US Army Corps of Engineers
St Paul District

APPLICANT: **Minnesota Department of Transportation, District 7, c/o Mr. Scott Morgan**

Public Notice

ISSUED: September 25, 2015
EXPIRES: October 25, 2015

REFER TO: 2013-00315-SEW

SECTION: 404 - Clean Water Act
SECTION: 10 - Rivers and Harbors Act

1. APPLICATION FOR PERMIT TO discharge dredged and fill material into approximately 445 linear feet of the Minnesota River, 241 linear feet of Seven Mile Creek, 52 linear feet of Hiniker Creek, 51 linear feet of an unnamed tributary to the Minnesota River, and approximately 13.44 acres of wetlands adjacent to Minnesota River and tributaries of the Minnesota River to facilitate a pavement preservation and grade-raise project on US Trunk Highway 169 (TH 169) between St. Peter and Mankato. For more detailed information on the proposed permanent and temporary impacts to aquatic resources, see Quantity, Type, and Area of Fill in Section 2 below, and the attached tables and figures labeled "2013-00315-SEW, Table 1 through 2 of 2", and "2013-00315-SEW, Figures 1 through 13 of 13", respectively.

2. SPECIFIC INFORMATION.

APPLICANT'S ADDRESS:
2151 Bassett Drive
Mankato, Minnesota 56001

PROJECT LOCATION: The project site is located in Sections 6, 28, 29, 30, 31, and 32, T. 110N., R. 26W., and Sections 1, 12, 13, 24, 25, and 36, T. 109N., R. 27W., Nicollet County, Minnesota. The approximate central coordinates are -94.026663N., and 44.261228W.

PURPOSE AND NEED: The Minnesota Department of Transportation (MnDOT) proposes work on 8.71 miles of TH 169 between St. Peter and Mankato, including 5.47 miles of pavement preservation and 3.24 miles of raising the grade of the roadway above the Minnesota River's 100-year flood elevation. The grade-raise portion of the project would occur on four distinct segments of the highway that have overtopped eight times in the past 22 years, including 1993, 1997, twice in 2001, twice in 2010, 2011, and 2014, resulting in road closures and detours on local two-lane roads. TH 169 is a high-volume roadway with an annual average daily traffic (AADT) and heavy commercial annual average daily traffic (HCAADT) of 13,700 and 1,500 in 2011, respectively, and a projected AADT of 17,600. It is considered by MnDOT to be a high priority interregional highway corridor for freight transport, as it connects south central Minnesota to major barge terminals on the Mississippi and Minnesota Rivers and major rail yards near the Twin Cities metropolitan area, which is typically a less than two-hour drive from Mankato via TH 169. When the road closes due to flooding, the official detour on two-lane roads results in about 16.3 miles of additional travel length between Mankato and St. Peter, which extends commutes for local traffic, including school buses, and results in reduced business activity in the local area and delayed regional traffic. The detours require heavy use of two-lane roads that are not designed to handle heavy mixed-use traffic, which decreases safety and mobility on these roadways during flood events. In addition to the flooding issue, pavement in the corridor has

deteriorated over time. As such, the purpose of the project is to improve year-round safety and mobility on TH 169 between Mankato and St. Peter, up to the Minnesota River 100-year flood event.

PROJECT DESCRIPTION: To correct the problems on this stretch of TH 169, MnDOT proposes to raise four distinct segments of the roadway that are currently in the modeled 100-year flood elevation of the Minnesota River above the 100-year flood elevation so the road can continue operations during the 100-year flood event. Segment A (on the south end by Mankato) is about 0.44 mile long, Segment B is about 0.80 mile long, Segment C (at Seven Mile Creek) is about 0.50 mile long, and Segment D (on the north end by St. Peter) is about 1.51 miles long. At a minimum, the road would be raised enough in each segment so that the point where the road shoulder intersects the ditch slope is at least one half foot above the 100-year flood elevation. Additionally, in some locations, the road would be raised to a greater height to accommodate drainage of stormwater runoff from the roadway. The maximum proposed grade-raise is 3.5 feet in Segment A, 6 feet in Segments B and D, and 5.5 feet in Segment C. The typical cross-section for TH 169 would include two 12-foot wide travel lanes in each direction with 10-foot wide outside shoulders, four-foot wide inside shoulders, 12-foot wide turn lanes where needed, and 1V:5H sideslopes in the clear zone. The existing typical cross-section has eight-foot wide outside shoulders and 1V:4H sideslopes, but is otherwise the same as the proposed. In the three pavement preservation segments, TH 169 would receive a mill and overlay and would not be widened beyond the existing typical section. Culvert repairs would also be completed in these segments. Where needed, culverts would be lined through the “cured in place pipe” method to maintain drainage. Within the grade-raise segments, some culverts would be lengthened to accommodate the wider road base.

The project includes the replacement of Bridge 8846 on Seven Mile Creek with Bridge 52X02. The existing bridge is a dual line of 118.11-foot long, 12-foot wide by 7-foot tall box culverts with inlet elevations of 751.18 feet and an outlet elevations of 750.91 feet. Due to problems with substantial debris and sediment build-up in the existing structures, the replacement culvert would be a single line 196-foot long, 20-foot wide by 12-foot tall box culvert. The new box culvert would be buried one foot below the existing stream bed elevation and would have an inlet elevation of 750.47 feet and an outlet elevation of 748.90 feet. MnDOT anticipates that approximately 241 linear feet of the creek would be temporarily impacted by a stream diversion for up to 30 days to facilitate the culvert replacement, including the installation of dikes to isolate the work area, and diversion of water flow from the creek to a pipe under the adjacent pedestrian underpass. The existing 138-foot long, 10-foot wide by 8-foot tall box culvert (Bridge 52X02) at the pedestrian trail underpass, located about 60 feet north of Bridge 8846, would be extended 16 feet on the downstream side and 24 feet on the upstream side. This box culvert acts as an overflow structure for Bridge 8846 when Seven Mile Creek is above bankfull stage (roughly the 2-year flood event) or when the Minnesota River is in flood stage. Additionally, at Hiniker Creek, the existing 177.62-foot long bridge (Bridge 52X03) consisting of one 8-foot wide by 5-foot tall box culvert and one 8-foot wide by 4-foot tall box culvert would be extended 12 feet on the downstream side to accommodate the wider road base in the grade-raise section. To facilitate this work, MnDOT anticipates that approximately 210 linear feet of Hiniker Creek would be temporarily impacted for up to 10 days by a temporary stream diversion in order to isolate the work area; they expect dikes would be used upstream and downstream of the culvert, and flow would be diverted into one box culvert while the other is being extended. Also, in the unnamed tributary to the Minnesota River, an approximately 180-foot long, 96-inch diameter reinforced concrete pipe would be extended approximately 10 linear feet to accommodate the road grade-raise.

Finally, the project involves the installation of rock bendway weirs in two locations along the Minnesota River bank on the east side of TH 169. The purpose of the bendway weirs is to slow or prevent the continued erosion of the river bank in two areas where the river bank provides support to the TH 169 roadway. In the upstream location, two bendway weirs would be constructed just upstream of where Seven Mile Creek enters the Minnesota River, and just downstream of an existing 1,600-foot long riprap area located along the outside bend of the river bank. Each of the two weirs would permanently affect about 100 linear feet of the river bank. The upstream weir would have a bottom length of about 105.3 feet and a top width of about 10 feet with 1V:3H sideslopes, and would be placed at the downstream end of the riprap protection area. The downstream weir would have a bottom length of about 108.1 feet, a top width of 10 feet with 1V:3H sideslopes, and would be located about 600 feet downstream of the first weir. Downstream near St. Peter, three additional bendway weirs would be constructed along an outer bend. All three weirs would have top widths of 10 feet and sideslopes of 1V:3H. The upstream weir would permanently affect about 65 linear feet of the river bank, and would have a bottom length of 56 feet. The middle weir would be located about 220 feet downstream of the upstream weir, would permanently affect 70 linear feet of the river bank, and would have a bottom length of 87.4 feet. The downstream weir would be located about 420 linear feet downstream of the middle weir, would permanently affect 90 linear feet of the river bank, and would have a bottom width of 112 feet. All of the weirs constructed for this project would be installed partially below the existing ground level and would have a top elevation lower than the 1.5-year flow event. Temporary roadways would be constructed from TH 169 to each bendway weir location to allow for equipment access during construction. The weirs would be constructed downstream to upstream in each location during low-flow conditions.

QUANTITY, TYPE, AND AREA OF FILL: Approximately 9.22 acres of wetlands that are part of tributary systems to the Minnesota River would be permanently impacted by fill for the proposed project. Also, approximately 3.18 acres of wetlands would be temporarily impacted by fill for topsoil storage and the temporary equipment roads needed to access the bendway weir sites. In addition to wetland impacts, several tributaries would also be permanently impacted by the project, including 445 linear feet of the Minnesota River (0.80 acre), 196 linear feet of Seven Mile Creek (0.09 acre), 32 linear feet of Hiniker Creek (0.02 acre), and 37 linear feet of an unnamed tributary to the Minnesota River (0.022 acre), as discussed above. A table of the proposed aquatic resource impacts is attached ("2013-00315-SEW, Table 1-2 of 2"), while the locations of each proposed impact are shown on the attached figures ("2013-00315-SEW, Figures 1-13 of 13").

VEGETATION IN AFFECTED AREA: Vegetation in the affected area includes deciduous forest, shrubland, cropland, grassland, and wetland. The project would permanently impact the following wetland types: 0.23 acre of floodplain forest, 1.52 acres of floodplain forest/wet meadow complex, 0.36 acre of wet meadow, 2.90 acres of wet meadow/shrub carr complex, 3.86 acres of shallow marsh, 0.99 acre of wet meadow/shallow marsh complex, 0.18 acre of shallow marsh/deep marsh complex, and 0.23 acre of shrub carr. The project would temporarily impact 0.84 acre of floodplain forest, 0.093 acre of wet meadow, 1.21 acre of floodplain forest/wet meadow complex, 0.18 acre of shrub carr/wet meadow complex, 0.078 acre of shallow marsh/wet meadow complex, 0.057 acre of shallow marsh/deep marsh complex, 0.70 acre of shallow marsh, and 0.013 acre of shrub carr wetlands.

SOURCE OF FILL MATERIAL: MnDOT states that fill material would be granular embankment (sand, gravel, recycled pavement), common borrow material (silt, clay), and salvaged topsoil from the project area for final slope dressing. The sources of the fill would be determined by the selected contractor, but MnDOT anticipates that existing local sources would be used. MnDOT would require the use of clean granular soils.

SURROUNDING LAND USE: The project area includes developed urban areas, such as the cities of Mankato and St. Peter, as well as rural areas, including undeveloped wooded areas, cropland, and rural residential development. The project corridor is located along the Minnesota River bluff and along the west edge of the Minnesota River's 100-year floodplain. The distance from the project site to the river varies throughout the project area from about 50 feet to over 4,500 feet.

DESCRIPTION OF STRUCTURE: See the above "Project Description" for a description of the proposed road cross-section, the box culvert replacement structure at Seven Mile Creek, the box culvert extension at Hiniker Creek, and the concrete pipe extension at the unnamed tributary to the Minnesota River.

DESCRIPTION OF DREDGING OR EXCAVATION: Approximately 1.04 acres of wetlands that are part of tributary systems to the Minnesota River would be permanently impacted by excavation ("cut") impacts associated with the grade-raise portion of the project. A table of the proposed aquatic resource impacts is attached ("2013-00315-SEW, Table 1 of 2"), while the locations of each proposed impact are shown on the attached figures ("2013-00315-SEW, Figures 1-13 of 13").

THE FOLLOWING POTENTIALLY TOXIC MATERIALS COULD BE USED AT THE PROJECT SITE: Construction of the project may involve potentially toxic materials from the use of equipment, such as fuels, lubricants, and solvents. Specific types of products, quantities, and specific applications of these materials were not provided with the application.

THE FOLLOWING PRECAUTIONS TO PROTECT WATER QUALITY HAVE BEEN DESCRIBED BY THE APPLICANT: The project would require a Stormwater Pollution Prevention Plan (SWPPP) to control erosion from the project area and a NPDES/SDS construction stormwater permit from the Minnesota Pollution Control Agency. The project's erosion control and turf establishment plans indicate that several stormwater best management practices would be used to protect downstream water quality, including culvert end controls, storm drain inlet protection, sediment control logs, silt fence, erosion control blanket, seeding and mulching, and turf reinforcement mats. MnDOT states that stormwater ponds, filtration basins, infiltration basins, and the like are not required for this project because the project would result in less than an acre of new impervious area.

MITIGATION: The applicant proposes to provide compensatory mitigation for unavoidable permanent and adverse wetland impacts by debiting wetland credits from the Minnesota Wetland Bank via the Cooperative Wetland Replacement Program administered by the Minnesota Board of Water and Soil Resources. Specifically, the applicant proposes to debit MnDOT-owned wetland credits from the closest Corps-approved bank within the same bank serve area (BSA) as the impacts, which is BSA 9.

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The proposed aquatic resource impacts are located in major watershed 28 (Minnesota River - Mankato watershed). Final mitigation requirements will be determined by the Corps.

3. REPLIES/COMMENTS.

Interested parties are invited to submit to this office written facts, arguments, or objections within 30 days of the date of this notice. These statements should bear upon the suitability of the location and the adequacy of the project and should, if appropriate, suggest any changes believed to be desirable. Comments received may be forwarded to the applicant.

Replies may be addressed to Regulatory Branch, St. Paul District, Corps of Engineers, 180 Fifth Street East, Suite 700, Saint Paul, MN 55101-1678.

Or, IF YOU HAVE QUESTIONS ABOUT THE PROJECT, call Sarah Wingert at the St. Paul office of the Corps, telephone number (651) 290-5358.

To receive Public Notices by e-mail, go to: http://mvp-extstp/list_server/ and add your information in the New Registration Box.

4. FEDERALLY-LISTED THREATENED OR ENDANGERED WILDLIFE OR PLANTS OR THEIR CRITICAL HABITAT.

None were identified by the applicant or are known to exist in the permit area. However, Nicollet County is within the known or historic range of the following Federally-listed threatened (T) and endangered (E) species:

Species	Habitat
Northern long-eared bat (T)	Hibernates in caves and mines, swarming in surrounding wooded areas in autumn. Roosts and forages in upland forests during spring and summer.

This application is being coordinated with the U.S. Fish and Wildlife Service. Any comments it may have concerning Federally-listed threatened or endangered wildlife or plants or their critical habitat will be considered in our final assessment of the described work. The project would involve tree clearing. The Economic Development Administration (EDA), which is the lead federal agency for this project, determined the project would have no effect on the northern long-eared bat (NLEB) because MnDOT has committed to removing trees sometime between October 1 and March 30 (which is outside the roosting season of the NLEB), and impacts would be avoided to a known bat cave located along a pull-off area on TH 169. The road pull-off would also be eliminated as part of this project.

5. JURISDICTION.

This application is being reviewed in accordance with current practices for documenting Corps jurisdiction under Section(s) 9 & 10 of the Rivers and Harbor Act of 1899 and Section 404 of the Clean Water Act.

We have made a preliminary determination that the aquatic resources that would be impacted by the proposed project are subject to Corps of Engineers jurisdiction under Section(s) 9 & 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act. If an approved jurisdictional determination is completed as part of the review process for this application, a copy will be posted on the St. Paul District web page at the following link: http://www.mvp.usace.army.mil/Missions/Regulatory.aspx.

THE APPLICANT HAS STATED THAT THE FOLLOWING STATE, COUNTY, AND/OR LOCAL PERMITS HAVE BEEN APPLIED FOR/ISSUED: 1) Pubic Waters Work permit from Minnesota Department of Natural Resources (General Permit issued for Seven Mile Creek and Hiniker Creek work, Individual Permit pending for bendway weirs in the Minnesota River), 2) 401 Water Quality Certification from Minnesota Pollution Control Agency (review process will begin with this public notice), and 3) approval under the Minnesota Wetland Conservation Act (pending).

6. STATE SECTION 401 WATER QUALITY CERTIFICATION.

Valid Section 404 permits cannot be issued for any activity unless state water quality certification for the activity is granted or waived pursuant to Section 401 of the Clean Water Act. The state Section 401 authority in Minnesota is the Minnesota Pollution Control Agency (MPCA). The St. Paul District has provided this public notice and a copy of the applicant's Section 404 permit application form to the MPCA. If MPCA needs any additional information in order for the Section 401 application to be considered complete by MPCA, the MPCA has indicated that it will request such information from the applicant. It is the permit applicant's responsibility to ensure that the MPCA has received a valid, complete application for state Section 401 certification and to obtain a final Section 401 action from the MPCA.

The MPCA has indicated that this public notice serves as its public notice of the application for Section 401 water quality certification under Minnesota Rules Part 7001. The MPCA has also indicated that the Section 401 process shall begin to commence upon the issuance date of this public notice unless the MPCA notifies both the St. Paul District and the permit applicant to the contrary, in writing, before the expiration date of this public notice.

Any comments relative to MPCA's Section 401 Certification for the activity proposed in this public notice may be sent to:

Minnesota Pollution Control Agency, Resource Management and Assistance Division, Attention: 401 Certification, 520 Lafayette Road North, St. Paul, Minnesota 55155-4194.

7. HISTORICAL/ARCHAEOLOGICAL.

This public notice is being sent to the National Park Service and the State Archaeologist for their comments. The Corps will review information on known cultural resources and/or historic properties within and adjacent to the project area. The Corps will also consider the potential effects of the project

on any properties that have yet to be identified. The results of this review and the Corps' determination of effect will be coordinated with the State Historic Preservation Officer independent of this public notice. Any adverse effects on historic properties will be resolved prior to the Corps authorization, or approval, of the work in connection with this project.

EDA delegated their authority to MnDOT to complete the Section 106 National Historic Preservation Act review. Through a Phase 1 and Phase II investigation, on October 8, 2013, MnDOT determined there were no eligible archaeological or architectural properties in the project's area of potential effect. The Minnesota State Historic Preservation Office (SHPO) concurred with this determination on October 8, 2013. In March 2015, MnDOT determined the Seven Mile Creek Mounds site was located near a parcel that would be transferred to Nicollet County as part of this project in order to mitigate for property takings elsewhere. On March 11, 2015, MnDOT determined the transfer would have no effect on the Seven Mile Creek Mounds, or any unknown sites or structures. MnDOT received concurrence from the SHPO with this determination on April 9, 2015.

8. PUBLIC HEARING REQUESTS.

Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for public hearings shall state, in detail, the reasons for holding a public hearing. A request may be denied if substantive reasons for holding a hearing are not provided or if there is otherwise no valid interest to be served.

9. PUBLIC INTEREST REVIEW.

The decision whether to issue a permit will be based on an evaluation of the probable impact, including cumulative impacts, of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered, including the cumulative effects. Among those are conservation, economics, aesthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production and, in general, the needs and welfare of the people. Environmental and other documents will be available for review in the St. Paul District Office.

The Corps of Engineers is soliciting comments from the public; Federal, State, and local agencies and officials; Indian tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition, or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

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Chad Konickson
Chief, Southwest Section

Enclosures
NOTICE TO EDITORS: This public notice is provided as background information and is not a request or contract for publication.

Table 1 of 2: Proposed Aquatic Resource Impact Areas

Aquatic Resource ID	Roadway Stationing (Location)	Aquatic Resource Type	Permanent Fill Impacts (acre)	Permanent Cut Impacts (acre)	Temporary Impacts (acre)	Duration of Temporary Impact (days)	SP Number
M-01 (Median between roadways)	134+70C - 140+45C	wet meadow wetland	0.052	0	0	n/a	SP 5211-59 (grade-raise project)
NB-01 (east ditch)	134+37R - 147+03R	wet meadow / floodplain forest wetland	0.070	0	0.085	7	SP 5211-59 (grade-raise project)
NB-03	155+56R - 162+13R	wet meadow wetland	0.036	0	0.040	7	SP 5211-59 (grade-raise project)
NB-06	216+04R - 229+14R	floodplain forest wetland	0.097	0	0.066	7	SP 5211-59 (grade-raise project)
NB-07	229+52R - 253+49R	fresh meadow / shrub carr wetland	2.606	0.294	0.181	14	SP 5211-59 (grade-raise project)
NB-13	353+23R - 366+23R	floodplain forest wetland	0.031	0	0.718	28	SP 5211-59 (grade-raise project)
NB-14	364+85R - 390+31R	wet meadow / floodplain forest wetland	0.748	0	0.208	14	SP 5211-59 (grade-raise project)
NB-17	536+17R - 605-62R	wet meadow / floodplain forest wetland	0.702	0	0.920	28	SP 5211-59 (grade-raise project)
SB-01	591+80L - 601+38L	wet meadow / shallow marsh wetland	0.174	0	0.052	7	SP 5211-59 (grade-raise project)
SB-02	577+58L - 590+16L	shallow marsh / deep marsh wetland	0.180	0	0.057	7	SP 5211-59 (grade-raise project)
SB-03 (west ditch)	562+61L - 566+80L	wet meadow wetland	0.104	0	0	n/a	SP 5211-59 (grade-raise project)
SB-04 (west ditch)	554+01L - 561+52L	shallow marsh wetland	0.230	0	0	n/a	SP 5211-59 (grade-raise project)
SB-05 (west ditch)	547+96L - 552+50L	shrub carr wetland	0.194	0.035	0.013	7	SP 5211-59 (grade-raise project)
SB-06 (west ditch)	528+48L - 546+62L	shallow marsh wetland	0.650	0.025	0	n/a	SP 5211-59 (grade-raise project)
SB-15 (west ditch)	365+09L - 383+10L	wet meadow / shallow marsh wetland	0.812	0	0.026	7	SP 5211-59 (grade-raise project)
SB-16 (portion is in the west ditch, south of Seven Mile Creek park entrance)	355+77L - 362+46L	floodplain forest wetland	0.089	0	0.058	7	SP 5211-59 (grade-raise project)
SB-23 (portion is in the west ditch, north of farmstead by CR 28)	237+02L - 259+36L	shallow marsh wetland	1.064	0.683	0.286	14	SP 5211-59 (grade-raise project)
SB-24	229+70L - 236+57L	shallow marsh wetland	0.465	0	0.134	14	SP 5211-59 (grade-raise project)
SB-25 (west ditch)	217+50L - 228+99L	shallow marsh wetland	0.573	0.004	0.099	7	SP 5211-59 (grade-raise project)
SB-27 (west ditch)	151+15L - 188+91L	shallow marsh wetland	0.165	0	0.102	7	SP 5211-59 (grade-raise project)
SB-28 (west ditch flows into Hinicker Creek)	149+48L - 150+82L	wet meadow wetland	0.040	0.002	0	n/a	SP 5211-59 (grade-raise project)
SB-29 (west ditch, toe of bluff)	141+27L - 145+53L	wet meadow wetland	0.077	0	0.025	7	SP 5211-59 (grade-raise project)
NB-03	155+56R - 162+13R	wet meadow wetland	0.011	0	0	n/a	SP 5211-61 (culvert work on mill and overlay project)
NB-04	169+80R - 172+10R	floodplain forest wetland	0.007	0	0	n/a	SP 5211-61 (culvert work on mill and overlay project)
NB-09 (east ditch)	294+20R - 307+87R	wet meadow wetland	0.040	0	0	n/a	SP 5211-61 (culvert work on mill and overlay project)
NB-16	466+20R - 473+30R	floodplain forest wetland	0.007	0	0	n/a	SP 5211-61 (culvert work on mill and overlay project)
SB-07 (west ditch)	498+92L - 507+70L	shallow marsh wetland	0	0	0.007	3	SP 5211-61 (culvert work on mill and overlay project)
SB-09 (west ditch)	475+20L - 477+62R	shallow marsh wetland	0	0	0.007	3	SP 5211-61 (culvert work on mill and overlay project)
SB-10 (west ditch)	458+10L-474+02L	shallow marsh wetland	0	0	0.014	6	SP 5211-61 (culvert work on mill and overlay project)
SB-19 (WEST DITCH)	288+80L - 307+82L	shallow marsh wetland	0	0	0.014	6	SP 5211-61 (culvert work on mill and overlay project)
SB-20 (WEST DITCH)	269+10L - 288+30L	shallow marsh wetland	0	0	0.007	3	SP 5211-61 (culvert work on mill and overlay project)
SB-26 (west ditch)	190+80L - 202+00L	wet meadow wetland	0	0	0.028	6	SP 5211-61 (culvert work on mill and overlay project)
SB-27 (west ditch)	151+15L - 188+91L	shallow marsh wetland	0	0	0.028	12	SP 5211-61 (culvert work on mill and overlay project)
1 & 2 (Hiniker Creek)	Sta. 149+00	tributary	0	0	0.12	10	SP 5211-59 (grade-raise project - culvert extension)
6 & 7 (Seven Mile Creek)	Sta. 361+00	tributary	0.09	0	0.17	30	SP 5211-59 (grade-raise project - culvert replacement)
10 (unnamed tributary to Minnesota River)	Sta. 527+56	tributary	0.01	0	0.01	10	SP 5211-59 (grade-raise project - culvert extension)
11 (unnamed tributary to Minnesota River)	Sta 527+56	tributary	0.012	0	0	n/a	SP 5211-59 (grade-raise project - riprap at culvert extension)
14 (Minnesota River)	Sta. 356-361	tributary	0.40	0	0.21	10	SP 5211-59 (bendway weirs)
15 (Minnesota River)	Sta. 530-541	tributary	0.40	0	0.051	15	SP 5211-59 (bendway weirs)
	Wetland Impact Totals		**9.22**	**1.04**	**3.18**	***13.44***	
	Tributary Impact Totals*		**0.93**	**0.00**	**0.56**	***1.49***	
	Grand Impact Totals		***10.16***	***1.04***	***3.73***	***14.93***	

**See Table 2 of 2 for tributary impacts in linear feet.*

Table 2 of 2: Tributary Impacts in Linear Feet*

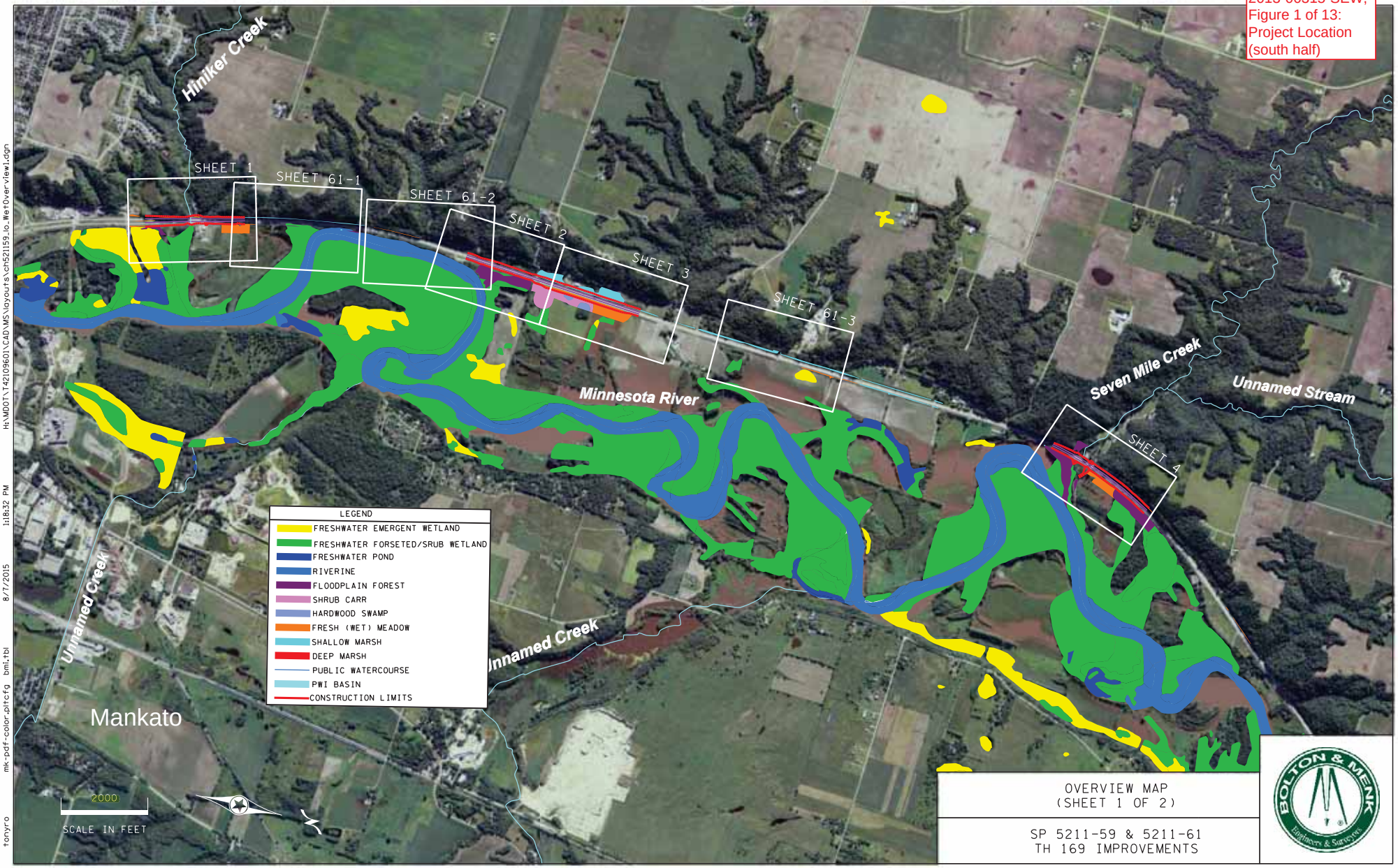
Aquatic Resource ID	Roadway Stationing (Location)	Aquatic Resource Type	Permanent Impacts (linear feet)	Temporary Impacts (linear feet)	Duration of Temporary Impact (days)
1 (Hiniker Creek)**	Sta. 149+00	tributary	0	210	10
2 (Hinker Creek)	Sta. 149+00	tributary	32	0	10
6 & 7 (Seven Mile Creek)***	Sta. 361+00	tributary	196	241	30
10 (unnamed tributary to Minnesota River)	Sta. 527+56	tributary	16	14	10
11 (unnamed tributary to Minnesota River)	Sta 527+56	tributary	21	0	n/a
14 (Minnesota River)	Sta. 356-361	tributary	220	40	10
15 (Minnesota River)	Sta. 530-541	tributary	225	56	15
TOTALS			***710***	***561***	

**See Table 1 of 2 for tributary impacts in area (acre).*

***The temporary impact is the length affected by a temporary diversion to complete the culvert extension.*

****The temporary impact is the length affected by temporary diversion (includes the 196-foot permanent impact).*

2013-00315-SEW,
Figure 1 of 13:
Project Location
(south half)



OVERVIEW MAP
(SHEET 1 OF 2)

SP 5211-59 & 5211-61
TH 169 IMPROVEMENTS

BOLTON & MENK
Engineers & Surveyors

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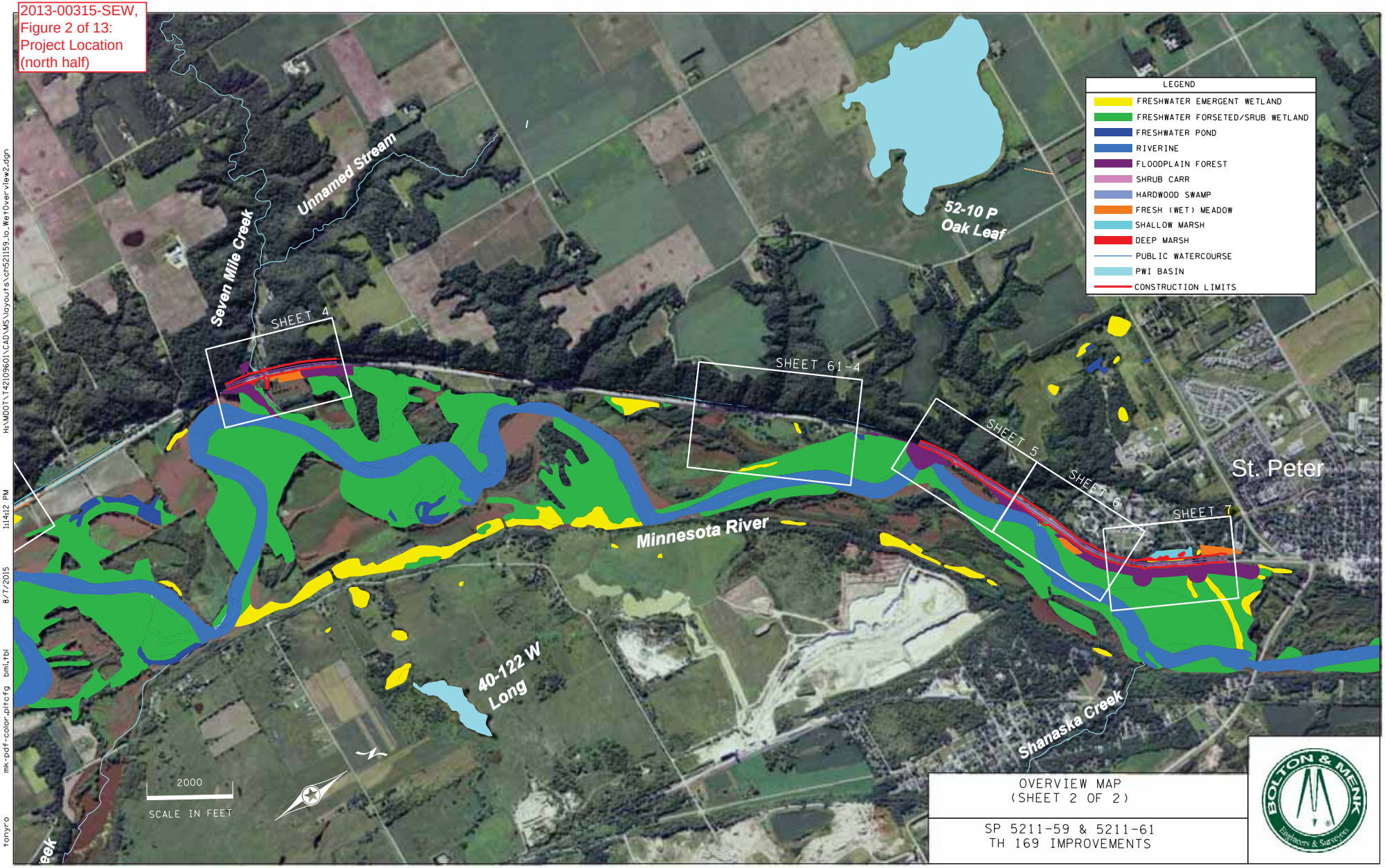
2013-00315-SEW,
Figure 2 of 13:
Project Location
(north half)



OVERVIEW MAP
(SHEET 2 OF 2)

SP 5211-59 & 5211-61
TH 169 IMPROVEMENTS

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2013-00315-SEW, Figure 3 of 13: Aquatic Resource Impact Maps

AQUATIC RESOURCE MAPS
SECTION A
(SHEET 1 OF 7)

SP 5211-59
TH 169 GRADE RAISE PROJECT

BOLTON & MENK
Engineers & Surveyors

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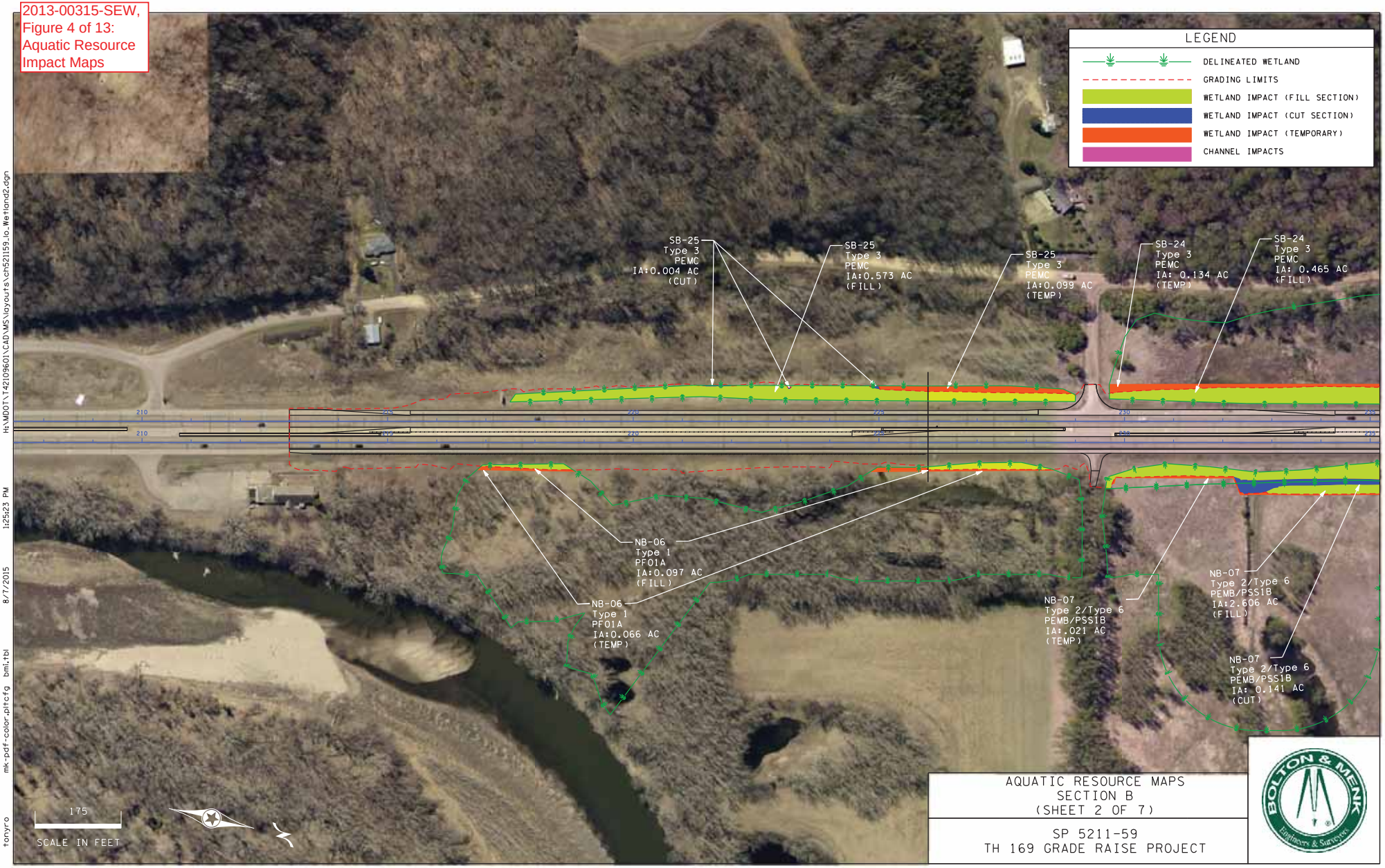
2013-00315-SEW, Figure 4 of 13: Aquatic Resource Impact Maps



AQUATIC RESOURCE MAPS
SECTION B
(SHEET 2 OF 7)

SP 5211-59
TH 169 GRADE RAISE PROJECT

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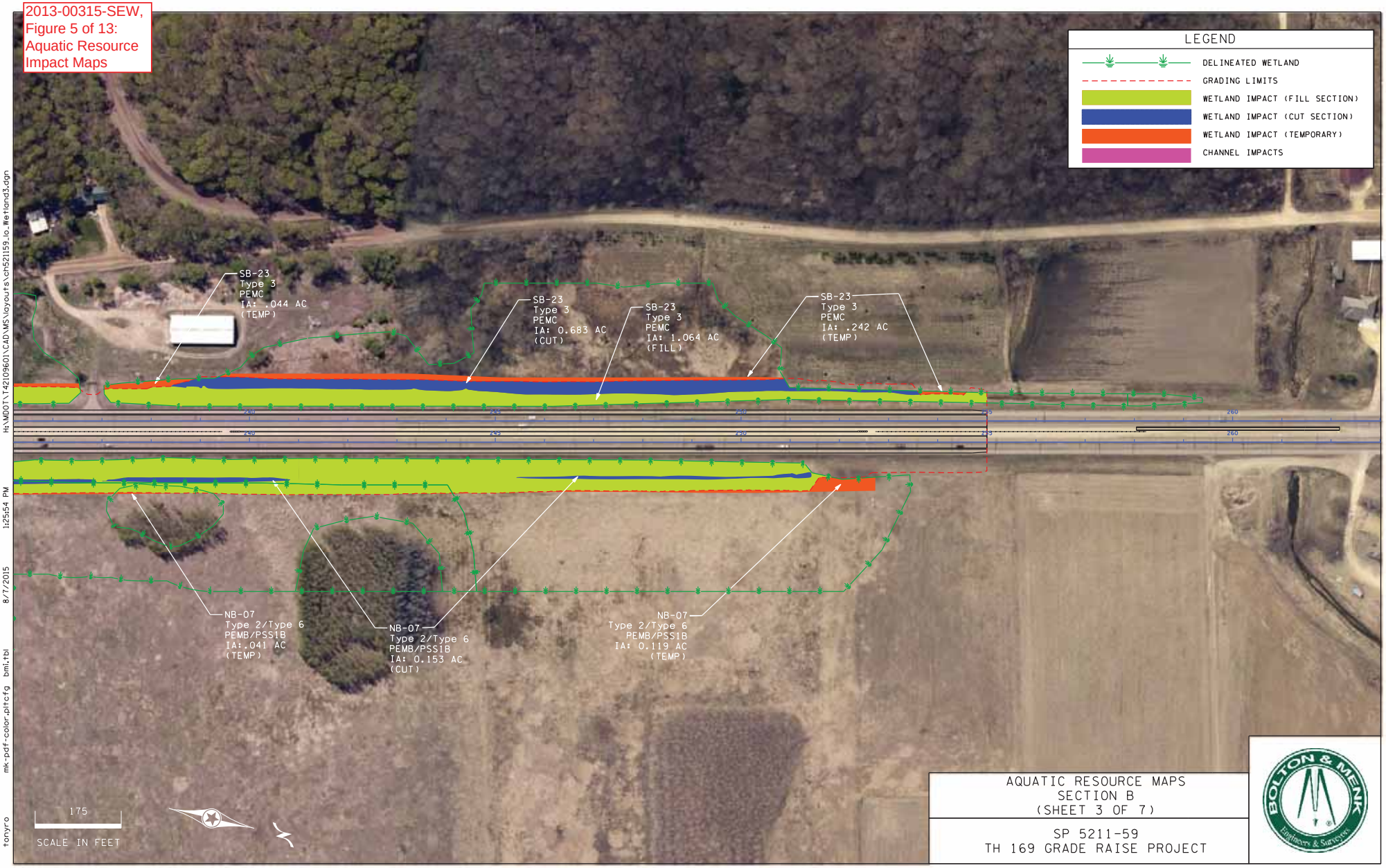
2013-00315-SEW,
Figure 5 of 13:
Aquatic Resource
Impact Maps



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AQUATIC RESOURCE MAPS
SECTION B
(SHEET 3 OF 7)

SP 5211-59
TH 169 GRADE RAISE PROJECT

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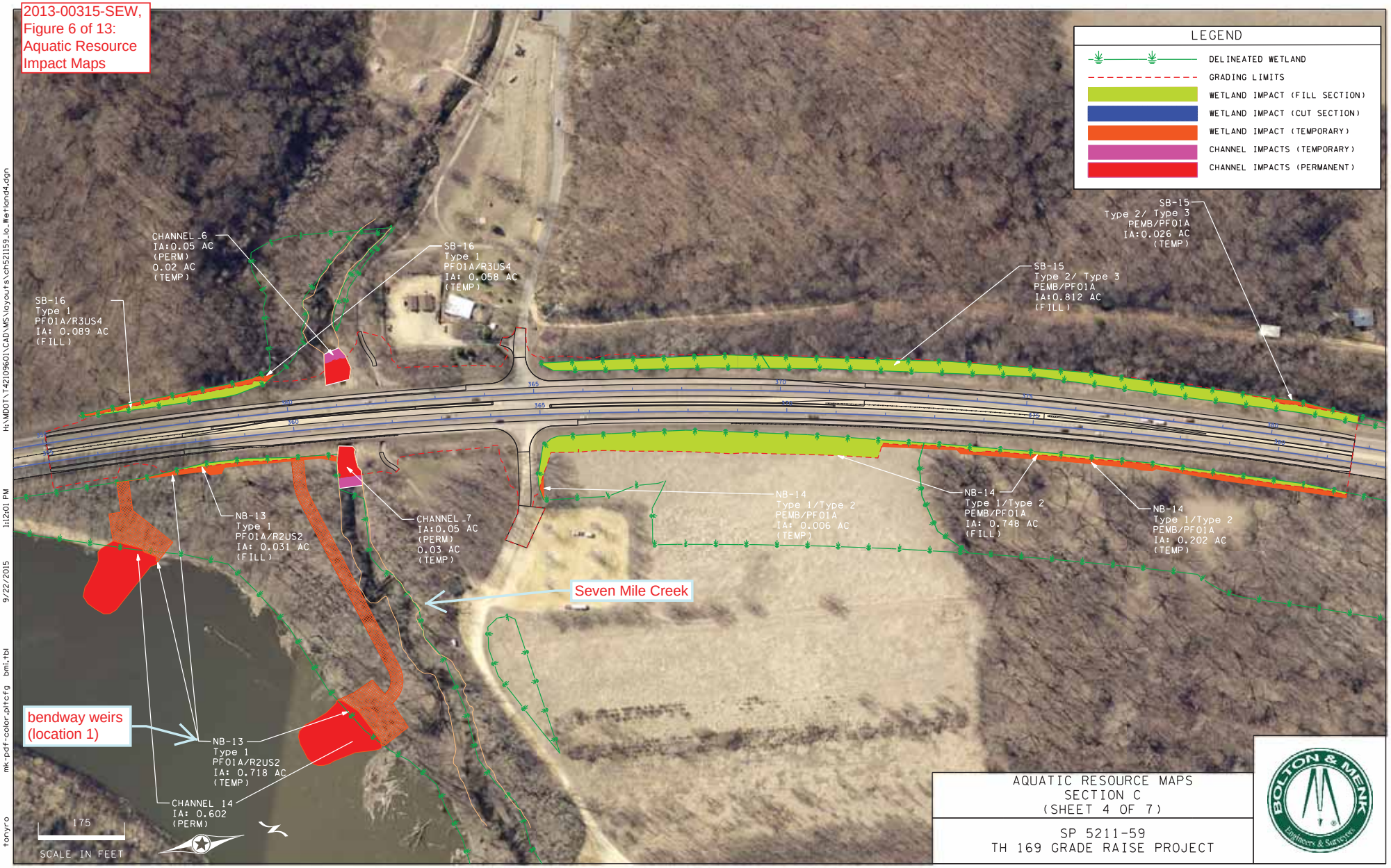
2013-00315-SEW, Figure 6 of 13: Aquatic Resource Impact Maps



AQUATIC RESOURCE MAPS
SECTION C
(SHEET 4 OF 7)

SP 5211-59
TH 169 GRADE RAISE PROJECT

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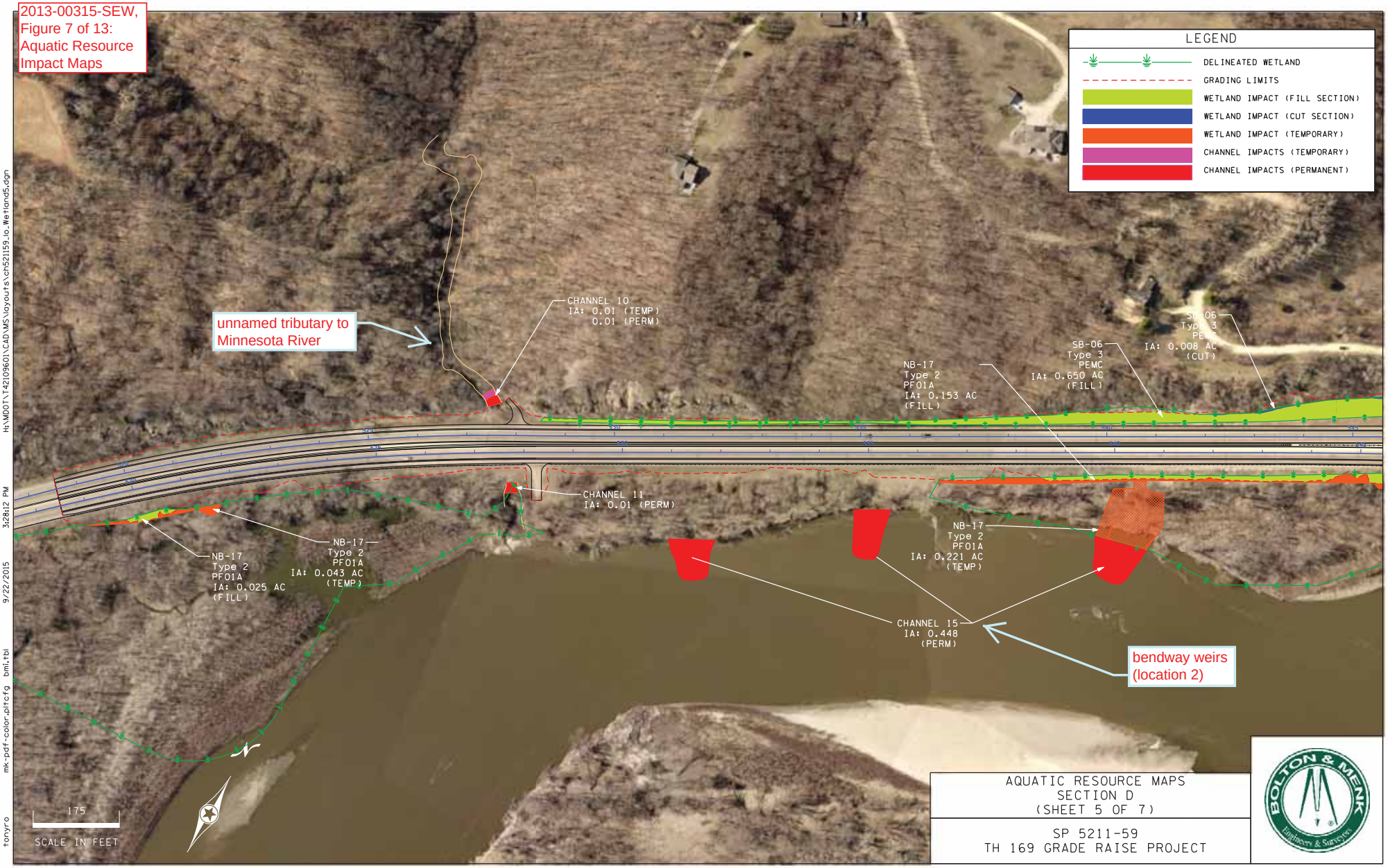
Figure 7 of 13:
Aquatic Resource
Impact Maps



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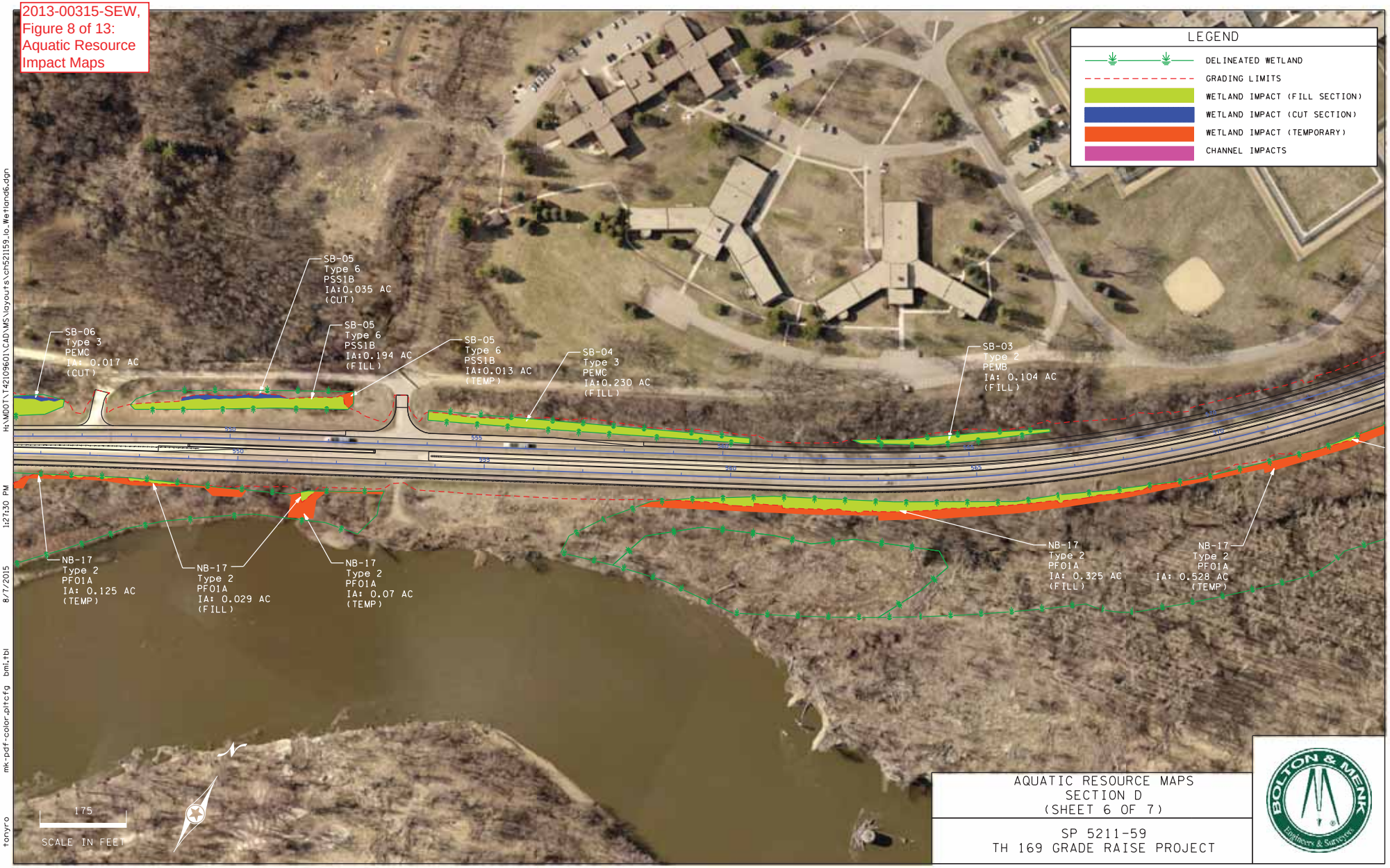
2013-00315-SEW,
Figure 8 of 13:
Aquatic Resource
Impact Maps



AQUATIC RESOURCE MAPS
SECTION D
(SHEET 6 OF 7)

SP 5211-59
TH 169 GRADE RAISE PROJECT

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2013-00315-SEW, Figure 9 of 13: Aquatic Resource Impact Maps

AQUATIC RESOURCE MAPS
SECTION D
(SHEET 7 OF 7)

SP 5211-59
TH 169 GRADE RAISE PROJECT

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Figure 10 of 13:
Aquatic Resource
Impact Maps

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2013-00315-SEW,
Figure 11 of 13:
Aquatic Resource
Impact Maps

AQUATIC RESOURCE MAPS

(SHEET 61-2)

SP 5211-61
PRESERVATION PROJECT

BOLTON & MENK
Engineers & Surveyors

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2013-00315-SEW, Figure 12 of 13: Aquatic Resource Impact Maps

AQUATIC RESOURCE MAPS

(SHEET 61-3)

SP 5211-61
PRESERVATION PROJECT

BOLTON & MENK
Engineers & Surveyors

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2013-00315-SEW,
Figure 13 of 13:
Aquatic Resource
Impact Maps

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AQUATIC RESOURCE MAPS

(SHEET 61-4)

SP 5211-61
PRESERVATION PROJECT

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