

TECHNICAL MEMORANDUM

TO: Dave Nelson, SRF
FROM: Ben Hodapp
CC:
DATE: October 15, 2021
RE: Level -1 Wetland Delineation – MnDOT Interstate 90 Bridges Replacement, Austin
 SP 5080-170

Anderson Engineering of Minnesota, LLC (Anderson) was retained to provide professional services to identify those areas of potential wetland utilizing the United States Army Corps of Engineers (USACE) Guidance for Offsite Hydrology/Wetland Determinations (July 2016), as well as any other aquatic resources within the project area.

The project consists of 4 Environmental Clearance Boundaries on Interstate 90 (I-90) including the intersections at Trunk Highway 105 (Table 1), US Highway 218/14th Street NW (Table 2), County State-Aid Highway 45/4th Street (Table 3), the I-90 mainline bridges over the Cedar River and 6th Street (Tables 3/4), and finally US Highway 218 /21st Street NE (Table 5).

Anderson completed the Routine Level-1 Wetland Delineation to determine existence and approximate boundaries of aquatic resources. A Routine Level-1 review consisted of an examination of mapping resources (soils, topography, National Wetlands Inventory, historic aerial photographs) to determine the potential presence of wetlands. The boundaries of the digitized wetlands were determined based on topographic relief (2-foot LIDAR derived contours) and wetland signatures identified on aerial photographs. A site visit was conducted to confirm the existence and relative extent of the features listed below.

Thirty-seven potential aquatic resources were identified and delineated within the 4 Environmental Clearance Boundaries, as depicted in detail on attached Figure 3 and summarized in the following tables:

Table 1. Bridge 9183 (TH105 over I—90)

Resource ID	Resource Type	Wetland Type Classification			Approximate Size (ac.) within ECB	Approximate Size (s.f.) within ECB
		Circular 39 Classification	Cowardin Classification	Eggers & Reed Classification		
1-1	Wet Ditch	Type 3	PEM1Cd	Shallow Marsh	0.18	8,004
1-2	Wet Ditch	Type 3	PEM1Cd	Shallow Marsh	0.31	13,308
1-3	Wet Ditch	Type 3	PEM1Cd	Shallow Marsh	0.33	14,549
1-4	Wet Ditch	Type 1	PEM1Ad	Seasonally Flooded Basin	0.03	11,01
1-5	Wet Ditch	Type 3	PEM1Cd	Shallow Marsh	0.00	175
1-6	Wet Ditch	Type 3	PEM1Cd	Shallow Marsh	0.19	8,211
1-7	Wet Ditch	Type 3	PEM1Cd	Shallow Marsh	0.40	17,631
1-8	Wet Ditch	Type 3	PEM1Cd	Shallow Marsh	0.15	6,619
1-9	Wet Ditch	Type 3	PEM1Cd	Shallow Marsh	0.27	11,620
1-10	Wet Ditch	Type 1	PEM1Ad	Seasonally Flooded Basin	0.03	1,174
1-11	Wet Ditch	Type 1	PEM1Ad	Seasonally Flooded Basin	0.08	3,395

Table 2. Bridges 50803/50804 (US 218N. Jct/14th St NW over I-90)

Resource ID	Resource Type	Wetland Type Classification			Approximate Size (ac.) within ECB	Approximate Size (s.f.) within ECB
		Circular 39 Classification	Cowardin Classification	Eggers & Reed Classification		
2-1	Wet Ditch	Type 1	PEM1Ad	Seasonally Flooded Basin	0.13	5,829
2-2	Wet Ditch	Type 3	PEM1Cd	Shallow Marsh	0.70	30,485
2-3	Wet Ditch	Type 1	PEM1Ad	Seasonally Flooded Basin	0.08	3,303
2-4	Wet Ditch	Type 1	PEM1Ad	Seasonally Flooded Basin	0.16	6,771
2-5	Wet Ditch	Type 1	PEM1Ad	Seasonally Flooded Basin	0.31	13,706
2-6	Wet Ditch	Type 1	PEM1Ad	Seasonally Flooded Basin	0.16	6,806
2-7	Wet Ditch	Type 1	PEM1Ad	Seasonally Flooded Basin	0.16	6,904
2-8	Wet Ditch	Type 1	PEM1Ad	Seasonally Flooded Basin	0.07	3,208
2-9	Wet Ditch	Type 3	PEM1Cd	Shallow Marsh	0.06	2,806

Table 3. Bridge 9180 (CSAH 45/4th St. over I-90) & Bridges 6868/6869 (I-90 over Cedar River)

Resource ID	Resource Type	Wetland Type Classification			Approximate Size (ac.) within ECB	Approximate Size (s.f.) within ECB
		Circular 39 Classification	Cowardin Classification	Eggers & Reed Classification		
3-1	Wetland	Type 3	PEM1Cd	Shallow Marsh	0.10	4,546
3-2	Wetland	Type 1	PFO1A	Seasonally Flooded Basin	0.01	296
3-3	Wetland	Type 1	PFO1A	Seasonally Flooded Basin	0.03	1,470
3-4	Wet Ditch	Type 1	PEM1Ad	Seasonally Flooded Basin	0.09	3,822
3-5	Wet Ditch	Type 3	PEM1Cd	Shallow Marsh	0.06	2,451
3-6	Wet Ditch	Type 3	PEM1Cd	Shallow Marsh	0.07	3,218
3-7	Wet Ditch	Type 3	PEM1Cd	Shallow Marsh	0.17	7,591
A	Tributary	Type 90	R2UBH	Channel	0.86	37,661

Table 4. Bridges 6868/6869 (I-90 over Cedar River) & Bridges 9178/9179 (CSAH 6th St. over I-90)

Resource ID	Resource Type	Wetland Type Classification			Approximate Size (ac.) within ECB	Approximate Size (s.f.) within ECB
		Circular 39 Classification	Cowardin Classification	Eggers & Reed Classification		
4-2	Wetland	Type 3	PEM1Cd	Shallow Marsh	0.10	4,275
4-1	Wetland	Type 3	PEM1Cd	Shallow Marsh	0.49	21,409

Table 5. Bridge 9201 (US 218 S. Jct./21st St. NE over I-90)

Resource ID	Resource Type	Wetland Type Classification			Approximate Size (ac.) within ECB	Approximate Size (s.f.) within ECB
		Circular 39 Classification	Cowardin Classification	Eggers & Reed Classification		
5-1	Wet Ditch	Type 3	PEM1Cd	Shallow Marsh	0.12	5,277
5-2	Wet Ditch	Type 3	PEM1Cd	Shallow Marsh	0.07	2,964
5-3	Wet Ditch	Type 1	PEM1Ad	Seasonally Flooded Basin	0.02	846
5-4	Wet Ditch	Type 3	PEM1Cd	Shallow Marsh	0.13	5,617
5-5	Wet Ditch	Type 3	PEM1Cd	Shallow Marsh	0.11	4,948
5-6	Wet Ditch	Type 3	PEM1Cd	Shallow Marsh	0.17	7,592
5-7	Wet Ditch	Type 3	PEM1Cd	Shallow Marsh	0.03	1,294

This product is for informational planning only and based on readily available data. A Level-2 field delineation, completed during the growing season, would be required to support permitting for any impacts to the identified aquatic resources.

Respectfully,
Anderson Engineering of Minnesota, LLC.



Benjamin J Hodapp, PWS
Environmental Services Manager
MN Certified Wetland Delineator



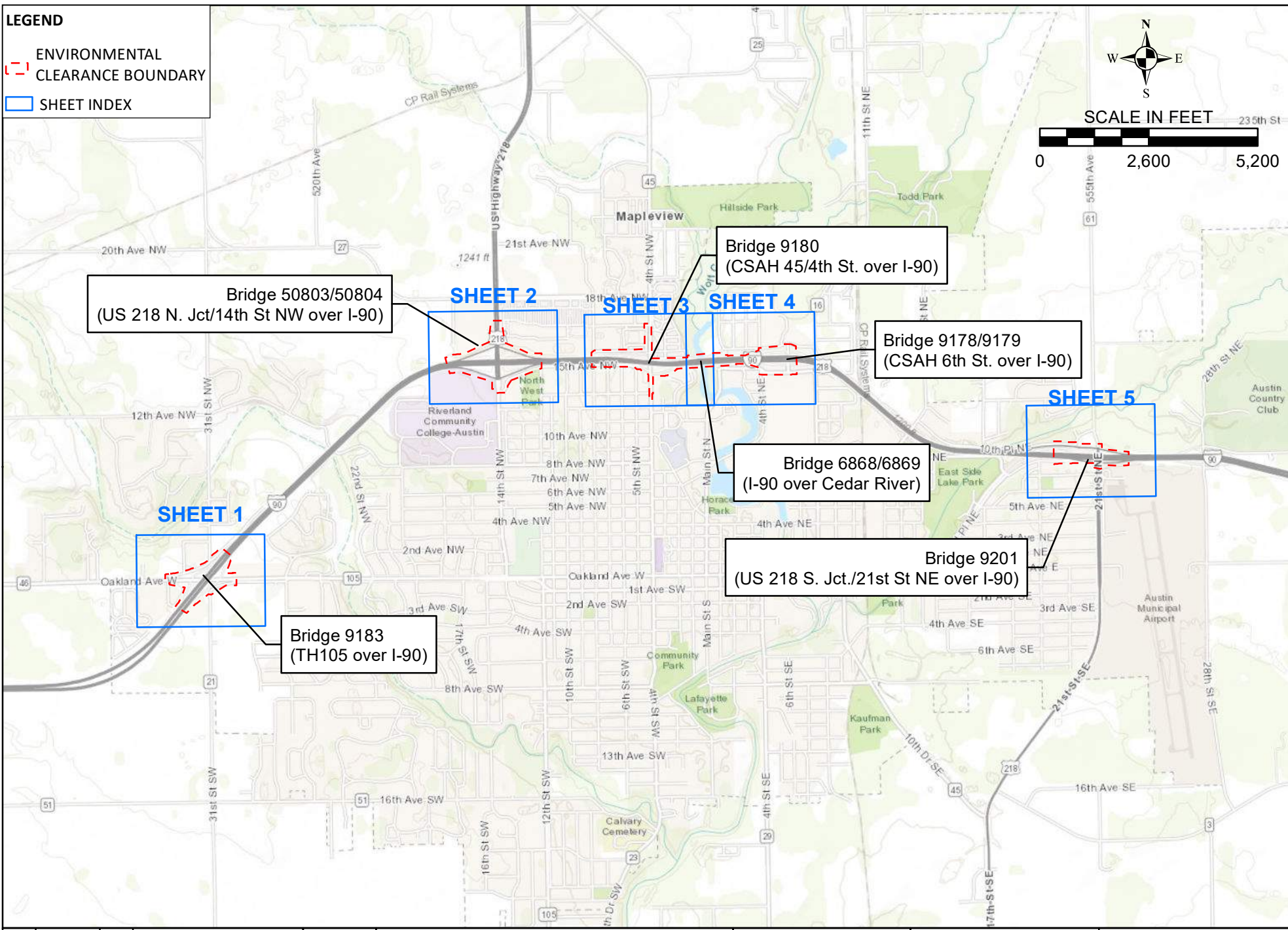
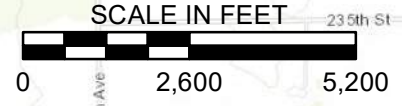
Attachments:

- Figure 1 Location
- Figure 2 Environmental
- Figure 3 Level I Wetland Determination

LEGEND

ENVIRONMENTAL CLEARANCE BOUNDARY

SHEET INDEX



NO.	DATE	BY	DESCRIPTION OF REVISIONS

DES: _____

DRW: _____

CHK: _____

I HEREBY CERTIFY THAT THIS SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA

SIGNATURE: _____ LICENSE NO. _____

PRINT NAME: _____ DATE: 9/20/2021

ANDERSON








I-90 BRIDGE REPLACEMENT
AUSTIN, MINNESOTA

STATE PROJ. NO. 5080-170

FIGURE 1
PROJECT LOCATIONS

SHEET NO. 1 OF 1 SHEETS

LEGEND

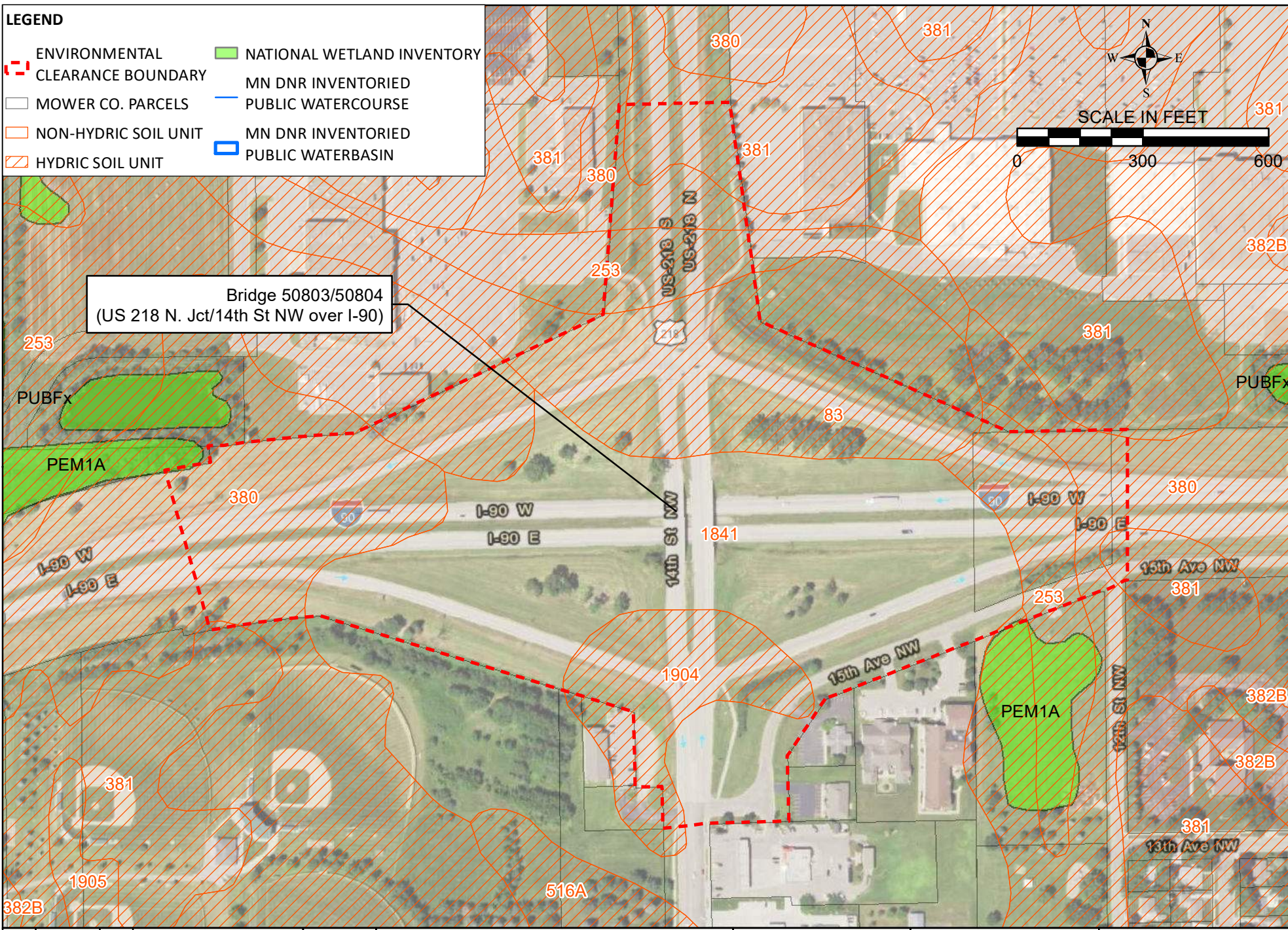
-  ENVIRONMENTAL CLEARANCE BOUNDARY
-  MOWER CO. PARCELS
-  NON-HYDRIC SOIL UNIT
-  HYDRIC SOIL UNIT
-  NATIONAL WETLAND INVENTORY
-  MN DNR INVENTORIED PUBLIC WATERCOURSE
-  MN DNR INVENTORIED PUBLIC WATERBASIN



SCALE IN FEET



Bridge 50803/50804
(US 218 N. Jct/14th St NW over I-90)



NO.	DATE	BY	DESCRIPTION OF REVISIONS

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I-90 BRIDGE REPLACMENT
AUSTIN, MINNESOTA

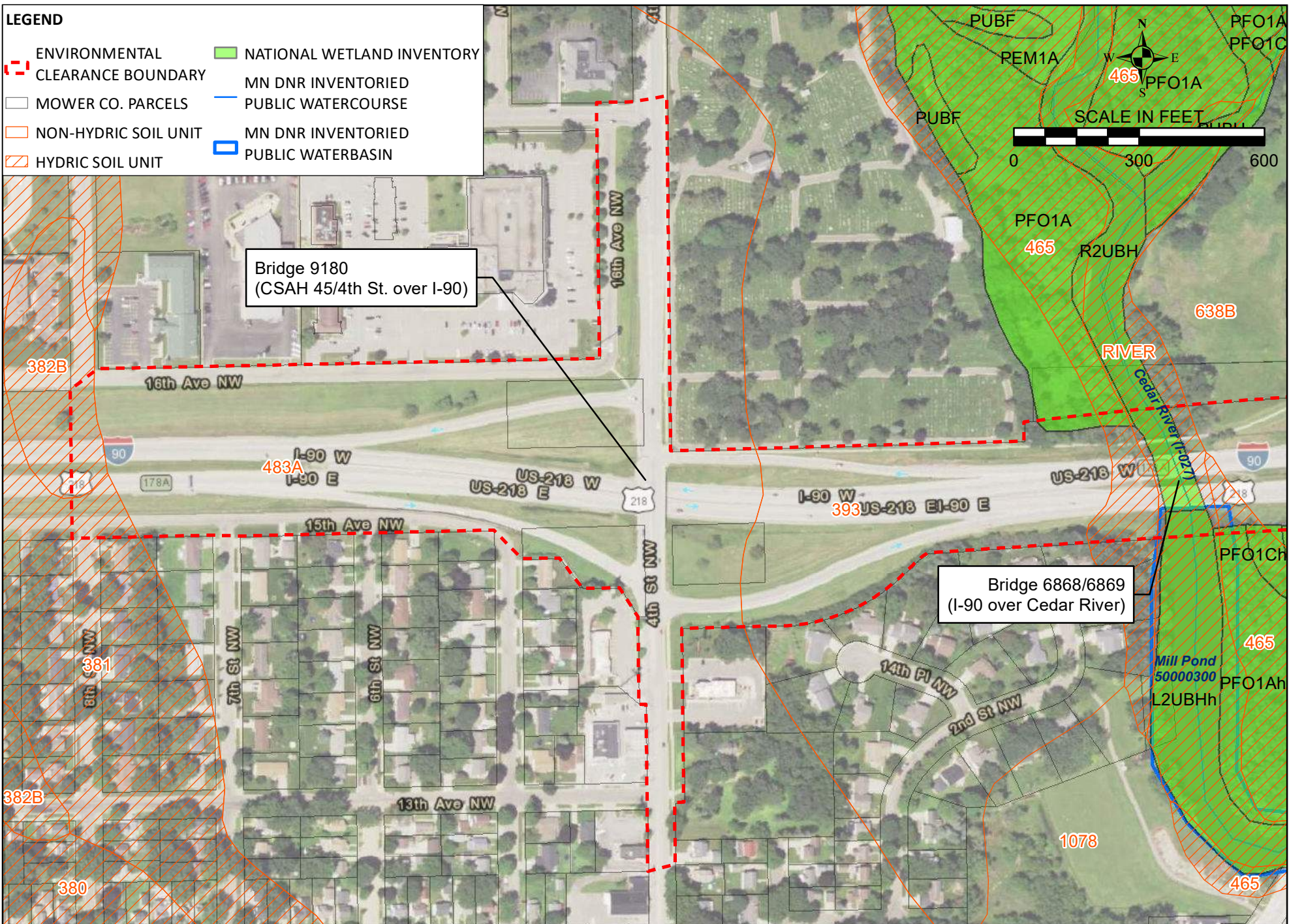
STATE PROJ. NO. 5080-170

FIGURE 2-2
ENVIRONMENTAL

SHEET NO. 2 OF 5 SHEETS

LEGEND

-  ENVIRONMENTAL CLEARANCE BOUNDARY
-  MOWER CO. PARCELS
-  NON-HYDRIC SOIL UNIT
-  HYDRIC SOIL UNIT
-  NATIONAL WETLAND INVENTORY
-  MN DNR INVENTORIED PUBLIC WATERCOURSE
-  MN DNR INVENTORIED PUBLIC WATERBASIN



Bridge 9180
(CSAH 45/4th St. over I-90)

Bridge 6868/6869
(I-90 over Cedar River)

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I-90 BRIDGE REPLACMENT
AUSTIN, MINNESOTA

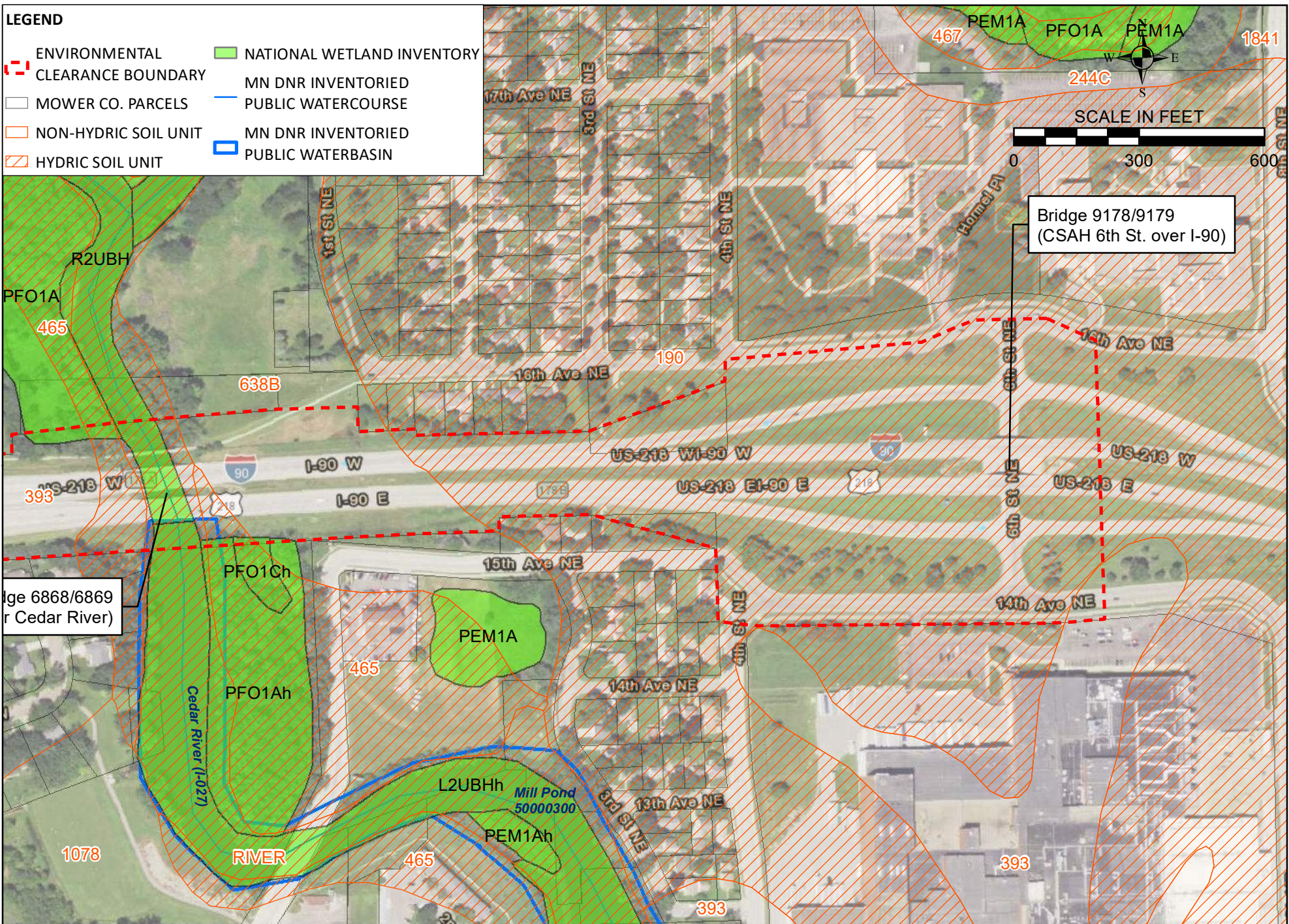
STATE PROJ. NO. 5080-170

FIGURE 2-3
ENVIRONMENTAL

SHEET NO. 3 OF 5 SHEETS

LEGEND

-  ENVIRONMENTAL CLEARANCE BOUNDARY
-  MOWER CO. PARCELS
-  NON-HYDRIC SOIL UNIT
-  HYDRIC SOIL UNIT
-  NATIONAL WETLAND INVENTORY
-  MN DNR INVENTORIED PUBLIC WATERCOURSE
-  MN DNR INVENTORIED PUBLIC WATERBASIN



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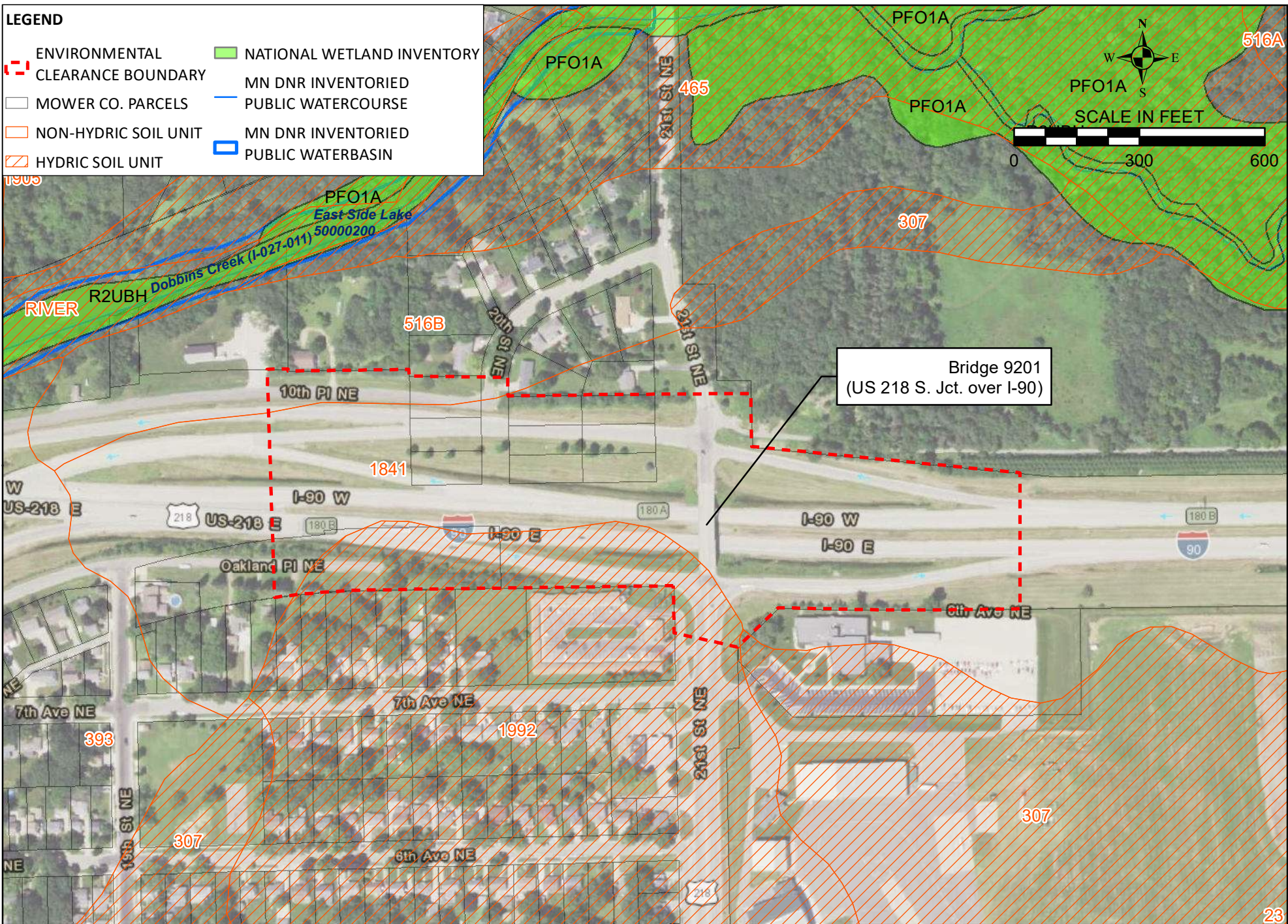
STATE PROJ. NO. 5080-170

FIGURE 2-4
 ENVIRONMENTAL

SHEET NO. 4 OF 5 SHEETS

LEGEND

- ENVIRONMENTAL CLEARANCE BOUNDARY
- MOWER CO. PARCELS
- NON-HYDRIC SOIL UNIT
- HYDRIC SOIL UNIT
- NATIONAL WETLAND INVENTORY
- MN DNR INVENTORIED PUBLIC WATERCOURSE
- MN DNR INVENTORIED PUBLIC WATERBASIN



NO.	DATE	BY	DESCRIPTION OF REVISIONS

DES: _____
 DRW: _____
 CHK: _____

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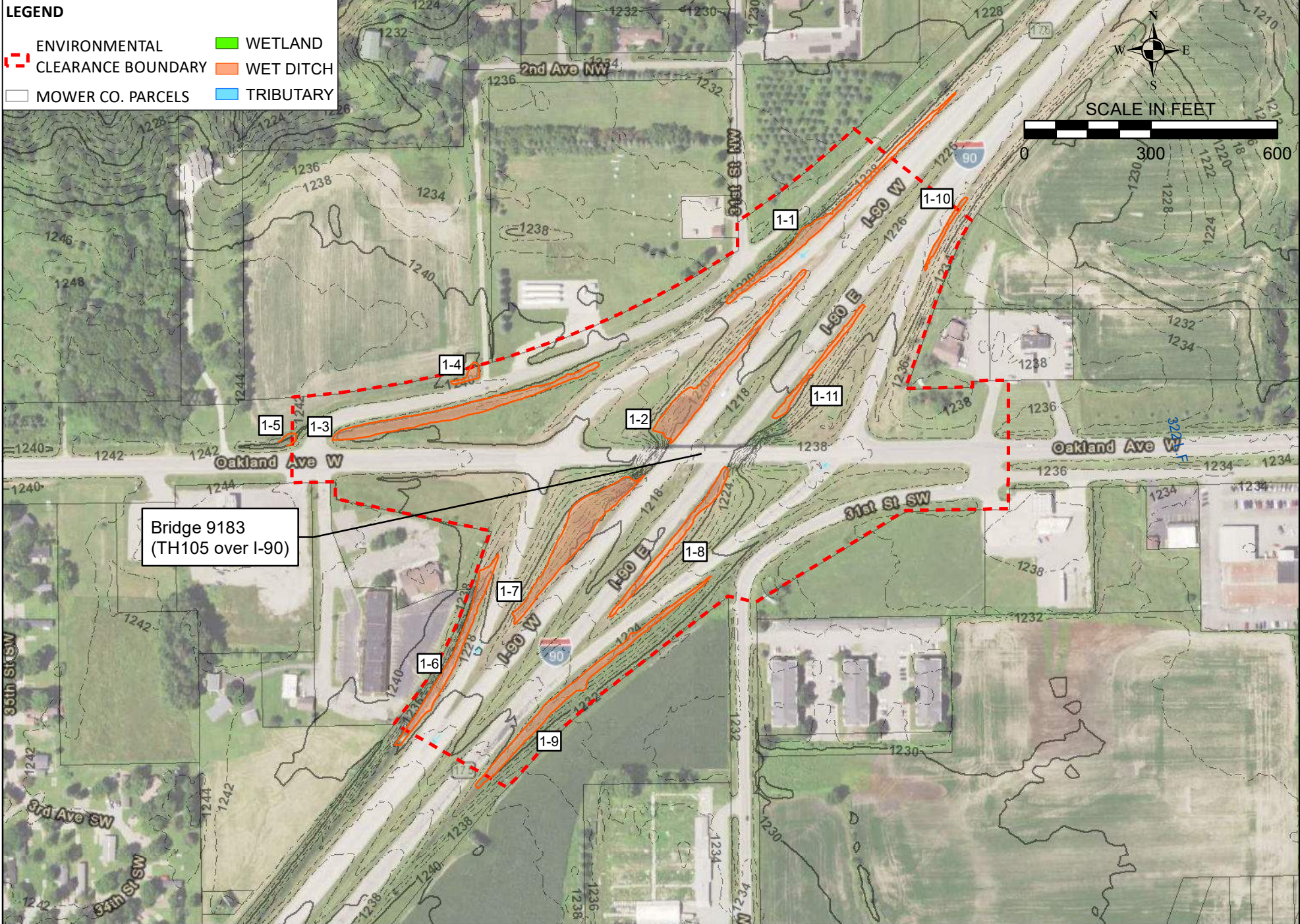
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I-90 BRIDGE REPLACMENT
 AUSTIN, MINNESOTA

STATE PROJ. NO. 5080-170

FIGURE 2-5
 ENVIRONMENTAL

SHEET NO. 5 OF 5 SHEETS



NO.	DATE	BY	DESCRIPTION OF REVISIONS

DES: _____
 DRW: _____
 CHK: _____

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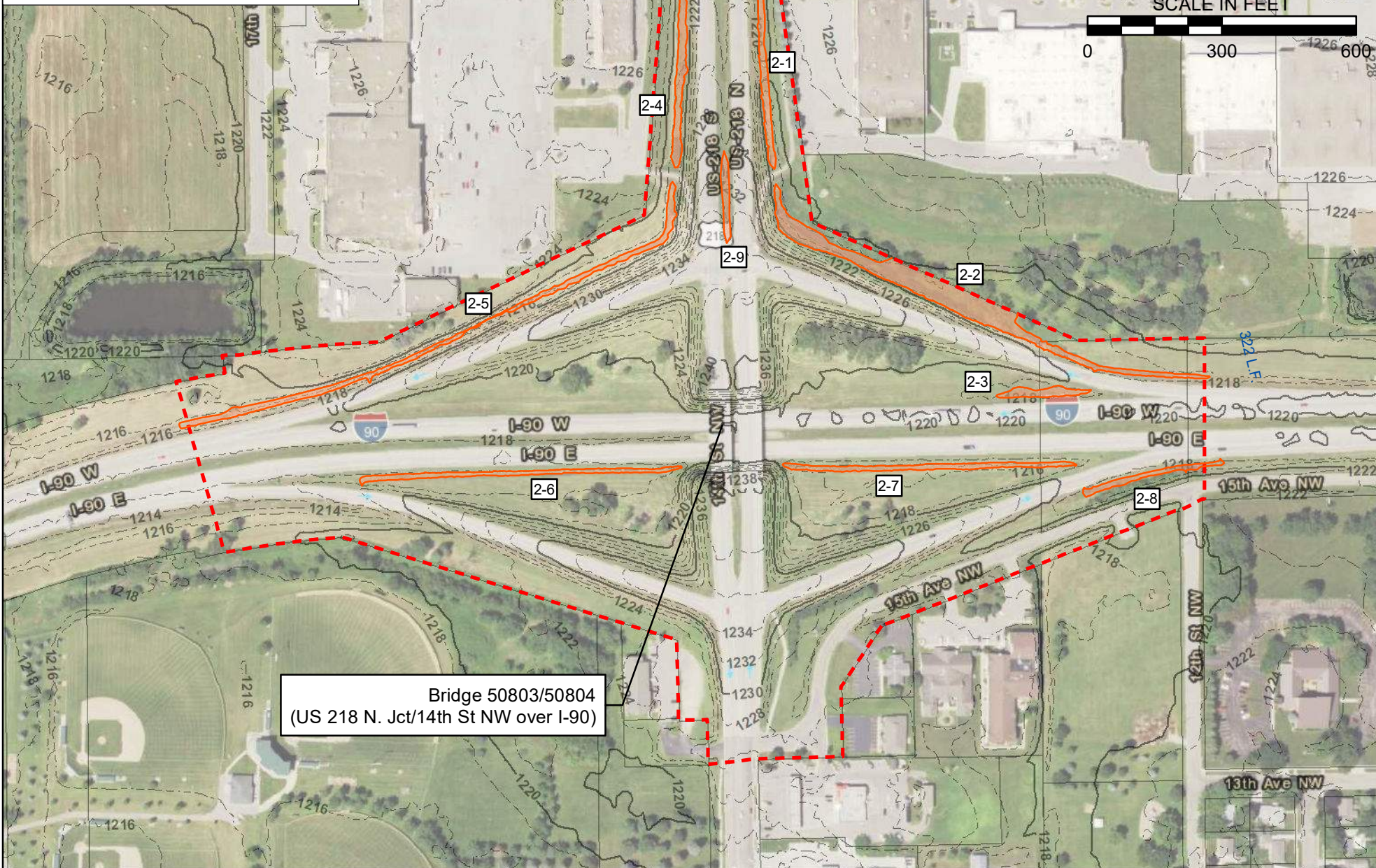
I-90 BRIDGE REPLACEMENT
 AUSTIN, MINNESOTA

STATE PROJ. NO. 5080-170

FIGURE 3-1
 LEVEL I
 WETLAND DETERMINATION

SHEET NO. 1 OF 5 SHEETS

- LEGEND**
- - - ENVIRONMENTAL CLEARANCE BOUNDARY
 - WETLAND
 - WET DITCH
 - MOWER CO. PARCELS
 - TRIBUTARY



Bridge 50803/50804
 (US 218 N. Jct/14th St NW over I-90)

NO.	DATE	BY	DESCRIPTION OF REVISIONS

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DRW: _____

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I-90 BRIDGE REPLACEMENT
AUSTIN, MINNESOTA

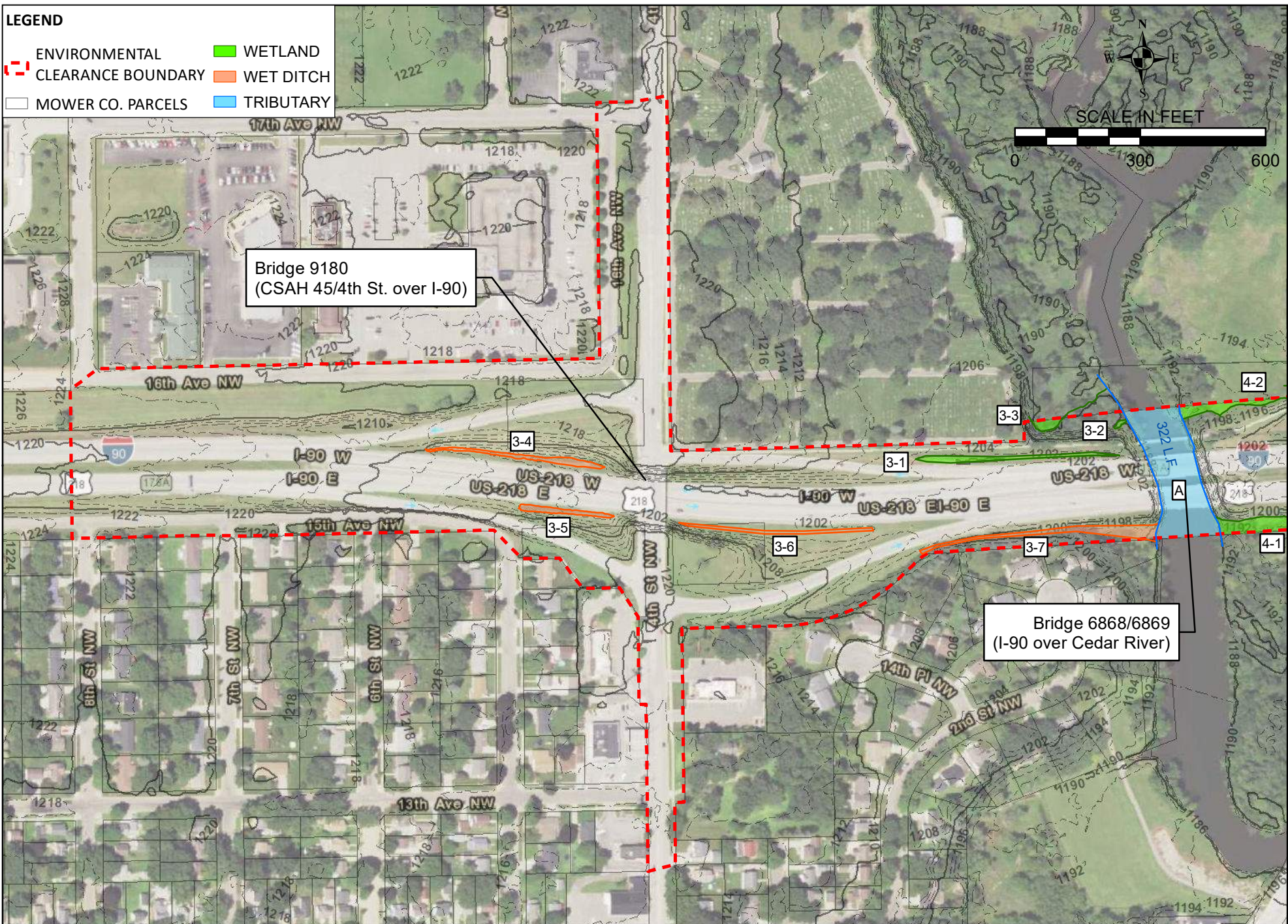
STATE PROJ. NO. 5080-170

FIGURE 3-2
LEVEL I
WETLAND DETERMINATION

SHEET NO. 2 OF 5 SHEETS

LEGEND

- ENVIRONMENTAL CLEARANCE BOUNDARY
- MOWER CO. PARCELS
- WETLAND
- WET DITCH
- TRIBUTARY



NO.	DATE	BY	DESCRIPTION OF REVISIONS

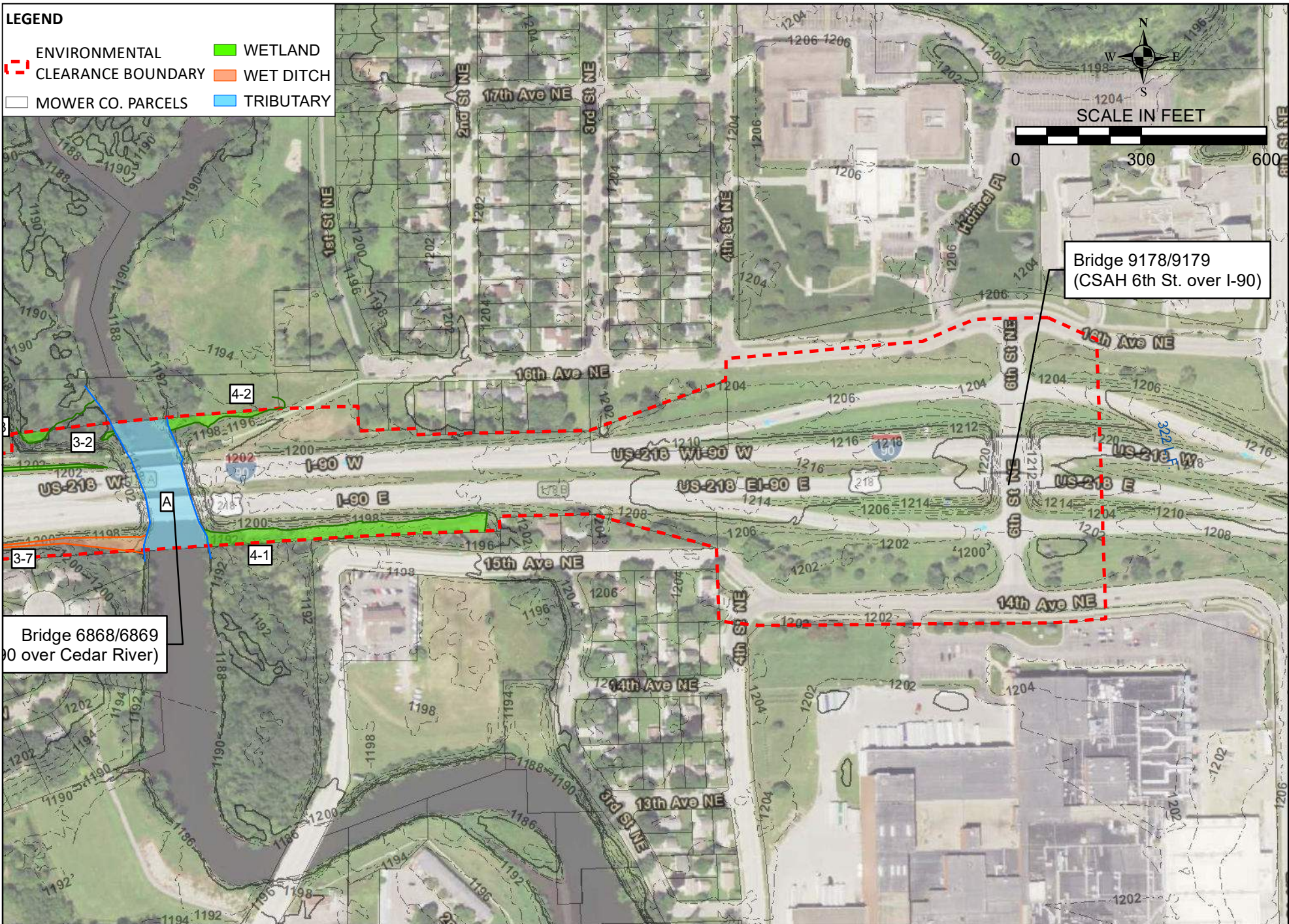
DES: _____
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I-90 BRIDGE REPLACEMENT
 AUSTIN, MINNESOTA
 STATE PROJ. NO. 5080-170

FIGURE 3-3
 LEVEL I
 WETLAND DETERMINATION
 SHEET NO. 3 OF 5 SHEETS

- LEGEND**
- - - ENVIRONMENTAL CLEARANCE BOUNDARY
 - WETLAND
 - WET DITCH
 - MOWER CO. PARCELS
 - TRIBUTARY



NO.	DATE	BY	DESCRIPTION OF REVISIONS

DES: _____
 DRW: _____
 CHK: _____

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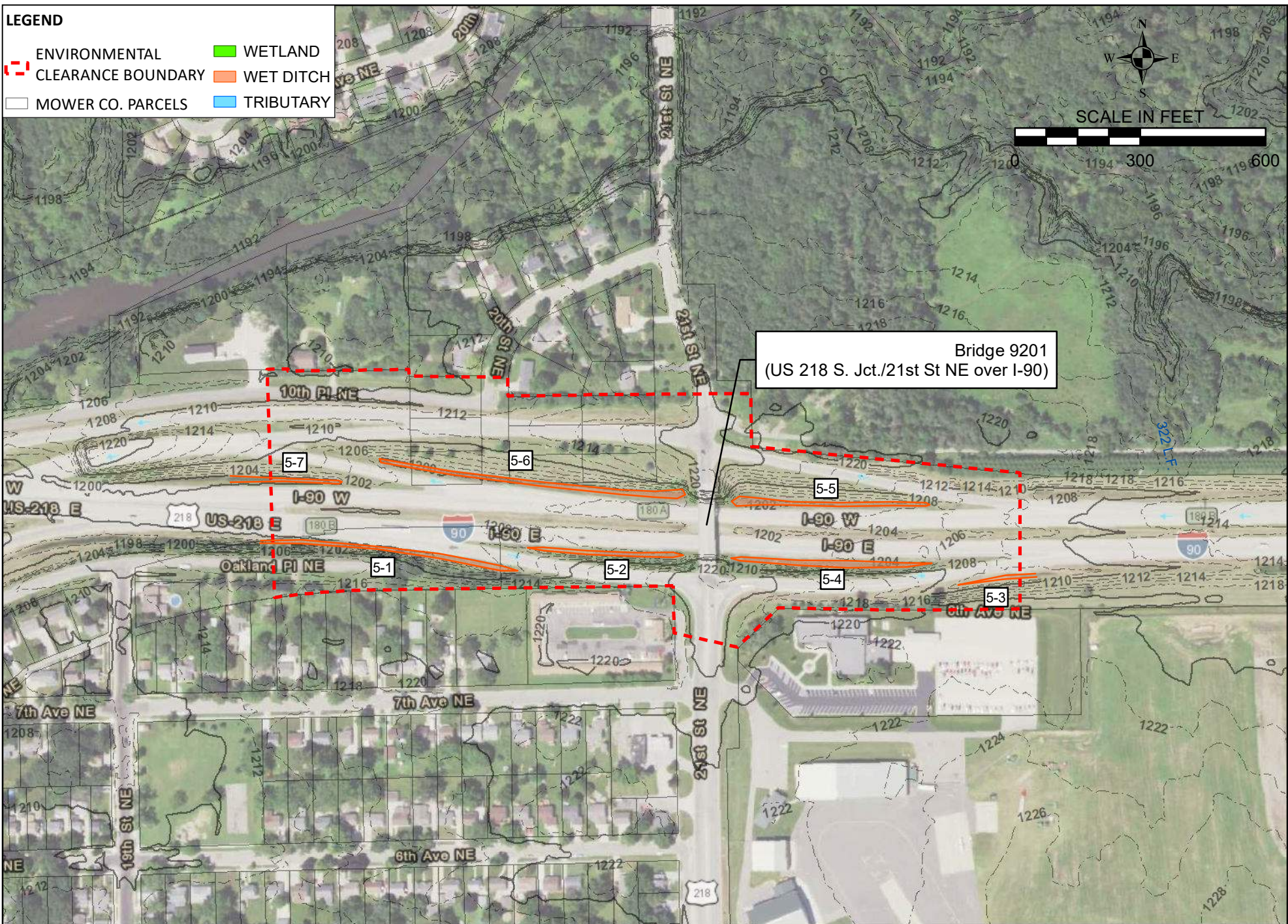
I-90 BRIDGE REPLACEMENT
 AUSTIN, MINNESOTA

STATE PROJ. NO. 5080-170

FIGURE 3-4
 LEVEL I
 WETLAND DETERMINATION

SHEET NO. 4 OF 5 SHEETS

- LEGEND**
- ENVIRONMENTAL CLEARANCE BOUNDARY
 - MOWER CO. PARCELS
 - WETLAND
 - WET DITCH
 - TRIBUTARY



Bridge 9201
(US 218 S. Jct./21st St NE over I-90)

NO.	DATE	BY	DESCRIPTION OF REVISIONS

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I-90 BRIDGE REPLACEMENT
AUSTIN, MINNESOTA

STATE PROJ. NO. 5080-170

FIGURE 3-5
LEVEL I
WETLAND DETERMINATION

SHEET NO. 5 OF 5 SHEETS