

# Wetland Impact Assessment & Two Part Finding Form

## Project Description

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S.P. Number: S.P. 2780-97 (I-94 Resurfacing), S.P. 229-010-001 (Brockton interchange)  
 Project Name: I-94 UBOL Resurfacing Maple Grove to Rogers and Brockton interchange  
 County: Hennepin  
 Watershed: Mississippi River (No. 20)

This environmental document addresses permanent wetlands impacts. Permanent wetland impacts result in a loss in the quantity, quality or biological diversity of a wetland and will not be restored to pre-project conditions and functions within 90 days of the impact occurrence. Temporary wetland impacts will be repaired, rehabilitated or restored to existing conditions within 90 days of the impact occurrence. The regulatory agencies will determine whether an impact to an aquatic resource is permanent or temporary. Temporary impacts will be addressed through the permitting process.

**Table 1. Total Permanent Impacts**

	<b>Permanent Impacts</b> (Acres or Square Feet <sup>1</sup> )
Wetland basins	<b>3.98 acres</b>
Ditches with wetlands in the bottom (WCA* and COE*)	<b>0</b>
Ditches with wetlands in the bottom (COE only)	<b>16.7 acres</b>
Other Aquatic Resources	<b>0.38 acres</b>
*Corps of Engineers <sup>1</sup> Wetland Conservation Act	

## Location of Wetlands in Project Area

On behalf of MnDOT’s Metro District Wetland Coordinator, WSB conducted a Level 1 Wetland Delineation of the project area. Project area maps are provided in Appendix A of the main EA document. The following total wetland basins, ditches with wetlands in the bottom and other aquatic resources (lakes, rivers, streams, etc.) are located within the project area (the acreages are the full basin, not just the area within the MnDOT Right of Way).

**Table 2. Aquatic Resource Overview**

	<b>Total Areas</b> (Acres or Square Feet <sup>1</sup> )
Wetland basins	<b>53.4 acres</b>
Ditches with wetlands in the bottom (WCA and COE)	<b>0</b>
Ditches with wetlands in the bottom (COE only)	<b>28.2 acres</b>
Other Aquatic Resources	<b>18 acres</b>

A Level 1 Wetland Delineation, identifying the wetland and other aquatic resource boundaries, has been completed (see Appendix A for Project Location Map). A Level 1 Wetland Delineation uses aerial photos, maps of the project area, etc. to define conservative wetland and other aquatic resource boundaries. The sources used for this Level 1 Wetland Delineation are listed below:

- National Wetlands Inventory (NWI) mapping
- DNR Public Water Inventory (PWI) mapping
- DNR Minnesota Land Cover Classification System (MLCCS) mapping
- County Soil Survey mapping
- Floodplain Mapping
- USGS Topographic Mapping<sup>1</sup>
- MnDOT Video Road Log (2012)
- Current Aerial Photos
- Historic Aerial Photos

A Level 2 Delineation has been completed for Wetlands 1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, and 23. Wetlands 1, 3, 5, 6, 7, 8, 10, 12, 13, 15, 16, 17, 18, 19, 20, 22, and 23 are wetlands with proposed permanent impacts. A Level 2 Delineation is based on a field survey of vegetation, soil, and hydrology characteristics, following procedures described in the *U.S. Army Corps of Engineers Wetlands Delineation Manual* (Technical Report Y-87-1, 1987) and in accordance with the methods identified in the *Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest or Northcentral and Northeast Regions* (Interim Regional Supplements) as required by both the Minnesota Wetland Conservation Act and Section 404 of the Clean Water Act.

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<sup>1</sup> Impacts less than 0.01 acre should be reported in square feet. Impacts greater than 0.01 acre should be reported as acres and rounded to the nearest 0.01 acre.

## PART 1: Avoidance Alternatives

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### No- Build Alternative

This alternative would avoid all wetland impacts (except those due to routine maintenance) but would fail to meet the project purpose and need. It was therefore rejected from further consideration.

### Alternatives Considered

Several alternatives were evaluated for both I-94 and the Brockton interchange that would have impacted wetlands to a different extent. These alternatives are summarized below and discussed in greater detail in the Technical Memorandum (Appendix C of EA/EAW). The alternatives for I-94 and Brockton interchange are presented separately.

**I-94-1a/2a: Construction of auxiliary lane on westbound and eastbound I-94 between TH 610 and the proposed Brockton interchange:** This alternative will construct an auxiliary lane rather than a travel lane. This alternative will result in 0.6 acre of wetland impact. This alternative will provide some improvement to the project area in terms of mobility by adding capacity between TH 610 and the exit to the proposed Brockton interchange and will also meet the requirements of the TH 610 Interstate Access Request (IAR). Although this alternative has a higher benefit-cost ratio, it will provide less benefit than an additional travel lane. In addition, an auxiliary lane will not maintain route consistency. MnDOT is constructing a third lane on I-94, west of the UBOL project between Albertville and St. Michael. There are currently three eastbound travel lanes on I-94 between TH 241 and TH 101 (western limits of the UBOL project), but the third lane ends at the exit to TH 101. There is already some congestion that occurs at this lane drop and volumes are forecast to increase. Not extending the third lane through the TH 101 interchange will increase the congestion and backups at this lane drop.

**Brockton 1 – Partial Cloverleaf:** The Brockton 1 Alternative is a partial cloverleaf (Parclo) interchange (see Figure 4 of EA/EAW). A parclo is a modification of a traditional cloverleaf interchange and has four ramps and two loops. A loop ramp from the interchange to eastbound I-94 will be constructed in the northwest quadrant of the interchange, and a loop ramp from westbound I-94 to the interchange will be constructed in the northeast quadrant of the interchange. Ramps from I-94 westbound and eastbound to the interchange will be constructed in the southeast and northwest quadrants. An entrance ramp from the interchange to eastbound and westbound I-94 will be constructed in the southwest and northeast quadrants of the interchange. A five-lane bridge will be required. This alternative resulted in 3.7 acres of wetland impact. This alternative was rejected because it had the highest right of way impacts, requires more maintenance, and has the highest costs.

**Brockton 2 - Standard Diamond:** The Brockton 2 Alternative is a standard diamond as shown on Figure 5. A standard diamond has four ramps for exiting and entering on to I-94. This alternative has sufficient capacity for vehicles, but not as much as the parclo alternative. Some heavy moves prevent free flow during peak traffic time. A six-lane bridge will be required due to double left-turn lanes. This alternative resulted in 2.5 acres of wetland impact. This alternative was rejected because it did not have the needed future capacity to accommodate long-term growth in the region and would have been very difficult to expand capacity.

**Brockton 4 - Folded Diamond:** The Brockton 4 Alternative is a folded diamond interchange as shown on Figure 7. This interchange includes two ramps and two loops like the parclo except that the loops and ramps are all on the same side of the bridge. This alternative resulted in 3.7 acres of wetland impact. This alternative was rejected because it had the highest amount of environmental impact and would require additional right of way acquisition.

## PART 2: Minimization Measures

It was not feasible to completely avoid all wetland impacts resulting from the I-94 improvement and Brockton interchange construction. Wetland impacts that are unavoidable have been minimized to the extent practicable without compromising safety. The following design measures were used to minimize these impacts.

- 1:4 inslopes
- Minimum safe sight distances to minimize the need for cut and fill

**Table 3. Wetlands within the Project Area (Level 2 Wetland Delineation)**

Basin ID	Section, Township, Range	Wetland Type/ Existing Plant Community Type(s)	Basin Size (Acres)*	Permitting Jurisdiction (COE, DNR, WCA)	Size of Permanent Impact of the Preferred Alternative (Acres or Square Feet <sup>1</sup> )
1	S5, T119N, R22W	3/Shallow Marsh	<0.01	COE, WCA	<b>0.10 acres</b>
3	S31, T120N, R22W	3/Shallow Marsh	16.07	COE, WCA	<b>112 sq ft</b>
4	S32, T120N, R22W	1/Seasonally Flooded Basin	0.04	COE, WCA	<b>0</b>
5	S31, T120N, R22W	3/Shallow Marsh	0.10	COE, WCA	<b>0.12 acre</b>
6	S31, T120N, R22W	2/Fresh (wet) Meadow	0.16	COE, WCA	<b>0.01 acre</b>
7	S31, T120N, R22W	3/Shallow Marsh	<0.01	COE, WCA	<b>3 sq ft</b>
8	S31, T120N, R22W	2/Fresh (wet) Meadow	0.70	COE, WCA	<b>0.21 acre</b>
9	S25, T120N, R23W	3/Shallow Marsh	0.66	COE, WCA	<b>0</b>
10	S23, T120N, R23W S24, T120N, R23W	3/Shallow Marsh	2.15	COE, WCA	<b>1.05 acres</b>

11	S36, T120N, R23W	3/Shallow Marsh	1.18	COE, WCA	<b>0</b>
12	S31, T120N, R22W S36, T120N, R23W	2/3 Fresh (wet) Meadow/Shallow Marsh	5.26	COE, WCA	<b>1.60 acres</b>
13	S31, T120N, R22W	2/Fresh (wet) Meadow	4.77	COE, WCA	<b>142 sq ft</b>
14	S5, T119N, R22W S8, T119N, R22W	2/Fresh (wet) Meadow	0.13	COE, WCA	<b>0</b>
15	S8, T119N, R22W S17, T119N, R22W	3/Shallow Marsh	0.65	COE, WCA	<b>0.33 acre</b>
16	S16, T119N, R22W	5/Shallow Open Water	8.55	COE, WCA	<b>0.05 acre</b>
17	S21, T119N, R21W	4/Deep Marsh	8.55	COE, WCA	<b>0.10 acre</b>
18	S27, T119N, R22W	4/Deep Marsh	1.37	COE, WCA	<b>0.04 acre</b>
19	S21, T119N, R22W	5/Shallow Open Water	0.96	COE, WCA	<b>196 sq ft</b>
20	S23, T120N, R23W	4/Deep Marsh	0.18	COE, WCA	<b>290 sq ft</b>
21	S23, T120N, R23W	4/Deep Marsh	0.08	COE, WCA	<b>0</b>
22	S23, T120N, R23W	4/Deep Marsh	1.24	COE, WCA	<b>0.34 acre</b>
23	S23, T120N, R23W	4/Deep Marsh	0.63	COE, WCA	<b>0.02 acre</b>
				<b>Total Permanent Impacts:</b>	<b>3.98</b>

\* Within project area

**Table 4. Ditches with Wetlands in the Bottom in the Project Area (Level 2 Wetland Delineation)**

Ditch ID	Section, Township, Range	Wetland Type/ Existing Plant Community Type(s)	Basin Size (Acres)	Permitting Jurisdiction (COE, DNR, WCA)	Size of Permanent Impact of the Preferred Alternative (Acres or Square Feet <sup>1</sup> )
Ditch #1	S22, T119N, R22W	1/Seasonally Flooded Basin	0.44	COE	<b>0.10 acre</b>
Ditch #2	S21, T119N, R22W S16, T119N, R22W	1/Seasonally Flooded Basin	0.64	COE	<b>0.50 acre</b>
Ditch #3	S16, T119N, R22W	1/Seasonally Flooded Basin	0.41	COE	<b>0.30 acre</b>
Ditch #4	S16, T119N, R22W	1/Seasonally Flooded Basin	0.43	COE	<b>0.03 acre</b>
Ditch #5	S16, T119N, R22W	1/Seasonally Flooded Basin	1.45	COE	<b>0</b>
Ditch #6	S16, T119N, R22W S17, T119N, R22W	1/Seasonally Flooded Basin	1.65	COE	<b>0.70 acre</b>
Ditch #7	S8, T119N, R22W	1/Seasonally Flooded Basin	1.58	COE	<b>0.4 acre</b>
Ditch #8	S8, T119N, R22W S5, T119N, R22W	1/Seasonally Flooded Basin	0.04	COE	<b>0.04 acre</b>
Ditch #9	S8, T119N, R22W	1/Seasonally Flooded Basin	0.40	COE	<b>0.30 acre</b>
Ditch #10	S5, T119N, R22W	1/Seasonally Flooded Basin	0.27	COE	<b>0</b>
Ditch #11	S5, T119N, R22W S6, T119N, R22W S31, T120N, R22W	1/Seasonally Flooded Basin	1.80	COE	<b>0.30 acre</b>
Ditch #12	S6, T119N, R22W	1/Seasonally Flooded Basin	0.78	COE	<b>0.23 acre</b>
Ditch #13	S31, T120N, R22W	1/Seasonally Flooded Basin	0.50	COE	<b>0.45 acre</b>
Ditch #14	S31, T120N, R22W	1/Seasonally Flooded Basin	2.75	COE	<b>2.40 acre</b>

Ditch #15	S31, T120N, R22W	1/Seasonally Flooded Basin	0.20	COE	<b>0.20 acre</b>
Ditch #16	S31, T120N, R22W	1/Seasonally Flooded Basin	1.25	COE	<b>0.70 acre</b>
Ditch #17	S31, T120N, R22W	1/Seasonally Flooded Basin	0.77	COE	<b>0.67 acre</b>
Ditch #18	S31, T120N, R22W	1/Seasonally Flooded Basin	0.10	COE	<b>0.05 acre</b>
Ditch #19	S31, T120N, R22W S36, T120N, R23W	1/Seasonally Flooded Basin	0.10	COE	<b>0.10 acre</b>
Ditch #20	S31, T120N, R22W S36, T120N, R23W	1/Seasonally Flooded Basin	0.10	COE	<b>0.10 acre</b>
Ditch #21	S25, T120N, R23W	1/Seasonally Flooded Basin	0.28	COE	<b>0.28 acre</b>
Ditch #22	S25, T120N, R23W	1/Seasonally Flooded Basin	2.20	COE	<b>0.60 acre</b>
Ditch #23	S25, T120N, R23W	1/Seasonally Flooded Basin	0.35	COE	<b>0.35 acre</b>
Ditch #24	S25, T120N, R23W	1/Seasonally Flooded Basin	0.19	COE	<b>0.19 acre</b>
Ditch #25	S25, T120N, R23W S24, T120N, R23W	1/Seasonally Flooded Basin	0.60	COE	<b>0.55 acre</b>
Ditch #26	S25, T120N, R23W S24, T120N, R23W	1/Seasonally Flooded Basin	3.48	COE	<b>2.51 acre</b>
Ditch #27	S25, T120N, R23W S24, T120N, R23W	1/Seasonally Flooded Basin	0.70	COE	<b>0</b>
Ditch #28	S25, T120N, R23W S24, T120N, R23W	1/Seasonally Flooded Basin	1.07	COE	<b>1.07 acre</b>
Ditch #29	S23, T120N, R23W	1/Seasonally Flooded Basin	0.71	COE	<b>0.55 acre</b>
Ditch #30	S23, T120N, R23W	1/Seasonally Flooded Basin	0.08	COE	<b>6 sf</b>
Ditch #31	S23, T120N, R23W	1/Seasonally Flooded Basin	0.54	COE	<b>0.17 acre</b>
Ditch #32	S23, T120N, R23W S24, T120N, R23W	1/Seasonally Flooded Basin	4.57	COE	<b>1.74 acre</b>

	S25, T120N, R23W				
Ditch #33	S14, T120N, R23W S23, T120N, R23W	1/Seasonally Flooded Basin	1.34	COE	<b>0.22 acre</b>
Ditch #34	S14, T120N, R23W	1/Seasonally Flooded Basin	0.93	COE	<b>0.90 acre</b>
				<b>Total Permanent Impacts:</b>	<b>16.70 acres</b>

**Table 5. Other Aquatic Resources within the Project Area (Level 2 Wetland Delineation)**

Resource ID	Section, Township, Range	Wetland Type/ Existing Plant Community Type(s)	Basin Size (Acres)	Permitting Jurisdiction (COE, DNR, WCA)	Size of Permanent Impact of the Preferred Alternative (Acres or Square Feet <sup>1</sup> )
Rush Creek	S5, T22N, R119W	Stream	0.32	COE, DNR	<b>0.17 acre</b>
Unnamed	S17, T22N, R119W	Ditch	1.6	COE	<b>0.21 acre</b>
Pond 2	S23, T120N, R23W	Stormwater Pond	0.50	COE	<b>0.10 acre</b>
Pond 9	S8, T119N, R22W	Stormwater Pond	1.13	COE	<b>308 sq ft</b>
Pond 10	S8, T119N, R22W	Stormwater Pond	2.45	COE	<b>51 sq ft</b>
Pond 11	S8, T119N, R22W	Stormwater Pond	1.44	COE	<b>0.10 acre</b>
Pond 12	S8, T119N, R22W	Stormwater Pond	1.60	COE	<b>0.21 acre</b>
				<b>Total Permanent Impacts:</b>	<b>0.80</b>

The location of each wetland impact is illustrated on the attached exhibits.

## **COMPENSATION (REPLACEMENT/ENHANCEMENTS)**

Applications for wetland permits will be made to the appropriate agencies with wetland jurisdiction. Expected wetland mitigation needs are refined on a continual basis during early stages of project design, and therefore subject to change. The preferred method of wetland replacement is to use established, federally and state approved wetland bank credits. Efforts will be made to replace wetland losses within the bank service area of the wetland impact. The minimum wetland replacement ratio for the project area is 2.0, within Bank Service Area 7. The specific wetland compensation (bank credits) to be used will be determined through consultation with the Corps of Engineers and the MnDOT Office of Environmental Stewardship (OES) as the project proceeds.

For the COE, ditches with wetland bottoms may be replaced at a different ratio, dependent on the following items:

- If a ditch bottom wetland is filled but a new ditch created (the ditch is shifted) no mitigation is typically required;
- If a ditch bottom wetland is filled but no new ditch is created mitigation is typically required at a 1:1 ratio.

## **Conclusion**

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In accordance with Executive Order 11990, based upon the above factors and considerations, it is determined that there is no practicable alternative to the proposed construction in the identified wetlands, and that the proposed action includes all practicable measures to minimize harm to the wetlands.

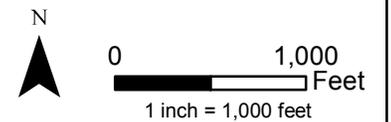
Based on the estimated 3.98 acres of permanent wetland basin impacts, 16.7 acres of permanent impacts to COE ditches with wetlands in the bottom and 0.80 acres of permanent impacts to other aquatic resources it is anticipated that the project will qualify for the following Army Corps of Engineers permit category Transportation Regional General Permit. However, this finding is subject to change as continued coordination occurs with the US Army Corps of Engineers as the permitting processes proceeds.

## **ATTACHMENTS**

Figure 1 - 7: Wetland Boundary



**Figure 1 - Wetland Boundary**  
**I-94 UBOL Resurfacing Maple Grove to Rogers and Brockton Interchange**  
 S.P. 2780-97  
 MnDOT and City of Dayton, Minnesota



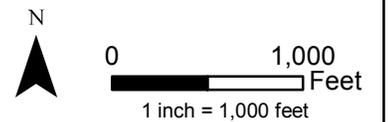


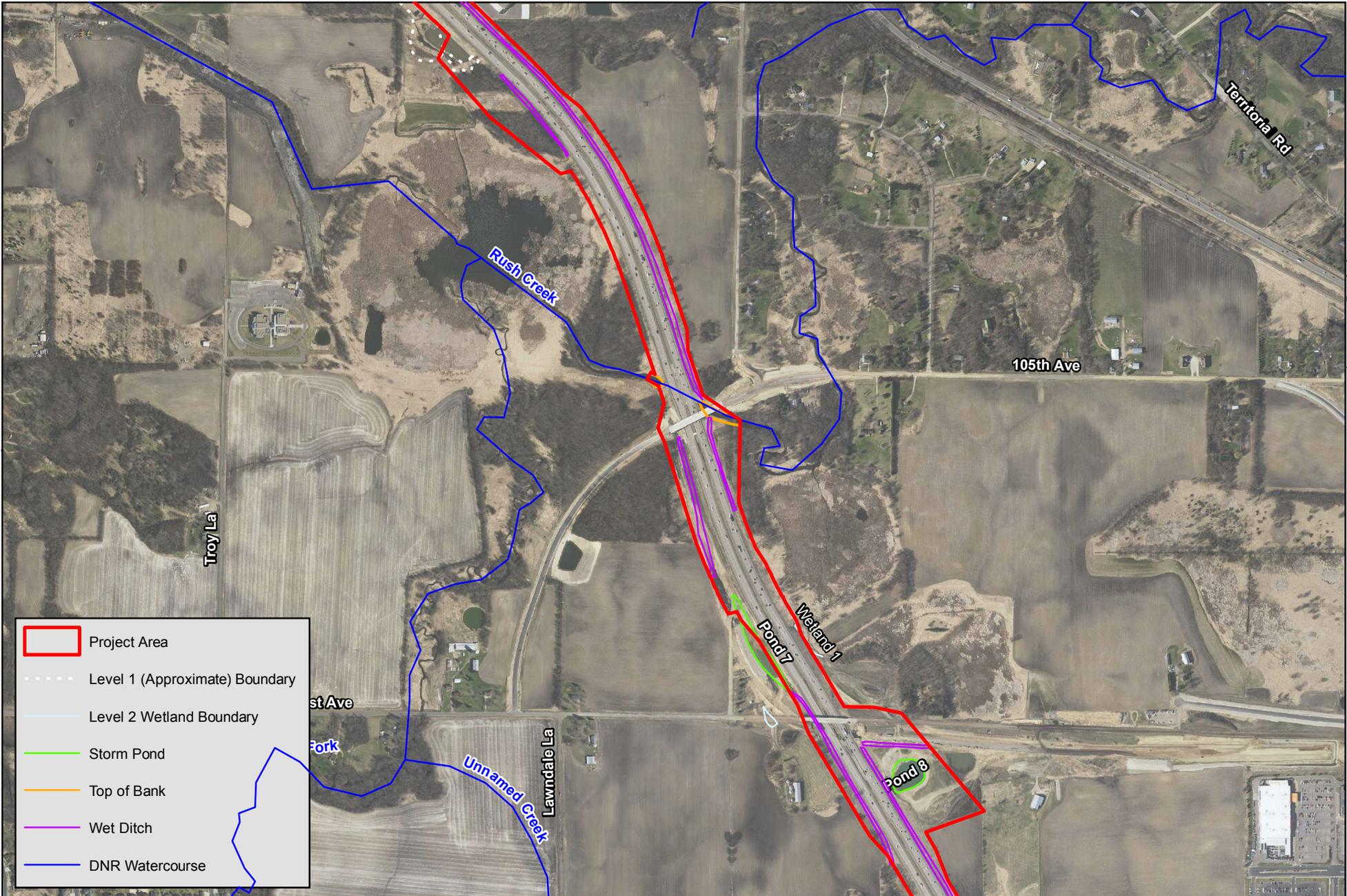
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**Figure 2 - Wetland Boundary**  
**I-94 UBOL Resurfacing Maple Grove to Rogers and Brockton Interchange**  
 S.P. 2780-97  
 MnDOT and City of Dayton, Minnesota

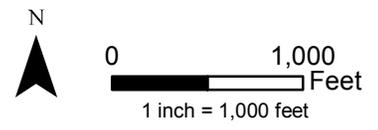


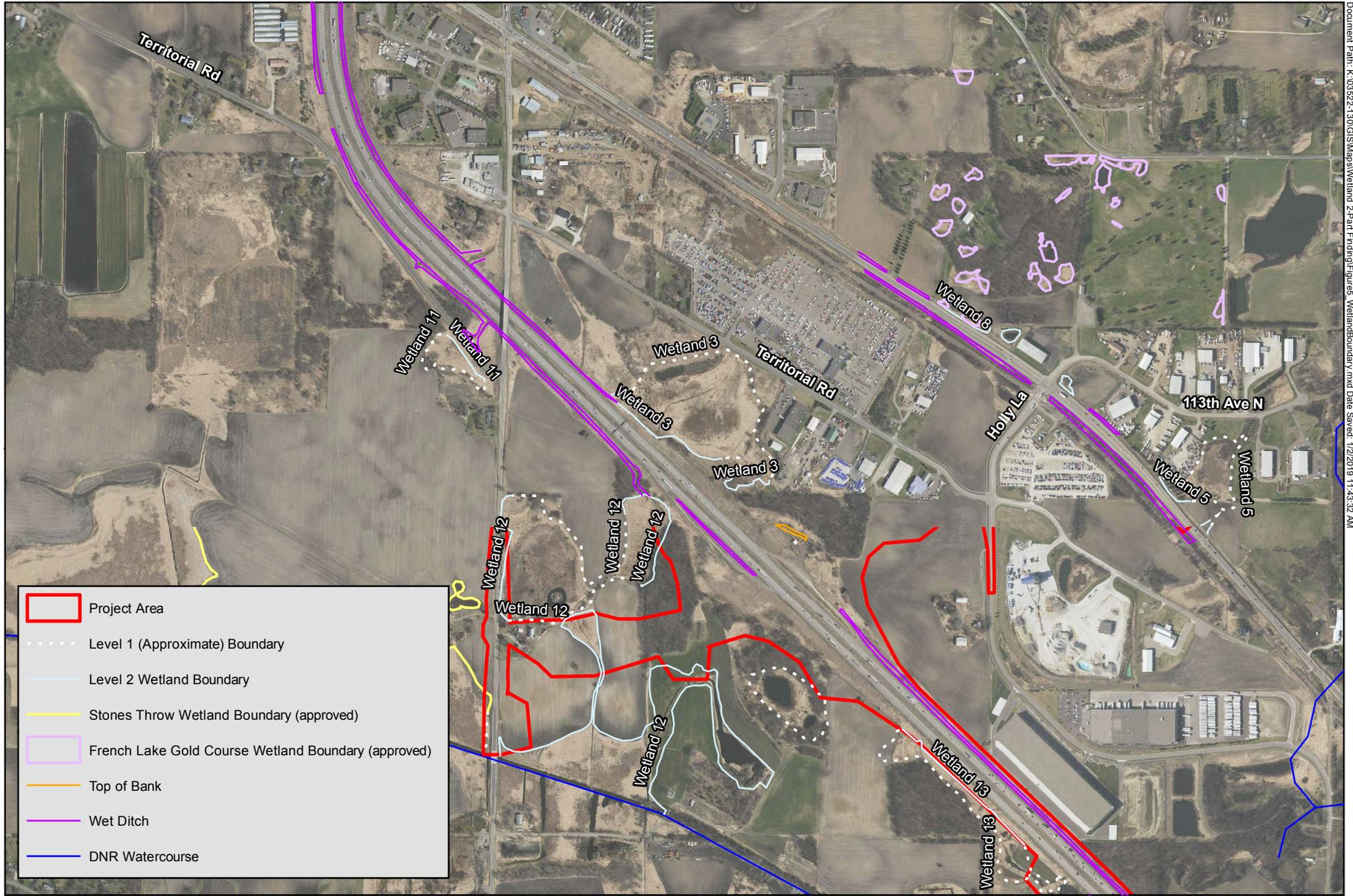
**Figure 3 - Wetland Boundary**  
**I-94 UBOL Resurfacing Maple Grove to Rogers and Brockton Interchange**  
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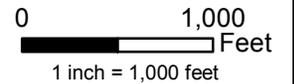


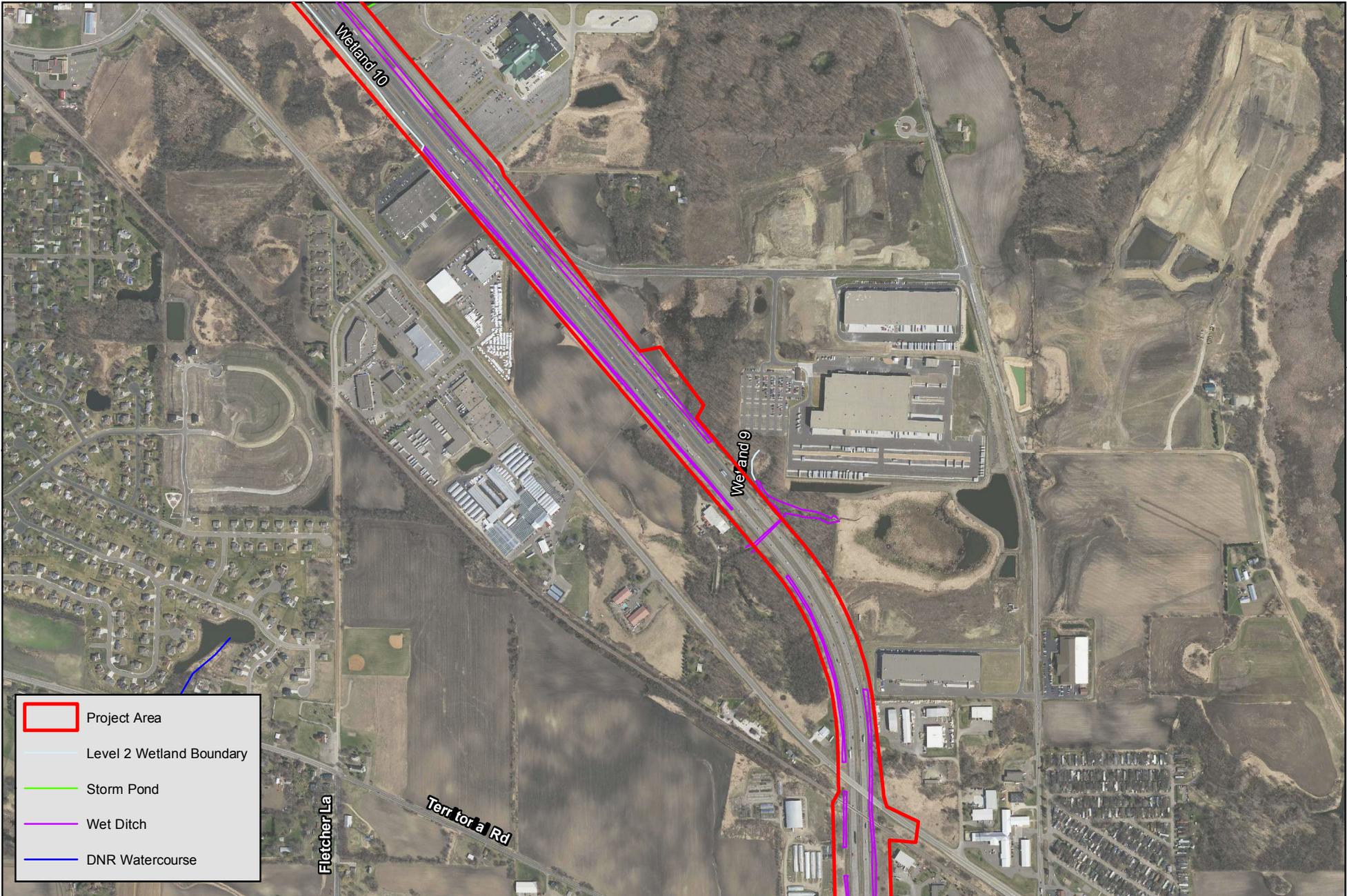
**Figure 4 - Wetland Boundary**  
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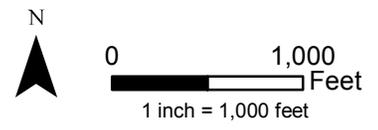


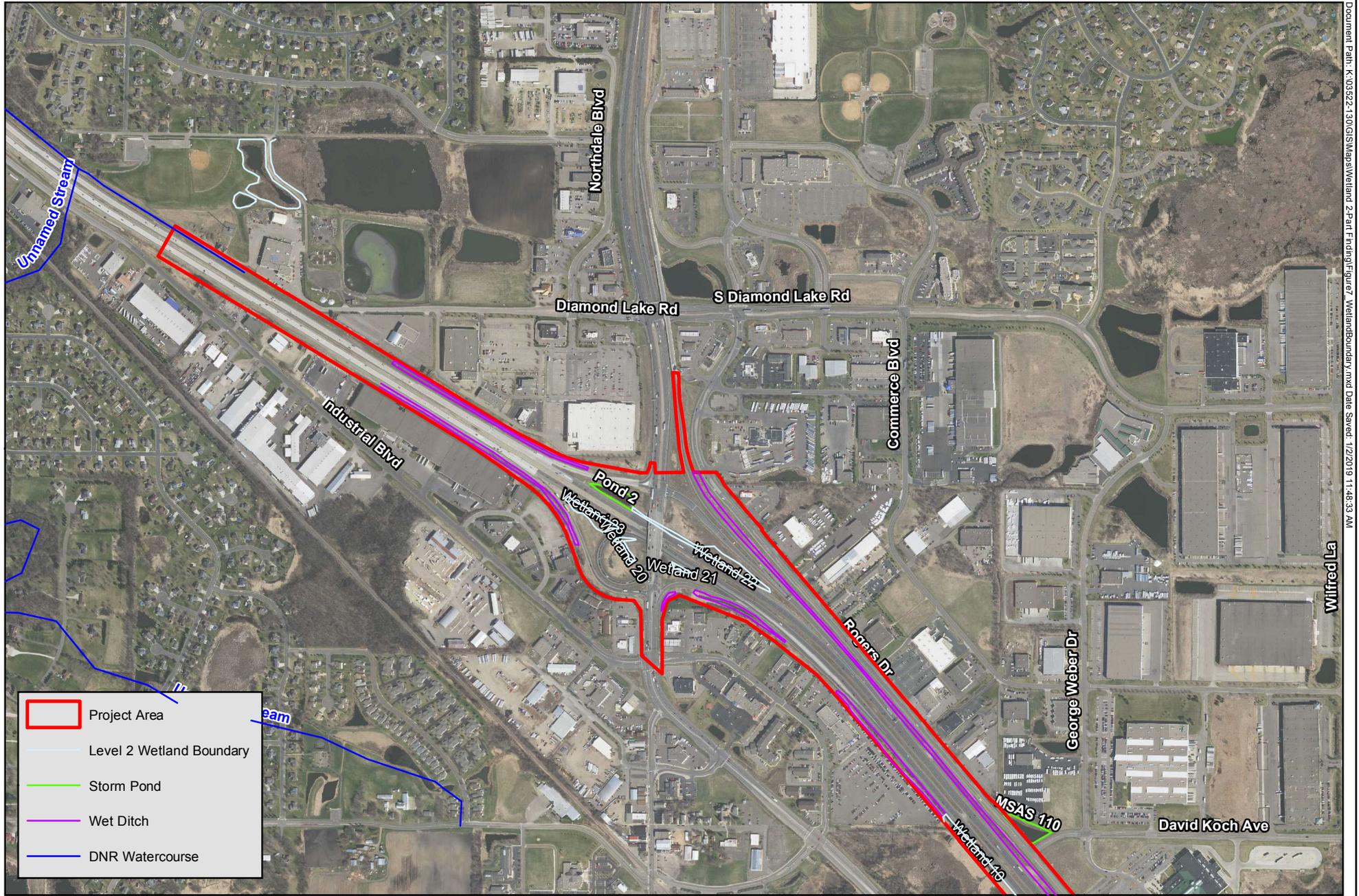
**Figure 5 - Wetland Boundary**  
**I-94 UBOL Resurfacing Maple Grove to Rogers and Brockton Interchange**  
S.P. 2780-97  
MnDOT and City of Dayton, Minnesota





**Figure 6 - Wetland Boundary**  
**I-94 UBOL Resurfacing Maple Grove to Rogers and Brockton Interchange**  
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**Figure 7 - Wetland Boundary**  
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