



North Dakota Department of Transportation

Thomas K. Sorel
Director

Doug Burgum
Governor

November 6, 2017

ADDENDUM 1 – JOB 5

TO: All prospective bidders on Project ROM-0300(135), Job No. 5 scheduled for the November 17, 2017 bid opening.

The following plan and request for proposal revisions shall be made:

Plan Revisions:

See attached summary from Clifford R. Menting PE, Sambatek Inc. dated October 31, 2017 for an explanation.

Request for Proposal Revisions:

Remove and replace pages 5, 6 and 7 of 9 the Proposal pages located at the beginning of the Request for Proposal, with the enclosed pages revised 11/2/2017.

The following changes were made to the Bid Items:

Spec No.	Code No.	Description	Description of Change
202	0174	REMOVAL OF PIPE ALL TYPES AND SIZES	Decreased from 596 to 551 LF
251	0200	SEEDING CLASS II	Increased from 3.099 to 3.164 ACRE
251	2000	TEMPORARY COVER CROP	Increased from 3.099 to 3.164 ACRE
253	0101	STRAW MULCH	Increased from 6.197 to 6.328 ACRE
261	0112	FIBER ROLLS 12	Increased from 7,819 to 8,522 LF
261	0113	REMOVE FIBER ROLLS 12IN	Increased from 7,819 to 8,522 LF
262	0100	FLOTATION SILT CURTAIN	Decreased from 18,610 to 4,000 LF
262	0101	REMOVE FLOTATION SILT CURTAIN	Decreased from 18,610 to 4,000 LF
754	0206	STEEL GALV POSTS-TELESCOPING PERFORATED TUBE	Increased from 103 to 105 LF
900	2001	WETLAND MITIGATION SITE 1	Decreased from 0.86 to 0.63 ACRE
900	2002	WETLAND MITIGATION SITE 2	Increased from 1.96 to 2.20 ACRE

Add Special Provision SP 5181(14) PERMITS AND ENVIRONMENTAL CONSIDERATIONS.

Addendum 1

Job 5, November 17, 2017 Bid Opening

Page 2 of 2

This addendum is to be incorporated into the bidder's proposal for this project. AASHTOWare Project Bids files should be updated by downloading the addendum file from the Bid Express on-line bidding exchange at <http://www.bidx.com/> and load it into the AASHTOWare Project Bids program.

A handwritten signature in black ink, appearing to read 'Phillip Murdoff', with a stylized, sweeping flourish at the end.

PHILLIP MURDOFF – CONSTRUCTION SERVICES ENGINEER

80:jwj

Enclosure

October 31, 2017

ADDENDUM 1 – JOB 5

TO: All prospective bidders on Project ROM 0300(135) PCN 21835, Job 5, scheduled for the November 17, 2017 bid opening

The following plan revisions shall be made:

Proposal Revisions ROM 0300(135), PCN 21835:

Add Special Provision SP 5181 (14) Permits and Environmental Considerations “General Activities Special Use Permit.”

Plan Revisions ROM 0300(135), PCN 21835:

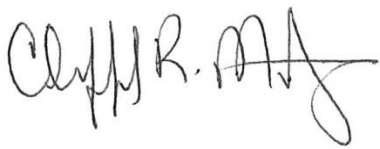
Remove and replace, insert, or delete the following sheets with the revised sheets dated 10/13/17 and 10/16/17:

- Sec 2 Sheet 1: The Sheet numbering changed; corrected to include the removed, replaced, insert, or delete sheets within Addendum #1.
- Sec 6 Sheet 1: Modified notes to incorporate comments:
- Note 100-P02, corrected fence quantity
 - Note 104-P02, corrected quantity of mitigation credits, corrected quantity in reference to the watersheds, add to the note about wetland area for the Burke County roadway;
- Sec 6 Sheet 2: Modified notes to incorporate comments:
- Note 262-P01; revised bid quantities for added additional language about the bid quantity of FLOTATION SILT CURTAIN and REMOVE FLOTATION SILT CURTAIN.
- Sec 6 Sheet 3: Added Additional Wetland notes
- Sec 6 Sheet 4: Removed Wetland Table, added additional Environmental Notes
- Sec 6 Sheet 5-9: Deleted
- Sect 8 Sheet 1: Revised the following quantities:

- Item 202 0174 REMOVAL OF PIPE ALL TYPES AND SIZES quantity revised from 596 to 551 LF.
- Item 251 0200 SEEDING CLASS II quantity was revised from 3.099 to 3.164 ACRE.
- Item 251 0200 TEMPORARY COVER CROP quantity was revised from 3.099 to 3.164 ACRE.
- Item 253 0101 STRAW MULCH quantity was revised from 6.197 to 6.328 ACRE.
- Item 261 0112 FIBER ROLLS 12IN quantity was revised from 7,819 to 8,522 LF.
- Item 261 0113 REMOVE FIBER ROLLS 12IN quantity was revised from 7,819 to 8,522 LF.
- Item 262 0100 FLOTATION SILT CURTAIN quantity was revised from 18,610 to 4,000 LF.
- Item 262 0101 REMOVE FLOTATION SILT CURTAIN quantity was revised from 18,610 to 4,000 LF.
- Item 754 0206 STEEL GALV POSTS-TELESCOPING PERFORATED TUBE quantity revised from 103 to 105 LF.
- Item 900 2001 Wetland Mitigation Site 1 quantity revised from 0.86 to 0.63 ACRE.
- Item 900 2002 Wetland Mitigation Site 2 quantity revised from 1.96 to 2.20 ACRE.

Sect 10 Sheets 1:	Revised SEEDING CLASS II, TEMPORARY COVER CROP and STRAW MULCH quantities.
Sect 30 Sheet 2:	Deleted Sheet.
Sec 30 Sheet 3-28	The Sheet numbering changed with deletion of Sheet 2
Sec 30 Sheet 29	Deleted with sheet renumbering
Sec 75 Sheet 1-5	Added Wetland table. Added Wetlands #1a, #1b, #2a, #2b, #3a and #3b. Separated the Wetlands into the two different Regional Service Areas (RSA). Deleted Wetland #10 since it did not show on any plans.
Sec 75 Sheet 6-22	Revised sheet numbering with the addition of Sheets 75-1 through 75-5.
Sec 75 Sheet 19	Revised the wetland impact areas on sheet 19 for wetland sites 13a and 14a.
Sec 76 Sheet 22	REMOVED TEMPORARY SILT CURTAIN, added TEMPORARY FIBER ROLLS 12IN on Wetland 14a, Modified the comment "See Sheet 28-31.
Sec 76 Sheet 23	REMOVED TEMPORARY SILT CURTAIN, added TEMPORARY FIBER ROLLS 12IN on Wetland 13a, Modified the comment "See Sheet 28-31.
Sec 76 Sheet 28	Added additional columns to the table; Remove 12" Fiber Rolls (LF) and Remove Silt Curtain (LF)
Sec 76 Sheet 29	Added additional columns to the table; Remove 12" Fiber Rolls (LF) and Remove Silt Curtain (LF)

Sec 76 Sheet 30	<p>Added new sheet. Made the following changes for Site K7-5; Stationing 106+76 to 107+20 changed to 106+76 to 109+44 and the quantity of 12" Fiber Rolls changed from 44 LF to 280 LF; the line of Stationing 107+20 to 109+11 was deleted, including the quantity of 191 LF of silt curtain; the line of Stationing 109+11 to 109+44 was deleted, including the quantity of 34 LF of 12" Fiber Rolls.</p> <p>Made the following changes for Site K7-6; Stationing 110+96 to 111+35 changed to 110+96 to 116+04 and the quantity of 12" Fiber Rolls changed from 41 LF to 525 LF; the line of Stationing 111+35 to 115+72 was deleted, including the quantity of 438 LF of silt curtain; the line of Stationing 115+72 to 116+04 was deleted, including the quantity of 32 LF of 12" Fiber Rolls.</p>
Sec 76 Sheet 31	Added new sheet.
Sec 77 Sheet 28	Deleted columns Area(Acre) and Volume (CY). Added columns of Seed/Mulch (Acre), TRM (SY), Concrete Blanket (SY), and Rip Rap (CY) with quantities.
Sec 77 Sheet 29	Deleted columns Area(Acre) and Volume (CY). Added columns of Seed/Mulch (Acre), TRM (SY), Concrete Blanket (SY), and Rip Rap (CY) with quantities.
Sec 77 Sheet 30	Deleted columns Area(Acre) and Volume (CY). Added columns of Seed/Mulch (Acre), TRM (SY), Concrete Blanket (SY), and Rip Rap (CY) with quantities.
Sec 81 Sheet 1	Added Horizontal Alignment data and Curve Data
Sec 81 Sheet 2-4	Added new sheets with Horizontal Alignment data and Curve Data
Sec 100 Sheet 1	Item 704 0100 FLAGGING quantity was revised from 5,616 to 4,896 HHR.



Clifford R. Menting, PE
Project Manager
Sambatek, Inc.

BID ITEMS

Project: ROM-0300(135) (PCN-21835)

Bidder must type or neatly print unit prices in numerals, make extensions for each item, and total. Do not carry unit prices further than three (3) decimal places.

Item No.	Spec No.	Code No.	Description	Unit	Approx. Quantity	Unit Price		Amount	
						\$\$\$\$	000	\$\$\$\$	00
001	103	0100	CONTRACT BOND	L SUM	1.				
002	201	0370	REMOVAL OF TREES 10IN	EA	4.				
003	202	0174	REMOVAL OF PIPE ALL TYPES AND SIZES	LF	551.				
004	202	0312	REMOVE EXISTING FENCE	LF	3,476.				
005	202	0400	REMOVAL OF RIPRAP - LOOSE ROCK	CY	2,182.				
006	203	0109	TOPSOIL	CY	2,786.				
007	203	0119	TOPSOIL-IMPORTED	CY	2,391.				
008	203	0138	COMMON EXCAVATION-SUBCUT	CY	492.				
009	203	0140	BORROW-EXCAVATION	CY	147,558.				
010	216	0100	WATER	M GAL	157.				
011	251	0200	SEEDING CLASS II	ACRE	3.164				
012	251	2000	TEMPORARY COVER CROP	ACRE	3.164				
013	253	0101	STRAW MULCH	ACRE	6.328				
014	255	0202	TRM TYPE 2	SY	5,936.				
015	256	0200	RIPRAP GRADE II	CY	3,729.				
016	260	0100	SILT FENCE UNSUPPORTED	LF	1,284.				

BID ITEMS

Project: ROM-0300(135) (PCN-21835)

Bidder must type or neatly print unit prices in numerals, make extensions for each item, and total. Do not carry unit prices further than three (3) decimal places.

Item No.	Spec No.	Code No.	Description	Unit	Approx. Quantity	Unit Price		Amount	
						\$\$\$\$	000	\$\$\$\$	00
017	260	0101	REMOVE SILT FENCE UNSUPPORTED	LF	1,284.				
018	261	0112	FIBER ROLLS 12IN	LF	8,522.				
019	261	0113	REMOVE FIBER ROLLS 12IN	LF	8,522.				
020	262	0100	FLOTATION SILT CURTAIN	LF	4,000.				
021	262	0101	REMOVE FLOTATION SILT CURTAIN	LF	4,000.				
022	302	0356	AGGREGATE SURFACE COURSE CL 13	TON	1,069.				
023	702	0100	MOBILIZATION	L SUM	1.				
024	704	0100	FLAGGING	MHR	4,896.				
025	704	1000	TRAFFIC CONTROL SIGNS	UNIT	5,644.				
026	704	1052	TYPE III BARRICADE	EA	10.				
027	704	1080	STACKABLE VERTICAL PANELS	EA	25.				
028	708	5810	CONCRETE EROSION CONTROL BLANKET	SY	14,580.				
029	709	0151	GEOSYNTHETIC MATERIAL TYPE R1	SY	6,053.				
030	709	0155	GEOSYNTHETIC MATERIAL TYPE RR	SY	26,690.				
031	714	3020	END SECT-CONC REINF 24IN	EA	2.				
032	714	4100	PIPE CONDUIT 18IN	LF	719.				

North Dakota Department of Transportation

BID ITEMS

Rev: 11/2/2017

Project: ROM-0300(135) (PCN-21835)

Bidder must type or neatly print unit prices in numerals, make extensions for each item, and total. Do not carry unit prices further than three (3) decimal places.

Item No.	Spec No.	Code No.	Description	Unit	Approx. Quantity	Unit Price		Amount	
						\$\$\$\$\$	000	\$\$\$\$\$	00
033	714	4105	PIPE CONDUIT 24IN	LF	377.				
034	714	4110	PIPE CONDUIT 30IN	LF	62.				
035	752	0905	TEMPORARY FENCE	LF	3,476.				
036	754	0110	FLAT SHEET FOR SIGNS-TYPE XI REFL SHEETING	SF	47.				
037	754	0206	STEEL GALV POSTS-TELESCOPING PERFORATED TUBE	LF	105.				
038	754	0805	OBJECT MARKERS - CULVERTS	EA	52.				
039	900	2001	WETLAND MITIGATION SITE 1	ACRE	.630	68,000	00	42,840	00
040	900	2002	WETLAND MITIGATION SITE 2	ACRE	2.200	50,000	00	110,000	00
			TOTAL SUM BID						

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION**SPECIAL PROVISION****PERMITS AND ENVIRONMENTAL CONSIDERATIONS****Project ROM 0300(135) - PCN 21835**

This Special Provision incorporates the U.S. Fish and Wildlife Services Special Use Permit obtained by the Mountrail County Department of Roads and Bridges for the inslope repair on roadways J-10, K6S and K6N, and K7. The project consists of reshaping the inslope and adding borrow excavation material to restore the inslope back to their pre-erosion condition and placing sod/seed, TRM, riprap or concrete blanket; replacing or adding new centerline pipe and other incidentals. Additional temporary Right of Way has been acquired to accommodate all inslope improvements.

The Contractor shall be responsible for complying with all the terms and conditions as contained in the permit attached hereto. Bidders shall become familiar with all standard conditions and special conditions of the permit and submit their bid for the construction of this project based on the following:

- **US Fish and Wildlife Services Special Use Permit**
US Fish and Wildlife Services Special Use Permit 2017-103E (Audubon) authorizes the construction to reshape the inslope and add borrow excavation material to restore the inslope back to their pre-erosion condition and place sod/seed, TRM, riprap or concrete blanket; replace or add new centerline pipe and other incidentals.

The contractor shall be responsible for obtaining permits for impacts not authorized by the attached U.S. Fish and Wildlife Services Special Use Permit obtained by the Mountrail County Department of Roads and Bridges.

This document was originally
issued and sealed by
Clifford R. Menting
Registration Number
PE- 8919,
on 10/13/17 and the original
document is stored at the
North Dakota Department
of Transportation



General Activities Special Use Permit

1

Station #: 62573

(For Official Use Only)

Permit #: 2017-103E

Permit Term: From 9/28/2017 To 9/28/2018

1) Permittee Name/Business: Jana Heberlie, Mountrail County Department of Roads & Bridges

- 2) Permit Status: a) Approved: ☒ If approved, provide special conditions (if any) in the text box below.
b) Denied: ☐ If denied, provide justification in the text box below.

[Type In additional Special Conditions or Justification for Denied Permit in the space provided]

Special Conditions- Minot Air Force Base Access Road In slope Repair Projects

1. All temporary fill or other materials placed outside of road right-of-ways within USFWS properties (wetland and grassland easements and WPA's) must be restored to pre work condition within 30 days from the start of projects. Temporary fill will only be placed in areas authorized through special use permit. The contractor or other project representative will survey the project areas in the spring of 2018 to determine if the project work can be completed without the placement of temporary fill outside of road right-of-way (i.e. If water levels in wetlands are less than 2' in depth, a temporary berm may not be needed).
2. Contractor(s) will contact USFWS before project work begins and after project work is complete. Once restoration work has been completed the contractor will notify USFWS and arrange for an inspection of the area which should be completed before equipment is mobilized.
3. If questions related to wetlands or USFWS property interests arise during construction, the contractor is required to notify USFWS staff before adjustments to the engineering plans are made.
4. Culverts which are proposed to be replaced will remain at the current elevation unless prior approval in writing has been granted by USFWS.
5. Grassland impacted within USFWS wetland and grassland easement properties should be reseeded to grass cover specified by ND DOT or the landowner.
6. Grassland impacted within USFWS Waterfowl Production Areas will be reseeded to native grass seed mix (North Dakota DOT Class II) at the contractor's expense.
7. If boundary fence or other property (i.e. survey pins, signs, etc.) are impacted on Waterfowl Production Areas, contractor will consult with the Wetland District Manager and repair and replace impacted property at the contractor's expense.
8. Storage of construction equipment or other materials is not allowed within USFWS Waterfowl Production Areas or USFWS grassland easement properties.
9. Contractors will coordinate and insure proposed borrow site locations used in conjunction with the projects do not impact USFWS property interests. No borrow fill will be used from USFWS Waterfowl Production Areas or USFWS grassland easement properties.
10. Issuance of authorization does not preclude the requirements for obtaining necessary permits and/or approvals from other County, State, or Federal agencies and from local landowners, if applicable.

- 3) Are there additional special conditions attached to the permit? Yes ☐ No ☒
- 4) Are other licenses/permits required, and have they been verified? Yes ☐ No ☐ N/A ☒
- 5) Are Insurance and/or Certification(s) required, and have they been verified? Yes ☐ No ☐ N/A ☒
- 6) Record of Payments: Full ☐ Partial ☐ Exempt ☒
- Amount of full payment: Record of partial payments:
- 7) Is a surety bond or security deposit required? Yes ☐ No ☐ N/A ☒

This permit is issued by the U.S. Fish and Wildlife Service and accepted by the applicant signed below, subject to the terms, covenants, obligations, and reservations, expressed or implied herein, and to the notice, conditions, and requirements included or attached. A copy of this permit should be kept on-hand so that it may be shown at any time to any refuge staff.

8) Permit approved/issued by: (Signature and title)

[Signature]
Date: 9/28/2017 Refuge Manager

9) Permit accepted by: (Signature of permittee)

[Signature]
Date: 10-24-17

General Conditions and Requirements

- 1) Responsibility of Permittee: The permittee, by operating on the premises, shall be considered to have accepted these premises with all facilities, fixtures, or improvements in their existing condition as of the date of this permit. At the end of the period specified or upon earlier termination, the permittee shall give up the premises in as good order and condition as when received except for reasonable wear, tear, or damage occurring without fault or negligence. The permittee will fully repay the Service for any and all damage directly or indirectly resulting from negligence or failure on his/her part, and/or the part of anyone of his/her associates, to use reasonable care.
- 2) Operating Rules and Laws: The permittee shall keep the premises in a neat and orderly condition at all times, and shall comply with all municipal county, and State laws applicable to the operations under the permit as well as all Federal laws, rules, and regulations governing national wildlife refuges and the area described in this permit. The permittee shall comply with all instructions applicable to this permit issued by the refuge official in charge. The permittee shall take all reasonable precautions to prevent the escape of fires and to suppress fires and shall render all reasonable assistance in the suppression of refuge fires.
- 3) Use Limitations: The permittee's use of the described premises is limited to the purposes herein specified and does not, unless provided for in this permit, allow him/her to restrict other authorized entry onto his/her area; and allows the U.S. Fish and Wildlife Service to carry on whatever activities are necessary for: (1) protection and maintenance of the premises and adjacent lands administered by the U.S. Fish and Wildlife Service; and (2) the management of wildlife and fish using the premises and other U.S. Fish and Wildlife Service lands.
- 4) Transfer of Privileges: This permit is not transferable, and no privileges herein mentioned may be sublet or made available to any person or interest not mentioned in this permit. No interest hereunder may accrue through lien or be transferred to a third party without the approval of the Regional Director of the U.S. Fish and Wildlife Service and the permit shall not be used for speculative purposes.
- 5) Compliance: The U.S. Fish and Wildlife Service's failure to require strict compliance with any of this permit's terms, conditions, and requirements shall not constitute a waiver or be considered as a giving up of the U.S. Fish and Wildlife Service's right to thereafter enforce any of the permit's terms or conditions.
- 6) Conditions of Permit not Fulfilled: If the permittee fails to fulfill any of the conditions and requirements set forth herein, the U.S. Fish and Wildlife Service shall retain all money paid under this permit to be used to satisfy as much of the permittee's obligation as possible.
- 7) Payments: All payment shall be made on or before the due date to the local representative of the U.S. Fish and Wildlife Service by a postal money order or check made payable to the U.S. Fish and Wildlife Service.
- 8) Termination Policy: At the termination of this permit the permittee shall immediately give up possession to the U.S. Fish and Wildlife Service representative, reserving, however, the rights specified in paragraph 11 below. If he/she fails to do so, he/she will pay the U.S. Fish and Wildlife Service, as liquidated damages, an amount double the rate specified in this permit for the entire time possession is withheld. Upon yielding possession, the permittee will still be allowed to reenter as needed to remove his/her property as stated in paragraph 11 below. The acceptance of any fee for the liquidated damages or any other act of administration relating to the continued tenancy is not to be considered as an affirmation of the permittee's action nor shall it operate as a waiver of the U.S. Fish and Wildlife Service's right to terminate or cancel the permit for the breach of any specified condition or requirement.
- 9) Revocation Policy: The Regional Director of the U.S. Fish and Wildlife Service may revoke this permit without notice for noncompliance with the terms hereof, or for violation of general and/or specific laws or regulations governing national wildlife refuges, or for nonuse. It is at all times subject to discretionary revocation by the Director of the Service. Upon such revocation the U.S. Fish and Wildlife Service, by and through any authorized representative, may take possession of said premises for its own and sole use, and/or may enter and possess the premises as the agent of the permittee and for his/her account.
- 10) Damages: The U.S. Fish and Wildlife Service shall not be responsible for: any loss or damage to property including but not limited to crops, animals, and machinery; injury to the permittee or his/her relatives or to the officers, agents, employees, or any other(s) who are on the premises from instructions; the sufferance from wildlife or employees or representatives of the U.S. Fish and Wildlife Service carrying out their official responsibilities. The permittee agrees to hold the U.S. Fish and Wildlife Service harmless from any and all claims for damages or losses that may arise to be incident to the flooding of the premises resulting from any associated government river and harbor, flood control, reclamation, or Tennessee Valley Authority activity.
- 11) Removal of Permittee's Property: Upon the expiration or termination of this permit, if all rental charges and/or damage claims due to the U.S. Fish and Wildlife Service have been paid, the permittee may, within a reasonable period as stated in the permit or as determined by the U.S. Fish and Wildlife Service official in charge, but not to exceed 60 days, remove all structures, machinery, and/or equipment, etc., from the premises for which he/she is responsible. Within this period the permittee also must remove any other of his/her property including his/her acknowledged share of products or crops grown, cut, harvested, stored, or stacked on the premises. Upon failure to remove any of the above items within the aforesaid period, they shall become the property of the U.S. Fish and Wildlife Service.



General Activities Special Use Permit Application

OMB Control # 1018-0102
Expiration Date: 08/31/2020

1

Refuge:
Address:
Attn: (Refuge Official)
E-Mail:
Phone #:

For Official Use Only:

Permit #:
Station #:
Permit Term: from to

Note: We do not require all information for each use. See instructions at the end of the notice and contact the refuge identified above to determine applicability of a particular item. Attach additional sheets to the application if the text spaces provided are inadequate.

- 1a) Identify the type of Permit you are applying for: New ☒ Renewal ☐ Modification ☐ Other ☐
1b) Have you applied, or do you intend to apply, to any other refuges for this same activity? ☐ Yes ☒ No
1c) If yes, which refuges?

Applicant Information

- 2) Full Name: 3) Organization:
4) Physical Address:
City/State/Zip:
5) Mailing Address:
City/State/Zip:
6) Phone #: 7) Fax #:
8) E-mail:

- 9) List **known** assistants/subcontractors/subpermittees: (Only required if the assistants/subcontractors/subpermittees will be operating on the refuge without the permittee being present.)

Name/Business	Address	Phone #

Activity Information

- 10a) Choose an Activity: Special Access ☐ Construction ☒ Event ☐ Cabins/Subsistence ☐ Group Visit ☐
Educational Activity ☐ Ceremonial Activity ☐ Wood Cutting ☐ Trapping ☐ Mapping/Survey ☐ Other ☐
10b) Specify type of activity if 'Other' was chosen:

Logistics and Transportation

Note: Not all information is required for each use. Please contact the specific refuge where the activity is being conducted to determine what information is required. Attach additional sheets to the application if the text spaces provided are inadequate.

20) Does activity require personnel to stay overnight onsite? Yes ☐ No ☒

21) List names of personnel involved:

List Names	List Names	List Names

22) Specifically describe all major equipment/gear and materials used, if required:

Equipment: back hoe, front end loader, dump truck, bull dozer
Materials: fill, rock rip rap, geo-fabric, and culvert pipe

23a) Provide detailed information on the logistics for onsite, intersite, and/or ship-to-shore transportation to or on the refuge, if required:

Contractor will provide all of the equipment and materials. Equipment or other materials will NOT be stored on USFWS Waterfowl Production Areas or USFWS grassland easement properties.

23b) Provide descriptions, license plate, or I.D. numbers of vehicles used for onsite, intersite, and/or ship-to-shore transportation, if required:

Type of transportation (onsite, intersite, or ship-to-shore)	Equipment Type	License/I.D./Registration Numbers

24) Specifically describe onsite work and/or living accommodations:

A shallow temporary berm will be constructed within the water to create a dry working environment. The contractor will install fill, geo-fabric, and/or rip rap and repair erosion. Once permanent erosion control is installed and erosion repairs are complete, the temporary berm will be removed. Project work and reclaiming/restoring temporarily impacted areas will be complete within 30 days.

25) Specifically describe onsite hazardous material storage or other onsite material storage space:

No hazardous materials are anticipated to be stored on site.

Sign, date, and print this form and return it to the refuge for processing. By signing this application, I agree my operations will conform to the information I have provided in this application, and I understand that any deviations or changes to this information must receive prior written approval.

26) Signature of Applicant:  Date of Application: 10-24-17

4) Transfer of Privileges: This permit is not transferable, and no privileges herein mentioned may be sublet or made available to any person or interest not mentioned in this permit. No interest hereunder may accrue through lien or be transferred to a third party without the approval of the Regional Director of the U.S. Fish and Wildlife Service and the permit shall not be used for speculative purposes.

5) Compliance: The U.S. Fish and Wildlife Service's failure to require strict compliance with any of this permit's terms, conditions, and requirements shall not constitute a waiver or be considered as a giving up of the U.S. Fish and Wildlife Service's right to thereafter enforce any of the permit's terms or conditions.

6) Conditions of Permit not Fulfilled: If the permittee fails to fulfill any of the conditions and requirements set forth herein, the U.S. Fish and Wildlife Service shall retain all money paid under this permit to be used to satisfy as much of the permittee's obligation as possible.

7) Payments: All payment shall be made on or before the due date to the local representative of the U.S. Fish and Wildlife Service by a postal money order or check made payable to the U.S. Fish and Wildlife Service.

8) Termination Policy: At the termination of this permit the permittee shall immediately give up possession to the U.S. Fish and Wildlife Service representative, reserving, however, the rights specified in paragraph 11 below. If he/she fails to do so, he/she will pay the U.S. Fish and Wildlife Service, as liquidated damages, an amount double the rate specified in this permit for the entire time possession is withheld. Upon yielding possession, we will still allow the permittee to reenter as needed to remove his/her property as stated in paragraph 11 below. The acceptance of any fee for the liquidated damages or any other act of administration relating to the continued tenancy is not to be considered as an affirmation of the permittee's action nor shall it operate as a waiver of the U.S. Fish and Wildlife Service's right to terminate or cancel the permit for the breach of any specified condition or requirement.

9) Revocation Policy: The Regional Director of the U.S. Fish and Wildlife Service may revoke this permit without notice for noncompliance with the terms hereof, or for violation of general and/or specific laws or regulations governing national wildlife refuges, or for nonuse. It is at all times subject to discretionary revocation by the Director of the Service. Upon such revocation the U.S. Fish and Wildlife Service, by and through any authorized representative, may take possession of said premises for its own and sole use, and/or may enter and possess the premises as the agent of the permittee and for his/her account.

10) Damages: The U.S. Fish and Wildlife Service shall not be responsible for: any loss or damage to property including but not limited to crops, animals, and machinery; injury to the permittee or his/her relatives, or to the officers, agents, employees, or any other(s) who are instructed to be on the premises; the sufferance from wildlife or employees or representatives of the U.S. Fish and Wildlife Service carrying out their official responsibilities. The permittee agrees to hold the U.S. Fish and Wildlife Service harmless from any and all claims for damages or losses that may arise to be incident to the flooding of the premises resulting from any associated government river and harbor, flood control, reclamation, or Tennessee Valley Authority activity.

11) Removal of Permittee's Property: Upon the expiration or termination of this permit, if all rental charges and/or damage claims due to the U.S. Fish and Wildlife Service have been paid, the permittee may, within a reasonable period as stated in the permit or as determined by the U.S. Fish and Wildlife Service official in charge, but not to exceed 60 days, remove all structures, machinery, and/or equipment, etc., from the premises for which he/she is responsible. Within this period the permittee also must remove any other of his/her property including his/her acknowledged share of products or crops grown, cut, harvested, stored, or stacked on the premises. Upon failure to remove any of the above items within the aforesaid period, they shall become the property of the U.S. Fish and Wildlife Service.

INSTRUCTIONS FOR COMPLETING APPLICATION

You may complete the application portion verbally, in person, or electronically and submit to the refuge for review. Note: Please read instructions carefully as not all information is required for each activity. Contact the specific refuge headquarters office where the activity is going to be conducted to determine applicability of a particular item. We may add special conditions or permit stipulations to permit prior to approval.

1a-1c) Identify if permit application is for new, renewal, or modification of an existing permit, whether or not you have or will be applying to another refuge for the same activity, and for which refuge(s). Permit renewals may not need all information requested. Contact the specific refuge headquarters office where the activity is going to be conducted if you have questions regarding the applicability of a particular item.

2-8) Provide full name, organization (if applicable), physical and/or mailing address, phone, fax, and e-mail.

9) Provide known names and addresses of assistants, subcontractors or subpermittees. Names and address are only required if the assistants, subcontractors or subpermittees will be operating on the refuge without the permittee being present. Volunteers, assistants, subcontractors or subpermittees that are accompanied by the permittee need not be identified.

10a) Activity type: check one of the following categories:

- Special Access;
- Construction;
- Event;

Missile Road Project- Project ROM 0300(315)

<u>Site</u>	<u>Twp, Range, Section</u>	<u>Temp Permit N</u>	<u>Wetland Easement</u>	<u>Grassland Easement</u>	<u>WPA</u>
J10-1	156-88-5	Yes	Mountrail 12X,1		
J10-3	157-88-22,23	Yes	Mountrail 72X,1		
J10-4	157-88-22, 23	Yes	Mountrail 72X,1		
K6S-1	157-88-6	Yes	Mountrail 47X,1-3	479G,1-3	
K6S-2	157-88-6	Yes	Mountrail 47X,1-3		
K6S-3	157-88-1,6	Yes	Mountrail 47X-4,5-8, Mountrail 47X,1-3		
K6S-4	158-88-31	Yes	Mountrail 47X,1-3		
K6S-5	158-88-31	Yes	Mountrail 47X,1-3		
K6S-6	158-88-31	Yes	Mountrail 47X,1-3		
K6S-8	158-88-30	Yes	Mountrail 47X-9	Mountrail 446G,1	
K6S-9	158-88-30	Yes	Mountrail 445X,1		
K6N-1	158-88-30, 19	Yes	Mountrail 445X,1, Mountrail 217X		
K6N-2	158-89-24 & 158-88-19	Yes	Mountrail 562X, Mountrail 217X		
K6N-4	158-89-12	Yes	Mountrail 561X		
K7-1	158-89-31,32	Yes	Mountrail 221X, Mountrail 222X,1,2		Lundt WPA
K7-2	158-89-29	Yes			Lundt WPA
K7-3	158-89-29	Yes			
K7-4	158-89-19,20	Yes	Mountrail 284X,1, Mountrail 278X, Mountrail 284X,1		
K7-6	158-89-20	Yes	Mountrail 284X,1		
K10-8	158-89-17	Yes	Mountrail 519X		
K10-9	158-89-8	Yes	Mountrail 519X,1		
K10-1	159-91-11	Yes	Mountrail 398X,1,2		
K10-2	159-90-7	Yes	Mountrail 256X,1	Mountrail 389G,1	

293X

291X

11X

15608805

15608804

19X,1,2

12X,1

33a 33b

J10-1

N

15608808

15608809

19X

Legend

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- RGB
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- Green_Band_2
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15708815

15708814

15X

15708822

15708823

72X.1



30a
30b

31a
31b

510-4

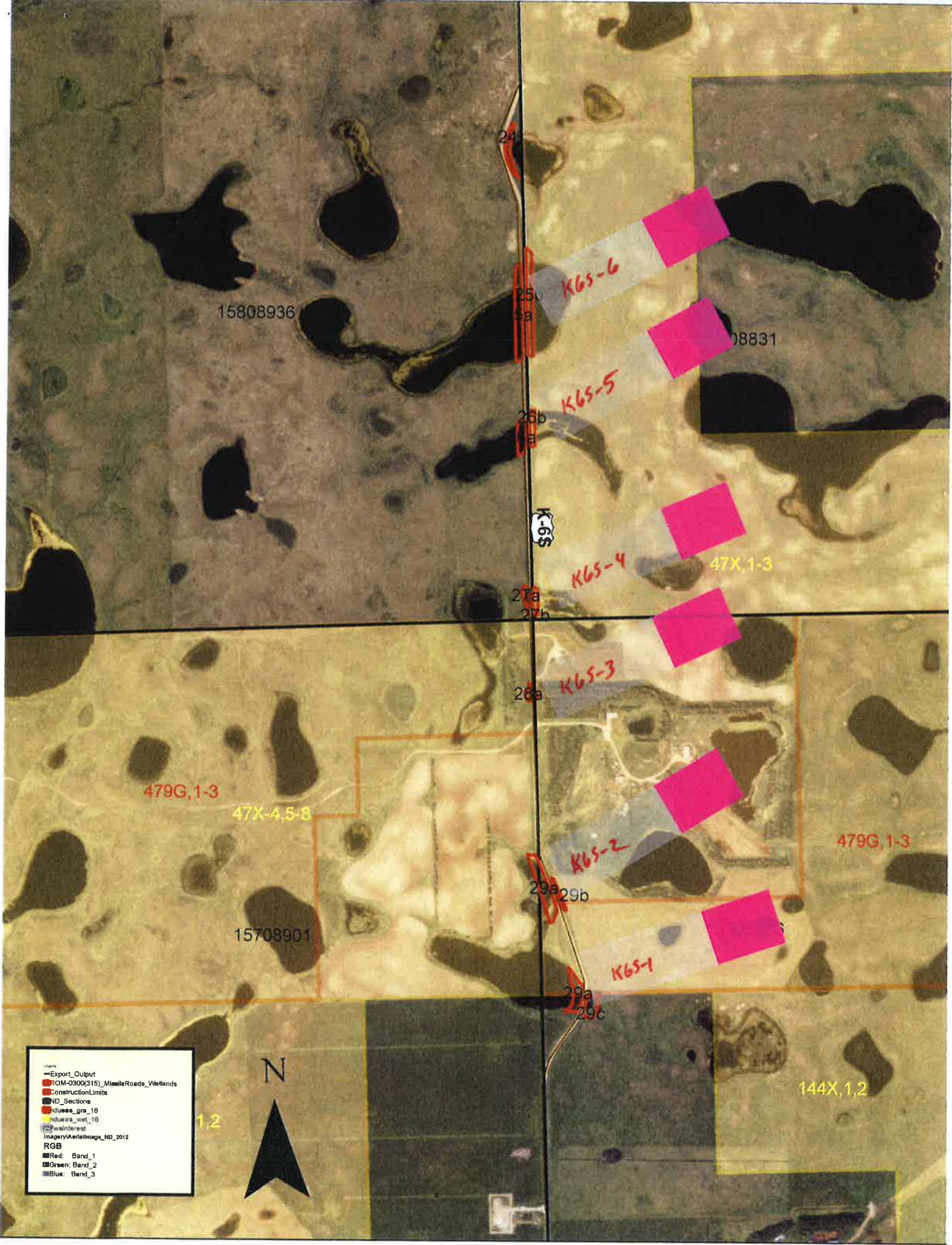
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562X

404X

20a
20b

K6N-2

15808924

K6N

217X

15808819

K6N-1

21

446X

446X

22b
22a

K6S-9

15808925

K6S

15808830

23b
23a

K6S-8

448X,1

448G

47X-9

446G,1

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395X

15808901

15808806

561X

K6N-4

18a

15808912

161

19a

19b

19c

407X,1,2

15808907

22X,1

210X-2,3

352X,1-3

15808818

15808

N



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15808919

16b 16a

K7-3

15808920

16c 16d

K7-2

16e

15808930

15808929

215X

Legend
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221X

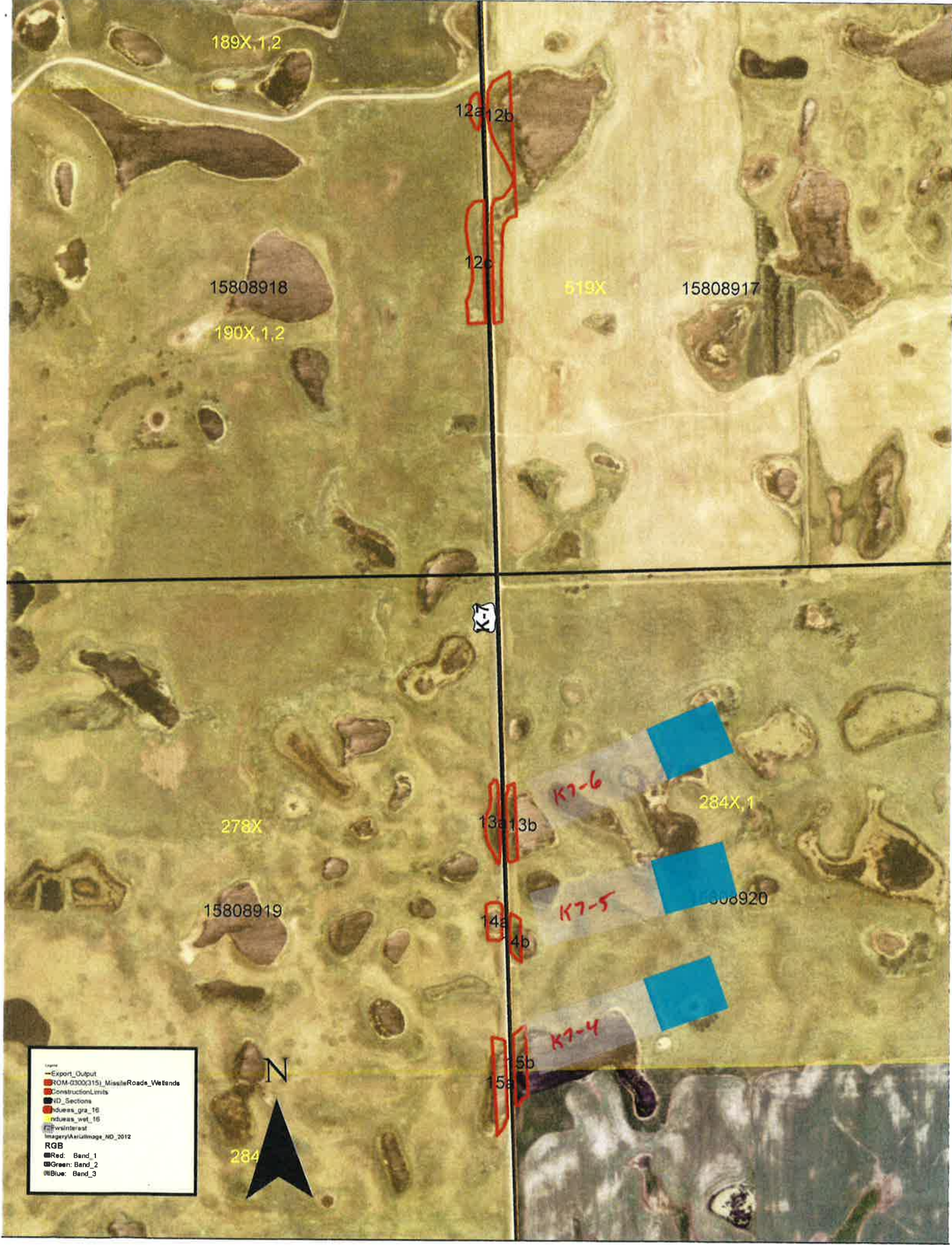
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K7-1

17a 17b

222X.1.2

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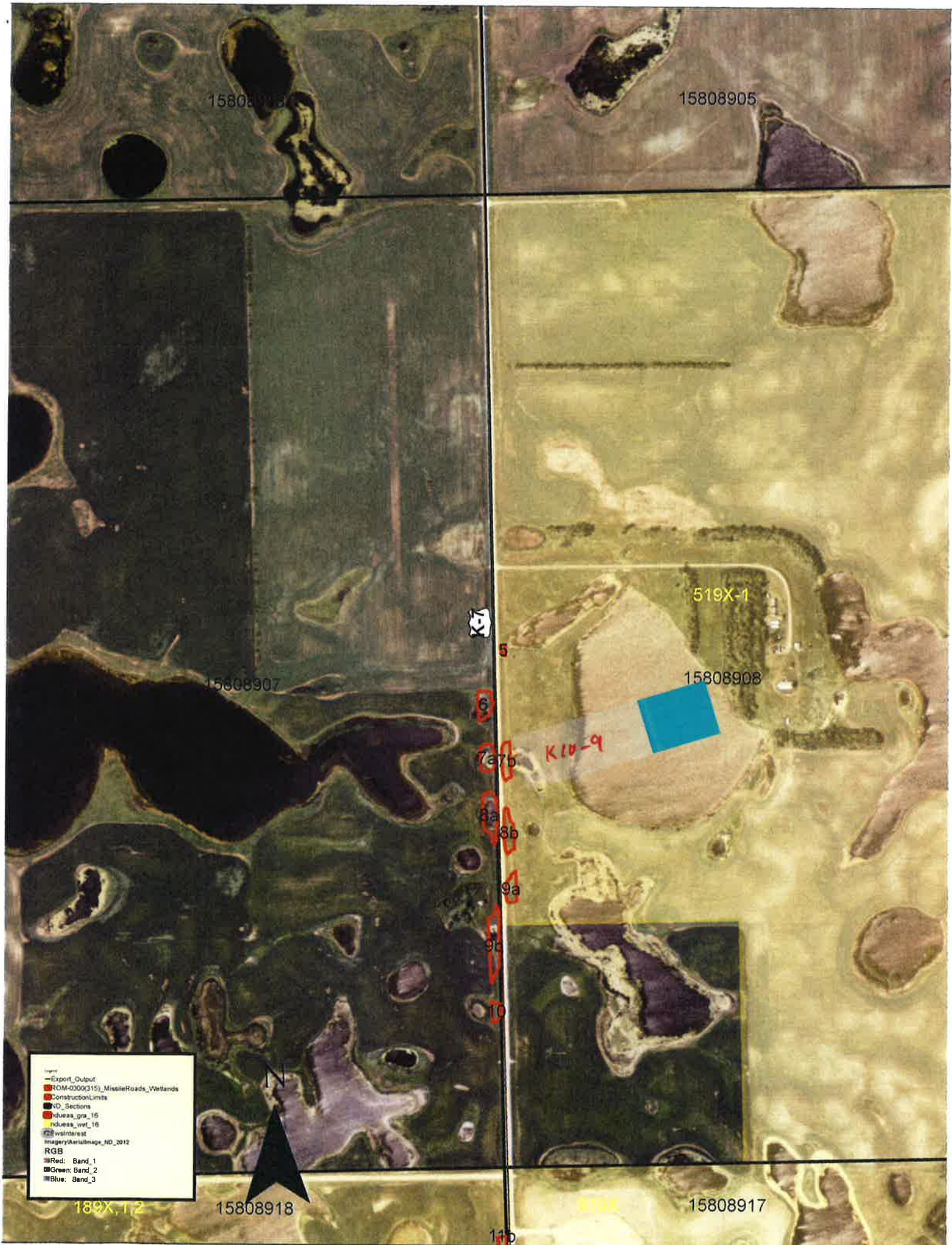
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15808905

15808905

15808907

519X-1

15808908

K10-9

5

6

7a7b

8a8b

9a

9b

10

N

189X, 1, 2

15808918

519X

15808917

11b

Legend
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Red: Band_1
Green: Band_2
Blue: Band_3



398X-1,2

15909102

15909101

K-10

1a

1b

K10-1

398G,1

398X

15909111

15909112

398X

47X

- Legend
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N

46X

15909006

15909101

2b

K10-2

3a

3b

15909007

15909112

256X,1

177X,1,2
447G,1

N



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- ndueas_wet_16
- WetlandInterest
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- RGB
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 - Green_Band_2
 - Blue_Band_3

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NOTES

100-P02	<p>FENCE REMOVAL: The Contractor will remove existing fences unless otherwise noted in the plans.</p> <p>The Contractor shall install temporary fence along the proposed right-of-way. A quantity of 3,476 linear feet has been provided to accommodate operations. The temporary fence shall meet the requirements of Standard Drawing D-752-1. The temporary fence shall be installed with connections made to the existing fence prior to removal of fencing within the right-of-way. All costs associated with this working, including the installation, removal and disposal of the temporary fence shall be included in the price bid for “Temporary Fence”.</p>		<p>Trenton Hieb Biologist in Ecosystem Services – Mitigation Ducks Unlimited (Great Plains Region) 2525 River Road Bismarck, ND 58503 Phone: 701-355-3573 Email: thieb@ducks.org</p> <p>0.27 acres of mitigation credit purchased as part of this project is for impacts at site K-10, Highway 20 in Burke County. Work at Site K-10 will be done as part of a separate construction project at a later date.</p>									
104-P01	<p>WATER LEVEL: The Contractor should be aware that the water levels on the projects are expected to change. NDDOT reserves the right to change grades and any other aspect of the work that are affected by the changing water level. The contractor’s unit bid prices for all bid items will be considered full compensation for that item regardless of the water elevation at the time of construction.</p> <p>It is the responsibility of the contractor to become informed in regards to the anticipated water level at the time of construction. The submission of a proposal will be considered conclusive evidence that the bidder is satisfied with the conditions to be encountered in performing the work and as to the requirements of the proposed work.</p>	107-P01	<p>ENVIRONMENTAL COMMITMENT: Contact the US Fish and Wildlife Service to confirm sources of water intended for use are not part of the USFWS refuge system, including wetland easements.</p> <p>Kory Richardson, Refuse Manager, Lostwood WMD Complex 8315 HWY 8, Kenmare, ND 58746 Office Phone: 701.848-2722</p>									
104-P02	<p>WETLAND MITIGATION CREDITS: Prior to beginning any work on the project the contractor shall purchase exactly 2.83 acre of wetland mitigation credits from Ducks Unlimited to satisfy the Environmental Commitments shown in Section 75 of the plans. No work shall begin on the project until a Credit Sales Letter from Ducks Unlimited is submitted to and accepted by The Army Corps Engineers.</p> <p>The wetland mitigation credits shall be purchased from the Missouri North Watershed mitigation site and the Souris River Watershed mitigation site. The details are:</p> <table><tr><td>Souris River</td><td>0.63 Credits @ \$68,000/credit =</td><td>\$ 42,840</td></tr><tr><td>Missouri North</td><td>2.20 Credits @ \$50,000/credit =</td><td>\$110,000</td></tr><tr><td>Total</td><td>2.83 Credits</td><td>\$152,840</td></tr></table> <p>The contact information to purchase the wetland mitigation credits from Ducks Unlimited is provided below:</p>	Souris River	0.63 Credits @ \$68,000/credit =	\$ 42,840	Missouri North	2.20 Credits @ \$50,000/credit =	\$110,000	Total	2.83 Credits	\$152,840	202-P01	<p>REMOVAL OF RIP RAP – LOOSE ROCK: Remove all material being used as rip rap. This includes Type II Rip Rap, large rock and broken up concrete.</p> <p>All this material will become the property of the contractor.</p> <p>If the contractor wishes to reuse the riprap, the riprap must meet Grade listed in plans.</p>
Souris River	0.63 Credits @ \$68,000/credit =	\$ 42,840										
Missouri North	2.20 Credits @ \$50,000/credit =	\$110,000										
Total	2.83 Credits	\$152,840										
		203-P01	<p>TOPSOIL AND IMPORTED TOPSOIL: Strip and stockpile the existing topsoil. Replace topsoil on new embankments that are not permanently protected with riprap, concrete blanket, or TRM. Supplement the existing topsoil with imported topsoil so the final topsoil depth is a 4 inches in depth. Payment for the existing topsoil will be made at the plan quantity for “Topsoil”. Payment for imported topsoil will be measured and paid for as “Imported Topsoil”.</p>									
		203-P02	<p>SHRINKAGE: 25 percent additional volume of borrow material is included for shrinkage in earth embankment above the water. 50 percent additional volume of material is included for shrinkage/loss in temporary berm construction.</p>									

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NOTES

- 203-P03

KEYWAY/BERM: Construct a temporary keyway/berm in areas where the foreslope extends into the water at locations shown in the plans. Remove the entire keyway berm. Remove the keyway/berm in its entirety at the pipe locations after the new pipe has been installed. Do not push the temporary embankment into the water.

The removed embankment may be incorporated within other areas of the project or it may be disposed of outside the highway right of way in accordance with Section 107.17 of the Standard Specifications. If the contractor elects to dispose of the removed keyway/berm embankment at the borrow site, the contractor shall notify the engineer to cross-section the borrow site prior to placing the waste embankment at the borrow site. If the contractor elects to incorporate the removed keyway/berm embankment within other areas on the project, the contractor will not be paid for this material a second time.
- 203-P04

SUBCUT: An additional 500 LF of subcut excavation has been included to be used at the discretion of the Engineer.
- 256-P01

RIPRAP-GRADE II: Place riprap immediately after embankment completion to minimize erosion potential.
- 262-P01

FLOTATION SILT CURTAIN: The plans require 4,000 LF of flotation silt curtain to be installed as perimeter sediment control in wetlands throughout the life of the project. 4,000 LF of flotation silt curtain has been provided and will be required to be moved as work progresses.

Install the flotation silt curtain prior to any ground disturbance at each required location. Move curtain from location to location as needed to complete the work. Do not move the flotation silt curtain until permanent erosion control has been installed on the disturbed area. Include installation and movement of the curtain from each location in the price bid for “ Flotation Silt Curtain” . Removal of flotation silt curtain will be paid for when the curtain is completely removed from the project.
- 704-P01

TRAFFIC CONTROL: Maintain one lane open to traffic at all times. Open the roadway to 2 way traffic at the end of each work day. Provide traffic control consisting of the following layouts:

1. Standard D-704-15, Layout Type A; 8 work sites, 16 flaggers

2. Standard D-704-20, Layout G; 8 project termini

3. Standard D-704-22, Layouts K; 2 truck entering layouts

4. Standard D-704-30; 2 windrow sites totaling 2 miles
- 708-P01

CONCRETE EROSION CONTROL BLANKET: Below is a list of suppliers that can supply the “CONCRETE EROSION CONTROL BLANKET”. Other suppliers will also be considered as approved equals.

- Product: CC 45
Forterra Pipe & Precast
925 Basin Avenue
Bismarck, ND 58504
(701) 223-7178

Product: ArmorFlex
Contech Engineered Solutions
P.O. Box 5322
Minnetonka, MN 55343 (800) 338-1122
(701) 202-0895

Product: UltraFlex M Series
Submar, Inc.
1711 Dunn St.
Houma, LA 70361
(800) 978-2627

714-P02

PIPE INSTALLATION: The Contractor will need to install the pipe, backfill the trench up to grade, and return traffic to normal by end of day's work. If the Contractor is unable to complete the centerline pipe replacement work in one working day, the area shall be made traversable for two lanes of traffic or flagged 24 hours per day. The Contractor must notify the Military 48 hours in advance of all pipe installation.

714-P03

EXISTING CENTERLINE PIPE: There is the possibility of existing centerline located within the work area. All centerline pipe will be removed and paid for as REMOVAL OF PIPE ALL TYPES AND SIZES.

714-P04

NEW PIPE INSTALLATION: Under Project No. ROM-0300(132) a new 24” Pipe Conduit was installed at site K6N - Site 3. The station location is unknown and the elevation is approximately 2290. This culvert is to remain in-place. The contractor will install the permanent inslope repair around the newly installed Pipe Conduit.
- This document was originally issued and sealed by Clifford R. Menting, Registration Number PE-8919, on 10/13/17 and the original document is stored at the North Dakota Department of Transportation.
- 10/10/2017 8:51:54 AM N:\20732\ROM-0300(135)\Design\Design Common\001_Upfront\006NT_001_notes.docm

ENVIRONMENTAL NOTES

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	ROM-0300(135)	6	3

ENVIRONMENTAL NOTES (EN): Mountrail County, North Dakota Department of Transportation, and the Federal Highway Administration have made environmental commitments to secure approval of this project. The following environmental notes are requirements to comply with these commitments:

EN-1: Unavoidable impacts to wetlands will be mitigated onsite, adjacent to the project, or at a NDDOT approved mitigation site or bank. The bank will be provided by ducks unlimited in the drainage basin for which the wetland impacts will occur.

EN-2 Temporary Wetland Impacts: Temporary impact areas within wetlands and or other waters are incorporated into the plans for this project. Remove all temporary fill placed and sedimentation in wetlands.

EN-3: NDPDES (North Dakota Pollutants Discharge Elimination System) permit to be obtained by the Contractor prior to construction. The owner will be Mountrail County.

EN-4: The contractor will notify the Project Engineer immediately in the event a piping plover or whooping crane is identified within one mile of the project. The Project Engineer will cease all construction activities, establish at least a 0.5 mile avoidance area, and immediately coordinate with the USFWS, FHWA, and the NDDOT Environmental and Transportation Services Biologist. The contractor will not resume work within the avoidance area until the Project Engineer has confirmed with the agencies that work may proceed (either species have left the area or approved minimization measures have been implemented).

EN-5: All spills must be immediately reported to this ND Department of Health, Project Engineer and appropriate remedial actions performed.

PAY SPECIAL ATTENTION TO THE FOLLOWING NOTES

EN-6: All temporary fill or other materials placed outside of road right-of-ways within USFWS properties (wetland easements, grassland easements and Waterfowl Protection Areas) must be restored to pre work condition within 30 days from the start of projects. Temporary fill will only be placed in areas authorized through the Special Use Permit.

EN-7: Contractor(s) will contact USFWS before project work begins and after project work is complete. Once restoration work has been completed the contractor will notify USFWS and arrange for an inspection of the area which should be completed before equipment is demobilized. The follow is a list of the USFWS easements:

Road	Site	USFWS Wetland Easement	USFWS Grassland Easement	Waterfowl Protection Area
J-10	Site 1	X		
J-10	Site 3	X		
J-10	Site 4	X		
K-6S	Site 1		X	
K-6S	Site 2	X		
K-6S	Site 3	X		
K-6S	Site 4	X		
K-6S	Site 5	X		
K-6S	Site 6	X		
K-6S	Site 8		X	
K-6S	Site 9	X		
K-6N	Site 2	X		
K-6N	Site 4	X		
K-7	Site 1	X		
K-7	Site 2			X
K-7	Site 3			X
K-7	Site 4	X		
K-7	Site 5	X		
K-7	Site 6	X		
K-7	Site 7	X		
K-7	Site 8	X		
K-7	Site 9	X		
K-7	Site 10	X		
K-10	Site 1		X	
K-10	Site 2	X		

EN-8: If questions related to wetlands or USFWS property interests arise during construction, the contractor is required to notify USFWS staff before adjustments to the engineering plans are made.

EN-9: Culverts which are proposed to be replaced will remain at the current elevation unless prior approval in writing has been granted by USFWS.

EN-10: If boundary fence or other property (i.e. survey pins, signs, etc.) are impacted on Waterfowl Production Areas (K-7 Sites 2 and 3), contractor will consult with the Wetland District Manager and repair and replace impacted property at the contractor’s expense.

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ENVIRONMENTAL NOTES

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
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EN-11: Storage of construction equipment or other materials is not allowed within USFWS Waterfowl Production Areas or USFWS grassland easement properties.

EN-12: Contractors will coordinate and insure proposed borrow site locations used in conjunction with the projects do not impact USFWS property interests. No borrow fill will be used from USFWS Waterfowl Production Areas or USFWS grassland easement properties.

EN-13: AQUATIC NUISANCE SPECIES (ANS): Equipment that was last used outside of North Dakota or within a Class I infested waterbody (identified on the North Dakota Game and Fish Department (NDGFD) website) requires an inspection by NDGFD. Notify the NDGFD at least 10 business days prior to pumps, watercraft, or any equipment entering a public water to allow the NDGFD sufficient time to inspect any and all such equipment for ANS. Contact the NDGFD ANS Coordinator, Jessica Howell by e-mail jmhowell@nd.gov for equipment inspections. Supply one of the following to the engineer as proof of compliance prior to work taking place in the water: (1) the NDGFD inspection report or, (2) documented NDGFD correspondence (email or signed letter). If an inspection is not required, no follow up documentation is required.

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Spec	Code	Description	Units	Quantity
103	0100	CONTRACT BOND	L SUM	1
201	0370	REMOVAL OF TREES 10IN	EA	4
202	0174	REMOVAL OF PIPE ALL TYPES AND SIZES	LF	551
202	0312	REMOVE EXISTING FENCE	LF	3,476
202	0400	REMOVAL OF RIPRAP - LOOSE ROCK	CY	2,182
203	0109	TOPSOIL	CY	2,786
203	0119	TOPSOIL-IMPORTED	CY	2,391
203	0138	COMMON EXCAVATION-SUBCUT	CY	492
203	0140	BORROW-EXCAVATION	CY	147,558
216	0100	WATER	M GAL	157
251	0200	SEEDING CLASS II	ACRE	3.164
251	2000	TEMPORARY COVER CROP	ACRE	3.164
253	0101	STRAW MULCH	ACRE	6.328
255	0202	TRM TYPE 2	SY	5,936
256	0200	RIPRAP GRADE II	CY	3,729
260	0100	SILT FENCE UNSUPPORTED	LF	1,284
260	0101	REMOVE SILT FENCE UNSUPPORTED	LF	1,284
261	0112	FIBER ROLLS 12IN	LF	8,522
261	0113	REMOVE FIBER ROLLS 12IN	LF	8,522
262	0100	FLOTATION SILT CURTAIN	LF	4,000
262	0101	REMOVE FLOTATION SILT CURTAIN	LF	4,000
302	0356	AGGREGATE SURFACE COURSE CL 13	TON	1,069
702	0100	MOBILIZATION	L SUM	1
704	0100	FLAGGING	MHR	4,896
704	1000	TRAFFIC CONTROL SIGNS	UNIT	5,644
704	1052	TYPE III BARRICADE	EA	10
704	1080	STACKABLE VERTICAL PANELS	EA	25
708	5810	CONCRETE EROSION CONTROL BLANKET	SY	14,580
709	0151	GEOSYNTHETIC MATERIAL TYPE R1	SY	6,053
709	0155	GEOSYNTHETIC MATERIAL TYPE RR	SY	26,690
714	3020	END SECT-CONC REINF 24IN	EA	2
714	4100	PIPE CONDUIT 18IN	LF	719
714	4105	PIPE CONDUIT 24IN	LF	377
714	4110	PIPE CONDUIT 30IN	LF	62
752	0905	TEMPORARY FENCE	LF	3,476
754	0110	FLAT SHEET FOR SIGNS-TYPE XI REFL SHEETING	SF	47
754	0206	STEEL GALV POSTS-TELESCOPING PERFORATED TUBE	LF	105
754	0805	OBJECT MARKERS - CULVERTS	EA	52
900	2001	Wetland Mitigation Site 1	ACRE	0.63
900	2002	Wetland Mitigation Site 2	ACRE	2.20

Revised	10/13/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	ROM-0300(135)	8	1

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Quantities

Unit Weights
Aggregate Base Course CL 5 @ 1.875 Tons/CY

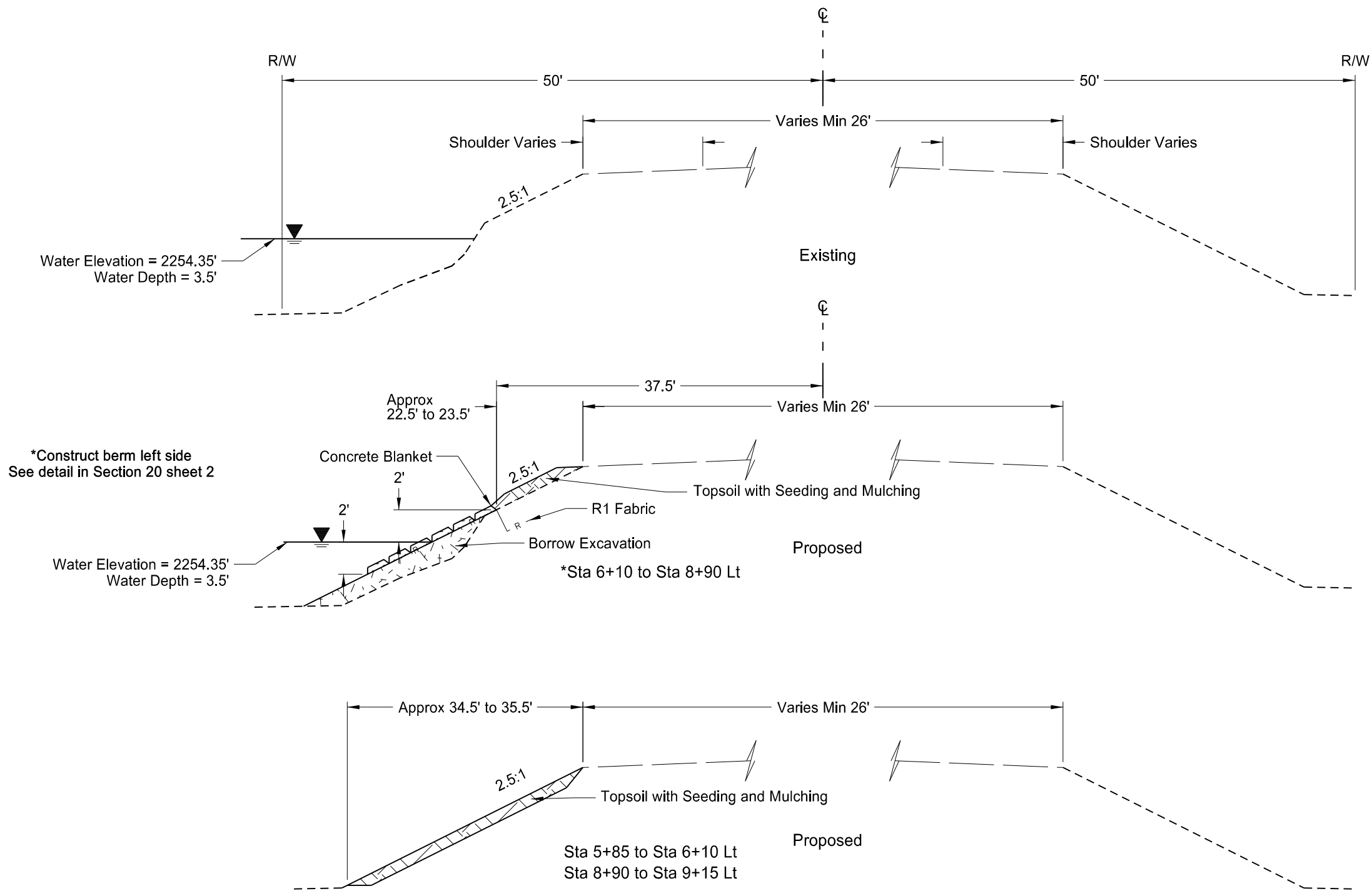
Water			
Description	Basis	Units	Mgal
10 Mgal/Mile for Dust Palliative	6	Miles	60.0
20 Gal/Ton for Aggregates	1069	Tons	21.4
10 Gal/CY for Embankment	7,561	CY	75.7
Project Total			157.1

Spec	Code	Material	Unit	Temporary	Permanent	Total
251	0200	Seeding Class II	Acre		3.164	3.164
251	2000	Temporary Cover Crop	Acre	3.164		3.164
253	0101	Straw Mulch	Acre	3.164	3.164	6.328

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Basis of Estimate

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		ND	ROM-0300(135)	30	2



Note: NTS.

Water levels will vary, those provided are as of 6/1/17.

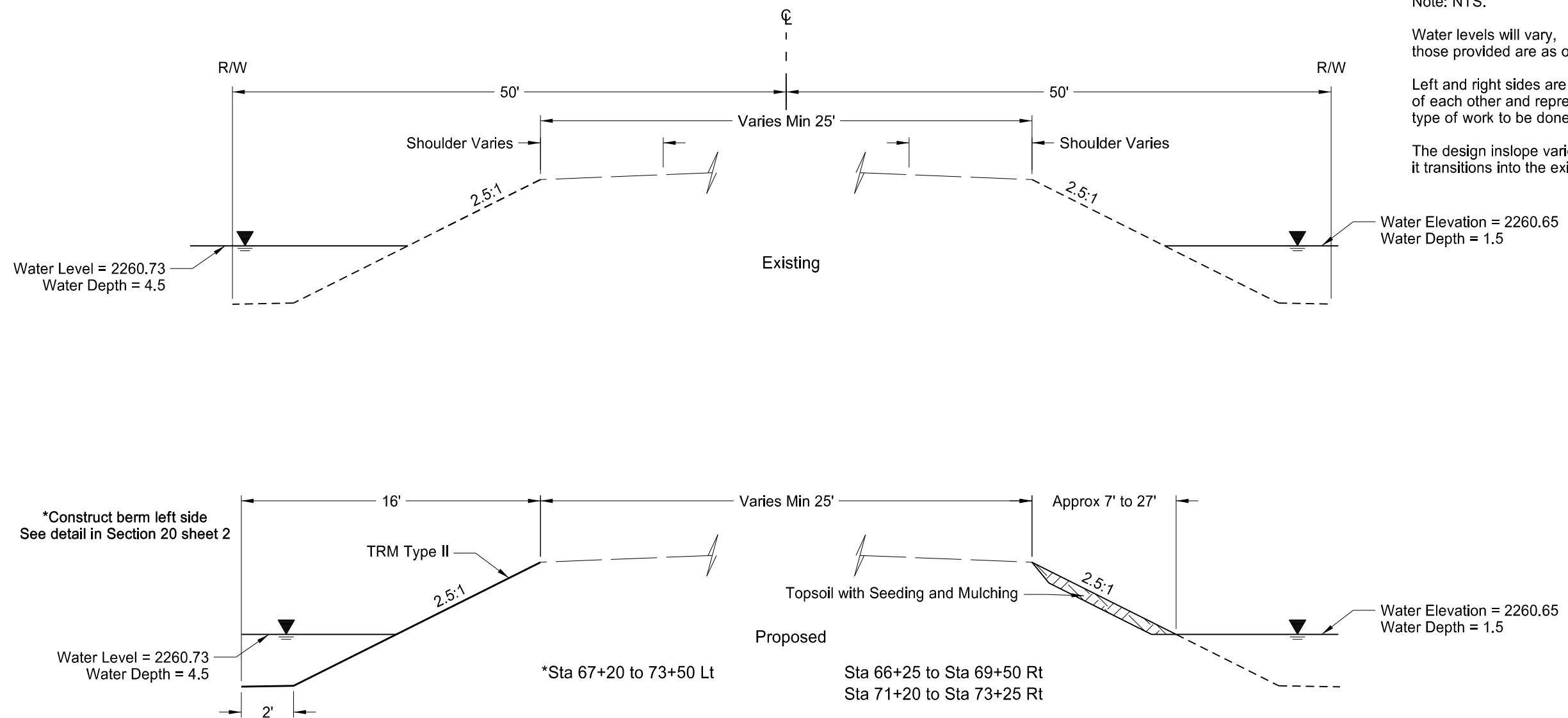
Left and right sides are independent of each other and represent the type of work to be done.

The design inslope varies for 25 ft. as it transitions into the existing inslope.

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J10-1
Typical Sections
Mountrail County

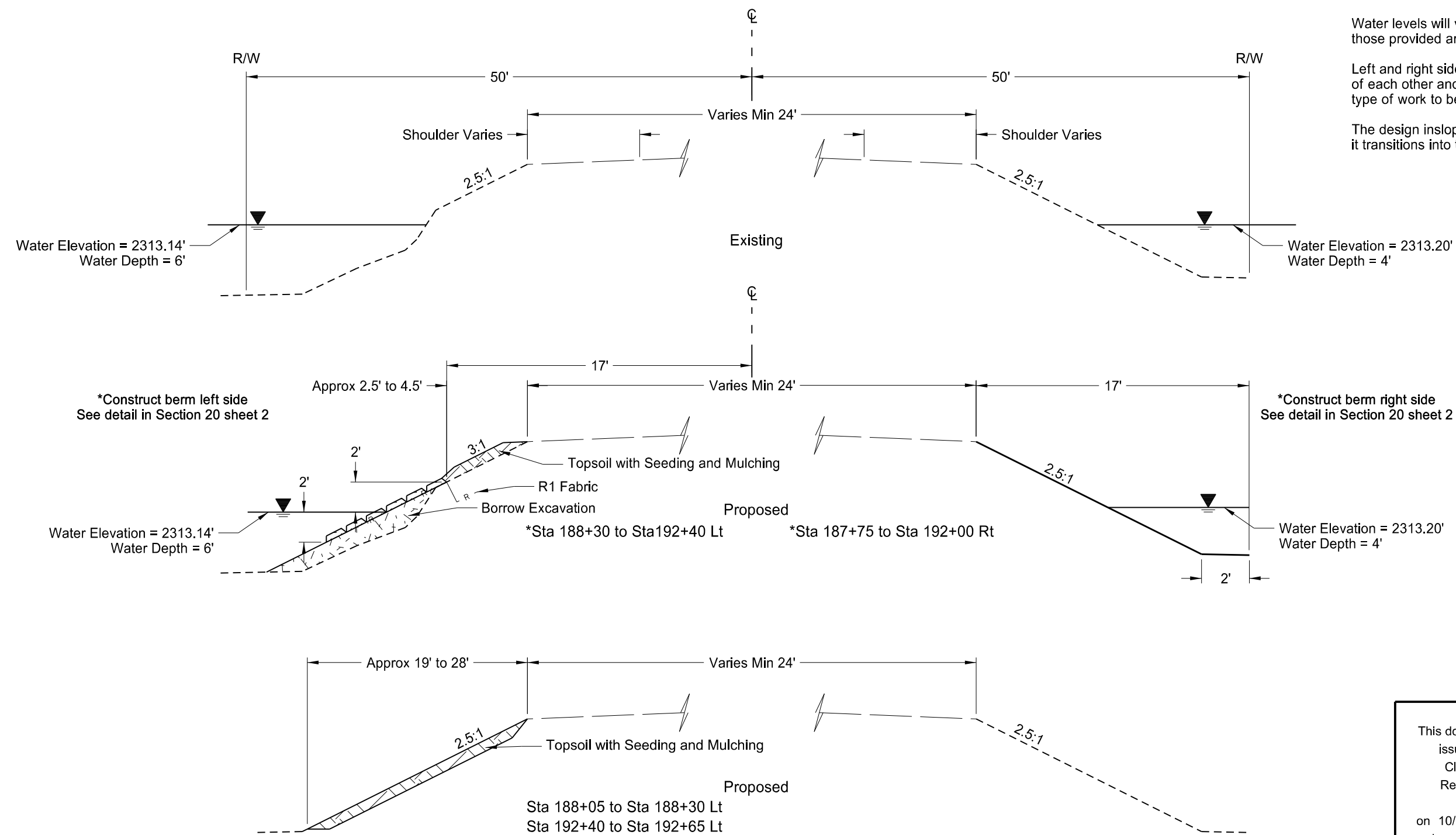
Revised	10/13/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	ROM-0300(135)	30	3



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J10-2
Typical Sections
Mountrail County

Revised	10/13/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	ROM-0300(135)	30	5



Note: NTS.

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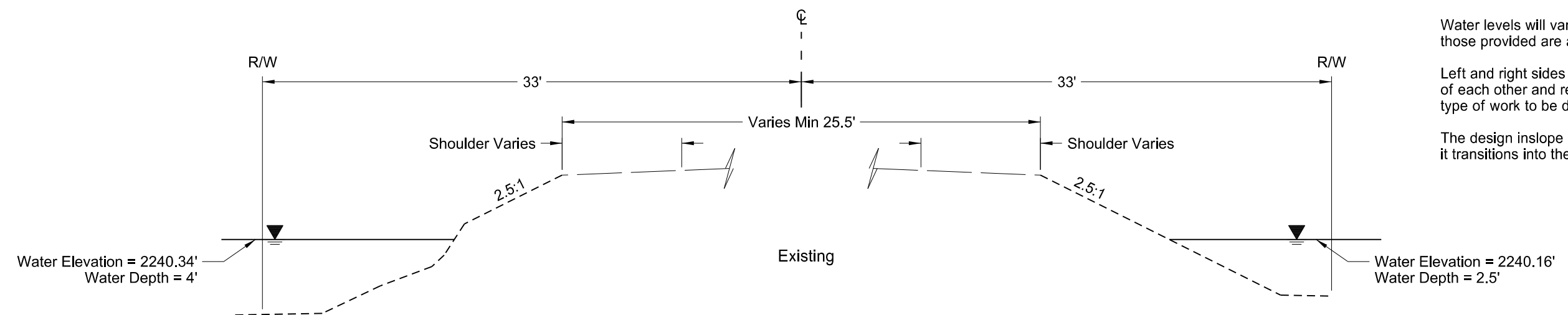
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J10-4
Typical Sections
Mountrail County

Revised	10/13/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	ROM-0300(135)	30	6

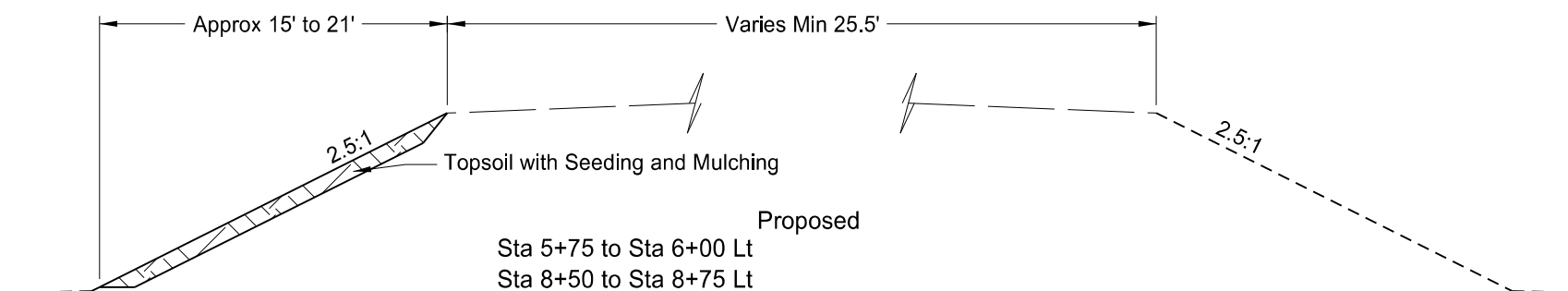
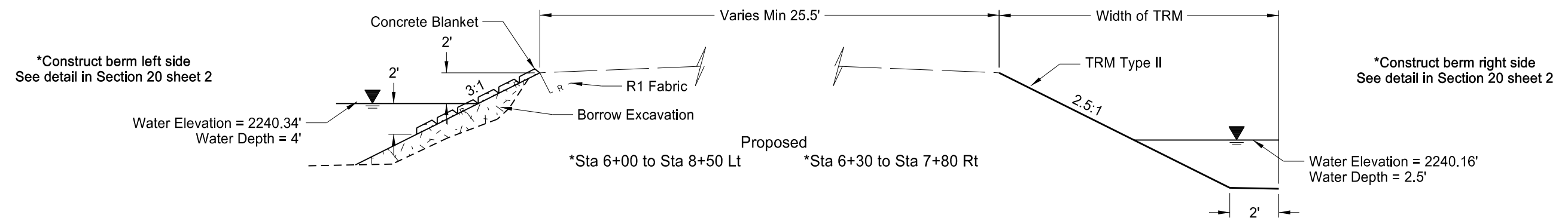


Note: NTS.

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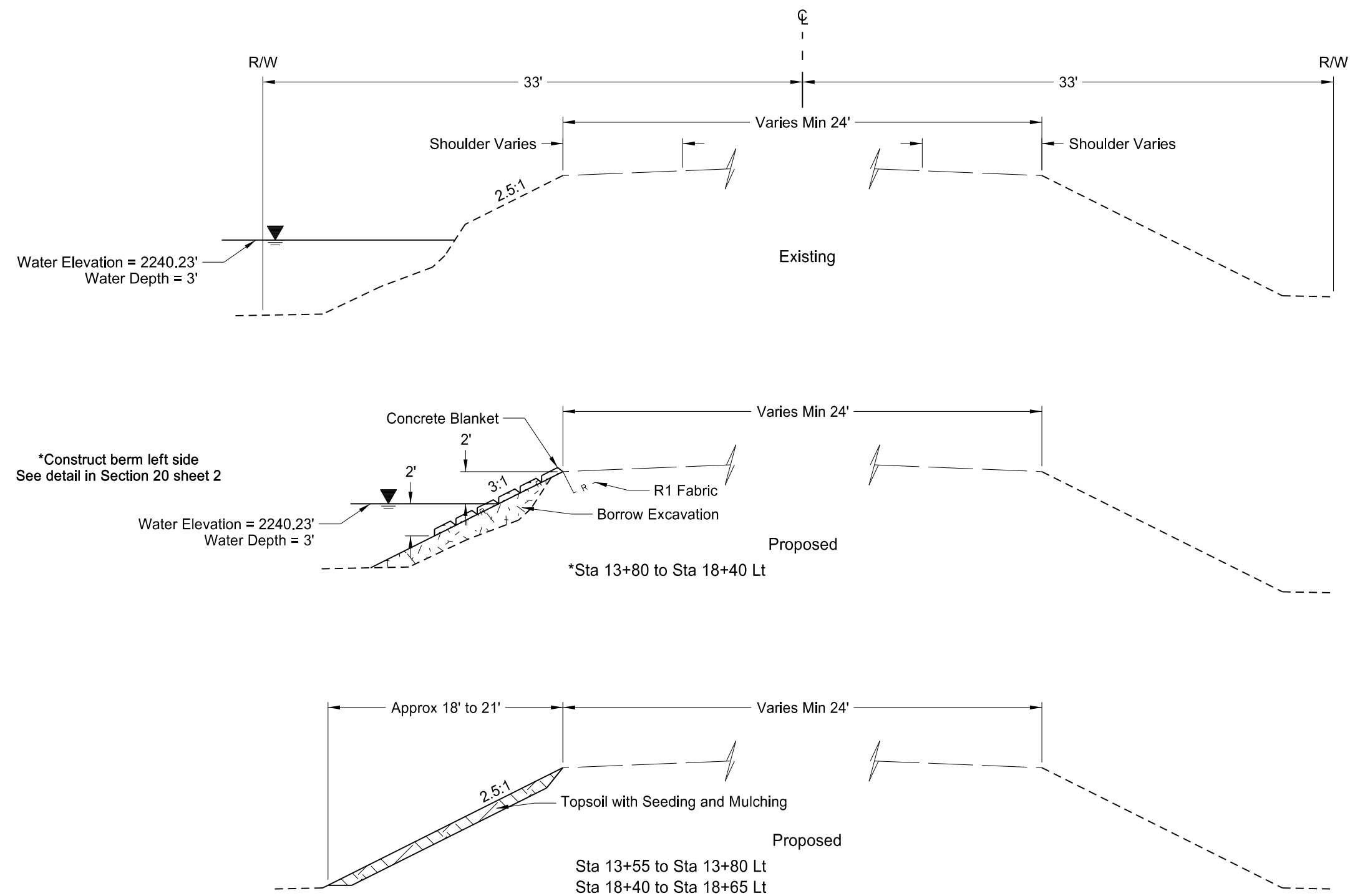
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K6S-1
Typical Sections
Mountrail County

Revised	10/13/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	ROM-0300(135)	30	7



Note: NTS.

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K6S-2
Typical Sections
Mountrail County

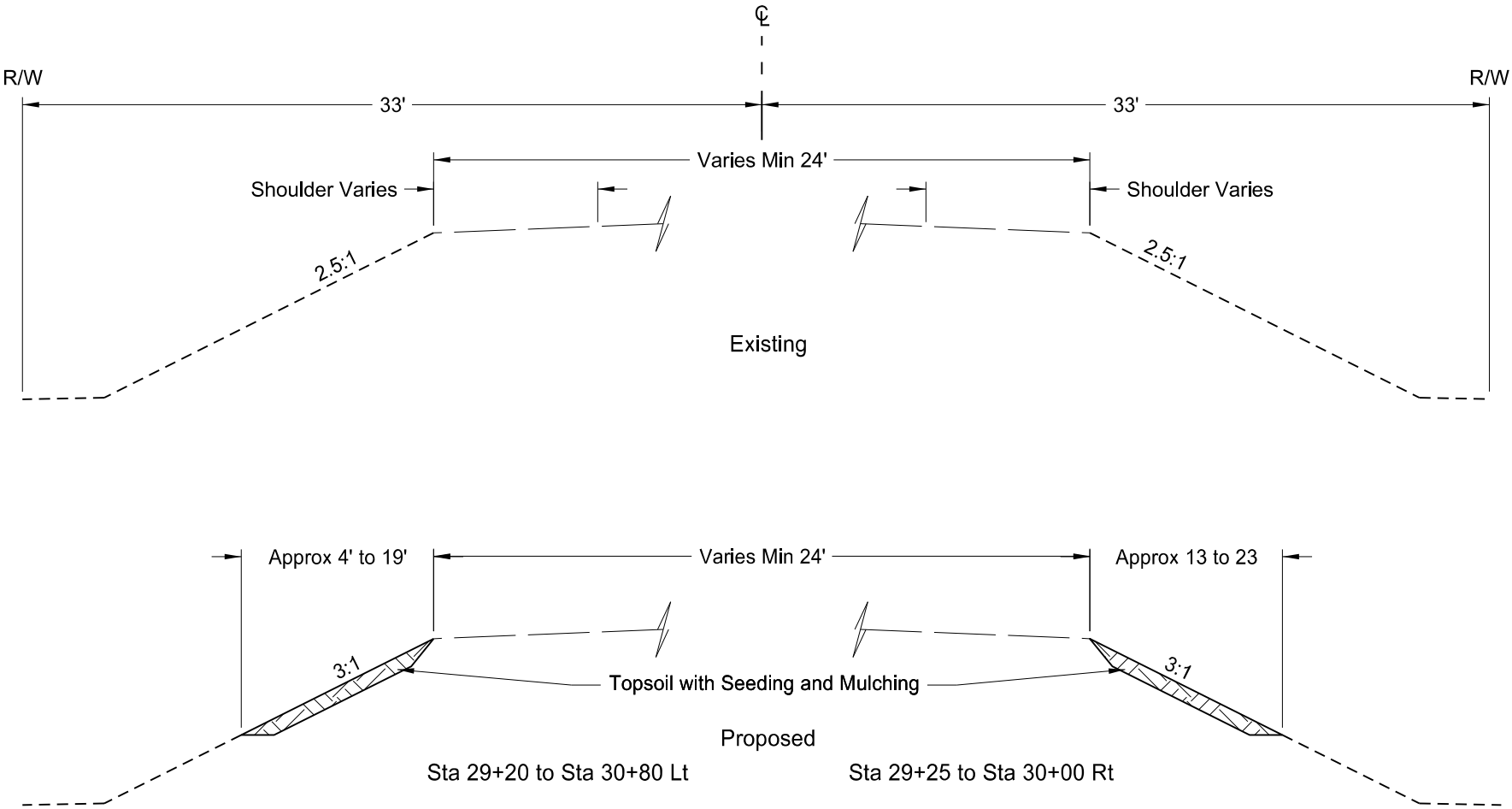
Revised	10/13/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	ROM-0300(135)	30	8

Note: NTS.

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K6S-3
Typical Sections
Mountrail County

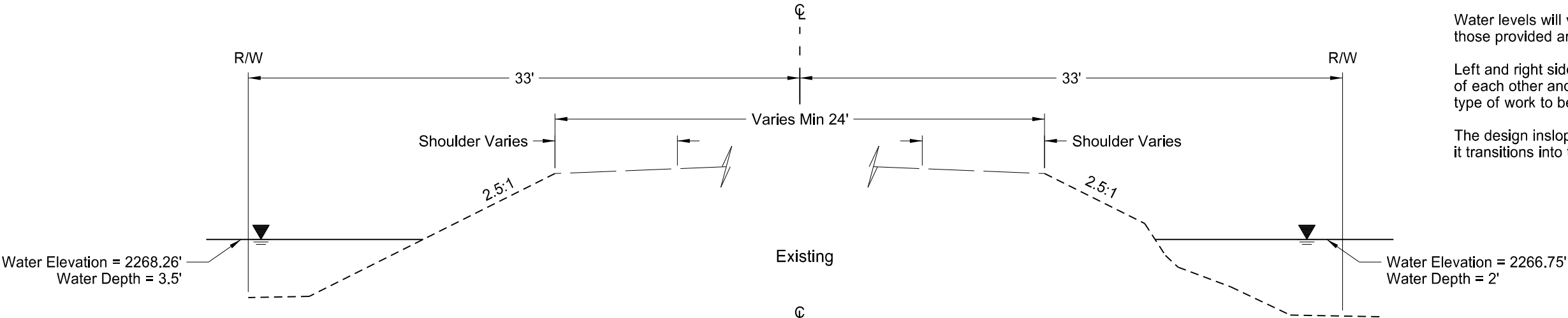
Revised	10/13/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	ROM-0300(135)	30	9

Note: NTS.

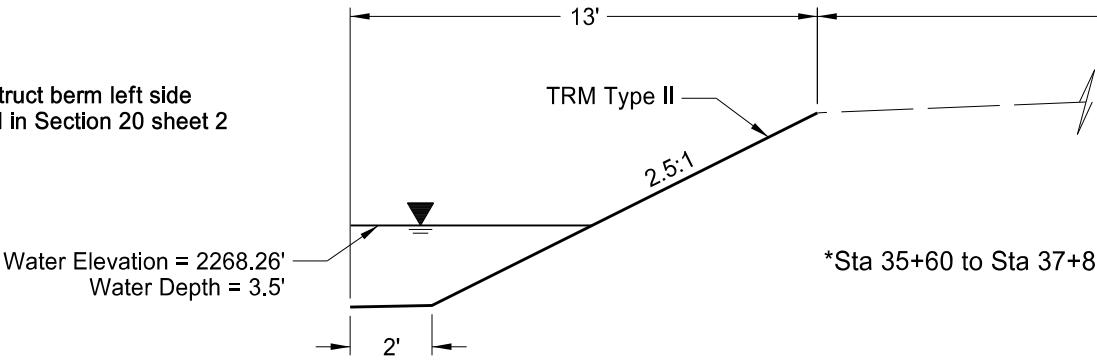
Water levels will vary, those provided are as of 6/1/17.

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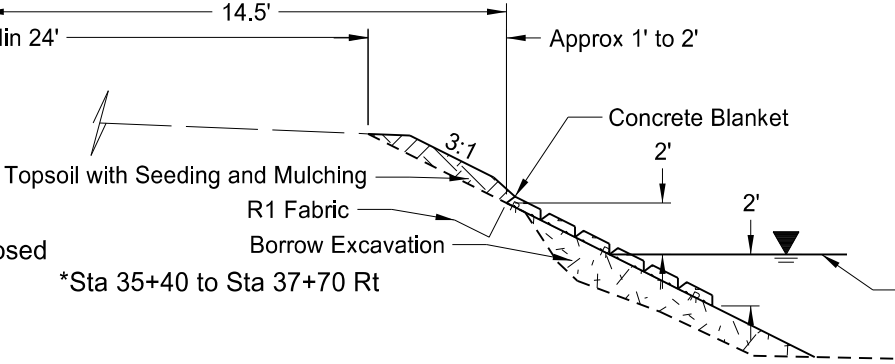
The design inslope varies for 25 ft. as it transitions into the existing inslope.



*Construct berm left side
See detail in Section 20 sheet 2

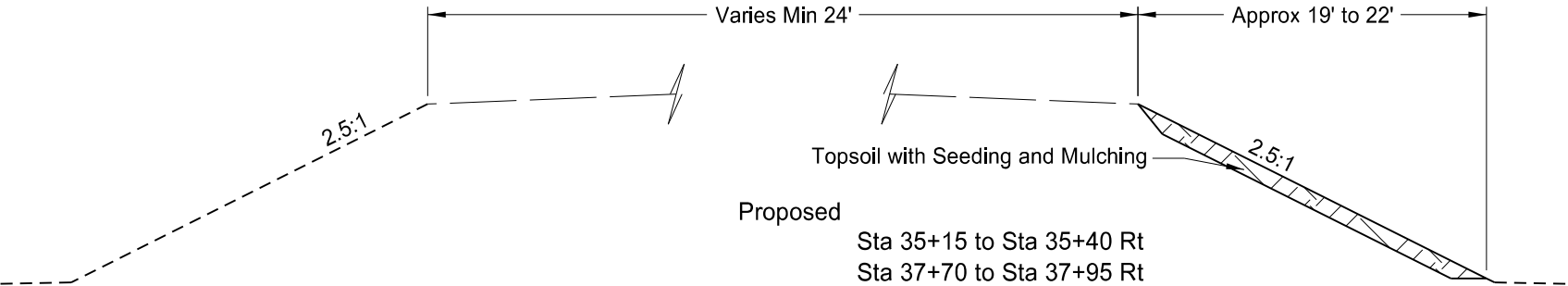


*Sta 35+60 to Sta 37+80 Lt



*Sta 35+40 to Sta 37+70 Rt

*Construct berm right side
See detail in Section 20 sheet 2

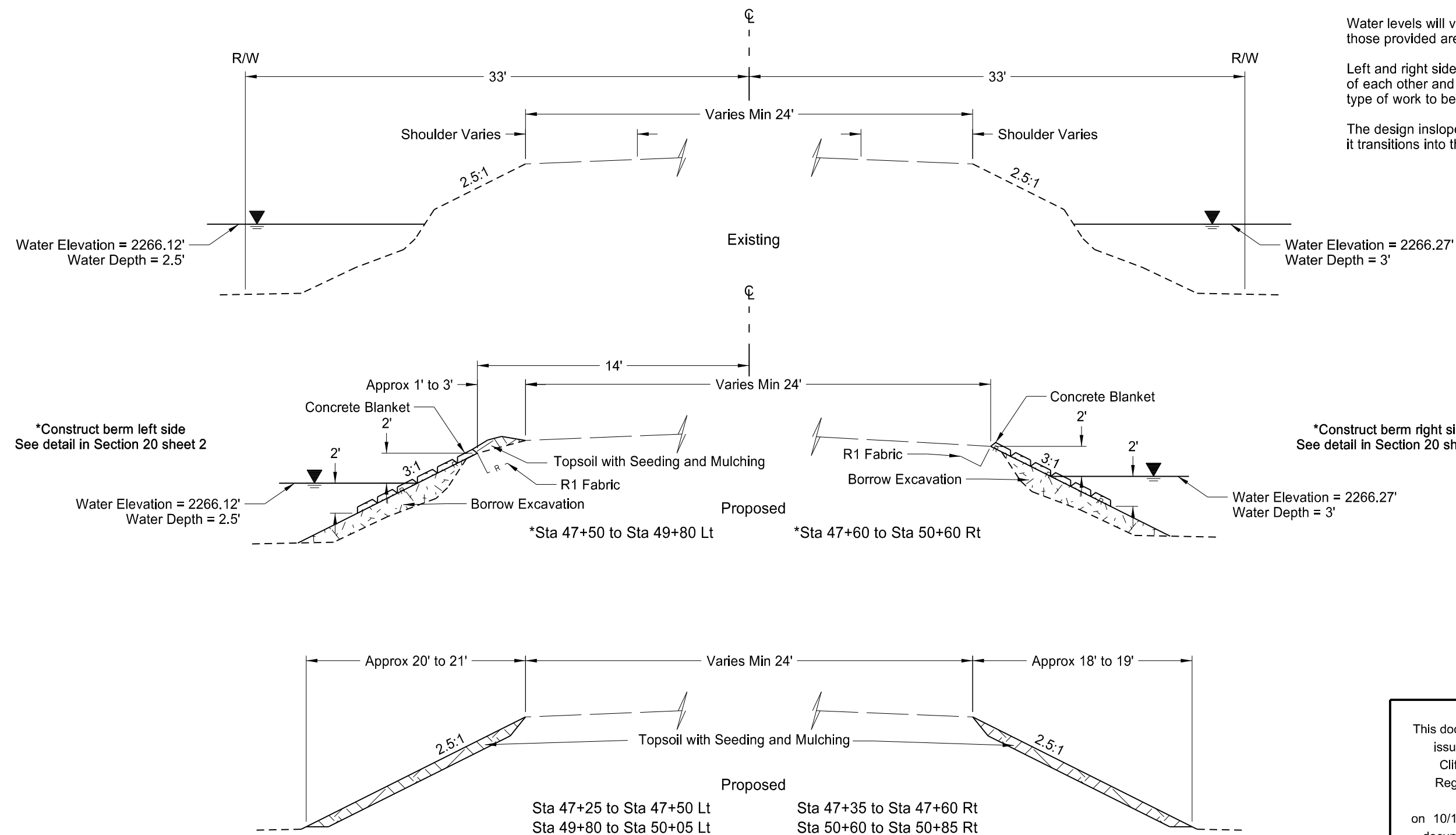


Sta 35+15 to Sta 35+40 Rt
Sta 37+70 to Sta 37+95 Rt

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K6S-4
Typical Sections
Mountrail County

Revised	10/13/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	ROM-0300(135)	30	10



Note: NTS.

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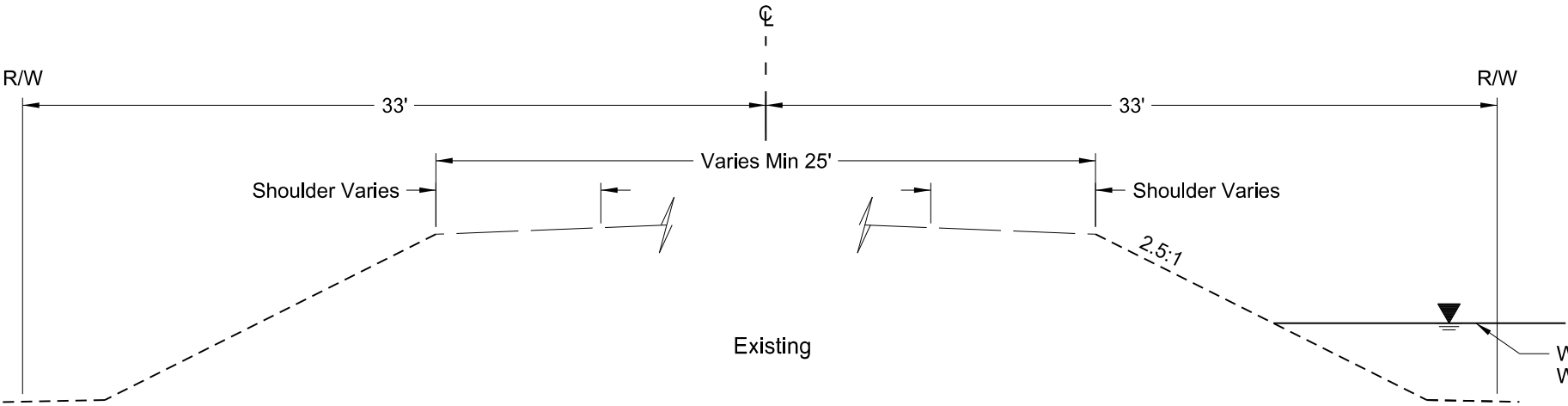
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K6S-5
Typical Sections
Mountrail County

Revised	10/13/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	ROM-0300(135)	30	12

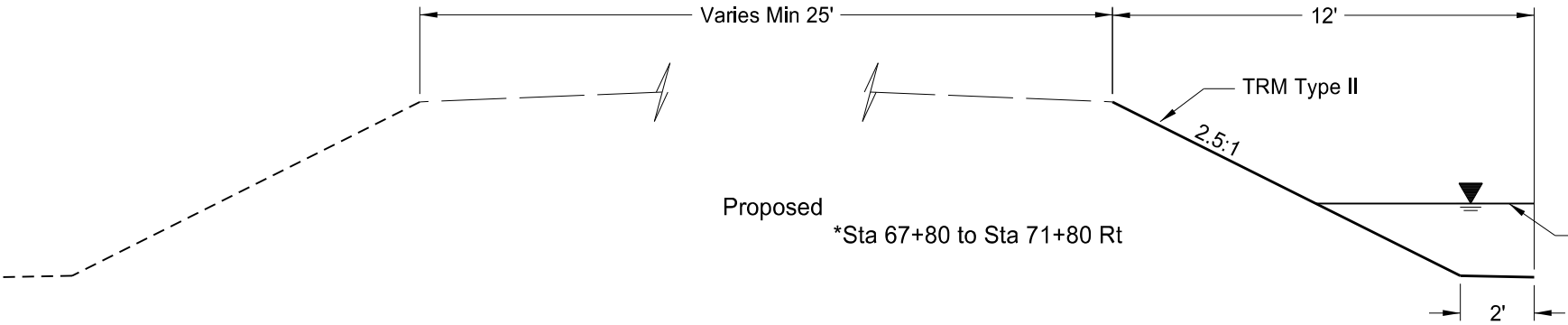


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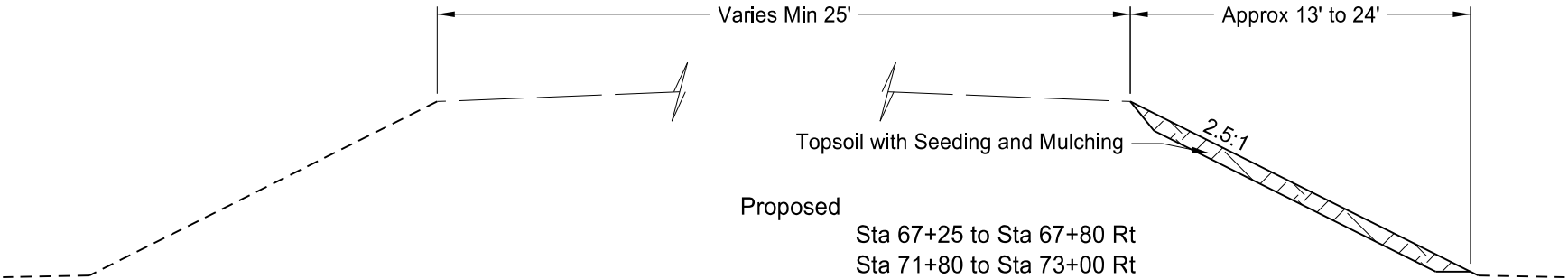
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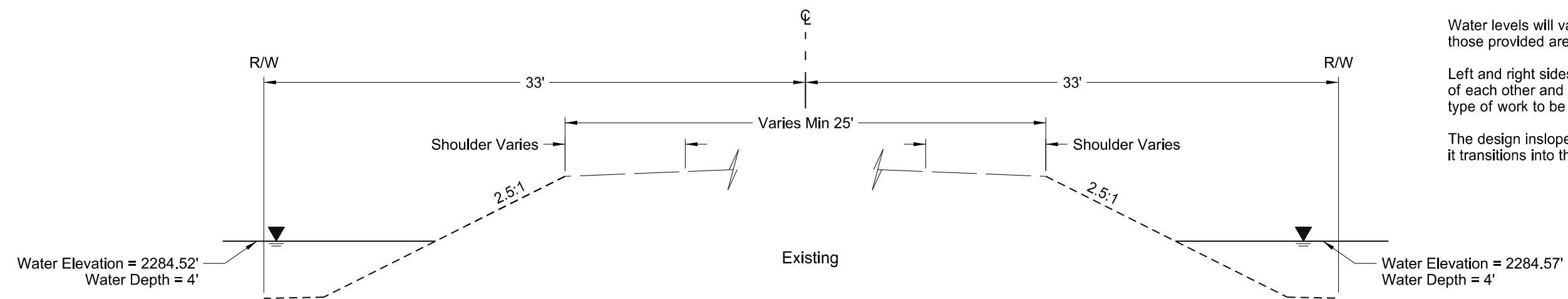
*Construct berm right side
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K6S-7
Typical Sections
Mountrail County

Revised	10/13/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	ROM-0300(135)	30	13

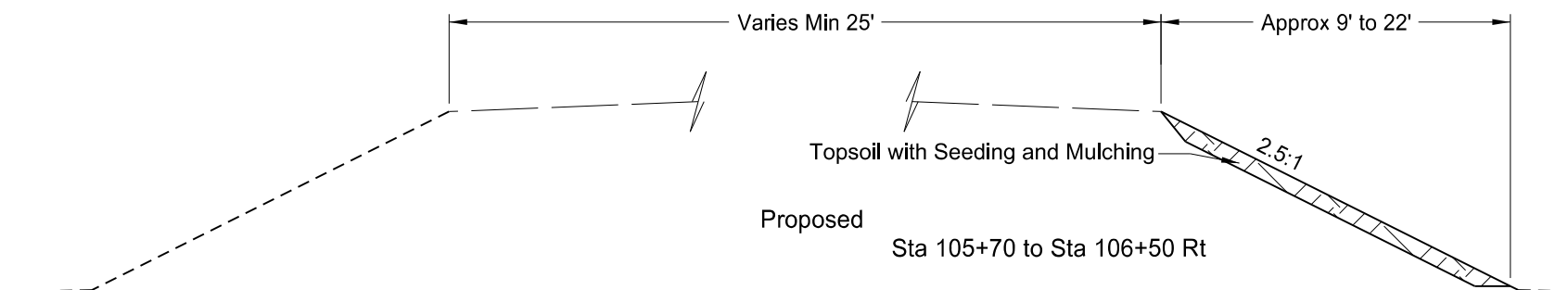
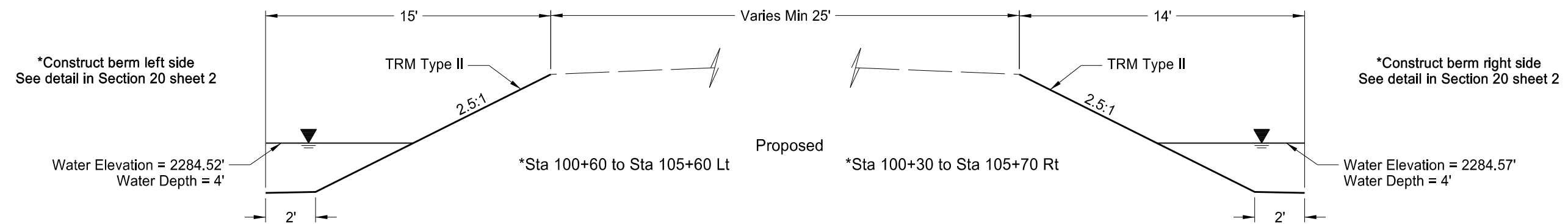


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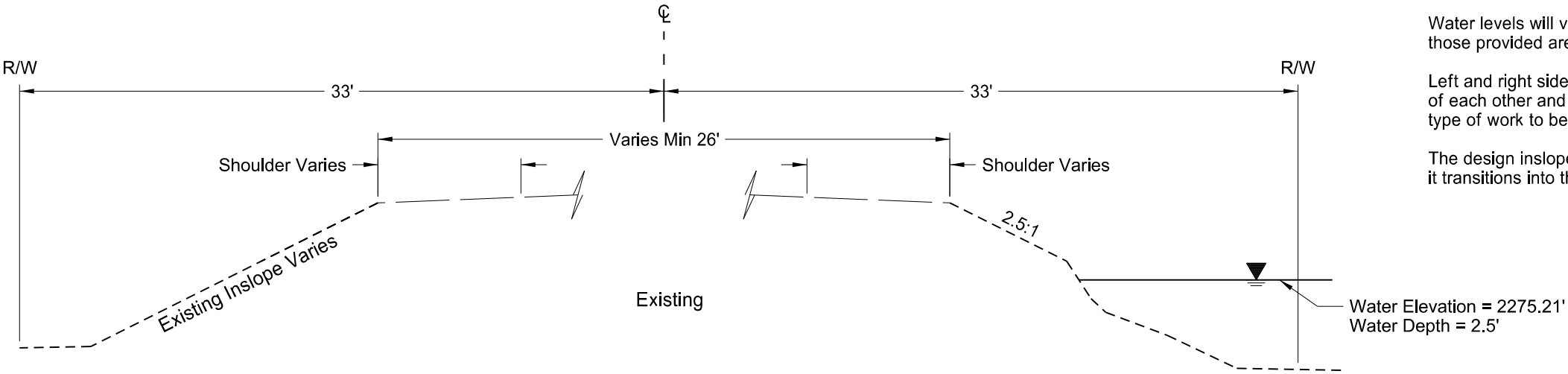
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K6S-8
Typical Sections
Mountrail County

Revised	10/13/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	ROM-0300(135)	30	14

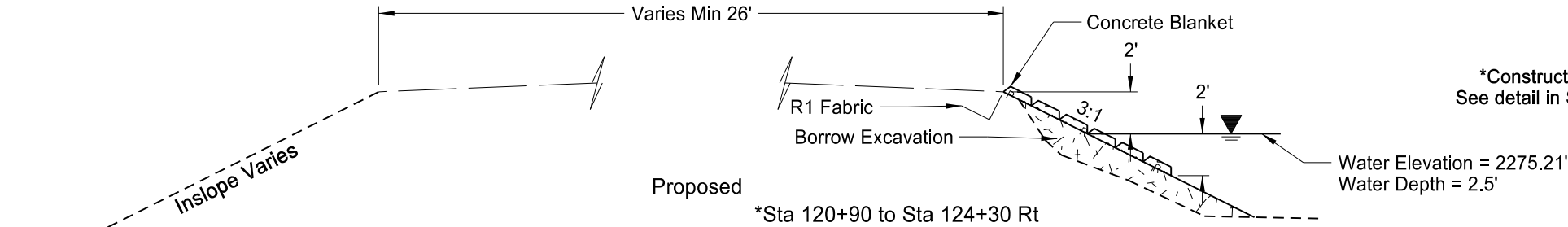


Note: NTS.

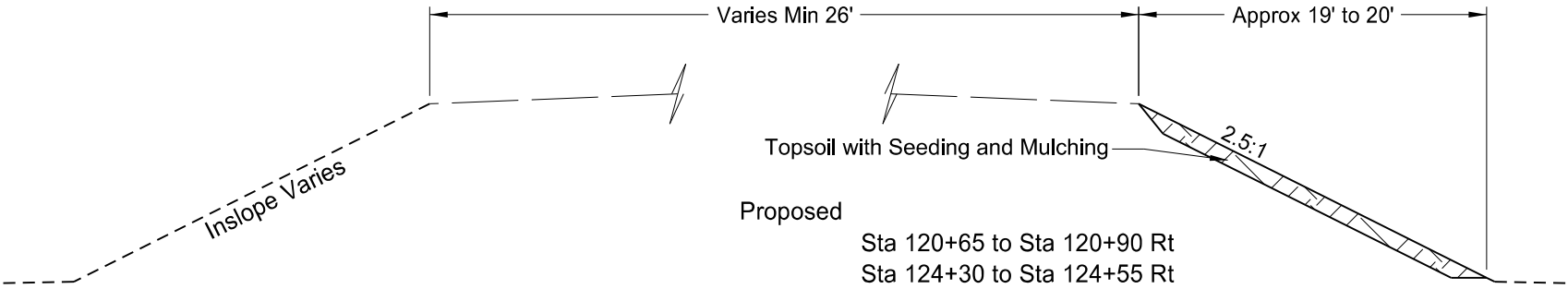
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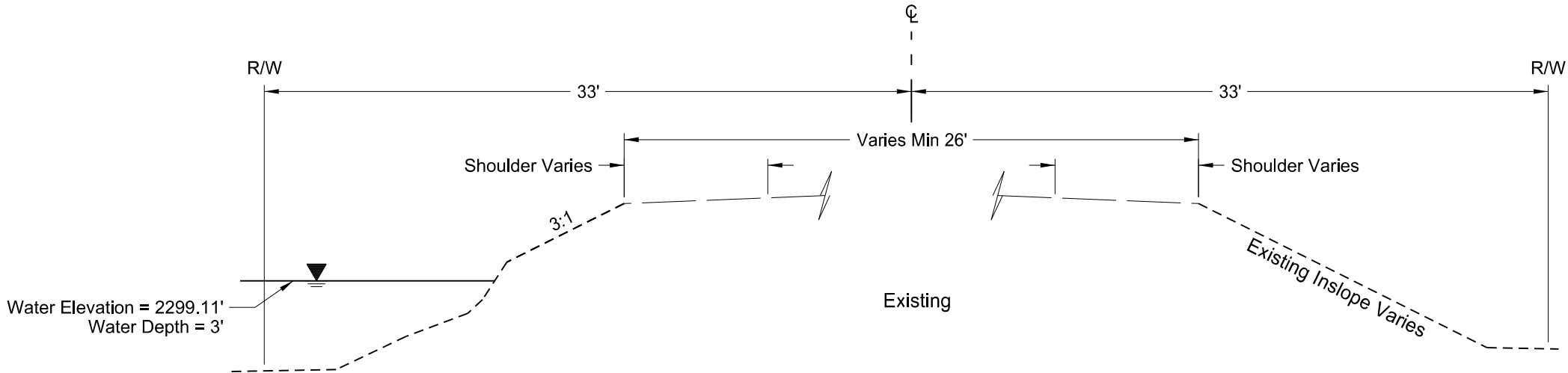
*Construct berm right side
See detail in Section 20 sheet 2



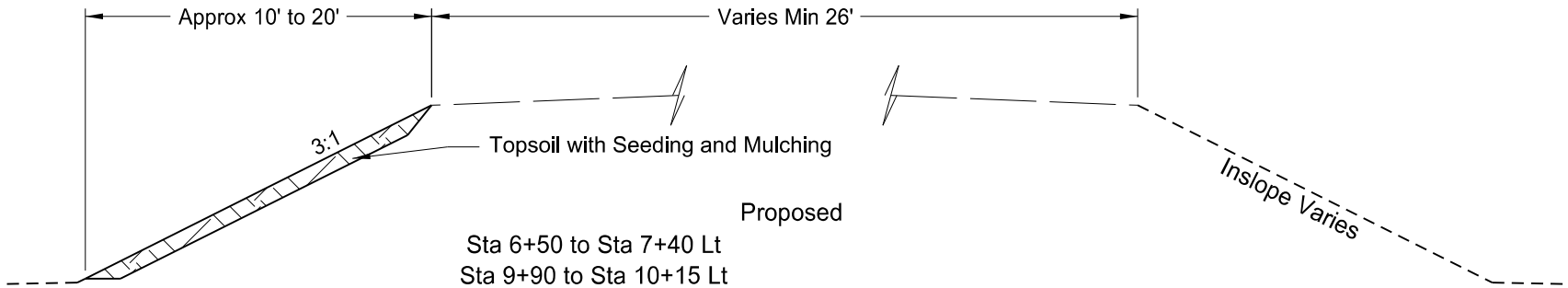
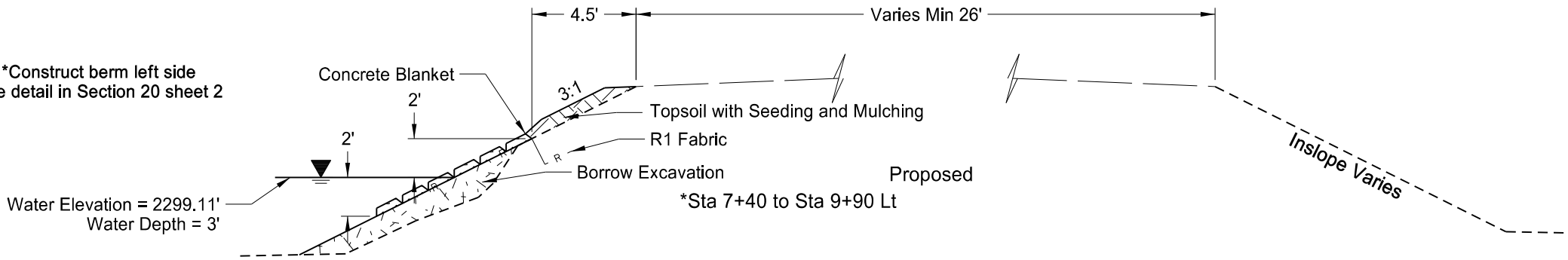
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K6S-9
Typical Sections
Mountrail County

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		ND	ROM-0300(135)	30	15



*Construct berm left side
See detail in Section 20 sheet 2



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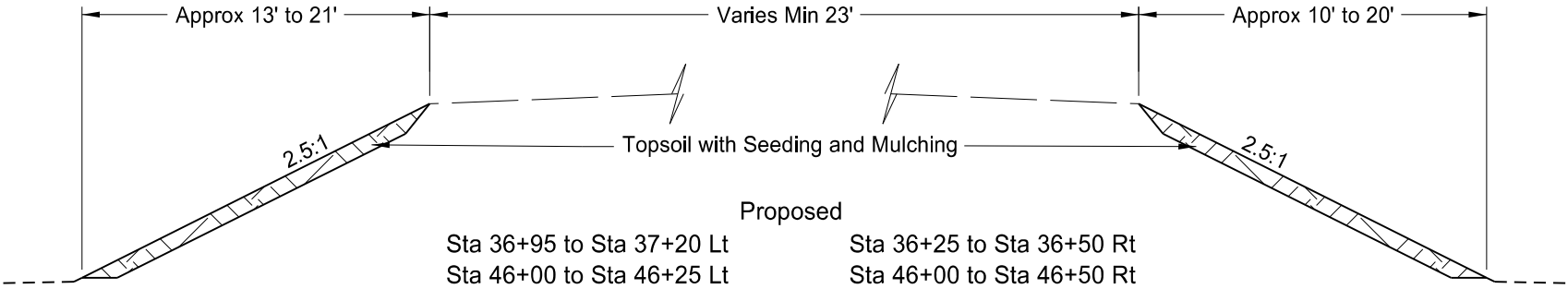
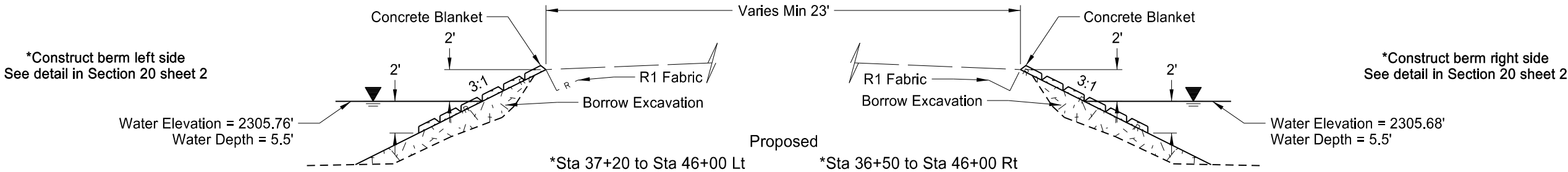
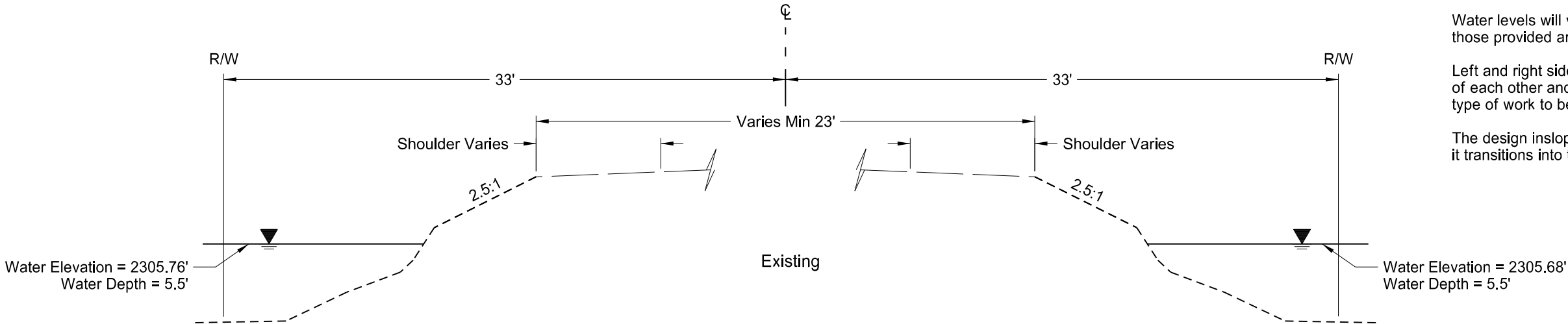
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K6N-1
Typical Sections
Mountrail County

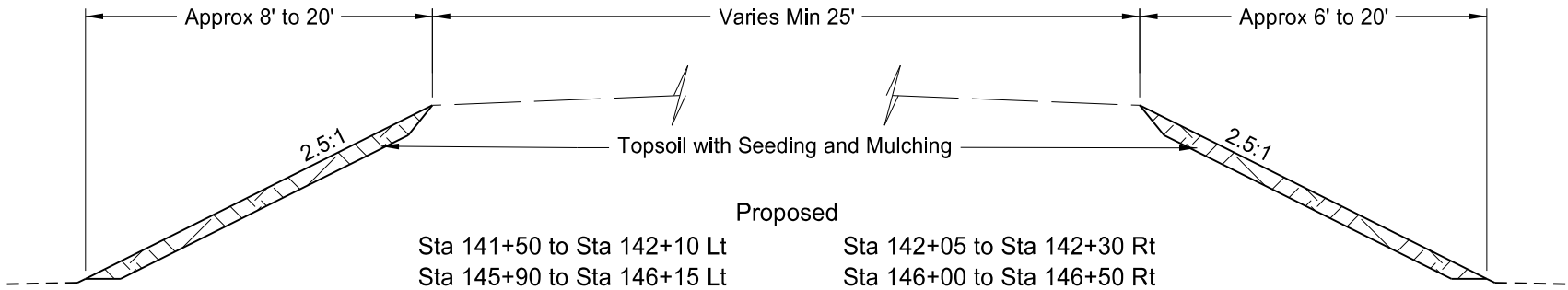
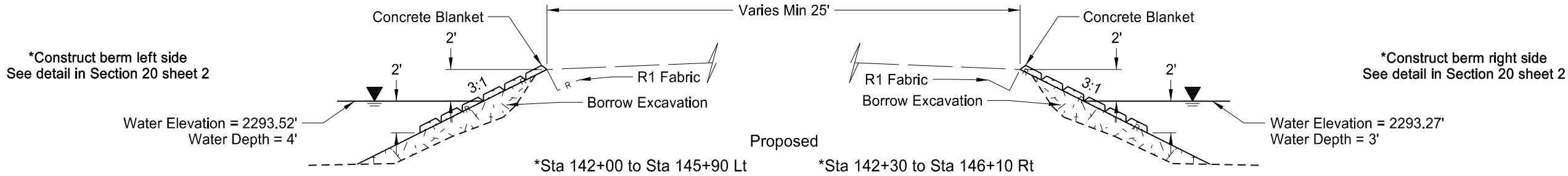
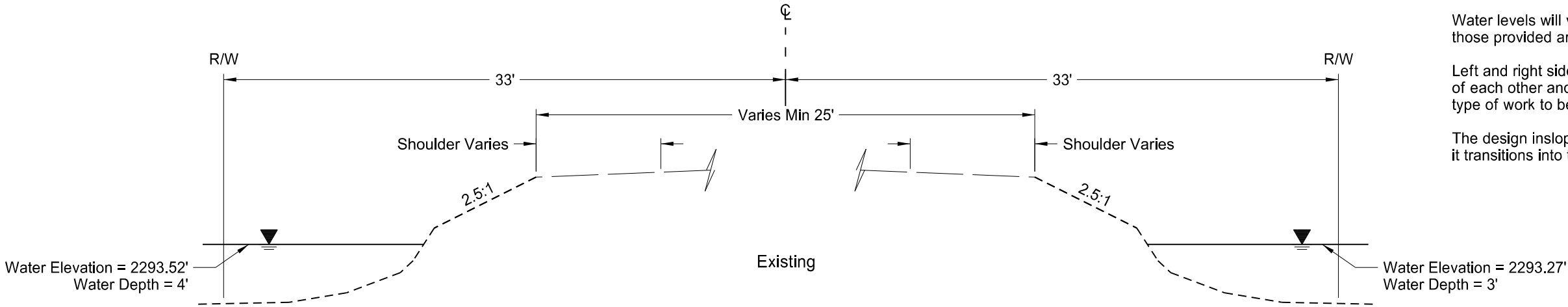
Revised	10/13/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	ROM-0300(135)	30	16



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K6N-2
Typical Sections
Mountrail County

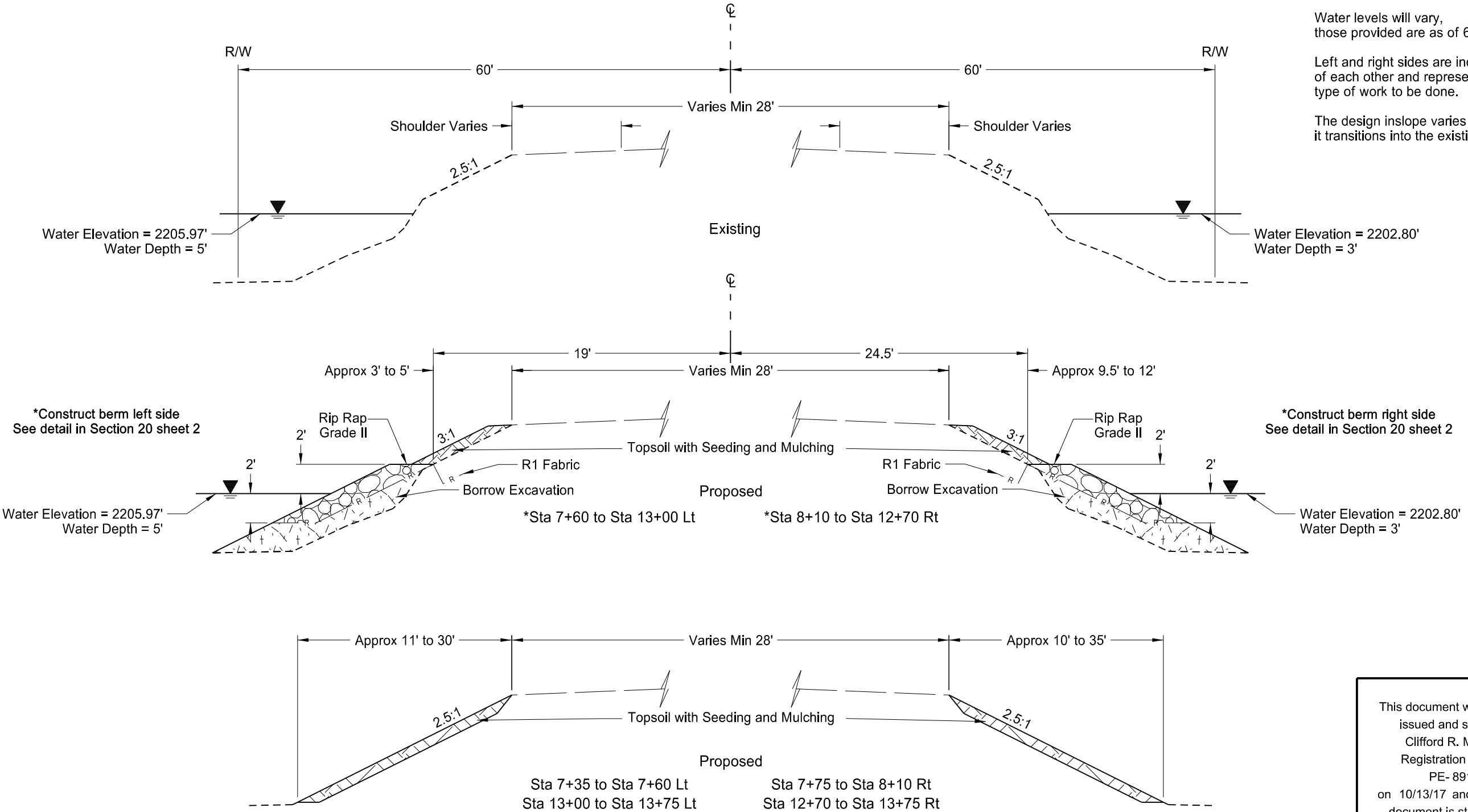
Revised	10/13/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	ROM-0300(135)	30	18



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K6N-4
Typical Sections
Mountrail County

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		ND	ROM-0300(135)	30	19



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K7-1
Typical Sections
Mountrail County

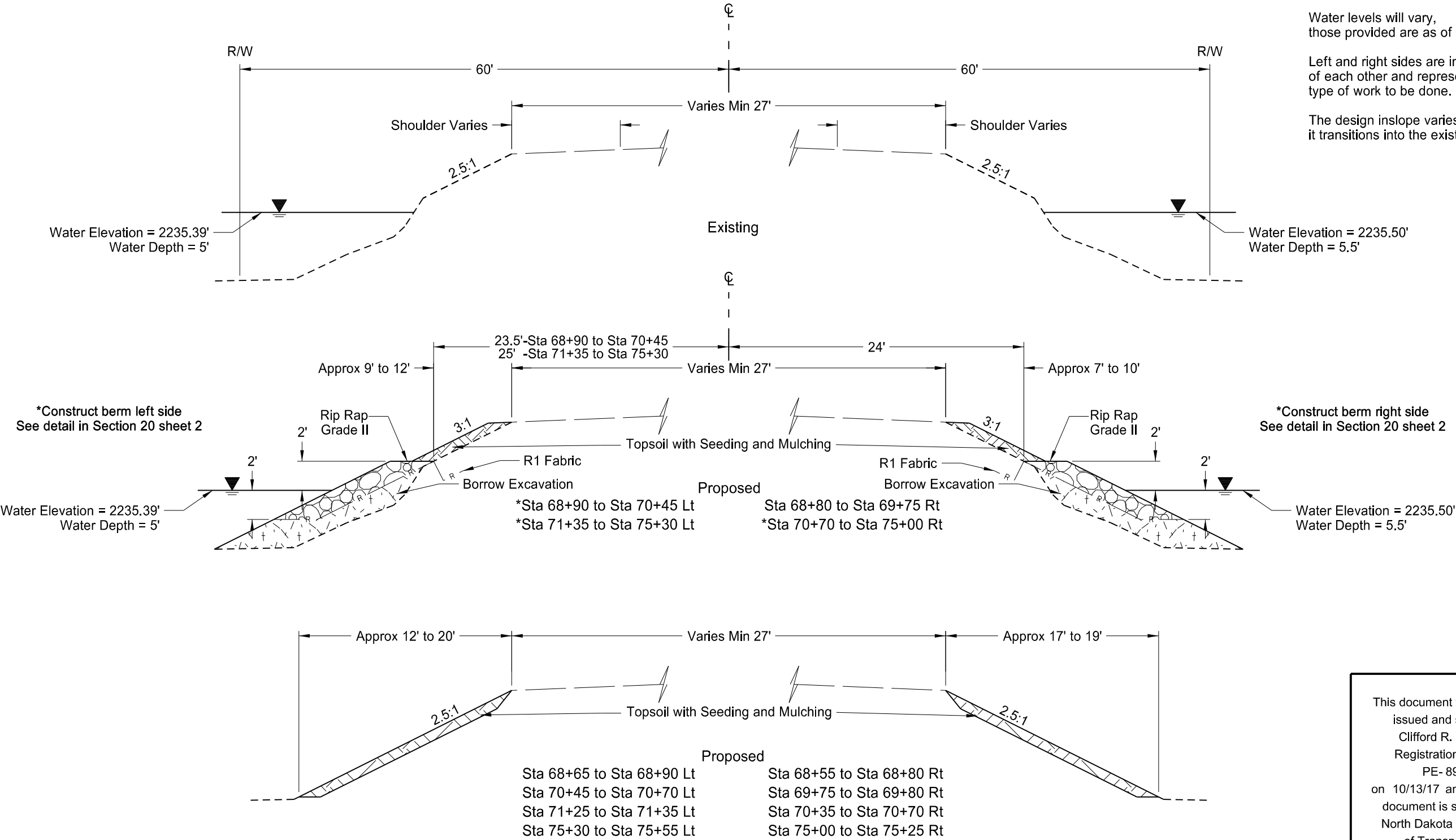
Revised	10/13/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	ROM-0300(135)	30	21

Note: NTS.

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K7-3
Typical Sections
Mountrail County

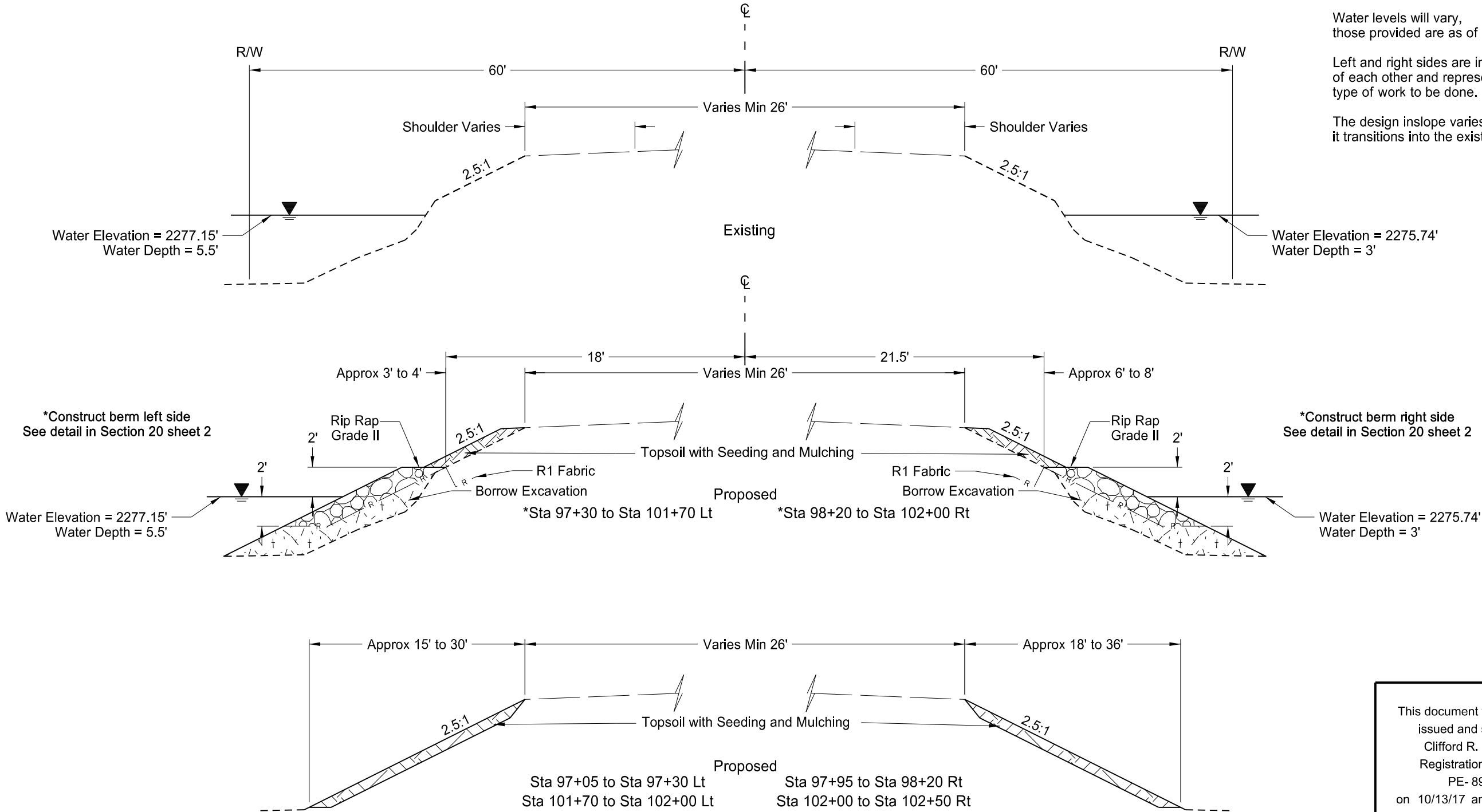
Revised	10/13/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	ROM-0300(135)	30	22

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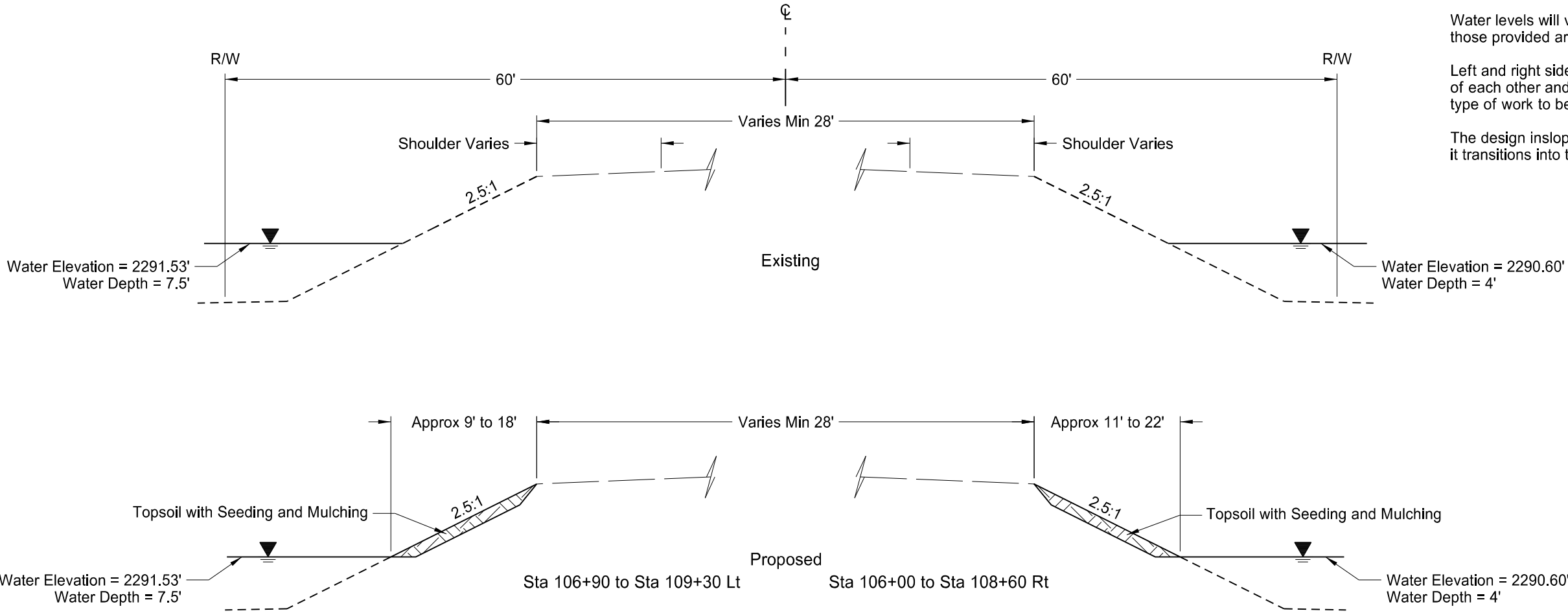
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K7-4
Typical Sections
Mountrail County

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		ND	ROM-0300(135)	30	23



Note: NTS.

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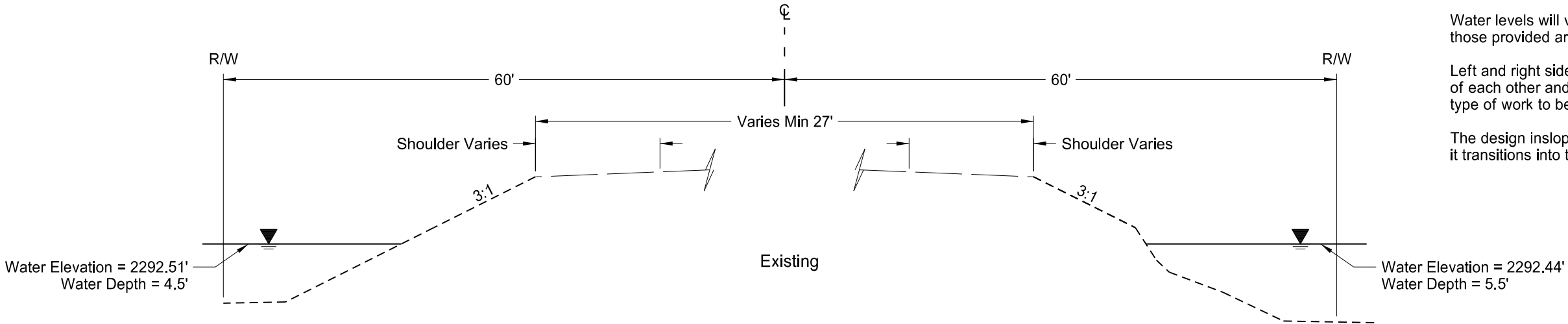
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K7-5
Typical Sections
Mountrail County

Revised	10/13/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	ROM-0300(135)	30	24

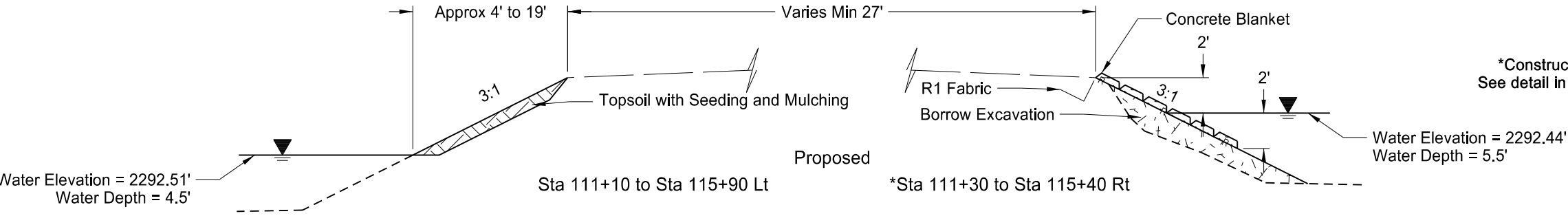


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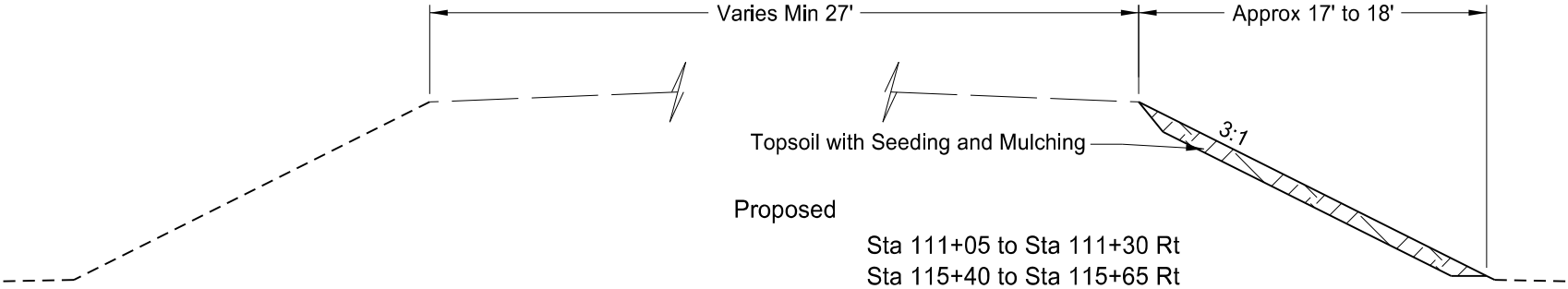
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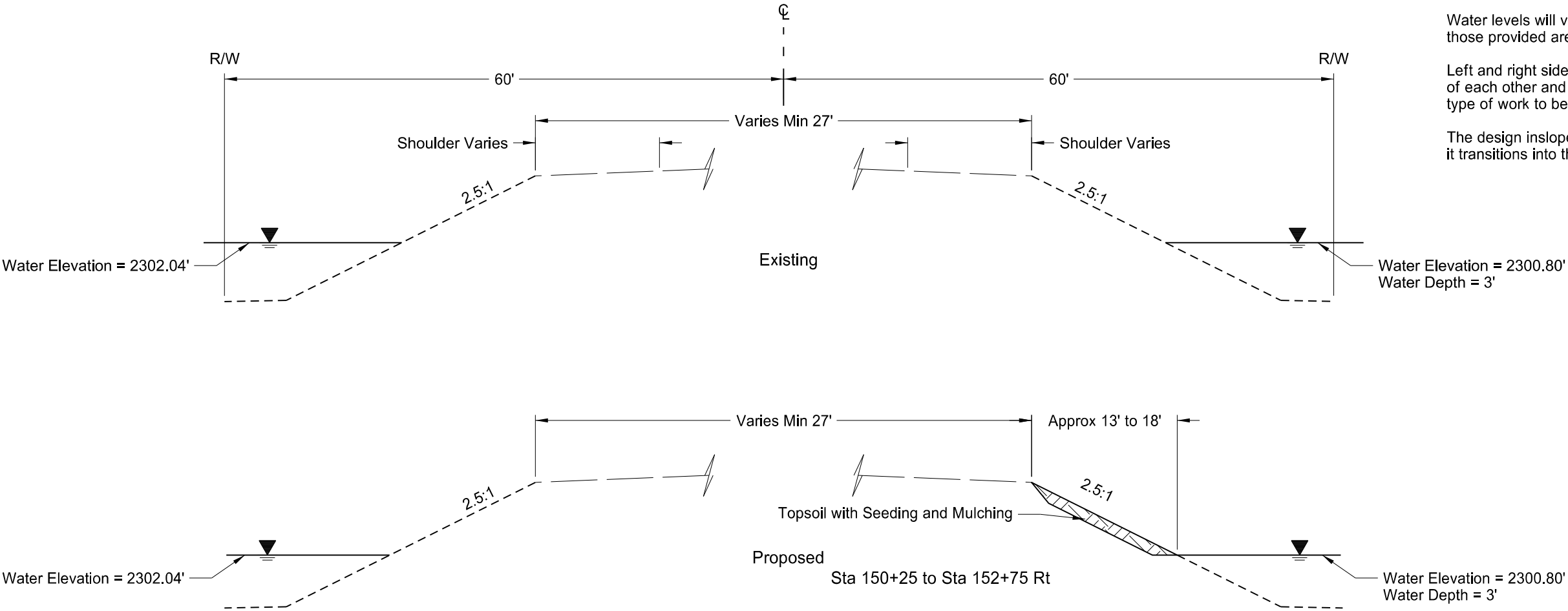
*Construct berm right side
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K7-6
Typical Sections
Mountrail County

Revised	10/13/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	ROM-0300(135)	30	25



Note: NTS.

Water levels will vary, those provided are as of 6/1/17.

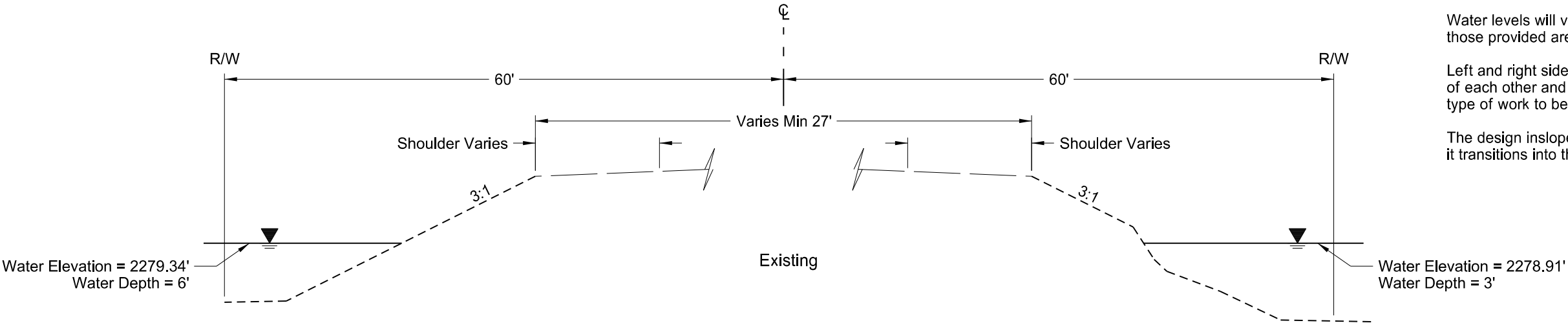
Left and right sides are independent of each other and represent the type of work to be done.

The design inslope varies for 25 ft. as it transitions into the existing inslope.

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K7-7
 Typical Sections
 Mountrail County

Revised	10/13/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	ROM-0300(135)	30	26

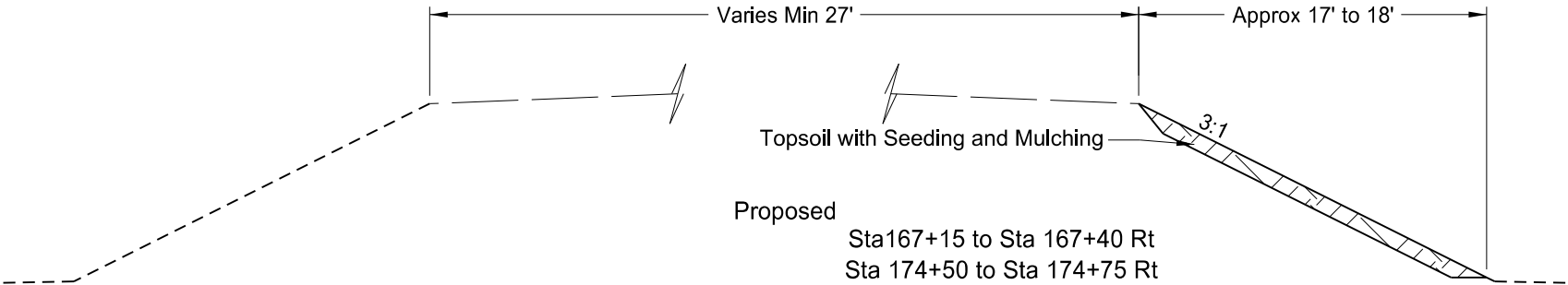
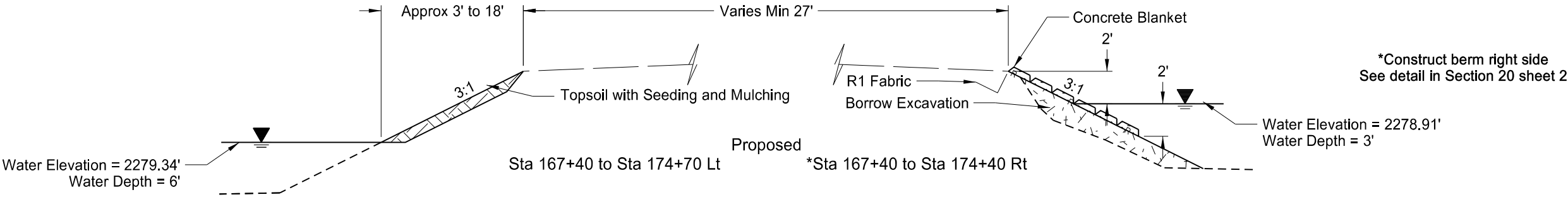


Note: NTS.

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K7-8
Typical Sections
Mountrail County

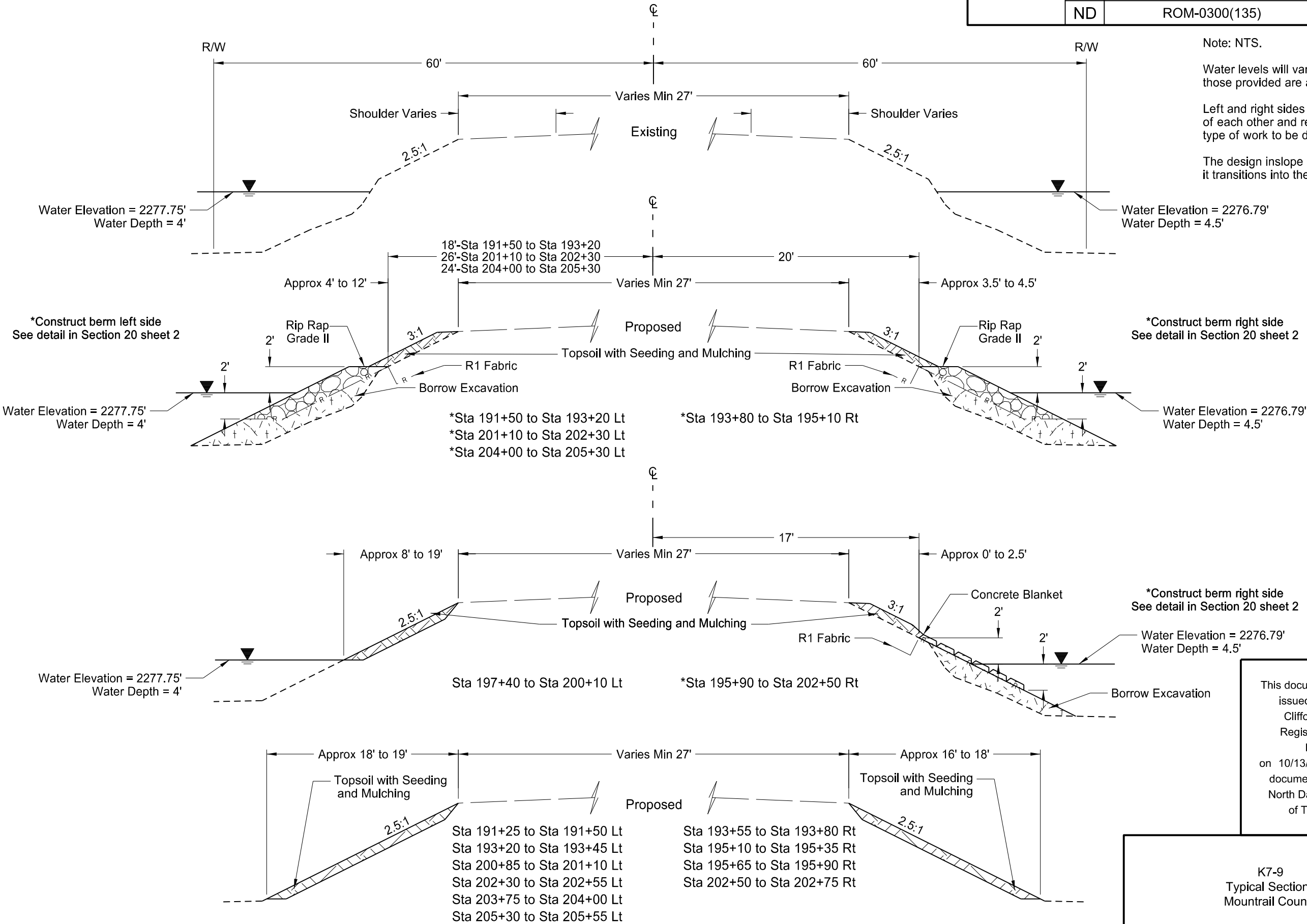
Revised	10/13/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	ROM-0300(135)	30	27

Note: NTS.

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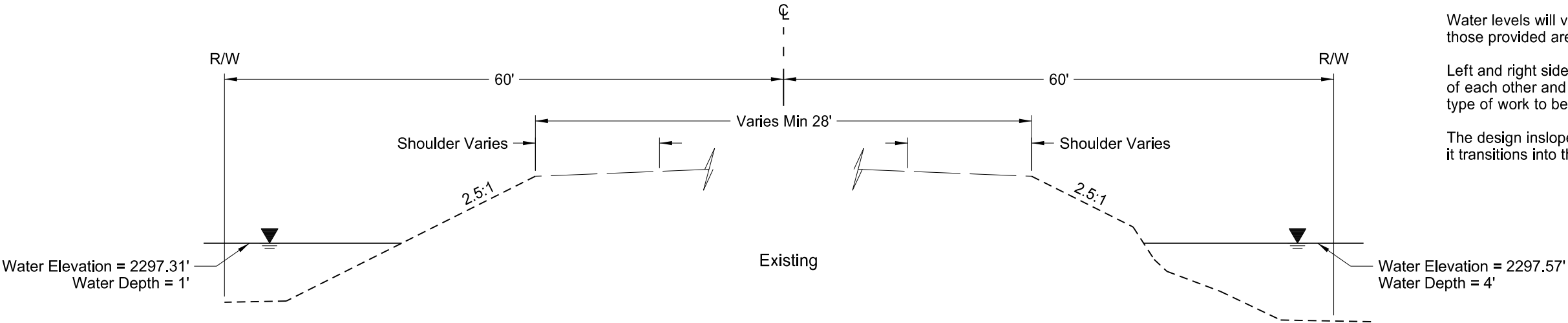
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K7-9
Typical Sections
Mountrail County

Revised	10/13/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	ROM-0300(135)	30	28

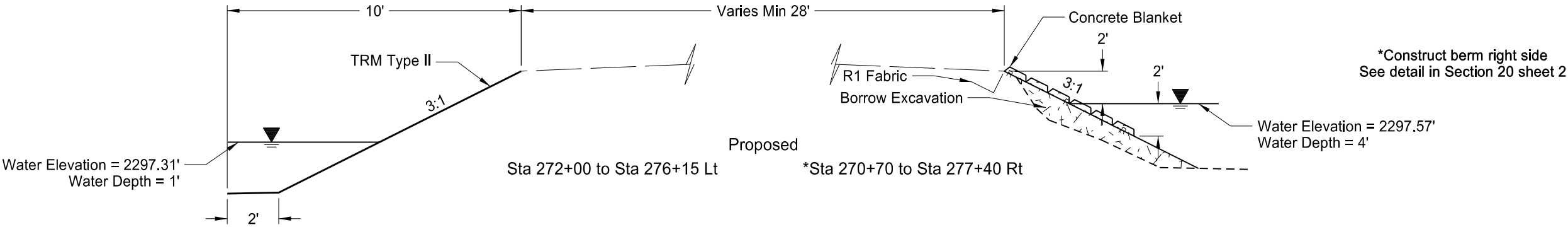


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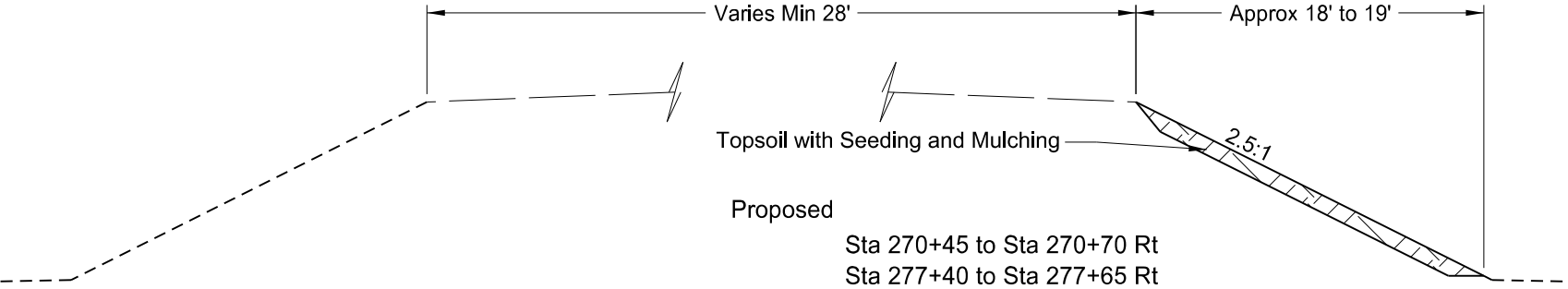
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The design inslope varies for 25 ft. as
it transitions into the existing inslope.



*Construct berm right side
See detail in Section 20 sheet 2



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K7-10
Typical Sections
Mountrail County

Wetland Impact Table														
Wetland Number	Location	Wetland Type	Wetland Feature	USACE Jurisdictional Wetlands ¹	Wetland Impacts Acre(s)		USFWS Easement Impacts Acre(s)		Wetland Mitigation			Ducks Unlimited Bank		
									Mitigation Required					
					Temp.	Perm.	Temp.	Perm.	EO 11990	USACE	USFWS	Location	Acres per RSA Mouse	Acres per RSA Missouri
#1a	Sec. 2, T159N, R91W	Basin	Natural	Yes	0.13	0.00	0.00	0.00	No	No	No	Souris River Service Area	0.00	0
#1b	Sec. 11, T159N, R91W	Fringe	Natural	Yes	0.80	0.05	0.00	0.00	No	No	No	Souris River Service Area	0.05	0
#2a	Sec. 6, T159N, R90W	Basin	Natural	Yes	0.95	0.00	0.00	0.00	No	No	No	Souris River Service Area	0.00	0
#2b	Sec. 7, T159N, R90W	Basin	Natural	Yes	1.08	0.04	0.00	0.00	No	No	No	Souris River Service Area	0.04	0
#3a	Sec. 6, T159N, R90W	Basin	Natural	Yes	0.11	0.09	0.00	0.00	No	No	No	Souris River Service Area	0.09	0
#3b	Sec. 7, T159N, R90W	Basin	Natural	Yes	0.12	0.09	0.00	0.00	No	No	No	Souris River Service Area	0.09	0
#4a	Sec. 6, T158N, R89W	Basin	Natural	Yes	0.12	0.00	0.00	0.00	No	No	No	Missouri River Northern Service Area	0.00	0
#4b	Sec. 5, T158N, R89W	Basin	Natural	Yes	0.54	0.07	0.00	0.00	No	No	No	Missouri River Northern Service Area	0.00	0.07
#5	Sec. 8, T158N, R89W	Basin	Natural	Yes	0.00	0.00	0.00	0.00	No	No	No	Missouri River Northern Service Area	0.00	0
#6	Sec. 7, T158N, R89W	Basin	Natural	Yes	0.03	0.03	0.00	0.00	No	No	No	Missouri River Northern Service Area	0.00	0.03
#7a	Sec. 7, T158N, R89W	Basin	Natural	Yes	0.04	0.05	0.00	0.00	No	No	No	Missouri River Northern Service Area	0.00	0.05
#7b	Sec. 8, T158N, R89W	Basin	Natural	Yes	0.16	0.04	0.00	0.00	No	No	No	Missouri River Northern Service Area	0.00	0.04

Wetland Impact Table														
Wetland Number	Location	Wetland Type	Wetland Feature	USACE Jurisdictional Wetlands ¹	Wetland Impacts Acre(s)		USFWS Easement Impacts Acre(s)		Wetland Mitigation			Ducks Unlimited Bank		
									Mitigation Required					
					Temp.	Perm.	Temp.	Perm.	EO 11990	USACE	USFWS	Location	Acres per RSA Mouse	Acres per RSA Missouri
#8a	Sec. 7, T158N, R89W	Basin	Natural	Yes	0.13	0.00	0.00	0.00	No	No	No	Missouri River Northern Service Area	0.00	0
#8b	Sec. 8, T158N, R89W	Basin	Natural	Yes	0.08	0.04	0.00	0.00	No	No	No	Missouri River Northern Service Area	0.00	0.04
#9a	Sec. 8, T158N, R89W	Basin	Natural	Yes	0.03	0.04	0.00	0.00	No	No	No	Missouri River Northern Service Area	0.00	0.04
#9b	Sec. 7, T158N, R89W	Basin	Natural	Yes	0.08	0.05	0.00	0.00	No	No	No	Missouri River Northern Service Area	0.00	0.05
#11a	Sec. 17, T158N, R89W	Basin	Natural	Yes	0.58	0.06	0.00	0.00	No	No	No	Missouri River Northern Service Area	0.00	0.06
#11b	Sec. 18, T188N, R89W	Basin	Natural	Yes	0.25	0.00	0.00	0.00	No	No	No	Missouri River Northern Service Area	0.00	0
#12a	Sec. 18, T158N, R89W	Basin	Natural	Yes	0.00	0.00	0.00	0.00	No	No	No	Missouri River Northern Service Area	0.00	0
#12b	Sec. 17, T158N, R89W	Basin	Natural	Yes	0.14	0.00	0.00	0.00	No	No	No	Missouri River Northern Service Area	0.00	0
#12c	Sec. 18, T158N, R89W	Basin	Natural	Yes	0.00	0.00	0.00	0.00	No	No	No	Missouri River Northern Service Area	0.00	0
#13a	Sec. 19, T158N, R89W	Basin	Natural	Yes	0.02	0.00	0.00	0.00	No	No	No	Missouri River Northern Service Area	0.00	0
#13b	Sec. 20, T158N, R89W	Basin	Natural	Yes	0.40	0.06	0.00	0.00	No	No	No	Missouri River Northern Service Area	0.00	0.06
#14a	Sec. 19, T158N, R89W	Basin	Natural	Yes	0.02	0.00	0.00	0.00	No	No	No	Missouri River Northern Service Area	0.00	0

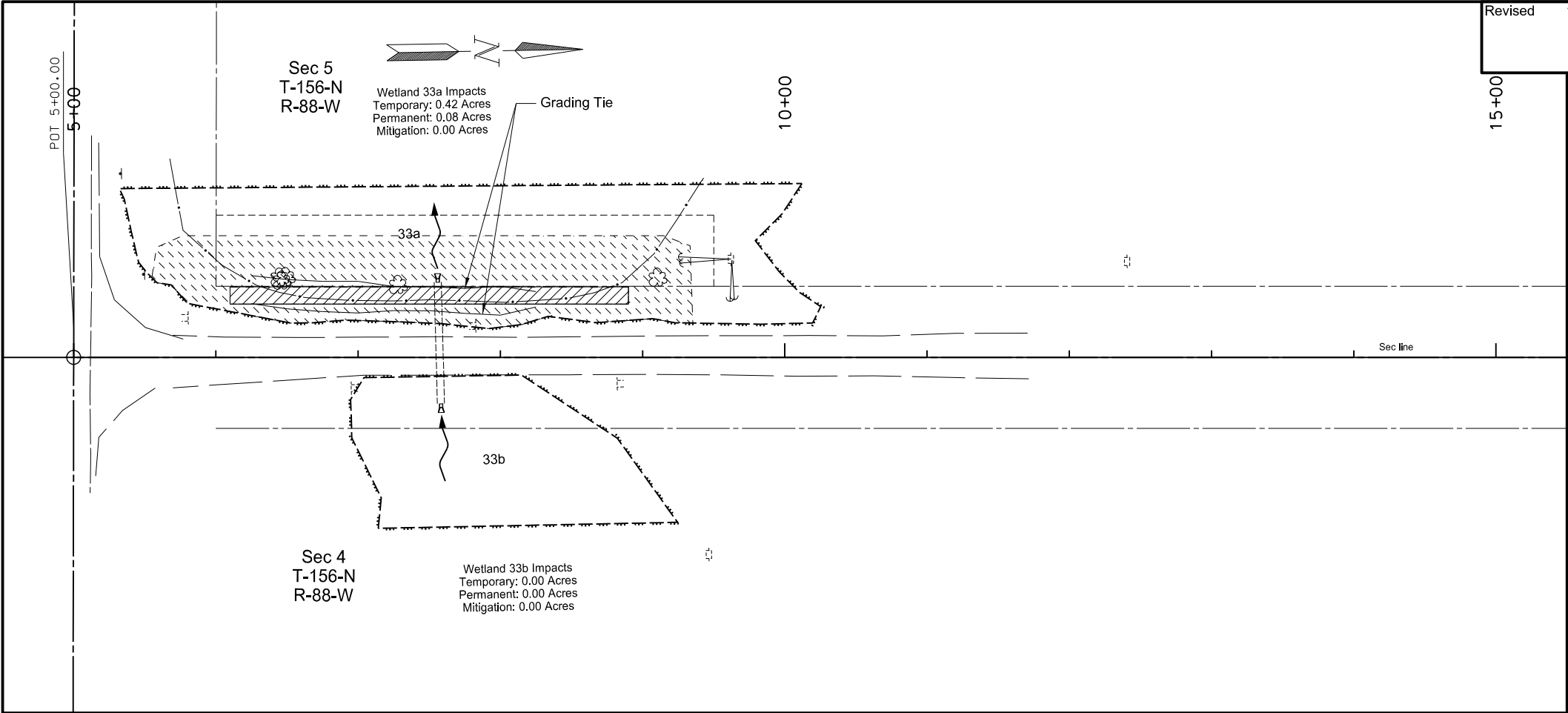
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									Mitigation Required			Ducks Unlimited Bank		
					Temp.	Perm.	Temp.	Perm.	EO 11990	USACE	USFWS	Location	Acres per RSA Mouse	Acres per RSA Missouri
#14b	Sec. 20, T158N, R89W	Basin	Natural	Yes	0.14	0.00	0.00	0.00	No	No	No	Missouri River Northern Service Area	0.00	0
#15a	Sec. 19, T158N, R89W	Basin	Natural	Yes	0.48	0.15	0.00	0.00	No	No	No	Missouri River Northern Service Area	0.00	0.15
#15b	Sec. 20, T158N, R89W	Basin	Natural	Yes	0.29	0.12	0.00	0.00	No	No	No	Missouri River Northern Service Area	0.00	0.12
#16a	Sec. 20, T158N, R89W	Basin	Natural	Yes	0.46	0.07	0.00	0.00	No	No	No	Missouri River Northern Service Area	0.00	0.07
#16b	Sec. 20, T158N, R89W	Basin	Natural	Yes	0.38	0.13	0.00	0.00	No	No	No	Missouri River Northern Service Area	0.00	0.13
#16c	Sec. 29, T158N, R89W	Fringe	Natural	Yes	0.57	0.12	0.00	0.00	No	No	No	Missouri River Northern Service Area	0.00	0.12
#16d	Sec. 29, T158N, R89W	Basin	Natural	Yes	0.02	0.03	0.00	0.00	No	No	No	Missouri River Northern Service Area	0.00	0.03
#16e	Sec. 29, T158N, R89W	Basin	Natural	Yes	0.20	0.09	0.00	0.00	No	No	No	Missouri River Northern Service Area	0.00	0.09
#17a	Sec. 31, T158N, R89W	Basin	Natural	Yes	0.48	0.16	0.00	0.00	No	No	No	Missouri River Northern Service Area	0.00	0.16
#17b	Sec. 32, T158N, R89W	Fringe	Natural	Yes	0.36	0.14	0.00	0.00	No	No	No	Missouri River Northern Service Area	0.00	0.14
#18a	Sec. 12, T158N, R89W	Basin	Natural	Yes	0.30	0.03	0.00	0.00	No	No	No	Souris River Service Area	0.03	0
#18b	Sec. 7, T158N, R89W	Basin	Natural	Yes	0.27	0.07	0.00	0.00	No	No	No	Souris River Service Area	0.07	0



Wetland Impact Table														
Wetland Number	Location	Wetland Type	Wetland Feature	USACE Jurisdictional Wetlands ¹	Wetland Impacts Acre(s)		USFWS Easement Impacts Acre(s)		Wetland Mitigation			Ducks Unlimited Bank		
									Mitigation Required					
					Temp.	Perm.	Temp.	Perm.	EO 11990	USACE	USFWS	Location	Acres per RSA Mouse	Acres per RSA Missouri
#19a	Sec. 12, T158N, R89W	Basin	Natural	Yes	0.04	0.00	0.00	0.00	No	No	No	Souris River Service Area	0.00	0
#19b	Sec. 7, T158N, R89W	Basin	Natural	Yes	0.54	0.20	0.00	0.00	No	No	No	Souris River Service Area	0.20	0
#19c	Sec. 12, T158N, R89W	Basin	Natural	Yes	0.73	0.06	0.00	0.00	No	No	No	Souris River Service Area	0.06	0
#20a	Sec. 24, T158N, R89W	Basin	Natural	Yes	0.60	0.06	0.00	0.00	No	No	No	Missouri River Northern Service Area	0.00	0.06
#20b	Sec. 19, T158N, R88W	Basin	Natural	Yes	0.64	0.14	0.00	0.00	No	No	No	Missouri River Northern Service Area	0.00	0.14
#21	Sec. 19, T158N, R88W	Basin	Natural	Yes	0.19	0.02	0.00	0.00	No	No	No	Missouri River Northern Service Area	0.00	0.02
#22a	Sec. 25, T158N, R89W	Basin	Natural	Yes	0.00	0.00	0.00	0.00	No	No	No	Missouri River Northern Service Area	0.00	0
#22b	Sec. 30, T158N, R88W	Basin	Natural	Yes	0.18	0.02	0.00	0.00	No	No	No	Missouri River Northern Service Area	0.00	0.02
#23a	Sec. 25, T158N, R89W	Basin	Natural	Yes	0.36	0.00	0.00	0.00	No	No	No	Missouri River Northern Service Area	0.00	0
#23b	Sec. 30, T158N, R88W	Basin	Natural	Yes	0.29	0.00	0.00	0.00	No	No	No	Missouri River Northern Service Area	0.00	0
#24	Sec. 36, T158N, R89W	Basin	Natural	Yes	0.29	0.00	0.00	0.00	No	No	No	Missouri River Northern Service Area	0.00	0
#25a	Sec. 36, T158N, R89W	Basin	Natural	Yes	0.62	0.03	0.00	0.00	No	No	No	Missouri River Northern Service Area	0.00	0.03

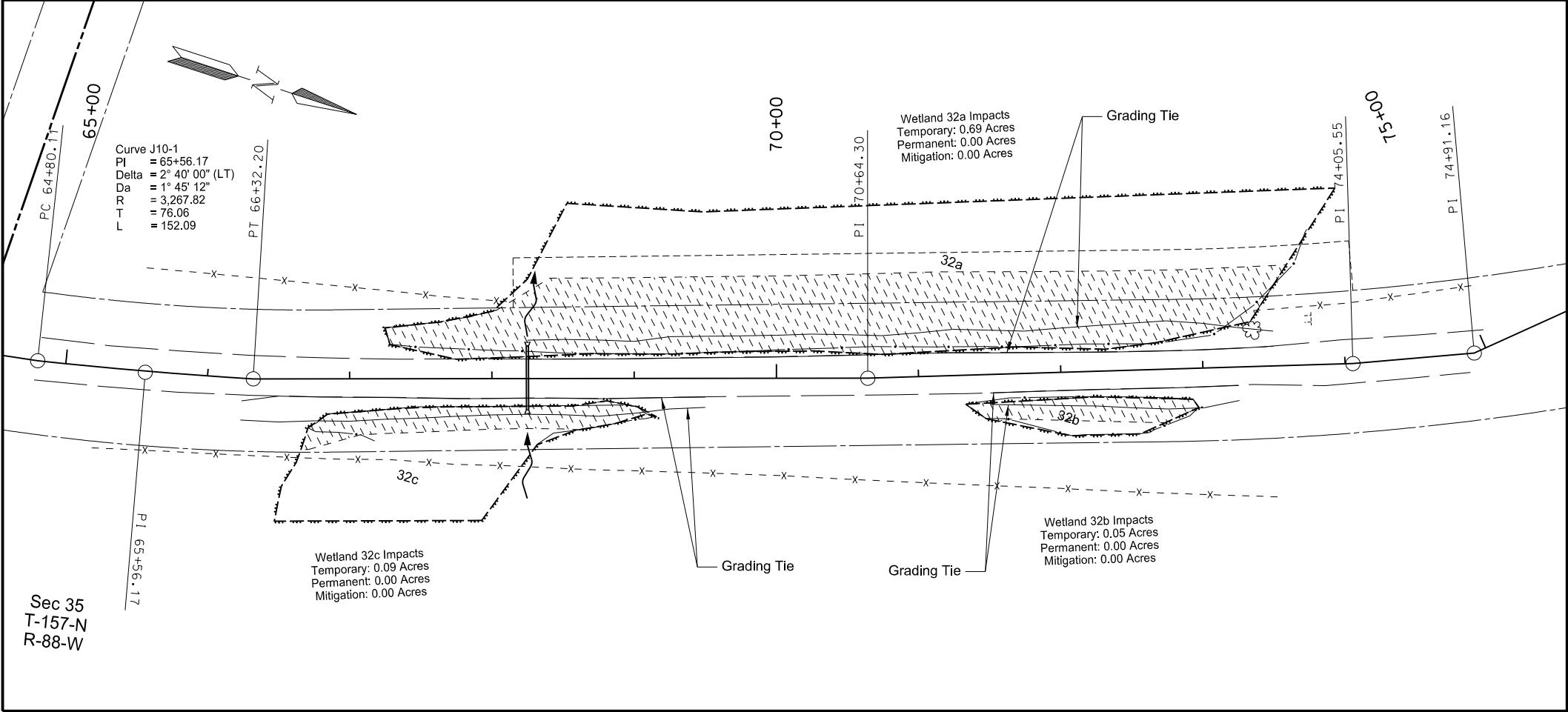
Wetland Impact Table														
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									Mitigation Required					
					Temp.	Perm.	Temp.	Perm.	EO 11990	USACE	USFWS	Location	Acres per RSA Mouse	Acres per RSA Missouri
#25b	Sec. 31, T158N, R88W	Basin	Natural	Yes	0.48	0.16	0.00	0.00	No	No	No	Missouri River Northern Service Area	0.00	0.16
#26a	Sec. 36, T158N, R89W	Basin	Natural	Yes	0.18	0.05	0.00	0.00	No	No	No	Missouri River Northern Service Area	0.00	0.05
#26b	Sec. 31, T158N, R88W	Basin	Natural	Yes	0.18	0.03	0.00	0.00	No	No	No	Missouri River Northern Service Area	0.00	0.03
#27a	Sec. 36, T158N, R89W	Basin	Natural	Yes	0.15	0.00	0.00	0.00	No	No	No	Missouri River Northern Service Area	0.00	0
#27b	Sec. 31, T158N, R88W	Basin	Natural	Yes	0.11	0.04	0.00	0.00	No	No	No	Missouri River Northern Service Area	0.00	0.04
#28a	Sec. 1, T157N, R89W	Basin	Natural	Yes	0.04	0.00	0.00	0.00	No	No	No	Missouri River Northern Service Area	0.00	0
#28b	Sec. 6, T157N, R88W	Basin	Natural	Yes	0.00	0.00	0.00	0.00	No	No	No	Missouri River Northern Service Area	0.00	0
#29a	Sec. 6, T157N, R88W	Basin	Natural	Yes	0.00	0.00	0.56	0.09	Yes	No	Yes	Missouri River Northern Service Area	0.00	0
#29b	Sec. 6, T157N, R88W	Basin	Artificial	Yes	0.00	0.00	0.00	0.00	No	No	No	Missouri River Northern Service Area	0.00	0
#29c	Sec. 6, T157N, R88W	Basin	Natural	Yes	0.00	0.00	0.13	0.00	No	No	No	Missouri River Northern Service Area	0.00	0
#30a	Sec. 22, T157N, R88W	Basin	Natural	Yes	0.44	0.06	0.00	0.00	No	No	No	Missouri River Northern Service Area	0.00	0.06
#30b	Sec. 23, T157N, R88W	Basin	Natural	Yes	0.44	0.00	0.00	0.00	No	No	No	Missouri River Northern Service Area	0.00	0

Wetland Impact Table														
Wetland Number	Location	Wetland Type	Wetland Feature	USACE Jurisdictional Wetlands ¹	Wetland Impacts Acre(s)		USFWS Easement Impacts Acre(s)		Wetland Mitigation					
									Mitigation Required			Ducks Unlimited Bank		
					Temp.	Perm.	Temp.	Perm.	EO 11990	USACE	USFWS	Location	Acres per RSA Mouse	Acres per RSA Missouri
#31a	Sec. 22, T157N, R88W	Basin	Natural	Yes	0.28	0.00	0.00	0.00	No	No	No	Missouri River Northern Service Area	0.00	0
#31b	Sec. 23, T157N, R88W	Basin	Natural	Yes	0.28	0.06	0.00	0.00	No	No	No	Missouri River Northern Service Area	0.00	0.06
#32a	Sec. 35, T157N, R88W	Basin	Natural	Yes	0.69	0.00	0.00	0.00	No	No	No	Missouri River Northern Service Area	0.00	0
#32b	Sec. 35, T157N, R88W	Basin	Natural	Yes	0.05	0.00	0.00	0.00	No	No	No	Missouri River Northern Service Area	0.00	0
#32c	Sec. 35, T157N, R88W	Basin	Natural	Yes	0.09	0.00	0.00	0.00	No	No	No	Missouri River Northern Service Area	0.00	0
#33a	Sec. 5, T156N, R88W	Basin	Natural	Yes	0.42	0.08	0.00	0.00	No	No	Yes	Missouri River Northern Service Area	0.00	0.08
#33b	Sec. 4, T156N, R88W	Basin	Natural	Yes	0.00	0.00	0.00	0.00	No	No	No	Missouri River Northern Service Area	0.00	0
Totals					18.07	2.83	0.69	0.09					0.63	2.20

Revised	10/13/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	ROM-0300(135)	75	7



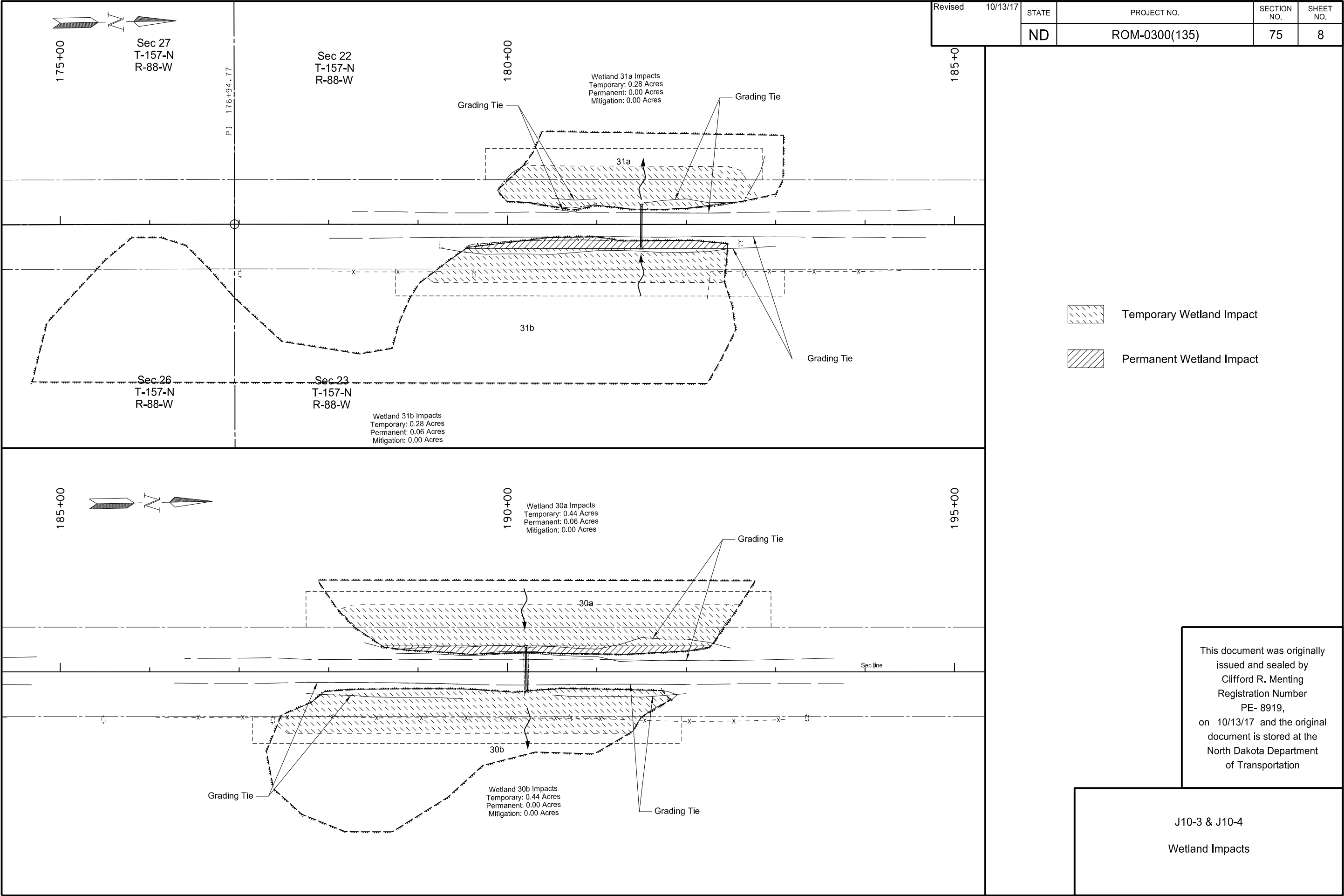
-  Temporary Wetland Impact
-  Permanent Wetland Impact



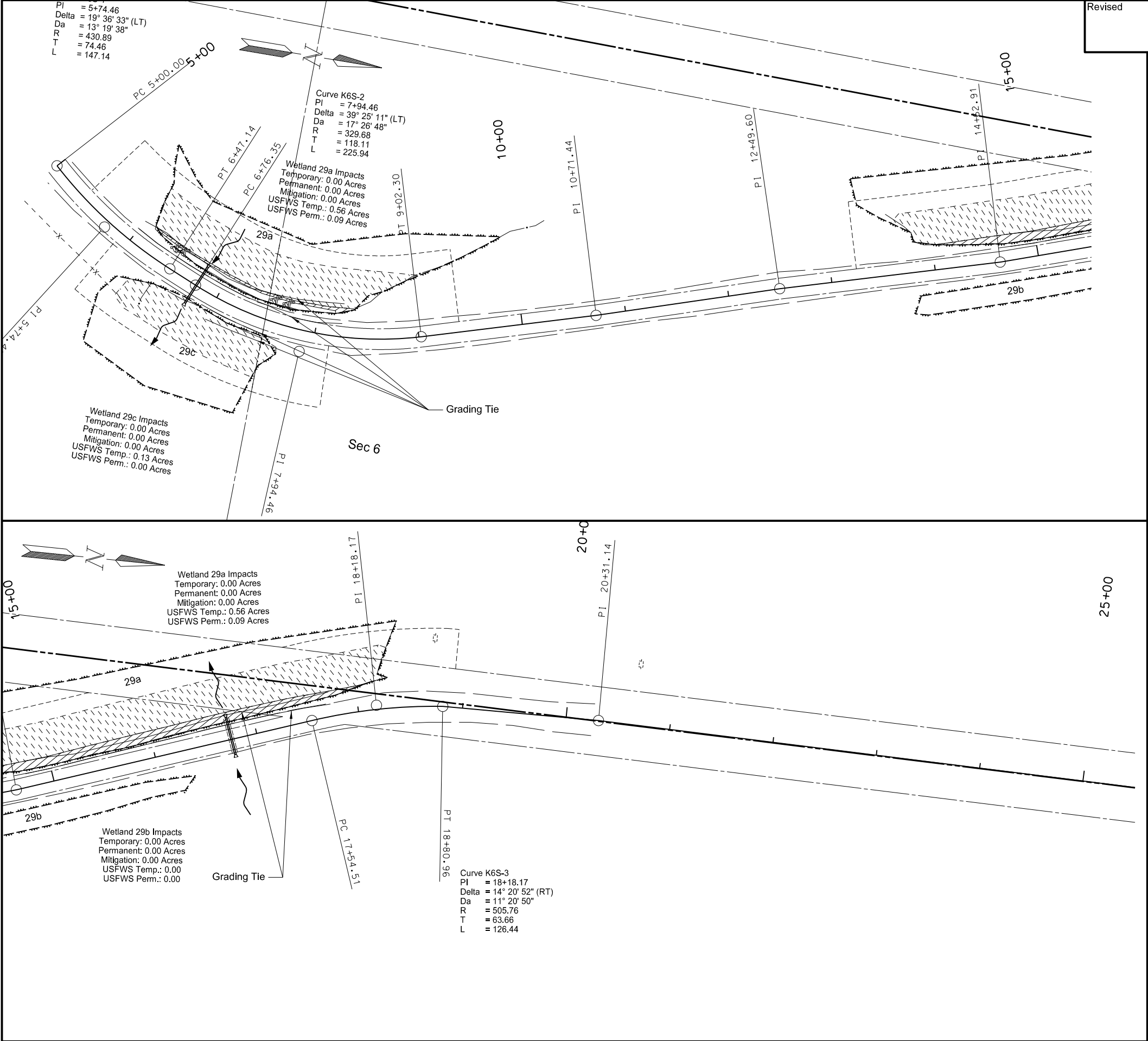
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J10-1 & J10-2

Wetland Impacts



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		ND	ROM-0300(135)	75	9

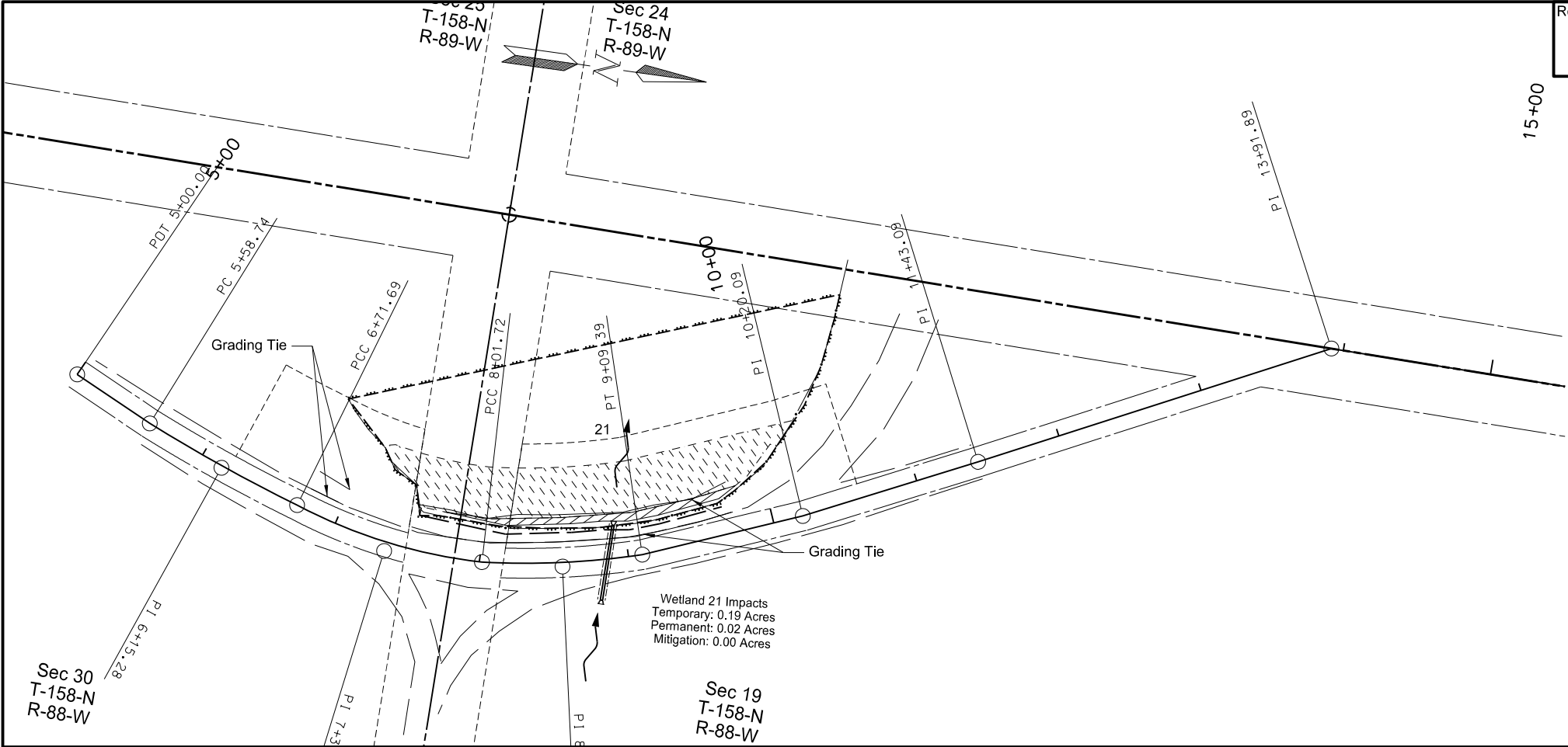




- Temporary Wetland Impact
- Permanent Wetland Impact

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K6S-1 & K6S-2
Wetland Impacts

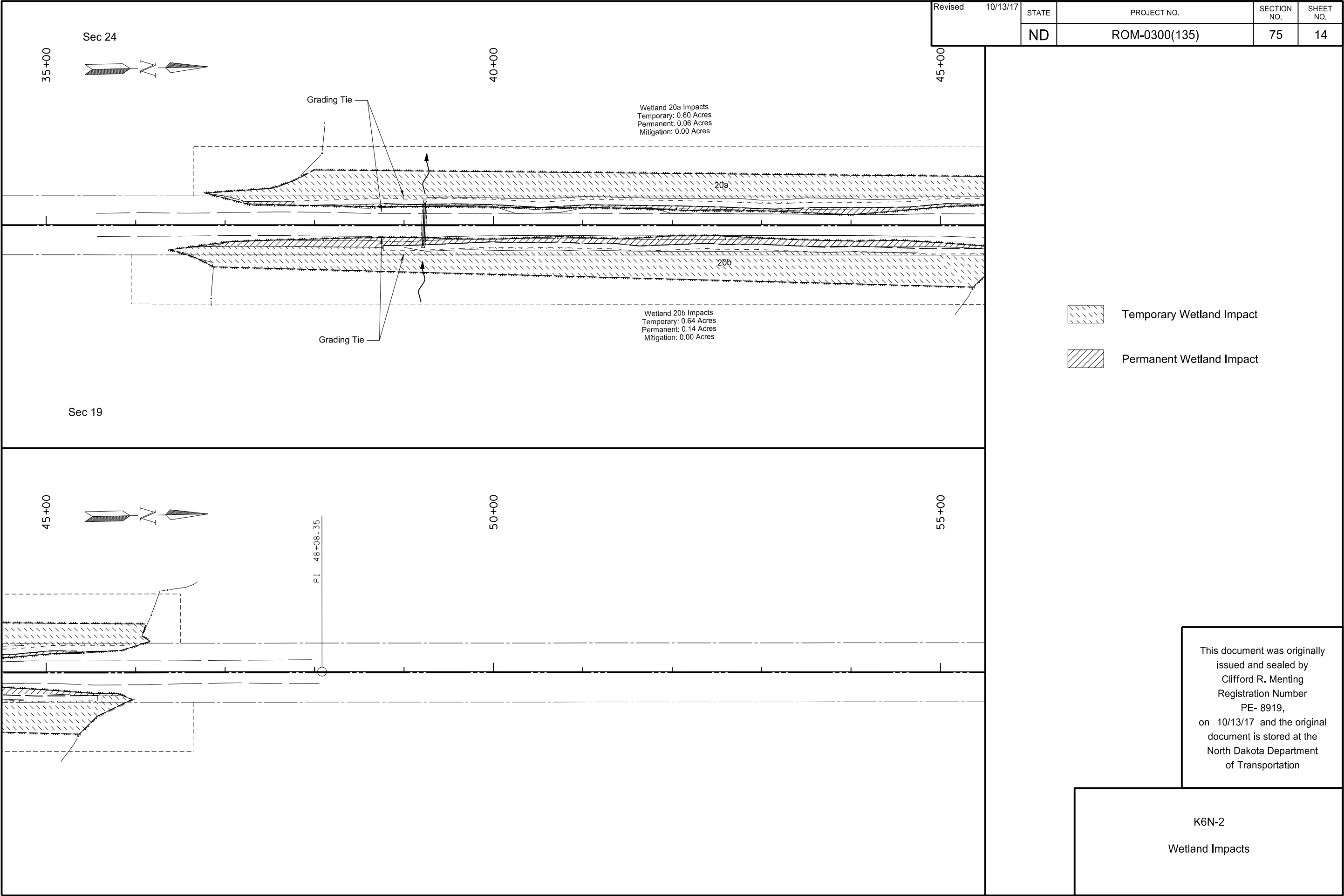
Revised	10/13/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	ROM-0300(135)	75	13



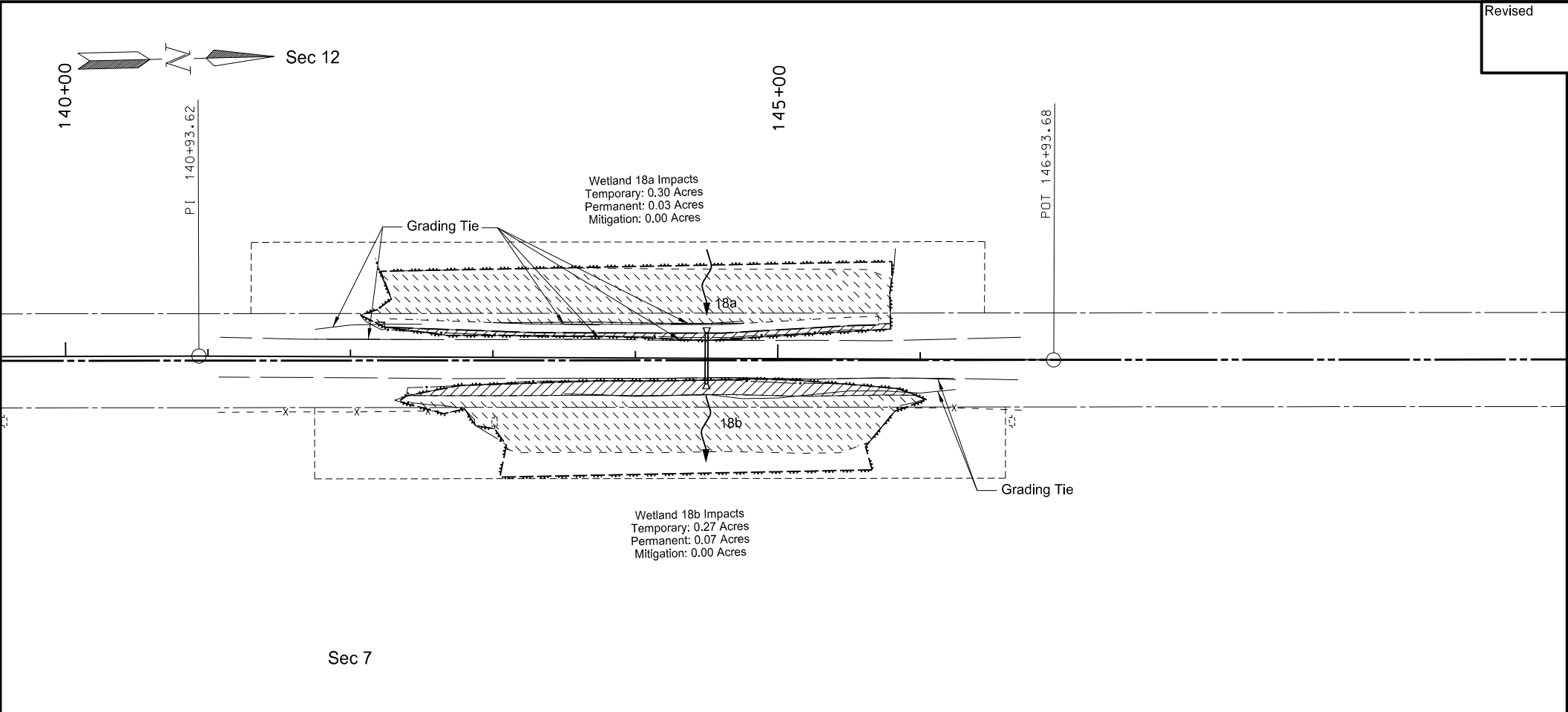
-  Temporary Wetland Impact
-  Permanent Wetland Impact



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K6N-1
 Wetland Impacts



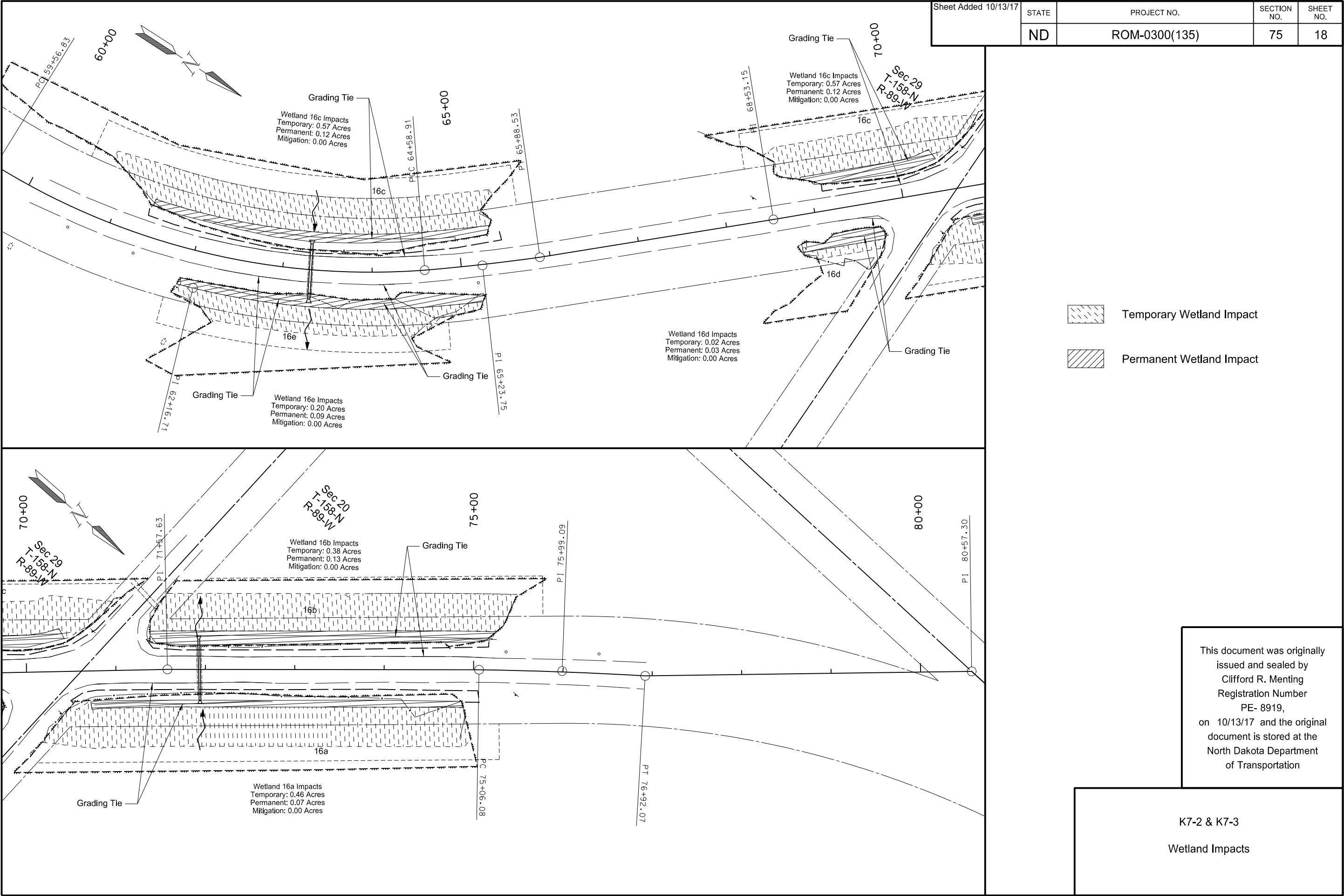
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		ND	ROM-0300(135)	75	16



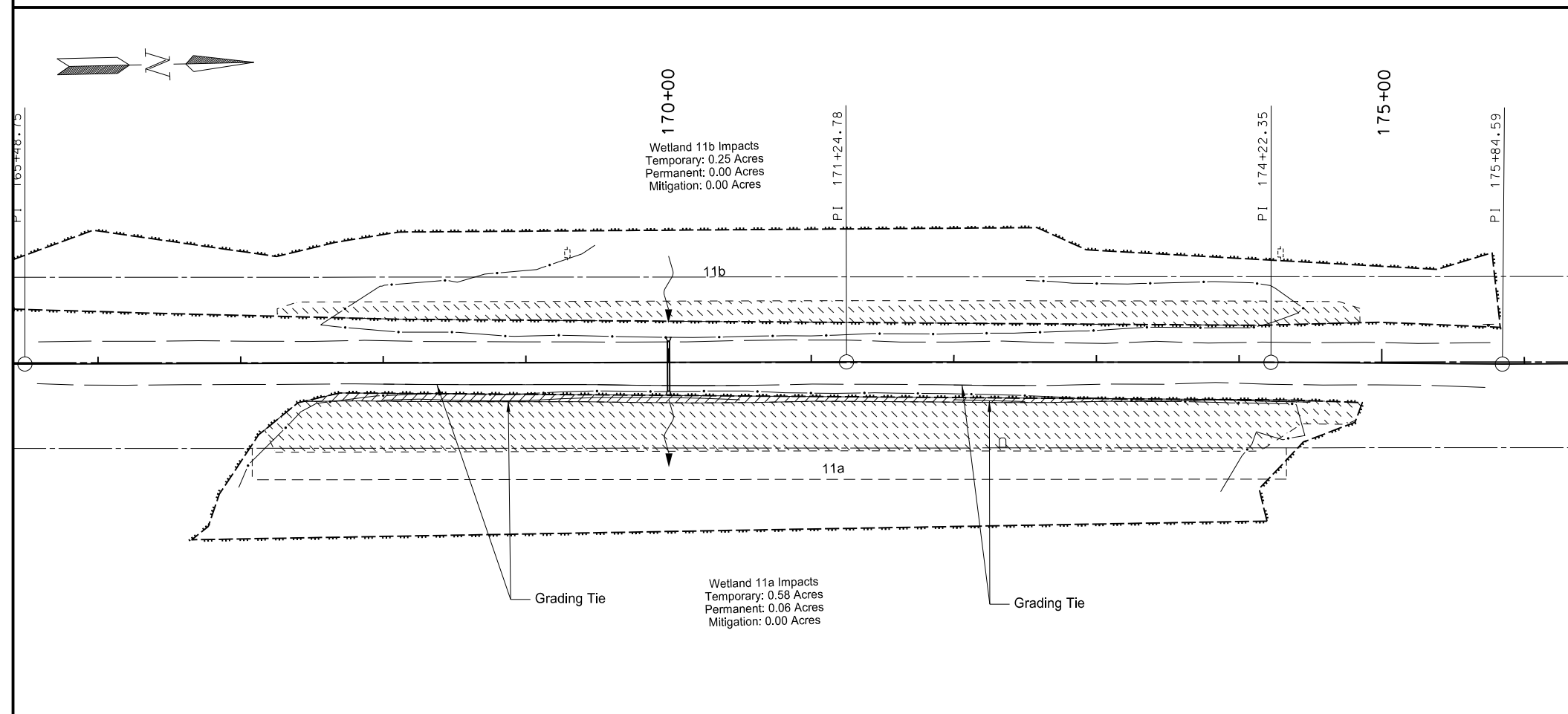
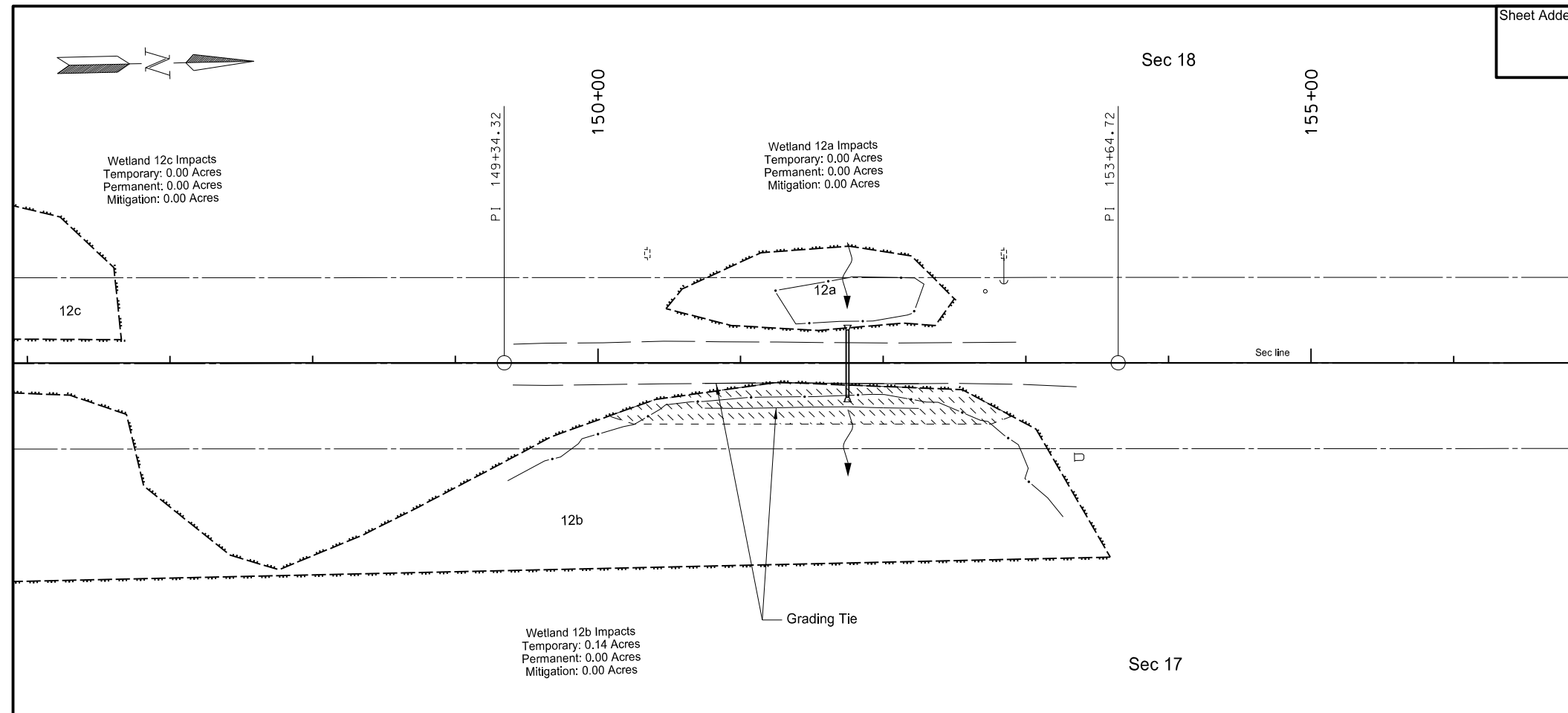
-  Temporary Wetland Impact
-  Permanent Wetland Impact


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K6N-4
Wetland Impacts



Sheet Added 10/13/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(135)	75	20



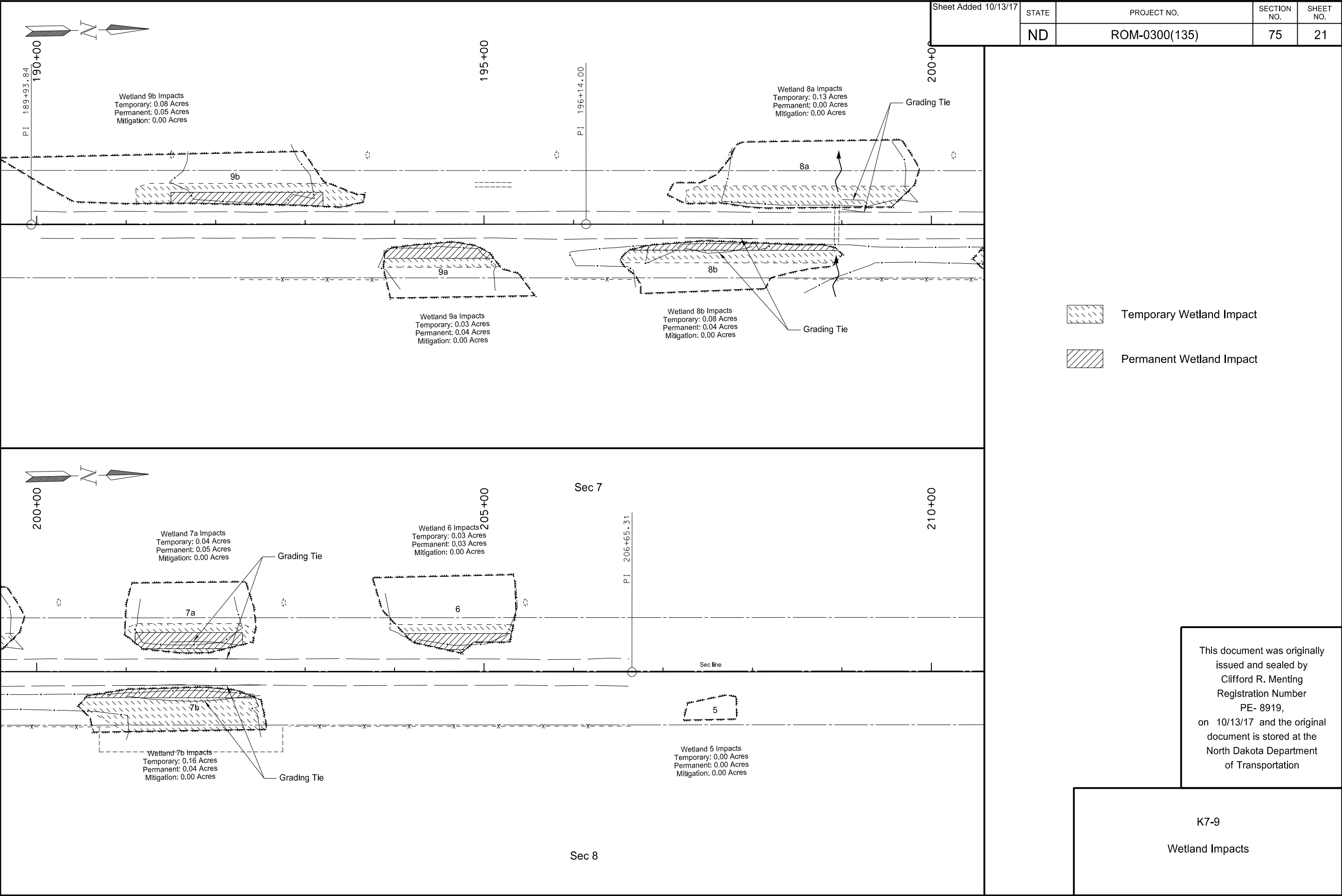
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 Permanent Wetland Impact

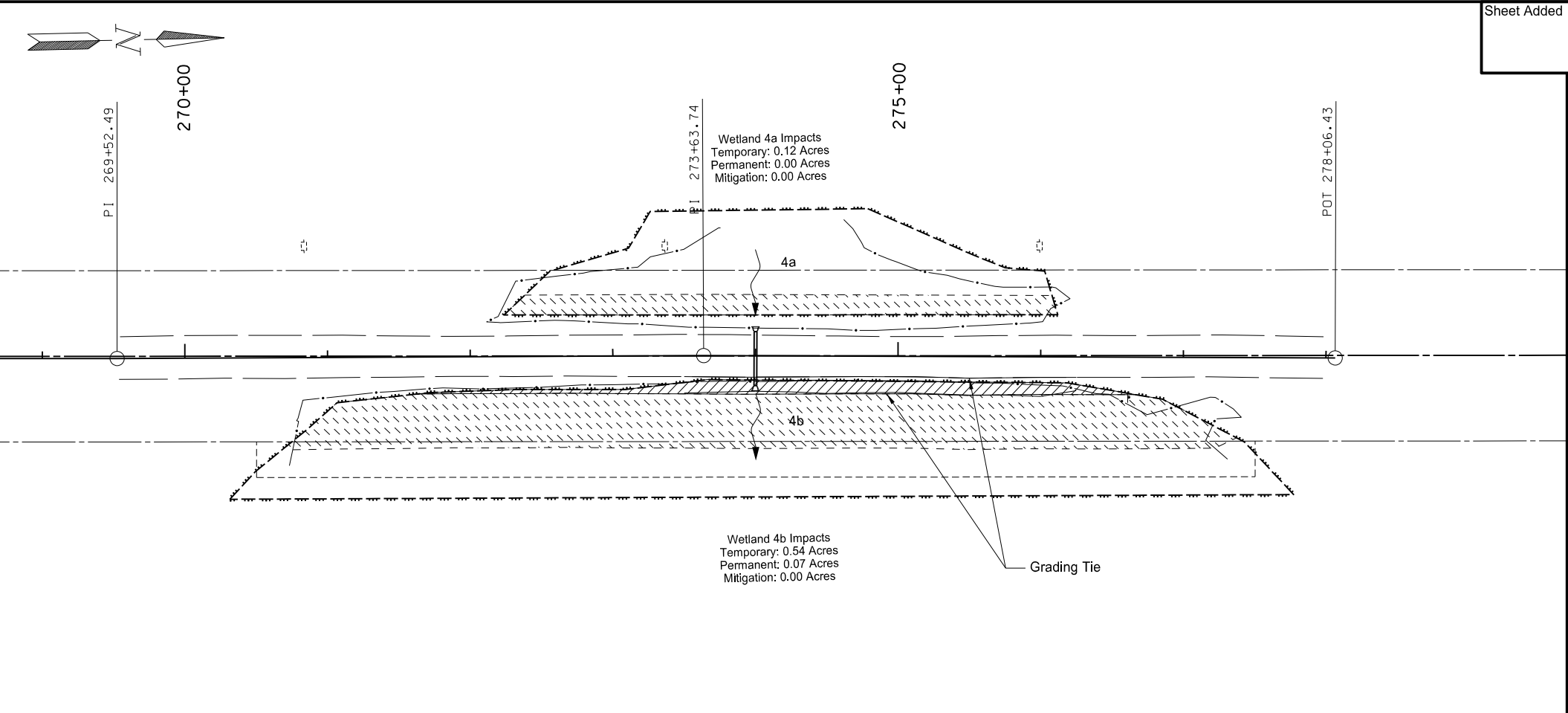
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K7-7 & K7-8

Wetland Impacts



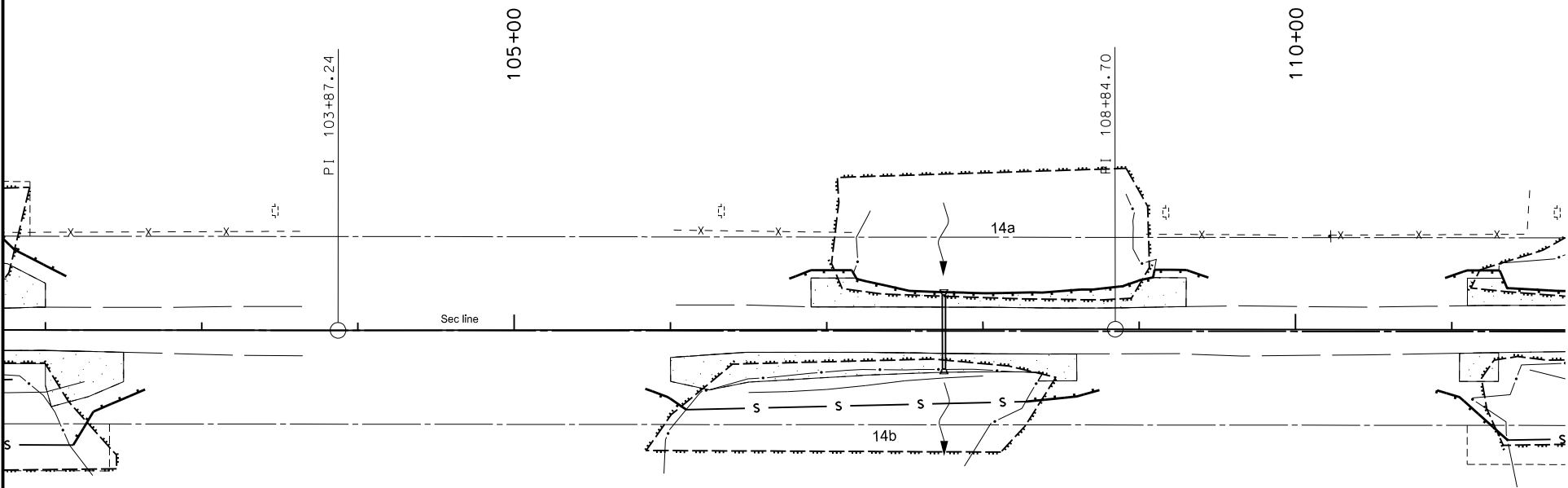
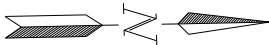
Sheet Added 10/13/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(135)	75	22







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K7-10
 Wetland Impacts

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		ND	ROM-0300(135)	76	22



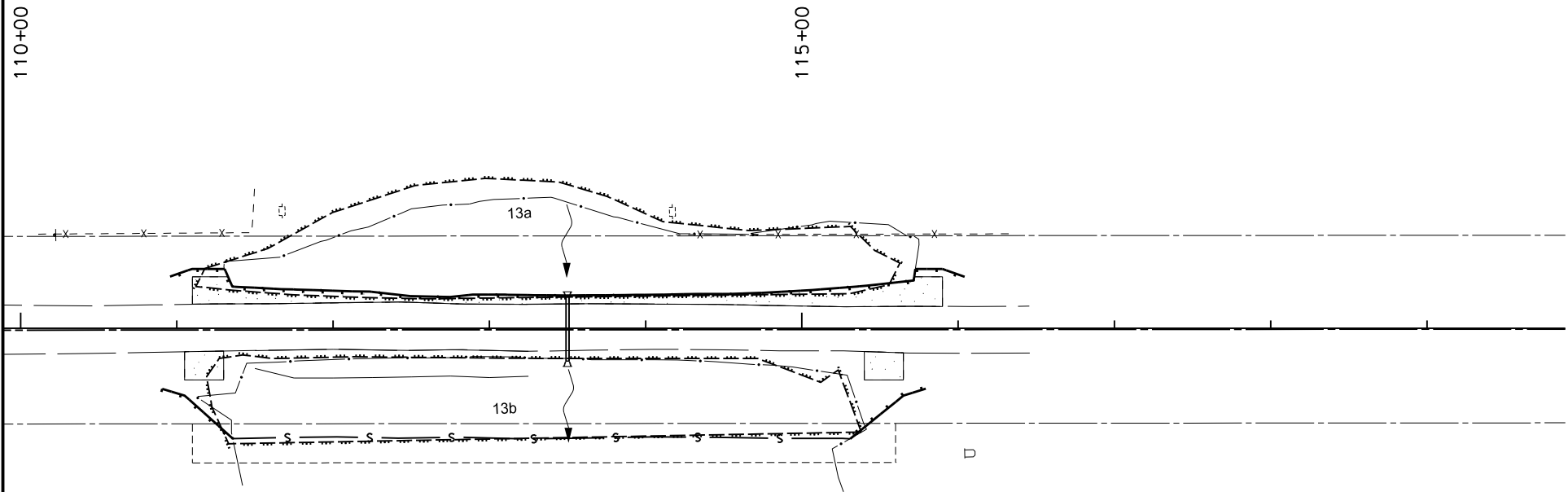
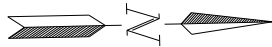
See sheets 28-31 for quantities

-  MULCHING/TEMPORARY COVER CROP
-  TEMPORARY FIBER ROLLS
-  TEMPORARY SILT FENCE UNSUPPORTED
-  TEMPORARY SILT CURTAIN





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K7-5
Temporary Erosion Control

Revised	10/13/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	ROM-0300(135)	76	23



See sheets 28-31 for quantities

-  MULCHING/TEMPORARY COVER CROP
-  TEMPORARY FIBER ROLLS
-  TEMPORARY SILT FENCE UNSUPPORTED
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K7-6

Temporary Erosion Control

Temporary Erosion Control				Offset	12" Fiber Rolls (LF)		Remove 12" Fiber Rolls (LF)		Silt Fence (LF)		Remove Silt Fence (LF)		Silt Curtain (LF)	
Site	Stationing			Feet	LT	RT	LT	RT	LT	RT	LT	RT	LT	RT
J10-1	5+66	to	6+03	57-65	39		39							
	6+03	to	9+01	65-66									297	
	9+01	to	9+33	66-69	34		34							
J10-2	66+12	to	67+07	46-40		102		102						
	67+07	to	68+63	40-36					155		155			
	68+64	to	69+64	36-38		103		103						
	67+06	to	67+68	35-41	63		63							
	68+41	to	73+66	71									523	
	73+67	to	73+80	71-66	15		15							
	71+06	to	71+59	38-32		57		57						
	71+59	to	72+77	32-38					118		118			
J10-3	72+77	to	73+39	38-38		64		64						
	179+89	to	180+04	61-66	15		15							
	180+04	to	182+47	65-66									243	
	182+47	to	182+61	61-66	15		15							
	179+00	to	179+18	55-65		20		20						
	179+18	to	182+39	65										321
J10-4	182+39	to	183+14	65-40		80		80						
	187+91	to	188+26	63-75	46		46							
	188+26	to	192+41	75									415	
	192+41	to	192+79	69-75	21		21							
	187+39	to	187+51	58-66		19		19						
	187+51	to	191+19	66-69										365
K6S-1	191+19	to	192+15	69-37		104		104						
	5+66	to	6+00	38-64	40		40							
	6+00	to	9+05	64-60									255	
	9+05	to	9+16	60-49	15		15							
	6+19	to	6+42	51-56		26		26						
	6+42	to	7+56	56-57										129
K6S-2	7+56	to	7+94	53-57		45		45						
	13+41	to	13+72	38-58	37		37							
	13+72	to	18+26	58-61									463	
K6S-3	18+26	to	18+78	47-61	63		63							
	29+06	to	29+39	37-34	38		38							
	29+39	to	30+29	34					96		96			
	30+35	to	30+94	34-38	62		62							
K6S-4	29+11	to	30+14	40-38	106		106							
	35+01	to	35+58	37-57		62		62						
	35+58	to	37+49	57										191
	37+49	to	38+09	38-57		65		65						
	35+01	to	36+62	37-61	123		123							
	36+62	to	37+94	61					96		96			
K6S-5	37+57	to	38+09	31-61	48		48							
	47+10	to	47+27	48-58	20		20							
	47+27	to	49+54	58									227	
	49+54	to	50+19	38-58	68		68							
	47+21	to	48+04	38-60		87		87						
	48+04	to	50+30	60										225

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Temporary Erosion Control

Temporary Erosion Control				Offset	12" Fiber Rolls (LF)		Remove 12" Fiber Rolls (LF)		Silt Fence (LF)		Remove Silt Fence (LF)		Silt Curtain (LF)	
Site	Stationing			Feet	LT	RT	LT	RT	LT	RT	LT	RT	LT	RT
K6S-5	50+30	to	50+99	38-60		75		75						
K6S-6	53+61	to	54+09	37-69	58		58							
	54+09	to	60+51	69									644	
	60+51	to	61+68	69-38	123		123							
	53+96	to	54+45	39-67		57		57						
	54+45	to	61+26	67										673
	61+26	to	62+64	31-67		152		152						
K6S-7	67+06	to	67+38	40-53		35		35						
	67+38	to	71+12	53-58										330
	71+12	to	73+13	43-33		207		207						
K6S-8	100+46	to	101+27	34-39	85		85							
	102+83	to	105+06	67									222	
	105+06	to	105+74	67-34	76		76							
	100+16	to	100+89	34-38		73		73						
	103+39	to	105+65	65-64										227
	105+65	to	106+64	64-29		106		106						
K6S-9	120+51	to	121+62	38-57		113		113						
	121+62	to	124+28	57										267
	124+28	to	124+69	38-57		45		45						
K6N-1	6+36	to	7+20	29-64	85		85							
	7+20	to	10+32	64									272	
	10+32	to	10+46	57-64	15		15							
K6N-2	36+82	to	37+25	41-39	44		44							
	38+01	to	46+17	70-68									820	
	46+17	to	46+35	68-43	30		30							
	36+11	to	36+85	38-68		82		82						
	36+85	to	45+36	68-70										851
	45+36	to	46+64	70-28		136		136						
K6N-3	123+61	to	124+92	26-67	140		140							
	124+96	to	132+04	67									712	
	132+04	to	133+47	67-43	148		148							
	133+74	to	134+24	41-38	51		51							
	134+24	to	134+77	38				53		53				
	134+77	to	135+59	38-39	84		84							
	124+61	to	127+71	23-62		315		315						
	127+71	to	130+67	62										296
K6N-4	130+67	to	135+89	25-62		528		528						
	141+36	to	142+30	25-62	104		104							
	142+30	to	145+62	62-63									333	
	145+62	to	146+29	37-63	71		71							
	141+91	to	143+19	39-67		132		132						225
	143+19	to	146+44	66-67										
K7-1	145+44	to	146+64	59-25		127		127						
	6+90	to	7+18	69-78	30		30							
	7+18	to	10+97	78-79									379	
	10+97	to	12+91	79-56				196		196				
	12+92	to	13+88	56-34	102		102							
	7+58	to	7+82	23-77		59		59						

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Temporary Erosion Control

Temporary Erosion Control		Offset	12" Fiber Rolls (LF)		Remove 12" Fiber Rolls (LF)		Silt Fence (LF)		Remove Silt Fence (LF)		Silt Curtain (LF)	
Site	Stationing	Feet	LT	RT	LT	RT	LT	RT	LT	RT	LT	RT
K7-1	7+82 to 12+29	77										447
	12+29 to 13+87	37-77		171		171						
K7-2	60+66 to 60+78	61-78	20		20							
	60+78 to 65+41	78-83									420	
	65+41 to 65+77	34-83	61		61							
	61+42 to 62+40	41-72		110		110						
	62+40 to 64+38	72										216
	64+38 to 65+68	39-72		144		144						
K7-3	68+49 to 68+67	70-80	20		20							
	68+67 to 70+97	77-80									231	
	70+97 to 71+04	70-77	10		10							
	68+42 to 69+04	35-52		66		66						
	69+04 to 69+71	52										67
	70+09 to 70+16	72-79		10		10						
	70+16 to 74+90	79-86										472
	74+90 to 75+40	38-86		70		70						
	71+54 to 71+58	85	5		5							
	71+58 to 75+47	85									392	
K7-4	75+47 to 75+57	75-85	15		15							
	96+62 to 96+77	75-80	15		15							
	96+77 to 101+50	80									473	
	101+50 to 102+13	80-34	79		79							
	97+81 to 98+68	38-74		94		94						
	98+68 to 102+18	74										350
K7-5	102+18 to 102+64	38-74		61		61						
	105+86 to 106+10	38-51		30		30						
	106+10 to 108+27	51-46										217
	108+27 to 108+74	46-39		48		48						
	106+76 to 109+44	23-38	280		280							
K7-6	110+91 to 111+36	39-71		56		56						
	111+36 to 115+31	71										395
	115+31 to 115+79	71-39		59		59						
	110+96 to 116+04	20-38	525		525							
K7-7	150+11 to 150+25	38-43		15		15						
	150+25 to 152+76	43										250
	152+76 to 152+90	43-38		15		15						
K7-8	167+01 to 167+24	38-62		36		36						
	167+24 to 174+05	62										680
	174+05 to 174+89	43-38		90		90						
	167+26 to 167+81	38-43	56		56							
	167+81 to 174+38	43									657	
	174+38 to 174+84	43-38	47		47							
K7-9	191+11 to 191+52	41-46	42		42							
	191+52 to 193+07	46									156	
	193+07 to 193+59	46-41	53		53							
	193+40 to 193+82	40-48		42		42						
	193+82 to 195+14	48										131
	195+14 to 196+01	48-43		89		89						

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Temporary Erosion Control

Temporary Erosion Control			Offset	12" Fiber Rolls (LF)		Remove 12" Fiber Rolls (LF)		Silt Fence (LF)		Remove Silt Fence (LF)		Silt Curtain (LF)	
Site	Stationing		Feet	LT	RT	LT	RT	LT	RT	LT	RT	LT	RT
K7-9	196+01	to 201+02	43-69						509		509		
	201+02	to 202+50	69										147
	202+50	to 202+89	39-69		51		51						
	197+26	to 197+70	38-43	45		45							
	197+70	to 199+70	43									200	
	199+70	to 200+24	43-38	55		55							
	200+71	to 201+12	38-54	44		44							
	201+12	to 202+28	54									116	
	202+28	to 202+69	38-54	44		44							
	203+61	to 203+95	38-53	38		38							
	203+95	to 205+31	53									135	
K7-10	205+31	to 205+69	38-53	42		42							
	270+31	to 270+75	38-64		52		52						
	270+75	to 277+22	64										647
	277+22	to 277+79	38-64		62		62						
	271+86	to 272+27	30-43	44		44							
	272+27	to 276+18	43									391	
			276+18	to 276+32	38-43	15		15					
Subtotal				3,669	4,447	3,669	4,447	441	782	441	782	8,976	8,119
Engineers Discretion (5%)				183	222	183	222	22	39	22	39	449	406
Total				3,852	4,669	3,852	4,669	463	821	463	821	9,425	8,525

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Temporary Erosion Control

Permanent Erosion Control												
Location	Begin Sta	End Sta	Offset	CL Offset	Length (Ft)	Width (Ft)	Seed/Mulch (Acre)	TRM (SY)	Concrete Blanket (SY)	Rip Rap (CY)	Water Depth	Erosion Control
J10-1	5+85	9+15	LT	Begin at Shoulder	330		0.190				3.5	Seed/Mulch
	6+10	8+90	LT	37.5	280	12			373			Concrete Blanket
J10-2	67+20	73+50	LT	Begin at Shoulder	630	17		1,190			4.5	TRM
	66+25	69+50	RT	Begin at Shoulder	325		0.111				1.5	Seed/Mulch
	71+20	73+25	RT	Begin at Shoulder	205		0.057				1.5	Seed/Mulch
J10-3	179+80	182+80	LT	Begin at Shoulder	300	16		533			3.5	TRM
	179+15	183+00	RT	Begin at Shoulder	385		0.049				4	Seed/Mulch
	179+40	182+50	RT	15	310	12			413			Concrete Blanket
J10-4	188+05	192+65	LT	Begin at Shoulder	460		0.059				6	Seed/Mulch
	188+30	192+40	LT	17	410	12			547		4	Concrete Blanket
	187+75	192+00	RT	Begin at Shoulder	425	17		803				TRM

K6S-1	5+75	6+00	LT	Begin at Shoulder	25		0.011				4	Seed/Mulch
	6+00	8+50	LT	Begin at Shoulder	250	12			333			Concrete Blanket
	8+50	8+75	LT	Begin at Shoulder	25		0.009					Seed/Mulch
	6+30	7+80	RT	Begin at Shoulder	150	10		167			2.5	TRM
K6S-2	13+55	13+80	LT	Begin at Shoulder	25		0.012				3	Seed/Mulch
	13+80	18+40	LT	Begin at Shoulder	460	6			307			Concrete Blanket
	18+40	18+65	LT	Begin at Shoulder	25		0.011					Seed/Mulch
K6S-3	29+20	30+80	LT	Begin at Shoulder	160		0.031				-	Seed/Mulch
	29+25	30+00	RT	Begin at Shoulder	75		0.034				-	Seed/Mulch
K6S-4	35+60	37+80	LT	Begin at Shoulder	220	13		318			3.5	TRM
	35+15	37+95	RT	Begin at Shoulder	280		0.035				2	Seed/Mulch
	35+40	37+70	RT	14.5	230	12			307			Concrete Blanket
K6S-5	47+25	50+05	LT	Begin at Shoulder	280		0.033				2.5	Seed/Mulch
	47+50	49+80	LT	14	230	12			307		3	Concrete Blanket
	47+35	50+85	RT	Begin at Shoulder	350		0.011					Seed/Mulch
	47+60	50+60	RT	Begin at Shoulder	300	12			400			Concrete Blanket
K6S-6	53+75	61+55	LT	Begin at Shoulder	780		0.092				5	Seed/Mulch
	54+00	61+30	LT	15	730	12			973		4.5	Concrete Blanket
	54+10	54+35	RT	Begin at Shoulder	25		0.010					Seed/Mulch
	54+35	61+70	RT	Begin at Shoulder	735	12			980			Concrete Blanket
	61+50	62+50	RT	Begin at Shoulder	100		0.049					Seed/Mulch
K6S-7	67+25	67+80	RT	Begin at Shoulder	55		0.022				2.5	Seed/Mulch
	67+80	71+80	RT	Begin at Shoulder	400	12		533				TRM
	71+80	73+00	RT	Begin at Shoulder	120		0.063					Seed/Mulch
K6S-8	100+60	105+60	LT	Begin at Shoulder	500	15		833			4	TRM
	100+30	105+70	RT	Begin at Shoulder	540	14		840			4	TRM
	105+70	106+50	RT	Begin at Shoulder	80		0.037					Seed/Mulch
K6S-9	120+65	120+90	RT	Begin at Shoulder	25		0.012				2.5	Seed/Mulch
	120+90	124+30	RT	Begin at Shoulder	340	12			453			Concrete Blanket
	124+30	124+55	RT	Begin at Shoulder	25		0.011					Seed/Mulch

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Permanent Erosion Control

Permanent Erosion Control												
Location	Begin Sta	End Sta	Offset	CL Offset	Length (Ft)	Width (Ft)	Seed/Mulch (Acre)	TRM (SY)	Concrete Blanket (SY)	Rip Rap (CY)	Water Depth	Erosion Control
K6N-1	6+50	10+15	LT	Begin at Shoulder	365		0.067				3	Seed/Mulch
	7+40	9+90	LT	4.5 ft from Shoulder	250	12			333			Concrete Blanket
K6N-2	36+95	37+20	LT	Begin at Shoulder	25		0.009				5.5	Seed/Mulch
	37+20	46+00	LT	Begin at Shoulder	880	12			1,173			Concrete Blanket
	46+00	46+25	LT	Begin at Shoulder	25		0.011					Seed/Mulch
	36+25	36+50	RT	Begin at Shoulder	25		0.010				5.5	Seed/Mulch
	36+50	46+00	RT	Begin at Shoulder	950	12			1,267			Concrete Blanket
	46+00	46+50	RT	Begin at Shoulder	50		0.019					Seed/Mulch
K6N-3	123+75	133+50	LT	Begin at Shoulder	975		0.081				5	Seed/Mulch
	125+00	133+40	LT	1 ft from Shoulder	840	12			1,120			Concrete Blanket
	133+75	135+20	LT	4 ft from Shoulder	145	16		258			1	TRM
	135+00	135+45	LT	Begin at Shoulder	45		0.016					Seed/Mulch
	124+75	135+75	RT	Begin at Shoulder	1,100		0.155				3.5	Seed/Mulch
	126+00	133+40	RT	1 ft from Shoulder	740	12			987			Concrete Blanket
K6N-4	141+50	142+10	LT	Begin at Shoulder	60		0.019				4	Seed/Mulch
	142+00	145+90	LT	Begin at Shoulder	390	12			520			Concrete Blanket
	145+90	146+15	LT	Begin at Shoulder	25		0.011					Seed/Mulch
	142+05	142+30	RT	Begin at Shoulder	25		0.010				4.5	Seed/Mulch
	142+30	146+10	RT	Begin at Shoulder	380	12			507			Concrete Blanket
	146+00	146+50	RT	Begin at Shoulder	50		0.014					Seed/Mulch

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Permanent Erosion Control

Permanent Erosion Control												
Location	Begin Sta	End Sta	Offset	CL Offset	Length (Ft)	Width (Ft)	Seed/Mulch (Acre)	TRM (SY)	Concrete Blanket (SY)	Rip Rap (CY)	Water Depth	Erosion Control
K7-1	7+35	13+75	LT	Begin at Shoulder	640		0.101				5	Seed/Mulch
	7+60	13+00	LT	19	540	12				480		Rip Rap
	7+75	13+75	RT	Begin at Shoulder	600		0.199				3	Seed/Mulch
	8+10	12+70	RT	24.5	460	12				409		Rip Rap
K7-2	61+15	65+65	LT	Begin at Shoulder	450		0.099				4.5	Seed/Mulch
	61+40	65+40	LT	24.5	400	12				356		Rip Rap
	61+55	65+55	RT	Begin at Shoulder	400		0.102				2	Seed/Mulch
	61+80	65+30	RT	23.5	350	12				311		Rip Rap
K7-3	68+65	70+70	LT	Begin at Shoulder	205		0.050				4	Seed/Mulch
	68+90	70+45	LT	23.5	155	12				138		Rip Rap
	71+25	75+55	LT	Begin at Shoulder	430		0.109				5	Seed/Mulch
	71+35	75+30	LT	25	395	12				351		Rip Rap
	68+55	69+80	RT	Begin at Shoulder	125		0.034				1.5	Seed/Mulch
	68+80	69+75	RT	24	95	12				84		Rip Rap
	70+35	75+25	RT	Begin at Shoulder	490		0.112				5.5	Seed/Mulch
	70+70	75+00	RT	24	430	12				382		Rip Rap
K7-4	97+05	102+00	LT	Begin at Shoulder	495		0.069				5.5	Seed/Mulch
	97+30	101+70	LT	18	440	12				391		Rip Rap
	97+95	102+50	RT	Begin at Shoulder	455		0.104				3	Seed/Mulch
	98+20	102+00	RT	21.5	380	12				338		Rip Rap
K7-5	106+90	109+30	LT	Begin at Shoulder	240		0.072				7.5	Seed/Mulch
	106+00	108+60	RT	Begin at Shoulder	260		0.093				4	Seed/Mulch
K7-6	111+10	115+90	LT	Begin at Shoulder	480		0.096				4.5	Seed/Mulch
	111+05	111+30	RT	Begin at Shoulder	25		0.010				5.5	Seed/Mulch
	111+30	115+40	RT	Begin at Shoulder	410	12			547			Concrete Blanket
	115+40	115+65	RT	Begin at Shoulder	25		0.010					Seed/Mulch
K7-7	150+25	152+75	RT	Begin at Shoulder	250		0.083				3	Seed/Mulch
K7-8	167+40	174+70	LT	Begin at Shoulder	730		0.121				6	Seed/Mulch
	167+15	167+40	RT	Begin at Shoulder	25		0.010				3	Seed/Mulch
	167+40	174+60	RT	Begin at Shoulder	720	12			960			Concrete Blanket
	174+50	174+75	RT	Begin at Shoulder	25		0.010					Seed/Mulch
K7-9	191+25	193+45	LT	Begin at Shoulder	220		0.038				1.5	Seed/Mulch
	191+50	193+20	LT	18	170	12				151		Rip Rap
	193+55	195+35	RT	Begin at Shoulder	180		0.032				1.5	Seed/Mulch
	193+80	195+10	RT	20	130	12				116		Rip Rap
	195+65	202+75	RT	Begin at Shoulder	710		0.038				4.5	Seed/Mulch
	195+90	202+50	RT	17	660	12			880			Concrete Blanket
	197+40	200+10	LT	Begin at Shoulder	270		0.071				4	Seed/Mulch
	200+85	202+55	LT	Begin at Shoulder	170		0.054				1.5	Seed/Mulch
	201+10	202+30	LT	26	120	12				107		Rip Rap
	203+75	205+55	LT	Begin at Shoulder	180		0.053				1.5	Seed/Mulch
	204+00	205+30	LT	25	130	12				116		Rip Rap
K7-10	272+00	276+15	LT	Begin at Shoulder	415	10		461			1	TRM
	270+45	270+70	RT	Begin at Shoulder	25		0.011				4	Seed/Mulch
	270+70	277+40	RT	Begin at Shoulder	670	12			893			Concrete Blanket
	277+40	277+65	RT	Begin at Shoulder	25		0.011					Seed/Mulch

This document was originally issued and sealed by Clifford R. Menting Registration Number PE- 8919, on 10/13/17 and the original document is stored at the North Dakota Department of Transportation

Permanent Erosion Control

PRELIMINARY SURVEY COORDINATE DATA - MINOT MINUTEMAN COMPLEX INSLOPE REPAIR - MOUNTRAIL COUNTY										Revised 10/13/17		STATE	PROJECT NO.		SECTION NO.	SHEET NO.	
												ND	ROM-0300(135)		81	1	
HORIZONTAL ALIGNMENT				CURVE DATA		US PUBLIC LAND SURVEY DATA				SURVEY CONTROL POINTS							
PNT	STATION	NORTHING	EASTING	ARC DEFINITION		DESC.	SEC-TWP-RGE	NORTHING	EASTING	PNT	NORTHING	EASTING	ELEV	STATION	OFFSET		
J-10				Curve J10-1						CONTROL POINT DESCRIPTION							
Begin	5+00.00	498336.55	1601937.02	PI Sta =65+56.17						3	519233.64	1600437.75	2375.88	203+41.53 J10	29.28' Rt		
PI	31+39.97	500976.09	1601984.20	Delta =2° 40' 00" (LT)						5/8" Rebar w/Alum cap stamped - GPS-3							
PI	63+28.18	504163.82	1602039.58	D _i =1° 45' 12"						4	504106.98	1601988.03	2286.68	62+70.44 J10	50.56' LT		
PC	64+80.11	504313.65	1602014.38	R =3,267.82						5/8" Rebar w/Alum cap stamped - GPS-4							
PI J10-1	65+56.17	504388.10	1601998.77	T =76.06						5	528326.08	1579538.92	2260.49	South of K6S			
PT	66+32.21	504461.73	1601979.71	L =152.10						5/8" Rebar w/Alum cap stamped - GPS-5							
PI	70+64.30	504872.56	1601845.82							6	558095.46	1580187.09	2321.03	118+95.70 K6N	33.52' Rt		
PI	74+05.55	505193.80	1601730.69	Curve K6S-1						5/8" Rebar w/Alum cap stamped - GPS-6							
PI	74+91.16	505272.62	1601697.28	PI Sta =5+74.46						7	563023.41	1553783.42	2320.28	227+42.33 K7	50.80' Lt		
PI	97+62.57	506949.72	1600165.40	Delta =19° 36' 33" (LT)						5/8" Rebar w/Alum cap stamped - GPS-7							
PI	124+06.64	509593.28	1600216.89	D _i =13° 17' 50"						8	535254.64	1553286.93	2252.99	South of K7			
PI	150+50.75	512236.83	1600271.56	R =430.89						5/8" Rebar w/Alum cap stamped - GPS-8							
PI	176+94.77	514880.44	1600318.15	T =74.46													
End	203+41.54	517526.64	1600373.05	L =147.47													
K6S																	
PC	5+00.00	533591.29	1579824.21	Curve K6S-2													
PI K6S-1	5+74.46	533646.05	1579874.67	PI Sta =7+94.79													
PT	6+47.47	533714.56	1579903.83	Delta =39° 25' 11" (LT)													
PC	6+76.69	533741.45	1579915.27	D _i =17° 22' 46"													
PI K6S-2	7+94.79	533850.12	1579961.52	R =329.68													
PT	9+03.50	533963.44	1579928.24	T =118.11													
PI	10+72.65	534125.63	1579880.25	L =226.82													
PI	12+50.81	534295.27	1579825.81														
PI	14+64.12	534499.89	1579765.55	Curve K6S-3													
PC	17+55.72	534775.45	1579670.14	PI Sta =18+19.38													
PI K6S-3	18+19.38	534835.55	1579649.17	Delta =14° 20' 52" (RT)													
PT	18+82.37	534898.98	1579643.74	D _i =11° 19' 44"													
PI	20+32.55	535049.15	1579641.89	R =505.76													
PI	27+73.38	535789.80	1579657.72	T =63.66													
PI	31+31.66	536148.02	1579664.58	L =126.65													
PI	34+38.89	536455.20	1579670.00														
PI	39+16.33	536932.51	1579681.33			<input type="checkbox"/> Assumed Coordinates				INITIALIZING BENCH MARK							
PI	46+96.50	537712.47	1579699.35			<input checked="" type="checkbox"/> All coordinates on this sheet are Mountrail County ground coordinates. They are derived from the NAD83(2011) reference frame; North Dakota North Zone Combination Factor (cf) = .9998350				<input checked="" type="checkbox"/> NAVD-88 <input type="checkbox"/> NGVD-29							
NOTES: Sheet 1 of 4				Date Survey Completed 06/01/17						<input type="checkbox"/> GEOID 09 <input type="checkbox"/> _____ <input checked="" type="checkbox"/> GEOID 12B							
All coordinates and measurements on this document derived from the International Foot definition.																This document was originally issued and sealed by James Alber Registration Number LS- 4730 , on 10/13/17 and the original document is stored at the North Dakota Department of Transportation	

PRELIMINARY SURVEY COORDINATE DATA - MINOT MINUTEMAN COMPLEX INSLOPE REPAIR - MOUNTRAIL COUNTY										Sheet Added 10/13/17		STATE	PROJECT NO.		SECTION NO.	SHEET NO.	
												ND	ROM-0300(135)		81	2	
HORIZONTAL ALIGNMENT				CURVE DATA		US PUBLIC LAND SURVEY DATA				SURVEY CONTROL POINTS							
PNT	STATION	NORTHING	EASTING	ARC DEFINITION		DESC.	SEC-TWP-RGE	NORTHING	EASTING	PNT	NORTHING	EASTING	ELEV	STATION	OFFSET		
										CONTROL POINT DESCRIPTION							
K6S				Curve K6S-4		Curve K6N-1											
PI	52+21.27	538237.11	1579711.04	PI Sta =66+10.16		PI Sta =6+15.28											
PI	63+07.98	539323.50	1579737.35	Delta =15° 04' 42" (LT)		Delta =5° 31' 44" (LT)											
PI	63+46.20	539361.70	1579736.09	D _s =14° 35' 00"		D _s =4° 53' 36"											
PC	65+58.16	539573.52	1579728.21	R =392.89		R =1,170.86											
PI K6S-4	66+10.16	539624.78	1579719.51	T =52.00		T =56.54											
PT	66+61.56	539672.02	1579697.77	L =103.39		L =112.99											
PC	68+52.08	539849.14	1579627.59														
PI K6S-5	69+91.82	539980.73	1579580.58	Curve K6S-5		Curve K6N-2											
PT	71+18.11	540108.71	1579636.68	PI Sta =69+91.82		PI Sta =7+37.73											
PC	72+67.62	540248.03	1579690.95	Delta =43° 19' 28" (RT)		Delta =21° 21' 22" (LT)											
PI K6S-6	73+55.59	540327.96	1579727.71	D _s =16° 17' 09"		D _s =16° 22' 03"											
PT	74+42.91	540413.80	1579746.94	R =351.81		T =66.00											
PI	87+79.43	541749.64	1579789.34	T =139.73		L =130.48											
PI	98+62.91	542832.78	1579816.84	L =266.02		R =350.06											
PI	100+45.06	543014.90	1579819.76														
PI	104+28.27	543397.98	1579829.57	Curve K6S-6		Curve K6N-3											
PI	107+77.06	543746.69	1579837.45	PI Sta =73+55.59		PI Sta =8+56.31											
PI	114+23.52	544393.05	1579848.68	Delta =12° 04' 25" (LT)		Delta =11° 42' 33" (LT)											
PI	119+48.24	544917.61	1579861.44	D _s =6° 53' 15"		D _s =10° 51' 32"											
End	125+59.09	545528.37	1579872.28	T =87.97		T =54.10											
K6N				L =175.29		L =107.83											
Begin	5+00.00	546764.40	1580054.33	R =831.87		R =527.64											
PC	5+58.74	546817.16	1580080.15														
PI K6N-1	6+15.28	546868.88	1580102.99														
PT	6+71.73	546922.56	1580120.75														
PC	6+71.73	546922.56	1580120.75														
PI K6N-2	7+37.73	546984.64	1580143.15														
PCC	8+02.21	547050.62	1580141.41														
PI K6N-3	8+56.31	547104.54	1580136.90														
PC	8+02.21	547050.62	1580141.41														
PI	10+20.73	547259.41	1580080.97														
PI	11+43.73	547370.75	1580028.71														
PI	13+92.53	547594.83	1579920.57														
NOTES: Sheet 2 of 4				Date Survey Completed 06/01/17		<div><div><input type="checkbox"/> Assumed Coordinates</div><div><input checked="" type="checkbox"/> All coordinates on this sheet are Mountrail County ground coordinates. They are derived from the NAD83(2011) reference frame; North Dakota North Zone Combination Factor (cf) = .9998350</div></div>				<div><div>All coordinates and measurements on this document derived from the International Foot definition.</div><div>INITIALIZING BENCH MARK</div><div><div><input checked="" type="checkbox"/> NAVD-88</div><div><input type="checkbox"/> NGVD-29</div><div><input type="checkbox"/> GEOID 09</div><div><input checked="" type="checkbox"/> GEOID 12B</div></div></div>		<div>This document was originally issued and sealed by James Alber Registration Number LS- 4730 , on 10/13/17 and the original document is stored at the North Dakota Department of Transportation</div>					

PRELIMINARY SURVEY COORDINATE DATA - MINOT MINUTEMAN COMPLEX INSLOPE REPAIR - MOUNTRAIL COUNTY										Sheet Added 10/13/17		STATE	PROJECT NO.		SECTION NO.	SHEET NO.
												ND	ROM-0300(135)		81	3
HORIZONTAL ALIGNMENT				CURVE DATA		US PUBLIC LAND SURVEY DATA				SURVEY CONTROL POINTS						
PNT	STATION	NORTHING	EASTING	ARC DEFINITION		DESC.	SEC-TWP-RGE	NORTHING	EASTING	PNT	NORTHING	EASTING	ELEV	STATION	OFFSET	
K6N				Curve K7-1						CONTROL POINT DESCRIPTION						
PI	48+08.99	551010.45	1579996.08	PI Sta =62+16.71												
PI	61+22.68	552323.79	1580026.59	Delta =36° 08' 17" (LT)												
PI	114+11.05	557610.82	1580145.18	D _c =7° 11' 34"												
PI	123+27.94	558527.58	1580161.03	R =796.56												
PI	136+48.88	559848.15	1580192.20	T =259.88												
PI	140+94.27	560293.45	1580200.94	L =502.41												
End	146+94.32	560893.28	1580217.43													
K-7				Curve K7-2												
Begin	5+00.00	541425.63	1553364.00	PI Sta =65+24.08												
PI	14+03.29	542328.72	1553383.10	Delta =3° 19' 40" (LT)												
PC	59+56.83	546676.57	1554736.23	D _c =2° 34' 02"												
PI K7-1	62+16.71	546936.39	1554730.99	R =2,231.83												
PCC	64+59.24	547143.14	1554573.53	T =64.83												
PI K7-2	65+24.08	547194.48	1554533.94	L =129.63												
PT	65+88.87	547243.44	1554491.44													
PI	68+53.49	547439.79	1554314.05	Curve K7-3												
PI	71+57.97	547664.19	1554108.26	PI Sta =75+99.43												
PC	75+06.42	547925.99	1553878.29	Delta =2° 27' 26" (RT)												
PI K7-3	75+99.43	547996.73	1553817.90	D _c =1° 19' 16.17"												
PT	76+92.41	548069.99	1553760.60	R =4,336.79												
PI	80+57.64	548340.77	1553515.51	T =93.01												
PI	103+87.59	550670.18	1553565.56	L =185.99												
PI	108+85.04	551167.55	1553574.98													
PI	126+14.33	552896.41	1553613.39													
PI	153+65.06	555646.48	1553673.44													
PI	165+49.09	556830.21	1553700.29													
PI	171+25.13	557406.13	1553711.81													
PI	174+22.69	557703.61	1553718.76													
PI	175+84.94	557865.78	1553723.64							All coordinates and measurements on this document derived from the International Foot definition.		This document was originally issued and sealed by James Alber Registration Number LS- 4730 , on 10/13/17 and the original document is stored at the North Dakota Department of Transportation				
PI	179+05.22	558186.02	1553729.24													
PI	189+94.19	559274.71	1553753.52													
PI	196+14.34	559894.74	1553766.28			<input type="checkbox"/> Assumed Coordinates <input checked="" type="checkbox"/> All coordinates on this sheet are Mountrail County ground coordinates. They are derived from the NAD83(2011) reference frame; North Dakota North Zone Combination Factor (cf) = .9998350										
PI	206+65.66	560945.79	1553789.96													
NOTES: Sheet 3 of 4				Date Survey Completed 06/01/17						INITIALIZING BENCH MARK						
										<input checked="" type="checkbox"/> NAVD-88 <input type="checkbox"/> NGVD-29						
										<input type="checkbox"/> GEOID 09 <input type="checkbox"/> _____ <input checked="" type="checkbox"/> GEOID 12B						

							STATE	PROJECT NO.		SECTION NO.	SHEET NO.
							ND	ROM-0300(135), PCN 21835		100	1

SIGN NUMBER	SIGN SIZE	DESCRIPTION	AMOUNT REQUIRED	UNITS PER AMOUNT	UNITS SUB TOTAL
D3-36	36"x6"	STREET NAME SIGN (Sign and installation only)		6	
G20-1-60	60"x24"	ROAD WORK NEXT ___ MILES	8	34	272
G20-1b-60	60"x24"	WORK IN PROGRESS/ NO WORK IN PROGRESS (Sign and installation only)		26	
G20-2-48	48"x24"	END ROAD WORK	12	19	228
G20-4-36	36"x18"	PILOT CAR FOLLOW ME (Mounted to back of pilot car)		18	
G20-10-108	108"x48"	CONTRACTOR SIGN		64	
G20-50a-72	72"x36"	ROAD WORK NEXT ___ MILES RT & LT ARROWS	26	37	962
G20-52a-72	72"x24"	ROAD WORK NEXT ___ MILES RT or LT ARROW	4	30	120
G20-55-96	96"x48"	SPEED LIMIT ENFORCED - MINIMUM FEE \$80 WHEN WORKERS PRESENT	4	59	236
M1-1-36	36"x36"	INTERSTATE ROUTE MARKER (Post and installation only)		10	
M1-4-24	24"x24"	U.S. ROUTE MARKER (Post and installation only)		10	
M1-5-24	24"x24"	STATE ROUTE MARKER (Post and installation only)		10	
M3-1-24	24"x12"	NORTH (Mounted on route marker post)		7	
M3-2-24	24"x12"	EAST (Mounted on route marker post)		7	
M3-3-24	24"x12"	SOUTH (Mounted on route marker post)		7	
M3-4-24	24"x12"	WEST (Mounted on route marker post)		7	
M4-8-24	24"x12"	DETOUR (Mounted on route marker post)		7	
M4-9-30	30"x24"	DETOUR ARROW RIGHT or LEFT/AHD AND RT or LT		15	
M4-10-48	48"x18"	DETOUR ARROW RIGHT or LEFT		23	
M5-1-21	21"x15"	ARROW AHD AND RT or LT(Mounted on route marker post)		7	
M5-2-21	21"x15"	ARROW AHD UP & RT or LT (Mounted on route marker post)		7	
M6-1-21	21"x15"	ARROW RT or LT (Mounted on route marker post)		7	
M6-2-21	21"x15"	ARROW UP & RT or LT (Mounted on route marker post)		7	
M6-3-21	21"x15"	ARROW AHD (Mounted on route marker post)		7	
R1-1-48	48"x48"	STOP	2	32	64
R1-1a-18	18"x18"	STOP and SLOW PADDLE Back to Back	16	5	80
R1-2-60	60"x60"	YIELD		29	
R2-1-48	48"x60"	SPEED LIMIT ____	24	39	936
R2-1a-24	24"x18"	MINIMUM FEE \$80 (Mounted on Speed Limit post)		10	
R3-7-48	48"x48"	LEFT or RIGHT LANE MUST TURN LEFT or RIGHT		35	
R4-1-48	48"x60"	DO NOT PASS		39	
R4-7-48	48"x60"	KEEP RIGHT SYMBOL		39	
R5-1-48	48"x48"	DO NOT ENTER		35	
R6-1-36	36"x12"	ONE WAY RIGHT or LEFT		13	
R7-1-12	12"x18"	NO PARKING		11	
R10-6-24	24"x36"	STOP HERE ON RED		16	
R11-2-48	48"x30"	ROAD CLOSED		28	
R11-2a-48	48"x30"	STREET CLOSED		28	
R11-3a-60	60"x30"	ROAD CLOSED ____ MILES AHEAD LOCAL TRAFFIC ONLY		31	
R11-3c-60	60"x30"	STREET CLOSED ____ MILES AHEAD LOCAL TRAFFIC ONLY		31	
R11-4a-60	60"x30"	STREET CLOSED TO THRU TRAFFIC		31	
W1-3-48	48"x48"	RIGHT or LEFT SHARP REVERSE CURVE ARROW		35	
W1-4-48	48"x48"	RIGHT or LEFT REVERSE CURVE ARROW		35	
W1-4b-48	48"x48"	DOUBLE RIGHT or LEFT REVERSE CURVE ARROW		35	
W1-6-48	48"x24"	LARGE ARROW	4	26	104
W3-1-48	48"x48"	STOP AHEAD SYMBOL		35	
W3-3-48	48"x48"	SIGNAL AHEAD SYMBOL		35	
W3-4-48	48"x48"	BE PREPARED TO STOP	16	35	560
W3-5-48	48"x48"	SPEED REDUCTION AHEAD	4	35	140
W4-2-48	48"x48"	RIGHT or LEFT LANE TRANSITION SYMBOL		35	
W5-1-48	48"x48"	ROAD NARROWS		35	
W5-8-48	48"x48"	THRU TRAFFIC RIGHT LANE		35	
W5-9-48	48"x48"	ROAD WORK TRAFFIC ONLY DOWN & LT or RT ARROW		35	
W6-3-48	48"x48"	TWO WAY TRAFFIC SYMBOL		35	
W8-1-48	48"x48"	BUMP		35	
W8-3-48	48"x48"	PAVEMENT ENDS		35	
W8-7-48	48"x48"	LOOSE GRAVEL		35	
W8-9a-48	48"x48"	SHOULDER DROP-OFF		35	
W8-11-48	48"x48"	UNEVEN LANES		35	
W8-12-48	48"x48"	NO CENTER STRIPE		35	
W8-53-48	48"x48"	TRUCKS ENTERING HIGHWAY		35	
W8-54-48	48"x48"	TRUCKS ENTERING AHEAD or ____ FT.	2	35	70
W8-55-48	48"x48"	TRUCKS CROSSING AHEAD or ____ FT.		35	
W8-56-48	48"x48"	TRUCKS EXITING HIGHWAY		35	
W9-3a-48	48"x48"	CENTER LANE CLOSED SYMBOL		35	
W12-2-48	48"x48"	LOW CLEARANCE SYMBOL		35	
W13-1-24	24"x24"	____ MPH ADVISORY SPEED PLATE (Mounted on warning sign post)		11	
W13-4-48	48"x60"	RAMP ARROW		39	
W14-3-48	48"x36"	NO PASSING ZONE		23	
W20-1-48	48"x48"	ROAD WORK AHEAD or ____ FT or ____ MILE	20	35	700
W20-2-48	48"x48"	DETOUR AHEAD or ____ FT		35	
W20-3-48	48"x48"	ROAD or STREET CLOSED AHEAD or ____ FT.		35	
W20-4-48	48"x48"	ONE LANE ROAD AHEAD or ____ FT.	4	35	140
W20-5-48	48"x48"	RIGHT or LEFT LANE CLOSED AHEAD or ____ FT.		35	
W20-7a-48	48"x48"	FLAGGING SYMBOL	20	35	700
W20-7k-24	24"x18"	____ FEET (Mounted on warning sign post)		10	
W20-8-48	48"x48"	STREET CLOSED		35	
W20-51-48	48"x48"	EQUIPMENT WORKING		35	
W20-52-54	54"x12"	NEXT ____ MILES (Mounted on warning sign post)	16	12	192
W21-1a-48	48"x48"	WORKERS SYMBOL		35	
W21-2-48	48"x48"	FRESH OIL		35	
W21-3-48	48"x48"	ROAD MACHINERY AHEAD or ____ FT		35	

SIGN NUMBER	SIGN SIZE	DESCRIPTION	AMOUNT REQUIRED	UNITS PER AMOUNT	UNITS SUB TOTAL
W21-5-48	48"x48"	SHOULDER WORK		35	
W21-5a-48	48"x48"	RIGHT or LEFT SHOULDER CLOSED		35	
W21-5b-48	48"x48"	RIGHT or LEFT SHOULDER CLOSED AHEAD or ____ FT.		35	
W21-6a-48	48"x48"	SURVEY CREW AHEAD		35	
W21-50-48	48"x48"	BRIDGE PAINTING AHEAD or ____ FT.		35	
W21-51-48	48"x48"	MATERIAL ON ROADWAY	4	35	140
W22-8-48	48"x48"	FRESH OIL LOOSE ROCK		35	
		</			