DESIGN DATA			
Traffic G11	Average Daily		
Current 2014	Pass: 215	Trucks: N/A	Total: 215
Traffic J8	Average Daily		
Current 2017	Pass: 125	Trucks: 25	Total: 150
Traffic J9	Average Daily		
Current 2002	Pass: 65	Trucks: N/A	Total: 65
Traffic K5S	Average Daily		
Current 2017	Pass: 30	Trucks: N/A	Total: 30
Traffic G3 & G5	Average Daily		
Current 1992	Pass: 40	Trucks: NA	Total: 40
Traffic J1 & J5	Average Daily		
Current 2017	Pass: 10	Trucks: N/A	Total: 10

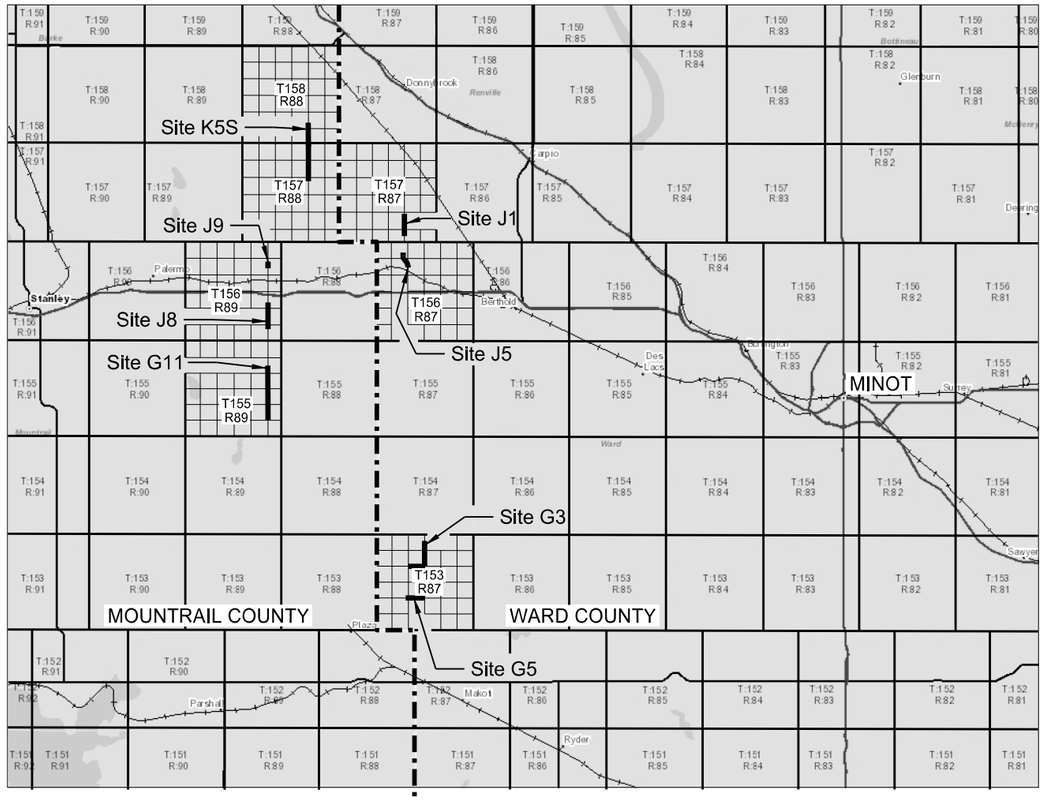
JOB # 8
NORTH DAKOTA
DEPARTMENT OF TRANSPORTATION

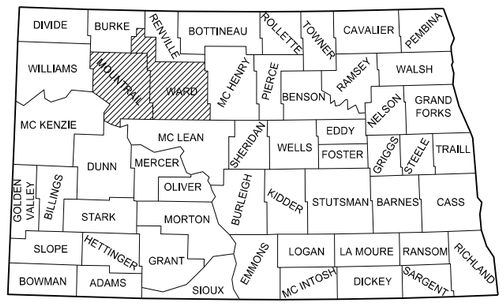
ROM-0300(134)
Mountrail & Ward County
Inslope Repairs at Multiple Locations

	STATE	PROJECT NO.	PCN	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	21834	1	1

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

PROJECT NUMBER \ DESCRIPTION		NET MILES	GROSS MILES
ROM-0300(134)	Mountrail County	2.3740 Miles	2.4778 Miles
ROM-0300(134)	Ward County	1.0275 Miles	1.0275 Miles
	TOTAL MILES	3.4015 Miles	3.5053 Miles





STATE COUNTY MAP

DESIGNERS

Jason Ericson

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

APPROVED DATE 4/02/18

Holly M. Beck /s/
HOLLY BECK SURVEYING & ENGINEERING INC.

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STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	ROM-0300(134)	2	1

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PLAN SECTIONS

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2	1	Table of Contents
4	1 - 15	Scope of Work
6	1 - 3	Notes
6	4 - 5	Environmental Notes
8	1	Quantities
10	1	Basis of Estimate
11	1 - 3	Data Tables
20	1 - 7	General Details
30	1 - 20	Typical Sections
60	1 - 31	Plan & Profile
75	1 - 18	Wetland Impacts
76	1 - 16	Temporary Erosion Control
77	1 - 16	Permanent Erosion Control
81	1 - 4	Survey Coordinate and Curve Data
100	1	Work Zone Traffic Control
110	1 - 3	Signing
200	1 - 107	Cross Sections

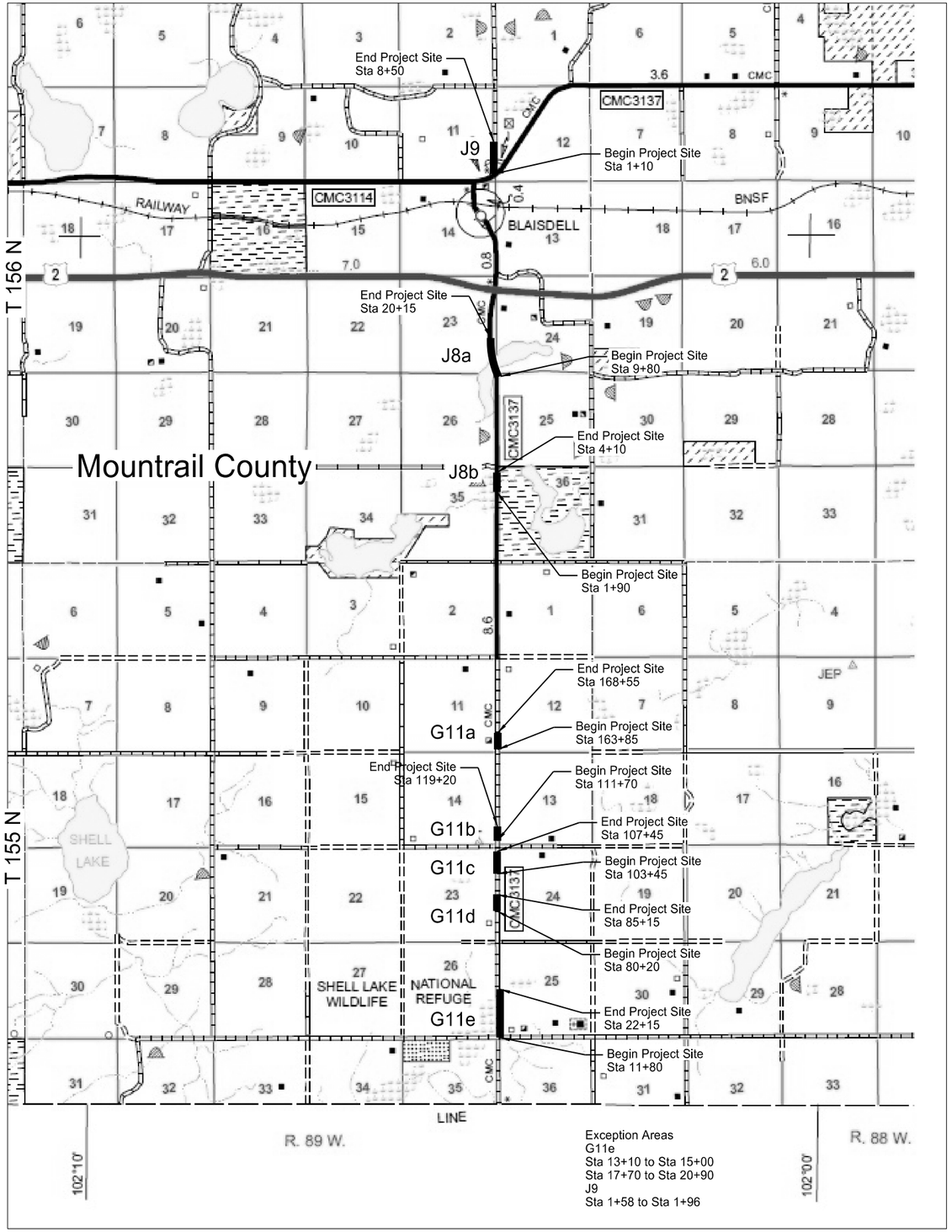
SPECIAL PROVISIONS

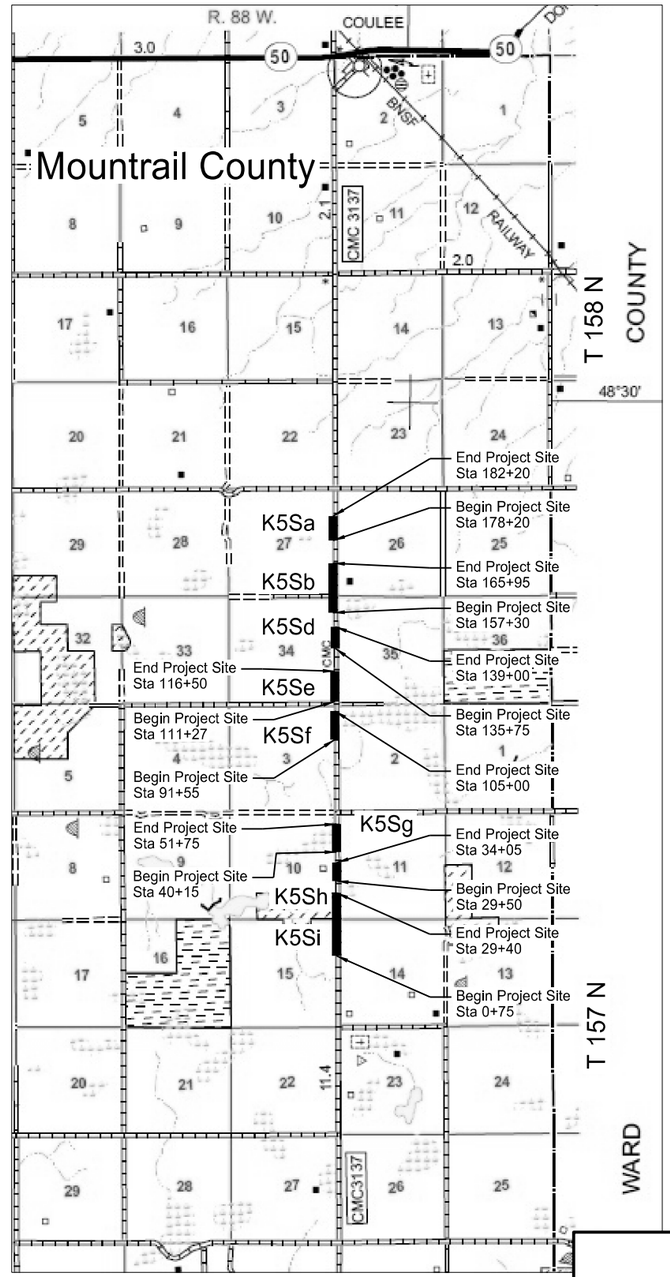
Number	Description
SP 003(14)	Temporary Erosion and Sediment Best Management Practices
SP 569(14)	Concrete Erosion Control Blanket
SP 671(14)	Rolled Concrete Erosion Control Blanket
SP 702(14)	Winter Suspension
SP 5175(14)	Permits and Environmental Considerations

LIST OF STANDARD DRAWINGS

Number	Description
D-101-1, 2, 3	NDDOT Abbreviations
D-101-10	NDDOT Utility Company and Organization Abbreviations
D-101-20, 21	Line Styles
D-101-30, 31, 32	Symbols
D-255-2	Erosion And Siltation Control - Erosion Control Blanket Installation
D-260-1	Erosion And Siltation Controls - Silt Fence
D-261-1	Erosion Control - Fiber Roll Placement Details
D-704-8	Breakaway Systems For Construction Zone Signs - U-Channel Post
D-704-9	Construction Sign Details - Terminal And Guide Signs
D-704-11	Construction Sign Details - Warning Signs
D-704-13	Barricade And Channelizing Device Details
D-704-14	Construction Sign Punching And Mounting Details
D-704-15	Road Closure Layouts
D-704-19	Road Closure And Lane Closure On A Two Way Road Layouts
D-704-20	Terminal And Seal Coat Sign Layouts
D-704-22	Construction Truck And Temporary Detour Layouts
D-704-26	Miscellaneous Sign Layouts
D-704-30	Windrow Marking
D-704-31	Construction Sign Layout - Non-Signalized Low Volume One Lane Closure
D-714-1	Reinforced Concrete Pipe Culverts And End Sections (Round Pipe)
D-714-4	Round Corrugated Steel Pipe Culverts And End Sections
D-714-22	Concrete Pipe Or Precast Concrete Box Culvert Ties
D-714-25	Transverse Mainline Pipe Installation Detail for Pipes More Than 4 Feet Below Top of the Proposed Subgrade
D-714-25M	Transverse Mainline Pipe Installation Detail for Multiple Pipes More Than 4 Feet Below the Top of Subgrade
D-714-26	Transverse Mainline Pipe Installation Detail for Pipes 4 Feet or Less Below Top of the Proposed Subgrade
D-714-28	Transverse Mainline Pipe Installation Detail for Pipes Installed in New Embankment Areas
D-714-28M	Transverse Mainline Pipe Installation Detail for Multiple Pipes Installed in New Embankment Areas
D-752-1	Standard Barbed Wire Fence
D-754-23	Perforated Tube Assembly Details
D-754-25	Mounting Details Perforated Tube
D-754-28, 37	Sign Punching, Stringer And Support Location Details Regulatory, Warning, And Guide Signs
D-754-82	Object Markers

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	4	1





N

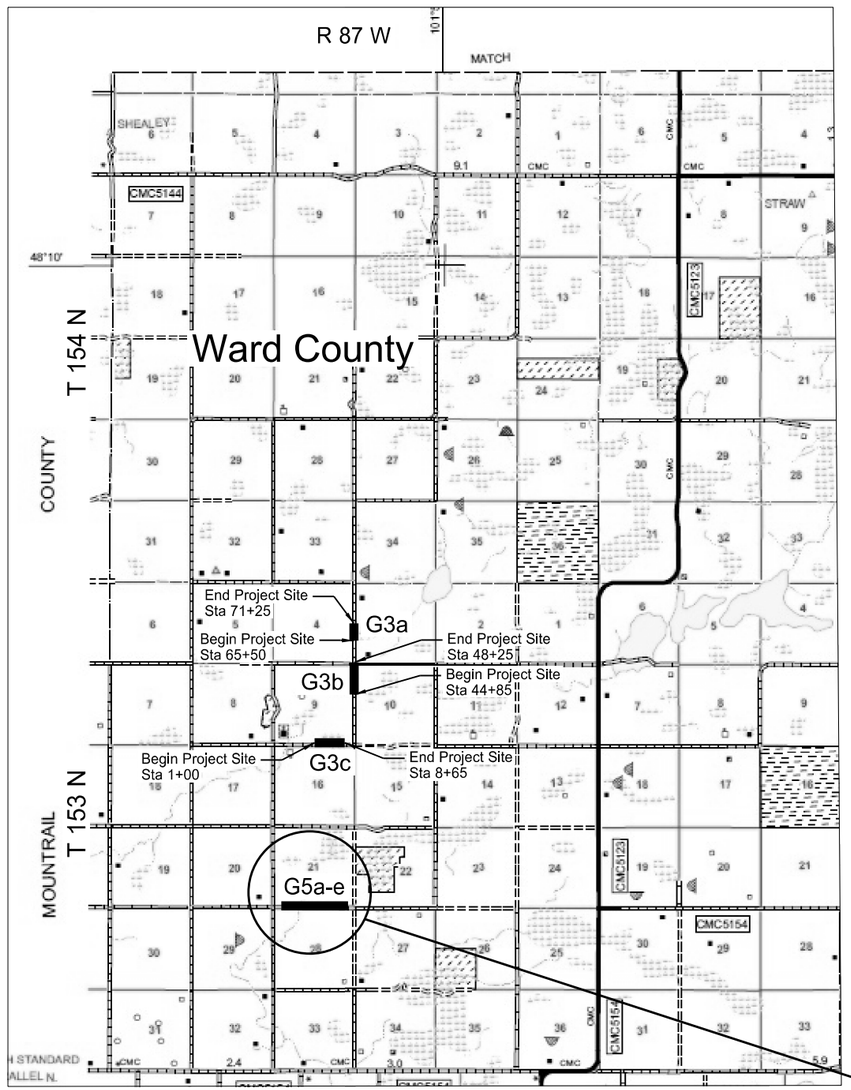
Project Sites

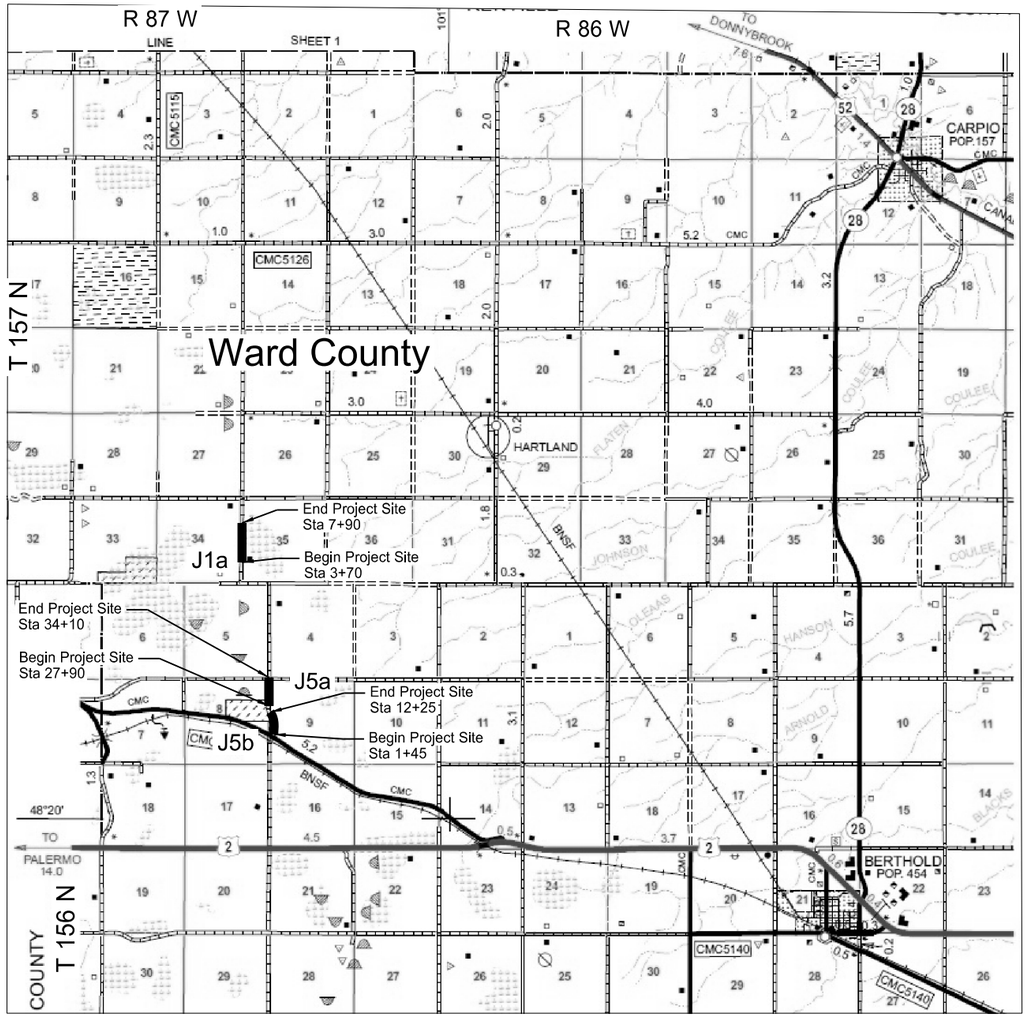
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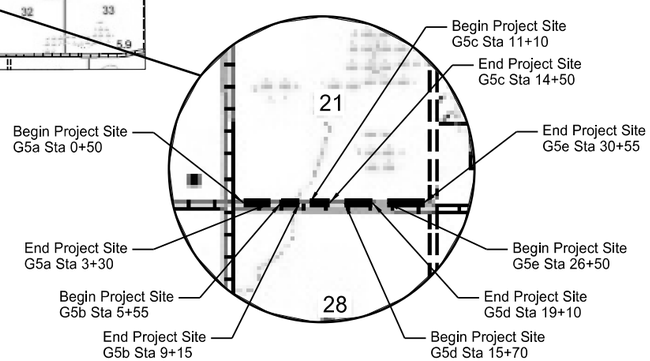
Scope of Work

Mountrail County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM 0300(134)	4	2







N

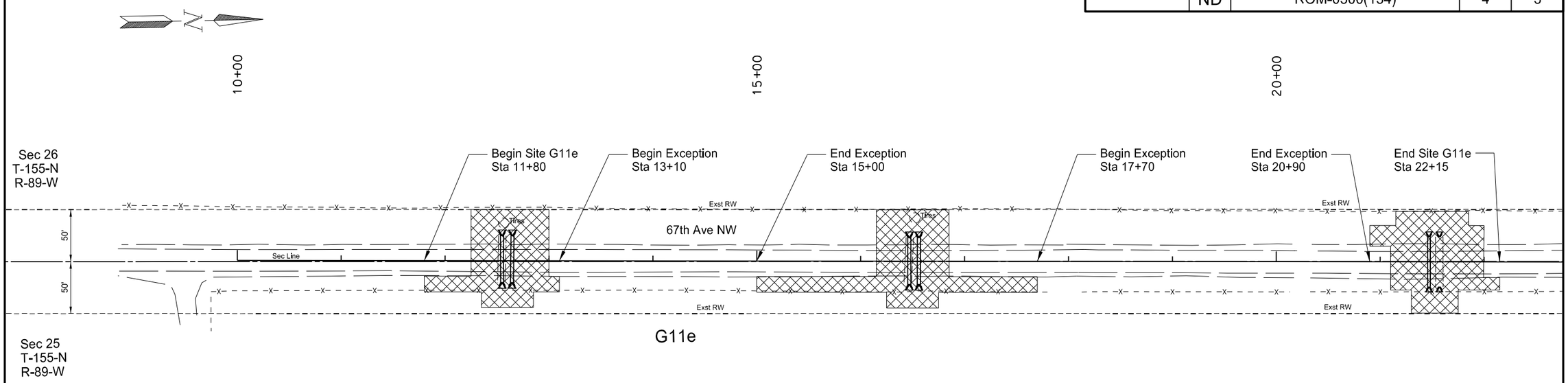
Project Sites

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Scope of Work

Ward County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	4	3

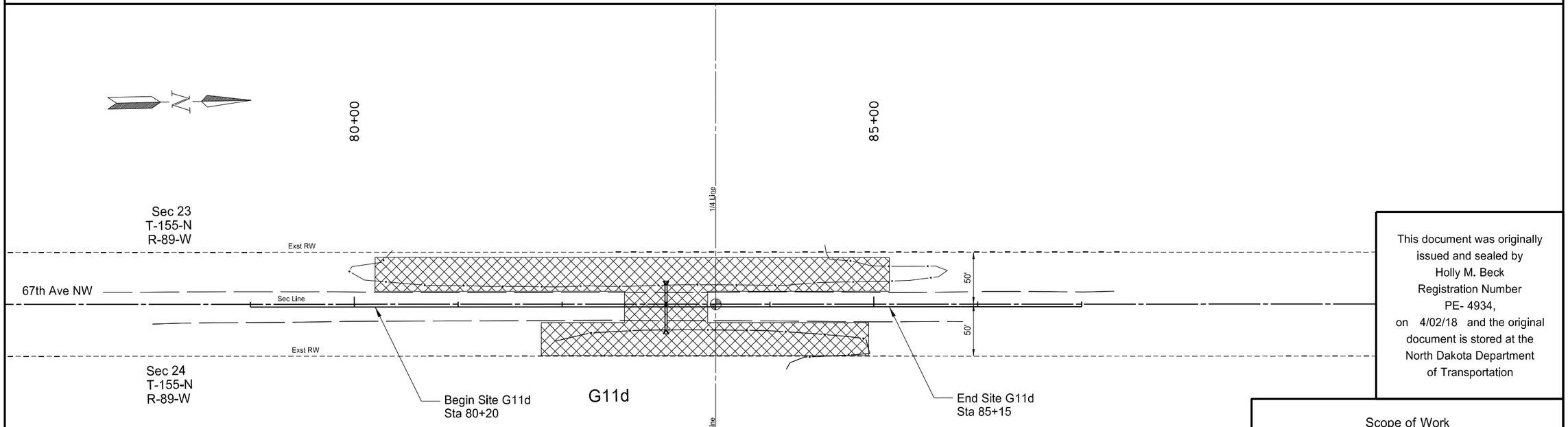


Legend

Work Area

Note:
1). Work Consists of Inslope Repair, ECB, Topsoil, Seed & Mulch on the Right Side.
2). Work Consists of Installing Riprap at the End of the Culverts on the Left Side.
3). Install Culverts.
4). Remove and Replace Culverts.
5). Remove Tires on the Left Side.

Exception Areas
Sta 13+10 to Sta 15+00
Sta 17+70 to Sta 20+90



Legend

Work Area

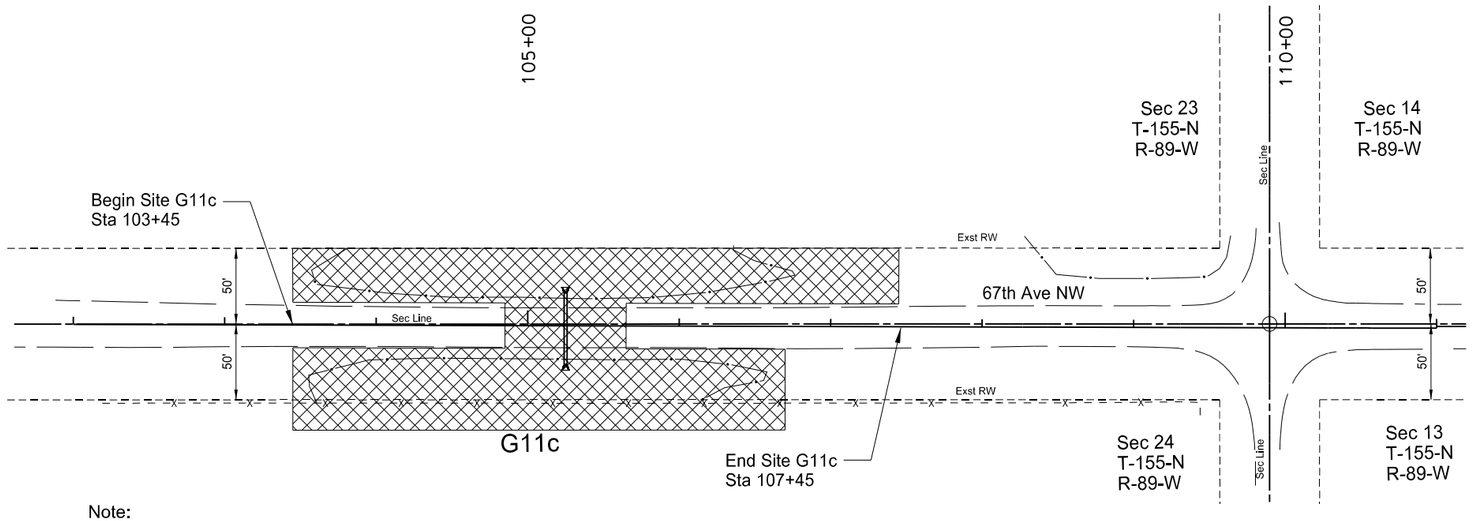
Note:
1). Work Consists of Inslope Repair, TRM, Temporary Berms, Topsoil, Seed & Mulch on Both Sides.
2). Install Culvert.

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Scope of Work

Site G11e & G11d
Inslope Erosion Repair
Missile Access Road - G11
Mountrail County

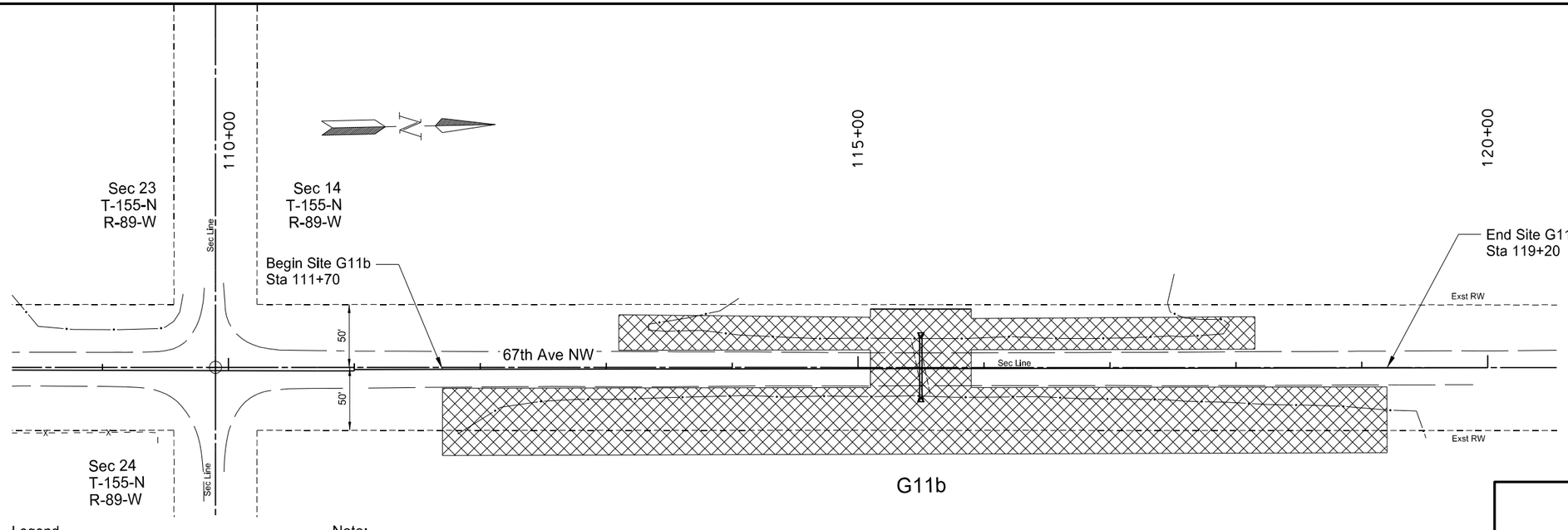
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	4	4



Legend

Work Area

Note:
1). Work Consists of Inslope Repair, Rolled Concrete Erosion Control Blanket, Temporary Berm, Topsoil, Seed & Mulch on the Left Side.
2). Work Consists of Inslope Repair, TRM, Temporary Berm, Topsoil, Seed & Mulch on Right Side.
3). Install Culvert.



Legend

Work Area

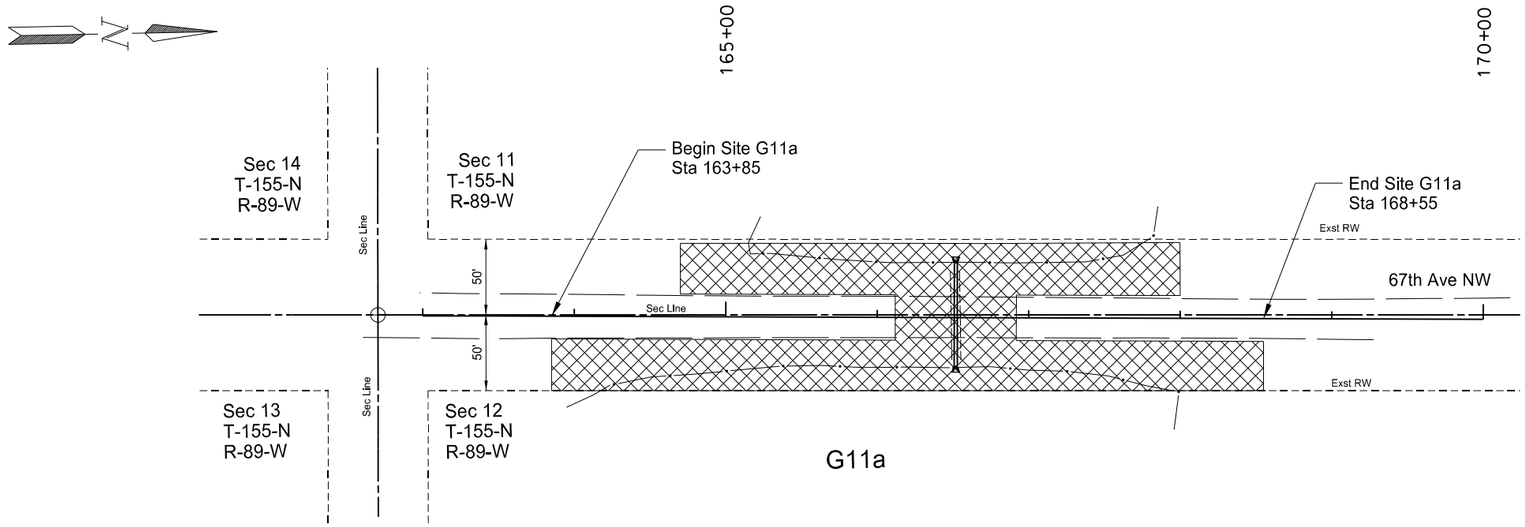
Note:
1). Work Consists of Inslope Repair, TRM, Topsoil, Seed & Mulch on the Left Side.
2). Work Consists of Inslope Repair, Rolled Concrete Erosion Control Blanket, Temporary Berm, Topsoil, Seed & Mulch on the Right Side.
3). Remove and Replace Culvert.

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Scope of Work

Site G11c & G11b
Inslope Erosion Repair
Missile Access Road - G11
Mountrail County

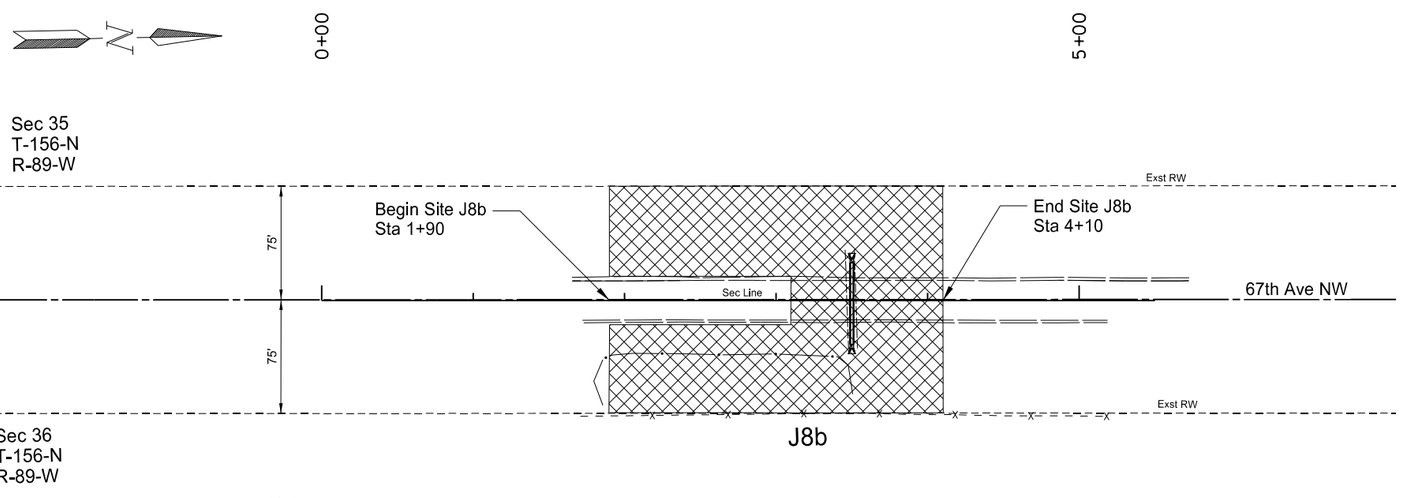
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	4	5



Legend

Work Area

Note:
1). Work Consists of Inslope Repair, ECB, Topsoil, Seed & Mulch on the Left Side.
2). Work Consists of Inslope Repair, TRM, Topsoil, Seed & Mulch on the Right Side.
3). Remove and Replace Culvert.



Legend

Work Area

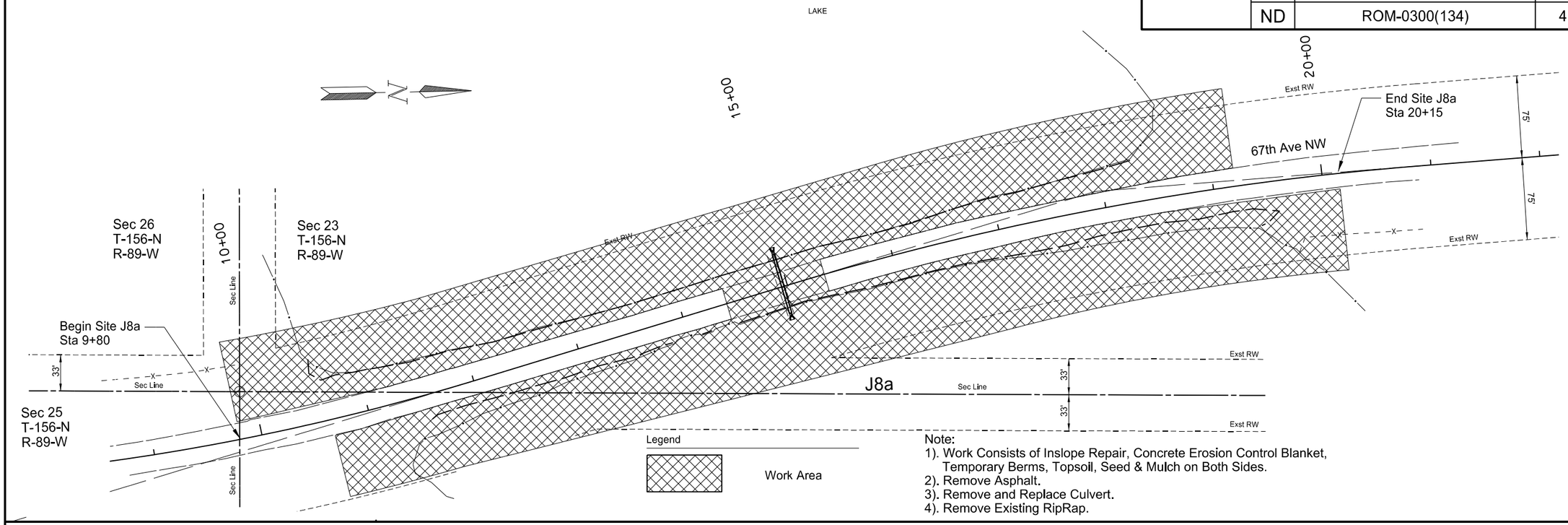
Note:
1). Work Consists of Inslope Repair, TRM, Topsoil, Seed & Mulch on Both Sides.
2). Remove Asphalt.
3). Remove and Replace Culvert.

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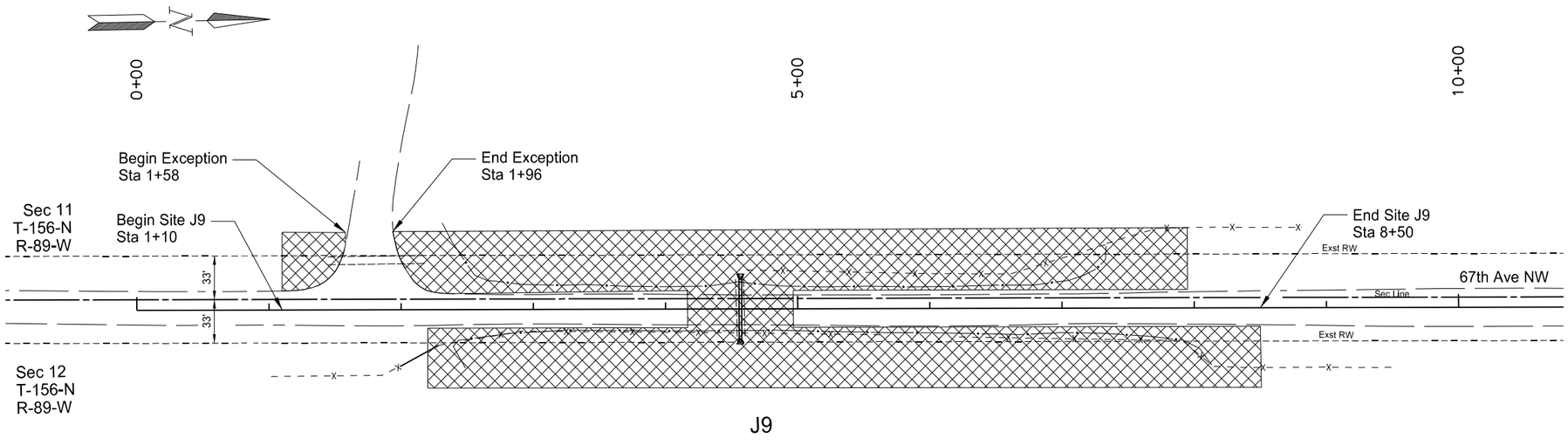
Scope of Work

Site G11a & J8b
Inslope Erosion Repair
Missile Access Road - G11 & J8
Mountrail County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	4	6



Note:
1). Work Consists of Inslope Repair, Concrete Erosion Control Blanket, Temporary Berms, Topsoil, Seed & Mulch on Both Sides.
2). Remove Asphalt.
3). Remove and Replace Culvert.
4). Remove Existing RipRap.



Legend

Work Area

Note:
1). Work Consists of Inslope Repair, Concrete Erosion Control Blanket, Temporary Berms, Topsoil, Seed & Mulch, and on Both Sides.
2). Remove and Replace Culvert.
3). Removing Existing RipRap.

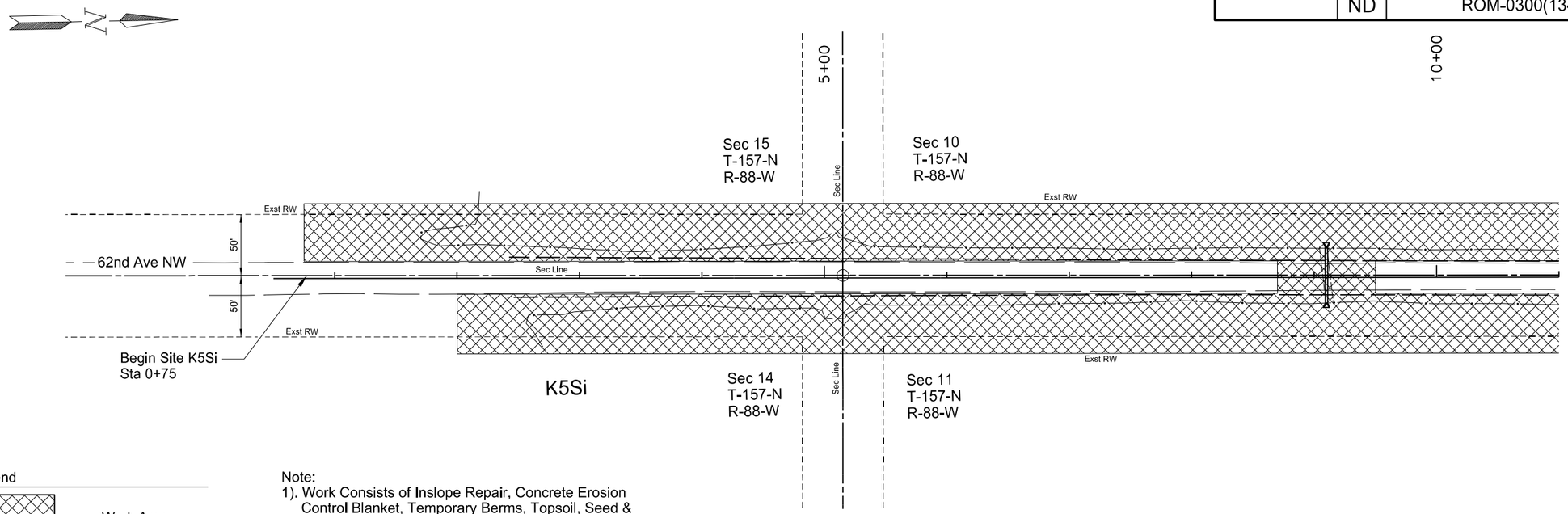
Exception Area
Sta 1+58 to Sta 1+96

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Scope of Work

Site J8a & J9
Inslope Erosion Repair
Missile Access Road - J8 & J9
Mountrail County

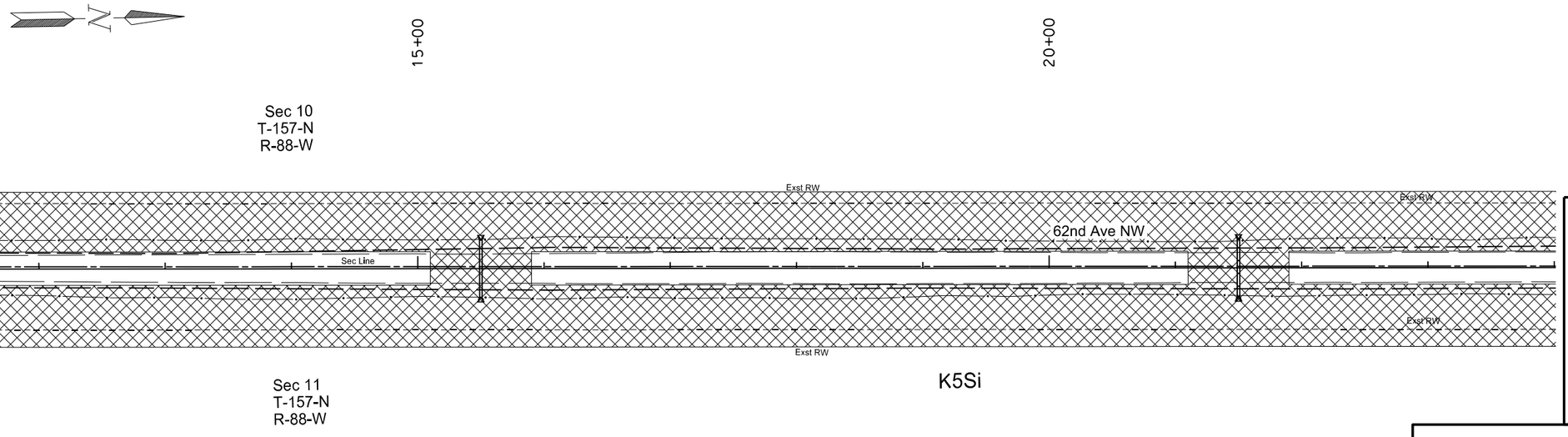
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	4	7



Legend

Work Area

Note:
1). Work Consists of Inslope Repair, Concrete Erosion Control Blanket, Temporary Berms, Topsoil, Seed & Mulch on Both Sides.
2). Remove and Replace Culvert.
3). Remove Existing RipRap.



Legend

Work Area

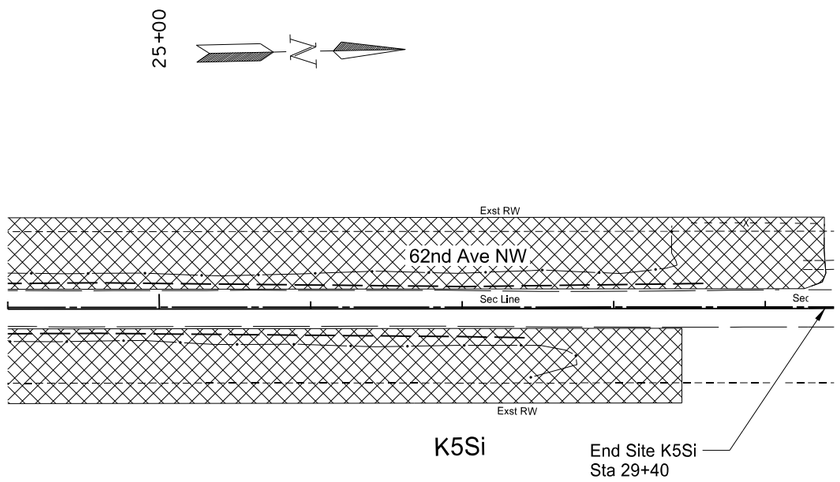
Note:
1). Work Consists of Inslope Repair, Concrete Erosion Control Blanket, Temporary Berms, Topsoil, Seed & Mulch on Both Sides.
2). Remove and Replace Culverts.
3). Remove Existing RipRap.

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Scope of Work

Site K5Si
Inslope Erosion Repair
Missile Access Road - K5S
Mountrail County

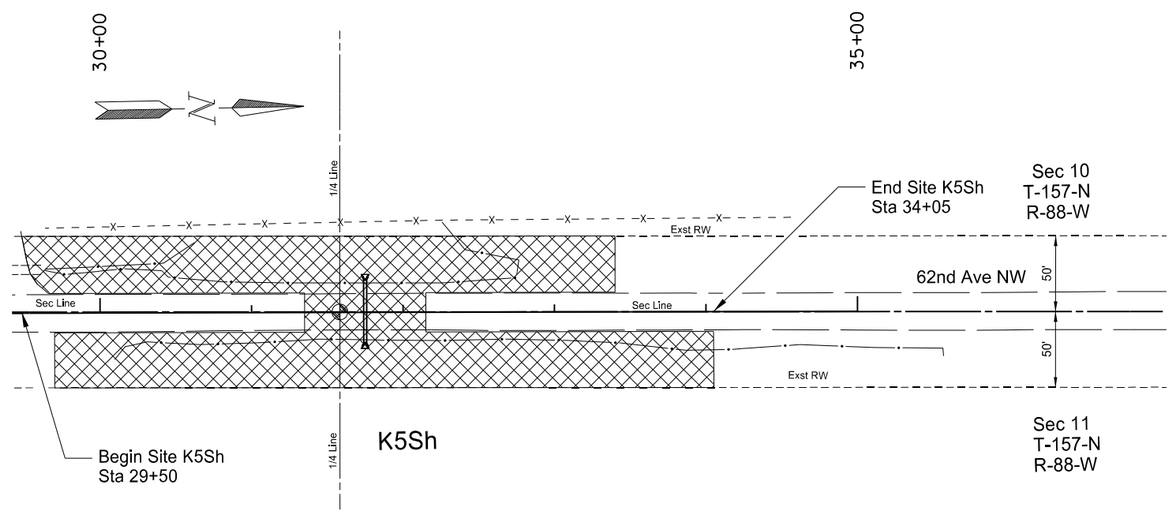
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	4	8



Legend

Work Area

Note:
1). Work Consists of Inslope Repair, Concrete Erosion Control Blanket, Temporary Berms, Topsoil, Seed & Mulch on Both Sides.
2). Remove Existing RipRap.



Legend

Work Area

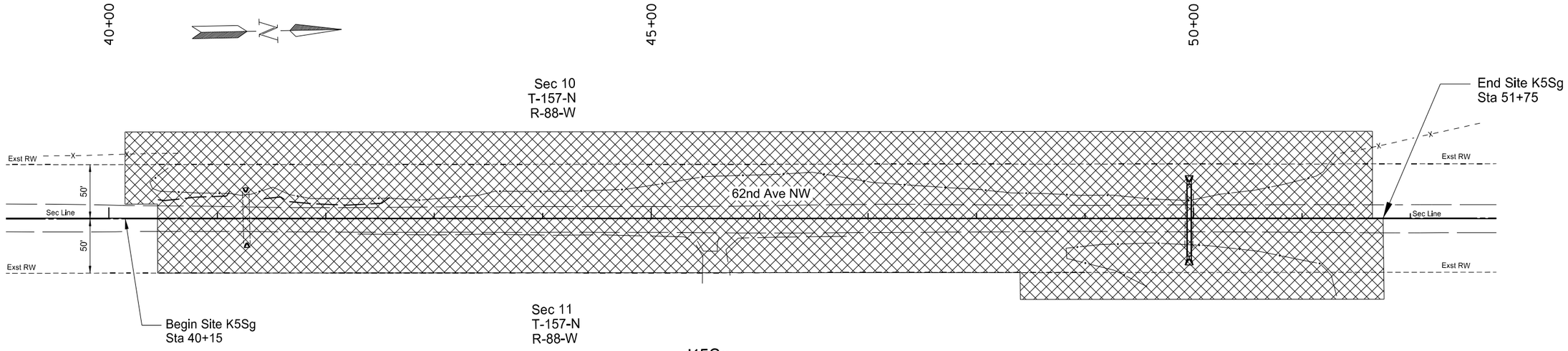
Note:
1). Work Consists of Inslope Repair, TRM, Temporary Berms, Topsoil, Seed & Mulch on Both Sides.
2). Install Culvert.

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Scope of Work

Site K5Si & K5Sh
Inslope Erosion Repair
Missile Access Road - K5S
Mountrail County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	4	9

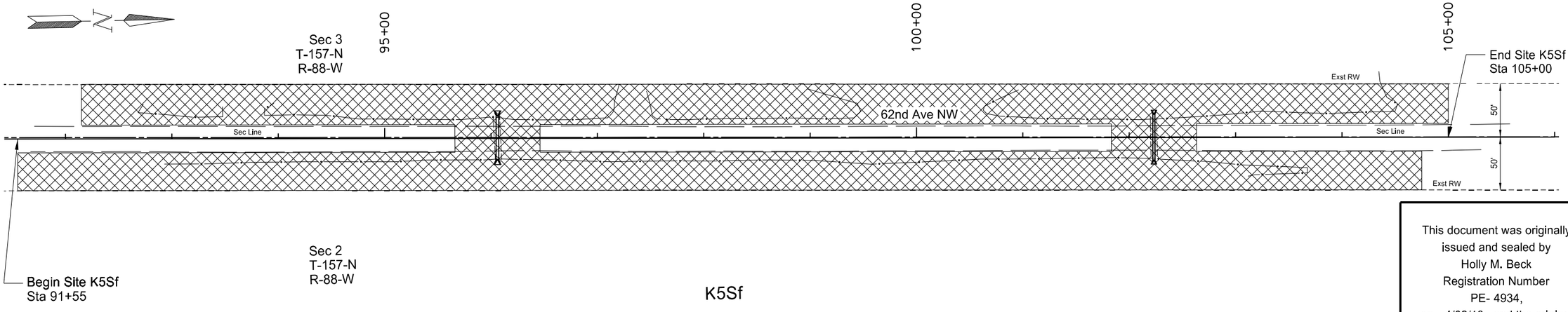


K5Sg

Legend

Work Area

Note:
1). Work Consists of Inslope Repair, Concrete Erosion Control Blanket, Temporary Berms, Topsoil, Seed & Mulch on Both Sides.
2). Remove and Replace Culvert.
3). Install Flared Ends on Existing Culvert.
4). Lowering Vertical Profile.



K5Sf

Legend

Work Area

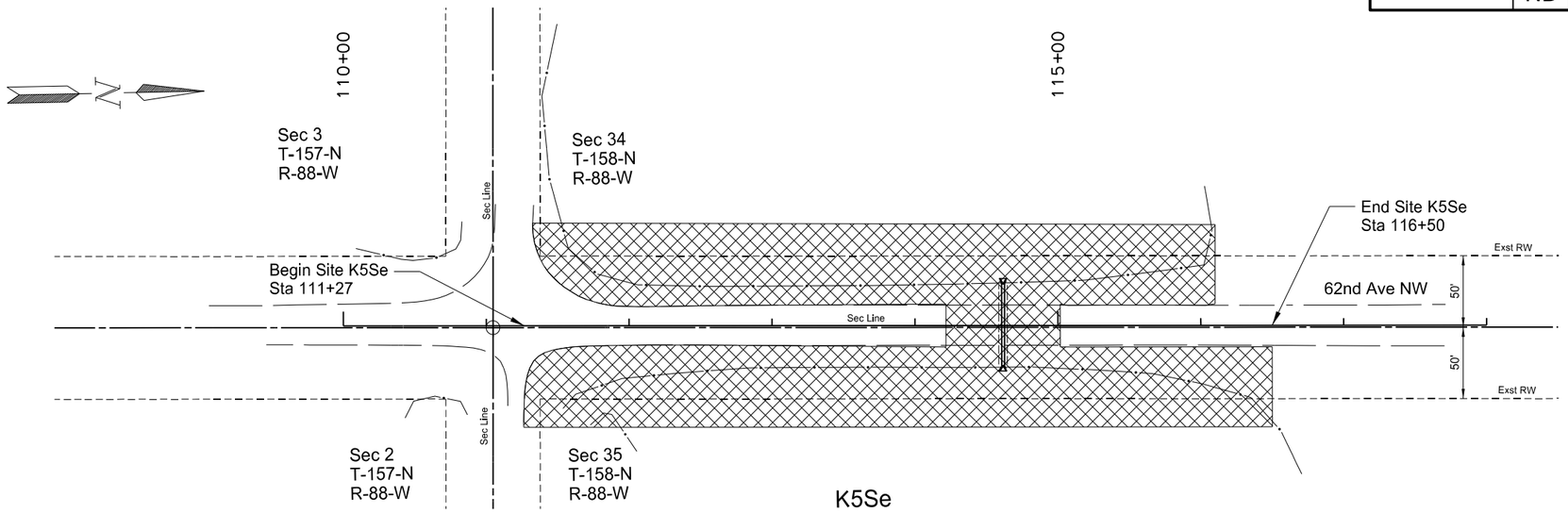
Note:
1). Work Consists of Inslope Repair, ECB, Topsoil, Seed & Mulch on Both Sides.
2). Remove and Replace Culverts.

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Scope of Work

Site K5Sg & K5Sf
Inslope Erosion Repair
Missile Access Road - K5S
Mountrail County

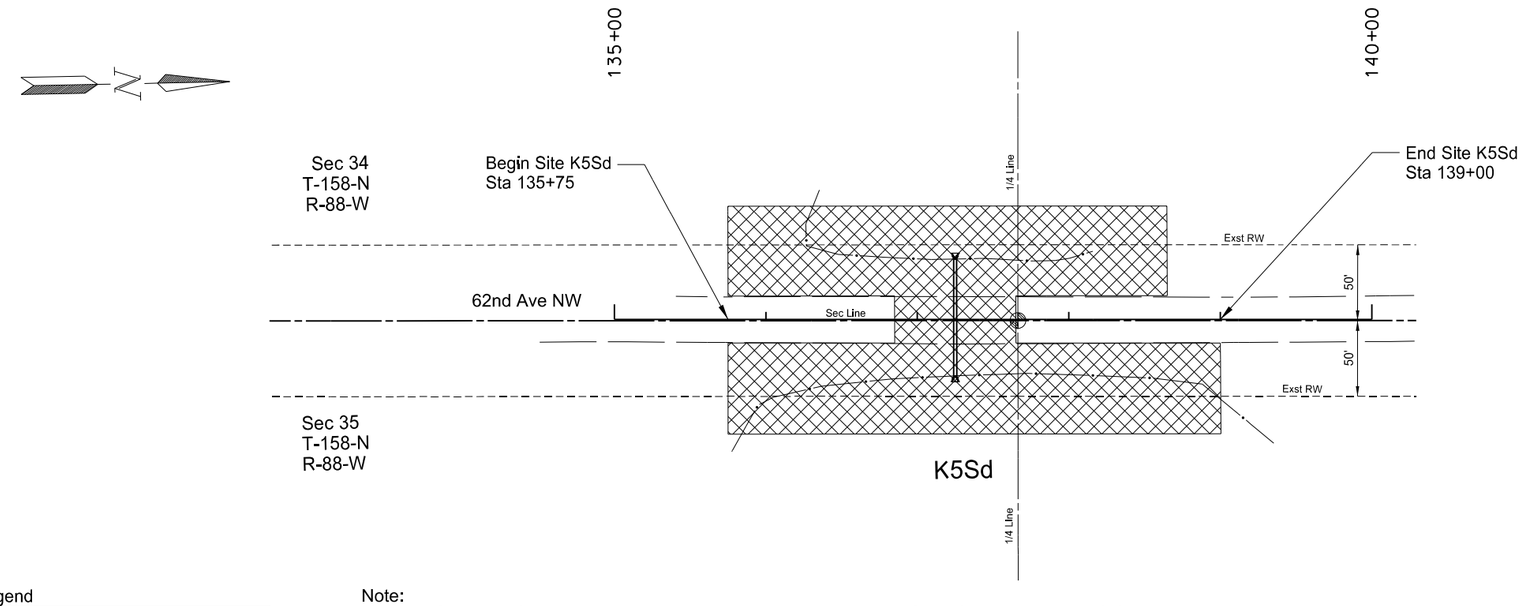
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	4	10



Legend

Work Area

Note:
1). Work Consists of Inslope Repair, Concrete Erosion Control Blanket, Temporary Berms, Topsoil, Seed & Mulch on Both Sides.
2). Remove and Replace Culvert.



Legend

Work Area

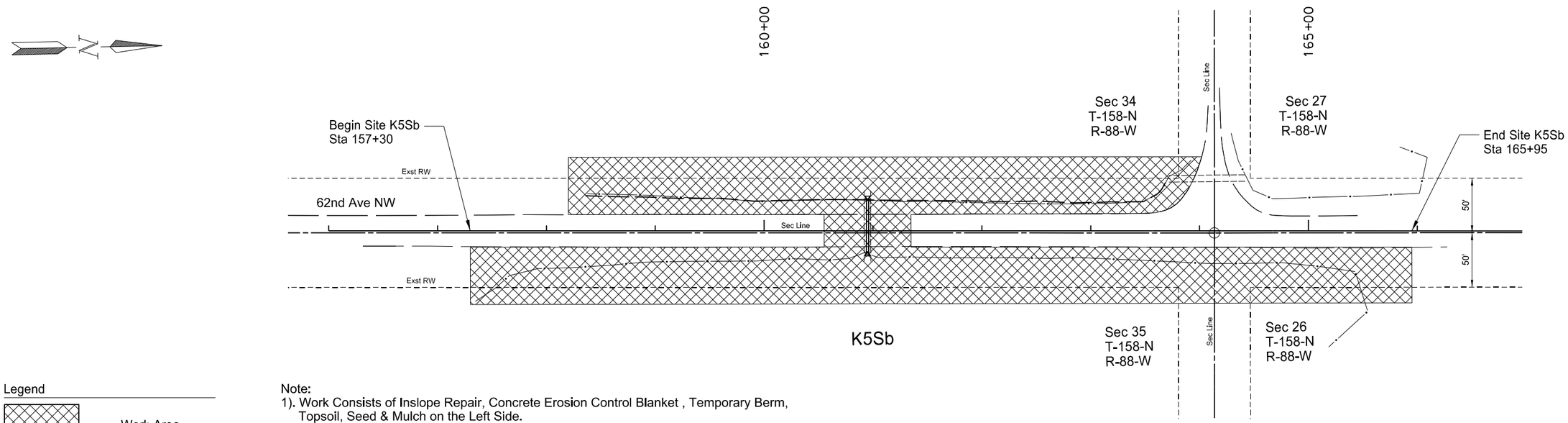
Note:
1). Work Consists of Inslope Repair, Temporary Berm, TRM, Topsoil, Seed & Mulch on the Left Side.
2). Work Consists of Inslope Repair, Rolled Concrete Erosion Control Blanket, Temporary Berm, Topsoil, Seed & Mulch on the Right Side.
3). Remove and Replace Culvert.

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Scope of Work

Site K5Se & K5Sd
Inslope Erosion Repair
Missile Access Road - K5S
Mountrail County

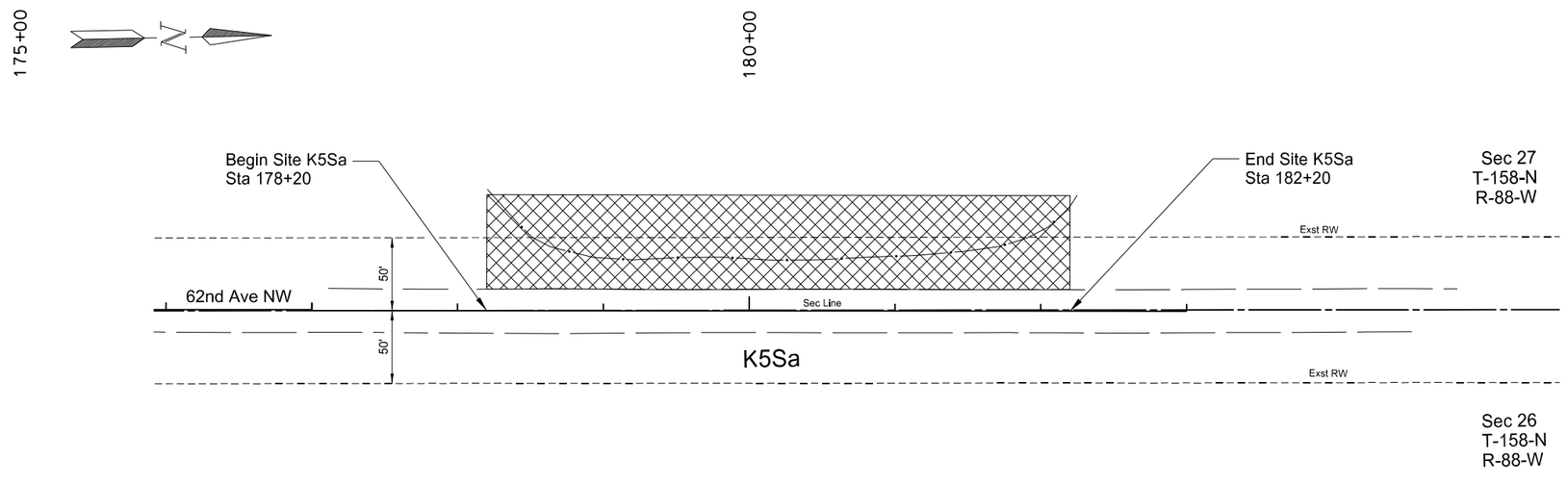
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	4	11



Legend

Work Area

Note:
1). Work Consists of Inslope Repair, Concrete Erosion Control Blanket , Temporary Berm, Topsoil, Seed & Mulch on the Left Side.
2). Remove and Replace Culvert.
3). Removing Existing RipRap.



Legend

Work Area

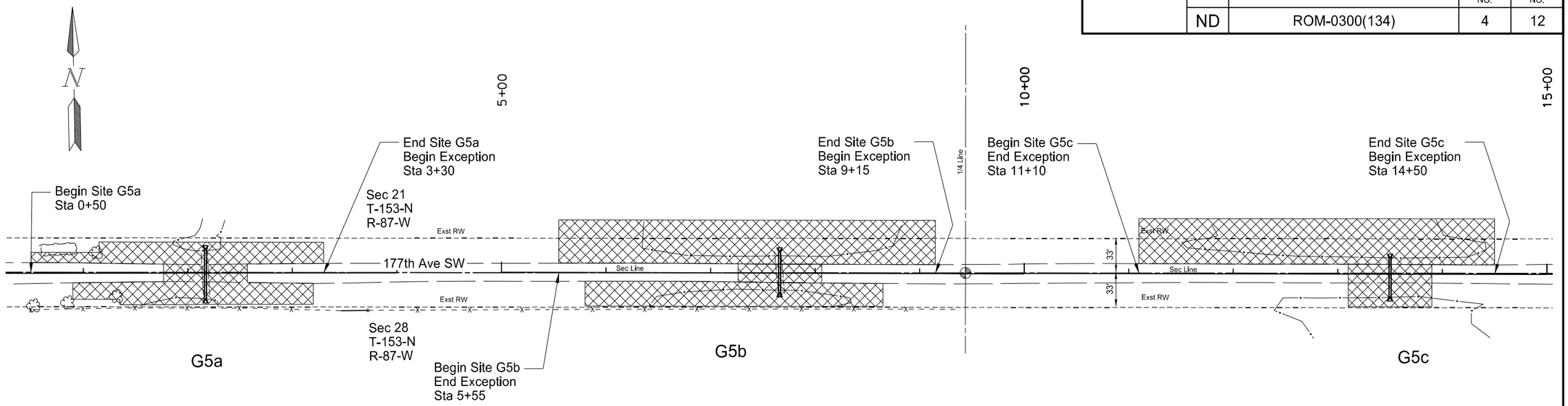
Note:
1). Work Consists of Inslope Repair, Concrete Erosion Control Blanket , Temporary Berm, Topsoil, Seed & Mulch on the Left Side.

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Scope of Work

Site K5Sb & K5Sa
Inslope Erosion Repair
Missile Access Road - K5S
Mountrail County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	4	12

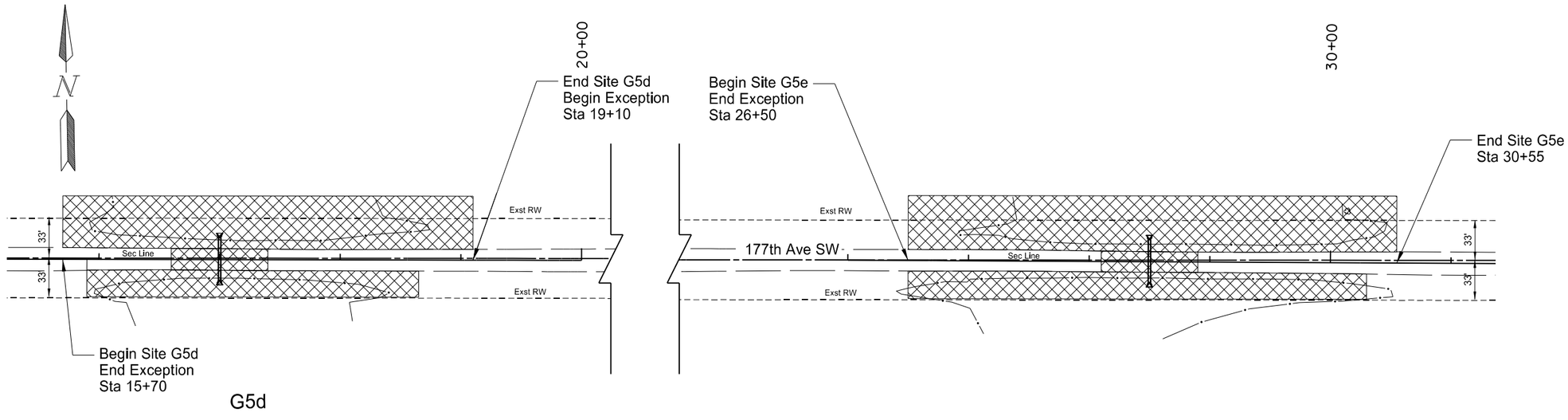


Legend

Work Area

Note:
1). Work Consists of Inslope Repair, TRM, Topsoil, Seed & Mulch on the Left Side.
2). Work Consists of Inslope Repair, ECB, Topsoil, Seed & Mulch on the Right Side.
3). Remove and Replace Culverts at Site G5a & G5b.
4). Install Culvert at Site G5c.
5). Temporary Berm Shall be Used at Site G5b & G5c to Repair the Inslope (Left Side).

Exception Areas
Sta 3+30 to 5+55
Sta 9+15 to 11+10



Legend

Work Area

Note:
1). Work Consists of Inslope Repair, TRM, Topsoil, Seed & Mulch on the Left Side.
2). Work Consists of Inslope Repair, ECB, Topsoil, Seed & Mulch on the Right Side.
3). Install Culverts at Site G5d & G5e.
4). Temporary Berms Shall be Used at Site G5d & G5e to Repair the Inslopes (Left Side).

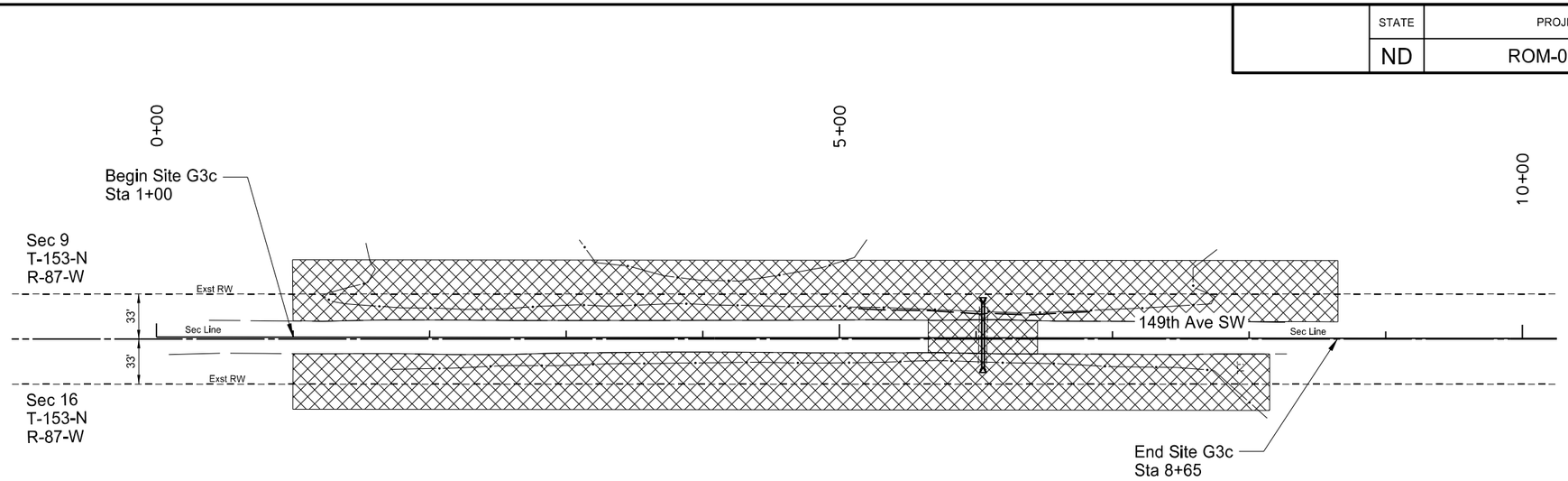
Exception Areas
Sta 14+50 to 15+70
Sta 19+10 to 26+50

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Scope of Work

Sites G5a-e
Inslope Erosion Repair
Missile Access Road - G5
Ward County

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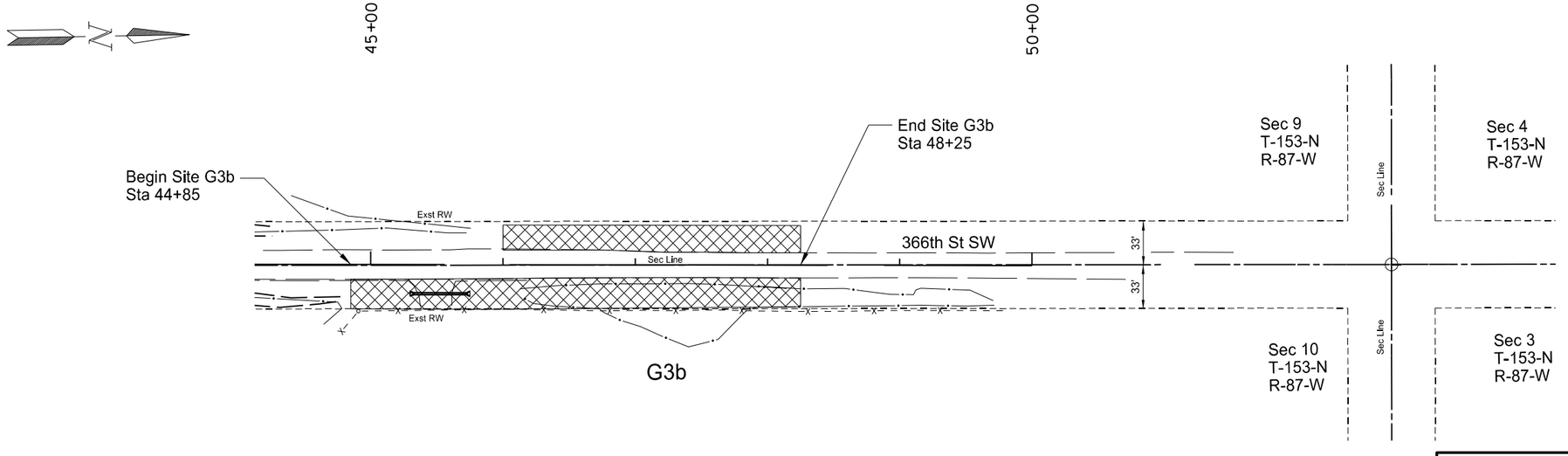


G3c

Legend

Work Area

Note:
1). Work Consists of Inslope Repair, TRM, Temporary Berm, Topsoil, Seed & Mulch on the Left Side.
2). Work Consists of Inslope Repair, Concrete Erosion Control Blanket, Temporary Berm, Topsoil, Seed & Mulch on the Right Side.
3). Remove and Replace Culvert.
4). Removal of Existing RipRap.



G3b

Legend

Work Area

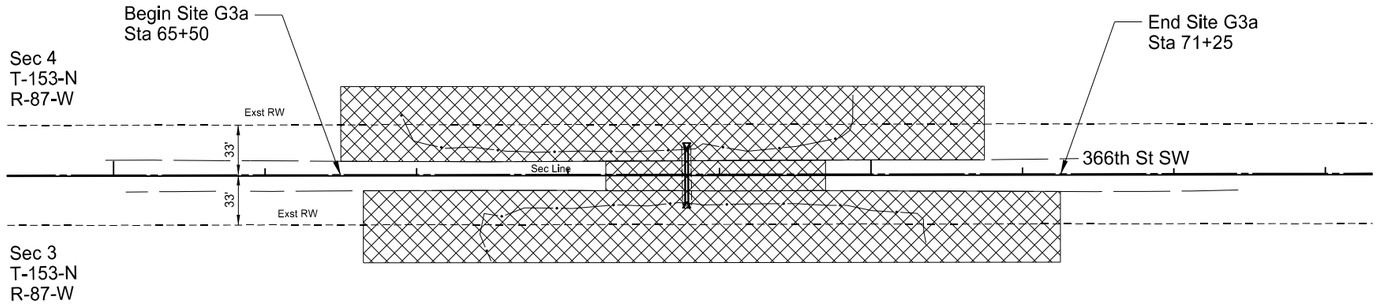
Note:
1). Work Consists of Inslope Repair, TRM, Topsoil, Seed & Mulch on the Left Side.
2). Work Consists of Inslope Repair, ECB, Topsoil, Seed & Mulch on the Right Side.
3). Install Approach Culvert.

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Scope of Work

Sites G3c & G3b
Inslope Erosion Repair
Missile Access Road - G3
Ward County

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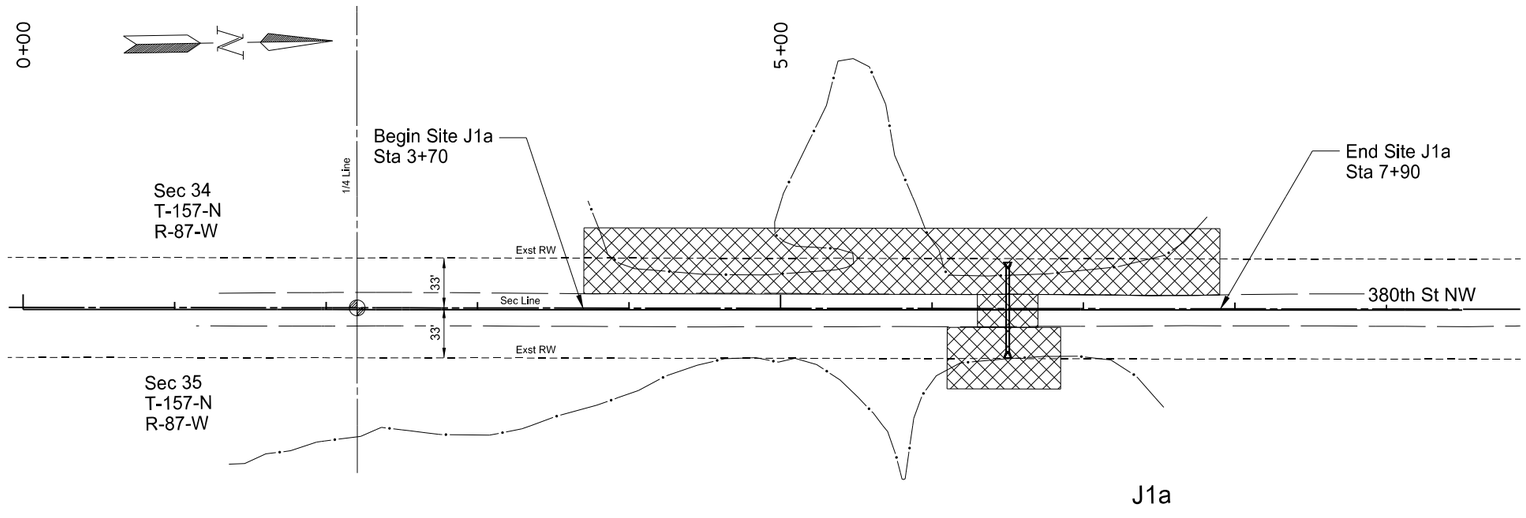


G3a

Legend

Work Area

Note:
1). Work Consists of Inslope Repair, Concrete Erosion Control Blanket, Temporary Berms, Topsoil, Seed & Mulch on Both Sides.
2). Remove and Replace Culvert.



J1a

Legend

Work Area

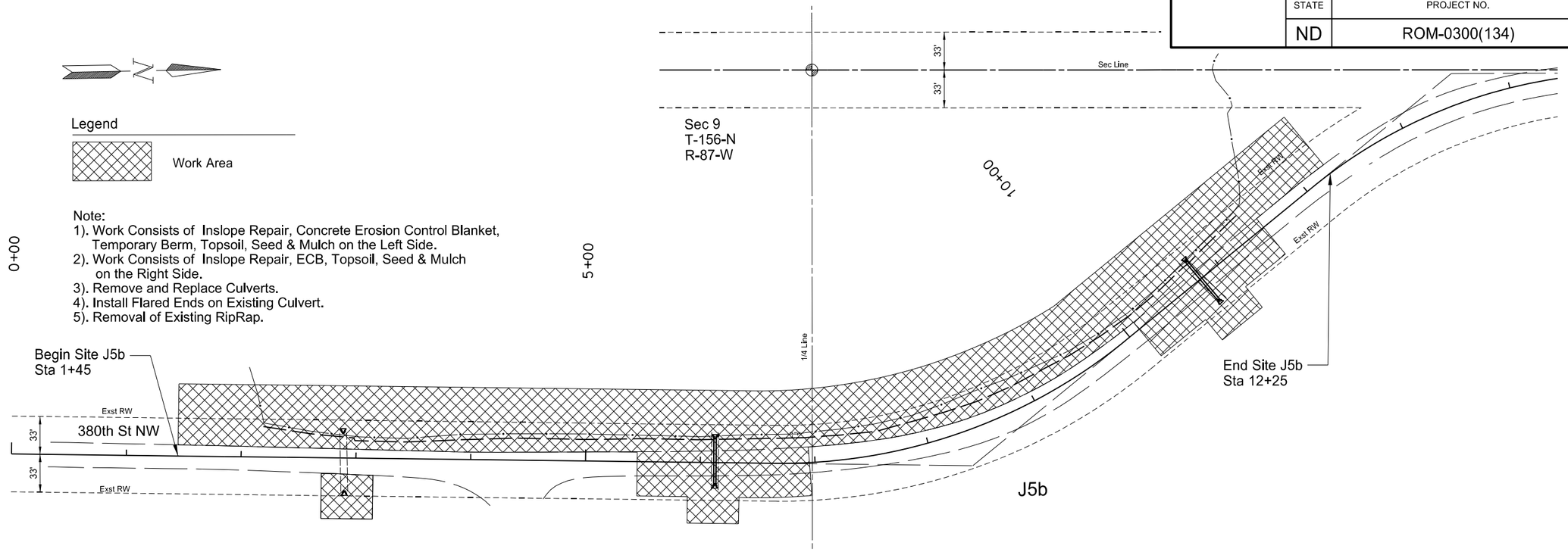
Note:
1). Work Consists of Inslope Repair, Concrete Erosion Control Blanket, Temporary Berm, Topsoil, Seed & Mulch on the North West Inslope.
2). Work Consists of Inslope Repair, TRM, Temporary Berm, Topsoil, Seed & Mulch on the South West Inslope.
3). Work Consists of Inslope Repair, TRM, Topsoil, Seed & Mulch on the East Inslope.
4). Install Culvert.

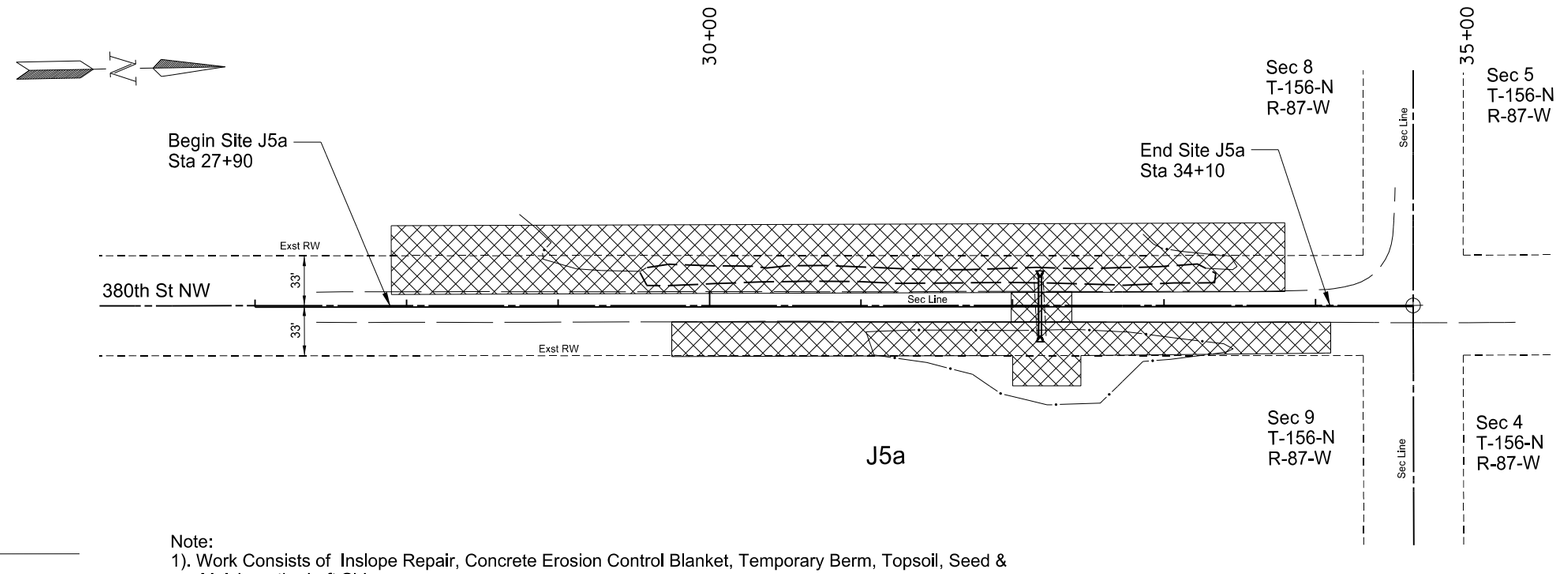
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Scope of Work

Sites G3a & J1a
Inslope Erosion Repair
Missile Access Road - G3 & J1
Ward County

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Legend

Work Area

Note:
1). Work Consists of Inslope Repair, Concrete Erosion Control Blanket, Temporary Berm, Topsoil, Seed & Mulch on the Left Side.
2). Work Consists of Inslope Repair, ECB, Topsoil, Seed & Mulch on the Right Side.
3). Remove and Replace Culvert.
4). Removal of Existing RipRap.

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Scope of Work

Sites J5b & J5a
Inslope Erosion Repair
Missile Access Road - J5
Ward County

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ND	ROM 0300(134)	6	1

NOTES

100-P01 **AGENCY COORDINATION:** The Contractor must invite the following representatives to the Preconstruction meeting and provide the MAFB personnel 48 hours of advance notice before beginning work at each site.

Military Contact:
MAFB - Missile Engineering
Dan Lewis P.E.
445 Peacekeeper Place
Minot AFB, ND 58705
701.723.4834

Military Contact:
MAFB - Engineering Technician
Marlyn P. Matzke
Minot AFB, ND 58705
701.723.4866

Mountrail County:
Jana Hennessy - Mountrail County Engineer
P.O. Box 275
8103 61st Street NW
Stanley, ND, 58754
701.628.2390

Ward County:
Dana G. Larsen - Ward County Engineer
P.O Box 5005
Minot, ND, 58701
701.838.2810

100-P02 **CONSTRUCTION EQUIPMENT:** Storage of construction equipment or other materials is not allowed within USFWS Waterfowl Production Areas or USFWS grassland easement properties.

100-P03 **OPEN WORK SITES:** The contractor shall be only allowed to open a total of 5 sites at a time. The sites need to be consecutive and on the same roadway. A 30-day Special Use Permit will be issued for work in USFWS easements. Each repair site will be given 30 days to start to finish all construction work at each site. If 5 sites are open at the same time all 5 sites will be only given a total of 30 days to start and finish construction for all 5 sites.

100-P04 **FENCE REMOVAL:** The Contractor will remove existing fences and shall install temporary fence as noted in the plans.

The Contractor shall install temporary fence along the proposed right-of-way. 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. The temporary fence shall be installed up to a depth of two feet in the water to keep the livestock contained within the fenced in property. All costs associated with this work, including the installation, removal and disposal of the temporary fence shall be included in the price bid for "Temporary Fence".

100-P05 **UTILITY COORDINATION:** The guy wire at site K5Sg should be moved by others. If not moved by the time construction starts for this site, contact Mountrail-Williams Electric Company.

Chris Meiers
Mountrail-Williams Electric
PO Box 129
Stanley, ND 58784
701.628.2242

104-P01 **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.

104-P02 **WETLAND MITIGATION CREDITS:** Prior to beginning any work on the project the contractor shall purchase exactly 0.95 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.

The wetland mitigation credits shall be purchased from the Missouri North Watershed mitigation site and the Souris River Watershed mitigation site. The details are:

Souris River	0.44 Credits @ $68,000/credit =	$ 29,920
Missouri North	0.51 Credits @ $50,000/credit =	$ 25,500
Total	0.95 Credits	**$ 55,420**

The contact information to purchase the wetland mitigation credits from Ducks Unlimited is provided below:

Trenton Hieb
Biologist in Ecosystem Services - Mitigation
Ducks Unlimited (Great Plains Region)
2525 River Road
Bismarck. ND 58503
Phone: 701-355-3573

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NOTES

Email: thieb@ducks.org

107-P01 **MAINTAINING TRAFFIC – PAVEMENT DROP-OFFS**: If the public is operating in an area with a drop-off greater than 2 inches, construct a temporary wedge composed of aggregate or embankment material with a foreslope of 4 to 1 or flatter.

The Engineer will not measure material used to construct the wedge. Include cost for the additional aggregate or embankment required for this operation in the price bid for "REMOVAL OF PAVEMENT".

If unable to complete a traversable taper wedge, the contractor will provide 24-hour flagging and traffic control at no additional cost to the department.

202-P01 **REMOVAL OF PAVEMENT:** All costs to remove, haul, and dispose of bituminous surfacing and gravel surfacing, shall be included in the price bid for "REMOVAL OF PAVEMENT". If the Engineer and the Contractor agree, use plan quantity as the measurement.

Asphalt pavement removal calculations were based on asphalt pavement thickness being 6 inches. The roadway width being 32 feet to the bottom of asphalt slough.

The contractor shall remove the asphalt pavement to install a new RCP culvert at sites J8a & J8b. The contractor shall backfill the RCP culvert excavation area within 6 inches of the top of asphalt pavement including a minimum of 6 inches of aggregate base Class 5 and provide a smooth travelling surface between asphalt pavement saw cuts for motorists. The contractor shall immediately notify Mountrail County when this work has been completed. Mountrail County will install a 6(in) asphalt pavement patch to cover the excavation area that was removed over the RCP culverts.

All costs associated with backfilling shall be incidental to the pipe installation.

202-P02 **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.

All removed material becomes the property of the contractor unless otherwise stated.

If the contractor wishes to reuse the riprap, the riprap must meet Grade listed in plans.

202-P03 **EXISTING CENTERLINE PIPE:** There is the possibility of an existing centerline pipe located within the work area, in addition to the ones shown in the plans. All centerline pipe will be removed and paid for as "REMOVAL OF PIPE ALL TYPES AND SIZES".

203-P01 **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 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 "Topsoil-Imported".

203-P02 **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.

203-P03 **KEYWAY/BERM:** Construct a temporary keyway/berm in areas where the foreslope extends into the water at locations shown in the plans for a water depth of 2 foot or more. Remove the entire keyway berm at all sites. 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.

203-P05 **COMMON EXCAVATION:** Placement of embankment material at Site K5Sg shall be as specified in section 203.04 E.3 "Compaction Control, Type B".

203-P06 **BORROW EXCAVATION:** Placement of embankment for installing Rolled Concrete Erosion Control Blanket, Concrete Erosion Control Blanket, and TRM Type 2 shall be compacted as specified in section 203.04 E.4 "Compaction Control, Type C".

255-P01 **ROLLED CONCRETE EROSION CONTROL BLANKET:** Place rolled concrete erosion control blanket within a day after embankment completion to minimize erosion potential.

Below is a list of suppliers that can supply the "ROLLED CONCRETE EROSION CONTROL BLANKET". Submit other suppliers to the Engineer to be considered approved equals.

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For more details see special provision 671(14) – Rolled Concrete Erosion Control Blanket.

Product: Flexamat - Plus
Brock White Co.
4401 E. Burdick Expressway
Minot, ND 58701
701.839.0509

Product: ShoreFlex
Premier Concrete Products, INC.
38200 LA-16
Denham Springs, LA 70706
225.304.3985

256-P01 **RIPRAP-GRADE II:** Place riprap within a day after embankment completion to minimize erosion potential.

256-P02 Tires need to be removed at Site G11e where the three existing culverts are using for erosion control. The tires need to be removed according to section 107.17. All costs associated with removing the tires will be included in the price bid for "RipRap Grade II".

262-P01 **FLOTATION SILT CURTAIN:** Place flotation silt curtain prior to any work in the water. Do not remove the flotation silt curtain until permanent erosion control has been installed on the protected area.

A quantity of 5220 linear feet has been provided to accommodate operations.

The Flotation Silt Curtain shall be cleaned and reused for each site. All costs associated with this work, including the installation, removal and disposal of the Flotation Silt Curtain shall be included in the price bid for "FLOTATION SILT CURTAIN" & "REMOVE FLOTATION SILT CURTAIN".

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; 5 work sites, 10 flaggers
2. Standard D-704-19, Layout Type F; Site J8a & J9
3. Standard D-704-20, Layout G; 5 project termini
4. Standard D-704-22, Layouts K; 2 truck entering layouts
5. Standard D-704-26, Layouts JJ; Sites J8a & J8b
6. Standard D-704-30, 3 windrow sites
7. Standard D-704-31, as applicable

708-P01 **CONCRETE EROSION CONTROL BLANKET:** Place concrete erosion control blanket within a day after embankment completion to minimize erosion potential.

Below is a list of suppliers that can supply the "CONCRETE EROSION CONTROL BLANKET". Submit other suppliers to the Engineer to be considered approved equals.

For more details see special provision 569(14) - Concrete Erosion Control Blanket.

Product: CC35
Forterra Pipe & Precast
925 Basin Avenue
Bismarck, ND 58504
701.223.7178

Product: ArmorFlex 45S
Contech Engineered Solutions
5670 Greenwood Plaza Blvd #530
Greenwood Village, CO 80111
1.800.338.1122
307.631.5761

Product: UltraFlex M4545
Submar, Inc.
1711 Dunn St.
Houma, LA 70360
1.800.978.2627
270.535.0196

714-P01 **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 one lane of traffic and be flagged 24 hours per day.

752-P01 **FENCE:** New fence shall be installed after temporary fence has been removed. All costs associated with this work shall be included in the price bid for "FENCE BARBED WIRE 3 STRAND-STEEL POST & CORNER ASSEMBLY-STEEL POST".

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ENVIRONMENTAL NOTES

ENVIRONMENTAL NOTES (EN): Mountrail and Ward 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: 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-2: NDPDES (North Dakota Pollutants Discharge Elimination System) permit to be obtained by the Contractor prior to construction. The owner will be Mountrail County and Ward County.

EN-3: 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-4: All spills must be immediately reported to the ND Department of Health, Project Engineer and appropriate remedial actions performed.

EN-5: All temporary fill or other materials placed outside of road rights-of-way 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.

USFWS Special Use Permit Contact:

Jonathan Beyer
Wetland District Manager
Audubon National Wildlife Refuge
3275 11th St NW
Coleharbor, ND 58531
Phone: 701-442-5474 ext 116
Email: jonathan_beyer@fws.gov

EN-6: Contractor(s) will contact USFWS before project work begins at each site and after project work is completed at each site. 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:

Mountrail County

Road	Site	USFWS Wetland Easement	USFWS Grassland Easement	Waterfowl Protection Area
G11	G11e	X		
J8	J8a	X		
J8	J8b	X		
J9	J9	X		
K5S	K5Sa	X		
K5S	K5Sb	X		
K5S	K5Sd	X		
K5S	K5Se	X		
K5S	K5Sf	X		
K5S	K5Sg	X	X	
K5S	K5Sh	X	X	
K5S	K5Si		X	X

Ward County

Road	Site	USFWS Wetland Easement	USFWS Grassland Easement	Waterfowl Protection Area
G5	G5a	X	X	
G5	G5b	X	X	
G5	G5c	X		
G5	G5d	X		
G5	G5e	X		
G3	G3a	X		
G3	G3b	X	X	
J1	J1a	X		
J5	J5a	X		
J5	J5b	X		X

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ENVIRONMENTAL NOTES

EN-8: 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.

Mountrail County:
Kory Richardson, Refuge Manager, Lostwood WMD Complex
8315 HWY 8, Kenmare, ND 58746
Office Phone: (701) 848-2722

Ward County:
Jonathan Beyer, Refuge Manager, Audubon WMD Complex
3275 11th St NW, Coleharbor, ND 58531
Office Phone: (701) 442-5474 ext 116

EN-9: 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-10: Culverts which are proposed to be replaced will remain at the current elevation unless prior approval in writing has been granted by USFWS.

EN-11: If boundary fence or other property (i.e. survey pins, signs, etc.) are impacted on Waterfowl Production Areas (J5b & K5Si), contractor will consult with the Wetland District Manager and repair and replace impacted property at the contractor's expense.

EN-12: Contractors will coordinate and ensure 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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ESTIMATE OF QUANTITIES

SPEC	CODE	ITEM DESCRIPTION	UNIT	MOUNTRAIL COUNTY SUBTOTAL	WARD COUNTY SUBTOTAL	PROJECT TOTAL
103	0100	CONTRACT BOND	L SUM	0.5	0.5	1
201	0330	CLEARING & GRUBBING	L SUM	0.6	0.4	1
202	0136	REMOVAL OF PAVEMENT	TON	210	0	210
202	0174	REMOVAL OF PIPE ALL TYPES AND SIZES	LF	876	302	1178
202	0312	REMOVE EXISTING FENCE	LF	1823	0	1823
202	0400	REMOVAL OF RIPRAP - LOOSE ROCK	CY	6808	1487	8295
203	0102	COMMON EXCAVATION-TYPE B	CY	3094	0	3094
203	0109	TOPSOIL	CY	3268	1153	4421
203	0119	TOPSOIL-IMPORTED	CY	1639	578	2217
203	0138	COMMON EXCAVATION-SUBCUT	CY	1056	445	1501
203	0140	BORROW EXCAVATION	CY	73682	11986	85668
216	0100	WATER	M GAL	737	119	856
251	0200	SEEDING CLASS II	ACRE	6.15	2.35	8.50
251	2000	TEMPORARY COVER CROP	ACRE	6.15	2.35	8.50
253	0101	STRAW MULCH	ACRE	12.30	4.70	17.00
255	0101	ECB TYPE 1	SY	5476	2574	8050
255	0202	TRM TYPE 2	SY	6056	5980	12036
255	0305	ROLLED CONCRETE EROSION CONTROL BLANKET	SY	2396	0	2396
256	0200	RIPRAP GRADE II	CY	84	0	84
260	0100	SILT FENCE UNSUPPORTED	LF	2040	1625	3665
260	0101	REMOVE SILT FENCE UNSUPPORTED	LF	2040	1625	3665
261	0112	FIBER ROLLS 12IN	LF	25899	10522	36421
261	0113	REMOVE FIBER ROLLS 12IN	LF	4750	3167	7917
262	0100	FLOTATION SILT CURTAIN	LF	2610	2610	5220
262	0101	REMOVE FLOTATION SILT CURTAIN	LF	2610	2610	5220
302	0356	AGGREGATE SURFACE COURSE CL 13	TON	3684	992	4676
702	0100	MOBILIZATION	L SUM	0.8	0.2	1
704	0100	FLAGGING	MHR	250	250	500
704	1000	TRAFFIC CONTROL SIGNS	UNIT	2025	2025	4050
704	1052	TYPE III BARRICADE	EA	5	5	10
704	1060	DELINEATOR DRUMS	EA	15	15	30
704	1065	TRAFFIC CONES	EA	30	30	60
704	1067	TUBULAR MARKERS	EA	30	30	60
704	1080	STACKABLE VERTICAL PANELS	EA	25	25	50
708	5810	CONCRETE EROSION CONTROL BLANKET	SY	18886	4327	23213
709	0100	GEOSYNTHETIC MATERIAL TYPE G	SY	2109	888	2997
709	0151	GEOSYNTHETIC MATERIAL TYPE R1	SY	709	286	995
709	0155	GEOSYNTHETIC MATERIAL TYPE RR	SY	26384	10591	36975
714	0615	PIPE CONC REINF 24IN CL III	LF	110	0	110
714	1005	PIPE CONC REINF 42IN CL III	LF	66	0	66
714	3020	END SECT-CONC REINF 24IN	EA	4	0	4
714	3040	END SECT-CONC REINF 42IN	EA	2	0	2
714	5015	PIPE CORR STEEL .064IN 18IN	LF	0	40	40
714	5035	PIPE CORR STEEL .064IN 24IN	LF	666	462	1128
714	5040	PIPE CORR STEEL .064IN 30IN	LF	90	0	90
714	5045	PIPE CORR STEEL .064IN 36IN	LF	184	0	184
714	5810	END SECT CORR STEEL .064IN 18IN	EA	0	4	4
714	5820	END SECT CORR STEEL .064IN 24IN	EA	28	22	50
714	5825	END SECT CORR STEEL .079IN 30IN	EA	6	0	6
714	5830	END SECT CORR STEEL .079IN 36IN	EA	8	0	8
752	0110	FENCE BARBED WIRE 3 STRAND-STEEL POST	LF	846	0	846
752	0905	TEMPORARY FENCE	LF	846	0	846
752	2996	CORNER ASSEMBLY-STEEL POST	EA	22	0	22
754	0110	FLAT SHEET FOR SIGNS-TYPE XI REFL SHEETING	SF	4.6	8.5	13.1
754	0206	STEEL GALV POSTS-TELESCOPING PERFORATED TUBE	LF	27.8	17.0	44.8
754	0592	RESET SIGN PANEL	EA	8	1	9
754	0593	RESET SIGN SUPPORT	EA	8	1	9
754	0805	OBJECT MARKERS - CULVERTS	EA	48	26	74
900	2001	WETLAND MITIGATION SITE 1	ACRE	0.23	0.28	0.51
900	2002	WETLAND MITIGATION SITE 2	ACRE	0.41	0.03	0.44

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ND	ROM-0300(134)	10	1

BASIS OF ESTIMATE

Water
25 MGal/Mile for Dust Palliative (Estimated for sites along same roadway within 1 mile of each other) = 100 MGal

10 Gal/CY for Borrow Embankment

Site G11a - e	4702 CY x 10 Gal/CY = 47
Site J8a & J8b	20445 CY x 10 Gal/CY = 204
Site J9	3166 CY x 10 Gal/CY = 32
Site K5Sa - i	45368 CY x 10 Gal/CY = 454
Site G5a - e	1918 CY x 10 Gal/CY = 19
Site G3a - c	4310 CY x 10 Gal/CY = 43
Site J1a	513 CY x 10 Gal/CY = 5
Site J5a & J5b	5246 CY x 10 Gal/CY = 52
	Subtotal = 856 MGal

Riprap Grade II
Riprap is estimated at 1.75 Tons per Cubic Yard

Topsoil & Topsoil-Imported Summary

Based on 4 inches depth in place, to be stripped, stockpiled onsite and replaced evenly across all disturbed areas.			Topsoil-Imported (2inch Depth)
Location	Quantity Removed (CY)	Quantity Replaced (CY)	Quantity (CY)
Site G11a-e	694	694	348
Site J8a & J8b	438	438	220
Site J9	80	80	40
Site K5Sa-i	2056	2056	1031
Site G5a-e	307	307	154
Site G3a-c	358	358	180
Site J1a	102	102	51
Site J5a & J5b	386	386	193
	Total	4421	2217

Signs

Location	Flat Sheet – Type XI	Object Markers - Culverts
	(SF)	(EA)
Site G11a-e		20
Site J8a & J8b		4
Site J9		2
Site K5Sa-i	4.6	22
Site G5a-e		10
Site G3a-c	8.5	6
Site J1a		2
Site J5a & J5b		8
Total	13.1	74

Earthwork Summary

Location	Quantity Required Above Water (CY)	Quantity Required Below Water (CY)	Common Excavation – Type B (CY) Pay Item	Borrow Excavation (CY) Pay Item
	A_1	A_2	B	$C = A_1 + A_2 - B$
Site G11a-e	1116	3586		4702
Site J8a & J8b	4089	16356		20445
Site J9	765	2401		3166
Site K5Sa-i	10856	37606	3094	45368
Site G5a-e	502	1416		1918
Site G3a-c	996	3314		4310
Site J1a	97	416		513
Site J5a & J5b	1386	3860		5246
Totals	19807	68955	3094	85668

Signs (REMOVE & RESET)

Location	Station	Reset Sign Panel	Reset Sign Support
	(EA)	(EA)	(EA)
Site G11b	111+95 RT	1	1
Site K5Se	111+62 RT	1	1
	113+34 RT	1	1
	115+46 RT	1	1
Site K5Sd	136+19 LT	1	1
	136+78 LT	1	1
	138+05 LT	1	1
Site K5Sb	160+64 LT	1	1
Site J5b	6+84 LT	1	1
Total		9	9

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	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	11	1

EARTHWORK - AVERAGE END AREA

SITE	Station	Distance (FT)	Borrow Excavation							
			Fill-Not in Water (Includes Riprap Removal Void) (25% Additional Volume For Shrinkage)				Fill-In Water (Includes Berm & Riprap Removal Void) (50% Additional Volume For Shrinkage and Losses)			
			Area (FT°2)	Volume (CY)	Adjusted Volume (1.25)	Accumulated Adjusted Volume (CY)	Area (FT°2)	Volume (CY)	Adjusted Volume (1.5)	Accumulated Adjusted Volume (CY)
G11e	11+50	0	0	0	0	0				
	12+00	50	4.6	4	5	5				
	12+55	55	13.1	18	23	28				
	12+75	20	7.6	8	10	37				
	15+00	225	0	32	40	77				
	15+50	50	3.6	3	4	81				
	16+00	50	4.2	7	9	90				
	16+46	46	9	11	14	104				
	17+00	54	12.30	21	27	131				
	17+50	50	4.10	15	19	150				
	18+00	50	0.00	4	5	155				
	20+50	250	0.00	0	0	155				
	21+00	50	0.70	1	1	155				
	21+57	57	16.10	18	22	178				
	22+00	43	0.90	14	17	195				
	22+50	50	0.00	1	1	196				
G11d	80+00	0	0.00	0	0	196	0.00	0	0	0
	81+00	100	5.20	10	12	208	24.70	46	69	69
	82+00	100	8.80	26	32	240	59.00	155	233	301
	83+00	100	11.20	37	46	286	94.50	284	426	728
	84+00	100	11.50	42	53	339	56.20	279	419	1146
	85+00	100	0.00	21	27	365	0.00	104	156	1302
G11c	103+00	0	0.00	0	0	365	0.00	0	0	1302
	104+00	100	12.10	22	28	393	65.00	120	181	1483
	105+00	100	10.10	41	51	445	104.20	313	470	1953
	105+25	25	10.50	10	12	457	106.60	98	146	2099
	106+00	75	10.60	29	37	493	52.20	221	331	2430
	107+00	100	0.00	20	25	518	0.00	97	145	2575
G11b	111+50	0	0.00	0	0	518	0.00	0	0	2575
	112+50	100	11.20	21	26	544	17.50	32	49	2624
	113+50	100	8.10	36	45	589	36.00	99	149	2772
	114+50	100	13.20	39	49	638	41.50	144	215	2988
	115+50	100	14.50	51	64	702	36.00	144	215	3203
	116+50	100	2.80	32	40	742	17.80	100	149	3352
	117+50	100	1.50	8	10	752	16.50	64	95	3448
	118+50	100	0.00	3	3	755	0.00	31	46	3493
G11a	164+50	0	0.00	0	0	755	0	0	0	3493
	165+50	100	18.10	34	42	797	5	9	13	3507
	166+50	100	20.90	72	90	888	7	22	33	3540
	167+50	100	38.80	111	138	1026	5	22	33	3573
	168+50	100	0.00	72	90	1116	0	9	13	3586
J8b	1+50	0	0.00	0	0	1116	0.00	0	0	3586
	2+00	50	6.70	6	8	1123	1.10	1	2	3588
	2+50	50	4.90	11	13	1137	2.70	4	5	3593
	3+50	100	5.70	20	25	1161	0.15	5	8	3601
	4+00	50	0.00	5	7	1168	0.00	0	0	3601
J8a	10+50	0	0.00	0	0	1168	0.00	0	0	3601
	11+50	100	86.90	161	201	1369	180.90	335	503	4104
	12+50	100	93.00	333	416	1786	363.00	1007	1511	5614
	13+50	100	47.90	261	326	2112	318.70	1262	1894	7508
	14+50	100	32.30	149	186	2297	295.80	1138	1707	9215
	14+95	45	37.70	58	73	2370	279.20	479	719	9934
	15+50	55	37.90	77	96	2467	297.40	587	881	10815
	16+50	100	44.30	152	190	2657	316.80	1137	1706	12521
	17+50	100	63.90	200	250	2907	289.10	1122	1683	14204
	18+50	200	109.00	640	800	3708	203.70	1825	2738	16942
	19+50	200	109.00	807	1009	4717	203.70	1509	2263	19205
	20+50	100	101.70	390	488	5205	61.70	491	737	19942

SITE	Station	Distance (FT)	Borrow Excavation							
			Fill-Not in Water (Includes Riprap Removal Void) (25% Additional Volume For Shrinkage)				Fill-In Water (Includes Berm & Riprap Removal Void) (50% Additional Volume For Shrinkage and Losses)			
			Area (FT°2)	Volume (CY)	Adjusted Volume (1.25)	Accumulated Adjusted Volume (CY)	Area (FT°2)	Volume (CY)	Adjusted Volume (1.5)	Accumulated Adjusted Volume (CY)
J9	1+00	0	0.00	0	0	5205	0.00	0	0	19942
	1+20	20	0.70	0	0	5205	0.00	0	0	19942
	2+00	80	0.00	1	1	5206	0.00	0	0	19942
	2+30	30	5.70	3	4	5210	0.00	0	0	19942
	3+00	70	38.40	57	71	5282	68.20	88	133	20075
	4+00	100	25.10	118	147	5429	110.70	331	497	20572
	4+57	57	25.60	54	67	5496	93.50	216	323	20895
	5+00	43	24.10	40	49	5545	97.00	152	228	21123
	6+00	100	29.10	99	123	5668	105.50	375	563	21685
	7+00	100	50.50	147	184	5853	65.70	317	476	22161
	8+00	100	0.00	94	117	5969	0.00	122	183	22343
K5Si	1+50	0	0.00	0	0	5969	0.00	0	0	22343
	3+50	200	49.70	184	230	6200	54.70	203	304	22647
	5+50	200	54.70	387	483	6683	123.00	658	987	23634
	7+50	200	61.50	430	538	7221	158.60	1043	1564	25199
	9+10	160	46.50	320	400	7621	172.30	980	1471	26669
	9+50	40	50.20	72	90	7710	181.00	262	393	27062
	11+50	200	57.30	398	498	8208	188.80	1370	2054	29116
	13+50	200	41.30	365	456	8665	182.70	1376	2064	31180
	15+50	200	34.30	280	350	9015	189.20	1377	2066	33246
	17+50	200	33.60	251	314	9329	153.30	1269	1903	35149
	19+50	200	36.60	260	325	9654	193.60	1285	1927	37076
	21+50	200	41.60	290	362	10016	226.20	1555	2332	39409
	23+50	200	39.20	299	374	10390	188.70	1537	2305	41714
	25+50	200	29.60	255	319	10708	173.30	1341	2011	43725
	27+50	200	25.10	203	253	10962	85.20	957	1436	45161
	29+00	150	0.00	70	87	11049	0.00	237	355	45516
K5Sh	30+00	0	0.00	0	0	11049	0.00	0	0	45516
	31+00	100	23.60	44	55	11104	59.10	109	164	45680
	31+25	25	33.20	26	33	11136	67.00	58	88	45767
	32+00	75	35.30	95	119	11255	69.00	189	283	46051
	33+00	100	26.00	114	142	11397	24.40	173	259	46310
	34+00	100	0.00	48	60	11457	0.00	45	68	46378

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EARTHWORK

DATA TABLES

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	11	2

EARTHWORK - AVERAGE END AREA

SITE	Station	Distance (FT)	Borrow Excavation							
			Fill-Not in Water (Includes Riprap Removal Void) (25% Additional Volume For Shrinkage)				Fill-In Water (Includes Berm & Riprap Removal Void) (50% Additional Volume For Shrinkage and Losses)			
			Area (FT°2)	Volume (CY)	Adjusted Volume (1.25)	Accumulated Adjusted Volume (CY)	Area (FT°2)	Volume (CY)	Adjusted Volume (1.5)	Accumulated Adjusted Volume (CY)
K5Sg	40+00	0	0.00	0	0	11457	0.00	0	0	46378
	41+00	100	17.10	32	40	11497	25.80	48	72	46450
	41+27	27	21.00	19	24	11521	45.40	36	53	46503
	42+00	73	60.70	110	138	11659	79.50	169	253	46756
	43+00	100	64.90	233	291	11950	103.10	338	507	47264
	44+00	100	45.40	204	255	12205	45.40	275	413	47676
	45+00	100	48.50	174	217	12422	101.40	272	408	48084
	46+00	100	0.00	90	112	12535	0.00	188	282	48366
	47+00	100	0.00	0	0	12535	0.00	0	0	48366
	48+00	100	16.90	31	39	12574	84.60	157	235	48601
	48+40	40	0.00	13	16	12589	0.00	63	94	48695
	49+00	60	110.60	123	154	12743	116.70	130	195	48889
	49+96	96	272.10	680	850	13593	163.90	499	748	49637
	50+00	4	267.30	40	50	13643	156.90	24	36	49673
	51+00	100	206.90	878	1098	14741	81.40	441	662	50335
	52+00	100	0.00	383	479	15220	0.00	151	226	50561
K5Sf	91+75	0	0.00	0	0	15220	0.00	0	0	50561
	92+60	85	24.30	38	48	15268	0.00	0	0	50561
	93+50	90	16.60	68	85	15353	2.40	4	6	50567
	95+50	200	9.90	98	123	15476	21.00	87	130	50697
	96+06	56	8.40	19	24	15499	15.70	38	57	50754
	97+50	144	9.40	47	59	15559	3.30	51	76	50830
	99+50	200	11.50	77	97	15655	1.40	17	26	50856
	101+50	200	12.50	89	111	15767	23.10	91	136	50992
	102+23	73	49.30	84	104	15871	20.00	58	87	51080
	103+50	127	5.40	129	161	16032	3.10	54	81	51161
	104+50	100	32.50	70	88	16120	0.00	6	9	51170
	105+50	100	0.00	60	75	16195	0.00	0	0	51170
K5Se	111+50	0	0.00	0	0	16195	0.00	0	0	51170
	112+50	100	8.30	15	19	16214	55.50	103	154	51324
	113+50	100	8.40	31	39	16253	78.30	248	372	51696
	114+50	100	13.90	41	52	16304	108.20	345	518	52214
	114+62	12	15.00	6	8	16312	112.40	49	74	52287
	115+50	88	2.00	28	35	16347	75.40	306	459	52746
	116+50	100	0.00	4	5	16352	0.00	140	209	52956
K5Sd	135+50	0	0.00	0	0	16352	0.00	0	0	52956
	136+50	100	1.50	3	3	16355	55.80	103	155	53111
	137+25	75	12.50	19	24	16379	107.80	227	341	53452
	137+50	25	6.40	9	11	16390	104.80	98	148	53599
	138+50	100	0.00	12	15	16405	34.40	258	387	53986
	139+00	50	0.00	0	0	16405	0.00	32	48	54034
K5Sb	157+00	0	0.00	0	0	16405	0.00	0	0	54034
	159+00	200	5.60	21	26	16431	112.40	416	624	54658
	160+95	195	16.60	80	100	16531	180.00	1056	1584	56242
	161+00	5	12.60	3	3	16535	170.60	32	49	56291
	163+00	200	8.70	79	99	16633	128.40	1107	1661	57952
	165+00	200	0.00	32	40	16673	22.00	557	836	58787
	167+00	200	0.00	0	0	16673	0.00	81	122	58910
K5Sa	178+00	0	0.00	0	0	16673	0.00	0	0	58910
	179+00	100	6.30	12	15	16688	34.40	64	96	59005
	180+00	100	11.50	33	41	16729	76.10	205	307	59312
	181+00	100	15.00	49	61	16791	76.70	283	424	59736
	182+00	100	0.00	28	35	16825	0.00	142	213	59950

SITE	Station	Distance (FT)	Borrow Excavation							
			Fill-Not in Water (Includes Riprap Removal Void) (25% Additional Volume For Shrinkage)				Fill-In Water (Includes Berm & Riprap Removal Void) (50% Additional Volume For Shrinkage and Losses)			
			Area (FT°2)	Volume (CY)	Adjusted Volume (1.25)	Accumulated Adjusted Volume (CY)	Area (FT°2)	Volume (CY)	Adjusted Volume (1.5)	Accumulated Adjusted Volume (CY)
G5a	0+50	0	0.00	0	0	16825	0.00	0	0	59950
	1+00	50	1.20	1	1	16827	0.00	0	0	59950
	1+50	50	12.80	13	16	16843	0.00	0	0	59950
	2+17	67	60.00	90	113	16956	8.30	10	15	59965
	2+50	33	25.90	52	66	17021	0.00	5	8	59973
	3+17	67	3.10	36	45	17066	0.00	0	0	59973
	3+28	11	0.00	1	1	17067	0.00	0	0	59973
	3+50	22	0.00	0	0	17067	0.00	0	0	59973
G5b	5+50	0	0.00	0	0	17067	0.00	0	0	59973
	6+00	50	0.30	0	0	17068	0.00	0	0	59973
	6+50	50	9.90	10	13	17080	12.30	11	17	59990
	7+50	100	9.40	36	45	17125	33.40	85	127	60117
	7+66	16	9.00	5	7	17132	32.30	19	29	60146
	8+50	84	11.70	32	40	17172	14.00	72	108	60254
	9+00	50	0.70	11	14	17186	0.00	13	19	60273
	9+15	15	0.00	0	0	17186	0.00	0	0	60273
G5c	11+00	0	0.00	0	0	17186	0.00	0	0	60273
	12+00	100	0.00	0	0	17186	0.00	0	0	60273
	13+00	100	0.00	0	0	17186	14.60	27	41	60314
	13+50	50	9.10	8	11	17197	20.50	33	49	60363
	14+40	90	0.00	15	19	17216	0.00	34	51	60414
G5d	16+00	0	0.00	0	0	17216	0.00	0	0	60414
	16+50	50	1.90	2	2	17218	39.50	37	55	60469
	17+00	50	4.60	6	8	17226	62.80	95	142	60611
	17+50	50	0.60	5	6	17232	39.50	95	142	60753
	18+50	100	0.00	1	1	17233	0.00	73	110	60863
	19+00	50	2.70	3	3	17236	0.00	0	0	60863
	19+10	10	2.40	1	1	17237	0.00	0	0	60863
	19+50	40	0.00	2	2	17240	0.00	0	0	60863
G5e	26+00	0	0.00	0	0	17240	0.00	0	0	60863
	26+50	50	1.50	2	3	17242	0.00	0	0	60863
	27+00	50	3.70	5	6	17248	0.00	0	0	60863
	27+50	50	1.70	5	6	17254	5.30	5	7	60870
	28+50	100	4.60	12	15	17269	52.20	106	160	61030
	29+50	100	8.30	24	30	17299	39.30	169	254	61284
	30+25	75	5.80	20	24	17323	0.00	55	82	61366
	30+50	25	0.60	3	4	17327	0.00	0	0	61366
	31+00	50	0.00	1	1	17328	0.00	0	0	61366

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EARTHWORK

DATA TABLES

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM 0300(134)	11	3

EARTHWORK - AVERAGE END AREA

SITE	Station	Distance (FT)	Borrow Excavation							
			Fill-Not in Water (Includes Riprap Removal Void) (25% Additional Volume For Shrinkage)				Fill-In Water (Includes Berm & Riprap Removal Void) (50% Additional Volume For Shrinkage and Losses)			
			Area (FT°2)	Volume (CY)	Adjusted Volume (1.25)	Accumulated Adjusted Volume (CY)	Area (FT°2)	Volume (CY)	Adjusted Volume (1.5)	Accumulated Adjusted Volume (CY)
G3c	0+50	0	0.00	0	0	17328	0	0	0	61366
	1+00	50	1.87	2	2	17330	0	0	0	61366
	1+50	50	5.49	7	9	17338	0	0	0	61366
	2+50	100	20.60	48	60	17399	59	109	163	61528
	3+50	100	14.61	65	82	17480	49	200	299	61828
	4+50	100	22.40	69	86	17566	48	179	269	62097
	5+50	100	30.60	98	123	17689	77	230	345	62442
	6+05	55	34.90	67	83	17772	95	175	262	62704
	6+50	45	40.50	63	79	17851	94	157	236	62940
	7+50	100	10.50	94	118	17969	22	215	322	63262
	8+00	0	0.00	0	0	17969	0	0	0	63262
G3b	45+00	0	0.00	0	0	17969	0	0	0	63262
	45+80	80	9.90	15	18	17987	0	0	0	63262
	46+00	20	6.90	6	8	17995	0	0	0	63262
	47+00	100	13.50	38	47	18042	10	18	28	63289
	48+00	100	10.50	44	56	18098	0	18	28	63317
	48+50	50	0.00	10	12	18110	0	0	0	63317
G3a	66+50	0	0.00	0	0	18110	0	0	0	63317
	67+50	100	18.10	34	42	18152	64	118	177	63494
	68+50	100	16.40	64	80	18232	99	301	452	63946
	68+78	28	15.40	16	21	18252	91	99	148	64094
	69+50	72	10.30	34	43	18295	84	234	351	64445
	70+50	100	1.50	22	27	18322	0	156	234	64679
	71+00	50	0.00	1	2	18324	0	0	0	64679
J1a	3+50	0	0.00	0	0	18324	0	0	0	64679
	4+50	100	0.10	0	0	18324	24	45	68	64747
	5+50	100	0.70	1	2	18326	0	45	68	64815
	6+50	100	9.20	18	23	18349	50	92	138	64953
	7+50	100	14.60	44	55	18404	1	94	141	65094
	8+00	50	0.00	14	17	18421	0	1	1	65095
J5a	27+90	0	0.00	0	0	18421	0	0	0	65095
	28+50	60	7.80	9	11	18432	0	0	0	65095
	29+50	100	8.30	30	37	18469	2	3	4	65100
	30+50	100	22.90	58	72	18541	26	51	76	65175
	31+50	100	26.60	92	115	18656	42	125	188	65363
	32+18	68	25.90	66	83	18739	31	92	138	65501
	32+50	32	26.00	31	38	18777	37	40	60	65561
	33+50	100	4.30	56	70	18847	0	68	102	65663
	34+10	60	0.00	5	6	18853	0	0	0	65663
J5b	2+19	0	0.00	0	0	18853	0.00	0	0	65663
	2+50	31	10.10	6	7	18860	29.20	17	25	65688
	2+89	39	26.60	27	33	18893	62.40	66	99	65787
	3+50	61	45.40	81	102	18995	79.30	160	240	66027
	4+50	100	19.90	121	151	19146	35.40	212	319	66346
	5+50	100	11.30	58	72	19219	55.70	169	253	66599
	6+13	63	14.50	30	38	19256	71.00	148	222	66821
	6+50	37	11.50	18	22	19278	66.50	94	141	66962
	7+50	100	30.70	78	98	19376	82.00	275	413	67375
	8+50	100	17.30	89	111	19487	79.70	299	449	67824
	9+50	100	25.20	79	98	19586	71.50	280	420	68244
	10+50	100	33.60	109	136	19722	89.20	298	446	68690
	10+81	31	29.40	36	45	19767	75.10	94	141	68832
	11+40	59	0.00	32	40	19807	0.00	82	123	68955
Site Totals						19807				68955

SITE	Station	Distance (FT)	Common Excavation - Type B		
			Area (FT°2)	Volume (CY)	Accumulated Volume (CY)
K5Sg	42+00	0	0.00	0	0
	43+00	100	28.70	53	53
	44+00	100	132.90	299	352
	45+00	100	211.10	637	989
	46+00	100	258.40	869	1859
	47+00	100	181.80	815	2674
	48+00	100	32.30	396	3071
	48+40	40	0.00	24	3094
Total					3094

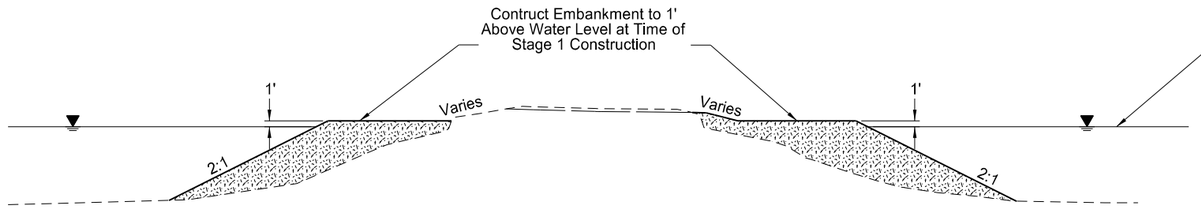
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EARTHWORK

DATA TABLES

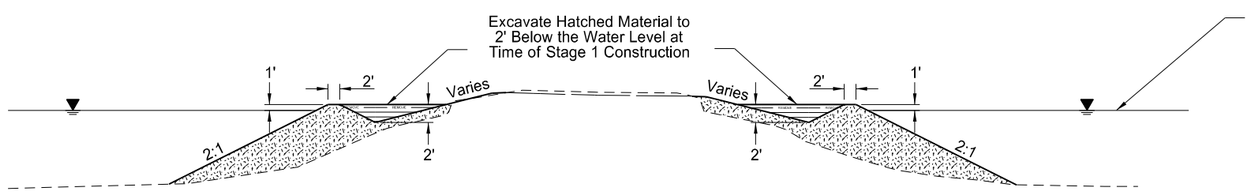
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	20	1

STAGE 1 - Embankment

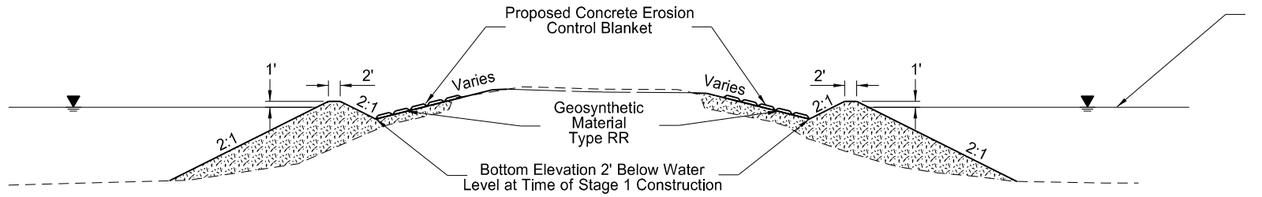


STAGE 2 - Excavation

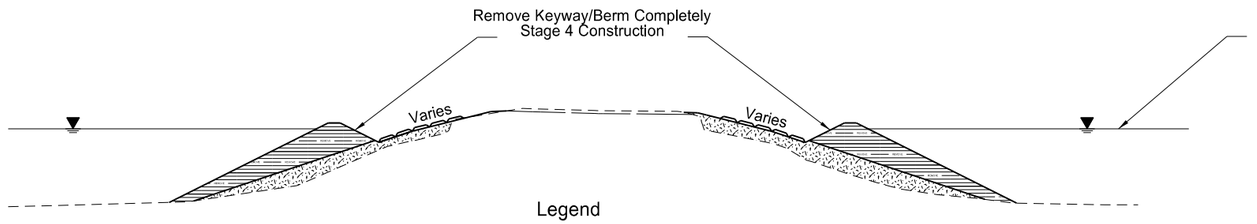
NOTE: To be used in other embankment and to be included in price bid for "Borrow Excavation".



STAGE 3 - Place Fabric, Concrete Erosion Control Blanket and Additional Embankment



STAGE 4 - Completely Remove Keyway/Berm



Legend

BORROW EXCAVATION

REMOVE BORROW EXCAVATION

CONCRETE EROSION CONTROL BLANKET

Note:

The typical placement practice for all construction sites that require keyway/ berms. Existing inslopes and proposed new inslopes may vary. Keyway/ berms shall be completely removed at Stage 4 as listed above.

Keyway/ berms shall be used where work needs done in the water at a depth of 2' or more.

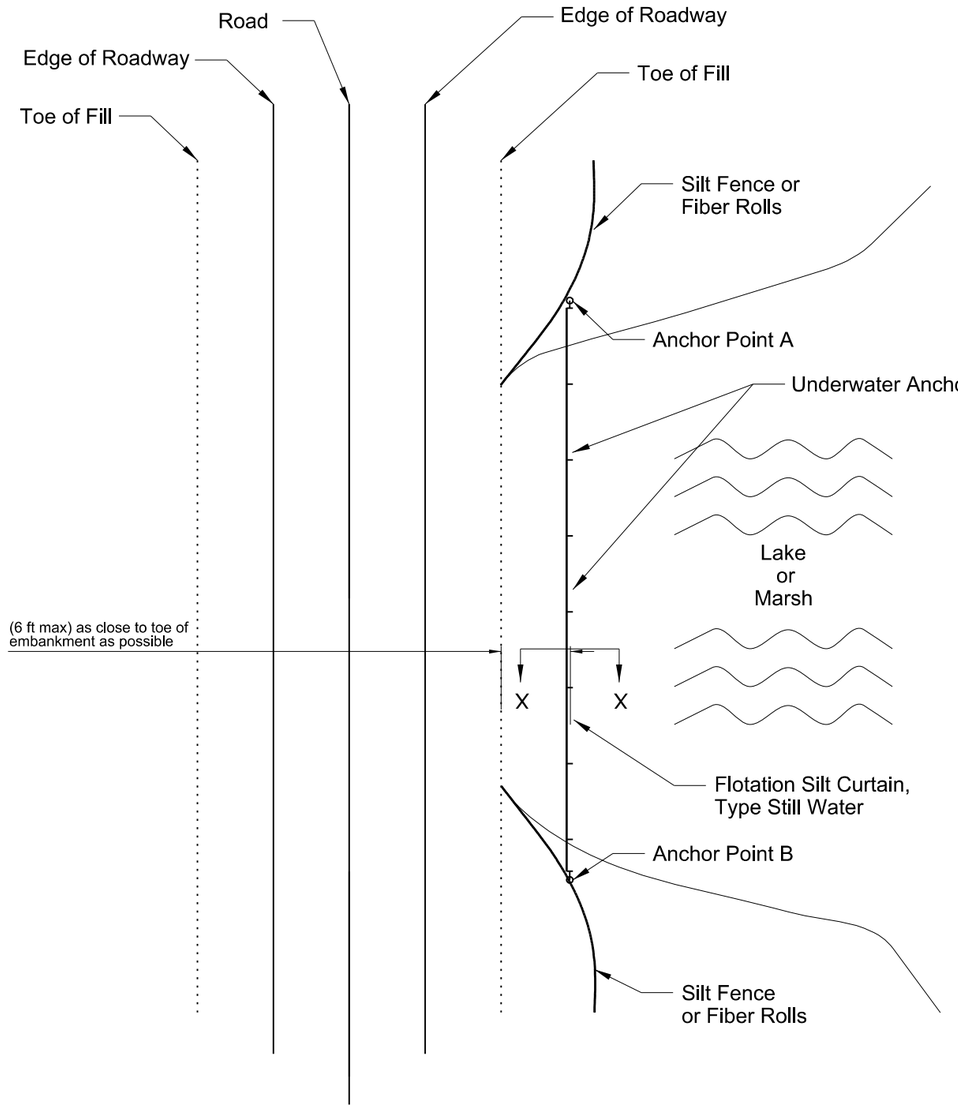
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Berm Sequence Detail

Inslope Erosion Repair

Mountrail County & Ward County

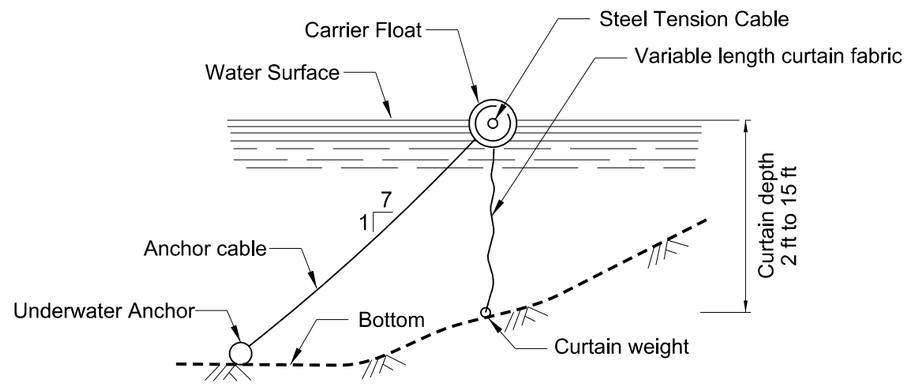
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
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PLAN VIEW

FLOTATION SILT CURTAIN - TYPE STILL WATER

The silt curtain shall extend onto shore and shall also be anchored there.



SECTION X-X

FLOTATION SILT CURTAINS

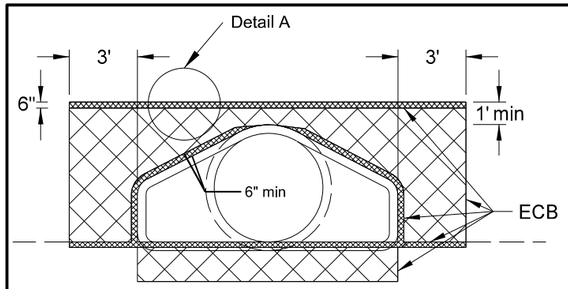
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Temporary Erosion Control - Flotation Silt Curtain

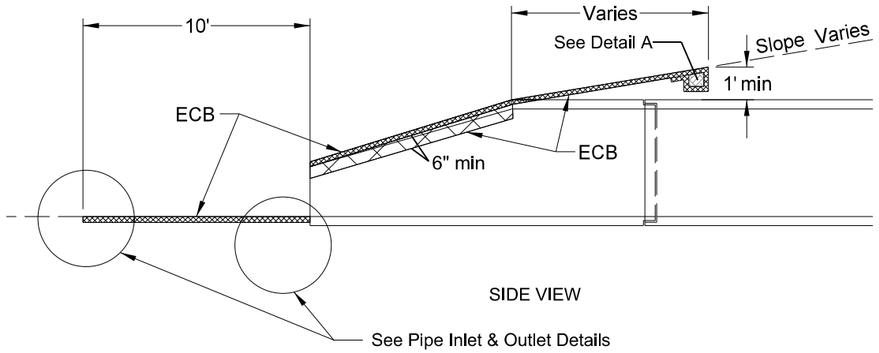
Inslope Erosion Repair

Mountrail County & Ward County

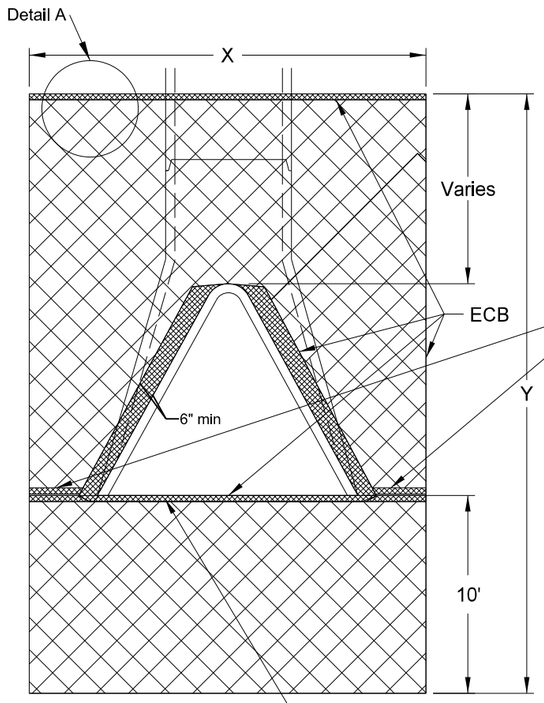
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
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FRONT VIEW



SIDE VIEW

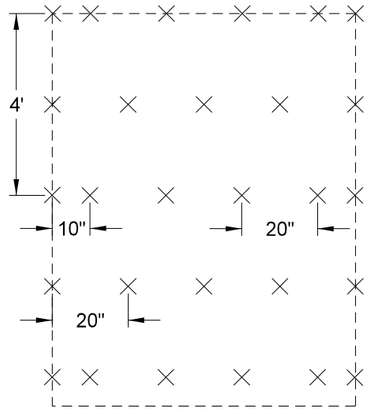


TOP VIEW

Tuck this end a minimum of 6" into the embankment.

Inlet side - see applicable detail for pipe inlet.
Outlet side - see applicable detail for pipe outlet.

NOTE: Tuck the ECB a minimum of 6" into the embankment (against the flared end section) around the opening of the flared end section.



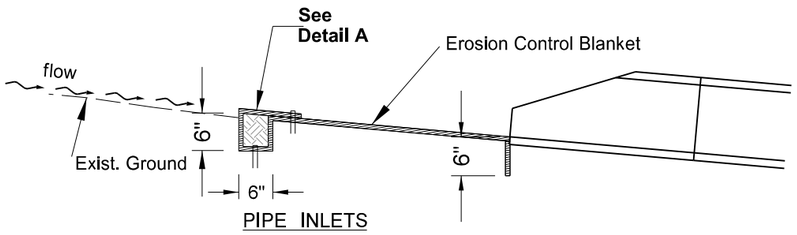
STAPLE PATTERN

Erosion Control Blanket (ECB)								
Location to be Protected Station	Culvert Type Appr/CL	Pipe Diam (Inch)	No	Unit Quantity (SY)	Total Quantity Type 1 (SY)	Type 2 (SY)	Type 3 (SY)	Type 4 (SY)
G11e								
12+55 Rt	CL	36	1	24	24			
12+65 Rt	CL	36	1	24	24			
16+46 Rt	CL	36	1	24	24			
16+56 Rt	CL	36	1	24	24			
21+47 Rt	CL	30	1	22	22			
21+57 Rt	CL	30	1	22	22			
J9								
1+45 Lt	Appr	24	1	20	20			
2+18 Lt	Appr	24	1	20	20			
K5Sh								
29+25 Lt	Appr	18	1	20	20			
29+63 Lt	Appr	18	1	20	20			
K5Sg								
41+27 Rt	CL	24	1	20	20			
J5b								
2+89 Rt	CL	18	1	20	20			
6+13 Rt	CL	24	1	20	20			
10+81 Rt	CL	24	1	20	20			
G3b								
45+32 Rt	Appr	18	1	20	20			
45+72 Rt	Appr	18	1	20	20			
Total (SYs)					340			

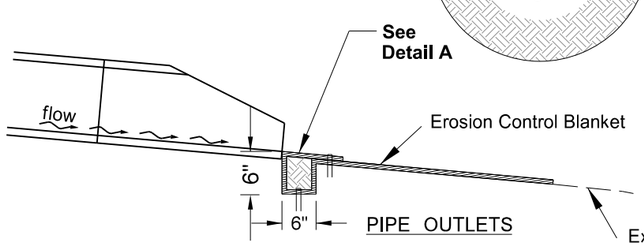
APPROACH CULVERTS				
DIA	X	Y	Surface area to be protected	ECB
In	Ft	Ft	SF	SY
15	9.0	20.0	176.0	20
18	9.5	20.7	190.7	22
21	9.5	21.0	190.9	22
24	10.5	21.6	214.1	24
27	11.0	22.0	226.3	25
30	11.6	22.5	241.5	27
36	12.7	23.3	268.8	30
42	13.3	23.3	279.7	31
48	13.8	24.0	293.2	33
54	14.5	23.4	300.6	34
60	15.0	23.0	307.5	35
66	15.6	24.0	325.6	37
72	16.2	24.5	340.6	38

Note: Quantities based on 8:1 slope.

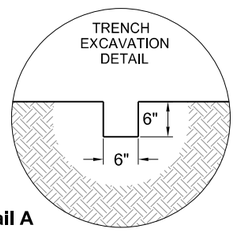
CENTERLINE CULVERTS									
DIA	X	Y	Surface area to be protected	ECB	DIA	X	Y	Surface area to be protected	ECB
In	Ft	Ft	SF	SY	In	Ft	Ft	SF	SY
24	10.5	19.6	193.1	22	24	10.5	27.6	172.1	20
27	11.0	20.0	204.3	23	27	11.0	18.0	182.3	21
30	11.6	20.5	218.3	25	30	11.6	18.5	195.1	22
36	12.7	21.2	242.1	27	36	12.7	19.2	216.7	24
42	13.3	21.2	251.8	28	42	13.3	19.2	225.2	25
48	13.8	22.0	265.6	30	48	13.8	20.0	238.0	27
54	14.5	21.5	273.7	31	54	14.5	19.5	244.7	28
60	15.0	21.0	278.3	31	60	15.0	19.0	248.3	28
66	15.6	22.0	295.7	33	66	15.6	20.0	264.5	30
72	16.2	22.5	309.2	35	72	16.2	20.5	276.8	31
Note: Quantities based on 6:1 slope.					Note: Quantities based on 4:1 slope.				

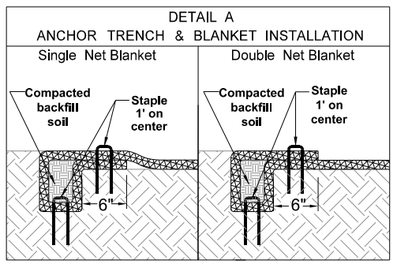


PIPE INLETS



PIPE OUTLETS





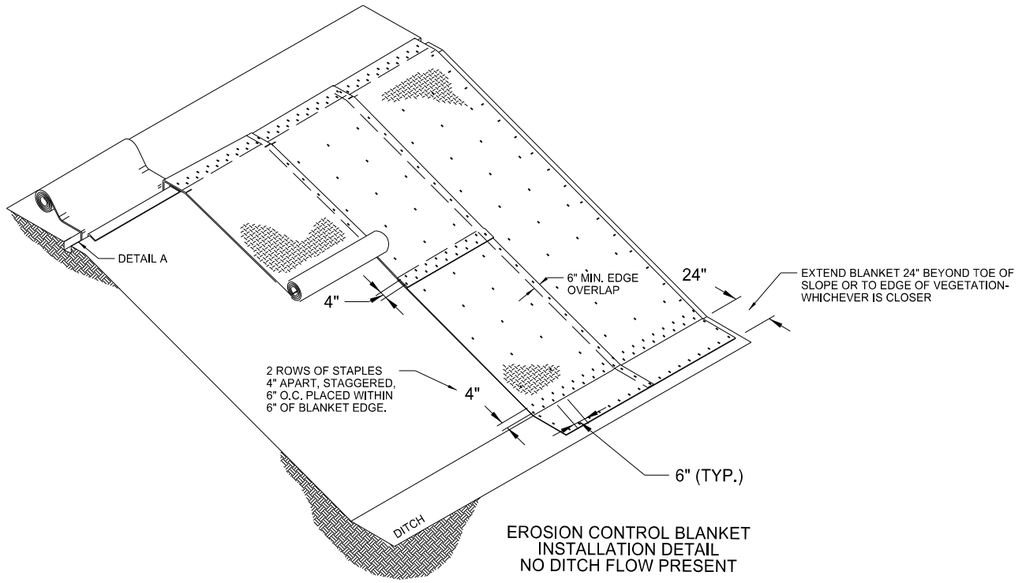
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Erosion Control at Culvert Flared End Sections

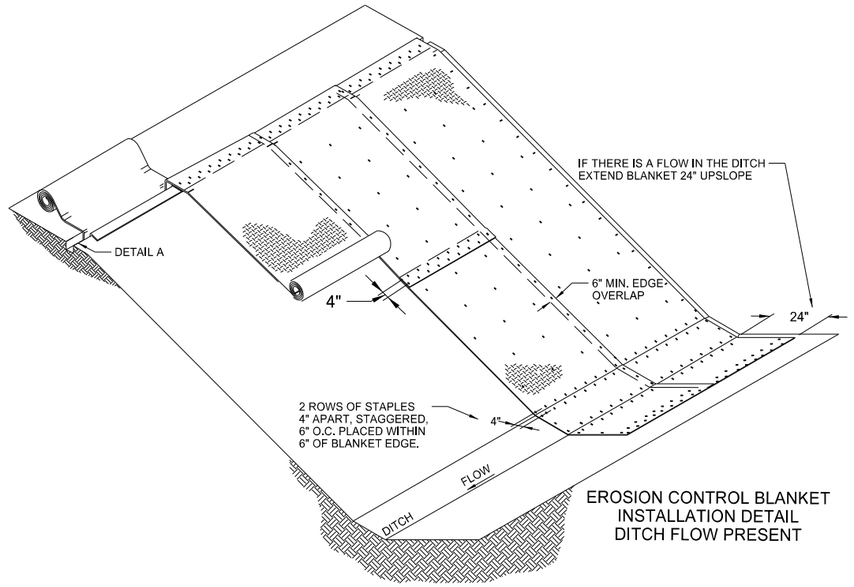
Inslope Erosion Repair

Mountrail County & Ward County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
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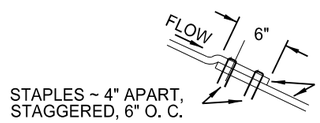
EROSION CONTROL BLANKET
INSTALLATION DETAIL
NO DITCH FLOW PRESENT



EROSION CONTROL BLANKET
INSTALLATION DETAIL
DITCH FLOW PRESENT

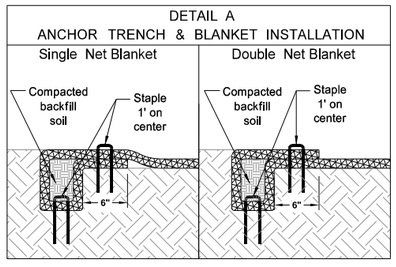
INSTALLATION STEPS:

1. Prepare smooth slope per spec. section 255
2. Amend soil and seed, as specified.
3. Dig anchor trench. Set aside native soil removed from trench.
4. Secure blanket in anchor trench, staking or stapling blanket as shown.
5. Replace native soil previously removed from trench.
6. Staple blanket as shown so there are no gaps between the blanket and the soil. Staple while unrolling blanket to minimize walking on blanket.
7. Install splices a minimum 24 inches prior to toe of slope.

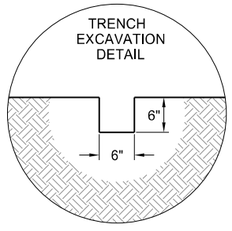


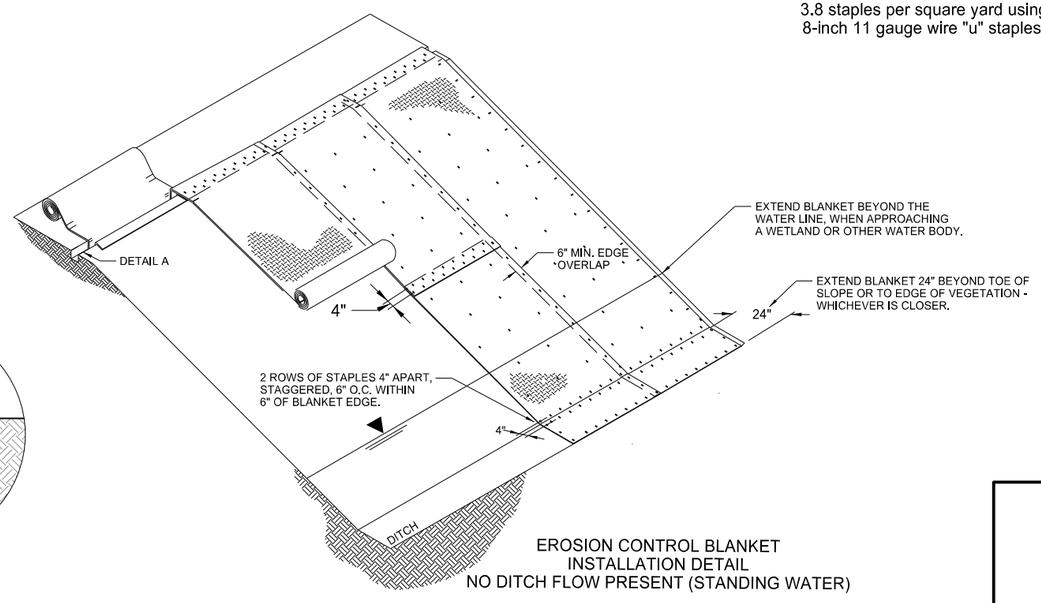
STAPLES ~ 4" APART, STAGGERED, 6" O. C.

EROSION CONTROL BLANKETS

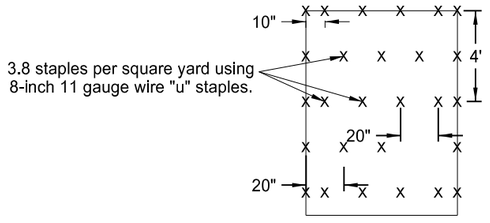


NOTE:
Install Single Net Blanket with netting on top of installed blanket.





EROSION CONTROL BLANKET
INSTALLATION DETAIL
NO DITCH FLOW PRESENT (STANDING WATER)



3.8 staples per square yard using 8-inch 11 gauge wire "u" staples.

STAPLE PATTERN

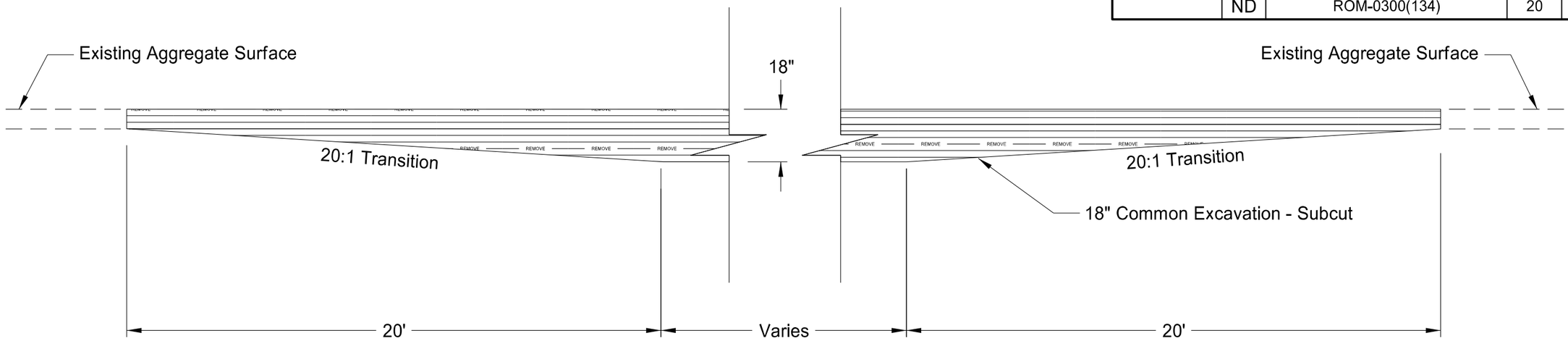
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Erosion Control Blanket

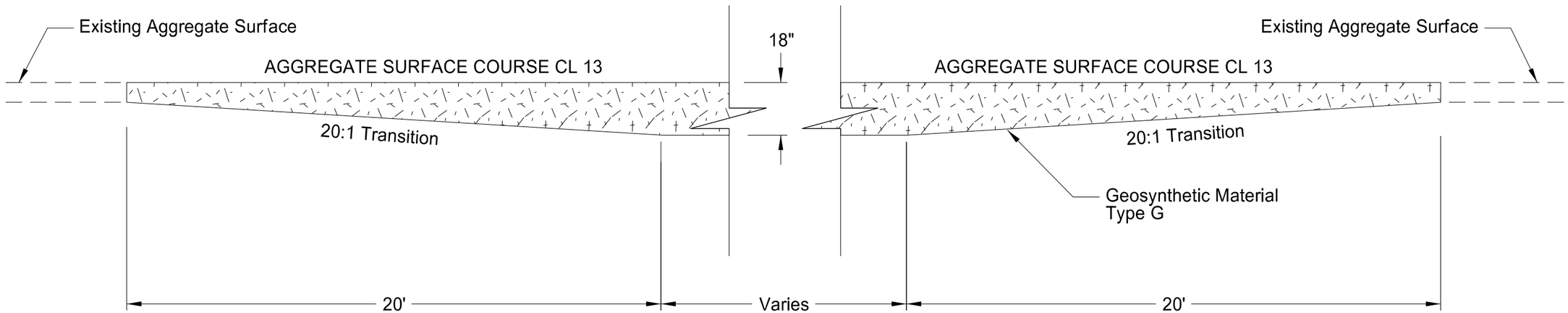
Inslope Erosion Repair

Mountrail County & Ward County

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Subcut - Removal



Subcut - Backfill

Subcut Repair Summary						
Site	Length from Begin of Transition to End Transition (FT)	Width (FT)	Subcut Depth (IN)	Common Excavation-Subcut (CY)	Geosynthetic Type G (SY)	Aggregate Surface Course CL 13 (1.875 Tons/CY)
G3b	150	20	18	167	333	391
G3a	150	20	18	167	333	391
K5Si	150	20	18	167	333	391
	150	20	18	167	333	391
	150	20	18	167	333	391
J9	100	20	18	111	222	260
			Totals	946	1887	2215

Note: Quantities are Based on a 20' Graded Width.
For Additional Quantities See Section 6 sheet 2 General Plan Note 203-P04 SUBCUT.

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Subcut Detail

Inslope Erosion Repair

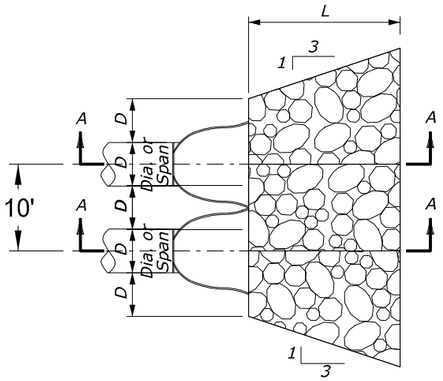
Mountrail County & Ward County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	20	6

PROTECTIVE APRON AT CULVERT OUTLET WITHOUT DITCH

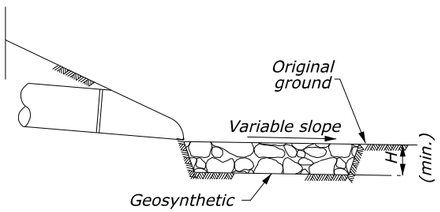
OUTLET WITHOUT DITCH
PROTECTIVE APRON DIMENSIONS AND ESTIMATED QUANTITIES

SITE G11e	CULVERT SIZE D (inches)	RIPRAP GRADE	LENGTH OF APRON L (feet)	DEPTH OF APRON H (feet)	ESTIMATED RIPRAP QUANTITY (CY)	ESTIMATED GEOSYNTHETIC QUANTITY (SY)
2 PIPES	30	2	12.5	2	22	56
2 PIPES	36	2	16	2	31	74



PLAN VIEW

DOUBLE CULVERT WITH STANDARD END SECTIONS



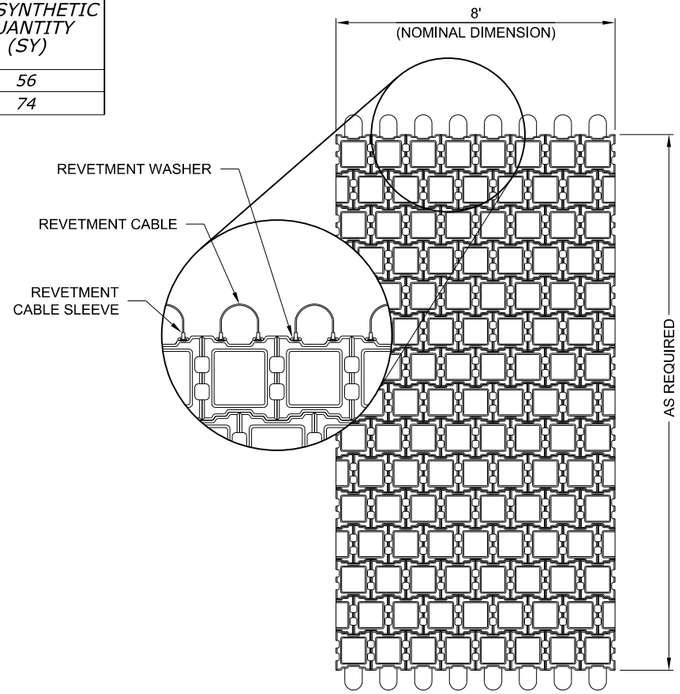
SECTION A-A

NOTE:

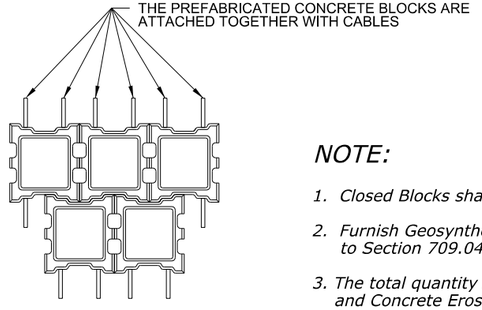
1. *Use for Aprons Serving Culverts with Slopes of less than 10%.*
2. *Furnish Geosynthetic Type RR Conforming to Section 709.04(E).*
3. *Excavation for Placement of Riprap Grade II will not be measured for payment.*

NOT TO SCALE

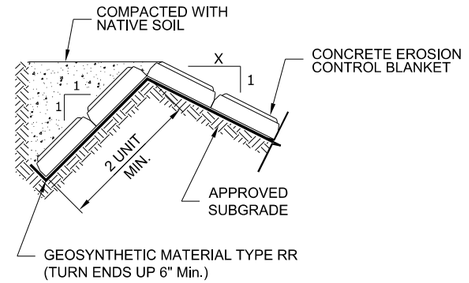
CONCRETE EROSION CONTROL BLANKET



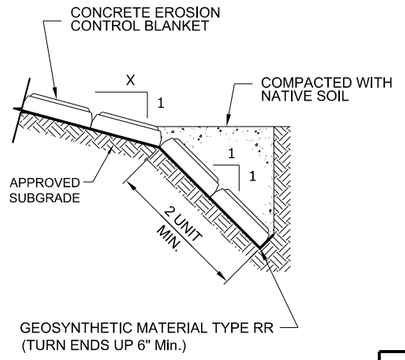
CONCRETE EROSION CONTROL BLANKET



PLAN



TOP OF SLOPE SECTION



TOE OF SLOPE SECTION

NOTE:

1. *Closed Blocks shall be used.*
2. *Furnish Geosynthetic Material Type RR Conforming to Section 709.04(E).*
3. *The total quantity for Geosynthetic Material Type RR and Concrete Erosion Control Blanket includes 2 units for the tuck at the toe and 2 units for the tuck at the top of the slope.*
4. *Stainless steel cable or polyester rope shall be used to connect the concrete mats together along the seams to secure the stay tight.*

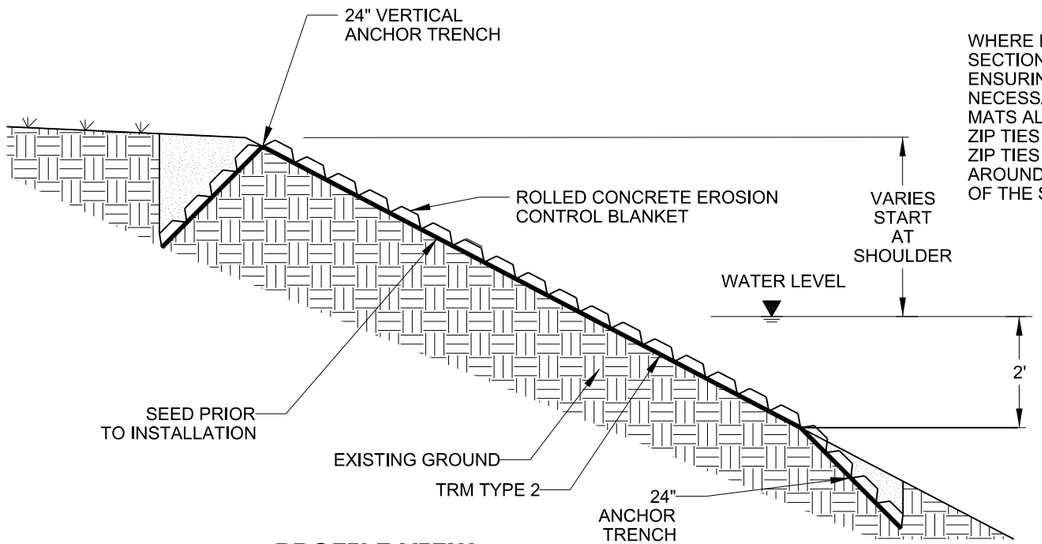
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Erosion Control Details

Inslope Erosion Repair

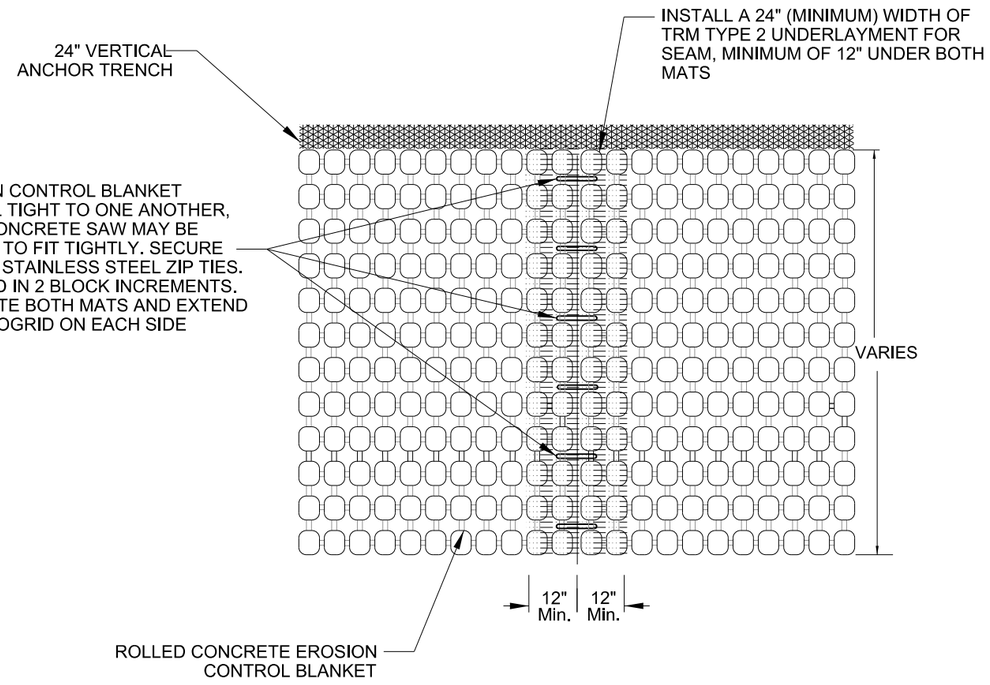
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	20	7

ROLLED CONCRETE EROSION CONTROL BLANKET

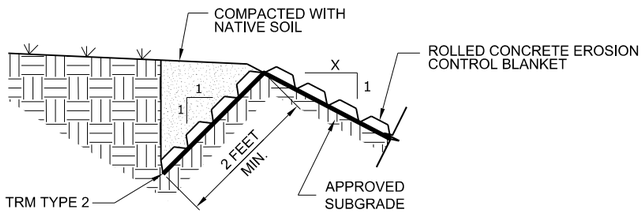


PROFILE VIEW

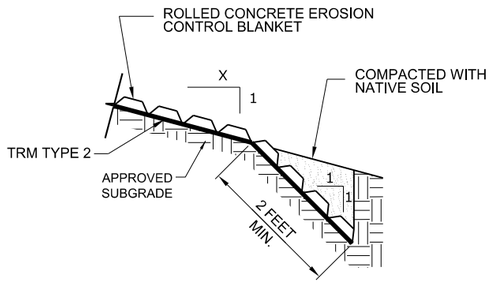
WHERE ROLLED EROSION CONTROL BLANKET SECTIONS MEET, INSTALL TIGHT TO ONE ANOTHER, ENSURING NO GAPS. A CONCRETE SAW MAY BE NECESSARY TO CUT MAT TO FIT TIGHTLY. SECURE MATS ALONG SEAM WITH STAINLESS STEEL ZIP TIES. ZIP TIES TO BE INSTALLED IN 2 BLOCK INCREMENTS. ZIP TIES SHALL PENETRATE BOTH MATS AND EXTEND AROUND 2 CORDS OF GEOGRID ON EACH SIDE OF THE SEAM.



PLAN VIEW - LONGITUDINAL SEAM



TOP OF SLOPE SECTION



TOE OF SLOPE SECTION

NOT TO SCALE

NOTE:

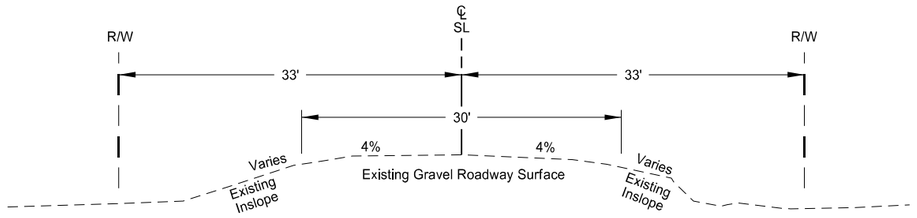
1. *Closed Blocks shall be used.*
2. *The total quantity for the Rolled Concrete Erosion Control Blanket includes the tuck for the toe and the tuck for the top.*
3. *The Extra 24" inch strip of TRM Type 2 underlayment for the seams shall be incidental to the price bid for "Rolled Concrete Erosion Control Blanket".*
4. *The Rolled Concrete Erosion Control Blanket shall have TRM Type 2 attached to the bottom and all costs shall be included in the price bid for "Rolled Concrete Erosion Control Blanket".*

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Erosion Control Details

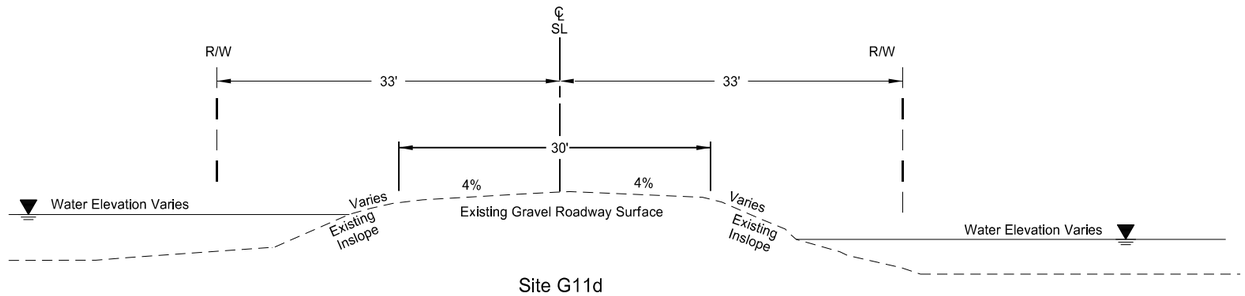
Inslope Erosion Repair

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	30	1

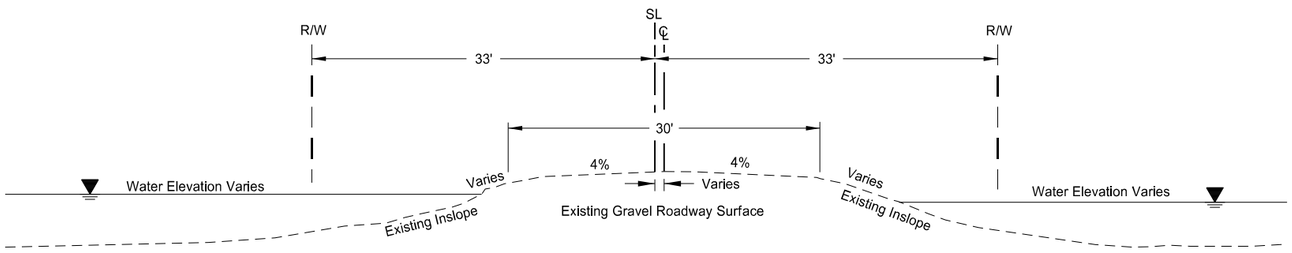


Site G11e
Existing Typical Section
Sta 11+80 to 22+15

Exception Areas:
Sta 13+10 to Sta 15+00
Sta 17+70 to Sta 20+90



Site G11d
Existing Typical Section
Sta 80+20 to 85+15



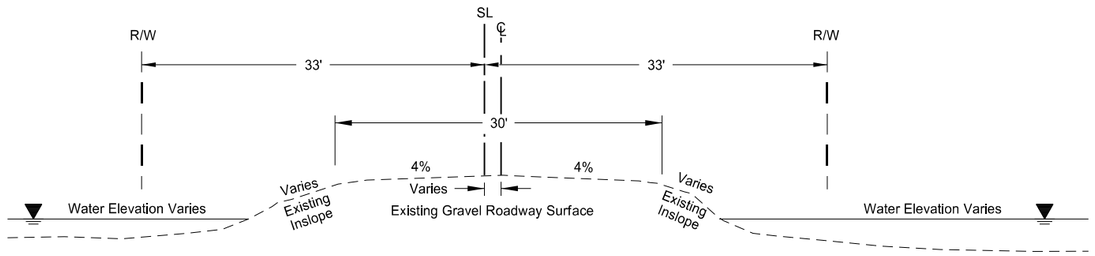
Site G11c
Existing Typical Section
Sta 103+45 to 107+45

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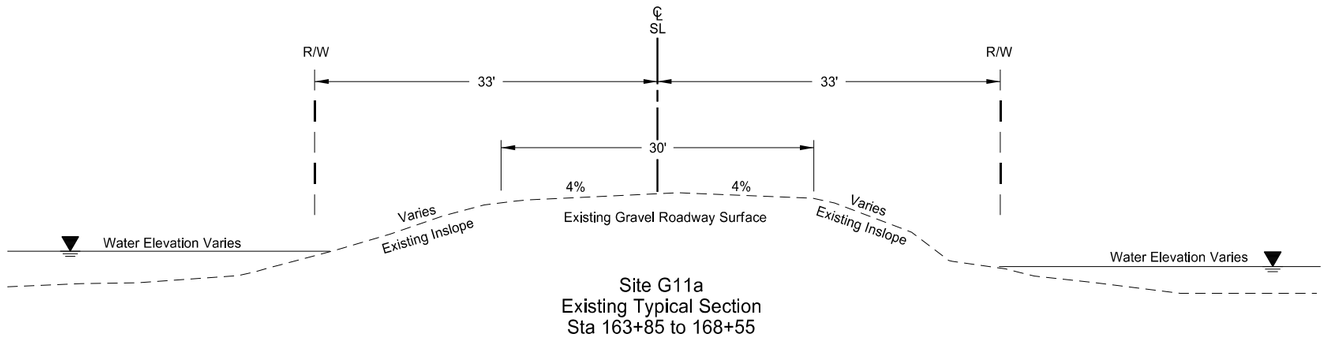
Existing Typical Sections

Inslope Erosion Repair
Missile Access Roads
Mountrail County

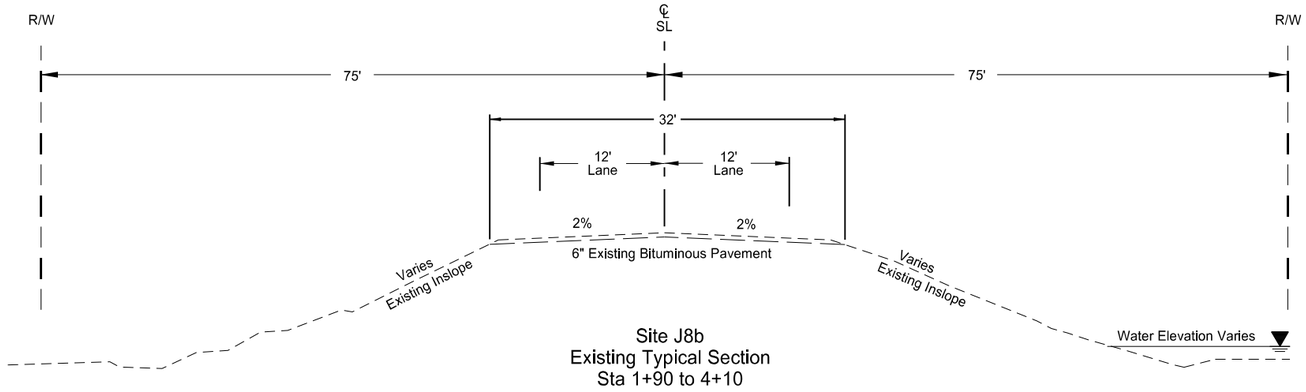
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	30	2



Site G11b
Existing Typical Section
Sta 111+70 to 119+20



Site G11a
Existing Typical Section
Sta 163+85 to 168+55



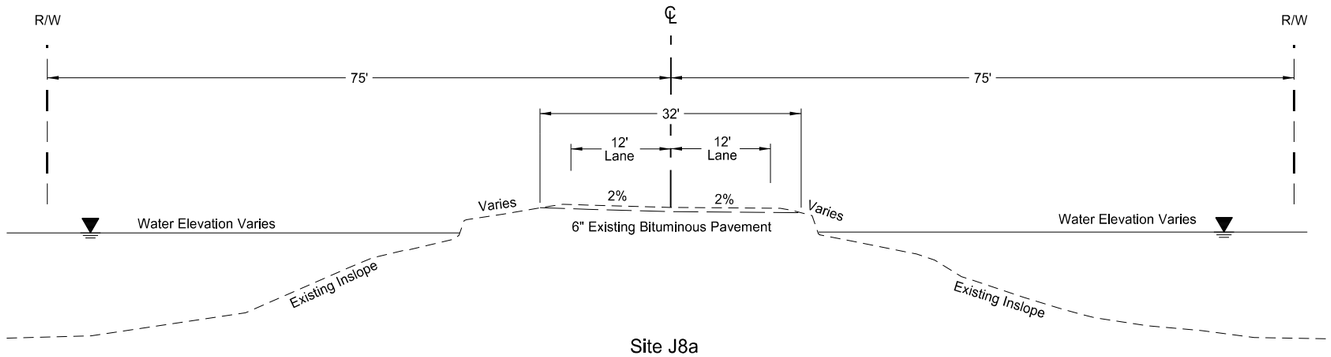
Site J8b
Existing Typical Section
Sta 1+90 to 4+10

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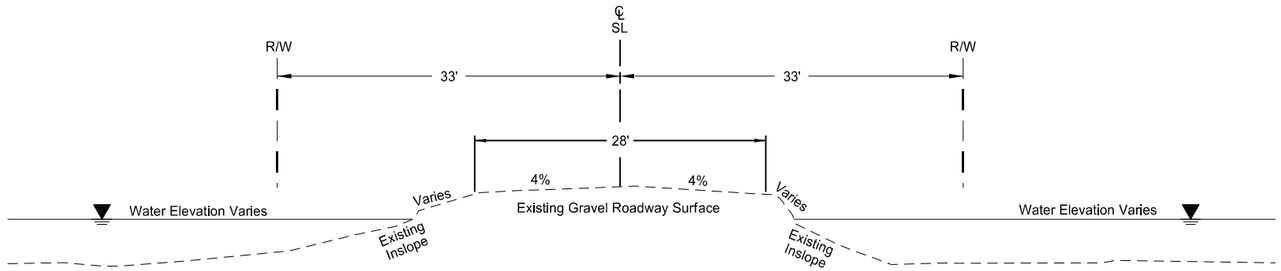
Existing Typical Sections

Inslope Erosion Repair
Missile Access Roads
Mountrail County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	30	3

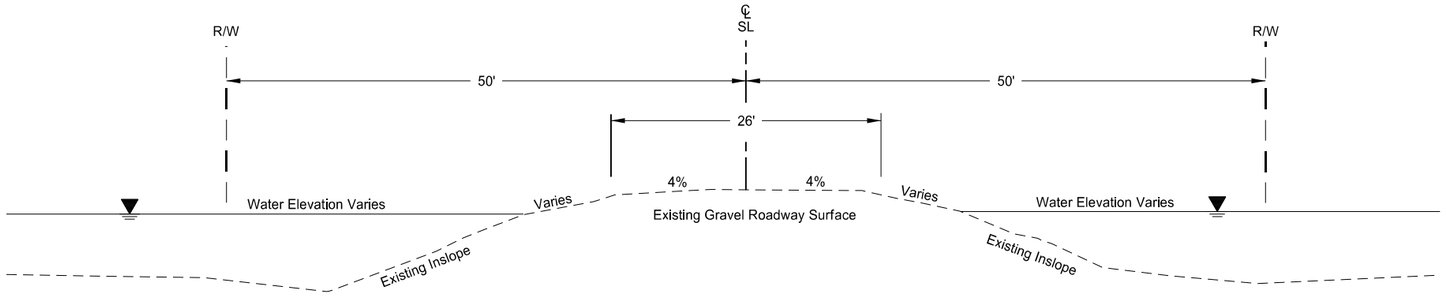


Site J8a
Existing Typical Section
Sta 9+80 to 20+15



Site J9
Existing Typical Section
Sta 1+10 to 8+50

Exception Area:
Sta 1+58 to 1+96



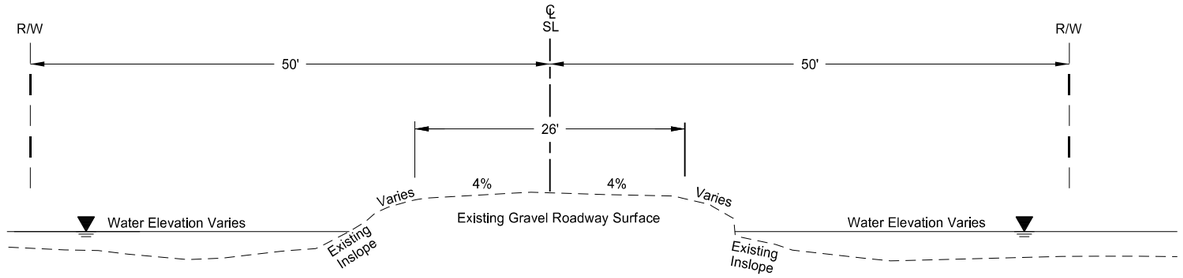
Site K5Si
Existing Typical Section
Sta 0+75 to 29+40

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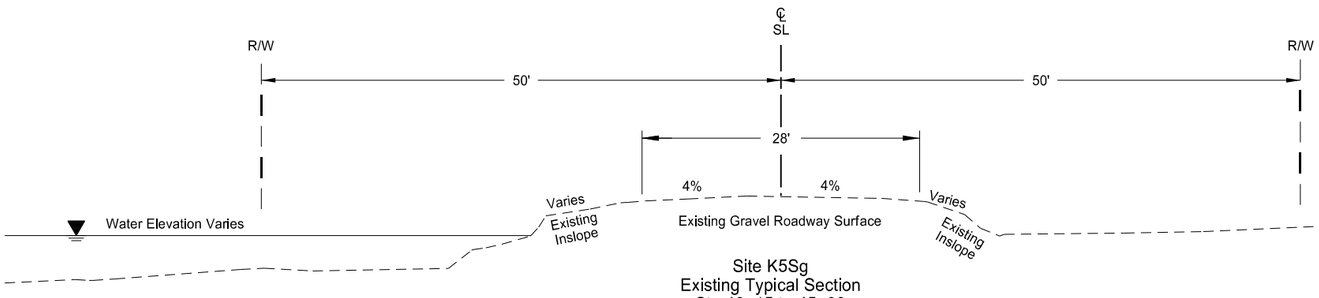
Existing Typical Sections

Inslope Erosion Repair
Missile Access Roads
Mountrail County

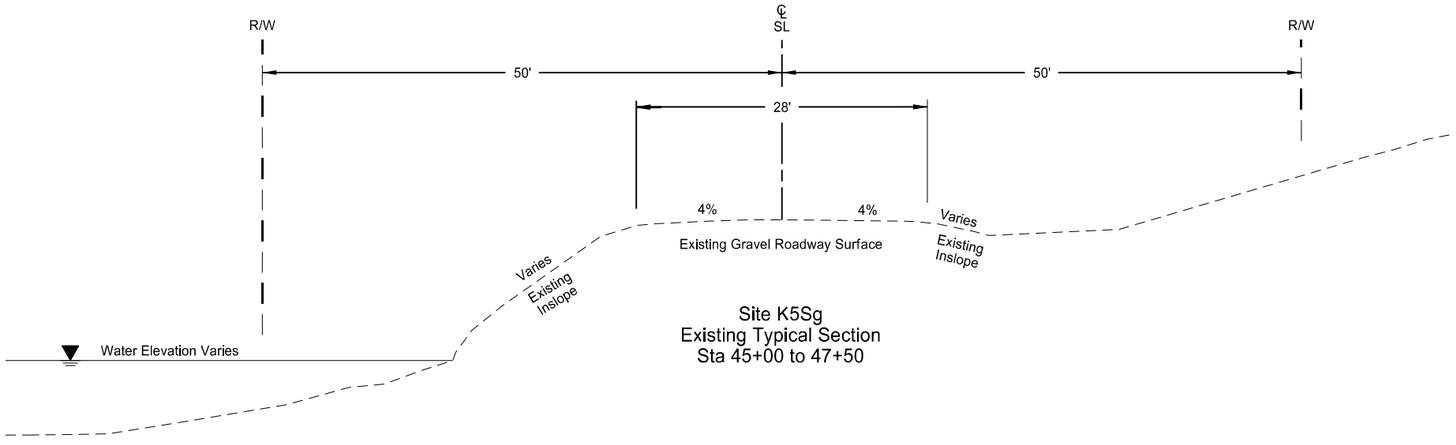
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	30	4



Site K5Sh
Existing Typical Section
Sta 29+50 to 34+05



Site K5Sg
Existing Typical Section
Sta 40+15 to 45+00



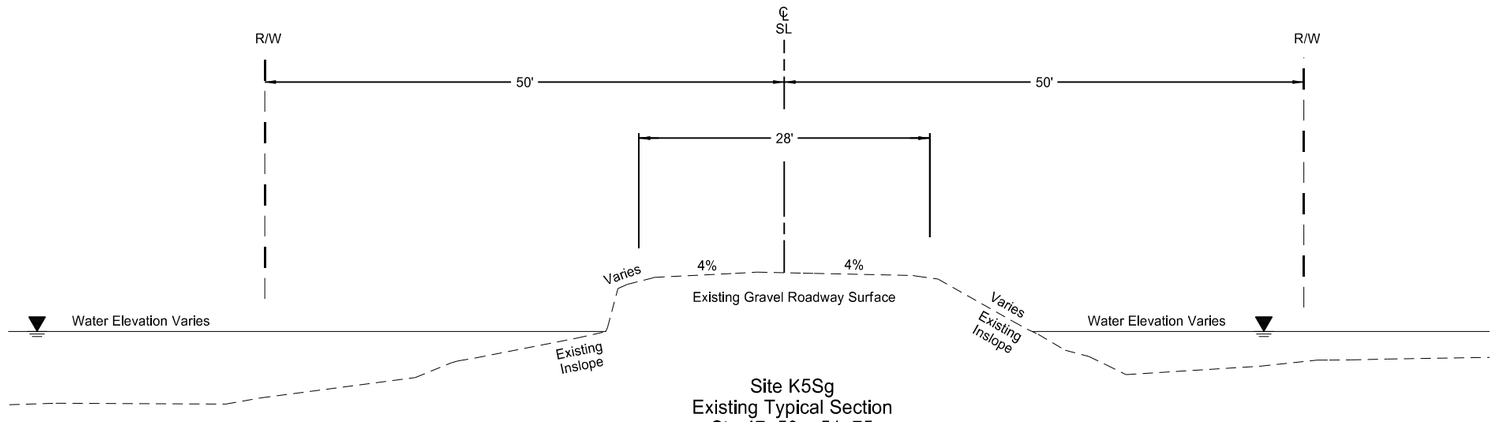
Site K5Sg
Existing Typical Section
Sta 45+00 to 47+50

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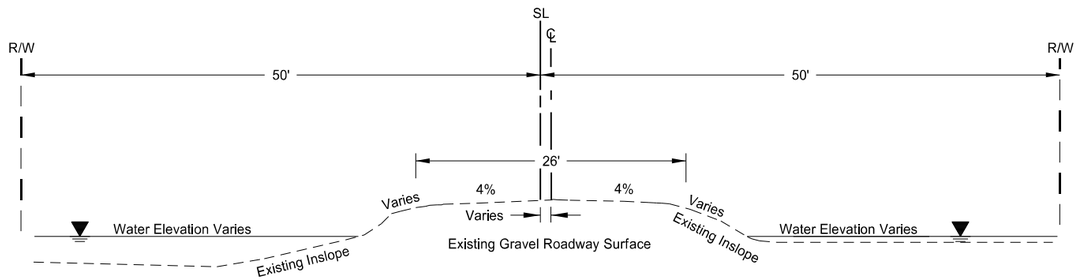
Existing Typical Sections

Inslope Erosion Repair
Missile Access Roads
Mountrail County

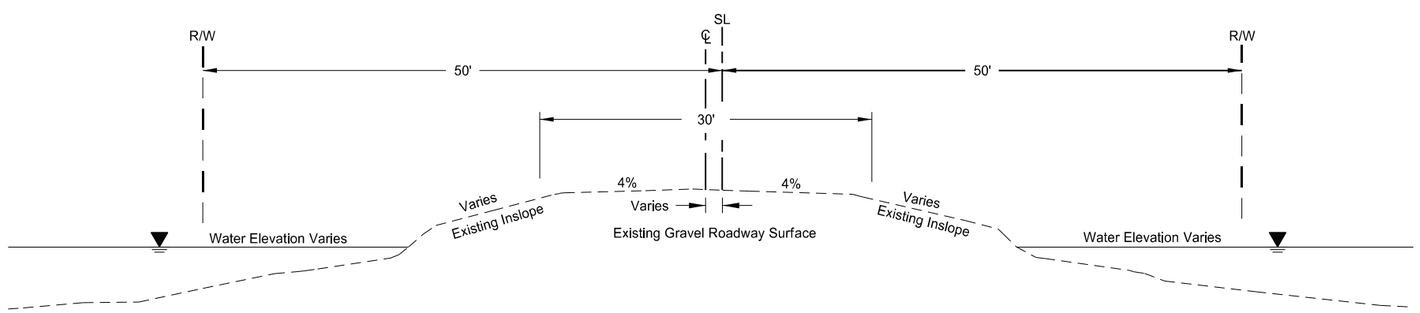
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	30	5



Site K5Sg
Existing Typical Section
Sta 47+50 + 51+75



Site K5Sf
Existing Typical Section
Sta 91+55 to 105+00



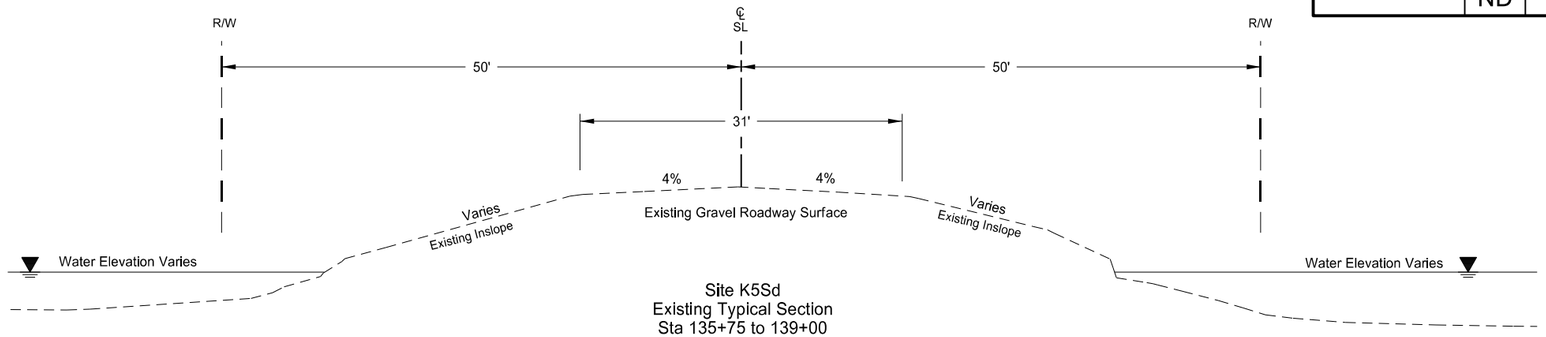
Site K5Se
Existing Typical Section
Sta 111+27 to 116+50

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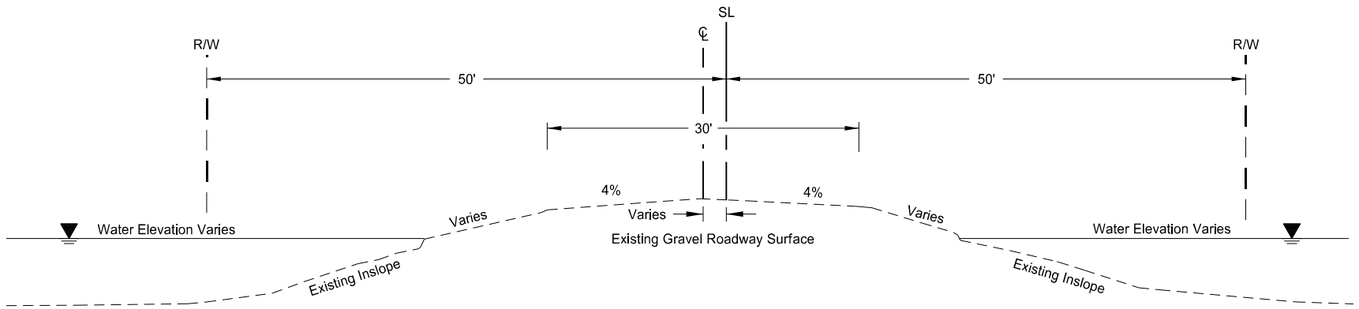
Existing Typical Sections

Inslope Erosion Repair
Missile Access Roads
Mountrail County

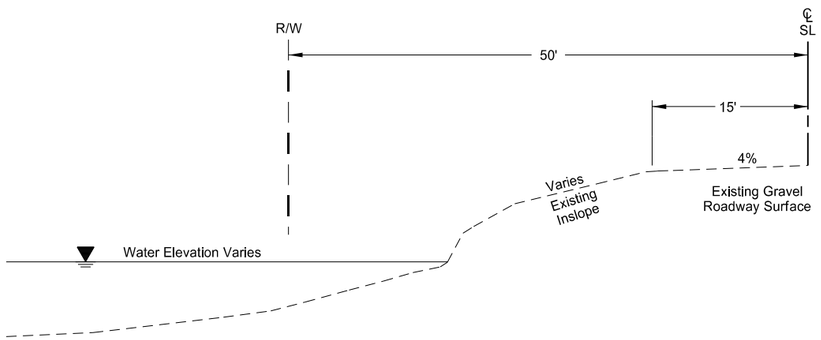
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	30	6



Site K5Sd
Existing Typical Section
Sta 135+75 to 139+00



Site K5Sb
Existing Typical Section
Sta 157+30 to 165+95



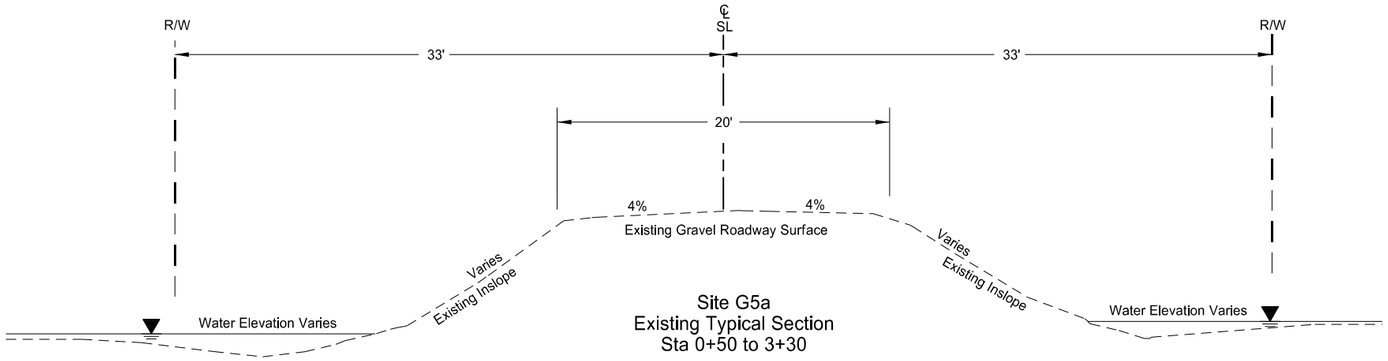
Site K5Sa
Existing Typical Section
Sta 178+80 to 182+20

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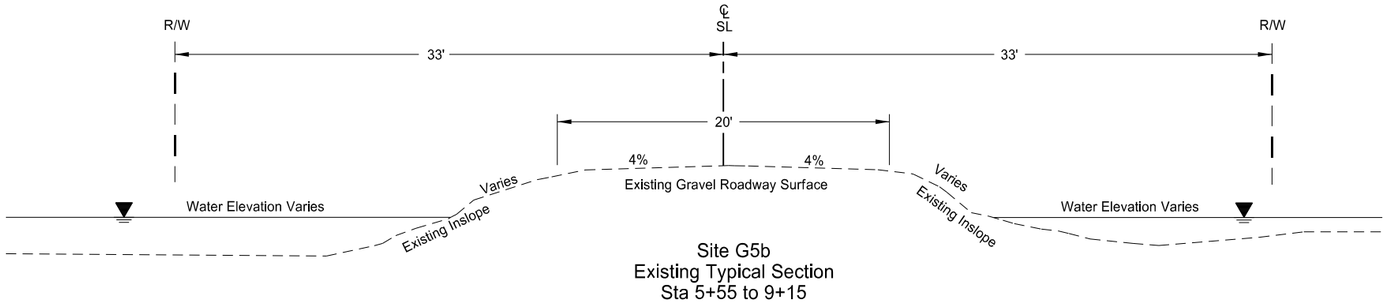
Existing Typical Sections

Inslope Erosion Repair
Missile Access Roads
Mountrail County

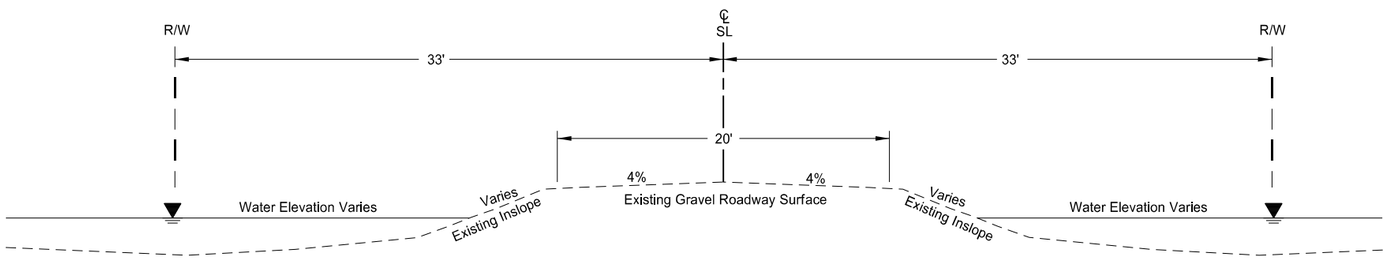
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	30	7



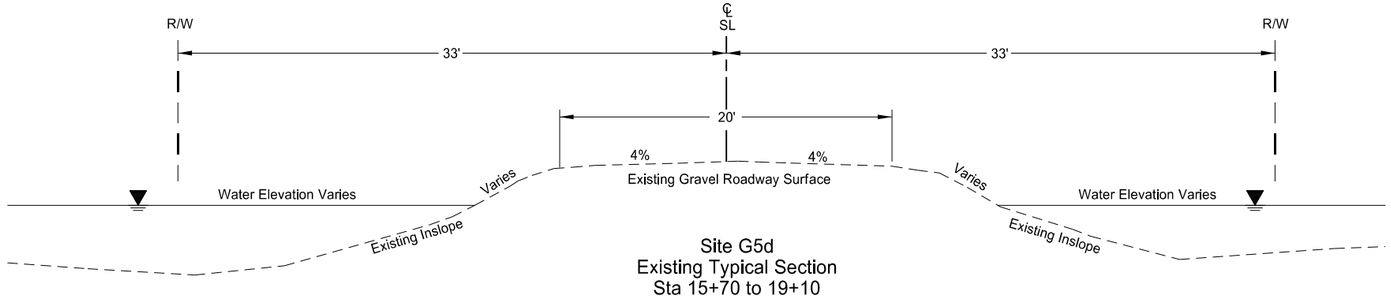
Site G5a
Existing Typical Section
Sta 0+50 to 3+30



Site G5b
Existing Typical Section
Sta 5+55 to 9+15



Site G5c
Existing Typical Section
Sta 11+10 to 14+50



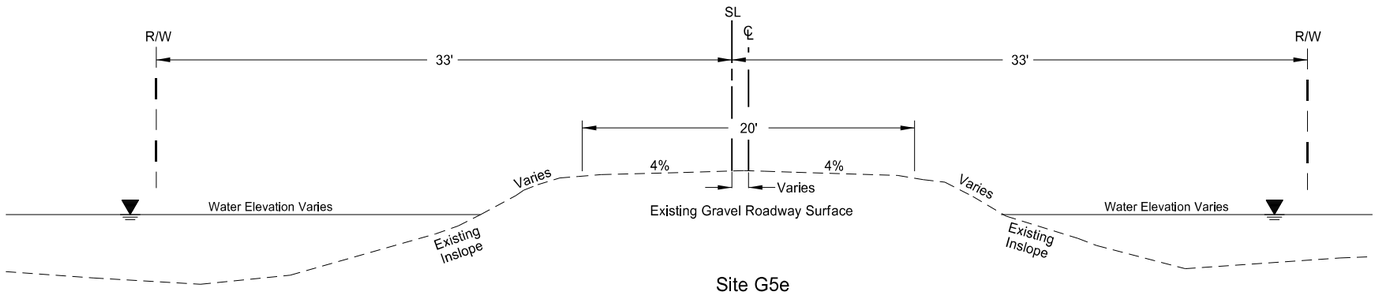
Site G5d
Existing Typical Section
Sta 15+70 to 19+10

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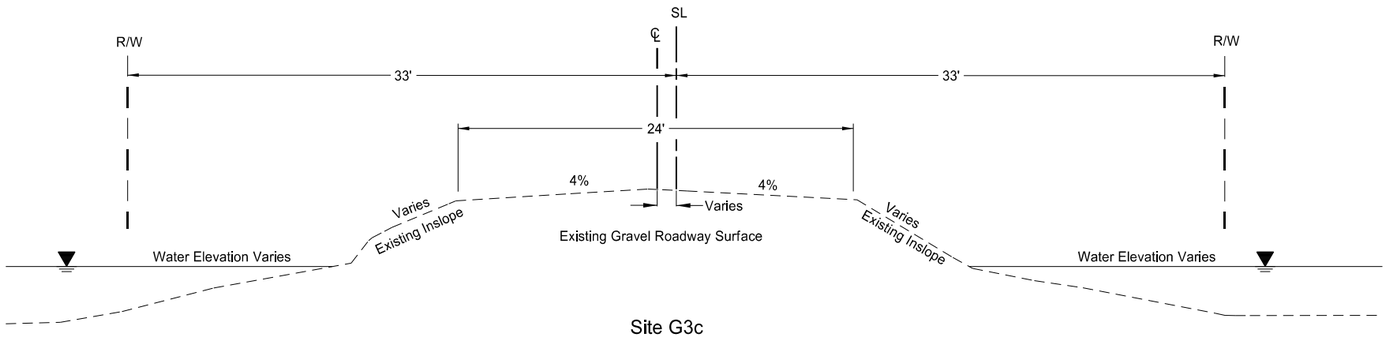
Existing Typical Sections

Inslope Erosion Repair
Missile Access Roads
Ward County

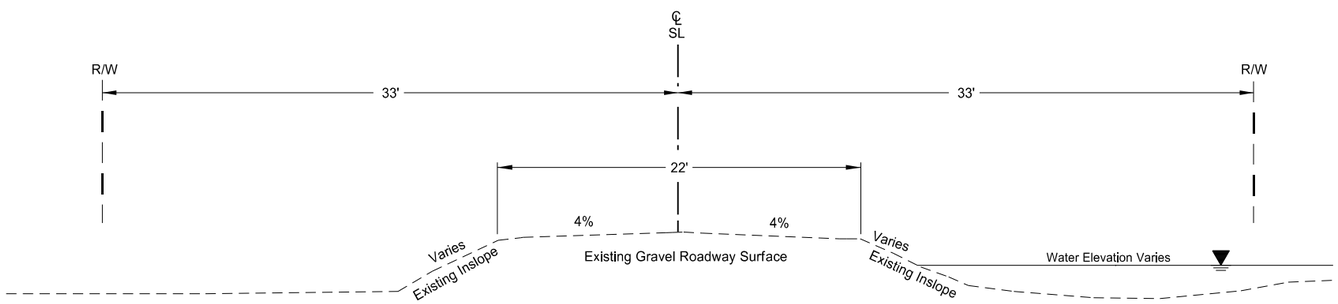
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	30	8



Site G5e
Existing Typical Section
Sta 26+50 to 30+55



Site G3c
Existing Typical Section
Sta 1+00 to 8+65



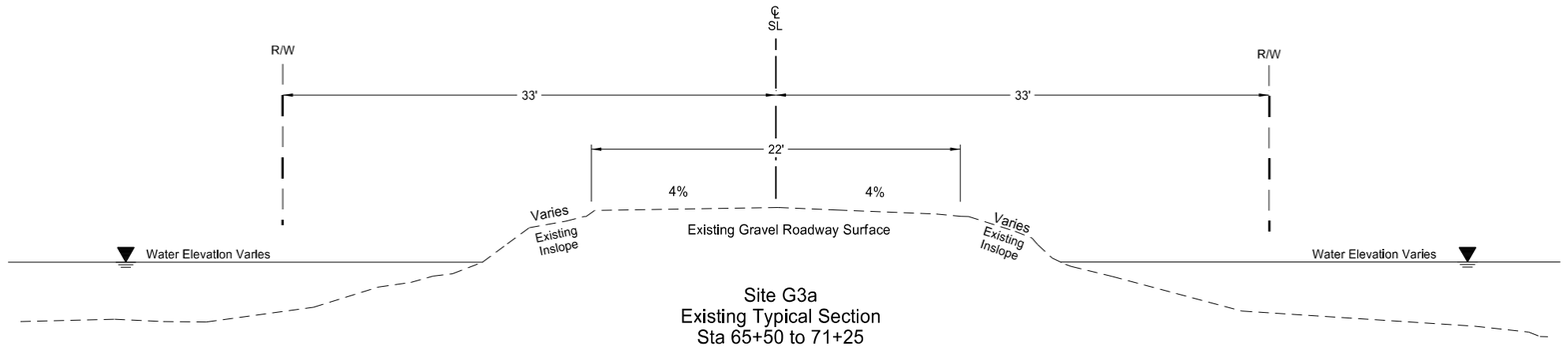
Site G3b
Existing Typical Section
Sta 44+85 to 48+25

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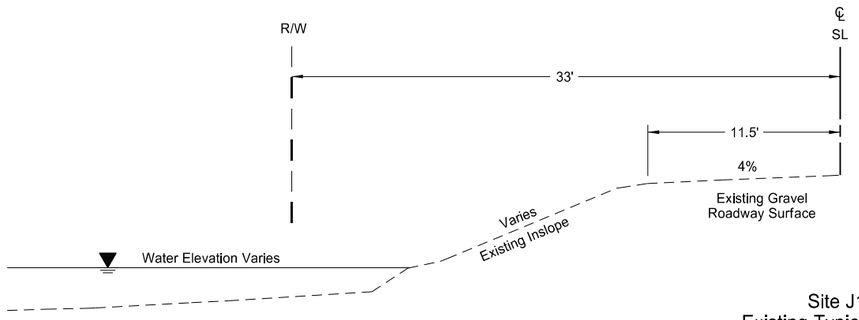
Existing Typical Sections

Inslope Erosion Repair
Missile Access Roads
Ward County

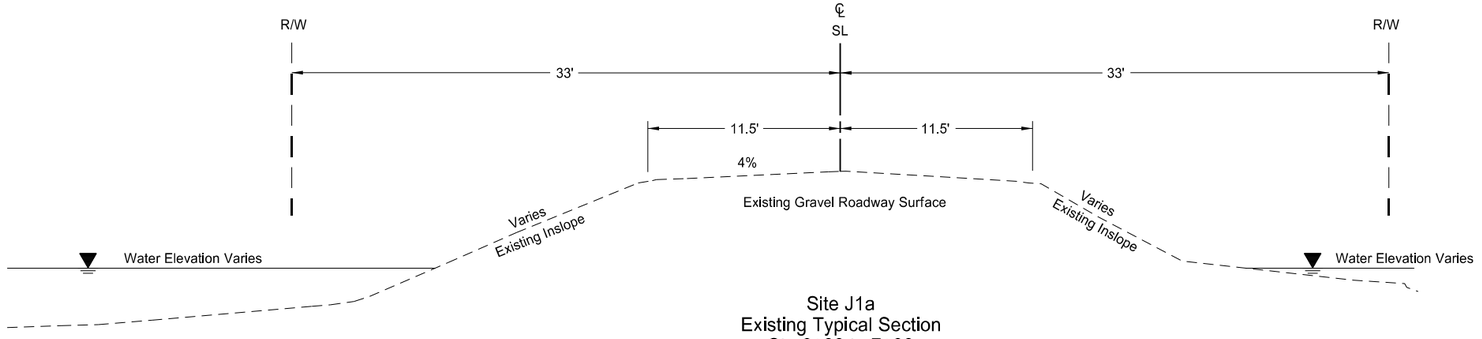
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	30	9



Site G3a
Existing Typical Section
Sta 65+50 to 71+25



Site J1a
Existing Typical Section
Sta 3+70 to 6+00



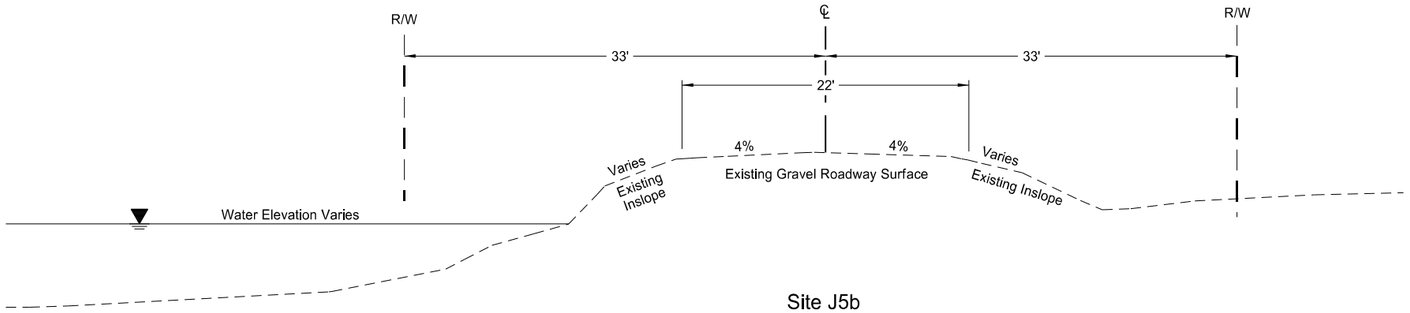
Site J1a
Existing Typical Section
Sta 6+00 to 7+90

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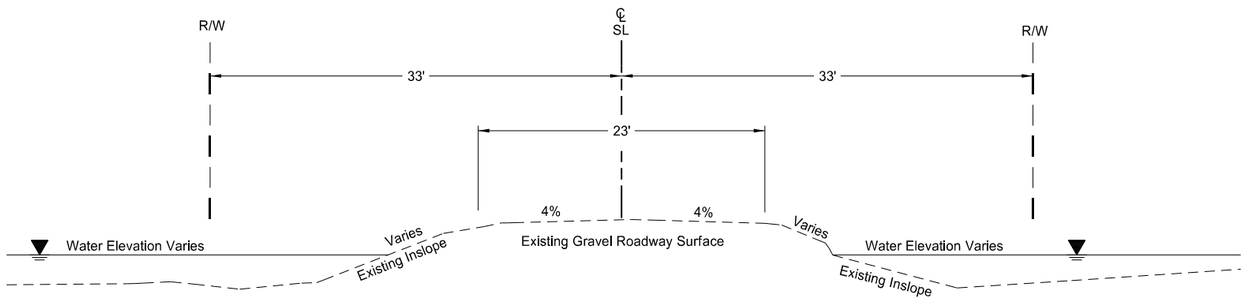
Existing Typical Sections

Inslope Erosion Repair
Missile Access Roads
Ward County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	30	10



Site J5b
Existing Typical Section
Sta 1+45 to 12+25



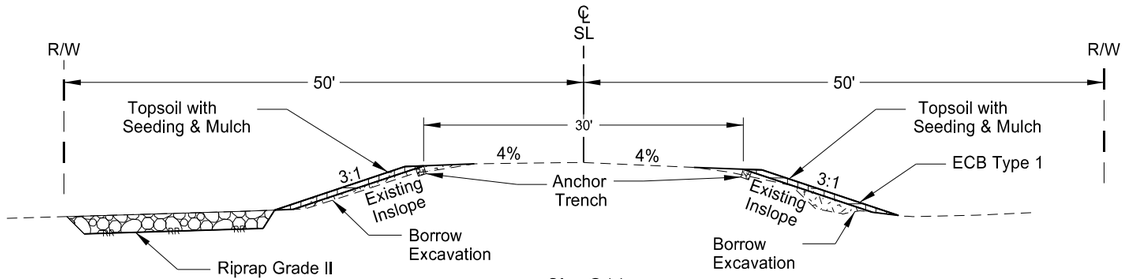
Site J5a
Existing Typical Section
Sta 27+90 to 34+10

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Existing Typical Section

Inslope Erosion Repair
Missile Access Roads
Ward County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	30	11



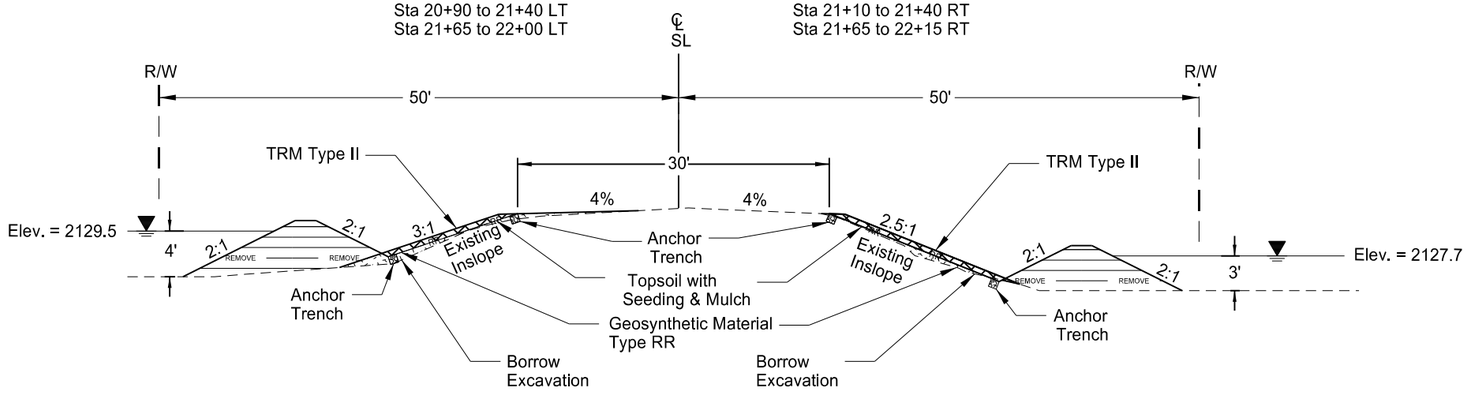
Site G11e
Proposed Typical Section

Riprap Grade II
Sta 12+45 to 12+75 LT
Sta 16+35 to 16+65 LT
Sta 21+40 to 21+65 LT

No Riprap Grade II
Sta 12+25 to 12+45 LT
Sta 12+75 to 13+00 LT
Sta 16+15 to 16+35 LT
Sta 16+65 to 16+85 LT
Sta 20+90 to 21+40 LT
Sta 21+65 to 22+00 LT

No Riprap Grade II
Sta 11+80 to 12+45 RT
Sta 12+75 to 13+10 RT
Sta 15+00 to 16+35 RT
Sta 16+65 to 17+70 RT
Sta 21+10 to 21+40 RT
Sta 21+65 to 22+15 RT

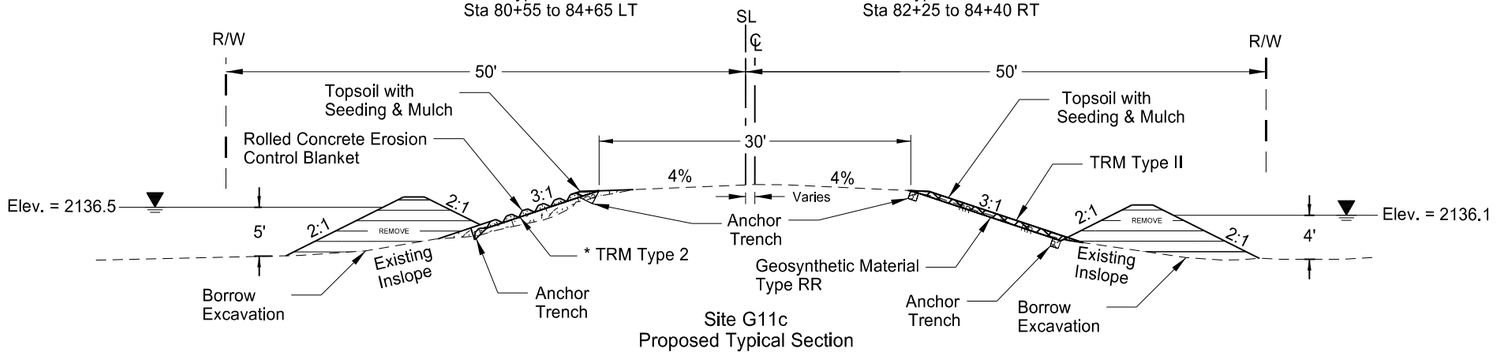
ECB Type 1
Sta 12+45 to 12+75 RT
Sta 16+35 to 16+65 RT
Sta 21+40 to 21+65 RT



Site G11d
Proposed Typical Section

No TRM Type II
Sta 80+20 to 80+55 LT
Sta 84+65 to 85+15 LT
TRM Type II
Sta 80+55 to 84+65 LT

No TRM Type II
Sta 81+80 to 82+25 RT
Sta 84+40 to 84+95 RT
TRM Type II
Sta 82+25 to 84+40 RT



Site G11c
Proposed Typical Section

No Rolled Concrete Erosion Control Blanket
Sta 103+45 to 103+65 LT
Sta 106+40 to 107+45 LT
Rolled Concrete Erosion Control Blanket
Sta 103+65 to 106+40 LT

No TRM Type II
Sta 103+45 to 103+65 RT
Sta 106+40 to 106+70 RT
TRM Type II
Sta 103+65 to 106+40 RT

Not to Scale

Notes:

For Berm Details See Berm Sequence Detail Section 20 Sheet 1.

The Temporary Berm will be Completely Removed at Final Stage of Construction.

Water levels will vary, those provided are as of 5/14/17.

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

Concrete Erosion Control Blanket and Rolled Concrete Erosion Control Blanket Shall be installed 2' above and 2' below existing water level.

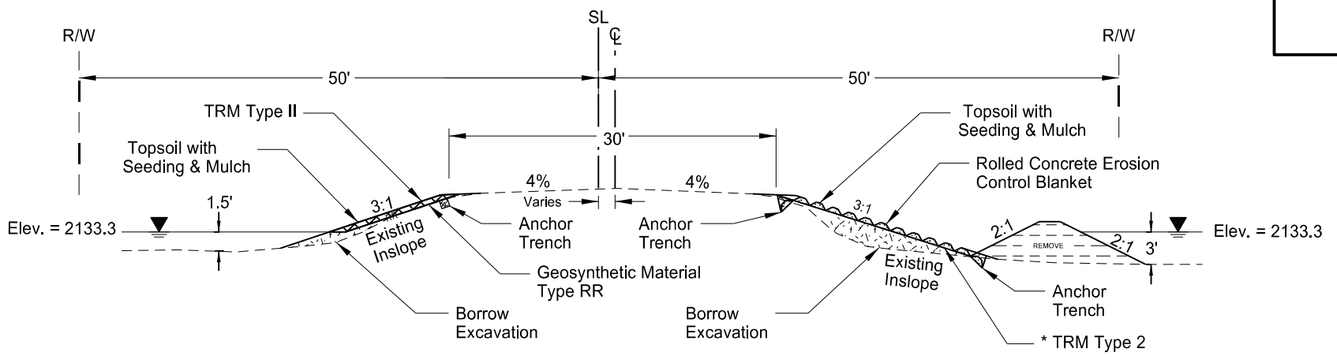
* TRM Type 2 is included in the price bid for "Rolled Concrete Erosion Control Blanket".

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Proposed Typical Sections

Inslope Erosion Repair
Missile Access Roads
Mountrail County

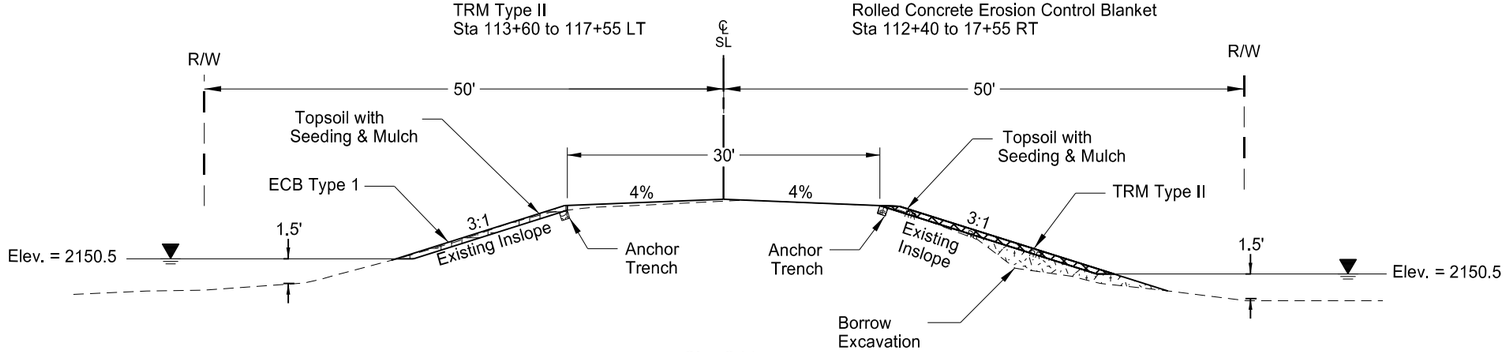
STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	ROM-0300(134)	30	12



Site G11b
Proposed Typical Section

No TRM Type II
Sta 113+10 to 113+60 LT
Sta 117+55 to 118+15 LT
TRM Type II
Sta 113+60 to 117+55 LT

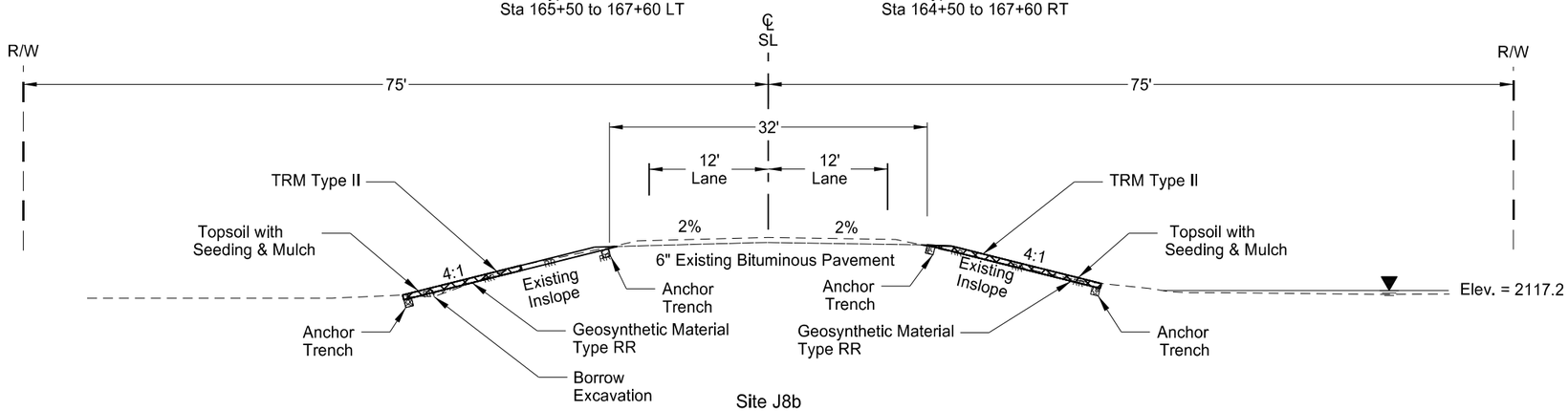
No Rolled Concrete Erosion Control Blanket
Sta 111+70 to 112+40 RT
Sta 117+55 to 119+20 RT
Rolled Concrete Erosion Control Blanket
Sta 112+40 to 17+55 RT



Site G11a
Proposed Typical Section

No ECB Type 1
Sta 164+70 to 165+50 LT
Sta 167+60 to 168+00 RT
ECB Type 1
Sta 165+50 to 167+60 LT

No TRM Type II
Sta 163+85 to 164+50 RT
Sta 167+60 to 168+55 RT
TRM Type II
Sta 164+50 to 167+60 RT



Site J8b
Proposed Typical Section

No TRM Type II
Sta 1+90 to 2+45 LT
Sta 3+80 to 4+10 LT
TRM Type II
Sta 2+45 to 3+80 LT

No TRM Type II
Sta 1+90 to 2+10 RT
Sta 3+80 to 4+10 RT
TRM Type II
Sta 2+10 to 3+80 RT

Not to Scale

Notes:

For Berm Details See Berm Sequence Detail Section 20 Sheet 1.

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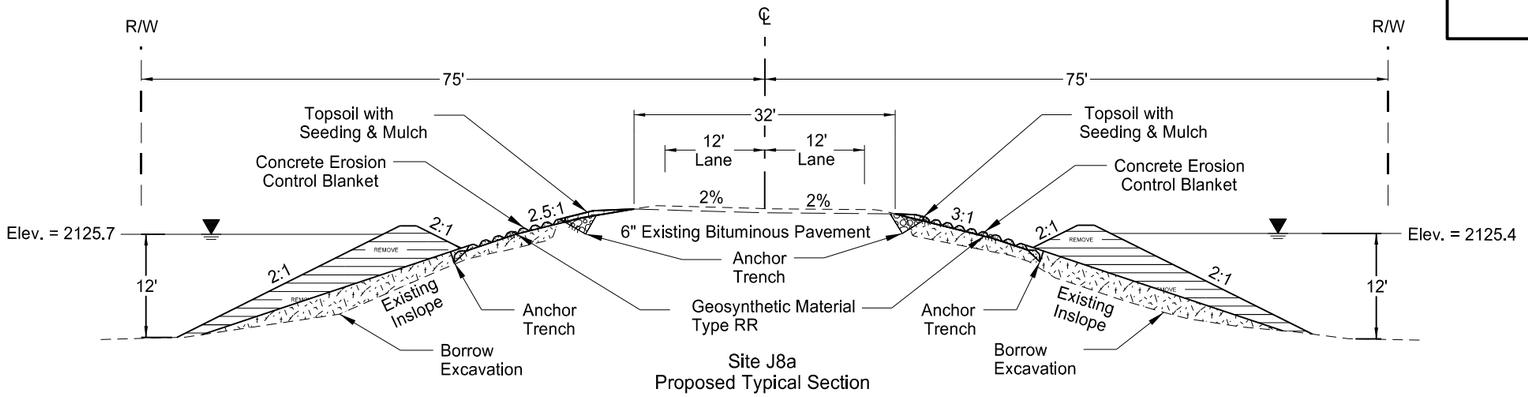
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Proposed Typical Sections

Inslope Erosion Repair
Missile Access Roads
Mountrail County

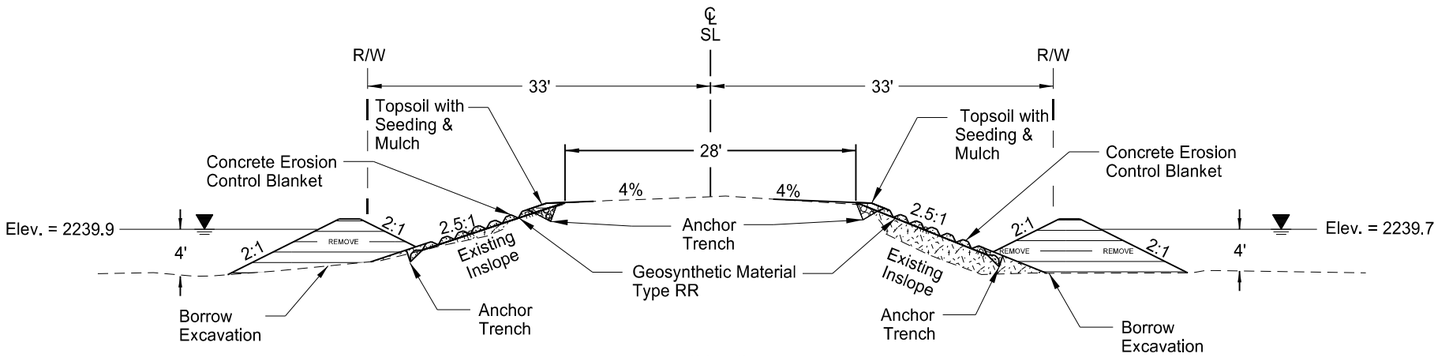
STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	ROM-0300(134)	30	13



Site J8a
Proposed Typical Section

No Concrete Erosion Control Blanket
Sta 9+80 to 10+80 LT
Sta 18+30 to 19+20 LT
Concrete Erosion Control Blanket
Sta 10+80 to 18+30 LT

No Concrete Erosion Control Blanket
Sta 10+65 to 11+40 RT
Sta 19+40 to 20+15 RT
Concrete Erosion Control Blanket
Sta 11+40 to 19+40 RT

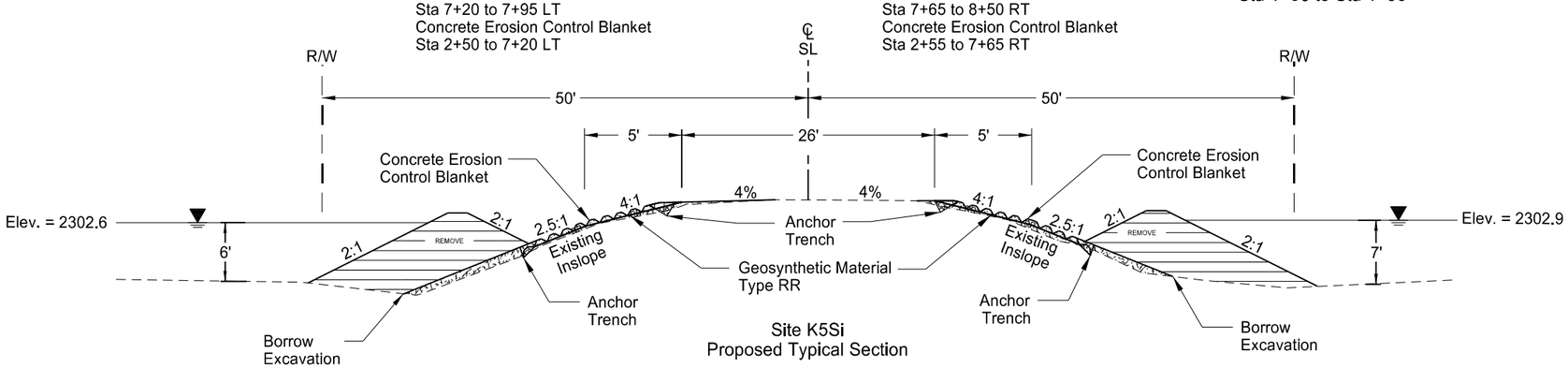


Site J9
Proposed Typical Section

No Concrete Erosion Control Blanket
Sta 1+10 to 2+50 LT
Sta 7+20 to 7+95 LT
Concrete Erosion Control Blanket
Sta 2+50 to 7+20 LT

No Concrete Erosion Control Blanket
Sta 2+20 to 2+55 RT
Sta 7+65 to 8+50 RT
Concrete Erosion Control Blanket
Sta 2+55 to 7+65 RT

Exception Area:
Sta 1+58 to Sta 1+96



Site K5Si
Proposed Typical Section

No Concrete Erosion Control Blanket
Sta 0+75 to 1+70 LT
Sta 28+60 to 29+40 LT
Concrete Erosion Control Blanket
Sta 1+70 to 28+60 LT

No Concrete Erosion Control Blanket
Sta 2+00 to 2+55 RT
Sta 27+65 to 28+45 RT
Concrete Erosion Control Blanket
Sta 2+55 to 27+65 RT

Not to Scale

Notes:

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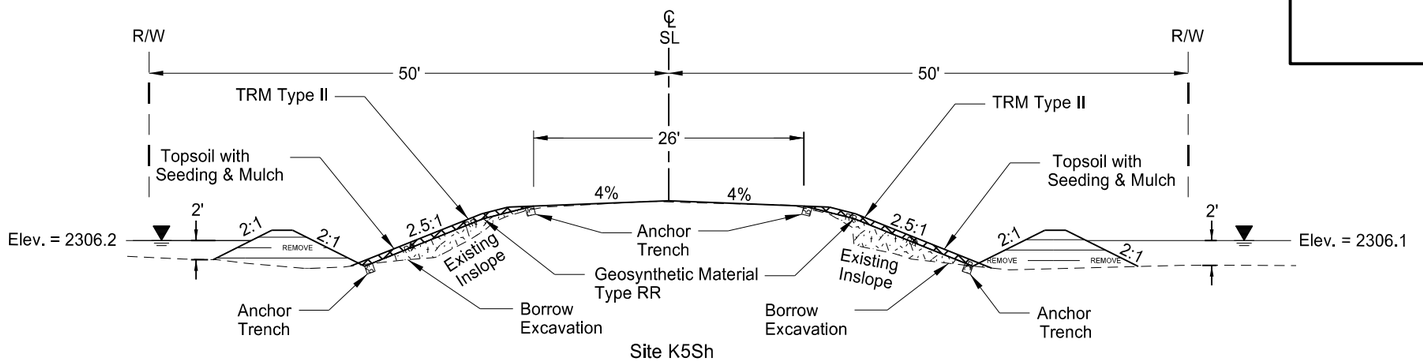
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Proposed Typical Sections

Inslope Erosion Repair
Missile Access Roads
Mountrail County

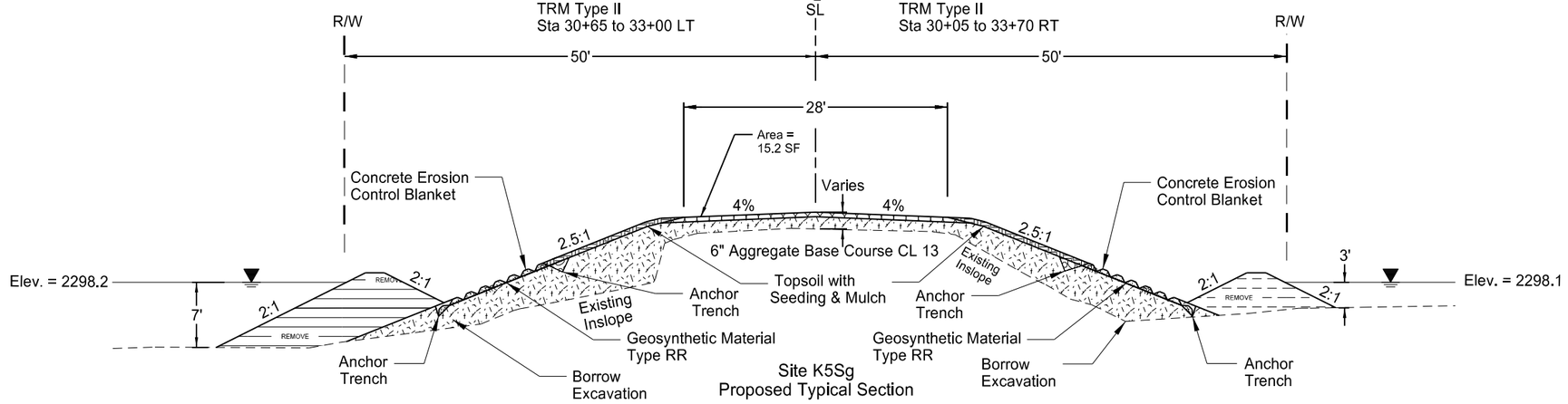
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	30	14



Site K5Sh
Proposed Typical Section

No TRM Type II
Sta 29+50 to 30+65 LT
Sta 33+00 to 33+40 LT
TRM Type II
Sta 30+65 to 33+00 LT

No TRM Type II
Sta 29+70 to 30+05 RT
Sta 33+70 to 34+05 RT
TRM Type II
Sta 30+05 to 33+70 RT

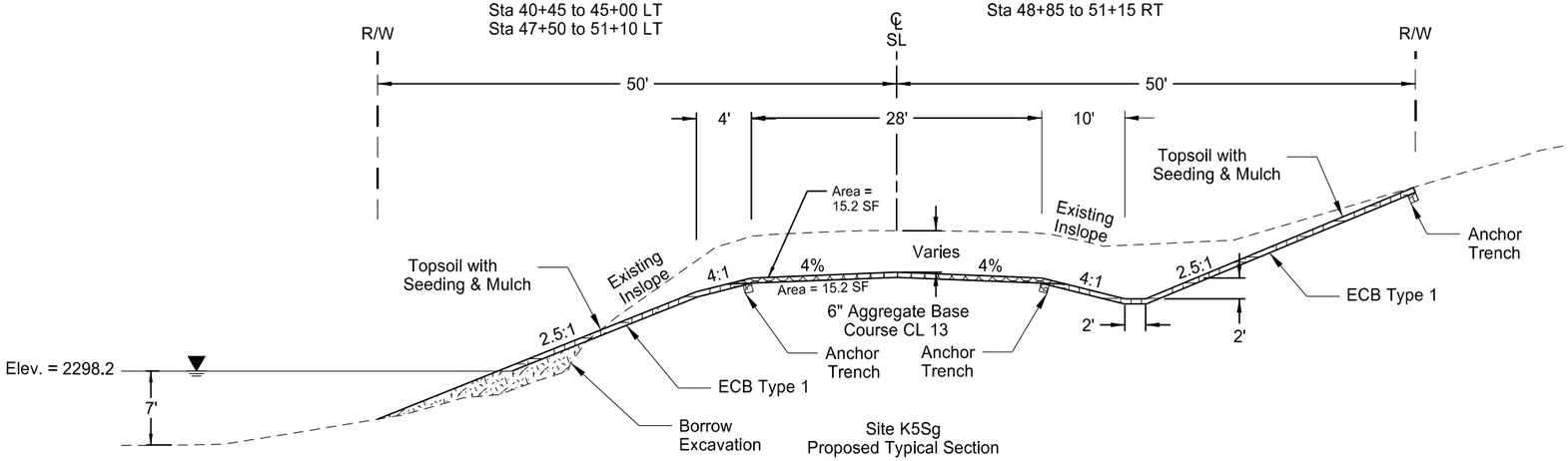


Site K5Sg
Proposed Typical Section

No Concrete Erosion Control Blanket
Sta 40+15 to 40+45 LT
Sta 45+00 to 47+50 LT
Sta 51+10 to 51+65 LT
Concrete Erosion Control Blanket
Sta 40+45 to 45+00 LT
Sta 47+50 to 51+10 LT

No Concrete Erosion Control Blanket
Sta 40+45 to 48+85 RT
Sta 51+15 to 51+75 RT

Concrete Erosion Control Blanket
Sta 48+85 to 51+15 RT



Site K5Sg
Proposed Typical Section

Not to Scale

ECB Type 1
Sta 45+00 to 47+50 LT

ECB Type 1
Sta 42+00 to 48+85 RT

Notes:

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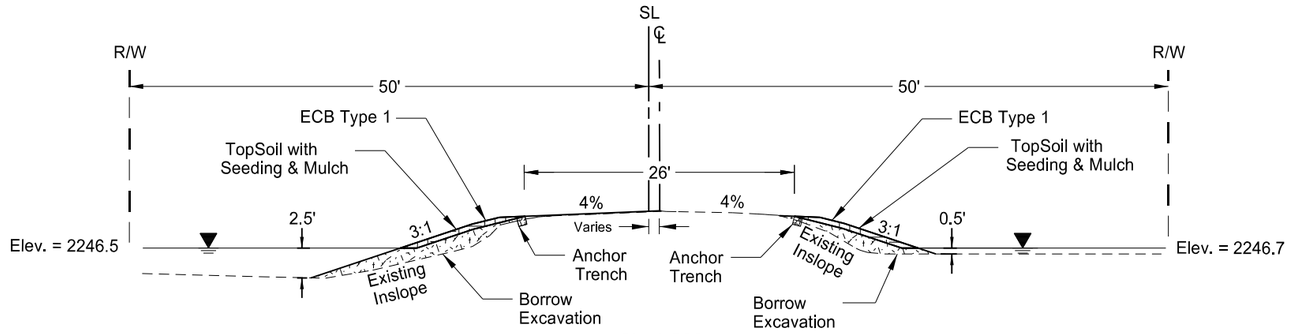
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Proposed Typical Sections

Inslope Erosion Repair
Missile Access Roads
Mountrail County

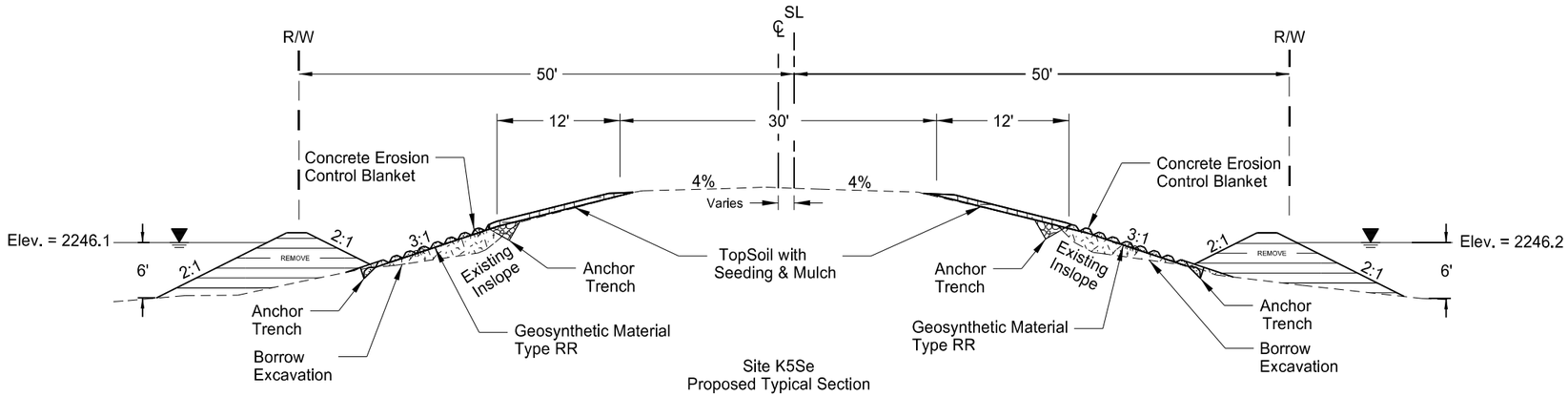
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	30	15



Site K5Sf
Proposed Typical Section

No ECB Type 1
Sta 92+15 to 93+00 LT
Sta 103+00 to 105+00 LT
ECB Type 1
Sta 93+00 to 103+00 LT

No ECB Type 1
Sta 91+55 to 93+00 RT
Sta 103+00 to 104+75 RT
ECB Type 1
Sta 93+00 to 103+00 RT



Site K5Se
Proposed Typical Section

No Concrete Erosion Control Blanket
Sta 111+37 to 111+80 LT
Sta 115+75 to 116+10 LT
Concrete Erosion Control Blanket
Sta 111+80 to 115+75 LT

No Concrete Erosion Control Blanket
Sta 111+27 to 112+25 RT
Sta 115+90 to 116+50 RT
Concrete Erosion Control Blanket
Sta 112+25 to 115+90 RT

Notes:

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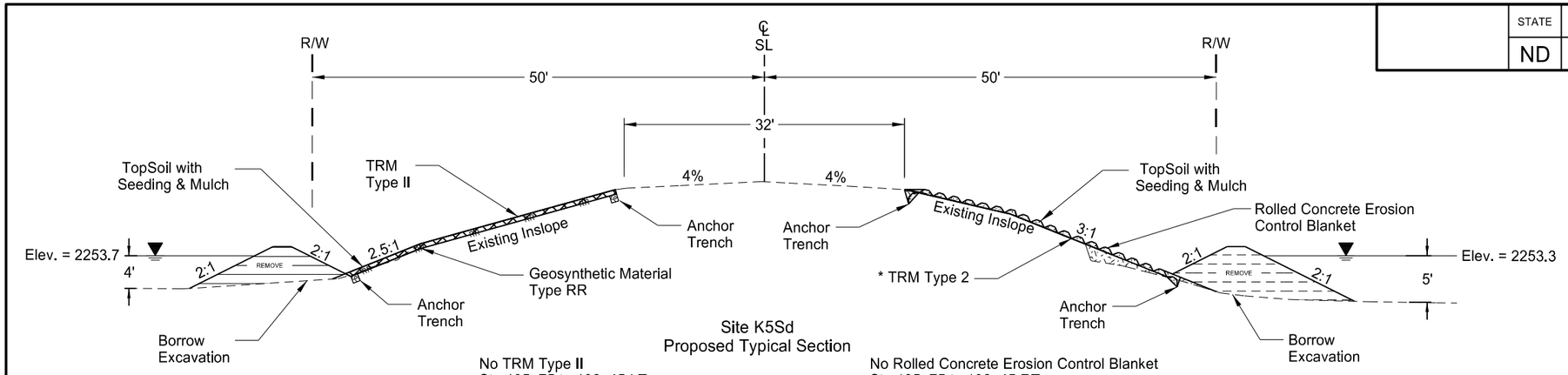
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Proposed Typical Sections

Inslope Erosion Repair
Missile Access Roads
Mountrail County

Not to Scale

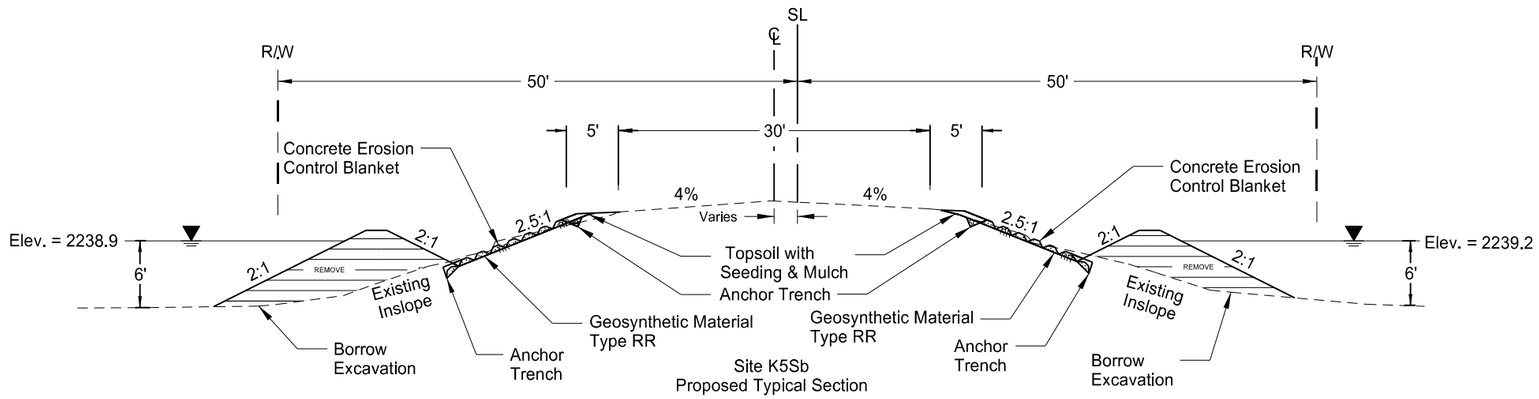
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	30	16



Site K5Sd
Proposed Typical Section

No TRM Type II
Sta 135+75 to 136+45 LT
Sta 138+10 to 138+65 LT
TRM Type II
Sta 103+65 to 106+40 LT

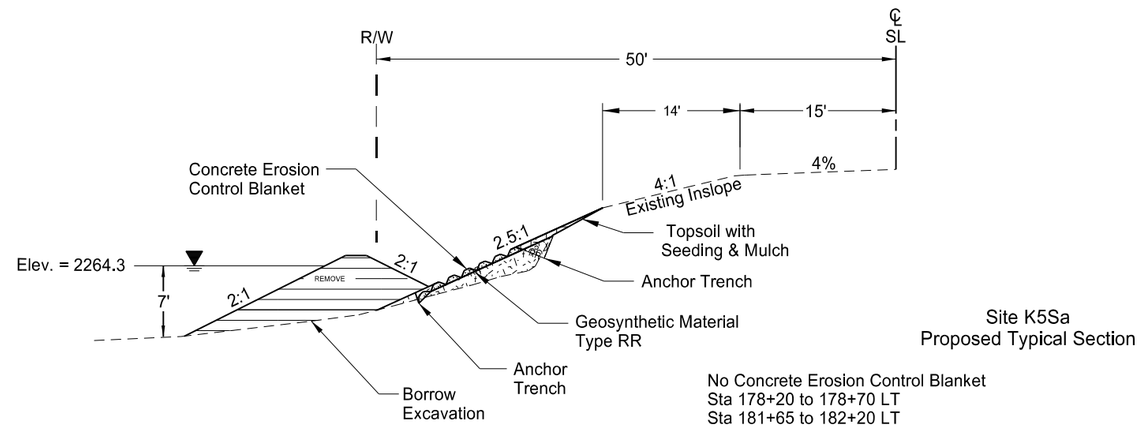
No Rolled Concrete Erosion Control Blanket
Sta 135+75 to 136+45 RT
Sta 138+85 to 139+00 RT
Rolled Concrete Erosion Control Blanket
Sta 103+65 to 106+40 RT



Site K5Sb
Proposed Typical Section

No Concrete Erosion Control Blanket
Sta 158+20 to 158+35 LT
Sta 163+60 to 163+95 LT
Concrete Erosion Control Blanket
Sta 158+35 to 163+60 LT

No Concrete Erosion Control Blanket
Sta 157+30 to 157+65 RT
Sta 165+35 to 165+95 RT
Concrete Erosion Control Blanket
Sta 157+65 to 165+35 RT



Site K5Sa
Proposed Typical Section

No Concrete Erosion Control Blanket
Sta 178+20 to 178+70 LT
Sta 181+65 to 182+20 LT
Concrete Erosion Control Blanket
Sta 178+70 to 181+65 LT

Not to Scale

Notes:

For Berm Details See Berm Sequence Detail Section 20 Sheet 1.

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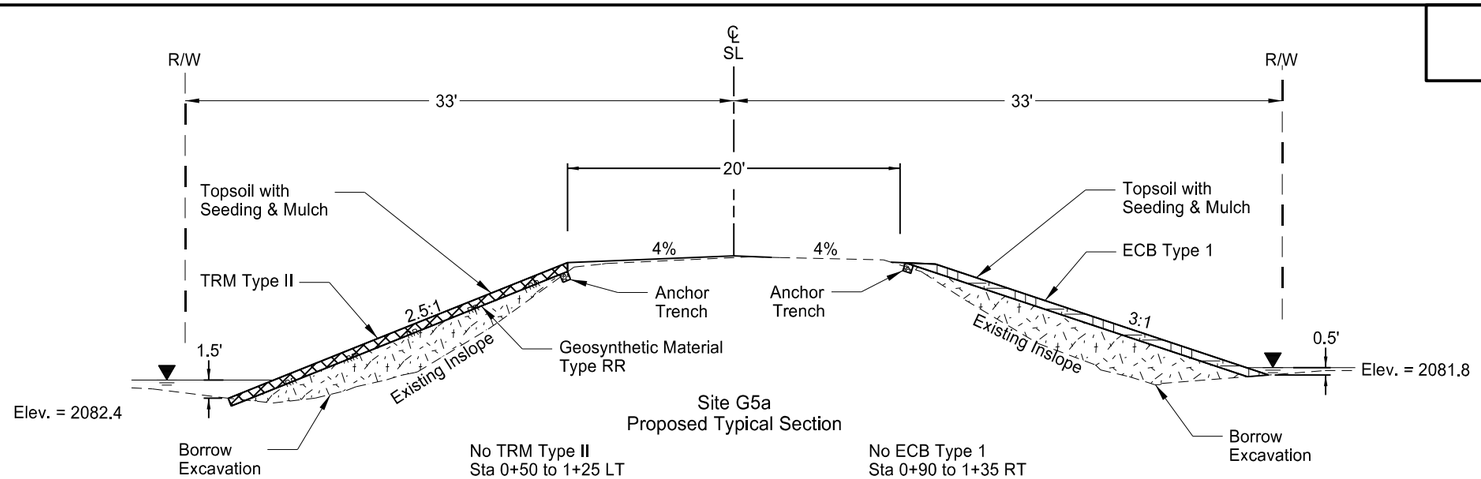
* TRM Type 2 is included in the price bid for "Rolled Concrete Erosion Control Blanket".

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Proposed Typical Sections

Inslope Erosion Repair
Missile Access Roads
Mountrail County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	ROM-0300(134)	30	17



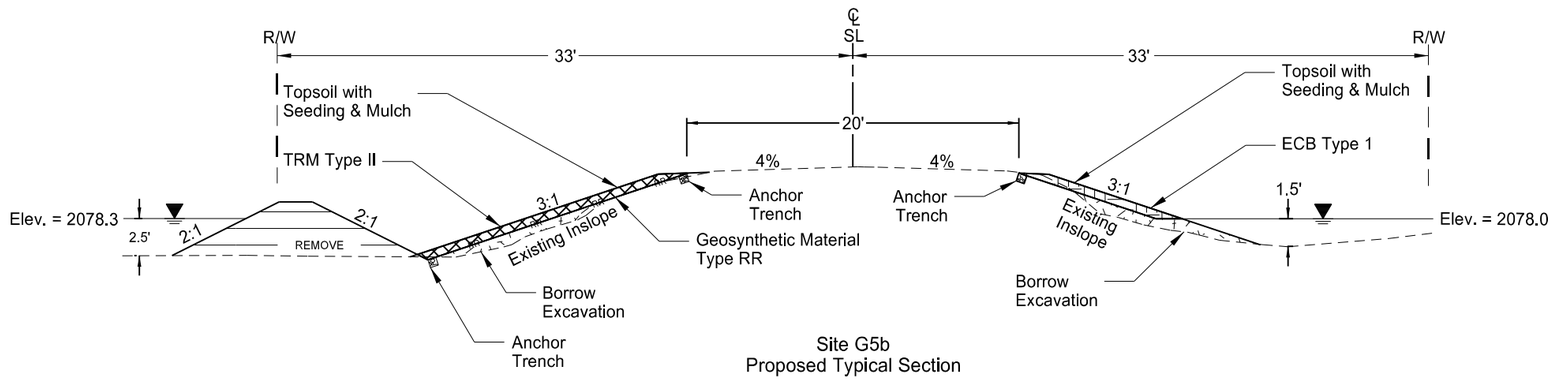
Site G5a
Proposed Typical Section

No TRM Type II
Sta 0+50 to 1+25 LT

TRM Type II
Sta 1+25 to 3+30 LT

No ECB Type 1
Sta 0+90 to 1+35 RT
Sta 2+50 to 3+20 RT

ECB Type 1
Sta 1+35 to 2+50 RT

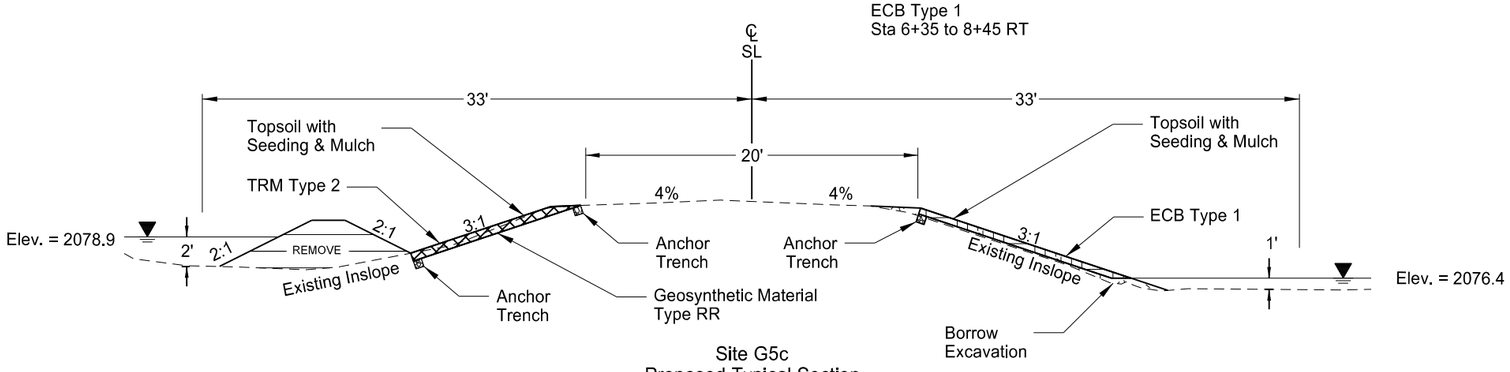


Site G5b
Proposed Typical Section

TRM Type II
Sta 5+55 to 9+15 LT

No ECB Type 1
Sta 5+80 to 6+35 RT
Sta 8+45 to 8+65 RT

ECB Type 1
Sta 6+35 to 8+45 RT



Site G5c
Proposed Typical Section

TRM Type II
Sta 11+10 to 14+50 LT

ECB Type 1
Sta 13+10 to 13+90 RT

Not to Scale

Notes:

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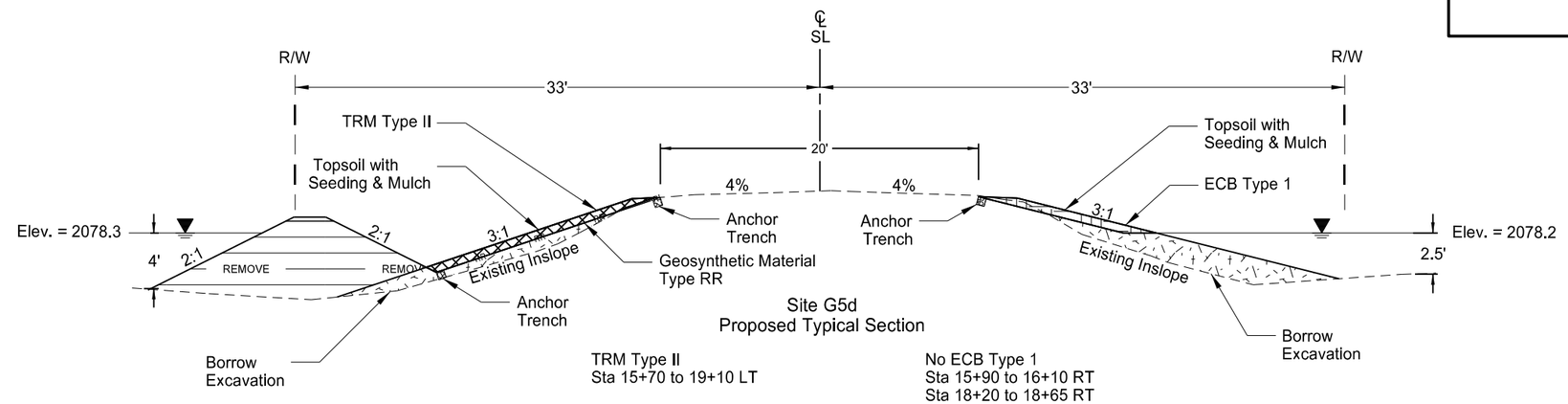
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Proposed Typical Sections

Inslope Erosion Repair
Missile Access Roads
Ward County

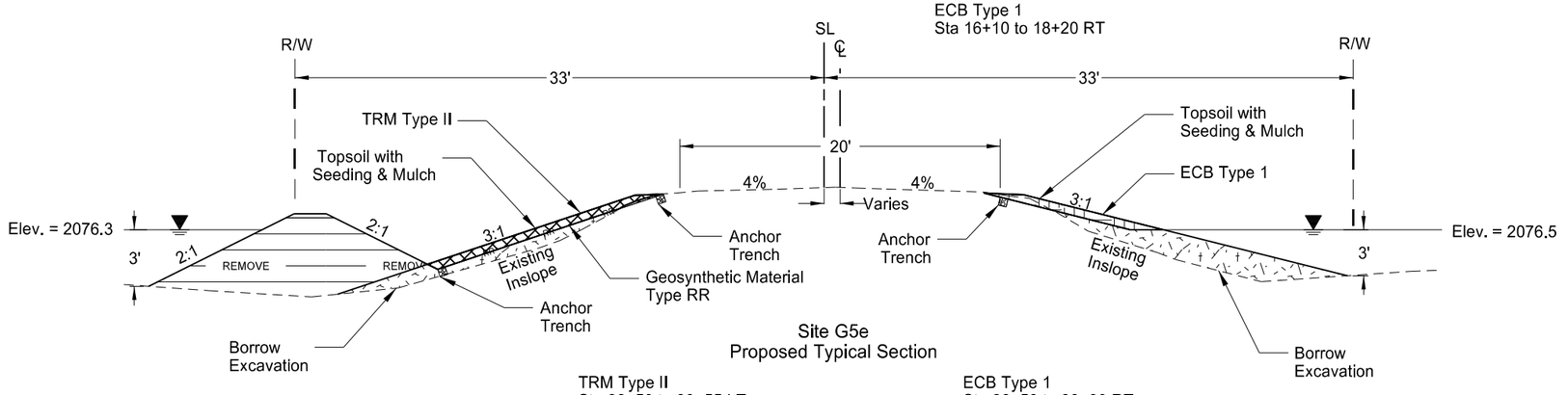
STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	ROM-0300(134)	30	18



Site G5d
Proposed Typical Section

TRM Type II
Sta 15+70 to 19+10 LT

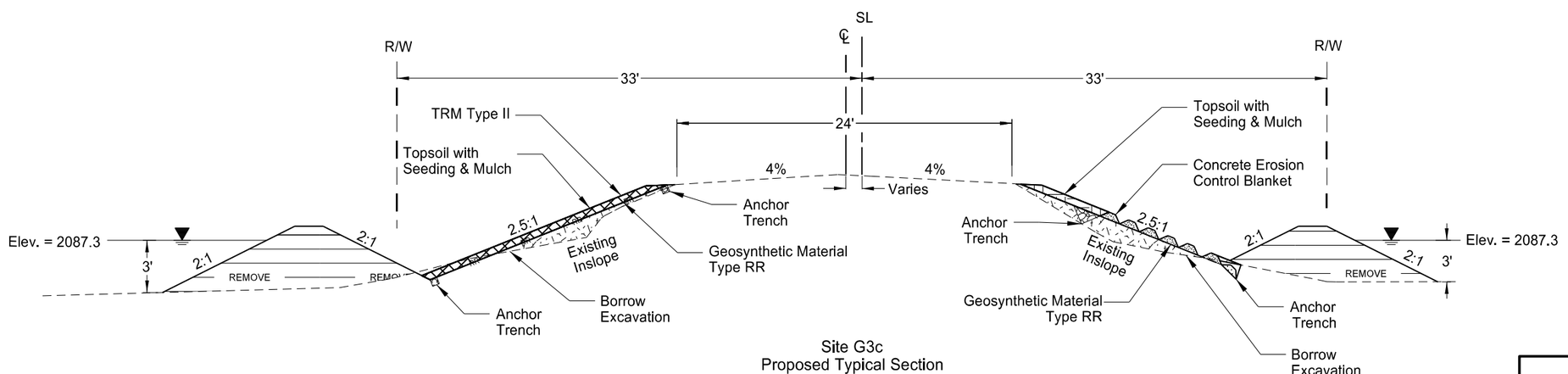
No ECB Type 1
Sta 15+90 to 16+10 RT
Sta 18+20 to 18+65 RT
ECB Type 1
Sta 16+10 to 18+20 RT



Site G5e
Proposed Typical Section

TRM Type II
Sta 26+50 to 30+55 LT

ECB Type 1
Sta 26+50 to 30+30 RT



Site G3c
Proposed Typical Section

No TRM Type II
Sta 8+40 to 8+65 LT

TRM Type II
Sta 1+00 to 8+40 LT

No Concrete Erosion Control Blanket
Sta 1+00 to 1+75 RT
Sta 7+65 to 8+15 RT
Concrete Erosion Control Blanket
Sta 1+75 to 7+65 RT

Not to Scale

Notes:

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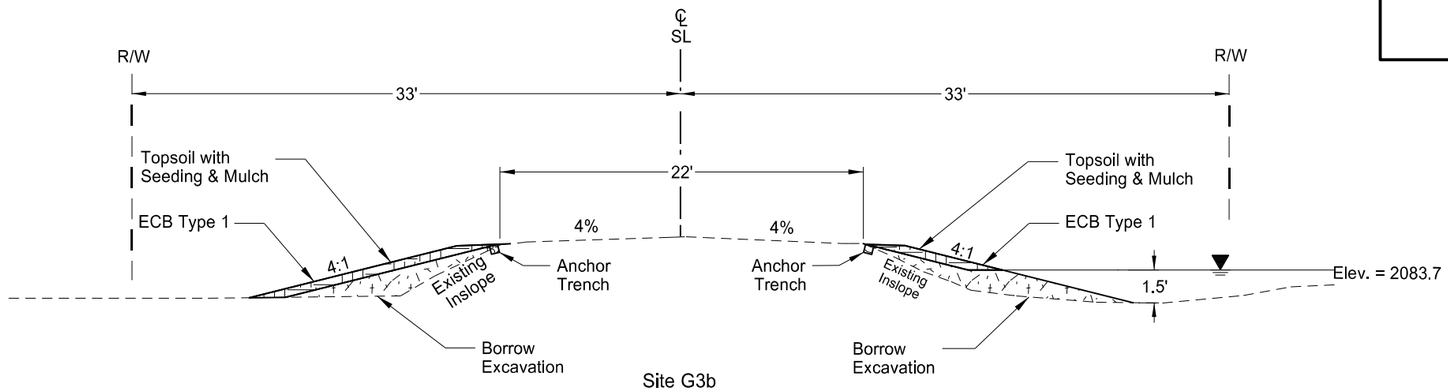
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Proposed Typical Sections

Inslope Erosion Repair
Missile Access Roads
Ward County

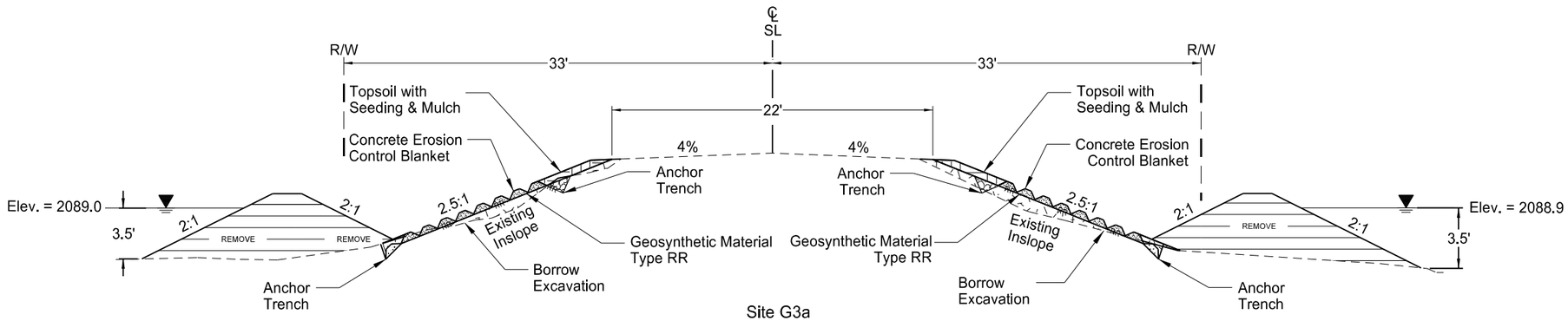
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	30	19



Site G3b
Proposed Typical Section

No ECB Type 1
Sta 46+00 to 46+45 LT
Sta 47+80 to 48+25 LT
ECB Type 1
Sta 46+45 to 47+80 LT

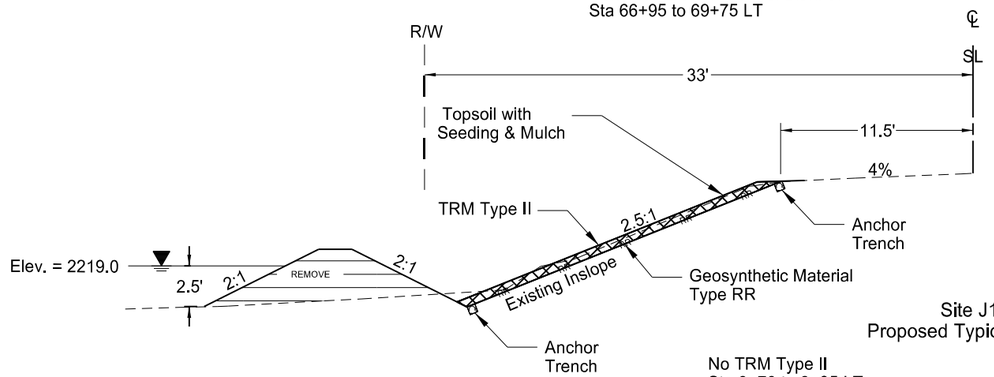
No ECB Type 1
Sta 44+85 to 45+10 RT
Sta 45+38 to 45+61 RT
ECB Type 1
Sta 45+10 to 45+38 RT
Sta 45+61 to 48+25 RT



Site G3a
Proposed Typical Section

No Concrete Erosion Control Blanket
Sta 66+50 to 66+95 LT
Sta 69+75 to 70+75 LT
Concrete Erosion Control Blanket
Sta 66+95 to 69+75 LT

No Concrete Erosion Control Blanket
Sta 66+65 to 67+40 RT
Sta 70+30 to 71+25 RT
Concrete Erosion Control Blanket
Sta 67+40 to 70+30 RT



Site J1a
Proposed Typical Section

No TRM Type II
Sta 3+70 to 3+95 LT
TRM Type II
Sta 3+95 to 5+40 LT

Not to Scale

Notes:

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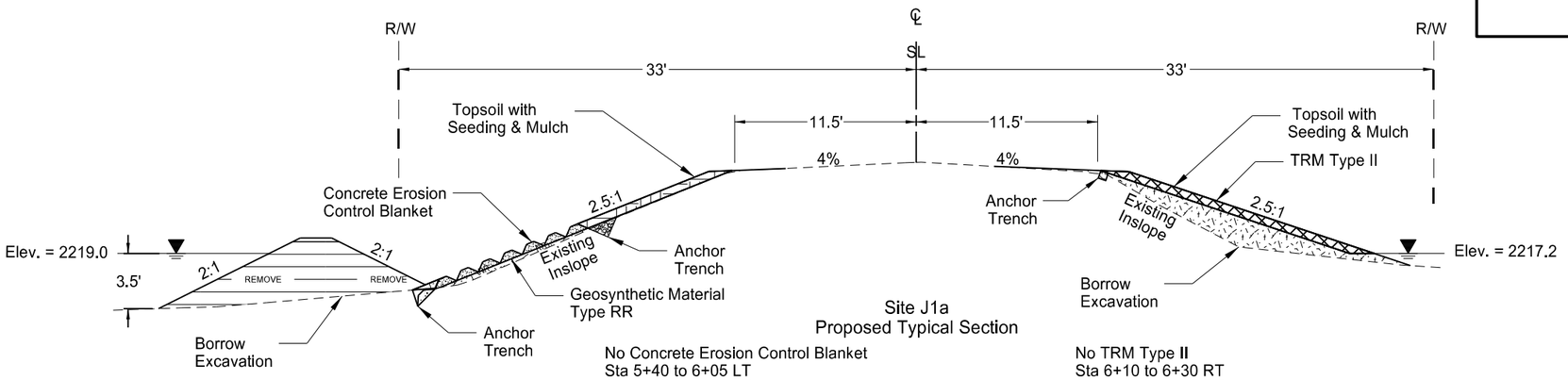
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Proposed Typical Sections

Inslope Erosion Repair
Missile Access Roads
Ward County

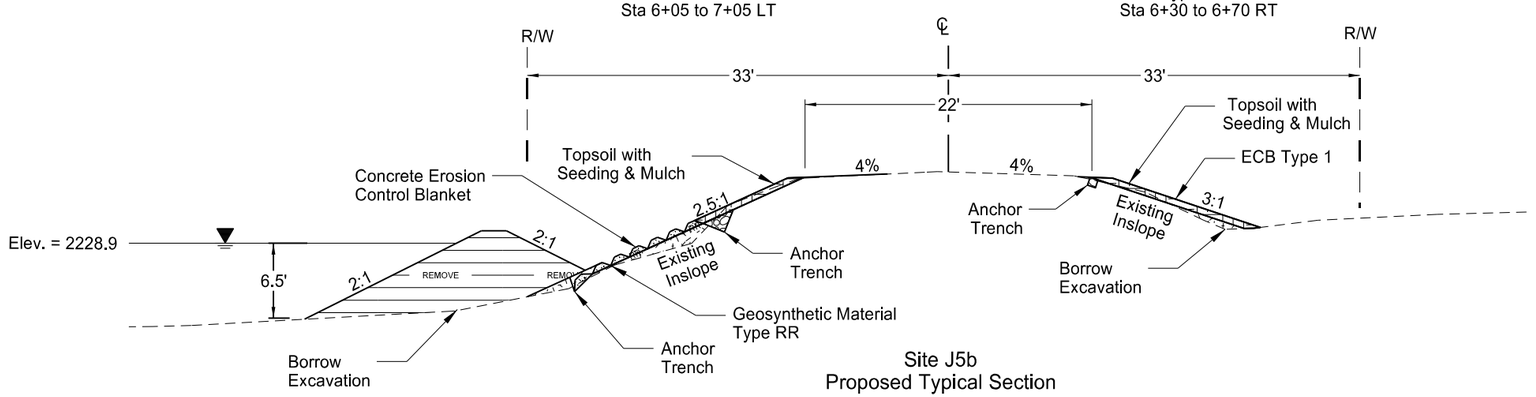
STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	ROM-0300(134)	30	20



Site J1a
Proposed Typical Section

No Concrete Erosion Control Blanket
Sta 5+40 to 6+05 LT
Sta 7+05 to 7+90 LT
Concrete Erosion Control Blanket
Sta 6+05 to 7+05 LT

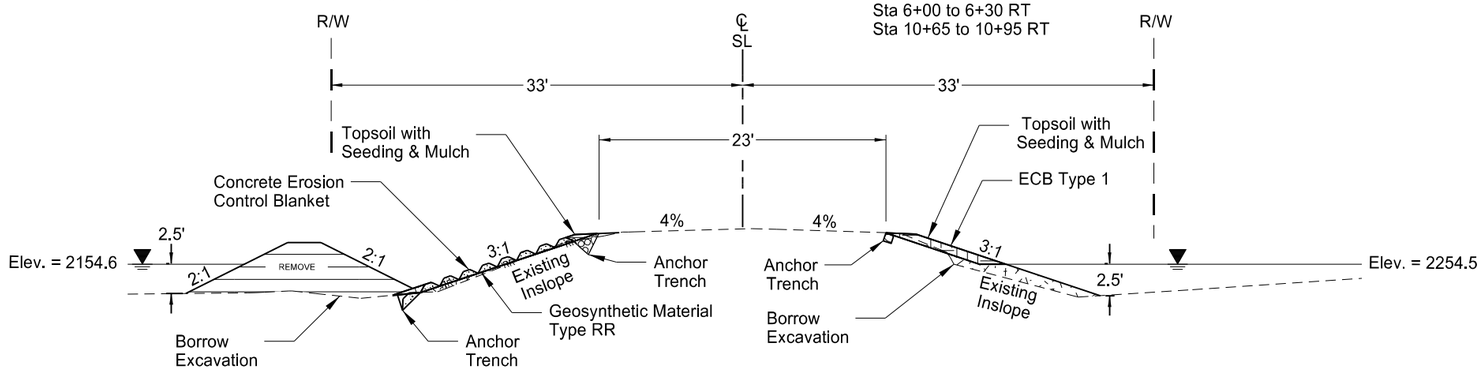
No TRM Type II
Sta 6+10 to 6+30 RT
Sta 6+70 to 7+85 RT
TRM Type II
Sta 6+30 to 6+70 RT



Site J5b
Proposed Typical Section

No Concrete Erosion Control Blanket
Sta 1+45 to 2+35 LT
Sta 11+35 to 12+25 LT
Concrete Erosion Control Blanket
Sta 2+35 to 11+35 LT

No ECB Type 1
Sta 5+45 to 6+00 RT
Sta 6+30 to 6+95 RT
ECB Type 1
Sta 2+80 to 3+00 RT
Sta 6+00 to 6+30 RT
Sta 10+65 to 10+95 RT



Site J5a
Proposed Typical Section

No Concrete Erosion Control Blanket
Sta 27+90 to 29+50 LT
Sta 33+35 to 33+80 LT
Concrete Erosion Control Blanket
Sta 29+50 to 33+35 LT

No ECB Type 1
Sta 29+75 to 31+00 RT
Sta 33+45 to 34+10 RT
ECB Type 1
Sta 31+00 to 33+45 RT

Not to Scale

Notes:

For Berm Details See Berm Sequence Detail Section 20 Sheet 1.

The Temporary Berm will be Completely Removed at Final Stage of Construction.

Water levels will vary, those provided are as of 5/14/17.

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

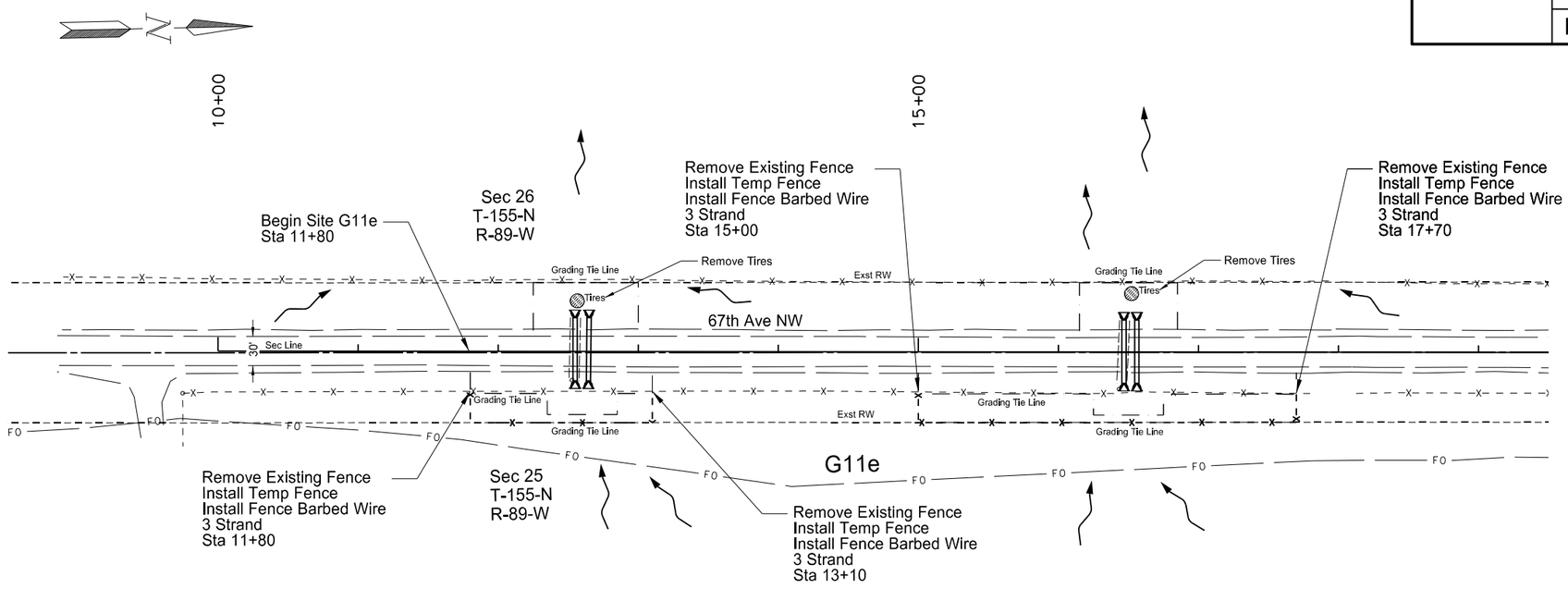
Concrete Erosion Control Blanket and Rolled Concrete Erosion Control Blanket Shall be installed 2' above and 2' below existing water level.

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Proposed Typical Sections

Inslope Erosion Repair
Missile Access Roads
Ward County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	60	1



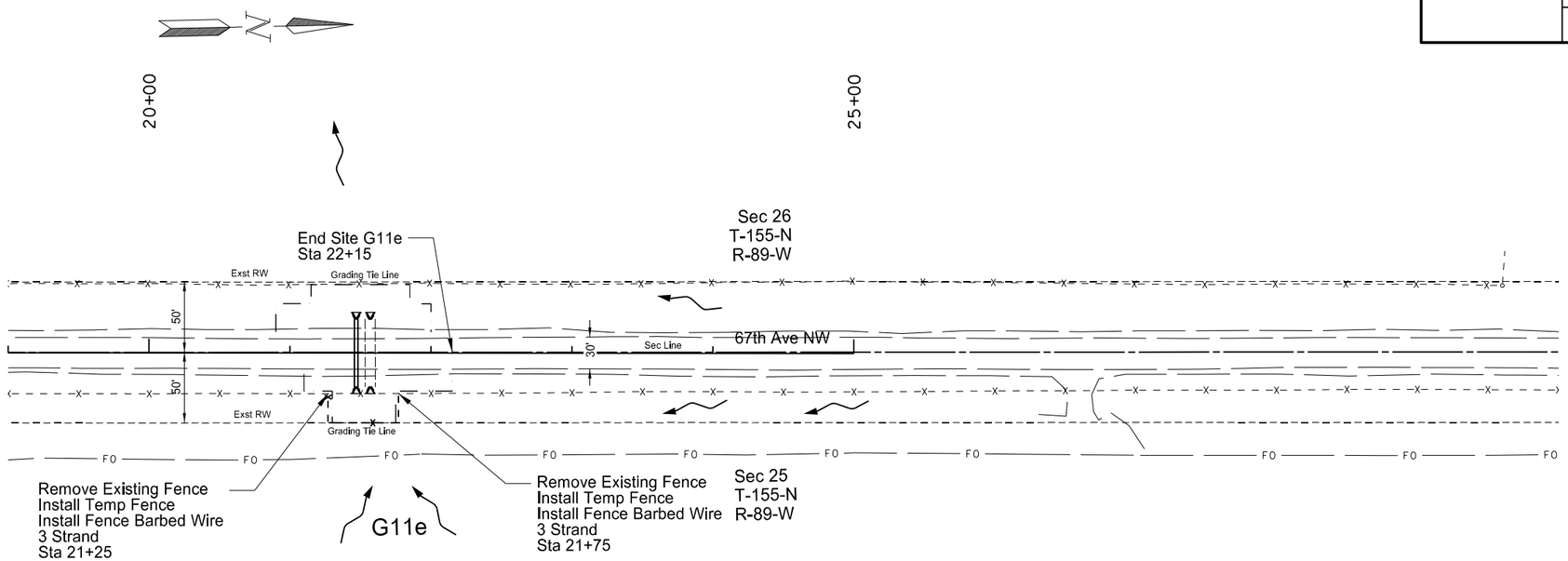
Spec	Code	Description	Quantity	Unit
202	0174	Removal of Pipe all Types and Sizes		
		Sta 12+55	45	LF
		Sta 16+46	45	LF
		Total =	90	LF
202	0312	Remove Existing Fence		
		Sta 11+80 to Sta 13+10	130	LF
		Sta 15+00 to Sta 17+70	270	LF
		Total =	400	LF
709	0151	Geosynthetic Material Type R1		
		Sta 12+55	34	SY
		Sta 12+65	34	SY
		Sta 16+46	34	SY
		Sta 16+56	34	SY
		Total =	136	SY
714	5045	Pipe Corr Steel .064IN 36IN		
		Sta 12+55	46	LF
		Sta 12+65	46	LF
		Sta 16+46	46	LF
		Sta 16+56	46	LF
		Total =	184	LF
714	5830	End Sect Corr Steel .079IN 36IN		
		Sta 12+55	2	EA
		Sta 12+65	2	EA
		Sta 16+46	2	EA
		Sta 16+56	2	EA
		Total =	8	EA
752	0110	Fence Barbed Wire 3 Strand-Steel Post		
		Sta 11+80 to Sta 13+10	175	LF
		Sta 15+00 to Sta 17+70	313	LF
		Total =	488	LF
752	0905	Temporary Fence		
		Sta 11+80 to Sta 13+10	175	LF
		Sta 15+00 to Sta 17+70	313	LF
		Total =	488	LF
752	2996	Corner Assembly-Steel Post		
		Sta 11+80 - 29 RT & 50 RT	2	EA
		Sta 13+10 - 29 RT & 50 RT	2	EA
		Sta 15+00 - 29 RT & 50 RT	2	EA
		Sta 17+70 - 29 RT & 50 RT	2	EA
		Total =	8	EA

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Plan and Profile Sheet

Site G11e
Inslope Erosion Repair
Missile Access Road - G11
Mountrail County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	60	2



STA 21+57
30" X 48' CSP (Good)
REMAIN

STA 21+52
30 IN X 48 LF
PIPE CORR STEEL .064IN 30IN
4 END SECT CORR STEEL .079IN 30IN
INVERT = 2018.5
INSTALL

2045 2040 2035 2030 2025 2020 2015 2010

2023.68 2023.74 2023.76 2023.83 2023.67 2023.85 2024.37 2024.61 2024.96 2025.71 2026.68

19+00 20+00 21+00 22+00 23+00 24+00 25+00 26+00 27+00 28+00 29+00

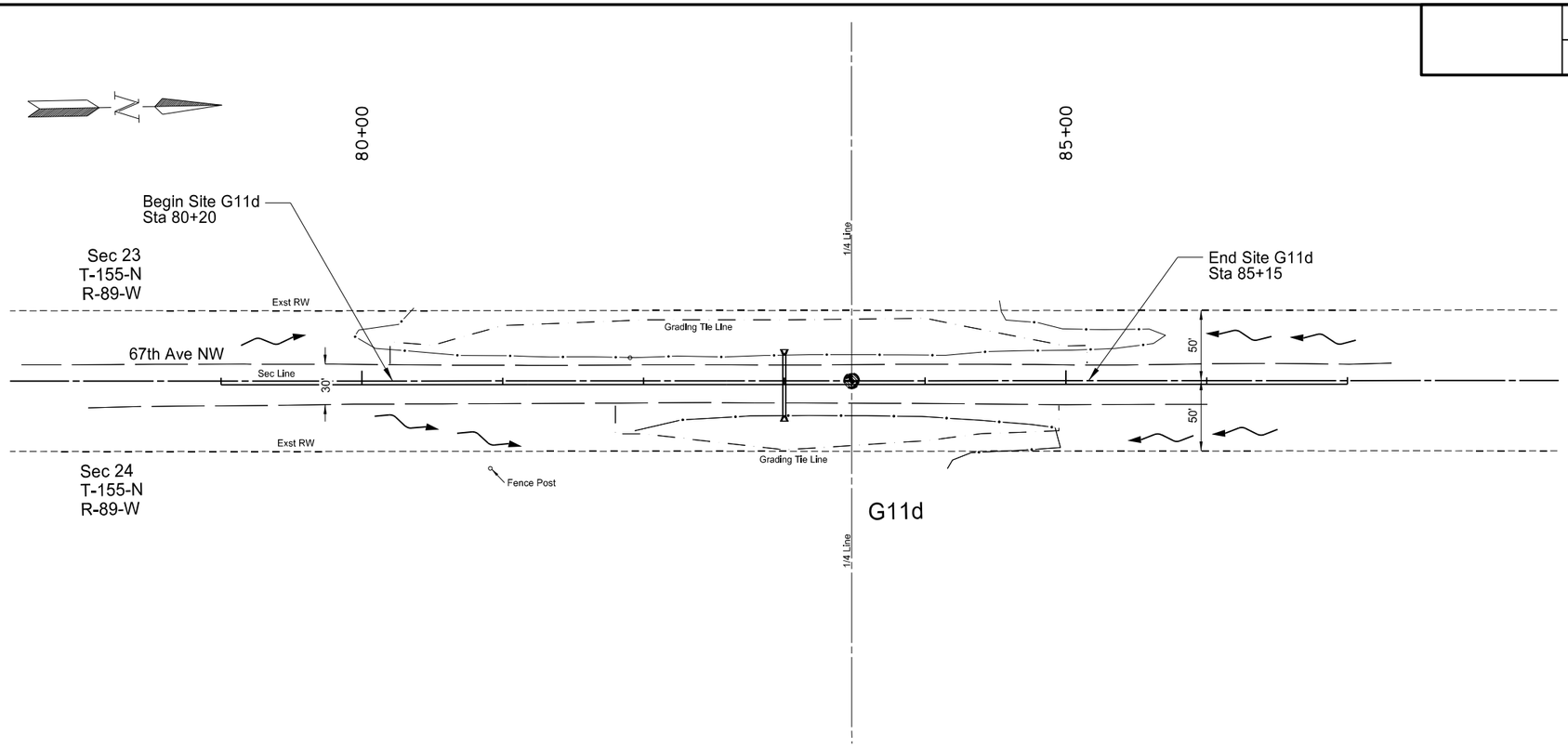
Spec	Code	Description	Quantity	Unit
202	0312	Remove Existing Fence		
		Sta 21+25 to Sta 21+75	50	LF
		Total =	50	LF
709	0151	Geosynthetic Material Type R1		
		Sta 21+47	32	SY
		Total =	32	SY
714	5040	Pipe Corr Steel .064IN 30IN		
		Sta 21+47	48	LF
		Total =	48	LF
714	5825	End Sect Corr Steel .079IN 30IN		
		Sta 21+47	2	EA
		Sta 21+57	2	EA
		Total =	4	EA
752	0110	Fence Barbed Wire		
		3 Strand-Steel Post		
		Sta 21+25 to Sta 21+75	93	LF
		Total =	93	LF
752	0905	Temporary Fence		
		Sta 21+25 to Sta 21+75	93	LF
		Total =	93	LF
752	2996	Corner Assembly-Steel Post		
		Sta 21+25 - 29 RT & 50 RT	2	EA
		Sta 21+75 - 29 RT & 50 RT	2	EA
		Total =	4	EA

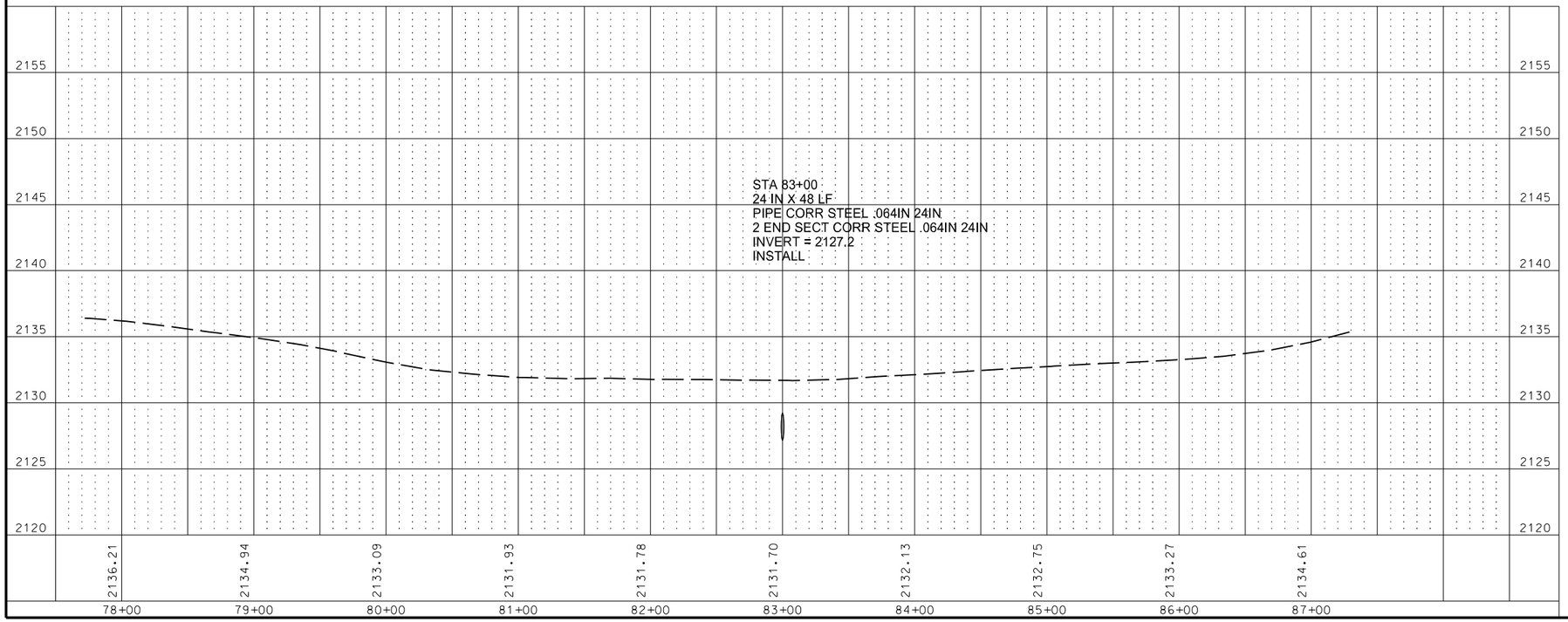
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Plan and Profile Sheet

Site G11e
Inslope Erosion Repair
Missile Access Road - G11
Mountrail County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	60	3





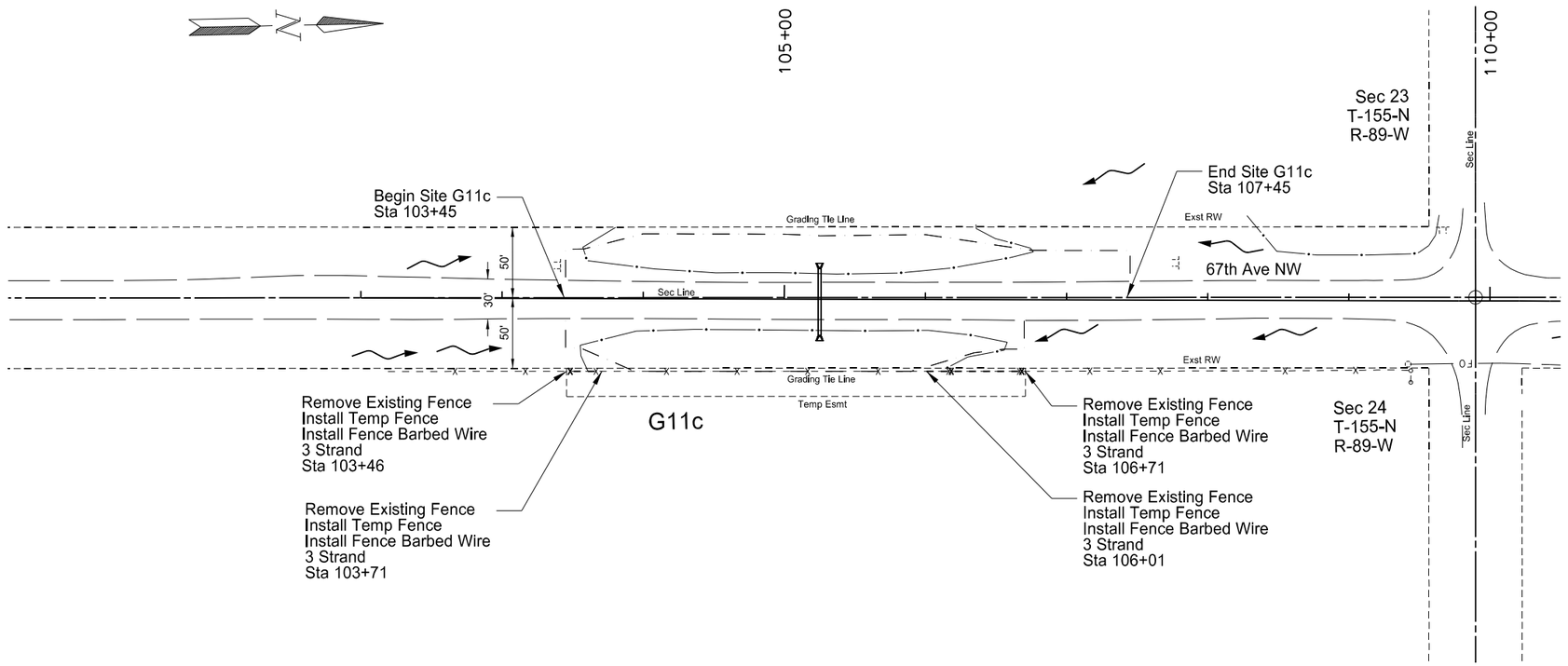
Spec	Code	Description	Quantity	Unit
709	0151	Geosynthetic Material Type R1		
		Sta 83+00	27	SY
		Total =	27	SY
714	5035	Pipe Corr Steel .064IN 24IN		
		Sta 83+00	48	LF
		Total =	48	LF
714	5820	End Sect Corr Steel .64IN 24IN		
		Sta 83+00	2	EA
		Total =	2	EA

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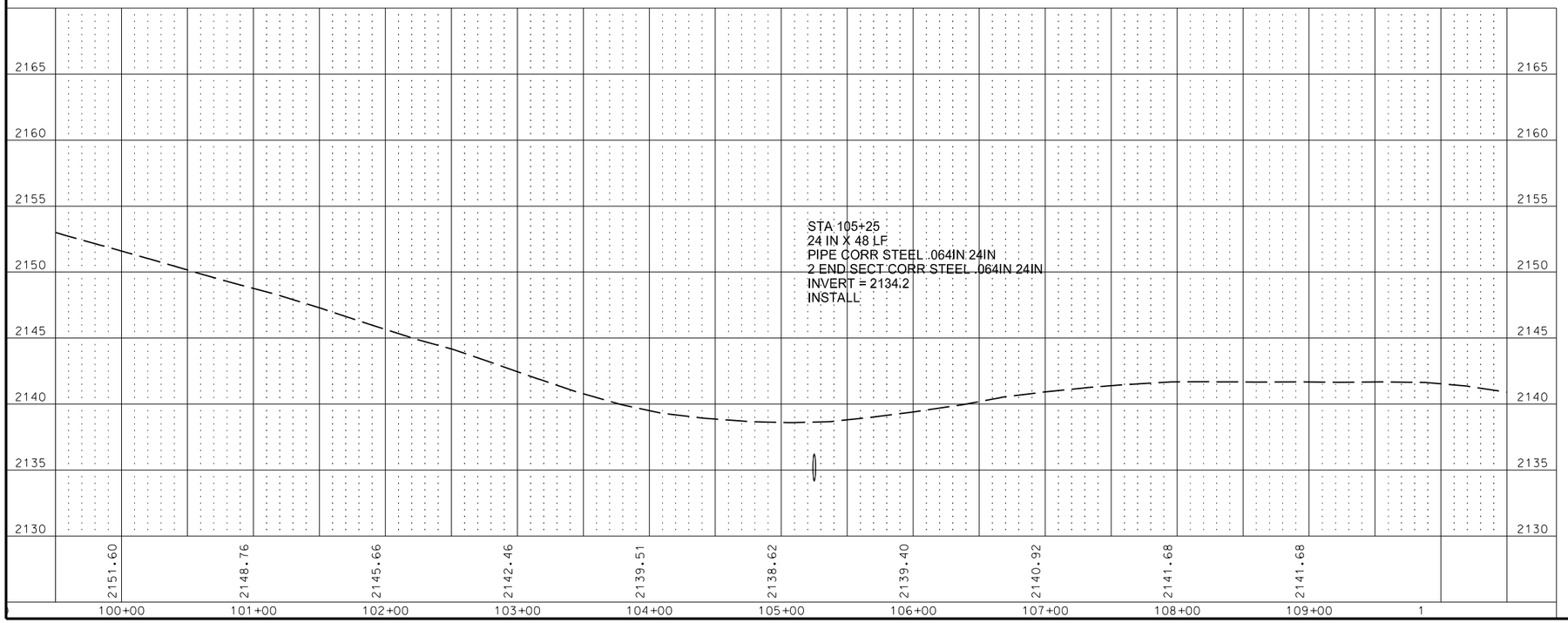
Plan and Profile Sheet

Site G11d
Inslope Erosion Repair
Missile Access Road - G11
Mountrail County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	ROM-0300(134)	60	4



Spec	Code	Description	Quantity	Unit
202	0312	Remove Existing Fence		
		Sta 103+46 to Sta 106+71	335	LF
		Total =	335	LF
709	0151	Geosynthetic Material Type R1		
		Sta 105+25	27	SY
		Total =	27	SY
714	5035	Pipe Corr Steel .064IN 24IN		
		Sta 105+25	48	LF
		Total =	48	LF
714	5820	End Sect Corr Steel .64IN 24IN		
		Sta 105+25	2	EA
		Total =	2	EA
752	0110	Fence Barbed Wire 3 Strand-Steel Post		
		Sta 103+46 to Sta 103+71	25	LF
		Sta 106+01 to Sta 106+71	70	LF
		Total =	95	LF
752	0905	Temporary Fence		
		Sta 103+46 to Sta 103+71	25	LF
		Sta 106+01 to Sta 106+71	70	LF
		Total =	95	LF
752	2996	Corner Assembly-Steel Post		
		Sta 103+46 - 52 RT	1	EA
		Sta 103+71 - 52 RT	1	EA
		Sta 106+01 - 51 RT	1	EA
		Sta 106+71 - 51 RT	1	EA
		Total =	4	EA

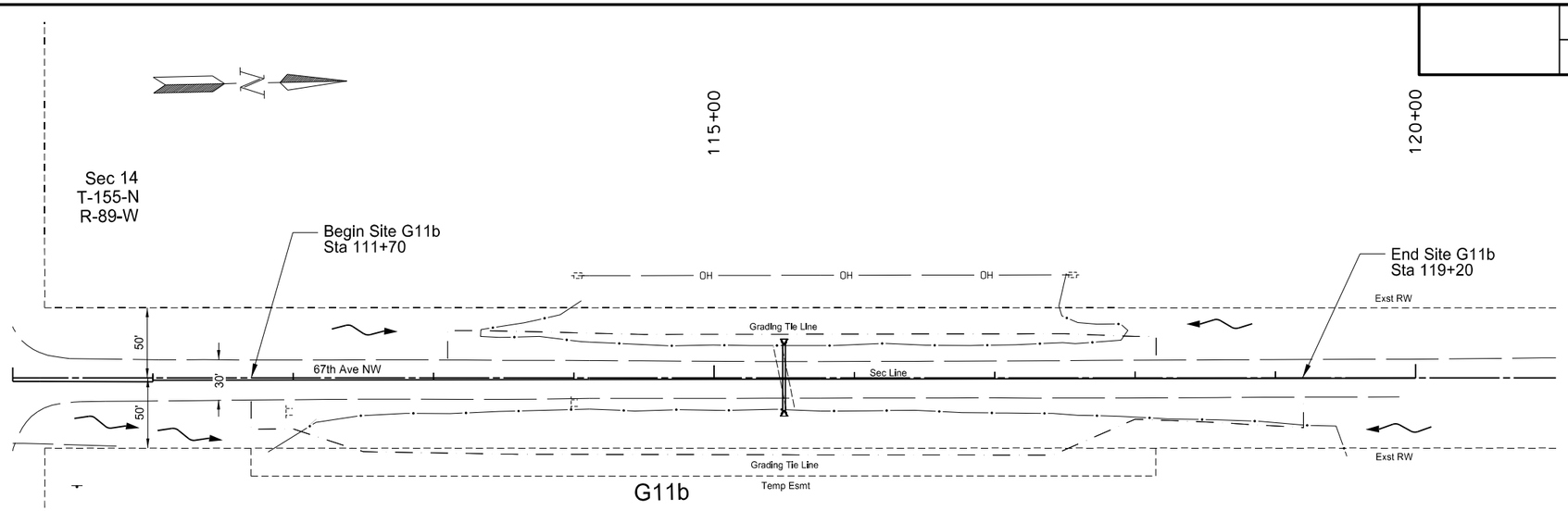


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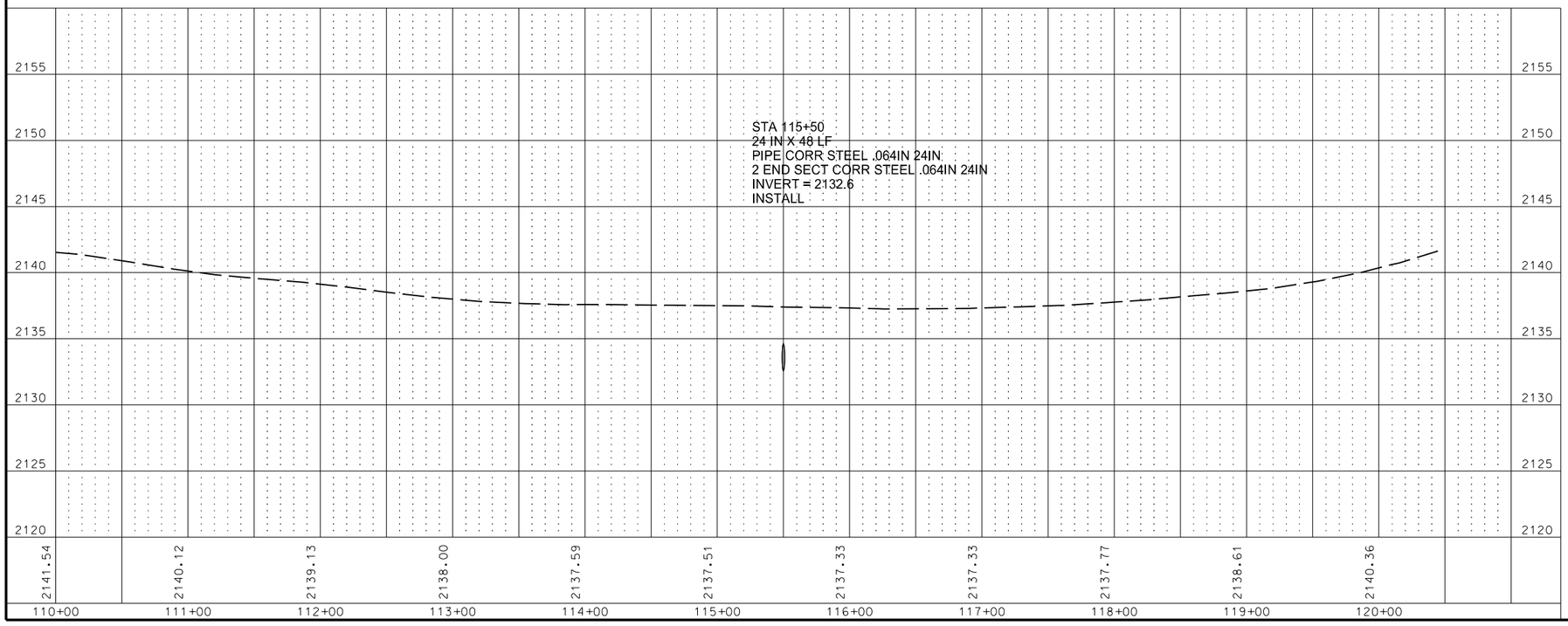
Plan and Profile Sheet

Site G11c
Inslope Erosion Repair
Missile Access Road - G11
Mountrail County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	ROM-0300(134)	60	5



Spec	Code	Description	Quantity	Unit
202	0174	Removal of Pipe all Types and Sizes		
		Sta 115+50	46	LF
		Total =	46	LF
709	0151	Geosynthetic Material Type R1		
		Sta 115+50	27	SY
		Total =	27	SY
714	5035	Pipe Corr Steel .064IN 24IN		
		Sta 115+50	48	LF
		Total =	48	LF
714	5820	End Sect Corr Steel .64IN 24IN		
		Sta 115+50	2	EA
		Total =	2	EA

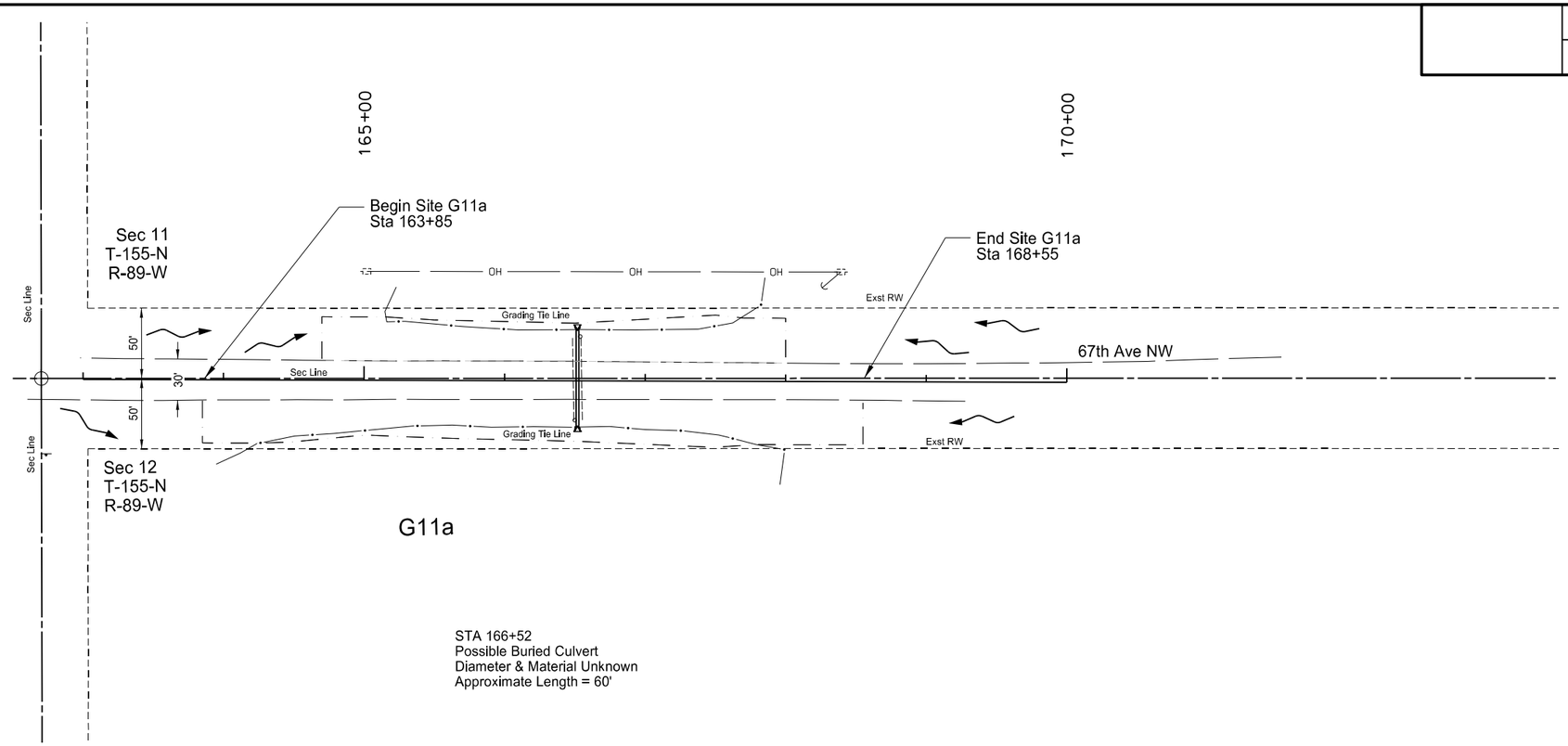


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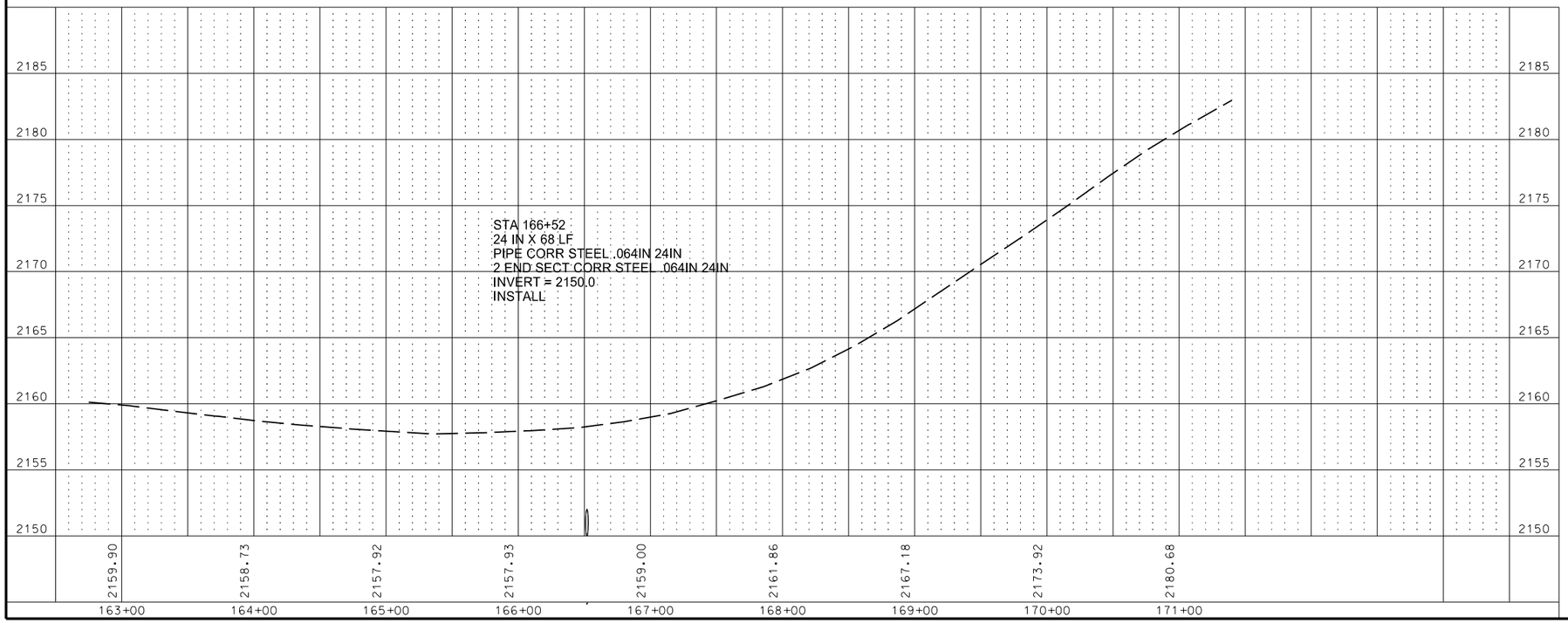
Plan and Profile Sheet

Site G11b
Inslope Erosion Repair
Missile Access Road - G11
Mountrail County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	ROM-0300(134)	60	6



Spec	Code	Description	Quantity	Unit
202	0174	Removal of Pipe all Types and Sizes Sta 166+52	60	LF
		Total =	60	LF
709	0151	Geosynthetic Material Type R1 Sta 166+52	39	SY
		Total =	39	SY
714	5035	Pipe Corr Steel .064IN 24IN Sta 166+52	68	LF
		Total =	68	LF
714	5820	End Sect Corr Steel .64IN 24IN Sta 166+52	2	EA
		Total =	2	EA

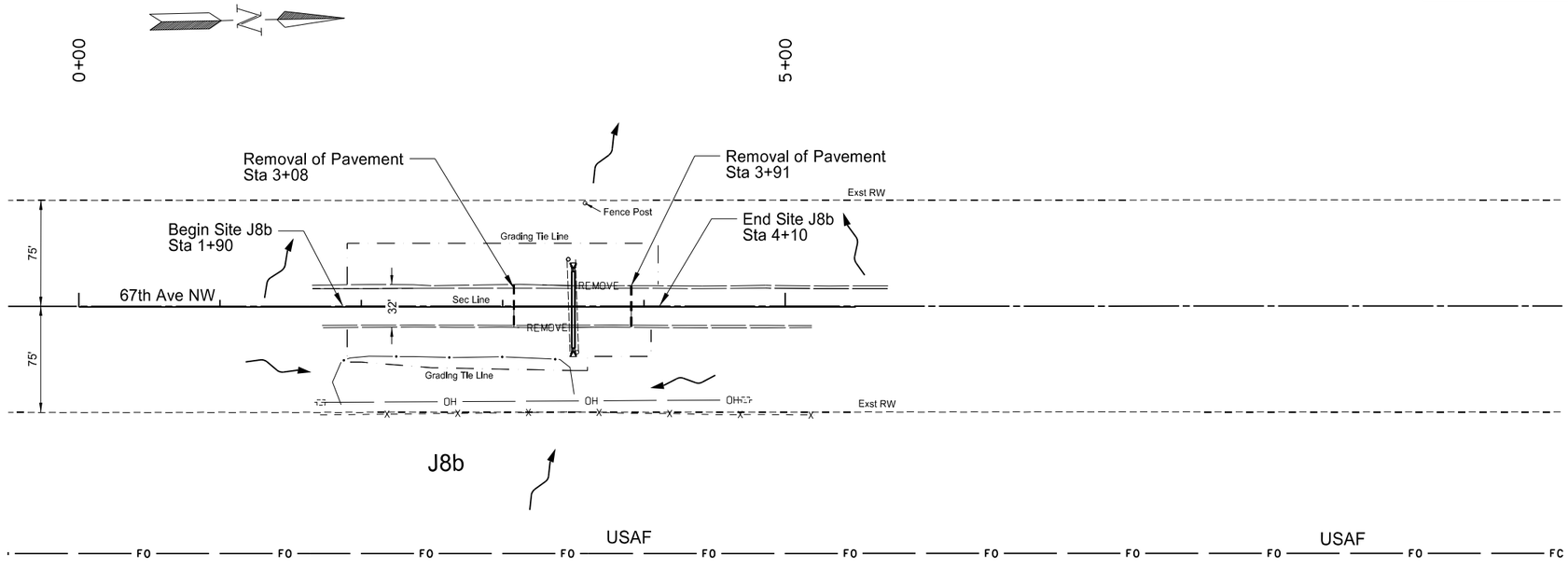


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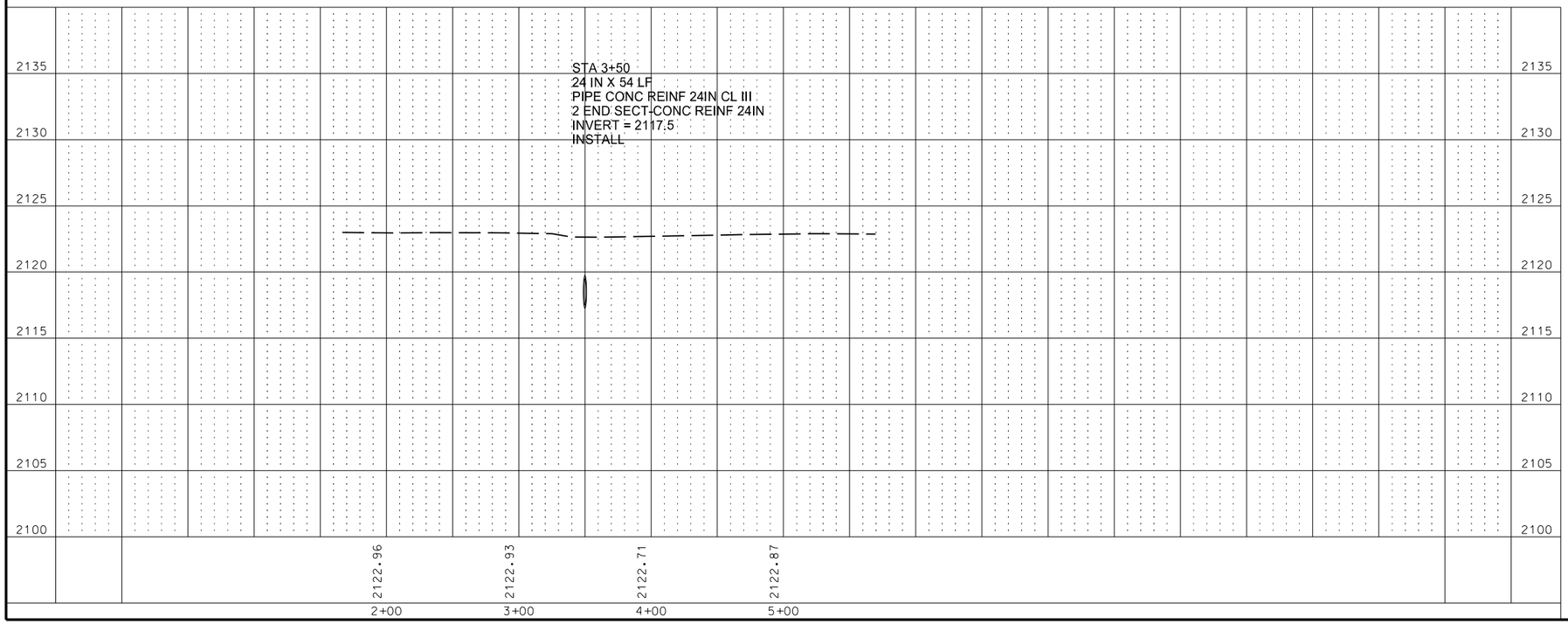
Plan and Profile Sheet

Site G11a
Inslope Erosion Repair
Missile Access Road - G11
Mountrail County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	60	7



Spec	Code	Description	Quantity	Unit
202	0136	Removal of Pavement Sta 3+08 to Sta 3+91	98	TON
		Total =	98	TON
202	0174	Removal of Pipe all Types and Sizes Sta 3+50	65	LF
		Total =	65	LF
709	0151	Geosynthetic Material Type R1 Sta 3+50	35	SY
		Total =	35	SY
714	0615	Pipe Conc Reinf 24IN CL III Sta 3+50	54	LF
		Total =	54	LF
714	3020	End Sect-Conc Reinf 24IN Sta 3+50	2	EA
		Total =	2	EA

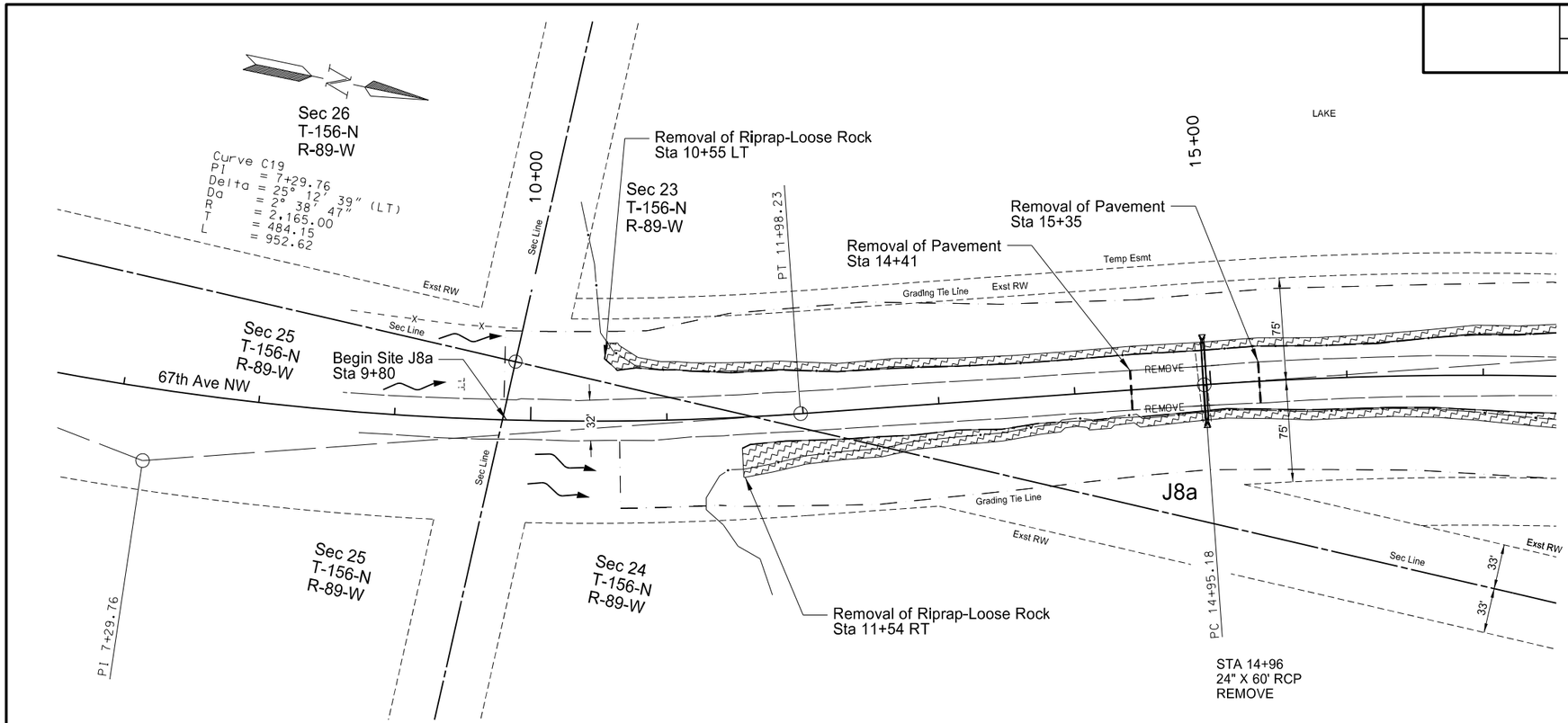


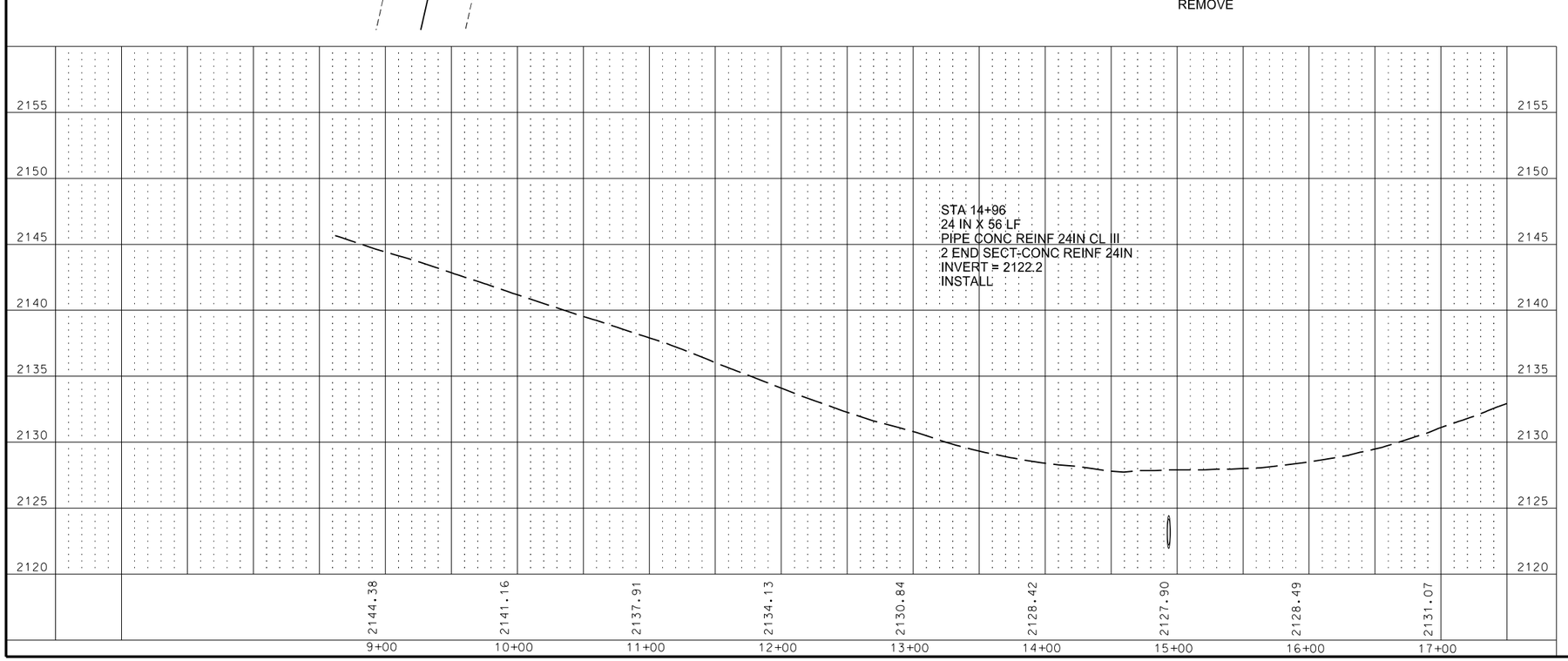
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Plan and Profile Sheet

Site J8b
Inslope Erosion Repair
Missile Access Road - J8
Mountrail County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	ROM-0300(134)	60	8





Spec	Code	Description	Quantity	Unit
202	0136	Removal of Pavement		
		Sta 14+41 to 15+35	112	TON
		Total =	112	TON
202	0174	Removal of Pipe all Types and Sizes		
		Sta 14+95	60	LF
		Total =	60	LF
202	0400	Removal of Riprap-Loose Rock		
		Sta 10+55 LT to 18+29 LT	377	CY
		Sta 11+54 RT to 19+57 RT	659	CY
		Total =	1036	CY
709	0151	Geosynthetic Material Type R1		
		Sta 14+95	35	SY
		Total =	35	SY
714	0615	Pipe Conc Reinf 24IN CL III		
		Sta 14+95	56	LF
		Total =	56	LF
714	3020	End Sect-Conc Reinf 24IN		
		Sta 14+95	2	EA
		Total =	2	EA

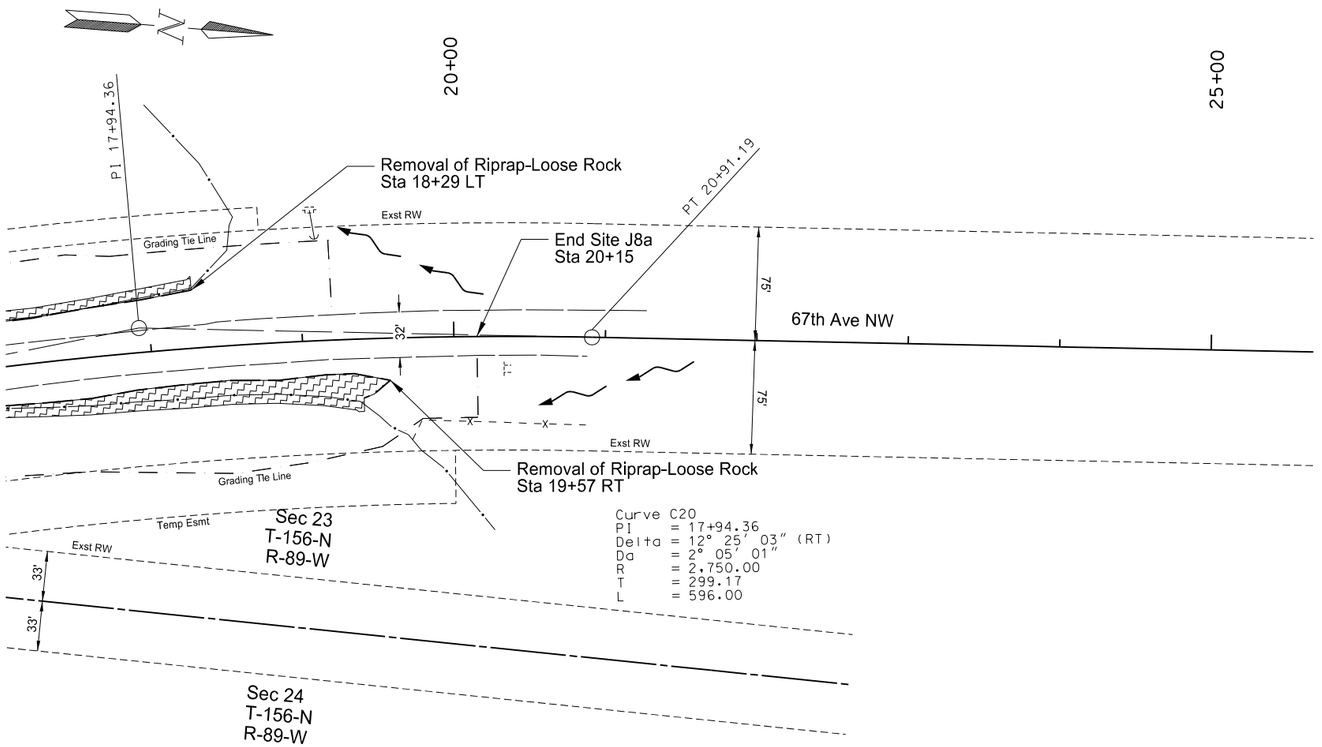
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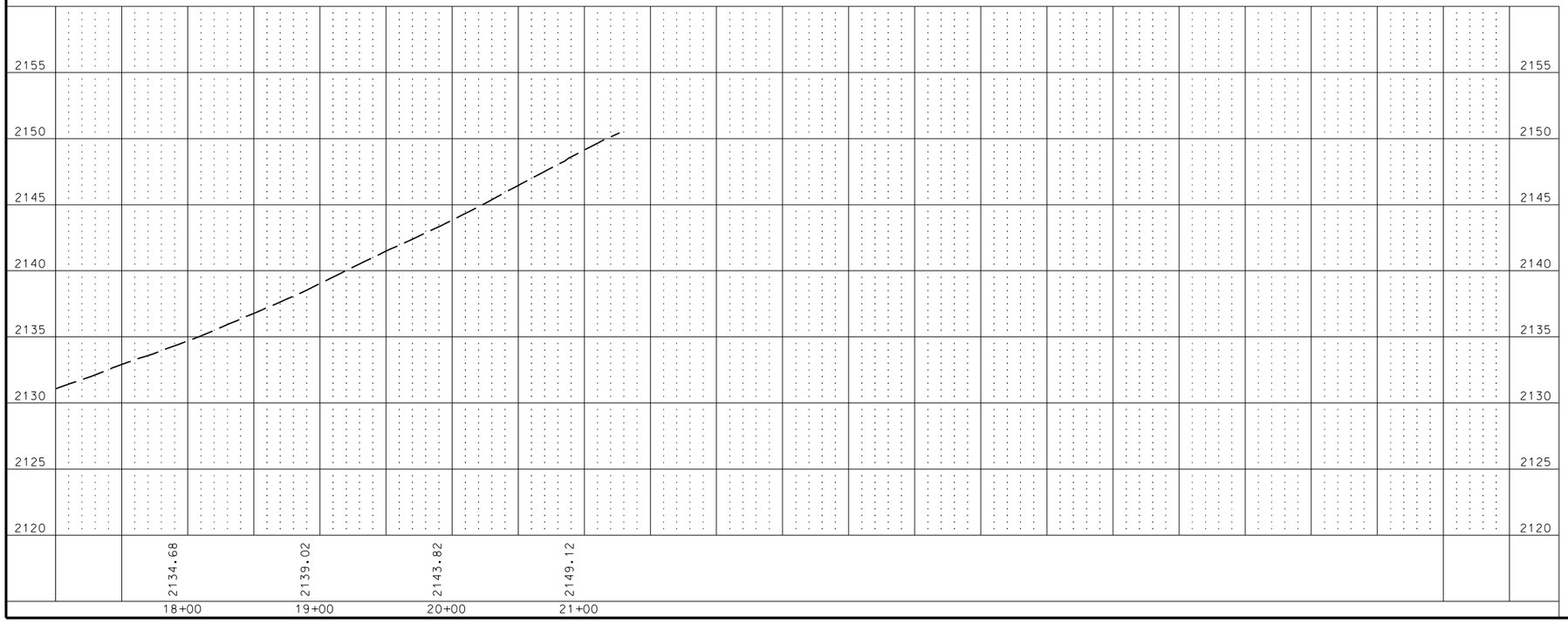
Plan and Profile Sheet

Site J8a
Inslope Erosion Repair
Missile Access Road - J8
Mountrail County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	60	9

Spec	Code	Description	Quantity	Unit
202	0400	Removal of Riprap-Loose Rock Quantity Totals are Included in the Previous Sheet		



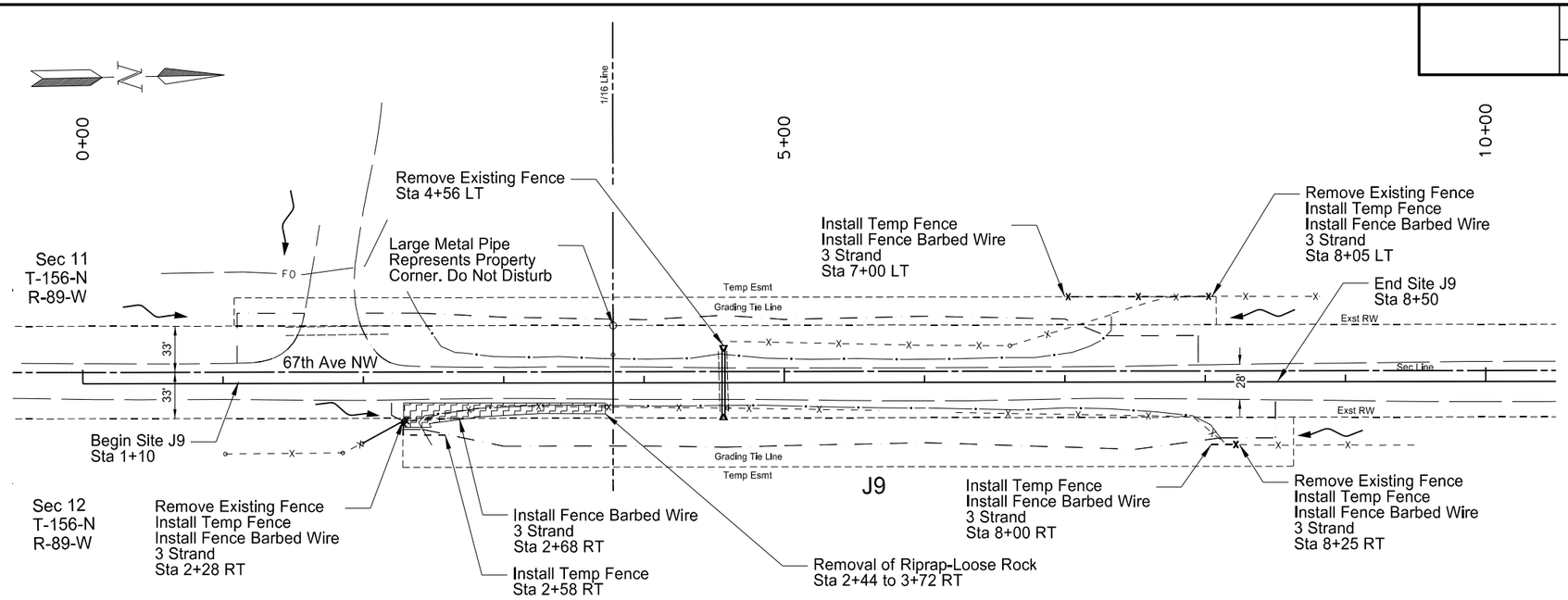


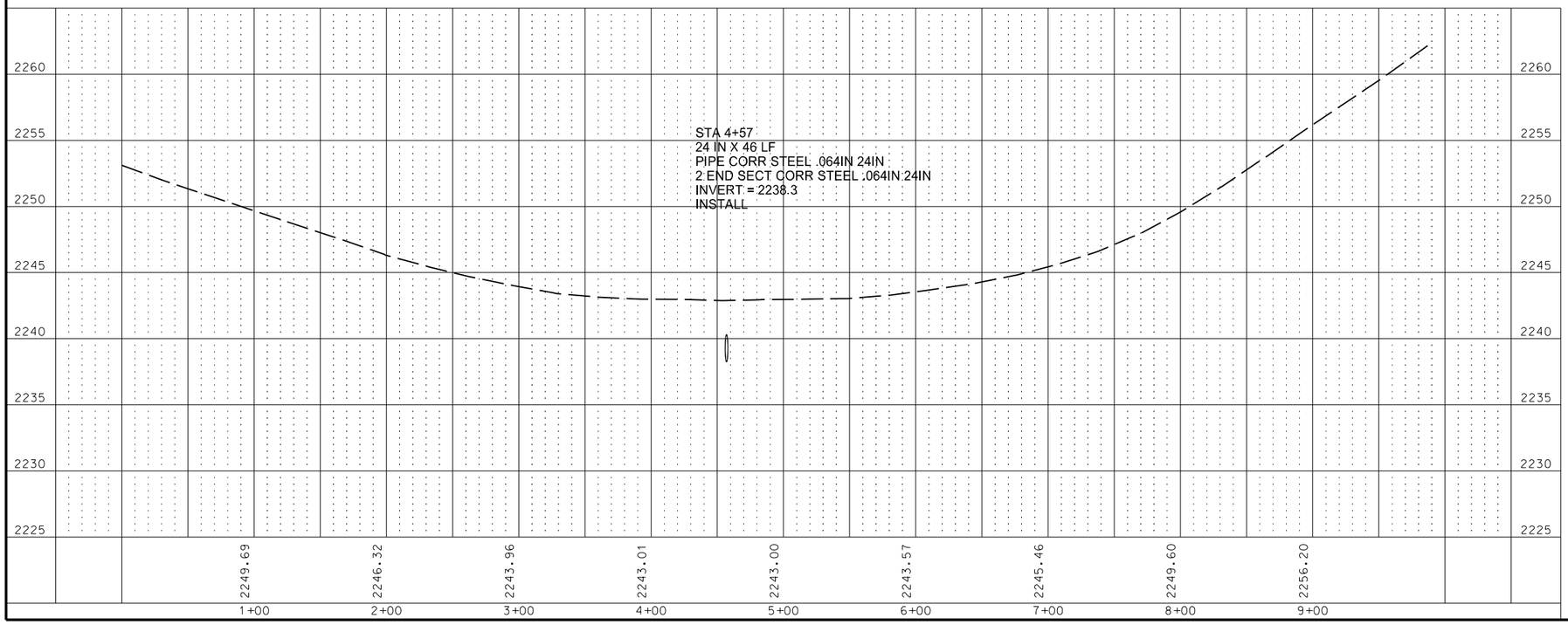
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Plan and Profile Sheet

Site J8a
Inslope Erosion Repair
Missile Access Road - J8
Mountrail County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	ROM-0300(134)	60	10





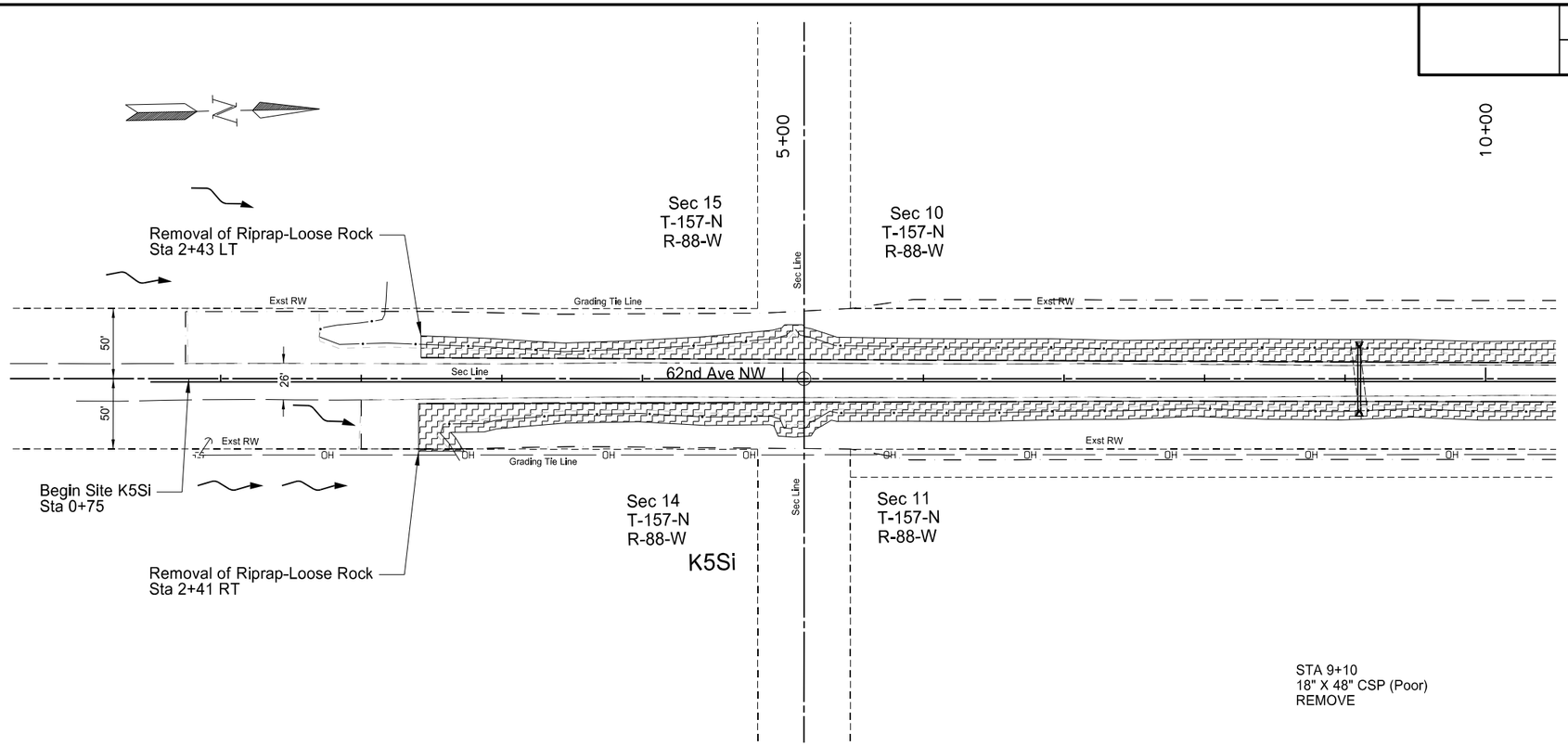
Spec	Code	Description	Quantity	Unit
202	0174	Removal of Pipe all Types and Sizes		
		Sta 4+57	45	LF
		Total =	45	LF
202	0312	Remove Existing Fence		
		Sta 2+28 RT to Sta 8+25 RT	684	LF
		Sta 4+56 LT to Sta 8+05 LT	354	LF
		Total =	1038	LF
202	0400	Removal of Riprap-Loose Rock		
		Sta 2+44 to 3+72 RT	111	CY
		Total =	111	CY
709	0151	Geosynthetic Material Type R1		
		Sta 4+57	26	SY
		Total =	26	SY
714	5035	Pipe Corr Steel .064IN 24IN		
		Sta 4+57	46	LF
		Total =	46	LF
714	5820	End Sect Corr Steel .64IN 24IN		
		Sta 4+57	2	EA
		Total =	2	EA
752	0110	Fence Barbed Wire 3 Post		
		Sta 2+28 RT to Sta 2+68 RT	40	LF
		Sta 7+00 LT to Sta 8+05 LT	105	LF
		Sta 8+00 RT to Sta 8+25 RT	25	LF
		Total =	170	LF
752	0905	Temporary Fence		
		Sta 2+28 RT to Sta 2+58 RT	40	LF
		Sta 7+00 LT to Sta 8+05 LT	105	LF
		Sta 8+00 RT to Sta 8+25 RT	25	LF
		Total =	170	LF
752	2996	Corner Assembly-Steel Post		
		Sta 2+28 - 27 RT	1	EA
		Sta 2+68 - 25 RT	1	EA
		Sta 7+00 - 61 LT	1	EA
		Sta 8+00 - 45 RT	1	EA
		Sta 8+05 - 45 LT	1	EA
		Sta 8+25 - 61 RT	1	EA
		Total =	6	EA

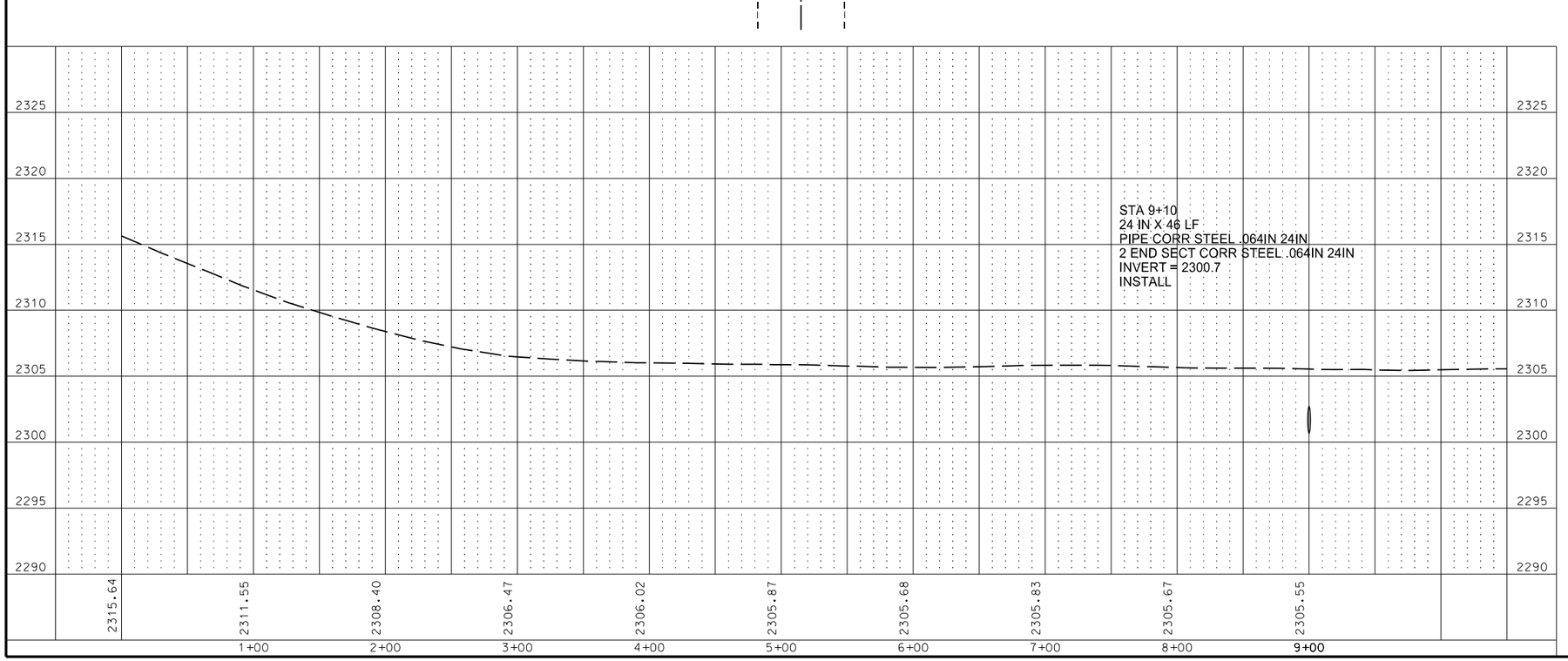
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Plan and Profile Sheet

Site J9
Inslope Erosion Repair
Missile Access Road - J9
Mountrail County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	60	11





Spec	Code	Description	Quantity	Unit
202	0174	Removal of Pipe all Types and Sizes		
		Sta 9+10	48	LF
		Total =	48	LF
202	0400	Removal of Riprap-Loose Rock		
		Sta 2+43 LT to 28+59 LT	2808	CY
		Sta 2+41 RT to 27+41 RT	2425	CY
		Total =	5233	CY
709	0151	Geosynthetic Material Type R1		
		Sta 9+10	26	SY
		Total =	26	SY
714	5035	Pipe Corr Steel .064IN 24IN		
		Sta 9+10	46	LF
		Total =	46	LF
714	5820	End Sect Corr Steel .64IN 24IN		
		Sta 9+10	2	EA
		Total =	2	EA

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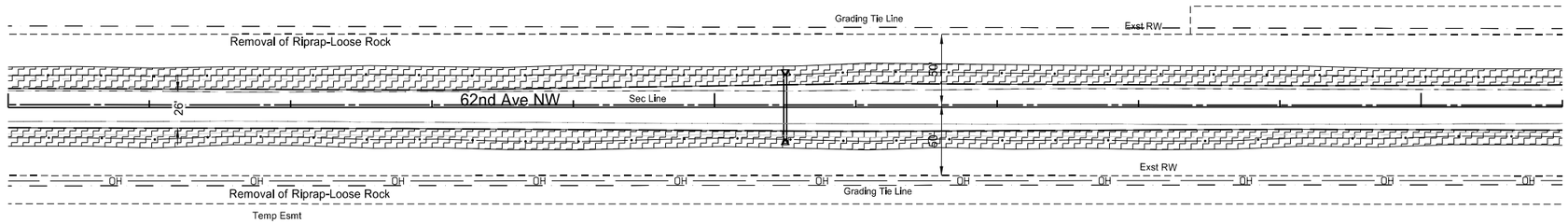
Plan and Profile Sheet

Site K5Si
Inslope Erosion Repair
Missile Access Road - K5S
Mountrail County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	60	12

10+00 15+00 20+00

Sec 10
T-157-N
R-88-W



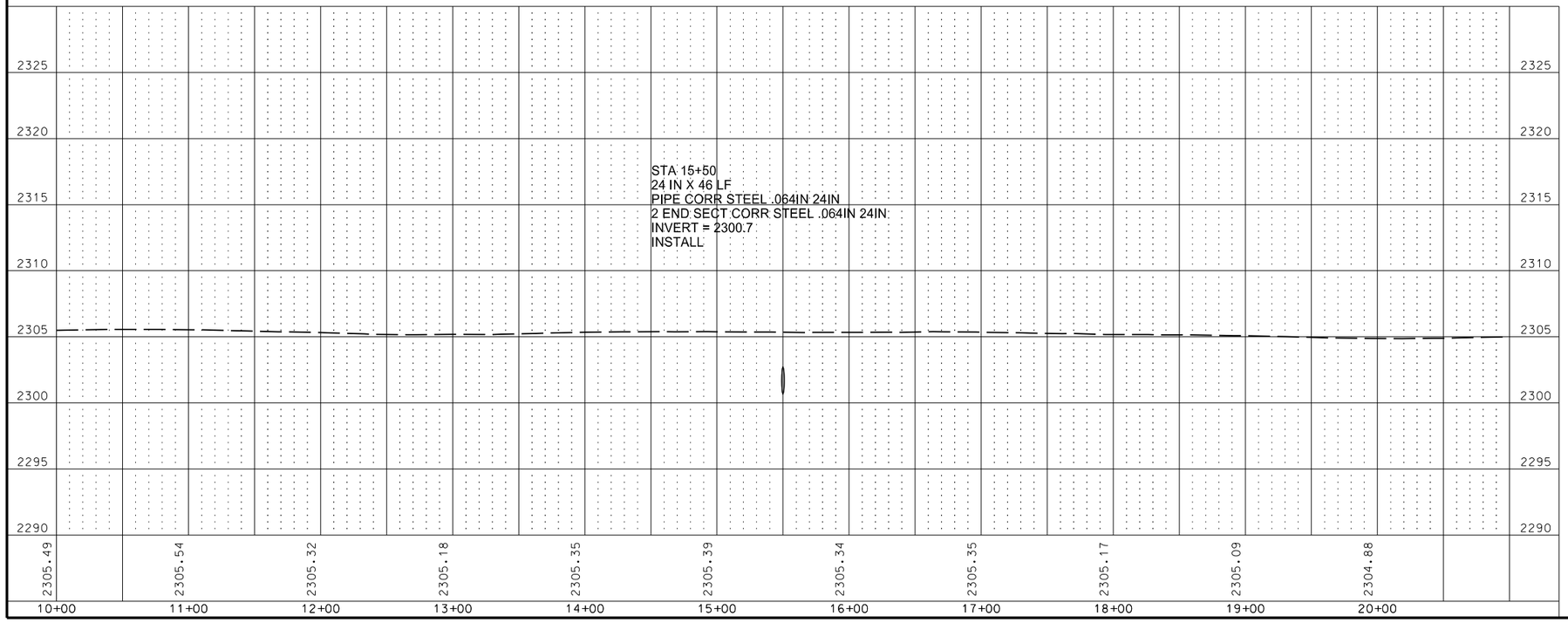
Sec 11
T-157-N
R-88-W

K5Si

Spec	Code	Description	Quantity	Unit
202	0174	Removal of Pipe all Types and Sizes		
		Sta 15+50	48	LF
		Total =	48	LF
202	0400	Removal of Riprap-Loose Rock		
		Quantity Totals are Included on the Previous Sheet		
709	0151	Geosynthetic Material Type R1		
		Sta 15+50	26	SY
		Total =	26	SY
714	5035	Pipe Corr Steel .064IN 24IN		
		Sta 15+50	46	LF
		Total =	46	LF
714	5820	End Sect Corr Steel .64IN 24IN		
		Sta 15+50	2	EA
		Total =	2	EA

STA 15+50
Buried Culvert
Diameter & Material Unknown
Approximate Length = 48'
REMOVE

STA 15+50
24 IN X 46 LF
PIPE CORR STEEL .064IN 24IN
2 END SECT CORR STEEL .064IN 24IN
INVERT = 2300.7
INSTALL

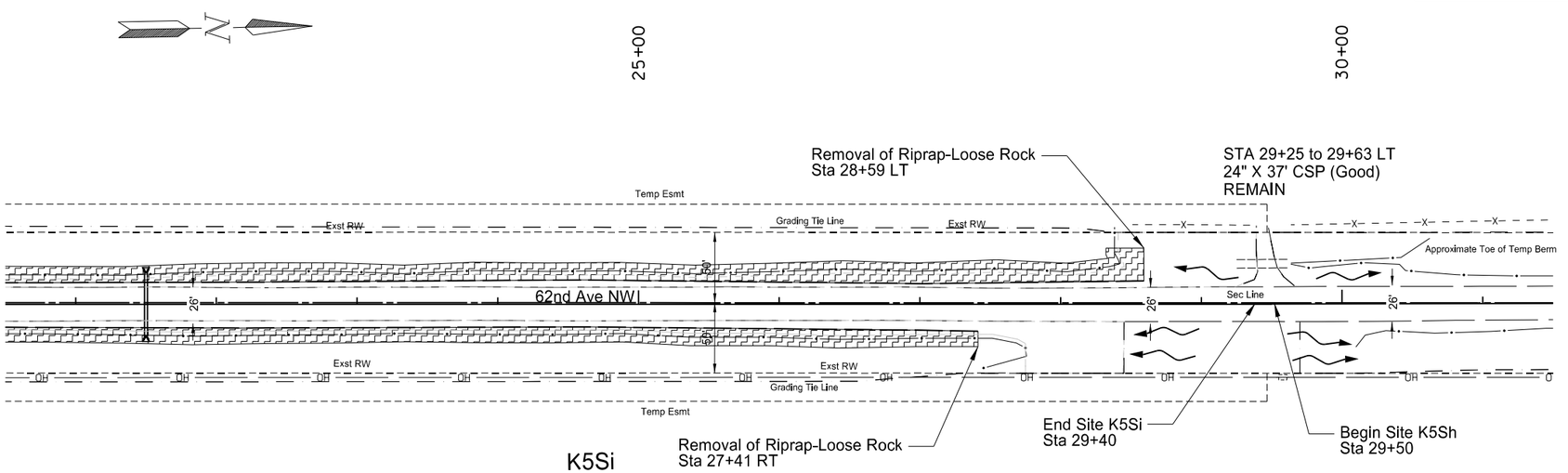


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Plan and Profile Sheet

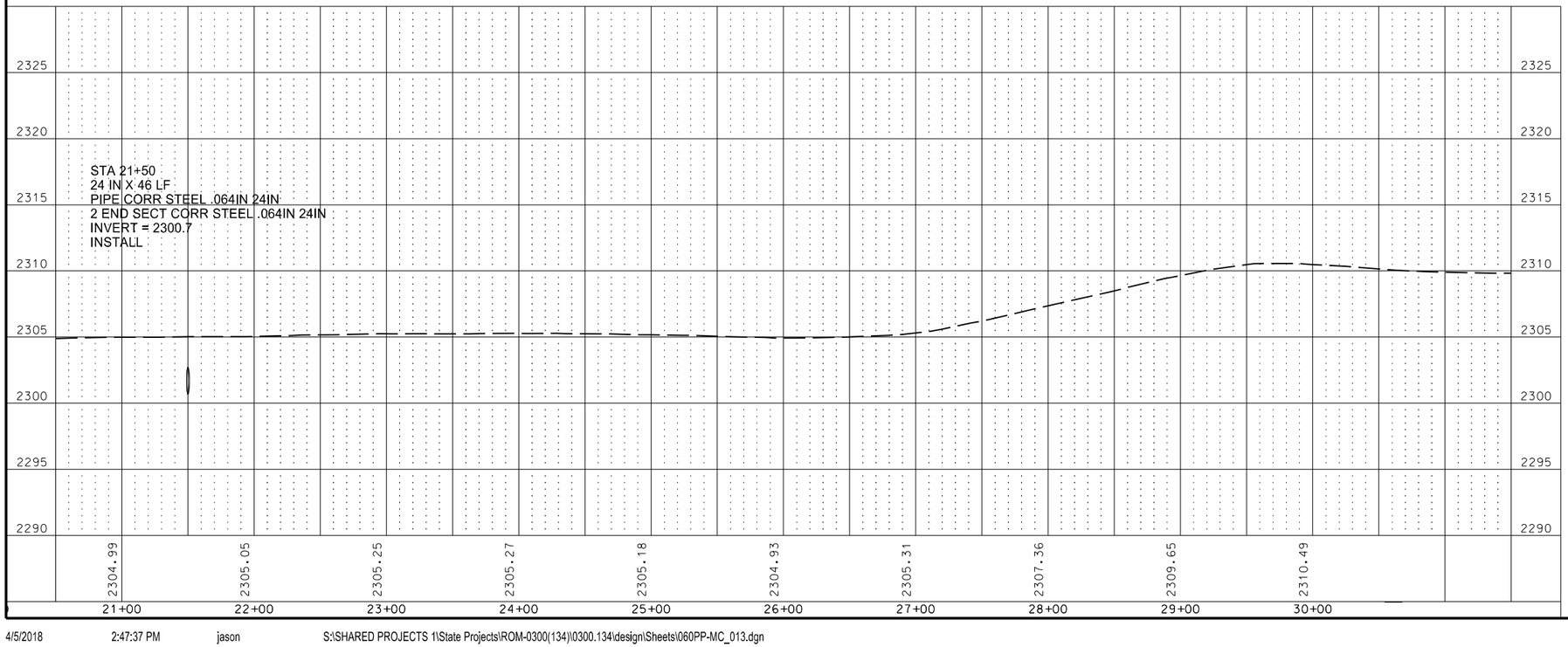
Site K5Si
Inslope Erosion Repair
Missile Access Road - K5S
Mountrail County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	60	13



Spec	Code	Description	Quantity	Unit
202	0174	Removal of Pipe all Types and Sizes		
		Sta 21+50	48	LF
		Total =	48	LF
202	0400	Removal of Riprap-Loose Rock		
		Quantity Totals are Included on the Previous Sheet		
709	0151	Geosynthetic Material Type R1		
		Sta 21+50	26	SY
		Total =	26	SY
714	5035	Pipe Corr Steel .064IN 24IN		
		Sta 21+50	46	LF
		Total =	46	LF
714	5820	End Sect Corr Steel .64IN 24IN		
		Sta 21+50	2	EA
		Total =	2	EA

STA 21+50
Buried Culvert
Diameter & Material Unknown
Approximate Length = 48'
REMOVE

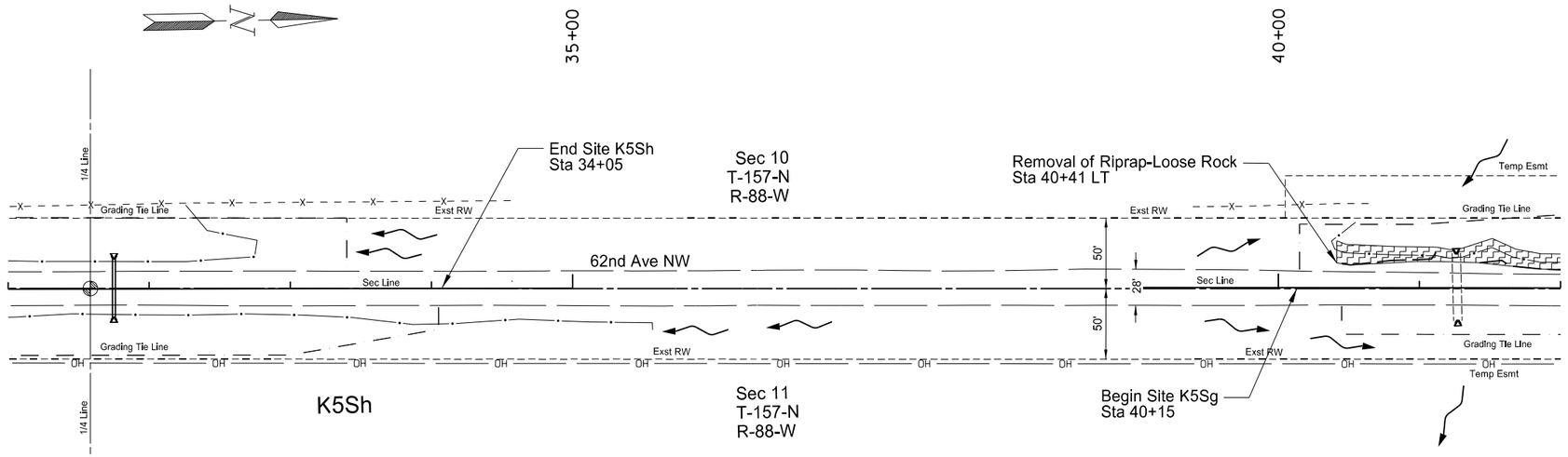


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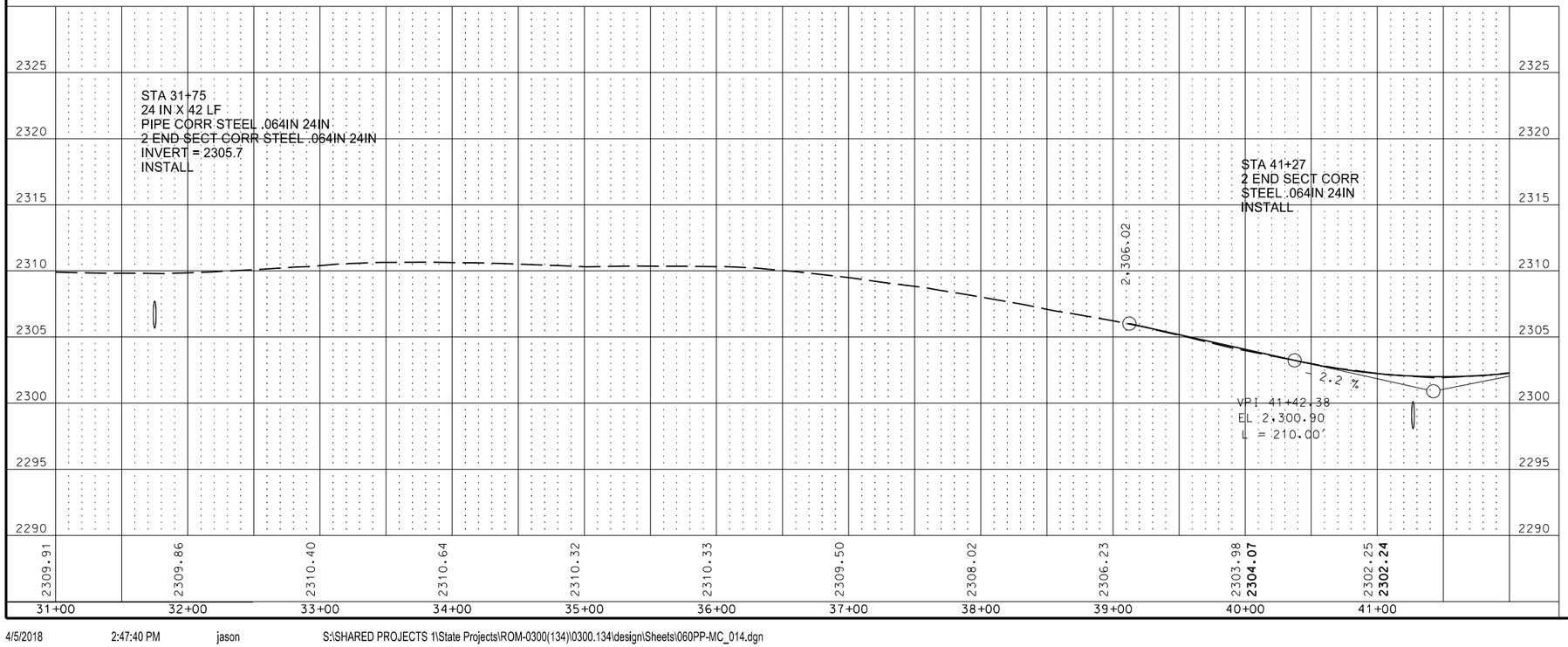
Site K5Si
Inslope Erosion Repair
Missile Access Road - K5S
Mountrail County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	60	14



Spec	Code	Description	Quantity	Unit
202	0174	Removal of Pipe all Types and Sizes		
		Sta 31+75	38	LF
		Total =	38	LF
202	0400	Removal of Riprap-Loose Rock		
		Sta 40+41 LT to 42+59 LT	192	CY
		Total =	192	CY
709	0151	Geosynthetic Material Type R1		
		Sta 31+75	24	SY
		Total =	24	SY
714	5035	Pipe Corr Steel .064IN 24IN		
		Sta 31+75	42	LF
		Total =	42	LF
714	5820	End Sect Corr Steel .64IN 24IN		
		Sta 31+75	2	EA
		Sta 41+27	2	EA
		Total =	4	EA

STA 41+27
24" X 48" CSP (Good)
REMAIN

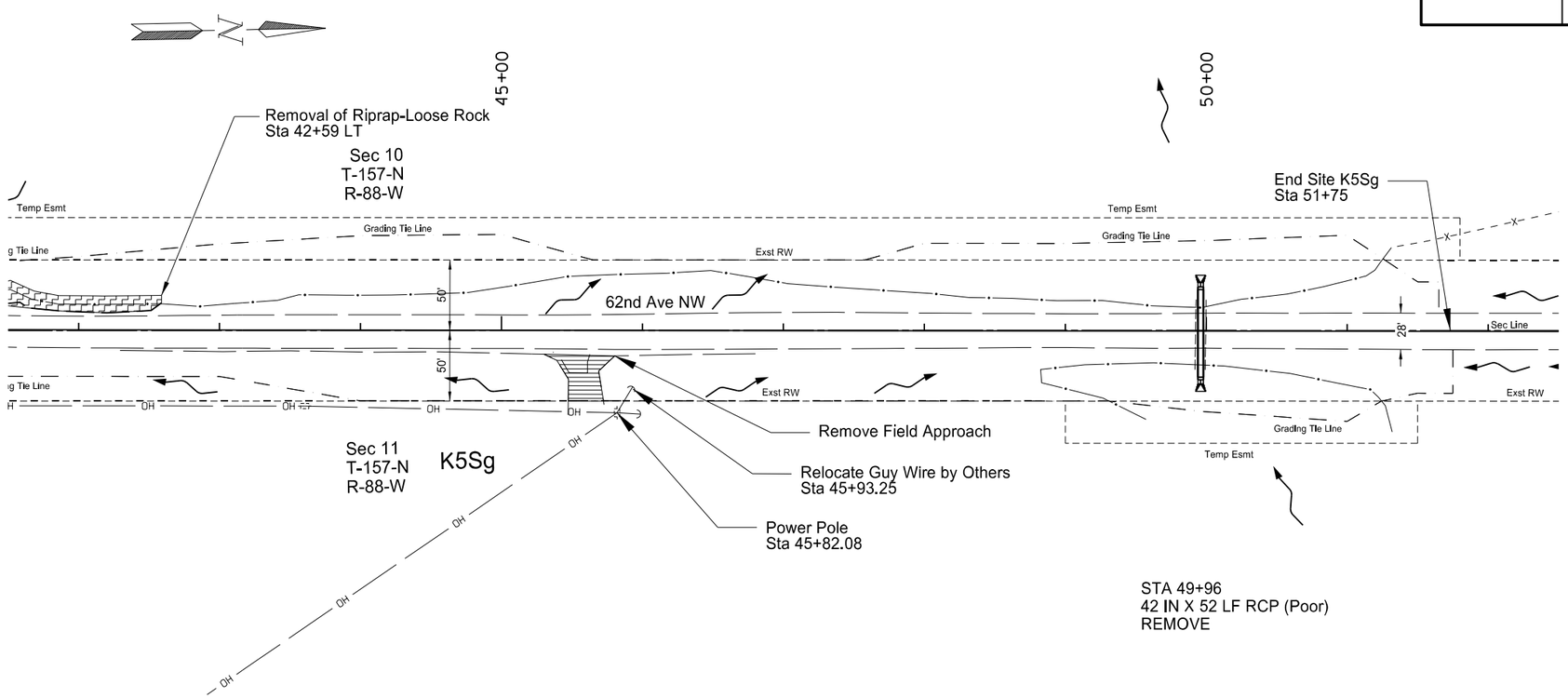


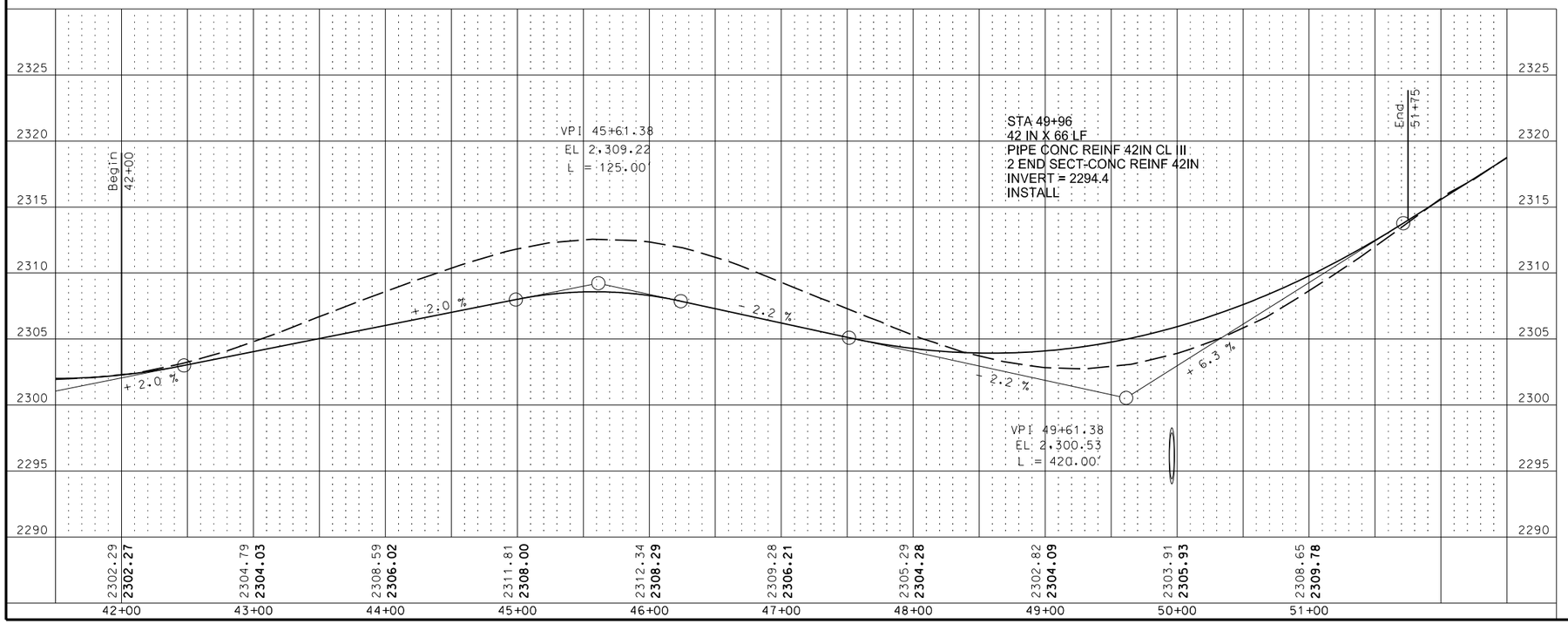
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Plan and Profile Sheet

Site K5Sh
Inslope Erosion Repair
Missile Access Road - K5S
Mountrail County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	60	15





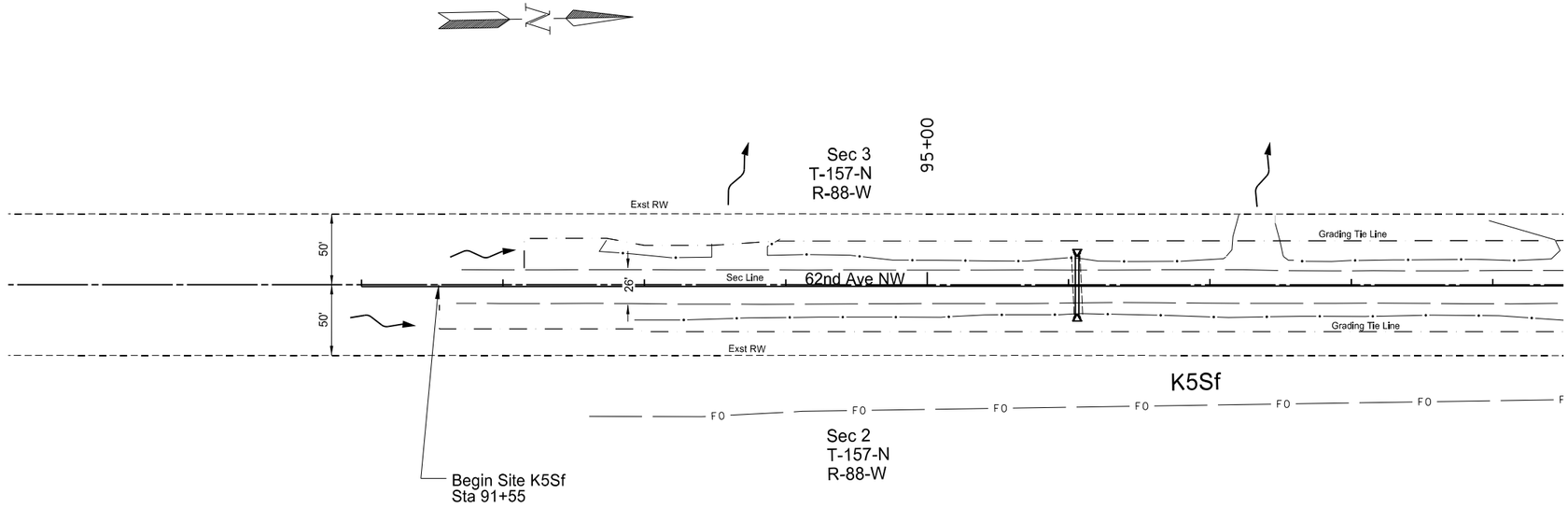
Spec	Code	Description	Quantity	Unit
202	0174	Removal of Pipe all Types and Sizes Sta 49+96	52	LF
		Total =	52	LF
202	0400	Removal of Riprap-Loose Rock Quantity Totals are Included on the Previous Sheet		
302	0356	Aggregate Surface Course CL 13 Sta 42+00 to Sta 51+75	1286	TON
		Total =	1286	TON
709	0151	Geosynthetic Material Type R1 Sta 49+96	55	SY
		Total =	55	SY
714	1005	Pipe Conc Reinf 42IN CL III Sta 49+96	66	LF
		Total =	66	LF
714	3040	End Sect-Conc Reinf 42IN Sta 49+96	2	EA
		Total =	2	EA

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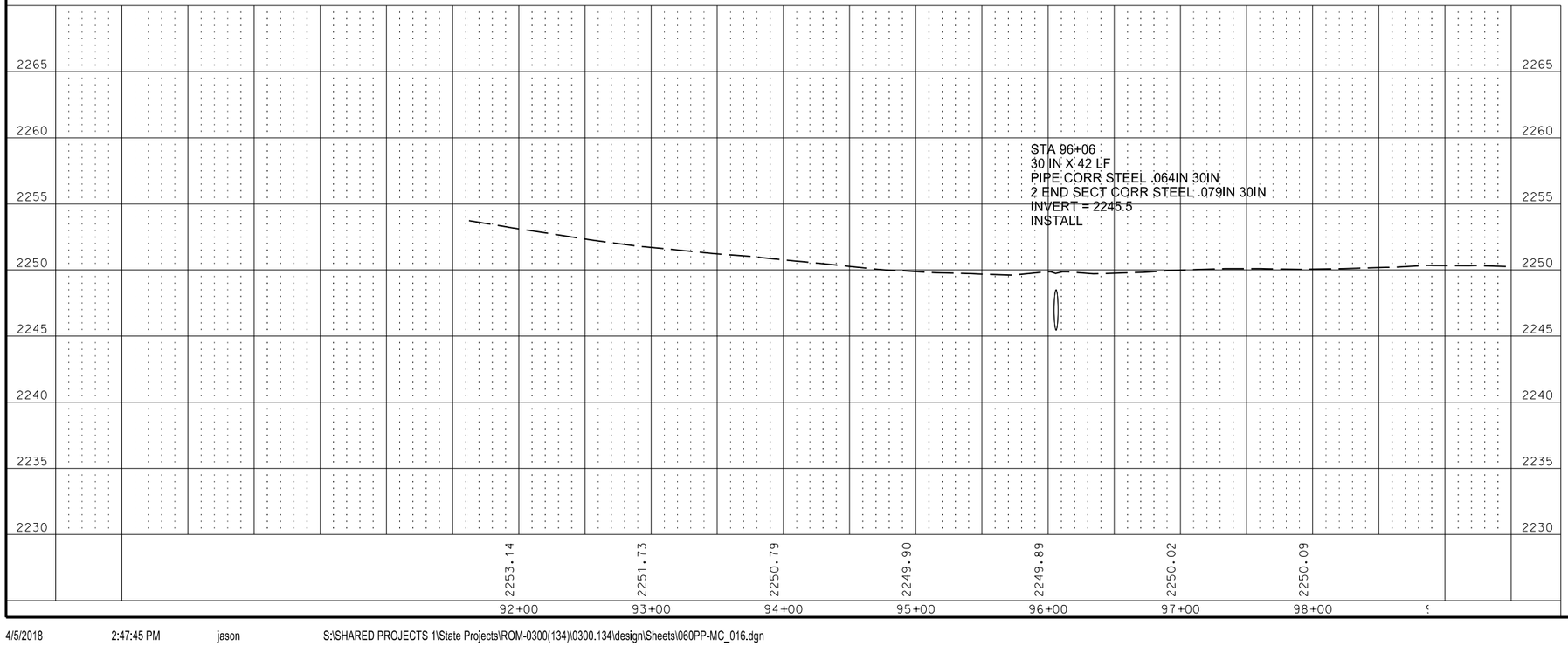
Site K5Sg
Inslope Erosion Repair
Missile Access Road - K5S
Mountrail County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	60	16



Spec	Code	Description	Quantity	Unit
202	0174	Removal of Pipe all Types and Sizes Sta 96+07	42	LF
		Total =	42	LF
709	0151	Geosynthetic Material Type R1 Sta 96+07	28	SY
		Total =	28	SY
714	5040	Pipe Corr Steel .064IN 30IN Sta 96+07	42	LF
		Total =	42	LF
714	5825	End Sect Corr Steel .079IN 30IN Sta 96+07	2	EA
		Total =	2	EA

STA 96+06
30" X 42' CSP (Fair)
REMOVE

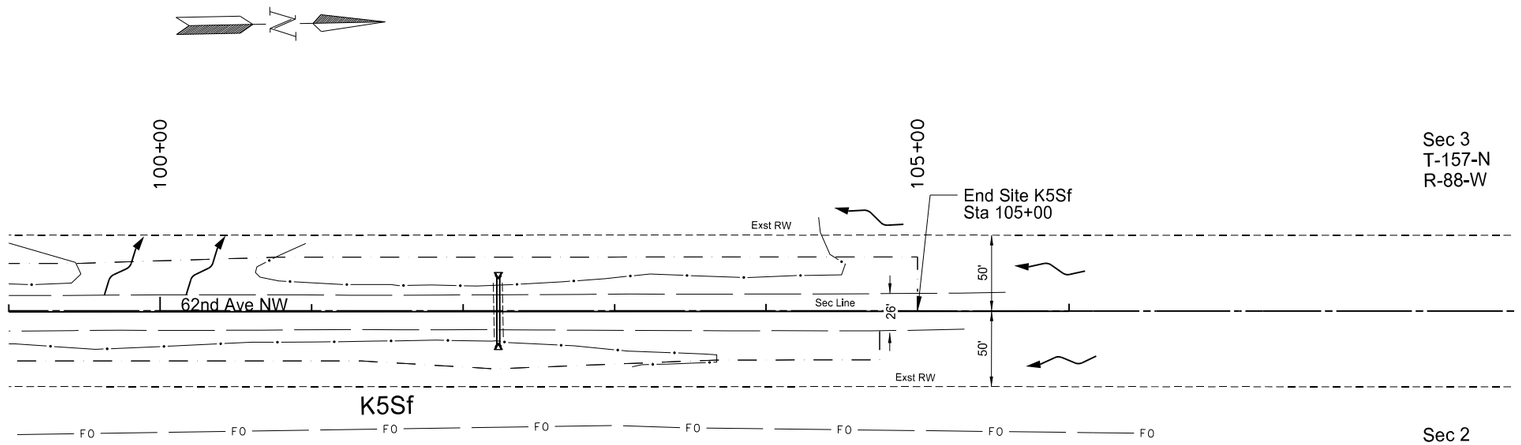


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Plan and Profile Sheet

Site K5Sf
Inslope Erosion Repair
Missile Access Road - K5S
Mountrail County

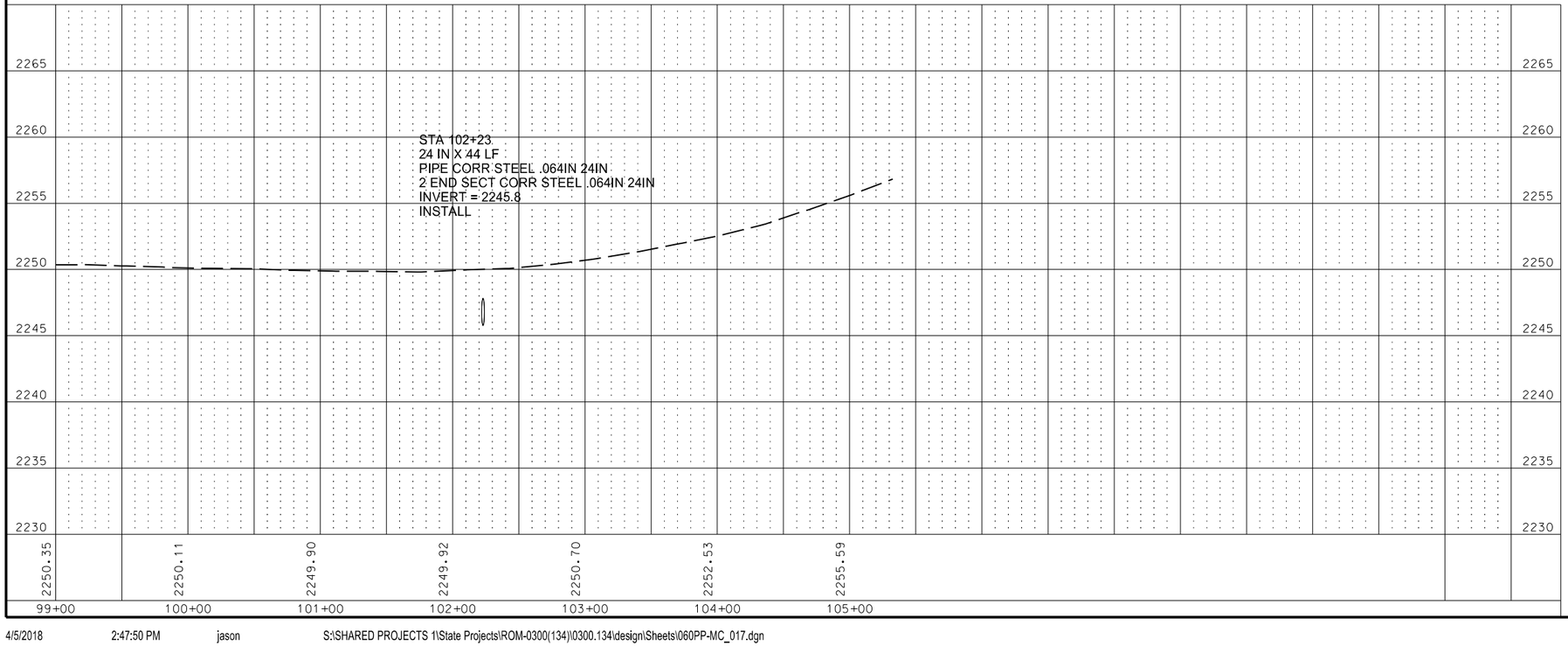
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	60	17



Spec	Code	Description	Quantity	Unit
202	0174	Removal of Pipe all Types and Sizes		
		Sta 102+23	37	LF
		Total =	37	LF
709	0151	Geosynthetic Material Type R1		
		Sta 102+23	25	SY
		Total =	25	SY
714	5035	Pipe Corr Steel .064IN 24IN		
		Sta 102+23	44	LF
		Total =	44	LF
714	5820	End Sect Corr Steel .64IN 24IN		
		Sta 102+23	2	EA
		Total =	2	EA

STA 102+23
24 IN X 37 LF CSP (Poor)
REMOVE

STA 102+23
24 IN X 44 LF
PIPE CORR STEEL .064IN 24IN
2 END SECT CORR STEEL .064IN 24IN
INVERT = 2245.8
INSTALL

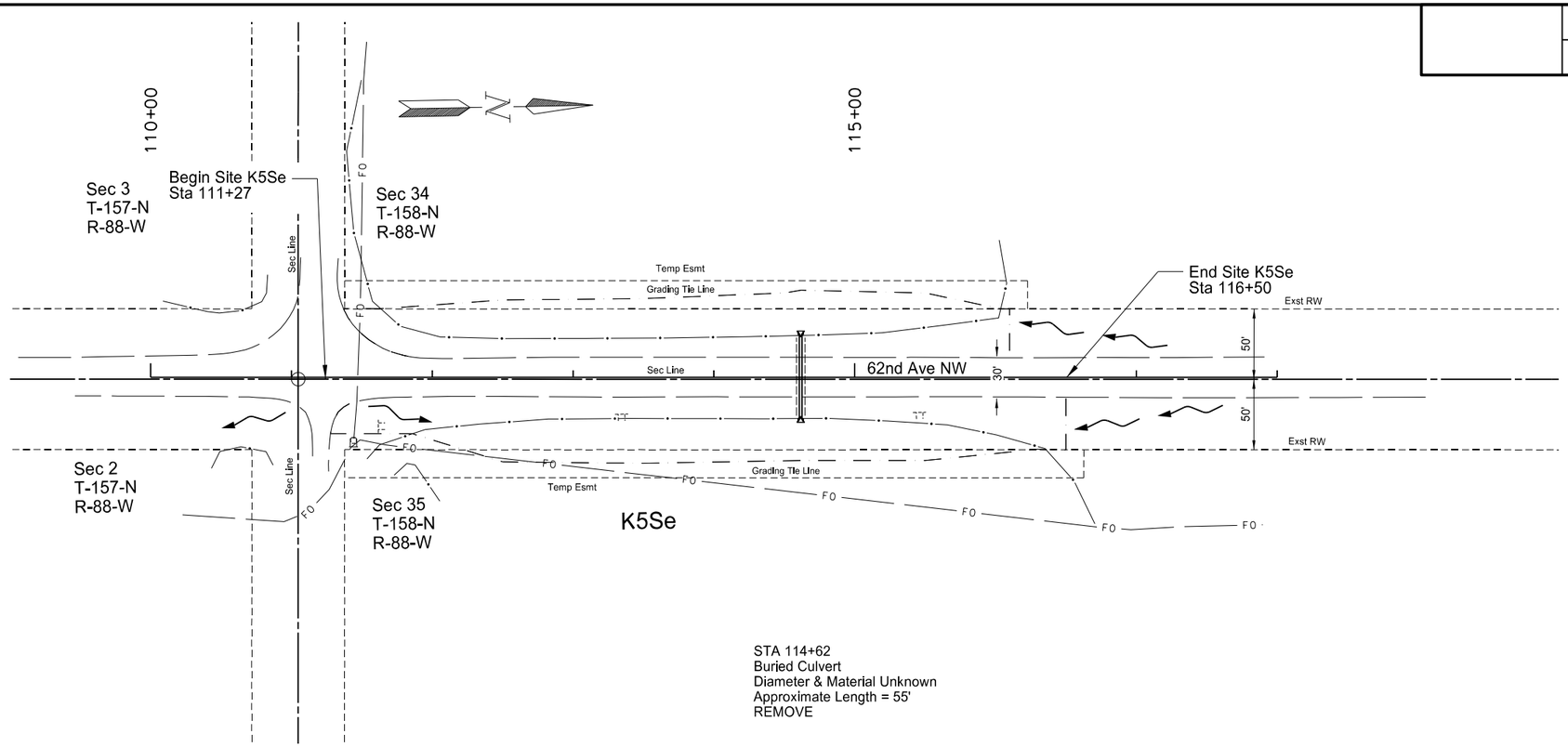


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Plan and Profile Sheet

Site K5Sf
Inslope Erosion Repair
Missile Access Road - K5S
Mountrail County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	ROM-0300(134)	60	18



STA 114+62
Buried Culvert
Diameter & Material Unknown
Approximate Length = 55'
REMOVE

STA 114+62
24 IN X 58 LF
PIPE CORR STEEL .064IN 24IN
2 END SECT CORR STEEL .064IN 24IN
INVERT = 2245.8
INSTALL

2275 2270 2265 2260 2255 2250 2245 2240

2256.03 2253.90 2252.03 2251.03 2251.27 2252.23 2253.52 2255.45 2257.34

110+00 111+00 112+00 113+00 114+00 115+00 116+00 117+00 118+00

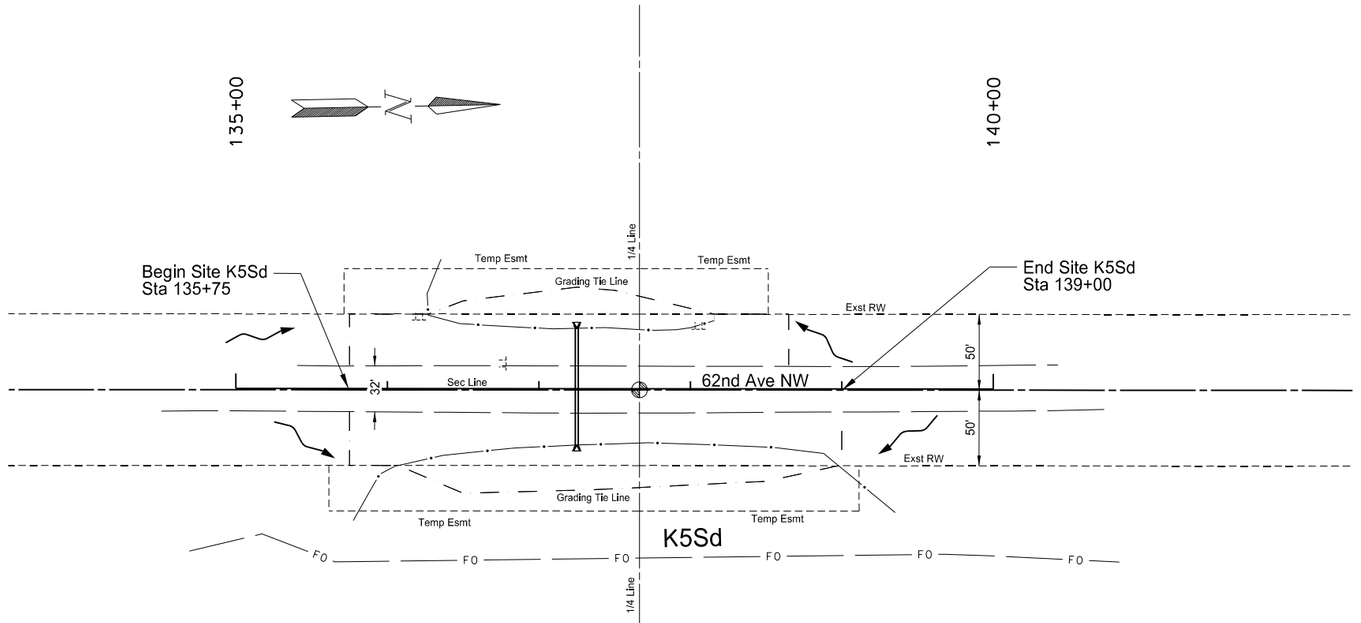
Spec	Code	Description	Quantity	Unit
202	0174	Removal of Pipe all Types and Sizes Sta 114+62	55	LF
		Total =	55	LF
709	0151	Geosynthetic Material Type R1 Sta 114+62	33	SY
		Total =	33	SY
714	5035	Pipe Corr Steel .064IN 24IN Sta 114+62	58	LF
		Total =	58	LF
714	5820	End Sect Corr Steel .64IN 24IN Sta 114+62	2	EA
		Total =	2	EA

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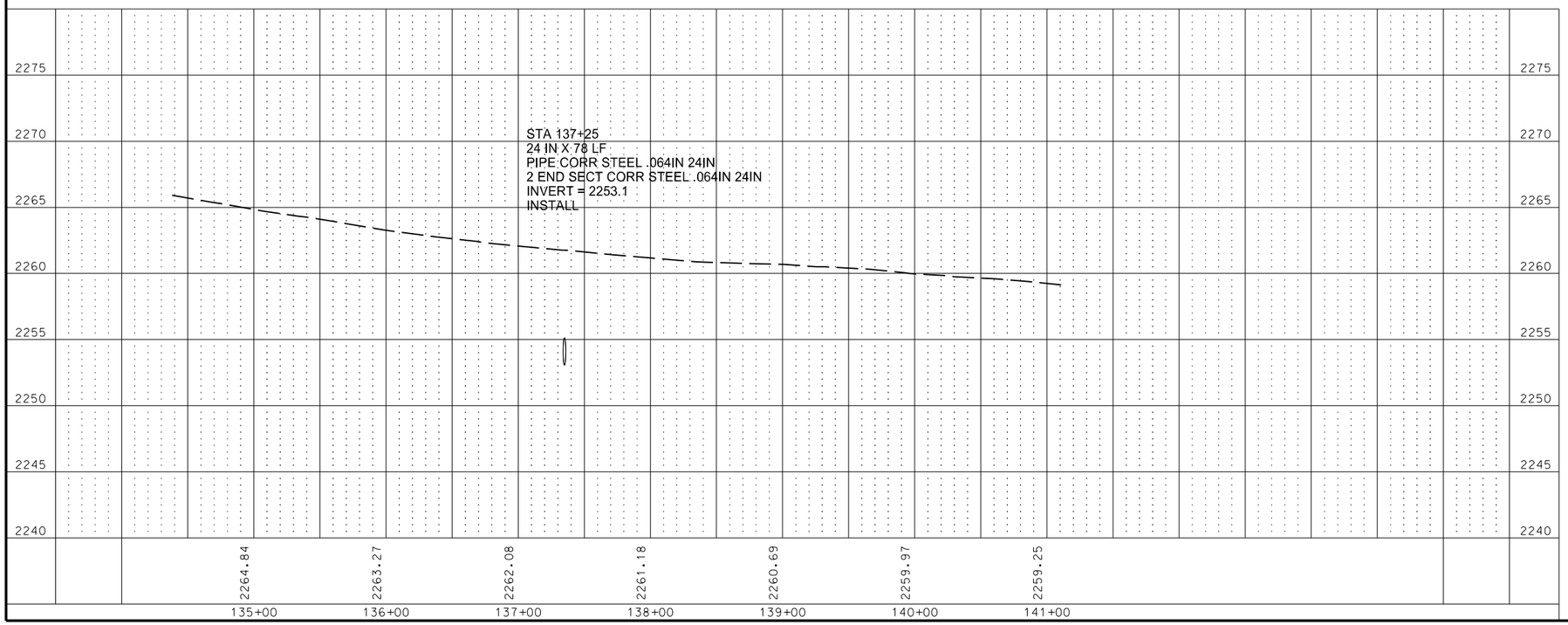
Plan and Profile Sheet

Site K5Se
Inslope Erosion Repair
Missile Access Road - K5S
Mountrail County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	60	19



Spec	Code	Description	Quantity	Unit
202	0174	Removal of Pipe all Types and Sizes		
		Sta 137+25	77	LF
		Total =	77	LF
709	0151	Geosynthetic Material Type R1		
		Sta 137+25	45	SY
		Total =	45	SY
714	5035	Pipe Corr Steel .064IN 24IN		
		Sta 137+25	78	LF
		Total =	78	LF
714	5820	End Sect Corr Steel .64IN 24IN		
		Sta 137+25	2	EA
		Total =	2	EA

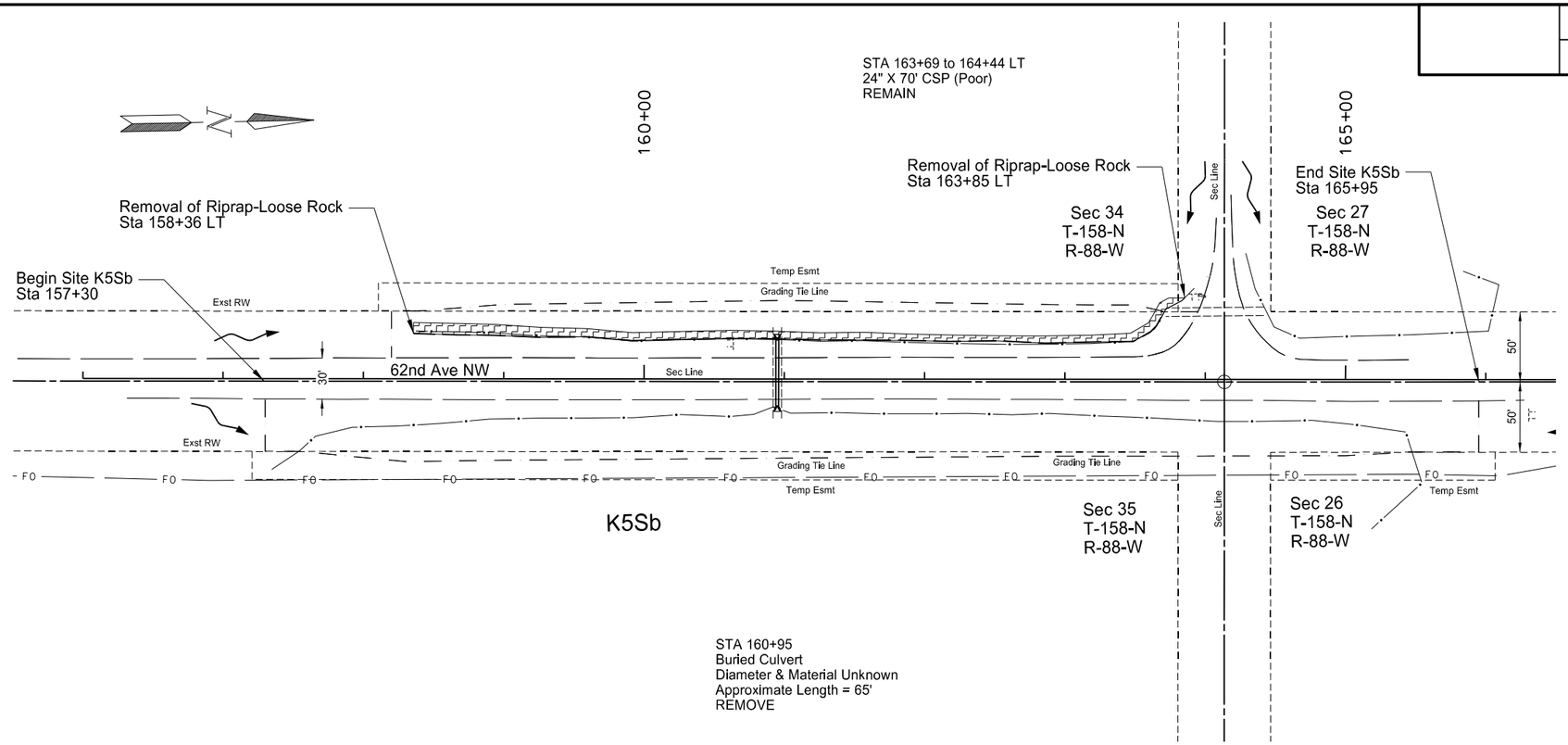


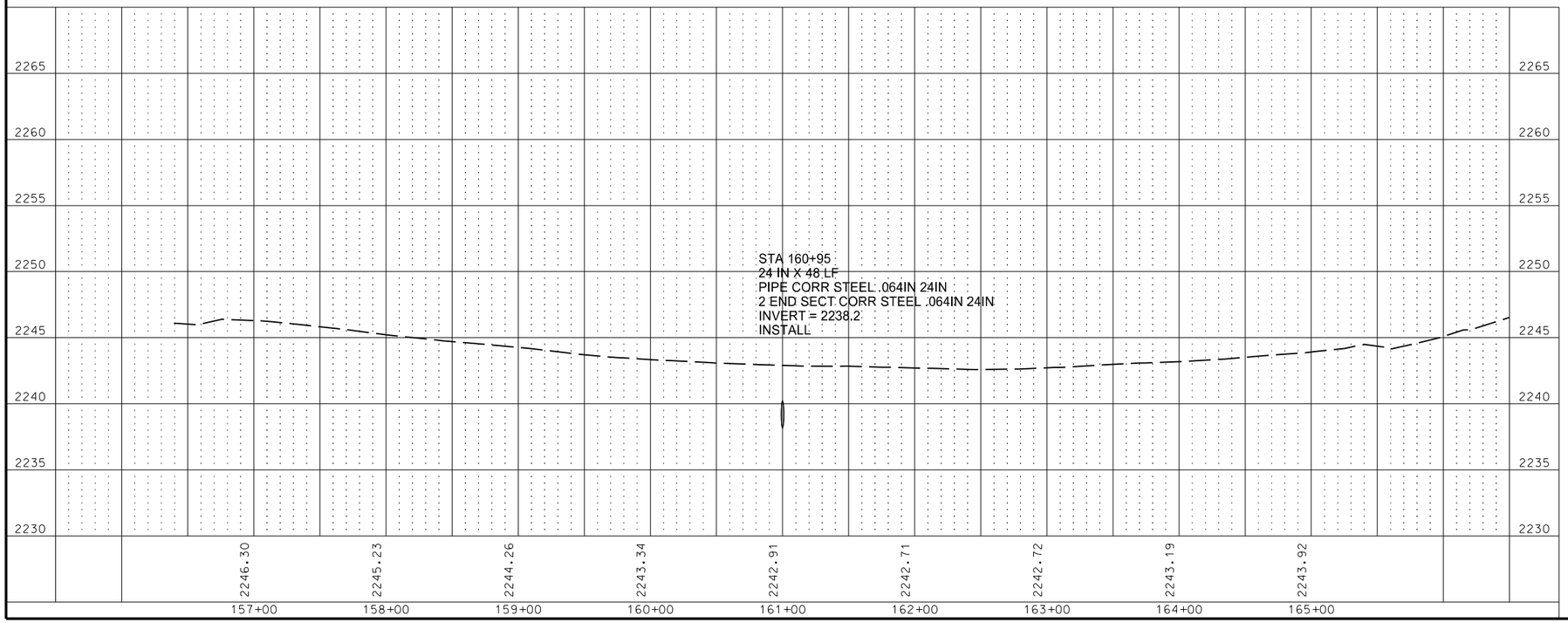
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Plan and Profile Sheet

Site K5Sd
Inslope Erosion Repair
Missile Access Road - K5S
Mountrail County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	ROM-0300(134)	60	20





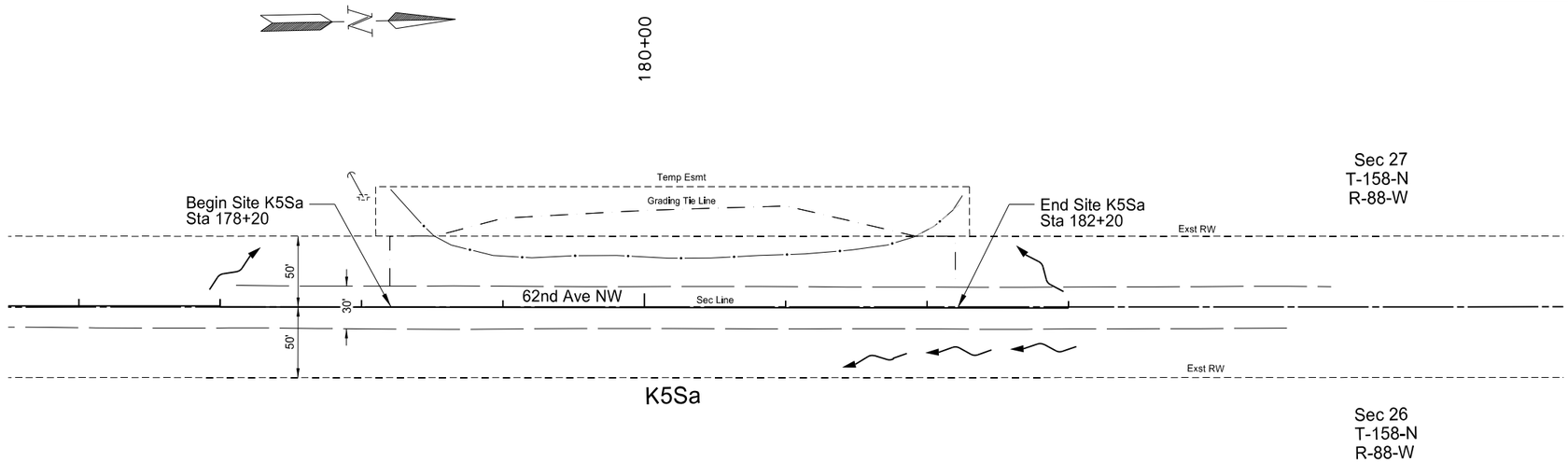
Spec	Code	Description	Quantity	Unit
202	0174	Removal of Pipe all Types and Sizes Sta 160+95	65	LF
		Total =	65	LF
202	0400	Removal of Riprap-Loose Rock Sta 158+36 LT to 163+85 LT	236	CY
		Total =	236	CY
709	0151	Geosynthetic Material Type R1 Sta 160+95	37	SY
		Total =	37	SY
714	5035	Pipe Corr Steel .064IN 24IN Sta 160+95	48	LF
		Total =	48	LF
714	5820	End Sect Corr Steel .64IN 24IN Sta 160+95	2	EA
		Total =	2	EA

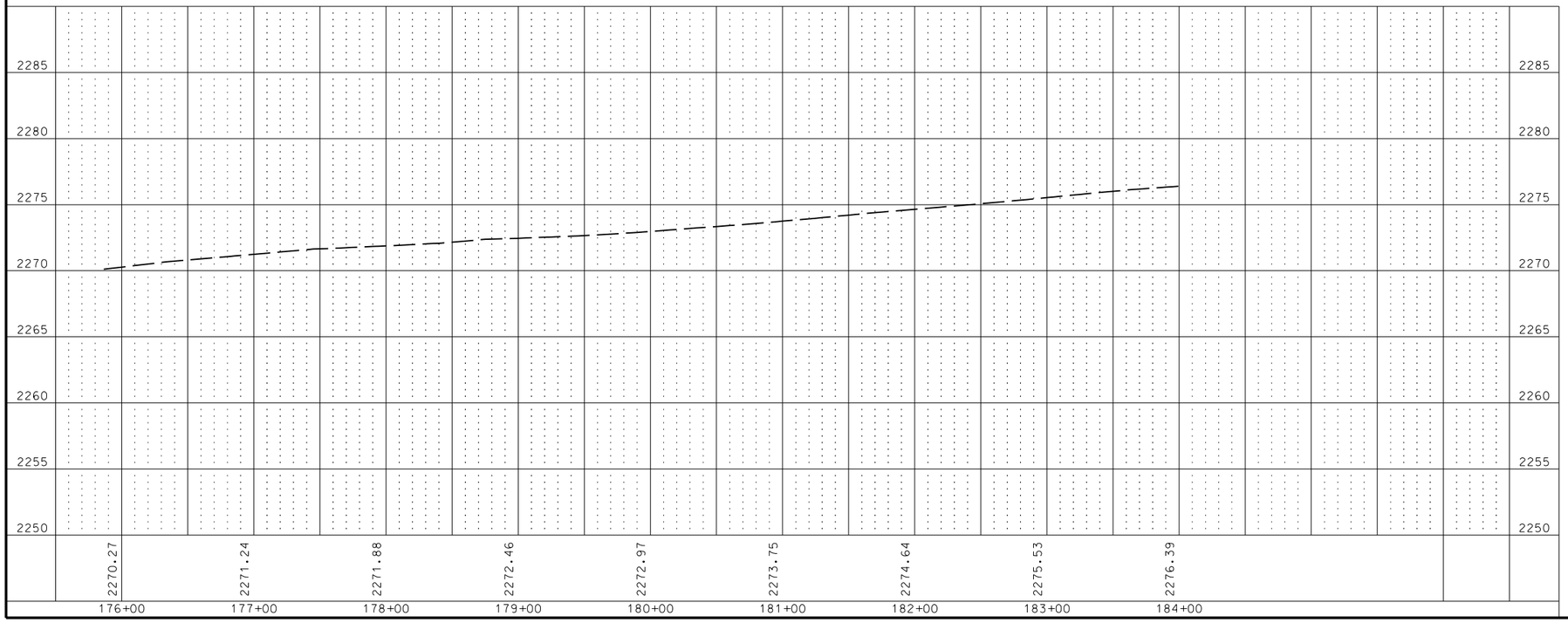
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Plan and Profile Sheet

Site K5Sb
Inslope Erosion Repair
Missile Access Road - K5S
Mountrail County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	60	21



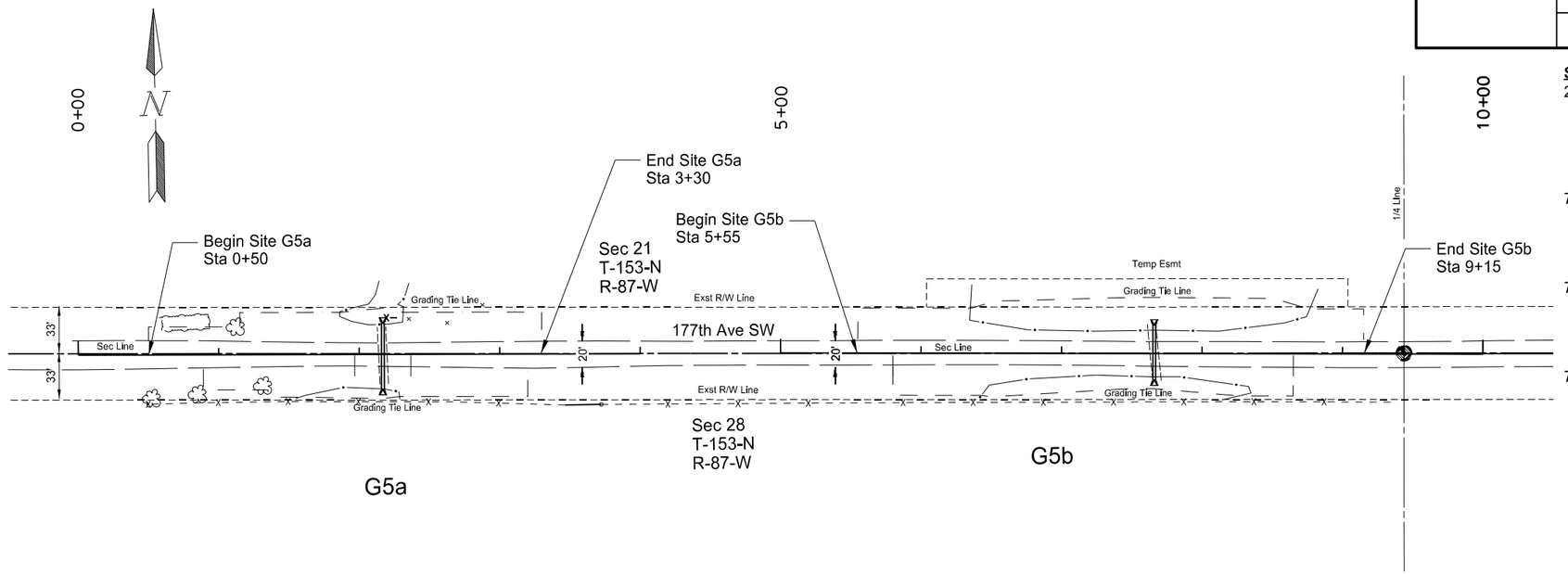


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Plan and Profile Sheet

Site K5Sa
Inslope Erosion Repair
Missile Access Road - K5S
Mountrail County

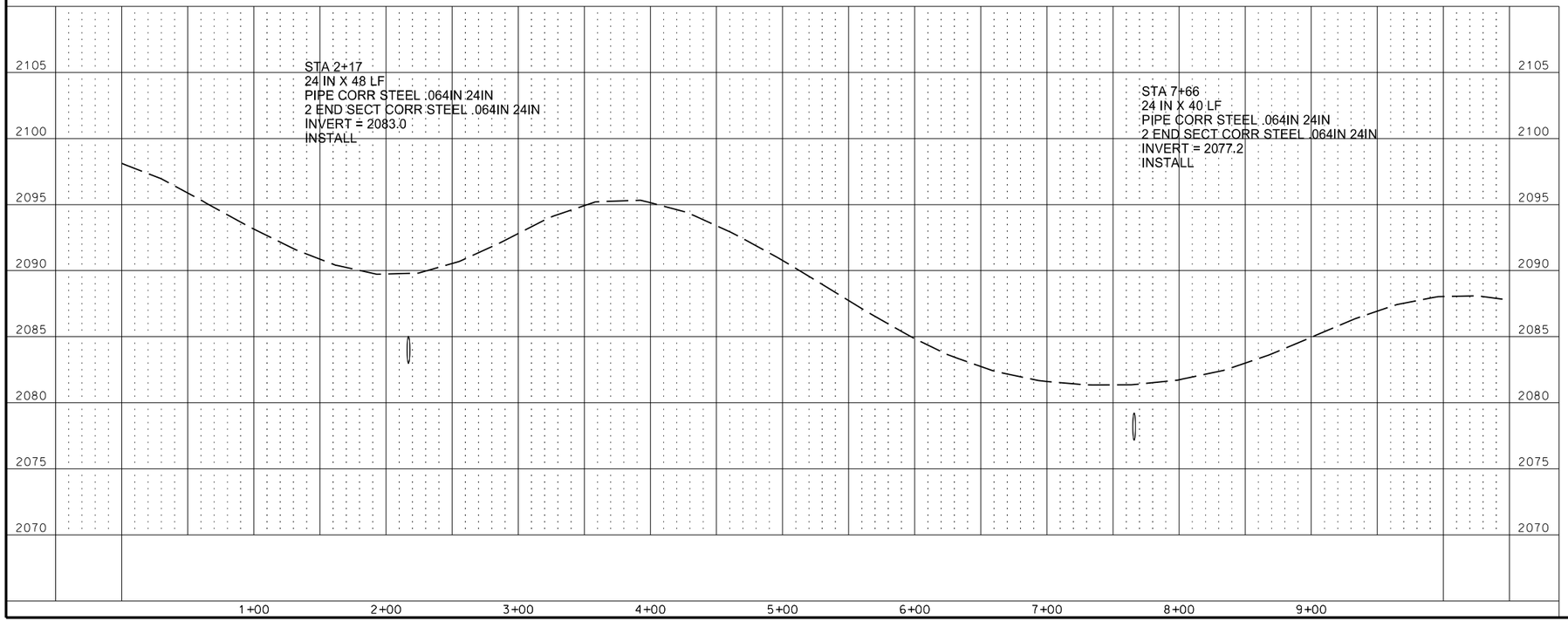
STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	ROM-0300(134)	60	22



Spec	Code	Description	Quantity	Unit
202	0174	Removal of Pipe all Types and Sizes		
		Sta 2+17	40	LF
		Sta 7+66	40	LF
		Total =	80	LF
709	0151	Geosynthetic Material Type R1		
		Sta 2+17	27	SY
		Sta 7+66	23	SY
		Total =	50	SY
714	5035	Pipe Corr Steel .064IN 24IN		
		Sta 2+17	48	LF
		Sta 7+66	40	LF
		Total =	88	LF
714	5820	End Sect Corr Steel .64IN 24IN		
		Sta 2+17	2	EA
		Sta 7+66	2	EA
		Total =	4	EA

STA 2+17
18 IN X 40 LF (Fair)
REMOVE

STA 7+66
18 IN X 40 LF (Fair)
REMOVE

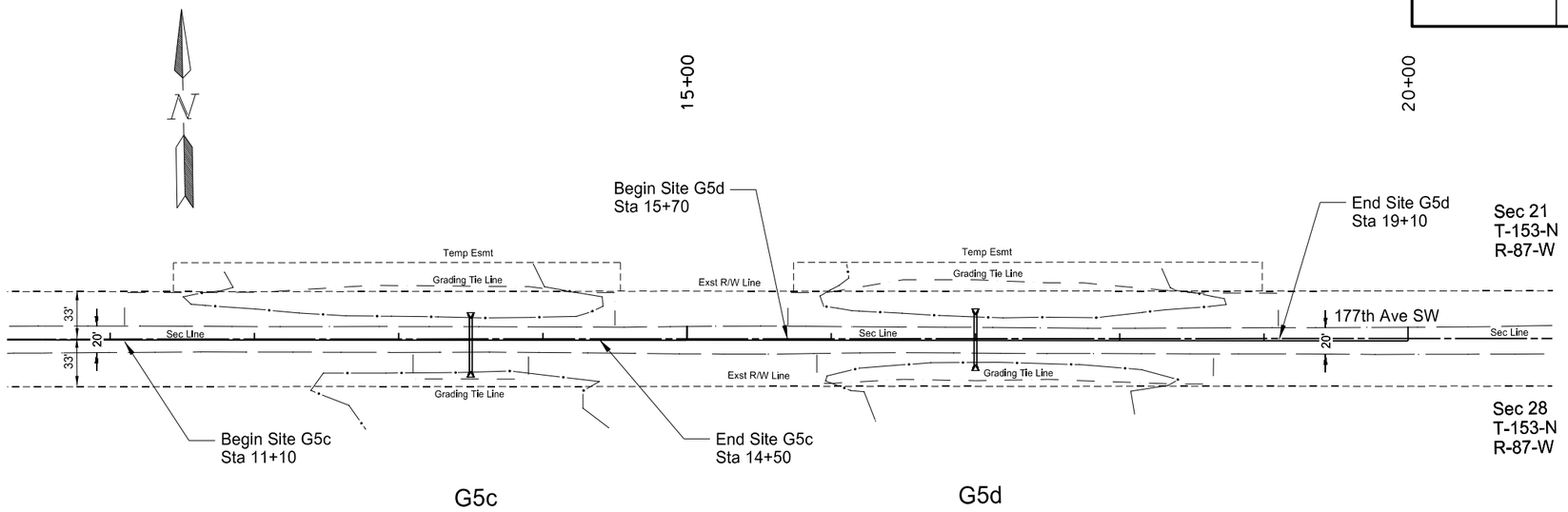


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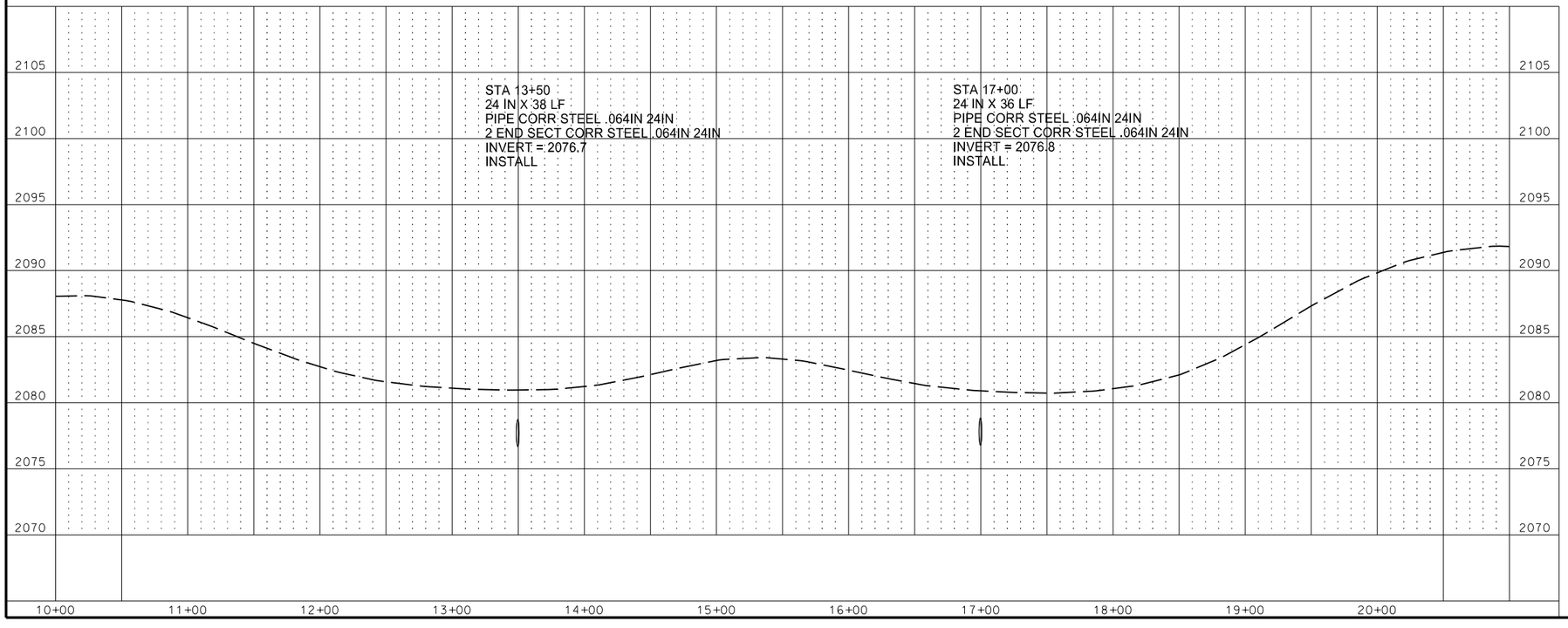
Plan and Profile Sheet

Site G5a & b
Inslope Erosion Repair
Missile Access Road - G5
Ward County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	60	23



Spec	Code	Description	Quantity	Unit
709	0151	Geosynthetic Material Type R1		
		Sta 13+50	22	SY
		Sta 17+00	21	SY
		Total =	43	SY
714	5035	Pipe Corr Steel .064IN 24IN		
		Sta 13+50	38	LF
		Sta 17+00	36	LF
		Total =	74	LF
714	5820	End Sect Corr Steel .64IN 24IN		
		Sta 13+50	2	EA
		Sta 17+00	2	EA
		Total =	4	EA

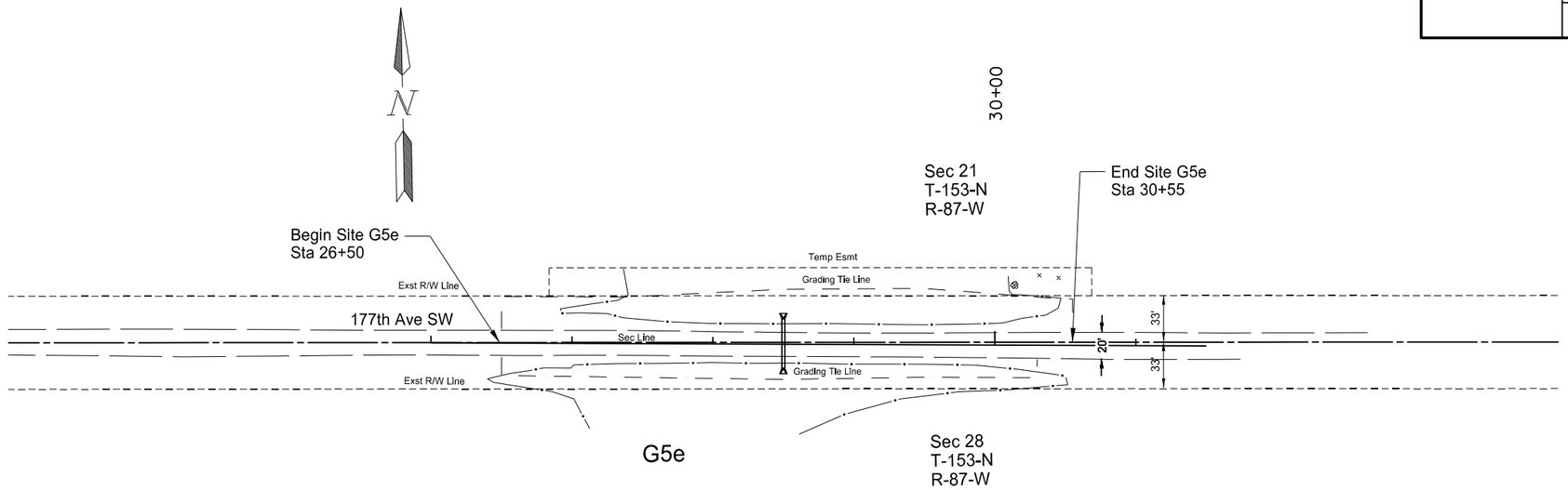


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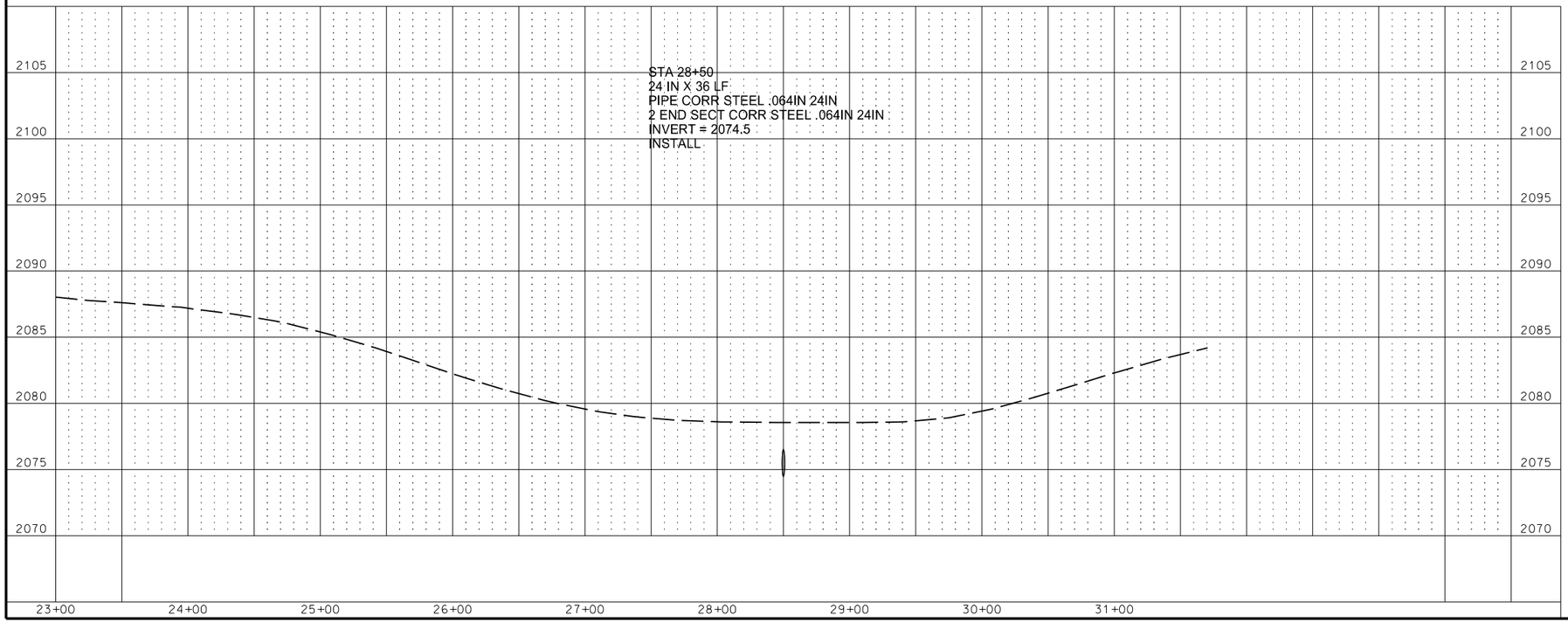
Plan and Profile Sheet

Site G5c & b
Inslope Erosion Repair
Missile Access Road - G5
Ward County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	60	24



Spec	Code	Description	Quantity	Unit
709	0151	Geosynthetic Material Type R1		
		Sta 28+50	21	SY
		Total =	21	SY
714	5035	Pipe Corr Steel .064IN 24IN		
		Sta 28+50	36	LF
		Total =	36	LF
714	5820	End Sect Corr Steel .64IN 24IN		
		Sta 28+50	2	EA
		Total =	2	EA

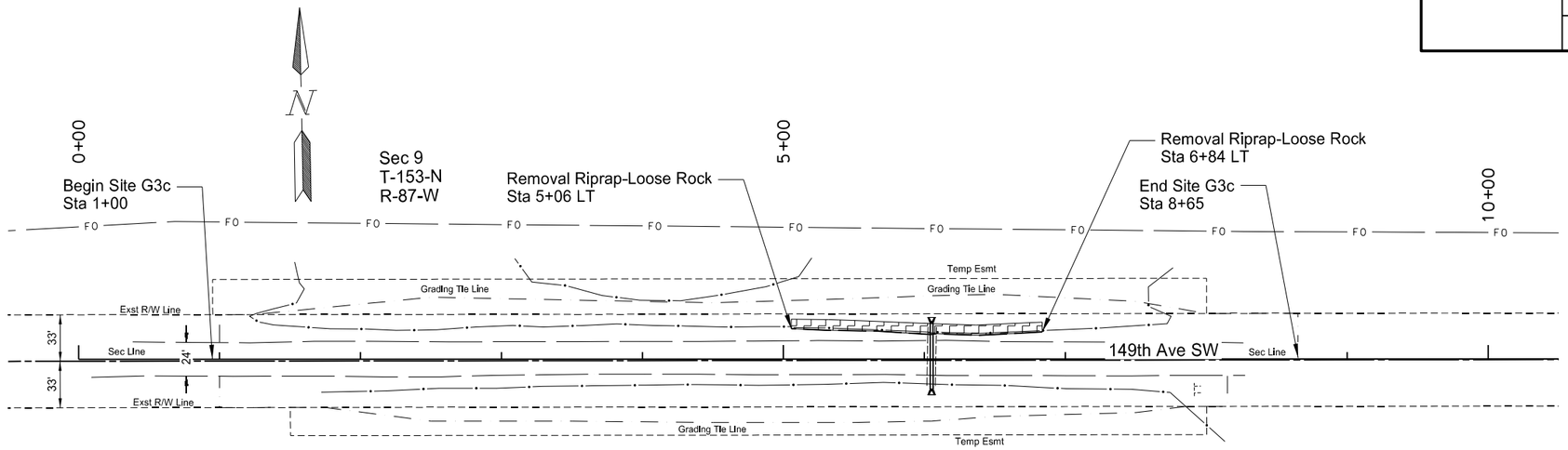


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Plan and Profile Sheet

Site G5e
Inslope Erosion Repair
Missile Access Road - G5
Ward County

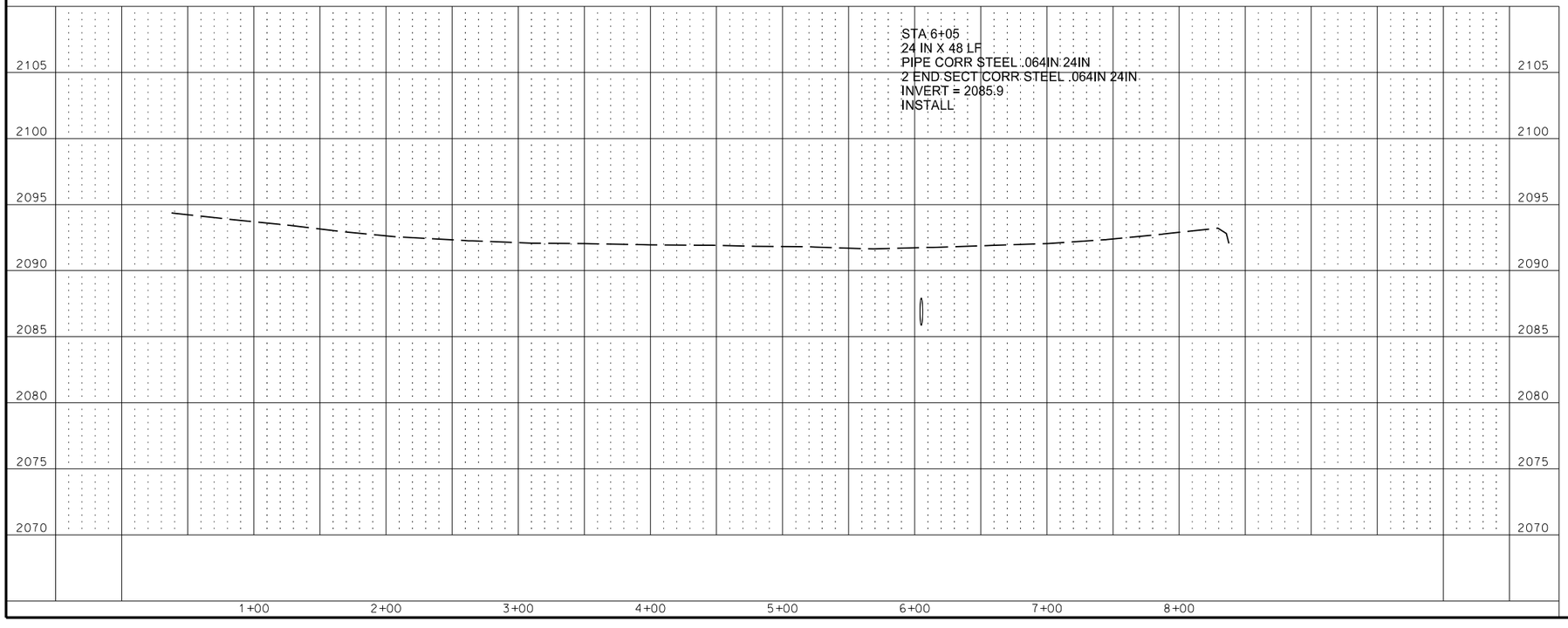
STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	ROM-0300(134)	60	25



Spec	Code	Description	Quantity	Unit
202	0174	Removal of Pipe all Types and Sizes		
		Sta 6+05	42	LF
		Total =	42	LF
202	0400	Removal of Riprap-Loose Rock		
		Sta 5+06 LT to 6+84 LT	95	CY
		Total =	95	CY
709	0151	Geosynthetic Material Type R1		
		Sta 6+05	27	SY
		Total =	27	SY
714	5035	Pipe Corr Steel .064IN 24IN		
		Sta 6+05	48	LF
		Total =	48	LF
714	5820	End Sect Corr Steel .64IN 24IN		
		Sta 6+05	2	EA
		Total =	2	EA

STA 6+05
18 IN X 42 LF CSP (Fair)
REMOVE

STA 6+05
24 IN X 48 LF
PIPE CORR STEEL .064IN 24IN
2 END SECT CORR STEEL .064IN 24IN
INVERT = 2085.9
INSTALL

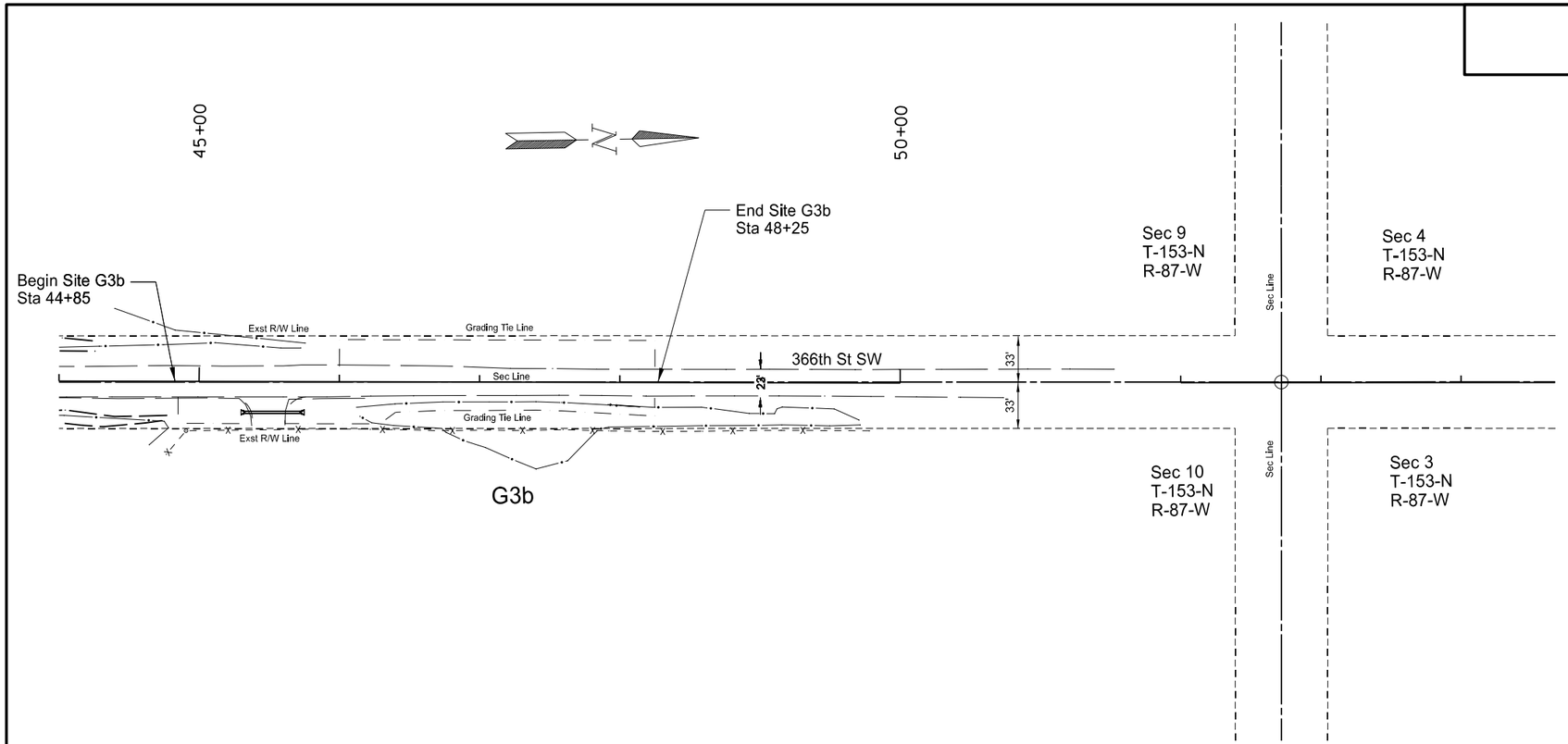


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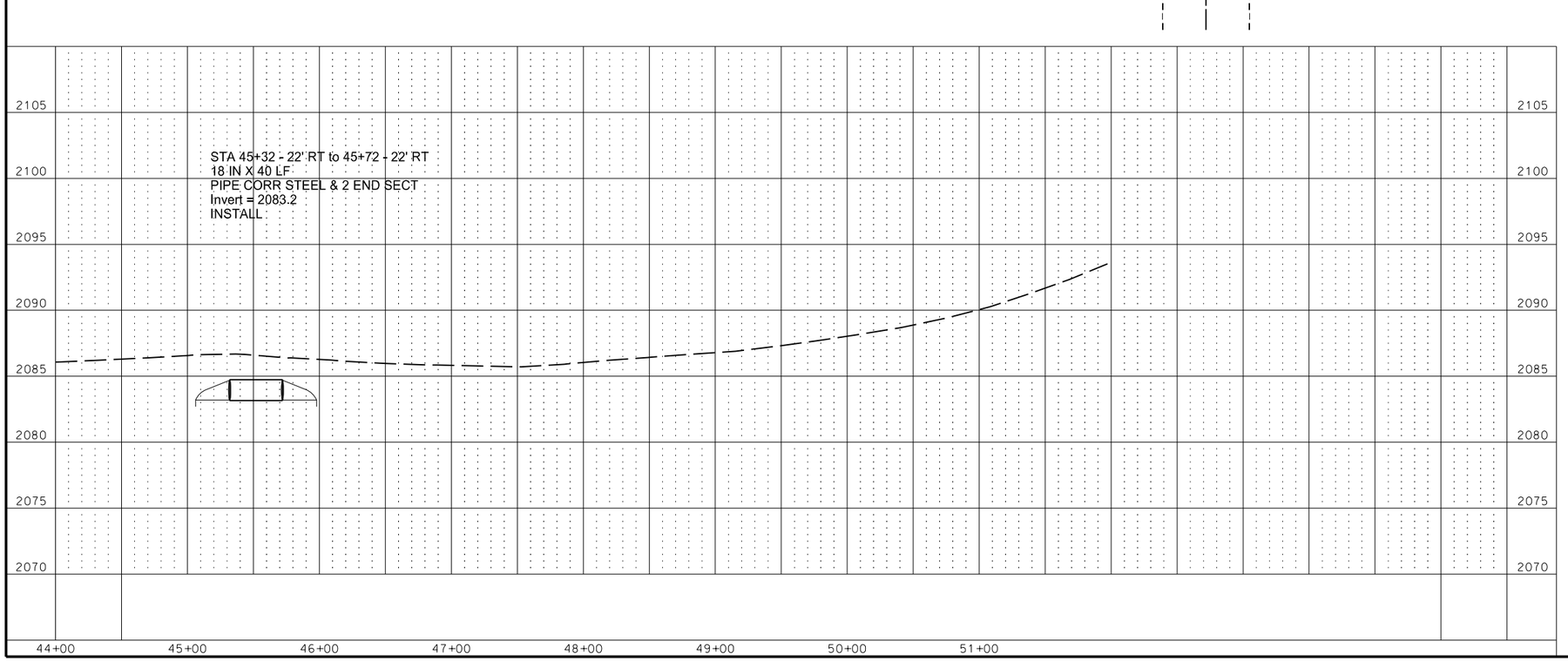
Plan and Profile Sheet

Site G3c
Inslope Erosion Repair
Missile Access Road - G3
Ward County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	ROM-0300(134)	60	26



Spec	Code	Description	Quantity	Unit
709	0151	Geosynthetic Material Type R1		
		Sta 45+32 & 45+72 (22' RT)	21	SY
		Total =	21	SY
714	5015	Pipe Corr Steel .064IN 18IN		
		Sta 45+32 to 45+72 (22' RT)	40	LF
		Total =	40	LF
714	5810	End Sect Corr Steel .64IN 18IN		
		Sta 45+32 to 45+72 (22' RT)	2	EA
		Total =	2	EA

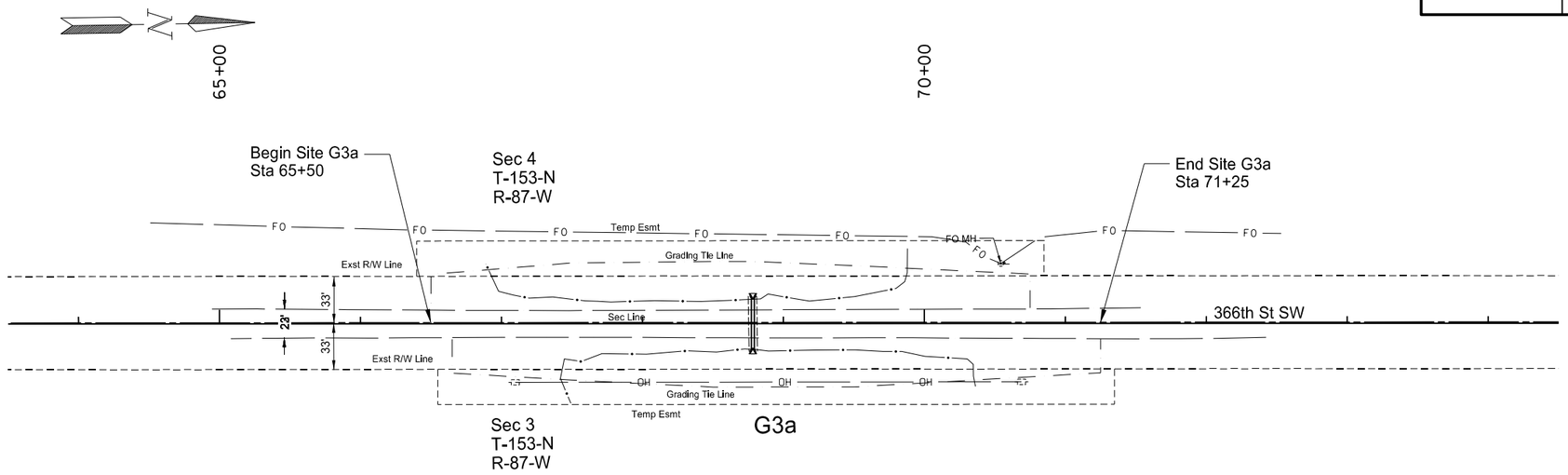


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Plan and Profile Sheet

Site G3b
Inslope Erosion Repair
Missile Access Road - G3
Ward County

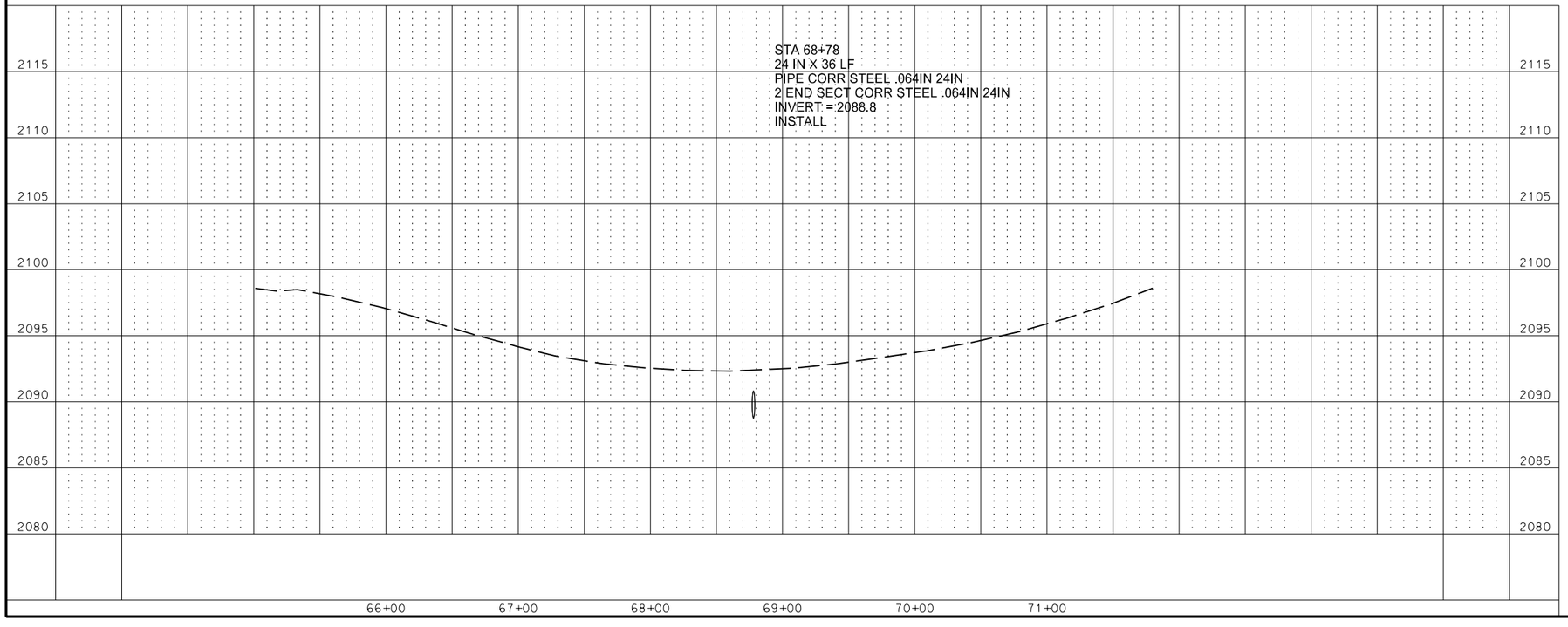
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	60	27



Spec	Code	Description	Quantity	Unit
202	0174	Removal of Pipe all Types and Sizes Sta 68+78	40	LF
		Total =	40	LF
709	0151	Geosynthetic Material Type R1 Sta 68+78	21	SY
		Total =	21	SY
714	5035	Pipe Corr Steel .064IN 24IN Sta 68+78	36	LF
		Total =	36	LF
714	5820	End Sect Corr Steel .64IN 24IN Sta 68+78	2	EA
		Total =	2	EA

STA 68+78
18 IN X 40 LF CSP (Fair)
REMOVE

STA 68+78
24 IN X 36 LF
PIPE CORR STEEL .064IN 24IN
2 END SECT CORR STEEL .064IN 24IN
INVERT = 2088.8
INSTALL

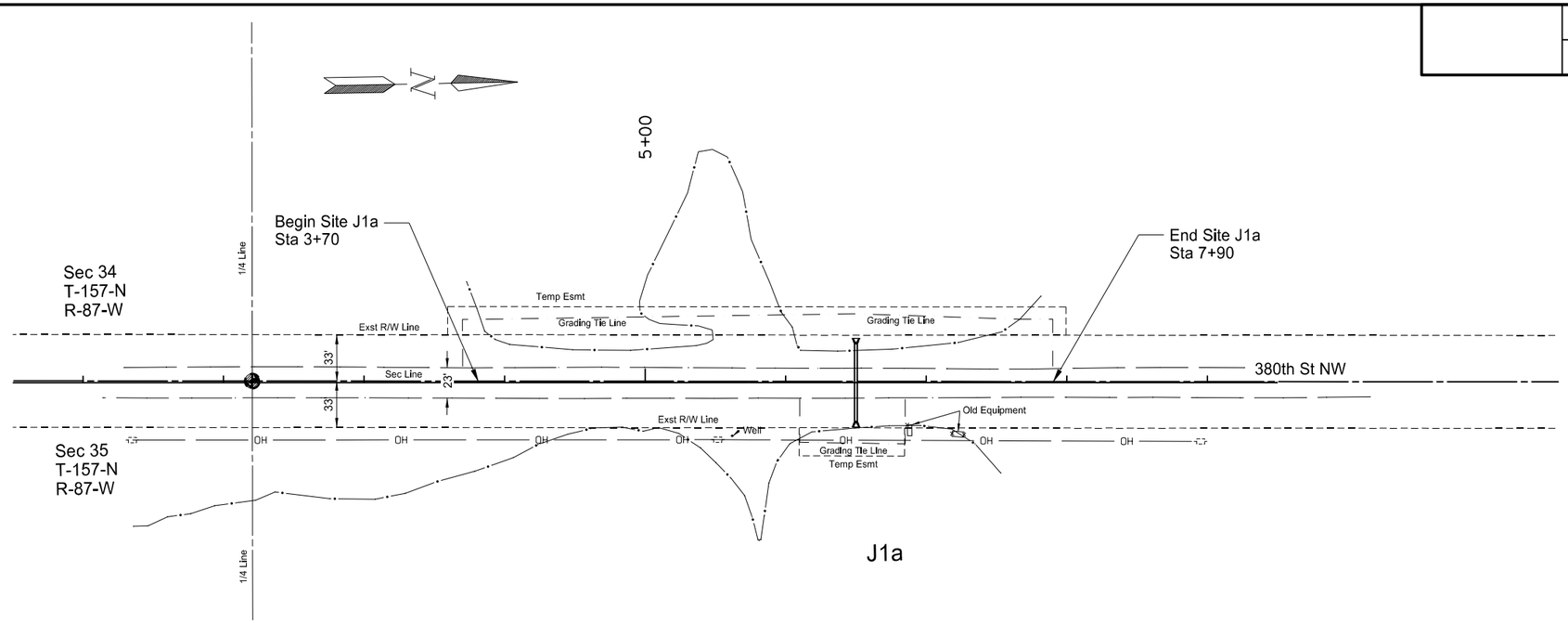


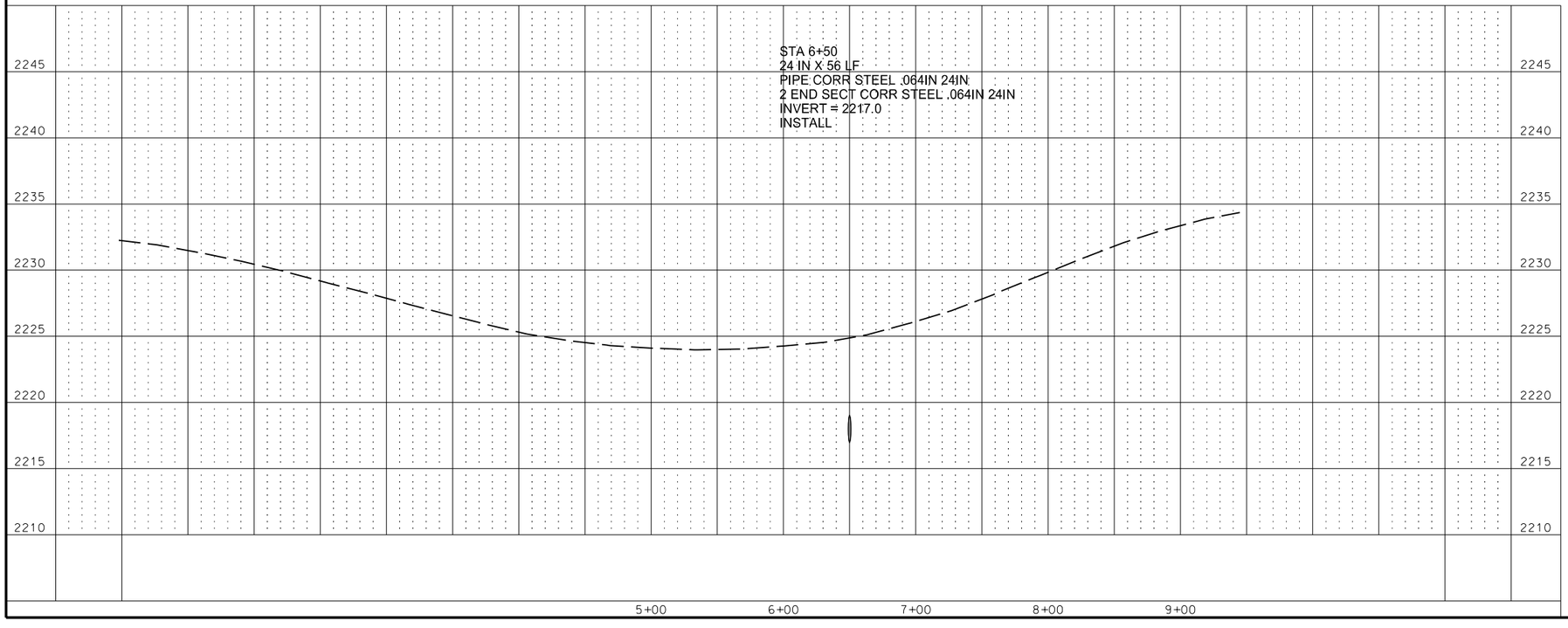
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Plan and Profile Sheet

Site G3a
Inslope Erosion Repair
Missile Access Road - G3
Ward County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	ROM-0300(134)	60	28





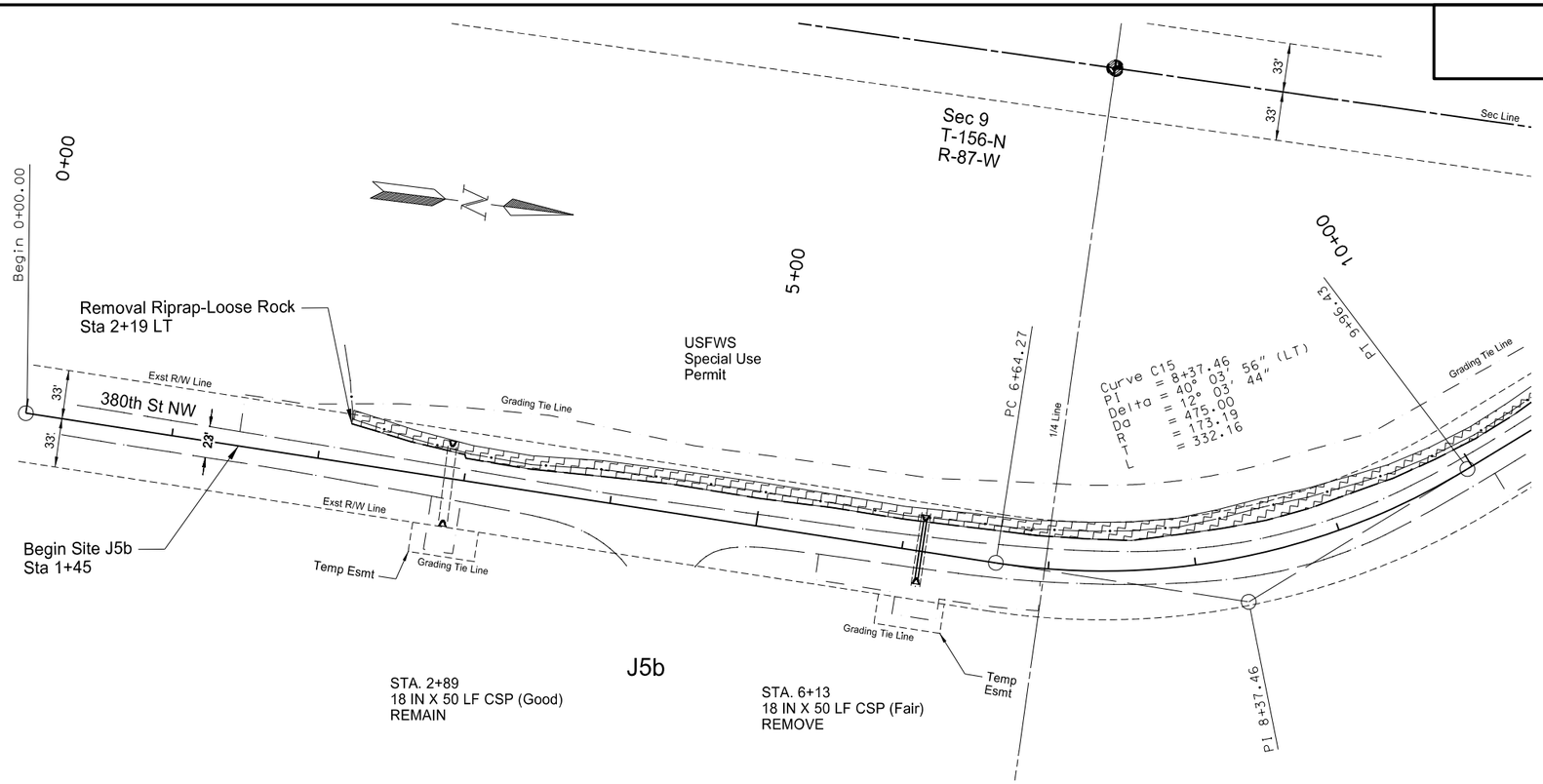
Spec	Code	Description	Quantity	Unit
709	0151	Geosynthetic Material Type R1		
		Sta 6+50	32	SY
		Total =	32	SY
714	5035	Pipe Corr Steel .064IN 24IN		
		Sta 6+50	56	LF
		Total =	56	LF
714	5820	End Sect Corr Steel .64IN 24IN		
		Sta 6+50	2	EA
		Total =	2	EA

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Plan and Profile Sheet

Site J1a
Inslope Erosion Repair
Missile Access Road - J1
Ward County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	ROM-0300(134)	60	29

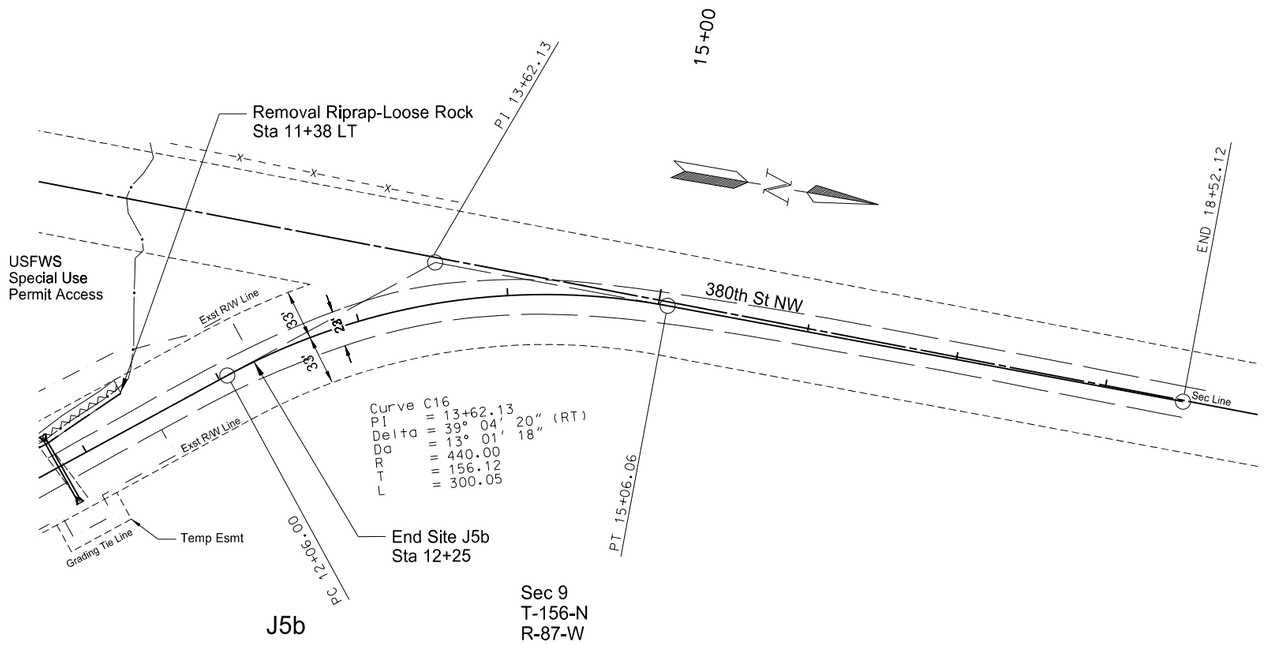


Spec	Code	Description	Quantity	Unit
202	0174	Removal of Pipe all Types and Sizes Sta 6+13	50	LF
		Total =	50	LF
202	0400	Removal of Riprap-Loose Rock Sta 2+19 LT to 11+38 LT	675	CY
		Total =	675	CY
709	0151	Geosynthetic Material Type R1 Sta 6+13	23	SY
		Total =	23	SY
714	5035	Pipe Corr Steel .064IN 24IN Sta 6+13	40	LF
		Total =	40	LF
714	5810	End Sect Corr Steel .64IN 18IN Sta 2+89	2	EA
		Total =	2	EA
714	5820	End Sect Corr Steel .64IN 24IN Sta 6+13	2	EA
		Total =	2	EA

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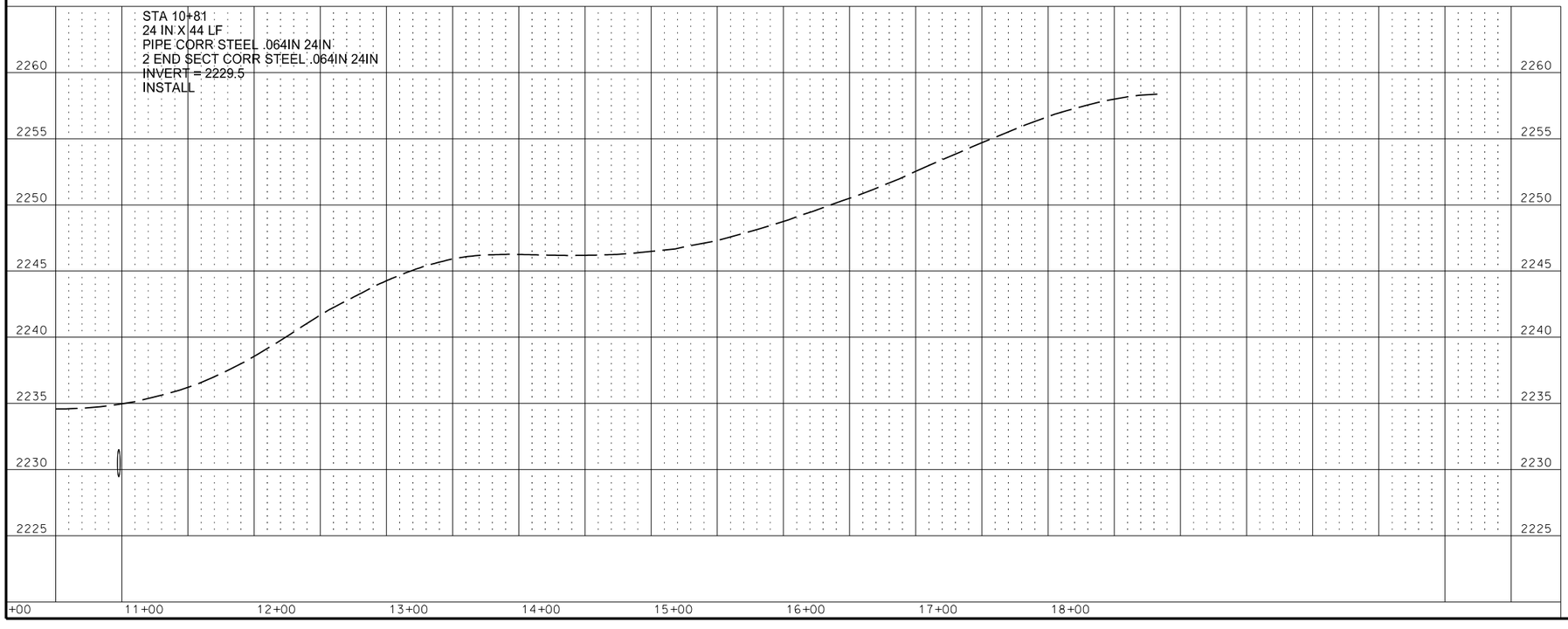
Plan and Profile Sheet

Site J5b
Inslope Erosion Repair
Missile Access Road - J5
Ward County



	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	60	30

Spec	Code	Description	Quantity	Unit
202	0174	Removal of Pipe all Types and Sizes		
		Sta 10+81	50	LF
		Total =	50	LF
202	0400	Removal Riprap-Loose Rock		
		Quantity Totals are Included on the Previous Sheet		
709	0151	Geosynthetic Material Type R1		
		Sta 10+81	25	SY
		Total =	25	SY
714	5035	Pipe Corr Steel .064IN 24IN		
		Sta 10+81	44	LF
		Total =	44	LF
714	5820	End Sect Corr Steel .64IN 24IN		
		Sta 10+81	2	EA
		Total =	2	EA

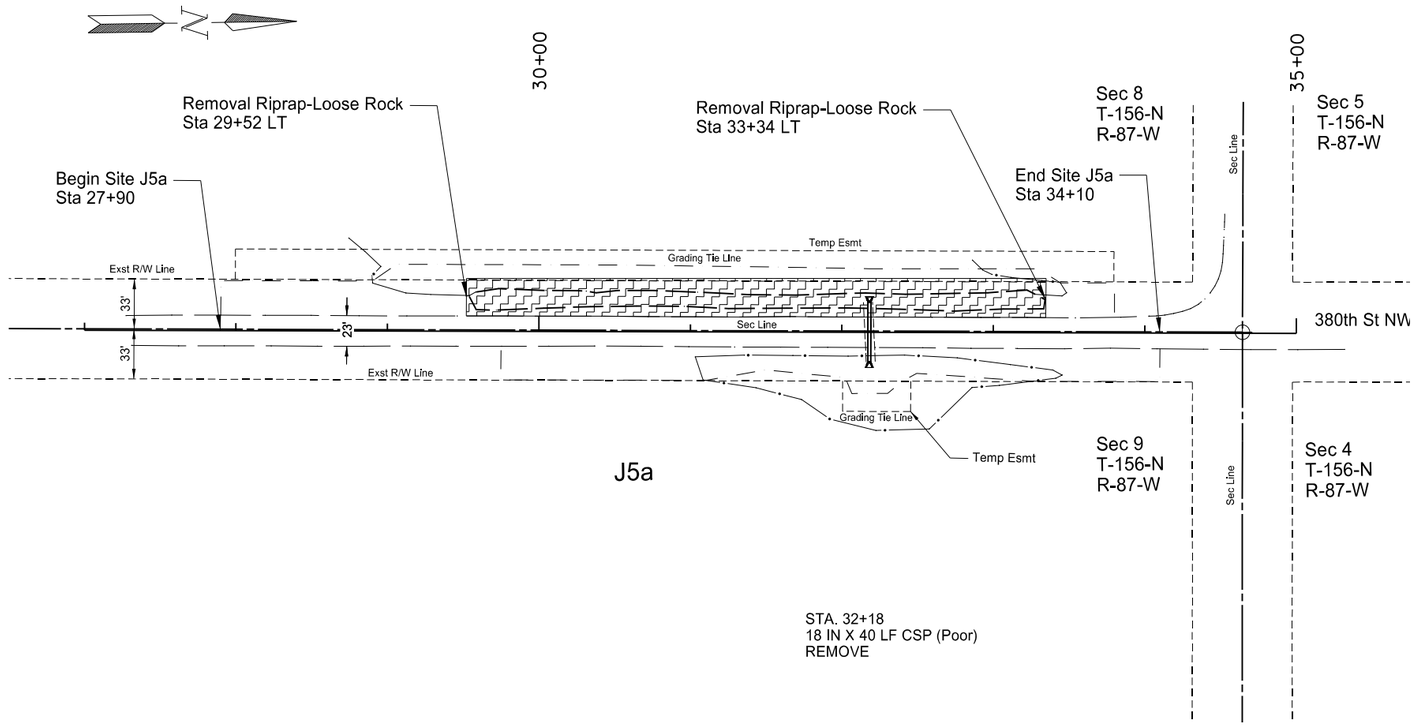


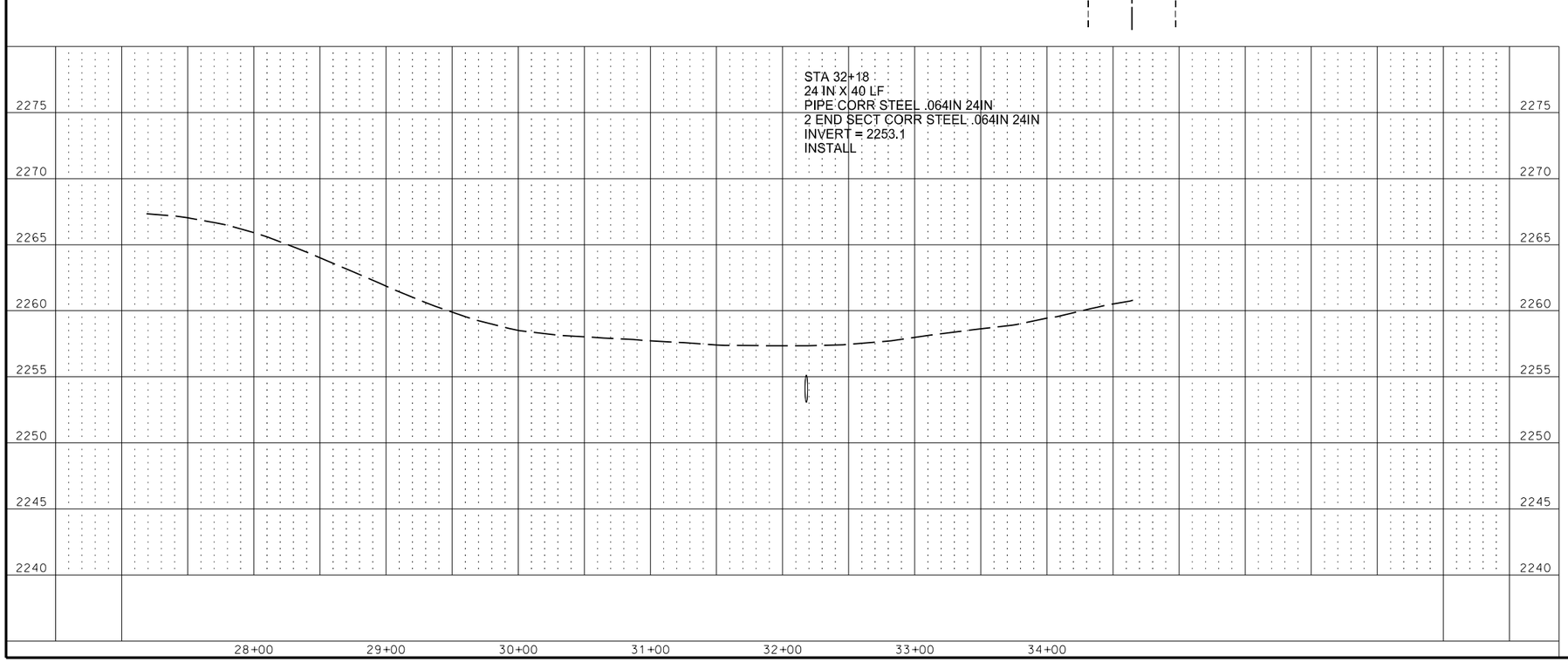
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Plan and Profile Sheet

Site J5b
Inslope Erosion Repair
Missile Access Road - J5
Ward County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	60	31





Spec	Code	Description	Quantity	Unit
202	0174	Removal of Pipe all Types and Sizes Sta 32+18	40	LF
		Total =	40	LF
202	0400	Removal of Riprap-Loose Rock Sta 29+52 LT to 33+34 LT	717	CY
		Total =	717	CY
709	0151	Geosynthetic Material Type R1 Sta 32+18	23	SY
		Total =	23	SY
714	5035	Pipe Corr Steel .064IN 24IN Sta 32+18	40	LF
		Total =	40	LF
714	5820	End Sect Corr Steel .64IN 24IN Sta 32+18	2	EA
		Total =	2	EA

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Plan and Profile Sheet

Site J5a
Inslope Erosion Repair
Missile Access Road - J5
Ward County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	ROM-0300(134)	75	1

Wetland Impact Table

Wetland Number	Location	Wetland Type	Wetland Feature	USACE Jurisdictional Wetlands	Wetland Impacts Acre(s)		USFWS Easement Impacts		Wetland Mitigation Mitigation Required		
					Temp.	Perm.	Temp.	Perm.	EO 11990	USACE	USFWS
1a	Sec. 28, T153N, R87W	Riverine	Natural	YES	0.02	0	0.02	0	N	Y	Y
1b	Sec. 21, T153N, R87W	Riverine	Natural	YES	0.01	0	0.01	0	N	Y	Y
2a	Sec. 28, T153N, R87W	Basin	Natural	NO	0.11	0	0.11	0	N	N	Y
2b	Sec. 21, T153N, R87W	Basin	Natural	NO	0.12	0	0.12	0	N	N	Y
3	Sec. 28, T153N, R87W	Basin	Natural	NO	0.02	0	0.02	0	N	N	Y
4	Sec. 21, T153N, R87W	Basin	Natural	NO	0.04	0	0.04	0	N	N	Y
5	Sec. 28, T153N, R87W	Basin	Natural	NO	0.08	0	0.08	0	N	N	Y
6	Sec. 21, T153N, R87W	Basin	Natural	NO	0.15	0	0.15	0	N	N	Y
7	Sec. 28, T153N, R87W	Basin	Natural	NO	0.09	0	0.09	0	N	N	Y
8	Sec. 21, T153N, R87W	Basin	Natural	NO	0.17	0	0.17	0	N	N	Y
9a	Sec. 16, T153N, R87W	Basin	Natural	NO	0.30	0.14	0.30	0	Y	N	N
9b	Sec. 9, T153N, R87W	Basin	Natural	NO	0.32	0	0.32	0	N	N	N
9c	Sec. 16, T153N, R87W	Basin	Natural	NO	0	0	0	0	N	N	N
10	Sec. 9, T153N, R87W	Basin	Natural	NO	0	0	0	0	N	N	N
11	Sec. 10, T153N, R87W	Basin	Natural	NO	0.06	0	0.06	0	N	N	Y
12a	Sec. 4, T153N, R87W	Basin	Natural	NO	0.17	0.07	0.17	0	Y	N	N
12b	Sec. 3, T153N, R87W	Basin	Natural	NO	0.16	0.07	0.16	0	Y	N	Y
13a	Sec. 26, T155N, R89W	Basin	Natural	YES	0.16	0.02	0.16	0	Y	Y	Y
13b	Sec. 25, T155N, R89W	Basin	Natural	YES	0.28	0	0.28	0	N	Y	Y
14	Sec. 24, T155N, R89W	Basin	Natural	NO	0.16	0	0.16	0	N	N	N
15	Sec. 23, T155N, R89W	Basin	Natural	NO	0.29	0	0.29	0	N	N	N
16a	Sec. 25, T155N, R89W	Ditch	Artificial	NO	0	0.01	0	0	N	N	N
16b	Sec. 25, T155N, R89W	Basin	Natural	NO	0.04	0.05	0.04	0	Y	N	N
16c	Sec. 25, T155N, R89W	Ditch	Artificial	NO	0.02	0.01	0.02	0	N	N	N
16d	Sec. 25, T155N, R89W	Basin	Natural	NO	0.02	0.01	0.02	0	N	N	N
17a	Sec. 24, T155N, R89W	Basin	Natural	NO	0.16	0	0.16	0	N	N	N
17b	Sec. 24, T155N, R89W	Ditch	Artificial	NO	0.02	0	0.02	0	N	N	N
18a	Sec. 13, T155N, R89W	Basin	Natural	NO	0.30	0.12	0.30	0	Y	N	N
18b	Sec. 13, T155N, R89W	Ditch	Artificial	NO	0.06	0.01	0.06	0	N	N	N

Wetland Impact Table

Wetland Number	Location	Wetland Type	Wetland Feature	USACE Jurisdictional Wetlands	Wetland Impacts Acre(s)		USFWS Easement Impacts		Wetland Mitigation Mitigation Required		
					Temp.	Perm.	Temp.	Perm.	EO 11990	USACE	USFWS
18c	Sec. 13, T155N, R89W	Basin	Natural	NO	0.02	0	0.02	0	N	N	N
19	Sec. 14, T155N, R89W	Basin	Natural	NO	0.09	0	0.09	0	N	N	N
20	Sec. 12, T155N, R89W	Basin	Natural	NO	0.02	0	0.02	0	N	N	N
21	Sec. 11, T155N, R89W	Basin	Natural	NO	0.02	0	0.02	0	N	N	N
22a	Sec. 35, T156N, R89W	Basin	Natural	NO	0.03	0	0.03	0	N	N	Y
22b	Sec. 36, T156N, R89W	Basin	Natural	NO	0.03	0	0.03	0	N	N	N
23b	Sec. 23, T156N, R89W	Ditch	Artificial	NO	0.04	0	0.04	0	N	N	N
26a	Sec. 9, T156N, R87W	Ditch	Artificial	NO	0	0	0	0	N	N	N
26c	Sec. 9, T156N, R87W	Ditch	Artificial	NO	0	0	0	0	N	N	N
26d	Sec. 9, T156N, R87W	Basin	Natural	NO	0.02	0	0.02	0	N	N	N
26e	Sec. 9, T156N, R87W	Slope	Natural	NO	0.02	0	0.02	0	N	N	Y
27a	Sec. 9, T156N, R87W	Basin	Natural	NO	0.15	0	0.15	0	N	N	N
27b	Sec. 10, T156N, R87W	Ditch	Artificial	NO	0.02	0	0.02	0	N	N	N
27c	Sec. 10, T156N, R87W	Basin	Natural	NO	0.09	0	0.09	0	N	N	Y
28a	Sec. 34, T157N, R87W	Fringe	Natural	NO	0.07	0	0.07	0	N	N	Y
28b	Sec. 34, T157N, R87W	Ditch	Artificial	NO	0.02	0	0.02	0	N	N	Y
28c	Sec. 34, T157N, R87W	Fringe	Natural	NO	0.08	0.03	0.08	0	Y	N	Y
29a	Sec. 35, T157N, R87W	Fringe	Natural	NO	0	0	0	0	N	N	N
29b	Sec. 35, T157N, R87W	Fringe	Natural	NO	0.02	0	0.02	0	N	N	N

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Wetland Tables

Inslope Erosion Repair
Missile Access Roads

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	ROM-0300(134)	75	2

Wetland Impact Table

Wetland Number	Location	Wetland Type	Wetland Feature	USACE Jurisdictional Wetlands[1]	Wetland Impacts Acre(s)		USFWS Easement Impacts		Wetland Mitigation Mitigation Required		
					Temp.	Perm.	Temp.	Perm.	EO 11990	USACE	USFWS
30a	Sec. 10, T157N, R88W	Fringe	Natural	NO	0.12	0	0.12	0	N	N	N
30c	Sec. 10, T157N, R88W	Ditch	Artificial	NO	0.03	0	0.03	0	N	N	N
30d	Sec. 10, T157N, R88W	Ditch	Artificial	NO	0.01	0	0.01	0	N	N	Y
30e	Sec. 10, T157N, R88W	Ditch	Artificial	NO	0.16	0	0.16	0	N	N	Y
31a	Sec. 11, T157N, R88W	Basin	Natural	NO	0.22	0	0.22	0	N	N	Y
31b	Sec. 11, T157N, R88W	Ditch	Artificial	NO	0	0	0	0	N	N	N
32a	Sec. 11, T157N, R88W	Basin	Natural	NO	0.09	0	0.09	0	N	N	N
32c	Sec. 11, T157N, R88W	Ditch	Artificial	NO	0.62	0	0.62	0	N	N	Y
32d	Sec. 11, T157N, R88W	Basin	Natural	NO	0.23	0.04	0.23	0	Y	N	Y
33a	Sec. 3, T157N, R88W	Ditch	Artificial	NO	0.04	0	0.04	0	N	N	N
33b	Sec. 3, T157N, R88W	Basin	Natural	NO	0.11	0	0.11	0	N	N	Y
33c	Sec. 2, T157N, R88W	Ditch	Artificial	NO	0.01	0.01	0.01	0	N	N	N
33d	Sec. 2, T157N, R88W	Fringe	Natural	NO	0.06	0	0.06	0	N	N	N
33e	Sec. 2, T157N, R88W	Ditch	Artificial	NO	0.01	0	0.01	0	N	N	N
33f	Sec. 2, T157N, R88W	Basin	Natural	NO	0.02	0	0.02	0	N	N	N
33g	Sec. 2, T157N, R88W	Ditch	Artificial	NO	0.01	0	0.01	0	N	N	N
33h	Sec. 2, T157N, R88W	Fringe	Natural	NO	0.05	0	0.05	0	N	N	Y
33i	Sec. 2, T157N, R88W	Ditch	Artificial	NO	0.01	0	0.01	0	N	N	N
33j	Sec. 3, T157N, R88W	Basin	Natural	NO	0.06	0	0.06	0	N	N	N
33k	Sec. 3, T157N, R88W	Ditch	Artificial	NO	0.06	0	0.06	0	N	N	N
33l	Sec. 3, T157N, R88W	Basin	Natural	NO	0.12	0	0.12	0	N	N	Y
34a	Sec. 35, T158N, R88W	Ditch	Artificial	NO	0.01	0	0.01	0	N	N	N
34b	Sec. 35, T158N, R88W	Basin	Natural	NO	0.13	0.11	0.0	0	Y	N	N
35	Sec. 35, T158N, R88W	Basin	Natural	NO	0.32	0.12	0.32	0	Y	N	Y
36	Sec. 34, T158N, R88W	Basin	Natural	NO	0.11	0	0.11	0	N	N	Y
37	Sec. 35, T158N, R88W	Basin	Natural	NO	0.18	0.06	0.18	0	Y	N	N
38	Sec. 26 & 35, T158N, R88W	Fringe	Natural	NO	0.51	0	0.51	0	N	N	N
39a	Sec. 34, T158N, R88W	Basin	Natural	NO	0.37	0	0.37	0	N	N	N
39b	Sec. 27, T158N, R88W	Basin	Natural	NO	0	0	0	0	N	N	N
40	Sec. 27, T158N, R88W	Basin	Natural	NO	0.25	0.07	0.25	0	Y	N	Y
41	Sec. 9, T153N, R87W	Basin	Natural	NO	0.06	0.0	0.06	0	N	N	Y
				Totals	**8.05**	**0.95**	**7.92**	**0**			

Other Waters Impact Table

Number	Location	Type	Size Acre(s)	Size Linear Feet	Feature	USACE Jurisdictional[1]	Impacts to Other Waters Acre(s) Temp	Acre(s) Perm	Linear Feet Temp	Linear Feet Perm	Other Water Mitigation Mitigation Required EO 11990
23a	Sec. 23, T156N, R89W	Tributary	0.88	53.03	Natural	NO	0.80	0	34.72	0	N
24	Sec. 23 & 24, T156N, R89W	Tributary	0.78	58.64	Natural	NO	0.66	0	45.95	0	N
25a	Sec. 11, T156N, R89W	Lake/Pond	0.72	65.53	Natural	NO	0.32	0	28.10	0	N
25b	Sec. 12, T156N, R89W	Lake/Pond	0.58	52.34	Natural	NO	0.35	0	28.57	0	N
26b	Sec. 9, T156N, R87W	Lake/Pond	1.39	74.52	Natural	NO	0.61	0	31.08	0	N
30b	Sec. 10 & 13, T157N, R88W	Lake/Pond	3.51	60.77	Natural	NO	1.59	0	35.19	0	N
30f	Sec. 11 & 14, T157N, R88W	Lake/Pond	2.78	46.91	Natural	NO	1.69	0	36.88	0	N
32b	Sec. 10, T157N, R88W	Lake/Pond	1.40	66.69	Natural	NO	0.85	0.18	24.23	16.12	N
		Totals	**12.04**	**478.43**			**6.87**	**0.18**	**264.72**	**16.12**	

[1] A wetland Jurisdictional Determination was issued by the USACE on 9/25/2017; NWO-2017-01369-BIS.

[2] All impacts to natural wetlands (natural/jurisdictional and natural/non-jurisdictional), regardless of size, as well as impacts greater than 0.10 acre to artificial/jurisdictional wetlands require mitigation.

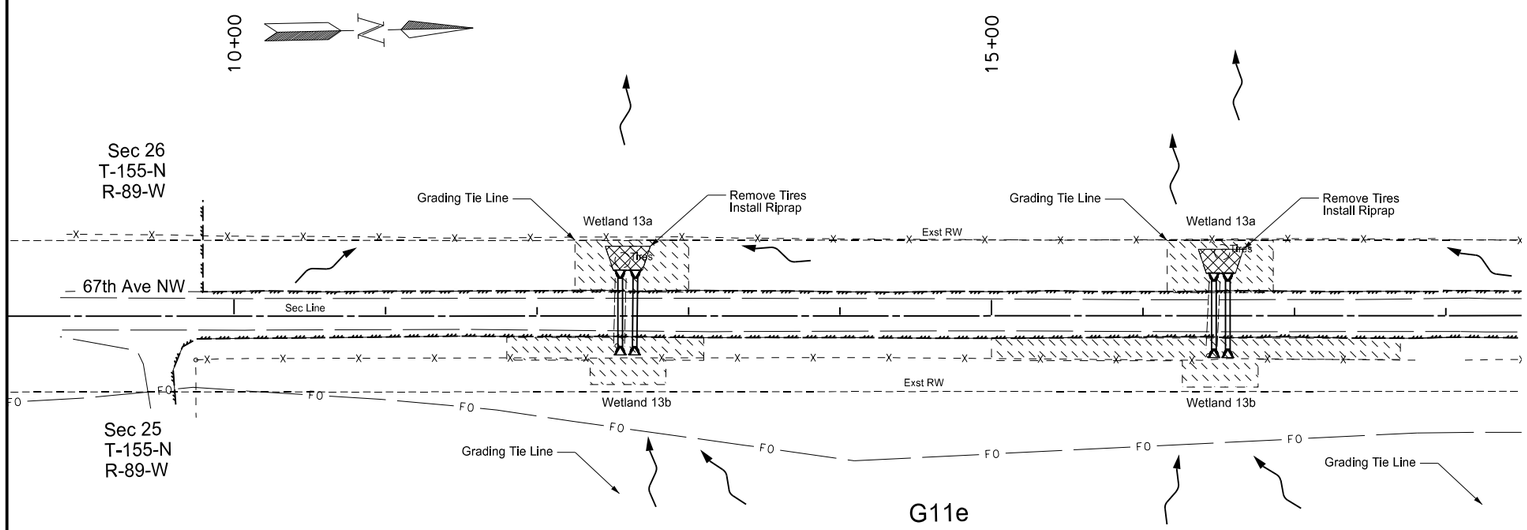
[3] All artificial/non-jurisdictional, deep water (impacts greater than 6.6 feet), Other Waters less than 300 linear feet (determined by the USACE on a case by case), and temporary impacts do not require mitigation.

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Wetland Tables

Inslope Erosion Repair
Missile Access Roads

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	75	3



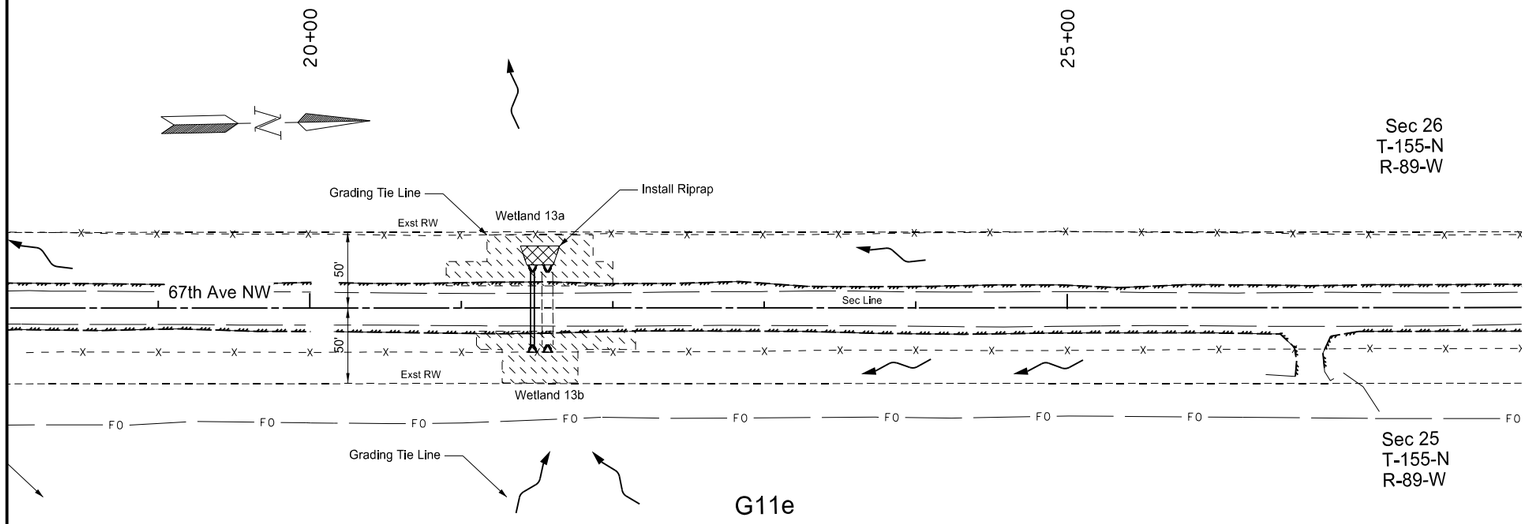
Legend

Temporary Wetland Impact

Permanent Wetland Impact

Wetland 13a Impacts	
Temporary Impact	= 0.16 ACRE
Permanent Impact	= 0.02 ACRE

Wetland 13b Impacts	
Temporary Impact	= 0.28 ACRE
Permanent Impact	= 0.00 ACRE



Legend

Temporary Wetland Impact

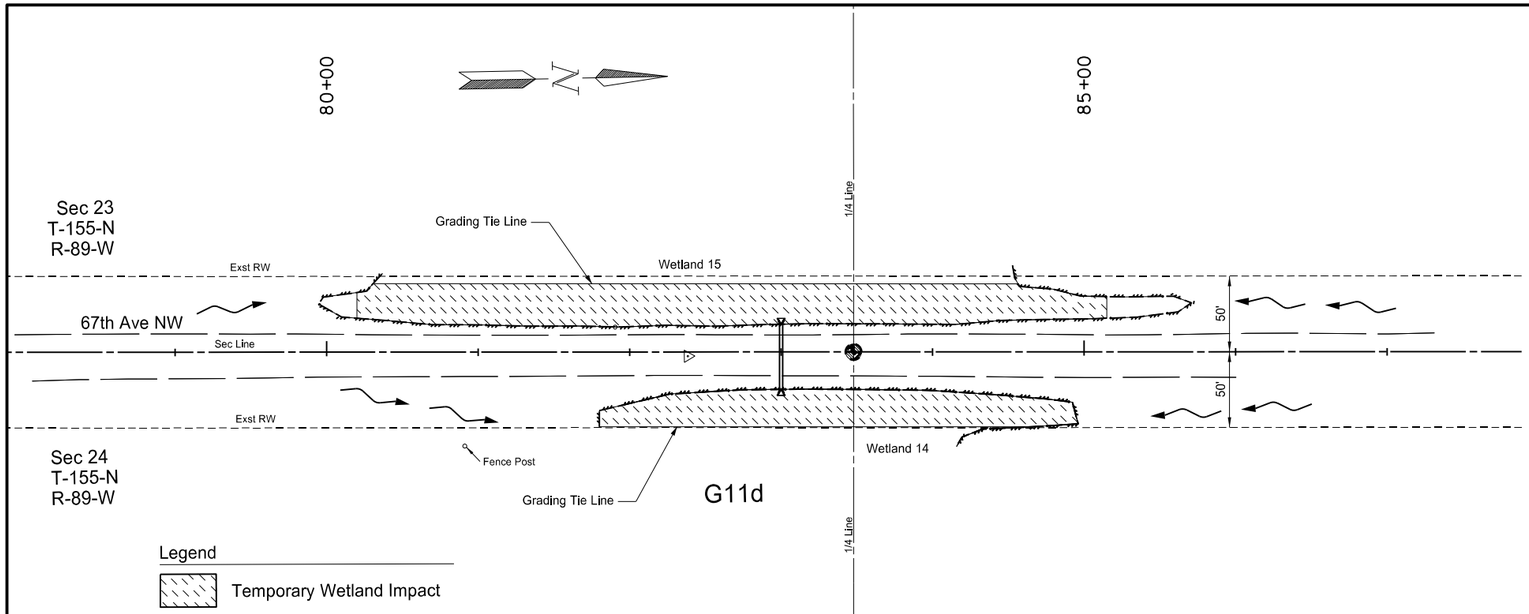
Permanent Wetland Impact

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Wetland Impacts

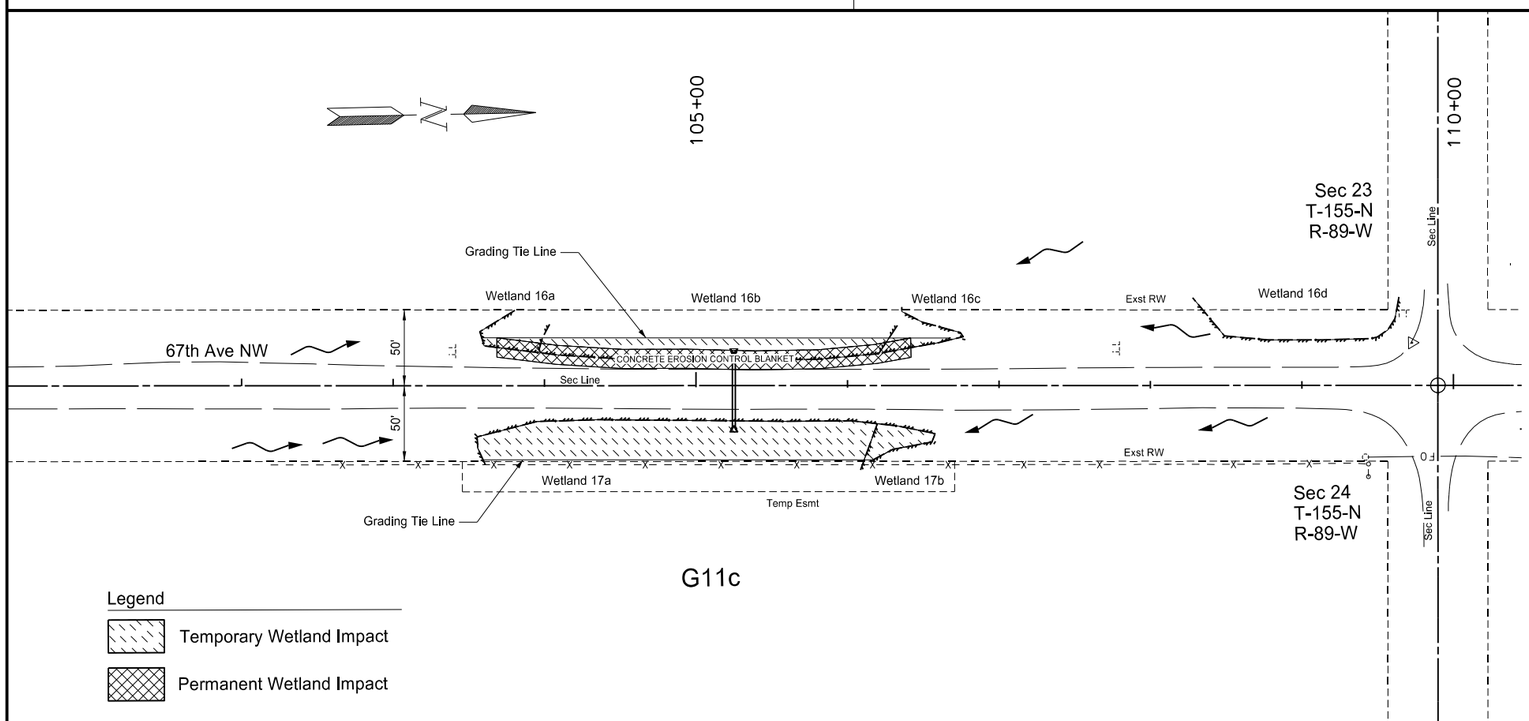
Site G11e
Inslope Erosion Repair
Missile Access Road - G11
Mountrail County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	ROM-0300(134)	75	4



Wetland 14 Impacts	
Temporary Impact	= 0.16 ACRE
Permanent Impact	= 0.00 ACRE

Wetland 15 Impacts	
Temporary Impact	= 0.29 ACRE
Permanent Impact	= 0.00 ACRE



Wetland 16a Impacts	
Temporary Impact	= 0.00 ACRE
Permanent Impact	= 0.01 ACRE

Wetland 16b Impacts	
Temporary Impact	= 0.04 ACRE
Permanent Impact	= 0.05 ACRE

Wetland 16c Impacts	
Temporary Impact	= 0.02 ACRE
Permanent Impact	= 0.01 ACRE

Wetland 17a Impacts	
Temporary Impact	= 0.16 ACRE
Permanent Impact	= 0.00 ACRE

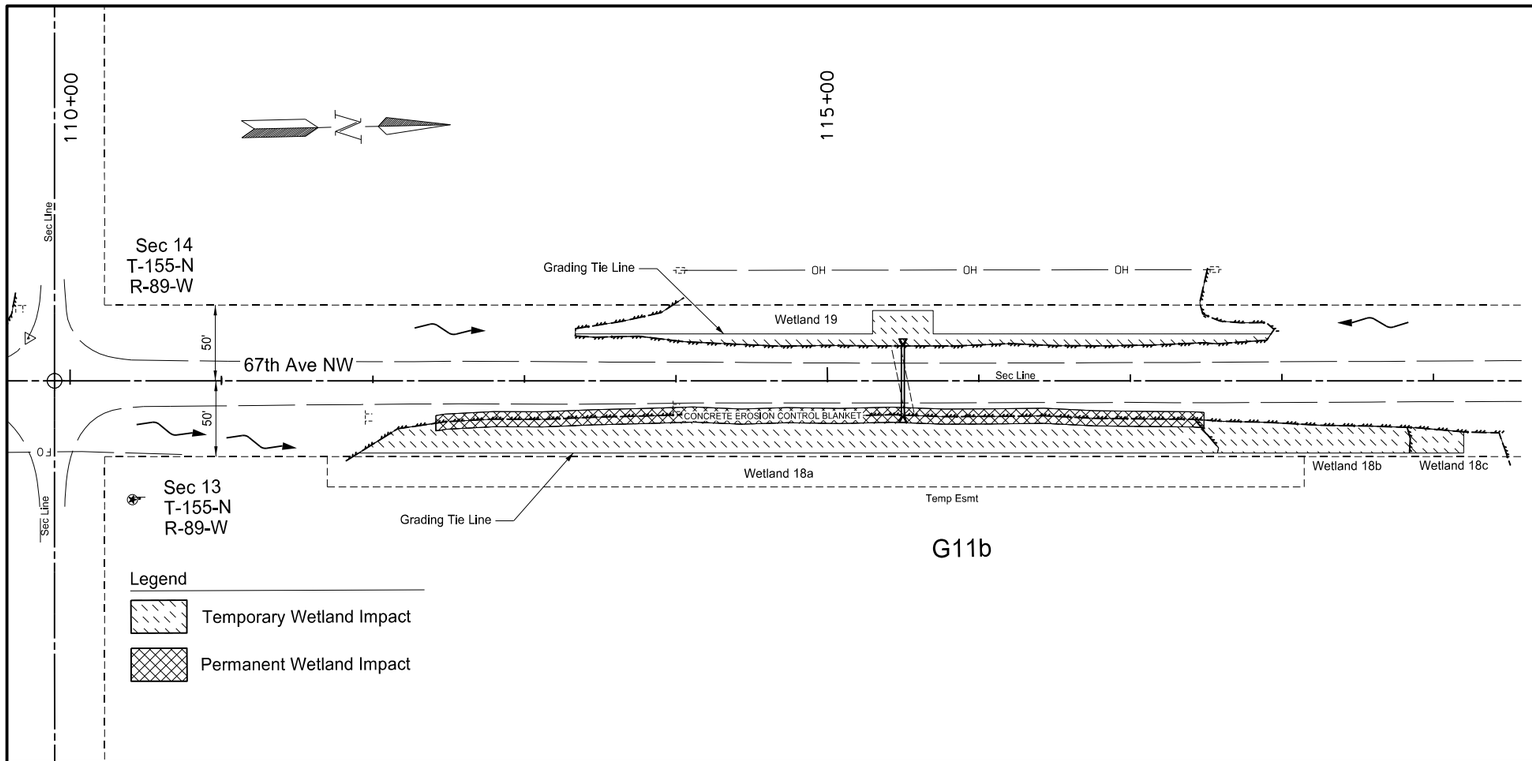
Wetland 17b Impacts	
Temporary Impact	= 0.02 ACRE
Permanent Impact	= 0.00 ACRE

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Wetland Impacts

Site G11d & c
Inslope Erosion Repair
Missile Access Road - G11
Mountrail County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	75	5

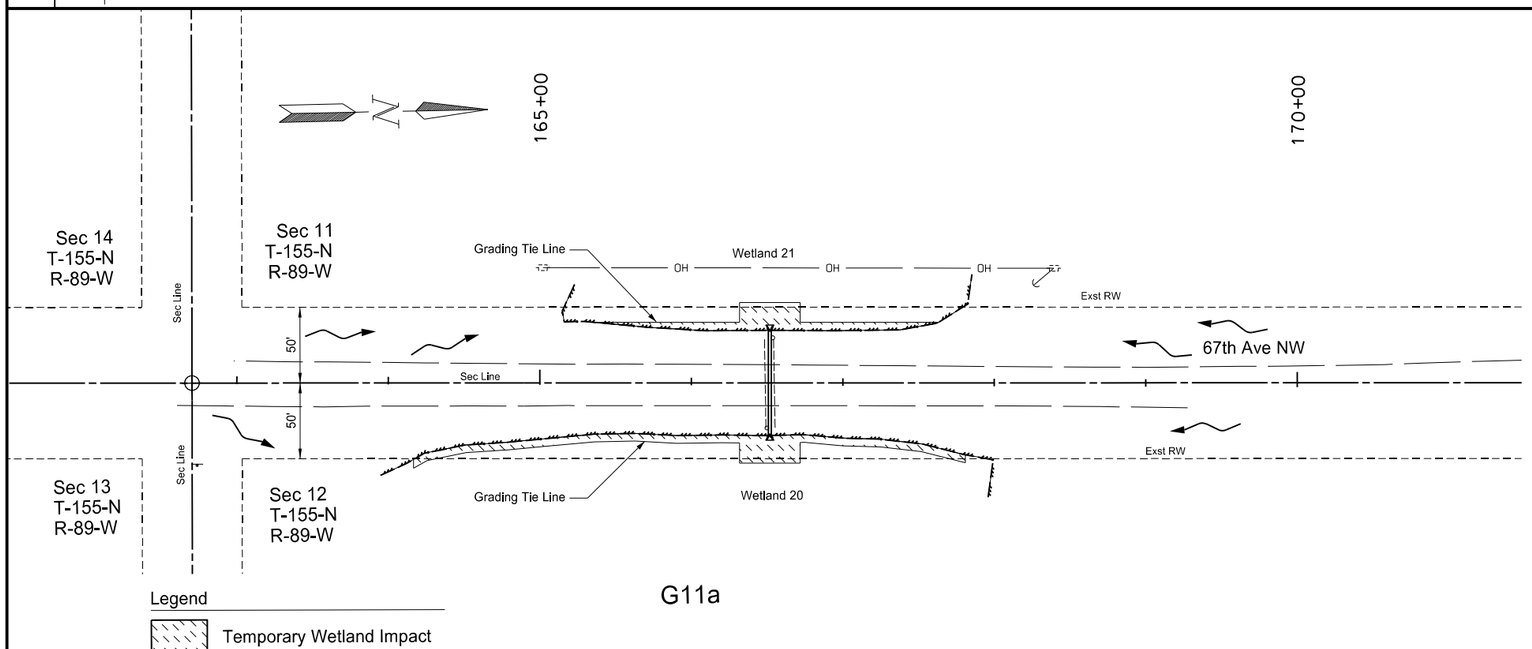


G11b

Wetland 18a Impacts	
Temporary Impact	= 0.30 ACRE
Permanent Impact	= 0.12 ACRE

Wetland 18b Impacts	
Temporary Impact	= 0.06 ACRE
Permanent Impact	= 0.01 ACRE
Wetland 18c Impacts	
Temporary Impact	= 0.02 ACRE
Permanent Impact	= 0.00 ACRE

Wetland 19 Impacts	
Temporary Impact	= 0.09 ACRE
Permanent Impact	= 0.00 ACRE



G11a

Wetland 20 Impacts	
Temporary Impact	= 0.02 ACRE
Permanent Impact	= 0.00 ACRE

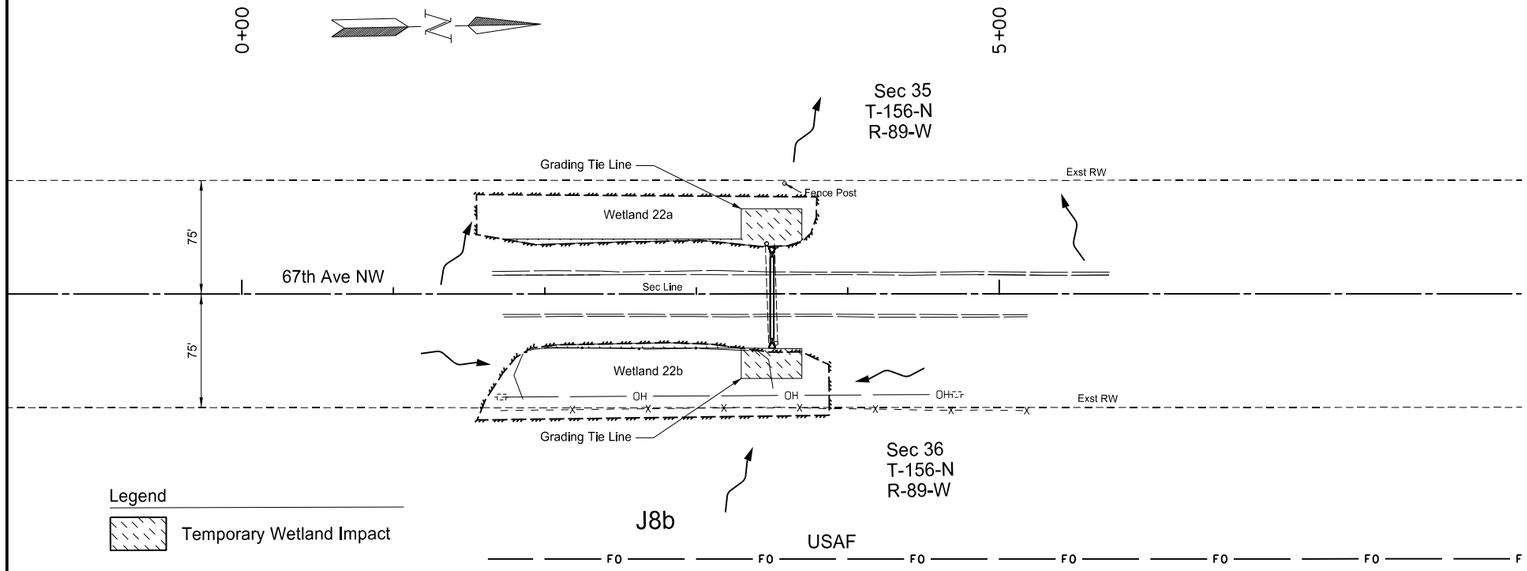
Wetland 21 Impacts	
Temporary Impact	= 0.02 ACRE
Permanent Impact	= 0.00 ACRE

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Wetland Impacts

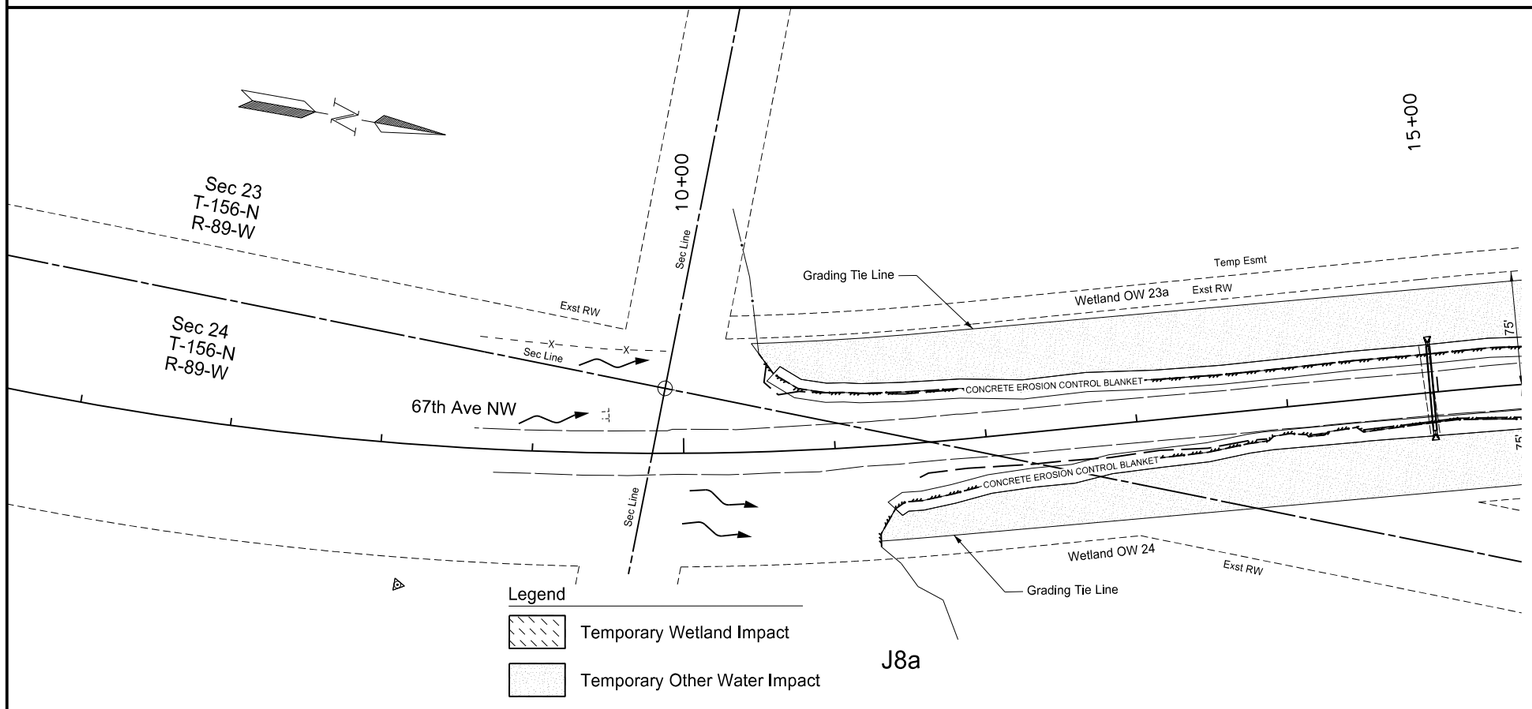
Site G11b & a
Inslope Erosion Repair
Missile Access Road - G11
Mountrail County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	75	6



Wetland 22a Impacts	
Temporary Impact	= 0.03 ACRE
Permanent Impact	= 0.00 ACRE

Wetland 22b Impacts	
Temporary Impact	= 0.03 ACRE
Permanent Impact	= 0.00 ACRE



Other Water 23a Impacts	
Temporary Impact	= 0.80 ACRE
Permanent Impact	= 0.00 ACRE

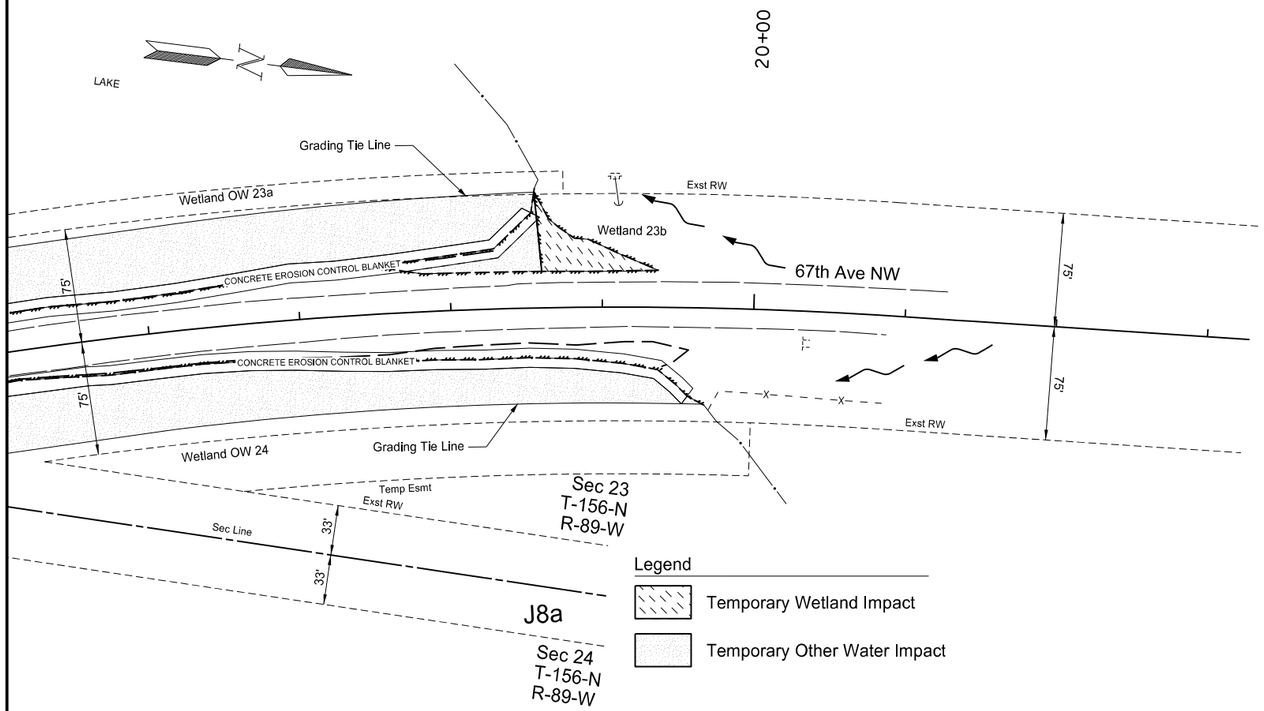
Other Water 24 Impacts	
Temporary Impact	= 0.66 ACRE
Permanent Impact	= 0.00 ACRE

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Wetland Impacts

Site J8b & J8a
Inslope Erosion Repair
Missile Access Road - J8
Mountrail County

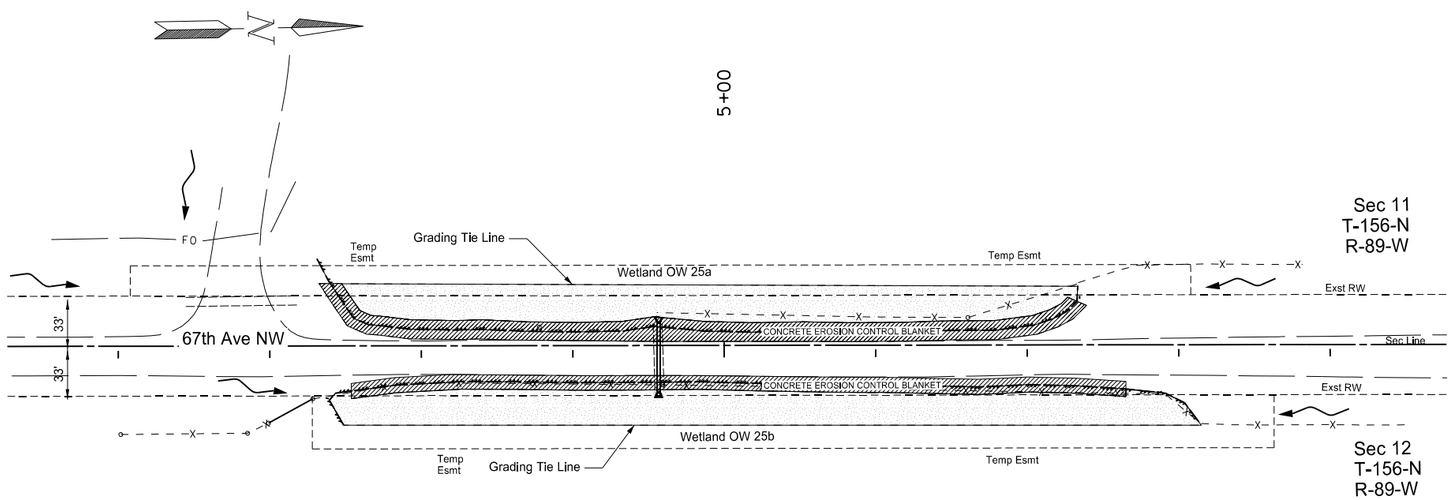
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	75	7



Other Water 23a Impacts	
Temporary Impact	Previous Table
Permanent Impact	Previous Table

Other Water 24 Impacts	
Temporary Impact	Previous Table
Permanent Impact	Previous Table

Wetland 23b Impacts	
Temporary Impact	= 0.04 ACRE
Permanent Impact	= 0.00 ACRE



Other Water 25a Impacts	
Temporary Impact	= 0.32 ACRE
Permanent Impact	= 0.00 ACRE

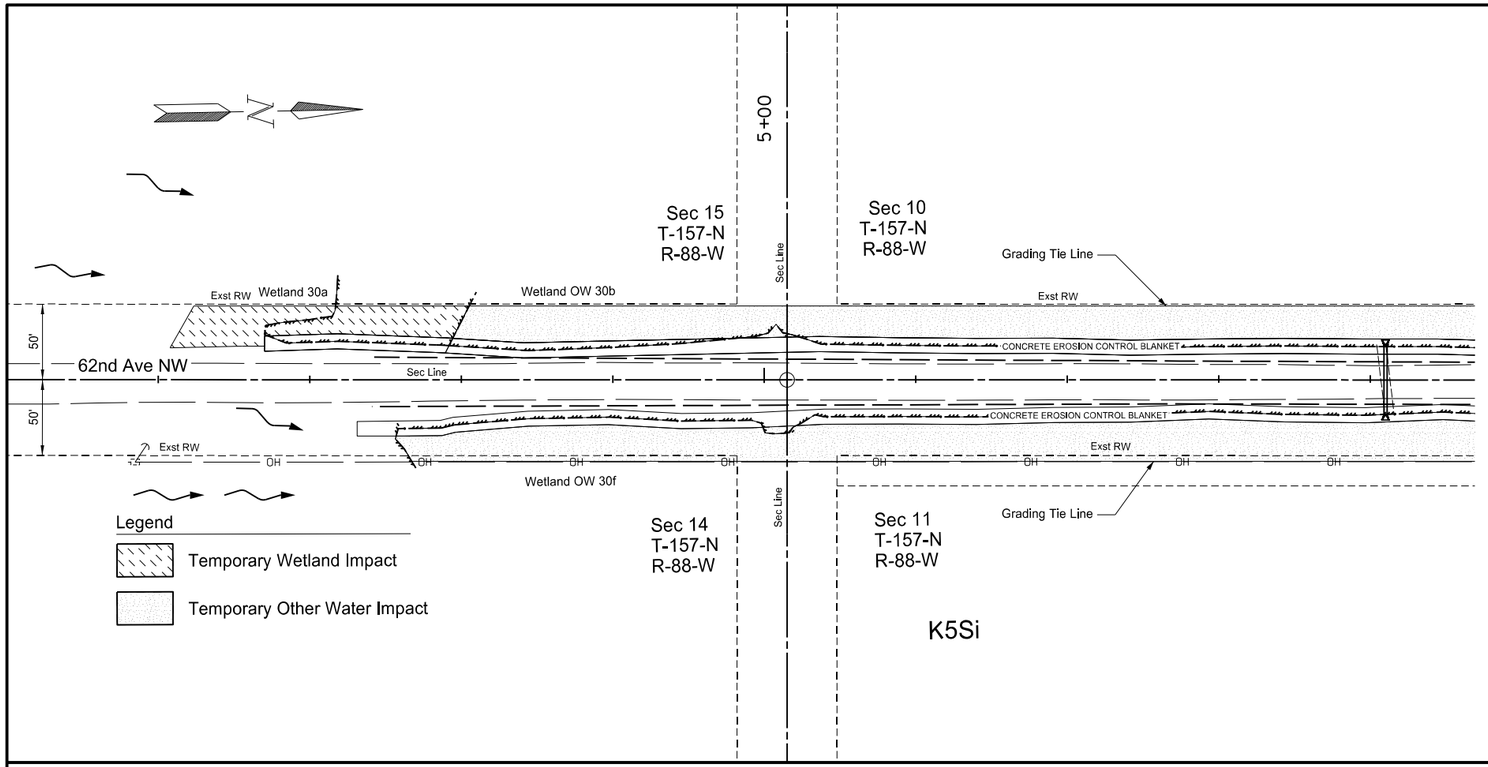
Other Water 25b Impacts	
Temporary Impact	= 0.35 ACRE
Permanent Impact	= 0.00 ACRE

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Wetland Impacts

Site J8a & J9
Inslope Erosion Repair
Missile Access Road - J8 & J9
Mountrail County

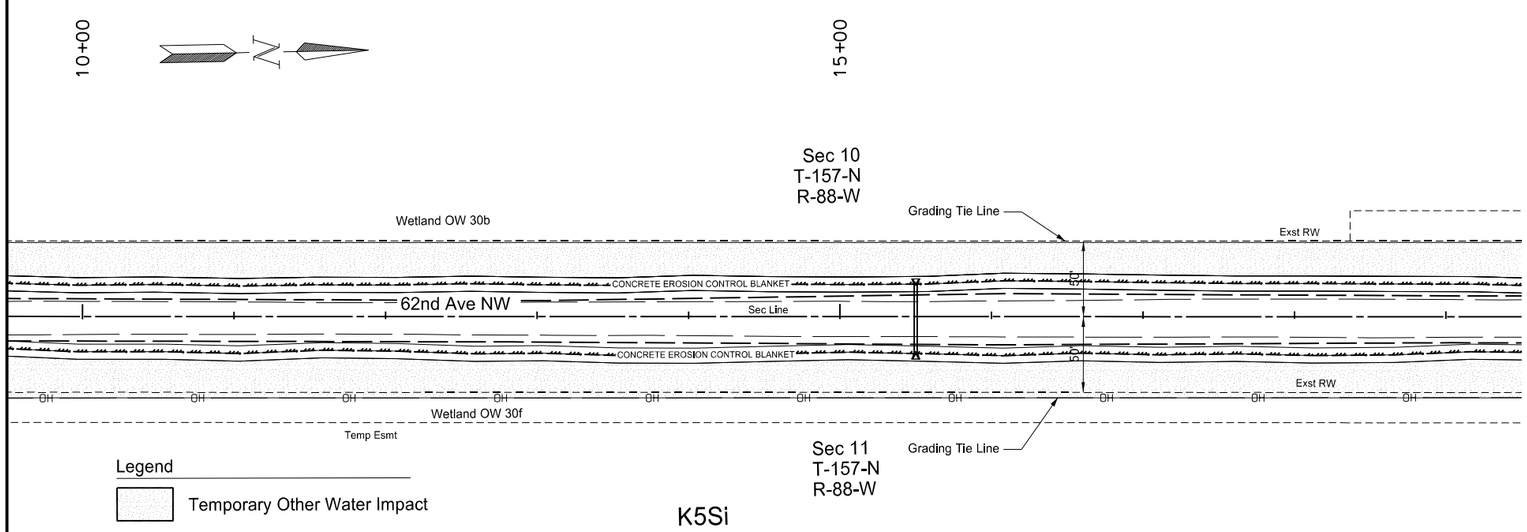
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	75	8



Wetland 30a Impacts	
Temporary Impact	= 0.12 ACRE
Permanent Impact	= 0.00 ACRE

Other Water 30b Impacts	
Temporary Impact	= 1.59 ACRE
Permanent Impact	= 0.00 ACRE

Other Water 30f Impacts	
Temporary Impact	= 1.69 ACRE
Permanent Impact	= 0.00 ACRE



Other Water 30b Impacts	
Temporary Impact	Previous Table
Permanent Impact	Previous Table

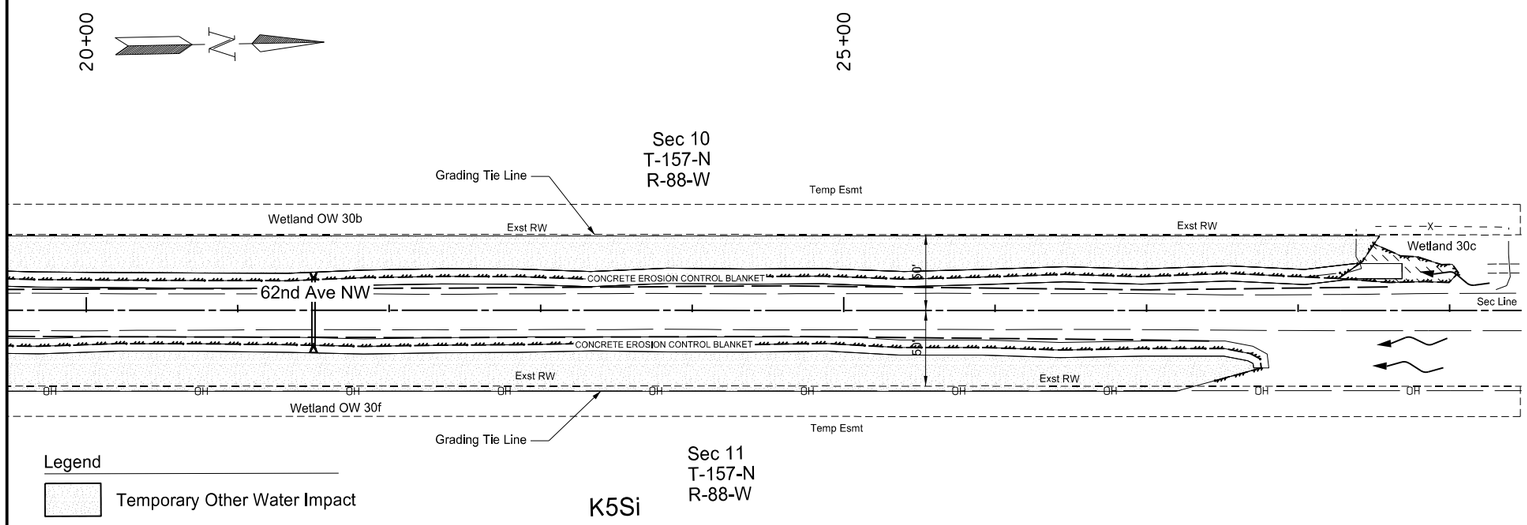
Other Water 30f Impacts	
Temporary Impact	Previous Table
Permanent Impact	Previous Table

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Wetland Impacts

Site K5Si
Inslope Erosion Repair
Missile Access Road - K5S
Mountrail County

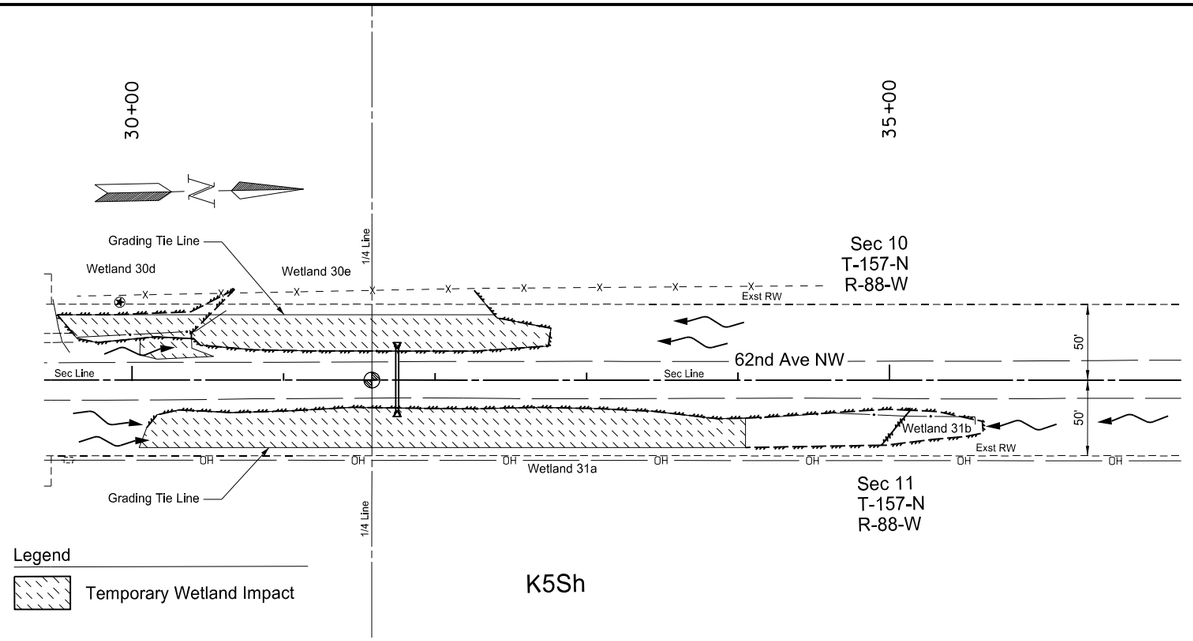
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	75	9



Other Water 30b Impacts	
Temporary Impact	Previous Table
Permanent Impact	Previous Table

Other Water 30f Impacts	
Temporary Impact	Previous Table
Permanent Impact	Previous Table

Wetland 30c Impacts	
Temporary Impact	= 0.03 ACRE
Permanent Impact	= 0.00 ACRE



Wetland 30d Impacts	
Temporary Impact	= 0.01 ACRE
Permanent Impact	= 0.00 ACRE

Wetland 30e Impacts	
Temporary Impact	= 0.16 ACRE
Permanent Impact	= 0.00 ACRE

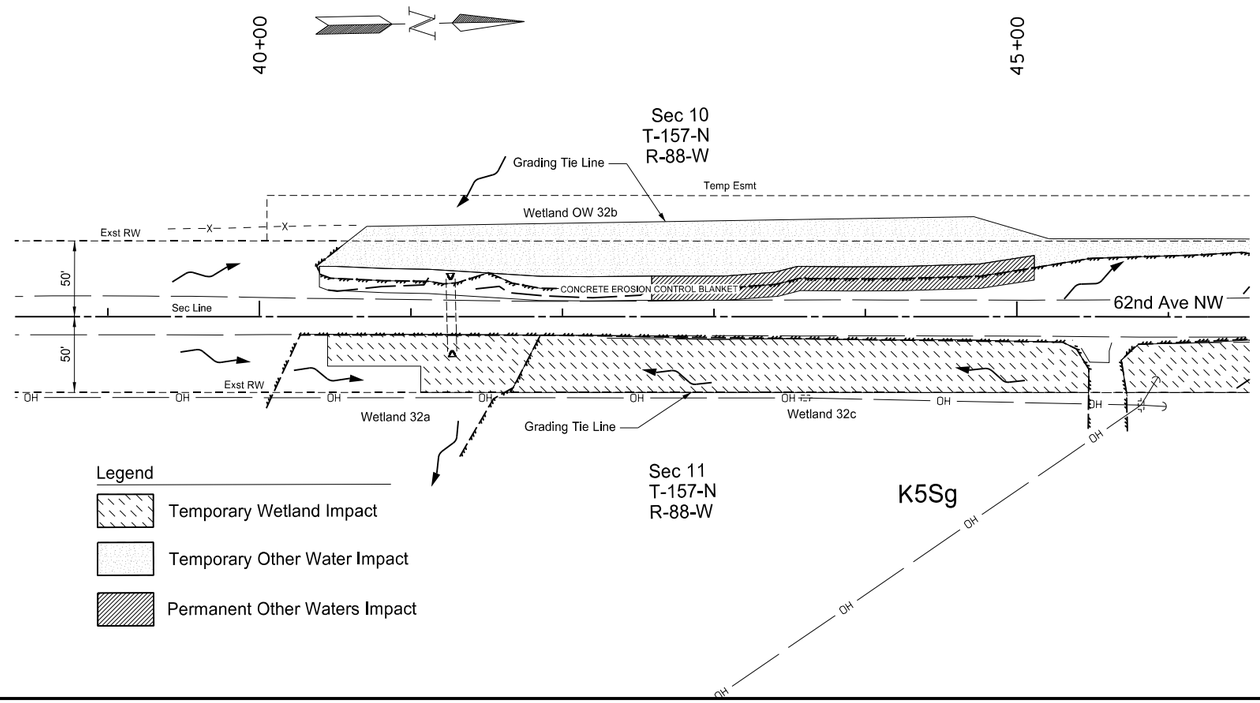
Wetland 31a Impacts	
Temporary Impact	= 0.22 ACRE
Permanent Impact	= 0.00 ACRE

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Wetland Impacts

Site K5Si & h
Inslope Erosion Repair
Missile Access Road - K5S
Mountrail County

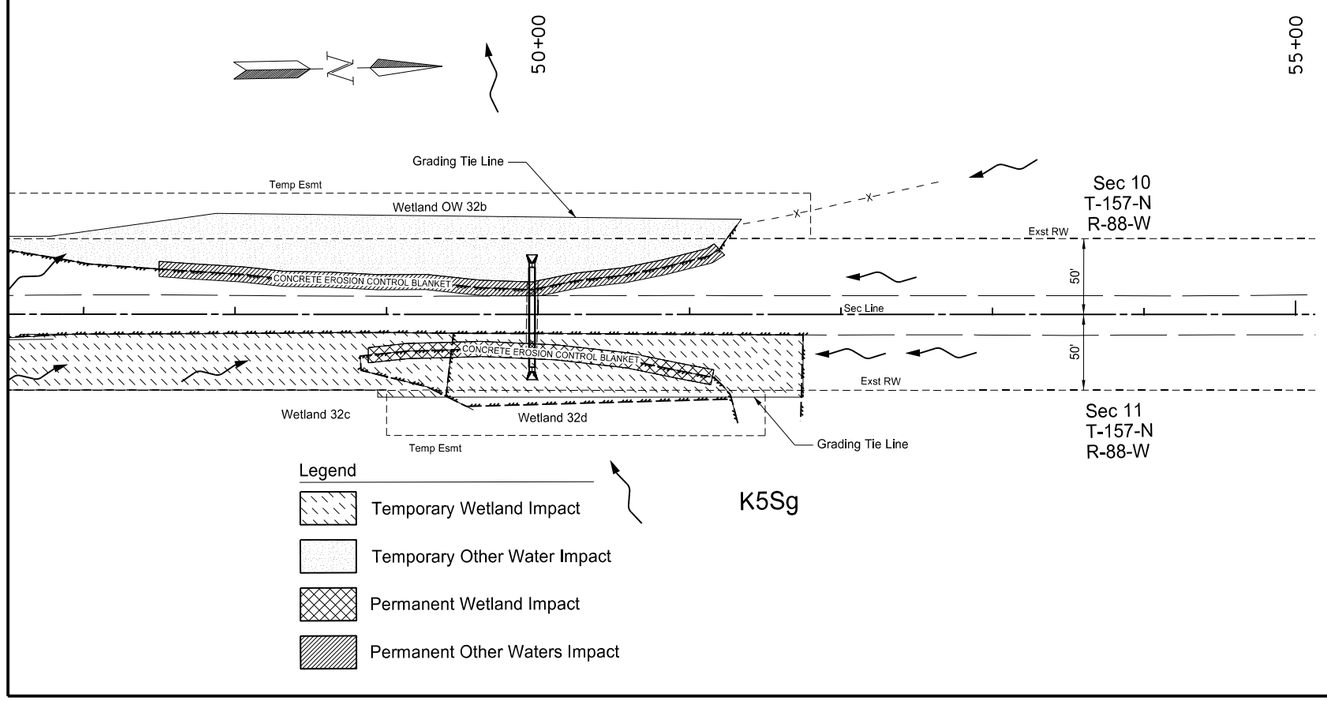
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	75	10



Other Water 32b Impacts	
Temporary Impact	= 0.85 ACRE
Permanent Impact	= 0.18 ACRE

Wetland 32a Impacts	
Temporary Impact	= 0.09 ACRE
Permanent Impact	= 0.00 ACRE

Wetland 32c Impacts	
Temporary Impact	= 0.62 ACRE
Permanent Impact	= 0.00 ACRE



Other Water 32b Impacts	
Temporary Impact	Previous Table
Permanent Impact	Previous Table

Wetland 32c Impacts	
Temporary Impact	Previous Table
Permanent Impact	Previous Table

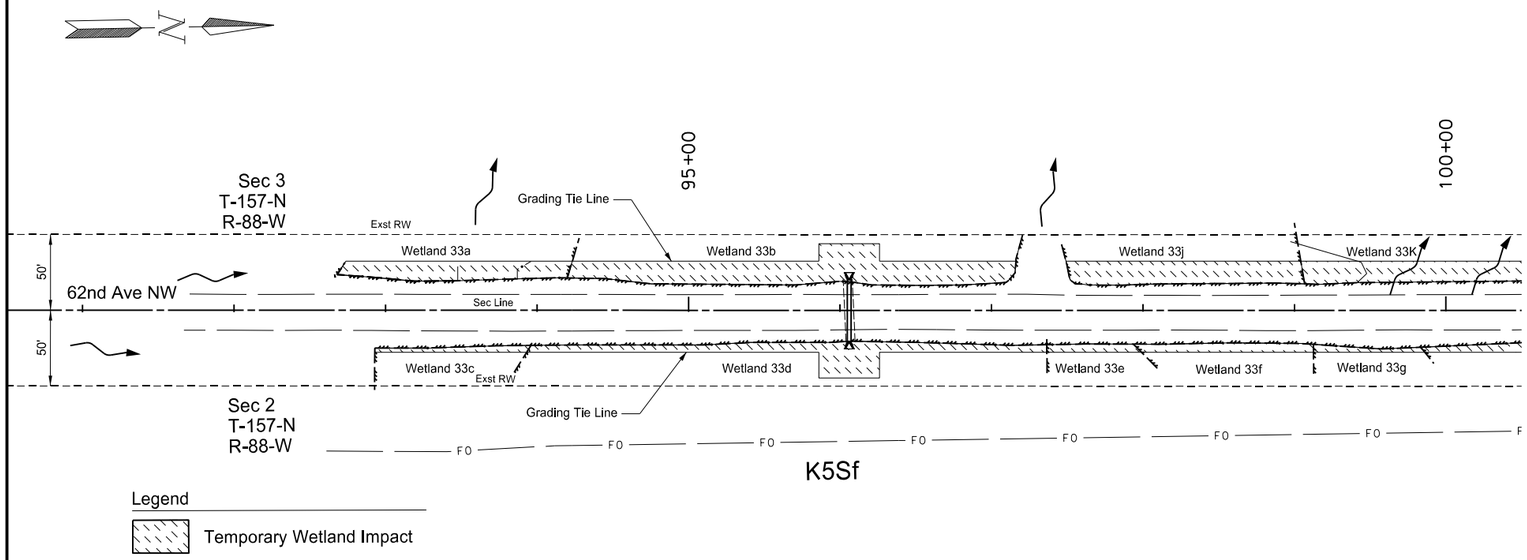
Wetland 32d Impacts	
Temporary Impact	= 0.23 ACRE
Permanent Impact	= 0.04 ACRE

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Wetland Impacts

Site K5Sg
Inslope Erosion Repair
Missile Access Road - K5S
Mountrail County

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Wetland 33a Impacts	
Temporary Impact	= 0.04 ACRE
Permanent Impact	= 0.00 ACRE

Wetland 33b Impacts	
Temporary Impact	= 0.11 ACRE
Permanent Impact	= 0.00 ACRE

Wetland 33c Impacts	
Temporary Impact	= 0.01 ACRE
Permanent Impact	= 0.00 ACRE

Wetland 33d Impacts	
Temporary Impact	= 0.06 ACRE
Permanent Impact	= 0.00 ACRE

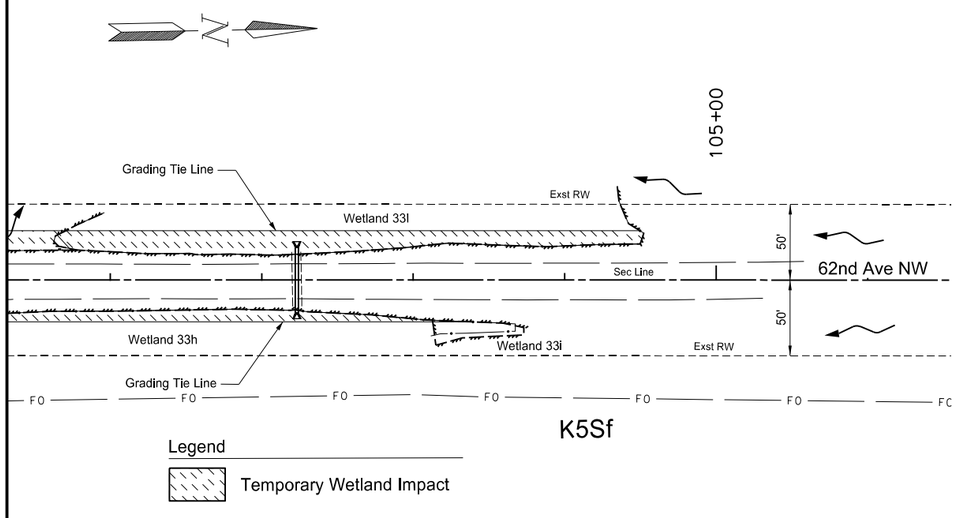
Wetland 33e Impacts	
Temporary Impact	= 0.01 ACRE
Permanent Impact	= 0.00 ACRE

Wetland 33f Impacts	
Temporary Impact	= 0.02 ACRE
Permanent Impact	= 0.00 ACRE

Wetland 33g Impacts	
Temporary Impact	= 0.01 ACRE
Permanent Impact	= 0.00 ACRE

Wetland 33j Impacts	
Temporary Impact	= 0.06 ACRE
Permanent Impact	= 0.00 ACRE

Wetland 33k Impacts	
Temporary Impact	= 0.06 ACRE
Permanent Impact	= 0.00 ACRE



Wetland 33h Impacts	
Temporary Impact	= 0.05 ACRE
Permanent Impact	= 0.00 ACRE

Wetland 33i Impacts	
Temporary Impact	= 0.01 ACRE
Permanent Impact	= 0.00 ACRE

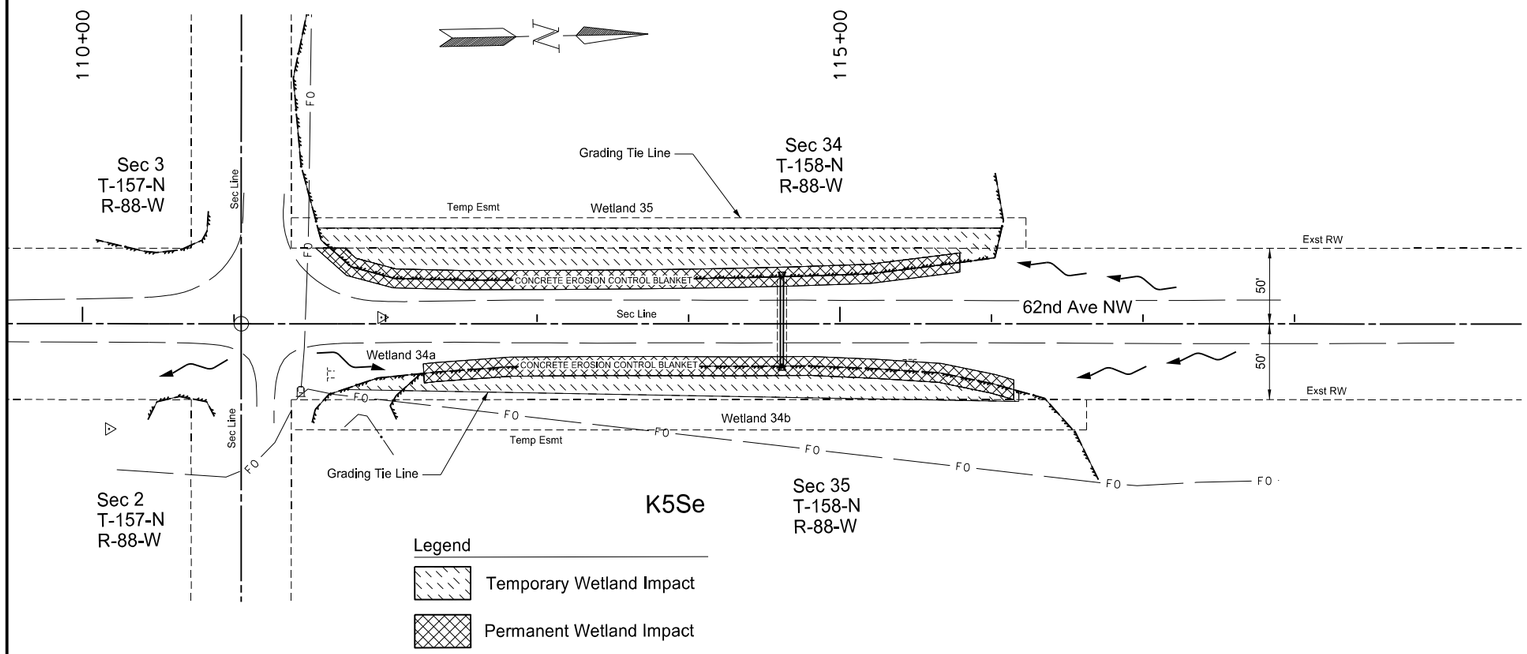
Wetland 33l Impacts	
Temporary Impact	= 0.12 ACRE
Permanent Impact	= 0.00 ACRE

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Wetland Impacts

Site K5Sf
Inslope Erosion Repair
Missile Access Road - K5S
Mountrail County

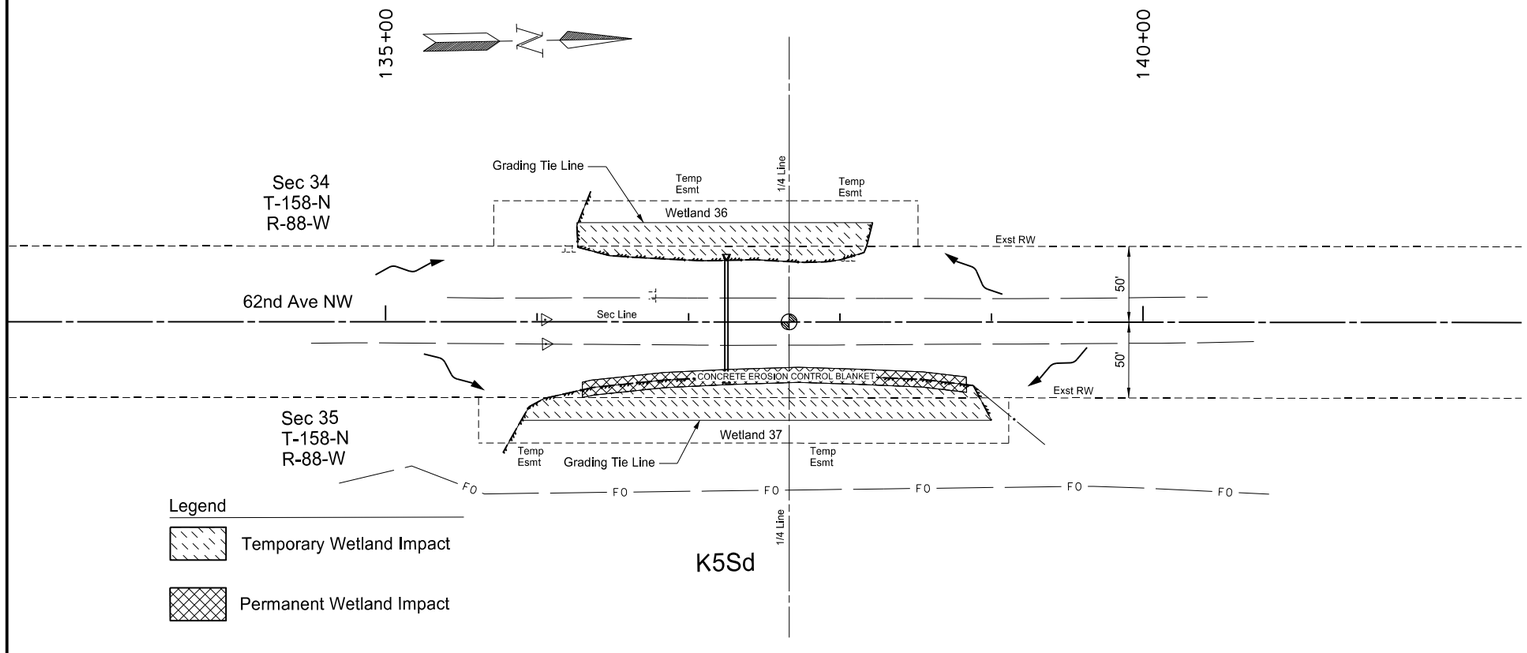
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	75	12



Wetland 34a Impacts	
Temporary Impact	= 0.01 ACRE
Permanent Impact	= 0.00 ACRE

Wetland 34b Impacts	
Temporary Impact	= 0.13 ACRE
Permanent Impact	= 0.11 ACRE

Wetland 35 Impacts	
Temporary Impact	= 0.32 ACRE
Permanent Impact	= 0.12 ACRE



Wetland 36 Impacts	
Temporary Impact	= 0.11 ACRE
Permanent Impact	= 0.00 ACRE

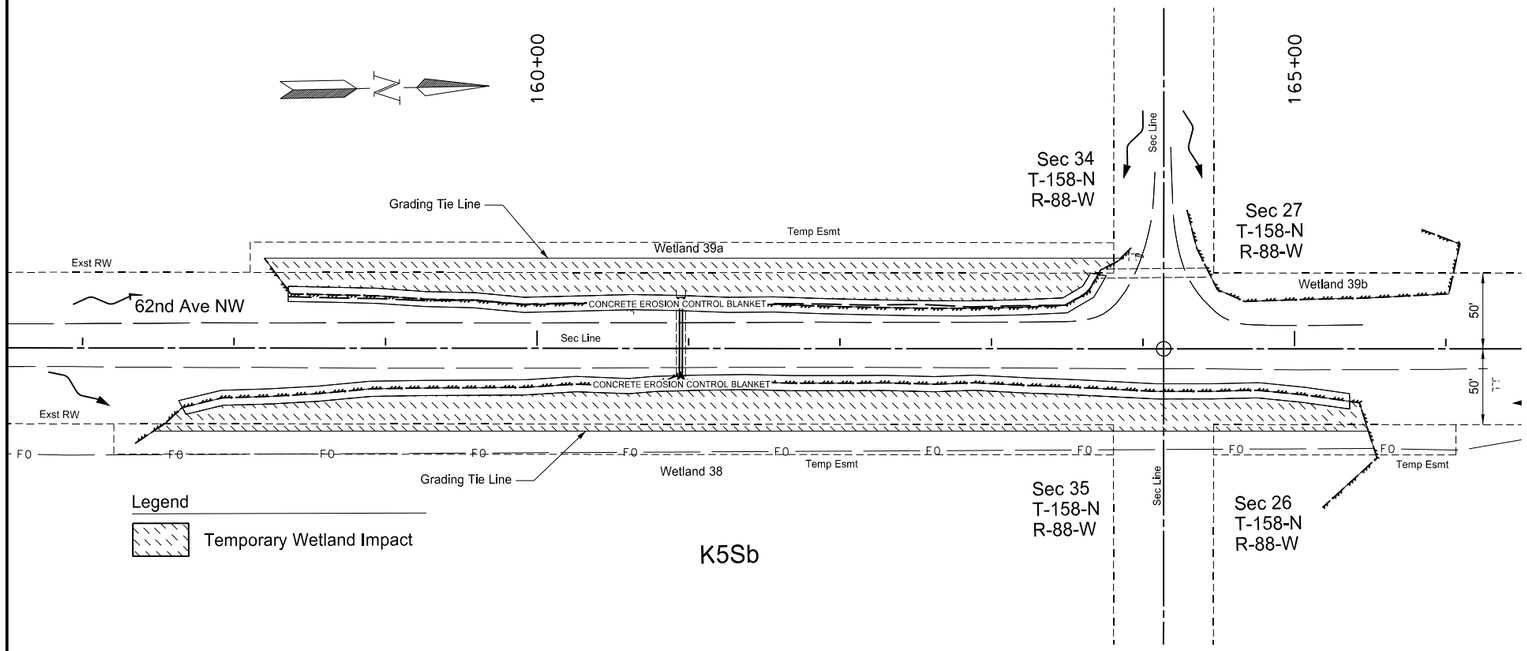
Wetland 37 Impacts	
Temporary Impact	= 0.18 ACRE
Permanent Impact	= 0.06 ACRE

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Wetland Impacts

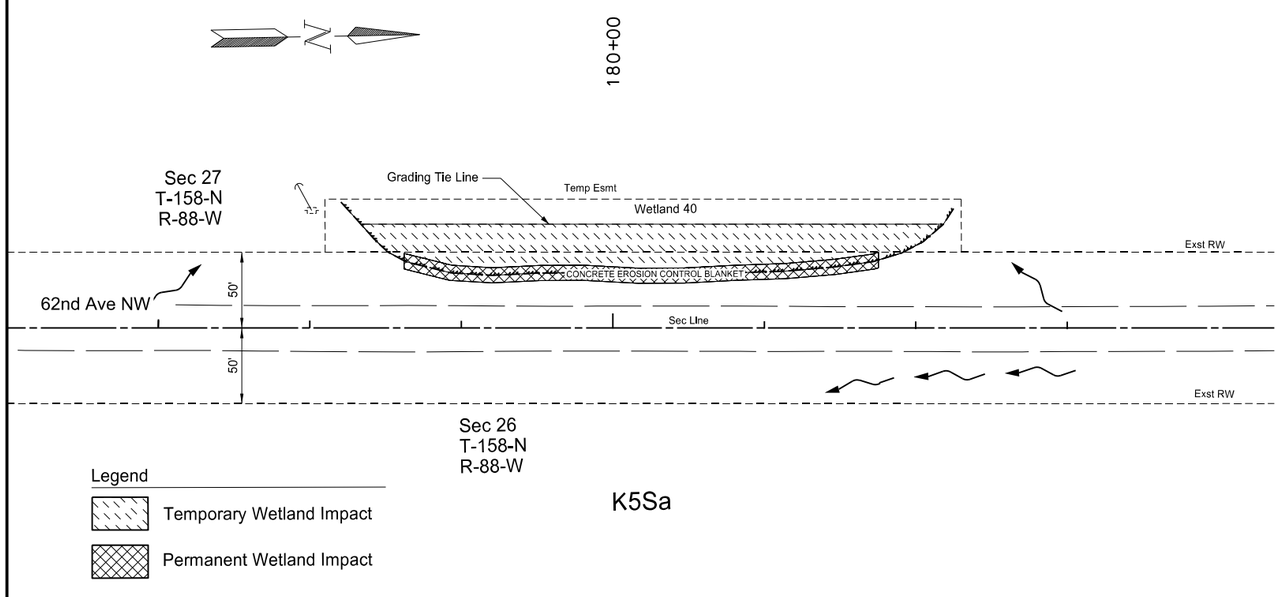
Site K5Se & d
Inslope Erosion Repair
Missile Access Road - K5S
Mountrail County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	75	13



Wetland 38 Impacts	
Temporary Impact	= 0.51 ACRE
Permanent Impact	= 0.00 ACRE

Wetland 39a Impacts	
Temporary Impact	= 0.37 ACRE
Permanent Impact	= 0.00 ACRE



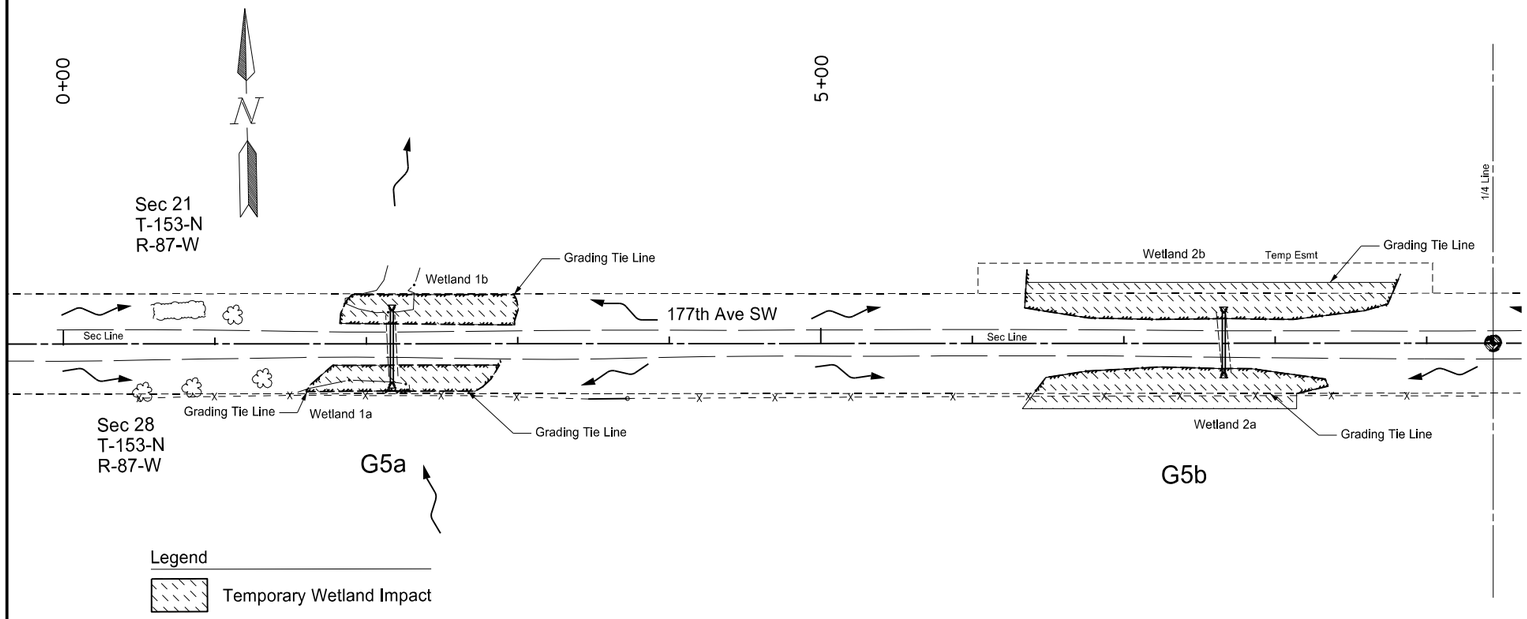
Wetland 40 Impacts	
Temporary Impact	= 0.25 ACRE
Permanent Impact	= 0.07 ACRE

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Wetland Impacts

Site K5Sb & a
Inslope Erosion Repair
Missile Access Road - K5S
Mountrail County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	ROM-0300(134)	75	14

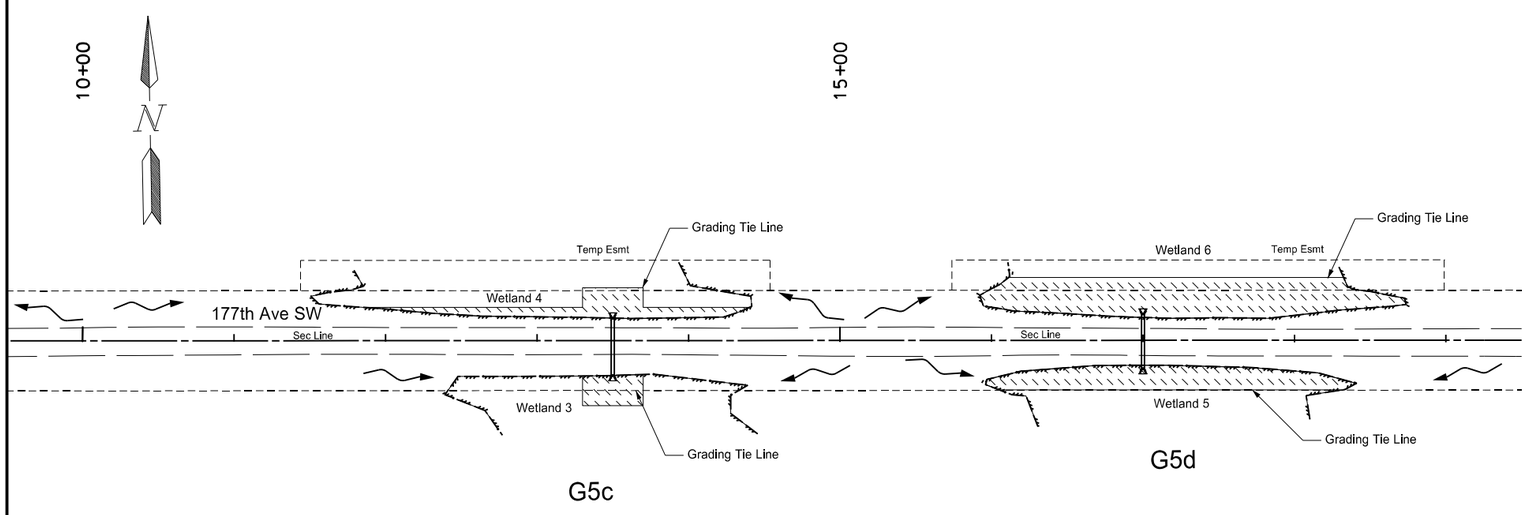


Wetland 1a Impacts	
Temporary Impact	= 0.05 ACRE
Permanent Impact	= 0.00 ACRE

Wetland 1b Impacts	
Temporary Impact	= 0.05 ACRE
Permanent Impact	= 0.00 ACRE

Wetland 2a Impacts	
Temporary Impact	= 0.11 ACRE
Permanent Impact	= 0.00 ACRE

Wetland 2b Impacts	
Temporary Impact	= 0.12 ACRE
Permanent Impact	= 0.00 ACRE



Wetland 3 Impacts	
Temporary Impact	= 0.02 ACRE
Permanent Impact	= 0.00 ACRE

Wetland 4 Impacts	
Temporary Impact	= 0.04 ACRE
Permanent Impact	= 0.00 ACRE

Wetland 5 Impacts	
Temporary Impact	= 0.08 ACRE
Permanent Impact	= 0.00 ACRE

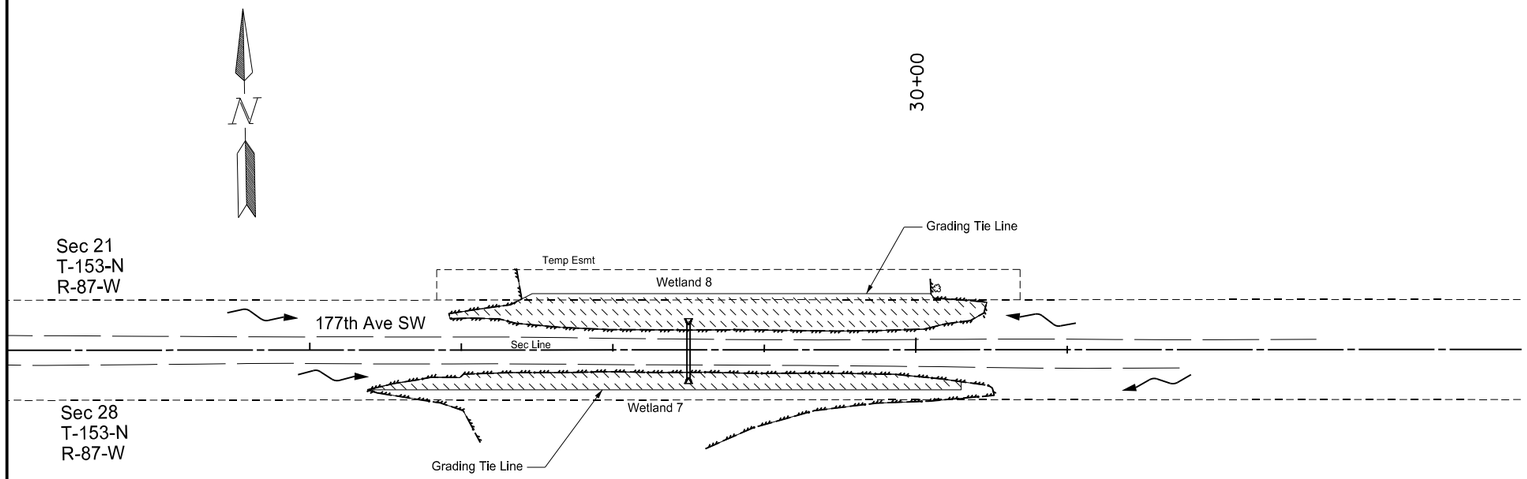
Wetland 6 Impacts	
Temporary Impact	= 0.15 ACRE
Permanent Impact	= 0.00 ACRE

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Wetland Impacts

Site G5a - d
Inslope Erosion Repair
Missile Access Road - G5
Ward County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	75	15



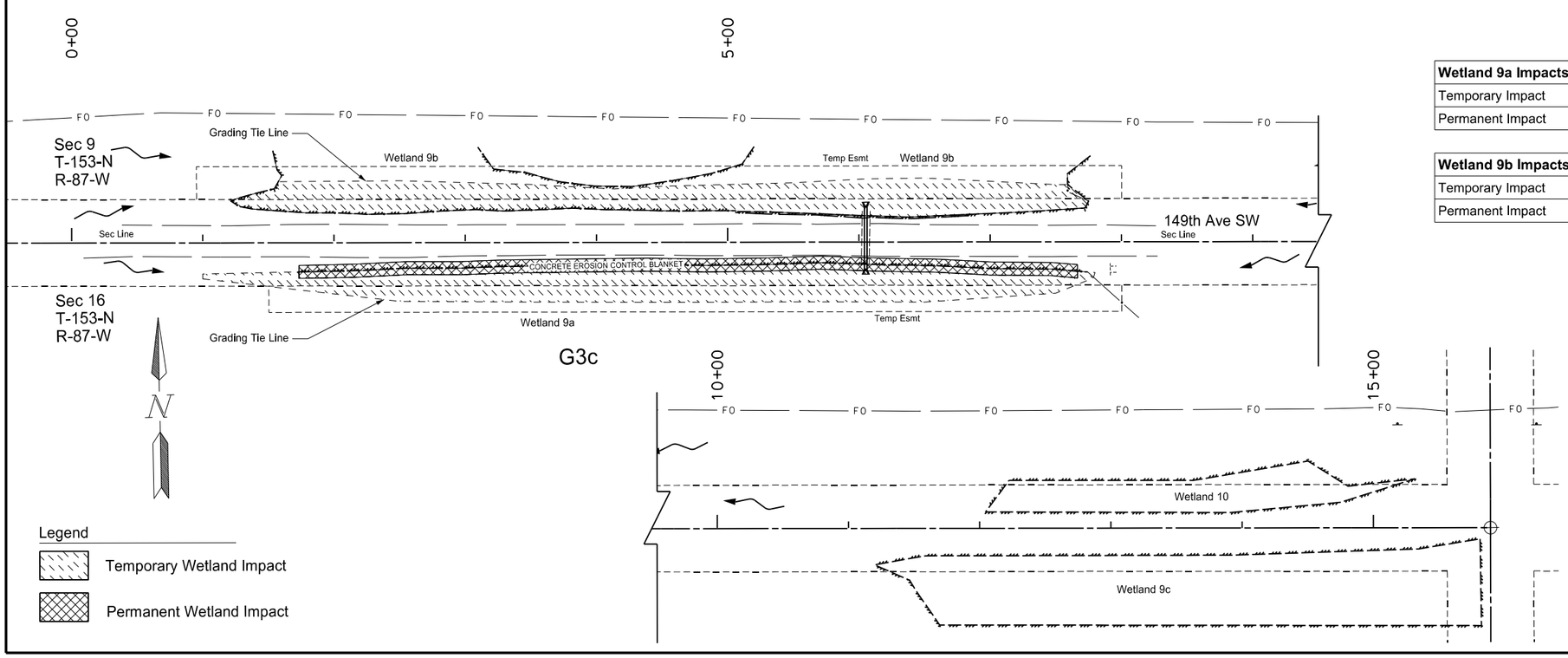
G5e

Legend

Temporary Wetland Impact

Wetland 7 Impacts	
Temporary Impact	= 0.09 ACRE
Permanent Impact	= 0.00 ACRE

Wetland 8 Impacts	
Temporary Impact	= 0.17 ACRE
Permanent Impact	= 0.00 ACRE



G3c

Legend

Temporary Wetland Impact

Permanent Wetland Impact

Wetland 9a Impacts	
Temporary Impact	= 0.30 ACRE
Permanent Impact	= 0.14 ACRE

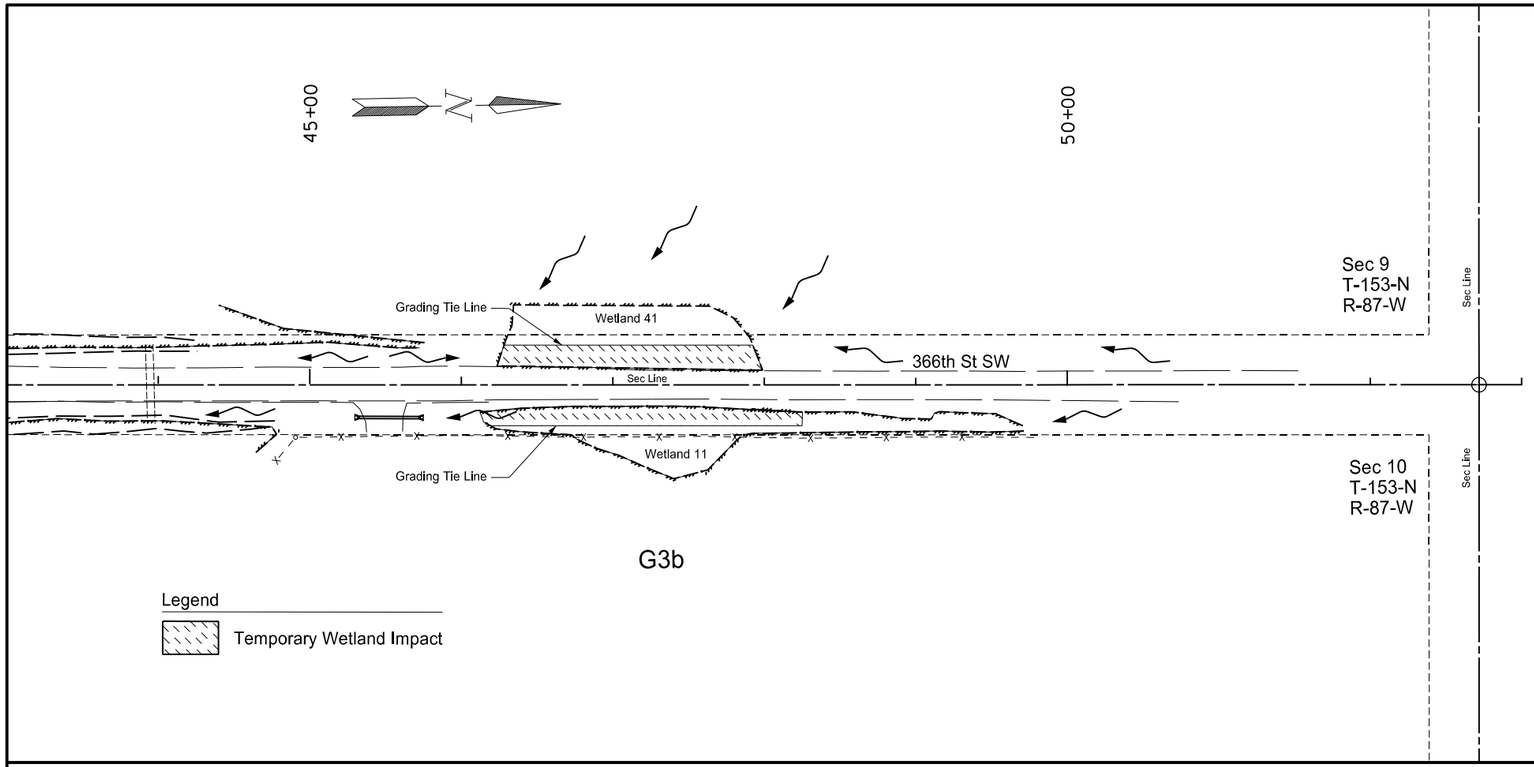
Wetland 9b Impacts	
Temporary Impact	= 0.32 ACRE
Permanent Impact	= 0.00 ACRE

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Wetland Impacts

Site G5e & G3c
Inslope Erosion Repair
Missile Access Road - G5 & G3
Ward County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
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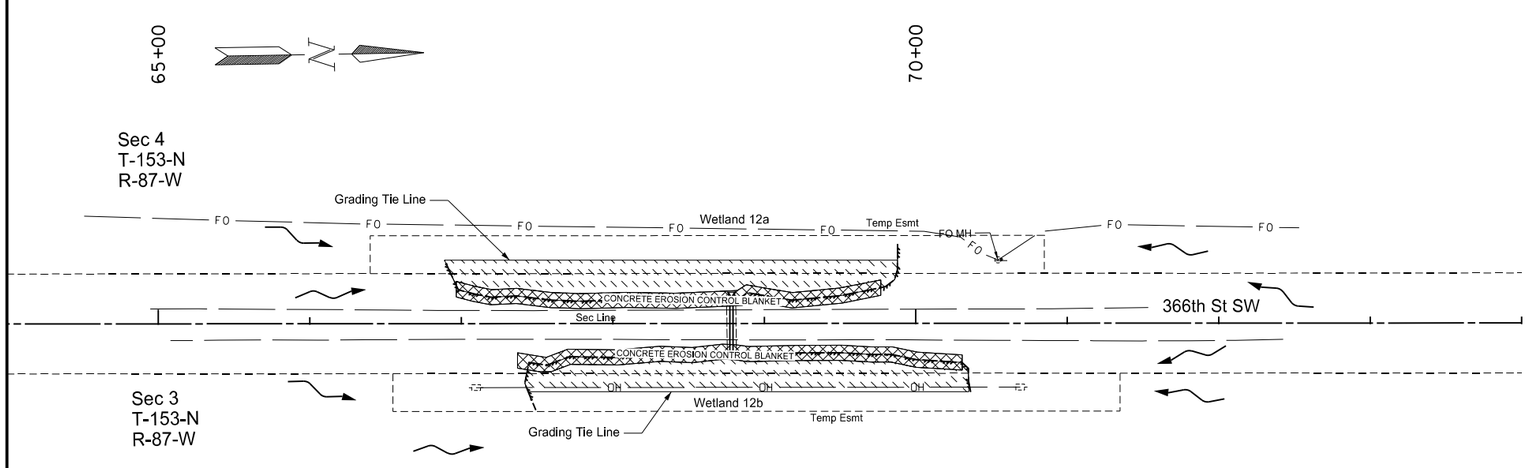
G3b

Legend

Temporary Wetland Impact

Wetland 11 Impacts	
Temporary Impact	= 0.06 ACRE
Permanent Impact	= 0.00 ACRE

Wetland 41 Impacts	
Temporary Impact	= 0.06 ACRE
Permanent Impact	= 0.00 ACRE



G3a

Legend

Temporary Wetland Impact

Permanent Wetland Impact

Wetland 12a Impacts	
Temporary Impact	= 0.17 ACRE
Permanent Impact	= 0.07 ACRE

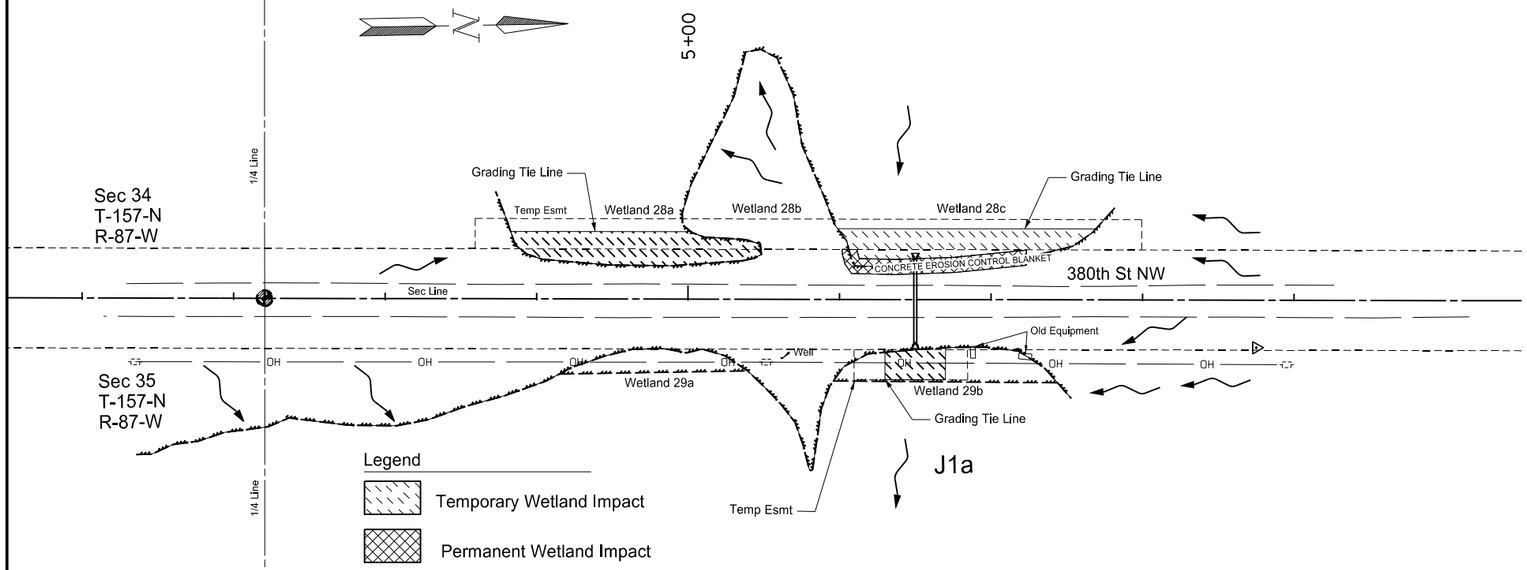
Wetland 12b Impacts	
Temporary Impact	= 0.16 ACRE
Permanent Impact	= 0.07 ACRE

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Wetland Impacts

Site G3b & a
Inslope Erosion Repair
Missile Access Road - G3
Ward County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	ROM-0300(134)	75	17

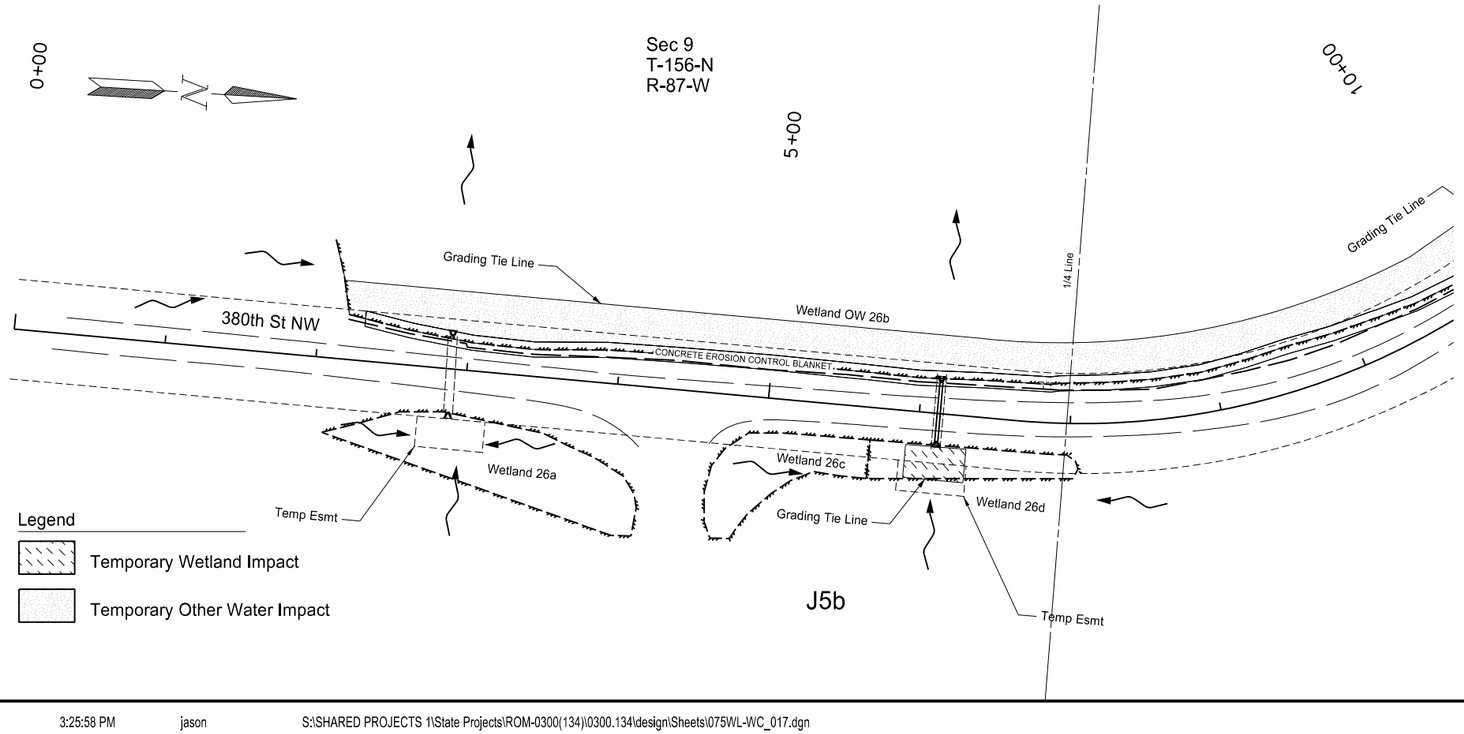


Wetland 28a Impacts	
Temporary Impact	= 0.07 ACRE
Permanent Impact	= 0.00 ACRE

Wetland 28b Impacts	
Temporary Impact	= 0.02 ACRE
Permanent Impact	= 0.00 ACRE

Wetland 28c Impacts	
Temporary Impact	= 0.08 ACRE
Permanent Impact	= 0.03 ACRE

Wetland 29b Impacts	
Temporary Impact	= 0.02 ACRE
Permanent Impact	= 0.00 ACRE



Other Water 26b Impacts	
Temporary Impact	= 0.61 ACRE
Permanent Impact	= 0.00 ACRE

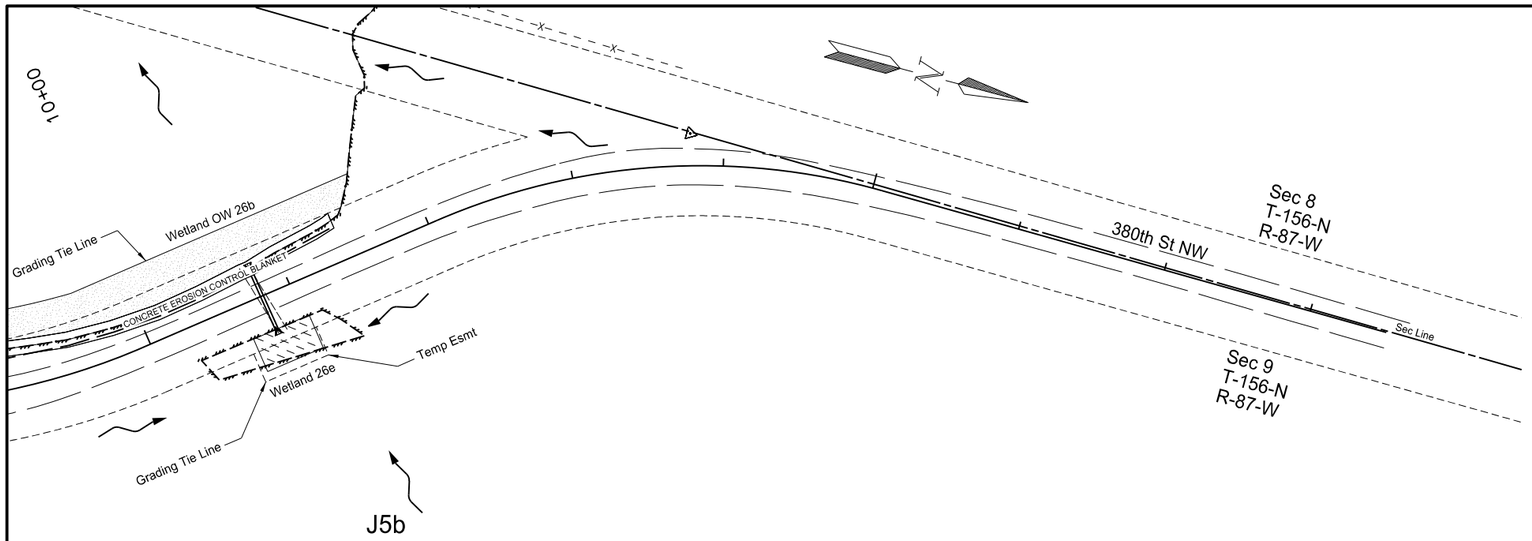
Wetland 26d Impacts	
Temporary Impact	= 0.02 ACRE
Permanent Impact	= 0.00 ACRE

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Wetland Impacts

Site J1a & J5b
Inslope Erosion Repair
Missile Access Road - J1 & J5
Ward County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	75	18



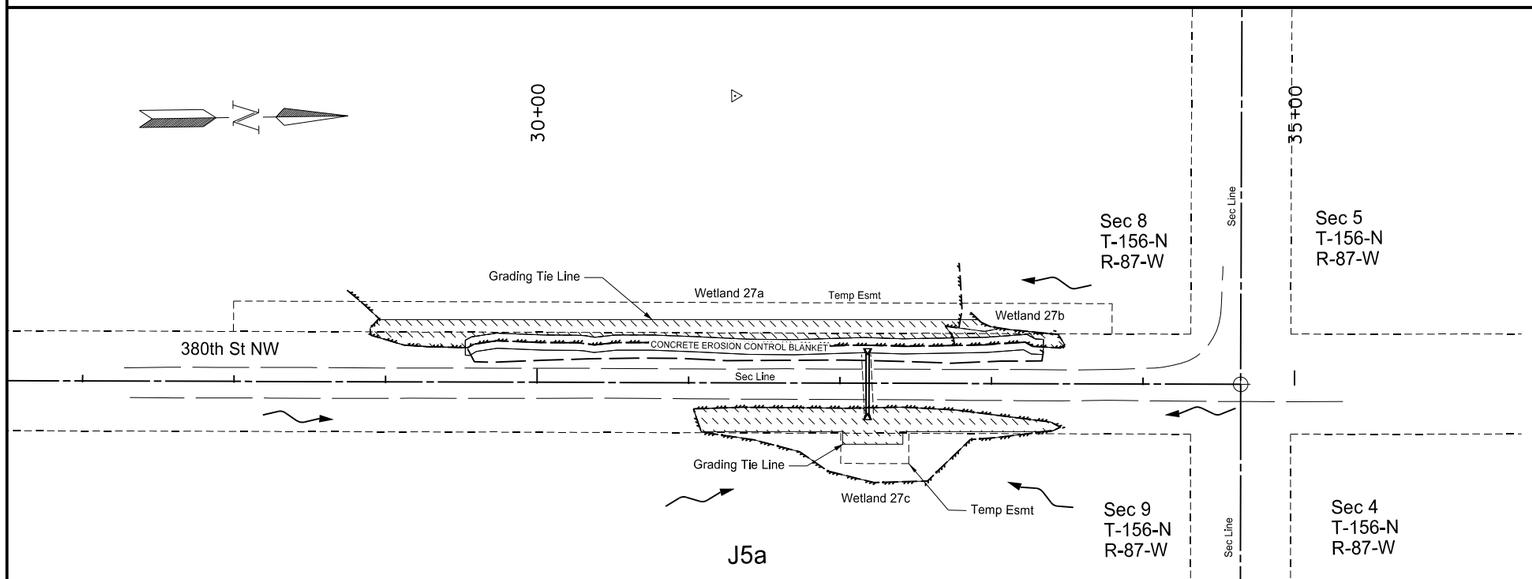
Legend

Temporary Wetland Impact

Temporary Other Water Impact

Other Water 26b Impacts	
Temporary Impact	Previous Table
Permanent Impact	Previous Table

Wetland 26e Impacts	
Temporary Impact	= 0.02 ACRE
Permanent Impact	= 0.00 ACRE



Legend

Temporary Wetland Impact

Temporary Other Water Impact

Wetland 27a Impacts	
Temporary Impact	= 0.15 ACRE
Permanent Impact	= 0.00 ACRE

Wetland 27b Impacts	
Temporary Impact	= 0.02 ACRE
Permanent Impact	= 0.00 ACRE

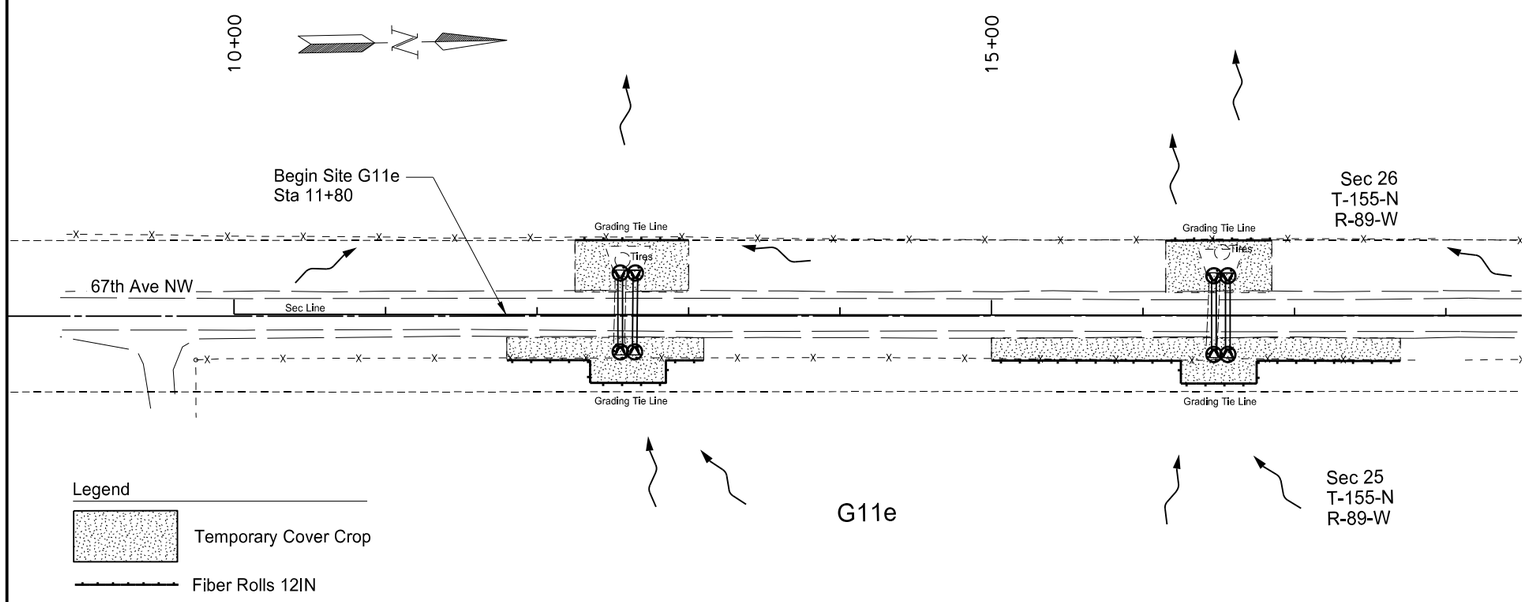
Wetland 27c Impacts	
Temporary Impact	= 0.09 ACRE
Permanent Impact	= 0.00 ACRE

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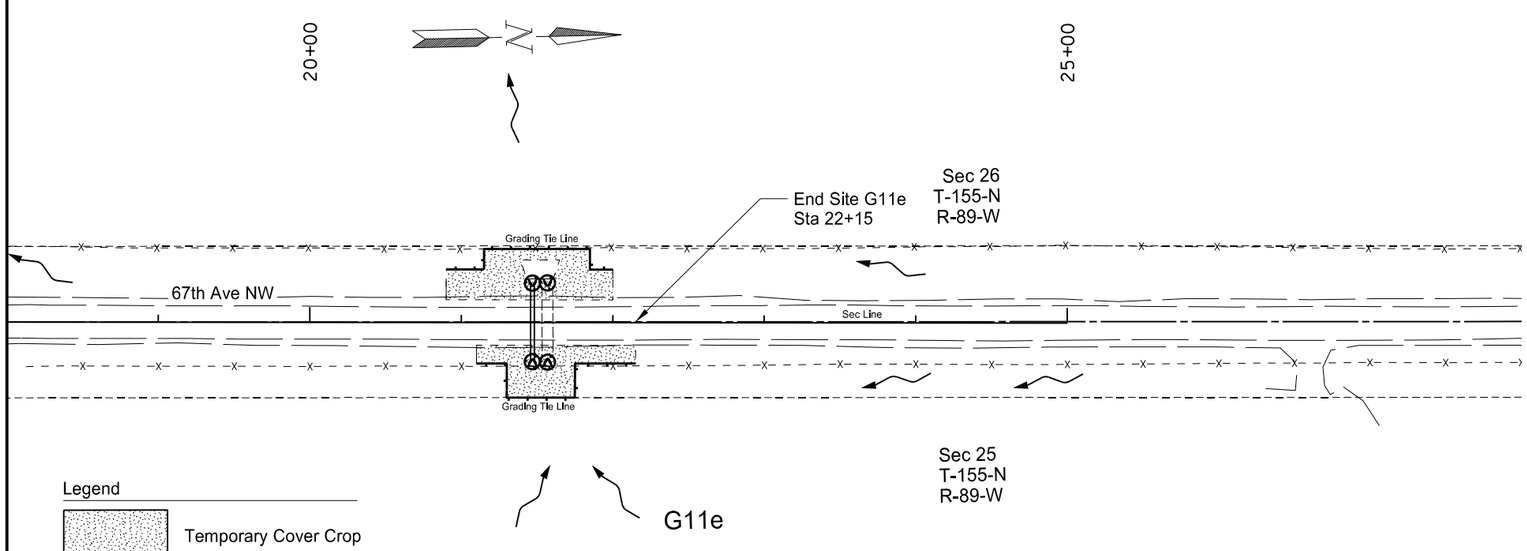
Wetland Impacts

Site J5b & a
Inslope Erosion Repair
Missile Access Road - J5
Ward County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	76	1



Spec	Code	Description	Quantity	Unit
251	2000	Temporary Cover Crop Sta 11+80 to 22+15	0.39	ACRE
		Total =	0.39	ACRE
261	0112	Fiber Rolls 12IN Sta 11+80 to 22+15	1270	LF
		Total =	1270	LF
261	0113	Remove Fiber Rolls 12IN Sta 11+80 to 22+15	1270	LF
		Total =	1270	LF



Spec	Code	Description	Quantity	Unit

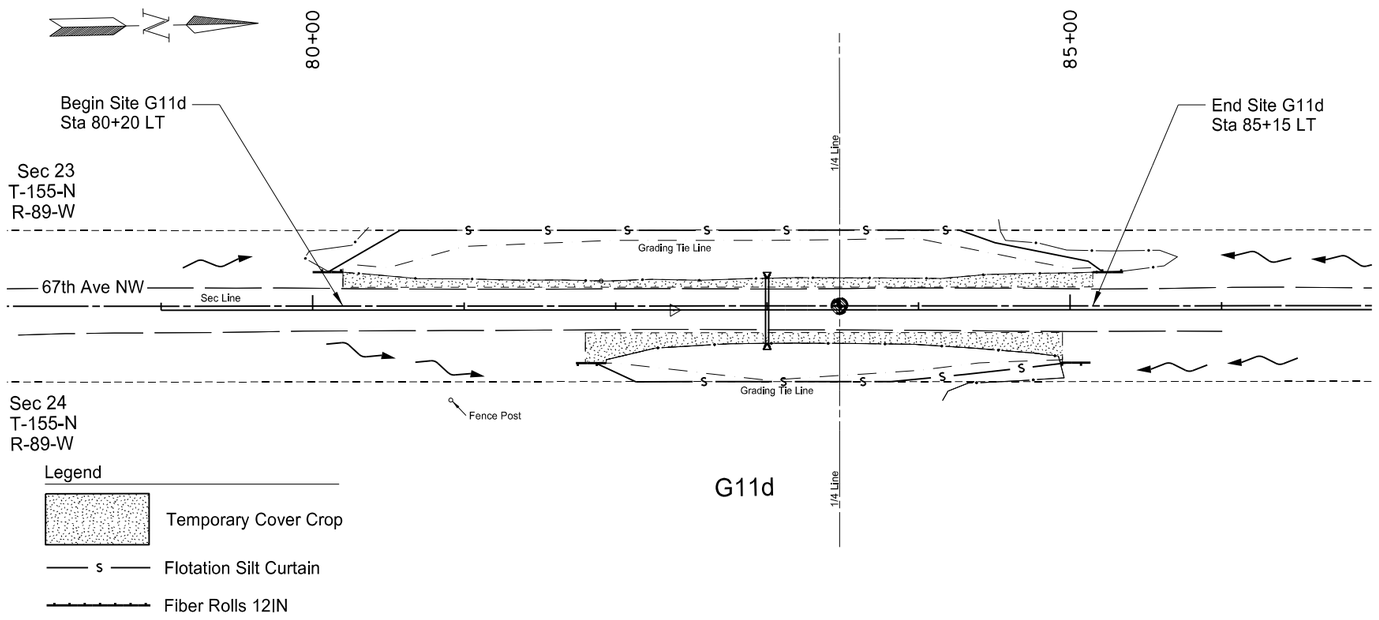
The Quantity Totals are Included in the Window Above

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Temporary Erosion Control

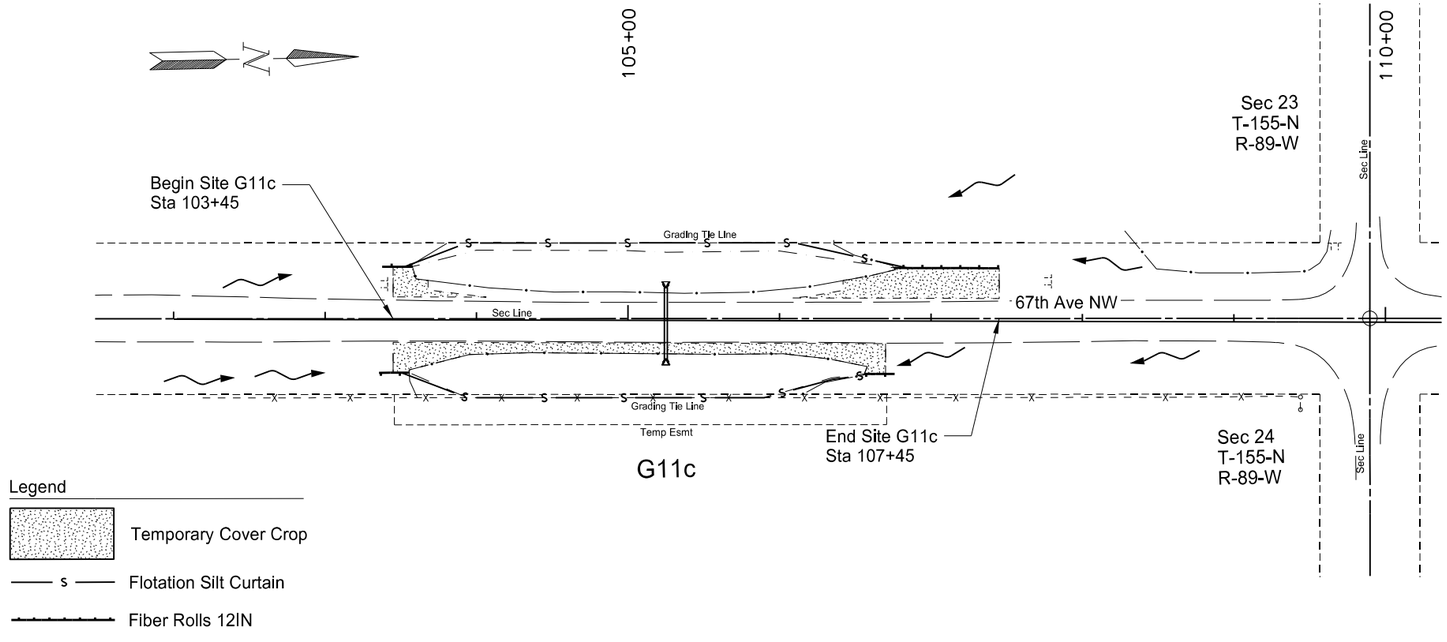
Site G11e
Inslope Erosion Repair
Missile Access Road - G11
Mountrail County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	76	2



Spec	Code	Description	Quantity	Unit
251	2000	Temporary Cover Crop Sta 80+20 to 85+15	0.14	ACRE
		Total =	0.14	ACRE
261	0112	Fiber Rolls 12IN Sta 80+20 to 85+15	80	LF
		Total =	80	LF
261	0113	Remove Fiber Rolls 12IN Sta 80+20 to 85+15	80	LF
		Total =	80	LF
262	0100	Flotation Silt Curtain Sta 80+20 to 85+15	840	LF
		Total =	840	LF
262	0101	Remove Flotation Silt Curtain Sta 80+20 to 85+15	840	LF
		Total =	840	LF

For quantity totals see Plan Note 262-P01 section 6 sheet 3
FLOTATION SILT CURTAIN



Spec	Code	Description	Quantity	Unit
251	2000	Temporary Cover Crop Sta 103+45 to 107+45	0.12	ACRE
		Total =	0.12	ACRE
261	0112	Fiber Rolls 12IN Sta 103+45 to 107+45	130	LF
		Total =	130	LF
261	0113	Remove Fiber Rolls 12IN Sta 103+45 to 107+45	130	LF
		Total =	130	LF
262	0100	Flotation Silt Curtain Sta 103+45 to 107+45	655	LF
		Total =	655	LF
262	0101	Remove Flotation Silt Curtain Sta 103+45 to 107+45	655	LF
		Total =	655	LF

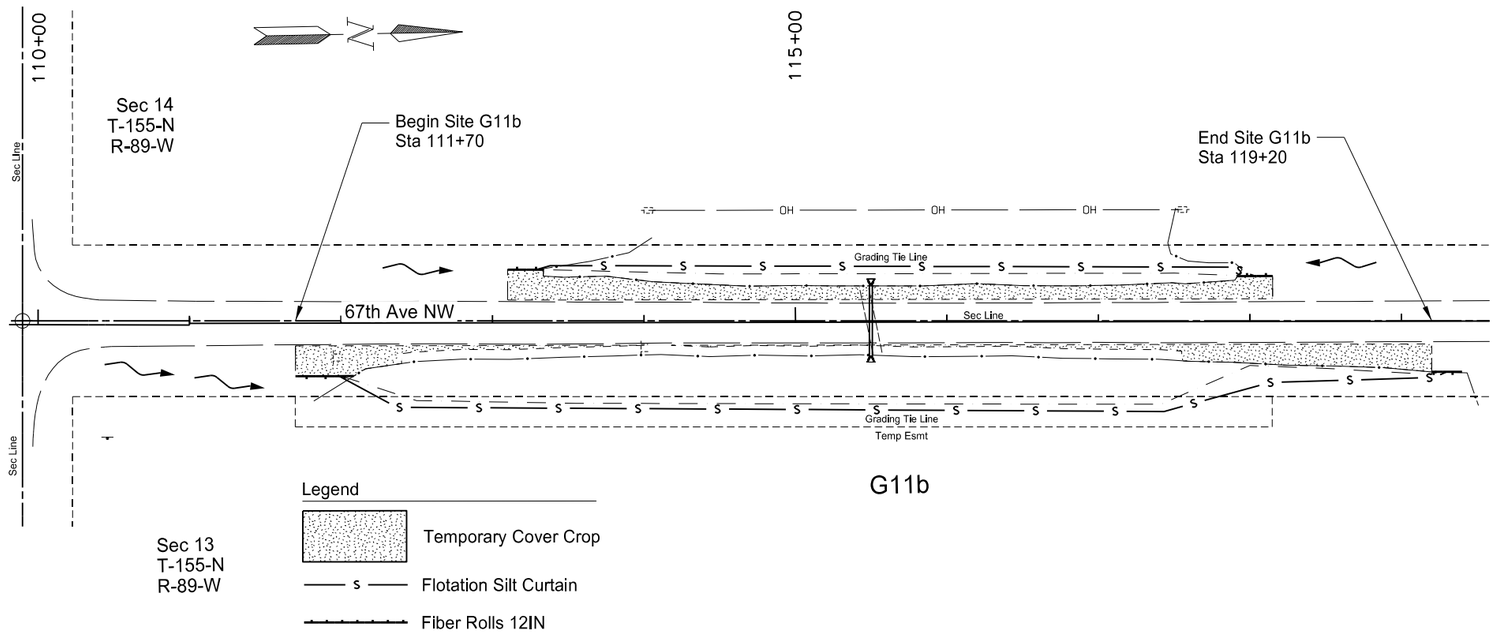
For quantity totals see Plan Note 262-P01 section 6 sheet 3
FLOTATION SILT CURTAIN

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Temporary Erosion Control

Site G11d & G11c
Inslope Erosion Repair
Missile Access Road - G11
Mountrail County

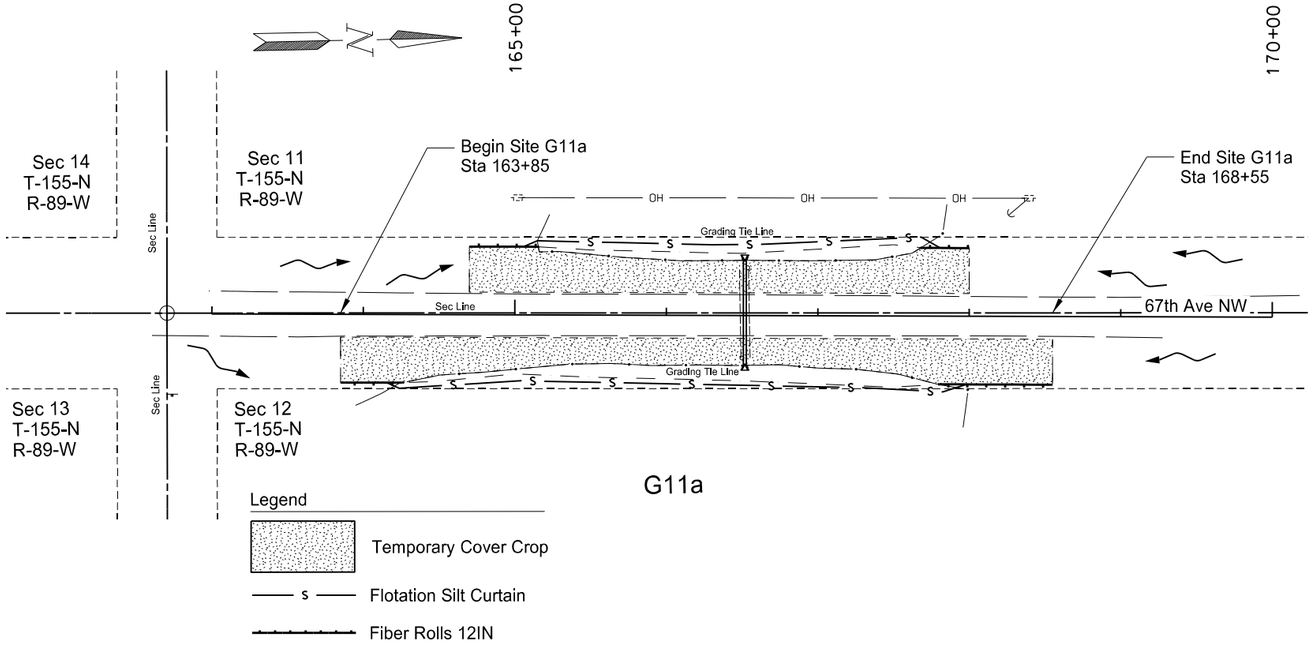
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	76	3



G11b

Spec	Code	Description	Quantity	Unit
251	2000	Temporary Cover Crop Sta 111+70 to 119+20	0.23	ACRE
		Total =	0.23	ACRE
261	0112	Fiber Rolls 12IN Sta 111+70 to 119+20	105	LF
		Total =	105	LF
261	0113	Remove Fiber Rolls 12IN Sta 111+70 to 119+20	105	LF
		Total =	105	LF
262	0100	Flotation Silt Curtain Sta 111+70 to 119+20	1220	LF
		Total =	1220	LF
262	0101	Remove Flotation Silt Curtain Sta 111+70 to 119+20	1220	LF
		Total =	1220	LF

For quantity totals see Plan Note 262-P01 section 6 sheet 3
FLOTATION SILT CURTAIN



G11a

Spec	Code	Description	Quantity	Unit
251	2000	Temporary Cover Crop Sta 163+85 to 168+55	0.43	ACRE
		Total =	0.43	ACRE
261	0112	Fiber Rolls 12IN Sta 163+85 to 168+55	195	LF
		Total =	195	LF
261	0113	Remove Fiber Rolls 12IN Sta 163+85 to 168+55	195	LF
		Total =	195	LF
262	0100	Flotation Silt Curtain Sta 163+85 to 168+55	640	LF
		Total =	640	LF
262	0101	Remove Flotation Silt Curtain Sta 163+85 to 168+55	640	LF
		Total =	640	LF

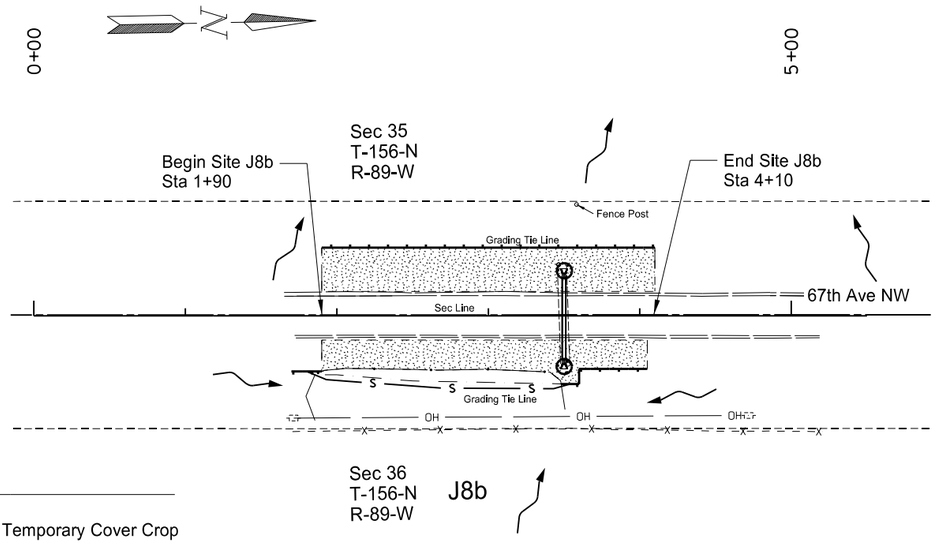
For quantity totals see Plan Note 262-P01 section 6 sheet 3
FLOTATION SILT CURTAIN

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Temporary Erosion Control

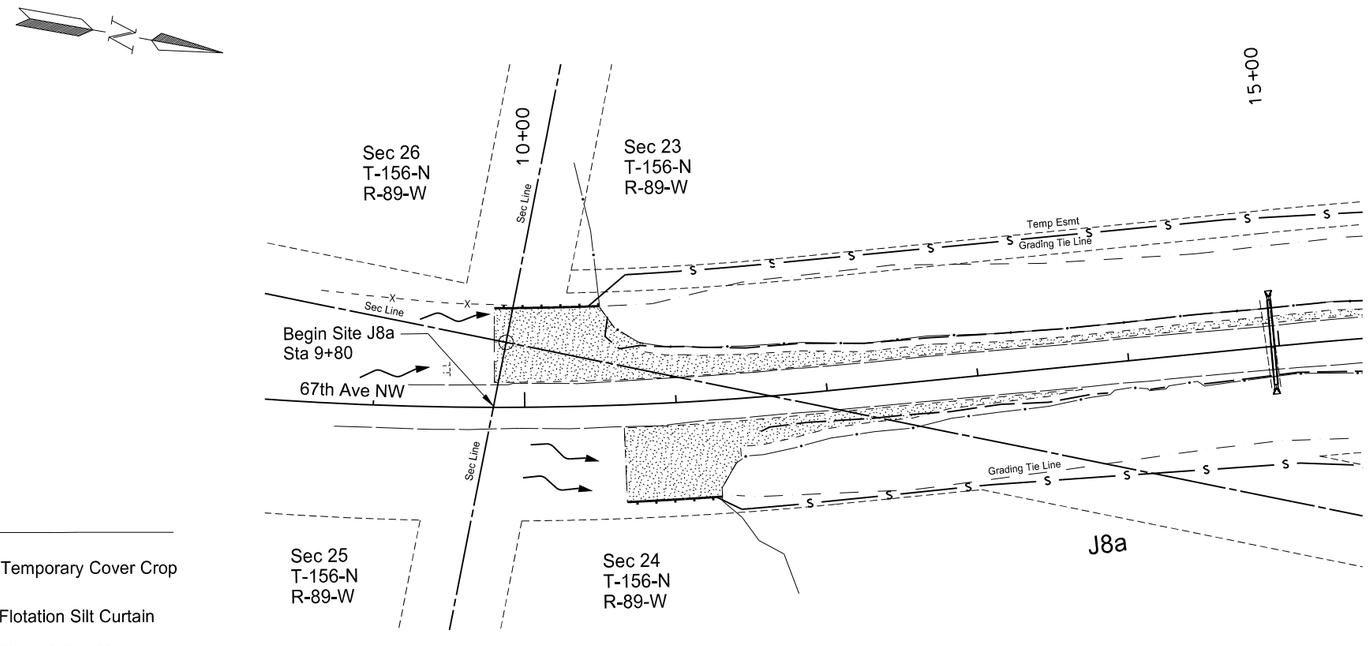
Site G11b & G11a
Inslope Erosion Repair
Missile Access Road - G11
Mountrail County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	76	4



Spec	Code	Description	Quantity	Unit
251	2000	Temporary Cover Crop		
		Sta 1+90 to 4+10	0.25	ACRE
		Total =	0.25	ACRE
261	0112	Fiber Rolls 12IN		
		Sta 1+90 to 4+10	370	LF
		Total =	370	LF
261	0113	Remove Fiber Rolls 12IN		
		Sta 1+90 to 4+10	370	LF
		Total =	370	LF
262	0100	Flotation Silt Curtain		
		Sta 1+90 to 4+10	175	LF
		Total =	175	LF
262	0101	Remove Flotation Silt Curtain		
		Sta 1+90 to 4+10	175	LF
		Total =	175	LF

For quantity totals see Plan Note 262-P01 section 6 sheet 3
FLOTATION SILT CURTAIN



Spec	Code	Description	Quantity	Unit
251	2000	Temporary Cover Crop		
		Sta 9+80 to 20+15	0.58	ACRE
		Total =	0.58	ACRE
261	0112	Fiber Rolls 12IN		
		Sta 9+80 to 20+15	250	LF
		Total =	250	LF
261	0113	Remove Fiber Rolls 12IN		
		Sta 9+80 to 20+15	250	LF
		Total =	250	LF
262	0100	Flotation Silt Curtain		
		Sta 9+80 to 20+15	1735	LF
		Total =	1735	LF
262	0101	Remove Flotation Silt Curtain		
		Sta 9+80 to 20+15	1735	LF
		Total =	1735	LF

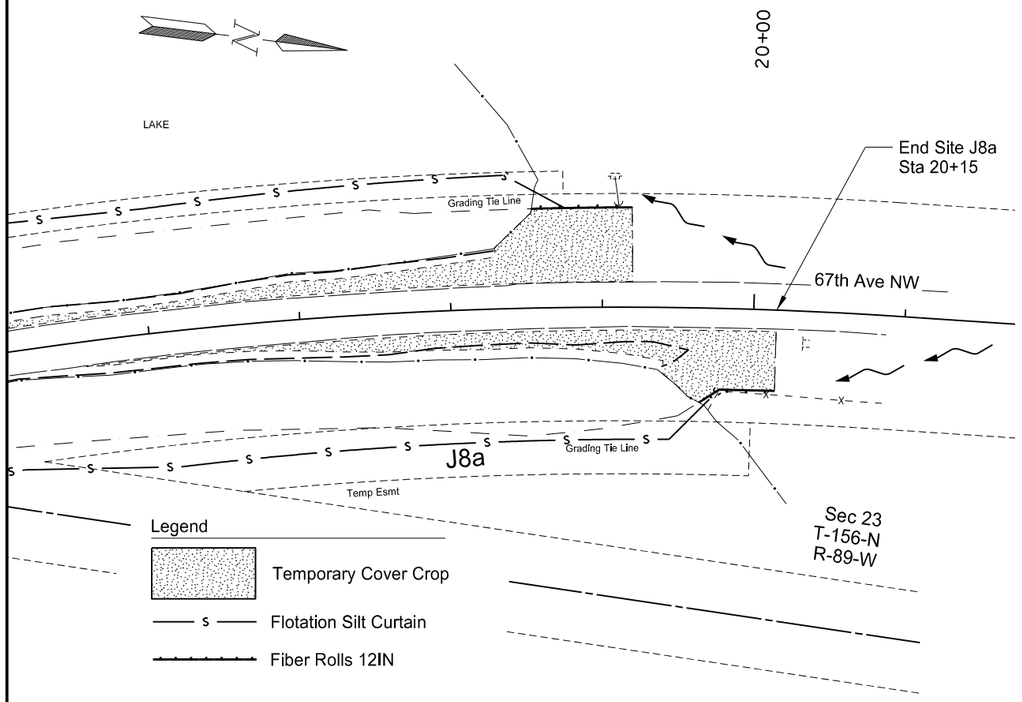
For quantity totals see Plan Note 262-P01 section 6 sheet 3
FLOTATION SILT CURTAIN

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Temporary Erosion Control

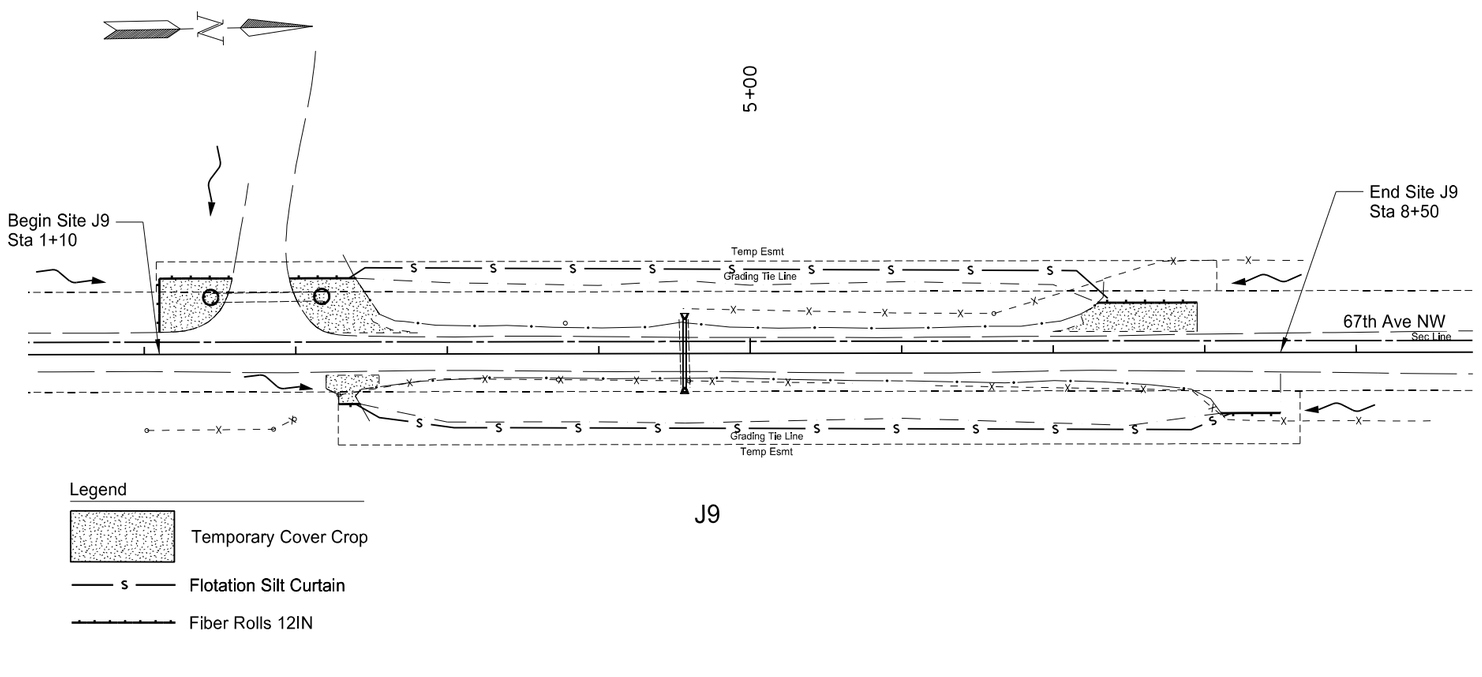
Site J8b & J8a
Inslope Erosion Repair
Missile Access Road - J8
Mountrail County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	76	5



Spec	Code	Description	Quantity	Unit

The Quantity Totals are Included in the Previous Sheet



J9

Spec	Code	Description	Quantity	Unit
251	2000	Temporary Cover Crop		
		Sta 1+10 to 8+50	0.15	ACRE
		Total =	0.15	ACRE
261	0112	Fiber Rolls 12IN		
		Sta 1+10 to 8+50	310	LF
		Total =	310	LF
261	0113	Remove Fiber Rolls 12IN		
		Sta 1+10 to 8+50	310	LF
		Total =	310	LF
262	0100	Flotation Silt Curtain		
		Sta 1+10 to 8+50	1130	LF
		Total =	1130	LF
262	0101	Remove Flotation Silt Curtain		
		Sta 1+10 to 8+50	1130	LF
		Total =	1130	LF

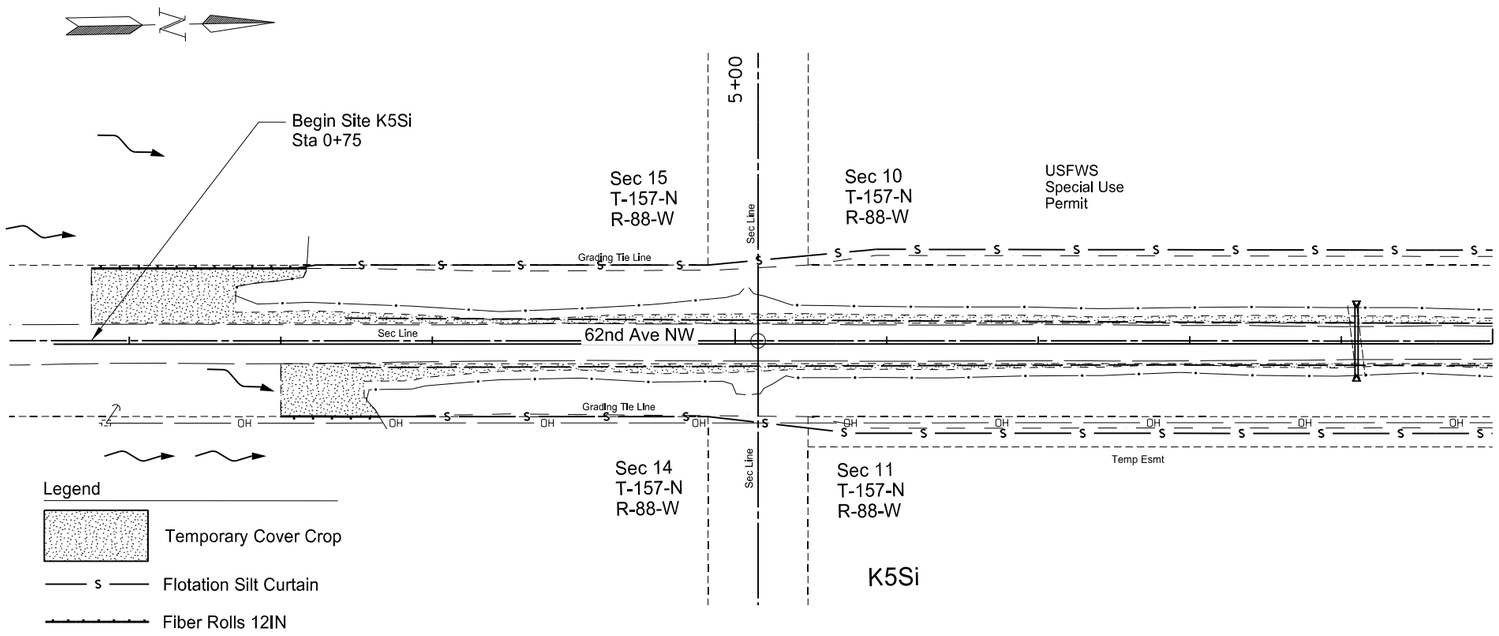
For quantity totals see Plan Note 262-P01 section 6 sheet 3
FLOTATION SILT CURTAIN

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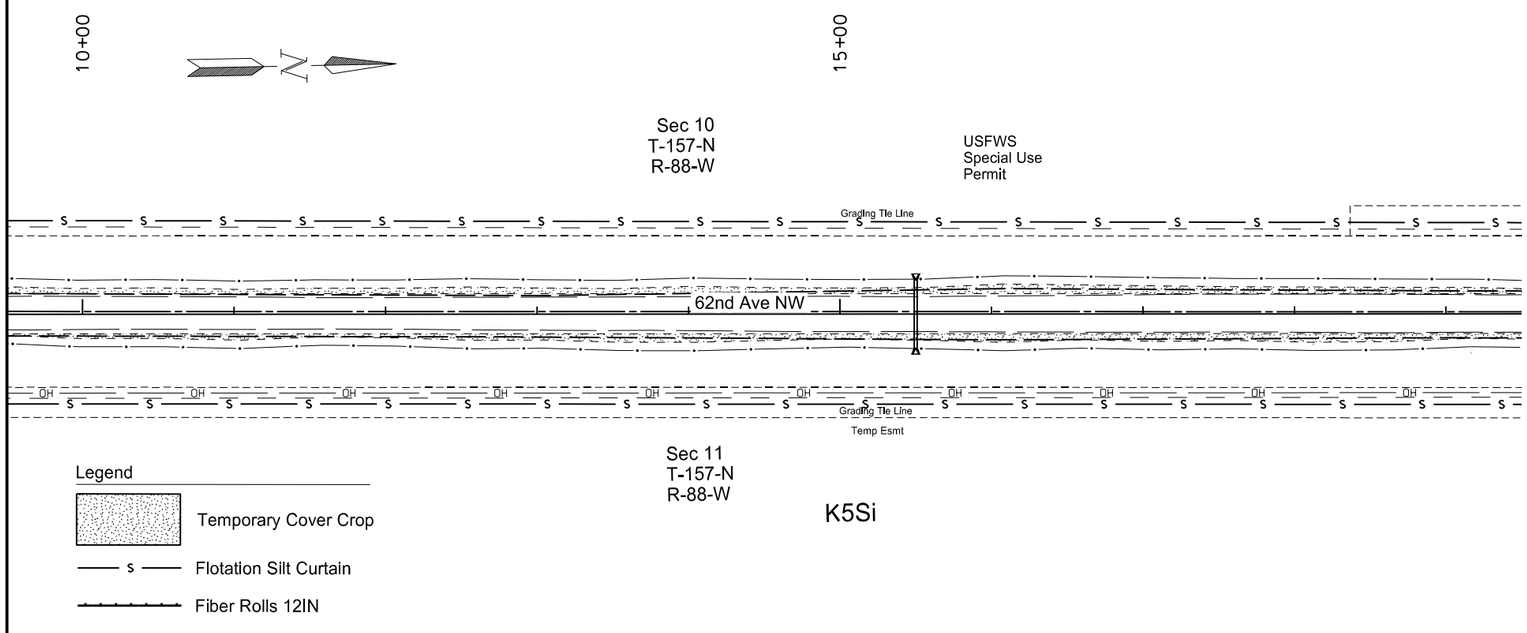
Site J8a & J9
Inslope Erosion Repair
Missile Access Road - J8 & J9
Mountrail County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	76	6



Spec	Code	Description	Quantity	Unit
251	2000	Temporary Cover Crop Sta 0+75 to 29+40	0.79	ACRE
		Total =	0.79	ACRE
261	0112	Fiber Rolls 12IN Sta 0+75 to 29+40	455	LF
		Total =	455	LF
261	0113	Remove Fiber Rolls 12IN Sta 0+75 to 29+40	455	LF
		Total =	455	LF
262	0100	Flotation Silt Curtain Sta 0+75 to 29+40	5220	LF
		Total =	5220	LF
262	0101	Remove Flotation Silt Curtain Sta 0+75 to 29+40	5220	LF
		Total =	5220	LF

For quantity totals see Plan Note 262-P01 section 6 sheet 3
FLOTATION SILT CURTAIN



Spec	Code	Description	Quantity	Unit

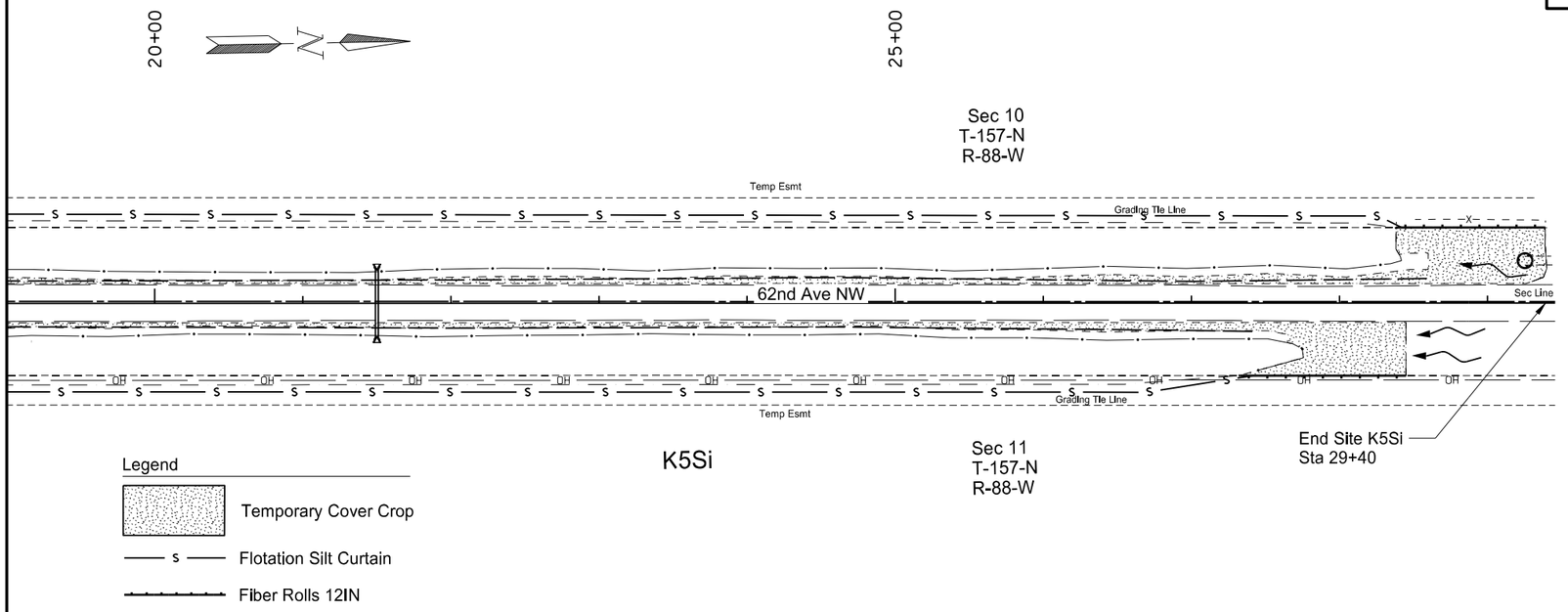
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Temporary Erosion Control

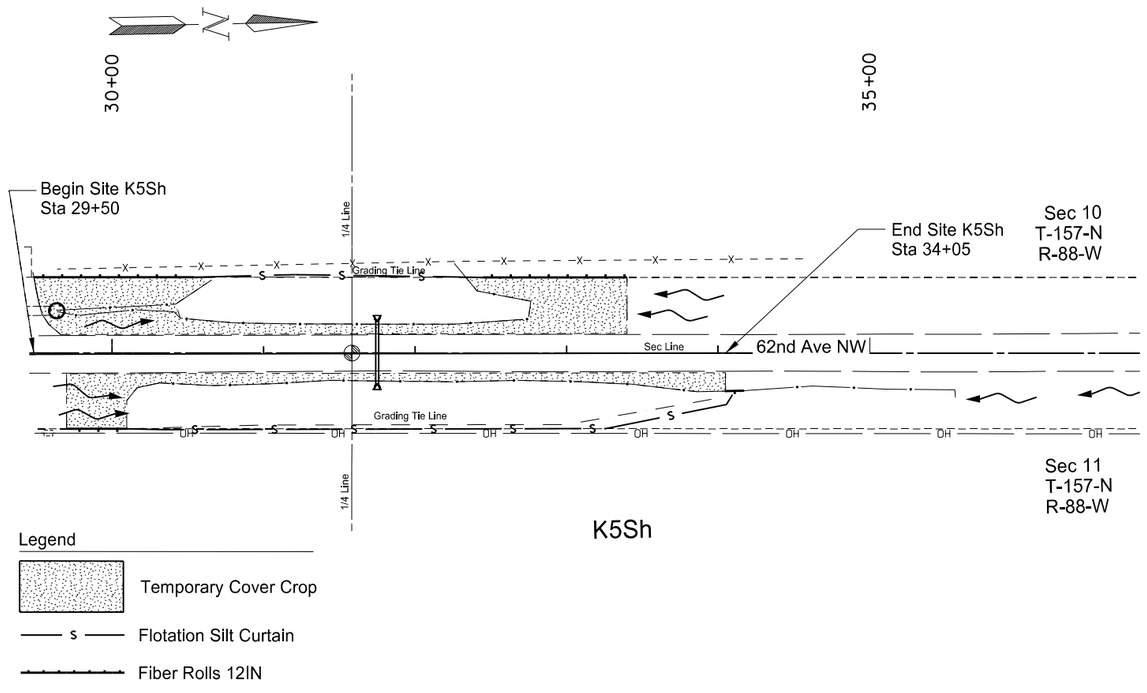
Site K5Si
Inslope Erosion Repair
Missile Access Road - K5S
Mountrail County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	76	7



Spec	Code	Description	Quantity	Unit

The Quantity Totals are Included in the Previous Sheet



Spec	Code	Description	Quantity	Unit
251	2000	Temporary Cover Crop		
		Sta 29+50 to 34+05	0.28	ACRE
		Total =	0.28	ACRE
261	0112	Fiber Rolls 12IN		
		Sta 29+50 to 34+05	285	LF
		Total =	285	LF
261	0113	Remove Fiber Rolls 12IN		
		Sta 29+50 to 34+05	285	LF
		Total =	285	LF
262	0100	Flotation Silt Curtain		
		Sta 29+50 to 34+05	610	LF
		Total =	610	LF
262	0101	Remove Flotation Silt Curtain		
		Sta 29+50 to 34+05	610	LF
		Total =	610	LF

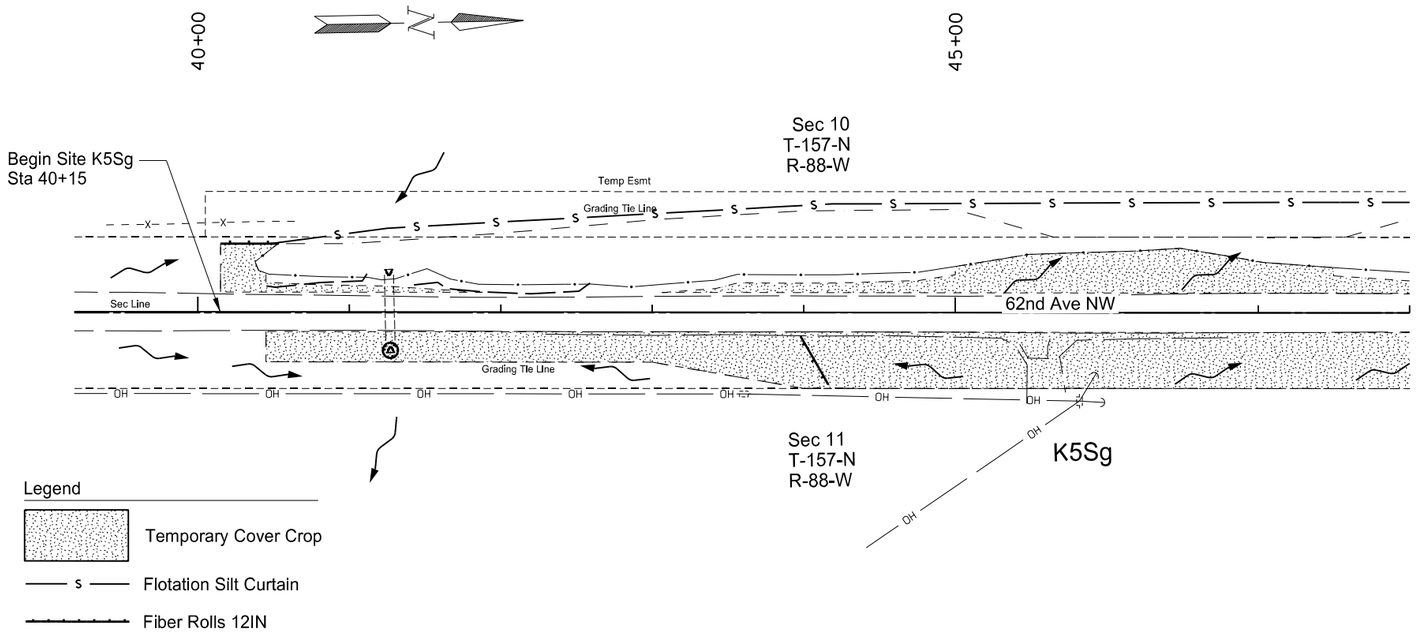
For quantity totals see Plan Note 262-P01 section 6 sheet 3
FLOTATION SILT CURTAIN

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Temporary Erosion Control

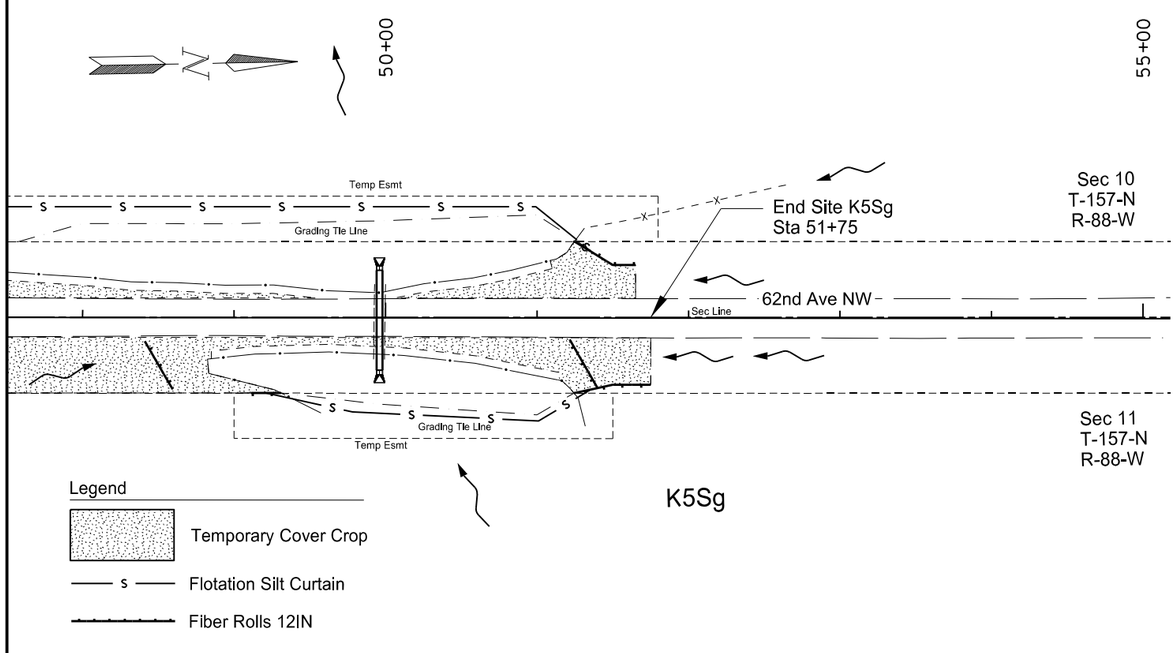
Site K5Si & K5Sh
Inslope Erosion Repair
Missile Access Road - K5S
Mountrail County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	76	8



Spec	Code	Description	Quantity	Unit
251	2000	Temporary Cover Crop		
		Sta 40+15 to 51+75	0.98	ACRE
		Total =	0.98	ACRE
261	0112	Fiber Rolls 12IN		
		Sta 40+15 to 51+75	275	LF
		Total =	275	LF
261	0113	Remove Fiber Rolls 12IN		
		Sta 40+15 to 51+75	275	LF
		Total =	275	LF
262	0100	Flotation Silt Curtain		
		Sta 40+15 to 51+75	1300	LF
		Total =	1300	LF
262	0101	Remove Flotation Silt Curtain		
		Sta 40+15 to 51+75	1300	LF
		Total =	1300	LF

For quantity totals see Plan Note 262-P01 section 6 sheet 3
FLOTATION SILT CURTAIN



Spec	Code	Description	Quantity	Unit

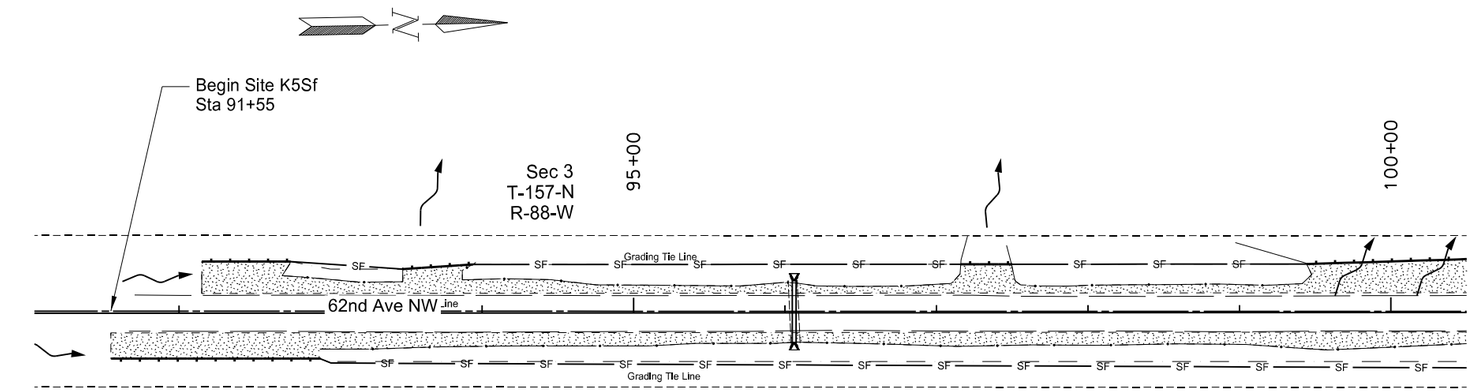
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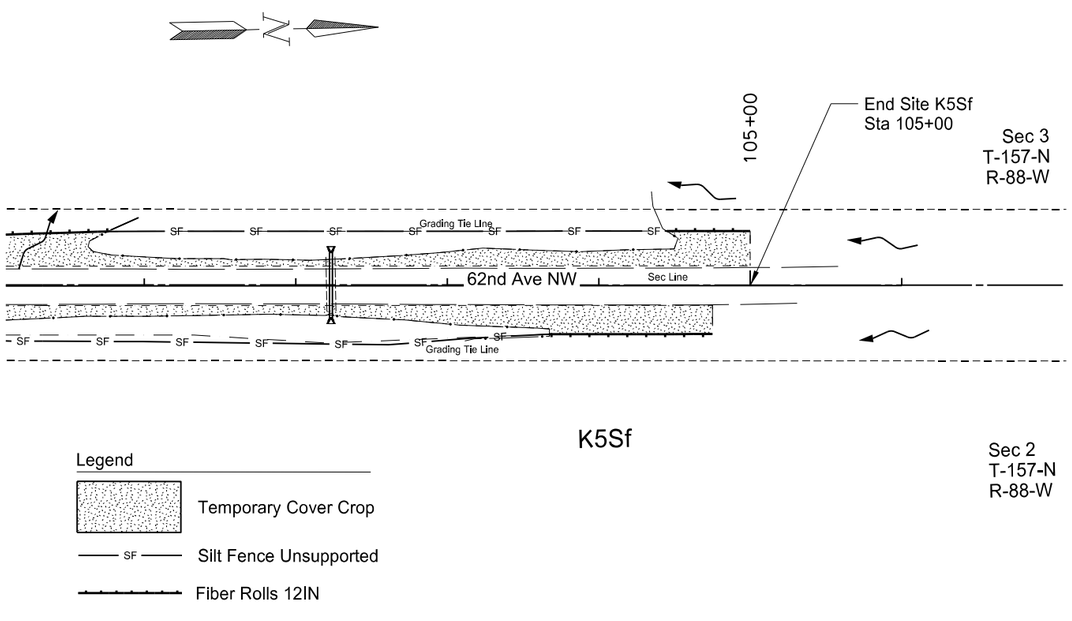
Temporary Erosion Control

Site K5Sg
Inslope Erosion Repair
Missile Access Road - K5S
Mountrail County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	76	9



Spec	Code	Description	Quantity	Unit
251	2000	Temporary Cover Crop		
		Sta 91+55 to 105+00	0.61	ACRE
		Total =	0.61	ACRE
260	0100	Silt Fence Unsupported		
		Sta 91+55 to 105+00	2040	LF
		Total =	2040	LF
260	0101	Remove Silt Fence Unsupported		
		Sta 91+55 to 105+00	2040	LF
		Total =	2040	LF
261	0112	Fiber Rolls 12IN		
		Sta 91+55 to 105+00	570	LF
		Total =	570	LF
261	0113	Remove Fiber Rolls 12IN		
		Sta 91+55 to 105+00	570	LF
		Total =	570	LF



Spec	Code	Description	Quantity	Unit

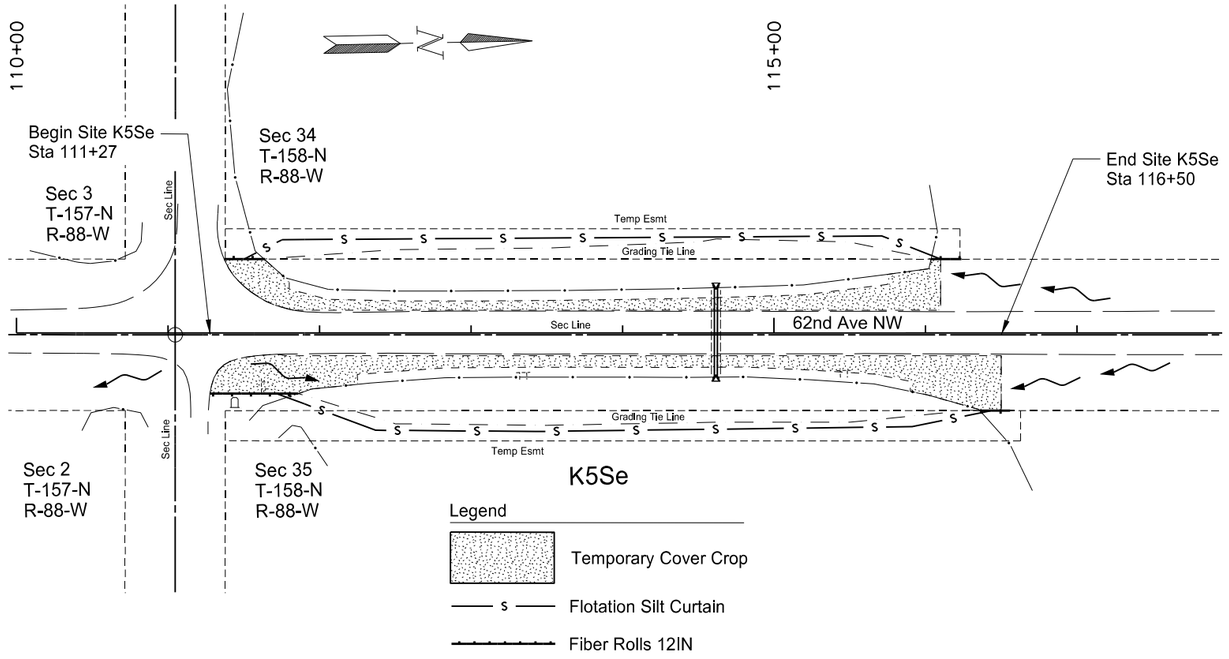
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Temporary Erosion Control

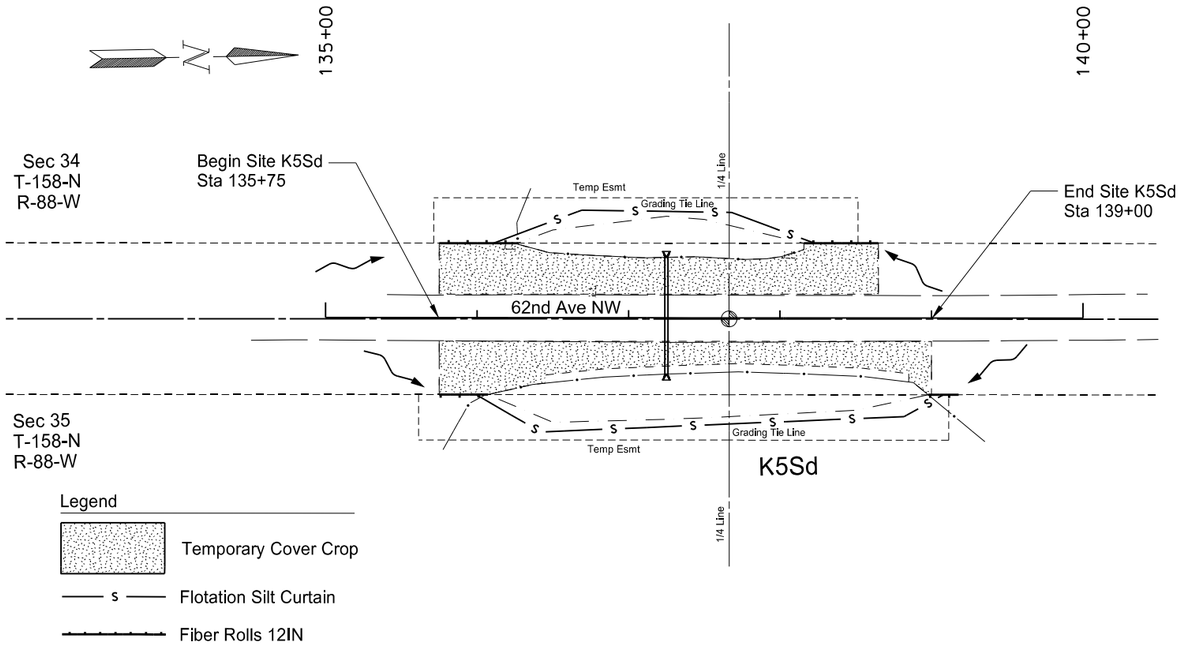
Site K5Sf
Inslope Erosion Repair
Missile Access Road - K5S
Mountrail County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	ROM-0300(134)	76	10



Spec	Code	Description	Quantity	Unit
251	2000	Temporary Cover Crop		
		Sta 111+27 to 116+50	0.28	ACRE
		Total =	0.28	ACRE
261	0112	Fiber Rolls 12IN		
		Sta 111+27 to 116+50	125	LF
		Total =	125	LF
261	0113	Remove Fiber Rolls 12IN		
		Sta 111+27 to 116+50	125	LF
		Total =	125	LF
262	0100	Flotation Silt Curtain		
		Sta 111+27 to 116+50	985	LF
		Total =	985	LF
262	0101	Remove Flotation Silt Curtain		
		Sta 111+27 to 116+50	985	LF
		Total =	985	LF

For quantity totals see Plan Note 262-P01 section 6 sheet 3
FLOTATION SILT CURTAIN



Spec	Code	Description	Quantity	Unit
251	2000	Temporary Cover Crop		
		Sta 135+75 to 139+00	0.35	ACRE
		Total =	0.35	ACRE
261	0112	Fiber Rolls 12IN		
		Sta 135+75 to 139+00	155	LF
		Total =	155	LF
261	0113	Remove Fiber Rolls 12IN		
		Sta 135+75 to 139+00	155	LF
		Total =	155	LF
262	0100	Flotation Silt Curtain		
		Sta 135+75 to 139+00	550	LF
		Total =	550	LF
262	0101	Remove Flotation Silt Curtain		
		Sta 135+75 to 139+00	550	LF
		Total =	550	LF

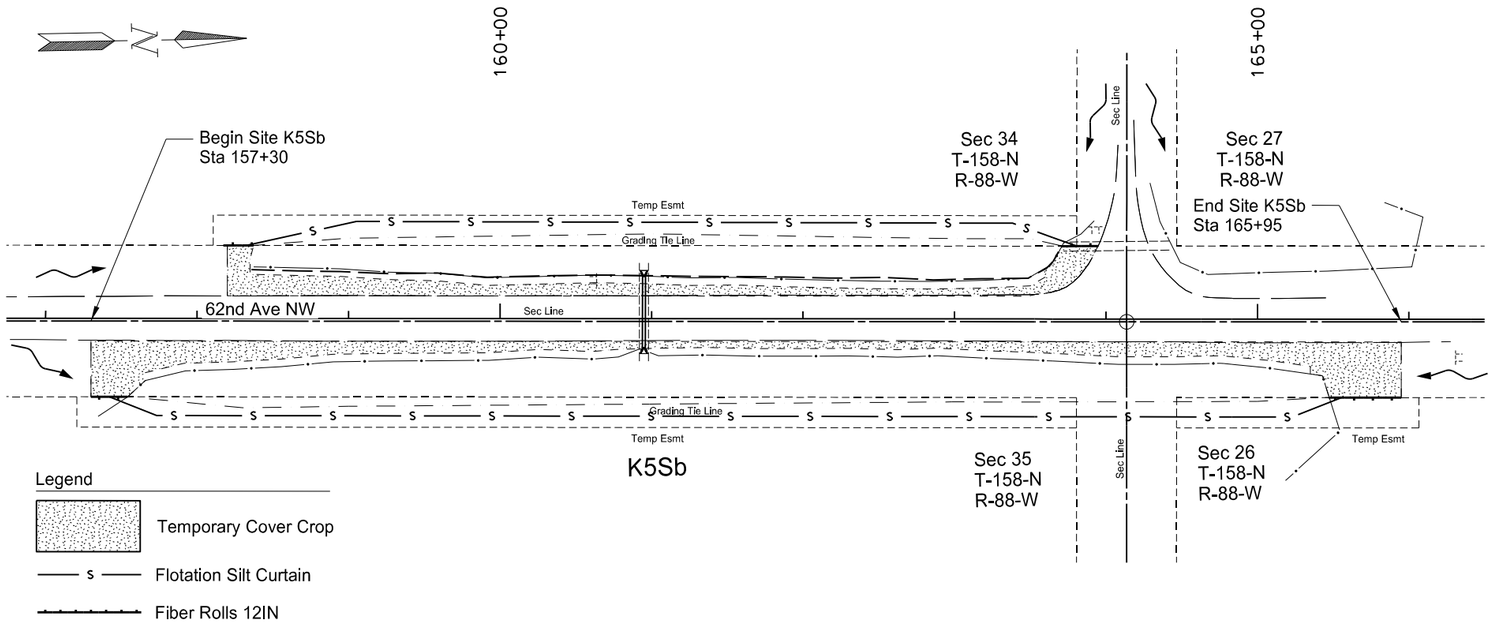
For quantity totals see Plan Note 262-P01 section 6 sheet 3
FLOTATION SILT CURTAIN

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Temporary Erosion Control

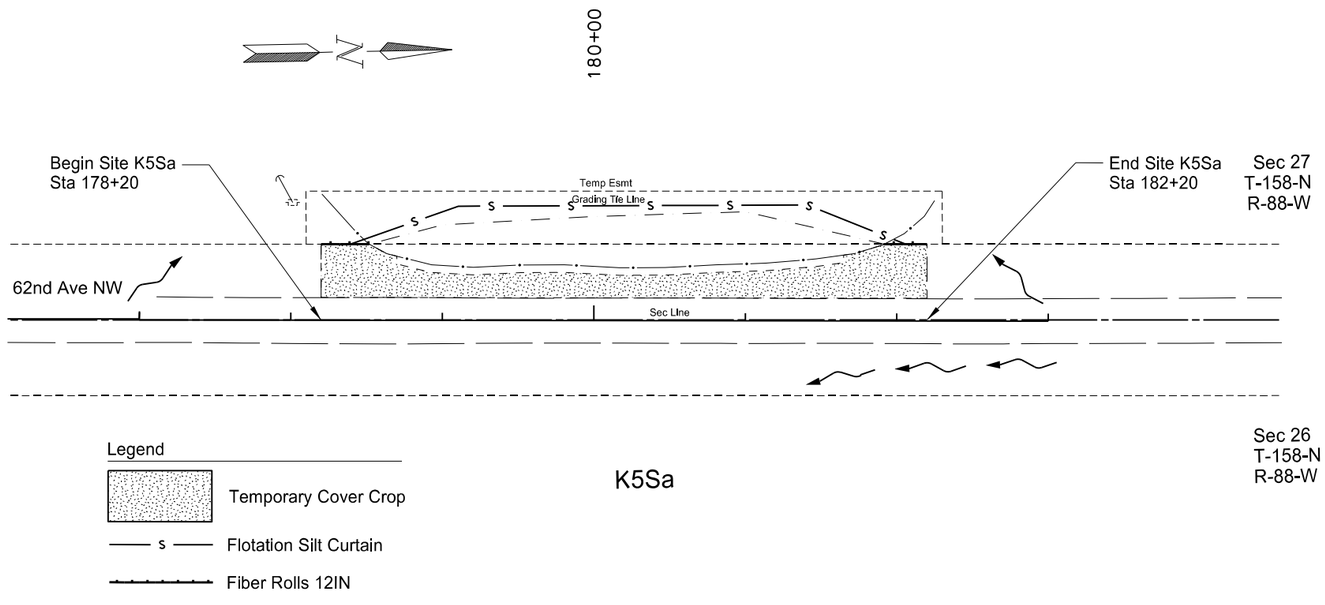
Site K5Se & K5Sd
Inslope Erosion Repair
Missile Access Road - K5S
Mountrail County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	76	11



Spec	Code	Description	Quantity	Unit
251	2000	Temporary Cover Crop		
		Sta 157+30 to 165+95	0.34	ACRE
		Total =	0.34	ACRE
261	0112	Fiber Rolls 12IN		
		Sta 157+30 to 165+95	115	LF
		Total =	115	LF
261	0113	Remove Fiber Rolls 12IN		
		Sta 157+30 to 165+95	115	LF
		Total =	115	LF
262	0100	Flotation Silt Curtain		
		Sta 157+30 to 165+95	1380	LF
		Total =	1380	LF
262	0101	Remove Flotation Silt Curtain		
		Sta 157+30 to 165+95	1380	LF
		Total =	1380	LF

For quantity totals see Plan Note 262-P01 section 6 sheet 3
FLOTATION SILT CURTAIN



Spec	Code	Description	Quantity	Unit
251	2000	Temporary Cover Crop		
		Sta 178+20 to 182+20	0.20	ACRE
		Total =	0.20	ACRE
261	0112	Fiber Rolls 12IN		
		Sta 178+20 to 182+20	60	LF
		Total =	60	LF
261	0113	Remove Fiber Rolls 12IN		
		Sta 178+20 to 182+20	60	LF
		Total =	60	LF
262	0100	Flotation Silt Curtain		
		Sta 178+20 to 182+20	385	LF
		Total =	385	LF
262	0101	Remove Flotation Silt Curtain		
		Sta 178+20 to 182+20	385	LF
		Total =	385	LF

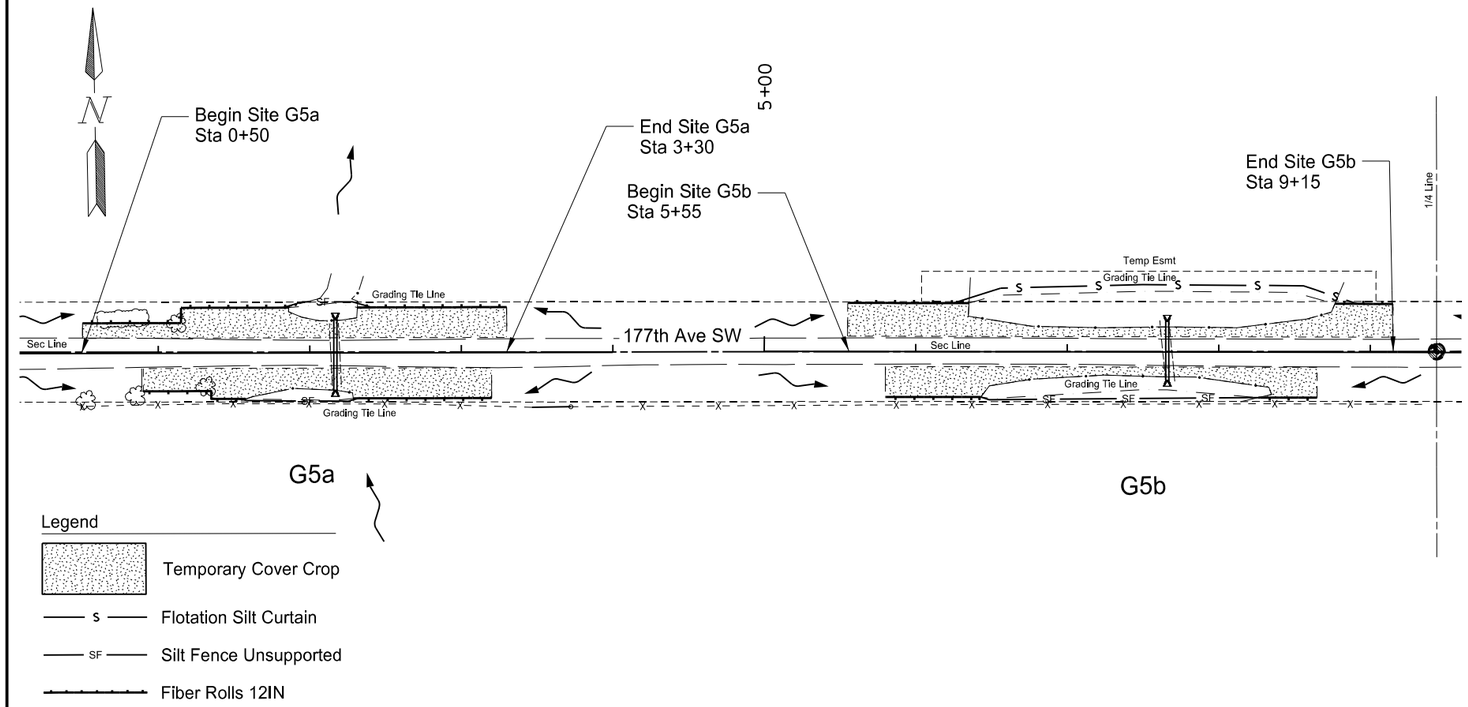
For quantity totals see Plan Note 262-P01 section 6 sheet 3
FLOTATION SILT CURTAIN

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Temporary Erosion Control

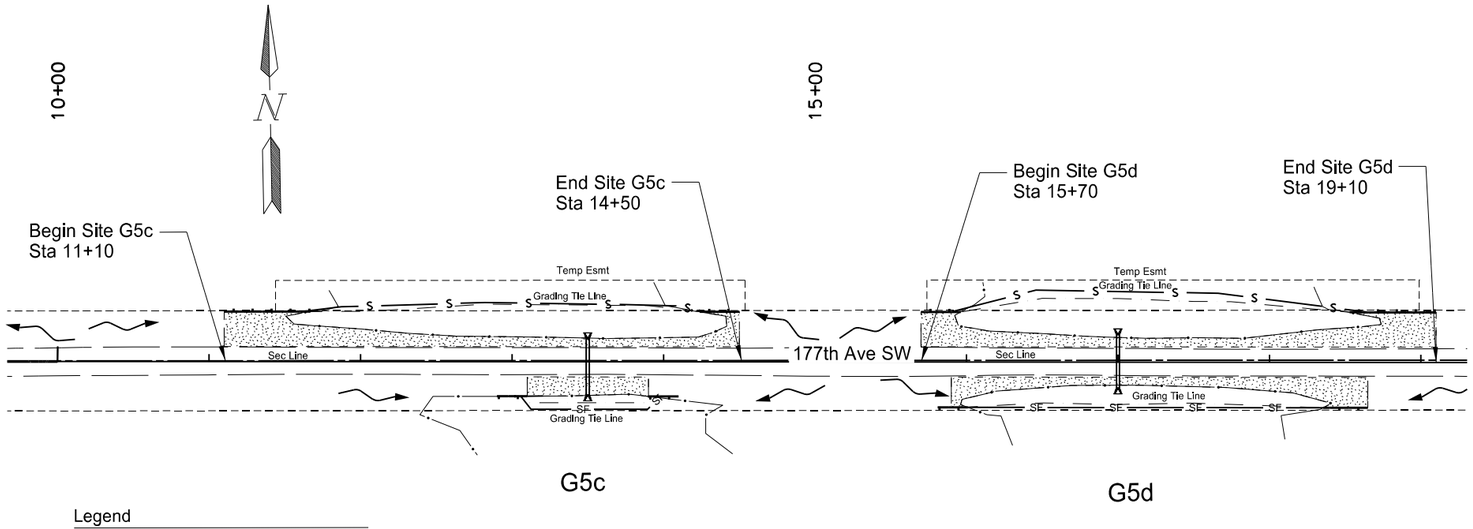
Site K5Sb & K5Sa
Inslope Erosion Repair
Missile Access Road - K5S
Mountrail County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	76	12



Spec	Code	Description	Quantity	Unit
251	2000	Temporary Cover Crop		
		Sta 0+50 to 19+15	0.63	ACRE
		Total =	0.63	ACRE
260	0100	Silt Fence Unsupported		
		Sta 0+50 to 19+15	655	LF
		Total =	655	LF
260	0101	Remove Silt Fence Unsupported		
		Sta 0+50 to 19+10	655	LF
		Total =	655	LF
261	0112	Fiber Rolls 12IN		
		Sta 0+50 to 19+10	885	LF
		Total =	885	LF
261	0113	Remove Fiber Rolls 12IN		
		Sta 0+50 to 19+10	885	LF
		Total =	885	LF
262	0100	Flotation Silt Curtain		
		Sta 0+50 to 19+10	820	LF
		Total =	820	LF
262	0101	Remove Flotation Silt Curtain		
		Sta 0+50 to 19+10	820	LF
		Total =	820	LF

For quantity totals see Plan Note 262-P01 section 6 sheet 3
FLOTATION SILT CURTAIN



Spec	Code	Description	Quantity	Unit

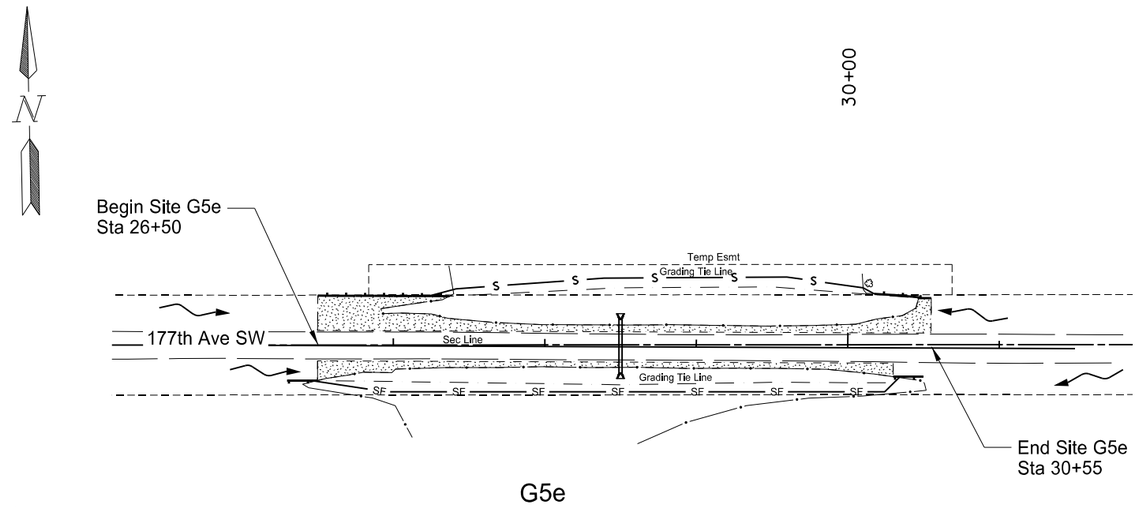
The Quantity Totals are Included in the Window Above

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Temporary Erosion Control

Site G5a - d
Inslope Erosion Repair
Missile Access Road - G5
Ward County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	76	13



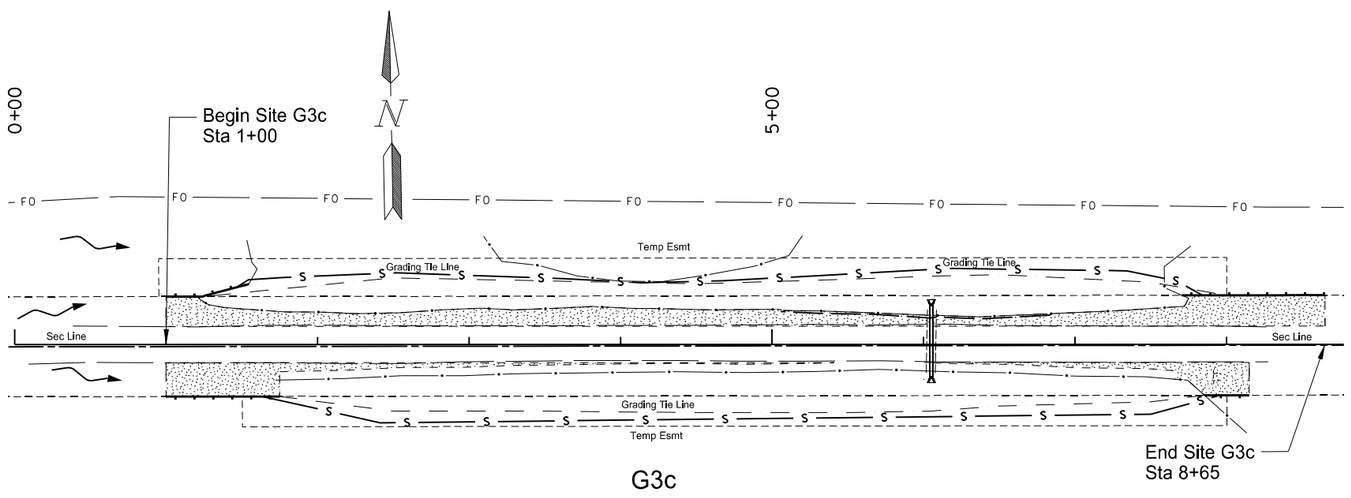
G5e

Legend

- Temporary Cover Crop
- S — Flotation Silt Curtain
- SF — Silt Fence Unsupported
- Fiber Rolls 12IN

Spec	Code	Description	Quantity	Unit
251	2000	Temporary Cover Crop Sta 26+50 to 30+55	0.13	ACRE
		Total =	0.13	ACRE
260	0100	Silt Fence Unsupported Sta 26+50 to 30+55	400	LF
		Total =	400	LF
260	0101	Remove Silt Fence Unsupported Sta 26+50 to 30+55	400	LF
		Total =	400	LF
261	0112	Fiber Rolls 12IN Sta 26+50 to 30+55	165	LF
		Total =	165	LF
261	0113	Remove Fiber Rolls 12IN Sta 26+50 to 30+55	165	LF
		Total =	165	LF
262	0100	Flotation Silt Curtain Sta 26+50 to 30+55	285	LF
		Total =	285	LF
262	0101	Remove Flotation Silt Curtain Sta 26+50 to 30+55	285	LF
		Total =	285	LF

For quantity totals see Plan Note 262-P01 section 6 sheet 3
FLOTATION SILT CURTAIN



G3c

Legend

- Temporary Cover Crop
- S — Flotation Silt Curtain
- SF — Silt Fence Unsupported
- Fiber Rolls 12IN

Spec	Code	Description	Quantity	Unit
251	2000	Temporary Cover Crop Sta 1+00 to 8+65	0.29	ACRE
		Total =	0.29	ACRE
261	0112	Fiber Rolls 12IN Sta 1+00 to 8+65	255	LF
		Total =	255	LF
261	0113	Remove Fiber Rolls 12IN Sta 1+00 to 8+65	255	LF
		Total =	255	LF
262	0100	Flotation Silt Curtain Sta 1+00 to 8+65	1265	LF
		Total =	1265	LF
262	0101	Remove Flotation Silt Curtain Sta 1+00 to 8+65	1265	LF
		Total =	1265	LF

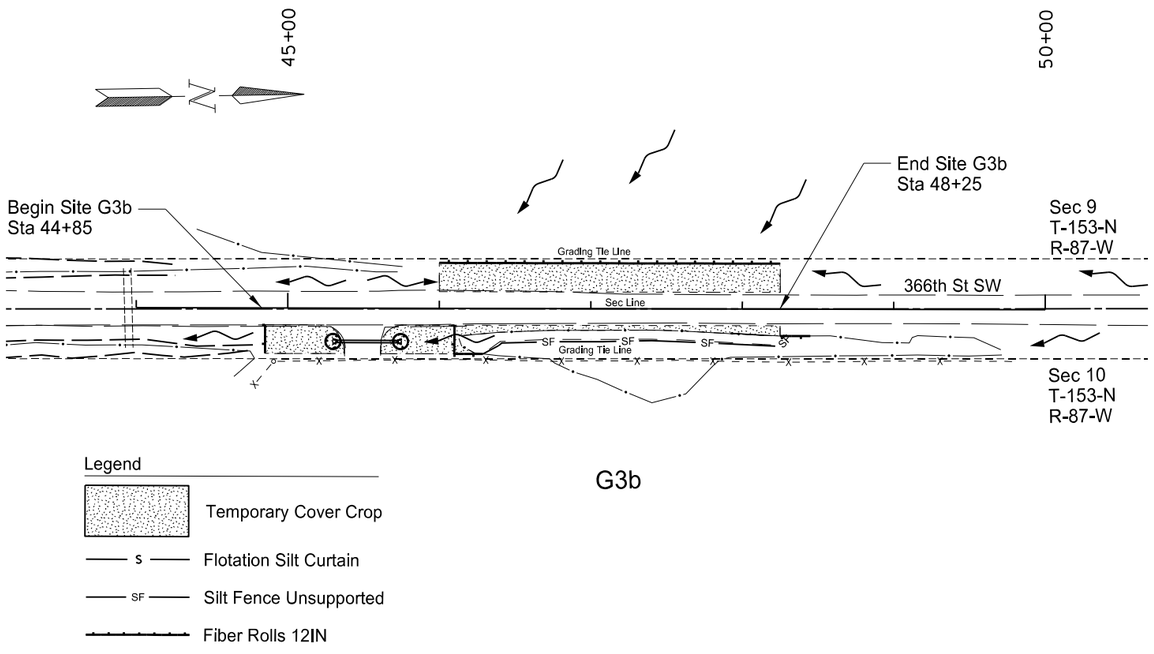
For quantity totals see Plan Note 262-P01 section 6 sheet 3
FLOTATION SILT CURTAIN

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Temporary Erosion Control

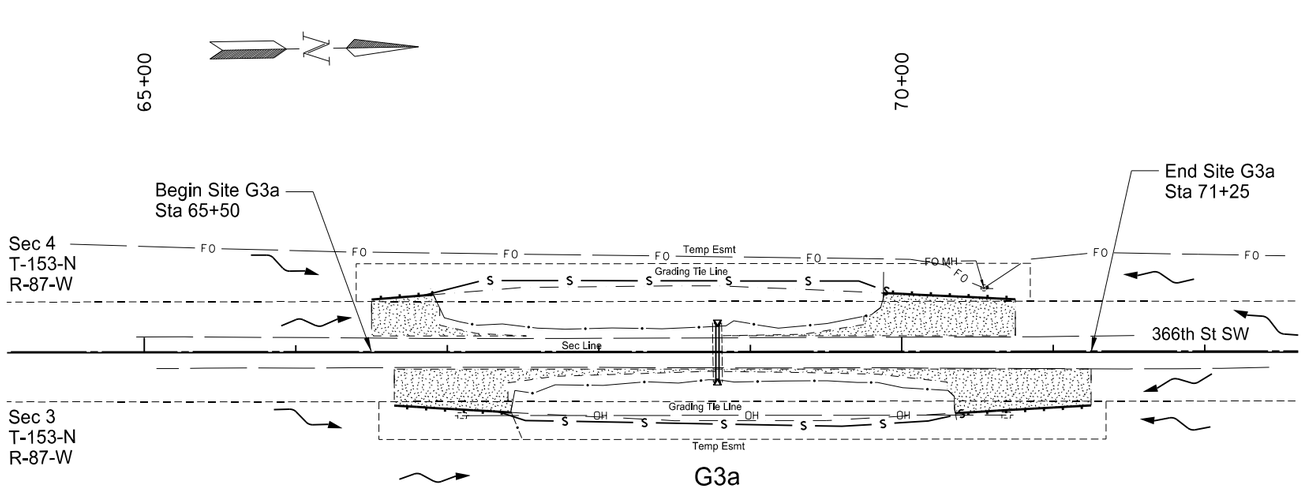
Site G5e & G3c
Inslope Erosion Repair
Missile Access Road - G5 & G3
Ward County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	76	14



G3b

Spec	Code	Description	Quantity	Unit
251	2000	Temporary Cover Crop		
		Sta 44+85 to 48+25	0.16	ACRE
		Total =	0.16	ACRE
260	0100	Silt Fence Unsupported		
		Sta 44+85 to 48+25	210	LF
		Total =	210	LF
260	0101	Remove Silt Fence Unsupported		
		Sta 44+85 to 48+25	210	LF
		Total =	210	LF
261	0112	Fiber Rolls 12IN		
		Sta 44+85 to 48+25	362	LF
		Total =	362	LF
261	0113	Remove Fiber Rolls 12IN		
		Sta 44+85 to 48+25	362	LF
		Total =	362	LF



G3a

Spec	Code	Description	Quantity	Unit
251	2000	Temporary Cover Crop		
		Sta 66+50 to 71+25	0.22	ACRE
		Total =	0.22	ACRE
261	0112	Fiber Rolls 12IN		
		Sta 66+50 to 71+25	295	LF
		Total =	295	LF
261	0113	Remove Fiber Rolls 12IN		
		Sta 66+50 to 71+25	295	LF
		Total =	295	LF
262	0100	Flotation Silt Curtain		
		Sta 66+50 to 71+25	645	LF
		Total =	645	LF
262	0101	Remove Flotation Silt Curtain		
		Sta 66+50 to 71+25	645	LF
		Total =	645	LF

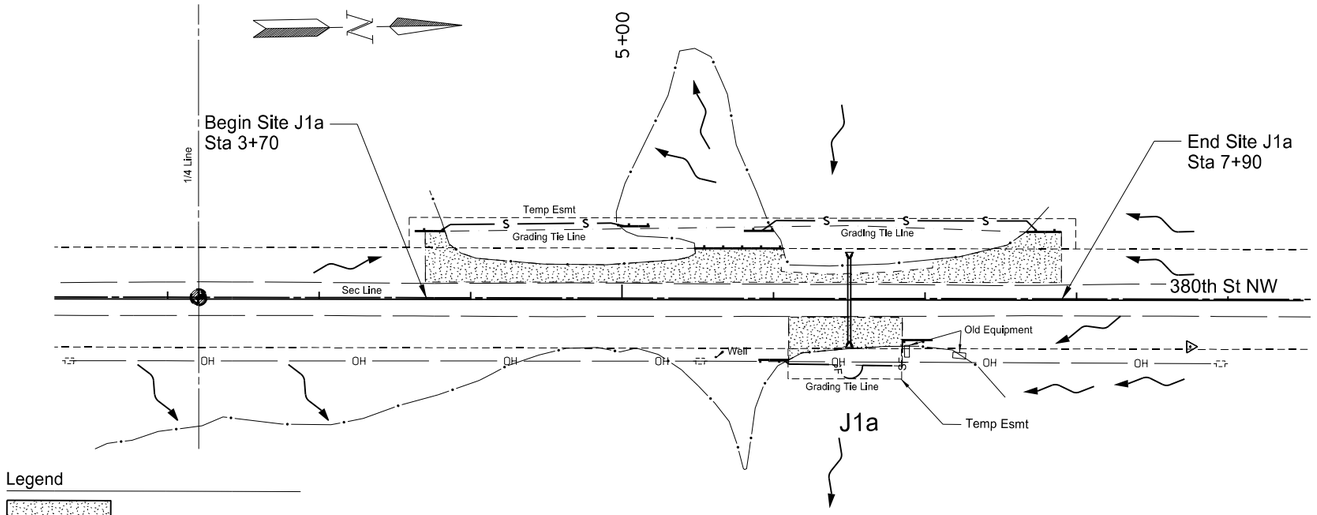
For quantity totals see Plan Note 262-P01 section 6 sheet 3
FLOTATION SILT CURTAIN

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Temporary Erosion Control

Site G3b
Inslope Erosion Repair
Missile Access Road - G3
Ward County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	76	15

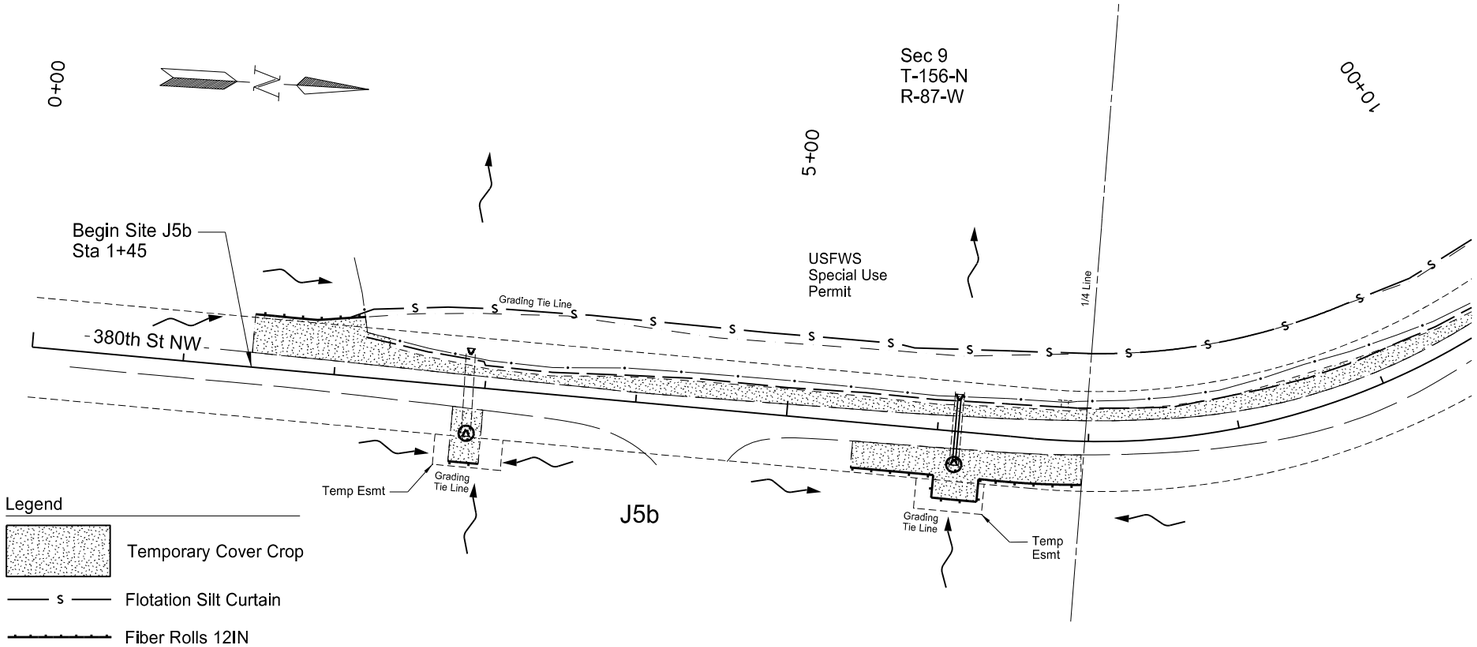


Legend

- Temporary Cover Crop
- S — Flotation Silt Curtain
- SF — Silt Fence Unsupported
- Fiber Rolls 12IN

Spec	Code	Description	Quantity	Unit
251	2000	Temporary Cover Crop		
		Sta 3+70 to 7+90	0.19	ACRE
		Total =	0.19	ACRE
260	0100	Silt Fence Unsupported		
		Sta 3+70 to 7+90	110	LF
		Total =	110	LF
260	0101	Remove Silt Fence Unsupported		
		Sta 3+70 to 7+90	110	LF
		Total =	110	LF
261	0112	Fiber Rolls 12IN		
		Sta 3+70 to 7+90	185	LF
		Total =	185	LF
261	0113	Remove Fiber Rolls 12IN		
		Sta 3+70 to 7+90	185	LF
		Total =	185	LF
262	0100	Flotation Silt Curtain		
		Sta 3+70 to 7+90	345	LF
		Total =	345	LF
262	0101	Remove Flotation Silt Curtain		
		Sta 3+70 to 7+90	345	LF
		Total =	345	LF

For quantity totals see Plan Note 262-P01 section 6 sheet 3
FLOTATION SILT CURTAIN



Legend

- Temporary Cover Crop
- S — Flotation Silt Curtain
- Fiber Rolls 12IN

Spec	Code	Description	Quantity	Unit
251	2000	Temporary Cover Crop		
		Sta 1+45 to 12+25	0.45	ACRE
		Total =	0.45	ACRE
261	0112	Fiber Rolls 12IN		
		Sta 1+45 to 12+25	610	LF
		Total =	610	LF
261	0113	Remove Fiber Rolls 12IN		
		Sta 1+45 to 12+25	610	LF
		Total =	610	LF
262	0100	Flotation Silt Curtain		
		Sta 1+45 to 12+25	935	LF
		Total =	935	LF
262	0101	Remove Flotation Silt Curtain		
		Sta 1+45 to 12+25	935	LF
		Total =	935	LF

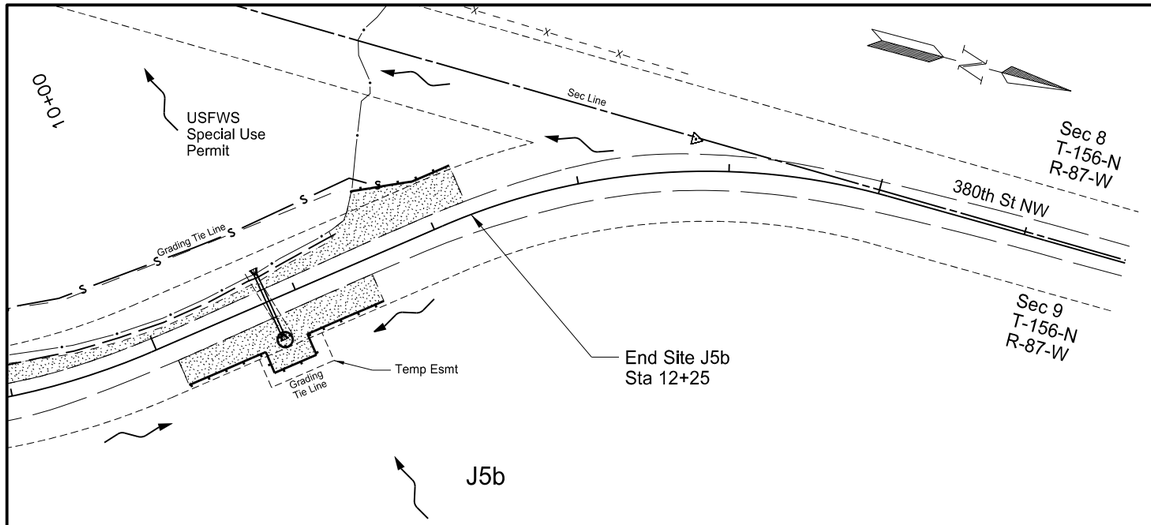
For quantity totals see Plan Note 262-P01 section 6 sheet 3
FLOTATION SILT CURTAIN

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Temporary Erosion Control

Site G3a & J1a
Inslope Erosion Repair
Missile Access Road - G3 & J1
Ward County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	76	16

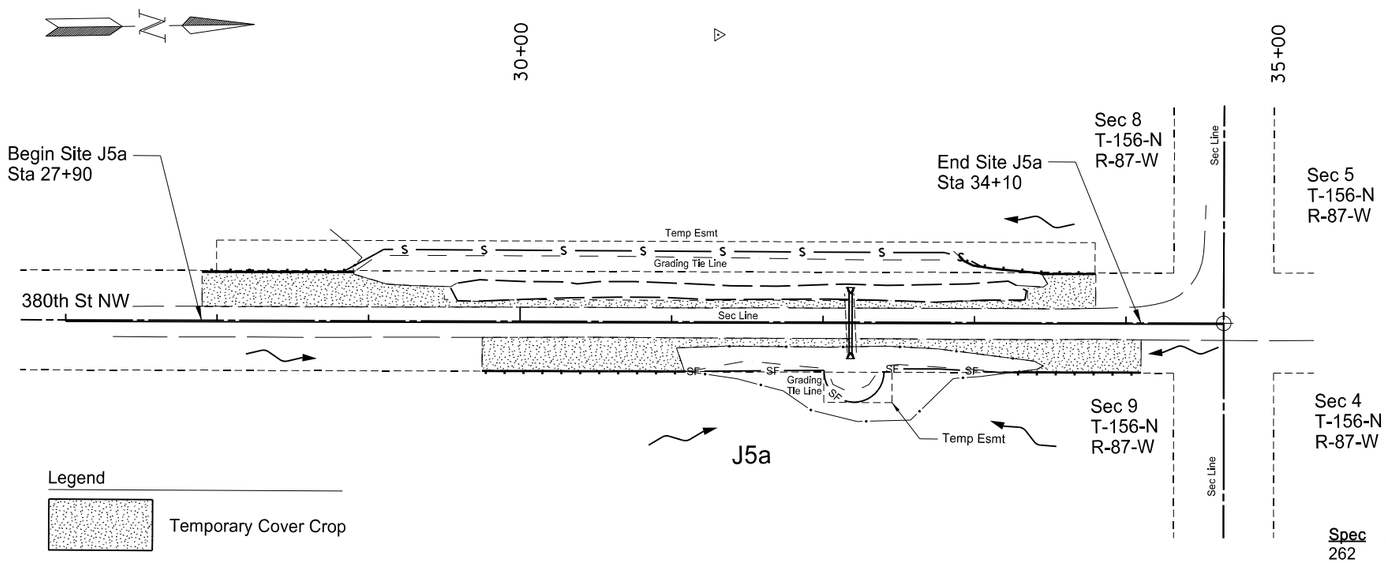


Legend

- Temporary Cover Crop
- S — Flotation Silt Curtain
- Fiber Rolls 12IN

Spec	Code	Description	Quantity	Unit

The Quantity Totals are Included in the Previous Sheet



Legend

- Temporary Cover Crop
- S — Flotation Silt Curtain
- SF — Silt Fence Unsupported
- Fiber Rolls 12IN

STA. 32+18
18 IN X 40 LF CSP (Poor)
REMOVE

Spec	Code	Description	Quantity	Unit
251	2000	Temporary Cover Crop		
		Sta 27+90 to 34+10	0.28	ACRE
		Total =	0.28	ACRE
260	0100	Silt Fence Unsupported		
		Sta 27+90 to 34+10	250	LF
		Total =	250	LF
260	0101	Remove Silt Fence Unsupported		
		Sta 27+90 to 34+10	250	LF
		Total =	250	LF
261	0112	Fiber Rolls 12IN		
		Sta 27+90 to 34+10	410	LF
		Total =	410	LF
261	0113	Remove Fiber Rolls 12IN		
		Sta 27+90 to 34+10	410	LF
		Total =	410	LF
262	0100	Flotation Silt Curtain		
		Sta 27+90 to 34+10	420	LF
		Total =	420	LF

Spec	Code	Description	Quantity	Unit
262	0101	Remove Flotation Silt Curtain		
		Sta 27+90 to 34+10	420	LF
		Total =	420	LF

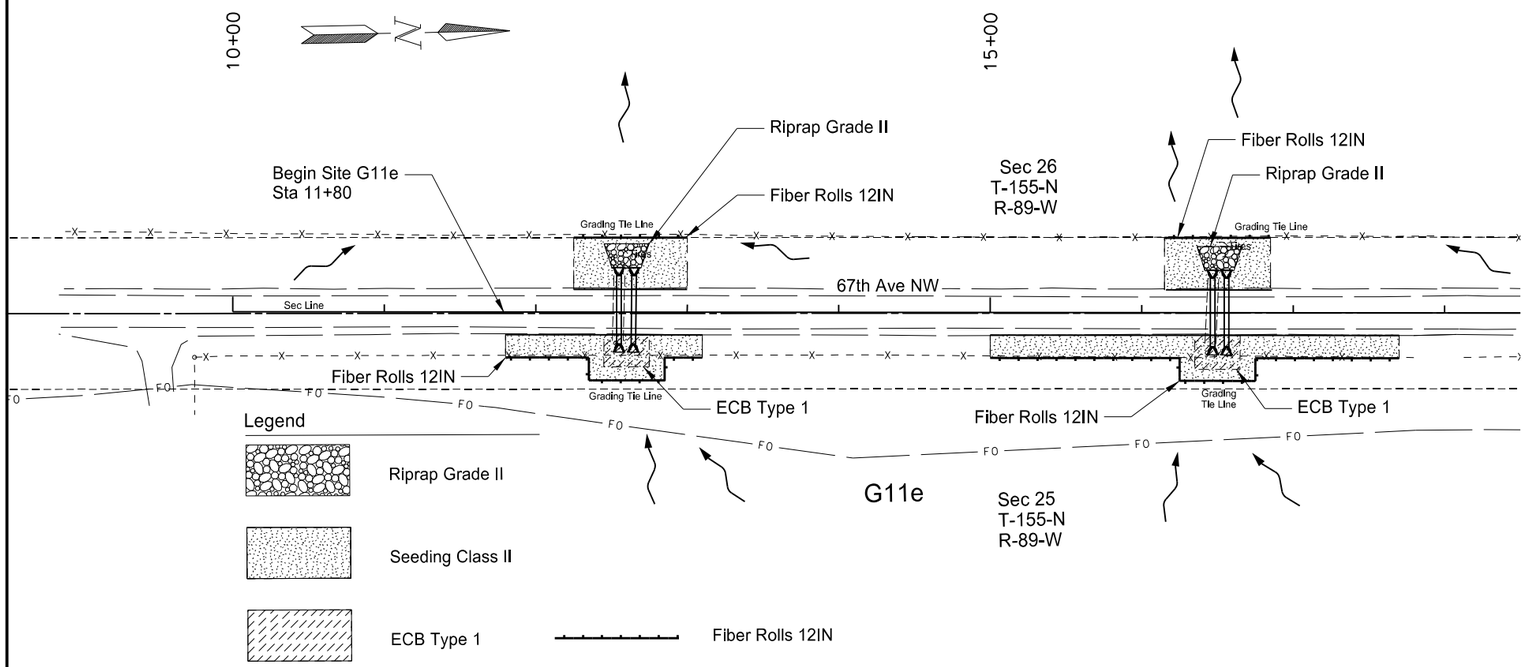
For quantity totals see Plan Note 262-P01 section 6 sheet 3
FLOTATION SILT CURTAIN

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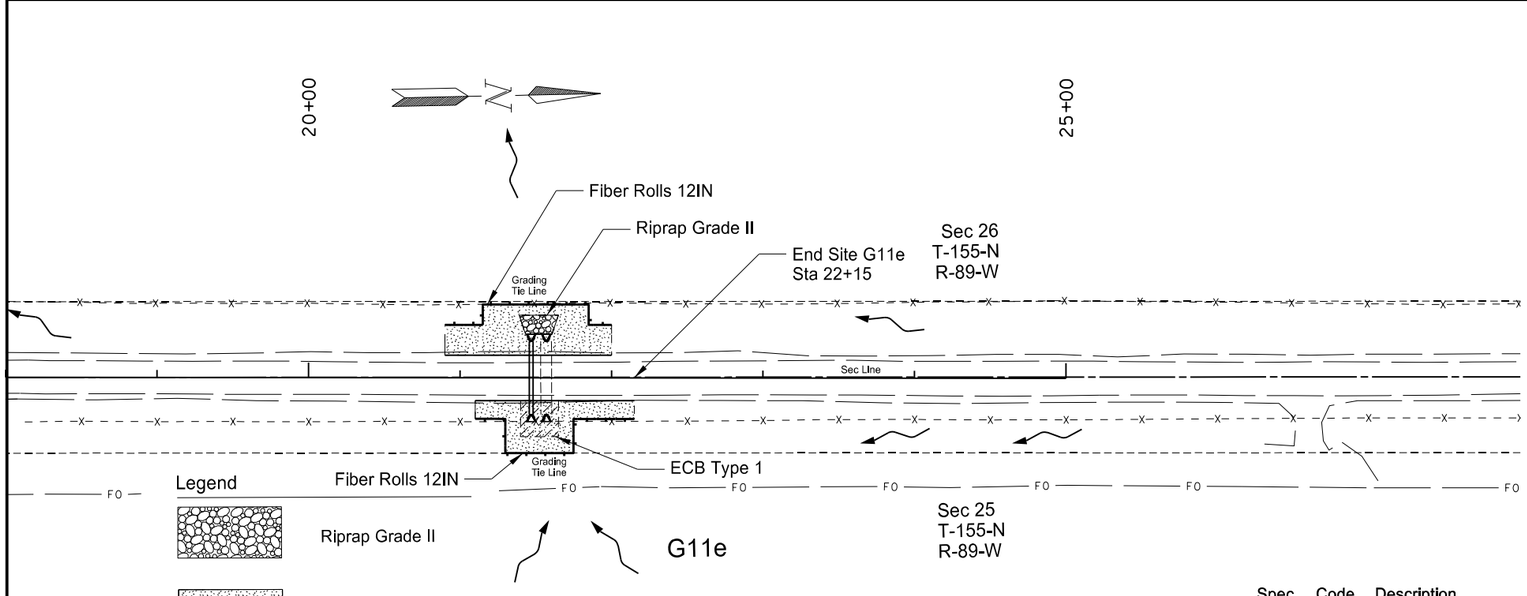
Temporary Erosion Control

Site J5b
Inslope Erosion Repair
Missile Access Road - J5
Ward County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	77	1



Spec	Code	Description	Quantity	Unit
203	0109	Topsoil		
		Sta 11+80 to 17+70	136	CY
		Total =	136	CY
251	0200	Seeding Class II		
		Sta 11+80 to 17+70	0.27	ACRE
		Total =	0.27	ACRE
253	0101	Straw Mulch		
		Sta 11+80 to 17+70	0.54	ACRE
		Total =	0.54	ACRE
255	0101	ECB Type 1		
		Sta 12+45 to 12+75 RT	87	SY
		Sta 16+35 to 16+65 RT	91	SY
		Total =	178	SY
256	0200	Riprap Grade II		
		Sta 12+45 to 12+75 LT	31	CY
		Sta 16+35 to 16+65 LT	31	CY
		Total =	62	CY
261	0112	Fiber Rolls 12IN		
		Sta 11+80 to 17+70	605	LF
		Total =	605	LF
709	0155	Geosynthetic Material Type RR		
		Sta 12+45 to 12+75 LT	74	SY
		Sta 16+35 to 16+65 LT	74	SY
		Total =	148	SY



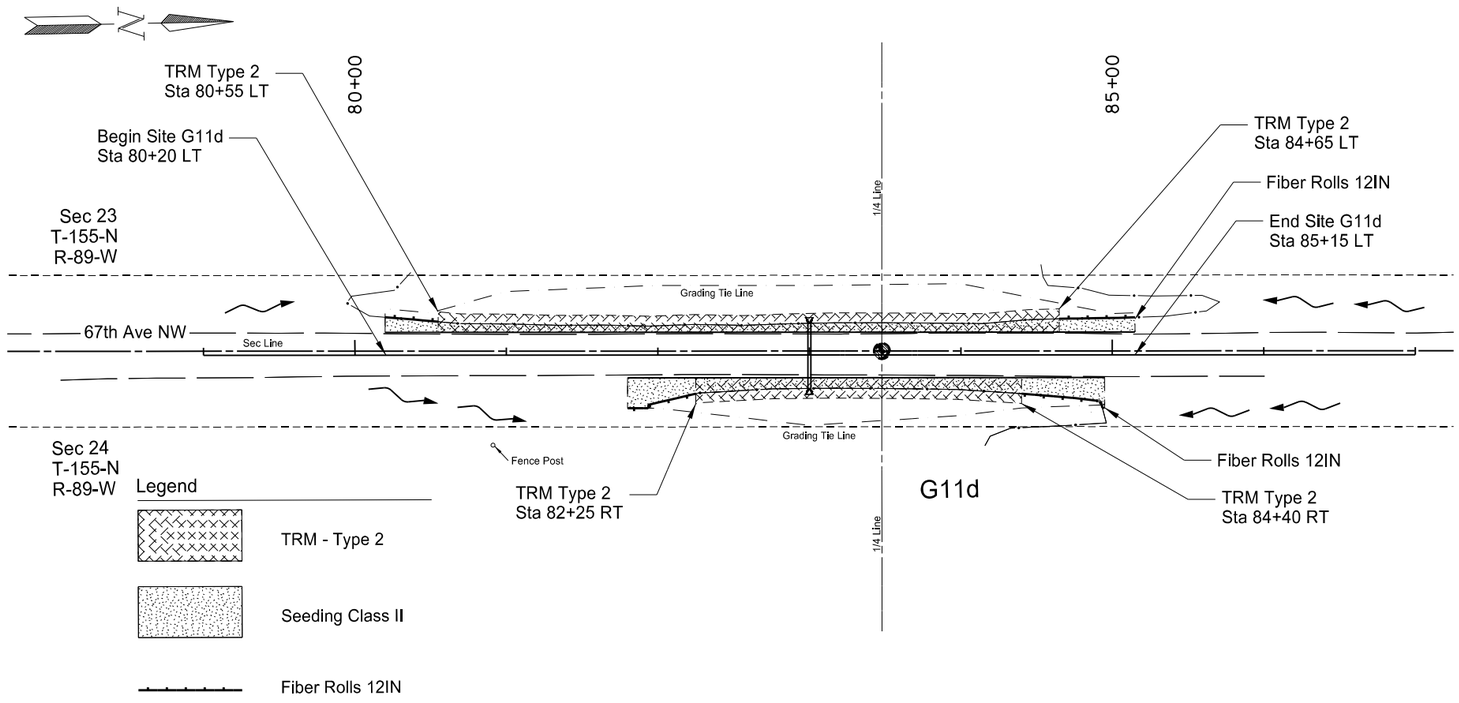
Spec	Code	Description	Quantity	Unit
203	0109	Topsoil		
		Sta 20+90 to 22+15	63	CY
		Total =	63	CY
251	0200	Seeding Class II		
		Sta 20+90 to 22+15	0.12	ACRE
		Total =	0.12	ACRE
253	0101	Straw Mulch		
		Sta 20+90 to 22+15	0.24	ACRE
		Total =	0.24	ACRE
255	0101	ECB Type 1		
		Sta 21+40 to 21+65 RT	80	SY
		Total =	80	SY
256	0200	Riprap Grade II		
		Sta 21+40 to 21+65 LT	22	CY
		Total =	22	CY
261	0112	Fiber Rolls 12IN		
		Sta 20+90 to 22+15	290	LF
		Total =	290	LF
709	0155	Geosynthetic Material Type RR		
		Sta 21+40 to 21+65 LT	56	SY
		Total =	56	SY

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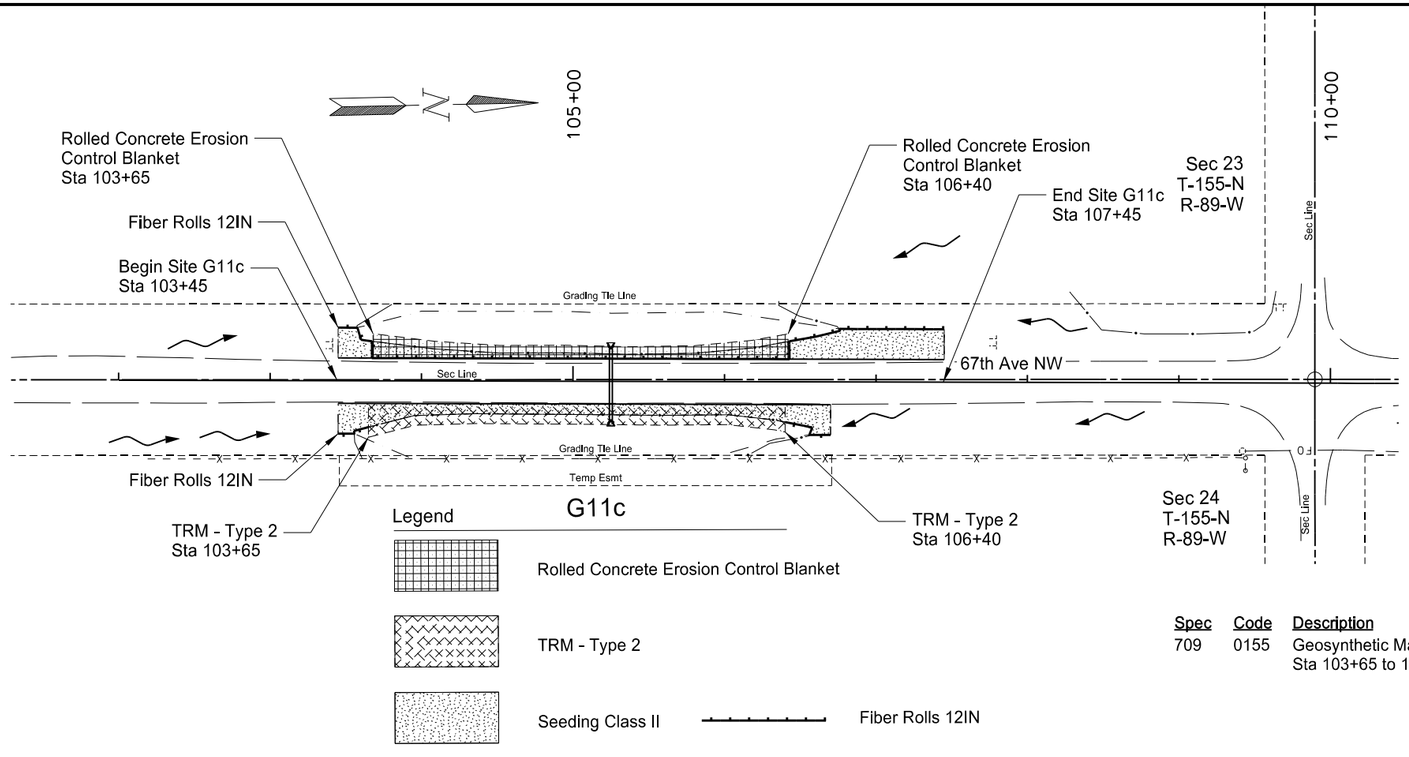
Permanent Erosion Control

Site G11e
Inslope Erosion Repair
Missile Access Road - G11
Mountrail County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	77	2



Spec	Code	Description	Quantity	Unit
203	0109	Topsoil		
		Sta 80+20 to 85+15	76	CY
		Total =	76	CY
251	0200	Seeding Class II		
		Sta 80+20 to 85+15	0.14	ACRE
		Total =	0.14	ACRE
253	0101	Straw Mulch		
		Sta 80+20 to 85+15	0.28	ACRE
		Total =	0.28	ACRE
255	0202	TRM Type 2		
		Sta 80+55 to 84+65 LT	784	SY
		Sta 82+25 to 84+40 RT	441	SY
		Total =	1225	SY
261	0112	Fiber Rolls 12IN		
		Sta 80+20 to 85+15	195	LF
		Total =	195	LF
709	0155	Geosynthetic Material Type RR		
		Sta 80+55 to 84+65 LT	784	SY
		Sta 82+25 to 84+40 RT	441	SY
		Total =	1225	SY



Spec	Code	Description	Quantity	Unit
203	0109	Topsoil		
		Sta 103+45 to 107+45	67	CY
		Total =	67	CY
251	0200	Seeding Class II		
		Sta 103+45 to 107+45	0.12	ACRE
		Total =	0.12	ACRE
253	0101	Straw Mulch		
		Sta 103+45 to 107+45	0.24	ACRE
		Total =	0.24	ACRE
255	0202	TRM Type 2		
		Sta 103+65 to 106+40	591	SY
		Total =	591	SY
255	0305	Rolled Concrete Erosion Control Blanket		
		Sta 103+65 to 106+40	479	SY
		Total =	479	SY
261	0112	Fiber Rolls 12IN		
		Sta 103+45 to 107+45	485	LF
		Total =	485	LF

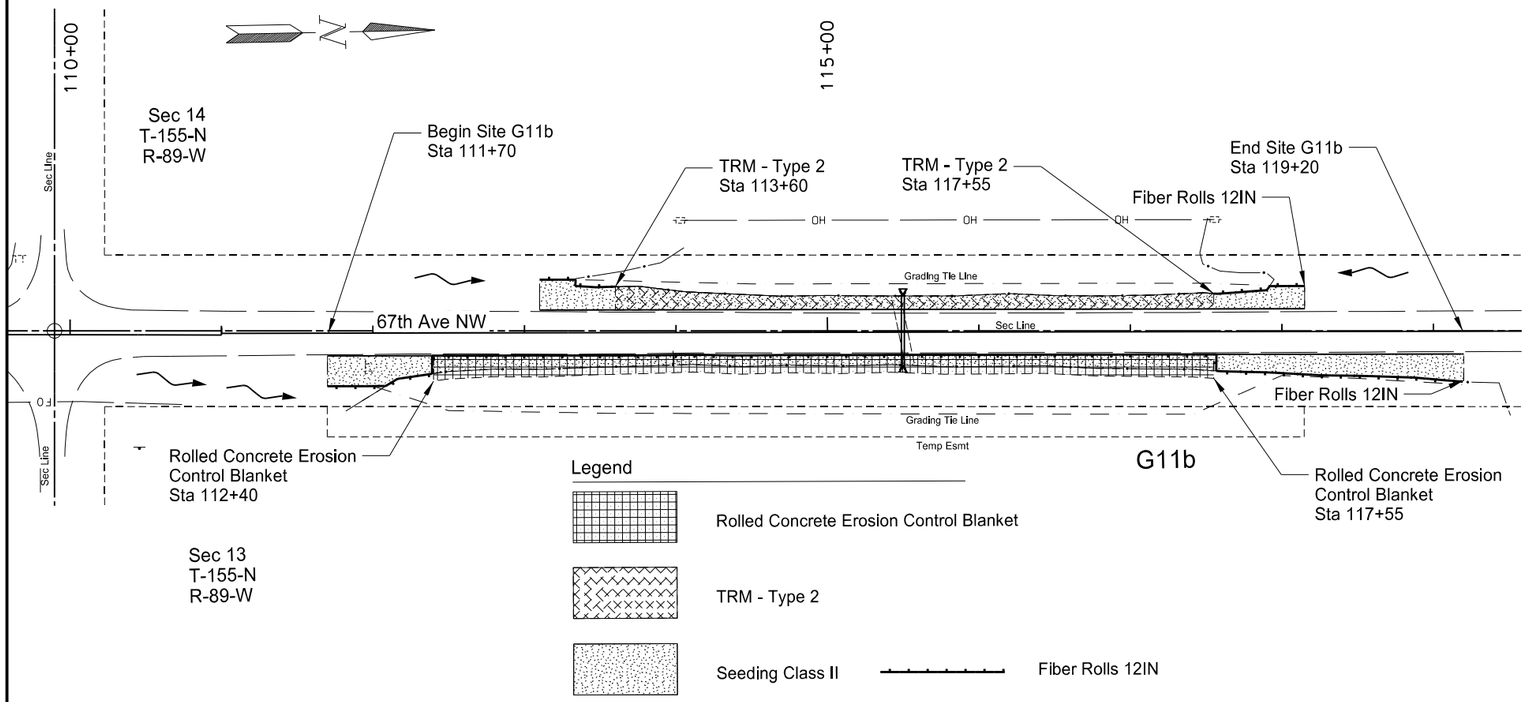
Spec	Code	Description	Quantity	Unit
709	0155	Geosynthetic Material Type RR		
		Sta 103+65 to 106+40	591	SY
		Total =	591	SY

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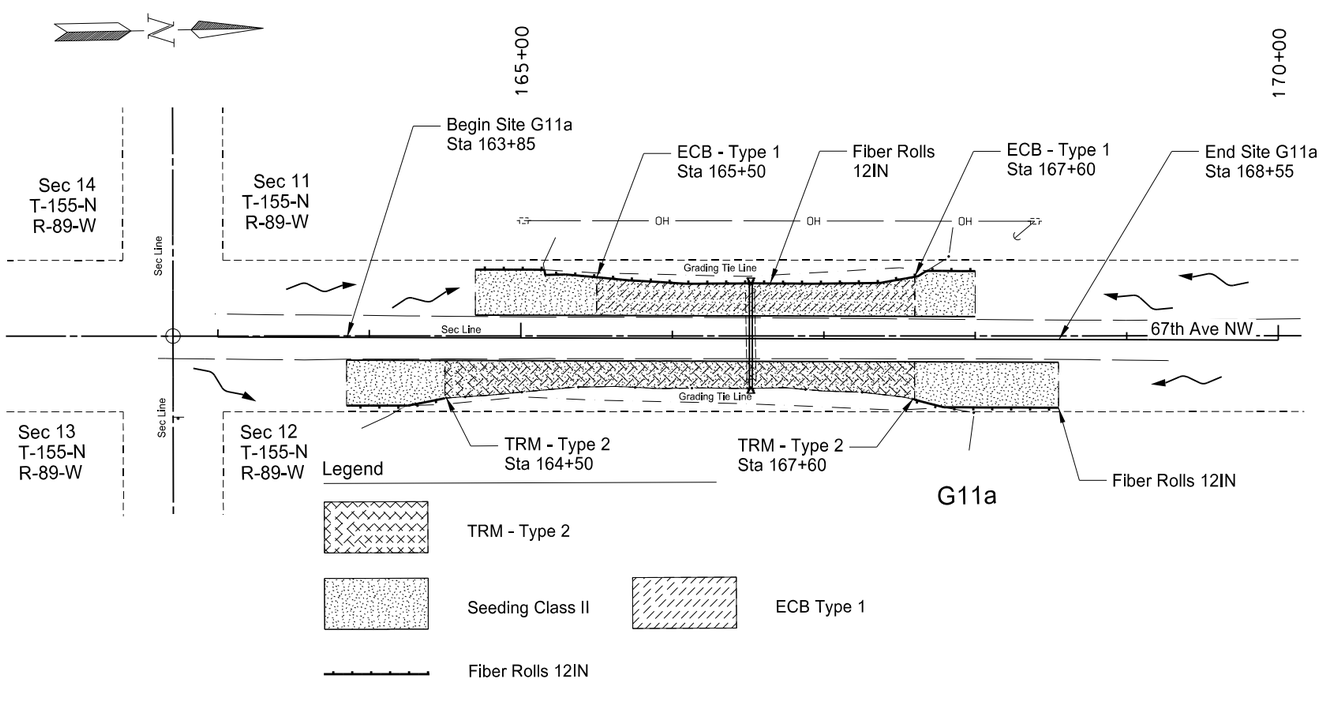
Permanent Erosion Control

Site G11d & G11c
Inslope Erosion Repair
Missile Access Road - G11
Mountrail County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	77	3



Spec	Code	Description	Quantity	Unit
203	0109	Topsoil Sta 111+70 to 119+20	122	CY
		Total =	122	CY
251	0200	Seeding Class II Sta 111+70 to 119+20	0.23	ACRE
		Total =	0.23	ACRE
253	0101	Straw Mulch Sta 111+70 to 119+20	0.46	ACRE
		Total =	0.46	ACRE
255	0202	TRM Type 2 Sta 113+60 to 117+55	551	SY
		Total =	551	SY
255	0305	Rolled Concrete Erosion Control Blanket Sta 112+40 to 117+55	1059	SY
		Total =	1059	SY
261	0112	Fiber Rolls 12IN Sta 111+70 to 119+20	885	LF
		Total =	885	LF
709	0155	Geosynthetic Material Type RR Sta 113+60 to 117+55	551	SY
		Total =	551	SY



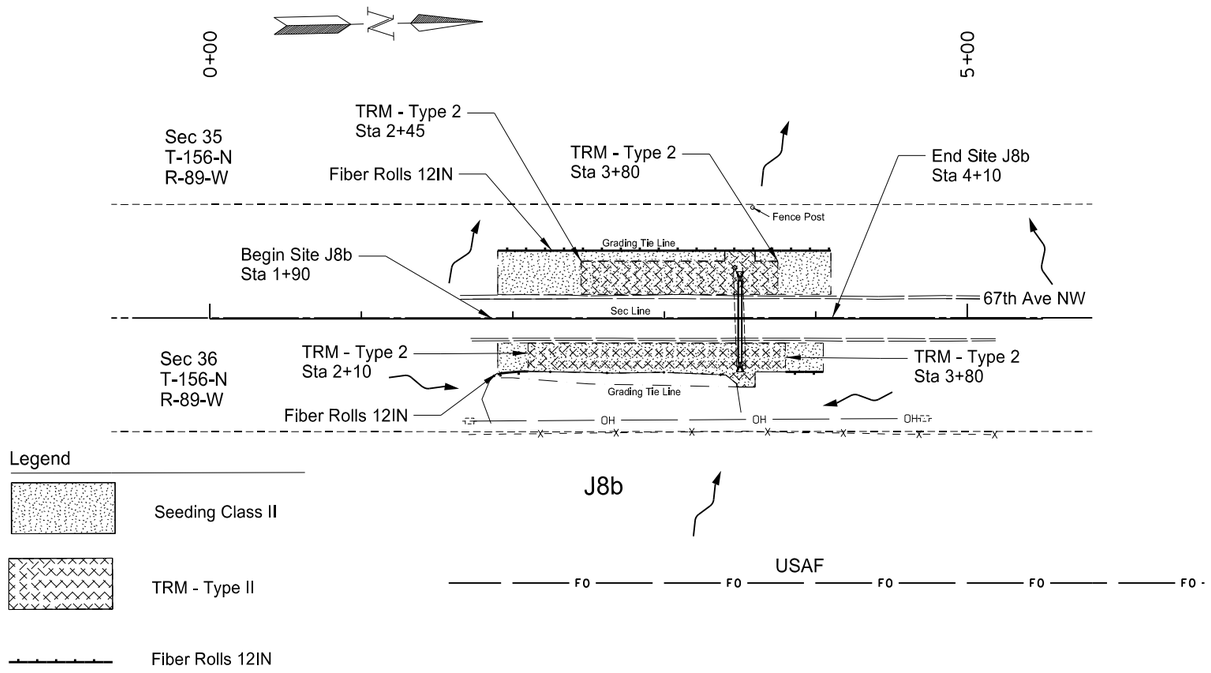
Spec	Code	Description	Quantity	Unit
203	0109	Topsoil Sta 163+85 to 168+55	232	CY
		Total =	232	CY
251	0200	Seeding Class II Sta 163+85 to 168+55	0.43	ACRE
		Total =	0.43	ACRE
253	0101	Straw Mulch Sta 163+85 to 168+55	0.86	ACRE
		Total =	0.86	ACRE
255	0101	ECB Type 1 Sta 165+50 to 167+60 LT	575	SY
		Total =	575	SY
255	0202	TRM Type 2 Sta 164+50 to 167+60	757	SY
		Total =	757	SY
261	0112	Fiber Rolls 12IN Sta 163+85 to 168+55	495	LF
		Total =	495	LF
709	0155	Geosynthetic Material Type RR Sta 164+50 to 167+60	757	SY
		Total =	757	SY

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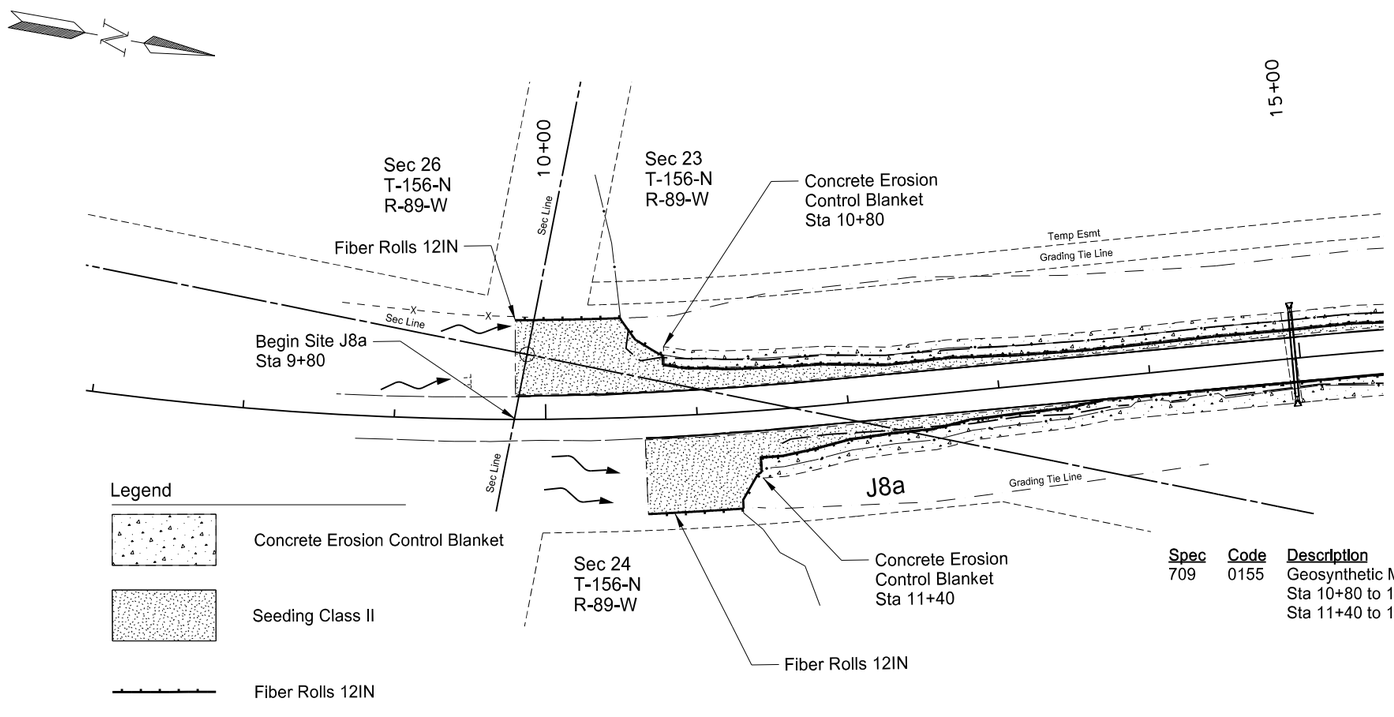
Permanent Erosion Control

Site G11b & a
Inslope Erosion Repair
Missile Access Road - G11
Mountrail County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	77	4



Spec	Code	Description	Quantity	Unit
203	0109	Topsoil		
		Sta 1+90 to 4+10	131	CY
		Total =	131	CY
251	0200	Seeding Class II		
		Sta 1+90 to 4+10	0.25	ACRE
		Total =	0.25	ACRE
253	0101	Straw Mulch		
		Sta 1+90 to 4+10	0.50	ACRE
		Total =	0.50	ACRE
255	0202	TRM Type 2		
		Sta 2+10 to 3+80 RT	442	SY
		Sta 2+45 to 3+80 LT	406	SY
		Total =	848	SY
261	0112	Fiber Rolls 12IN		
		Sta 1+90 to 4+10	265	LF
		Total =	265	LF
709	0155	Geosynthetic Material Type RR		
		Sta 2+10 to 3+80 RT	442	SY
		Sta 2+45 to 3+80 LT	406	SY
		Total =	848	SY



Spec	Code	Description	Quantity	Unit
203	0109	Topsoil		
		Sta 9+80 to 20+15	307	CY
		Total =	307	CY
251	0200	Seeding Class II		
		Sta 9+80 to 20+15	0.58	ACRE
		Total =	0.58	ACRE
253	0101	Straw Mulch		
		Sta 9+80 to 20+15	1.16	ACRE
		Total =	1.16	ACRE
261	0112	Fiber Rolls 12IN		
		Sta 9+80 to 20+15	1970	LF
		Total =	1970	LF
708	5810	Concrete Erosion Control Blanket		
		Sta 10+80 to 18+30 LT	1250	SY
		Sta 11+40 to 19+40 RT	1511	SY
		Total =	2761	SY

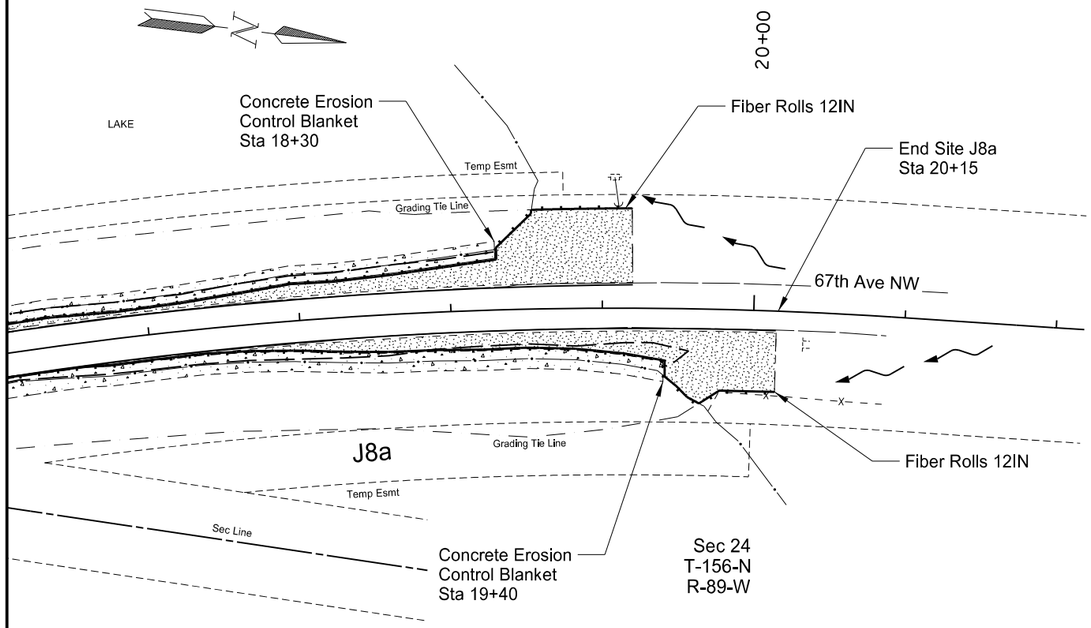
Spec	Code	Description	Quantity	Unit
709	0155	Geosynthetic Material Type RR		
		Sta 10+80 to 18+30 LT	1333	SY
		Sta 11+40 to 19+40 RT	1600	SY
		Total =	2933	SY

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Permanent Erosion Control

Site J8b & a
Inslope Erosion Repair
Missile Access Road - J8
Mountrail County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	77	5



Legend

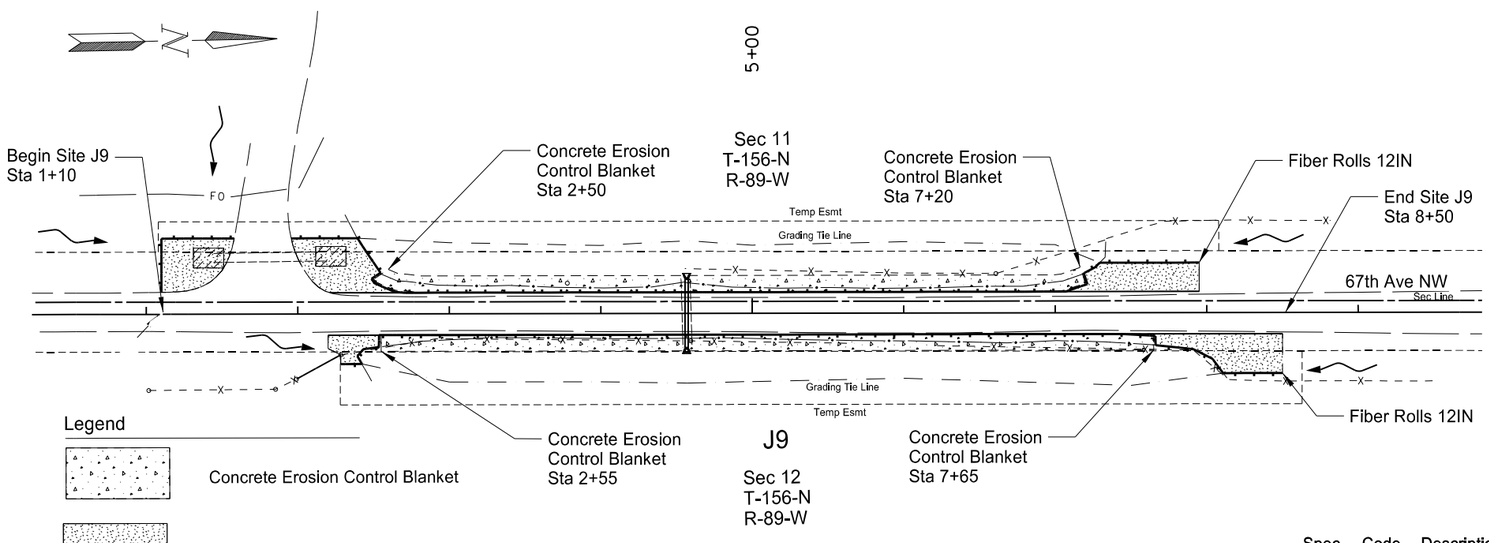
Concrete Erosion Control Blanket

Seeding Class II

Fiber Rolls 12IN

Spec	Code	Description	Quantity	Unit

Quantity Totals are Included in the Previous Sheet



Legend

Concrete Erosion Control Blanket

Seeding Class II

ECB Type 1

Fiber Rolls 12IN

Spec	Code	Description	Quantity	Unit
203	0109	Topsoil		
		Sta 1+10 to 8+50	80	CY
		Total =	80	CY
251	0200	Seeding Class II		
		Sta 1+10 to 8+50	0.15	ACRE
		Total =	0.15	ACRE
253	0101	Straw Mulch		
		Sta 1+10 to 8+50	0.30	ACRE
		Total =	0.30	ACRE
255	0101	ECB Type 1		
		Sta 1+45 LT	20	SY
		Sta 2+18 LT	20	SY
		Total =	40	SY
261	0112	Fiber Rolls 12IN		
		Sta 1+10 to 8+50	1375	LF
		Total =	1375	LF
708	5810	Concrete Erosion Control Blanket		
		Sta 2+50 to 7+20 LT	783	SY
		Sta 2+55 to 7+65 RT	850	SY
		Total =	1633	SY

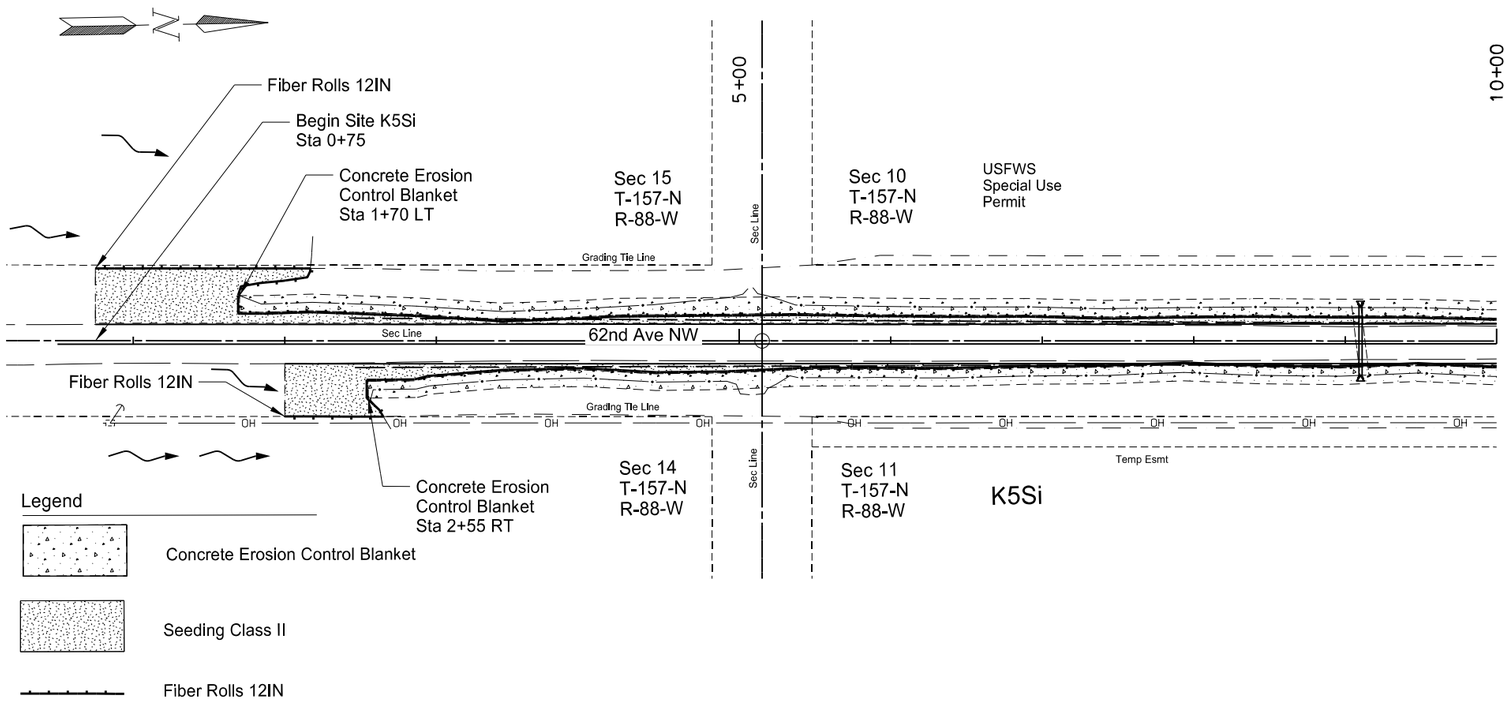
Spec	Code	Description	Quantity	Unit
709	0155	Geosynthetic Material Type RR		
		Sta 2+50 to 7+20 LT	836	SY
		Sta 2+55 to 7+65 RT	907	SY
		Total =	1743	SY

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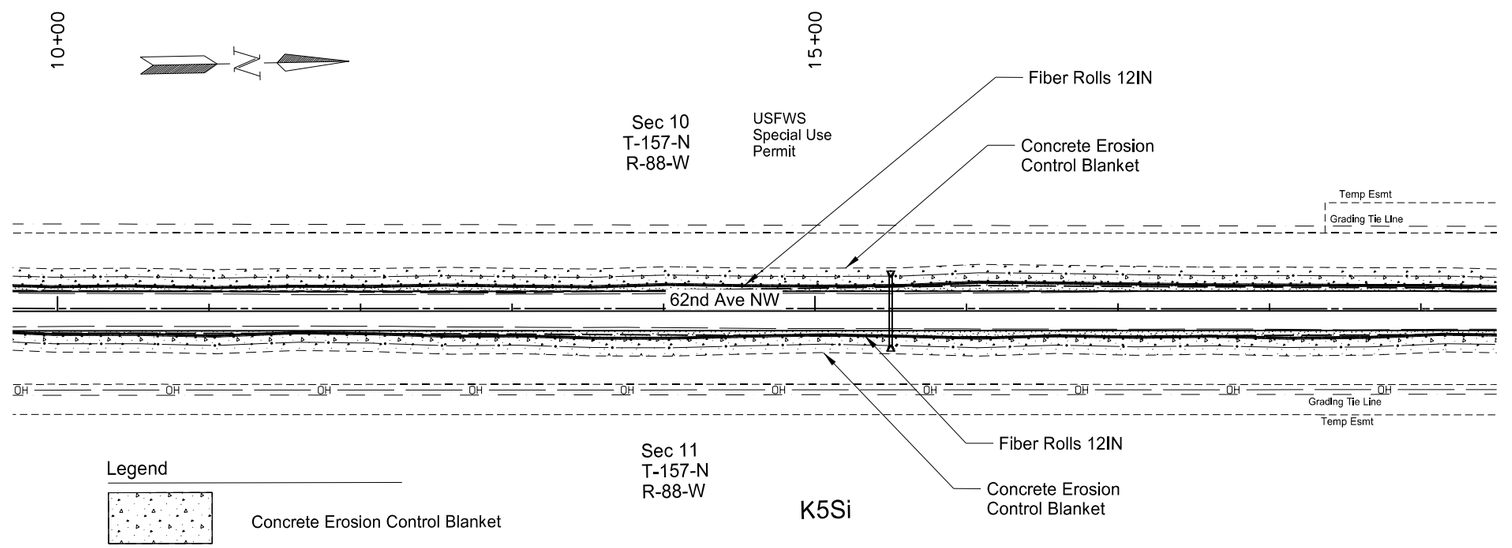
Permanent Erosion Control

Site J8a & J9
Inslope Erosion Repair
Missile Access Road - J8 & J9
Mountrail County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	77	6



Spec	Code	Description	Quantity	Unit
203	0109	Topsoil		
		Sta 0+75 to 29+40	423	CY
		Total =	423	CY
251	0200	Seeding Class II		
		Sta 0+75 to 29+40	0.79	ACRE
		Total =	0.79	ACRE
253	0101	Straw Mulch		
		Sta 0+75 to 29+40	1.58	ACRE
		Total =	1.58	ACRE
261	0112	Fiber Rolls 12IN		
		Sta 0+75 to 28+60	5845	LF
		Total =	5845	LF
708	5810	Concrete Erosion Control		
		Sta 1+70 to 28+60 LT	4483	SY
		Sta 2+55 to 27+65 RT	4183	SY
		Total =	8666	SY
709	0155	Geosynthetic Material Type RR		
		Sta 1+70 to 28+60 LT	4782	SY
		Sta 2+55 to 27+65 RT	4462	SY
		Total =	9244	SY



Spec	Code	Description	Quantity	Unit

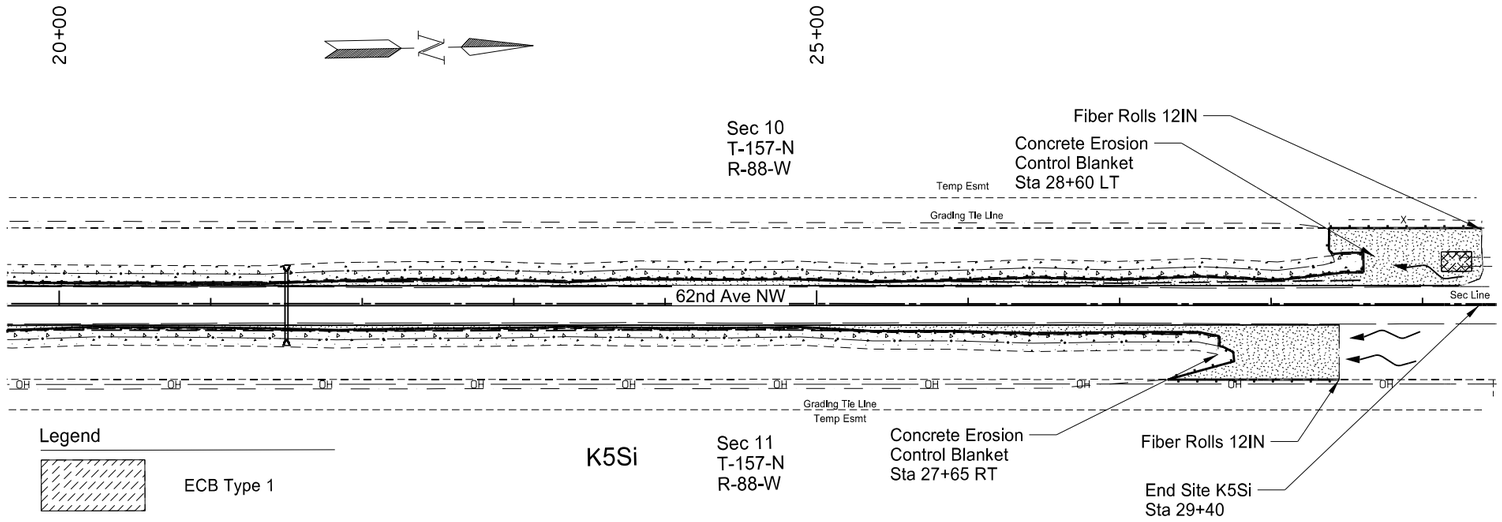
Quantity Totals are Included in the Window Above

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Permanent Erosion Control

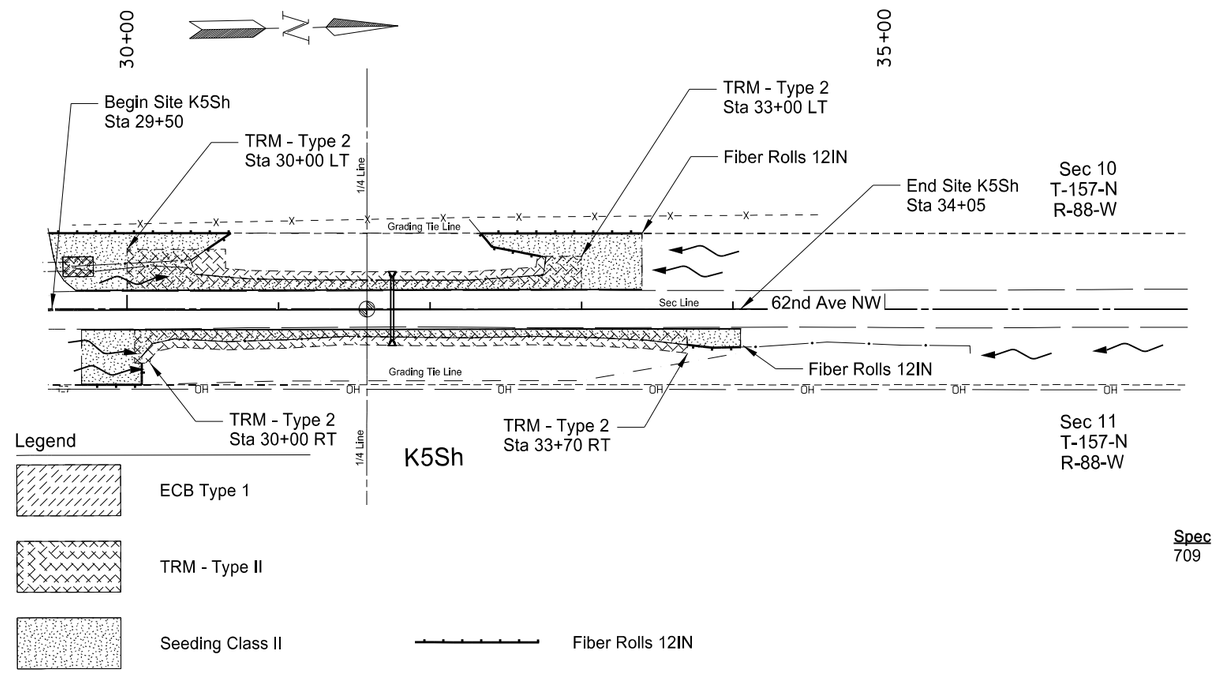
Site K5Si
Inslope Erosion Repair
Missile Access Road - K5S
Mountrail County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	77	7



Spec	Code	Description	Quantity	Unit

Quantity Totals are Included in the Previous Sheet
& for ECB Type 1 Quanitiy See Window Below



Spec	Code	Description	Quantity	Unit
203	0109	Topsoil		
		Sta 29+50 to 34+05	150	CY
		Total =	150	CY
251	0200	Seeding Class II		
		Sta 29+50 to 34+05	0.28	ACRE
		Total =	0.28	ACRE
253	0101	Straw Mulch		
		Sta 29+50 to 34+05	0.56	ACRE
		Total =	0.56	ACRE
255	0101	ECB Type 1		
		Sta 29+25 LT	20	SY
		Sta 29+63 LT	20	SY
		Total =	40	SY
255	0202	TRM Type 2		
		Sta 30+00 to 33+70 RT	693	SY
		Sta 30+00 to 33+00 LT	744	SY
		Total =	1437	SY
261	0112	Fiber Rolls 12IN		
		Sta 29+50 to 34+05	380	LF
		Total =	380	LF

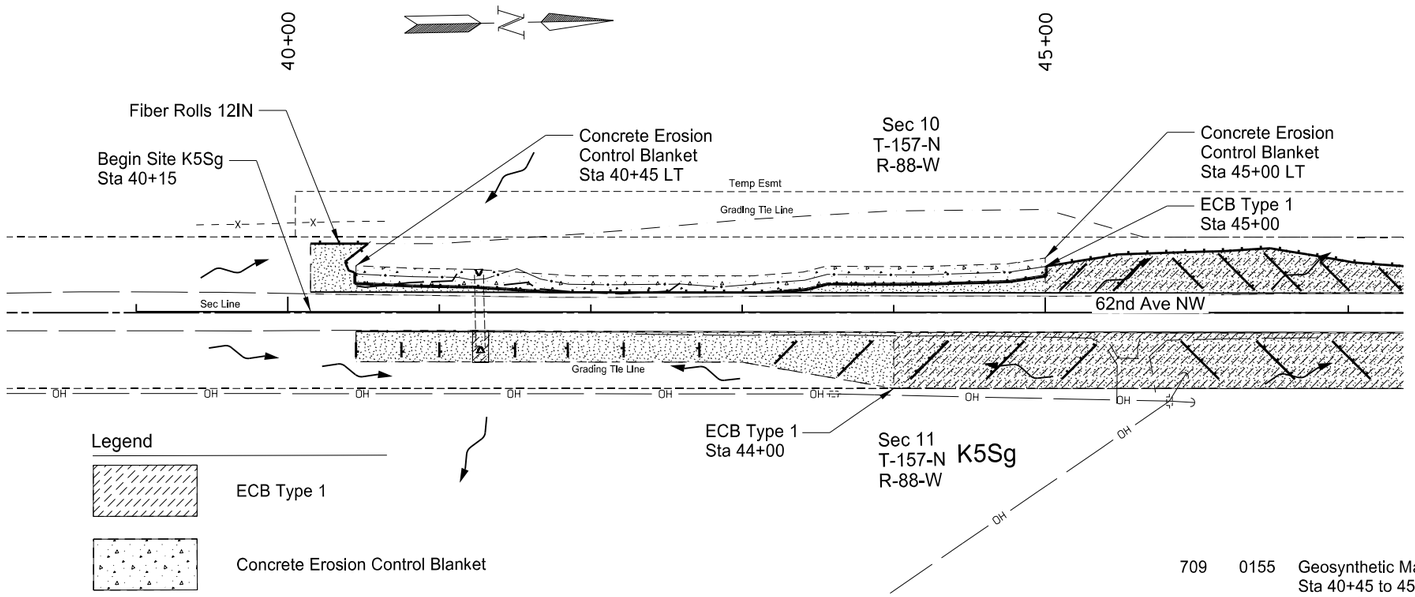
Spec	Code	Description	Quantity	Unit
709	0155	Geosynthetic Material Type RR		
		Sta 30+00 to 33+70 RT	693	SY
		Sta 30+00 to 33+00 LT	744	SY
		Total =	1437	SY

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Permanent Erosion Control

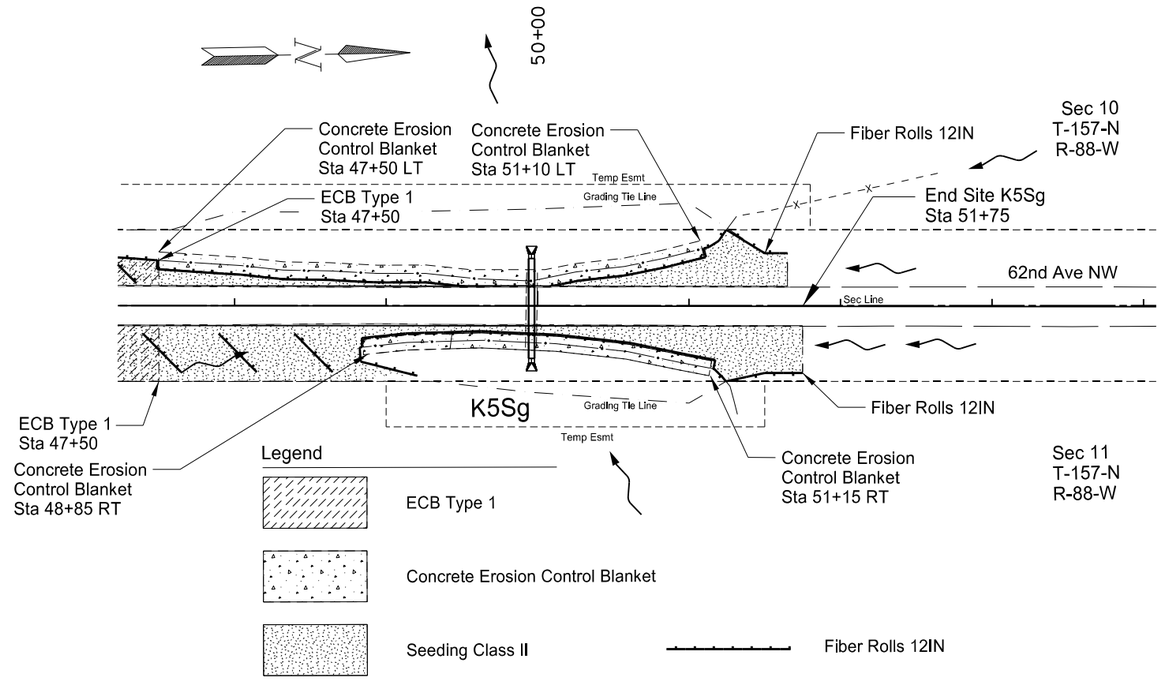
Site K5Si & h
Inslope Erosion Repair
Missile Access Road - K5S
Mountrail County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	ROM-0300(134)	77	8



Spec	Code	Description	Quantity	Unit
709	0155	Geosynthetic Material Type RR		
		Sta 40+45 to 45+00 LT	809	SY
		Sta 47+50 to 51+10 LT	640	SY
		Sta 48+85 to 51+15 RT	409	SY
		Total =	1858	SY

Spec	Code	Description	Quantity	Unit
203	0109	Topsoil		
		Sta 40+15 to 51+75	519	CY
		Total =	519	CY
251	0200	Seeding Class II		
		Sta 40+15 to 51+75	0.98	ACRE
		Total =	0.98	ACRE
253	0101	Straw Mulch		
		Sta 40+15 to 51+75	1.96	ACRE
		Total =	1.96	ACRE
255	0101	ECB Type 1		
		Sta 44+00 to 47+50 RT	1637	SY
		Sta 45+00 to 47+50 LT	735	SY
		Sta 41+27 RT	20	SY
		Total =	2392	SY
261	0112	Fiber Rolls 12IN		
		Sta 40+15 to 51+75	2250	LF
		Total =	2250	LF
708	5810	Concrete Erosion Control		
		Sta 40+45 to 45+00 LT	758	SY
		Sta 47+50 to 51+10 LT	600	SY
		Sta 48+85 to 51+15 RT	383	SY
		Total =	1741	SY



Spec	Code	Description	Quantity	Unit

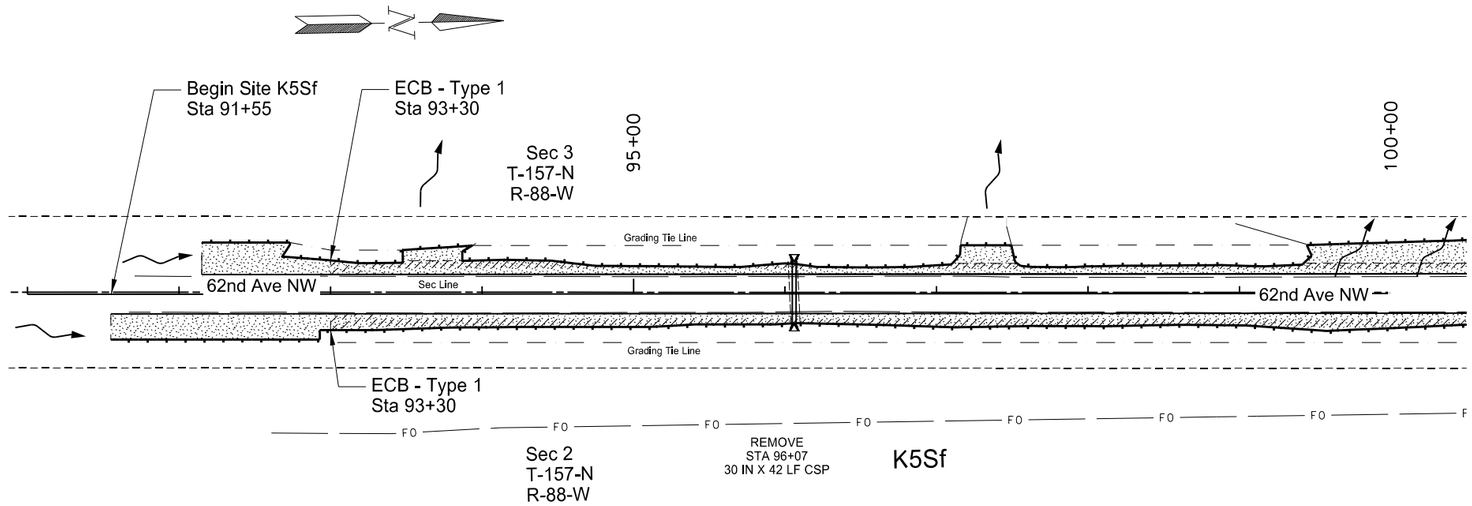
Quantity Totals are Included in the Window Above

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Permanent Erosion Control

Site K5Sg
Inslope Erosion Repair
Missile Access Road - K5S
Mountrail County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	77	9



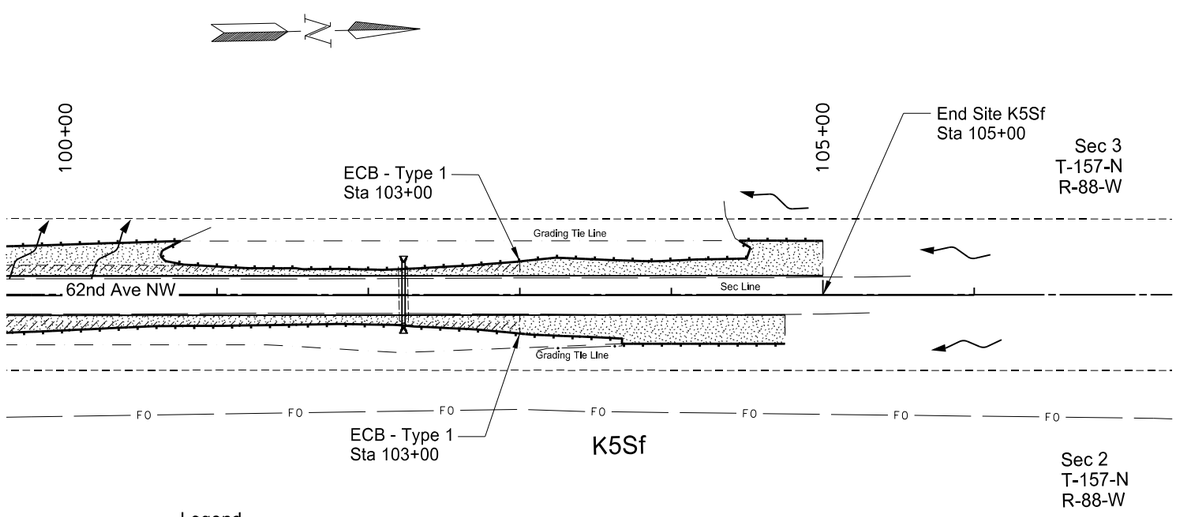
Legend

Seeding Class II

ECB Type 1

Fiber Rolls 12IN

Spec	Code	Description	Quantity	Unit
203	0109	Topsoil		
		Sta 91+55 to 105+00	325	CY
		Total =	325	CY
251	0200	Seeding Class II		
		Sta 91+55 to 105+00	0.61	ACRE
		Total =	0.61	ACRE
253	0101	Straw Mulch		
		Sta 91+55 to 105+00	1.22	ACRE
		Total =	1.22	ACRE
255	0101	ECB Type 1		
		Sta 93+30 to 103+00 RT	1204	SY
		Sta 93+30 to 103+00 LT	967	SY
		Total =	2171	SY
261	0112	Fiber Rolls 12IN		
		Sta 91+55 to 105+00	2750	LF
		Total =	2750	LF



Legend

Seeding Class II

ECB Type 1

Fiber Rolls 12IN

Spec	Code	Description	Quantity	Unit

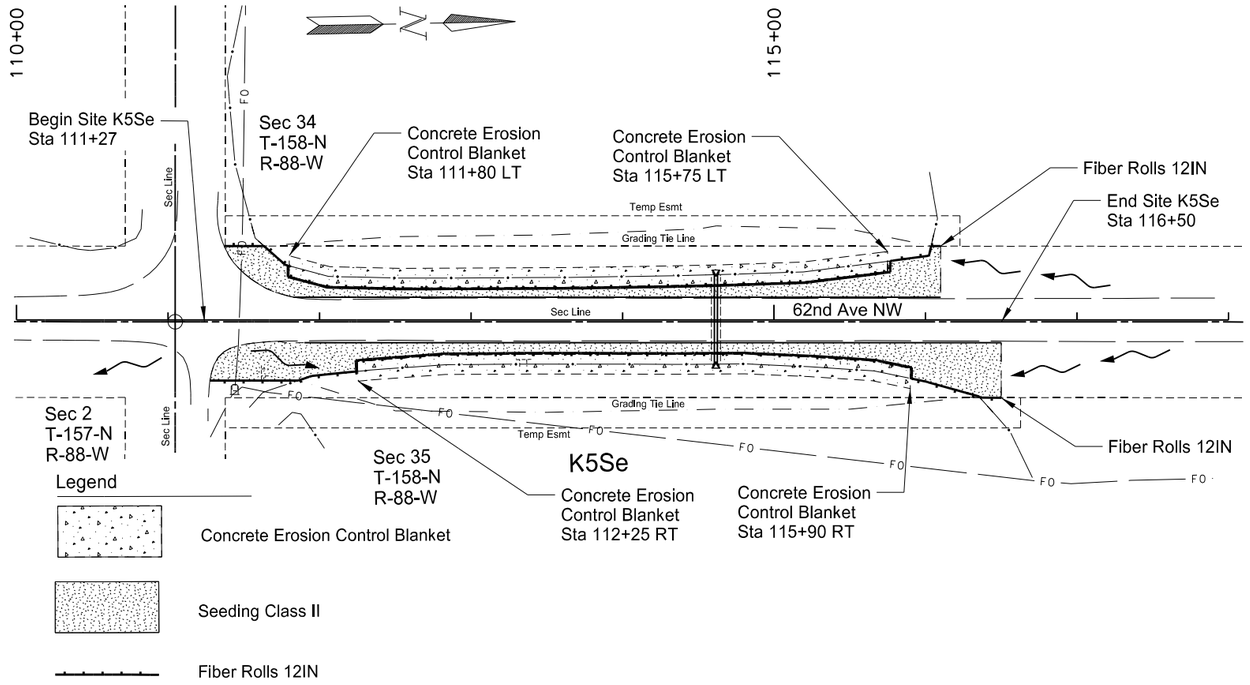
Quantity Totals are Included in the Window Above

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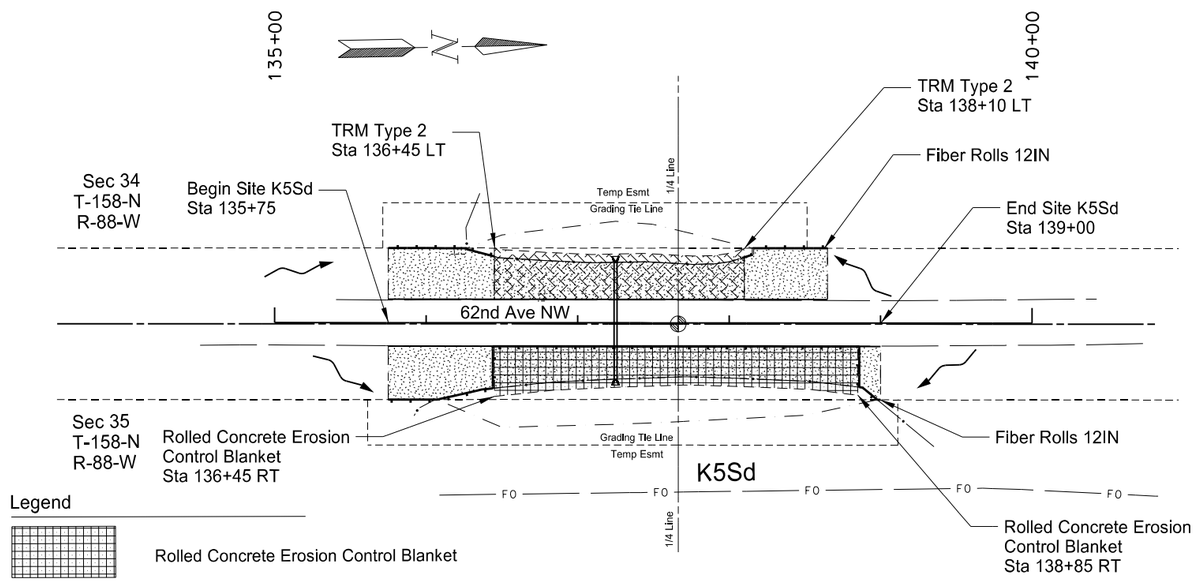
Permanent Erosion Control

Site K5Sf
Inslope Erosion Repair
Missile Access Road - K5S
Mountrail County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	77	10



Spec	Code	Description	Quantity	Unit
203	0109	Topsoil		
		Sta 111+27 to 116+50	151	CY
		Total =	151	CY
251	0200	Seeding Class II		
		Sta 111+27 to 116+50	0.28	ACRE
		Total =	0.28	ACRE
253	0101	Straw Mulch		
		Sta 111+27 to 116+50	0.56	ACRE
		Total =	0.56	ACRE
261	0112	Fiber Rolls 12IN		
		Sta 111+27 to 116+50	1040	LF
		Total =	1040	LF
708	5810	Concrete Erosion Control Blanket		
		Sta 111+80 to 115+75 LT	746	SY
		Sta 112+25 to 115+90 RT	689	SY
		Total =	1435	SY
709	0155	Geosynthetic Material Type RR		
		Sta 111+80 to 115+75 LT	790	SY
		Sta 112+25 to 115+90 RT	730	SY
		Total =	1520	SY

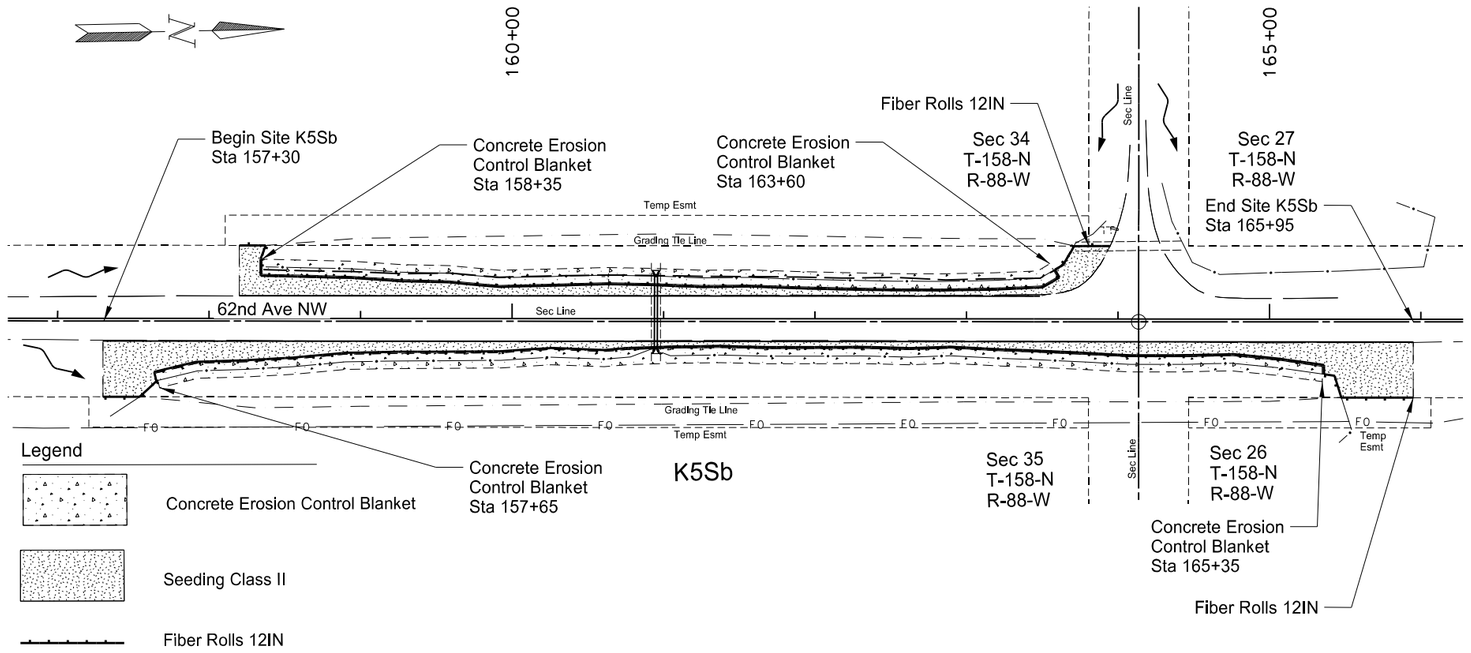


Spec	Code	Description	Quantity	Unit
203	0109	Topsoil		
		Sta 135+75 to 139+00	201	CY
		Total =	201	CY
251	0200	Seeding Class II		
		Sta 135+75 to 139+00	0.38	ACRE
		Total =	0.38	ACRE
253	0101	Straw Mulch		
		Sta 136+45 to 139+00	0.76	ACRE
		Total =	0.76	ACRE
255	0202	TRM Type 2		
		Sta 136+45 to 138+10 LT	647	SY
		Total =	647	SY
255	0305	Rolled Concrete Erosion Control Blanket		
		Sta 136+45 to 138+85 RT	858	SY
		Total =	858	SY
261	0112	Fiber Rolls 12IN		
		Sta 135+75 to 139+00	384	LF
		Total =	384	LF
709	0155	Geosynthetic Material Type RR		
		Sta 136+45 to 138+10 LT	647	SY
		Total =	647	SY

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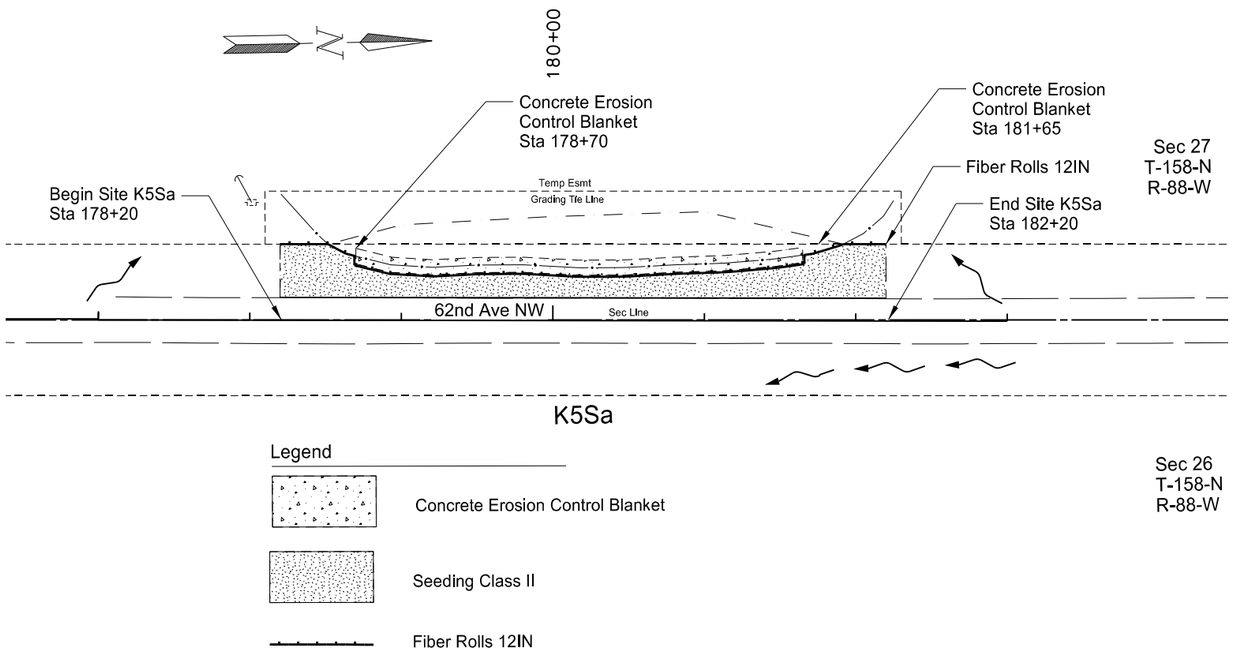
Permanent Erosion Control

Site K5Se & d
Inslope Erosion Repair
Missile Access Road - K5S
Mountrail County



	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	77	11

Spec	Code	Description	Quantity	Unit
203	0109	Topsoil		
		Sta 157+30 to 165+95	182	CY
		Total =	182	CY
251	0200	Seeding Class II		
		Sta 157+30 to 165+95	0.34	ACRE
		Total =	0.34	ACRE
253	0101	Straw Mulch		
		Sta 157+30 to 165+95	0.68	ACRE
		Total =	0.68	ACRE
261	0112	Fiber Rolls 12IN		
		Sta 157+30 to 165+95	1515	LF
		Total =	1515	LF
708	5810	Concrete Erosion Control		
		Sta 157+65 to 165+35 RT	1283	SY
		Sta 158+35 to 163+60 LT	875	SY
		Total =	2158	SY
709	0155	Geosynthetic Material Type RR		
		Sta 157+65 to 165+35 RT	1369	SY
		Sta 158+35 to 163+60 LT	933	SY
		Total =	2302	SY



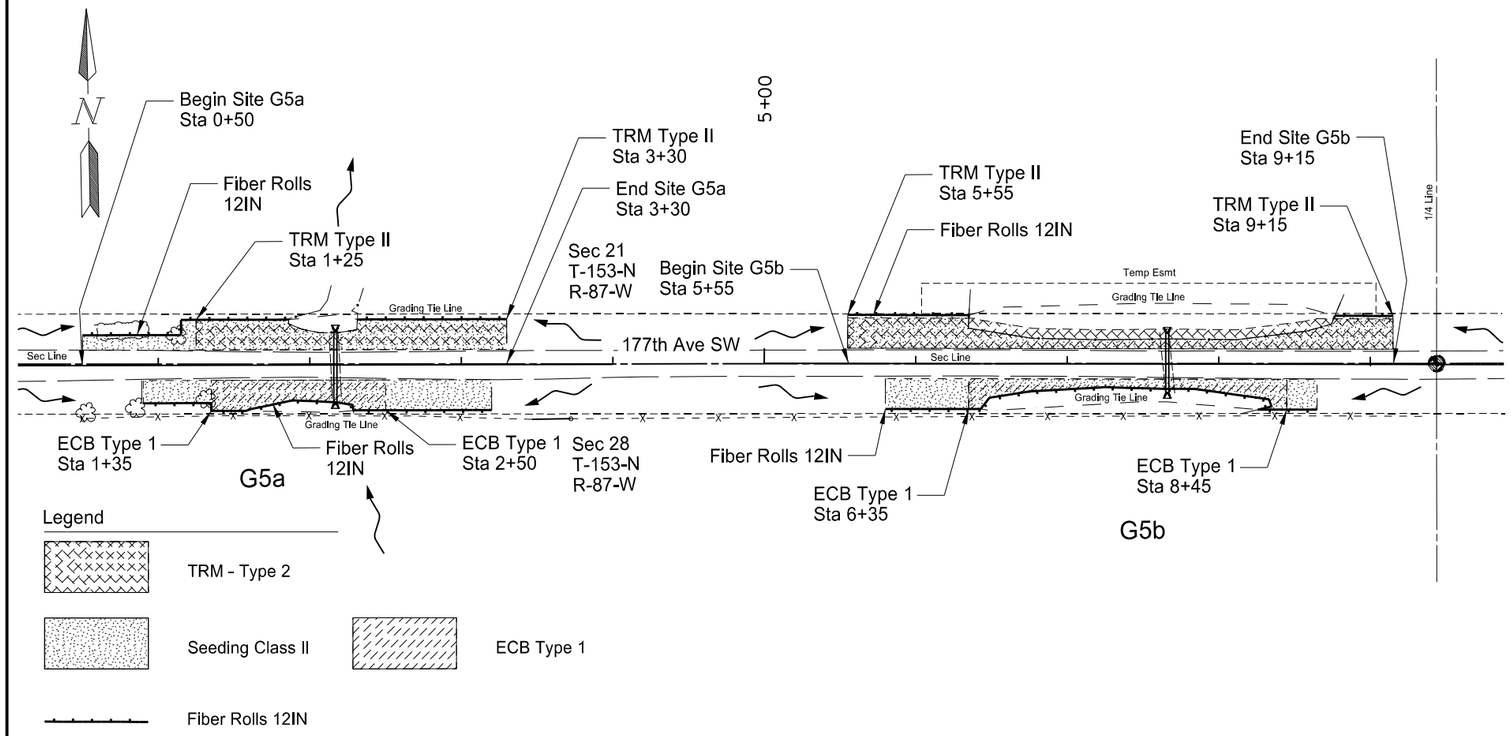
Spec	Code	Description	Quantity	Unit
203	0109	Topsoil		
		Sta 178+20 to 182+20	105	CY
		Total =	105	CY
251	0200	Seeding Class II		
		Sta 178+20 to 182+20	0.20	ACRE
		Total =	0.20	ACRE
253	0101	Straw Mulch		
		Sta 178+20 to 182+20	0.40	ACRE
		Total =	0.40	ACRE
261	0112	Fiber Rolls 12IN		
		Sta 178+20 to 182+20	420	LF
		Total =	420	LF
708	5810	Concrete Erosion Control		
		Sta 178+70 to 181+65 LT	492	SY
		Total =	492	SY
709	0155	Geosynthetic Material Type RR		
		Sta 178+70 to 181+65 LT	524	SY
		Total =	524	SY

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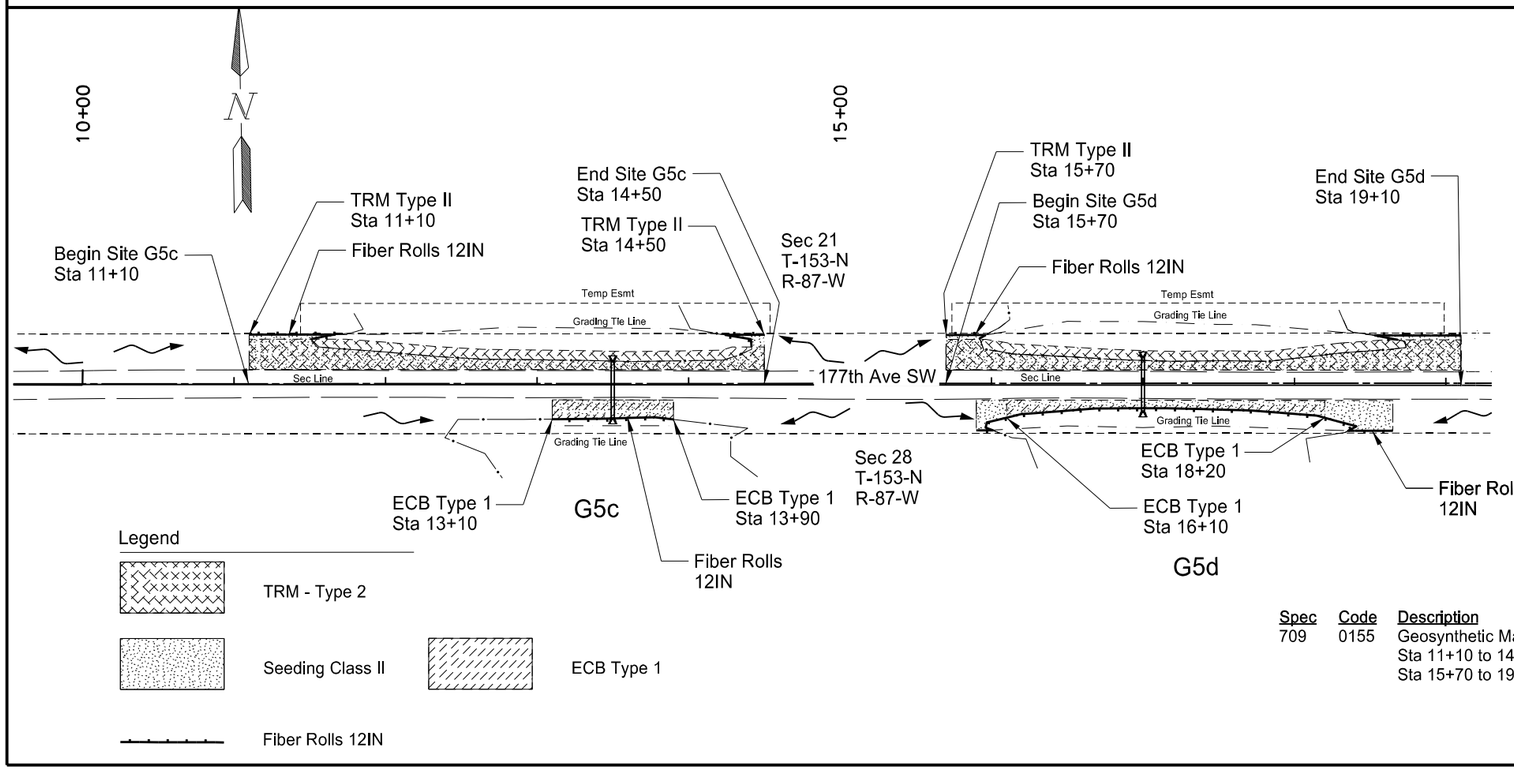
Permanent Erosion Control

Site K5Sb & a
Inslope Erosion Repair
Missile Access Road - K5S
Mountrail County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	ROM-0300(134)	77	12



Spec	Code	Description	Quantity	Unit
203	0109	Topsoil		
		Sta 0+50 to 9+15	106	CY
		Total =	106	CY
251	0200	Seeding Class II		
		Sta 0+50 to 9+15	0.38	ACRE
		Total =	0.38	ACRE
253	0101	Straw Mulch		
		Sta 0+50 to 9+15	0.76	ACRE
		Total =	0.76	ACRE
255	0101	ECB Type 1		
		Sta 1+35 to 2+50 RT	263	SY
		Sta 6+35 to 8+45 RT	282	SY
		Total =	545	SY
255	0202	TRM Type 2		
		Sta 1+25 to 3+30 LT	520	SY
		Sta 5+55 to 9+15 LT	855	SY
		Total =	1375	SY
261	0112	Fiber Rolls 12IN		
		Sta 0+50 to 9+15	920	LF
		Total =	920	LF
709	0155	Geosynthetic Material Type RR		
		Sta 1+25 to 3+30 LT	520	SY
		Sta 5+55 to 9+15 LT	855	SY
		Total =	1375	SY



Spec	Code	Description	Quantity	Unit
203	0109	Topsoil		
		Sta 11+10 to 19+10	134	CY
		Total =	134	CY
251	0200	Seeding Class II		
		Sta 11+10 to 19+10	0.25	ACRE
		Total =	0.25	ACRE
253	0101	Straw Mulch		
		Sta 11+10 to 19+10	0.50	ACRE
		Total =	0.50	ACRE
255	0101	ECB Type 1		
		Sta 13+10 to 13+90 RT	131	SY
		Sta 16+10 to 18+20 LT	221	SY
		Total =	352	SY
255	0202	TRM Type 2		
		Sta 11+10 to 14+50 LT	769	SY
		Sta 15+70 to 19+10 LT	797	SY
		Total =	1566	SY
261	0112	Fiber Rolls 12IN		
		Sta 11+10 to 19+10	585	LF
		Total =	585	LF

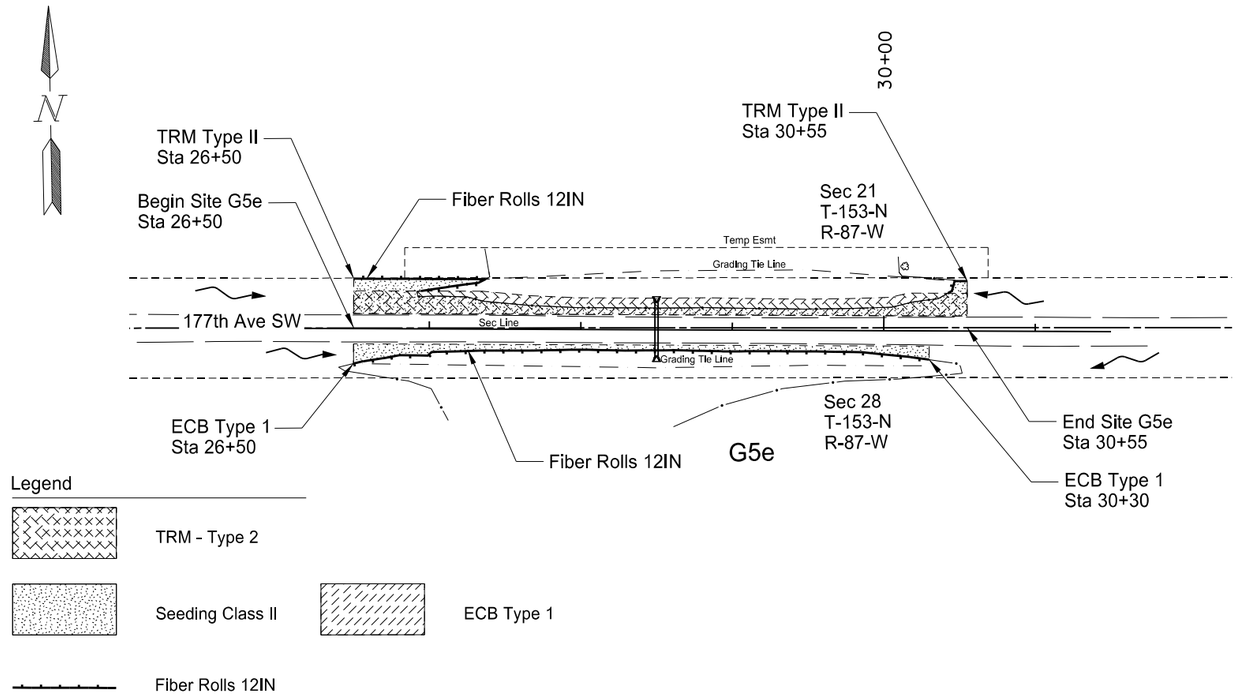
Spec	Code	Description	Quantity	Unit
709	0155	Geosynthetic Material Type RR		
		Sta 11+10 to 14+50 LT	769	SY
		Sta 15+70 to 19+10 LT	797	SY
		Total =	1566	SY

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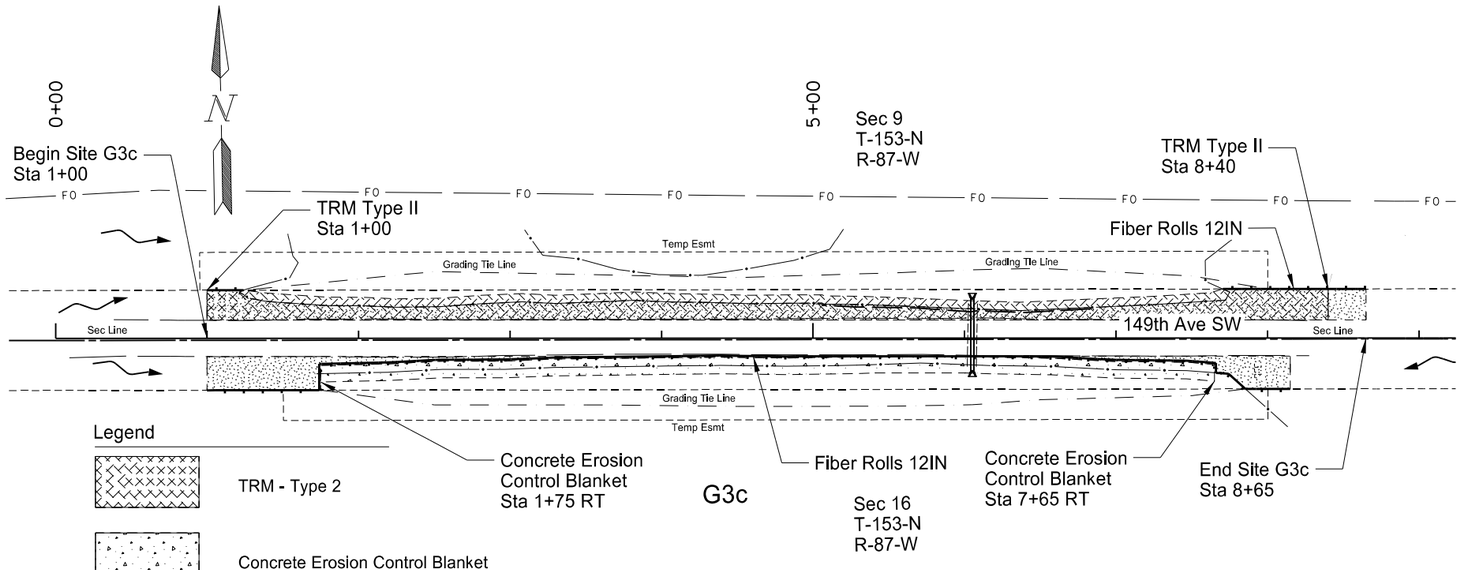
Permanent Erosion Control

Site G5a - d
Inslope Erosion Repair
Missile Access Road - G5
Ward County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	77	13



Spec	Code	Description	Quantity	Unit
203	0109	Topsoil		
		Sta 26+50 to 30+55	67	CY
		Total =	67	CY
251	0200	Seeding Class II		
		Sta 26+50 to 30+55	0.13	ACRE
		Total =	0.13	ACRE
253	0101	Straw Mulch		
		Sta 26+50 to 30+55	0.26	ACRE
		Total =	0.26	ACRE
255	0101	ECB Type 1		
		Sta 26+50 to 30+30 RT	311	SY
		Total =	311	SY
255	0202	TRM Type 2		
		Sta 26+50 to 30+55	792	SY
		Total =	792	SY
261	0112	Fiber Rolls 12IN		
		Sta 26+50 to 30+55	530	LF
		Total =	530	LF
709	0155	Geosynthetic Material Type RR		
		Sta 26+50 to 30+55	792	SY
		Total =	792	SY



Spec	Code	Description	Quantity	Unit
203	0109	Topsoil		
		Sta 1+00 to 8+65	155	CY
		Total =	155	CY
251	0200	Seeding Class II		
		Sta 1+00 to 8+65	0.29	ACRE
		Total =	0.29	ACRE
253	0101	Straw Mulch		
		Sta 1+00 to 8+65	0.58	ACRE
		Total =	0.58	ACRE
255	0202	TRM Type 2		
		Sta 1+00 to 8+40 LT	1760	SY
		Total =	1760	SY
261	0112	Fiber Rolls 12IN		
		Sta 1+00 to 8+65	865	LF
		Total =	865	LF
708	5810	Concrete Erosion Control Blanket		
		Sta 1+75 to 7+65 RT	983	SY
		Total =	983	SY

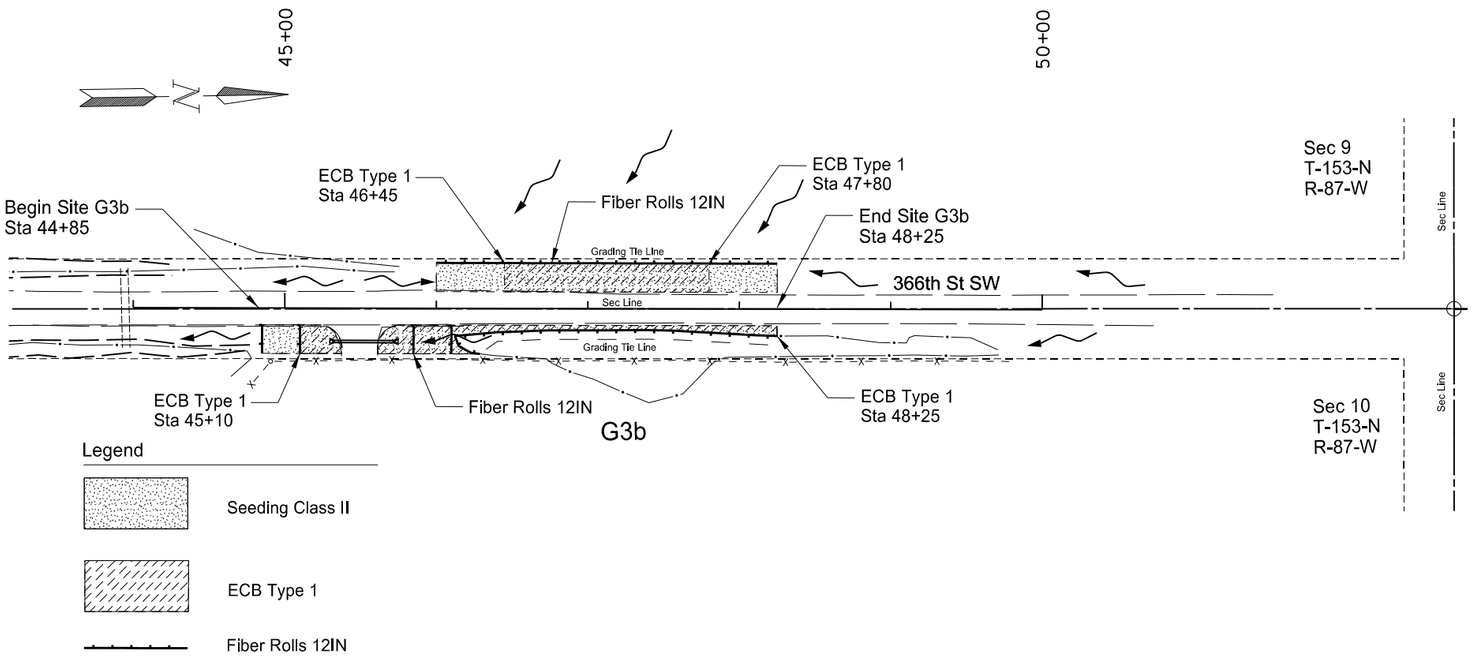
Spec	Code	Description	Quantity	Unit
709	0155	Geosynthetic Material Type RR		
		Sta 1+00 to 8+40 LT	1760	SY
		Sta 1+75 to 7+65 RT	1049	SY
		Total =	2809	SY

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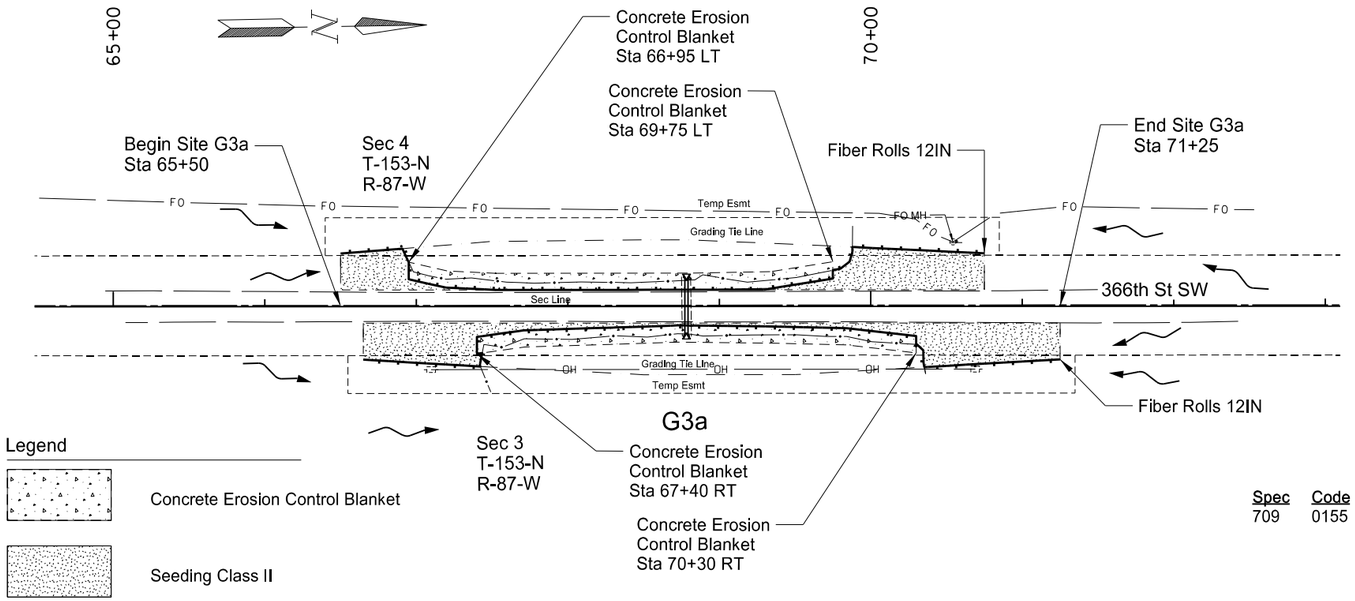
Permanent Erosion Control

Site G5e & G3c
Inslope Erosion Repair
Missile Access Road - G5 & G3
Ward County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	77	14



Spec	Code	Description	Quantity	Unit
203	0109	Topsoil		
		Sta 44+85 to 48+25	87	CY
		Total =	87	CY
251	0200	Seeding Class II		
		Sta 44+85 to 48+25	0.16	ACRE
		Total =	0.16	ACRE
253	0101	Straw Mulch		
		Sta 44+85 to 48+25	0.32	ACRE
		Total =	0.32	ACRE
255	0101	ECB Type 1		
		Sta 45+10 to 45+38 RT	79	SY
		Sta 45+61 to 48+25 RT	305	SY
		Sta 46+45 to 47+80 LT	360	SY
		Total =	744	SY
261	0112	Fiber Rolls 12IN		
		Sta 44+85 to 48+25	535	LF
		Total =	535	LF



Spec	Code	Description	Quantity	Unit
203	0109	Topsoil		
		Sta 65+50 to 71+25	116	CY
		Total =	116	CY
251	0200	Seeding Class II		
		Sta 65+50 to 71+25	0.22	ACRE
		Total =	0.22	ACRE
253	0101	Straw Mulch		
		Sta 65+50 to 71+25	0.44	ACRE
		Total =	0.44	ACRE
261	0112	Fiber Rolls 12IN		
		Sta 65+50 to 71+25	965	LF
		Total =	965	LF
708	5810	Concrete Erosion Blanket		
		Sta 66+95 to 69+75 LT	467	SY
		Sta 67+40 to 70+30 RT	483	SY
		Total =	950	SY

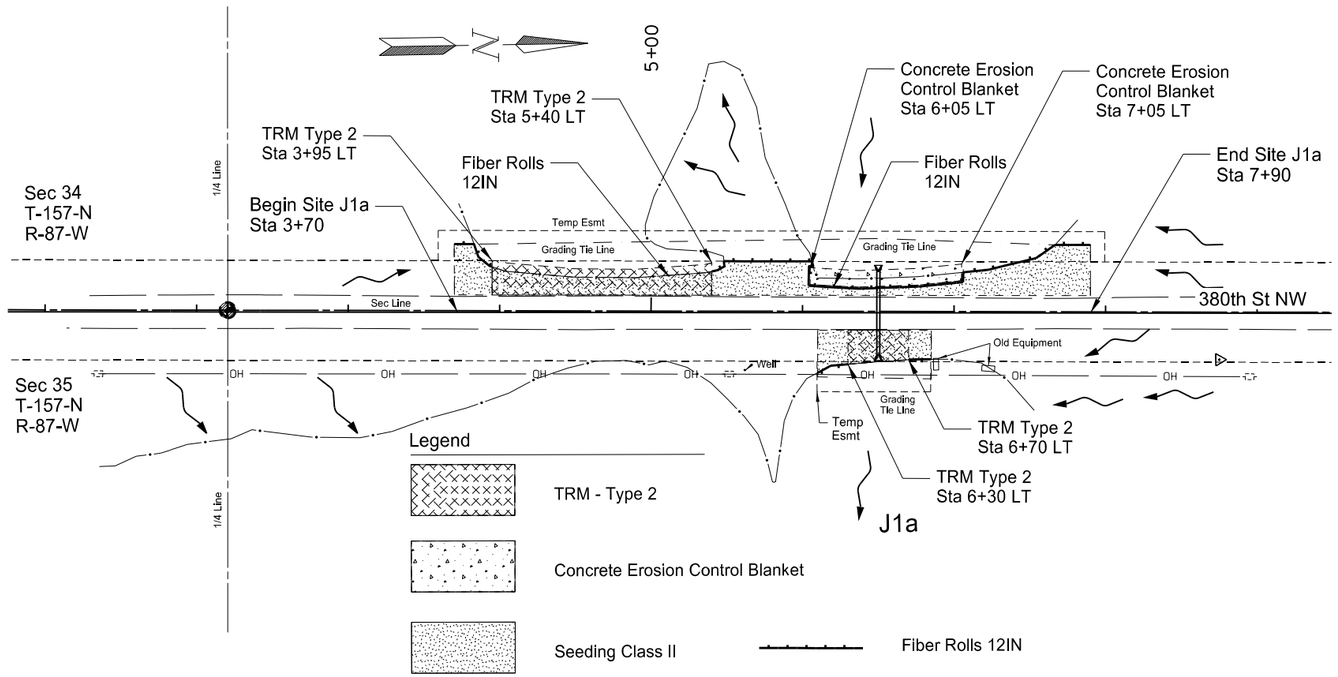
Spec	Code	Description	Quantity	Unit
709	0155	Geosynthetic Material Type RR		
		Sta 66+95 to 69+75 LT	498	SY
		Sta 67+40 to 70+30 RT	516	SY
		Total =	1014	SY

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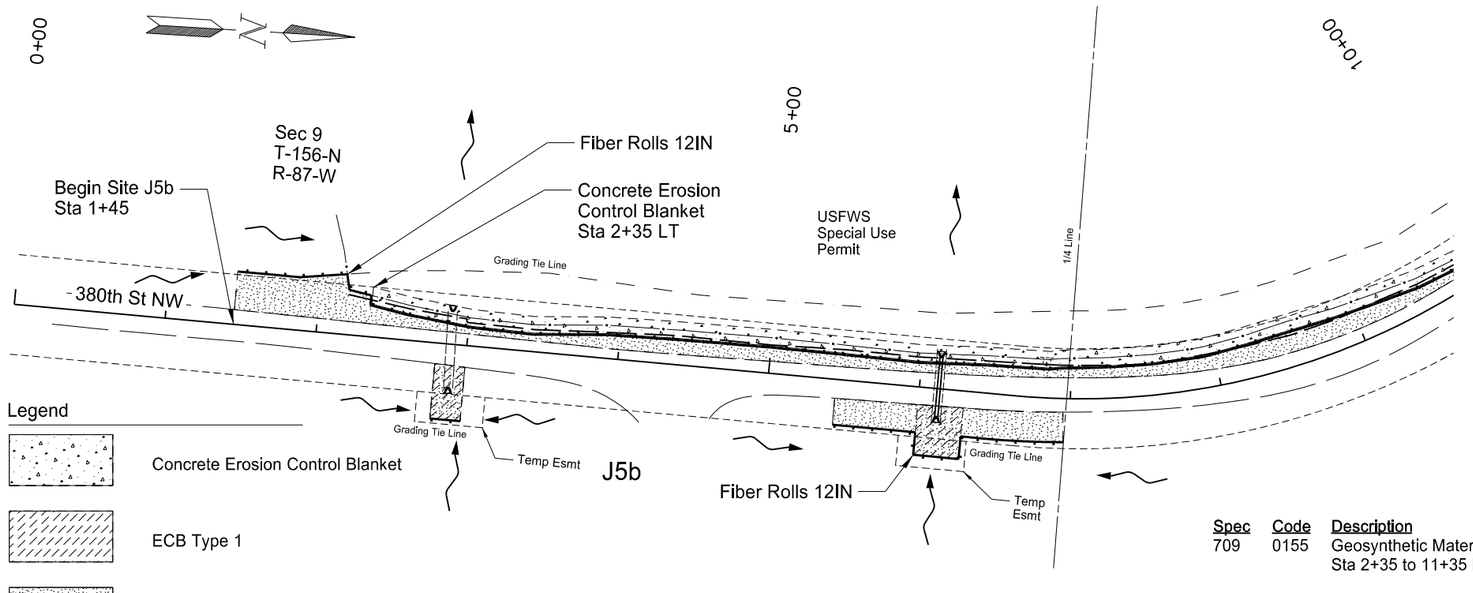
Permanent Erosion Control

Site G3b
Inslope Erosion Repair
Missile Access Road - G3
Ward County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	ROM-0300(134)	77	15



Spec	Code	Description	Quantity	Unit
203	0109	Topsoil		
		Sta 3+70 to 7+90	102	CY
		Total =	102	CY
251	0200	Seeding Class II		
		Sta 3+70 to 7+90	0.19	ACRE
		Total =	0.19	ACRE
253	0101	Straw Mulch		
		Sta 3+70 to 7+90	0.38	ACRE
		Total =	0.38	ACRE
255	0202	TRM Type 2		
		Sta 3+95 to 5+40 LT	383	SY
		Sta 6+30 to 6+70 RT	104	SY
		Total =	487	SY
261	0112	Fiber Rolls 12IN		
		Sta 3+70 to 7+90	355	LF
		Total =	355	LF
708	5810	Concrete Erosion Control		
		Sta 6+05 to 7+05 LT	167	SY
		Total =	167	SY
709	0155	Geosynthetic Material Type RR		
		Sta 3+95 to 5+40 LT	383	SY
		Sta 6+05 to 7+05 LT	178	SY
		Sta 6+30 to 6+70 RT	104	SY
		Total =	665	SY



Spec	Code	Description	Quantity	Unit
203	0109	Topsoil		
		Sta 1+45 to 12+25	238	CY
		Total =	238	CY
251	0200	Seeding Class II		
		Sta 1+45 to 12+25	0.45	ACRE
		Total =	0.45	ACRE
253	0101	Straw Mulch		
		Sta 1+45 to 12+25	0.90	ACRE
		Total =	0.90	ACRE
255	0101	ECB Type 1		
		Sta 2+89 RT	91	SY
		Sta 6+00 to 6+30 RT	129	SY
		Sta 10+65 to 10+95 RT	129	SY
		Total =	349	SY
261	0112	Fiber Rolls 12IN		
		Sta 1+45 to 12+25	1475	LF
		Total =	1475	LF
708	5810	Concrete Erosion Blanket		
		Sta 2+35 to 11+35 LT	1500	SY
		Total =	1500	SY

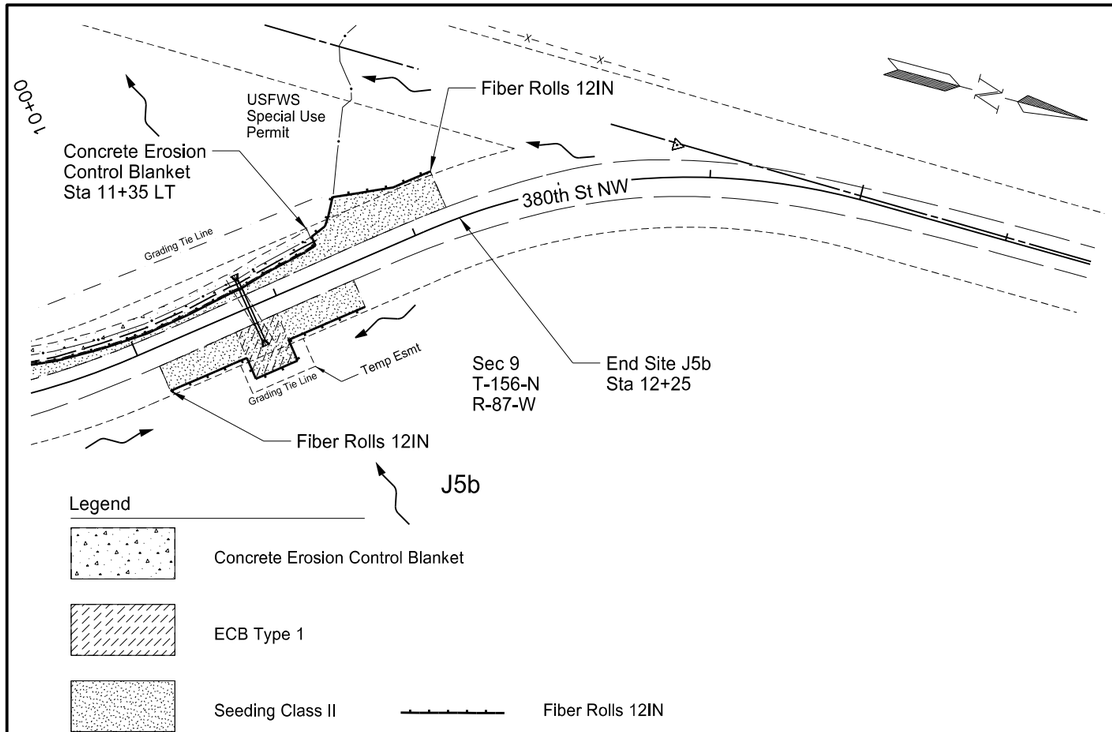
Spec	Code	Description	Quantity	Unit
709	0155	Geosynthetic Material Type RR		
		Sta 2+35 to 11+35 LT	1600	SY
		Total =	1600	SY

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Permanent Erosion Control

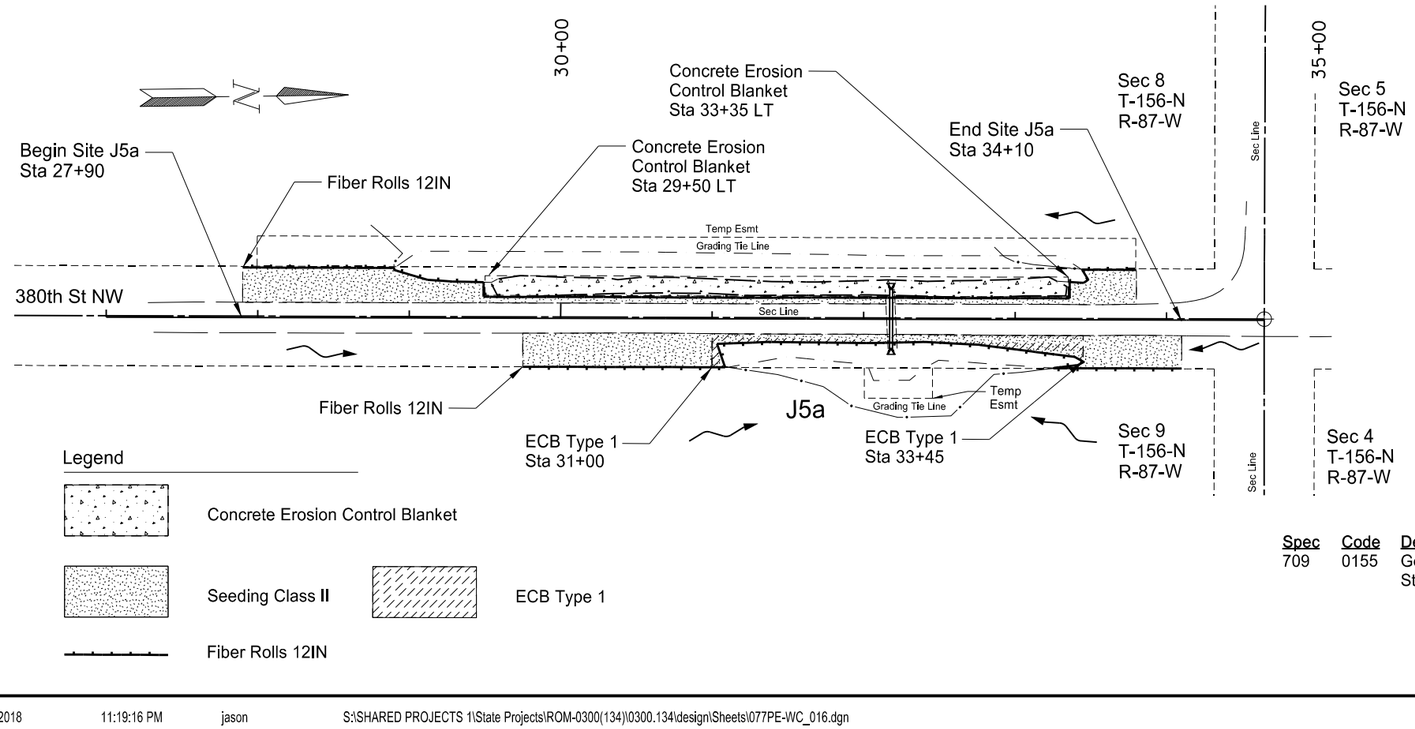
Site J1a & J5b
Inslope Erosion Repair
Missile Access Road - J1 & J5
Ward County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	77	16



Spec	Code	Description	Quantity	Unit

Quantity Totals are Included in the Previous Sheet



Spec	Code	Description	Quantity	Unit
203	0109	Topsoil		
		Sta 27+90 to 34+10	148	CY
		Total =	148	CY
251	0200	Seeding Class II		
		Sta 27+90 to 34+10	0.28	ACRE
		Total =	0.28	ACRE
253	0101	Straw Mulch		
		Sta 27+90 to 34+10	0.56	ACRE
		Total =	0.56	ACRE
255	0101	ECB Type 1		
		Sta 31+00 to 33+45 RT	273	SY
		Total =	273	SY
261	0112	Fiber Rolls 12IN		
		Sta 27+90 to 34+10	1125	LF
		Total =	1125	LF
708	5810	Concrete Erosion Blanket		
		Sta 29+50 to 33+35 LT	727	SY
		Total =	727	SY

Spec	Code	Description	Quantity	Unit
709	0155	Geosynthetic Material Type RR		
		Sta 29+50 to 33+35 LT	770	SY
		Total =	770	SY

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Permanent Erosion Control

Site J5b & J5a
Inslope Erosion Repair
Missile Access Road - J5
Ward County

PRELIMINARY SURVEY COORDINATE AND CURVE DATA - MAFB ACCESS ROADS - INSLOPE REPAIRS AT MULTIPLE LOCATIONS

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	ROM-0300(134)	81	1

HORIZONTAL ALIGNMENT

PNT	STATION	NORTHING	EASTING
G11eCON			
POT	10+00.00	446,439.97	1,585,201.99
POT	25+00.00	447,939.62	1,585,234.60
G11dCON			
POT	79+00.00	453,338.46	1,585,346.24
POT	87+00.00	454,138.30	1,585,362.39
G11cCON			
POT	102+00.00	455,638.04	1,585,390.53
POT	111+00.00	456,537.80	1,585,411.50
G11bCON			
POT	111+00.00	456,537.82	1,585,410.33
POT	120+00.00	457,437.66	1,585,427.51
G11aCON			
POT	163+00.00	461,736.73	1,585,517.06
POT	170+00.00	462,436.53	1,585,533.72
J8bCON			
POT	0+00.00	476,339.93	1,585,817.80
POT	5+50.00	476,889.82	1,585,829.02
J8aCON			
POT	0+00.00	481,868.75	1,585,976.51
PC	2+45.61	482,111.03	1,586,016.86
PI-C19	7+29.76	482,588.60	1,586,096.39
PT	11+98.23	483,054.56	1,585,964.92
PC	14+95.18	483,340.35	1,585,884.29
PI-C20	17+94.36	483,628.28	1,585,803.05
PT	20+91.19	483,926.95	1,585,785.63
POT	26+71.13	484,505.91	1,585,751.86

CURVE DATA

ARC DEFINITION

Curve C19

PI 7+29.76

Delta = 25° 12' 39" (LT)

D = 2° 38' 47" 47"

T = 484.15'

L = 952.62'

R = 2,165.00'

Curve C20

PI 17+94.36

Delta = 12° 25' 03" (RT)

D = 2° 05' 01" 01"

T = 299.17'

L = 596.00'

R = 2750.00'

US PUBLIC LAND SURVEY DATA

DESC.	SEC-TWP-RGE	NORTHING	EASTING

SURVEY CONTROL POINTS

PNT	NORTHING	EASTING	ELEV	STATION	OFFSET	CONTROL POINT DESCRIPTION
11	449337.70	1585299.98	2056.66			#5 Rebar w/Yellow Plastic Cap Stamped "Control Point"
12	462694.16	1585565.88	2185.44			#5 Rebar w/Yellow Plastic Cap Stamped "Control Point"
30	543963.24	1600934.94	2279.42			#5 Rebar w/Yellow Plastic Cap Stamped "Control Point"
31	531866.10	1600626.82	2323.70			#5 Rebar w/Yellow Plastic Cap Stamped "Control Point"
41	484852.92	1585702.49	2187.71			#5 Rebar w/Yellow Plastic Cap Stamped "Control Point"
42	496288.35	1586268.11	2273.19			#5 Rebar w/Yellow Plastic Cap Stamped "Control Point"

NOTES: Sheet 1 of 2

Date Survey Completed 5/14/17

☐ Assumed Coordinates

☒ 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) = 0.9998350

All coordinates and measurements on this document derived from the International Foot definition.

INITIALIZING BENCH MARK
NDGPS Stations (OPUS)

☐ NAVD-88

☐ NGVD-29

☐ GEOID 09 ☐ _____

☒ GEOID 12A

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PRELIMINARY SURVEY COORDINATE AND CURVE DATA - MAFB ACCESS ROADS - INSLOPE REPAIRS AT MULTIPLE LOCATIONS

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	ROM-0300(134)	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					
J9CON														
POT	0+00.00	496,964.61	1,586,234.41											
POT	16+88.14	498,652.47	1,586,265.02											
K5SiCON														
POT	0+50.00	524,988.20	1,600,518.11											
POT	29+50.00	527,887.65	1,600,574.69											
K5ShCON														
POT	29+50.00	527,887.65	1,600,574.56											
POT	35+00.00	528,437.56	1,600,584.50											
K5SgCON														
POT	39+00.00	528,837.49	1,600,591.95											
POT	58+01.59	530,738.67	1,600,631.57											
K5SfCON														
POT	91+00.00	534,036.45	1,600,695.99											
POT	106+00.00	535,536.17	1,600,724.86											
K5SeCON														
POT	110+00.00	535,936.12	1,600,731.39											
POT	118+00.00	536,735.97	1,600,747.20											
K5SdCON														
POT	135+00.00	538,435.62	1,600,781.73											
POT	140+00.00	538,935.51	1,600,791.96											
K5SbCON														
POT	156+00.00	540,535.19	1,600,823.94											
POT	177+00.00	542,634.75	1,600,867.09											
K5SaCON														
POT	177+00.00	542,634.74	1,600,867.73											
POT	183+00.00	543,234.60	1,600,880.46											

NOTES: Sheet 1 of 2

Date Survey Completed 5/14/17

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INITIALIZING BENCH MARK NDGPS Stations (OPUS)

☐ NAVD-88

☐ NGVD-29

☐ GEOID 09 ☐ _____

☒ GEOID 12A

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PRELIMINARY SURVEY COORDINATE AND CURVE DATA - MAFB ACCESS ROADS - INSLOPE REPAIRS AT MULTIPLE LOCATIONS

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	ROM-0300(134)	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
										CONTROL POINT DESCRIPTION					
G5aCON															
POT	0+00.00	386,841.91	1,633,175.24							3	397370.62	1634318.57	2113.81		
POT	4+00.00	386,835.09	1,633,575.19							#5 Rebar w/Yellow Plastic Cap Stamped "Control Point"					
										4	403455.73	1637006.74	2096.15		
G5bCON										#5 Rebar w/Yellow Plastic Cap Stamped "Control Point"					
POT	5+00.00	386,833.82	1,633,675.18							5	386803.29	1636746.02	2093.98		
POT	10+00.00	386,823.19	1,634,175.07							#5 Rebar w/Yellow Plastic Cap Stamped "Control Point"					
										20	506992.14	1631846.19	2231.16		
G5cCON										#5 Rebar w/Yellow Plastic Cap Stamped "Control Point"					
POT	10+00.00	386,823.56	1,634,175.08							21	495621.88	1633319.19	2247.14		
POT	15+00.00	386,813.60	1,634,674.98							#5 Rebar w/Yellow Plastic Cap Stamped "Control Point"					
G5dCON															
POT	15+00.00	386,813.64	1,634,674.98												
POT	20+00.00	386,803.44	1,635,174.87												
G5eCON															
POT	26+00.00	386,793.55	1,635,774.79												
POT	31+50.00	386,780.58	1,636,324.65												
G3cCON															
POT	0+00.00	397,382.37	1,635,334.37												
POT	15+89.23	397,351.82	1,636,923.31												
G3bCON															
POT	44+00.00	401,751.32	1,636,999.24												
POT	50+00.00	402,351.21	1,637,011.13												
G3aCON															
POT	52+00.00	402,551.18	1,637,014.37												
POT	76+00.00	404,950.83	1,637,055.17												

NOTES: Sheet 2 of 2

Date Survey Completed 5/14/17

☐ Assumed Coordinates

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INITIALIZING BENCH MARK
NDGPS Stations (OPUS)

☒ NAVD-88
☐ NGVD-29

☐ GEOID 09 ☐ _____
☒ GEOID 12A

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PRELIMINARY SURVEY COORDINATE AND CURVE DATA - MAFB ACCESS ROADS - INSLOPE REPAIRS AT MULTIPLE LOCATIONS

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	ROM-0300(134)	81	4

HORIZONTAL ALIGNMENT

PNT	STATION	NORTHING	EASTING
J1aCON			
POT	0+00.00	506,117.67	1,631,799.12
POT	9+50.00	507,067.51	1,631,816.93
J5bCON			
POT	0+00.00	494,337.68	1,633,629.54
PC	6+64.27	495,001.64	1,633,649.78
PI-C15	8+37.46	495,174.76	1,633,655.06
PT	9+96.43	495,310.64	1,633,547.67
PC	12+06.00	495,475.07	1,633,417.72
PI-C16	13+62.13	495,597.55	1,633,320.92
PT	15+06.06	495,753.67	1,633,322.97
POT	18+52.12	496,099.70	1,633,327.51
J5aCON			
POT	27+00.00	496,948.50	1,633,342.79
POT	35+00.00	497,748.38	1,633,356.89

CURVE DATA

ARC DEFINITION

Curve C15

PI 8+37.46

Delta = 40° 03' 56" (LT)

D = 12° 03' 44" 44"

T = 173.19'

L = 332.16'

R = 475'

Curve C16

PI 13+62.13

Delta = 39° 04' 20" (RT)

D = 13° 01' 18" 18"

T = 156.12'

L = 300.05'

R = 440.00'

US PUBLIC LAND SURVEY DATA

DESC.	SEC-TWP-RGE	NORTHING	EASTING

SURVEY CONTROL POINTS

PNT	NORTHING	EASTING	ELEV	STATION	OFFSET	CONTROL POINT DESCRIPTION

NOTES: Sheet 2 of 2

Date Survey Completed 5/14/17

☐ Assumed Coordinates

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INITIALIZING BENCH MARK
NDGPS Stations (OPUS)

☒ NAVD-88
☐ NGVD-29

☐ GEOID 09 ☐ _____
☒ GEOID 12A

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STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	ROM 0300(134)	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		34	
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		19	
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		37	
G20-52a-72	72"x24"	ROAD WORK NEXT __ MILES RT or LT ARROW		30	
G20-55-96	96"x48"	SPEED LIMIT ENFORCED - MINIMUM FEE $80 WHEN WORKERS PRESENT		59	
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**	**20**	**32**	**640**
R1-1a-18	18"x18"	STOP and SLOW PADDLE Back to Back		5	
R1-2-60	60"x60"	YIELD		29	
R2-1-48	**48"x60"**	**SPEED LIMIT __**	**20**	**39**	**780**
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**	**10**	**39**	**390**
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**	**10**	**26**	**260**
W3-1-48	**48"x48"**	**STOP AHEAD SYMBOL**	**10**	**35**	**350**
W3-3-48	48"x48"	SIGNAL AHEAD SYMBOL		35	
W3-4-48	48"x48"	BE PREPARED TO STOP		35	
W3-5-48	**48"x48"**	**SPEED REDUCTION AHEAD**	**10**	**35**	**350**
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.		35	
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**	**10**	**23**	**230**
W20-1-48	**48"x48"**	**ROAD WORK AHEAD or _FT or _ MILE**	**10**	**35**	**350**
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.**	**20**	**35**	**700**
W20-5-48	48"x48"	RIGHT or LEFT LANE CLOSED AHEAD or __ FT.		35	
W20-7a-48	48"x48"	FLAGGING SYMBOL		35	
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)		12	
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		35	
W22-8-48	48"x48"	FRESH OIL LOOSE ROCK		35	
	24"x24"	TAKE TURNS (6" D letters) (Mounted on stop sign post)		11	

SPECIAL SIGNS

SPEC & CODE

704-1000	**TRAFFIC CONTROL SIGNS**	**TOTAL UNITS**	**4050**

SPEC & CODE	DESCRIPTION	UNIT	QUANTITY
704-0100	**FLAGGING**	**MHR**	**500**
704-1041	ATTENUATION DEVICE-TYPE B-55	EACH	
704-1043	ATTENUATION DEVICE-TYPE B-65	EACH	
704-1044	ATTENUATION DEVICE-TYPE B-70	EACH	
704-1050	TYPE I BARRICADES	EACH	
704-1051	TYPE II BARRICADES	EACH	
704-1052	**TYPE III BARRICADES**	**EACH**	**10**
704-1060	**DELINEATOR DRUMS**	**EACH**	**30**
704-1065	**TRAFFIC CONES**	**EACH**	**60**
704-1067	**TUBULAR MARKERS**	**EACH**	**60**
704-1070	DELINEATOR	EACH	
704-1072	FLEXIBLE DELINEATORS	EACH	
704-1081	**VERTICAL PANELS - BACK TO BACK**	**EACH**	**50**
704-1085	SEQUENCING ARROW PANEL - TYPE A	EACH	
704-1086	SEQUENCING ARROW PANEL - TYPE B	EACH	
704-1087	SEQUENCING ARROW PANEL - TYPE C	EACH	
704-1088	SEQUENCING ARROW PANEL - TYPE C - CROSSOVER	EACH	
704-1095	TYPE B FLASHERS	EACH	
704-1500	OBLITERATION OF PVMT MK	SF	
704-3501	PORTABLE PRECAST CONCRETE MED BARRIER	LF	
704-3510	PRECAST CONCRETE MED BARRIER - STATE FURNISHED	EACH	
762-0200	RAISED PAVEMENT MARKERS	EACH	
762-0420	SHORT TERM 4IN LINE - TYPE R	LF	
762-0430	SHORT TERM 4IN LINE - TYPE NR	LF	
772-2110	FLASHING BEACON - POST MOUNTED	EACH	

NOTE:
If additional signs are required, units will be calculated using the formula from Section III-19.06 of the Design Manual.
http://www.dot.nd.gov/

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Traffic Control Devices List

Missile Access Inslope Repair

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
N.D.	ROM-0300(134)	110	1

Sta/RP	Sign No.	Assembly No.	Flat Sheet For Signs IV SF	Flat Sheet For Signs XI SF	Sign Support Length 1st LF	2nd LF	3rd LF	4th LF	Support Size	Max Post Len LF	Sleeve Length 1st LF	2nd LF	3rd LF	4th LF	Sleeve Size	Anchor EA	Anchor LF	Anchor Size	Break-Away EA	Comments
149th Ave SW																				
7+90 Rt		53		8.5	13.0				2.5 x 2.5 10 ga	14.7						1	4	3 x 3 7 ga	1	
Sub Total			0.0	8.5		**Total**	13.0									**Total**	4		1	
62nd Ave NW																				
38+77 Rt		13		2.3	9.6				2 x 2 12 ga	17.9						1	4	2.25 x 2.25 12 ga		
52+46 Lt		13		2.3	10.1				2 x 2 12 ga	17.9						1	4	2.25 x 2.25 12 ga		
Sub Total			0.0	4.6		**Total**	19.8									**Total**	8		0	
Grand Total			0.0	13.1		**Total**	32.8									**Total**	12		1	

Basis of Estimate
Sign Support Lengths

The sign support lengths have been calculated using the following vertical clearances:

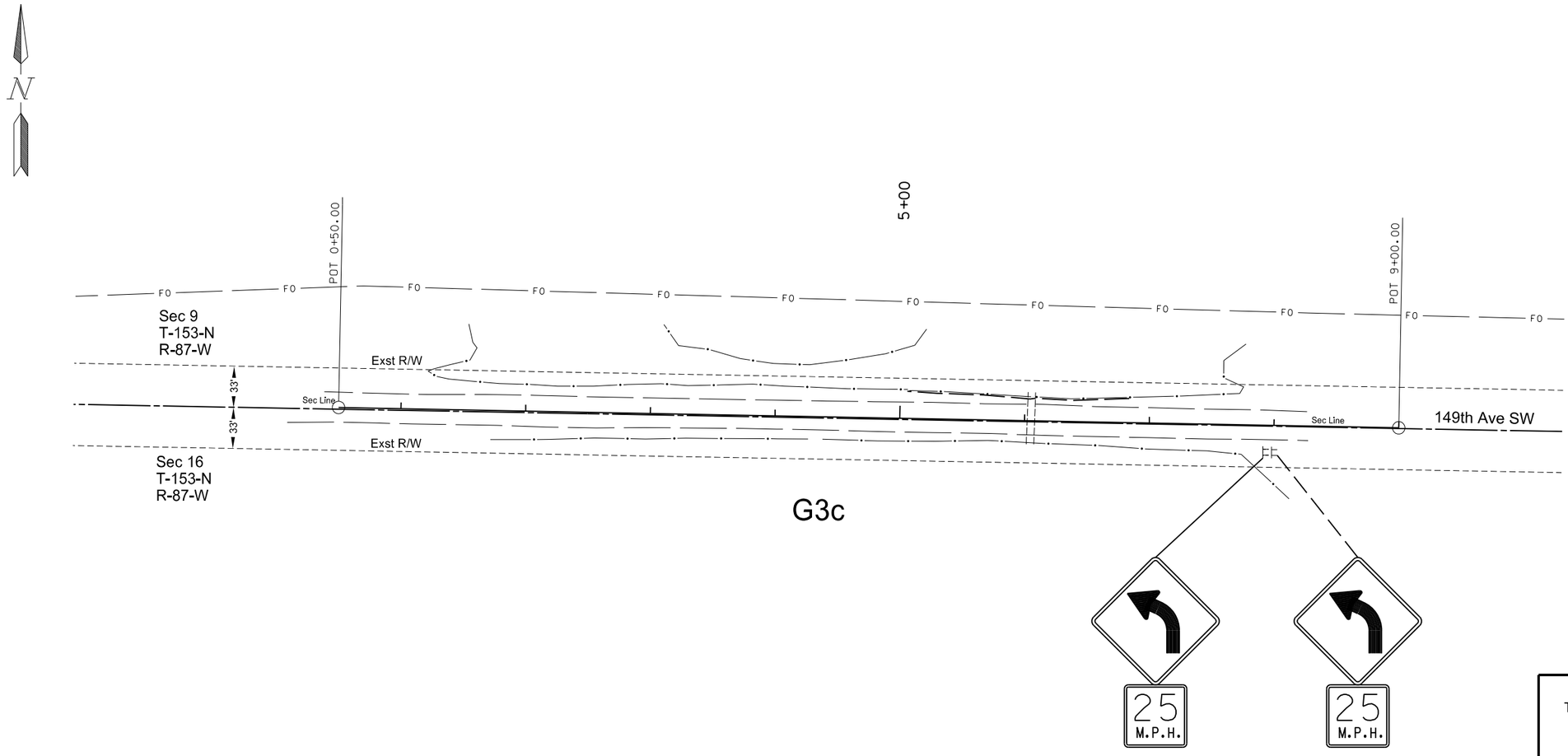
Rural Roadway - 60"

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Sign Summary
Perforated Tube

Missile Access Roads Inslope Repair
Mountrail & Ward County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	110	2



W1-1L, W13-1
Install Sign & Support
Advisory Sign
Sta 7+90 - RT

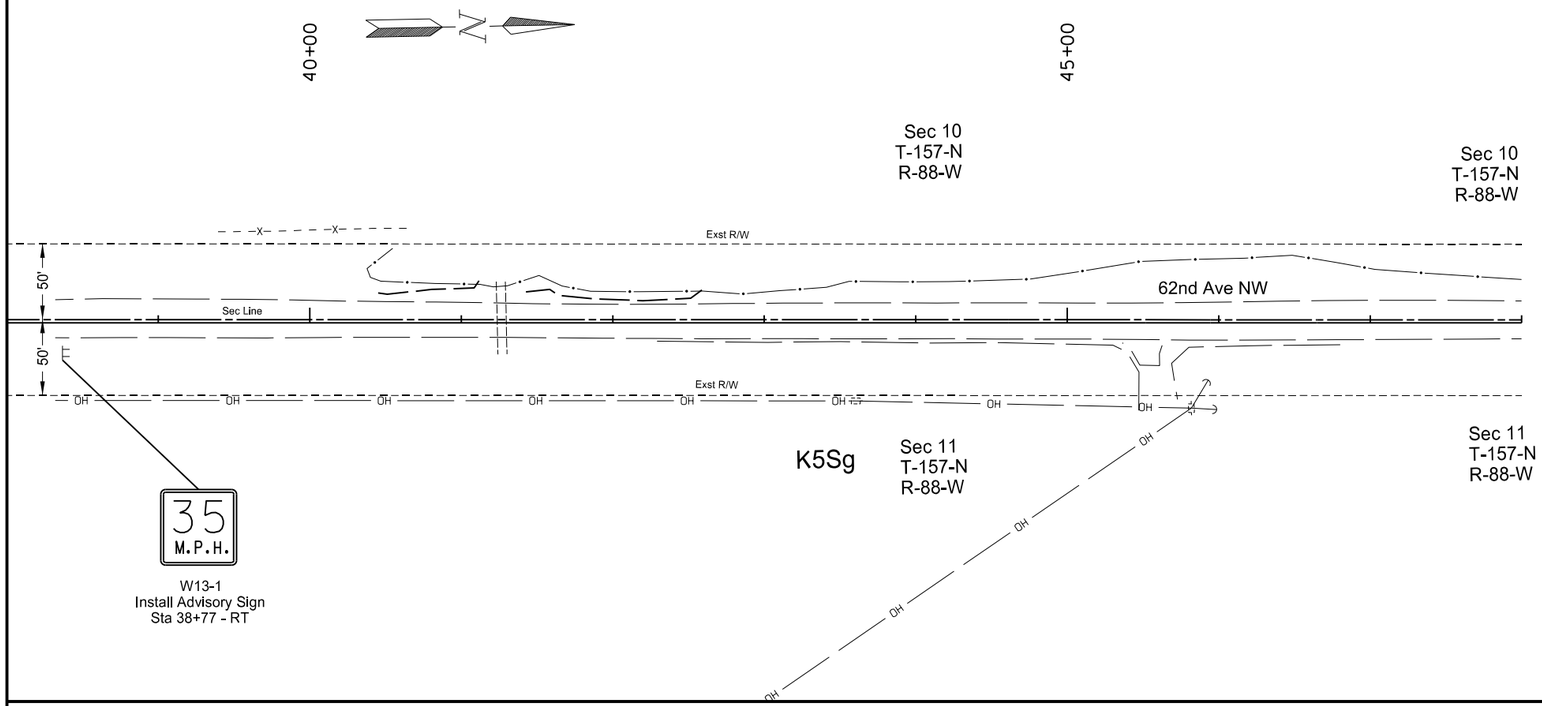
Remove Sign & Support
Sta 7+95 - RT

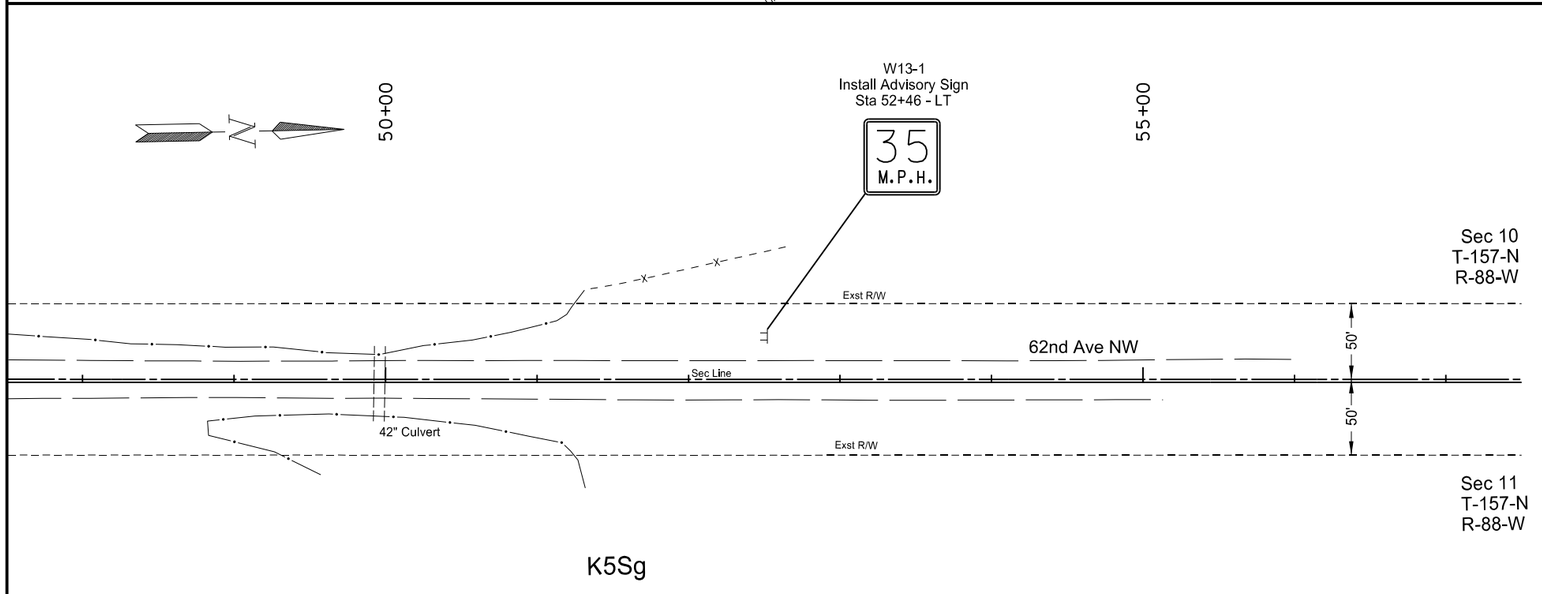
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Sign Layout

Site G3c
Inslope Erosion Repair
Missile Access Roads - G3
Ward County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	ROM-0300(134)	110	3





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Sign Layout

Site K5Sg
Inslope Erosion Repair
Missile Access Road - K5S
Mountrail County