

Kessler, Steven E.

From: Kessler, Steven E.
Sent: Thursday, February 02, 2017 11:40 AM
To: 'Swade.d.hammond@usace.army.mil'
Subject: 404 Permit Application - PCN 21040 NWO-2016-1395-BIS P1
Attachments: 404 Permit Application_21040_NDDOT_USACE.pdf

Swade,

Attached is a preconstruction notification for a Nationwide 23 Permit for NDDOT project number HEN-2-052(040)244, PCN 21040. A jurisdictional determination was received by your office on 8/01/16, NWO-2016-1395-BIS.

This project is located on US 52 near Pingree in Stutsman County.

The project will result in 0.36 acre of permanent and 0.21 acre of temporary jurisdictional wetlands impacts associated with widening.

NDDOT proposes compensatory mitigation for natural jurisdictional wetland impact greater than 0.10 as stated in the attached February 2, 2017 compensatory wetland mitigation plan.

NDDOT requests that the mitigation requirement to the artificial portion of the wetland resource, with cumulative impact greater than 0.10 acre, be waived since the impact to these wetlands are minimal and additional wetlands may establish after construction.

The SHPO concurrence is attached.

ESA table is attached.

The project has been approved by FHWA as a Categorical Exclusion per RGL 05-07 Attachment 2 (d)(1). The signed CatEx is attached.

The complete application will be mailed to your office. Please notify by email when you have received this permit application in the mail.

If you have any questions or concerns on the attached please call Steve Kessler 328-3736.

Thanks,

Steve Kessler

North Dakota Department of Transportation
Environmental & Transportation Services
608 E Boulevard Avenue
Bismarck ND 58505-0700
Phone (701) 328-3736
Fax (701) 328-0310

Corps of Engineers Nationwide Permit (NWP) Verification

**NORTH DAKOTA DEPARTMENT OF TRANSPORTATION (ND DOT) PROJECTS
REQUEST FOR NWP DETERMINATION(S)**

IMPACTED WATER RESOURCE NUMBER	PCN (DOT generated) HWY/Road Number	TYPE AND DIMENSIONS OF EXISTING STRUCTURE	ACTIVITY	STREAM IMPACTS BELOW OHWM (linear feet)			WETLAND IMPACTS (acres)		LOCATION LAT/LONG (NAD 83)		SEC-TWP-RGE, COUNTY	COE ID NUMBER (to be filled by COE)	NWP #
				TEMP (LF)	PERM (LF)	PERM (acre)	TEMP (acre)	PERM (acre)	LAT (Decimal Degrees)	LONG (Decimal Degrees)			
1a(b), 1d(b), 1d(c), 1d(d)	21040		Widening				0.21	0.36	47.1661250	-98.905740	NW 34-143-65, Stutsman		

The U.S. Army Corps of Engineers verifies that the requested activity(s) meet the criteria of the listed NWPs.

Signed: _____ North Dakota Regulatory Office

Verification Date: _____ Expiration Date: _____

***This NWP verification is subject to the activity meeting all General and Regional Conditions applicable to the 2012 NWPs reissuance. For this authorization to remain valid, you must meet all Regional and General Conditions and Section 401 Water Quality Certification Requirements, identified in the applicable Nationwide Permit Fact Sheet. All Fact Sheets and Section 401 Water Quality Certification Requirements are provided on the North Dakota Regulatory Office's website at <http://www.nwo.usace.army.mil/Missions/RegulatoryProgram/NorthDakota.aspx>.**

****Project Compliance Certification.** In compliance with General Condition 26, you are required to submit the following project compliance certification within thirty (30) days of project completion. **[Please check all applicable statements]**

- I certify that I have completed the project as permitted.
- I certify that I have completed a modified version of the project.
- I certify that I have completed all required mitigation.

Permittee's Signature: _____ Date: _____

***** Special Conditions.**



CATEGORICAL EXCLUSION / CONCEPT CONCURRENCE

U.S. Department of Transportation
Federal Highway Administration ND Division

North Dakota Department of Transportation
SFN 18878 - REV 07/13

PROJECT HEN-2-052(040)244		PCN 21040	DOCUMENT DATE 09.13.2016
LOCATION US 52 & ND 36 at Pingree		REQUESTED DATE / BID DATE 01.10.2017 / 03.10.2017	
LENGTH Intersection		SUBMITTED BY / DATE MARK GAYDOS / 01.10.2017	
NATURE Adding turn lanes at intersection		CONTACT / PHONE AMY BEISE 701-328-	
OF WORK		For FHWA Use Only	
		DATE IN	COMMENTS DUE
DOCUMENT TYPE	Documented CATEX		Approved
ENVIRONMENTAL APPROVAL REQUEST	CatEx Categorical Exclusion		

COMMENTS

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

The supporting documentation has been reviewed for compliance with the National Environmental Policy Act.

Signature Pete Christensen	<small>Digitally signed by Pete Christensen DN: cn=Pete Christensen, o=NDDOT, ou, email=pchristensen@nd.gov, c=US Date: 2017.01.10 09:10:18 -0600'</small>	Date 01/10/2017
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Name Pete Christensen	Title Environmental Scientist II
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FEDERAL HIGHWAY ADMINISTRATION

Signature MARK R SCHRADER	<small>Digitally signed by MARK R SCHRADER DN: cn=MARK R SCHRADER, o=FHWA, ou=U.S. Department of Transportation, c=US Date: 2017.01.12 15:40:05 -0600'</small>	Date 01/12/2017
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Name Mark Schrader	Title Transportation Engineer
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**STATE
HISTORICAL
SOCIETY
OF NORTH DAKOTA**

Jack Dalrymple
Governor of North Dakota

**North Dakota
State Historical Board**

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Bismarck - President

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State Treasurer

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Secretary of State

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Parks and Recreation
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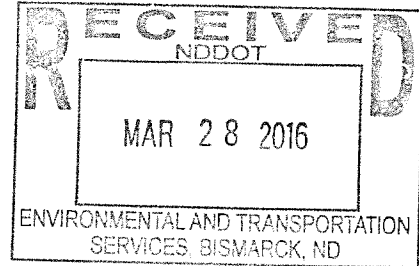
Grant Levi
*Director
Department of
Transportation*

Claudia J. Berg
Director

*Accredited by the
American Alliance
of Museums since 1986*

March 21, 2016

Ms. Valerie Barbie-Bluemle
ETS Division
Dept of Transportation
608 East Boulevard Avenue
Bismarck, ND 58505-0700



ND SHPO Ref.: 16-5403, "Proposed Road Improvements Along US Highway 52 and ND Highway 36 in Pingree, ND: A Class III Cultural Resource Inventory, Stutsman County, North Dakota, NDDOT Project No.: 2-052(040)244 PCN 21040" portions of [T143N R65W Sections 27 & 34]

Dear Ms. Bluemle,

We reviewed ND SHPO Ref.: 16-5403, "Proposed Road Improvements Along US Highway 52 and ND Highway 36 in Pingree, ND: A Class III Cultural Resource Inventory, Stutsman County, North Dakota, NDDOT Project No.: 2-052(040)244 PCN 21040" portions of [T143N R65W Sections 27 & 34] and find the report by John G. Morrison acceptable. We concur with the determination of "No Historic Properties Affected" for this project provided that it takes place in the location and in the manner described in the documentation and that all borrow comes from an approved source.

Thank you for the opportunity to review this project. If you have any questions please contact Lisa Steckler, Preservation Planner at (701) 328-3577, e-mail lsteckler@nd.gov

Sincerely,

Claudia J. Berg
State Historic Preservation Officer
(North Dakota)

NDDOT Threatened, Endangered, Proposed, Candidate Species and Critical Habitat Affect Determination Table

Project: HEN-2-052(040)244		PCN: 21040	Location: Intersection ND 36 and US 52 at Pingree	County: Stutsman			
Species	Listing	Guidance	FHWA Review Required?		Determination		Additional Documentation Included
			Yes	No	Not Present	No Effect	
Interior Least Tern	E	FHWA Review required for work in or along the shoreline of the Missouri River System including reservoirs from April 15 through August 1.			X		
Whooping Crane	E	FHWA Review required for the adjustment (raising, relocating) of existing above-ground utility lines; or for newly placed poles/towers that require overhead lines/guy wires; unless the adjustments or new installations are located in a highly developed or urban area.		X		X	
Black-footed Ferret	E	FHWA Review required for ground disturbing activities within 100 feet of prairie dog towns of at least 80 acres in size. Projects within the existing right-of-way will not require FHWA review.			X		
Pallid Sturgeon	E	FHWA Review required for work in or along the shoreline of the Missouri River (including reservoirs) and Yellowstone River Systems.			X		
Gray Wolf	E	FHWA Review required for roadway projects of 2 or more lanes on a new location (i.e. construction of a new roadway).		X		X	
Poweshiek Skipperling	E	FHWA Review required for work occurring outside of the right of way in undisturbed native tall grass prairie and wet swales.			X		
Piping Plover	T	FHWA Review required for ground disturbing activities within ½ mile of designated piping plover critical habitat or known nesting sites. See link for piping plover designated critical habitat maps: http://www.fws.gov/mountain-prairie/species/birds/pipingplover/		X		X	
Western Prairie Fringed Orchid	T	FHWA Review required for all ground disturbing activities on non-flooded, undisturbed ground, known habitat, and native prairie. High probability of species in or near the Sheyenne National Grassland.			X		
Dakota Skipper	T	FHWA Review required for work occurring outside of the right of way in high quality native prairie containing a high diversity of wildflowers and grasses.		X		X	
Rufa Red Knot	T	FHWA Review required for work activities impacting Piping Plover Critical Habitat or sewage lagoons. See link for piping plover designated critical habitat maps: http://www.fws.gov/mountain-prairie/species/birds/pipingplover/		X		X	
Northern Long-Eared Bat	T	FHWA Review required for work involving the removal of trees or buildings, ground disturbance in areas with caves, mines, and rock crevices, or work on structures. FHWA and USFWS have prepared a Programmatic Biological Assessment (PBA) for No Effect and May Affect Not Likely to Adversely Affect Determinations for this species. See following link for information on how to use PBA for NDDOT projects. http://www.dot.nd.gov/manuals/design/designmanual/reference-forms.htm		X		X	
Sprague's Pipit	C	FHWA Review Required for work activities occurring outside the right of way in large native short-to-mixed grass prairie patches of approximately 72 acres or greater.		X		X	

Species	Listing	Guidance	FHWA Review Required?		Determination		Additional Documentation Included
			Yes	No	Not Present	No Effect	
Piping Plover Critical Habitat	D	FHWA Review required for ground disturbing activities within ½ mile of designated piping plover critical habitat or known nesting sites. See link for piping plover designated critical habitat maps: http://www.fws.gov/mountain-prairie/species/birds/pipingplover/		X		X	
Poweshiek Skipperling Critical Habitat	D	FHWA Review required for ground disturbing activities within 0.6 mile of proposed Poweshiek Skipperling critical habitat. See link for Poweshiek Skipperling proposed critical habitat maps: http://www.fws.gov/midwest/Endangered/insects/posk/CHmaps/poskNDchUnitMaps.pdf			X		
Dakota Skipper Critical Habitat	D	FHWA Review required for ground disturbing activities within 0.6 mile of proposed Dakota Skipper critical habitat. See link for Dakota Skipper proposed critical habitat maps: http://www.fws.gov/midwest/Endangered/insects/dask/CHmaps/daskNDCHmaps24Oct2013.pdf			X		

DESIGN DATA - US 52 / 281				
Traffic	Average Daily			
Current 2015	Pass: 1915	Trucks: 1120	Total: 3035	
Forecast 2035	Pass: 2740	Trucks: 1660	Total: 4400	
Clear Zone Distance: 18'(6:1) & 26'(4:1)		Design Speed: 45 MPH		
Minimum Sight Dist. for Stopping: 360'		Bridges: N/A		
Sight Dist. for No Passing Zone: 700'				
Pavement Design Life 20 (years)				
Design Accumulated One-way Flexible ESALs: 4678155				

JOB #
NORTH DAKOTA
DEPARTMENT OF TRANSPORTATION

HEN-2-052(040)244

Stutsman County
US 52 / 281 & ND 36 at Pingree

Intersection Safety Improvements

STATE	PROJECT NO.	PCN	SECTION NO.	SHEET NO.
ND	HEN-2-052(040)244	21040	1	1

GOVERNING SPECIFICATIONS:

2014 Standard Specifications adopted by the North Dakota Department of Transportation and the Supplemental Specifications effective on the date the project is advertised.

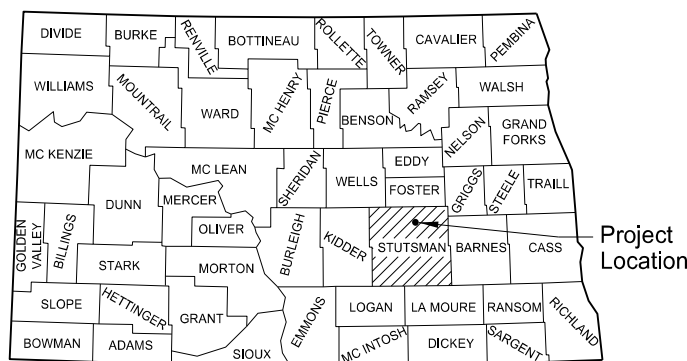
PROJECT NUMBER \ DESCRIPTION	NET MILES	GROSS MILES
HEN-2-052(040)244	0.298	0.298



Begin Project
HEN-2-052(040)244
RP 244.751
Sta. 12922+89.21

Intersection
Sta. 12928+87.20 US 52/281 =
Sta. 4770+16.32 ND 36

End Project
HEN-2-052(040)244
RP 245.049
Sta. 12938+61.61



STATE COUNTY MAP

DESIGNERS

Damon DeVillers, PE

Steve Thompson

Jeff Nording

Paul Sharp

I hereby certify that the attached plans were prepared by me or under my direct supervision and that I am a duly registered professional engineer under the laws of the state of ND.

APPROVED DATE 12-29-2016

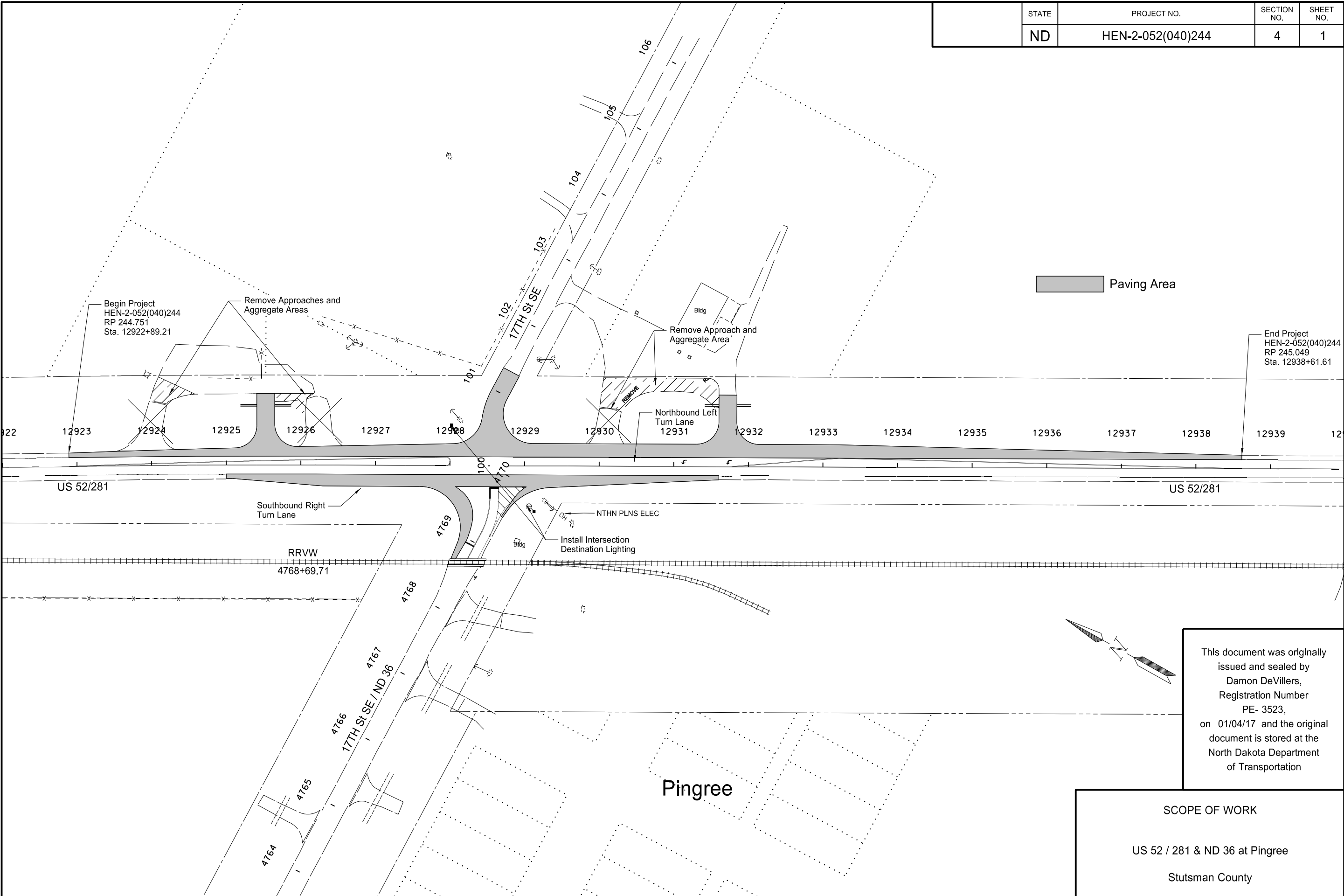
Damon K. DeVillers
INTERSTATE ENGINEERING, INC

This document was originally issued and sealed by
Damon DeVillers,
Registration Number
PE- 3523,
on 12/29/16 and the original document is stored at the North Dakota Department of Transportation

APPROVED DATE NDDOT Approval Date

NDDOT Approval Name
OFFICE OF PROJECT DEVELOPMENT
ND DEPARTMENT OF TRANSPORTATION

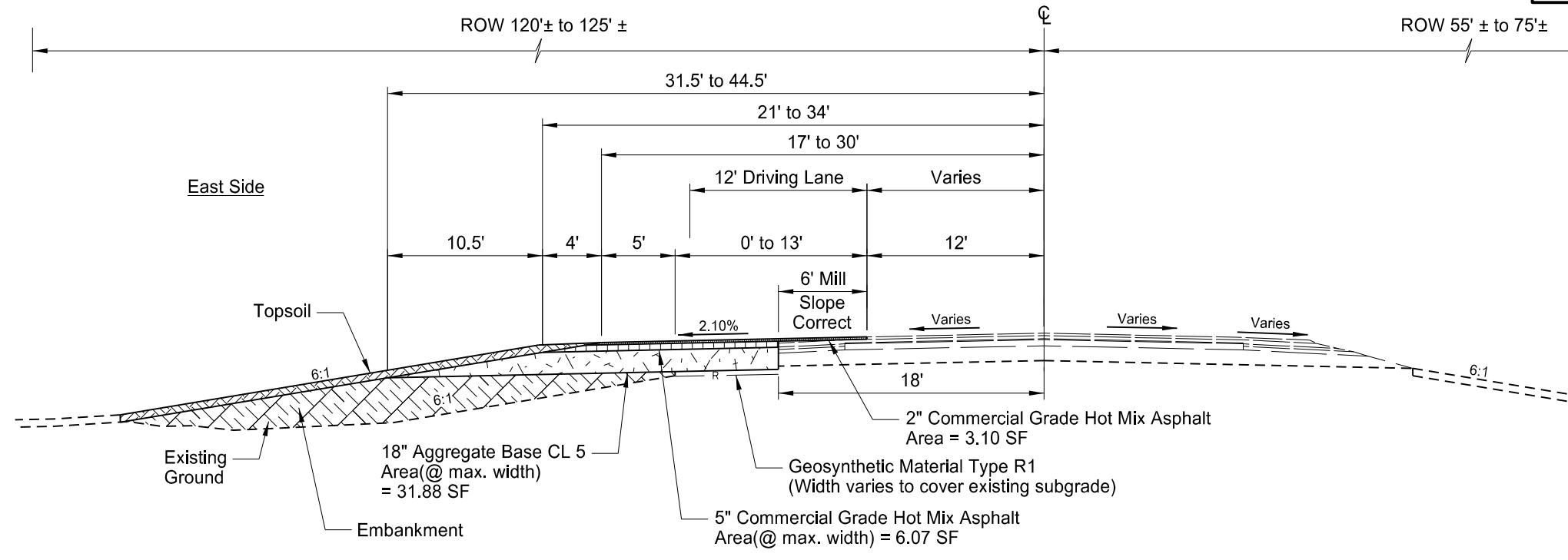
STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	HEN-2-052(040)244	4	1



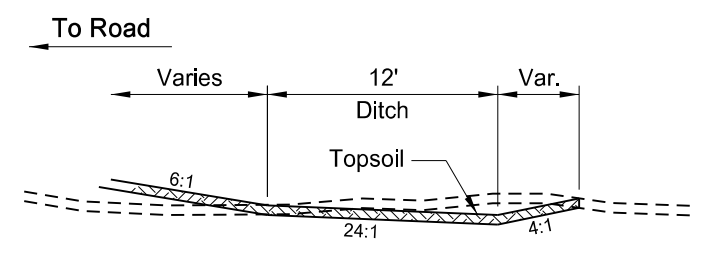
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SCOPE OF WORK
 US 52 / 281 & ND 36 at Pingree
 Stutsman County

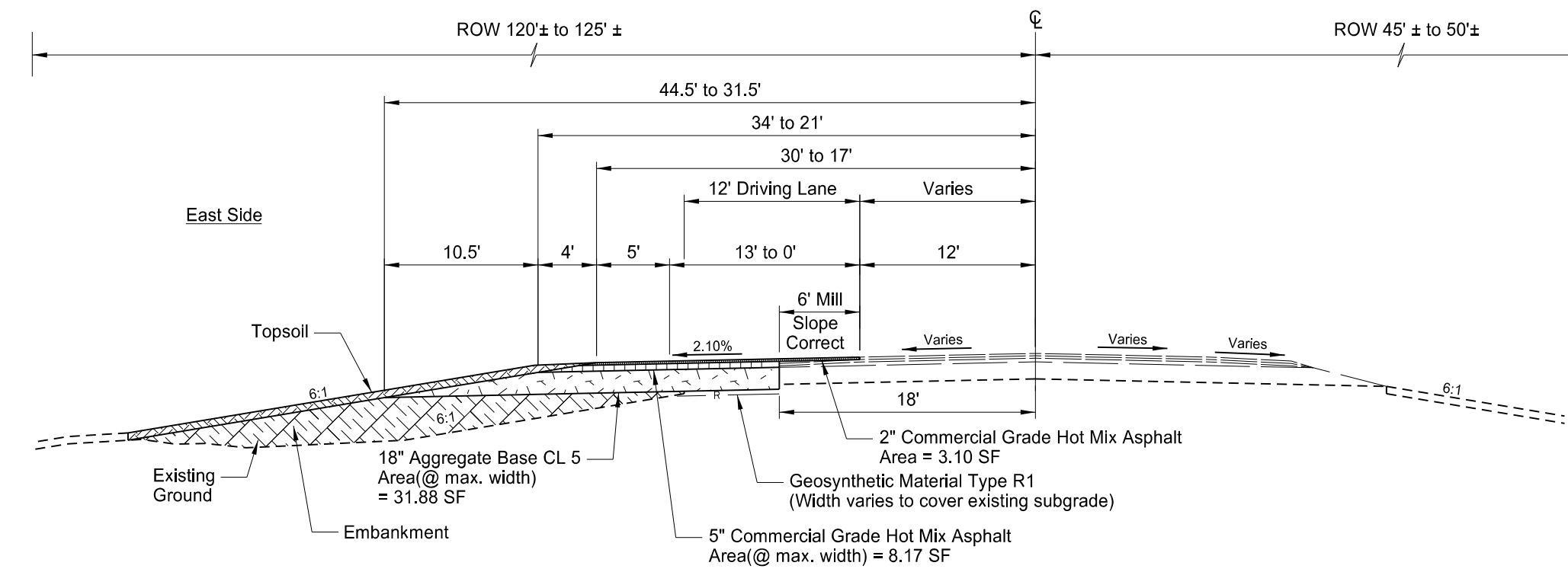
STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	HEN-2-052(040)244	30	5



Proposed Typical Section
RP 244.751 to RP 244.865
Sta. 12922+89.21 Lt. to Sta. 12928+87.20 Lt.



Cut Section Detail
 (See cross sections for locations)

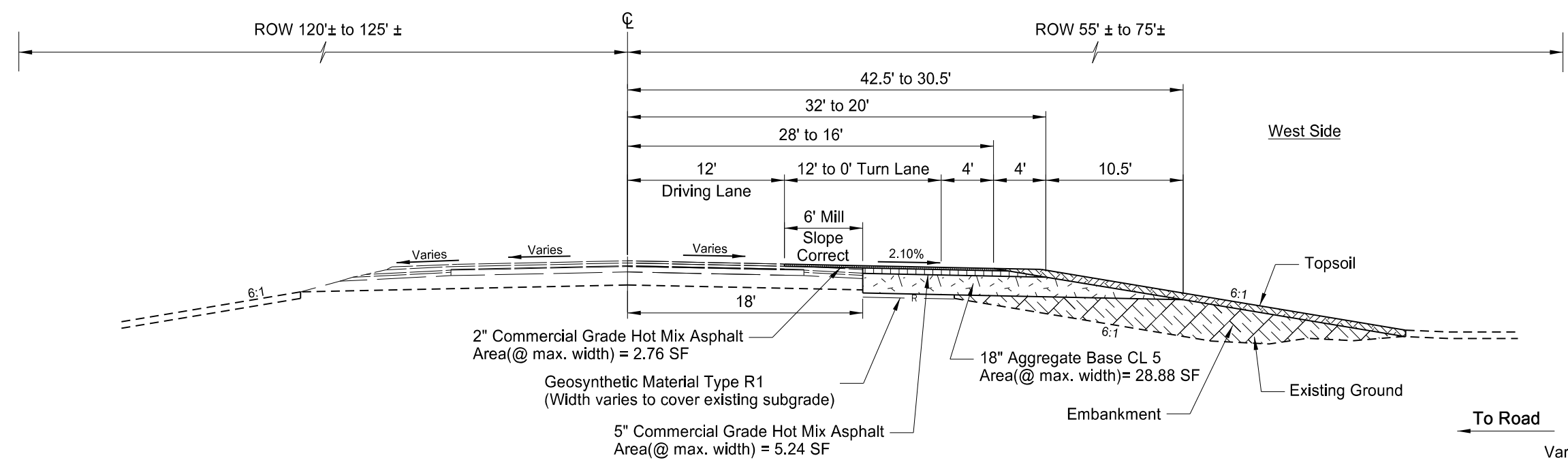


Proposed Typical Section
RP 244.865 to RP 245.049
Sta. 12928+87.20 Lt. to Sta. 12938+61.61 Lt.

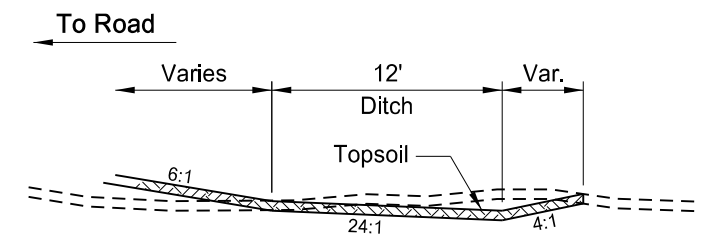
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TYPICAL SECTIONS - PROPOSED
US 52 / 281
 US 52 / 281 & ND 36 at Pingree
 Stutsman County

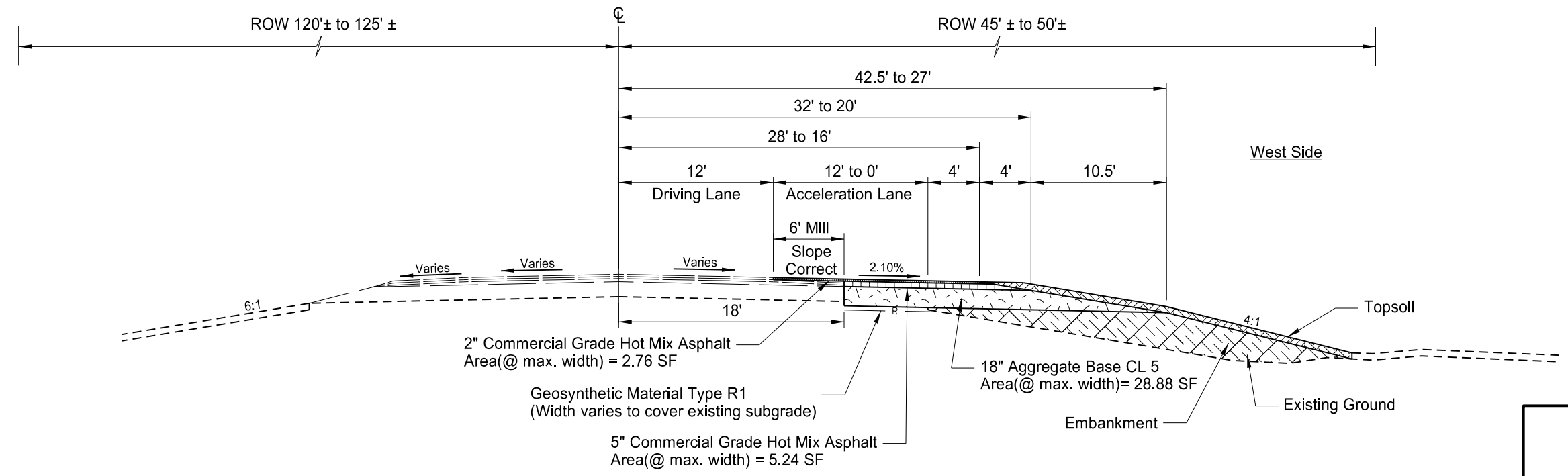
STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	HEN-2-052(040)244	30	6



Proposed Typical Section
RP 244.791 to RP 244.865
Sta. 12925+00.00 Rt. to Sta. 12928+87.20 Rt.



Cut Section Detail
 (See cross sections for locations)



Proposed Typical Section
RP 244.865 to RP 244.916
Sta. 12928+87.20 Rt. to Sta. 12931+60.44 Rt.

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TYPICAL SECTIONS - PROPOSED
US 52 / 281
US 52 / 281 & ND 36 at Pingree
Stutsman County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	HEN-2-052(040)244	51	1

Begin Station / Location	Begin Offset	End Station / Location	End Offset	Pipe Installation (Pay Item)		Allowable Material	Required Diameter	Steel Pipe Coatings	Steel Pipe Corrugations or Spiral Ribs	Steel Pipe Minimum Thickness	R1 Fabric (Pay Item)	(*) End Sections		Applicable Backfill
				In	LF							Begin EA	End EA	
12925+19	80' Lt	12925+87	80' Lt	18	Pipe Conduit - Approach	68	Reinforced Concrete Pipe - Class III (barrell length = 60 LF)	18				FES	FES	Specification 714.04 A
							Corrugated Steel Pipe	18	Z, A, P	2	0.064			
							Spiral Rib Steel Pipe	18	Z, A, P	3/4, 1	0.064			
							High-Density Polyethylene	18						
							Polypropylene Pipe (AASHTO M330, Type S)	18						
12931+41	82' Lt	12932+03	82' Lt	18	Pipe Conduit - Approach	62	Reinforced Concrete Pipe - Class III (barrell length = 54 LF)	18				FES	FES	Specification 714.04 A
							Corrugated Steel Pipe	18	Z, A, P	2	0.064			
							Spiral Rib Steel Pipe	18	Z, A, P	3/4, 1	0.064			
							High-Density Polyethylene	18						
							Polypropylene Pipe (AASHTO M330, Type S)	18						

Coatings: Z = Zinc

A = Aluminum

P = Polymeric (over Zinc or Aluminum)

Corrugations: 2 = 2-2/3"x1/2"

3 = 3"x1"

5 = 5"x1"

Spiral Ribs: 3/4 = 3/4"x3/4"@7-1/2"

1 = 3/4"x1"@11-1/2"

(*) The price bid for "Pipe Conduit" bid items includes end sections. Pipe Extensions shall pay for end sections seperately.

FES = Flared End Section

TES = Traversable End Section

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ALLOWABLE PIPE LIST

US 52 / 281 & ND 36 at Pingree

Stutsman County

Wetlands Impact Table															
Wetland Number	Location	Cowardin Class.	Wetland Type	Wetland Size (acres)	Wetland Feature	USACE Jurisdictional Wetlands ¹	Wetland Impacts (acres)		USFWS Easement Impacts (acres)		Wetland Mitigation				
							Temp.	Perm.	Temp.	Perm.	Mitigation Required			Onsite Mitigation	
											EO 11990	USACE	USFWS	Location; Acreage; Ratio	Acres
1a(a)	Sec. 34, T 143 N, R 65 W	PEMA	Basin	0.26	Natural	Y	0.00	0.00	0.00	0.00	N	N	N		
1a(b)	Sec. 34, T 143 N, R 65 W	PEMAx	Ditch	0.46	Artificial	Y	0.01	0.03	0.00	0.00	N	N	N		
1a(c)	Sec. 34, T 143 N, R 65 W	PEMA	Basin	0.15	Natural	Y	0.00	0.00	0.00	0.00	N	N	N		
1a(d)	Sec. 34, T 143 N, R 65 W	PEMAx	Ditch	0.16	Artificial	Y	0.00	0.00	0.00	0.00	N	N	N		
1b(a)	Sec. 34, T 143 N, R 65 W	PEMC	Basin	0.38	Natural	Y	0.00	0.00	0.00	0.00	N	N	N		
1b(b)	Sec. 34, T 143 N, R 65 W	PEMCx	Ditch	0.10	Artificial	Y	0.00	0.00	0.00	0.00	N	N	N		
1c(a)	Sec. 34, T 143 N, R 65 W	PEMC	Basin	0.65	Natural	Y	0.00	0.00	0.00	0.00	N	N	N		
1c(b)	Sec. 34, T 143 N, R 65 W	PEMCx	Ditch	0.08	Artificial	Y	0.00	0.00	0.00	0.00	N	N	N		
1d(a)	Sec. 34, T 143 N, R 65 W	PEMA	Basin	0.22	Natural	Y	0.00	0.00	0.00	0.00	N	N	N		
1d(b)	Sec. 34, T 143 N, R 65 W	PEMAx	Ditch	0.36	Artificial	Y	0.04	0.09	0.00	0.00	N	N	N		
1d(c)	Sec. 34, T 143 N, R 65 W	PEMA	Basin	0.35	Natural	Y	0.03	0.10	0.00	0.00	Y	Y	N	1d(d); 1:1	0.14
1d(d)	Sec. 34, T 143 N, R 65 W	PEMCx	Ditch	0.24	Artificial	Y	0.13	0.14	0.00	0.00	N	N	N		
3	Sec. 27, T 143 N, R 65 W	PEMAx	Ditch	0.01	Artificial	N	0.00	0.01	0.00	0.00	N	N	N		
5	Sec. 27, T 143 N, R 65 W	PEMAx	Ditch	0.14	Artificial	N	0.00	0.03	0.00	0.00	N	N	N		
Totals				3.56			0.21	0.40	0.00	0.00					0.14

¹ A wetland Jurisdictional Determination was issued by the USACE on 8/01/2016; NWO-2016-1395-BIS.

Summary Impact Table			
Total Permanent Impact Summary		Temporary Impacts and additional information	
Wetland Type	Total (Acres)	Wetland Type	Total (Acres/Lf)
Natural/JD	0.10	Temporary JD	0.21
Natural/Non-JD	0.00	Non-JD Temporary	0.00
Artificial/JD	0.26	Permanent JD > 0.10	0.24
Artificial/Non-JD	0.04	Permanent OW	0
Total	0.40	Temporary OW	0

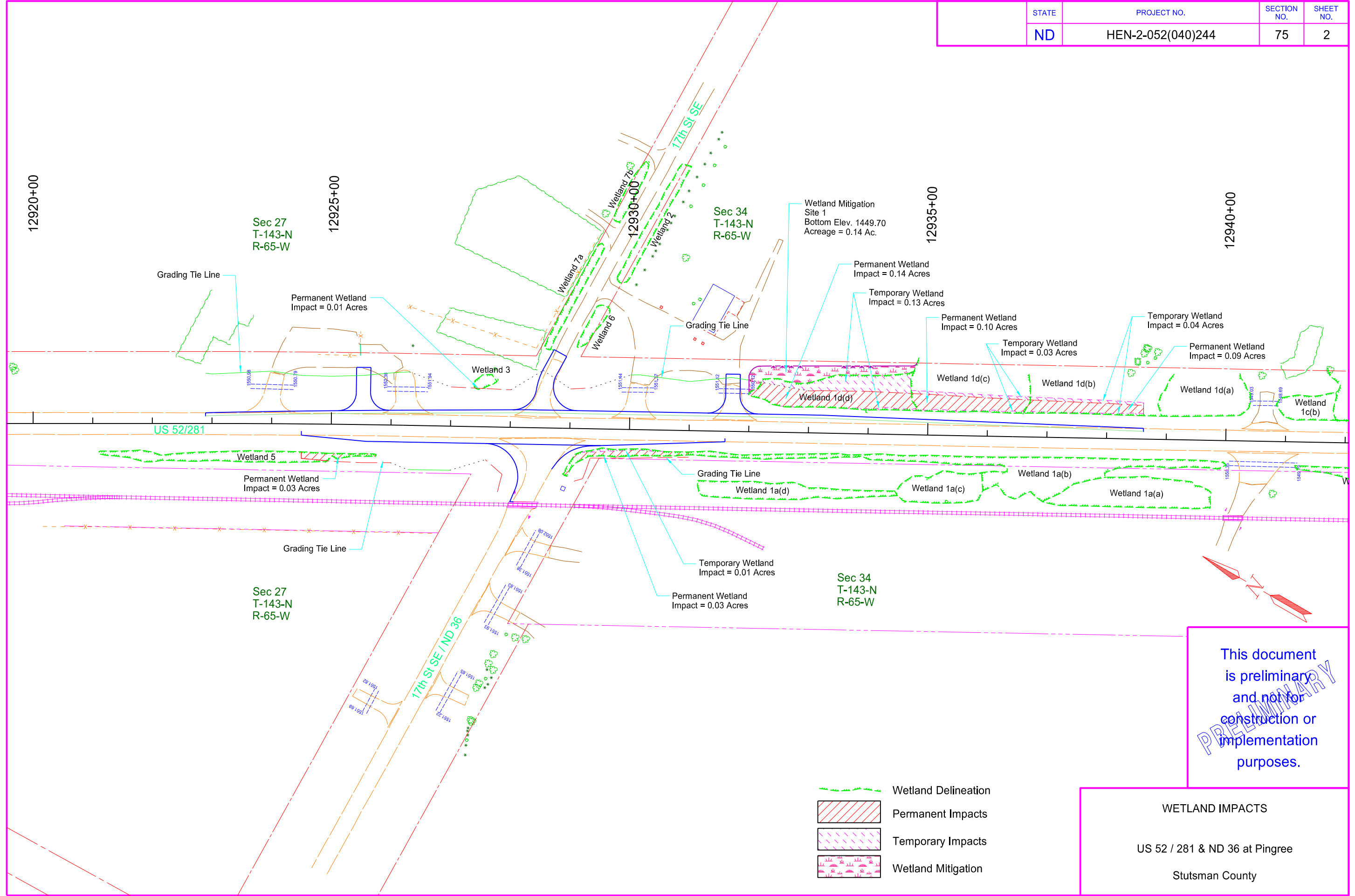
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WETLANDS MITIGATION AND ENVIRONMENTAL

US 52 / 281 & ND 36 at Pingree


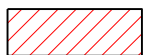

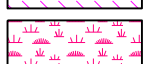
Stutsman County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	HEN-2-052(040)244	75	2



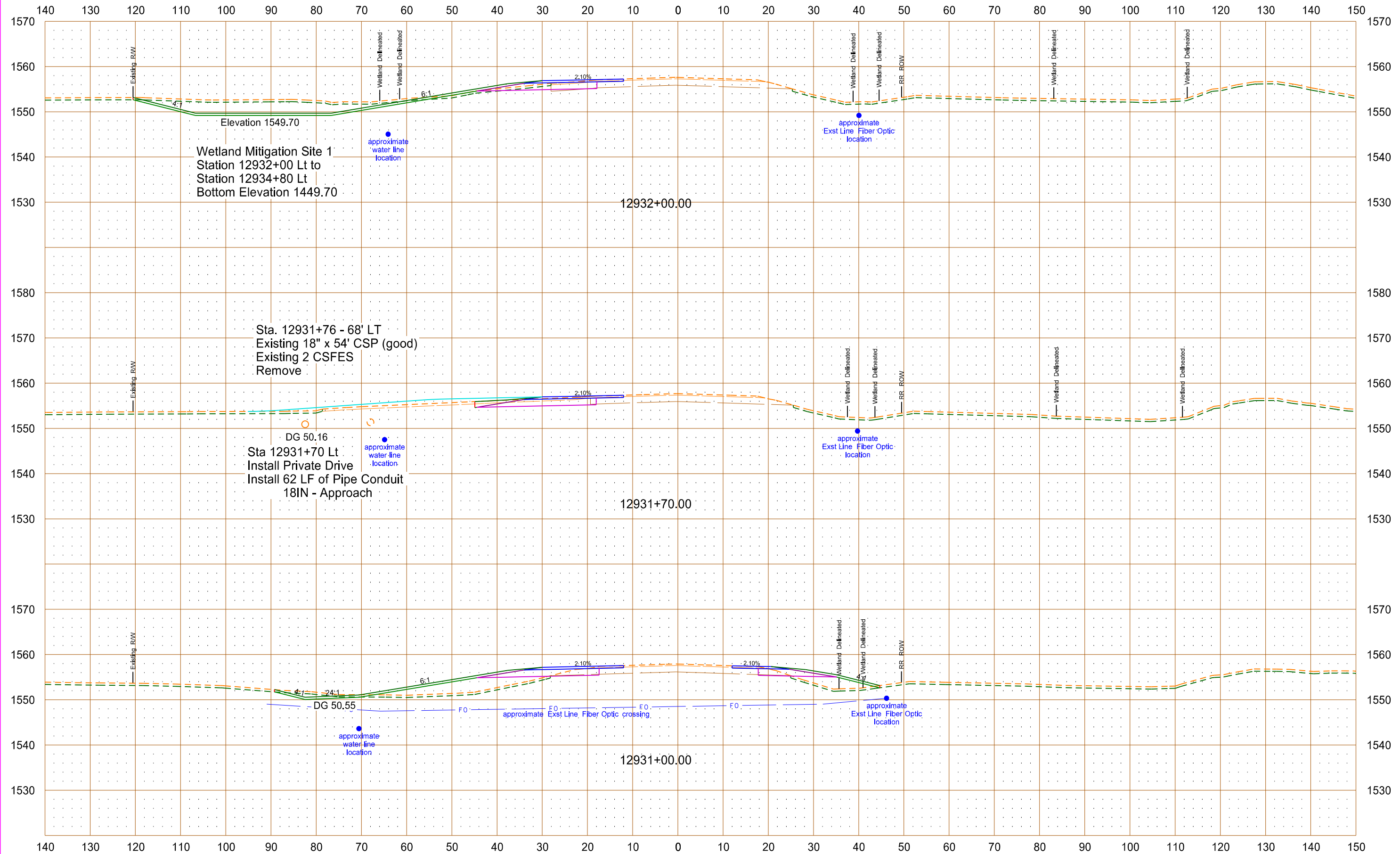
This document is preliminary and not for construction or implementation purposes.

WETLAND IMPACTS
 US 52 / 281 & ND 36 at Pingree
 Stutsman County

-  Wetland Delineation
-  Permanent Impacts
-  Temporary Impacts
-  Wetland Mitigation

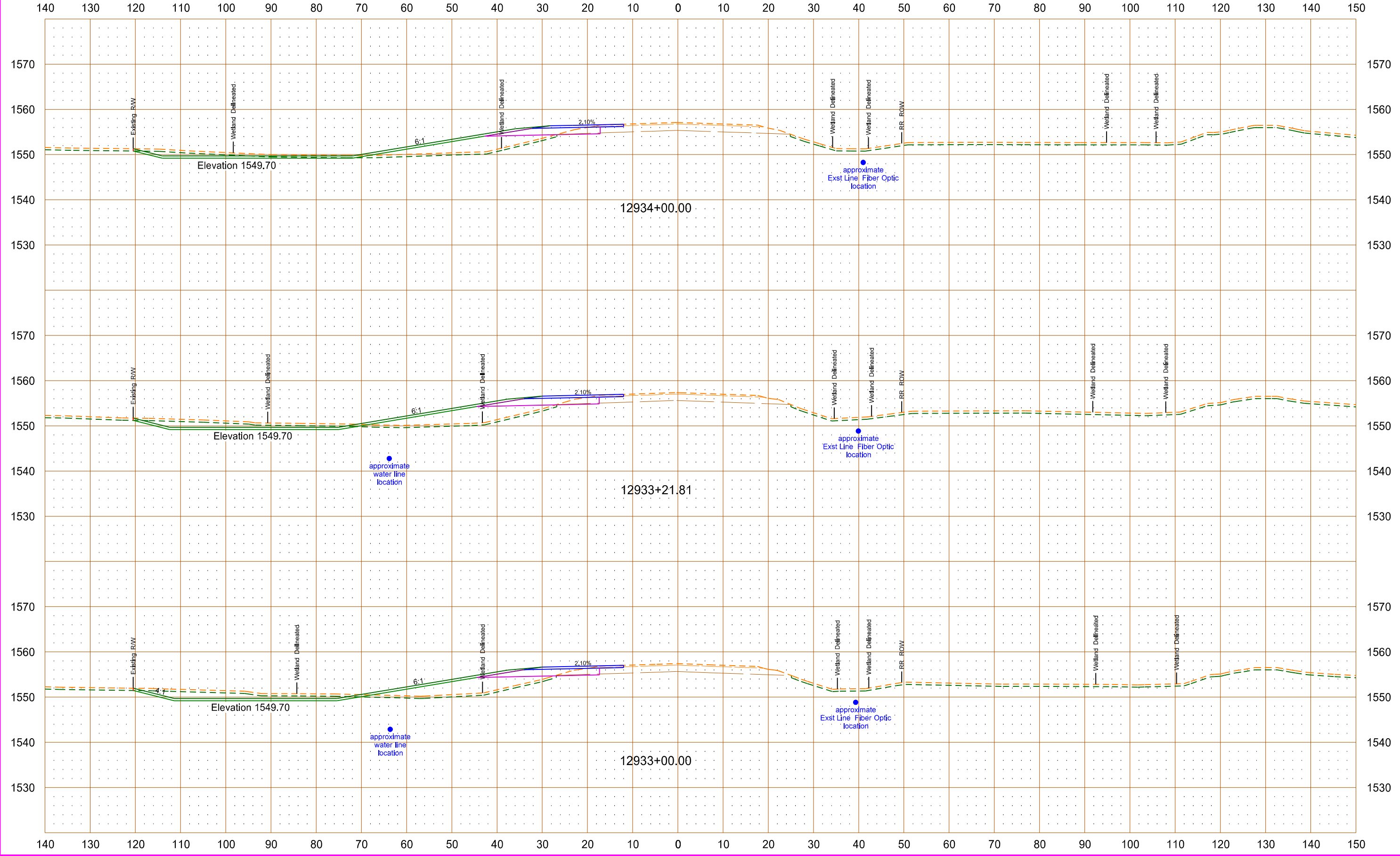
Cross-Sections
US 52 / 281

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	HEN-2-052(040)244	200	7



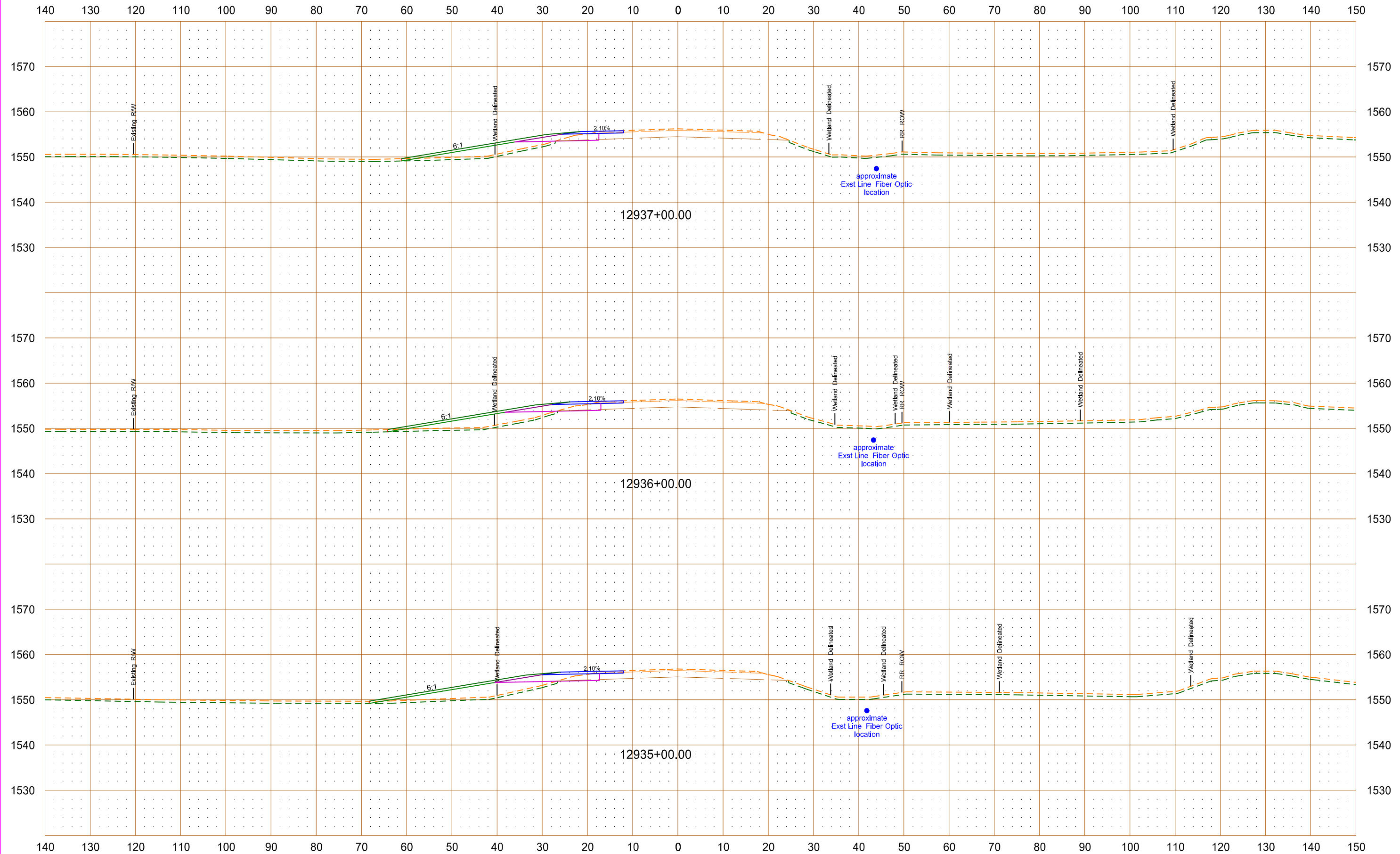
Cross-Sections
US 52 / 281

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	HEN-2-052(040)244	200	8



Cross-Sections
US 52 / 281

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	HEN-2-052(040)244	200	9



Compensatory Wetland Mitigation Plan; Hwy 52 near Pingree;
February 2, 2017

1. OBJECTIVE:

The objective is to create a shallow, seasonal palustrine emergent (PEMx) wetland consisting of a prevalence of herbaceous hydrophytic vegetation. The mitigation area of Site 1 is 0.14 acre which expands wetland 1d(d) to mitigate for losses to wetland 1d(c) of which 0.10 acre is required to function for the USACE. The created wetland will be constructed within the NDDOT right of way along US 52 / 281 near Pingree. Ditch bottoms will be widened and deepened in one area to pond water in the ditch to an appropriate elevation. The mitigation area is proposed to be adjacent to the impacted wetlands. The created wetlands will offset the unavoidable loss of aquatic resource functions and values.

2. SITE SELECTION:

The site was selected due to the location adjacent to existing wetlands, the contributing watershed, suitable soils, the proximity to the project, the ease of construction, and because it is within existing DOT right of way. Excavated material from the created wetland will may be utilized in the roadway embankment. The created wetland area will be sustained through storm water runoff and spring snow melt. All impacts and mitigation are within the Missouri River Basin Southern Zone Regional Service Area.

Hydrology

Site 1 is adjacent to wetland 1d(d) which receive hydrology from stormwater and snow melt from the 42.8 acres of contributing watershed.

Soils

The existing NRCS Web Soil Survey generally indicates soil characteristics at the site near wetland 1d(d) and 1d(c) consist of soils having a high infiltration rate with a 0-3 percent slope with fine sandy loam soils with a 36 - 60" water table.

3. SITE PROTECTION:

The mitigation site is located within the NDDOT's permanent ROW. The mitigation site will be protected in perpetuity. In the event of highway abandonment, the terms of the permit and mitigation will be transferred to the receiving property owner.

4. BASELINE INFORMATION:

A field delineation was conducted on November 24, 2015 and June 16, 2016. The mitigation site vegetation is above the existing adjacent wetland and dominated by upland vegetation typical on NDDOT ROW. The area does not have a cropping history. The upland area will be converted to wetland with hydrology driven by spring snowmelt and storm water runoff. The proposal is to expand wetland 1d(d) to compensate for the permanent impacts to wetland 1d(c).

a) **Hydrology**

This drainage area of the James Headwaters hydrologic unit HUC10160001 should support the proposed mitigation plan stormwater runoff and from spring snowmelt. Average annual precipitation at Jamestown, 20 miles to the south, is 18.8 inches.

b) **Soils**

From the NRCS Web Soil Survey, the area primarily consists of G732A – Swnoda-Barnes fine sandy loams with 0 – 3 percent slopes. The depth to restrictive feature is more than 80 inches, and the hydric rating is 2, which is 1 – 32 percent hydric components.

c) **Vegetation**

From the closest sampling point Pit # 1 of the Wetland delineation report, the existing Herb Stratum is 80 % smooth brome (*Bromus inermis*) and 20% Kentucky bluegrass (*Poa pratensis*).

5. DETERMINATION OF CREDITS:

Credit ratios were determined using the Wetland Mitigation Banking in North Dakota – *Interagency Guidance for Mitigation Bank* document, utilizing guidance that creation adjacent to the wetland impacted receives a 1:1 and mitigation nonadjacent to the wetland impacted receives a 2:1. The breakdown of impacts, ratios, and resulting mitigation required is below. NDODT proposed no mitigation for the artificial portion of the resource with permanent impacts greater than 0.10 acre.

Table 1: Wetland Credit Ratios and Credit Calculation

Mitigation Site #	Wetland Number	Wetland Feature	Mitigation Type	Perm. Wetland Impact (acre)	Acre-Credit Ratio (location)	Mitigation after ratios for USACE Impacts (acres)	Total Constructed Onsite Mitigation (acres)
Site 1	1d(c)	Natural	Creation Adjacent	0.10	1:1	0.10 ¹	0.14
Totals				0.10		0.10	0.14

¹ Mitigation for the natural portion where cumulative permanent impact to the resource was greater than 0.10 acre.

6. MITIGATION WORK PLAN:

Site 1 will be constructed by excavating and grading upland to a variable depth up to 2 feet maximum depth depressional area adjacent to the existing wetlands 6 and totaling 1.61 acres (1.59 acre required for the USACE). The site will be over excavated by 6 inches to a final elevation of 1449.70 feet and will be graded with a 4:1 transition, not included in the mitigation acreage, from the final 2 foot depth to the existing grade and contours of the adjacent uplands surrounding the mitigation site. The work will be started in the summer of 2017 and anticipated to be completed by the end of November. Hydrology will be obtained from the adjacent wetlands, road ditches, and water table. The wetland mitigation site will be seeded with the following wetland seed mix.

Wetland Seed Mix

Grass			Pounds Pure Live Seed Per Acre	
Common Name	Scientific Name	Variety	East of HWY 83	West of HWY 83
Prairie Cord Grass	<i>Spartina pectinata</i>	Red River	1.1	1.1
American Slough Grass	<i>Beckmannia syzigachne</i>	Common	0.2	0.2
Fowl Blue Grass	<i>Poa palustris</i>	Common	0.2	0.2
Fox Sedge	<i>Carex vulpinoidea</i>	Common	0.2	0.2
American Manna Grass ¹	<i>Glyceria grandis</i>	Common	0.2	0.2
Fowl Manna Grass ¹	<i>Glyceria striata</i>	Common	0.1	0.1
Bluejoint Grass ²	<i>Calamagrostis canadensis</i>	Common	0.1	0.1
Virginia Wild-rye	<i>Elymus virginicus</i>	Omaha	2.0	---
Canada Wild-rye	<i>Elymus canadensis</i>	Mandan	---	1.3
Total			4.1	3.4

¹ American, Fowl, or both may be used. If only one is used the seeding rate of other species does not need to be increased.

² Seed may not be available and can be removed without increasing the seeding rate of other species.

BMPs will be installed to prevent erosion and sedimentation within the site. All BMPs will be removed from the mitigation site upon the establishment of vegetative cover. After completion of the mitigation site designated photo points will be developed. Monitoring reports will be provided yearly until success criteria are met. As-built plans will be submitted to the USACE only if changes in the design plan occur.

7. MAINTENANCE PLAN:

The site will be maintained along with the adjacent road right of way. This section of highway is mowed periodically from the edge of pavement to the toe slope of the road grade by NDDOT maintenance staff. The balance of the right of way may be hayed by the adjacent landowner. No haying restrictions will be placed on this site. Noxious weeds will be controlled by NDDOT staff or a certified applicator. The site will be maintained to meet the success criteria outlined in the performance standards.

8. PERFORMANCE STANDARDS:

Wetland – Success criteria will be met when hydrology exists at the site for sufficient time periods to support a prevalence of vegetation typically adapted for life in saturated soil conditions. Performance standards are met when the mitigation meets wetland criteria for hydrology and hydrophytic vegetation as defined in the 1987 Corps of Engineers Wetland Delineation Manual and Great Plains Regional Supplement (Version 2.0). Once hydrology and hydrophytic vegetation performance standards are met, this serves to confirm that the soil is forming under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part.

Buffer – No buffer credits are proposed due to ROW restrictions at this location; however, all disturbed terrestrial areas will be reestablished with permanent native grass cover, as described in the mitigation work plan above. No buffer performance standards are necessary.

9. MONITORING REQUIREMENTS:

I. **Performance standard:** The **0.10 acre** mitigation area must successfully meet performance standards, as defined in component 8. Performance Standards

II. **Monitoring Requirements:**

The NDDOT shall submit mitigation monitoring reports as stated below:

1. First growing season: A mitigation monitoring report will be submitted to the North Dakota Regulatory Office. The report will discuss and document that the site was constructed as detailed in the mitigation plan, identify any problem areas, and a map will be included with established photo points. The photographic narrative will be included. The NDDOT onsite mitigation certification form will be included.

The map will include:

- a. Most current aerial background
 - b. Previously delineated existing wetlands (if present, supplied by NDDOT)
 - c. Design mitigation boundary
 - d. Photo points
 - e. Remedial action areas
2. Second growing season: A mitigation monitoring report will be submitted to the North Dakota Regulatory Office. The report will discuss and document how the site is progressing toward meeting performance standards up to the design boundary, identify any problem areas, and a map

will be included with previously established photo points. The photographic narrative will be included.

The map will include:

- a. Most current aerial background
 - b. Previously delineated existing wetlands (if present, supplied by NDDOT)
 - c. Design mitigation boundary
 - d. Photo points
 - e. Remedial action areas
3. Third growing season and/or until performance criteria are met: A monitoring report shall be submitted to the North Dakota Regulatory Office. The report will include the identification of existing vegetation and documentation of hydrology indicators within the mitigation site. A mitigation site boundary where performance standards are being met will be collected and shown on a map. The photographic narrative will be included.

The map will include:

- a. Most current aerial background
 - b. Previously delineated existing wetlands (if present, supplied by NDDOT)
 - c. Design mitigation boundary
 - d. Mitigation boundary where performance standards are met (can go beyond mitigation design boundary but not within previously delineated wetlands)
 - e. Photo points
 - f. Remedial action areas
4. If remedial actions are needed, the reporting may start over as the first growing season requirements after remediation activities are complete.

Onsite monitoring shall be conducted from June 15th to the end of the growing season. The monitoring reports shall include the following:

1. Corps of Engineers Permit Number **NWO-2016-1395-BIS**, NDDOT project number **HEN-2-052(040)244, PCN 21040**.
2. Name and contact information of permittee, point of contact and consultant (if one is used), as well as the dates the inspection(s) was conducted.
3. Directions to the mitigation/project site.
4. Log or timeline reflecting the construction and development of the compensatory wetland mitigation, including the completion date for construction of all mitigation, remedial actions (if any), plantings, monitoring dates, etc., as well as the date the site meets full success criteria (meeting all performance standards).
5. Photographic and narrative summary of the mitigation site's development, specifically including the following:
 - a. Photographs of the mitigation site prior to construction, encompassing the entire mitigation area using the NDDOT photo template.
 - b. Photographs and narrative summary of the mitigation site's progress and development into meeting wetland criteria.
 - c. Photographs taken from a minimum of one fixed point and directions for each wetland mitigation Site. Photo location and points must be sufficiently spaced to provide visual depiction of the entire site's development.
 - d. Additional photograph(s) and description(s) of problem areas, if any are identified.
 - e. Recommendations for any additional corrective or remedial actions (if needed).
6. Monitoring requirements may be waived by the North Dakota Regulatory Office once performance standards are met or a determination is made that the site adequately offsets the authorized impacts.

III. **Reports shall be sent to:** North Dakota Regulatory Office, 1513 South 12th Street, Bismarck, North Dakota, 58504

10. **LONG-TERM MANAGEMENT PLAN:**

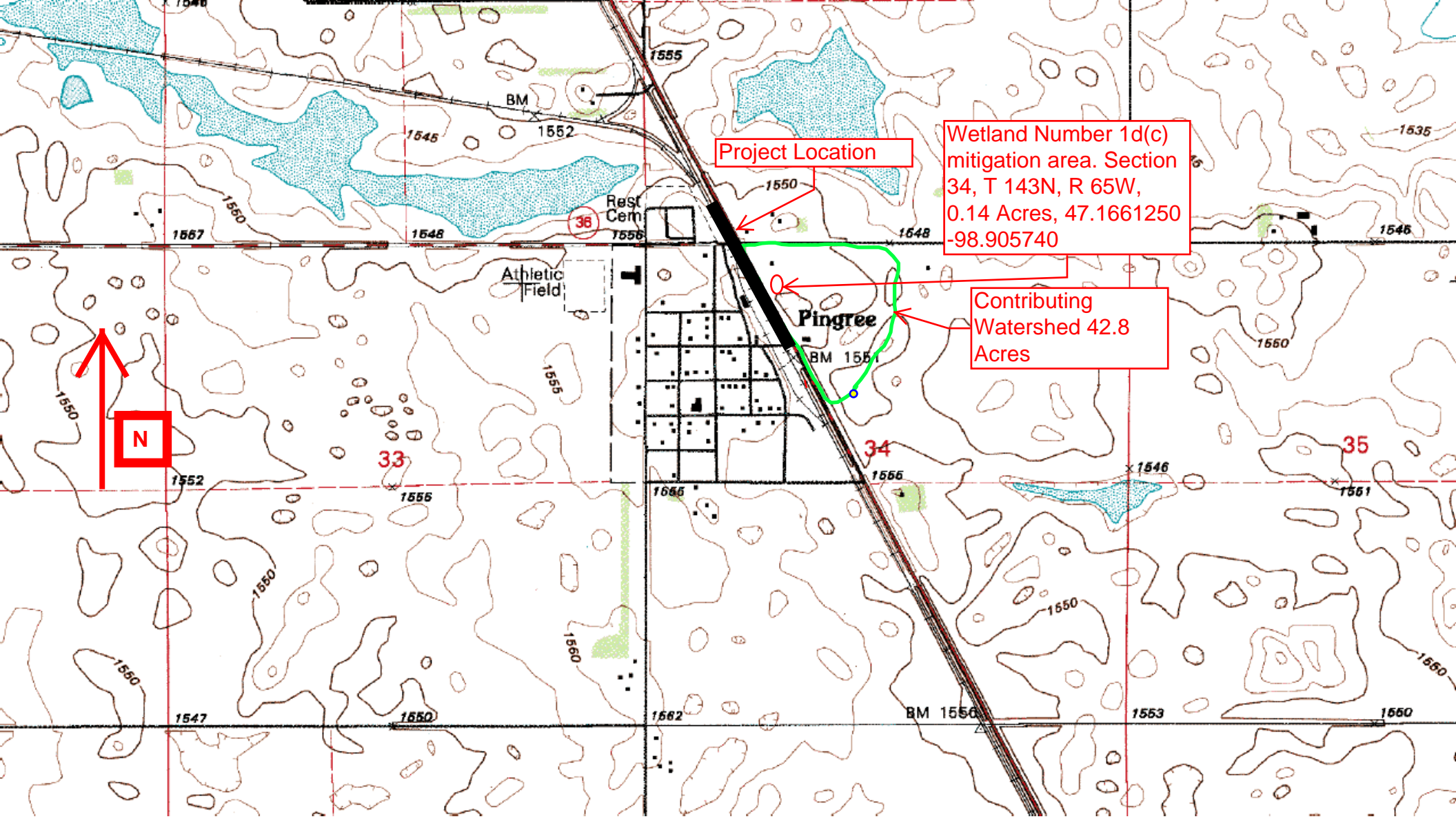
The NDDOT will continue to manage the site with noxious weed control, periodic mowing, and litter removal along with the adjacent road right of way. Repairs will be to the original construction specification. The NDDOT will inform the USACE if any corrective measures are needed.

11. **ADAPTIVE MANAGEMENT PLAN:**

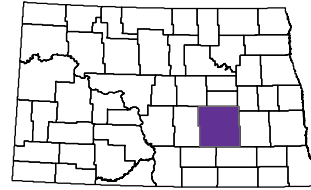
The NDDOT will continue to manage the site with noxious weed control, periodic mowing to reduce litter accumulation, and repair of any structures to original construction specification. The NDDOT will inform the USACE of any adaptive management needs.



12. **FINANCIAL ASSURANCES:**

Sufficient funds will be available to pay for monitoring and maintenance in the future. The Department receives an allocation from the North Dakota Legislature on biennium basis for road development and maintenance. Historically the NDDOT has allocated \$0.5 million annually for wetland mitigation development, management and monitoring.




HEN-2-052(040)244 PCN 21040



-  Mitigation Site
-  Environmental - Project Delineations



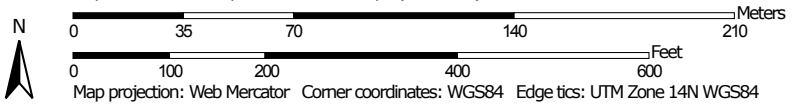
Mitigation Location Map				
Drawn By: SEK	Date: 1/26/17	Project Number: HEN-2-052(040)244	PCN: 21040	Sheet: 1 of 1
 NDDOT North Dakota Department of Transportation				

Soil Map—Stutsman County, North Dakota
(HEN-2-052(040)244 PCN 21040)



Soil Map may not be valid at this scale.

Map Scale: 1:2,400 if printed on A landscape (11" x 8.5") sheet.



Map Unit Description

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions in this report, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. All the soils of a series have major horizons that are similar in composition, thickness, and arrangement. Soils of a given series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Additional information about the map units described in this report is available in other soil reports, which give properties of the soils and the limitations, capabilities, and potentials for many uses. Also, the narratives that accompany the soil reports define some of the properties included in the map unit descriptions.

Stutsman County, North Dakota

G732A—Swenoda-Barnes fine sandy loams, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2q5wq

Elevation: 1,000 to 2,050 feet

Mean annual precipitation: 16 to 20 inches

Mean annual air temperature: 39 to 45 degrees F

Frost-free period: 120 to 140 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Swenoda and similar soils: 49 percent
Barnes and similar soils: 20 percent
Minor components: 31 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Swenoda

Setting

Landform: Rises
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Coarse-loamy eolian deposits over fine-loamy till

Typical profile

Ap - 0 to 9 inches: fine sandy loam
A - 9 to 13 inches: fine sandy loam
Bw - 13 to 33 inches: fine sandy loam
2Bk - 33 to 39 inches: loam
2C - 39 to 60 inches: loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Moderately well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat):
Moderately low to moderately high (0.14 to 1.42 in/hr)
Depth to water table: About 36 to 60 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 30 percent
Gypsum, maximum in profile: 1 percent
Salinity, maximum in profile: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)
Available water storage in profile: High (about 9.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Ecological site: Loamy Overflow (R055BY059ND)
Other vegetative classification: Overflow (G055BY500ND)
Hydric soil rating: No

Description of Barnes

Setting

Landform: Rises
Down-slope shape: Convex

Across-slope shape: Linear
Parent material: Fine-loamy till

Typical profile

Ap - 0 to 7 inches: fine sandy loam
Bw - 7 to 19 inches: loam
Bk - 19 to 37 inches: loam
C - 37 to 60 inches: loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat):
Moderately low to moderately high (0.14 to 1.42 in/hr)
Depth to water table: About 48 to 72 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 30 percent
Gypsum, maximum in profile: 1 percent
Salinity, maximum in profile: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)
Available water storage in profile: High (about 10.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Ecological site: Loamy (R055BY064ND)
Other vegetative classification: Loam (G055BY100ND)
Hydric soil rating: No

Minor Components

Towner

Percent of map unit: 10 percent
Landform: Rises
Down-slope shape: Concave
Across-slope shape: Linear
Ecological site: Subirrigated Sands (R055BY074ND)
Other vegetative classification: Droughty Loam (G055BY120ND)
Hydric soil rating: No

Hamerly

Percent of map unit: 7 percent
Landform: Flats
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: Limy Subirrigated (R055BY058ND)
Other vegetative classification: Subirrigated (G055BY700ND)
Hydric soil rating: No

Wyndmere, loamy substratum

Percent of map unit: 5 percent

Landform: Flats

Down-slope shape: Linear

Across-slope shape: Linear

Ecological site: Limy Subirrigated (R055BY058ND)

Other vegetative classification: Subirrigated (G055BY700ND)

Hydric soil rating: No

Balaton

Percent of map unit: 4 percent

Landform: Rises

Landform position (two-dimensional): Summit, shoulder

Down-slope shape: Convex

Across-slope shape: Convex

Ecological site: Thin Loamy (R055BY068ND)

Other vegetative classification: Limy Upland (G055BY400ND)

Hydric soil rating: No

Lanona

Percent of map unit: 3 percent

Landform: Rises

Down-slope shape: Convex

Across-slope shape: Linear

Ecological site: Sandy (R055BY062ND)

Other vegetative classification: Loam (G055BY100ND)

Hydric soil rating: No

Arveson

Percent of map unit: 2 percent

Landform: Depressions, flats

Down-slope shape: Concave, linear

Across-slope shape: Concave, linear

Ecological site: Wet Meadow (R055BY071ND)

Other vegetative classification: Wet (G055BY900ND)

Hydric soil rating: Yes

Data Source Information

Soil Survey Area: Stutsman County, North Dakota

Survey Area Data: Version 19, Sep 21, 2016