

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



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
 Northern long-eared bat
 Poweshiek skipperling
 Tricolored bat
 Three-awned grass

SC to T
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 <u>Part 303</u>, <u>Wetlands Protection</u>, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA). Only an onsite 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 OUALIFICATIONS

- 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.



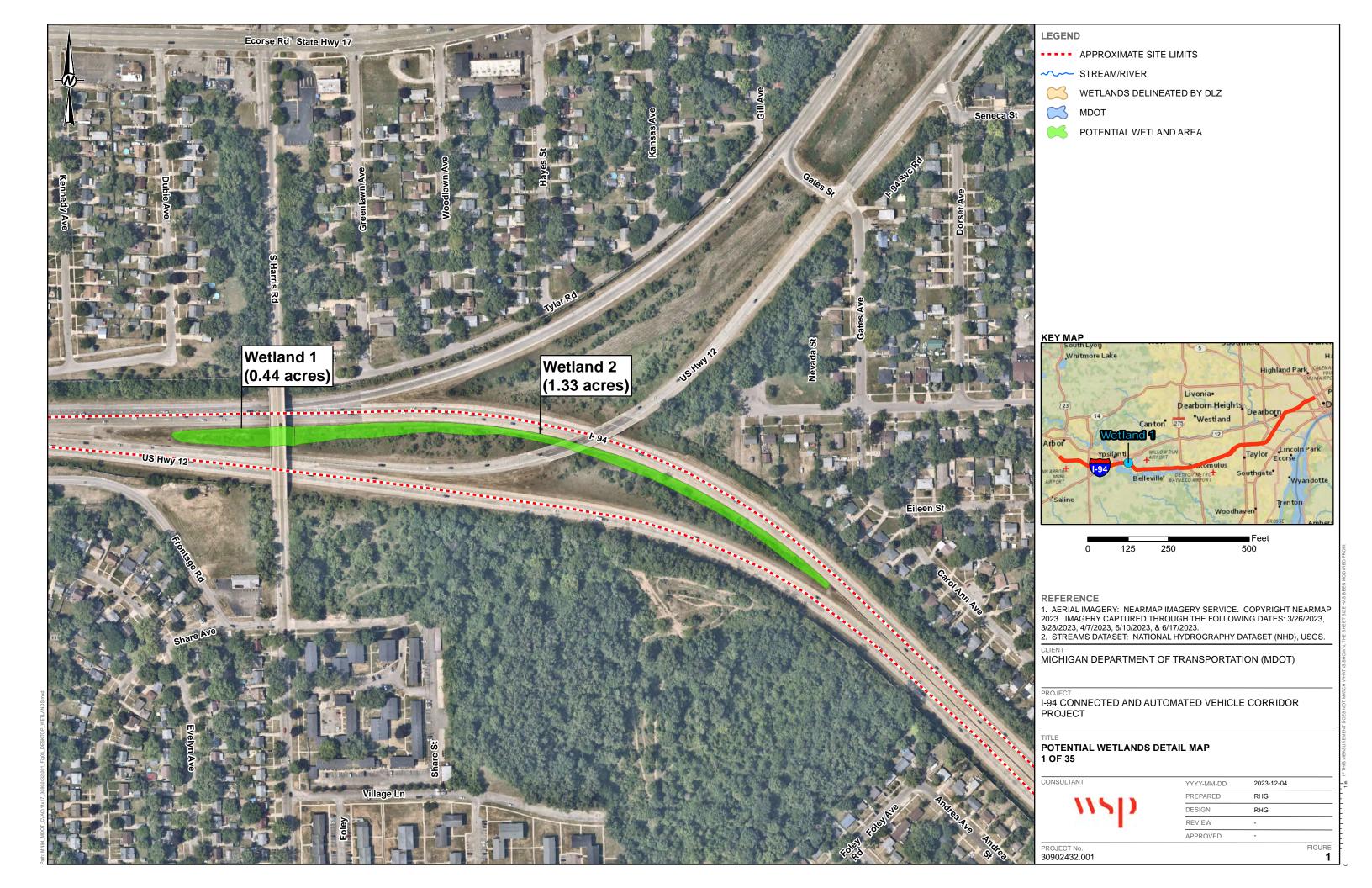
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DLZ Michigan, Inc. April 6, 2023. Final Report of Waters of the US Delineation. MDOT Project #JN208609, Wayne County, MI.

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.





STREAM/RIVER

WETLANDS DELINEATED BY DLZ

POTENTIAL WETLAND AREA



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.

MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT)

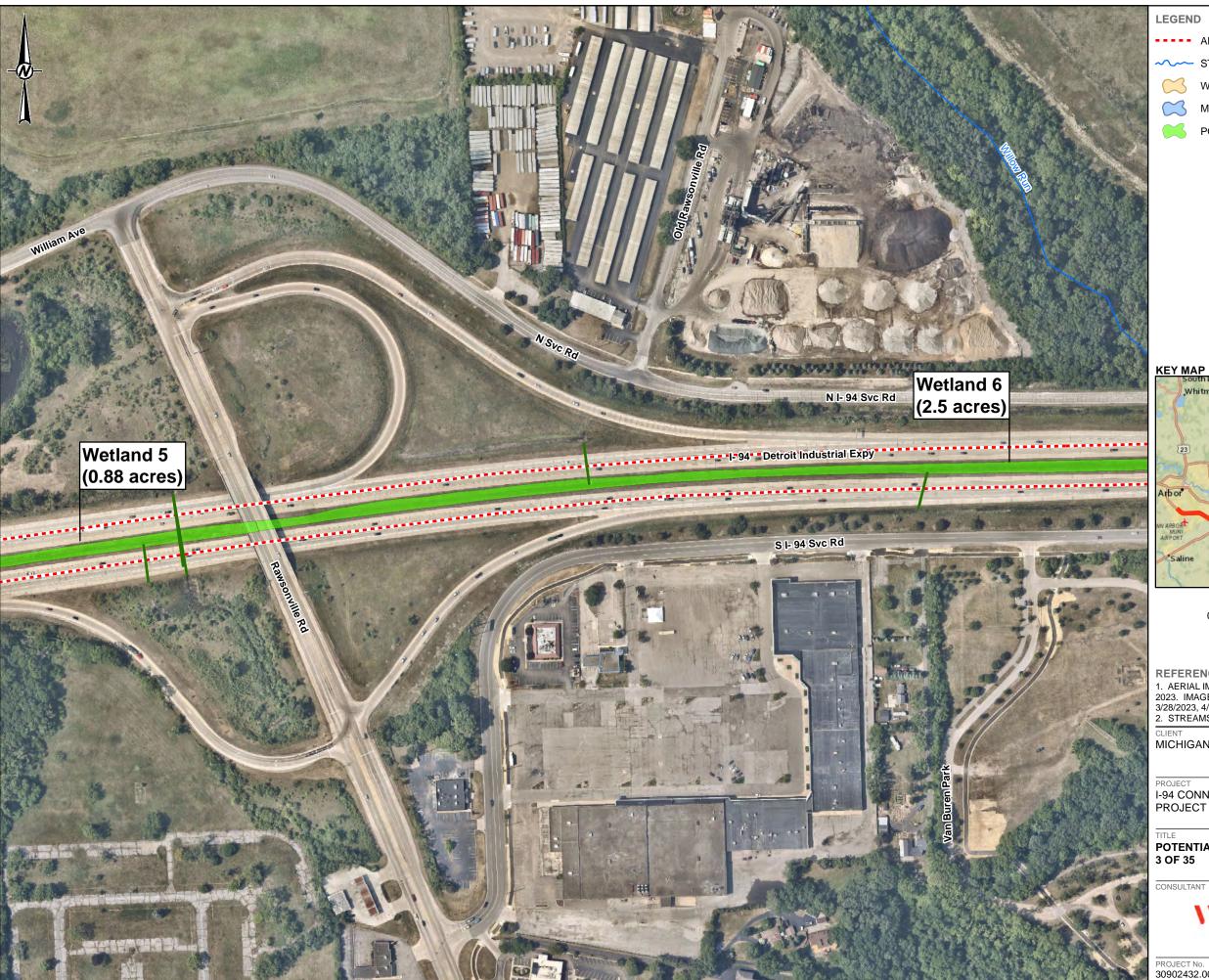
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PROJECT
I-94 CONNECTED AND AUTOMATED VEHICLE CORRIDOR

POTENTIAL WETLANDS DETAIL MAP



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



STREAM/RIVER

WETLANDS DELINEATED BY DLZ

POTENTIAL WETLAND AREA



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.

MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT)

250

I-94 CONNECTED AND AUTOMATED VEHICLE CORRIDOR

POTENTIAL WETLANDS DETAIL MAP



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

PROJECT No. 30902432.001



WETLANDS DELINEATED BY DLZ

POTENTIAL WETLAND AREA



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MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT)

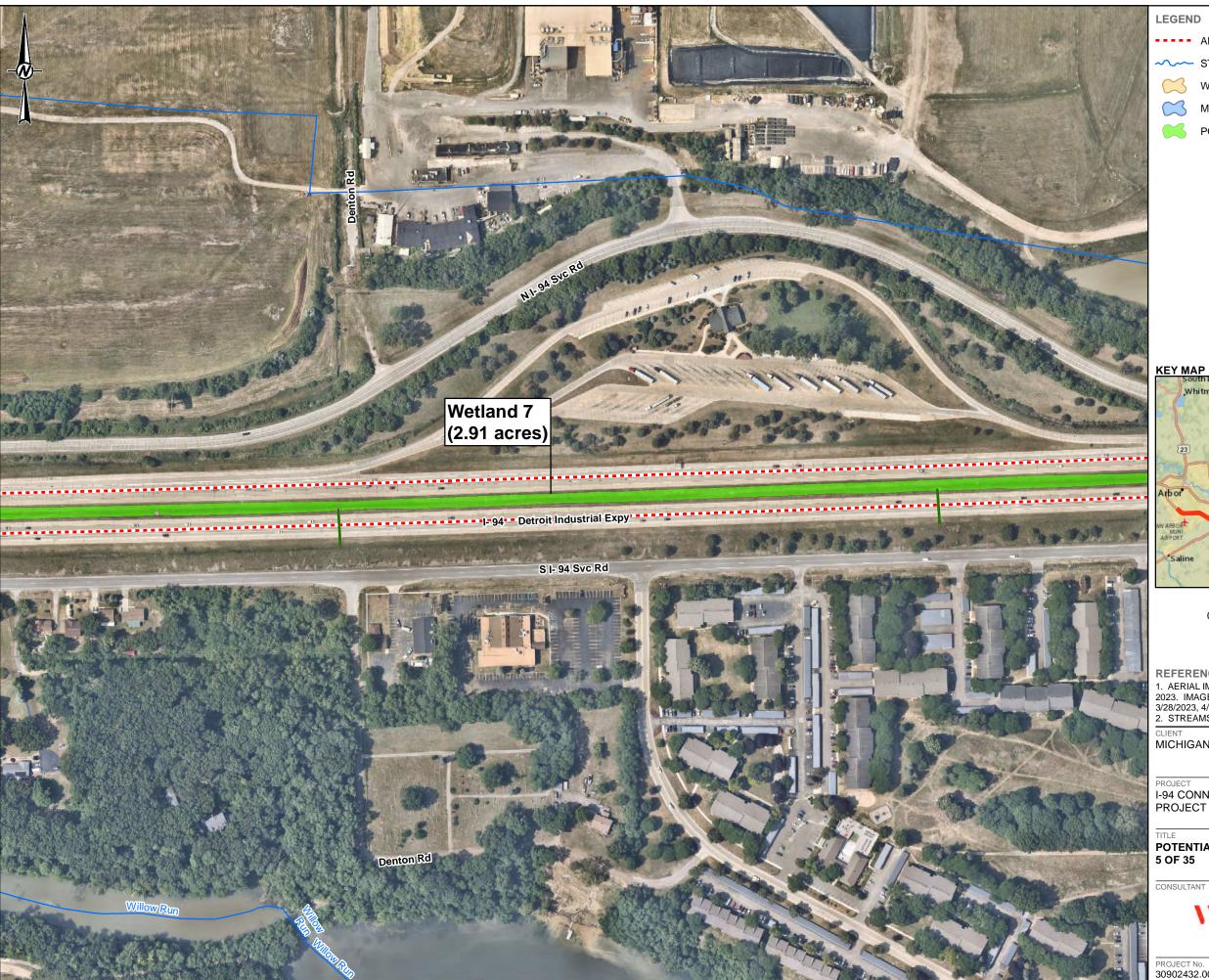
250

I-94 CONNECTED AND AUTOMATED VEHICLE CORRIDOR

POTENTIAL WETLANDS DETAIL MAP
4 OF 35



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STREAM/RIVER

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POTENTIAL WETLAND AREA



250

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MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT)

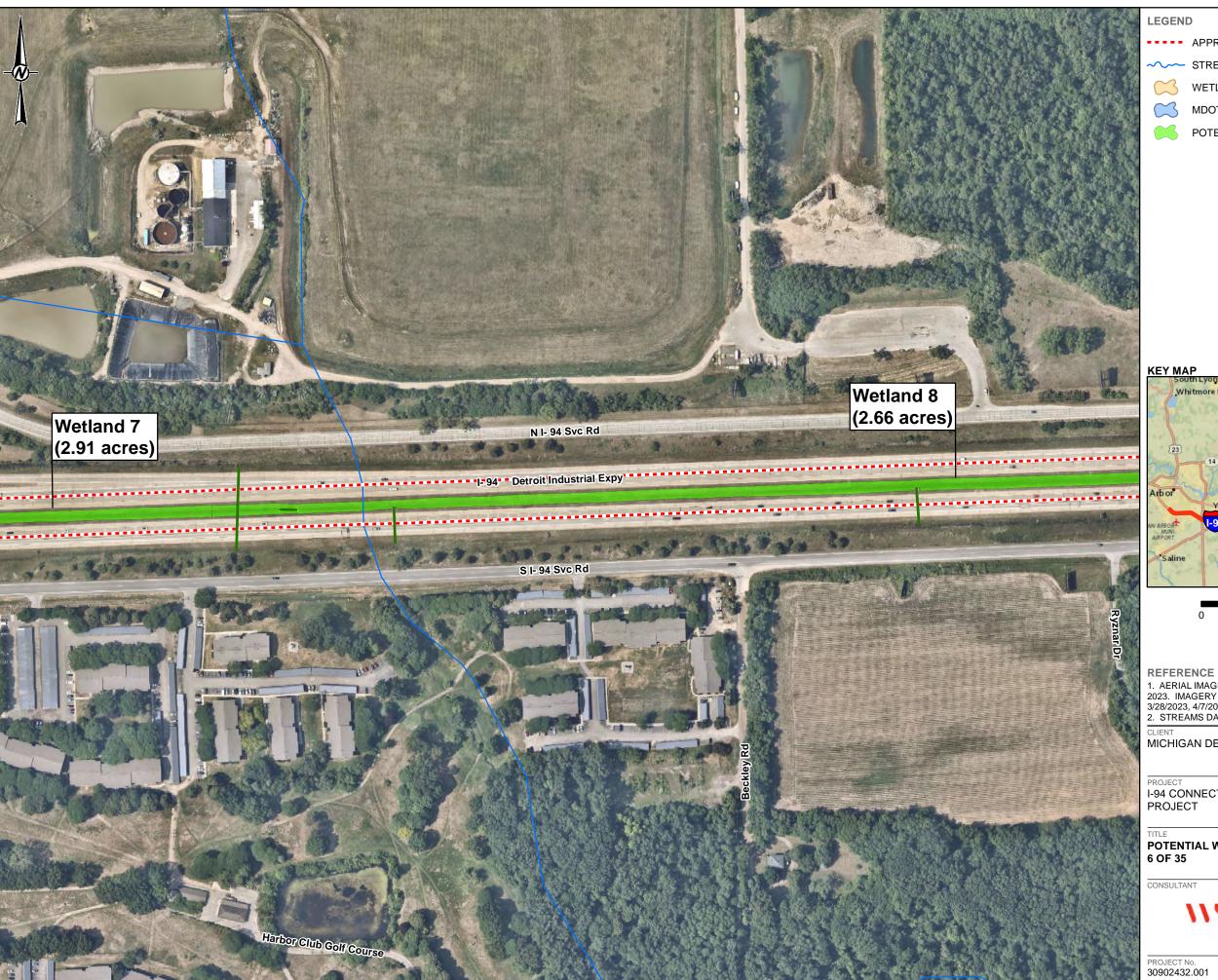
PROJECT
I-94 CONNECTED AND AUTOMATED VEHICLE CORRIDOR

POTENTIAL WETLANDS DETAIL MAP



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

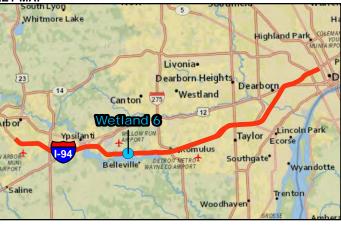
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STREAM/RIVER

WETLANDS DELINEATED BY DLZ

POTENTIAL WETLAND AREA



250

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MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT)

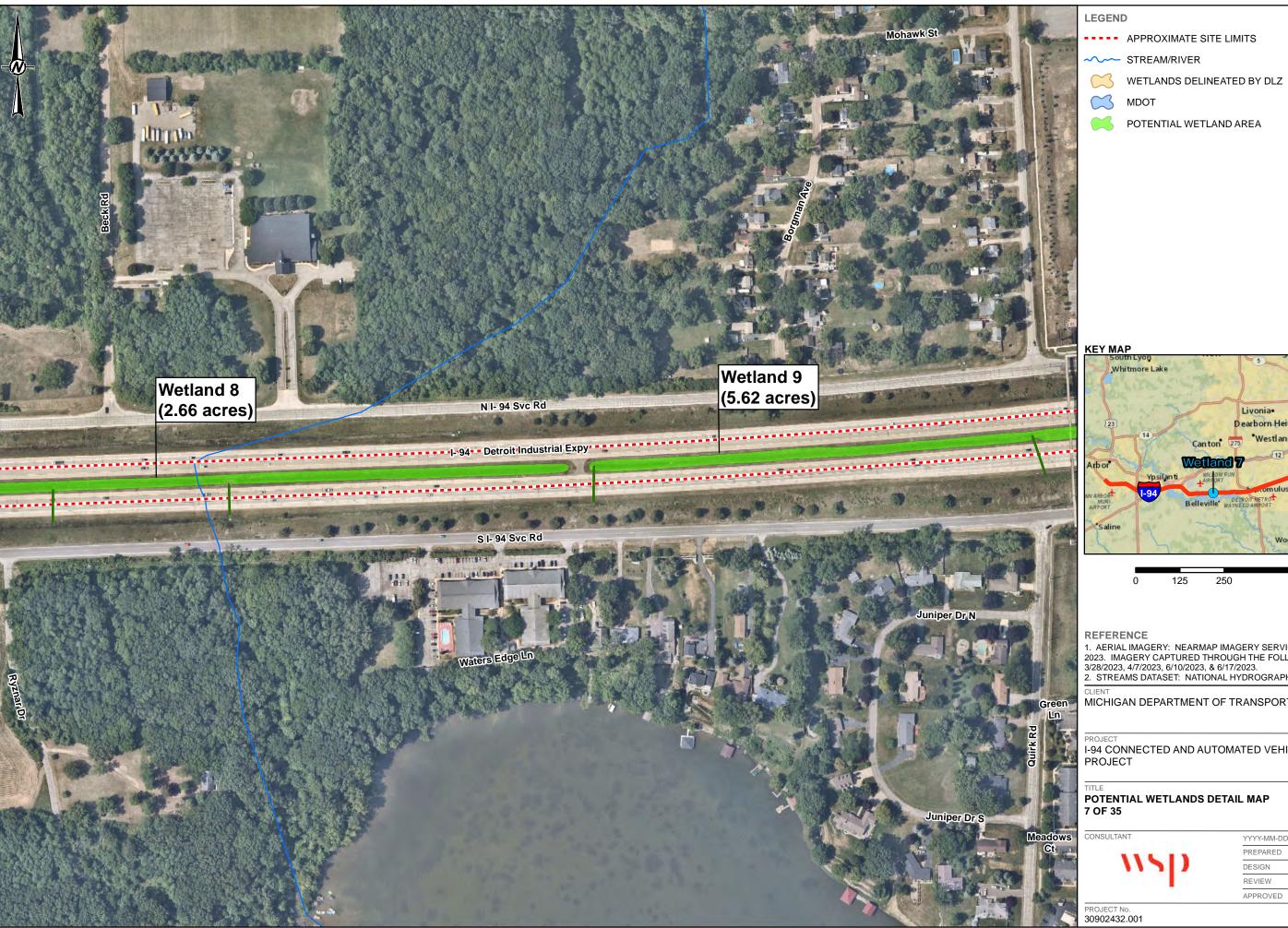
I-94 CONNECTED AND AUTOMATED VEHICLE CORRIDOR

POTENTIAL WETLANDS DETAIL MAP



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

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POTENTIAL WETLAND AREA



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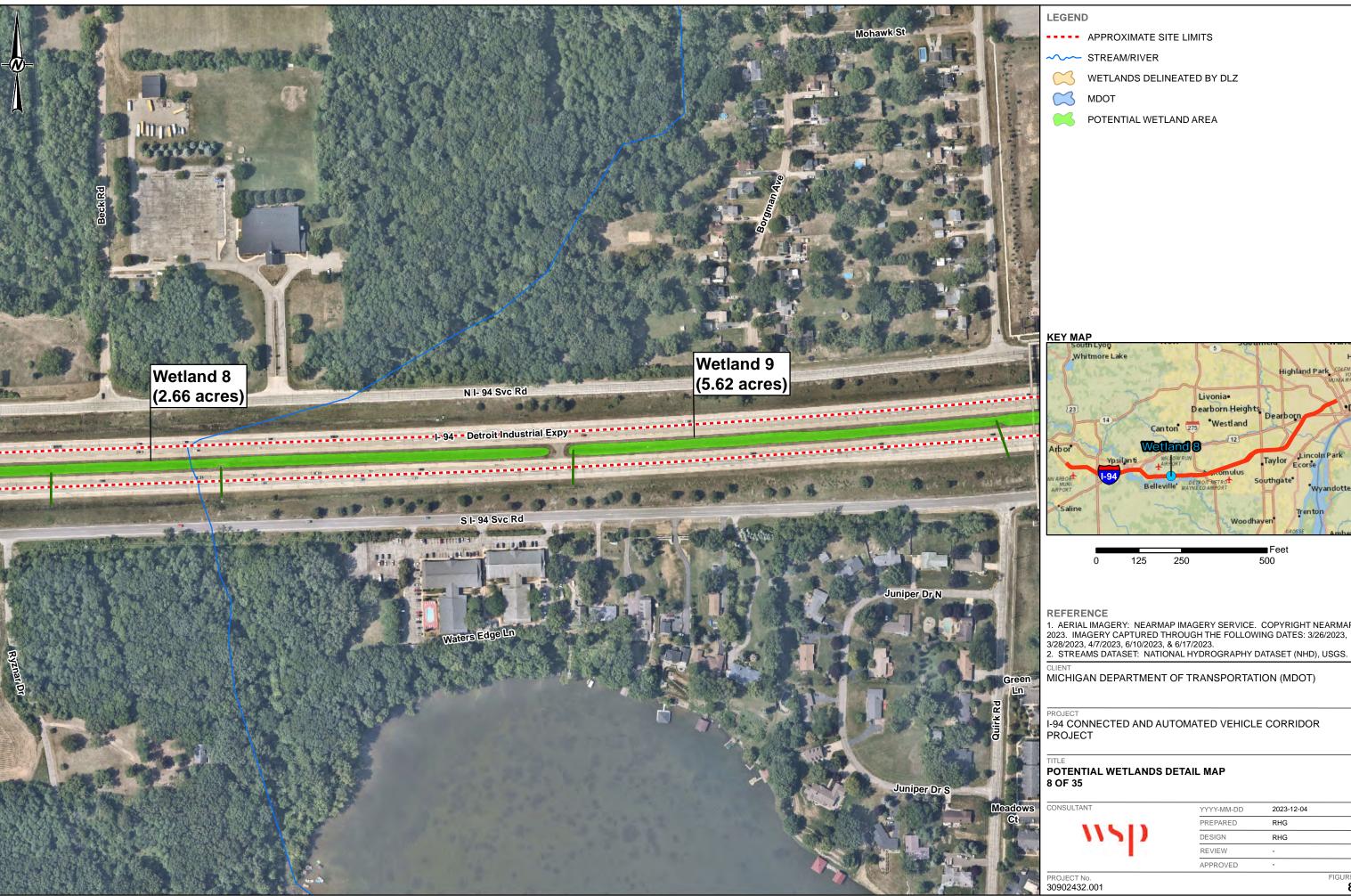
MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT)

I-94 CONNECTED AND AUTOMATED VEHICLE CORRIDOR

POTENTIAL WETLANDS DETAIL MAP

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

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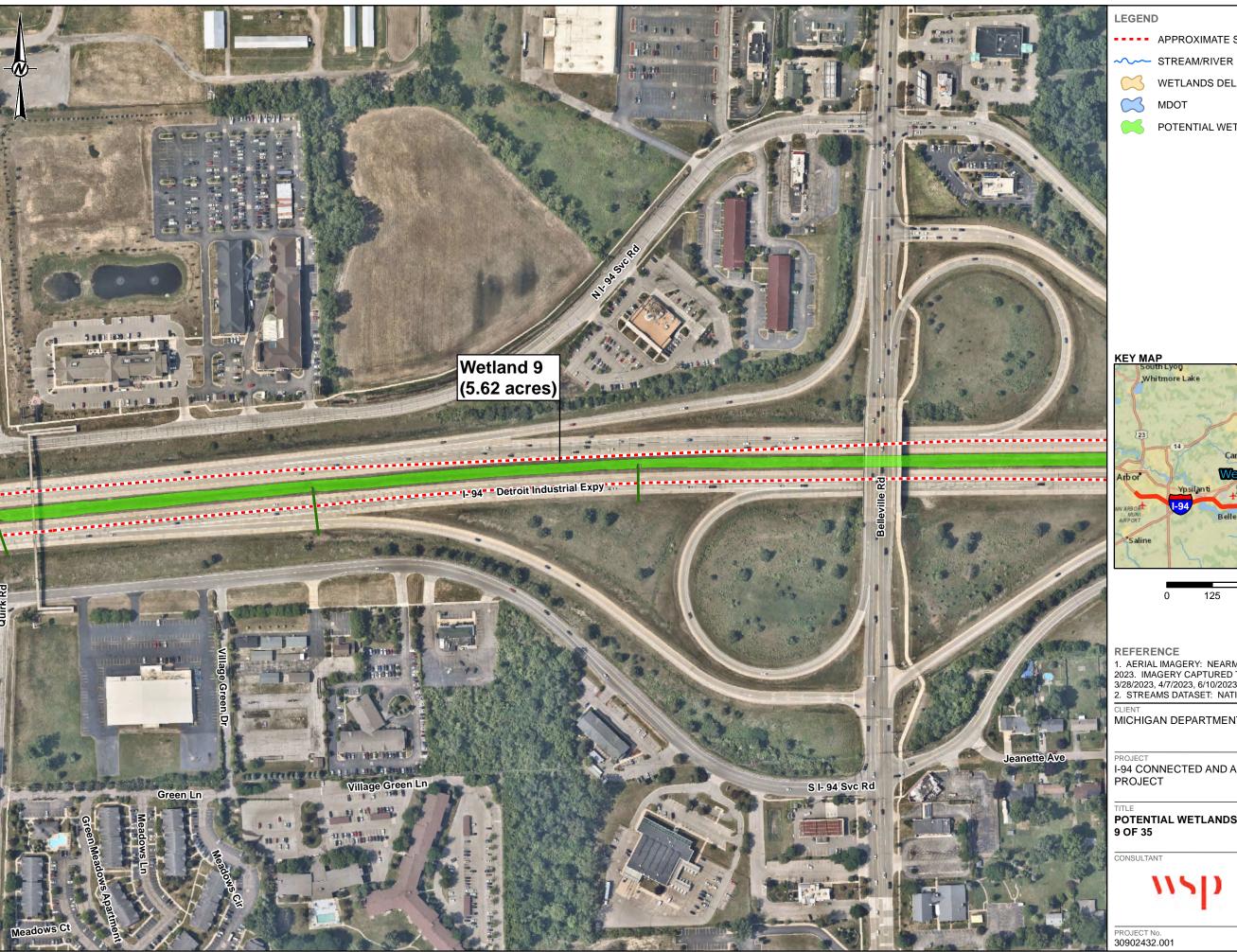
MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT)

I-94 CONNECTED AND AUTOMATED VEHICLE CORRIDOR

POTENTIAL WETLANDS DETAIL MAP

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

500



WETLANDS DELINEATED BY DLZ

POTENTIAL WETLAND AREA



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MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT)

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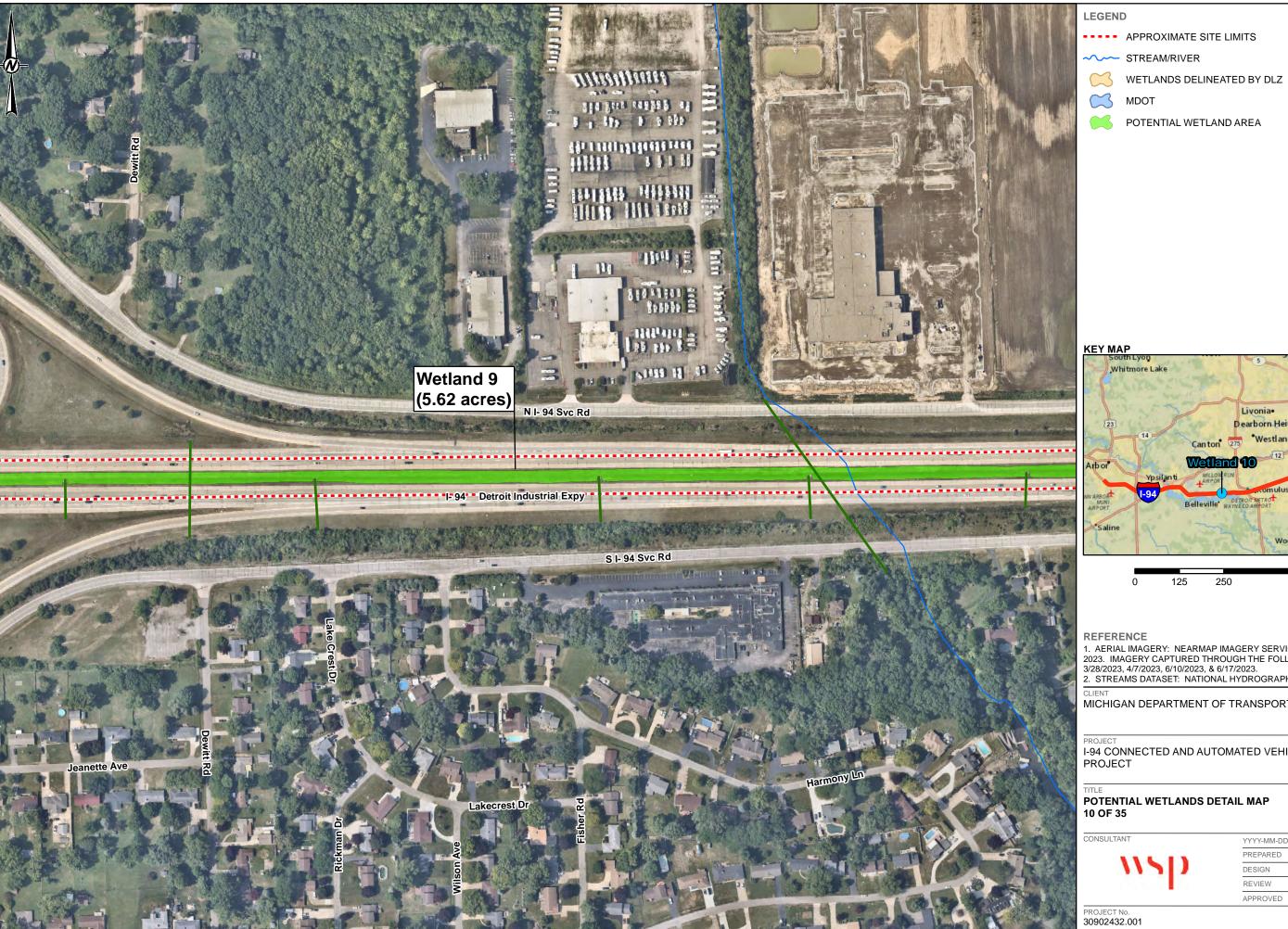
I-94 CONNECTED AND AUTOMATED VEHICLE CORRIDOR

POTENTIAL WETLANDS DETAIL MAP



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

500





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I-94 CONNECTED AND AUTOMATED VEHICLE CORRIDOR

POTENTIAL WETLANDS DETAIL MAP

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

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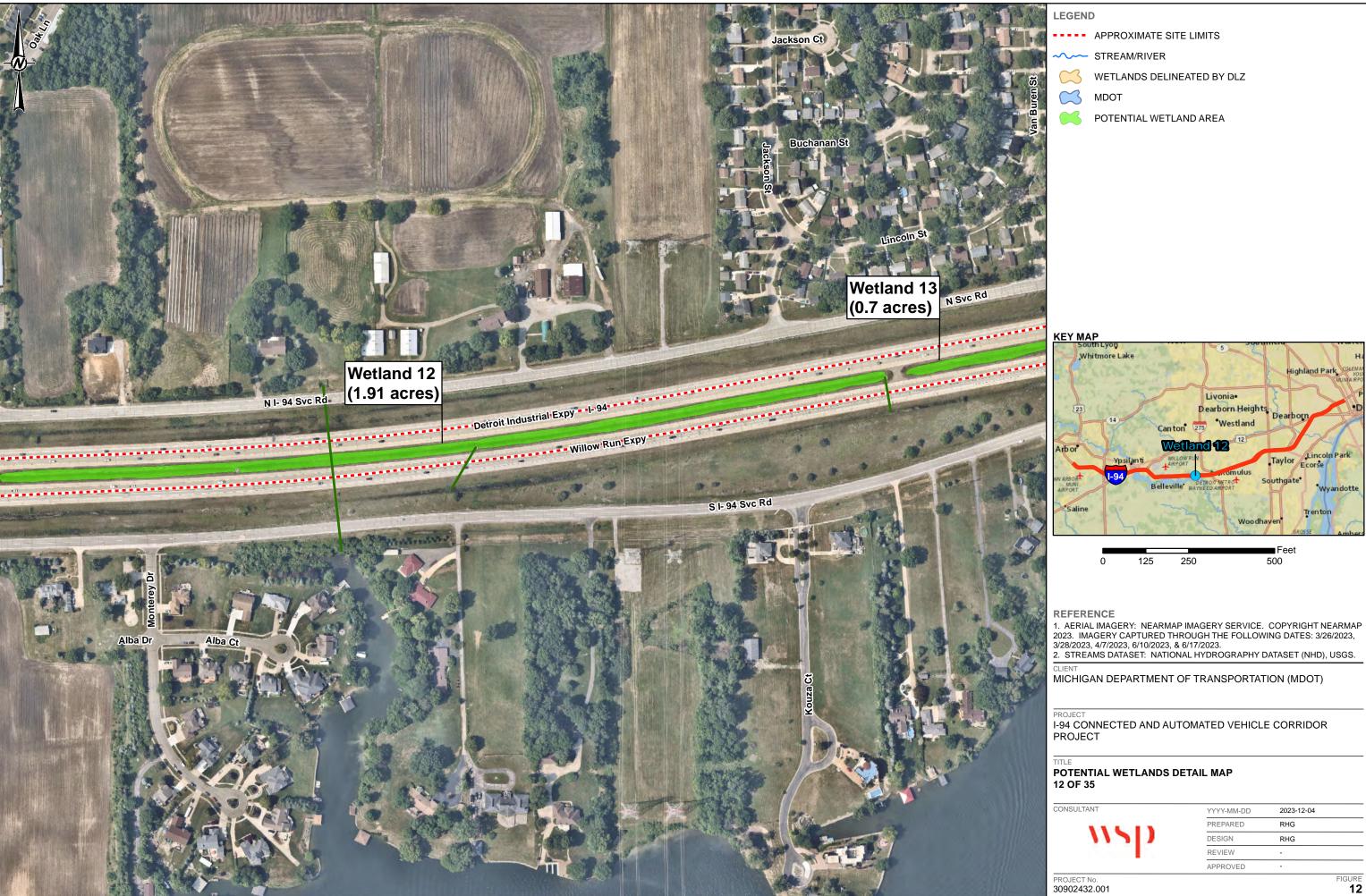


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I-94 CONNECTED AND AUTOMATED VEHICLE CORRIDOR

POTENTIAL WETLANDS DETAIL MAP

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

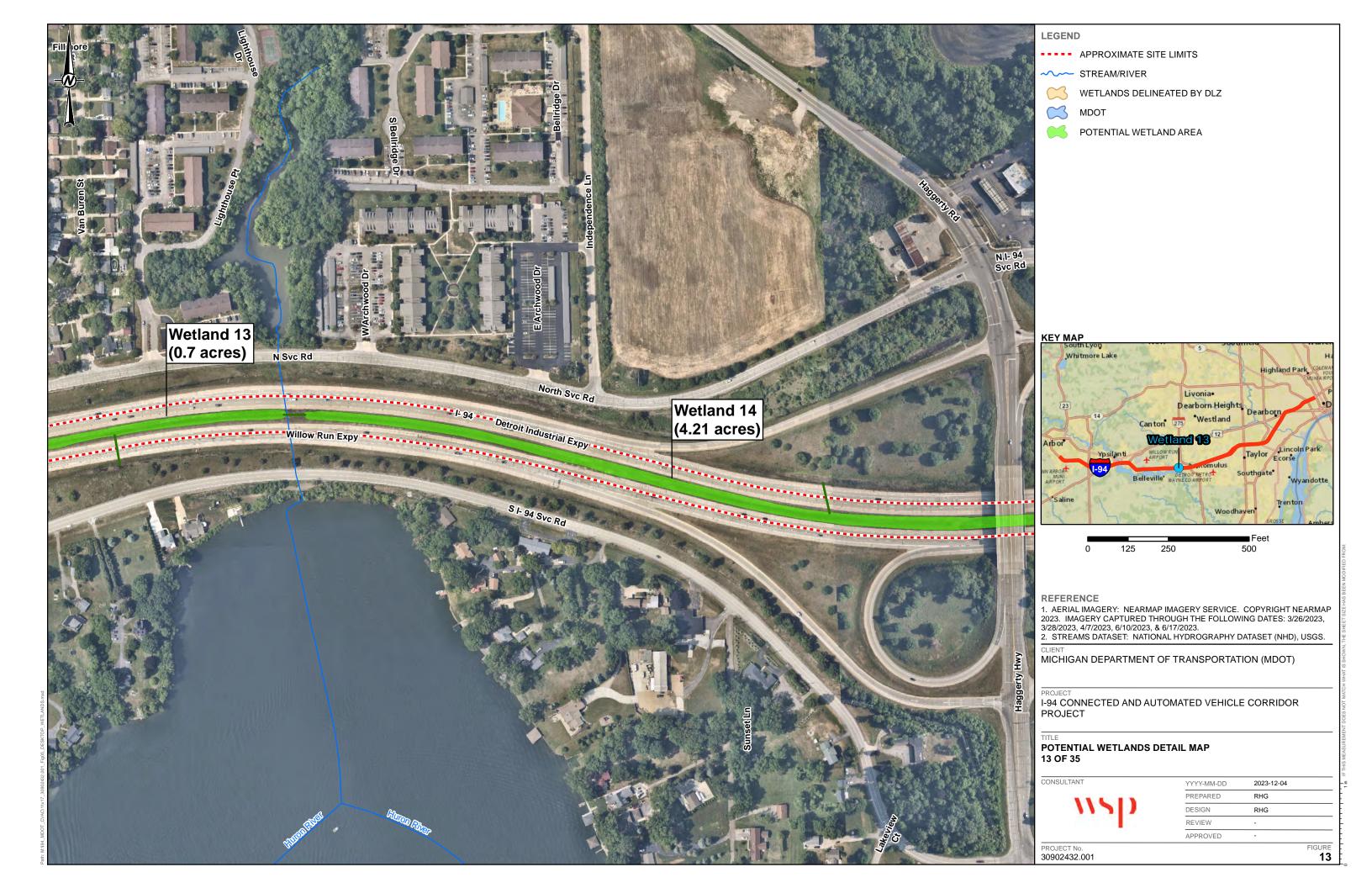


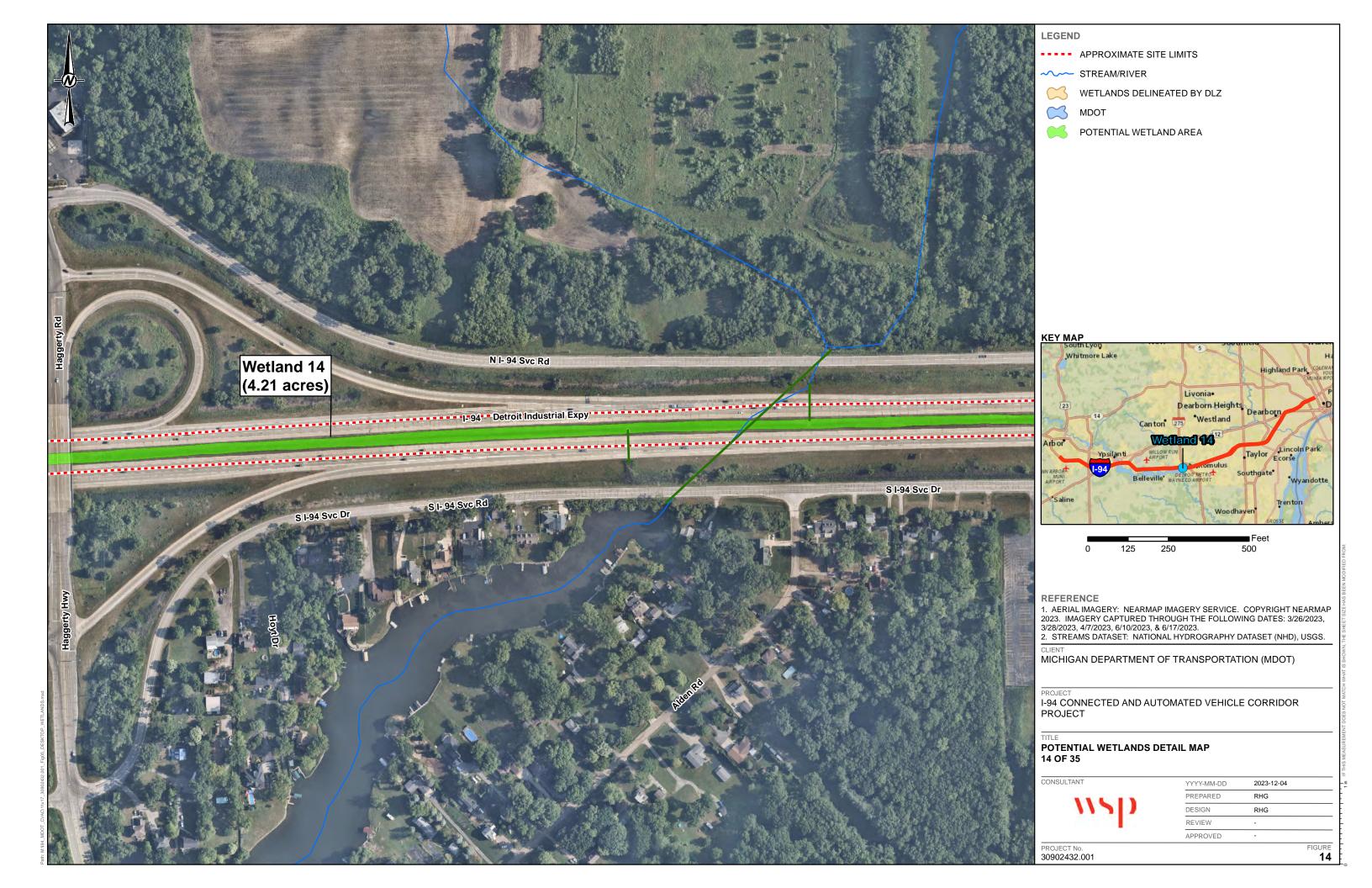


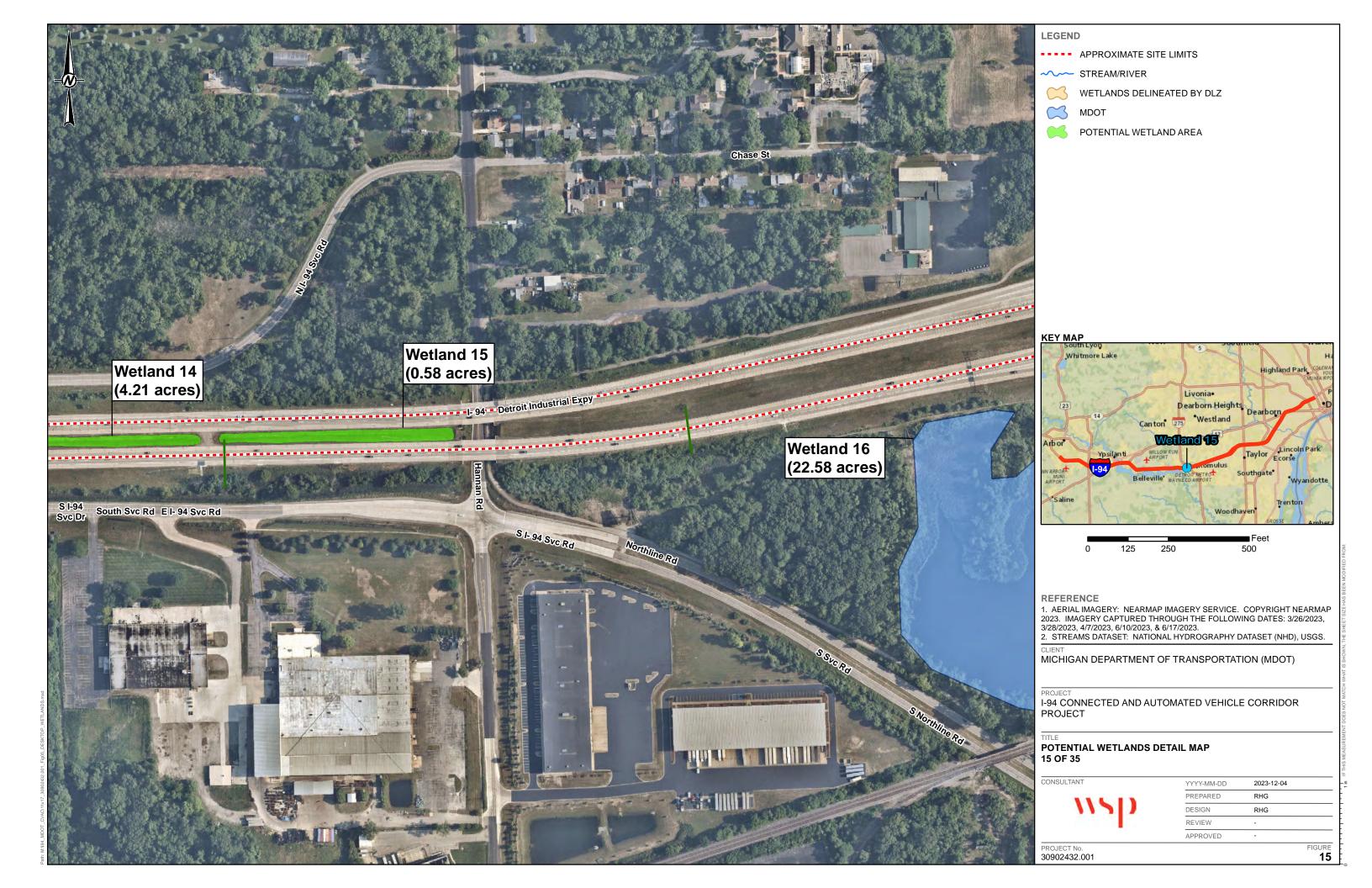
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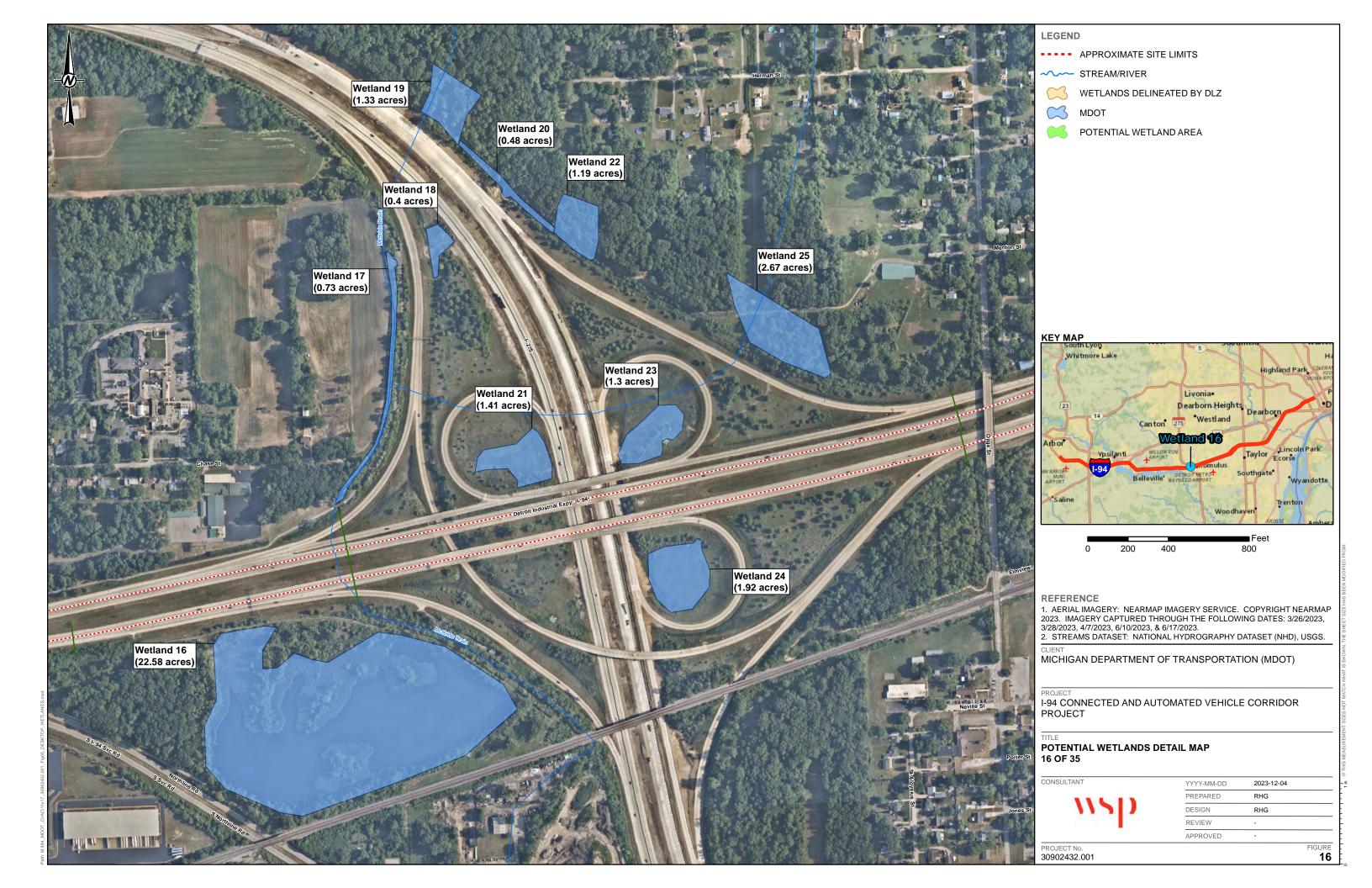
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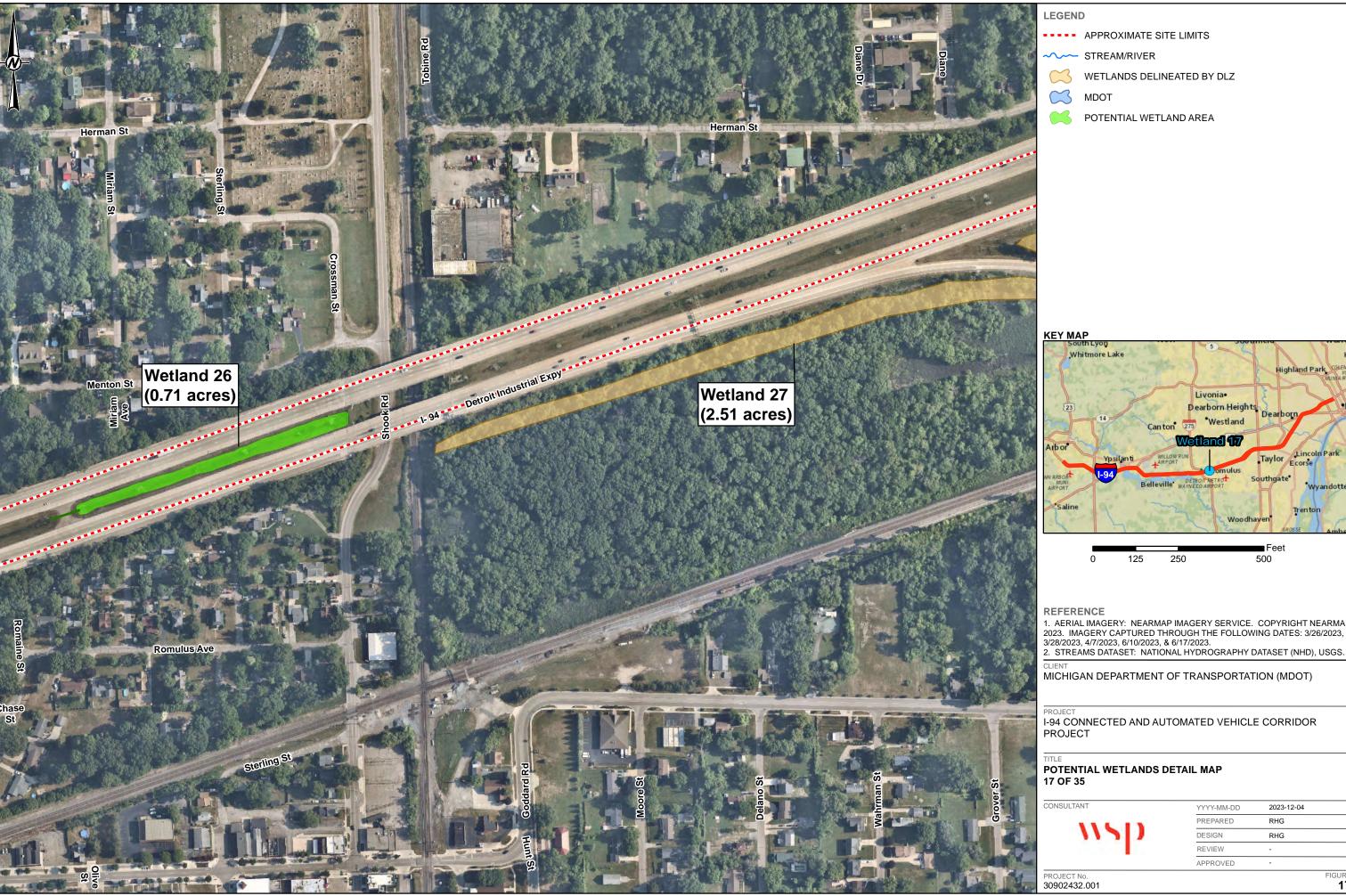
YYY-MM-DD	2023-12-04
PREPARED	RHG
DESIGN	RHG
REVIEW	-
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1. AERIAL IMAGERY: NEARMAP IMAGERY SERVICE. COPYRIGHT NEARMAP 2023. IMAGERY CAPTURED THROUGH THE FOLLOWING DATES: 3/26/2023,

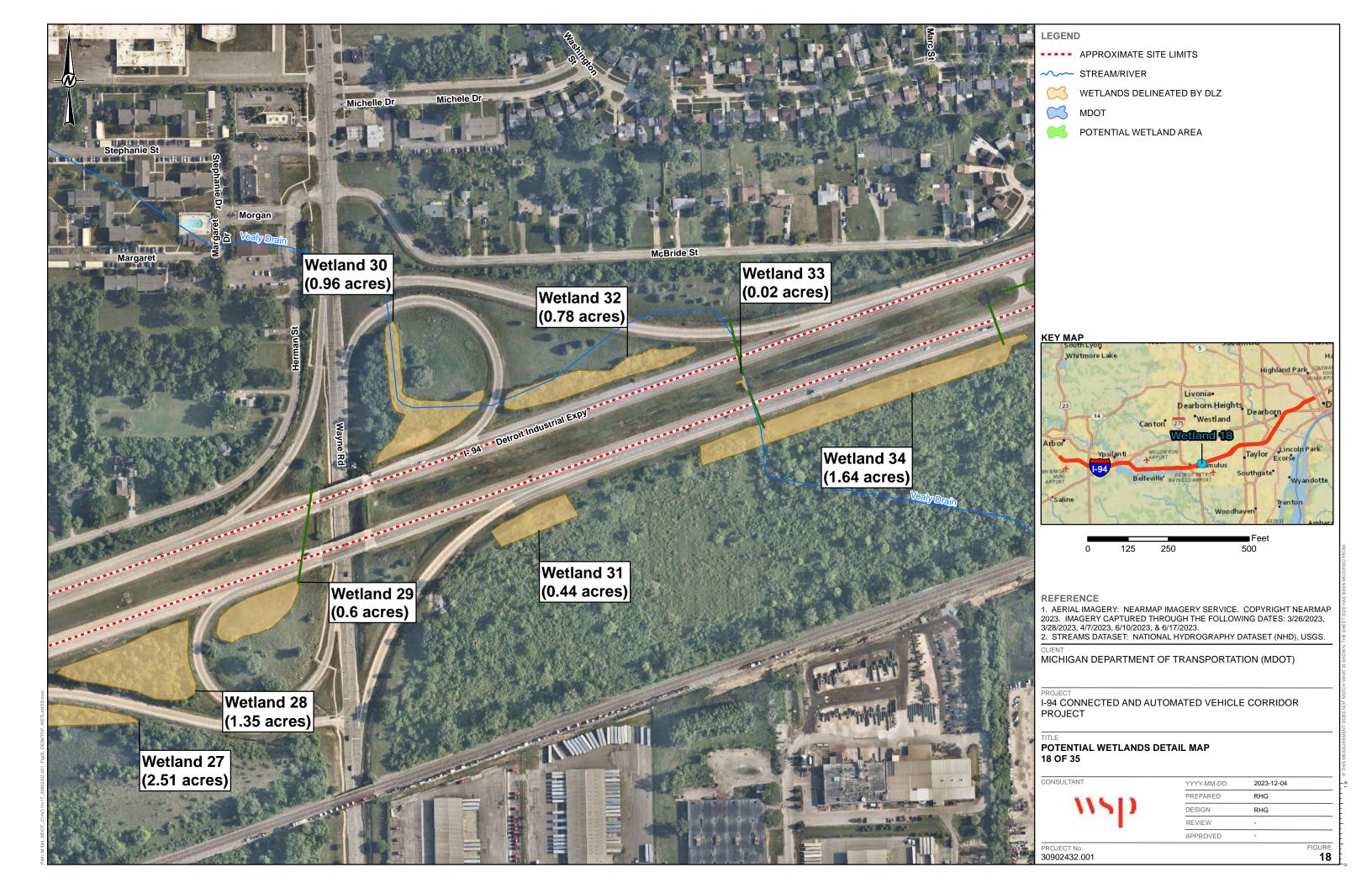
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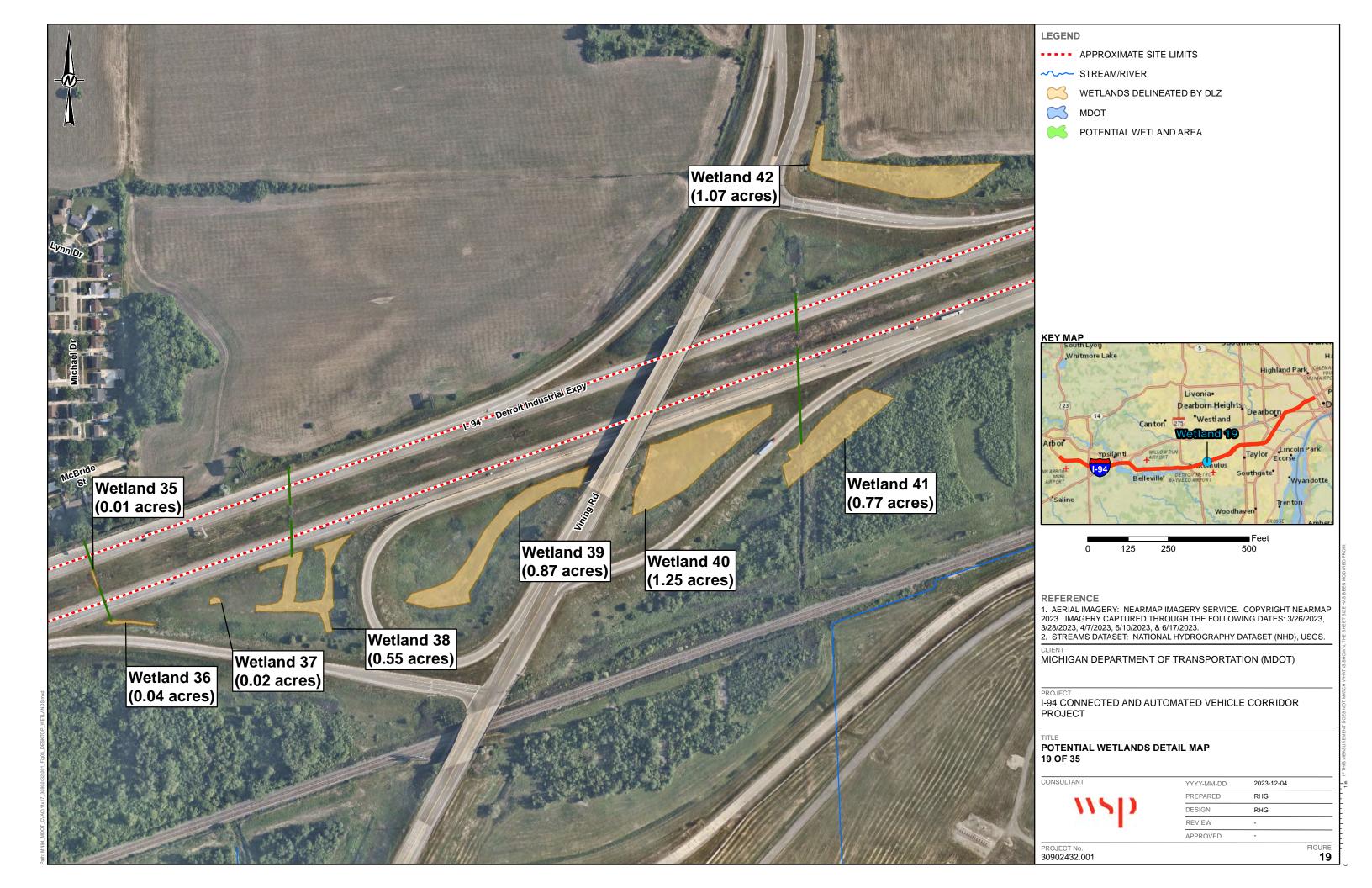
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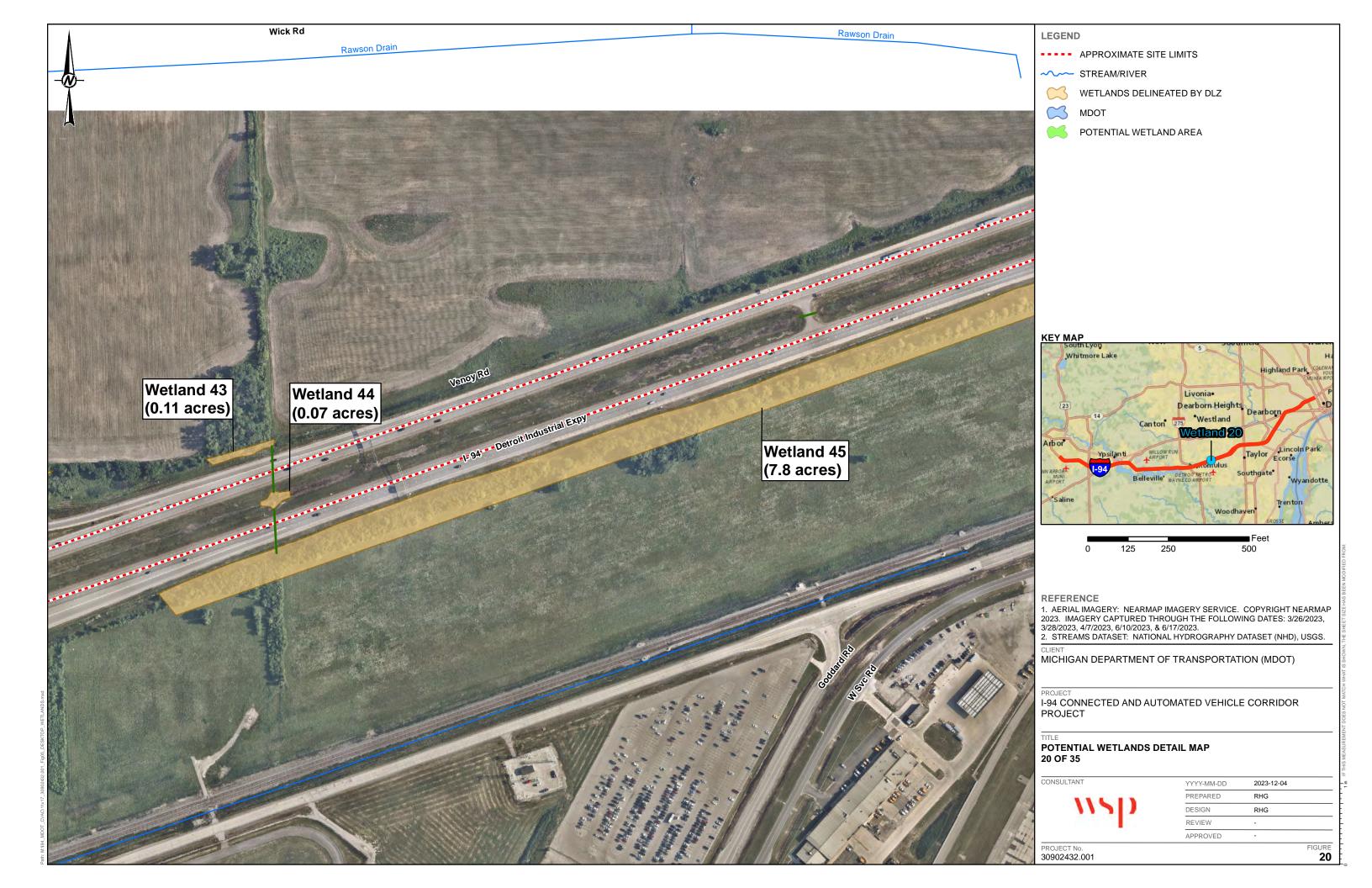
POTENTIAL WETLANDS DETAIL MAP

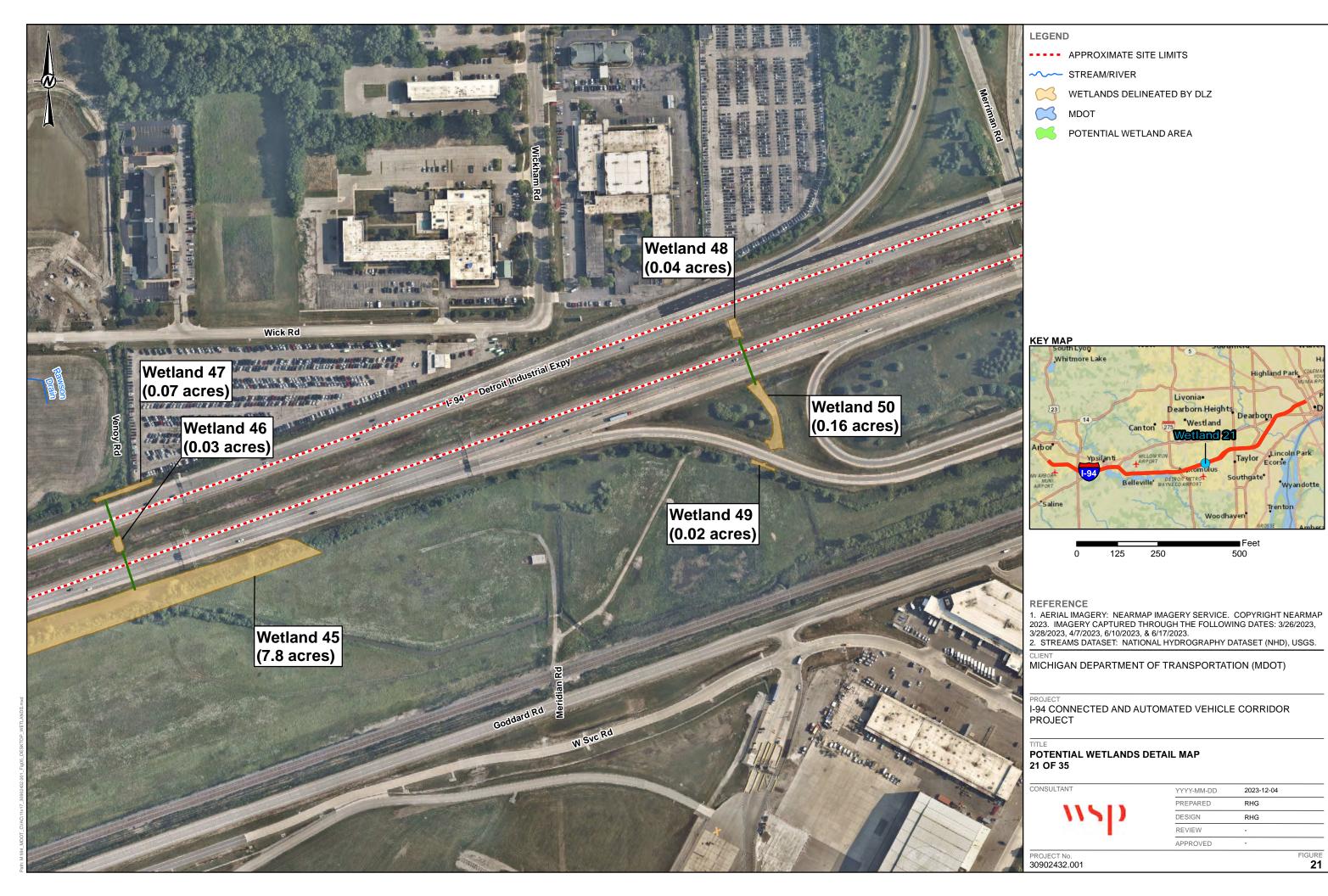
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STREAM/RIVER



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POTENTIAL WETLAND AREA



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MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT)

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I-94 CONNECTED AND AUTOMATED VEHICLE CORRIDOR **PROJECT**

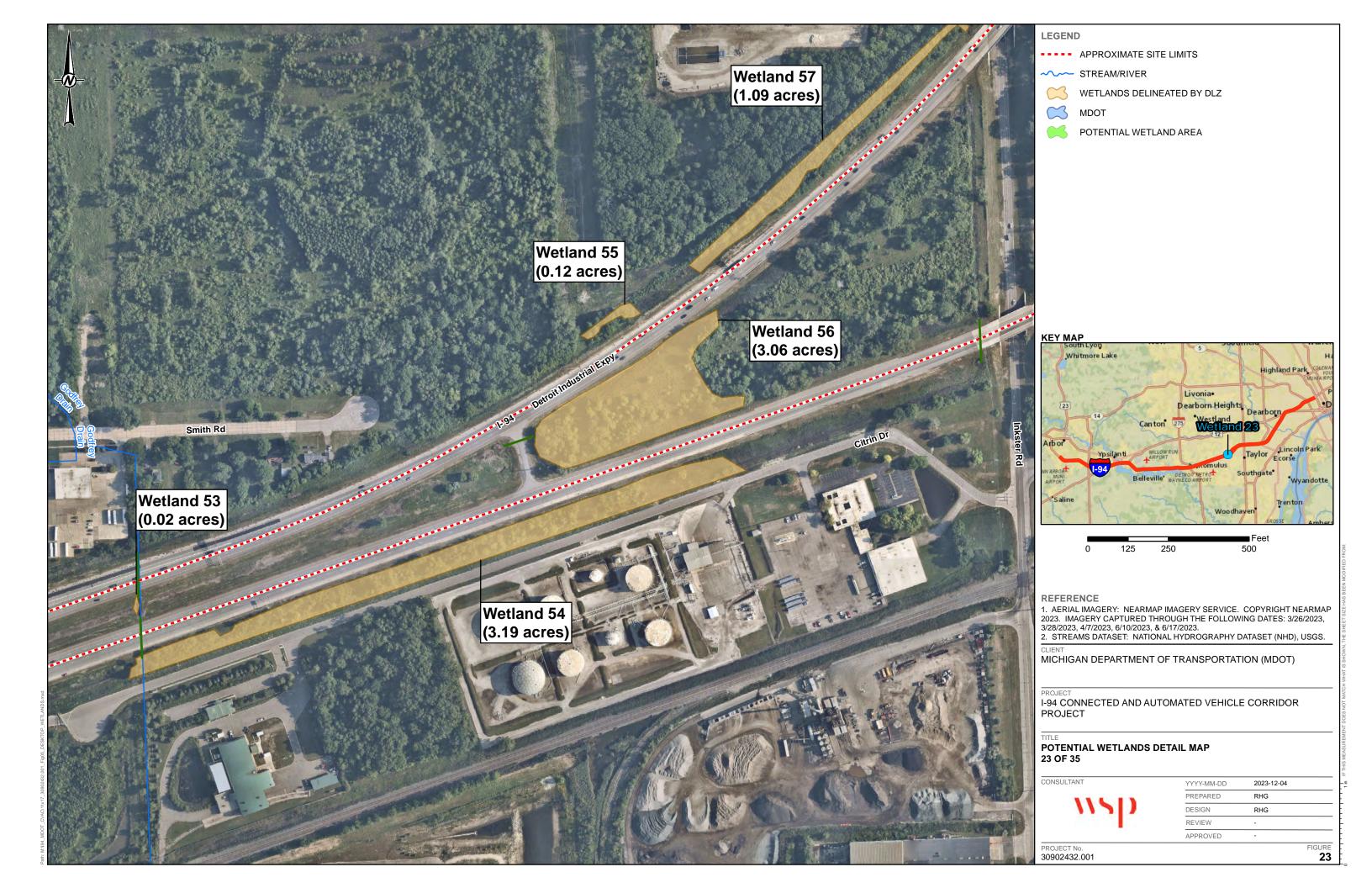
POTENTIAL WETLANDS DETAIL MAP

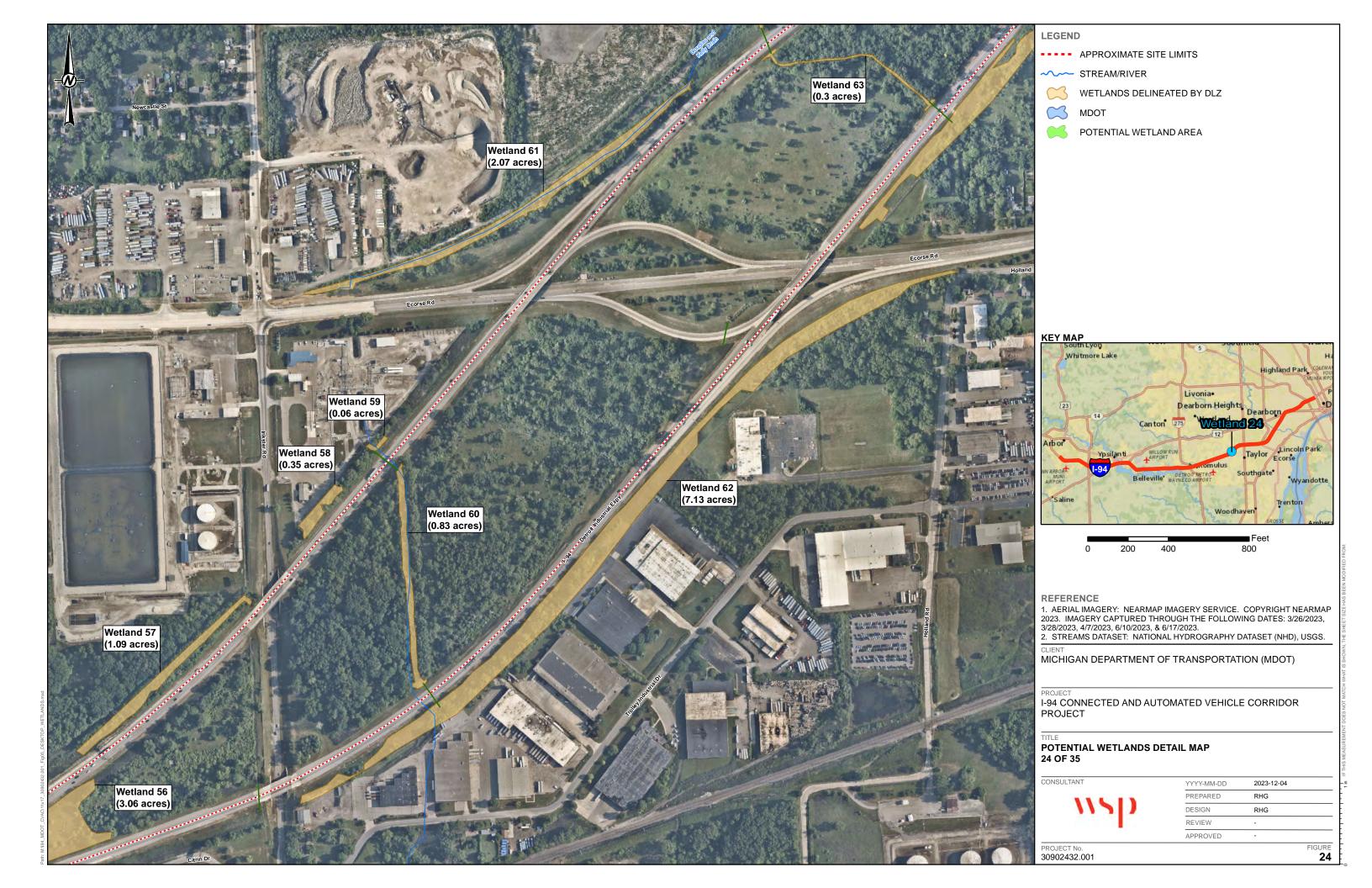


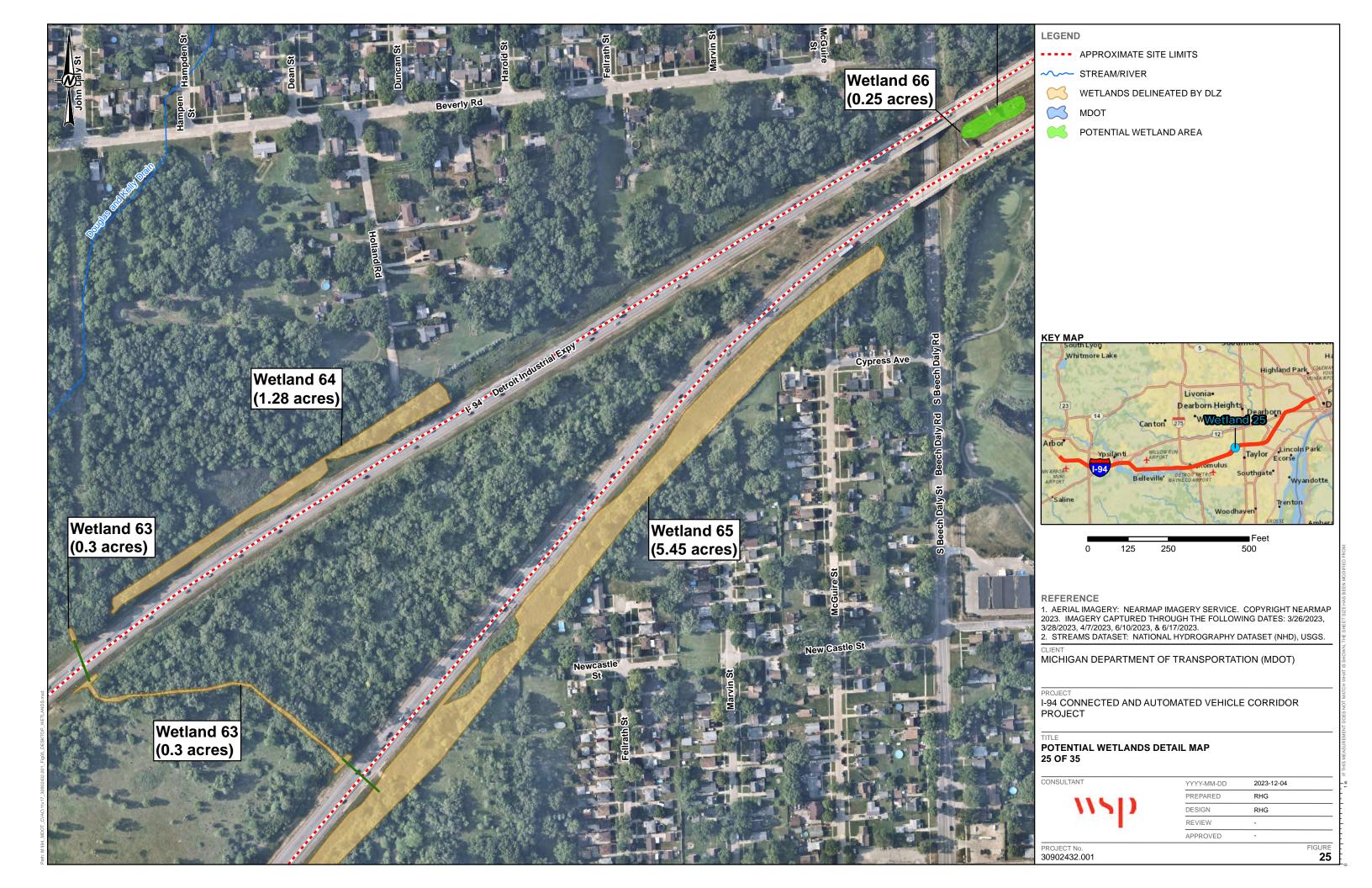
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PREPARED	RHG
DESIGN	RHG
REVIEW	-
APPROVED	-

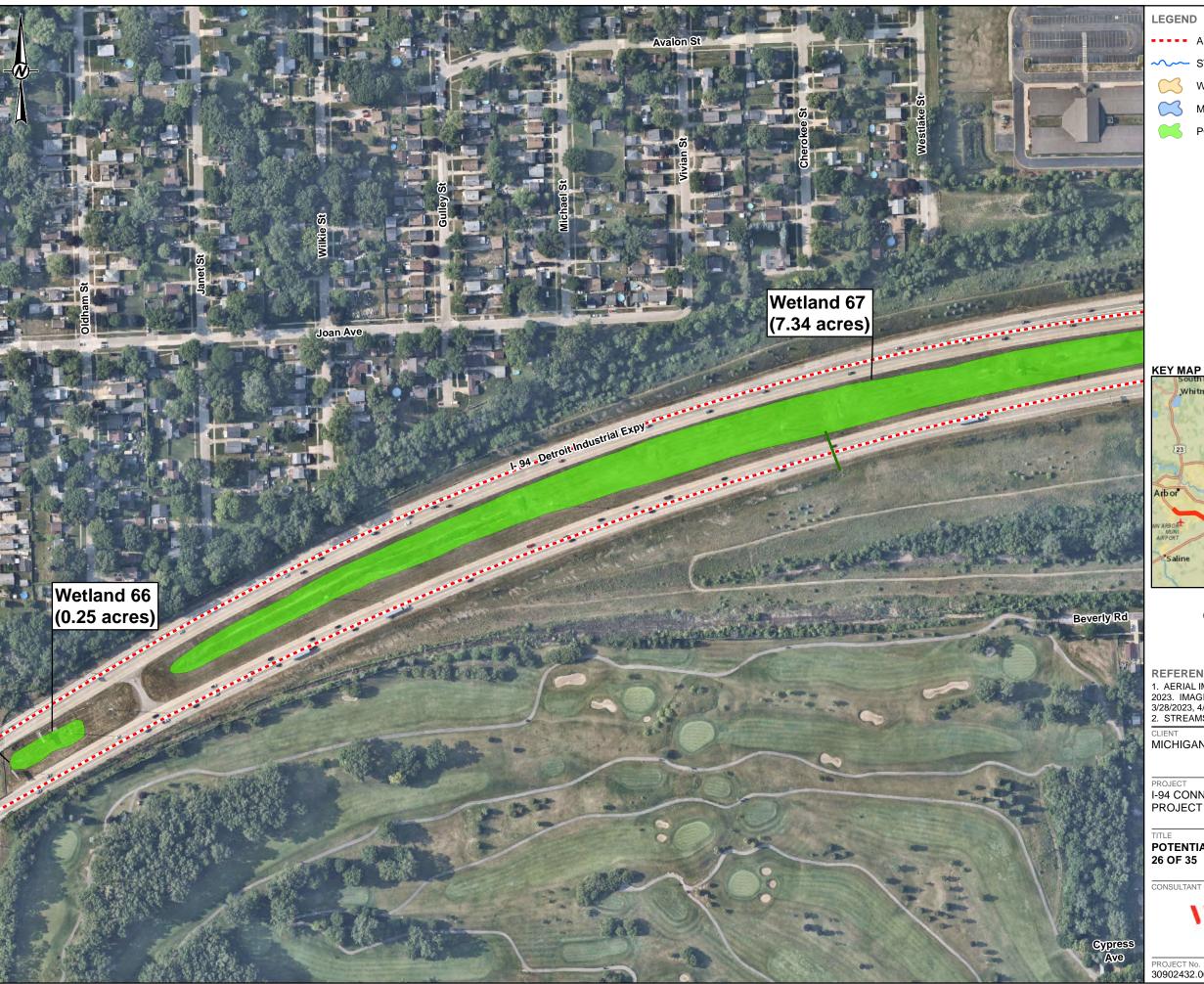
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∼ STREAM/RIVER

WETLANDS DELINEATED BY DLZ



POTENTIAL WETLAND AREA



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MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT)

250

I-94 CONNECTED AND AUTOMATED VEHICLE CORRIDOR

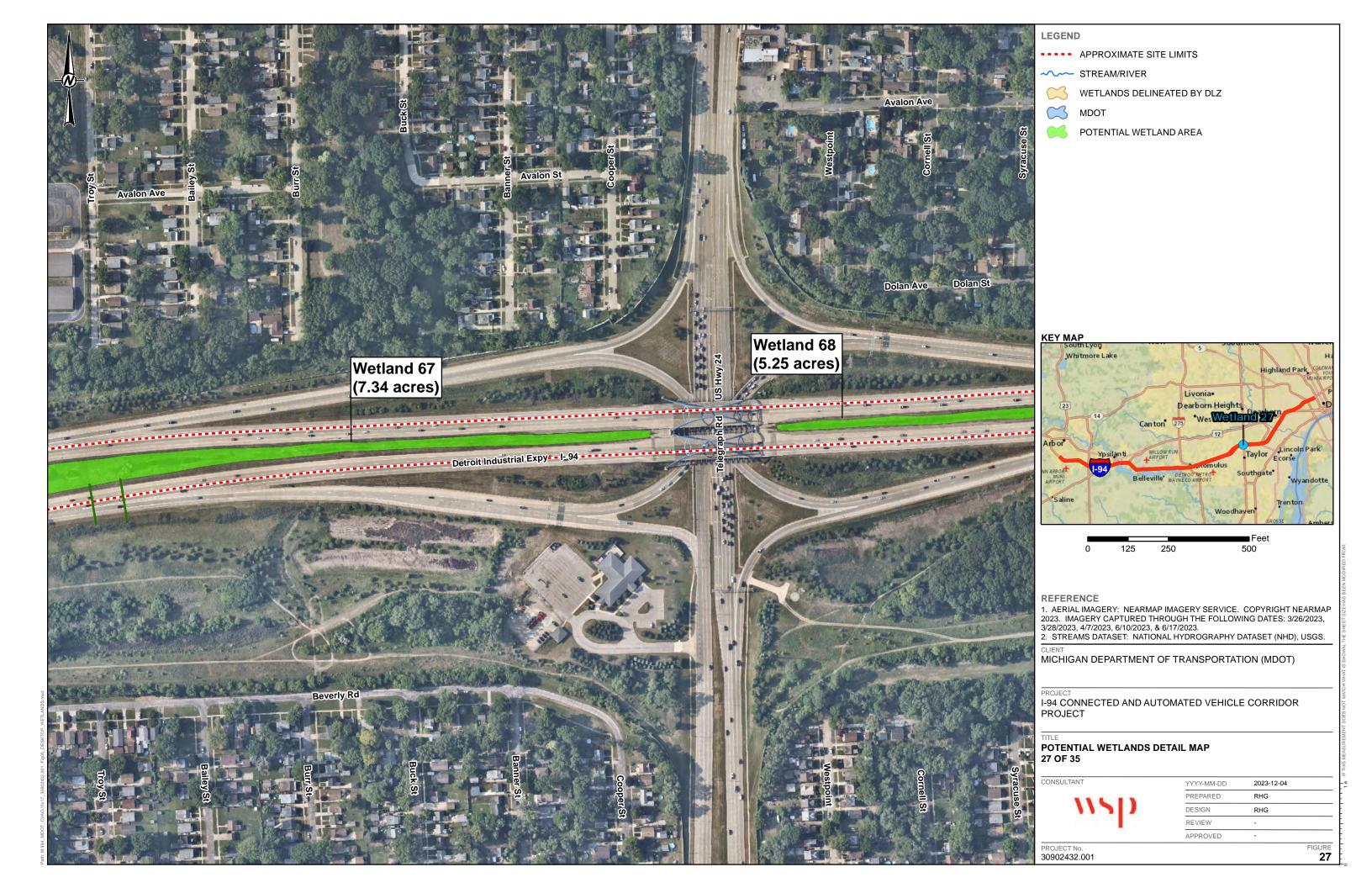
POTENTIAL WETLANDS DETAIL MAP



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STREAM/RIVER

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I-94 CONNECTED AND AUTOMATED VEHICLE CORRIDOR

POTENTIAL WETLANDS DETAIL MAP



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PROJECT
I-94 CONNECTED AND AUTOMATED VEHICLE CORRIDOR
PROJECT

POTENTIAL WETLANDS DETAIL MAP



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•••• APPROXIMATE SITE LIMITS

STREAM/RIVER

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POTENTIAL WETLAND AREA

KEY MAP



250 500

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I-94 CONNECTED AND AUTOMATED VEHICLE CORRIDOR

POTENTIAL WETLANDS DETAIL MAP 30 OF 35



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✓ STREAM/RIVER



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MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT)

250

I-94 CONNECTED AND AUTOMATED VEHICLE CORRIDOR

POTENTIAL WETLANDS DETAIL MAP



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