINEATED BY DLZ
- MDOT
- POTENTIAL WETLAND AREA

KEY MAP

0 125 250 500 Feet

REFERENCE

1. AERIAL IMAGERY: NEARMAP IMAGERY SERVICE. COPYRIGHT NEARMAP 2023. IMAGERY CAPTURED THROUGH THE FOLLOWING DATES: 3/26/2023, 3/28/2023, 4/7/2023, 6/10/2023, & 6/17/2023.
2. STREAMS DATASET: NATIONAL HYDROGRAPHY DATASET (NHD), USGS.

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I-94 CONNECTED AND AUTOMATED VEHICLE CORRIDOR PROJECT

TITLE
POTENTIAL WETLANDS DETAIL MAP
11 OF 35

CONSULTANT

YYYY-MM-DD	2023-12-04
PREPARED	RHG
DESIGN	RHG
REVIEW	-
APPROVED	-

PROJECT No.
30902432.001

FIGURE
11

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM:

Path: M:\94_MDOT_CVAC\11x17_30902432.001_Fig05_DESKTOP_WETLANDS.mxd

LEGEND

- APPROXIMATE SITE LIMITS
- STREAM/RIVER
- WETLANDS DELINEATED BY DLZ
- MDOT
- POTENTIAL WETLAND AREA

KEY MAP

0 125 250 500 Feet

REFERENCE

1. AERIAL IMAGERY: NEARMAP IMAGERY SERVICE. COPYRIGHT NEARMAP 2023. IMAGERY CAPTURED THROUGH THE FOLLOWING DATES: 3/26/2023, 3/28/2023, 4/7/2023, 6/10/2023, & 6/17/2023.
2. STREAMS DATASET: NATIONAL HYDROGRAPHY DATASET (NHD), USGS.

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TITLE
POTENTIAL WETLANDS DETAIL MAP
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YYYY-MM-DD	2023-12-04
PREPARED	RHG
DESIGN	RHG
REVIEW	-
APPROVED	-

PROJECT No.
30902432.001

FIGURE
12

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: 1 in 0

Path: M:\I94_MDOT_CVAC\11x17_30902432.001_Fig05_DESKTOP_WETLANDS.mxd

LEGEND

- APPROXIMATE SITE LIMITS
- STREAM/RIVER
- WETLANDS DELINEATED BY DLZ
- MDOT
- POTENTIAL WETLAND AREA

KEY MAP

Feet
0 125 250 500

REFERENCE

1. AERIAL IMAGERY: NEARMAP IMAGERY SERVICE. COPYRIGHT NEARMAP 2023. IMAGERY CAPTURED THROUGH THE FOLLOWING DATES: 3/26/2023, 3/28/2023, 4/7/2023, 6/10/2023, & 6/17/2023.
2. STREAMS DATASET: NATIONAL HYDROGRAPHY DATASET (NHD), USGS.

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CONSULTANT

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DESIGN	RHG
REVIEW	-
APPROVED	-

PROJECT No.
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FIGURE
13

Path: M:\I94_MDOT_CVAC\11x17_30902432.001_Fig05_DESKTOP_WETLANDS.mxd

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM:
1 in
0

LEGEND

- APPROXIMATE SITE LIMITS
- STREAM/RIVER
- WETLANDS DELINEATED BY DLZ
- MDOT
- POTENTIAL WETLAND AREA

KEY MAP

0 125 250 500 Feet

REFERENCE

1. AERIAL IMAGERY: NEARMAP IMAGERY SERVICE. COPYRIGHT NEARMAP 2023. IMAGERY CAPTURED THROUGH THE FOLLOWING DATES: 3/26/2023, 3/28/2023, 4/7/2023, 6/10/2023, & 6/17/2023.
2. STREAMS DATASET: NATIONAL HYDROGRAPHY DATASET (NHD), USGS.

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POTENTIAL WETLANDS DETAIL MAP
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CONSULTANT
wsp

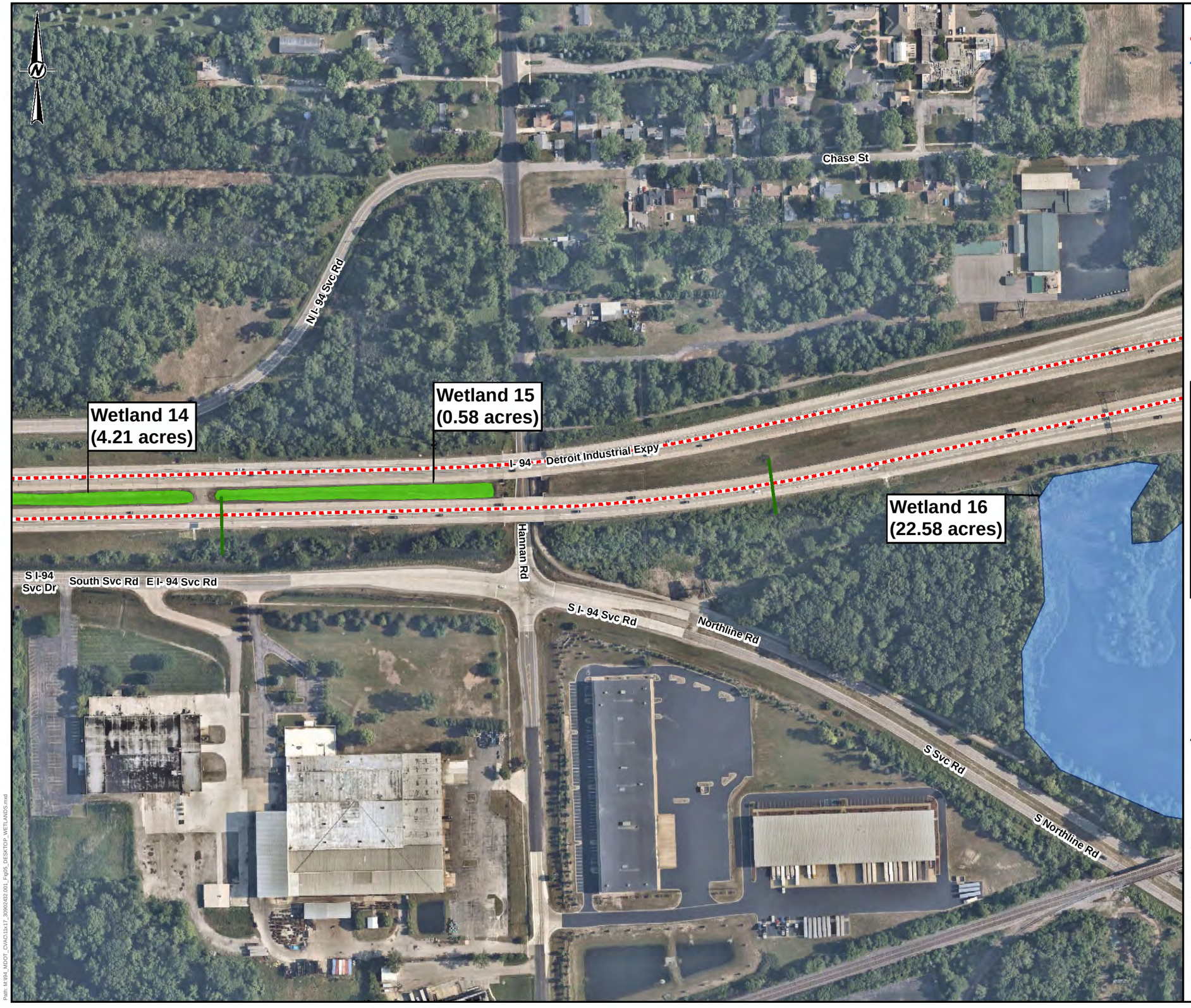
YYYY-MM-DD	2023-12-04
PREPARED	RHG
DESIGN	RHG
REVIEW	-
APPROVED	-

PROJECT No.
30902432.001

FIGURE
14

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: 1 in 0

Path: M:\I94_MDOT_CVAC\11x17_30902432.001_Fig05_DESKTOP_WETLANDS.mxd



LEGEND

- APPROXIMATE SITE LIMITS
- STREAM/RIVER
- WETLANDS DELINEATED BY DLZ
- MDOT
- POTENTIAL WETLAND AREA

KEY MAP

0 125 250 500 Feet

REFERENCE

1. AERIAL IMAGERY: NEARMAP IMAGERY SERVICE. COPYRIGHT NEARMAP 2023. IMAGERY CAPTURED THROUGH THE FOLLOWING DATES: 3/26/2023, 3/28/2023, 4/7/2023, 6/10/2023, & 6/17/2023.
2. STREAMS DATASET: NATIONAL HYDROGRAPHY DATASET (NHD), USGS.

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POTENTIAL WETLANDS DETAIL MAP
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CONSULTANT

YYYY-MM-DD	2023-12-04
PREPARED	RHG
DESIGN	RHG
REVIEW	-
APPROVED	-

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FIGURE
15

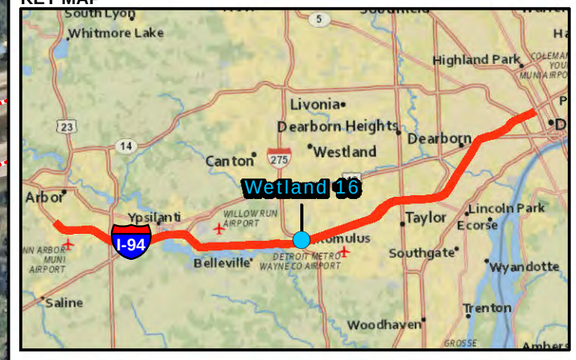
IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM:
1 in
0

Path: M:\94_MDOT_CVAC\11x17_30902432.001_Fig05_DESKTOP_WETLANDS.mxd

LEGEND

- APPROXIMATE SITE LIMITS
- STREAM/RIVER
- WETLANDS DELINEATED BY DLZ
- MDOT
- POTENTIAL WETLAND AREA

KEY MAP



0 200 400 800 Feet

REFERENCE

1. AERIAL IMAGERY: NEARMAP IMAGERY SERVICE. COPYRIGHT NEARMAP 2023. IMAGERY CAPTURED THROUGH THE FOLLOWING DATES: 3/26/2023, 3/28/2023, 4/7/2023, 6/10/2023, & 6/17/2023.
2. STREAMS DATASET: NATIONAL HYDROGRAPHY DATASET (NHD), USGS.

CLIENT
MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT)

PROJECT
I-94 CONNECTED AND AUTOMATED VEHICLE CORRIDOR PROJECT

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POTENTIAL WETLANDS DETAIL MAP
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CONSULTANT

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PREPARED	RHG
DESIGN	RHG
REVIEW	-
APPROVED	-

PROJECT No.
30902432.001

FIGURE
16

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: 1 in 0

Path: M:\I94_MDOT_CVAC\11x17_30902432.001_Fig05_DESKTOP_WETLANDS.mxd

LEGEND

- APPROXIMATE SITE LIMITS
- STREAM/RIVER
- WETLANDS DELINEATED BY DLZ
- MDOT
- POTENTIAL WETLAND AREA

KEY MAP

0 125 250 500 Feet

REFERENCE

1. AERIAL IMAGERY: NEARMAP IMAGERY SERVICE. COPYRIGHT NEARMAP 2023. IMAGERY CAPTURED THROUGH THE FOLLOWING DATES: 3/26/2023, 3/28/2023, 4/7/2023, 6/10/2023, & 6/17/2023.
2. STREAMS DATASET: NATIONAL HYDROGRAPHY DATASET (NHD), USGS.

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CONSULTANT
wsp

YYYY-MM-DD	2023-12-04
PREPARED	RHG
DESIGN	RHG
REVIEW	-
APPROVED	-

PROJECT No.
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FIGURE
17

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: 1 in 0

Path: M:\I94_MDOT_CVAC\11x17_30902432.001_Fig05_DESKTOP_WETLANDS.mxd

Wetland 30
(0.96 acres)

Wetland 32
(0.78 acres)

Wetland 33
(0.02 acres)

Wetland 34
(1.64 acres)

Wetland 31
(0.44 acres)

Wetland 29
(0.6 acres)

Wetland 28
(1.35 acres)

Wetland 27
(2.51 acres)

Washington St
Michelle Dr
Michele Dr
Marc St
Stephanie St
Stephanie Dr
Morgan
Margaret Dr
Margaret
Vealy Drain
McBride St
Herman St
Wayne Rd
I-94 Detroit Industrial Expy
Vealy Drain

LEGEND

- APPROXIMATE SITE LIMITS
- STREAM/RIVER
- WETLANDS DELINEATED BY DLZ
- MDOT
- POTENTIAL WETLAND AREA

KEY MAP

Feet
0 125 250 500

REFERENCE

1. AERIAL IMAGERY: NEARMAP IMAGERY SERVICE. COPYRIGHT NEARMAP 2023. IMAGERY CAPTURED THROUGH THE FOLLOWING DATES: 3/26/2023, 3/28/2023, 4/7/2023, 6/10/2023, & 6/17/2023.
2. STREAMS DATASET: NATIONAL HYDROGRAPHY DATASET (NHD), USGS.

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CONSULTANT
wsp

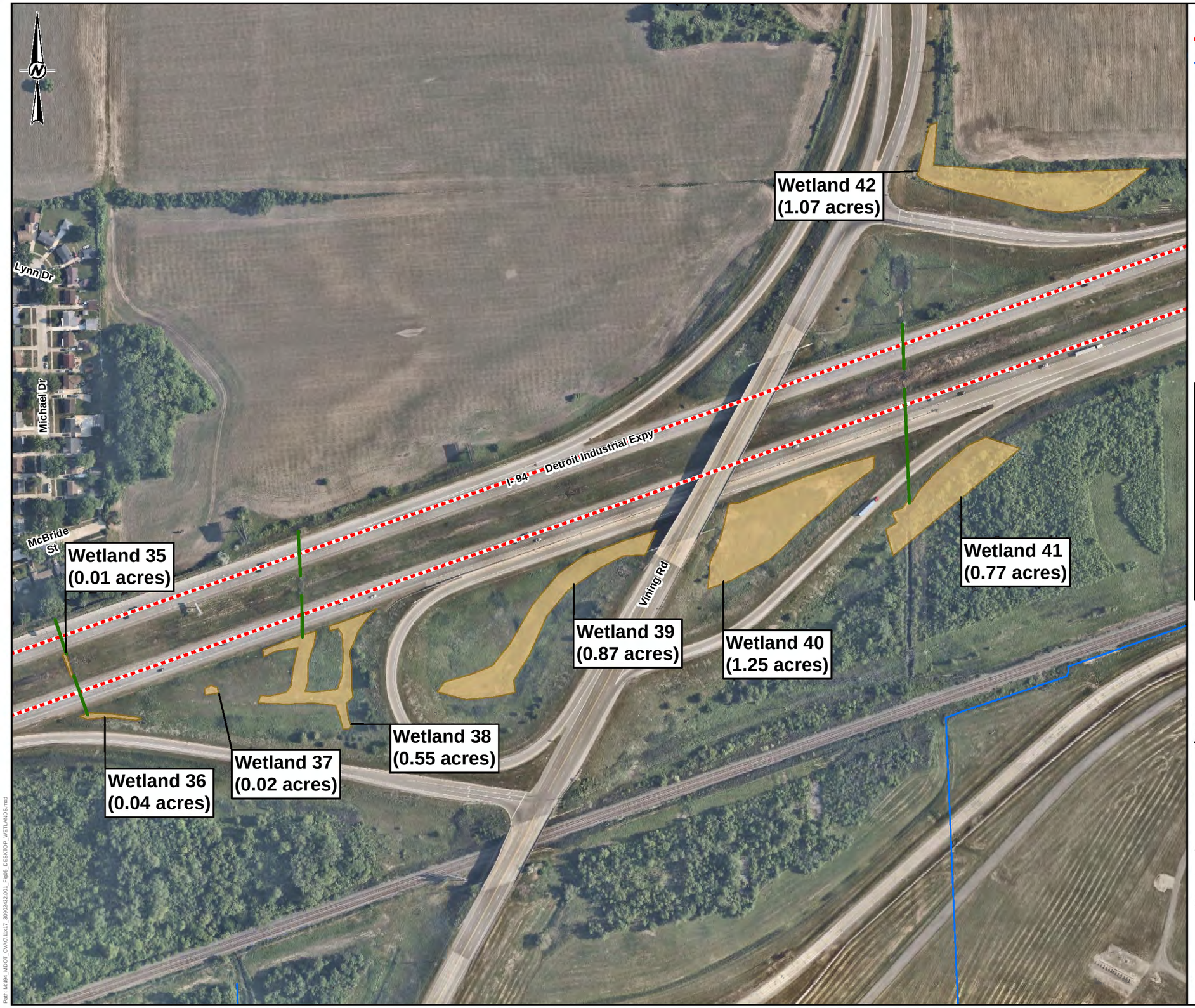
YYYY-MM-DD	2023-12-04
PREPARED	RHG
DESIGN	RHG
REVIEW	-
APPROVED	-

PROJECT No.
30902432.001

FIGURE
18

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM:
1 in
0

Path: M:\I94_MDOT_CVAC\11x17_30902432.001_Fig05_DESKTOP_WETLANDS.mxd



LEGEND

- APPROXIMATE SITE LIMITS
- STREAM/RIVER
- WETLANDS DELINEATED BY DLZ
- MDOT
- POTENTIAL WETLAND AREA

KEY MAP

0 125 250 500 Feet

REFERENCE

1. AERIAL IMAGERY: NEARMAP IMAGERY SERVICE. COPYRIGHT NEARMAP 2023. IMAGERY CAPTURED THROUGH THE FOLLOWING DATES: 3/26/2023, 3/28/2023, 4/7/2023, 6/10/2023, & 6/17/2023.
2. STREAMS DATASET: NATIONAL HYDROGRAPHY DATASET (NHD), USGS.

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YYYY-MM-DD	2023-12-04
PREPARED	RHG
DESIGN	RHG
REVIEW	-
APPROVED	-

PROJECT No.
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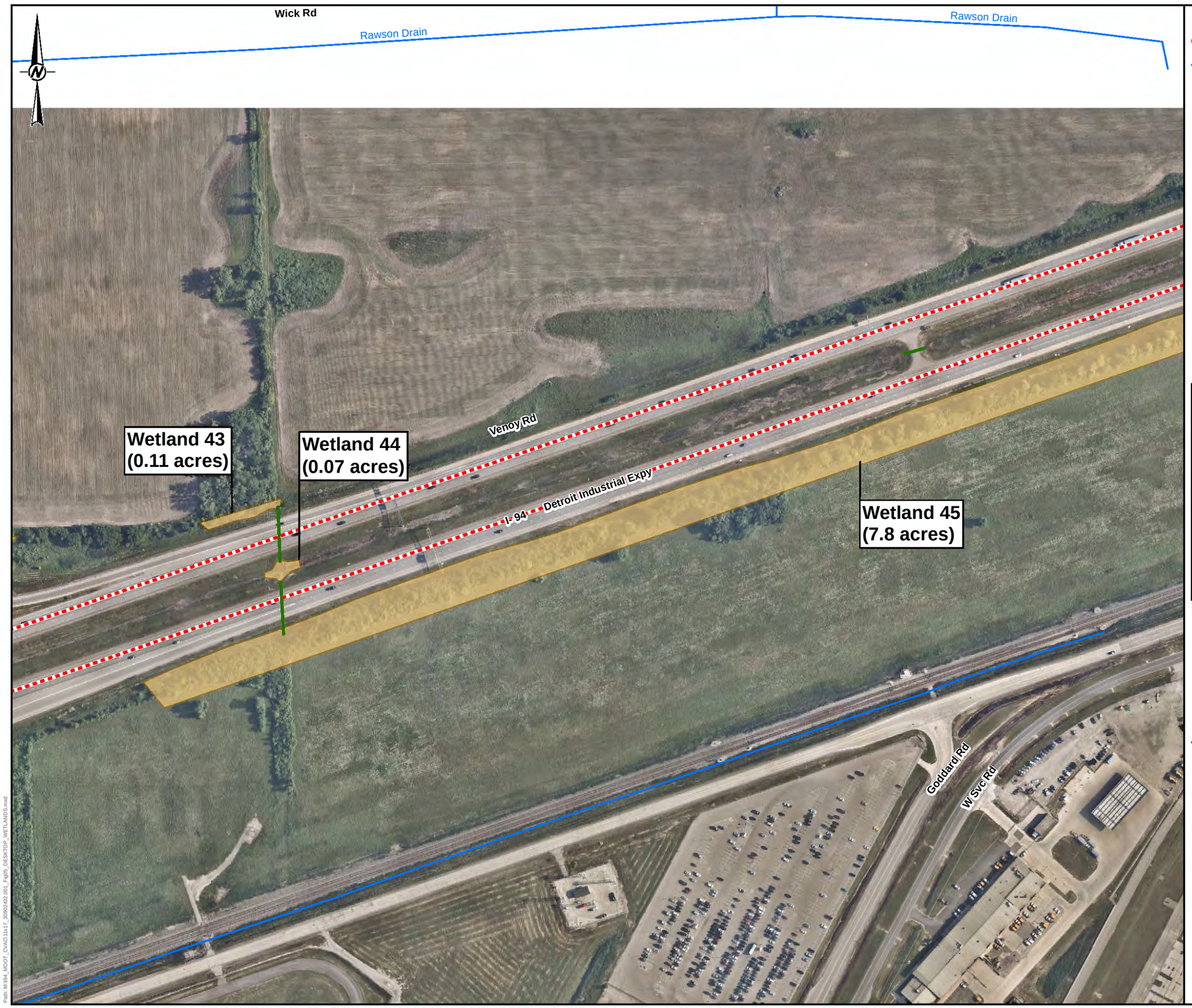
FIGURE
19

Path: M:\94_MDOT_CVAC\13x17_30902432.001_Fig05_DESKTOP_WETLANDS.mxd

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: 1 in 0



LEGEND

- APPROXIMATE SITE LIMITS
- STREAM/RIVER
- WETLANDS DELINEATED BY DLZ
- MDOT
- POTENTIAL WETLAND AREA

KEY MAP

0 125 250 500 Feet

REFERENCE

1. AERIAL IMAGERY: NEARMAP IMAGERY SERVICE. COPYRIGHT NEARMAP 2023. IMAGERY CAPTURED THROUGH THE FOLLOWING DATES: 3/26/2023, 3/28/2023, 4/7/2023, 6/10/2023, & 6/17/2023.
2. STREAMS DATASET: NATIONAL HYDROGRAPHY DATASET (NHD), USGS.

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CONSULTANT

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DESIGN	RHG
REVIEW	-
APPROVED	-

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FIGURE
20

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: 1 in 0

Path: M:\I94_MDOT_CVAC\11x17_30902432.001_Fig05_DESKTOP_WETLANDS.mxd

Wetland 48
(0.04 acres)

Wetland 47
(0.07 acres)

Wetland 46
(0.03 acres)

Wetland 50
(0.16 acres)

Wetland 49
(0.02 acres)

Wetland 45
(7.8 acres)

Wick Rd

Wickham Rd

Merriman Rd

Rawson Drain

Venoy Rd

I-94 Detroit Industrial Expy

Goddard Rd

Meridian Rd

W Svc Rd

N

LEGEND

- APPROXIMATE SITE LIMITS
- STREAM/RIVER
- WETLANDS DELINEATED BY DLZ
- MDOT
- POTENTIAL WETLAND AREA

KEY MAP

0 125 250 500 Feet

REFERENCE

1. AERIAL IMAGERY: NEARMAP IMAGERY SERVICE. COPYRIGHT NEARMAP 2023. IMAGERY CAPTURED THROUGH THE FOLLOWING DATES: 3/26/2023, 3/28/2023, 4/7/2023, 6/10/2023, & 6/17/2023.
2. STREAMS DATASET: NATIONAL HYDROGRAPHY DATASET (NHD), USGS.

CLIENT
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CONSULTANT

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DESIGN	RHG
REVIEW	-
APPROVED	-

PROJECT No.
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FIGURE
21

Path: M:\94_MDOT_CVAC\11x17_30902432.001_Fig05_DESKTOP_WETLANDS.mxd

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM:
1 in
0

Eel Ise River

Flynn Dr

Hudson St

Kenwood St

Kempa St

Garner St

Burton St

Dodge St

Hollywood St

Farnum St

Garner Ave

Wetland 51
(1.22 acres)

I-94

Detroit Industrial Expy

Middlebelt Rd

Wetland 52
(0.17 acres)

Goddard Svc Rd

Goddard Rd

Wick Rd

LEGEND

- APPROXIMATE SITE LIMITS
- STREAM/RIVER
- WETLANDS DELINEATED BY DLZ
- MDOT
- POTENTIAL WETLAND AREA

KEY MAP

0 125 250 500 Feet

REFERENCE

1. AERIAL IMAGERY: NEARMAP IMAGERY SERVICE. COPYRIGHT NEARMAP 2023. IMAGERY CAPTURED THROUGH THE FOLLOWING DATES: 3/26/2023, 3/28/2023, 4/7/2023, 6/10/2023, & 6/17/2023.
2. STREAMS DATASET: NATIONAL HYDROGRAPHY DATASET (NHD), USGS.

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MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT)

PROJECT
I-94 CONNECTED AND AUTOMATED VEHICLE CORRIDOR PROJECT

TITLE
POTENTIAL WETLANDS DETAIL MAP
22 OF 35

CONSULTANT
wsp

YYYY-MM-DD	2023-12-04
PREPARED	RHG
DESIGN	RHG
REVIEW	-
APPROVED	-

PROJECT No.
30902432.001

FIGURE
22

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM:
1 in
0

Path: M:\I94_MDOT_CVAC\11x17_30902432.001_Fig05_DESKTOP_WETLANDS.mxd

LEGEND

- APPROXIMATE SITE LIMITS
- STREAM/RIVER
- WETLANDS DELINEATED BY DLZ
- MDOT
- POTENTIAL WETLAND AREA

KEY MAP

0 125 250 500 Feet

REFERENCE

1. AERIAL IMAGERY: NEARMAP IMAGERY SERVICE. COPYRIGHT NEARMAP 2023. IMAGERY CAPTURED THROUGH THE FOLLOWING DATES: 3/26/2023, 3/28/2023, 4/7/2023, 6/10/2023, & 6/17/2023.
2. STREAMS DATASET: NATIONAL HYDROGRAPHY DATASET (NHD), USGS.

CLIENT
MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT)

PROJECT
I-94 CONNECTED AND AUTOMATED VEHICLE CORRIDOR PROJECT

TITLE
POTENTIAL WETLANDS DETAIL MAP
23 OF 35

CONSULTANT
wsp

YYYY-MM-DD	2023-12-04
PREPARED	RHG
DESIGN	RHG
REVIEW	-
APPROVED	-

PROJECT No.
30902432.001

FIGURE
23

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: 1 in 0

Path: M:\I94_MDOT_CVAC\11x17_30902432.001_Fig05_DESKTOP_WETLANDS.mxd

LEGEND

- APPROXIMATE SITE LIMITS
- STREAM/RIVER
- WETLANDS DELINEATED BY DLZ
- MDOT
- POTENTIAL WETLAND AREA

KEY MAP

0 200 400 800 Feet

REFERENCE

1. AERIAL IMAGERY: NEARMAP IMAGERY SERVICE. COPYRIGHT NEARMAP 2023. IMAGERY CAPTURED THROUGH THE FOLLOWING DATES: 3/26/2023, 3/28/2023, 4/7/2023, 6/10/2023, & 6/17/2023.
2. STREAMS DATASET: NATIONAL HYDROGRAPHY DATASET (NHD), USGS.

CLIENT
MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT)

PROJECT
I-94 CONNECTED AND AUTOMATED VEHICLE CORRIDOR PROJECT

TITLE
POTENTIAL WETLANDS DETAIL MAP
24 OF 35

CONSULTANT

YYYY-MM-DD	2023-12-04
PREPARED	RHG
DESIGN	RHG
REVIEW	-
APPROVED	-

PROJECT No.
30902432.001

FIGURE
24

Path: M:\94_MDOT_CVAC\11x17_30902432.001_Fig05_DESKTOP_WETLANDS.mxd

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM:
1 in
0

LEGEND

- APPROXIMATE SITE LIMITS
- STREAM/RIVER
- WETLANDS DELINEATED BY DLZ
- MDOT
- POTENTIAL WETLAND AREA

KEY MAP

0 125 250 500 Feet

REFERENCE

1. AERIAL IMAGERY: NEARMAP IMAGERY SERVICE. COPYRIGHT NEARMAP 2023. IMAGERY CAPTURED THROUGH THE FOLLOWING DATES: 3/26/2023, 3/28/2023, 4/7/2023, 6/10/2023, & 6/17/2023.
2. STREAMS DATASET: NATIONAL HYDROGRAPHY DATASET (NHD), USGS.

CLIENT
MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT)

PROJECT
I-94 CONNECTED AND AUTOMATED VEHICLE CORRIDOR PROJECT

TITLE
POTENTIAL WETLANDS DETAIL MAP
25 OF 35

CONSULTANT

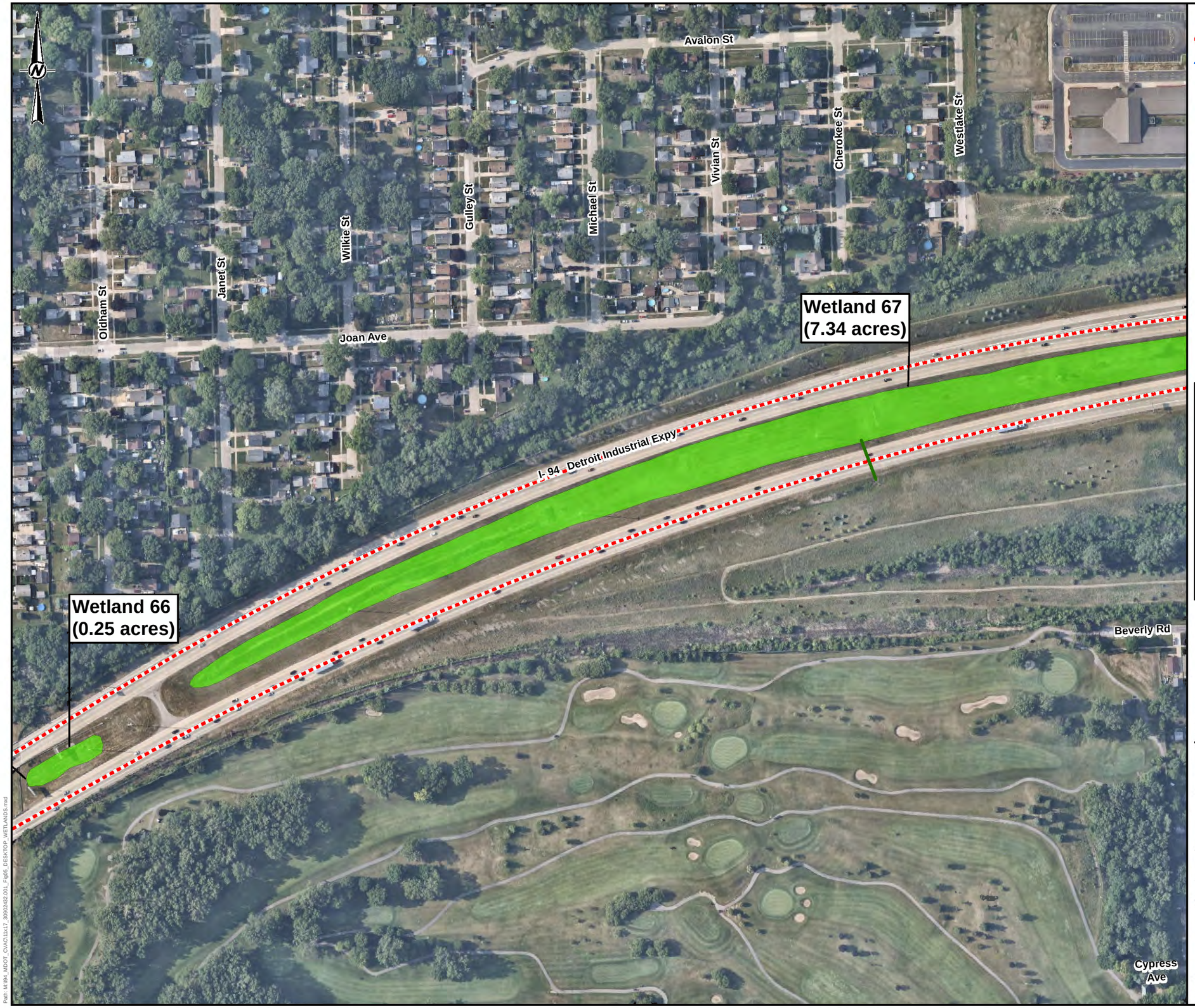
YYYY-MM-DD	2023-12-04
PREPARED	RHG
DESIGN	RHG
REVIEW	-
APPROVED	-

PROJECT No.
30902432.001

FIGURE
25

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM:
1 in
0

Path: M:\I94_MDOT_CVAC\11x17_30902432.001_Fig05_DESKTOP_WETLANDS.mxd



LEGEND

- APPROXIMATE SITE LIMITS
- STREAM/RIVER
- WETLANDS DELINEATED BY DLZ
- MDOT
- POTENTIAL WETLAND AREA

KEY MAP

Feet
0 125 250 500

REFERENCE

1. AERIAL IMAGERY: NEARMAP IMAGERY SERVICE. COPYRIGHT NEARMAP 2023. IMAGERY CAPTURED THROUGH THE FOLLOWING DATES: 3/26/2023, 3/28/2023, 4/7/2023, 6/10/2023, & 6/17/2023.
2. STREAMS DATASET: NATIONAL HYDROGRAPHY DATASET (NHD), USGS.

CLIENT
MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT)

PROJECT
I-94 CONNECTED AND AUTOMATED VEHICLE CORRIDOR PROJECT

TITLE
POTENTIAL WETLANDS DETAIL MAP
26 OF 35

CONSULTANT

YYYY-MM-DD	2023-12-04
PREPARED	RHG
DESIGN	RHG
REVIEW	-
APPROVED	-

PROJECT No.
30902432.001

FIGURE
26

Path: M:\I94_MDOT_CVAO\11x17_30902432.001_Fig05_DESKTOP_WETLANDS.mxd

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM:
1 in
0

LEGEND

- APPROXIMATE SITE LIMITS
- STREAM/RIVER
- WETLANDS DELINEATED BY DLZ
- MDOT
- POTENTIAL WETLAND AREA

KEY MAP

0 125 250 500 Feet

REFERENCE

1. AERIAL IMAGERY: NEARMAP IMAGERY SERVICE. COPYRIGHT NEARMAP 2023. IMAGERY CAPTURED THROUGH THE FOLLOWING DATES: 3/26/2023, 3/28/2023, 4/7/2023, 6/10/2023, & 6/17/2023.
2. STREAMS DATASET: NATIONAL HYDROGRAPHY DATASET (NHD), USGS.

CLIENT
MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT)

PROJECT
I-94 CONNECTED AND AUTOMATED VEHICLE CORRIDOR PROJECT

TITLE
POTENTIAL WETLANDS DETAIL MAP
27 OF 35

CONSULTANT

YYYY-MM-DD	2023-12-04
PREPARED	RHG
DESIGN	RHG
REVIEW	-
APPROVED	-

PROJECT No.
30902432.001

FIGURE
27

Path: M:\I94_MDOT_CVAC\11x17_30902432.001_Fig05_DESKTOP_WETLANDS.mxd

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM:
1 in
0

LEGEND

- APPROXIMATE SITE LIMITS
- STREAM/RIVER
- WETLANDS DELINEATED BY DLZ
- MDOT
- POTENTIAL WETLAND AREA

KEY MAP

0 125 250 500 Feet

REFERENCE

1. AERIAL IMAGERY: NEARMAP IMAGERY SERVICE. COPYRIGHT NEARMAP 2023. IMAGERY CAPTURED THROUGH THE FOLLOWING DATES: 3/26/2023, 3/28/2023, 4/7/2023, 6/10/2023, & 6/17/2023.
2. STREAMS DATASET: NATIONAL HYDROGRAPHY DATASET (NHD), USGS.

CLIENT
MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT)

PROJECT
I-94 CONNECTED AND AUTOMATED VEHICLE CORRIDOR PROJECT

TITLE
POTENTIAL WETLANDS DETAIL MAP
28 OF 35

CONSULTANT

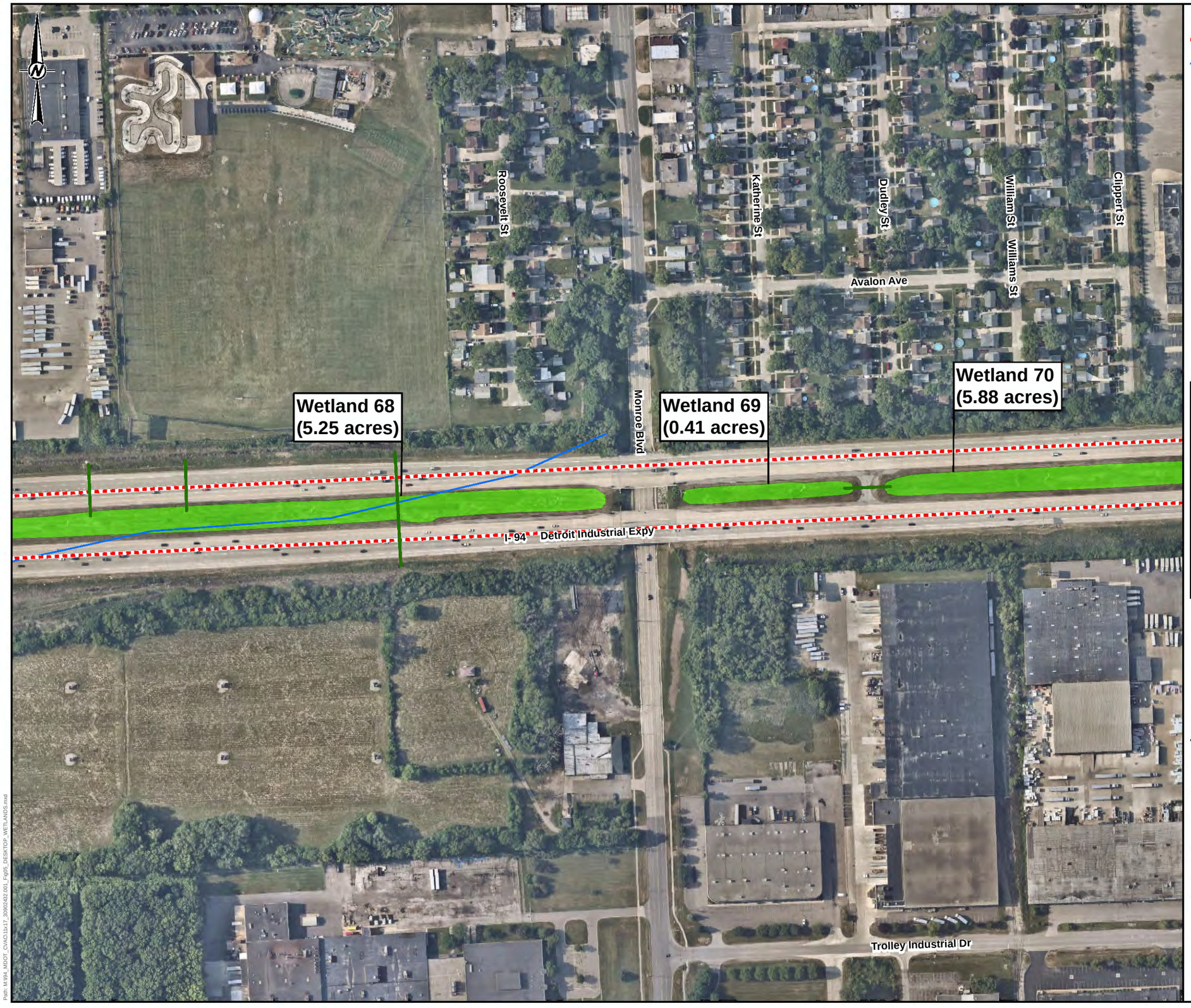
YYYY-MM-DD	2023-12-04
PREPARED	RHG
DESIGN	RHG
REVIEW	-
APPROVED	-

PROJECT No.
30902432.001

FIGURE
28

Path: M:\94_MDOT_CVAC\11x17_30902432.001_Fig\05_DESKTOP_WETLANDS.mxd

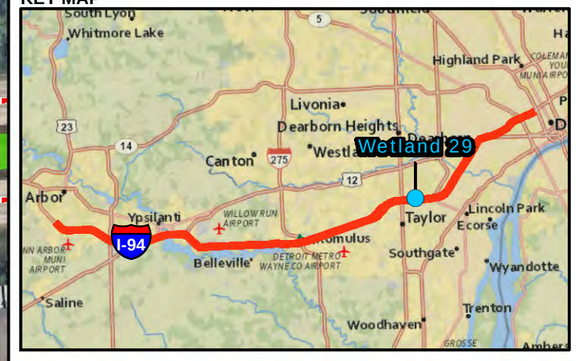
IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: 1 in 0



LEGEND

- APPROXIMATE SITE LIMITS
- STREAM/RIVER
- WETLANDS DELINEATED BY DLZ
- MDOT
- POTENTIAL WETLAND AREA

KEY MAP



0 125 250 500 Feet

REFERENCE

1. AERIAL IMAGERY: NEARMAP IMAGERY SERVICE. COPYRIGHT NEARMAP 2023. IMAGERY CAPTURED THROUGH THE FOLLOWING DATES: 3/26/2023, 3/28/2023, 4/7/2023, 6/10/2023, & 6/17/2023.
2. STREAMS DATASET: NATIONAL HYDROGRAPHY DATASET (NHD), USGS.

CLIENT
MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT)

PROJECT
I-94 CONNECTED AND AUTOMATED VEHICLE CORRIDOR PROJECT

TITLE
POTENTIAL WETLANDS DETAIL MAP
29 OF 35

CONSULTANT

YYYY-MM-DD	2023-12-04
PREPARED	RHG
DESIGN	RHG
REVIEW	-
APPROVED	-

PROJECT No.
30902432.001

FIGURE
29

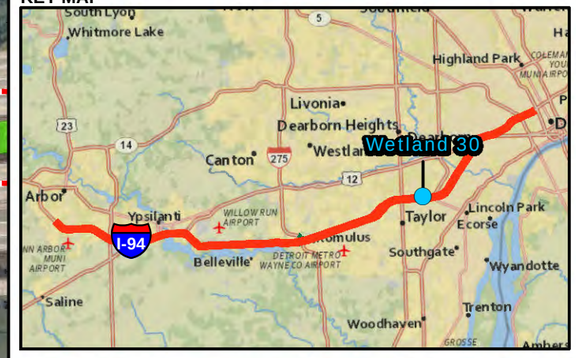
IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: 1 in 0

Path: M:\94_MDOT_CVAG\11x17_30902432.001_Fig05_DESKTOP_WETLANDS.mxd

LEGEND

- APPROXIMATE SITE LIMITS
- STREAM/RIVER
- WETLANDS DELINEATED BY DLZ
- MDOT
- POTENTIAL WETLAND AREA

KEY MAP



0 125 250 500 Feet

REFERENCE

1. AERIAL IMAGERY: NEARMAP IMAGERY SERVICE. COPYRIGHT NEARMAP 2023. IMAGERY CAPTURED THROUGH THE FOLLOWING DATES: 3/26/2023, 3/28/2023, 4/7/2023, 6/10/2023, & 6/17/2023.
2. STREAMS DATASET: NATIONAL HYDROGRAPHY DATASET (NHD), USGS.

CLIENT
MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT)

PROJECT
I-94 CONNECTED AND AUTOMATED VEHICLE CORRIDOR PROJECT

TITLE
POTENTIAL WETLANDS DETAIL MAP
30 OF 35

CONSULTANT

YYYY-MM-DD	2023-12-04
PREPARED	RHG
DESIGN	RHG
REVIEW	-
APPROVED	-

PROJECT No.
30902432.001

FIGURE
30

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: 1 in 0

Path: M:\94_MDOT_CVAO\11x17_30902432.001_Fig06_DESKTOP_WETLANDS.mxd

LEGEND

- APPROXIMATE SITE LIMITS
- STREAM/RIVER
- WETLANDS DELINEATED BY DLZ
- MDOT
- POTENTIAL WETLAND AREA

KEY MAP

0 125 250 500 Feet

REFERENCE

1. AERIAL IMAGERY: NEARMAP IMAGERY SERVICE. COPYRIGHT NEARMAP 2023. IMAGERY CAPTURED THROUGH THE FOLLOWING DATES: 3/26/2023, 3/28/2023, 4/7/2023, 6/10/2023, & 6/17/2023.
2. STREAMS DATASET: NATIONAL HYDROGRAPHY DATASET (NHD), USGS.

CLIENT
MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT)

PROJECT
I-94 CONNECTED AND AUTOMATED VEHICLE CORRIDOR PROJECT

TITLE
POTENTIAL WETLANDS DETAIL MAP
31 OF 35

CONSULTANT

YYYY-MM-DD	2023-12-04
PREPARED	RHG
DESIGN	RHG
REVIEW	-
APPROVED	-

PROJECT No. 30902432.001

FIGURE **31**

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: 1 in 0

Path: M:\I94_MDOT_CVAC\11x17_30902432.001_Fig05_DESKTOP_WETLANDS.mxd

LEGEND

- APPROXIMATE SITE LIMITS
- STREAM/RIVER
- WETLANDS DELINEATED BY DLZ
- MDOT
- POTENTIAL WETLAND AREA

KEY MAP

0 125 250 500 Feet

REFERENCE

1. AERIAL IMAGERY: NEARMAP IMAGERY SERVICE. COPYRIGHT NEARMAP 2023. IMAGERY CAPTURED THROUGH THE FOLLOWING DATES: 3/26/2023, 3/28/2023, 4/7/2023, 6/10/2023, & 6/17/2023.
2. STREAMS DATASET: NATIONAL HYDROGRAPHY DATASET (NHD), USGS.

CLIENT
MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT)

PROJECT
I-94 CONNECTED AND AUTOMATED VEHICLE CORRIDOR PROJECT

TITLE
POTENTIAL WETLANDS DETAIL MAP
32 OF 35

CONSULTANT

YYYY-MM-DD	2023-12-04
PREPARED	RHG
DESIGN	RHG
REVIEW	-
APPROVED	-

PROJECT No.
30902432.001

FIGURE
32

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM:
1 in
0

Path: M:\I94_MDOT_CVAC\11x17_30902432.001_Fig05_DESKTOP_WETLANDS.mxd

LEGEND

- APPROXIMATE SITE LIMITS
- STREAM/RIVER
- WETLANDS DELINEATED BY DLZ
- MDOT
- POTENTIAL WETLAND AREA

KEY MAP

0 125 250 500 Feet

REFERENCE

1. AERIAL IMAGERY: NEARMAP IMAGERY SERVICE. COPYRIGHT NEARMAP 2023. IMAGERY CAPTURED THROUGH THE FOLLOWING DATES: 3/26/2023, 3/28/2023, 4/7/2023, 6/10/2023, & 6/17/2023.
2. STREAMS DATASET: NATIONAL HYDROGRAPHY DATASET (NHD), USGS.

CLIENT
MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT)

PROJECT
I-94 CONNECTED AND AUTOMATED VEHICLE CORRIDOR PROJECT

TITLE
POTENTIAL WETLANDS DETAIL MAP
33 OF 35

CONSULTANT

YYYY-MM-DD	2023-12-04
PREPARED	RHG
DESIGN	RHG
REVIEW	-
APPROVED	-

PROJECT No.
30902432.001

FIGURE
33

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM:
1 in
0

Path: M:\I94_MDOT_CVAC\11x17_30902432.001_Fig\05_DESKTOP_WETLANDS.mxd

LEGEND

- APPROXIMATE SITE LIMITS
- STREAM/RIVER
- WETLANDS DELINEATED BY DLZ
- MDOT
- POTENTIAL WETLAND AREA

KEY MAP

0 125 250 500 Feet

REFERENCE

1. AERIAL IMAGERY: NEARMAP IMAGERY SERVICE. COPYRIGHT NEARMAP 2023. IMAGERY CAPTURED THROUGH THE FOLLOWING DATES: 3/26/2023, 3/28/2023, 4/7/2023, 6/10/2023, & 6/17/2023.
2. STREAMS DATASET: NATIONAL HYDROGRAPHY DATASET (NHD), USGS.

CLIENT
MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT)

PROJECT
I-94 CONNECTED AND AUTOMATED VEHICLE CORRIDOR PROJECT

TITLE
POTENTIAL WETLANDS DETAIL MAP
34 OF 35

CONSULTANT

YYYY-MM-DD	2023-12-04
PREPARED	RHG
DESIGN	RHG
REVIEW	-
APPROVED	-

PROJECT No.
30902432.001

FIGURE
34

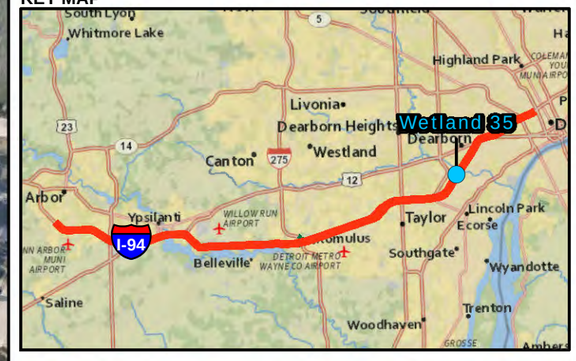
IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: 1 in 0

Path: M:\94_MDOT_CVAC\11x17_30902432.001_Fig\05_DESKTOP_WETLANDS.mxd

LEGEND

- APPROXIMATE SITE LIMITS
- STREAM/RIVER
- WETLANDS DELINEATED BY DLZ
- MDOT
- POTENTIAL WETLAND AREA

KEY MAP



0 125 250 500 Feet

REFERENCE

1. AERIAL IMAGERY: NEARMAP IMAGERY SERVICE. COPYRIGHT NEARMAP 2023. IMAGERY CAPTURED THROUGH THE FOLLOWING DATES: 3/26/2023, 3/28/2023, 4/7/2023, 6/10/2023, & 6/17/2023.
2. STREAMS DATASET: NATIONAL HYDROGRAPHY DATASET (NHD), USGS.

CLIENT
MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT)

PROJECT
I-94 CONNECTED AND AUTOMATED VEHICLE CORRIDOR PROJECT

TITLE
POTENTIAL WETLANDS DETAIL MAP
35 OF 35

CONSULTANT

YYYY-MM-DD	2023-12-04
PREPARED	RHG
DESIGN	RHG
REVIEW	-
APPROVED	-

PROJECT No.
30902432.001

FIGURE
35

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM:
1 in
0

Path: M:\I94_MDOT_CVAC\11x17_30902432.001_Fig05_DESKTOP_WETLANDS.mxd

APPENDIX

A MNFI Rare Species Review Results

MICHIGAN STATE UNIVERSITY | Extension

Nathan Ring
WSP Golder Inc.
15851 South US 27, Suite 50
Lansing, MI

March 27, 2023

Re: Rare Species Review #3423 – I-94 Corridor Project, Washtenaw and Wayne counties, MI.

Hello Nathan:

The location for the proposed project was checked against known localities for rare species and unique natural features, which are recorded in the Michigan Natural Features Inventory (MNFI) natural heritage database. This continuously updated database is a comprehensive source of existing data on Michigan's endangered, threatened, or otherwise significant plant and animal species, natural plant communities, and other natural features. Records in the database indicate that a qualified observer has documented the presence of special natural features. The absence of records in the database for a site may mean that the site has not been surveyed. The only way to obtain a definitive statement on the status of natural features is to have a competent biologist perform a complete field survey.

Under Act 451 of 1994, the Natural Resources and Environmental Protection Act, Part 365, Endangered Species Protection, "a person shall not take, possess, transport, …fish, plants, and wildlife indigenous to the state and determined to be endangered or threatened," unless first receiving an Endangered Species Permit from the Michigan Department of Natural Resources (MDNR), Wildlife Division. Responsibility to protect endangered and threatened species is not limited to the lists below. Other species may be present that have not been recorded in the database.

Several at-risk species have been documented within 1.5 miles of the proposed activity and it is possible that adverse impacts will occur. This response reflects a desktop review of the database and MNFI cannot fully evaluate this project without visiting the area. MNFI offers several levels of Rare Species Reviews, including field surveys which I would be happy to discuss with you.

Sincerely,

Michael A. Sanders

Michael A. Sanders
Environmental Review Specialist/Zoologist
Michigan Natural Features Inventory

MSU EXTENSION

Michigan Natural Features Inventory

PO Box 13036
Lansing MI 48901

(517) 284-6200
Fax (517) 373-9566

mnfi.anr.msu.edu

Comments for Rare Species Review #3423:

It is important to note that it is the applicant's responsibility to comply with both state and federal threatened and endangered species legislation. Therefore, if a state listed species occurs at a project site, and you think you need an endangered species permit please contact: Casey Reitz, DNR-Wildlife Division, 517-284-6210, or ReitzC@michigan.gov. If a federally listed species is involved and, you think a permit is needed, please contact Jessica Pruden, U.S. Fish and Wildlife Service, East Lansing office, 517-351-8316, or Jessica_Pruden@fws.gov.

NOTE: special concern species and natural communities are not protected under endangered species legislation, but efforts should be taken to minimize any or all impacts. Please consult MNFI's Rare Species Explorer for additional information on Michigan's rare plants and animals.

Washtenaw County Section

NOTE: Michigan rivers and streams have been grouped according to existing information of mussel distribution and individual species conservation status. Sections of the **Huron River** in this area are designated Group 3 mussel streams which means that federally threatened or endangered mussel species are expected to occur here and that certain surveys and possibly relocation procedures apply. The group number triggers the type of mussel survey protocols and relocation procedures that must be followed. I encourage you to review the ***Michigan Freshwater Mussel Survey Protocols and Relocation Procedures*** publication if in-stream work and/or land clearing activities occur that result in streambed disturbance and erosion and sedimentation into the river. A copy of the publication can be found at: https://mnfi.anr.msu.edu/resources/michigan-mussels

Purple wartyback – the state threatened purple wartyback mussel (*Cyclonaias tuberculat)* has been known to occur in the Huron River near the mouth of Ford Lake . The purple wartyback is found in medium to large rivers with gravel or mixed sand and gravel substrates.

Management and Conservation: like other mussels, threats are varied and include habitat degradation, poor water quality, flow alterations, water temperature changes, heavy metals, organic pollution, sedimentation, and siltation. Maintenance or establishment of vegetated riparian buffers can help protect mussel habitats from many of these threats. Control of zebra mussels is critical to preserving native mussels. As with all mussels, fish host requirements also need to be considered.

Spotted gar - the state special concern spotted gar (*Lepisosteus oculatus)* has been known to occur in Ford Lake. The spotted gar requires clear, quiet water with abundant vegetation. It occurs in backwater areas of rivers, lakes and wetlands. Like other gar species, it is tolerant of warm water with low dissolved oxygen levels. They tolerate low dissolved oxygen levels because of a curious behavior they exhibit called "breaking." At the surface of the water, they open and close their jaws, taking air in through their mouths. The spotted gar typically spawns in shallow, warm water in late spring or early summer. Spawning from fourth week of April to first week of June.

Management and Conservation: the spotted gar requires clear vegetated waters. These habitats are rapidly disappearing in its range. Siltation, dredging, filling and harbor improvements negatively impact this species. Best Management Practices should be taken to minimize soil erosion and thereby reducing stream sedimentation that would be detrimental to this species.

Northern long-eared bat – the state threatened and federally threatened Northern long-eared bat (*Myotis septentrionalis*) has been known to occur in the area south of the interstate in Section 10, T03S R06E (Pittsfield Township). Northern long-eared bat numbers in the northeast US have declined up to 99 percent. Loss or degradation of summer habitat, wind turbines, disturbance to hibernacula, predation, and pesticides have contributed to declines in Northern long-eared bat populations. However, no other threat has been as severe to the decline as White-nose Syndrome (WNS). WNS is a fungus that thrives in the cold, damp conditions in caves

and mines where bats hibernate. The disease is believed to disrupt the hibernation cycle by causing bats to repeatedly awake thereby depleting vital energy reserves. This species was federally listed in May 2015 primarily due to the threat from WNS.

Also called northern bat or northern myotis, this bat is distinguished from other *Myotis* species by its long ears. In Michigan, northern long-eared bats hibernate in abandoned mines and caves in the Upper Peninsula; they also commonly hibernate in the Tippy Dam spillway in Manistee County. This species is a regional migrant with migratory distance largely determined by locations of suitable hibernacula sites.

Northern long-eared bats typically roost and forage in forested areas. During the summer, these bats roost singly or in colonies underneath bark, in cavities or in crevices of both living and dead trees. These bats seem to select roost trees based on suitability to retain bark or provide cavities or crevices. Common roost trees in southern lower Michigan included species of ash, elm and maple. Foraging occurs primarily in areas along woodland edges, woodland clearings and over small woodland ponds. Moths, beetles and small flies are common food items. Like all temperate bats this species typically produces only 1-2 young per year.

*Management and Conservation***:** we encourage you to conduct tree-cutting activities and prescribed burns in forested areas during October 1 through March 31. When that is not possible, we encourage you to remove trees prior to June 1 or after July 31, as that will help to protect young bats that may be in forested areas but are not yet able to fly.

Cup Plant - the state threatened cup plant (*Silphium perfoliatum*) has been known to occur in the area where near the intersection of S Huron Street in Section 16 T03S R07E. In Michigan, cut-plant is found in river floodplains in forest openings and edges. Recommended survey time ranges from first week of July to fourth week of October.

Management and Conservation: conserve hydrology of river system and corresponding cyclical floodplain regime. Maintain healthy intact, mature floodplain forests and minimize forest fragmentation. When possible, leave large tracts of unharvested forests and allow natural processes to operate unhindered.

Wayne County Section

NOTE: Michigan rivers and streams have been grouped according to existing information of mussel distribution and individual species conservation status. Sections of the Rouge River in this area are designated Group 2 mussel streams which means that state threatened or state endangered mussel species are expected to occur here and that certain surveys and possibly relocation procedures apply. The group number triggers the type of mussel survey protocols and relocation procedures that must be followed. I encourage you to review the ***Michigan Freshwater Mussel Survey Protocols and Relocation Procedures*** publication if in-stream work and/or land clearing activities occur that result in streambed disturbance and erosion and sedimentation into the river. A copy of the publication can be found at: https://mnfi.anr.msu.edu/resources/michigan-mussels

Rainbow – the state special concern rainbow (*Villosa iris*) has been known to occur in the Rouge River where the project is proposed to cross. This freshwater mussel occurs in coarse sand or gravel in small to medium streams.

Management and Conservation: like other mussels, threats to the rainbow include: natural flow alterations, siltation, channel disturbance, point and non-point source pollution, and exotic species. Maintenance or establishment of vegetated riparian buffers can help protect mussel habitats from many of their threats. Control of zebra mussels is critical to preserving native mussels. And as with all mussels, protection of their hosts habitat is also crucial.

Bald eagle - the state special concern bald eagle (*Haliaeetus leucocephalus*) has been known to nest near the project site in Sections 13 and 24 of T03S R08E. Bald eagle nests are usually located within ½ - mile of water and at the top of tall, established trees. These birds prefer forested habitats adjacent to the shorelines of lakes, large rivers, floodings, and other bodies of water where prey is available throughout the breeding season which runs from mid-March through the end of June. Live trees are generally preferred over dead ones. In Michigan, eagles arrive on nesting territories between mid-February and mid-March. Nesting pairs are usually faithful to previous nesting sites. By October and November, immature bald eagles and most adults move southward, with many remaining in Michigan throughout the winter.

Effective August 8, 2007, the bald eagle in the lower 48 States was **removed** from the Federal List of Endangered and Threatened Wildlife (Federal Register Vol. 72, No. 130; July 9, 2007) but are still protected under the Migratory Bird Treaty Act, the Lacey Act and the https://www.fws.gov/law/bald-and-golden-eagle-protection-act Bald and Golden Eagle Protection Act: which prohibits anyone from "taking" bald eagles, including their parts, eggs or nests.

Management and Conservation: bald eagles are extremely sensitive to human activity during the first 12 weeks of the breeding season. To help provide clarity on the management of bald eagles after delisting, the U.S. Fish and Wildlife Service (USFWS) published National Bald Eagle Management Guidelines in May 2007. These guidelines as well as other information regarding bald eagles can be viewed at the USFWS Midwest Bald Eagle page. The management guidelines were established to help people minimize harmful impacts, especially where they may constitute a "disturbance." A variety of human activities can potentially interfere with bald eagles, affecting their ability to forage, nest, roost, breed or raise young. A **permit** from USFWS is recommended if you are unable to minimize or prevent disturbance, injury of potential mortality of bald or golden eagles as a result of an otherwise lawful activity. For permit information in Michigan contact Ms. Jennifer Pruden, USFWS East Lansing Field Office, 2651 Coolidge Road, East Lansing, MI 48823, PH: 517-351-8316, or Jessica_Pruden@fws.gov.

Osprey - the state special concern osprey *(Pandion haliaetus)* has been observed nesting in the area in Section 23 of T03S R08E. Ospreys are most commonly found in forested regions near lakes, large rivers, and floodings. They will nest in snags, dead topped pines, tamaracks, and man-made platforms near bodies of water. They feed on fish caught in relatively clear rivers or lakes.

Management and Conservation: their past decline has been attributed to habitat loss, human intrusion, and chemical pollution. It is recommended that land altering activities not occur within 400 meters (1/4 mile) of an active nest(s) during the nesting season (March 15 to August 31). Impacts will be minimized if work is avoided during the nesting season. If the landowner wishes to provide nesting habitat for osprey, leaving supercanopy trees, both dead and alive, which have strong wide branches high up in the canopy would be useful.

Three-awned grass – the state threatened three-awned grass *(Aristida longespica)* has been known to occur near the project site in Section 12 of T03SR09E. Three-awned grass inhabits dry, sandy ground in fields, clearings, or prairies. Like other three-awn grasses, this species is an annual. It typically begins flowering in late August and fruits in September or October. Survey guidelines: random meander search covering areas that appear likely to have rare taxa, based on habitat and the judgement of the investigator.

Management and Conservation: this species requires conservation of habitat and protection of the hydrology, including maintenance of cyclical drawdown regime and water table. Maintain moist, open habitat. It is also vulnerable to ORV impacts and dredging and filling activities.

Cup Plant - the state threatened cup plant (*Silphium perfoliatum*) has been known to occur just north of the interstate in Section 30 of T02S R11E. In Michigan, cup plant is found in river floodplains in forest openings and edges. Recommended survey time ranges from first week of July to fourth week of October.

Management and Conservation: conserve hydrology of river system and corresponding cyclical floodplain regime. Maintain healthy intact, mature floodplain forests and minimize forest fragmentation. When possible, leave large tracts of unharvested forests and allow natural processes to operate unhindered.

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Section 7 Comments for Rare Species Review #3423
I-94 Corridor Project
WSP Golder Inc.
March 27, 2023

For projects involving Federal funding or a federal agency authorization

The following information is provided to assist you with Section 7 compliance of the Federal Endangered Species Act (ESA). The ESA directs all Federal agencies "to work to conserve endangered and threatened species. Section 7 of the ESA, called "Interagency Cooperation," is the means by which Federal agencies ensure their actions, including those they authorize or fund, do not jeopardize the existence of any listed species."

The project falls within the range of the following federally listed/proposed/candidate species which have been identified by the U.S. Fish and Wildlife Service (USFWS) to occur in Washtenaw County, Michigan:

Federally Endangered

Indiana bat – there does appear to be suitable habitat within our 1.5-mile search buffer. Indiana bats (*Myotis sodalis*) are found only in the eastern United States and are typically confined to the southern three tiers of counties in Michigan. Indiana bats that summer in Michigan winter in caves in Indiana and Kentucky. This species forms colonies and forages in riparian and mature floodplain habitats. Nursery roost sites are usually located under loose bark or in hollows of trees near riparian habitat. Indiana bats typically avoid houses or other artificial structures and typically roost underneath loose bark of dead elm, maple and ash trees. Other dead trees used include oak, hickory and cottonwood. Foraging typically occurs over slow-moving, wooded streams and rivers as well as in the canopy of mature trees. Movements may also extend into the outer edge of the floodplain and to nearby solitary trees. A summer colony's foraging area usually encompasses a stretch of stream over a half-mile in length. Upland areas isolated from floodplains and non-wooded streams are generally avoided.

Management and Conservation: **the suggested seasonal tree cutting range for Indiana bat is between October 1 and March 31 (i.e., no cutting April 1-September 30). This applies throughout the Indiana bat range in Michigan.**

Mitchell's satyr butterfly – there does not appear to be suitable habitat within our 1.5-mile search buffer. The Mitchell's satyr butterfly *(Neonympha mitchellii mitchellii)* is restricted to calcareous wetlands known as prairie fens. In Michigan, this habitat is characterized by scattered tamaracks, poison sumac, and dogwood with a ground cover of sedges, shrubby cinquefoil, and a variety of herbaceous species with prairie affinities. Adult Mitchell's satyr butterflies are active two to three weeks each summer, with males emerging before females. Adult flight dates are from mid-June to mid-July. Larvae hibernate near the bottom of a sedge. The larval food plant is thought to be several species of sedge. The caterpillar is green with white stripes.

Conservation & Management: the primary threat to the continued survival of this species is habitat loss and modification. Many of the wetland complexes occupied currently have been altered or drained for agriculture or development. Wetland alteration is responsible for extirpating the single known satyr population in Ohio. Wetland alteration also can lead to invasion by exotic plant species such as glossy buckthorn (*Rhamnus frangula*), purple loosestrife (*Lythrum salicaria*), common buckthorn (*Rhamnus cathartica*), and the common reed (*Phragmites australis*). In addition, landscape-scale processes that may be important for maintaining suitable satyr habitat and/or creating new habitat, such as wildfires, fluctuations in hydrologic regimes, and flooding from beaver (*Castor canadensis*) activity, have been virtually eliminated or altered throughout the species' range.

Rayed bean mussel – there appears to be suitable habitat within our 1.5-mile search buffer. The federally and state endangered rayed bean mussel *(Villosa fabalis)* is found in fine mud substrates and riffles among roots of aquatic vegetation. Limits of the breeding season are not known but gravid specimens have been found in May.

Conservation and Management: like other mussels, threats to the rayed bean include: natural flow alterations, siltation, channel disturbance, point and non-point source pollution, and exotic species. Maintenance or establishment of vegetated riparian buffers can help protect mussel habitats from many of their threats. Control of zebra mussels is critical to preserving native mussels. And as with all mussels, protection of their hosts habitat is also crucial.

Northern riffleshell – there does appear to be suitable habitat within our 1.5-mile search buffer. The northern riffleshell *(Epioblasma torulosa-angiana)* mussel inhabits medium to large rivers in gravel riffles, where the water is highly oxygenated. This species was formerly widespread in the Midwest, but it has declined in range by more than 95% and now exists in only eight to ten isolated populations, most of which are small and peripheral.

Conservation and Management: members of the genus *Epioblasma* seem to be particularly sensitive to impacts from impoundment, which include population fragmentation and streamflow alteration. Other threats include habitat destruction (e.g. channelization, dredging, bulkheading), exotic species introductions, siltation, pollution, and modified streamflows due to wetland loss, dam operation, and intensive landscape modification. The other two subspecies of *E. torulosa*, *E. torulosa torulosa* and *E. torulosa gubernaculum*, appear to have already gone extinct due to modification and degradation of river systems.

Snuffbox mussel – there does appear to be suitable habitat within our 1.5-mile search buffer. The state and federally endangered snuffbox mussel (*Epioblasma triquetra*) inhabits rivers and streams with cobble, gravel, or sand bottoms in swift currents and usually is deeply buried in the substrate. Glochidia, the parasitic larval stage of the mussel, are released from May to mid-July. In Michigan, the only host fish known for snuffbox is the log perch (*Percina caprodes*). In other parts of their range the banded sculpin (*Cottus carolinae*) is also a known host. After completing the parasitic stage and reaching adulthood, snuffbox remain relatively sessile on the river bottom, living between 8-10 years. The best time to survey for snuffbox is April through September.

Management and Conservation: the snuffbox mussel is sensitive to river impoundment, siltation, and disturbance, due to its requirement for clean, swift current and relative immobility as an adult. To maintain the current populations in Michigan, rivers need to be protected to reduce silt loading and run-off. Maintaining or establishing vegetated riparian buffers can aid in controlling many of the threats to mussels. Control of zebra mussels is critical to preserving native mussels. And as with all mussels, protection of their hosts habitat is also crucial. Because the life cycle of the snuffbox is inherently linked with that of the logperch in Michigan, conservation and management of this fish species is needed to ensure that of the snuffbox.

Poweshiek skipperling – there does not appear to be suitable habitat within our 1.5-mile search buffer. The state and federally endangered poweshiek skipperling *(Oarisma poweshiek)* inhabits alkaline wetlands known as fens. This habitat is characterized by scattered tamaracks, poison sumac, and dogwood clones with a ground cover of sedges and other herbaceous species. The poweshiek skipper has a single generation each year. Egg laying is believed to occur on sedges and rushes. Eggs are laid sometime around early July; larvae (caterpillar stage) hibernate through the winter on the underside of the blade of grass on which they have been feeding on. In early April, they resume feeding. Adult flight dates occur late June through the first three weeks of July.

Management and Conservation: the primary threat to the continued survival of this species is habitat loss and modification. Many of the wetland complexes occupied currently have been altered or drained for agriculture or development. Wetland alteration also can lead to invasion by exotic plant species such as glossy buckthorn (*Rhamnus frangula*), purple loosestrife (*Lythrum salicaria*), common buckthorn (*Rhamnus cathartica*), and the common reed (*Phragmites australis*). In addition, landscape-scale processes that may be important for maintaining suitable poweshiek habitat and/or creating new habitat, such as wildfires, fluctuations in hydrologic regimes, and flooding from beaver (*Castor canadensis*) activity, have been virtually eliminated or altered throughout the species' range. The widespread use of neonicotinoid pesticides could be a cause for the decline in this species as most sites are adjacent to, or downslope from, row crop agriculture.

Federally Threatened

Northern long-eared bat – there appears to be suitable habitat within our 1.5-mile search buffer and there is a known occurrence in the area (See Response Letter). In addition, this activity occurs within the designated WNS zone (i.e., within 150 miles of positive counties/districts impacted by WNS.

Northern long-eared bat (*Myotis septentrionalis*) numbers in the northeast US have declined up to 99 percent. Loss or degradation of summer habitat, wind turbines, disturbance to hibernacula, predation, and pesticides have contributed to declines in Northern long-eared bat populations. However, no other threat has been as severe to the decline as White-nose Syndrome (WNS). WNS is a fungus that thrives in the cold, damp conditions in caves and mines where bats hibernate. The disease is believed to disrupt the hibernation cycle by causing bats to repeatedly awake thereby depleting vital energy reserves. This species was federally listed in May 2015 primarily due to the threat from WNS.

Also called northern bat or northern myotis, this bat is distinguished from other *Myotis* species by its long ears. In Michigan, northern long-eared bats hibernate in abandoned mines and caves in the Upper Peninsula; they also commonly hibernate in the Tippy Dam spillway in Manistee County. This species is a regional migrant with migratory distance largely determined by locations of suitable hibernacula sites.

Northern long-eared bats typically roost and forage in forested areas. During the summer, these bats roost singly or in colonies underneath bark, in cavities or in crevices of both living and dead trees. These bats seem to select roost trees based on suitability to retain bark or provide cavities or crevices. Common roost trees in southern lower Michigan included species of ash, elm and maple. Foraging occurs primarily in areas along woodland edges, woodland clearings and over small woodland ponds. Moths, beetles and small flies are common food items. Like all temperate bats this species typically produces only 1-2 young per year.

Management and Conservation: **we encourage you to conduct tree-cutting activities and prescribed burns in forested areas during October 1 through March 31. When that is not possible, remove trees prior to June 1 or after July 31, to help protect young bats that may be in forested areas but are not yet able to fly.**

Eastern massasauga rattlesnake (EMR) – this project **falls outside** EMR Tier habitat as designated by the US Fish and Wildlife Service. The federally threatened and state special concern Eastern massasauga rattlesnake *(Sistrurus catenatus)* is Michigan's only venomous snake and is found in a variety of wetland habitats including bogs, fens, shrub swamps, wet meadows, marshes, moist grasslands, wet prairies, and floodplain forests. Eastern massasaugas occur throughout the Lower Peninsula but are not found in the Upper Peninsula. Populations in southern Michigan are typically associated with open wetlands, particularly prairie fens, while those in northern Michigan are better known from lowland coniferous forests, such as cedar swamps. These snakes normally overwinter in crayfish or small mammal burrows often close to the groundwater level and emerge in spring as water levels rise. During late spring, these snakes move into adjacent uplands they spend the warmer months foraging in shrubby fields and grasslands in search of mice and voles, their favorite food.

Often described as "shy and sluggish", these snakes avoid human confrontation and are not prone to strike, preferring to leave the area when they are threatened. However, like any wild animal, they will protect themselves from anything they see as a potential predator. Their short fangs can easily puncture skin and they do possess potent venom. Like many snakes, the first human reaction may be to kill the snake, but it is important to remember that all snakes play vital roles in the ecosystem. Some may eat harmful insects. Others like the massasauga consider rodents a delicacy and help control their population. Snakes are also a part of a larger food web and can provide food to eagles, herons, and several mammals.

Management and Conservation: protection of extant populations and suitable wetland and adjacent upland habitats is crucial for successful conservation of the Eastern Massasauga. Maintaining or restoring open habitat conditions is critical for this species. Fragmentation of suitable wetland-upland habitat complexes by roads or other barriers should be avoided or minimized. Land management practices such as timber harvesting, mowing, disking, or prescribed burning should be conducted in such a manner so as to minimize the potential for adverse impacts to massasaugas (e.g.,

conducting management activities during the snakes' inactive season (November through early March) or on days when snakes are less likely to be active on the surface during the active season). Protecting suitable hibernation sites also is critical. Hydrological alterations such as drawdowns should be conducted prior to or after hibernation to reduce the potential for causing winter mortality due to desiccation or freezing. Sudden and/or permanent increases or decreases in water levels during the active season also can cause adverse impacts.

Candidate Species

Monarch Butterfly (*Danaus plexipuss*) on December 15, 2020, the U.S. Fish and Wildlife Service announced that listing the monarch as endangered or threatened under the Endangered Species Act is warranted but precluded by higher priority listing actions. The decision is the result of an extensive status review of the monarch that compiled and assessed the monarch's current and future status. The monarch is now a candidate under the Endangered Species Act; we will review its status annually until a listing decision is made.

Management and Conservation: neither section 7 of the Endangered Species Act nor the implementing regulations for section 7 contain requirements for federal agencies with respect to candidate species. Habitat loss and fragmentation has occurred throughout the monarch's range. Pesticide use can destroy the milkweed monarchs need to survive. A changing climate has intensified weather events which may impact monarch populations.

USFWS Section 7 Consultation Technical Assistance can be found at:

https://www.fws.gov/service/esa-section-7-consultation

The website offers step-by-step instructions to guide you through the Section 7 consultation process with prepared templates for documenting "no effect." as well as requesting concurrence on "may affect, but not likely to adversely affect" determinations.

Please let us know if you have questions.

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Michigan Natural Features Inventory
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Section 7 Comments for Rare Species Review #3423
I-94 Corridor Project
WSP Golder Inc.
March 27, 2023

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For projects involving Federal funding or a federal agency authorization

The following information is provided to assist you with Section 7 compliance of the Federal Endangered Species Act (ESA). The ESA directs all Federal agencies "to work to conserve endangered and threatened species. Section 7 of the ESA, called "Interagency Cooperation," is the means by which Federal agencies ensure their actions, including those they authorize or fund, do not jeopardize the existence of any listed species."

The project falls within the range of the following federally listed/proposed/candidate species which have been identified by the U.S. Fish and Wildlife Service (USFWS) to occur in Wayne County, Michigan:

Federally Endangered

Indiana bat – there appears to be suitable habitat within the 1.5-mile search buffer. Indiana bats (*Myotis sodalis*) are found only in the eastern United States and are typically confined to the southern three tiers of counties in Michigan. Indiana bats that summer in Michigan winter in caves in Indiana and Kentucky. This species forms colonies and forages in riparian and mature floodplain habitats. Nursery roost sites are usually located under loose bark or in hollows of trees near riparian habitat. Indiana bats typically avoid houses or other artificial structures and typically roost underneath loose bark of dead elm, maple and ash trees. Other dead trees used include oak, hickory and cottonwood. Foraging typically occurs over slow-moving, wooded streams and rivers as well as in the canopy of mature trees. Movements may also extend into the outer edge of the floodplain and to nearby solitary trees. A summer colony's foraging area usually encompasses a stretch of stream over a half-mile in length. Upland areas isolated from floodplains and non-wooded streams are generally avoided.

Management and Conservation: the suggested seasonal tree cutting range for Indiana bat is between October 1 and March 31 (i.e., no cutting April 1-September 30). This applies throughout the Indiana bat range in Michigan.

Mitchell's satyr butterfly - there does not appear to be suitable habitat within the 1.5-mile search buffer. The federally and state endangered Mitchell's satyr butterfly *(Neonympha mitchellii mitchellii)* is restricted to calcareous wetlands known as prairie fens. In Michigan, this habitat is characterized by scattered tamaracks, poison sumac, and dogwood with a ground cover of sedges, shrubby cinquefoil, and a variety of herbaceous species with prairie affinities. Adult Mitchell's satyr butterflies are active two to three weeks each summer, with males emerging before females. Adult flight dates are from mid-June to mid-July. Larvae hibernate near the bottom of a sedge. The larval food plant is thought to be several species of sedge. The caterpillar is green with white stripes.

Management and Conservation: the primary threat to the continued survival of this species is habitat loss and modification. Many of the wetland complexes occupied currently have been altered or drained for agriculture or development. Wetland alteration is responsible for extirpating the single known satyr population in Ohio. Wetland alteration also can lead to invasion by exotic plant species such as glossy buckthorn (*Rhamnus frangula*), purple loosestrife (*Lythrum salicaria*), common buckthorn (*Rhamnus cathartica*), and the common reed (*Phragmites australis*). In addition, landscape-scale processes that may be important for maintaining suitable satyr habitat and/or creating new habitat, such as wildfires, fluctuations in hydrologic regimes, and flooding from beaver (*Castor canadensis*) activity, have been virtually eliminated or altered throughout the species' range

Piping plover - there does not appear to be suitable habitat within the 1.5-mile search buffer. In the Great Lakes region, the federally and state endangered piping plover *(Charadrius melodus)* prefers to nest and forage on sparse or non-

vegetated sand-pebble beaches with less than 5% vegetative cover. Nests are simple depressions in the sand are generally placed in level areas between the water's edge and the first dune. Associated bodies of water and interdunal wetlands enhance these areas by increasing food availability. Optimal foraging areas are especially crucial along Lake Superior, where shoreline and benthic invertebrate communities are known to be naturally sparse. While feeding, open shoreline is preferred to vegetated beach areas. Piping plovers begin arriving in mid- to late-April. The nesting season is under way by mid-May and lasts until mid-August.

Management and Conservation - this species is declining throughout the Midwest due to habitat destruction and disturbance. The nests are simple depressions in the sand and are difficult to see. People walking on the beach may inadvertently destroy nests. Dogs on the beach can be especially dangerous for chicks and adults. Piping plovers are protected under the Federal Endangered Species Act and are very sensitive to human disturbance. Please avoid activity along the shoreline in this compartment between May and September.

Snuffbox – there appears to be suitable habitat within the 1.5-mile search buffer. The federally and state endangered snuffbox mussel (*Epioblasma triquetra)* inhabits rivers and streams with cobble, gravel, or sand bottoms in swift currents and usually is deeply buried in the substrate. Freshwater mussels require a fish host to complete their life cycle. Eggs are fertilized and develop into larvae within the gills of the female mussel. These larvae, called glochidia, are released into the water and must attach to a suitable fish host to survive and transform into the adult mussel. In Michigan, the only host fish known for snuffbox is the log perch (*Percina caprodes*). In other parts of their range the banded sculpin (*Cottus carolinae*) is also a known host. After completing the parasitic stage and reaching adulthood, this mussel remains relatively sessile on the river bottom, living between 8-10 years. The best time to survey for snuffbox is April through September.

Management and Conservation: this mussel is sensitive to river impoundment, siltation and disturbance, due to its requirement for clean, swift current and relative immobility as an adult. To maintain the current populations in Michigan, rivers need to be protected to reduce silt loading and run-off. Maintaining or establishing vegetated riparian buffers can aid in controlling many of the threats to mussels. Control of zebra mussels is critical to preserving native mussels. And as with all mussels, protection of their hosts habitat is also crucial. Because the life cycle of the snuffbox is inherently linked with that of the logperch in Michigan, conservation and management of this fish species is needed to ensure that of the snuffbox.

Northern riffleshell – there appears to be suitable habitat within the 1.5-mile search buffer. The federal and state endangered northern riffleshell *(Epioblasma torulosa rangiana)* mussel inhabits medium to large rivers in gravel riffles, where the water is highly oxygenated. This species was formerly widespread in the Midwest, but it has declined in range by more than 95% and now exists in only eight to ten isolated populations, most of which are small and peripheral.

Conservation and Management: members of the genus *Epioblasma* seem to be particularly sensitive to impacts from impoundment, which include population fragmentation and streamflow alteration. Other threats include habitat destruction (e.g. channelization, dredging, bulkheading), exotic species introductions, siltation, pollution, and modified streamflows due to wetland loss, dam operation, and intensive landscape modification. The other two subspecies of *E. torulosa*, *E. torulosa torulosa* and *E. torulosa gubernaculum*, appear to have already gone extinct due to modification and degradation of river systems.

Rayed bean mussel – there appears to be suitable habitat within the 1.5-mile search buffer. The federally and state endangered rayed bean mussel *(Villosa fabalis)* occurs in fine mud substrates and riffles among roots of aquatic vegetation. Limits of the breeding season are not known but gravid specimens have been found in May.

Management and Conservation: like other mussels, threats to the rayed bean include: natural flow alterations, siltation, channel disturbance, point and non-point source pollution, and exotic species. Maintenance or establishment of vegetated riparian buffers can help protect mussel habitats from many of their threats. Control of zebra mussels is critical to preserving native mussels. And as with all mussels, protection of their hosts habitat is also crucial.

Karner blue butterfly - there does not appear to be suitable habitat within 1.5 miles of the project area. The federally endangered and state threatened Karner blue butterfly *(Lycaeides melissa samuelis)* was historically found in open-canopied barrens communities, including oak and oak-pine savanna or barrens found prior to European settlement. Since their historical habitat suffers from fire suppression efforts, the butterfly often occurs in openings, old fields, and rights-of-way. Karner blue larvae feed exclusively on wild lupine (*Lupinus perennis*), an early successional species that can become abundant after appropriate disturbances. Adults visit a wide variety of flowering plants for nectar.

The Karner blue has two generations per year, with the later, or summer, generation typically having three to four times the number of adults as the earlier, or spring, brood. Adults are active most of the day, decreasing activity during midday and during cool, rainy weather. Females can live up to two weeks in the field, but typically live an average of five days. Peak flight dates are mid-May through early June and mid-July through early August, with stragglers found between.

Management and Conservation: recommendations for management of Karner blue butterfly habitat will be pertinent only if the host plant, wild lupine (*Lupinus perennis*) is present. If lupine is present the following guidelines should be followed: (1) mower blades should be set no lower than 6 inches; (2) mowing should not occur before August 15th (i.e. no spring mowing at all!); (3) no burning of habitat where lupine exists, and (4) contact us if planting or logging will occur in lupine areas.

Federally Threatened

Northern long-eared bat - Northern long-eared bat (*M. septentrionalis*) numbers in the northeast US have declined up to 99 percent. Loss or degradation of summer habitat, wind turbines, disturbance to hibernacula, predation, and pesticides have contributed to declines in Northern long-eared bat populations. However, no other threat has been as severe to the decline as White-nose Syndrome (WNS). WNS is a fungus that thrives in the cold, damp conditions in caves and mines where bats hibernate. The disease is believed to disrupt the hibernation cycle by causing bats to repeatedly awake thereby depleting vital energy reserves. This species was federally listed in May 2015 primarily due to the threat from WNS.

Although no known hibernacula or roost trees have been documented within 1.5 miles of the project site, this activity occurs within the designated WNS zone (i.e., within 150 miles of positive counties/districts impacted by WNS. Also, there appears to be suitable habitat within the 1.5-mile search buffer.

Also called northern bat or northern myotis, this bat is distinguished from other *Myotis* species by its long ears. In Michigan, northern long-eared bats hibernate in abandoned mines and caves in the Upper Peninsula; they also commonly hibernate in the Tippy Dam spillway in Manistee County. This species is a regional migrant with migratory distance largely determined by locations of suitable hibernacula sites.

Northern long-eared bats typically roost and forage in forested areas. During the summer, these bats roost singly or in colonies underneath bark, in cavities or in crevices of both living and dead trees. Roost trees are selected based on the suitability to retain bark or provide cavities or crevices. Common roost trees in southern Lower Michigan include species of ash, elm and maple. Foraging occurs primarily in areas along woodland edges, woodland clearings and over small woodland ponds. Moths, beetles, and small flies are common food items. Like all temperate bats this species typically produces only 1-2 young per year.

Management and Conservation: when there are no known roost trees or hibernacula in the project area, we encourage you to conduct tree-cutting activities and prescribed burns in forested areas during October 1 through March 31. When that is not possible, we encourage you to remove trees prior to June 1 or after July 31, as that will help to protect young bats that may be in forested areas but are not yet able to fly.

Rufa red knot – there does not appear to be suitable habitat within the 1.5-mile search buffer. The federally threatened rufa red knot (*Calidris canutus rufa*) is one of the longest-distance migrants in the animal kingdom, flying some 18,000 miles annually between its breeding grounds in the Canadian Arctic to the wintering grounds at the southern-most tip of South America. Primarily occurring along the Atlantic and Gulf coasts, small groups of this shorebird regularly use the

interior of the United States such as the Great Lakes during the annual migration. The Great Lakes shorelines provide vital stopover habitat for resting and refueling during their long annual journey.

The largest concentration of rufa red knots is found in May in Delaware Bay, where the birds stop to gorge on the eggs of spawning horseshoe crabs; a spectacle attracting thousands of birdwatchers to the area. In just a few days, the birds nearly double their weight to prepare for the final leg of their long journey to the Arctic. This species may be especially vulnerable to climate change which affects coastal habitats due to rising sea levels.

Management and Conservation: applies to actions that occur along coastal areas during the Red Knot migratory window of MAY 1 - SEPTEMBER 30.

Eastern massasauga rattlesnake (EMR) – this activity **falls outside** of EMR Tier habitat as designated by the US Fish & Wildlife Service. The federally threatened and state special concern eastern massasauga rattlesnake *(Sistrurus catenatus)* is Michigan's only venomous snake and is found in a variety of wetland habitats including bogs, fens, shrub swamps, wet meadows, marshes, moist grasslands, wet prairies, and floodplain forests. Eastern massasaugas occur throughout the Lower Peninsula but are not found in the Upper Peninsula. Populations in southern Michigan are typically associated with open wetlands, particularly prairie fens, while those in northern Michigan are better known from lowland coniferous forests, such as cedar swamps. These snakes normally overwinter in crayfish or small mammal burrows often close to the groundwater level and emerge in spring as water levels rise. During late spring, these snakes move into adjacent uplands they spend the warmer months foraging in shrubby fields and grasslands in search of mice and voles, their favorite food.

Often described as "shy and sluggish", these snakes avoid human confrontation and are not prone to strike, preferring to leave the area when they are threatened. However, like any wild animal, they will protect themselves from anything they see as a potential predator. Their short fangs can easily puncture skin and they do possess potent venom. Like many snakes, the first human reaction may be to kill the snake, but it is important to remember that all snakes play vital roles in the ecosystem. Some may eat harmful insects. Others like the massasauga consider rodents a delicacy and help control their population. Snakes are also a part of a larger food web and can provide food to eagles, herons, and several mammals.

Management and Conservation: protection of extant populations and suitable wetland and adjacent upland habitats is crucial for successful conservation of the Eastern Massasauga. Maintaining or restoring open habitat conditions is critical for this species. Fragmentation of suitable wetland-upland habitat complexes by roads or other barriers should be avoided or minimized. Land management practices such as timber harvesting, mowing, disking, or prescribed burning should be conducted in such a manner so as to minimize the potential for adverse impacts to massasaugas (e.g., conducting management activities during the snakes' inactive season (November through early March) or on days when snakes are less likely to be active on the surface during the active season). Protecting suitable hibernation sites also is critical. Hydrological alterations such as drawdowns should be conducted prior to or after hibernation to reduce the potential for causing winter mortality due to desiccation or freezing. Sudden and/or permanent increases or decreases in water levels during the active season also can cause adverse impacts.

Candidate Species

Monarch Butterfly (*Danaus plexipuss*) on December 15, 2020, the U.S. Fish and Wildlife Service announced that listing the monarch as endangered or threatened under the Endangered Species Act is warranted but precluded by higher priority listing actions. The decision is the result of an extensive status review of the monarch that compiled and assessed the monarch's current and future status. The monarch is now a candidate under the Endangered Species Act; we will review its status annually until a listing decision is made.

Management and Conservation: neither section 7 of the Endangered Species Act nor the implementing regulations for section 7 contain requirements for federal agencies with respect to candidate species. Habitat loss and fragmentation has occurred throughout the monarch's range. Pesticide use can destroy the milkweed monarchs need to survive. A changing climate has intensified weather events which may impact monarch populations.

USFWS Section 7 Consultation Technical Assistance can be found at:

https://www.fws.gov/service/esa-section-7-consultation

The website offers step-by-step instructions to guide you through the Section 7 consultation process with prepared templates for documenting “no effect.” as well as requesting concurrence on "may affect, but not likely to adversely affect" determinations.

Please let us know if you have questions.

Michael Sanders
Environmental Review Specialist/Zoologist
Michigan Natural Features Inventory
Sander75@msu.edu

APPENDIX

B IPaC Review Results

IPaC **U.S. Fish & Wildlife Service**

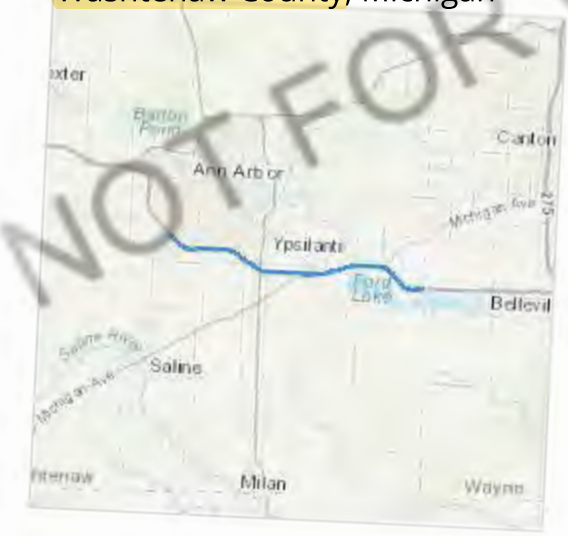
IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly a ected by activities in the project area. However, determining the likelihood and extent of e ects a project may have on trust resources typically requires gathering additional site-speci c (e.g., vegetation/species surveys) and project-speci c (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS o ce(s) with jurisdiction in the de ned project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Washtenaw County, Michigan



Local office

Michigan Ecological Services Field O ce

(517) 351-2555
(517) 351-1443

2651 Coolidge Road Suite 101

2651 Coolidge Road Suite 101
East Lansing, MI 48823-6360

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of in uence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly a ected by activities in that area (e.g., placing a dam upstream of a sh population even if that sh does not occur at the dam site, may indirectly impact the species by reducing or eliminating water ow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential e ects to species, additional site-speci c and project-speci c information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local o ce and a species list which ful lls this requirement can **only** be obtained by requesting an o cial species list from either the Regulatory Review section in IPaC (see directions below) or from the local eld o ce directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an o cial species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the sheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).

2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an o ce of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially a ected by activities in this location:

Mammals

NAME	STATUS
Indiana Bat Myotis sodalis Wherever found There is **nal** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/5949	Endangered
Northern Long-eared Bat Myotis septentrionalis Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9045	Endangered
Tricolored Bat Perimyotis subflavus Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/10515	Proposed Endangered

Birds

NAME	STATUS
Piping Plover Charadrius melodus There is **nal** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/6039	Endangered
Red Knot Calidris canutus rufa Wherever found This species only needs to be considered if the following condition applies: • Only actions that occur along coastal areas during the Red Knot migratory window of MAY 1 - SEPTEMBER 30. There is **proposed** critical habitat for this species. https://ecos.fws.gov/ecp/species/1864	Threatened

Whooping Crane Grus americana EXPN

No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/758

Reptiles

NAME	STATUS

Eastern Massasauga (=rattlesnake) Sistrurus catenatus Threatened

Wherever found

This species only needs to be considered if the following condition applies:

- For all Projects: Project is within EMR Range

No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/2202

Clams

NAME	STATUS

Northern Ri eshell Epioblasma rangiana Endangered

Wherever found

No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/527

Snu box Mussel Epioblasma triquetra Endangered

Wherever found

No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/4135

Insects

NAME	STATUS

Mitchell's Satyr Butter y Neonympha mitchellii mitchellii Endangered

Wherever found

No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/8062

Monarch Butter y Danaus plexippus Candidate

Wherever found

No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/9743

Flowering Plants

NAME	STATUS
Eastern Prairie Fringed Orchid Platanthera leucophaea Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/601	Threatened

Critical habitats

Potential e ects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

You are still required to determine if your project(s) may have e ects on all above listed species.

Bald & Golden Eagles

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act.

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats, should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

Additional information can be found using the following links:

- Eagle Managment https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/ les/documents/nationwide-standard-conservation-measures.pdf

There are bald and/or golden eagles in your project area.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list,click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle Haliaeetus leucocephalus This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in o shore areas from certain types of development or activities.	Breeds Oct 15 to Aug 31
Golden Eagle Aquila chrysaetos This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in o shore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds elsewhere

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence ( )

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey e ort (see below) can be used to establish a level of con dence in the presence score. One can have higher con dence in the presence score if the corresponding survey e ort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum

probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

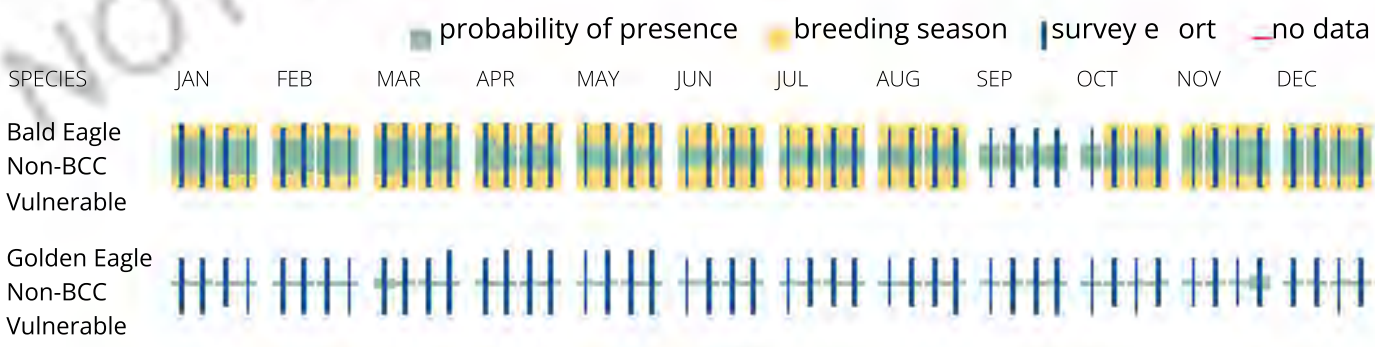
Breeding Season ( )
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort ( )
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey e ort range, simply hover your mouse cursor over the bar.

No Data ( )
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas o the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



What does IPaC use to generate the potential presence of bald and golden eagles in my speci ed location?

The potential for eagle presence is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and ltered to return a list of those birds reported as occurring in the 10km grid cell(s) which

your project intersects, and that have been identi ed as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply). To see a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs of bald and golden eagles in my speci ed location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and ltered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identi ed as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to o shore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur. Please contact your local Fish and Wildlife Service Field O ce if you have questions.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern https://www.fws.gov/program/migratory-birds/species
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/ les/documents/nationwide-standard-conservation-

measures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
American Golden-plover Pluvialis dominica This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Bald Eagle Haliaeetus leucocephalus This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Oct 15 to Aug 31
Black Tern Chlidonias niger This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3093	Breeds May 15 to Aug 20
Black-billed Cuckoo Coccyzus erythropthalmus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9399	Breeds May 15 to Oct 10
Bobolink Dolichonyx oryzivorus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 20 to Jul 31

Canada Warbler Cardellina canadensis — Breeds May 20 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Cerulean Warbler Dendroica cerulea — Breeds Apr 21 to Jul 20
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/2974

Chimney Swift Chaetura pelagica — Breeds Mar 15 to Aug 25
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Eastern Whip-poor-will Antrostomus vociferus — Breeds May 1 to Aug 20
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Golden Eagle Aquila chrysaetos — Breeds elsewhere
This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in o shore areas from certain types of development or activities.
https://ecos.fws.gov/ecp/species/1680

Golden-winged Warbler Vermivora chrysoptera — Breeds May 1 to Jul 20
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/8745

Henslow's Sparrow Ammodramus henslowii — Breeds May 1 to Aug 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3941

Kentucky Warbler Oporornis formosus — Breeds Apr 20 to Aug 20
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Kirtland's Warbler Setophaga kirtlandii — Breeds May 25 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/8078

Lesser Yellowlegs Tringa flavipes This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679	Breeds elsewhere
Long-eared Owl asio otus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3631	Breeds Mar 1 to Jul 15
Prothonotary Warbler Protonotaria citrea This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 1 to Jul 31
Red-headed Woodpecker Melanerpes erythrocephalus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Sep 10
Rusty Blackbird Euphagus carolinus This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds elsewhere
Short-billed Dowitcher Limnodromus griseus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9480	Breeds elsewhere
Upland Sandpiper Bartramia longicauda This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9294	Breeds May 1 to Aug 31
Wood Thrush Hylocichla mustelina This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Aug 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence ( )

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey e ort (see below) can be used to establish a level of con dence in the presence score. One can have higher con dence in the presence score if the corresponding survey e ort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season ( )

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort ( )

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey e ort range, simply hover your mouse cursor over the bar.

No Data ( )

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas o the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more

sparse.

Golden-winged Warbler BCC Rangewide (CON)

Henslow's Sparrow BCC Rangewide (CON)

SPECIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC

Kentucky Warbler BCC Rangewide (CON)

Kirtland's Warbler BCC Rangewide (CON)

Lesser Yellowlegs BCC Rangewide (CON)

Long-eared Owl BCC Rangewide (CON)

Prothonotary Warbler BCC Rangewide (CON)

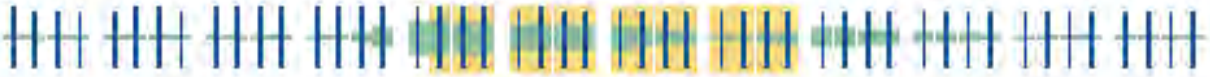
Red-headed Woodpecker BCC Rangewide (CON)

Rusty Blackbird BCC - BCR

Short-billed Dowitcher BCC Rangewide (CON)

Upland Sandpiper BCC - BCR

Wood Thrush BCC Rangewide (CON)



Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my speci ed location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and ltered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identi ed as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to o shore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my speci ed location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the RAIL Tool and look at the range maps provided for birds in your area at the bottom of the pro les provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe speci ed. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Paci c Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in o shore areas from certain types of development or activities (e.g. o shore energy development or longline shing).

Although it is important to try to avoid and minimize impacts to all birds, e orts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially a ected by o shore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area o the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also o ers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results les underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the

migratory birds potentially occurring in my speci ed location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey e ort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey e ort is the key component. If the survey e ort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey e ort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to con rm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be con rmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no sh hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER EMERGENT WETLAND

PEM1F

RIVERINE

R2UBH
R5UBFx
R5UBH

A full description for each wetland code can be found at the National Wetlands Inventory website

NOTE: This initial screening does **not** replace an on-site delineation to determine whether wetlands occur. Additional information on the NWI data is provided below.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identi ed based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classi cation established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth veri cation work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or eld work. There may be occasional di erences in polygon boundaries or classi cations between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuber cid worm reefs) have also

been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may de ne and describe wetlands in a di erent manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to de ne the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modi cations within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning speci ed agency regulatory programs and proprietary jurisdictions that may a ect such activities.

IPaC **U.S. Fish & Wildlife Service**

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly a ected by activities in the project area. However, determining the likelihood and extent of e ects a project may have on trust resources typically requires gathering additional site-speci c (e.g., vegetation/species surveys) and project-speci c (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS o ce(s) with jurisdiction in the de ned project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Wayne County, Michigan

Local office

Michigan Ecological Services Field O ce

(517) 351-2555
(517) 351-1443

2651 Coolidge Road Suite 101

2651 Coolidge Road Suite 101
East Lansing, MI 48823-6360

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of in uence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly a ected by activities in that area (e.g., placing a dam upstream of a sh population even if that sh does not occur at the dam site, may indirectly impact the species by reducing or eliminating water ow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential e ects to species, additional site-speci c and project-speci c information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local o ce and a species list which ful lls this requirement can **only** be obtained by requesting an o cial species list from either the Regulatory Review section in IPaC (see directions below) or from the local eld o ce directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an o cial species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the sheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).

2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an o ce of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially a ected by activities in this location:

Mammals

NAME	STATUS
Indiana Bat Myotis sodalis Wherever found There is **nal** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/5949	Endangered
Northern Long-eared Bat Myotis septentrionalis Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9045	Endangered
Tricolored Bat Perimyotis subflavus Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/10515	Proposed Endangered

Birds

NAME	STATUS
Piping Plover Charadrius melodus There is **nal** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/6039	Endangered
Red Knot Calidris canutus rufa Wherever found This species only needs to be considered if the following condition applies: • Only actions that occur along coastal areas during the Red Knot migratory window of MAY 1 - SEPTEMBER 30. There is **proposed** critical habitat for this species. https://ecos.fws.gov/ecp/species/1864	Threatened

Whooping Crane Grus americana EXPN

No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/758

Reptiles

NAME	STATUS

Eastern Massasauga (=rattlesnake) Sistrurus catenatus Threatened

Wherever found

This species only needs to be considered if the following condition applies:

- For all Projects: Project is within EMR Range

No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/2202

Clams

NAME	STATUS

Northern Ri eshell Epioblasma rangiana Endangered

Wherever found

No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/527

Snu box Mussel Epioblasma triquetra Endangered

Wherever found

No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/4135

Insects

NAME	STATUS

Monarch Butter y Danaus plexippus Candidate

Wherever found

No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/9743

Flowering Plants

NAME	STATUS

Eastern Prairie Fringed Orchid Platanthera leucophaea Threatened
Wherever found
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/601

Critical habitats

Potential e ects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

You are still required to determine if your project(s) may have e ects on all above listed species.

Bald & Golden Eagles

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act.

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats, should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

Additional information can be found using the following links:

- Eagle Managment https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/ les/documents/nationwide-standard-conservation-measures.pdf

There are bald and/or golden eagles in your project area.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list,click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in o shore areas from certain types of development or activities.	Breeds Dec 1 to Aug 31
Golden Eagle *Aquila chrysaetos* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in o shore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds elsewhere

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence ( )

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey e ort (see below) can be used to establish a level of con dence in the presence score. One can have higher con dence in the presence score if the corresponding survey e ort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

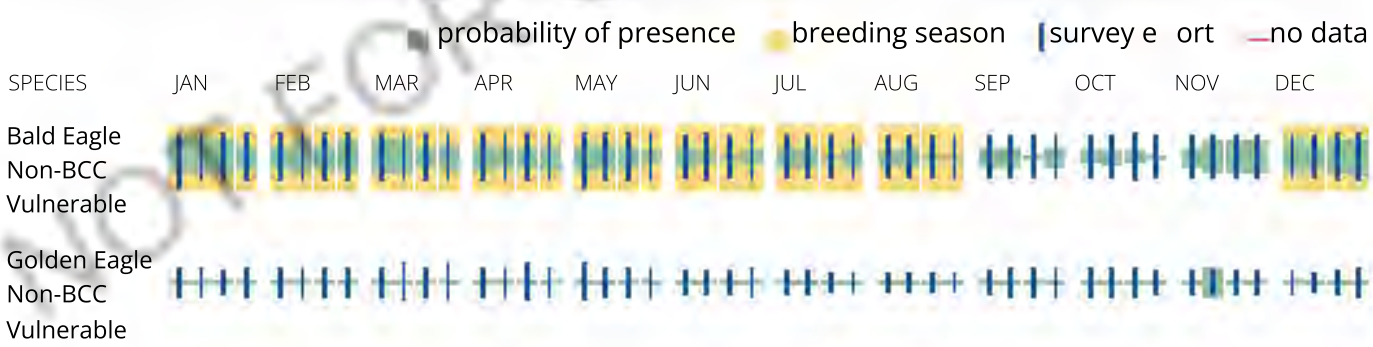
Breeding Season ( )
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort ( )
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey e ort range, simply hover your mouse cursor over the bar.

No Data ( )
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas o the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



What does IPaC use to generate the potential presence of bald and golden eagles in my speci ed location?

The potential for eagle presence is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and ltered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identi ed as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply). To see a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs of bald and golden eagles in my speci ed location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur. Please contact your local Fish and Wildlife Service Field Office if you have questions.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern https://www.fws.gov/program/migratory-birds/species
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To

see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur o the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
American Golden-plover Pluvialis dominica This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Bald Eagle Haliaeetus leucocephalus This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in o shore areas from certain types of development or activities.	Breeds Dec 1 to Aug 31
Black-billed Cuckoo Coccyzus erythropthalmus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9399	Breeds May 15 to Oct 10
Bobolink Dolichonyx oryzivorus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 20 to Jul 31
Canada Warbler Cardellina canadensis This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 20 to Aug 10
Cerulean Warbler Dendroica cerulea This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/2974	Breeds Apr 22 to Jul 20

Chimney Swift Chaetura pelagica — Breeds Mar 15 to Aug 25
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Eastern Whip-poor-will Antrostomus vociferus — Breeds May 1 to Aug 20
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Golden Eagle Aquila chrysaetos — Breeds elsewhere
This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in o shore areas from certain types of development or activities.
https://ecos.fws.gov/ecp/species/1680

Golden-winged Warbler Vermivora chrysoptera — Breeds May 1 to Jul 20
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/8745

Henslow's Sparrow Ammodramus henslowii — Breeds May 1 to Aug 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3941

Lesser Yellowlegs Tringa flavipes — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9679

Long-eared Owl asio otus — Breeds Mar 1 to Jul 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3631

Red-headed Woodpecker Melanerpes erythrocephalus — Breeds May 10 to Sep 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Rusty Blackbird Euphagus carolinus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Upland Sandpiper Bartramia longicauda — Breeds May 1 to Aug 31

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/9294

Wood Thrush Hylocichla mustelina — Breeds May 10 to Aug 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence ( )

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey e ort (see below) can be used to establish a level of con dence in the presence score. One can have higher con dence in the presence score if the corresponding survey e ort is also high.

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Breeding Season ( )

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort ( )
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

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No Data ( )
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Survey Timeframe
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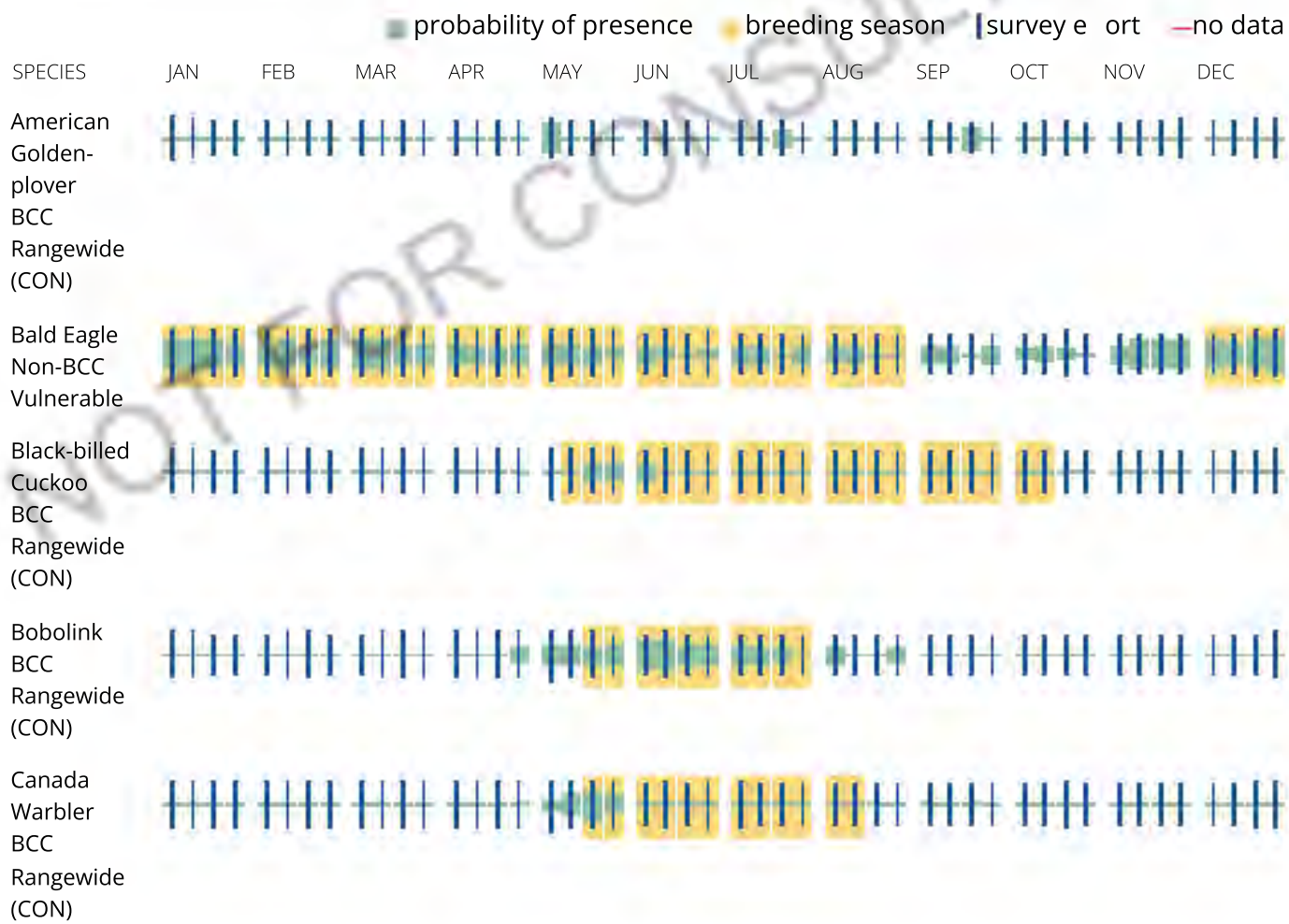


Cerulean Warbler
BCC
Rangewide
(CON)

Chimney Swift
BCC
Rangewide
(CON)

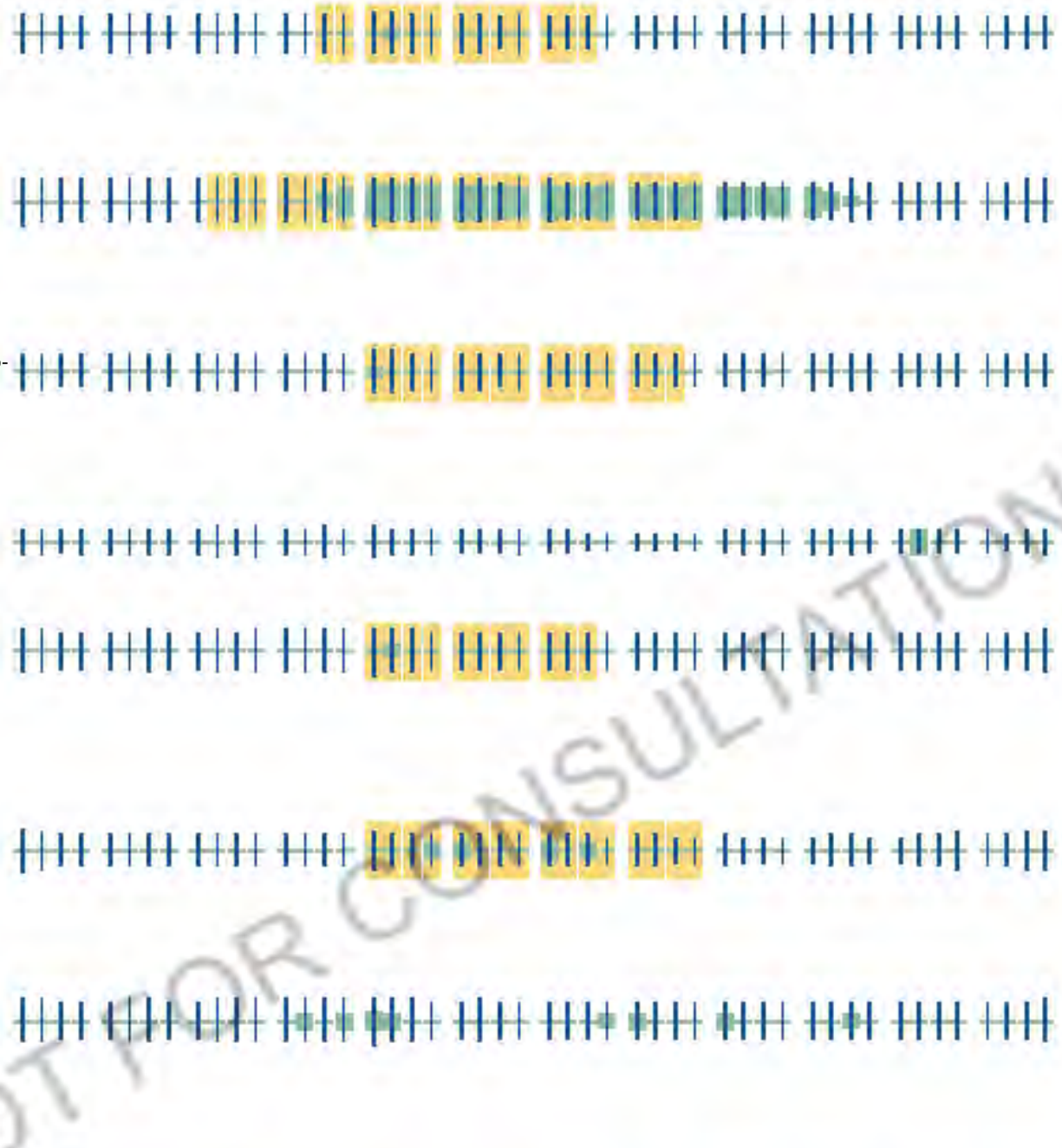
Eastern Whip-poor-will
BCC
Rangewide
(CON)

Golden Eagle
Non-BCC
Vulnerable

Golden-winged Warbler
BCC
Rangewide
(CON)

Henslow's Sparrow
BCC
Rangewide
(CON)

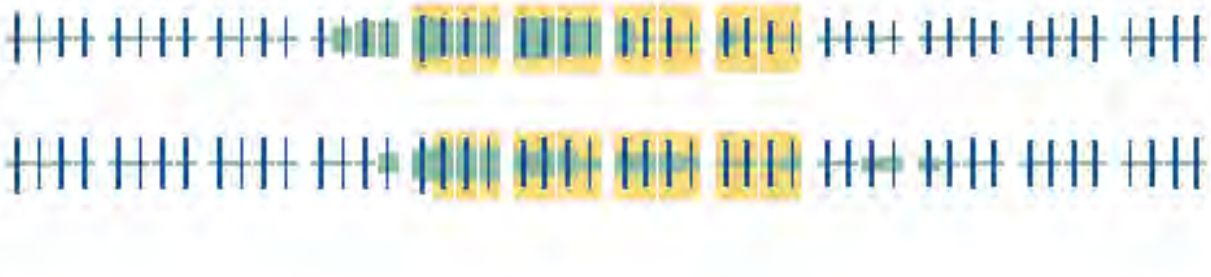
Lesser Yellowlegs
BCC
Rangewide
(CON)



Long-eared Owl
BCC
Rangewide
(CON)

Red-headed Woodpecker
BCC
Rangewide
(CON)

Rusty Blackbird
BCC - BCR



Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my speci ed location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and ltered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identi ed as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to o shore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my speci ed location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the RAIL Tool and look at the range maps provided for birds in your area at the bottom of the pro les provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe speci ed. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Paci c Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in o shore areas from certain types of development or activities (e.g. o shore energy development or longline shing).

Although it is important to try to avoid and minimize impacts to all birds, e orts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially a ected by o shore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area o the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also o ers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results les underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the

migratory birds potentially occurring in my speci ed location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey e ort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey e ort is the key component. If the survey e ort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey e ort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to con rm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be con rmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no sh hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

RIVERINE

- R2UBH
- R2UBHx
- R5UBFx
- R5UBH

A full description for each wetland code can be found at the National Wetlands Inventory website

NOTE: This initial screening does **not** replace an on-site delineation to determine whether wetlands occur. Additional information on the NWI data is provided below.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identi ed based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classi cation established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth veri cation work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or eld work. There may be occasional di erences in polygon boundaries or classi cations between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuber cid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may de ne and describe wetlands in a di erent manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to de ne the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modi cations within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning speci ed agency regulatory programs and proprietary jurisdictions that may a ect such activities.

Social Indicators

Vacancy

Name	State	County	Total housing units	Percent of housing units that are vacant *	Total Occupied Housing Units	Owner Occupied Housing Units	Renter Occupied Housing Units
Census Tract 4044	Michigan	Washtenaw County	958	6.4	897	659	238
Census Tract 4045	Michigan	Washtenaw County	2471	5.2	2343	288	2055
Census Tract 4046	Michigan	Washtenaw County	2779	3.3	2687	1211	1476
Census Tract 4051	Michigan	Washtenaw County	1075	8.2	987	434	553
Census Tract 4054	Michigan	Washtenaw County	1055	0	1055	901	154
Census Tract 4055	Michigan	Washtenaw County	1151	0	1151	840	311
Census Tract 4056	Michigan	Washtenaw County	1956	4.1	1876	324	1552
Census Tract 4103	Michigan	Washtenaw County	1979	2.8	1924	884	1040
Census Tract 4105	Michigan	Washtenaw County	1364	1.9	1338	457	881
Census Tract 4106	Michigan	Washtenaw County	1282	8	1180	357	823
Census Tract 4107	Michigan	Washtenaw County	944	14.9	803	227	576
Census Tract 4108	Michigan	Washtenaw County	817	2.4	797	265	532
Census Tract 4117	Michigan	Washtenaw County	995	5.5	940	859	81
Census Tract 4120	Michigan	Washtenaw County	1577	5.6	1489	925	564

Name	State	County	Total housing units	Percent of housing units that are vacant *	Total Occupied Housing Units	Owner Occupied Housing Units	Renter Occupied Housing Units
Census Tract 4123	Michigan	Washtenaw County	1176	8.5	1076	728	348
Census Tract 4126	Michigan	Washtenaw County	1787	8.3	1639	241	1398
Census Tract 4127	Michigan	Washtenaw County	2294	3.4	2216	1267	949
Census Tract 4130	Michigan	Washtenaw County	1581	6.5	1478	826	652
Census Tract 4134.03	Michigan	Washtenaw County	850	2.8	826	782	44
Census Tract 4143	Michigan	Washtenaw County	1728	6	1625	380	1245
Census Tract 4145	Michigan	Washtenaw County	1058	2.1	1036	992	44
Census Tract 4147	Michigan	Washtenaw County	1133	7.5	1048	521	527
Census Tract 4149	Michigan	Washtenaw County	1438	5.8	1354	1109	245
Census Tract 4152	Michigan	Washtenaw County	1152	4.1	1105	172	933
Census Tract 4154	Michigan	Washtenaw County	996	9.4	902	576	326
Census Tract 4160	Michigan	Washtenaw County	1319	3.5	1273	1228	45
Census Tract 9840	Michigan	Washtenaw County	15	0	15	15	0
Census Tract 5119	Michigan	Wayne County	1241	33.2	829	125	704
Census Tract 5180	Michigan	Wayne County	1466	13.2	1272	265	1007
Census Tract 5202	Michigan	Wayne County	942	14.8	803	14	789
Census Tract 5219	Michigan	Wayne County	1482	12.4	1298	351	947

Name	State	County	Total housing units	Percent of housing units that are vacant *	Total Occupied Housing Units	Owner Occupied Housing Units	Renter Occupied Housing Units
Census Tract 5220	Michigan	Wayne County	982	16.4	821	74	747
Census Tract 5223	Michigan	Wayne County	1130	36.1	722	139	583
Census Tract 5224	Michigan	Wayne County	679	14.6	580	231	349
Census Tract 5254	Michigan	Wayne County	818	17.5	675	353	322
Census Tract 5258	Michigan	Wayne County	723	18.8	587	248	339
Census Tract 5260	Michigan	Wayne County	947	11	843	612	231
Census Tract 5261	Michigan	Wayne County	749	18.4	611	384	227
Census Tract 5262	Michigan	Wayne County	851	21.6	667	424	243
Census Tract 5263	Michigan	Wayne County	1341	16	1126	636	490
Census Tract 5264	Michigan	Wayne County	509	28.5	364	182	182
Census Tract 5334	Michigan	Wayne County	1604	40.3	957	385	572
Census Tract 5336	Michigan	Wayne County	1365	51.8	658	257	401
Census Tract 5339	Michigan	Wayne County	2289	26.1	1692	482	1210
Census Tract 5726	Michigan	Wayne County	2083	2.5	2030	1245	785
Census Tract 5727	Michigan	Wayne County	1915	1.8	1881	1553	328
Census Tract 5729	Michigan	Wayne County	1077	6.2	1010	674	336
Census Tract 5733	Michigan	Wayne County	1156	5.4	1094	703	391
Census Tract 5736	Michigan	Wayne County	2107	13.4	1824	855	969

Name	State	County	Total housing units	Percent of housing units that are vacant *	Total Occupied Housing Units	Owner Occupied Housing Units	Renter Occupied Housing Units
Census Tract 5737.02	Michigan	Wayne County	1978	7.9	1821	1208	613
Census Tract 5740	Michigan	Wayne County	1919	6.8	1788	994	794
Census Tract 5741	Michigan	Wayne County	1654	7	1538	799	739
Census Tract 5755	Michigan	Wayne County	1565	7.2	1452	1205	247
Census Tract 5756	Michigan	Wayne County	685	7.6	633	529	104
Census Tract 5761	Michigan	Wayne County	2920	5.4	2762	2349	413
Census Tract 5762	Michigan	Wayne County	1103	7.9	1016	874	142
Census Tract 5764	Michigan	Wayne County	1597	2.3	1561	1362	199
Census Tract 5785	Michigan	Wayne County	2572	6.1	2415	1574	841
Census Tract 5786	Michigan	Wayne County	2334	9.1	2121	1083	1038
Census Tract 5832	Michigan	Wayne County	1135	16.1	952	625	327
Census Tract 5833	Michigan	Wayne County	1004	4.4	960	745	215
Census Tract 5837	Michigan	Wayne County	1665	3.2	1611	1156	455
Census Tract 5855	Michigan	Wayne County	883	21.9	690	547	143
Census Tract 5857	Michigan	Wayne County	810	4.2	776	578	198
Census Tract 5859	Michigan	Wayne County	1569	21	1239	642	597
Census Tract 5863	Michigan	Wayne County	712	6.2	668	630	38

Name	State	County	Total housing units	Percent of housing units that are vacant *	Total Occupied Housing Units	Owner Occupied Housing Units	Renter Occupied Housing Units
Census Tract 5870	Michigan	Wayne County	2099	9.5	1900	940	960
Census Tract 5879	Michigan	Wayne County	2677	3.8	2574	1796	778
Census Tract 5882	Michigan	Wayne County	1872	4.4	1789	396	1393
Census Tract 5884	Michigan	Wayne County	2178	5.6	2056	1940	116
Census Tract 9850	Michigan	Wayne County	6	100	0	0	0
Census Tract 9854	Michigan	Wayne County	8	0	8	8	0
Census Tract 9857	Michigan	Wayne County	0	<Null>	0	0	0
Census Tract 9802	Michigan	Washtenaw County	0	<Null>	0	0	0
Census Tract 5228	Michigan	Wayne County	947	32.1	643	546	97
Census Tract 5279	Michigan	Wayne County	1697	59.8	682	373	309
Census Tract 5735.01	Michigan	Wayne County	1303	3.8	1253	317	936
Census Tract 5742.03	Michigan	Wayne County	1569	12.8	1368	633	735
Census Tract 5760.01	Michigan	Wayne County	883	3.7	850	685	165
Census Tract 5830.01	Michigan	Wayne County	1143	10	1029	685	344
Census Tract 5831.01	Michigan	Wayne County	1473	17	1222	813	409

Name	State	County	Total housing units	Percent of housing units that are vacant *	Total Occupied Housing Units	Owner Occupied Housing Units	Renter Occupied Housing Units
Census Tract 5862.01	Michigan	Wayne County	2408	2	2361	1644	717
Census Tract 5880.01	Michigan	Wayne County	1822	1.1	1802	561	1241
Census Tract 5880.02	Michigan	Wayne County	1373	5.5	1297	662	635
Census Tract 5881.02	Michigan	Wayne County	542	3.5	523	401	122
Census Tract 9819.01	Michigan	Wayne County	0	<Null>	0	0	0
Census Tract 9819.02	Michigan	Wayne County	0	<Null>	0	0	0
Census Tract 9825	Michigan	Wayne County	0	<Null>	0	0	0
Census Tract 9826	Michigan	Wayne County	31	100	0	0	0
Census Tract 9837	Michigan	Wayne County	0	<Null>	0	0	0
Census Tract 9865.01	Michigan	Wayne County	0	<Null>	0	0	0
Low			**0**	**0**	**0**	**0**	**0**
High			**2920**	**100**	**2762**	**2349**	**2055**
Average			**1258.5**	**12.8**	**1129.3**	**625.9**	**503.3**

Michigan			4566504	12.9	3976729	2870693	1106036
Washtenaw County			155927	5.6	147185	90365	56820

Name	State	County	Total housing units	Percent of housing units that are vacant *	Total Occupied Housing Units	Owner Occupied Housing Units	Renter Occupied Housing Units
Wayne County			793207	13.6	685635	434436	251199

Homeownership

Name	State *	County *	Total Occupied Housing Units	Overall Homeownership Rate: Percent of Occupied Housing Units that are Owner-Occupied *	Overall Renter Rate: Percent of Occupied Housing Units that are Renter-Occupied
Census Tract 4044	Michigan	Washtenaw County	897	73.5	26.5
Census Tract 4045	Michigan	Washtenaw County	2343	12.3	87.7
Census Tract 4046	Michigan	Washtenaw County	2687	45.1	54.9
Census Tract 4051	Michigan	Washtenaw County	987	44	56
Census Tract 4054	Michigan	Washtenaw County	1055	85.4	14.6
Census Tract 4055	Michigan	Washtenaw County	1151	73	27
Census Tract 4056	Michigan	Washtenaw County	1876	17.3	82.7
Census Tract 4103	Michigan	Washtenaw County	1924	45.9	54.1
Census Tract 4105	Michigan	Washtenaw County	1338	34.2	65.8
Census Tract 4106	Michigan	Washtenaw County	1180	30.3	69.7
Census Tract 4107	Michigan	Washtenaw County	803	28.3	71.7
Census Tract 4108	Michigan	Washtenaw County	797	33.2	66.8

Name	State *	County *	Total Occupied Housing Units	Overall Homeownership Rate: Percent of Occupied Housing Units that are Owner-Occupied *	Overall Renter Rate: Percent of Occupied Housing Units that are Renter-Occupied
Census Tract 4117	Michigan	Washtenaw County	940	91.4	8.6
Census Tract 4120	Michigan	Washtenaw County	1489	62.1	37.9
Census Tract 4123	Michigan	Washtenaw County	1076	67.7	32.3
Census Tract 4126	Michigan	Washtenaw County	1639	14.7	85.3
Census Tract 4127	Michigan	Washtenaw County	2216	57.2	42.8
Census Tract 4130	Michigan	Washtenaw County	1478	55.9	44.1
Census Tract 4134.03	Michigan	Washtenaw County	826	94.7	5.3
Census Tract 4143	Michigan	Washtenaw County	1625	23.4	76.6
Census Tract 4145	Michigan	Washtenaw County	1036	95.8	4.2
Census Tract 4147	Michigan	Washtenaw County	1048	49.7	50.3
Census Tract 4149	Michigan	Washtenaw County	1354	81.9	18.1
Census Tract 4152	Michigan	Washtenaw County	1105	15.6	84.4
Census Tract 4154	Michigan	Washtenaw County	902	63.9	36.1
Census Tract 4160	Michigan	Washtenaw County	1273	96.5	3.5
Census Tract 9840	Michigan	Washtenaw County	15	100	0
Census Tract 5119	Michigan	Wayne County	829	15.1	84.9
Census Tract 5180	Michigan	Wayne County	1272	20.8	79.2
Census Tract 5202	Michigan	Wayne County	803	1.7	98.3
Census Tract 5219	Michigan	Wayne County	1298	27	73

Name	State *	County *	Total Occupied Housing Units	Overall Homeownership Rate: Percent of Occupied Housing Units that are Owner-Occupied *	Overall Renter Rate: Percent of Occupied Housing Units that are Renter-Occupied
Census Tract 5220	Michigan	Wayne County	821	9	91
Census Tract 5223	Michigan	Wayne County	722	19.3	80.7
Census Tract 5224	Michigan	Wayne County	580	39.8	60.2
Census Tract 5254	Michigan	Wayne County	675	52.3	47.7
Census Tract 5258	Michigan	Wayne County	587	42.2	57.8
Census Tract 5260	Michigan	Wayne County	843	72.6	27.4
Census Tract 5261	Michigan	Wayne County	611	62.8	37.2
Census Tract 5262	Michigan	Wayne County	667	63.6	36.4
Census Tract 5263	Michigan	Wayne County	1126	56.5	43.5
Census Tract 5264	Michigan	Wayne County	364	50	50
Census Tract 5334	Michigan	Wayne County	957	40.2	59.8
Census Tract 5336	Michigan	Wayne County	658	39.1	60.9
Census Tract 5339	Michigan	Wayne County	1692	28.5	71.5
Census Tract 5726	Michigan	Wayne County	2030	61.3	38.7
Census Tract 5727	Michigan	Wayne County	1881	82.6	17.4
Census Tract 5729	Michigan	Wayne County	1010	66.7	33.3
Census Tract 5733	Michigan	Wayne County	1094	64.3	35.7
Census Tract 5736	Michigan	Wayne County	1824	46.9	53.1
Census Tract 5737.02	Michigan	Wayne County	1821	66.3	33.7
Census Tract 5740	Michigan	Wayne County	1788	55.6	44.4
Census Tract 5741	Michigan	Wayne County	1538	52	48
Census Tract 5755	Michigan	Wayne County	1452	83	17
Census Tract 5756	Michigan	Wayne County	633	83.6	16.4
Census Tract 5761	Michigan	Wayne County	2762	85	15
Census Tract 5762	Michigan	Wayne County	1016	86	14
Census Tract 5764	Michigan	Wayne County	1561	87.3	12.7
Census Tract 5785	Michigan	Wayne County	2415	65.2	34.8
Census Tract 5786	Michigan	Wayne County	2121	51.1	48.9
Census Tract 5832	Michigan	Wayne County	952	65.7	34.3
Census Tract 5833	Michigan	Wayne County	960	77.6	22.4

Name	State *	County *	Total Occupied Housing Units	Overall Homeownership Rate: Percent of Occupied Housing Units that are Owner-Occupied *	Overall Renter Rate: Percent of Occupied Housing Units that are Renter-Occupied
Census Tract 5837	Michigan	Wayne County	1611	71.8	28.2
Census Tract 5855	Michigan	Wayne County	690	79.3	20.7
Census Tract 5857	Michigan	Wayne County	776	74.5	25.5
Census Tract 5859	Michigan	Wayne County	1239	51.8	48.2
Census Tract 5863	Michigan	Wayne County	668	94.3	5.7
Census Tract 5870	Michigan	Wayne County	1900	49.5	50.5
Census Tract 5879	Michigan	Wayne County	2574	69.8	30.2
Census Tract 5882	Michigan	Wayne County	1789	22.1	77.9
Census Tract 5884	Michigan	Wayne County	2056	94.4	5.6
Census Tract 9850	Michigan	Wayne County	<null>	<null>	<null>
Census Tract 9854	Michigan	Wayne County	8	100	0
Census Tract 9857	Michigan	Wayne County	<null>	<null>	<null>
Census Tract 9802	Michigan	Washtenaw County	<null>	<null>	<null>
Census Tract 5228	Michigan	Wayne County	643	84.9	15.1
Census Tract 5279	Michigan	Wayne County	682	54.7	45.3
Census Tract 5735.01	Michigan	Wayne County	1253	25.3	74.7
Census Tract 5742.03	Michigan	Wayne County	1368	46.3	53.7
Census Tract 5760.01	Michigan	Wayne County	850	80.6	19.4
Census Tract 5830.01	Michigan	Wayne County	1029	66.6	33.4
Census Tract 5831.01	Michigan	Wayne County	1222	66.5	33.5
Census Tract 5862.01	Michigan	Wayne County	2361	69.6	30.4
Census Tract 5880.01	Michigan	Wayne County	1802	31.1	68.9
Census Tract 5880.02	Michigan	Wayne County	1297	51	49

Name	State *	County *	Total Occupied Housing Units	Overall Homeownership Rate: Percent of Occupied Housing Units that are Owner-Occupied *	Overall Renter Rate: Percent of Occupied Housing Units that are Renter-Occupied
Census Tract 5881.02	Michigan	Wayne County	523	76.7	23.3
Census Tract 9819.01	Michigan	Wayne County	<null>	<null>	<null>
Census Tract 9819.02	Michigan	Wayne County	<null>	<null>	<null>
Census Tract 9825	Michigan	Wayne County	<null>	<null>	<null>
Census Tract 9826	Michigan	Wayne County	<null>	<null>	<null>
Census Tract 9837	Michigan	Wayne County	<null>	<null>	<null>
Census Tract 9865.01	Michigan	Wayne County	<null>	<null>	<null>
Low			**8**	**1.7**	**0**
High			**2762**	**100**	**98.3**
Average			**1253.2**	**57.0**	**43.0**

Michigan			3976729	72.2	27.8
Washtenaw County			147185	61.4	38.6
Wayne County			685635	63.4	36.6

Vehicle Access

Name	State	County *	Percent of households with no vehicle available *
Census Tract 4044	Michigan	Washtenaw County	1.7
Census Tract 4045	Michigan	Washtenaw County	14.5
Census Tract 4046	Michigan	Washtenaw County	8.5
Census Tract 4051	Michigan	Washtenaw County	7.1

Name	State	County *	Percent of households with no vehicle available *
Census Tract 4054	Michigan	Washtenaw County	5.7
Census Tract 4055	Michigan	Washtenaw County	6.6
Census Tract 4056	Michigan	Washtenaw County	5
Census Tract 4103	Michigan	Washtenaw County	7.3
Census Tract 4105	Michigan	Washtenaw County	11.4
Census Tract 4106	Michigan	Washtenaw County	18.2
Census Tract 4107	Michigan	Washtenaw County	34.9
Census Tract 4108	Michigan	Washtenaw County	11.7
Census Tract 4117	Michigan	Washtenaw County	3
Census Tract 4120	Michigan	Washtenaw County	7.1
Census Tract 4123	Michigan	Washtenaw County	6.3
Census Tract 4126	Michigan	Washtenaw County	4.6
Census Tract 4127	Michigan	Washtenaw County	7.3
Census Tract 4130	Michigan	Washtenaw County	7.9
Census Tract 4134.03	Michigan	Washtenaw County	1.8
Census Tract 4143	Michigan	Washtenaw County	21
Census Tract 4145	Michigan	Washtenaw County	0.8
Census Tract 4147	Michigan	Washtenaw County	1.6
Census Tract 4149	Michigan	Washtenaw County	0.4

Name	State	County *	Percent of households with no vehicle available *
Census Tract 4152	Michigan	Washtenaw County	0.7
Census Tract 4154	Michigan	Washtenaw County	0.8
Census Tract 4160	Michigan	Washtenaw County	1.2
Census Tract 9840	Michigan	Washtenaw County	0
Census Tract 5119	Michigan	Wayne County	38.1
Census Tract 5180	Michigan	Wayne County	24
Census Tract 5202	Michigan	Wayne County	33.3
Census Tract 5219	Michigan	Wayne County	30.3
Census Tract 5220	Michigan	Wayne County	46.9
Census Tract 5223	Michigan	Wayne County	47.9
Census Tract 5224	Michigan	Wayne County	35.2
Census Tract 5254	Michigan	Wayne County	22.2
Census Tract 5258	Michigan	Wayne County	34.4
Census Tract 5260	Michigan	Wayne County	32.9
Census Tract 5261	Michigan	Wayne County	12.6
Census Tract 5262	Michigan	Wayne County	12.7
Census Tract 5263	Michigan	Wayne County	13.9
Census Tract 5264	Michigan	Wayne County	17.9
Census Tract 5334	Michigan	Wayne County	24.8
Census Tract 5336	Michigan	Wayne County	33.9
Census Tract 5339	Michigan	Wayne County	23.9
Census Tract 5726	Michigan	Wayne County	9.7
Census Tract 5727	Michigan	Wayne County	6.5
Census Tract 5729	Michigan	Wayne County	9.1
Census Tract 5733	Michigan	Wayne County	13
Census Tract 5736	Michigan	Wayne County	16.9
Census Tract 5737.02	Michigan	Wayne County	8.1
Census Tract 5740	Michigan	Wayne County	8.9
Census Tract 5741	Michigan	Wayne County	6
Census Tract 5755	Michigan	Wayne County	1.7

Name	State	County *	Percent of households with no vehicle available *
Census Tract 5756	Michigan	Wayne County	4.4
Census Tract 5761	Michigan	Wayne County	2.5
Census Tract 5762	Michigan	Wayne County	2.4
Census Tract 5764	Michigan	Wayne County	7.6
Census Tract 5785	Michigan	Wayne County	2.2
Census Tract 5786	Michigan	Wayne County	13.3
Census Tract 5832	Michigan	Wayne County	3.5
Census Tract 5833	Michigan	Wayne County	0.9
Census Tract 5837	Michigan	Wayne County	1.9
Census Tract 5855	Michigan	Wayne County	2.9
Census Tract 5857	Michigan	Wayne County	7.1
Census Tract 5859	Michigan	Wayne County	11.1
Census Tract 5863	Michigan	Wayne County	0.9
Census Tract 5870	Michigan	Wayne County	11
Census Tract 5879	Michigan	Wayne County	7.1
Census Tract 5882	Michigan	Wayne County	2.5
Census Tract 5884	Michigan	Wayne County	2.8
Census Tract 9850	Michigan	Wayne County	<null>
Census Tract 9854	Michigan	Wayne County	50
Census Tract 9857	Michigan	Wayne County	<null>
Census Tract 9802	Michigan	Washtenaw County	<null>
Census Tract 5228	Michigan	Wayne County	31.6
Census Tract 5279	Michigan	Wayne County	37.1
Census Tract 5735.01	Michigan	Wayne County	15.6
Census Tract 5742.03	Michigan	Wayne County	18.1
Census Tract 5760.01	Michigan	Wayne County	4.7
Census Tract 5830.01	Michigan	Wayne County	1.9
Census Tract 5831.01	Michigan	Wayne County	13.1

Name	State	County *	Percent of households with no vehicle available *
Census Tract 5862.01	Michigan	Wayne County	6.9
Census Tract 5880.01	Michigan	Wayne County	8.6
Census Tract 5880.02	Michigan	Wayne County	1.6
Census Tract 5881.02	Michigan	Wayne County	2.1
Census Tract 9819.01	Michigan	Wayne County	<null>
Census Tract 9819.02	Michigan	Wayne County	<null>
Census Tract 9825	Michigan	Wayne County	<null>
Census Tract 9826	Michigan	Wayne County	<null>
Census Tract 9837	Michigan	Wayne County	<null>
Census Tract 9865.01	Michigan	Wayne County	<null>
Low			**0**
High			**50**
Average			**12.7**

Michigan			7.3
Washtenaw County			7.7
Wayne County			12.2

Commute

Name	State	County	Percent of workers who commuted by driving alone *	Percent of workers who commuted by carpooling	Percent of workers who commuted by public transportation	Percent of workers who commuted by bus	Percent of workers who commuted by light rail, streetcar or trolley	Percent of workers who commuted by subway or elevated rail	Percent of workers who commuted by long-distance train or commuter rail	Percent of workers who commuted by ferryboat	Percent of workers who commuted by taxicab	Percent of workers who commuted by motorcycle	Percent of workers who commuted by bicycle	Percent of workers who commuted by walking	Percent of workers who commuted by other means	Percent of workers who worked at home *
Census Tract 4044	Michigan	Washtenaw County	67.1	5.4	2.9	2.9	0	0	0	0	0	0	0.5	4.3	0	19.9
Census Tract 4045	Michigan	Washtenaw County	66.2	7.1	7.3	7.3	0	0	0	0	0	0	0.6	3	0.6	15.2
Census Tract 4046	Michigan	Washtenaw County	54.9	7.1	6.6	6.6	0	0	0	0	0.9	0	5.1	5.2	0	20.4
Census Tract 4051	Michigan	Washtenaw County	66.4	5.2	8.6	8.6	0	0	0	0	0	0	7.6	0	0	12.1
Census Tract 4054	Michigan	Washtenaw County	61.4	9	11.4	11.4	0	0	0	0	0.5	0	1.1	1.9	1.1	13.5
Census Tract 4055	Michigan	Washtenaw County	74.5	7.3	2.2	2.2	0	0	0	0	0	0	0.4	2.2	0.2	13.1
Census Tract 4056	Michigan	Washtenaw County	78.7	6.3	9	9	0	0	0	0	0.1	0	0	0.7	0	5.2
Census Tract 4103	Michigan	Washtenaw County	59	3.5	11.4	9.8	1.6	0	0	0	0	0	4.5	5.3	0	16.4
Census Tract 4105	Michigan	Washtenaw County	72.2	9.5	3.9	3.9	0	0	0	0	0	1	0.8	6.6	0	6.1
Census Tract 4106	Michigan	Washtenaw County	72.8	7.6	13.3	13.3	0	0	0	0	0	0	0	3.2	2.3	0.8
Census Tract 4107	Michigan	Washtenaw County	76.4	4.5	5.1	5.1	0	0	0	0	0.8	0	1.2	2.9	0	9.2
Census Tract 4108	Michigan	Washtenaw County	52.6	25.3	4.5	4.5	0	0	0	0	0	0	0.6	1.5	0	15.5
Census Tract 4117	Michigan	Washtenaw County	83.5	3.8	1.2	1.2	0	0	0	0	1.2	0	0.4	3.3	0	6.6
Census Tract 4120	Michigan	Washtenaw County	75	7.4	5.8	5.8	0	0	0	0	0	0	0	5.8	0	6
Census Tract 4123	Michigan	Washtenaw County	65.6	18.9	5.2	4.3	1	0	0	0	0	0	0.7	0	3.8	5.7
Census Tract 4126	Michigan	Washtenaw County	80.1	6	0.3	0.3	0	0	0	0	0	1	0	0	0.3	12.3
Census Tract 4127	Michigan	Washtenaw County	78.6	14.2	3.4	3.4	0	0	0	0	0	0	0	0	0.7	3.1
Census Tract 4130	Michigan	Washtenaw County	83.4	7.6	0	0	0	0	0	0	0.7	0	0	0.8	0.9	6.5
Census Tract 4134.03	Michigan	Washtenaw County	78.6	8.2	0	0	0	0	0	0	0	0	0	0	0	13.2
Census Tract 4143	Michigan	Washtenaw County	63.7	11	3.4	3.4	0	0	0	0	0	0	0.5	6.5	4.6	10.3
Census Tract 4145	Michigan	Washtenaw County	74	9.6	1.8	1.8	0	0	0	0	0	0	0.5	0	0.3	13.9

Name	State	County	Percent of workers who commuted by driving alone *	Percent of workers who commuted by carpooling	Percent of workers who commuted by public transportation	Percent of workers who commuted by bus	Percent of workers who commuted by light rail, streetcar or trolley	Percent of workers who commuted by subway or elevated rail	Percent of workers who commuted by long-distance train or commuter rail	Percent of workers who commuted by ferryboat	Percent of workers who commuted by taxicab	Percent of workers who commuted by motorcycle	Percent of workers who commuted by bicycle	Percent of workers who commuted by walking	Percent of workers who commuted by other means	Percent of workers who worked at home *
Census Tract 4147	Michigan	Washtenaw County	62.5	6.7	0.4	0.4	0	0	0	0	0	0.9	0.3	2.2	0	27
Census Tract 4149	Michigan	Washtenaw County	65.3	5.4	1.9	1.9	0	0	0	0	0	0	0.3	7.9	0	19.2
Census Tract 4152	Michigan	Washtenaw County	77.8	10.5	1.4	1.4	0	0	0	0	0	0	0	0	0.5	9.8
Census Tract 4154	Michigan	Washtenaw County	74.7	8.2	1.4	1.4	0	0	0	0	0	0	0	5	0.4	10.4
Census Tract 4160	Michigan	Washtenaw County	68.9	10.9	0.5	0.5	0	0	0	0	0	0	0.4	2.7	0	16.7
Census Tract 9840	Michigan	Washtenaw County	100	0	0	0	0	0	0	0	0	0	0	0	0	0
Census Tract 5119	Michigan	Wayne County	65.8	19.6	4.5	4.5	0	0	0	0	0	0	1.6	2.7	0	5.8
Census Tract 5180	Michigan	Wayne County	49.3	6	3.9	3.9	0	0	0	0	0	0	0.6	28.9	2.1	9.1
Census Tract 5202	Michigan	Wayne County	37.9	4	7.9	5.7	2.3	0	0	0	7.3	0	1.3	31.7	0.6	9.4
Census Tract 5219	Michigan	Wayne County	67.2	3.6	3.7	3.7	0	0	0	0	0	0	3	1.3	3.9	17.3
Census Tract 5220	Michigan	Wayne County	53.5	8.1	24.7	15.3	9.3	0	0	0	0	0	0	2.3	9.3	2.1
Census Tract 5223	Michigan	Wayne County	46	0	26.5	26.5	0	0	0	0	0	0	0	2.7	9.7	15
Census Tract 5224	Michigan	Wayne County	47.2	0	0.3	0.3	0	0	0	0	0	0	0	0.6	0	51.9
Census Tract 5254	Michigan	Wayne County	78	14.5	1.3	1.3	0	0	0	0	0	0	1.3	0.9	3.2	0.8
Census Tract 5258	Michigan	Wayne County	56	23.9	7.4	4.2	0	0	0	3.2	1.3	0	0	1.3	8.4	1.8
Census Tract 5260	Michigan	Wayne County	76.5	8.2	2.7	2.7	0	0	0	0	0	0	0	7.2	3	2.3
Census Tract 5261	Michigan	Wayne County	90.2	8.4	1.5	1.5	0	0	0	0	0	0	0	0	0	0
Census Tract 5262	Michigan	Wayne County	69	25.3	1.3	1.3	0	0	0	0	0	0	0	2.5	0.6	1.3
Census Tract 5263	Michigan	Wayne County	65.5	16	0	0	0	0	0	0	0	0	0	0	14.4	4.1
Census Tract 5264	Michigan	Wayne County	82.6	10.2	0	0	0	0	0	0	0	0	0	0.6	2.5	4.2
Census Tract 5334	Michigan	Wayne County	59.2	8.5	29.7	29.7	0	0	0	0	0	0	0	2.6	0	0
Census Tract 5336	Michigan	Wayne County	67.2	4.2	13.7	13.7	0	0	0	0	0	0	0	0	4.8	10.1
Census Tract 5339	Michigan	Wayne County	66.1	8.1	8.7	7.9	0.8	0	0	0	0	0	3.2	2.8	0.8	10.4

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Census Tract 5726	Michigan	Wayne County	88.1	6.4	0	0	0	0	0	0	0	0	0	2.2	0	3.4
Census Tract 5727	Michigan	Wayne County	80.6	6.3	0	0	0	0	0	0	0	0	0.6	2.7	0.6	9.1
Census Tract 5729	Michigan	Wayne County	89.7	8.7	0	0	0	0	0	0	0	0	0	1	0	0.6
Census Tract 5733	Michigan	Wayne County	79.8	14.6	0	0	0	0	0	0	0	0	0	0	0	5.6
Census Tract 5736	Michigan	Wayne County	75	9.8	1.9	1.9	0	0	0	0	0	0	0	4.5	5.5	3.3
Census Tract 5737.02	Michigan	Wayne County	72.1	15.6	1.2	1.2	0	0	0	0	0	0	0	2.8	2.4	6
Census Tract 5740	Michigan	Wayne County	84.6	13.1	0	0	0	0	0	0	0	0	0.3	1.4	0	0.6
Census Tract 5741	Michigan	Wayne County	81.5	8.6	0	0	0	0	0	0	1.3	0	0	2.1	0.9	5.6
Census Tract 5755	Michigan	Wayne County	81.4	9.4	0.6	0.6	0	0	0	0	0	1.4	0	0	0	7.2
Census Tract 5756	Michigan	Wayne County	78.4	8.4	0	0	0	0	0	0	0	0	0	0.8	2.3	10.1
Census Tract 5761	Michigan	Wayne County	79.6	15	0	0	0	0	0	0	0	0	0.5	0	1.6	3.3
Census Tract 5762	Michigan	Wayne County	83.9	10.5	0	0	0	0	0	0	0	0	0	0.6	0.7	4.3
Census Tract 5764	Michigan	Wayne County	79	3.7	0	0	0	0	0	0	0	0.1	2.8	0	0	14.4
Census Tract 5785	Michigan	Wayne County	57.9	32.5	0	0	0	0	0	0	2.1	0	1.7	0	1.1	4.7
Census Tract 5786	Michigan	Wayne County	68	27	0	0	0	0	0	0	0	0	0	0	0	5
Census Tract 5832	Michigan	Wayne County	73.5	15.5	0	0	0	0	0	0	0	0	0	4.9	0	6.2
Census Tract 5833	Michigan	Wayne County	90.1	2.8	0	0	0	0	0	0	0	0	0	0	0	7.1
Census Tract 5837	Michigan	Wayne County	83.5	9.7	0	0	0	0	0	0	0	0	0	2.1	0.4	4.2
Census Tract 5855	Michigan	Wayne County	87.5	5.5	0.1	0.1	0	0	0	0	0	0	0	0	0	6.9
Census Tract 5857	Michigan	Wayne County	76	5	0	0	0	0	0	0	0	0	0	6.5	1.6	10.8
Census Tract 5859	Michigan	Wayne County	83.5	11.1	0	0	0	0	0	0	0	0	0	0	0.5	4.9
Census Tract 5863	Michigan	Wayne County	89.2	1.4	0	0	0	0	0	0	0	0	1.6	0	0.7	7.1

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Census Tract 5870	Michigan	Wayne County	69.8	5.2	0	0	0	0	0	0	0	0	0	0.3	5.8	18.9
Census Tract 5879	Michigan	Wayne County	84.3	3.1	1	1	0	0	0	0	0	0	0	0	2	9.6
Census Tract 5882	Michigan	Wayne County	81.4	9.6	0	0	0	0	0	0	0	0	0.3	0.4	3.2	5.1
Census Tract 5884	Michigan	Wayne County	81.4	2.5	0.6	0.6	0	0	0	0	0	0	0	1.5	0.4	13.8
Census Tract 9850	Michigan	Wayne County	<null>	<null>	<null>	<null>	<null>	<null>	<null>	<null>	<null>	<null>	<null>	<null>	<null>	<null>
Census Tract 9854	Michigan	Wayne County	100	0	0	0	0	0	0	0	0	0	0	0	0	0
Census Tract 9857	Michigan	Wayne County	<null>	<null>	<null>	<null>	<null>	<null>	<null>	<null>	<null>	<null>	<null>	<null>	<null>	<null>
Census Tract 9802	Michigan	Washtenaw County	<null>	<null>	<null>	<null>	<null>	<null>	<null>	<null>	<null>	<null>	<null>	<null>	<null>	<null>
Census Tract 5228	Michigan	Wayne County	78.7	10.1	1.4	1.4	0	0	0	0	0	0	0	1	3.3	5.4
Census Tract 5279	Michigan	Wayne County	58.6	29.5	6.1	6.1	0	0	0	0	0	0	0	2.5	0	3.3
Census Tract 5735.01	Michigan	Wayne County	75.2	18.7	4.1	4.1	0	0	0	0	0	0	0	2.1	0	0
Census Tract 5742.03	Michigan	Wayne County	67.1	4.8	0	0	0	0	0	0	0	0	0	1.2	0	26.9
Census Tract 5760.01	Michigan	Wayne County	71.2	6.1	0	0	0	0	0	0	0	0.7	0	5.9	2.2	13.9
Census Tract 5830.01	Michigan	Wayne County	89.2	2.7	0.7	0.7	0	0	0	0	0	0	0	6.4	0	0.9
Census Tract 5831.01	Michigan	Wayne County	82	8	0	0	0	0	0	0	0	1.6	0	0	0	8.4
Census Tract 5862.01	Michigan	Wayne County	83.7	8.3	0	0	0	0	0	0	3.6	0	0	0	0	4.4
Census Tract 5880.01	Michigan	Wayne County	85.6	3.4	0	0	0	0	0	0	0	0	0	0	2.6	8.4
Census Tract 5880.02	Michigan	Wayne County	82.1	5.4	0	0	0	0	0	0	0	0	0	3.7	1.1	7.7

Name	State	County	Percent of workers who commuted by driving alone *	Percent of workers who commuted by carpooling	Percent of workers who commuted by public transportation	Percent of workers who commuted by bus	Percent of workers who commuted by light rail, streetcar or trolley	Percent of workers who commuted by subway or elevated rail	Percent of workers who commuted by long-distance train or commuter rail	Percent of workers who commuted by ferryboat	Percent of workers who commuted by taxicab	Percent of workers who commuted by motorcycle	Percent of workers who commuted by bicycle	Percent of workers who commuted by walking	Percent of workers who commuted by other means	Percent of workers who worked at home *
Census Tract 5881.02	Michigan	Wayne County	89.1	6.6	0	0	0	0	0	0	0	0	0	0	0	4.3
Census Tract 9819.01	Michigan	Wayne County	<null>	<null>	<null>	<null>	<null>	<null>	<null>	<null>	<null>	<null>	<null>	<null>	<null>	<null>
Census Tract 9819.02	Michigan	Wayne County	<null>	<null>	<null>	<null>	<null>	<null>	<null>	<null>	<null>	<null>	<null>	<null>	<null>	<null>
Census Tract 9825	Michigan	Wayne County	<null>	<null>	<null>	<null>	<null>	<null>	<null>	<null>	<null>	<null>	<null>	<null>	<null>	<null>
Census Tract 9826	Michigan	Wayne County	<null>	<null>	<null>	<null>	<null>	<null>	<null>	<null>	<null>	<null>	<null>	<null>	<null>	<null>
Census Tract 9837	Michigan	Wayne County	<null>	<null>	<null>	<null>	<null>	<null>	<null>	<null>	<null>	<null>	<null>	<null>	<null>	<null>
Census Tract 9865.01	Michigan	Wayne County	<null>	<null>	<null>	<null>	<null>	<null>	<null>	<null>	<null>	<null>	<null>	<null>	<null>	<null>
Low			**37.9**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
High			**100**	**32.5**	**29.7**	**29.7**	**9.3**	**0**	**0**	**3.2**	**7.3**	**1.6**	**7.6**	**31.7**	**14.4**	**51.9**
Average			**73.8**	**9.3**	**3.3**	**3.1**	**0.2**	**0.0**	**0.0**	**0.0**	**0.2**	**0.1**	**0.5**	**2.6**	**1.4**	**8.7**
Michigan			78.8	8.3	1.2	1.1	0	0	0	0	0.1	0.1	0.4	2.1	0.7	8.3
Washtenaw County			66.1	6.5	4.2	4.1	0	0.1	0	0	0.1	0.1	1.3	6.9	0.6	14.2
Wayne County			76.2	9	2.5	2.4	0	0	0	0	0.4	0	0.3	1.8	1.2	8.6

Internet Access

Name	State	County *	Percent of Households with dial-up internet subscription alone *	Percent of Households with a broadband internet subscription *	Percent of Households without an internet subscription *	Percent of Households whose income is less than $35,000 without a broadband internet subscription	Percent of Households whose income is $35,000 or more without a broadband internet subscription
Census Tract 4044	Michigan	Washtenaw County	0	95.9	4.1	0	4.3
Census Tract 4045	Michigan	Washtenaw County	0	92.3	7.7	19.8	3.4
Census Tract 4046	Michigan	Washtenaw County	0	99.3	0.7	3.8	0
Census Tract 4051	Michigan	Washtenaw County	0	88.3	11.7	26.6	5.4
Census Tract 4054	Michigan	Washtenaw County	0	90.1	9.9	11.9	9.4
Census Tract 4055	Michigan	Washtenaw County	0	93	7	26.9	1.7
Census Tract 4056	Michigan	Washtenaw County	0	93.7	6.3	6.3	6.3
Census Tract 4103	Michigan	Washtenaw County	0	95.2	4.8	6.7	3.9
Census Tract 4105	Michigan	Washtenaw County	0	88.6	11.4	5.8	15.5
Census Tract 4106	Michigan	Washtenaw County	0	86.4	13.6	17.4	6
Census Tract 4107	Michigan	Washtenaw County	0.4	73	26.7	32	22.1
Census Tract 4108	Michigan	Washtenaw County	0	92.2	7.8	7.4	8.2
Census Tract 4117	Michigan	Washtenaw County	0	91.4	8.6	16.3	6.9
Census Tract 4120	Michigan	Washtenaw County	0	87.4	12.6	24	5.1

Name	State	County *	Percent of Households with dial-up internet subscription alone *	Percent of Households with a broadband internet subscription *	Percent of Households without an internet subscription *	Percent of Households whose income is less than $35,000 without a broadband internet subscription	Percent of Households whose income is $35,000 or more without a broadband internet subscription
Census Tract 4123	Michigan	Washtenaw County	0.9	88.9	10.1	19	4.8
Census Tract 4126	Michigan	Washtenaw County	0.4	95.7	3.9	8.6	2.5
Census Tract 4127	Michigan	Washtenaw County	0	93.6	6.4	12.6	2.8
Census Tract 4130	Michigan	Washtenaw County	0	93.9	6.1	3.6	7.3
Census Tract 4134.03	Michigan	Washtenaw County	0	96.5	3.5	16.8	1
Census Tract 4143	Michigan	Washtenaw County	0	85.1	14.9	26.8	4.7
Census Tract 4145	Michigan	Washtenaw County	0	98.8	1.2	0	1.2
Census Tract 4147	Michigan	Washtenaw County	0.7	96.1	3.2	11	2.1
Census Tract 4149	Michigan	Washtenaw County	0	97.6	2.4	10.2	1.5
Census Tract 4152	Michigan	Washtenaw County	0	99.6	0.4	0	0.4
Census Tract 4154	Michigan	Washtenaw County	0	93.1	6.9	30.8	2.7
Census Tract 4160	Michigan	Washtenaw County	0	96.7	3.3	12.3	2.3
Census Tract 9840	Michigan	Washtenaw County	0	100	0	0	0
Census Tract 5119	Michigan	Wayne County	0	71.4	28.6	34.3	18.4
Census Tract 5180	Michigan	Wayne County	0	84.7	15.3	23.1	7.1

Name	State	County *	Percent of Households with dial-up internet subscription alone *	Percent of Households with a broadband internet subscription *	Percent of Households without an internet subscription *	Percent of Households whose income is less than $35,000 without a broadband internet subscription	Percent of Households whose income is $35,000 or more without a broadband internet subscription
Census Tract 5202	Michigan	Wayne County	0	86.6	13.4	10.5	16.9
Census Tract 5219	Michigan	Wayne County	3.7	78.6	17.7	31.3	0
Census Tract 5220	Michigan	Wayne County	0	70.5	29.5	31	21.8
Census Tract 5223	Michigan	Wayne County	0	54	46	54.7	5.5
Census Tract 5224	Michigan	Wayne County	0	59.5	40.5	54.7	19
Census Tract 5254	Michigan	Wayne County	1	70.2	28.7	40.6	15.2
Census Tract 5258	Michigan	Wayne County	0	65.2	34.8	46.2	23.4
Census Tract 5260	Michigan	Wayne County	0	85.9	14.1	15.7	11.6
Census Tract 5261	Michigan	Wayne County	1.1	64.8	34	41.1	18.7
Census Tract 5262	Michigan	Wayne County	0	74.5	25.5	25.6	25.4
Census Tract 5263	Michigan	Wayne County	0	73.4	26.6	42	14
Census Tract 5264	Michigan	Wayne County	0	76.4	23.6	22.7	24.3
Census Tract 5334	Michigan	Wayne County	0	57.8	42.2	48.1	16.7
Census Tract 5336	Michigan	Wayne County	0	62.6	37.4	40.1	33.1
Census Tract 5339	Michigan	Wayne County	1.5	79.7	18.8	35.5	2.7

Name	State	County *	Percent of Households with dial-up internet subscription alone *	Percent of Households with a broadband internet subscription *	Percent of Households without an internet subscription *	Percent of Households whose income is less than $35,000 without a broadband internet subscription	Percent of Households whose income is $35,000 or more without a broadband internet subscription
Census Tract 5726	Michigan	Wayne County	0	82.1	17.9	18.9	17.2
Census Tract 5727	Michigan	Wayne County	0	86	14	16.5	13.4
Census Tract 5729	Michigan	Wayne County	0	84.1	15.9	19.6	13.7
Census Tract 5733	Michigan	Wayne County	0	93.9	6.1	10.9	3.4
Census Tract 5736	Michigan	Wayne County	0.4	83.2	16.3	17.4	14.2
Census Tract 5737.02	Michigan	Wayne County	0	87.9	12.1	20.3	5
Census Tract 5740	Michigan	Wayne County	0	84.8	15.2	21.4	10.2
Census Tract 5741	Michigan	Wayne County	0	80.6	19.4	6.4	27.5
Census Tract 5755	Michigan	Wayne County	0.7	86.6	12.7	35.5	7.2
Census Tract 5756	Michigan	Wayne County	0	85.9	14.1	27.5	9.2
Census Tract 5761	Michigan	Wayne County	0	92.3	7.7	11.1	6.6
Census Tract 5762	Michigan	Wayne County	0.7	88.1	11.2	34.4	7.1
Census Tract 5764	Michigan	Wayne County	0.4	85.7	13.8	25.7	9.9
Census Tract 5785	Michigan	Wayne County	0	92.2	7.8	14.3	3.2
Census Tract 5786	Michigan	Wayne County	0	75.8	24.2	33.4	14.1

Name	State	County *	Percent of Households with dial-up internet subscription alone *	Percent of Households with a broadband internet subscription *	Percent of Households without an internet subscription *	Percent of Households whose income is less than $35,000 without a broadband internet subscription	Percent of Households whose income is $35,000 or more without a broadband internet subscription
Census Tract 5832	Michigan	Wayne County	0	78.8	21.2	43.9	11.5
Census Tract 5833	Michigan	Wayne County	0	81.3	18.8	37.8	13.9
Census Tract 5837	Michigan	Wayne County	0	90.9	9.1	28.7	5.2
Census Tract 5855	Michigan	Wayne County	0	85.9	14.1	34.6	1
Census Tract 5857	Michigan	Wayne County	0	84.1	15.9	34.2	7.9
Census Tract 5859	Michigan	Wayne County	0	69	31	60.5	13.7
Census Tract 5863	Michigan	Wayne County	0	77.7	22.3	49.3	18.9
Census Tract 5870	Michigan	Wayne County	0	80.8	19.2	29.6	14.2
Census Tract 5879	Michigan	Wayne County	0.5	94.6	4.9	9.7	2.4
Census Tract 5882	Michigan	Wayne County	0	96.5	3.5	4.2	3.2
Census Tract 5884	Michigan	Wayne County	0	93.6	6.4	10.2	5.8
Census Tract 9850	Michigan	Wayne County	<null>	<null>	<null>	<null>	<null>
Census Tract 9854	Michigan	Wayne County	0	50	50	100	0
Census Tract 9857	Michigan	Wayne County	<null>	<null>	<null>	<null>	<null>
Census Tract 9802	Michigan	Washtenaw County	<null>	<null>	<null>	<null>	<null>

Name	State	County *	Percent of Households with dial-up internet subscription alone *	Percent of Households with a broadband internet subscription *	Percent of Households without an internet subscription *	Percent of Households whose income is less than $35,000 without a broadband internet subscription	Percent of Households whose income is $35,000 or more without a broadband internet subscription
Census Tract 5228	Michigan	Wayne County	0	64.9	35.1	39.7	29.3
Census Tract 5279	Michigan	Wayne County	0	61.4	38.6	40.9	32.8
Census Tract 5735.01	Michigan	Wayne County	0	90.1	9.9	17	1.9
Census Tract 5742.03	Michigan	Wayne County	0	89.5	10.5	43.6	0.9
Census Tract 5760.01	Michigan	Wayne County	0.7	87.2	12.1	34.6	2
Census Tract 5830.01	Michigan	Wayne County	1.6	74.7	23.7	50.3	11.4
Census Tract 5831.01	Michigan	Wayne County	0	77.8	22.2	33.3	15
Census Tract 5862.01	Michigan	Wayne County	0	86.5	13.5	22.6	10.9
Census Tract 5880.01	Michigan	Wayne County	2.1	90.8	7	7.9	6.8
Census Tract 5880.02	Michigan	Wayne County	0	81.1	18.9	40.5	14.8
Census Tract 5881.02	Michigan	Wayne County	0	89.9	10.1	14.8	7.3

Name	State	County *	Percent of Households with dial-up internet subscription alone *	Percent of Households with a broadband internet subscription *	Percent of Households without an internet subscription *	Percent of Households whose income is less than $35,000 without a broadband internet subscription	Percent of Households whose income is $35,000 or more without a broadband internet subscription
Census Tract 9819.01	Michigan	Wayne County	<null>	<null>	<null>	<null>	<null>
Census Tract 9819.02	Michigan	Wayne County	<null>	<null>	<null>	<null>	<null>
Census Tract 9825	Michigan	Wayne County	<null>	<null>	<null>	<null>	<null>
Census Tract 9826	Michigan	Wayne County	<null>	<null>	<null>	<null>	<null>
Census Tract 9837	Michigan	Wayne County	<null>	<null>	<null>	<null>	<null>
Census Tract 9865.01	Michigan	Wayne County	<null>	<null>	<null>	<null>	<null>
Low			**0**	**50**	**0**	**0**	**0**
High			**3.7**	**100**	**50**	**100**	**33.1**
Average			**0.2**	**84.0**	**15.8**	**25.1**	**9.7**

Michigan			0.2	86.4	13.3	28.5	7.6
Washtenaw County			0.1	92.3	7.7	18.3	4.6
Wayne County			0.2	83.3	16.5	30.5	9.1

Community Facilities

APN	city_id	Building Type	Year Built	Address	Zip code	City	Name
20010344-400	510	Educational	2015	4833 OGDEN ST	48210	Detroit	Universal Academy
18011125	510	Educational	2012	5525 MARTIN ST	48210	Detroit	Munger Elementary-Middle School
20009264	510	Educational	1926	4612 LONYO ST	48210	Detroit	International Islamic Academy
20010680	510	Religious and Civic	0	4430 SAINT JAMES ST	48210	Detroit	Quran Institute of America
20010290	510	Religious and Civic	0	5169 OGDEN ST	48210	Detroit	Gospel Truth Tabernacle of God
18011140	510	Religious and Civic	0	4701 MARTIN ST	48210	Detroit	Church Latin American Baptist Church
18011131	510	Religious and Civic	1926	4959 MARTIN ST	48210	Detroit	Resurrection Ministries
20010965	510	Religious and Civic	0	5281 ADDISON ST	48210	Detroit	Universal Temple of Divine Power
18007032	510	Religious and Civic	1920	4749 LIVERNOIS AVE	48210	Detroit	Church of Saint Anthony
18012113	510	Religious and Civic	0	5278 CHOPIN ST	48210	Detroit	Iglesia De Cristo Ministerios El Verbo De Dios
20010793-9	510	Transportation and Utility	1925	9125 MCGRAW ST	48210	Detroit	McGraw Substation DTE
20006242	510	Health and Social Services	1900	4848 LAWNDALE ST	48210	Detroit	American Indian Health
18011124	510	Parks and Recreation	0	6965 MCGRAW ST	48210	Detroit	Dingeman Park
14001145-51	513	Religious and Civic	1997	5207 LOVETT ST	48210	Detroit	Pleasant Hill Missionary Baptist Church
16016073	513	Religious and Civic	0	4660 MILITARY ST	48210	Detroit	Dove Christian Center Church
14007999	513	Religious and Civic	0	1510 W GRAND BLVD	48208	Detroit	Carter Metropolitan Church

APN	city_id	Building Type	Year Built	Address	Zip code	City	Name
14008631	513	Religious and Civic	0	5370 MCKINLEY ST	48208	Detroit	Bailey Temple Church of God
16015369	513	Religious and Civic	1913	4756 WESSON ST	48210	Detroit	Iglesia Pentecostal Puerta Del Cielo
16013061	513	Religious and Civic	1951	4720 JUNCTION ST	48210	Detroit	New Birth Christian B.E.L.C.Ministries
14001114	513	Religious and Civic	1922	3871 W WARREN AVE	48208	Detroit	Detroit Pentecostal Outreach Church of God In Christ
12010162	513	Religious and Civic	0	5204 ROOSEVELT ST	48208	Detroit	Dominion Convenant Fellowship International
14011009	513	Religious and Civic	0	5024 28TH ST	48210	Detroit	Bethel Temple Baptist Church
16011921	513	Religious and Civic	1950	4718 32ND ST	48210	Detroit	New Deliverance Pentecostal Church Of Truth
12010176-7	513	Religious and Civic	0	5330 ROOSEVELT ST	48208	Detroit	Galatian Christian Church
16013053	513	Health and Social Services	1912	4670 JUNCTION ST	48210	Detroit	Garage Cultural
10000661-8	529	Governmental	1951	5300 LAWTON ST	48208	Detroit	Wayne County Department of Corrections
08008062-6	529	Governmental	1950	5201 ROSA PARKS BLVD	48208	Detroit	Hart Medical EMS
10000547-9	529	Governmental	1980	5131 GRAND RIVER AVE	48208	Detroit	Department of Human Services - Grand River/Warren District
08001381-91	529	Health and Social Services	0	1776 W WARREN AVE	48208	Detroit	Boy Scouts of America
06001254-459	529	Parks and Recreation	1965	1401 EDSEL FORD SERVICE DR	48202	Detroit	Tom Adams Field, Wayne State University
06001254-459	529	Parks and Recreation	1965	5101 JOHN C LODGE FWY	48202	Detroit	Matthei Center, Wayne State University
06001254-459	529	Parks and Recreation	2016	1302 W WARREN	48208	Detroit	Wayne State University Softball Stadium

APN	city_id	Building Type	Year Built	Address	Zip code	City	Name
12006057	544	Religious and Civic	1920	5601 GRAND RIVER AVE	48208	Detroit	Moorish Science Temple of America
10008610	544	Religious and Civic	0	5646 LAWTON ST	48208	Detroit	Morning View Baptist Church
10005054-6	544	Religious and Civic	0	5780 14TH ST	48208	Detroit	First Fellowship Baptist Church
08008902-6	544	Governmental	0	5600 WABASH ST	48208	Detroit	Detroit Department of Transportation - Gilbert Terminal
12006657	544	Residential Care Facility	1924	5675-5683 MAYBURY GRAND ST	48208	Detroit	Self Help Addiction Recovery (SHAR) - Maybury Grand
12010189	550	Religious and Civic	0	5482 ROOSEVELT ST	48208	Detroit	Macedonia Primitive Baptist Church
14001170	550	Religious and Civic	1949	4358 W WARREN AVE	48210	Detroit	Burnette Baptist Church
12000980	550	Religious and Civic	1910	3402 MCGRAW ST	48208	Detroit	Temple Immanuel Intrdnmntl Church
14011558-70	550	Religious and Civic	0	6000 STANFORD ST	48210	Detroit	Saint Stephen AME Church
16010792	550	Religious and Civic	1907	5631 30TH ST	48210	Detroit	Spirit Of Faith M.B.C.
14011380	550	Religious and Civic	0	6004 HARTFORD ST	48210	Detroit	Good Shepherd Mssnry Baptist Church
14008128	550	Governmental	1900	1697 W GRAND BLVD	48210	Detroit	City Of Detroit Fire Department - Engine 31 Squad 4
16001925	550	Health and Social Services	1923	4828 W WARREN AVE	48210	Detroit	Blessings Medical Center
16013104	550	Parks and Recreation	0	5555 MCGRAW ST	48210	Detroit	Kronk Recreation Center
		Parks and Recreation				Detroit	Ewald Park
		Parks and Recreation				Detroit	Watson Park

APN	city_id	Building Type	Year Built	Address	Zip code	City	Name
		Parks and Recreation				Detroit	Kronk Park
		Parks and Recreation				Detroit	McKinley-Merrick Park
		Parks and Recreation				Detroit	30th-Herbert Park
		Parks and Recreation				Detroit	Hecla Park
		Parks and Recreation				Detroit	Romanowski Park
		Parks and Recreation				Detroit	Bryant-Vermont Park
		Parks and Recreation				Detroit	Ames Park
		Parks and Recreation				Detroit	Lumley-Michigan Park
		Parks and Recreation				Detroit	Atkinson Park
30 006 99 0002 001	1005	Educational	0	4500 ENTERPRISE DR	48101	Allen Park	Baker College-Allen Park
30 001 01 0002 003	1005	Educational	0	5000 SHENANDOAH AVE	48101	Allen Park	Rogers Early Elementary School
30 006 99 0001 001	1005	Religious and Civic	0	23700 OUTER DR	48101	Allen Park	Southpoint Church - Allen Park Campus
30 001 01 0003 304	1005	Religious and Civic	0	23610 OUTER DR	48101	Allen Park	Allen Park Church of Christ
30 022 01 0201 000	1005	Governmental	1994	5831 CORTLAND AVE	48101	Allen Park	Michigan Department-Transportation - Allen Park
		Parks and Recreation				Allen Park	Cunningham Park
		Parks and Recreation				Allen Park	Kennedy Park
		Parks and Recreation				Allen Park	Riel Park

APN	city_id	Building Type	Year Built	Address	Zip code	City	Name
		Parks and Recreation				Melvindale	Coogan Park
		Parks and Recreation				Melvindale	McGinity Park
		Parks and Recreation				Melvindale	Melvindale Civic Center
82 10 173 08 035	1025	Educational	1954	4801 OAKMAN BLVD	48126	Dearborn	Advanced Technology Academy
82 10 173 08 028	1025	Educational	0	13020 OSBORNE ST	48126	Dearborn	Cotter Early Childhood Center
82 10 192 04 004	1025	Educational	2001	3601 SCHAEFER	48126	Dearborn	Henry Ford Community College
82 10 192 04 004	1025	Educational	2001	3401 SCHAEFER	48126	Dearborn	Henry Ford Community College School of Nursing
82 10 302 03 001	1025	Governmental	1931	2661 GREENFIELD RD	48120	Dearborn	Dearborn Animal Shelter
82 10 194 03 001	1025	Transportation and Utility	1970	3051 SCHAEFER	48126	Dearborn	Advanced Disposal Services - Dearborn Transfer Station
82 10 302 01 001	1025	Parks and Recreation	1968	2951 GREENFIELD RD	48120	Dearborn	Dearborn Public Works Department
80 073 01 0168 002	1170	Religious and Civic	0	11280 OZGA ST	48174	Romulus	St Aloysius Parish
80 078 01 0265 302	1170	Religious and Civic	0	11160 OLIVE ST	48174	Romulus	Community United Methodist Church
80 044 99 0006 000	1170	Governmental	0	29900 GODDARD RD	48174	Romulus	Wayne County Roads Division Central Maintenance Yard
80 078 01 0257 001	1170	Governmental	0	11165 OLIVE ST	48174	Romulus	Romulus Police Department
80 040 99 0001 701	1170	Transportation and Utility	0	32280 WICK RD	48174	Romulus	Detroit Water and Sewerage Department
80 053 99 0001 700	1170	Transportation and Utility	0	505 W SERVICE DR	48242	Romulus	Detroit Metropolitan Wayne County Airport
80 068 01 0024 306	1170	Health and Social Services	2020	10912 WAYNE RD	48174	Romulus	Concentra Urgent Care

APN	city_id	Building Type	Year Built	Address	Zip code	City	Name
80 071 99 0019 702	1170	Health and Social Services	1950	10909 HANNAN RD	48174	Romulus	Special Tree Neurocare Center
80 072 99 0034 000	1170	Residential Care Facility	0	10420 OZGA ST	48174	Romulus	Reach Foundation
80 071 99 0019 702	1170	Residential Care Facility	1950	39000 CHASE ST	48174	Romulus	NeuroCare Center South Assisted Living
60 013 02 0290 000	1185	Religious and Civic	1940	6142 MCGUIRE ST	48180	Taylor	Grace Evangelical Fellowship
60 013 02 0348 300	1185	Religious and Civic	1963	6034 BEECH DALY RD	48180	Taylor	Vietnamese Buddhist Temple
60 009 99 0003 000	1185	Governmental	0	6510 TELEGRAPH RD	48180	Taylor	Michigan Department of Transportation Taylor Transportation Service Center
		Parks and Recreation				Taylor	Taylor Meadows Mun. Golf Course
		Parks and Recreation				Taylor	Lucinda Burns Park
83 063 99 0004 001	1200	Religious and Civic	0	47100 N INTERSTATE 94 SERVICE DR	48111	Van Buren Township	Metro Baptist Church
83 086 99 0028 002	1200	Religious and Civic	0	11575 BELLEVILLE RD	48111	Van Buren Township	Trinity Episcopal Church
83 073 99 0012 000	1200	Governmental	0	50901 S INTERSTATE 94 SERVICE DR	48111	Van Buren Township	Van Buren Park
83 067 99 0004 002	1200	Transportation and Utility	0	48490 N INTERSTATE 94 SERVICE DR	48111	Van Buren Township	US Ecology
83 077 99 0004 002	1200	Parks and Recreation	1973	<Null>	48111	Van Buren Township	Pickle Park
09-12-10-400-031	4005	Religious and Civic	0	3630 PLATT RD	48108	Ann Arbor	St Paul Missionary Baptist Church

APN	city_id	Building Type	Year Built	Address	Zip code	City	Name
09-12-09-300-015	4005	Health and Social Services	1969	700 KMS PL	48108	Ann Arbor	University of Michigan Health
09-12-06-401-009	4005	Health and Social Services	1985	955 W EISENHOWER PKWY	48103	Ann Arbor	Ann Arbor Family Care
09-12-10-302-022	4005	Parks and Recreation	0	3 W EDEN CT	48108	Ann Arbor	Bryant Community Center
09-12-09-400-012	4005	Parks and Recreation	0	3500-3600 VARSITY DR	48108	Ann Arbor	University of Michigan Herbarium
		Parks and Recreation				Ann Arbor	Mill Creek
		Parks and Recreation				Ann Arbor	Waymarket
		Parks and Recreation				Ann Arbor	Scarlett Mitchell Woods
		Parks and Recreation				Ann Arbor	Southeast Area
		Parks and Recreation				Ann Arbor	Mary Beth Doyle
		Parks and Recreation				Ann Arbor	Clinton
		Parks and Recreation				Ann Arbor	Pilgrim
		Parks and Recreation				Ann Arbor	Arbor Oaks
		Parks and Recreation		4000 Platt Rd	48108	Ann Arbor	Swift Run Marsh
L -12-08-250-015	4080	Religious and Civic	0	3257 LOHR RD	48108	Pittsfield Township	Epispocal Church of the Incarnation
L -12-13-300-027	4080	Religious and Civic	0	4599 CARPENTER RD	48197	Pittsfield Township	Unity of Ann Arbor
L -12-08-400-035	4080	Governmental	0	1200 STATE CIR	48108	Pittsfield Township	Huron Valley Ambulance
		Parks and Recreation				Pittsfield Township	Lilley Park

APN	city_id	Building Type	Year Built	Address	Zip code	City	Name
11-11-10-360-001	4130	Educational	0	510 EMERICK ST	48198	Ypsilanti	Ypsilanti Middle School
11-11-37-203-014	4130	Educational	0	1036 JEFFERSON ST	48197	Ypsilanti	Victory Academy Charter School
11-11-37-155-016	4130	Religious and Civic	0	565 JEFFERSON ST	48197	Ypsilanti	Community Church of God
11-11-37-128-007	4130	Religious and Civic	0	866 MONROE ST	48197	Ypsilanti	St John's Baptist Church
11-11-37-129-010	4130	Religious and Civic	0	585 1ST AVE	48197	Ypsilanti	St James Church of God-Christ
11-11-10-360-007	4130	Religious and Civic	0	333 S PROSPECT ST	48198	Ypsilanti	Ypsilanti Community Church
11-11-37-203-013	4130	Religious and Civic	0	1076 JEFFERSON ST	48197	Ypsilanti	Shiloh Church of God
11-11-37-130-025	4130	Health and Social Services	0	937 MONROE ST	48197	Ypsilanti	Children Rainbow Center
		Parks and Recreation				Ypsilanti	Parkridge Park
		Parks and Recreation				Ypsilanti	Haab Brothers Memorial Park
K -11-10-465-001	4135	Educational	0	1076 ECORSE RD	48198	Ypsilanti Township	Forest School
K -11-24-135-032	4135	Religious and Civic	0	2152 MOELLER AVE	48198	Ypsilanti Township	Restore World Church
K -11-18-300-030	4135	Religious and Civic	0	2885 ELLIS RD	48197	Ypsilanti Township	Christian Faith Church
K -11-11-381-017	4135	Religious and Civic	0	1837 TYLER RD	48198	Ypsilanti Township	West Willow Church of God in Christ
K -11-18-100-017	4135	Health and Social Services	2001	850 S HEWITT RD	48197	Ypsilanti Township	Little Angels Preschool & Daycare

APN	city_id	Building Type	Year Built	Address	Zip code	City	Name
K -11-10-386-036	4135	Health and Social Services	1969	840 MAUS AVE	48198	Ypsilanti Township	Family Life Services - Washtenaw County
		Parks and Recreation				Ypsilanti Township	Sugarbrook Park
		Parks and Recreation				Ypsilanti Township	Lakeview Park
		Parks and Recreation				Ypsilanti Township	North Bay Park
		Parks and Recreation		10871 Quirk Rd	48111	Belleville	Wayne County Fairgrounds

Economic Indicators

Median Household Income

Name	State *	County *	Median Household Income in past 12 months (inflation-adjusted dollars to last year of 5-year range) *
Census Tract 4044	Michigan	Washtenaw County	156875
Census Tract 4045	Michigan	Washtenaw County	72261
Census Tract 4046	Michigan	Washtenaw County	77431
Census Tract 4051	Michigan	Washtenaw County	55156
Census Tract 4054	Michigan	Washtenaw County	61993
Census Tract 4055	Michigan	Washtenaw County	64018
Census Tract 4056	Michigan	Washtenaw County	45500
Census Tract 4103	Michigan	Washtenaw County	51119
Census Tract 4105	Michigan	Washtenaw County	45743
Census Tract 4106	Michigan	Washtenaw County	26329
Census Tract 4107	Michigan	Washtenaw County	36003
Census Tract 4108	Michigan	Washtenaw County	33194
Census Tract 4117	Michigan	Washtenaw County	77151
Census Tract 4120	Michigan	Washtenaw County	45568
Census Tract 4123	Michigan	Washtenaw County	44348
Census Tract 4126	Michigan	Washtenaw County	63418
Census Tract 4127	Michigan	Washtenaw County	64278
Census Tract 4130	Michigan	Washtenaw County	48594
Census Tract 4134.03	Michigan	Washtenaw County	98920
Census Tract 4143	Michigan	Washtenaw County	40677
Census Tract 4145	Michigan	Washtenaw County	127778
Census Tract 4147	Michigan	Washtenaw County	89286
Census Tract 4149	Michigan	Washtenaw County	140875
Census Tract 4152	Michigan	Washtenaw County	65313
Census Tract 4154	Michigan	Washtenaw County	83574
Census Tract 4160	Michigan	Washtenaw County	90114
Census Tract 9840	Michigan	Washtenaw County	<Null>
Census Tract 5119	Michigan	Wayne County	20243

Name	State *	County *	Median Household Income in past 12 months (inflation-adjusted dollars to last year of 5-year range) *
Census Tract 5180	Michigan	Wayne County	32304
Census Tract 5202	Michigan	Wayne County	33125
Census Tract 5219	Michigan		27745
Census Tract 5220	Michigan	Wayne County	20625
Census Tract 5223	Michigan	Wayne County	12000
Census Tract 5224	Michigan	Wayne County	<Null>
Census Tract 5254	Michigan	Wayne County	33060
Census Tract 5258	Michigan	Wayne County	35234
Census Tract 5260	Michigan	Wayne County	33514
Census Tract 5261	Michigan	Wayne County	25347
Census Tract 5262	Michigan	Wayne County	38229
Census Tract 5263	Michigan	Wayne County	38438
Census Tract 5264	Michigan	Wayne County	39412
Census Tract 5334	Michigan	Wayne County	16689
Census Tract 5336	Michigan	Wayne County	27000
Census Tract 5339	Michigan	Wayne County	35479
Census Tract 5726	Michigan	Wayne County	47626
Census Tract 5727	Michigan	Wayne County	62014
Census Tract 5729	Michigan	Wayne County	50278
Census Tract 5733	Michigan	Wayne County	47292
Census Tract 5736	Michigan	Wayne County	26044
Census Tract 5737.02	Michigan	Wayne County	39805
Census Tract 5740	Michigan	Wayne County	42500
Census Tract 5741	Michigan	Wayne County	42933
Census Tract 5755	Michigan	Wayne County	60549
Census Tract 5756	Michigan	Wayne County	64583
Census Tract 5761	Michigan	Wayne County	57056
Census Tract 5762	Michigan	Wayne County	73725
Census Tract 5764	Michigan	Wayne County	77467
Census Tract 5785	Michigan	Wayne County	44414
Census Tract 5786	Michigan	Wayne County	33402
Census Tract 5832	Michigan	Wayne County	46563
Census Tract 5833	Michigan	Wayne County	62500

Name	State *	County *	Median Household Income in past 12 months (inflation-adjusted dollars to last year of 5-year range) *
Census Tract 5837	Michigan	Wayne County	74340
Census Tract 5855	Michigan	Wayne County	46570
Census Tract 5857	Michigan	Wayne County	55441
Census Tract 5859	Michigan	Wayne County	50742
Census Tract 5863	Michigan	Wayne County	73456
Census Tract 5870	Michigan	Wayne County	51602
Census Tract 5879	Michigan	Wayne County	78819
Census Tract 5882	Michigan	Wayne County	45069
Census Tract 5884	Michigan	Wayne County	84750
Census Tract 9850	Michigan	Wayne County	<Null>
Census Tract 9854	Michigan	Wayne County	<Null>
Census Tract 9857	Michigan	Wayne County	<Null>
Census Tract 9802	Michigan	Washtenaw County	<Null>
Census Tract 5228	Michigan	Wayne County	23380
Census Tract 5279	Michigan	Wayne County	22162
Census Tract 5735.01	Michigan	Wayne County	33682
Census Tract 5742.03	Michigan	Wayne County	99500
Census Tract 5760.01	Michigan	Wayne County	54239
Census Tract 5830.01	Michigan	Wayne County	51782
Census Tract 5831.01	Michigan	Wayne County	41574
Census Tract 5862.01	Michigan	Wayne County	66692
Census Tract 5880.01	Michigan	Wayne County	89486
Census Tract 5880.02	Michigan	Wayne County	57234
Census Tract 5881.02	Michigan	Wayne County	42569
Census Tract 9819.01	Michigan	Wayne County	<Null>
Census Tract 9819.02	Michigan	Wayne County	<Null>
Census Tract 9825	Michigan	Wayne County	<Null>
Census Tract 9826	Michigan	Wayne County	<Null>
Census Tract 9837	Michigan	Wayne County	<Null>
Census Tract 9865.01	Michigan	Wayne County	<Null>
Low			**12000**
High			**156875**
Average			**54377.2**

Name	State *	County *	Median Household Income in past 12 months (inflation-adjusted dollars to last year of 5-year range) *
Michigan			79198
Washtenaw County			52830
Wayne County			63202

Poverty Status

Name *	State *	County *	Population whose income in the past 12 months is below federal poverty level *	Population whose income in the past 12 months is at or above federal poverty level	Percent of Population whose income in the past 12 months is below poverty level *	Population whose income in the past 12 months is 2.00x and over (200% or more of) the federal poverty level	Percent of population whose income in the past 12 months is 2.00x and over (200% of) the federal poverty level
Census Tract 4044	Michigan	Washtenaw County	74	2086	3.4	2086	96.6
Census Tract 4045	Michigan	Washtenaw County	553	3578	13.4	2655	64.3
Census Tract 4046	Michigan	Washtenaw County	542	4391	11	4116	83.4
Census Tract 4051	Michigan	Washtenaw County	502	1414	26.2	1036	54.1
Census Tract 4054	Michigan	Washtenaw County	239	2109	10.2	1775	75.6
Census Tract 4055	Michigan	Washtenaw County	166	2472	6.3	1931	73.2
Census Tract 4056	Michigan	Washtenaw County	1200	3383	26.2	2172	47.4
Census Tract 4103	Michigan	Washtenaw County	969	3376	22.3	2676	61.6
Census Tract 4105	Michigan	Washtenaw County	391	1964	16.6	1393	59.2

Name *	State *	County *	Population whose income in the past 12 months is below federal poverty level *	Population whose income in the past 12 months is at or above federal poverty level	Percent of Population whose income in the past 12 months is below poverty level *	Population whose income in the past 12 months is 2.00x and over (200% or more of) the federal poverty level	Percent of population whose income in the past 12 months is 2.00x and over (200% of) the federal poverty level
Census Tract 4106	Michigan	Washtenaw County	1290	1690	43.3	867	29.1
Census Tract 4107	Michigan	Washtenaw County	354	945	27.3	617	47.5
Census Tract 4108	Michigan	Washtenaw County	638	1058	37.6	765	45.1
Census Tract 4117	Michigan	Washtenaw County	146	2100	6.5	1766	78.6
Census Tract 4120	Michigan	Washtenaw County	1380	3116	30.7	2007	44.6
Census Tract 4123	Michigan	Washtenaw County	794	2354	25.2	1771	56.3
Census Tract 4126	Michigan	Washtenaw County	172	2424	6.6	1928	74.3
Census Tract 4127	Michigan	Washtenaw County	420	4673	8.2	3553	69.8
Census Tract 4130	Michigan	Washtenaw County	456	3035	13.1	2311	66.2
Census Tract 4134.03	Michigan	Washtenaw County	110	1916	5.4	1647	81.3
Census Tract 4143	Michigan	Washtenaw County	676	2386	22.1	1786	58.3
Census Tract 4145	Michigan	Washtenaw County	113	2989	3.6	2746	88.5
Census Tract 4147	Michigan	Washtenaw County	98	1817	5.1	1612	84.2
Census Tract 4149	Michigan	Washtenaw County	167	3187	5	3003	89.5
Census Tract 4152	Michigan	Washtenaw County	258	2172	10.6	1886	77.6

Name *	State *	County *	Population whose income in the past 12 months is below federal poverty level *	Population whose income in the past 12 months is at or above federal poverty level	Percent of Population whose income in the past 12 months is below poverty level *	Population whose income in the past 12 months is 2.00x and over (200% or more of) the federal poverty level	Percent of population whose income in the past 12 months is 2.00x and over (200% of) the federal poverty level
Census Tract 4154	Michigan	Washtenaw County	216	1528	12.4	1356	77.8
Census Tract 4160	Michigan	Washtenaw County	333	3044	9.9	2722	80.6
Census Tract 9840	Michigan	Washtenaw County	0	39	0	35	89.7
Census Tract 5119	Michigan	Wayne County	592	831	41.6	525	36.9
Census Tract 5180	Michigan	Wayne County	417	1898	18	1471	63.5
Census Tract 5202	Michigan	Wayne County	634	950	40	561	35.4
Census Tract 5219	Michigan	Wayne County	1084	1782	37.8	1143	39.9
Census Tract 5220	Michigan	Wayne County	1030	784	56.8	269	14.8
Census Tract 5223	Michigan	Wayne County	698	461	60.2	159	13.7
Census Tract 5224	Michigan	Wayne County	510	366	58.2	319	36.4
Census Tract 5254	Michigan	Wayne County	671	1516	30.7	831	38
Census Tract 5258	Michigan	Wayne County	858	1200	41.7	658	32
Census Tract 5260	Michigan	Wayne County	1038	1671	38.3	721	26.6
Census Tract 5261	Michigan	Wayne County	1715	1182	59.2	592	20.4
Census Tract 5262	Michigan	Wayne County	1194	1851	39.2	745	24.5

Name *	State *	County *	Population whose income in the past 12 months is below federal poverty level *	Population whose income in the past 12 months is at or above federal poverty level	Percent of Population whose income in the past 12 months is below poverty level *	Population whose income in the past 12 months is 2.00x and over (200% or more of) the federal poverty level	Percent of population whose income in the past 12 months is 2.00x and over (200% of) the federal poverty level
Census Tract 5263	Michigan	Wayne County	1093	1987	35.5	1037	33.7
Census Tract 5264	Michigan	Wayne County	637	894	41.6	686	44.8
Census Tract 5334	Michigan	Wayne County	821	1097	42.8	614	32
Census Tract 5336	Michigan	Wayne County	504	976	34.1	526	35.5
Census Tract 5339	Michigan	Wayne County	625	2009	23.7	1346	51.1
Census Tract 5726	Michigan	Wayne County	973	4228	18.7	3270	62.9
Census Tract 5727	Michigan	Wayne County	413	4353	8.7	3604	75.6
Census Tract 5729	Michigan	Wayne County	1046	1814	36.6	1275	44.6
Census Tract 5733	Michigan	Wayne County	1110	3404	24.6	2230	49.4
Census Tract 5736	Michigan	Wayne County	3657	3256	52.9	1526	22.1
Census Tract 5737.02	Michigan	Wayne County	2577	4900	34.5	3251	43.5
Census Tract 5740	Michigan	Wayne County	2538	4415	36.5	2364	34
Census Tract 5741	Michigan	Wayne County	1720	3260	34.5	1820	36.5
Census Tract 5755	Michigan	Wayne County	403	3600	10.1	2699	67.4
Census Tract 5756	Michigan	Wayne County	454	1472	23.6	1184	61.5

Name *	State *	County *	Population whose income in the past 12 months is below federal poverty level *	Population whose income in the past 12 months is at or above federal poverty level	Percent of Population whose income in the past 12 months is below poverty level *	Population whose income in the past 12 months is 2.00x and over (200% or more of) the federal poverty level	Percent of population whose income in the past 12 months is 2.00x and over (200% of) the federal poverty level
Census Tract 5761	Michigan	Wayne County	898	5395	14.3	4196	66.7
Census Tract 5762	Michigan	Wayne County	111	2195	4.8	2073	89.9
Census Tract 5764	Michigan	Wayne County	199	3460	5.4	2993	81.8
Census Tract 5785	Michigan	Wayne County	1528	4918	23.7	2621	40.7
Census Tract 5786	Michigan	Wayne County	1980	4108	32.5	2615	43
Census Tract 5832	Michigan	Wayne County	335	1890	15.1	1422	63.9
Census Tract 5833	Michigan	Wayne County	249	2355	9.6	1838	70.6
Census Tract 5837	Michigan	Wayne County	196	3812	4.9	3216	80.2
Census Tract 5855	Michigan	Wayne County	299	1419	17.4	923	53.7
Census Tract 5857	Michigan	Wayne County	436	1567	21.8	1408	70.3
Census Tract 5859	Michigan	Wayne County	310	2461	11.2	2006	72.4
Census Tract 5863	Michigan	Wayne County	70	1822	3.7	1608	85
Census Tract 5870	Michigan	Wayne County	272	3706	6.8	2750	69.1
Census Tract 5879	Michigan	Wayne County	1095	5814	15.8	4865	70.4
Census Tract 5882	Michigan	Wayne County	335	2909	10.3	2065	63.7

Name *	State *	County *	Population whose income in the past 12 months is below federal poverty level *	Population whose income in the past 12 months is at or above federal poverty level	Percent of Population whose income in the past 12 months is below poverty level *	Population whose income in the past 12 months is 2.00x and over (200% or more of) the federal poverty level	Percent of population whose income in the past 12 months is 2.00x and over (200% of) the federal poverty level
Census Tract 5884	Michigan	Wayne County	194	5363	3.5	4940	88.9
Census Tract 9850	Michigan	Wayne County	0	0	<Null>	0	<Null>
Census Tract 9854	Michigan	Wayne County	4	17	19	17	81
Census Tract 9857	Michigan	Wayne County	0	0	<Null>	0	<Null>
Census Tract 9802	Michigan	Washtenaw County	0	0	<Null>	0	<Null>
Census Tract 5228	Michigan	Wayne County	361	1246	22.5	509	31.7
Census Tract 5279	Michigan	Wayne County	824	1136	42	497	25.4
Census Tract 5735.01	Michigan	Wayne County	2385	3031	44	1757	32.4
Census Tract 5742.03	Michigan	Wayne County	195	2965	6.2	2562	81.1
Census Tract 5760.01	Michigan	Wayne County	207	1623	11.3	1353	73.9
Census Tract 5830.01	Michigan	Wayne County	133	2446	5.2	1523	59.1
Census Tract 5831.01	Michigan	Wayne County	822	2391	25.6	1643	51.1
Census Tract 5862.01	Michigan	Wayne County	951	6607	12.6	6032	79.8

Name *	State *	County *	Population whose income in the past 12 months is below federal poverty level *	Population whose income in the past 12 months is at or above federal poverty level	Percent of Population whose income in the past 12 months is below poverty level *	Population whose income in the past 12 months is 2.00x and over (200% or more of) the federal poverty level	Percent of population whose income in the past 12 months is 2.00x and over (200% of) the federal poverty level
Census Tract 5880.01	Michigan	Wayne County	605	2944	17	2610	73.5
Census Tract 5880.02	Michigan	Wayne County	235	2471	8.7	2226	82.3
Census Tract 5881.02	Michigan	Wayne County	145	1156	11.1	896	68.9
Census Tract 9819.01	Michigan	Wayne County	0	0	<Null>	0	<Null>
Census Tract 9819.02	Michigan	Wayne County	0	0	<Null>	0	<Null>
Census Tract 9825	Michigan	Wayne County	0	0	<Null>	0	<Null>
Census Tract 9826	Michigan	Wayne County	0	0	<Null>	0	<Null>
Census Tract 9837	Michigan	Wayne County	0	0	<Null>	0	<Null>
Census Tract 9865.01	Michigan	Wayne County	0	0	<Null>	0	<Null>
Low			**0**	**0**	**0**	**0**	**13.7**
High			**3657**	**6607**	**60.2**	**6032**	**96.6**
Average			**622.5**	**2226.7**	**22.1**	**1657.2**	**58.3**

Michigan			47351	305281	13.4	263656	74.8

Name *	State *	County *	Population whose income in the past 12 months is below federal poverty level *	Population whose income in the past 12 months is at or above federal poverty level	Percent of Population whose income in the past 12 months is below poverty level *	Population whose income in the past 12 months is 2.00x and over (200% or more of) the federal poverty level	Percent of population whose income in the past 12 months is 2.00x and over (200% of) the federal poverty level
Washtenaw County			363034	1407553	20.5	1076657	60.8
Wayne County			1310058	8540247	13.3	6902608	70.1