

DESIGN DATA				
Traffic	Average Daily			
Current 2022	Pass: N/A	Trucks: N/A	Total: <750	
Forecast 2042	Pass: _____	Trucks: _____	Total: _____	
Clear Zone Distance: 26', 4:1 Inslopes		Design Speed: 65		
Minimum Sight Dist. for Stopping: 193'		Bridges: N/A		
Sight Dist. for No Passing Zone: 1,865'				
Pavement Design Life: 20 Years				

NORTH DAKOTA
DEPARTMENT OF TRANSPORTATION

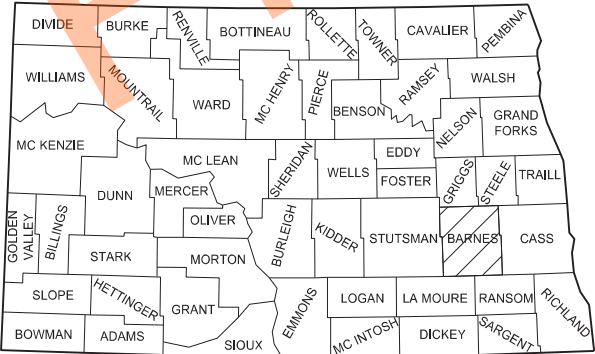
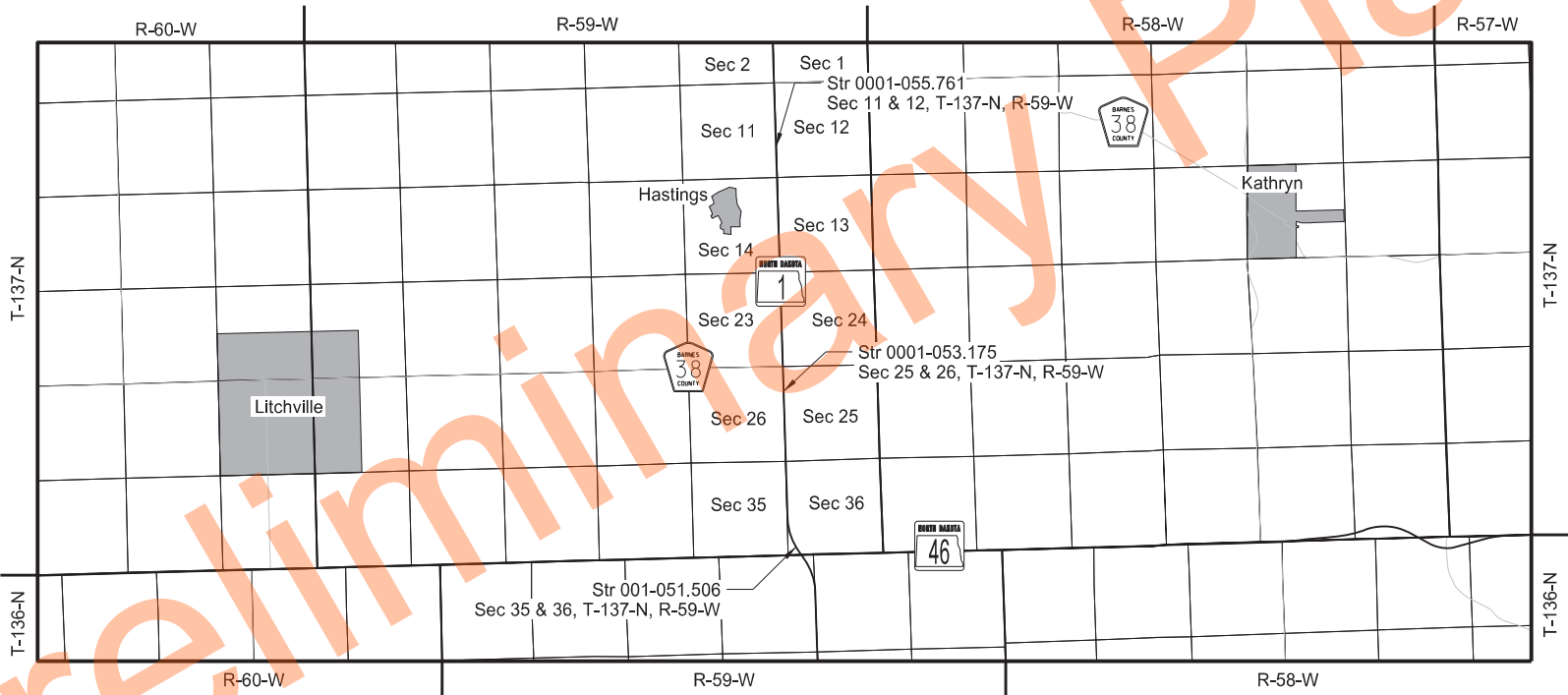
BRN-2-001(085)051

Barnes County
Structure 0001-051.506 ~ Just North of ND 46
Structure 0001-053.175 ~ 2 miles North of ND 46
Structure 0001-055.761 ~ 4 miles North of ND 46
Structure Removal, Pipe Installation, Grading, Hot Mix Asphalt, Aggregate Base
Milling, Guardrail Removal, Signing, Pavement Markings, & Incidentals

	STATE	PROJECT NO.	PCN	SECTION NO.	SHEET NO.
	ND	BRN-2-001(085)051	24472	1	1

GOVERNING SPECIFICATIONS	Date Published and Adopted by the North Dakota Department of Transportation
Standard Specifications	7/1/2025
Supplemental Specifications	NONE

PROJECT NUMBER \ DESCRIPTION	NET MILES	GROSS MILES
Structure 0001-051.506	0.109	0.109
Structure 0001-053.175	0.111	0.111
Structure 0001-055.761	0.109	0.109
	0.329	0.329



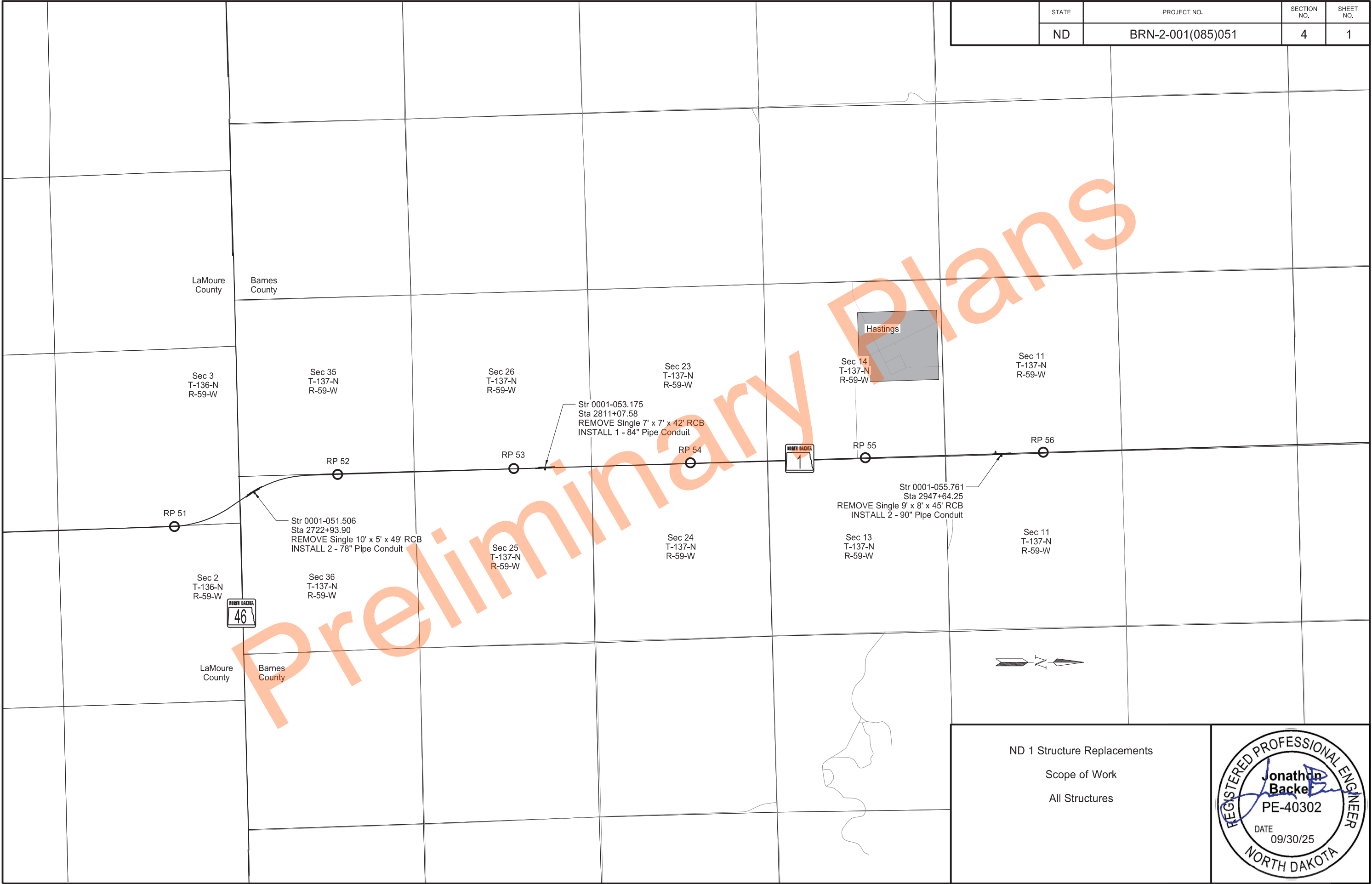
STATE COUNTY MAP

DESIGNER Adam McGill
DESIGNER Jonathon Backer
DESIGNER Mason Heustis
DESIGNER Marcus Rosing
DESIGNER Ryan Bergum
DESIGNER Jack Hamond

ND DEPARTMENT OF TRANSPORTATION
OFFICE OF PROJECT DEVELOPMENT



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			D-754-12	Breakaway Coupler System - Structural Details For W-Shape Supports					
			D-754-13	Breakaway System Structural Details For W-Shape Supports					
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SSP 1	Temporary Erosion and Sediment Best Management Practices								
SSP 2	Federal Migratory Bird Treaty Act								
SP 70(25)	Temporary Water Diversion								



NOTES

- 107-P01

MAINTAINING TRAFFIC – UNEVEN SHOULDER: If a shoulder and the adjacent lane are uneven due to milling or paving operations, the requirements of Section 704.04 O, “Traffic Control for Uneven Pavement” apply. If the uneven shoulder and adjacent lane are due to other circumstances, the contents of this note apply.

If, at the end of the work-day, drop-offs greater than 2 inches and less than 18 inches or slopes steeper than 4:1 exist between the edge of a traffic lane and the outside edge of the proposed roadway, perform one of the following actions:

 - Construct a traversable wedge in the area of the drop-off or steep slope; or
 - Close the lane adjacent to the drop-off or steep slope and provide 24-hour flagging or pilot car operations.

When constructing a wedge, construct a wedge composed of aggregate or earthen materials with a 4:1 or flatter slope along the entire length of the area. Compact materials using Type C compaction, as specified in 203.04 G.4, “Compaction Control Type C”.

Install stackable vertical panels that meet the requirements of Section 704.03 H, “Stackable Vertical Panels”, along the edge of the driving lane closest to the wedge.

The Engineer will measure stackable vertical panels as specified in Section 704.05, “Method of Measurement” and will pay for panels as specified in Section 704.06, “Basis of Payment”.

The Engineer will not measure material used to construct the wedge. Include the cost of materials, equipment, labor, and incidentals required for this operation in the price bid for “AGGREGATE BASE COURSE CL 5”.

If a 4:1 or flatter wedge is not installed, provide 24 hour flagging or pilot car operations and associated traffic control at no additional cost to the Department.
- 107-P02

HAUL ROAD RESTORATION: Use Class 13 aggregate for haul road restoration.
- 109-P01

MEASUREMENT OF QUANTITIES: A prismatic method was used for volume calculations of the earthwork items.
- 202-P01

REMOVAL OF BITUMINOUS SURFACING: Removal of Bituminous Surfacing consists of removing the existing bituminous pavement. The existing base is included in the excavation volumes listed in Section 11.
- 203-010

SHRINKAGE: 25% percent additional volume is included for shrinkage in earth embankment.
- 203-385

AVERAGE HAUL: No average haul has been computed for this project.
- 203-P01

COMMON EXCAVATION-TYPE A: The Engineer will pay plan quantity for Common Excavation-Type A. Field measurements will not be taken. Excess material to become property of the Contractor.
- 260-P01

SILT FENCE: Do not trench silt fence when in a wetland.

- 261-P01

TEMPORARY EROSION CONTROL WITHIN WETLANDS: Fiber Rolls and Silt Fence have been provided for placement between the earthen berm at the perimeter of the work area and adjacent wetlands. Do not place fiber roll inside a wetland. Use silt fence if installation area is inside a wetland. Apply temporary seed and mulch to the berm according to permit timelines. Temporary seed mix and mulch for this use will be paid for as “TEMPORARY COVER CROP” and “STRAW MULCH”.
- 704-500

PORTABLE RUMBLE STRIPS (PRS): Use PRS made of rubber or engineered polymers.

Install PRS as part of the temporary traffic control when the following signs are also part of the required traffic control set up:

 - “Be Prepared to Stop” (W3-4); and
 - “Flagger” symbol (W20-7)

Install PRS that meet the following criteria:

 - Have no adhesives or fasteners required for placement;
 - Have a manufacture's speed rating that meets or exceeds the posted speed limit; and
 - Each strip in the array must weigh a minimum of 100 pounds.

Use individual PRS constructed in one of the following manners:

 - A single piece;
 - Interlocking segments; or
 - Two pieces hinged at the midpoint.

An installed array of PRS consists of a minimum of 3 individual strips.

Move rumble strips with the flagging operation. Do not place rumble strips on horizontal curves.

The Engineer will count and measure each array as one unit. Include the cost of providing, installing, maintaining, and relocating PRS in the unit price bid for "PORTABLE RUMBLE STRIPS".



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NOTES

704-P01 TRAFFIC CONTROL DEVICES: The traffic control devices list has been developed using the following layouts shown in the Standard Drawings and layouts provided in the plans.

- All Sites
 - Section 100 Sheet 1 Overview
 - D-704-15 Type A Temporary Road Closure with Flaggers
 - D-704-26 Miscellaneous Sign Layouts (As Needed)
 - D-704-33 Two-Lane Roadway Portable Rumble Strips

The Traffic Control Device List Phase “O” represents the Overview on Sheet 2 of Section 100. Phase Numbers 1, 2, and 3 represent the three site locations 0001-051.506, 0001-053.175, and 0001-055.761, respectively. The quantities in Phase Numbers 1, 2, and 3 are the maximum total quantity required at any moment for each individual site. Phase ‘T’ on the Traffic Control Devices List represents the sum of all traffic control devices required for all three sites concurrently. Traffic control sign units and devices will be paid for when installed at each individual site regardless of the number of sites being worked on concurrently.

704-P02 TRAFFIC CONTROL STAGES: Replace all structures in the following construction stages:

Construction Stage 1:

- Set up traffic control signage, portable rumble strips, and flagging / pilot car operations in accordance with D-704-33.
- Install all traffic control signs and devices along the roadway following Section 100 Sheet 3, maintaining a minimum of 15’ of the existing pavement surface. Establish a single lane of traffic with flaggers and pilot car.
- Remove existing bituminous surfacing and aggregate base course within the roadway work-zone. Remove and grade subgrade in the work-zone to a depth of 2 feet from the existing pavement surface and place 6 inches of Traffic Service Aggregate, 15-feet wide. Maintain a maximum profile grade of 7%, and a minimum of 1-foot of cover over the existing structure.
- Install traffic control signs and devices along the temporary roadway following Section 100 Sheet 3. Shift traffic to the new temporary roadway.

Construction Stage 2:

- Remove remaining existing bituminous surfacing and aggregate base course. Excavate down to the existing box culvert maintaining a 4:1 inslope adjacent to the temporary roadway.
- Remove as much of the existing structure as possible maintaining 2 feet of the existing structure outside of the 4:1 inslope.
- Install culvert pipes leaving a two-foot gap from the existing structure.
- Place a minimum of 18 inches embankment and a minimum of 6 inches of traffic service aggregate for the driving surface of the temporary roadway over the new culvert pipes, maintaining a 4:1 inslope and a 2-foot buffer from the end of the new culvert pipes.
- Install traffic control signs and devices along the temporary roadway following Section 100 Sheet 3. Shift traffic onto the new temporary roadway.

Construction Stage 3:

- Excavate and remove the remaining portions of the existing box culvert. Install remaining portions of the culvert pipes.
- Place embankment and aggregate base course over new culvert pipes to finished grade , maintaining a 4:1 slope down to the temporary roadway.
- Install traffic control signs and devices along the finished grade temporary roadway following Section 100 Sheet 3. Shift traffic to the new temporary roadway.

Construction Stage 4:

- Place remaining backfill and aggregate base to finished grade.
- Install aggregate base course and bituminous surfacing, while shifting traffic between sides of the roadway.
- Establish normal traffic patterns.

754-P01 OBJECT MARKERS – CULVERTS: Remove existing object markers located at culvert end sections that are impacted by earthwork activities and pipe replacements. Include the cost for removal and disposal in the price bid for “OBJECT MARKERS – CULVERTS”.

772-P01 REVISE FLASHING BEACON SYSTEM: Unhook the conductor from feed point and flashing beacon, roll up and store onsite until it can be reset. Remove conduit as needed to install the culverts. Replace the removed sections of conduit with new conduit once earthwork grading is complete. Include costs for removing and resetting the conductor, conduit, and reassembling the flashing beacon system on new posts in the unit price bid for “REVISE FLASHING BEACON SYSTEM”.



ENVIRONMENTAL NOTES

ENVIRONMENTAL NOTES (EN): The North Dakota Department of Transportation has made environmental commitments to secure approval of this project. The following environmental notes are requirements to comply with these commitments:

EN-1 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, Ben Holen by e-mail - bholen@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, (2) documented NDGFD correspondence (email or signed letter).

EN-2 THREATENED AND ENDANGERED SPECIES: The project is located near/within suitable habitat for the species listed in the following table:

SPECIES	HABITAT	PRESENCE
Dakota Skipper	Native Prairie	Year-Round
Northern Long-Eared Bat	Forested/Wooded Areas/Bridges/Box Culverts/Caves/Mines	Active Season: April 15 - October 31 * Inactive Season: Nov 1 – April 14*

*Time frames can differ slightly, depending on the year

If any of the above threatened and endangered species are identified within 1 mile of the project, the Contractor will notify the Engineer immediately and cease construction activities in the vicinity until an avoidance area is established. The Engineer will establish an avoidance area that is at least a 0.5 mile and immediately coordinate with the USFWS (701-355-8513), FHWA (701-221-9464), and NDDOT Environmental and Transportation Services (701-328-2592). The Contractor will not resume work within the avoidance area until the Engineer has confirmed with the agencies that work may proceed (either the species have left the area, or approved avoidance/minimization measures have been implemented).

EN-3 TEMPORARY WETLAND IMPACT: Temporary impact areas within wetlands and or other waters are incorporated into the plans for this project. Remove temporary fill placed and sedimentation in wetlands or other waters. Restore these wetlands to preconstruction contours.

Estimated Quantities						STATE	PROJECT NO.	SECTION NO.	SHEET NO.
						ND	BRN-2-001(085)051	8	1
					Mainline:				
SPEC	CODE	ITEM DESCRIPTION	UNIT				TOTAL		
103	0100	CONTRACT BOND	L SUM	1			1		
202	0104	REMOVAL OF STRUCTURE	EA	3			3		
202	0132	REMOVAL OF BITUMINOUS SURFACING	SY	4659			4659		
202	0169	REMOVAL OF END SECTION-ALL TYPES & SIZES	EA	2			2		
202	0400	REMOVAL OF RIPRAP - LOOSE ROCK	CY	9			9		
203	0101	COMMON EXCAVATION-TYPE A	CY	2764			2764		
203	0109	TOPSOIL	CY	1712			1712		
216	0100	WATER	M GAL	67			67		
251	0200	SEEDING CLASS II	ACRE	2.43			2.43		
251	2000	TEMPORARY COVER CROP	ACRE	2.11			2.11		
253	0101	STRAW MULCH	ACRE	4.54			4.54		
255	0103	ECB TYPE 3	SY	280			280		
256	0300	RIPRAP GRADE III	CY	400			400		
260	0300	SILT FENCE	LF	2030			2030		
260	0301	REMOVE SILT FENCE	LF	2030			2030		
261	0112	FIBER ROLLS 12IN	LF	3891			3891		
261	0113	REMOVE FIBER ROLLS 12IN	LF	1024			1024		
261	0120	FIBER ROLLS 20IN	LF	500			500		
261	0121	REMOVE FIBER ROLLS 20IN	LF	250			250		
262	0100	FLOTATION SILT CURTAIN	LF	70			70		
262	0101	REMOVE FLOTATION SILT CURTAIN	LF	70			70		
302	0050	TRAFFIC SERVICE AGGREGATE	TON	500			500		
302	0120	AGGREGATE BASE COURSE CL 5	TON	1937			1937		
401	0050	TACK COAT	GAL	721			721		
401	0060	PRIME COAT	GAL	1141			1141		
401	0160	BLOTTER MATERIAL CL 44	TON	42			42		
411	0114	MILLING PAVEMENT SURFACE - 2 INCH	SY	1606			1606		
430	0142	RAP - SUPERPAVE FAA 42	TON	1755			1755		
430	5815	PG 58S-34 ASPHALT CEMENT	TON	91			91		
702	0100	MOBILIZATION	L SUM	1			1		
704	0100	FLAGGING	MHR	1680			1680		
704	1000	TRAFFIC CONTROL SIGNS	UNIT	2531			2531		
704	1048	PORTABLE RUMBLE STRIPS	EA	6			6		
704	1060	DELINEATOR DRUMS	EA	60			60		
704	1080	STACKABLE VERTICAL PANELS	EA	71			71		
709	0100	GEOSYNTHETIC MATERIAL TYPE G	SY	504			504		
709	0155	GEOSYNTHETIC MATERIAL TYPE RR	SY	607			607		
714	4150	PIPE CONDUIT 78IN	LF	156			156		
714	4155	PIPE CONDUIT 84IN	LF	86			86		
714	4160	PIPE CONDUIT 90IN	LF	168			168		
714	5015	PIPE CORR STEEL .064IN 18IN	LF	44			44		
714	5810	END SECT CORR STEEL .064IN 18IN	EA	2			2		
754	0214	GALV STEEL POSTS-W-SHAPE POSTS(TWO OR MORE)	LF	120			120		
754	0530	PANEL FOR SIGNS-TYPE XI REFLECTIVE SHEETING	SF	49			49		
754	0534	PANEL FOR SIGNS-TYPE IV REFLECTIVE SHEETING	SF	45			45		
754	0805	OBJECT MARKERS - CULVERTS	EA	10			10		
754	1104	REMOVE SIGN FOUNDATION	EA	4			4		

Estimated Quantities						STATE	PROJECT NO.	SECTION NO.	SHEET NO.
						ND	BRN-2-001(085)051	8	2
					Mainline:				
SPEC	CODE	ITEM DESCRIPTION	UNIT						TOTAL
760	0025	SINUSOIDAL RUMBLE STRIP - ASPHALT SHOULDER	MILE		1.2				1.2
760	0027	SINUSOIDAL RUMBLE STRIP - ASPHALT CENTERLINE	MILE		0.3				0.3
762	0432	SHORT TERM 6IN LINE-TYPE NR	LF		7781				7781
762	1106	PVMT MK PAINTED 6IN LINE	LF		4750				4750
764	0151	REMOVE W-BEAM GUARDRAIL & POSTS	LF		1525				1525
764	2081	REMOVE END TREATMENT & TRANSITION	EA		12				12
772	2935	REVISE FLASHING BEACON SYSTEM	EA		1				1
900	1000	TEMPORARY STREAM DIVERSION	EA		3				3

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MAINLINE PAVING SUMMARY												
Roadway	Site Location	Begin Station	End Station	Length	Cross-Sectional Area (See Typical Sections)		302 0120 AGGREGATE BASE COURSE CL 5	401 0050 TACK COAT	401 0060 PRIME COAT	401 0160 BLOTTER MATERIAL CL 44	430 0142 RAP - SUPERPAVE FAA 42	430 5815 PG 58S-34 ASPHALT CEMENT
					Aggregate Base	HMA						
				(LF)	(SF)	(SF)	(TON)	(GAL)	(GAL)	(TON)	(TON)	(TON)
ND 1	Structure 0001-051.506	2721+00	2722+00	100	-	4.93	-	17	-	1	37	2
		2722+00	2723+95	195	23.13	31.42	314	179	282	5	454	22
		2723+95	2724+95	100	-	4.93	-	17	-	1	37	2
		2720+10 Rt*	2722+00 Rt*	190	9.08	1.13	120	9	32	1	16	1
		2720+90 Lt*	2722+00 Lt*	110	6.63	1.01	51	5	16	1	9	1
		2723+95 Rt*	2724+85 Rt*	90	9.08	1.13	57	4	16	1	8	1
		2723+95 Lt*	2725+84 Lt*	189	6.63	1.01	87	7	27	1	15	1
	Structure 0001-053.175	2809+10	2810+10	100	-	4.93	-	17	-	3	37	2
		2810+10	2812+05	195	23.29	31.51	316	179	284	5	456	22
		2812+05	2813+05	100	-	4.93	-	17	-	3	37	2
		2808+13 Rt*	2810+10 Rt*	197	7.99	1.08	110	8	31	1	16	1
		2809+10 Lt*	2810+10 Lt*	100	7.99	1.08	56	4	16	1	8	1
		2812+05 Rt*	2813+02 Rt*	97	7.99	1.08	54	4	15	1	8	1
		2812+05 Lt*	2814+00 Lt*	195	7.99	1.08	109	8	31	1	16	1
	Structure 0001-055.761	2945+60	2946+60	100	-	4.93	-	17	-	3	37	2
		2946+60	2948+65	205	23.29	31.51	332	188	298	6	479	23
		2948+65	2949+65	100	-	4.93	-	17	-	3	37	2
		2944+85 Rt*	2946+60 Rt*	175	7.99	1.08	98	7	27	1	14	1
		2945+37 Lt*	2946+60 Lt*	123	7.99	1.08	69	5	19	1	10	1
		2948+65 Rt*	2949+63 Rt*	98	7.99	1.08	55	4	16	1	8	1
		2948+65 Lt*	2950+61 Lt*	196	7.99	1.08	109	8	31	1	16	1
TOTAL =							1,937	721	1,141	42	1,755	91

*Shoulder Paving

APPROACH PAVING SUMMARY								
Roadway	Site Location	Station	Offset	302 0120 AGGREGATE BASE COURSE CL 5	401 0050 TACK COAT	401 0060 PRIME COAT	430 0142 RAP - SUPERPAVE FAA 42	430 5815 PG 58S-34 ASPHALT CEMENT
				(TON)	(GAL)	(GAL)	(TON)	(TON)
ND 1	Structure 0001-055.761	2945+95	Lt	106	8	26	17	1
TOTAL =				106	8	26	17	1

LOCATION	EARTHWORK SUMMARY				TOPSOIL SUMMARY
	Excavation	Embankment ①	Excess Material ②	203 0101 COMMON EXCAVATION- TYPE A	203 0109 TOPSOIL
	(CY)	(CY)	(CY)	(CY)	(CY)
	A	B	C = A - B	A	D
Structure 0001-051.506	906	450	456	-	505
Structure 0001-053.175	1,111	675	436	-	572
Structure 0001-055.761	747	1,374	-627	-	635
TOTAL =	2,764	2,499	265	2,764	1,712

Notes:

- ① Additional 25% volume for shrinkage.
- ② Use excess material from Structure 0001-051.506 and Structure 0001-053.175 at Structure 0001-055.761. Additional excess material to become property of the contractor or wasted on the inslopes.

Water

25 MGAL / MILE for Dust Palliative
20 GAL / TON for Aggregate
10 GAL / CY for Embankment

Materials

Aggregate Base Course CL 5 @ 1.875 TON / CY
Tack Coat @ 0.05 GAL / SY
Prime Coat @ 0.35 GAL / SY
Blotter Material Cl 44 @ 12 LB / SY
RAP - Superpave FAA 42 @ 2.0 TON / CY
PG 58S-34 Asphalt Cement @ 4.8% by Weight

ND 1 Structure Replacements
Basis of Estimate
All Structures



	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	BRN-2-001(085)051	10	2

762 0432 SHORT TERM 6IN LINE-TYPE NR					
Roadway	Site Location	Begin Station	End Station	Offset	Quantity (LF)
ND 1	Structure 0001-051.506 Centerline - 1st Lift	2722+00	2723+95	CL	390
	Structure 0001-051.506 2nd Lift				390
	Structure 0001-051.506 3rd Lift				390
	Structure 0001-051.506 4th Lift				390
	Structure 0001-051.506 5th Lift				390
	Structure 0001-051.506 6th Lift (Top Lift)	2721+00	2724+95		790
	Structure 0001-051.506 Fogged Rumble Strips	2720+90	2725+84	Lt	494
		2720+10	2724+95	Rt	485
	Subotal =				3,719
	Structure 0001-053.175 Centerline - 1st Lift	2810+10	2812+05	CL	244
	Structure 0001-053.175 2nd Lift				244
	Structure 0001-053.175 3rd Lift				244
	Structure 0001-053.175 4th Lift				244
	Structure 0001-053.175 5th Lift				244
	Structure 0001-053.175 6th Lift (Top Lift)	2809+10	2813+05		494
	Structure 0001-053.175 Fogged Rumble Strips	2809+10	2814+00	Lt	490
		2808+13	2813+05	Rt	492
	Subotal =				2,696
	Structure 0001-055.761 Centerline - 1st Lift	2946+60	2948+65	CL	52
	Structure 0001-055.761 2nd Lift				52
	Structure 0001-055.761 3rd Lift				52
	Structure 0001-055.761 4th Lift				52
	Structure 0001-055.761 5th Lift				52
	Structure 0001-055.761 6th Lift (Top Lift)	2945+60	2949+65		102
	Structure 0001-055.761 Fogged Rumble Strips	2945+37	2950+61	Lt	524
		2944+85	2949+65	Rt	480
	Subotal =				1,366
	Total =				7,781

760 0025 SINUSOIDAL RUMBLE STRIPS - ASPHALT SHOULDER						
Roadway	Site Location	Begin Station	End Station	Offset	Basis	Quantity (MILE)
ND 1	Structure 0001-051.506	2720+90	2725+84	Lt	5,280 LF/Mile/Shldr	0.2
		2720+10	2724+85	Rt		0.2
	Structure 0001-051.506	2809+10	2814+00	Lt		0.2
		2808+13	2813+02	Rt		0.2
	Structure 0001-051.508	2945+37	2950+61	Lt		0.2
		2944+85	2949+63	Rt		0.2
Total =						1.2

762-1106 PVMT MK PAINTED 8IN LINE									
Roadway	Site Location	White Lt Edge Line				White Rt Edge Line			
		Begin Sta	End Sta	Total	Unit	Begin Sta	End Sta	Total	Unit
ND 1	Structure 0001-051-506	2720+45	2725+45	500	LF	2720+45	2725+45	500	LF
	Structure 0001-053.175	2808+55	2813+55	500	LF	2808+55	2813+55	500	LF
	Structure 0001-055.761	2945+15	2950+15	500	LF	2945+15	2950+15	500	LF
		Subtotal =		1,500	LF	Subtotal =		1,500	LF
						Total =		3,000	LF

762-1106 PVMT MK PAINTED 6IN LINE													
Roadway	Site Location	6" Yellow Barrier Line Lt				6" Yellow Centerline (10' Line 30' Skip)				6" Double Yellow Barrier Line			
		6" Yellow Skip (10' Line 30' Skip) Rt											
		Begin Sta	End Sta	Total	Unit	Begin Sta	End Sta	Total	Unit	Begin Sta	End Sta	Total	Unit
ND 1	Structure 0001-051-506	-	-	-	LF	-	-	-	LF	2720+45	2725+45	1,000	LF
	Structure 0001-053.175	2808+55	2813+55	625	LF	-	-	-	LF	-	-	-	LF
	Structure 0001-055.761	-	-	-	LF	2945+15	2950+15	125	LF	-	-	-	LF
		Subtotal =		625	LF	Subtotal =		125	LF	Subtotal =		1,000	LF
										Total =		1,750	LF

216 0100 WATER					
Roadway	Site Location	Material	Basis	Basis Quantity	Quantity (MGAL)
ND 1	Structure 0001-051.506	Dust Palliative	25 MGal/Mile	0.11	3
		Aggregate Base Course CL 5	15 Gal/Ton	629	10
		Embankment	10 Gal/CY	450	5
		Subtotal =			18
	Structure 0001-053.175	Dust Palliative	25 MGal/Mile	0.11	3
		Aggregate Base Course CL 5	15 Gal/Ton	645	10
		Embankment	10 Gal/CY	675	7
		Subtotal =			20
	Structure 0001-051.506	Dust Palliative	25 MGal/Mile	0.11	3
		Aggregate Base Course CL 5	15 Gal/Ton	769	12
		Embankment	10 Gal/CY	1,374	14
		Subtotal =			29
Total =				67	

754 0805 OBJECT MARKERS - CULVERTS				
Roadway	Site Location	Station	Offset	Quantity (EA)
ND 1	Structure 0001-051.506	2722+95	CL	4
	Structure 0001-053.175	2811+07	CL	2
	Structure 0001-055.761	2947+64	CL	4
Total =				10

760 0027 SINUSOIDAL RUMBLE STRIPS - ASPHALT CENTERLINE					
Roadway	Site Location	Begin Station	End Station	Basis	Quantity (MILE)
ND 1	Structure 0001-051.506	2722+00	2723+95	5,280 LF/Mile/Shldr	0.1
	Structure 0001-053.175	2810+10	2812+05		0.1
	Structure 0001-051.508	2946+60	2948+65		0.1
Total =					0.3

Water

25 MGAL / MILE for Dust Palliative
20 GAL / TON for Aggregate
10 GAL / CY for Embankment

Materials

Aggregate Base Course CL 5 @ 1.875 TON / CY
Tack Coat @ 0.05 GAL / SY
Prime Coat @ 0.35 GAL / SY
Blotter Material CI 44 @ 12 LB / SY
RAP - Superpave FAA 42 @ 2.0 TON / CY
PG 58S-34 Asphalt Cement @ 4.8% by Weight

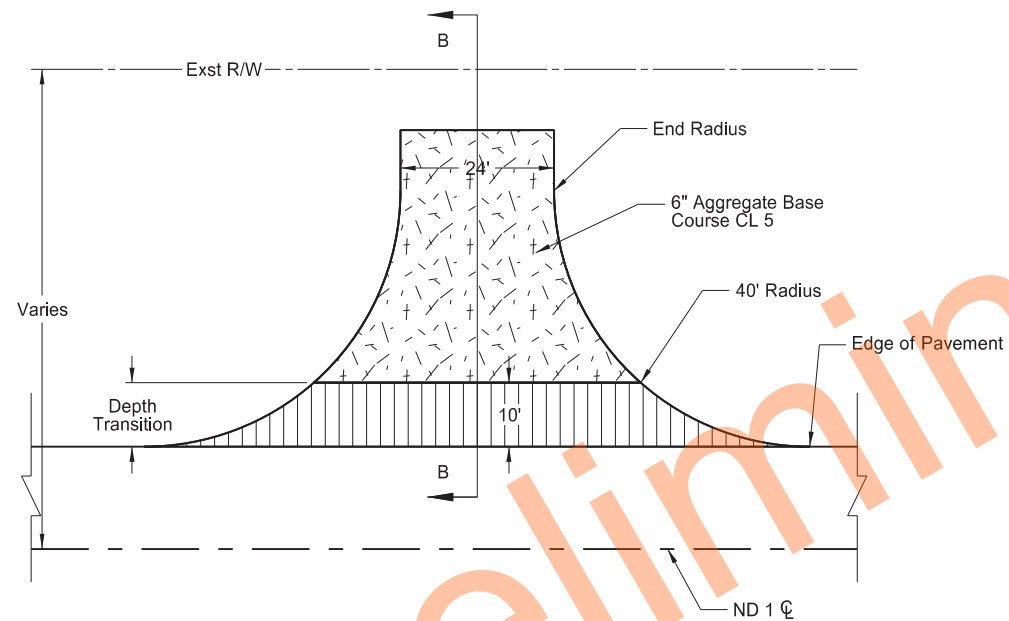
ND 1 Structure Replacements

Basis of Estimate

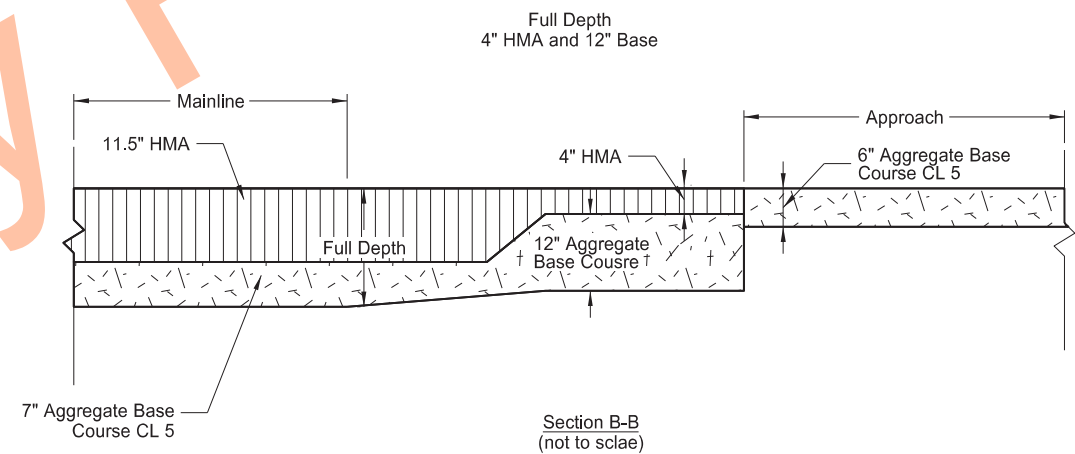
All Structures



STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	BRN-2-001(085)051	20	1



(8) Field Drive Approach
Tie into Right-of-Way



ND 1 Structure Replacements

General Details
Approach Details

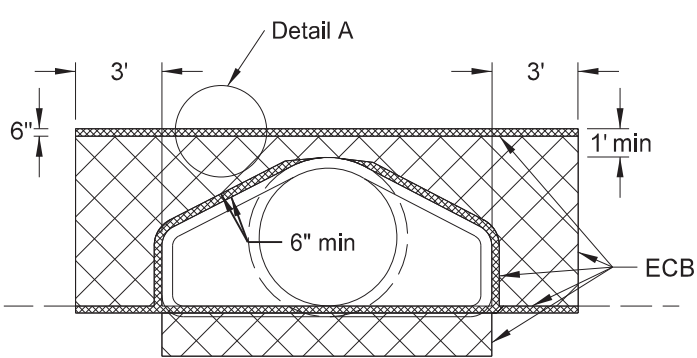
Structure 0001-055.761
ND 1



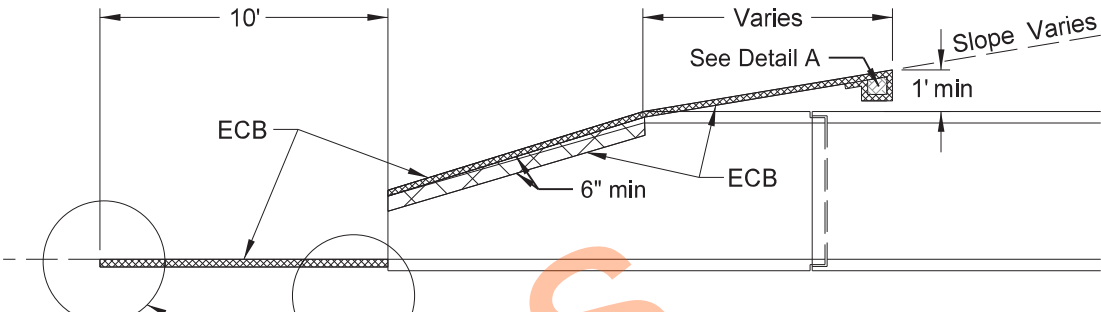
			STATE	PROJECT NO.	SECTION NO.	SHEET NO.
			ND	BRN-2-001(085)051	20	2

255 0103 ECB TYPE 3 CENTERLINE CULVERTS							
Location of Surface Area to be Protected			Pipe Diameter	No.	X	Y	Total Quantity
Structure	Station	Offset	(IN)		(FT)	(FT)	(SY)
ND 1							
0001-051.506	2722+88	Lt	78	1	16.4	23.2	43
	2723+02	Lt	78	1	16.4	23.2	43
0001-053.175	2811+07	Lt	84	1	16.7	25.9	48
0001-055.761	2947+57	Lt	90	1	16.9	27.1	51
	2947+71	Lt	90	1	16.9	27.1	51
TOTAL =							236

255 0103 ECB TYPE 3 APPROACH CULVERTS							
Location of Surface Area to be Protected			Pipe Diameter	No.	X	Y	Total Quantity
Structure	Station	Offset	(IN)		(FT)	(FT)	(SY)
ND 1							
0001-055.761	2946+05	Lt & Rt	18	2	9.5	20.7	44
TOTAL =							44

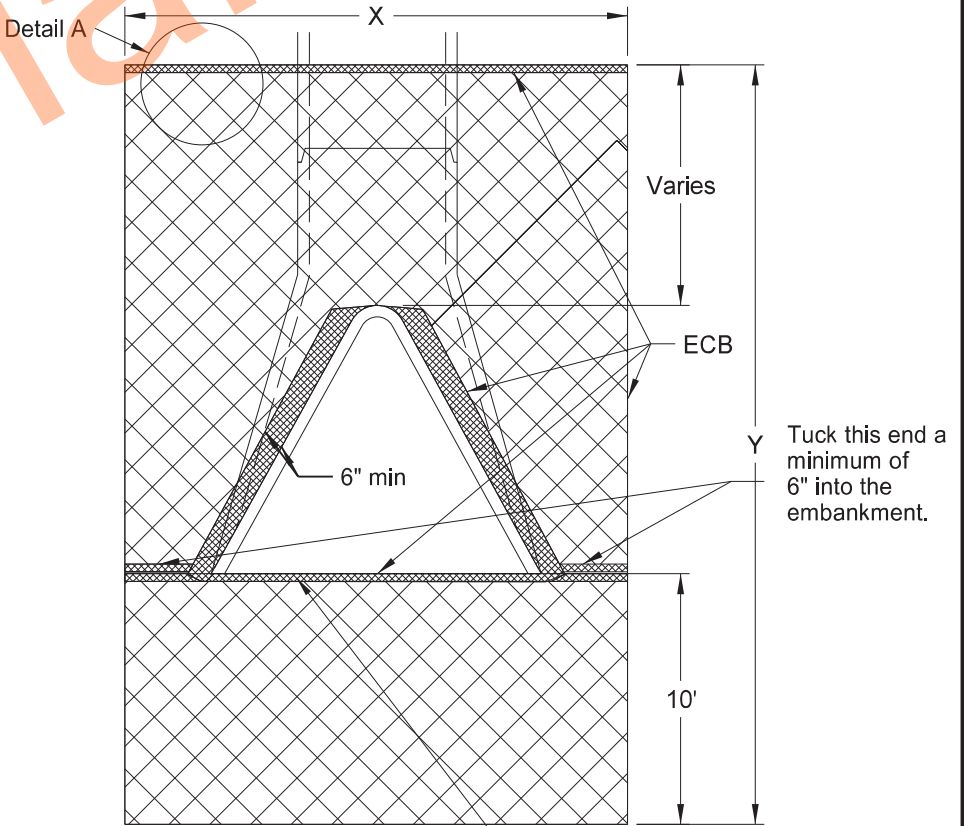


FRONT VIEW



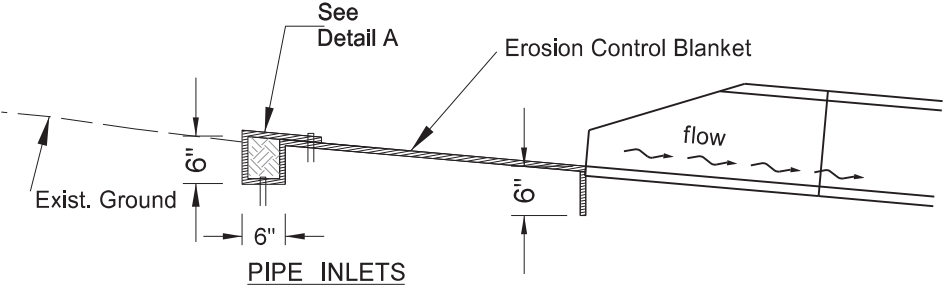
SIDE VIEW

See Pipe Inlet & Outlet Details

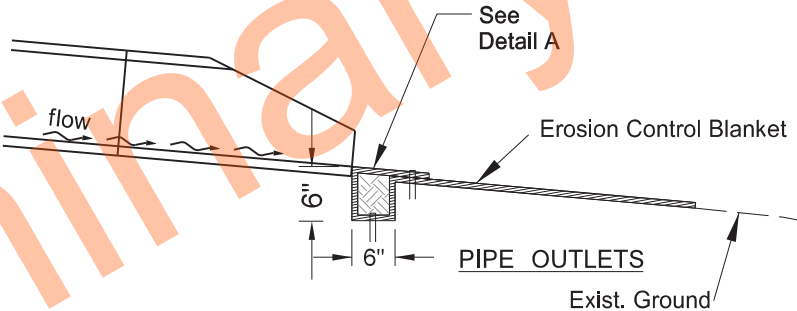


TOP VIEW

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



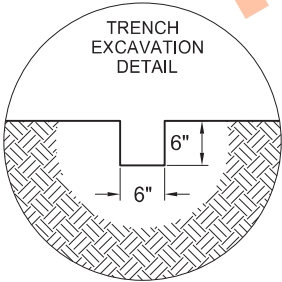
PIPE INLETS



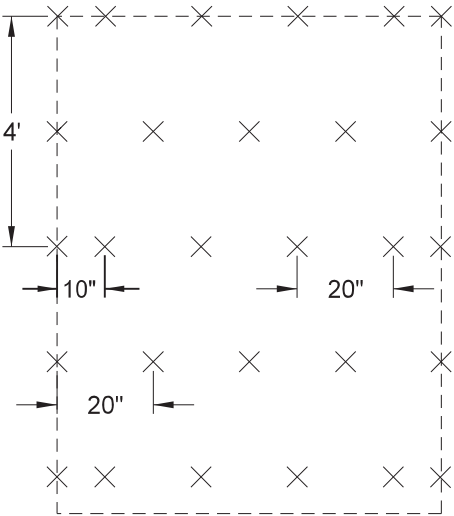
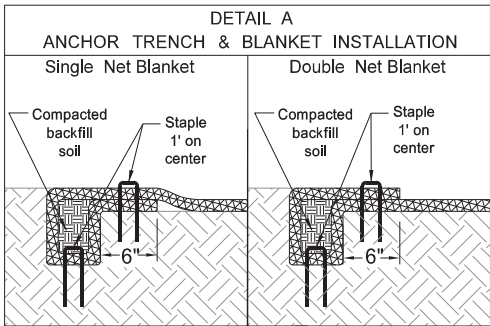
PIPE OUTLETS

NOTES:

1. Quantities based on 4:1 inslopes for mainline culverts.
2. Quantities based on 8:1 inslopes for approach culverts
3. Tuck the ECB a minimum of 6" into the embankment (against the flared endsection) around the opening of the flared end section.



TRENCH
EXCAVATION
DETAIL

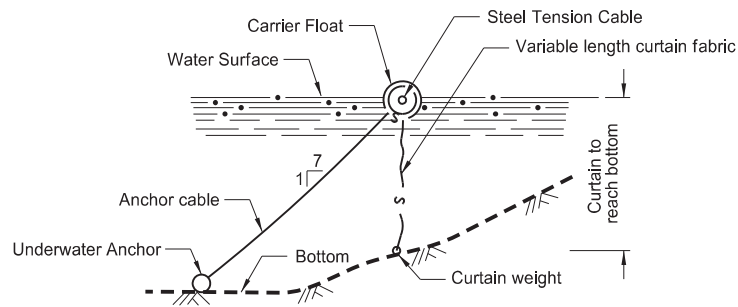


STAPLE PATTERN

ND 1 Structure Replacements
General Details
Erosion Control Blanket Details
ND 1 Structures

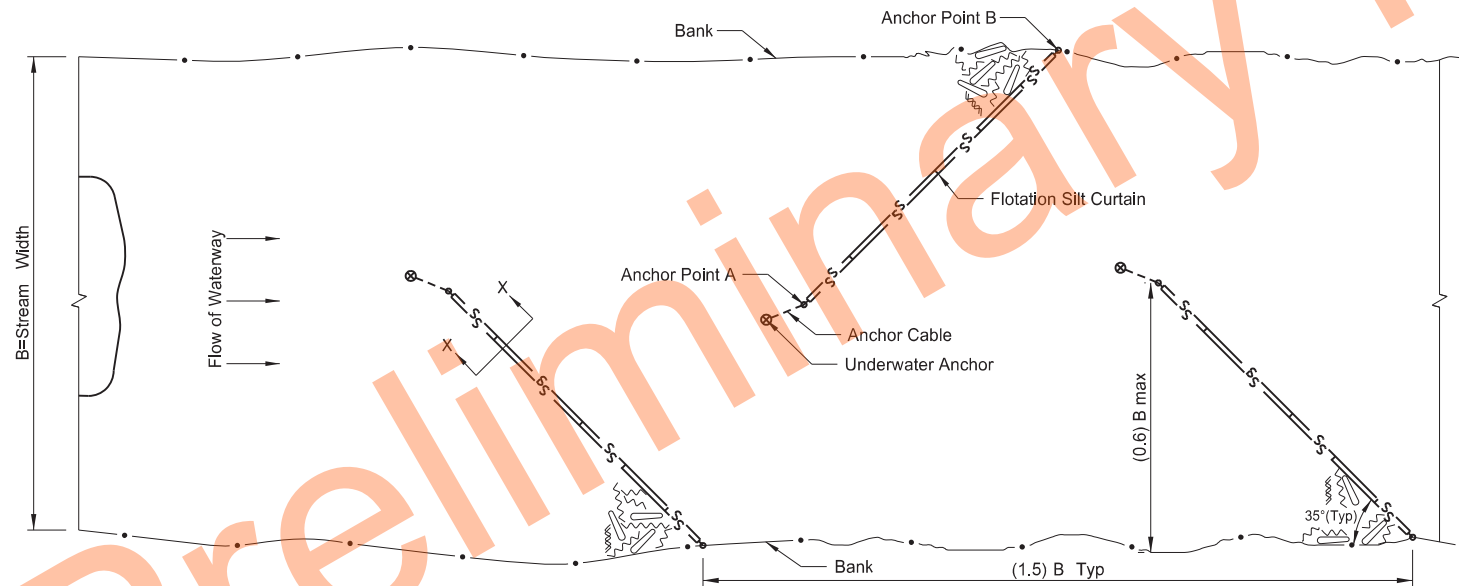


	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	BRN-2-001(085)051	20	3



SECTION X-X
FLOTATION SILT CURTAINS

Note:
Maximum water velocity for moving water = 5 ft/sec



PLAN VIEW
FLOTATION SILT CURTAIN - TYPE HERRING BONE PATTERN

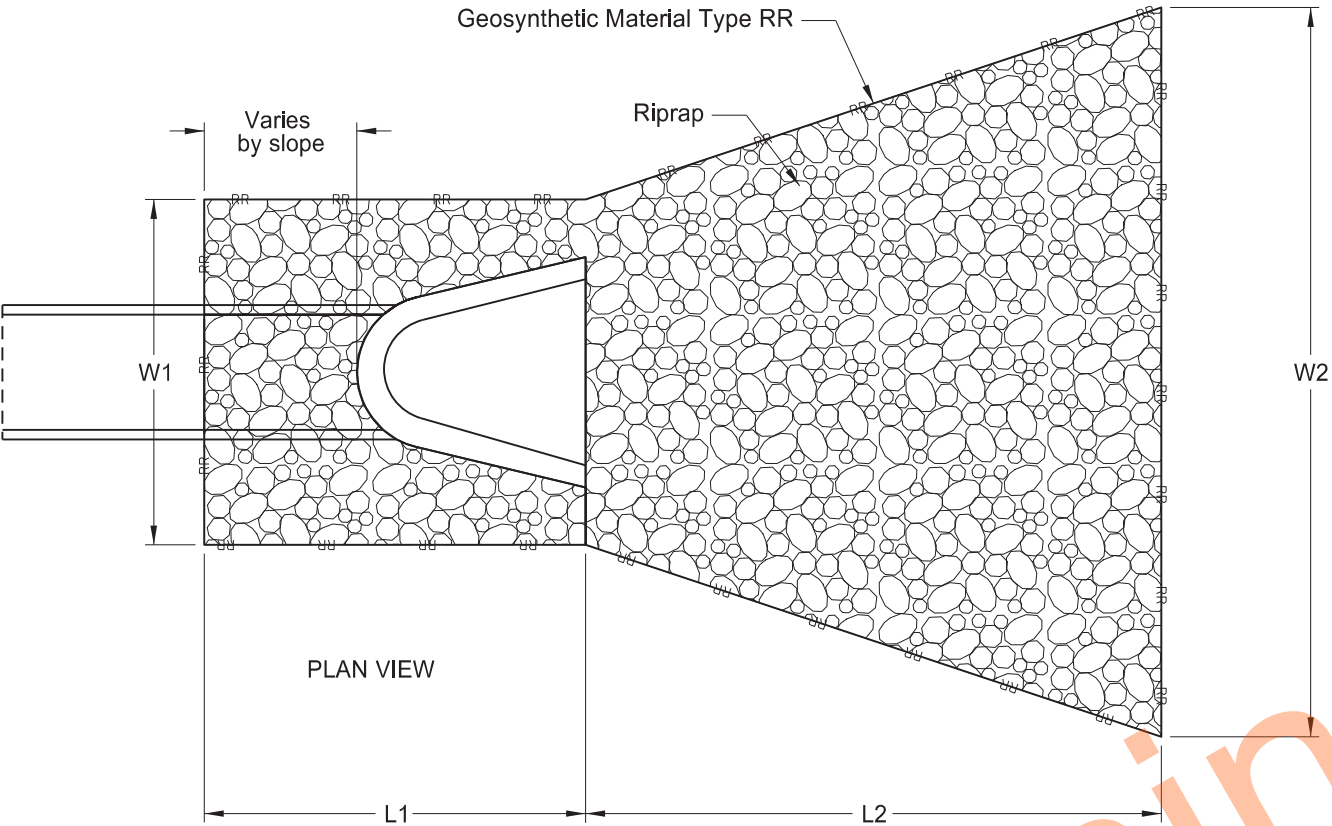
DESIGN GUIDELINES:
When temporary work encroaches more than $\frac{1}{3}$ width of the stream
Or where stream width doesn't allow use of Type Moving Water

ND 1 Structure Replacements

General Details
Flotation Silt Curtain Detail

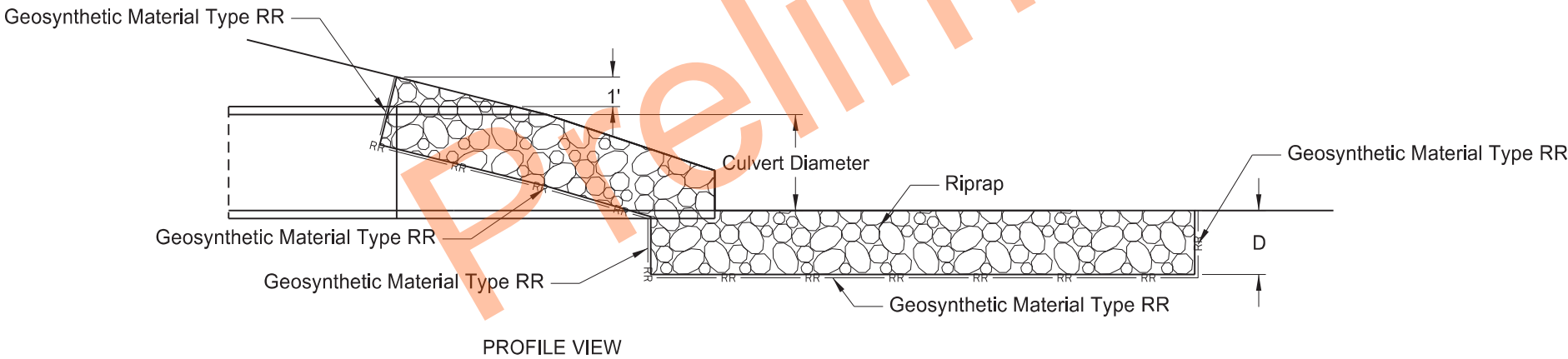
Structure No. 0001-055.761
ND 1





RIPRAP & GEOSYNTHETIC MATERIAL (FOR INFORMATION ONLY)											
Structure	Station	Offset	Culvert Diameter	L1	L2	W1	W2	D	Riprap Grade	256 0300 RIPRAP GRADE III ①	709 0155 GEOSYNTHETIC MATERIAL TYPE RR ②
			(IN)	(FT)	(FT)	(FT)	(FT)	(IN)		(CY)	(SY)
0001-051.506	2722+95	Rt	78	14.0	25.0	29.0	46.0	36	III	149	223
0001-053.175	2811+07	Rt	84	13.0	19.0	21.0	34.0	36	III	88	140
0001-055.761	2947+64	Rt	90	12.0	25.0	34.0	51.0	36	III	163	244
TOTALS =										400	607

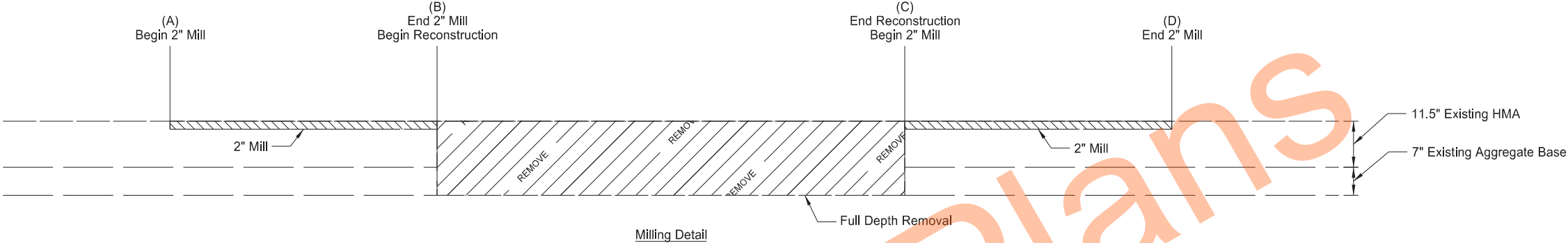
Notes:
① See Section 77 for Riprap quantities.
② See Section 77 for Geosynthetic Material Type RR quantities.



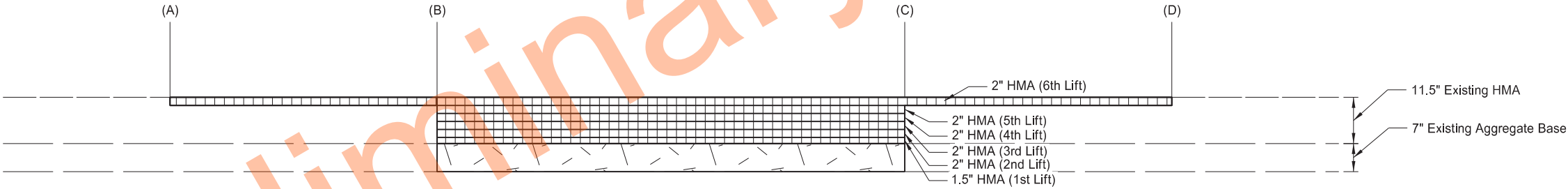
ND 1 Structure Replacements
General Details
Riprap at Pipe Outlets
ND 1 Structures



	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	BRN-2-001(085)051	20	5



Milling Detail



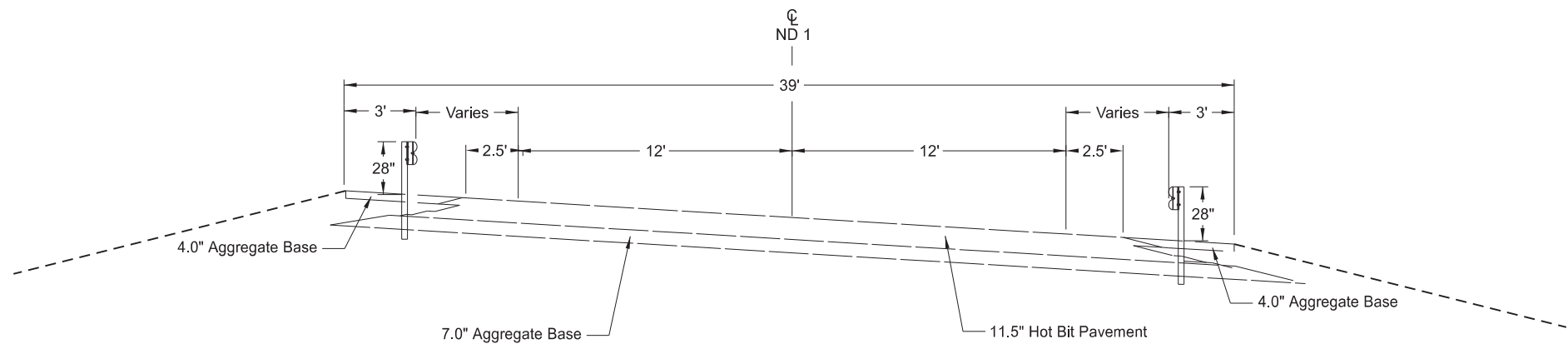
Paving Detail

Paving / Milling Detail				
Structure	A	B	C	D
0001-051.506	2721+00.00	2722+00.00	2723+95.00	2724+95.00
0001-053.175	2809+10.00	2810+10.00	2812+05.00	2813+05.00
0001-055.761	2945+60.00	2946+60.00	2948+65.00	2949+65.00

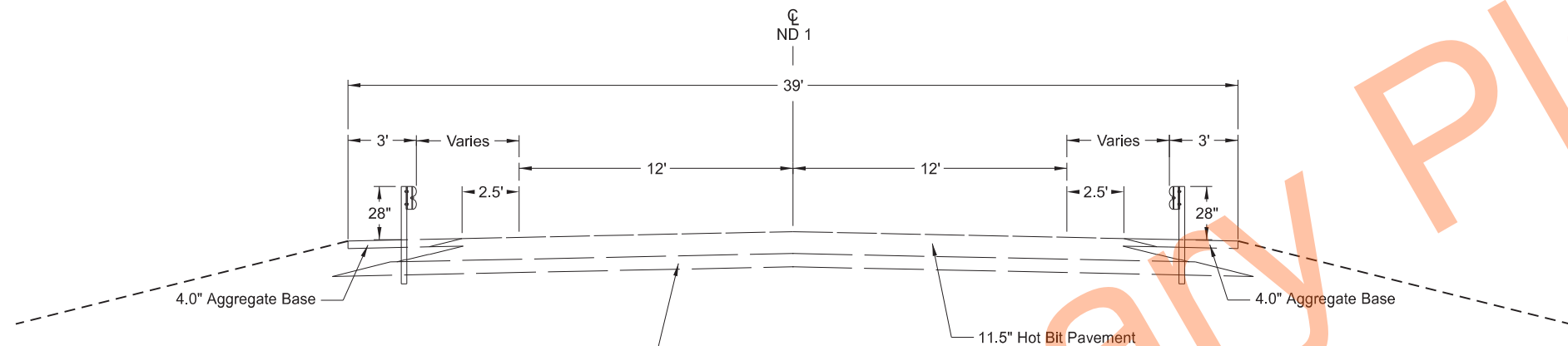
ND 1 Structure Replacements
General Details
Paving / Milling Detail
ND 1 Structures



	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	BRN-2-001(085)051	30	1



ND 1 Existing Typical Section 1
Sta 2720+10 to 2725+84 (Chain SCL_1_506)

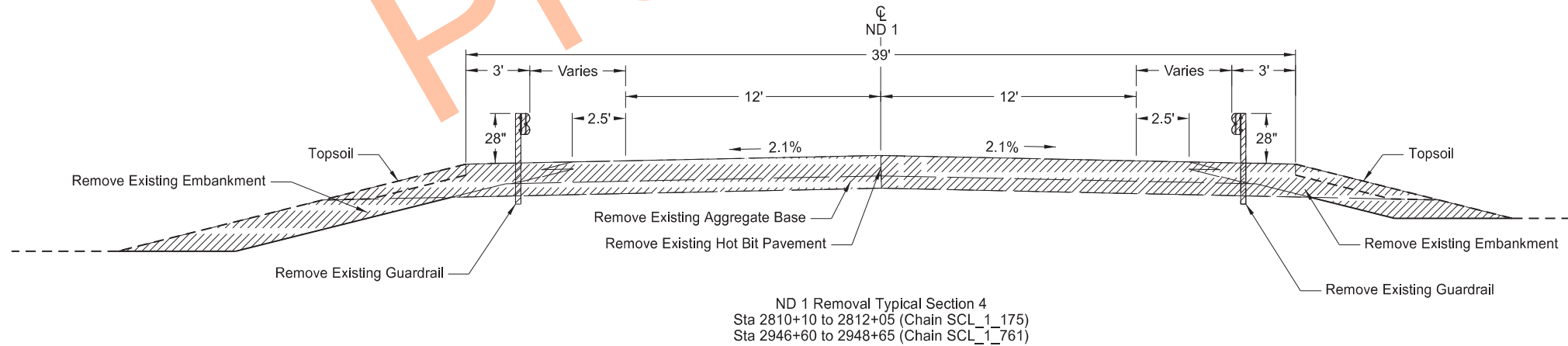
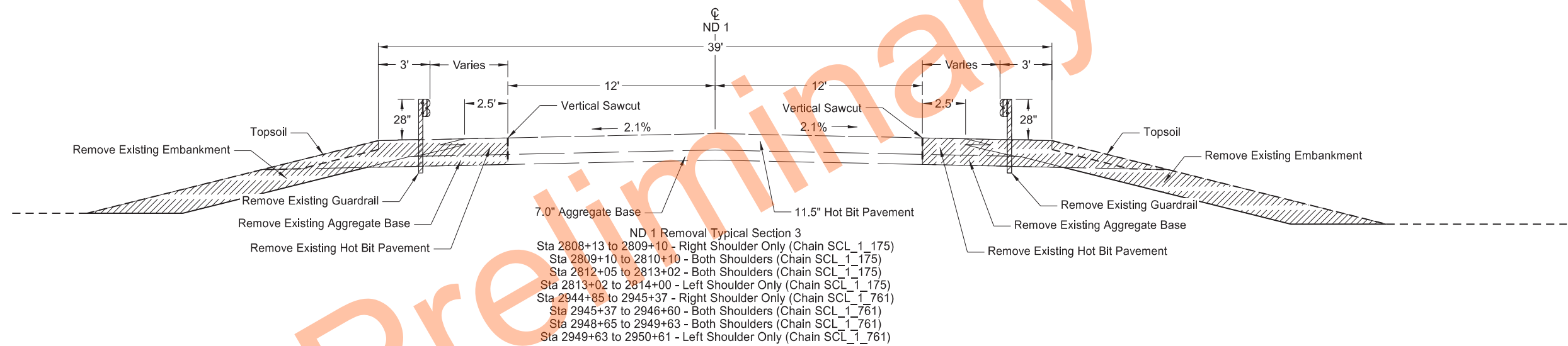
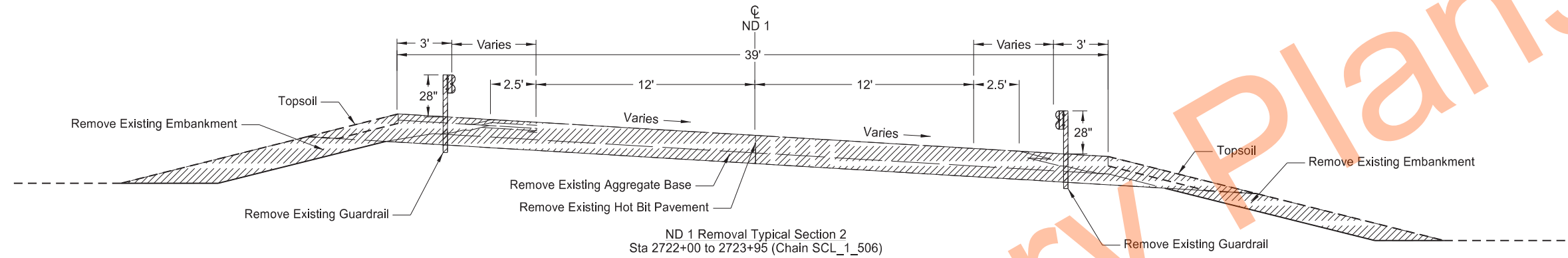
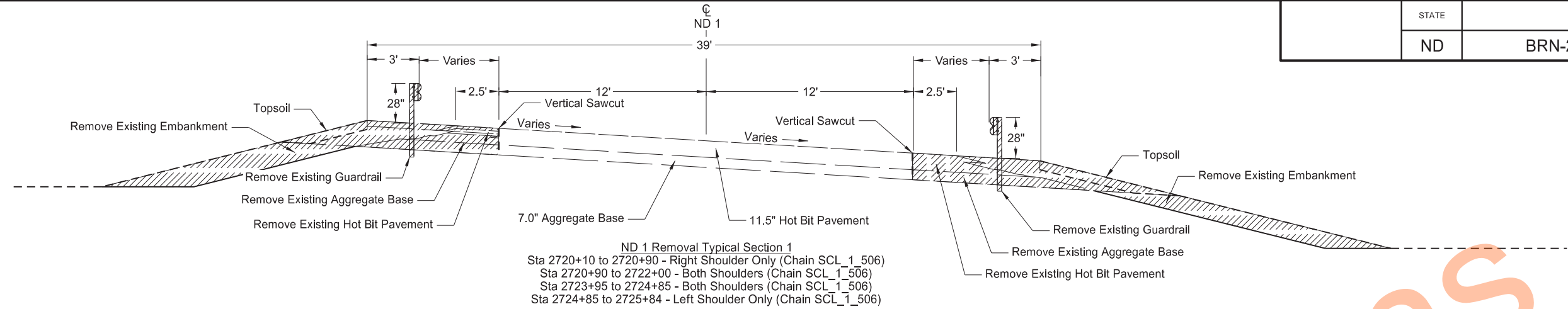


ND 1 Existing Typical Section 2
Sta 2808+13 to 2814+00 (Chain SCL_1_175)
Sta 2944+85 to 2950+61 (Chain SCL_1_761)

ND 1 Structure Replacements
Existing Typical Sections
All Structures



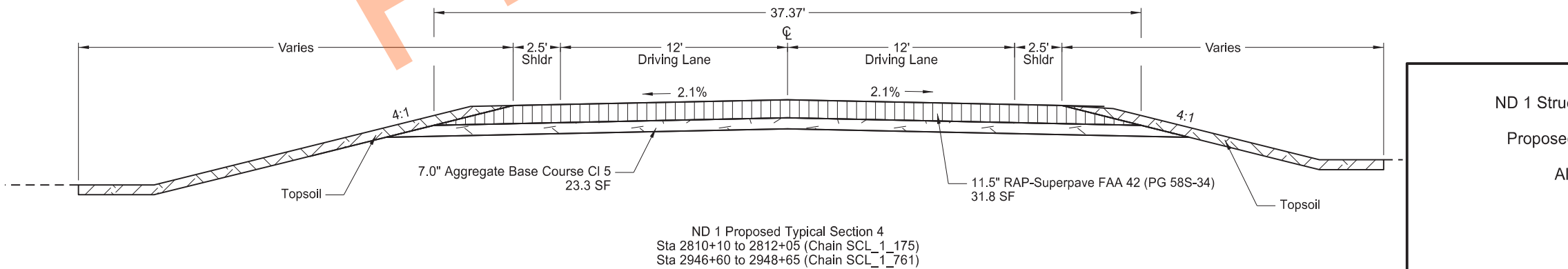
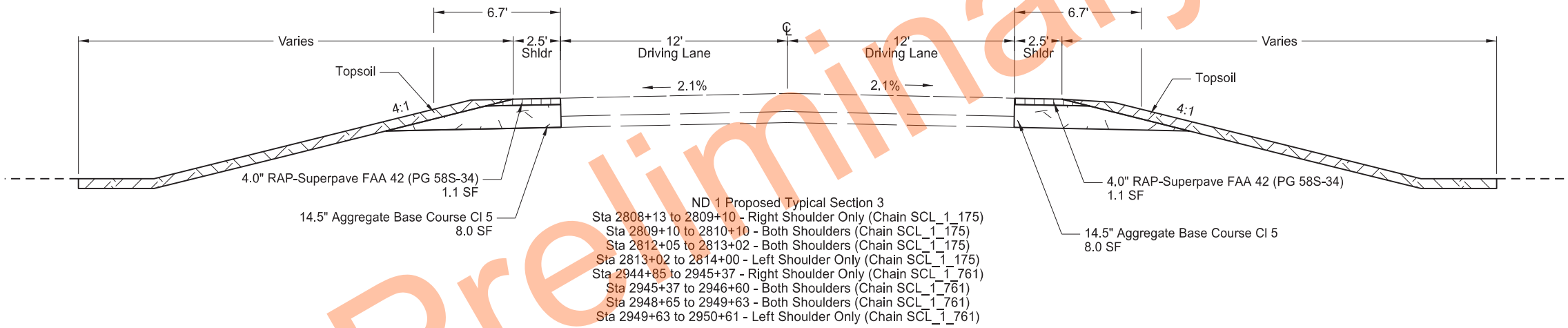
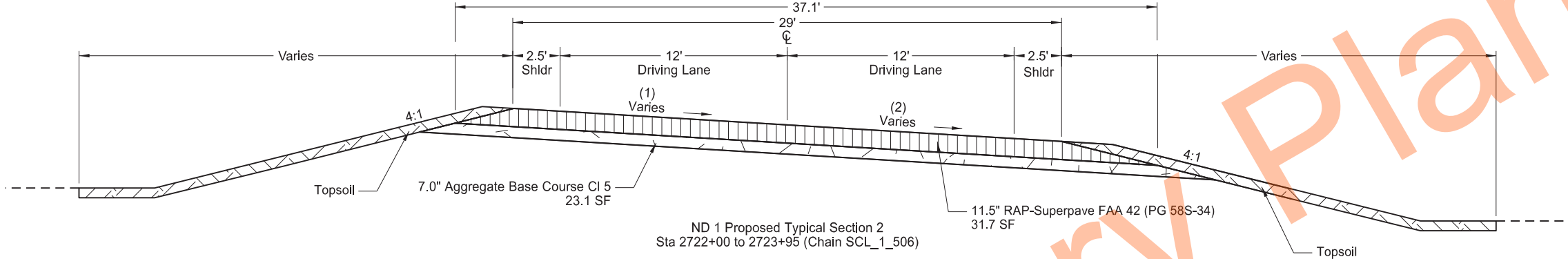
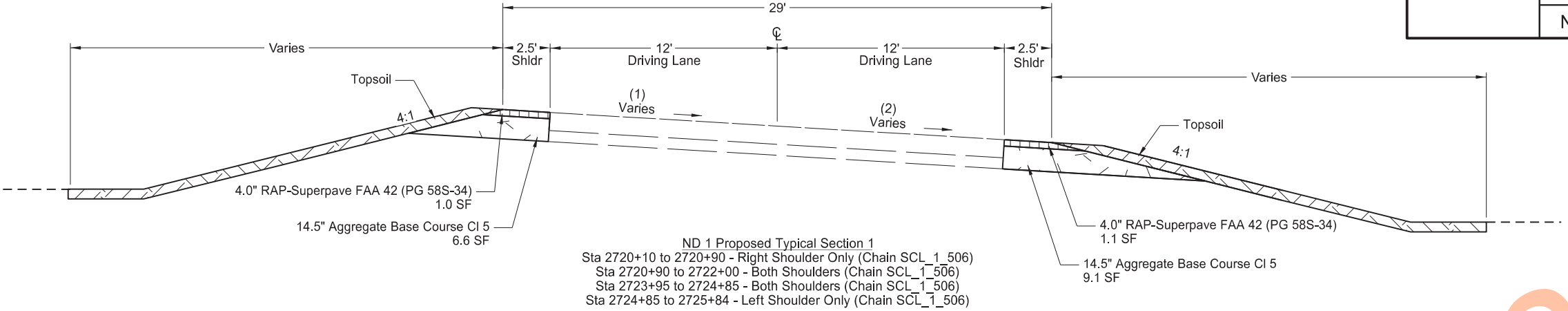
STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	BRN-2-001(085)051	30	2



ND 1 Structure Replacements
Removal Typical Sections
All Structures

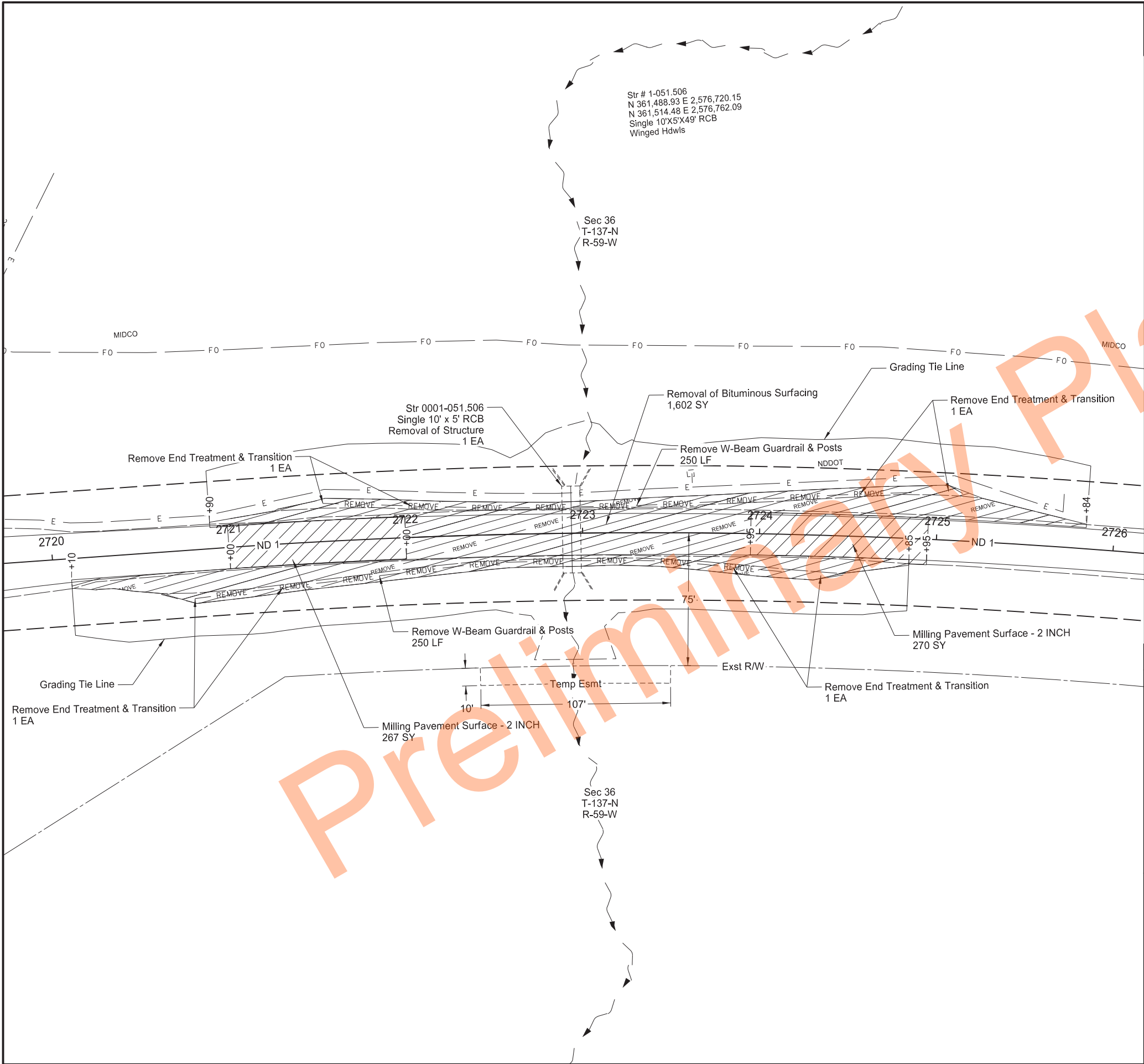


Station	Cross Slope	
	Left (1)	Right (2)
2722+00.00	-0.85%	-5.09%
2722+19.76	-1.44%	-4.50%
2723+22.24	-4.50%	-4.50%
2723+28.02	-4.50%	-4.50%
2723+74.91	-3.10%	-4.50%
2723+95.00	-2.50%	-5.10%



ND 1 Structure Replacements
Proposed Typical Sections
All Structures

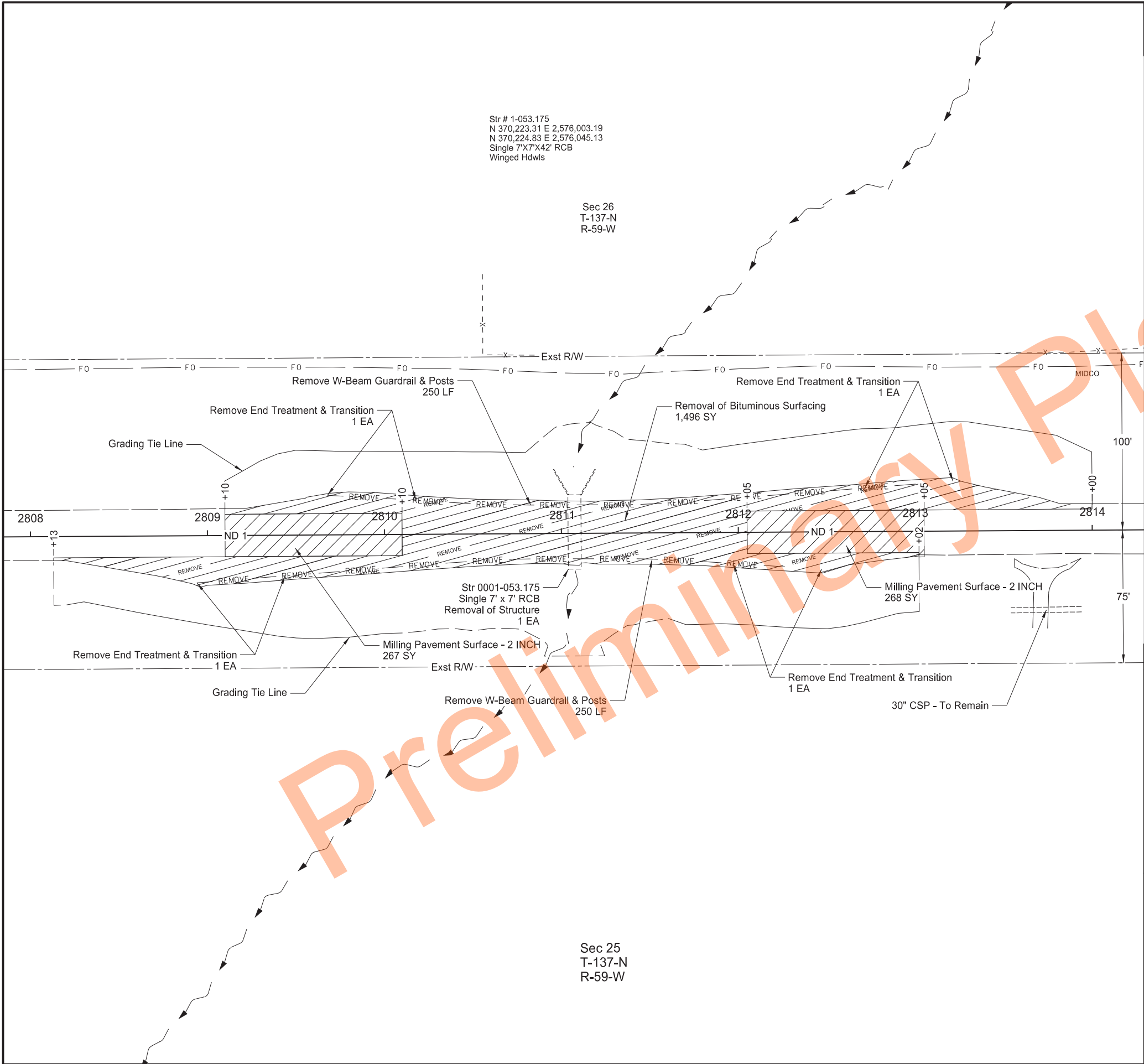




		STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	BRN-2-001(085)051	40	1
SPEC	CODE	BID ITEM	QTY	UNIT	
202	0104	REMOVAL OF STRUCTURE			
		Sta 2722+94 C	1	EA	
202	0132	REMOVAL OF BITUMINOUS SURFACING			
		Sta 2722+00 to Sta 2723+95	1,602	SY	
411	0114	MILLING PAVEMENT SURFACE - 2 INCH			
		Sta 2721+00 to Sta 2722+00	267	SY	
		Sta 2723+95 to Sta 2724+95	270	SY	
764	0151	REMOVE W-BEAM GUARDRAIL & POSTS			
		Sta 2721+28.70 Rt to Sta 2723+85.50 Rt	250	LF	
		Sta 2722+04.21 Lt to Sta 2724+55.66 Lt	250	LF	
764	2081	REMOVE END TREATMENT & TRANSITION			
		Sta 2720+78.83 Rt to Sta 2721+28.70 Rt	1	EA	
		Sta 2721+54.34 Lt to Sta 2722+04.21 Lt	1	EA	
		Sta 2723+85.50 Rt to Sta 2724+35.37 Rt	1	EA	
		Sta 2724+55.66 Lt to Sta 2725+05.53 Lt	1	EA	

LEGEND	
—REMOVE—	Removal of W-Beam Guardrail & Posts / Remove End Treatment & Transition
	Removal of Bituminous Surfacing
	Removal of Riprap
	Milling Pavement Surface - 2 INCH

ND 1 Structure Replacements	
Removals	
Sta 2721+00 to 2726+00 (SCL_1_506)	
Structure 0001-051.506 ND 1	



	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	BRN-2-001(085)051	40	2
SPEC	CODE	BID ITEM	QTY	UNIT
202	0104	REMOVAL OF STRUCTURE Sta 2811+08 CL	1	EA
202	0132	REMOVAL OF BITUMINOUS SURFACING Sta 2810+10 to Sta 2812+05	1,496	SY
411	0114	MILLING PAVEMENT SURFACE - 2 INCH Sta 2809+10 to Sta 2810+10	267	SY
		Sta 2812+05 to Sta 2813+05	268	SY
764	0151	REMOVE W-BEAM GUARDRAIL & POSTS Sta 2809+43.72 Rt to Sta 2811+97.06 Rt	250	LF
		Sta 2810+17.84 Lt to Sta 2812+71.56 Lt	250	LF
764	2081	REMOVE END TREATMENT & TRANSITION Sta 2808+93.85 Rt to Sta 2809+43.72 Rt	1	EA
		Sta 2809+67.97 Lt to Sta 2810+17.84 Lt	1	EA
		Sta 2811+97.06 Rt to Sta 2812+46.93 Rt	1	EA
		Sta 2812+71.56 Lt to Sta 2813+21.43 Lt	1	EA

LEGEND	
—REMOVE—	Removal of W-Beam Guardrail & Posts / Remove End Treatment & Transition
	Removal of Bituminous Surfacing
	Removal of Riprap
	Milling Pavement Surface - 2 INCH

ND 1 Structure Replacements	
Removals	
Sta 2808+00 to 2814+00 (SCL_1_175)	
Structure 0001-053.175 ND 1	

CENTERLINE CULVERT HYDRAULIC DATA FOR BRN-2-001(085)051 (A)									
STATION (or RP)	EXISTING PIPE	PROPOSED PIPE SIZE	DRAINAGE AREA (ACRES)	50 -YEAR DATA				100-YEAR DATA	
				DESIGN DISCHARGE (CFS)	DESIGN HEADWATER (FT)	DESIGN VELOCITY (FPS)	DESIGN STAGE (NAVD 88)	100-YEAR DISCHARGE (CFS)	100-YEAR STAGE (NAVD 88)
RP 51.506 (B)	1 - 10'x5' RCB - 49'	2 - 78" RCP - 78'	25,557	496	6.84	11.12	1421.71	636	1423.81
RP 53.175 (B)	1 - 7'x7' RCB - 42'	1 - 84" RCP - 86'	3,863	290	7.54	11.37	1425.34	366	1426.66
RP 55.761 (B)	1 - 9'x8' RCB - 45'	2 - 90" RCP - 88'	43,550	777	8.73	12.39	1418.35	1,000	1421.23
(A) Hydraulic data provided is for smooth-walled (Manning's n=0.012) type conduits.									
(B) Culverts have been sunk based on 2021 Nationwide Permit Regional Conditions.									

ND 1 Structure Replacements
Culvert Hydraulic Data
All Structures



Roadway	Begin Station / Location	Begin Offset	End Station / Location	End Offset	Pipe Installation (Pay Item)			Allowable Material	Required Diameter	Steel Pipe Coatings	Steel Pipe Corrugations or Spiral Ribs	Steel Pipe Minimum Thickness	Geosynthetic Material - Type G (Pay Item)	(*) End Sections		Applicable Backfill
														Begin	End	
					In	Bid Item	LF		In	Type		In	SY	EA	EA	
ND 1	2722+89	38.8' Lt	2722+89	38.7' Rt	78	Pipe Conduit	78	Reinforced Concrete Pipe - Class III (barrel length = 74 LF)	78				91	FES	FES	D-714-25M
								Corrugated Steel Pipe	84	P	3, 5	0.064				
	2723+01	38.8' Lt	2723+01	38.7' Rt	78	Pipe Conduit	78	Reinforced Concrete Pipe - Class III (barrel length = 74 LF)	78				91	FES	FES	D-714-25M
								Corrugated Steel Pipe	84	P	3, 5	0.064				
	2811+07	42.8' Lt	2811+07	42.8' Rt	84	Pipe Conduit	86	Reinforced Concrete Pipe - Class III (barrel length = 82 LF)	84				106	FES	FES	D-714-25
								Corrugated Steel Pipe	90	P	3, 5	0.079				
	2947+57	42.0' Lt	2947+57	42.0' Rt	90	Pipe Conduit	84	Reinforced Concrete Pipe - Class III (barrel length = 80 LF)	90				108	FES	FES	D-714-25M
								Corrugated Steel Pipe	96	P	3, 5	0.079				
	2947+71	42.0' Lt	2947+71	42.0' Rt	90	Pipe Conduit	84	Reinforced Concrete Pipe - Class III (barrel length = 80 LF)	90				108	FES	FES	D-714-25M
								Corrugated Steel Pipe	96	P	3, 5	0.079				

Corrugations: 2 = 2-2/3"x1/2"
3 = 3"x1"
5 = 5"x1"

Coatings: Z = Zinc
A = Aluminum
P = Polymeric (over Zinc or Aluminum)

Spiral Ribs: 3/4 = 3/4"x3/4"@7-1/2"
1 = 3/4"x1"@11-1/2"

(*) End sections are measured and paid for separately for pipe extensions.
FES = Flared End Section
TES = Traversable End Section

Roadway	Begin Station / Location	Begin Offset	End Station / Location	End Offset	Pipe Installation (Pay Item)			Allowable Material	Required Diameter	Steel Pipe Coatings	Steel Pipe Corrugations or Spiral Ribs	Steel Pipe Minimum Thickness	Geosynthetic Material - Type G (Pay Item)	(*) End Sections		Applicable Backfill
														Begin	End	
					In	Bid Item	LF		In	Type		In	SY	EA	EA	
ND 1	2945+57	50.0' Lt	2946+52	50.0' Lt	18	Pipe Corr. Steel (Extension)	44'	Corrugated Steel Pipe	18	Z, A, P	2, 3/4, 1	0.064	-	FES	FES	Specification 714.04 A

Corrugations: 2 = 2-2/3"x1/2"
3 = 3"x1"
5 = 5"x1"

Coatings: Z = Zinc
A = Aluminum
P = Polymeric (over Zinc or Aluminum)

Spiral Ribs: 3/4 = 3/4"x3/4"@7-1/2"
1 = 3/4"x1"@11-1/2"

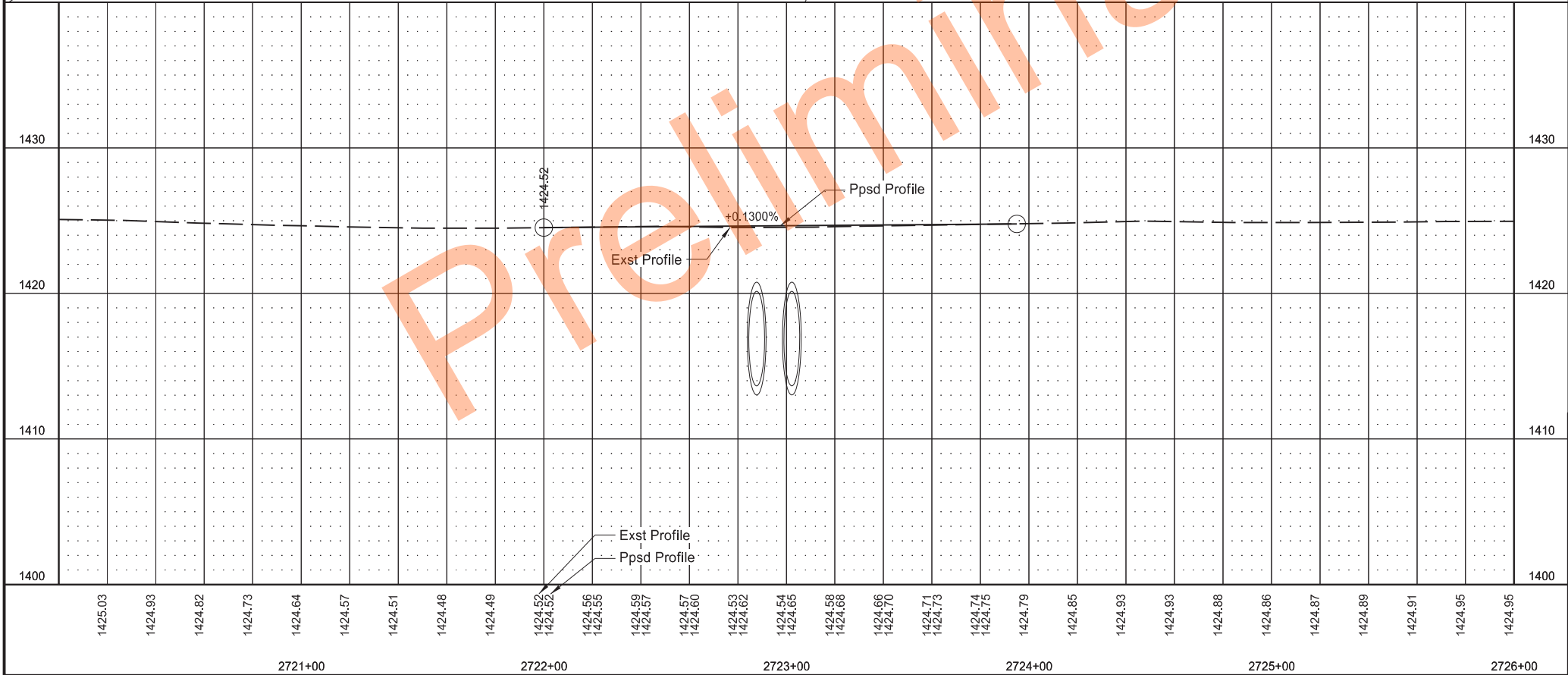
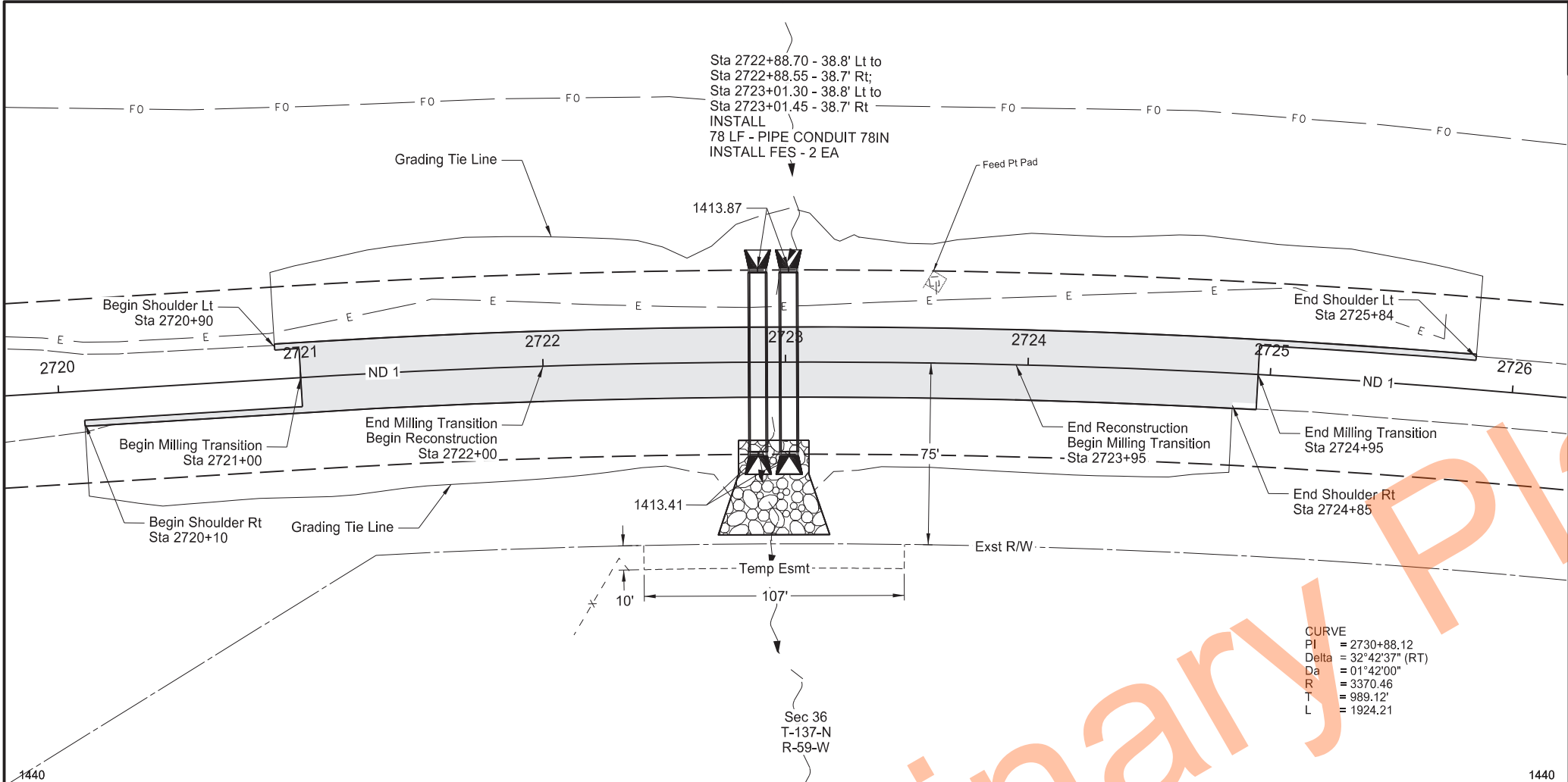
(*) End sections are measured and paid for separately for pipe extensions.
FES = Flared End Section
TES = Traversable End Section

ND 1 Structure Replacements

Allowable Pipe List

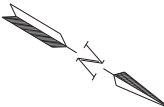
All Structures





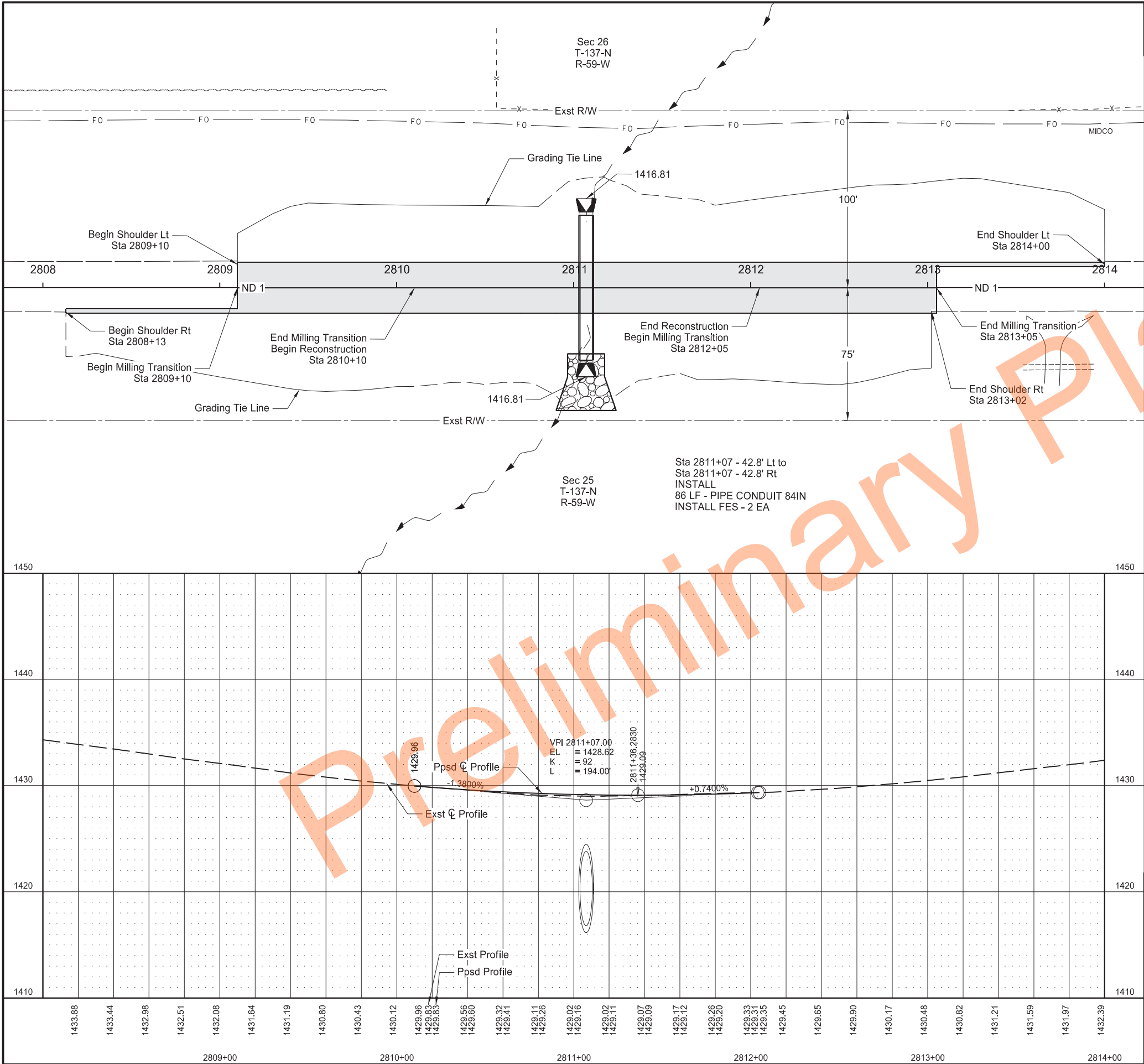
STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	BRN-2-001(085)051	60	1

SPEC	CODE	BID ITEM	QTY	UNIT
714	4150	PIPE CONDUIT 78IN		
		Sta 2722+87.75 ~ 2723+02.25	78	LF
			78	LF



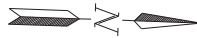
ND 1 Structure Replacements
Plan & Profile
Sta 2722+00 to 2723+95 (SCL_1_506)
Structure 0001-051.506
ND 1





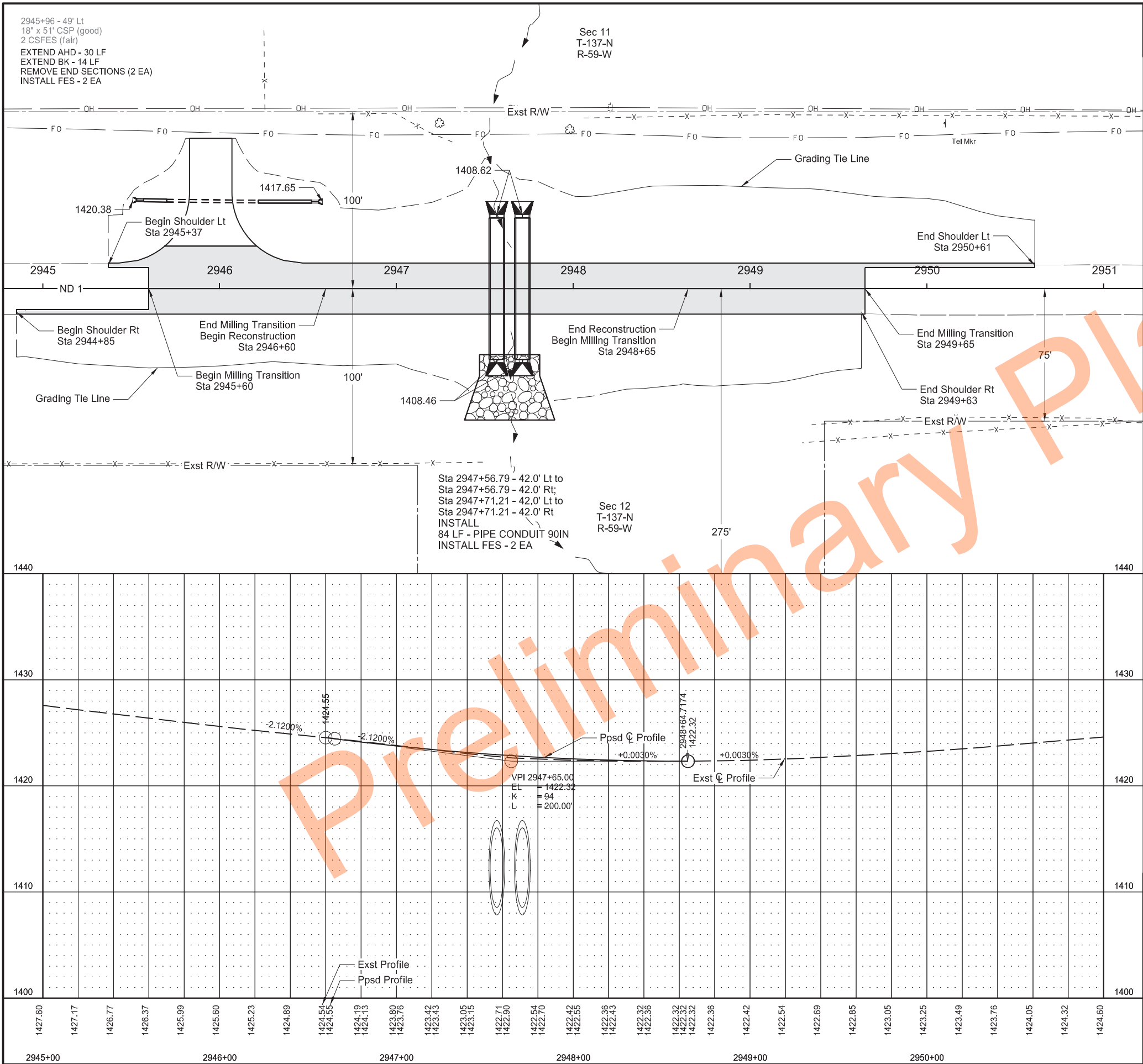
STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	BRN-2-001(085)051	60	2

SPEC	CODE	BID ITEM	QTY	UNIT
714	4155	PIPE CONDUIT 84IN Sta 2811+07.00 ~ CL	86	LF



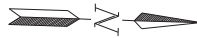
ND 1 Structure Replacements
Plan & Profile
Sta 2808+00 to 2814+00 (SCL_1_175)
Structure 0001-053.175
ND 1





STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	BRN-2-001(085)051	60	3

SPEC	CODE	BID ITEM	QTY	UNIT
202	0169	REMOVAL OF END SECTION-ALL TYPES & SIZES Sta 2945+96 ~ 49' Lt	2	EA
714	4160	PIPE CONDUIT 90IN Sta 2947+56.79 ~ C Sta 2947+71.21 ~ C	84 84	LF LF
714	5015	PIPE CORR STEEL .064IN 18IN Sta 2945+96 ~ 49' Lt (Ahd) Sta 2945+96 ~ 49' Lt (Bk)	30 14	LF LF
714	5810	END SECT CORR STEEL .064IN 18IN Sta 2945+96 ~ 49' Lt	2	EA



ND 1 Structure Replacements
Plan & Profile
Sta 2945+00 to 2951+00 (SCL_1_761)
Structure 0001-055.761
ND 1



STATE

ND

PROJECT NO.

BRN-2-001(085)051

SECTION NO.

75

SHEET NO.

1

Wetland Impact Table

Wetland Number	Location	Wetland Type	Wetland Feature	USACE Jurisdictional Wetlands ①	Wetland Impact				Wetland Mitigation													
					Wetland Impacts Acre(s)		USFWS Easement Impacts Acre(s)		Mitigation Proposed			USACE/11990 Bank		11990 Bank		USFWS Bank		Onsite Mitigation Method			Onsite Constructed Location	
					Temp.	Perm.	Temp.	Perm.	EO 11990	USACE	USFWS	Location	Acre(s)	Location	Acre(s)	Location	Acre(s)	Mitigation Location; Ratio	Ditch Shift Acre(s)	Onsite Acre(s)	Onsite Constructed Site #	Onsite Constructed Size Acre(s)
3a	Sec 12, T-137-N, R-59-W	Ditch	Created	Y	0.026	0.002																
3b	Sec 12, T-137-N, R-59-W	Slope	Natural	Y	0.001	0.008			Y	N				Anders Bank	0.008							
3d	Sec 12, T-137-N, R-59-W	Slope	Natural	Y	0.035	0.023			Y	N				Anders Bank	0.023							
3e	Sec 12, T-137-N, R-59-W	Ditch	Created	Y	0.012	0.001																
3f	Sec 11, T-137-N, R-59-W	Ditch	Created	Y	0.008	0.001																
3g	Sec 11, T-137-N, R-59-W	Slope	Natural	Y	0.053	0.005			Y	N				Anders Bank	0.005							
3i	Sec 11, T-137-N, R-59-W	Slope	Natural	Y	0.012	0.002			Y	N				Anders Bank	0.002							
4a	Sec 11, T-137-N, R-59-W	Ditch	Created	Y	0.008	0.008																
4b	Sec 11, T-137-N, R-59-W	Ditch	Created	Y	0.006	0.007																
5a	Sec 25, T-137-N, R-59-W	Slope	Natural	Y	0.057	0.041			Y	N				Anders Bank	0.041							
5b	Sec 26, T-137-N, R-59-W	Slope	Natural	Y	0.055	0.021			Y	N				Anders Bank	0.021							
6	Sec 26, T-137-N, R-59-W	Ditch	Created	Y	0.006																	
7a	Sec 36, T-137-N, R-59-W	Ditch	Created	Y	0.053																	
7b	Sec 36, T-137-N, R-59-W	Slope	Natural	Y	0.018	0.013			Y	N				Anders Bank	0.013							
7d	Sec 36, T-137-N, R-59-W	Slope	Natural	Y	0.012	0.015			Y	N				Anders Bank	0.015							
7e	Sec 36, T-137-N, R-59-W	Ditch	Created	Y	0.030																	
7f	Sec 36, T-137-N, R-59-W	Ditch	Created	Y	0.044																	
7g	Sec 36, T-137-N, R-59-W	Slope	Natural	Y	0.020	0.005			Y	N				Anders Bank	0.005							
7i	Sec 36, T-137-N, R-59-W	Slope	Natural	Y	0.008	0.004			Y	N				Anders Bank	0.004							
7j	Sec 36, T-137-N, R-59-W	Ditch	Created	Y	0.038	0.001			Y	N												
7k	Sec 3, T-137-N, R-59-W	Ditch	Created	Y																		
8	Sec 36, T-137-N, R-59-W	Basin	Natural	Y																		
Totals					0.502	0.157									0.137							

① A wetland Jurisdictional Determination was issued by the USACE on 4/8/2023; NWO-2024-00490-BIS, NWO-2024-00491-BIS, and NWO-2024-00492-BIS.

Impact Summary Table

Permanent Impact Summary		Temporary Impacts and additional information	
Wetland Type	Total Acre(s)	WaterType	Total Acre(s)
Natural/JD (Fill/Drain)	0.137	Temporary Wetland JD	0.035
Natural/Non-JD (Fill/Drain)	0.000	Non-JD Wetland Temporary	0.047
Artificial/JD (Fill/Drain)	0.020		
Artificial /Non-JD (Fill/Drain))	0.000	Permanent OW	0.064
Total	0.157	Temporary OW	0.023

Other Waters and Streams Impact Table

Number	Location	Type	Feature	USACE Jurisdictional ①	Impacts to Other Waters				Other Water Mitigation								
					Acre(s)				Mitigation Proposed			USACE Mitigation Bank		Onsite Mitigation Method		Onsite Constructed Location	
					Temp.	Perm. (total Loss + no Loss)	Perm. (Loss)	Perm. (No Loss)	EO 11990	USACE	USFWS	Location	Acre(s)	Mitigation Location; ratio	Acre(s)	Onsite Constructed Site #	Onsite Constructed Size Acre(s)
3c	Sec 12, T-137-N, R-59-W	Stream	Natural	Y	0.006	0.024	0.011	0.013	N	N	N						
3h	Sec 11, T-137-N, R-59-W	Stream	Natural	Y	0.007	0.010	0.010		N	N	N						
5c	Sec 25-26, T-137-N, R-59-W	Stream	Natural	Y	0.002	0.009	0.001	0.008	N	N	N						
7c	Sec 36, T-137-N, R-59-W	Stream	Natural	Y	0.004	0.015	0.006	0.009	N	N	N						
7h	Sec 36, T-137-N, R-59-W	Stream	Natural	Y	0.004	0.006	0.006		N	N	N						
Totals					0.023	0.064											

① A wetland Jurisdictional Determination was issued by the USACE on 4/8/2023; NWO-2024-00490-BIS, NWO-2024-00491-BIS, and NWO-2024-00492-BIS.

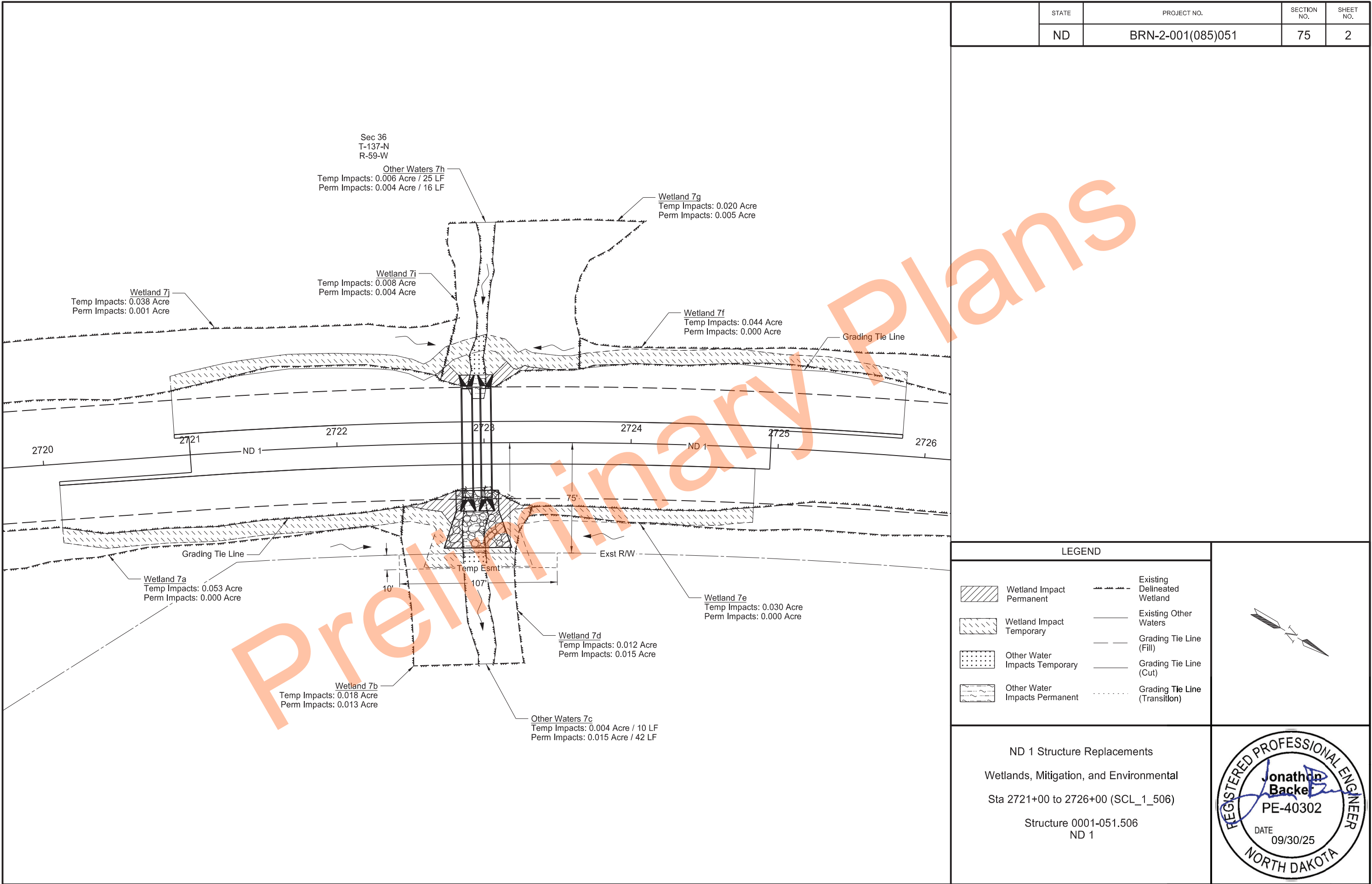
Mitigation Summary Table

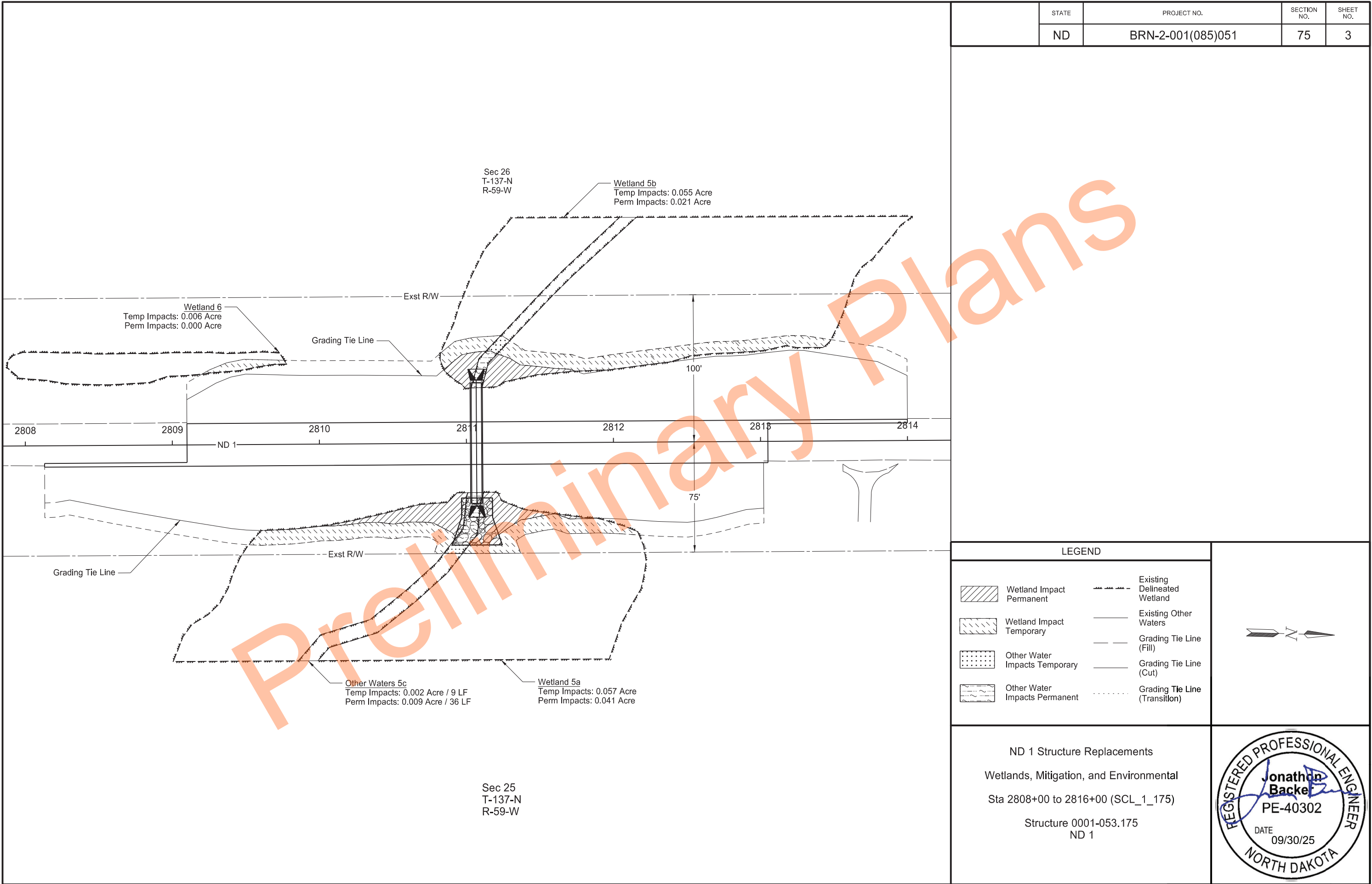
	Location	Ditch Shift Acre(s)	Onsite Acre(s)	11990 Bank Acre(s)	USACE/11990 Bank Acre(s)	USFWS Bank Acre(s)
USACE Only	Onsite	-	-	-	-	-
EO 11990 Only	Anders Bank	-	-	0.137	-	-
USACE/11990	Onsite	-	-	-	-	-
USFWS		-	-	-	-	-
Total		-	-	0.137	-	-

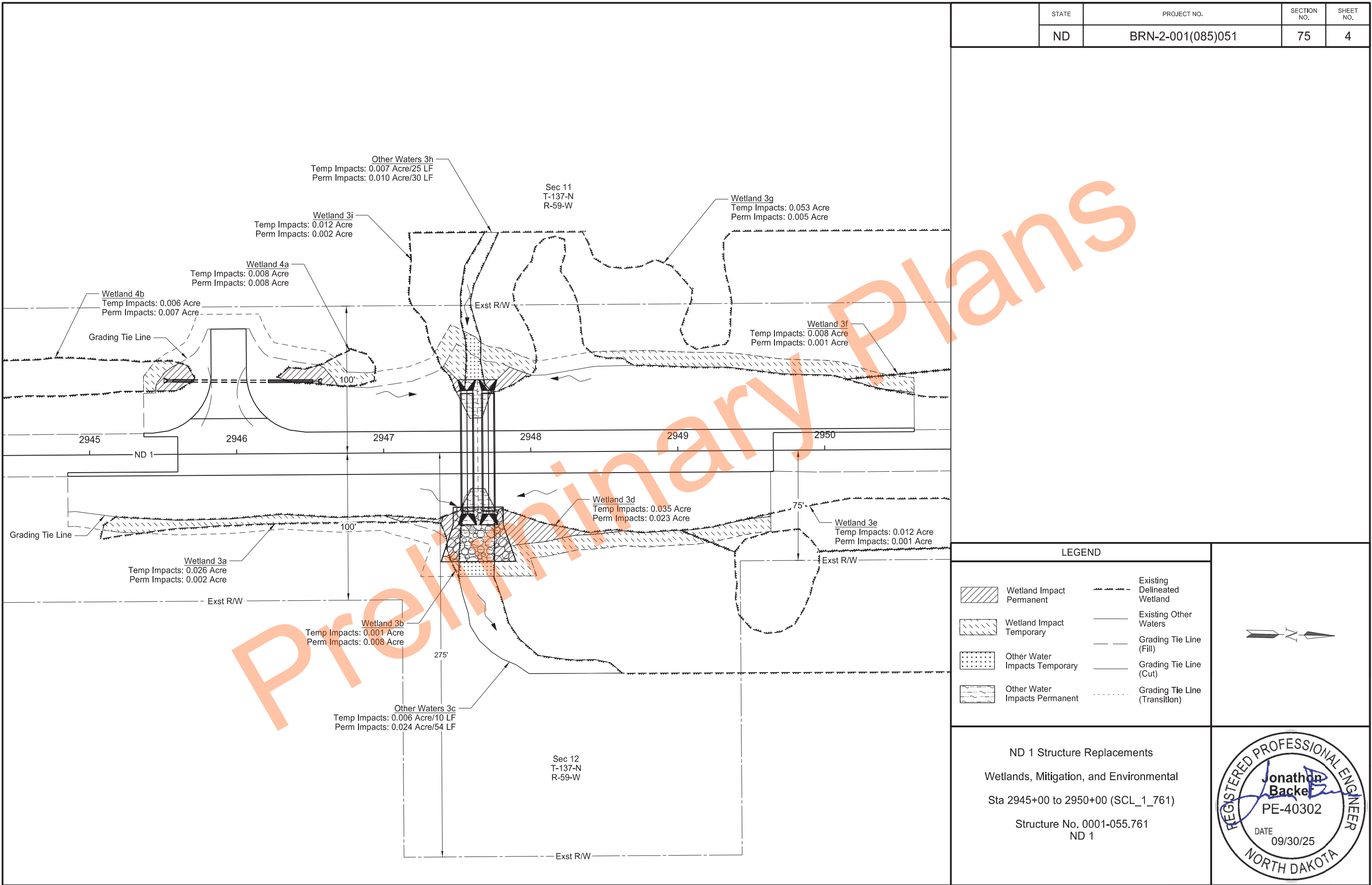
ND 1 Structure Replacements
Wetlands, Mitigation, and Environmental
Wetland Impacts Table
All Structures

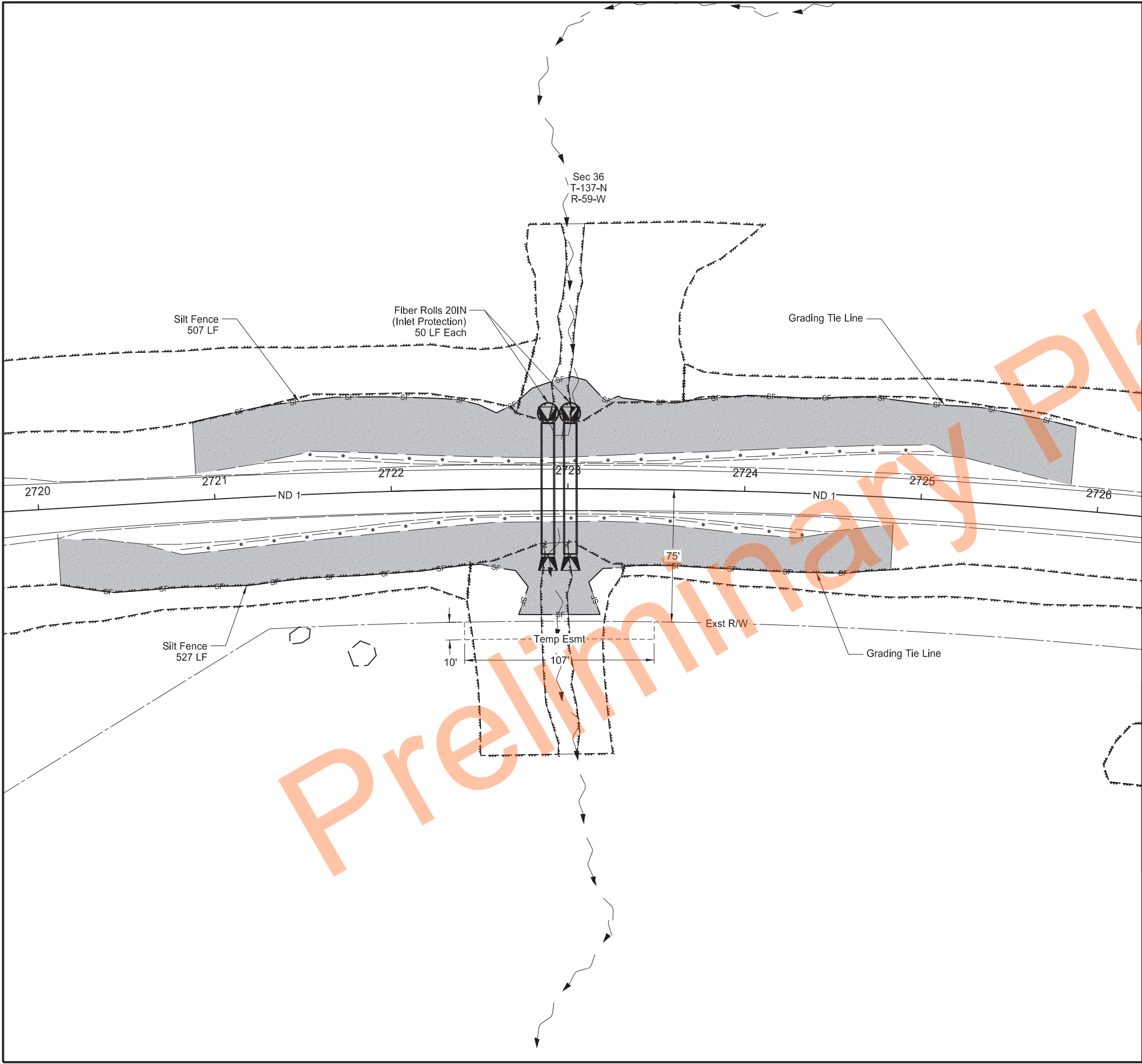
REGISTERED PROFESSIONAL ENGINEER
Jonathon Backe
PE-40302
DATE 09/30/25
NORTH DAKOTA

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STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	BRN-2-001(085)051	76	1

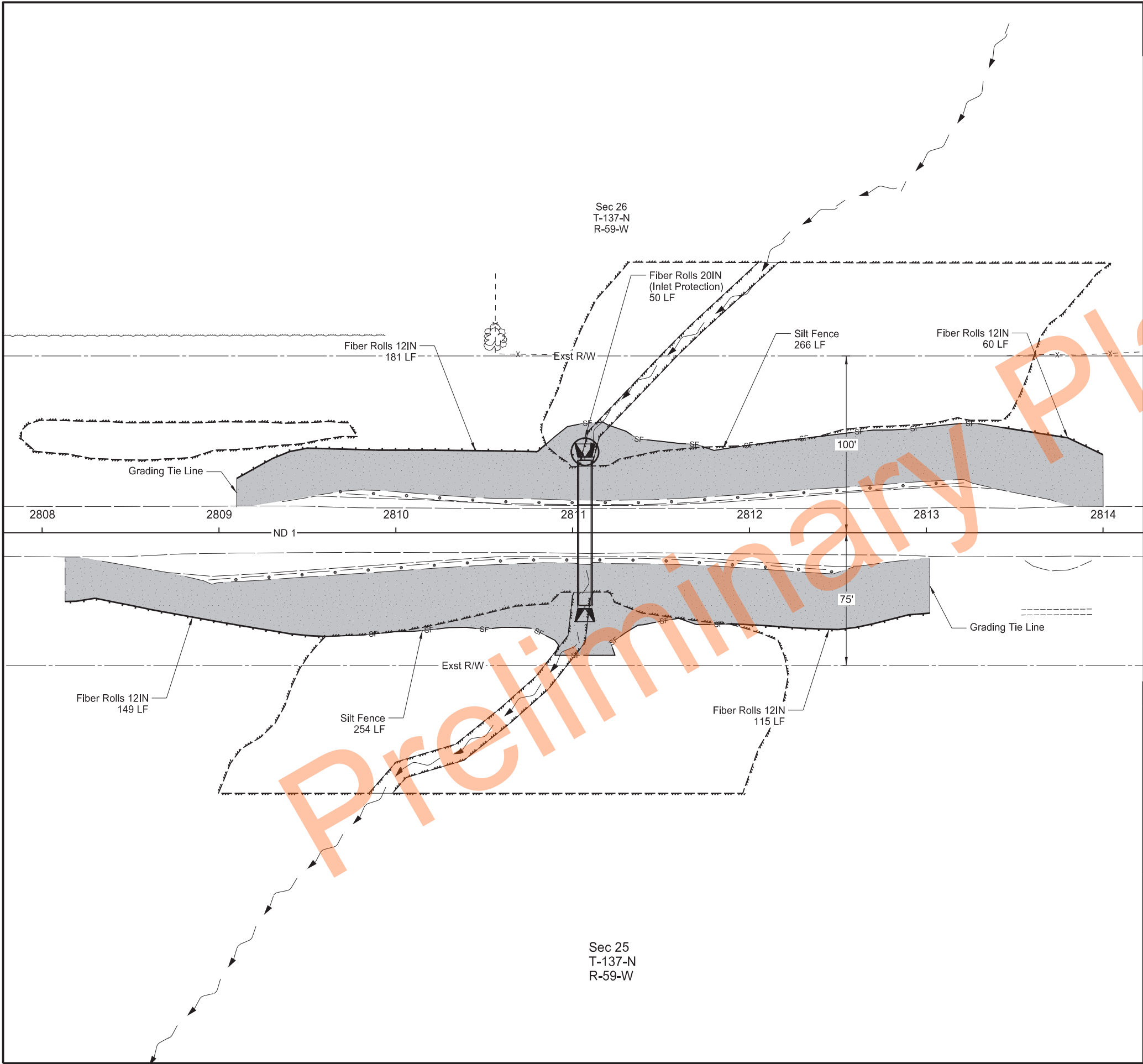
SPEC	CODE	BID ITEM	QTY	UNIT
251	2000	TEMPORARY COVER CROP Sta 2720+00 to 2726+00	0.64	ACRE
253	0101	STRAW MULCH Sta 2720+00 to 2726+00	0.64	ACRE
260	0300	SILT FENCE Sta 2720+00 to 2726+00	1,034	LF
260	0301	REMOVE SILT FENCE Sta 2720+00 to 2726+00	1,034	LF
261	0120	FIBER ROLLS 20IN Sta 2720+00 to 2726+00	100	LF
261	0121	REMOVE FIBER ROLLS 20IN Sta 2720+00 to 2726+00	100	LF

For ditch grades encountered in the field not listed, use the following spacing:
Spacing = { Diameter of Roll (ft) - Entrenchment (ft) } / Slope (ft/ft)

DITCH FIBER SPACING		LEGEND
Ditch Grade	Spacing (ft)	Fiber Rolls 12IN
<0.5%	200	Inlet Protection - Fiber Roll 20IN
1%	85	SF Silt Fence
2%	40	Temporary Cover Crop & Straw Mulch
3%	30	
4%	20	

ND 1 Structure Replacements
Temporary Erosion Control
Sta 2720+00 to 2726+00 (SCL_1_506)
Structure No. 0001-051.506
ND 1

REGISTERED PROFESSIONAL ENGINEER
Jonathon Backe
PE-40302
DATE 09/30/25
NORTH DAKOTA



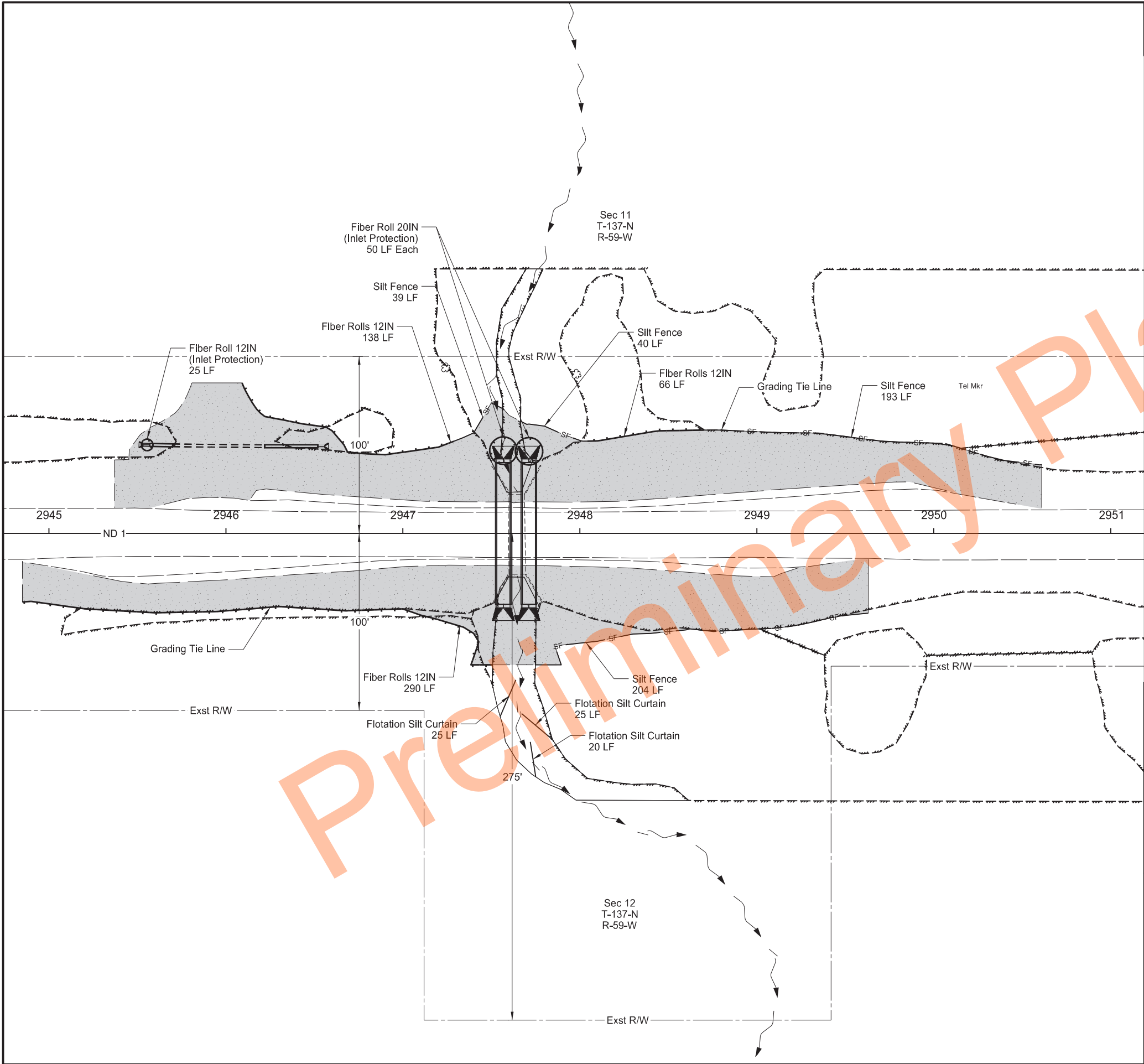
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	BRN-2-001(085)051	76	2

SPEC	CODE	BID ITEM	QTY	UNIT
251	2000	TEMPORARY COVER CROP Sta 2808+00 to 2814+00	0.71	ACRE
253	0101	STRAW MULCH Sta 2808+00 to 2814+00	0.71	ACRE
260	0300	SILT FENCE Sta 2808+00 to 2814+00	520	LF
260	0301	REMOVE SILT FENCE Sta 2808+00 to 2814+00	520	LF
261	0112	FIBER ROLLS 12IN Sta 2808+00 to 2814+00	505	LF
261	0113	REMOVE FIBER ROLLS 12IN Sta 2808+00 to 2814+00	505	LF
261	0120	FIBER ROLLS 20IN Sta 2808+00 to 2814+00	50	LF
261	0121	REMOVE FIBER ROLLS 20IN Sta 2808+00 to 2814+00	50	LF

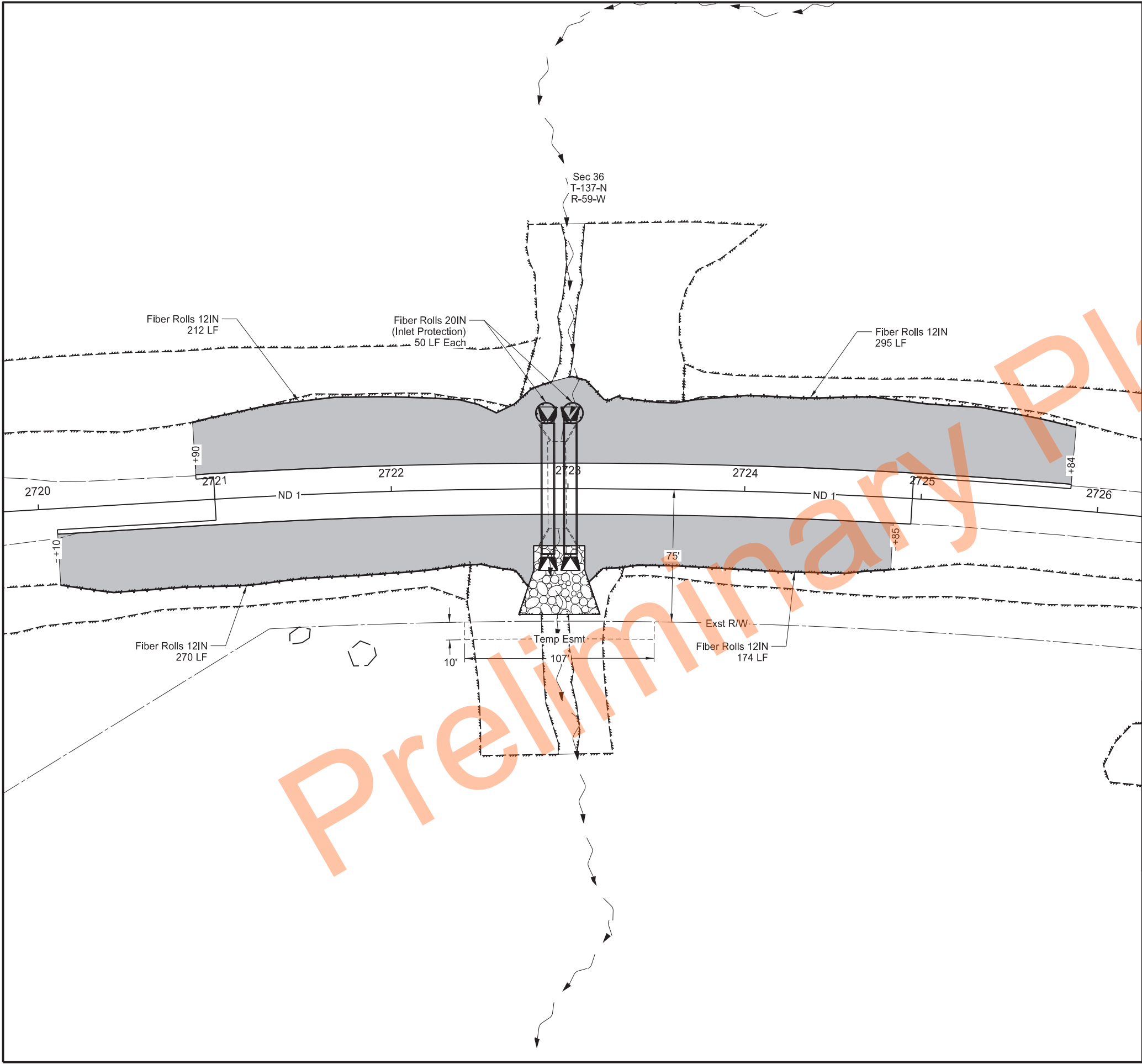
For ditch grades encountered in the field not listed, use the following spacing:
Spacing = { Diameter of Roll (ft) - Entrenchment (ft) } / Slope (ft/ft)

DITCH FIBER SPACING		LEGEND	
Ditch Grade	Spacing (ft)	Fiber Rolls 12IN	
<0.5%	200	Inlet Protection - Fiber Roll 20IN	
1%	85	Silt Fence	
2%	40	Temporary Cover Crop & Straw Mulch	
3%	30		
4%	20		

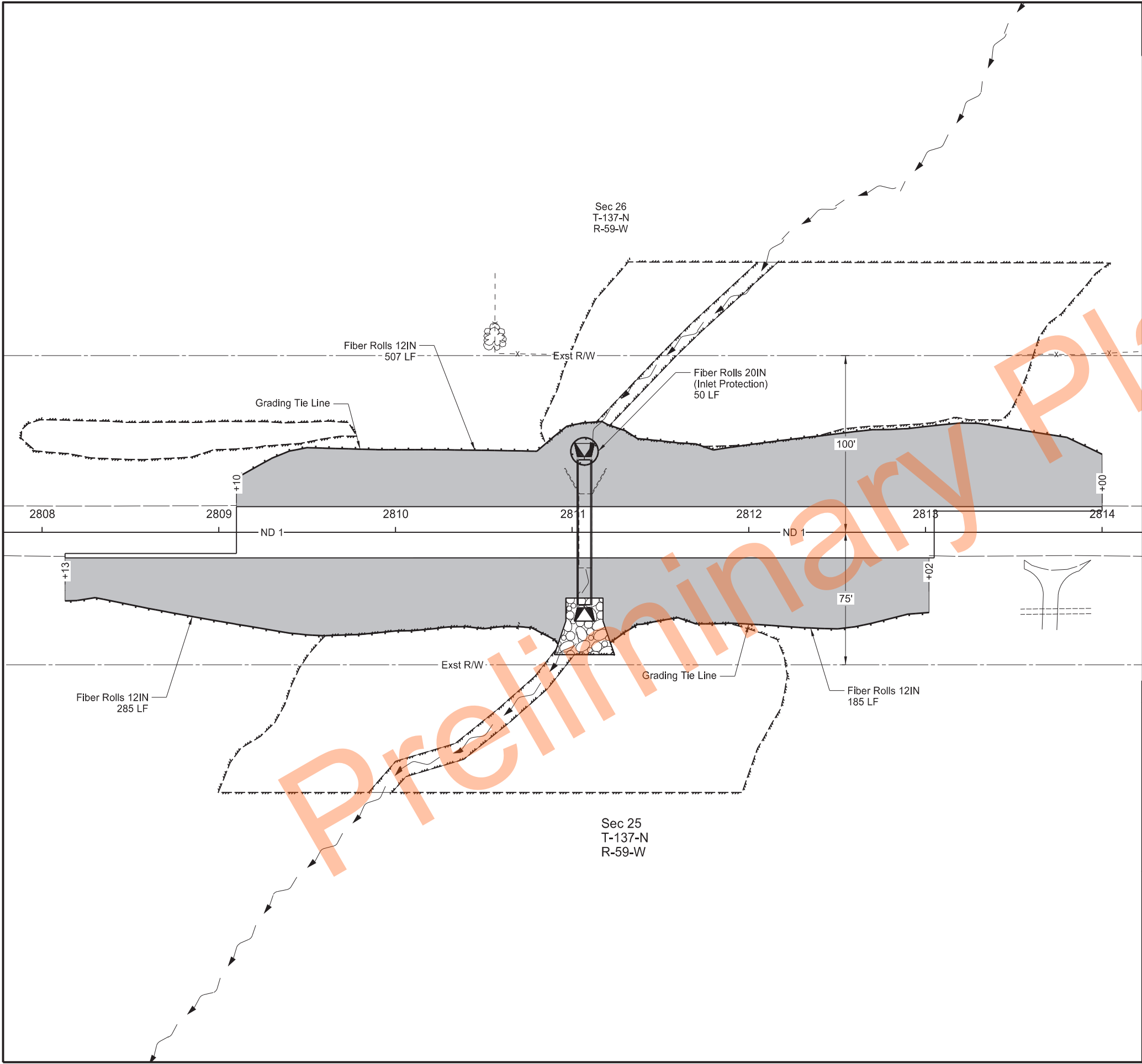
ND 1 Structure Replacements
Temporary Erosion Control
Sta 2808+00 to 2814+00 (SCL_1_175)
Structure 0001-053.175
ND 1



		STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	BRN-2-001(085)051	76	3
SPEC	CODE	BID ITEM		QTY	UNIT
251	2000	TEMPORARY COVER CROP			
		Sta 2945+00 to 2951+00		0.76	ACRE
253	0101	STRAW MULCH			
		Sta 2945+00 to 2951+00		0.76	ACRE
260	0300	SILT FENCE			
		Sta 2945+00 to 2951+00		476	LF
260	0301	REMOVE SILT FENCE			
		Sta 2945+00 to 2951+00		476	LF
261	0112	FIBER ROLLS 12IN			
		Sta 2945+00 to 2951+00		519	LF
261	0113	REMOVE FIBER ROLLS 12IN			
		Sta 2945+00 to 2951+00		519	LF
261	0120	FIBER ROLLS 20IN			
		Sta 2945+00 to 2951+00		100	LF
261	0121	REMOVE FIBER ROLLS 20IN			
		Sta 2945+00 to 2951+00		100	LF
262	0100	FLOTATION SILT CURTAIN			
		Sta 2945+00 to 2951+00		70	LF
262	0101	REMOVE FLOTATION SILT CURTAIN			
		Sta 2945+00 to 2951+00		70	LF
For ditch grades encountered in the field not listed, use the following spacing: Spacing = { Diameter of Roll (ft) - Entrenchment (ft) } / Slope (ft/ft)					
DITCH FIBER SPACING		LEGEND			
Ditch Grade	Spacing (ft)	Fiber Rolls 12IN			
<0.5%	200	Inlet Protection - Fiber Roll 20IN			
1%	85	Silt Fence			
2%	40	Temporary Cover Crop & Straw Mulch			
3%	30				
4%	20				
ND 1 Structure Replacements Temporary Erosion Control Sta 2945+00 to 2951+00 (SCL_1_761) Structure No. 0001-055.761 ND 1					



		STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	BRN-2-001(085)051	77	1
SPEC	CODE	BID ITEM		QTY	UNIT
251	0200	SEEDING CLASS II			
		Sta 2720+00 to 2726+00		0.77	ACRE
253	0101	STRAW MULCH			
		Sta 2720+00 to 2726+00		0.77	ACRE
256	0300	RIPRAP GRADE III			
		Sta 2720+00 to 2726+00		149	CY
261	0112	FIBER ROLLS 12IN			
		Sta 2720+00 to 2726+00		951	LF
261	0120	FIBER ROLLS 20IN			
		Sta 2720+00 to 2726+00		100	LF
709	0155	GEOSYNTHETIC MATERIAL TYPE RR			
		Sta 2720+00 to 2726+00		223	SY
For ditch grades encountered in the field not listed, use the following spacing: Spacing = { Diameter of Roll (ft) - Entrenchment (ft) } / Slope (ft/ft)					
DITCH FIBER SPACING		LEGEND			
Ditch Grade	Spacing (ft)	Fiber Rolls 12IN			
<0.5%	200	Inlet Protection - Fiber Roll 20IN			
1%	85	Seeding Class II & Straw Mulch			
2%	40				
3%	30				
4%	20				
ND 1 Structure Replacements Permanent Erosion Control Sta 2720+00 to 2726+00 (SCL_1_506) Structure 0001-051.506 ND 1					



	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	BRN-2-001(085)051	77	2

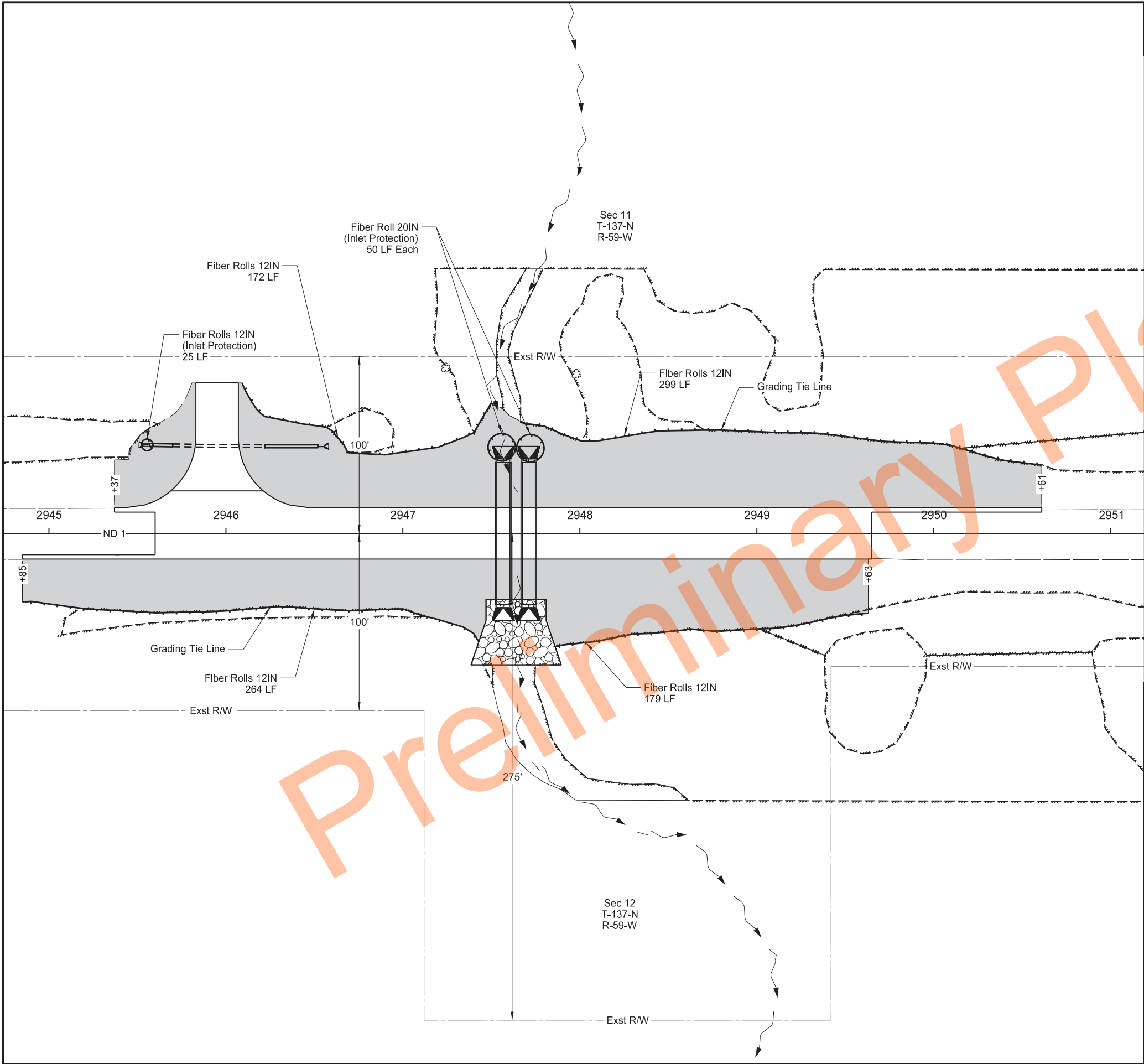
SPEC	CODE	BID ITEM	QTY	UNIT
251	0200	SEEDING CLASS II Sta 2808+00 to 2814+00	0.84	ACRE
253	0101	STRAW MULCH Sta 2808+00 to 2814+00	0.84	ACRE
256	0300	RIPRAP GRADE III Sta 2808+00 to 2814+00	88	CY
261	0112	FIBER ROLLS 12IN Sta 2808+00 to 2814+00	977	LF
261	0120	FIBER ROLLS 20IN Sta 2808+00 to 2814+00	50	LF
709	0155	GEOSYNTHETIC MATERIAL TYPE RR Sta 2808+00 to 2814+00	140	SY

For ditch grades encountered in the field not listed, use the following spacing:
Spacing = { Diameter of Roll (ft) - Entrenchment (ft) } / Slope (ft/ft)

DITCH FIBER SPACING		LEGEND	
Ditch Grade	Spacing (ft)	Fiber Rolls 12IN	
<0.5%	200	Inlet Protection - Fiber Roll 20IN	
1%	85		
2%	40		
3%	30		
4%	20	Seeding Class II & Straw Mulch	

ND 1 Structure Replacements
Permanent Erosion Control
Sta 2808+00 to 2814+00 (SCL_1_175)
Structure 0001-053.175
ND 1

REGISTERED PROFESSIONAL ENGINEER
Jonathon Backe
PE-40302
DATE 09/30/25
NORTH DAKOTA



		STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	BRN-2-001(085)051	77	3
SPEC	CODE	BID ITEM	QTY	UNIT	
251	0200	SEEDING CLASS II Sta 2945+00 to 2951+00	0.82	ACRE	
253	0101	STRAW MULCH Sta 2945+00 to 2951+00	0.82	ACRE	
256	0300	RIPRAP GRADE III Sta 2945+00 to 2951+00	163	CY	
261	0112	FIBER ROLLS 12IN Sta 2945+00 to 2951+00	939	LF	
261	0120	FIBER ROLLS 20IN Sta 2945+00 to 2951+00	100	LF	
709	0155	GEOSYNTHETIC MATERIAL TYPE RR Sta 2945+00 to 2951+00	244	SY	
For ditch grades encountered in the field not listed, use the following spacing: Spacing = { Diameter of Roll (ft) - Entrenchment (ft) } / Slope (ft/ft)					
DITCH FIBER SPACING		LEGEND			
Ditch Grade	Spacing (ft)	Fiber Rolls 12IN			
<0.5%	200	Inlet Protection - Fiber Roll 20IN			
1%	85	Seeding Class II & Straw Mulch			
2%	40				
3%	30				
4%	20				
ND 1 Structure Replacements Permanent Erosion Control Sta 2945+00 to 2951+00 (SCL_1_761) Structure 0001-055.761 ND 1					

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	BRN-2-001(085)051	100	1

SIGN NUMBER	SIGN SIZE	DESCRIPTION	AMOUNT REQUIRED					TOTAL AMOUNT REQUIRED	UNITS PER AMOUNT	UNITS SUB TOTAL
			BY PHASE NO.							
			O	1	2	3	T			
E5-1-48	48"x48"	EXIT GORE							35	
G20-1-60	60"x24"	ROAD WORK NEXT MILES							28	
G20-1b-60	60"x24"	NO WORK IN PROGRESS (Sign and installation only)							18	
G20-2-48	48"x24"	END ROAD WORK	2				2	2	26	52
G20-4-36	36"x18"	PILOT CAR FOLLOW ME (Mounted to back of pilot car)							18	
G20-4b-36	36"x30"	WAIT FOR PILOT CAR							18	
G20-50a-72	72"x36"	ROAD WORK NEXT MILES RT & LT ARROWS	9				9	9	43	387
G20-52a-72	72"x24"	ROAD WORK NEXT MILES RT or LT ARROW	2				2	2	36	72
G20-55-96	96"x48"	SPEED LIMIT ENFORCED - MINIMUM FEE \$150 WHEN WORKERS PRESENT							59	
M1-1-36	36"x36"	INTERSTATE ROUTE MARKER (Post and installation only)							11	
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 (INSIDE ARROW) RIGHT or LEFT (Mounted on barricade)							7	
M5-1-21	21"x15"	ADVANCE TURN ARROW RT or LT(Mounted on route marker post)							9	
M5-1-30	30"x21"	ADVANCE TURN ARROW RT or LT(Mounted on route marker post)							9	
M6-1-21	21"x15"	DIRECTIONAL ARROW RT or LT (Mounted on route marker post)							7	
M6-1-30	30"x21"	DIRECTIONAL ARROW RT or LT (Mounted on route marker post)							9	
M6-3-21	21"x15"	DIRECTIONAL ARROW UP (Mounted on route marker post)							7	
R1-1-48	48"x48"	STOP							32	
R1-2-60	60"x60"	YIELD							29	
R2-1-36	36"x48"	SPEED LIMIT (Portable only)	6	6	6	18		18	30	540
R2-1-48	48"x60"	SPEED LIMIT							39	
R2-1aP-24	24"x18"	MINIMUM FEE \$150 (Mounted on Speed Limit post)	4	4	4	12	12		10	120
R3-2-48	48"x48"	NO LEFT TURN							35	
R4-1-48	48"x60"	DO NOT PASS							39	
R4-7-48	48"x60"	KEEP RIGHT							39	
R5-1-48	48"x48"	DO NOT ENTER							35	
R6-1-54	54"x18"	ONE WAY RIGHT or LEFT (Mounted on STOP or DO NOT ENTER post)							14	
R7-1-12	12"x18"	NO PARKING ANY TIME							11	
R10-6-24	24"x36"	STOP HERE ON RED							16	
R11-2-48	48"x30"	ROAD CLOSED (Mounted on barricade)							12	
R11-2a-48	48"x30"	STREET CLOSED (Mounted on barricade)							12	
R11-3a-60	60"x30"	ROAD CLOSED MILES AHEAD LOCAL TRAFFIC ONLY (Mtd on barricade)							15	
R11-3c-60	60"x30"	STREET CLOSED MILES AHEAD LOCAL TRAFFIC ONLY (Mtd on barricade)							15	
R11-4a-60	60"x30"	STREET CLOSED TO THRU TRAFFIC (Mounted on barricade)							15	
W 1-3-48	48"x48"	REVERSE TURN RIGHT or LEFT							35	
W 1-4-48	48"x48"	REVERSE CURVE RIGHT or LEFT							35	
W 1-4b-48	48"x48"	TWO LANE REVERSE CURVE RIGHT or LEFT							35	
W 1-6-48	48"x24"	ONE DIRECTION LARGE ARROW							26	
W 3-1-48	48"x48"	STOP AHEAD							35	
W 3-3-48	48"x48"	SIGNAL AHEAD							35	
W 3-4-48	48"x48"	BE PREPARED TO STOP	2	2	2	6		6	35	210
W 3-5-48	48"x48"	SPEED REDUCTION AHEAD	4	4	4	12	12		35	420
W 4-2-48	48"x48"	LANE ENDS RIGHT or LEFT							35	
W 5-1-48	48"x48"	ROAD NARROWS							35	
W 5-8-48	48"x48"	THRU TRAFFIC RIGHT LANE							35	
W 5-9-48	48"x48"	ROAD WORK TRAFFIC ONLY DOWN & LT or RT ARROW							35	
W 6-3-48	48"x48"	TWO WAY TRAFFIC							35	
W 8-1-48	48"x48"	BUMP							35	
W 8-3-48	48"x48"	PAVEMENT ENDS							35	
W 8-7-48	48"x48"	LOOSE GRAVEL							35	
W 8-11-48	48"x48"	UNEVEN LANES							35	
W 8-12-48	48"x48"	NO CENTER LINE							35	
W 8-17-48	48"x48"	SHOULDER DROP-OFF SYMBOL							35	
W 8-53-48	48"x48"	TRUCKS ENTERING HIGHWAY							35	
W 8-54-48	48"x48"	TRUCKS ENTERING AHEAD or FT or MILE							35	
W 8-55-48	48"x48"	TRUCKS CROSSING AHEAD or FT or MILE							35	
W 8-56-48	48"x48"	TRUCKS EXITING HIGHWAY							35	
W 9-3a-48	48"x48"	CENTER LANE CLOSED SYMBOL							35	
W 13-1P-30	30"x30"	MPH ADVISORY SPEED PLAQUE (Mounted on warning sign post)							14	
W 14-3-64	64"x48"	NO PASSING ZONE							28	
W 16-2P-30	30"x24"	FEET PLAQUE (Mounted on warning sign post)							10	
W20-1-48	48"x48"	ROAD WORK AHEAD or FT or MILE	2	2	2	2	8	8	35	280
W20-2-48	48"x48"	DETOUR AHEAD or FT or MILE							35	
W20-3-48	48"x48"	ROAD or STREET CLOSED AHEAD or FT or MILE							35	
W20-4-48	48"x48"	ONE LANE ROAD AHEAD or FT or MILE							35	
W20-5-48	48"x48"	RIGHT or CENTER or LEFT LANE CLOSED AHEAD or FT or MILE							35	
W20-7-48	48"x48"	FLAGGER	2	2	2	6		6	35	210
W20-8-18	18"x18"	STOP - SLOW PADDLE Back to Back	2	2	2	6		6	5	30
W20-52P-54	54"x12"	NEXT MILES (Mounted on warning sign post)							12	
W21-1-48	48"x48"	WORKERS							35	
W21-2-48	48"x48"	FRESH OIL							35	
W21-3-48	48"x48"	ROAD MACHINERY AHEAD or FT or MILE							35	
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 or MILE							35	

[illegible][illegible]

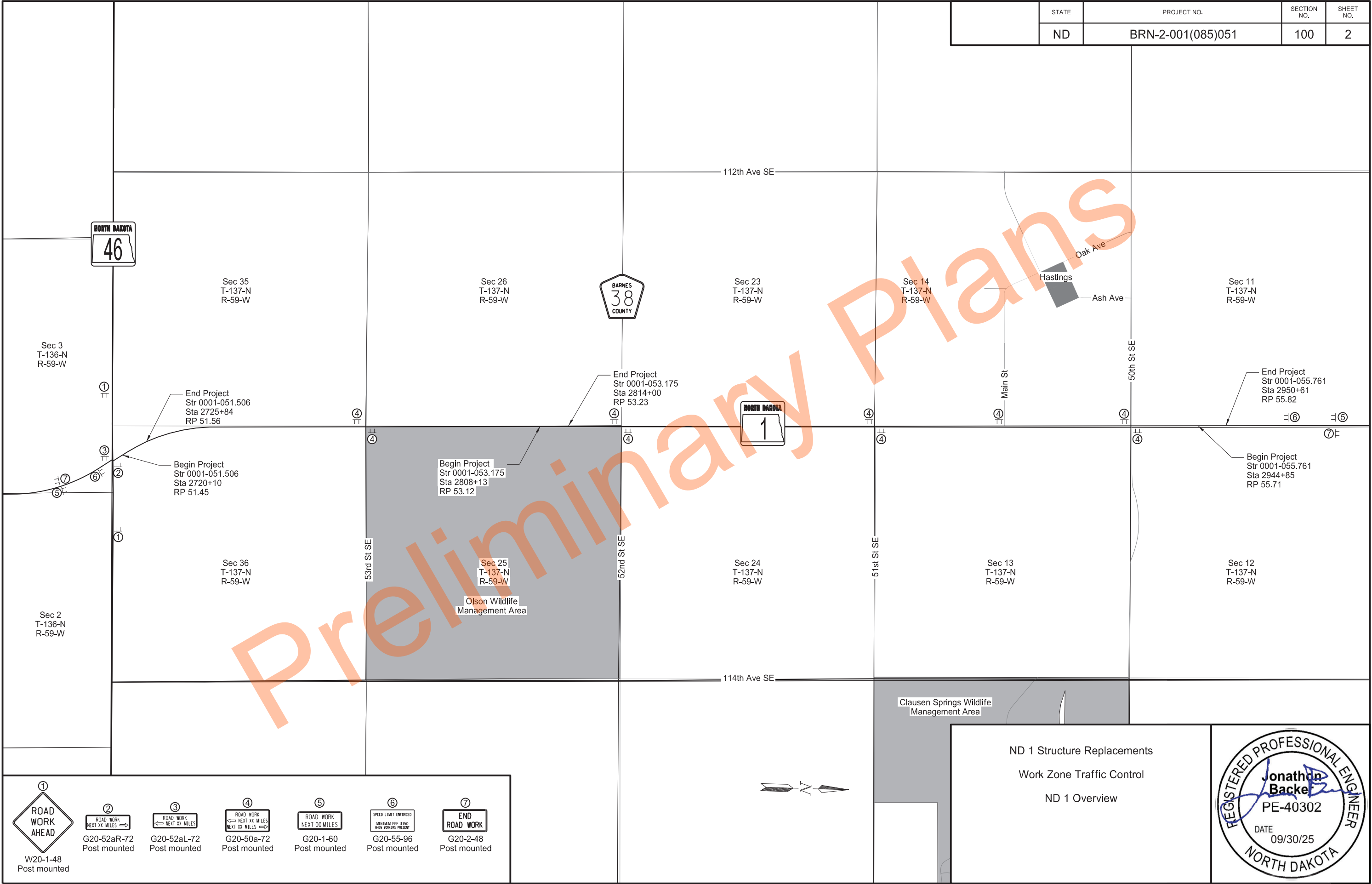
SPEC & CODE			
704-1000	TRAFFIC CONTROL SIGNS	TOTAL UNITS	2531

[illegible]

NOTE:
If additional signs are required, units will be calculated using the formula from Section III-18.06 of the Design Manual.
<http://www.dot.nd.gov/>



Traffic Control Devices List
ND 1 Structure Replacements
All Structures



ND 1 Structure Replacements

Work Zone Traffic Control

ND 1 Overview

REGISTERED PROFESSIONAL ENGINEER

Jonathon Backe

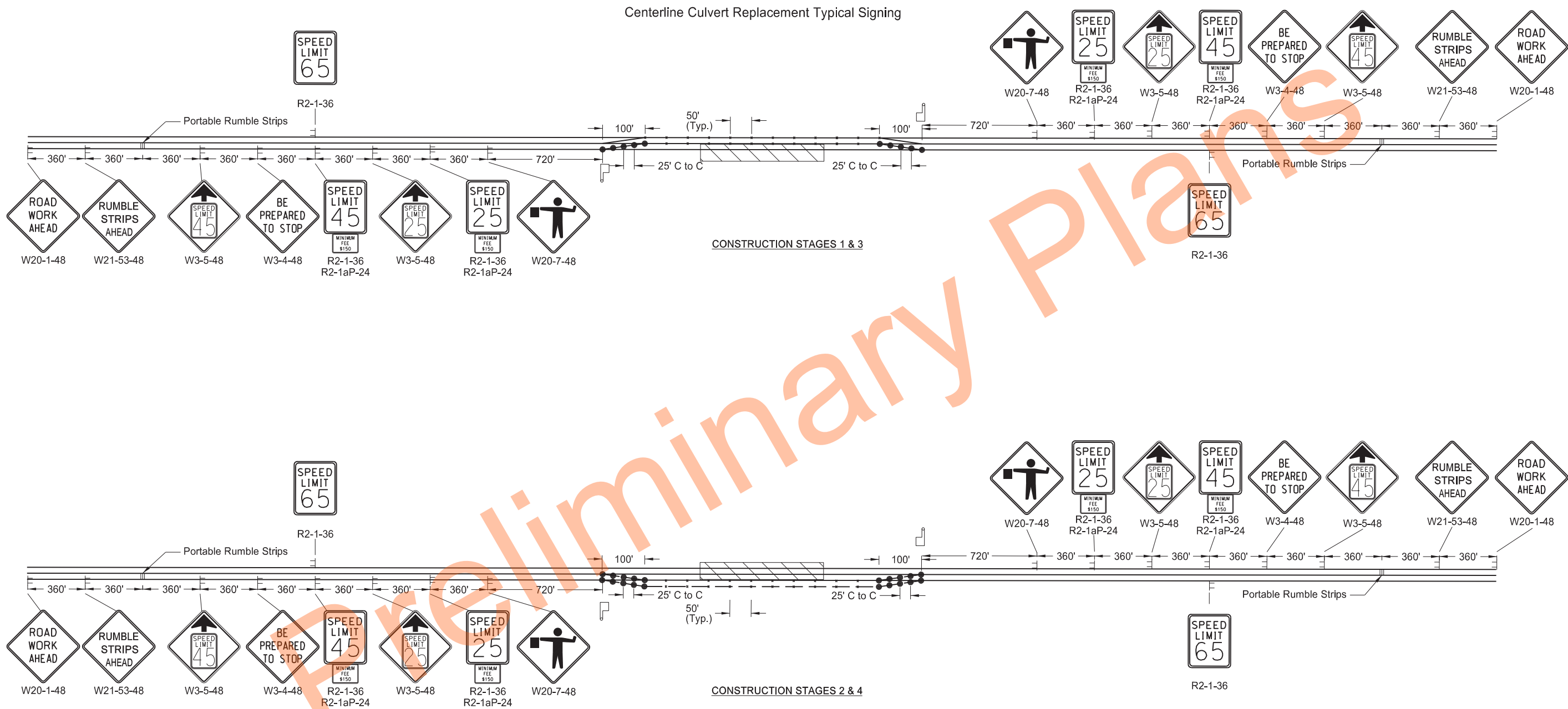
PE-40302

DATE

09/30/25

NORTH DAKOTA

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	BRN-2-001(085)051	100	3



ND 1 Structure Replacements

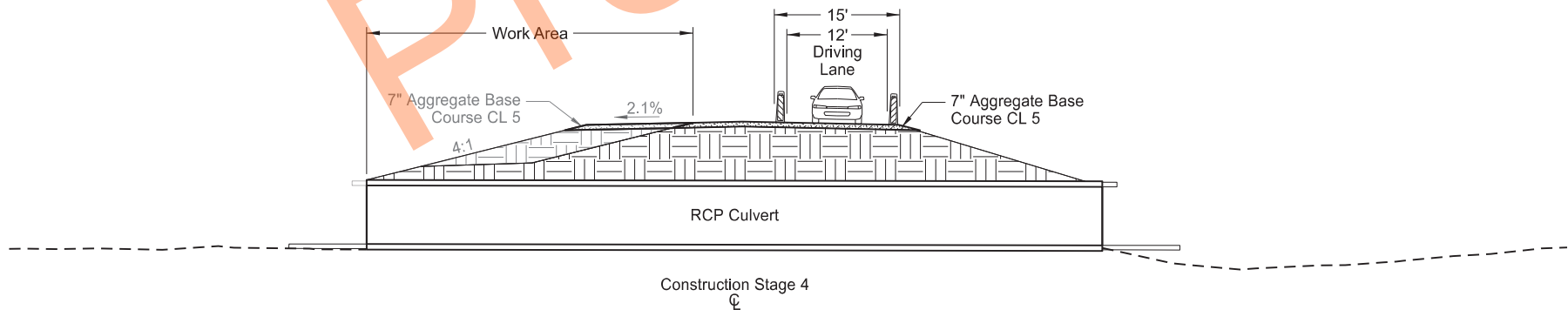
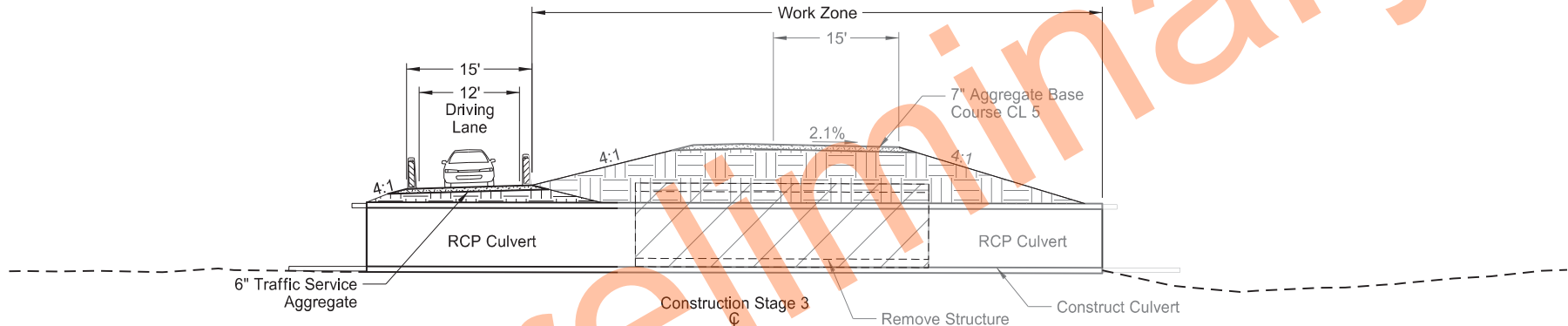
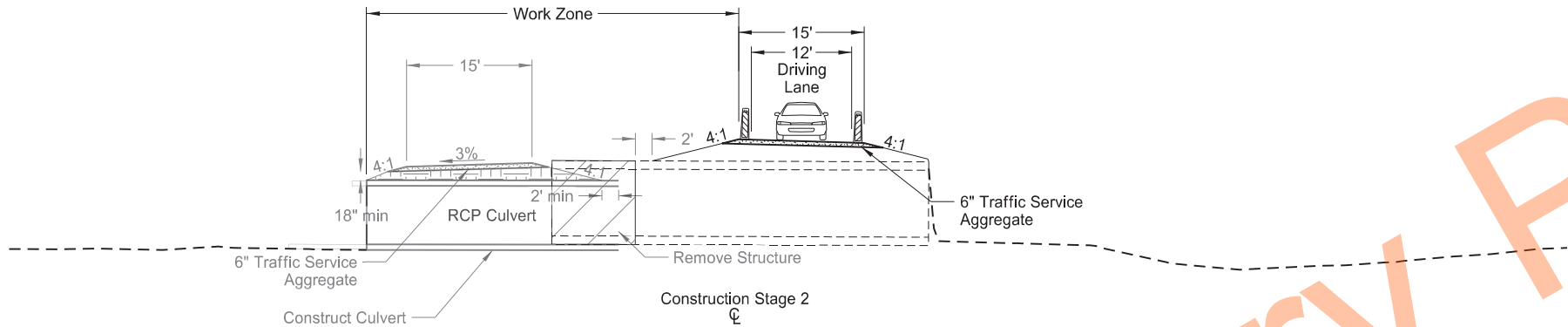
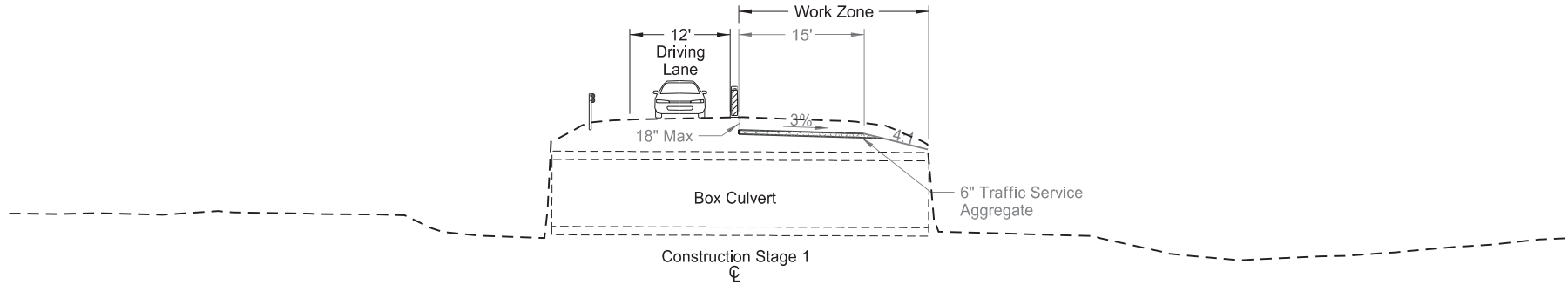
Work Zone Traffic Control

Construction Sign Layout
One Lane Closure / Half at a Time
Construction Stages 1, 2, 3, & 4



	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	BRN-2-001(085)051	100	4

SPEC	CODE	BID ITEM	QTY	UNIT
302	0050	TRAFFIC SERVICE AGGREGATE		
		Str 0001-051.506	150	TON
		Str 0001-053.175	175	TON
		Str 0001-055.761	175	TON



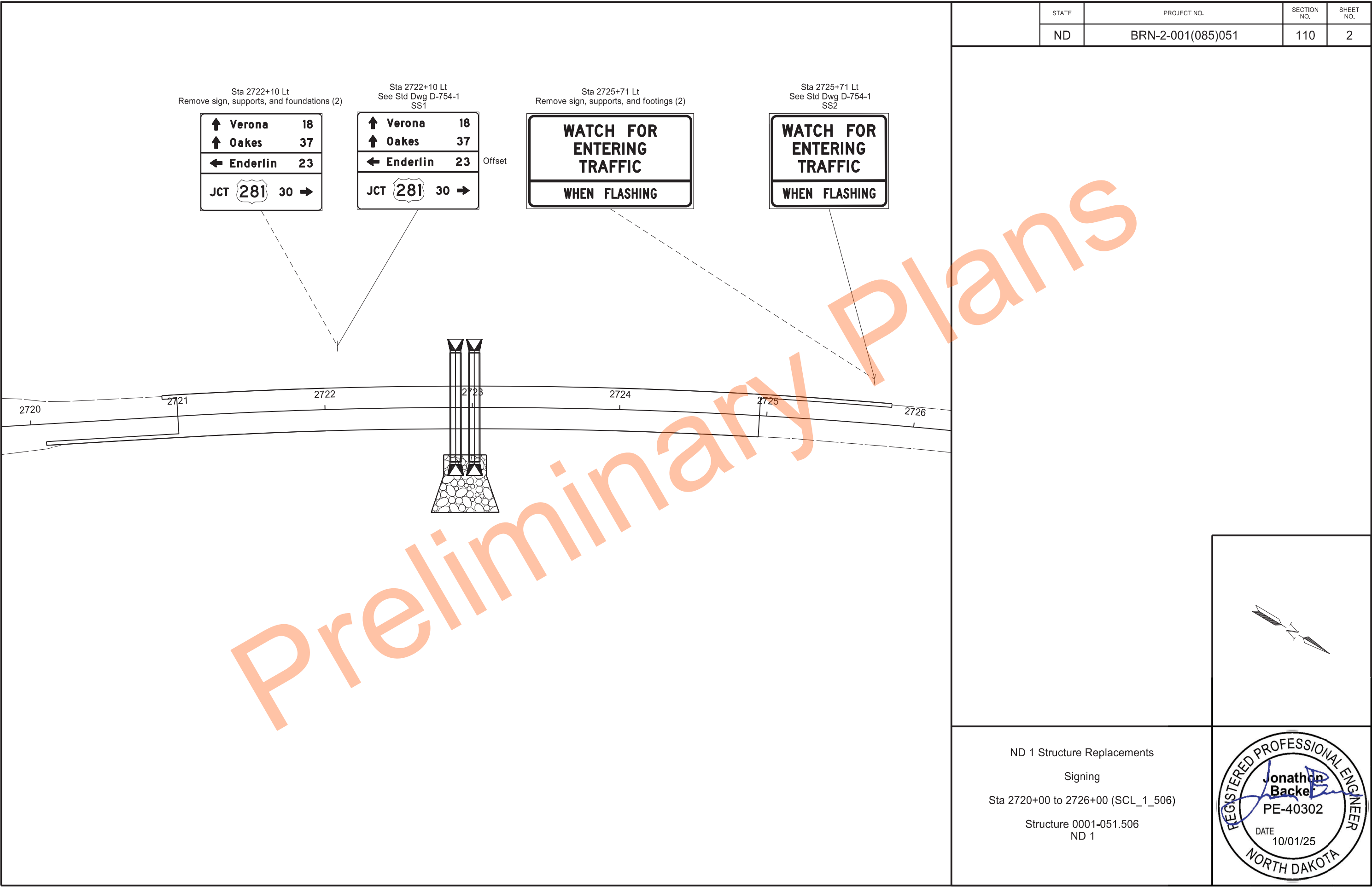
Note:
See Section 6 Note 704-P02 for Traffic Control Stages.

ND 1 Structure Replacements
Work Zone Traffic Control
Structure Replacement Staging



45.0 48.8 Total 0.0 Total 63.1 0.0 56 2 2 0 0 0

Preliminary Plans



	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	BRN-2-001(085)051	110	3

SIGN NUMBER	SS1
WIDTH X HEIGHT	7'-6" x 6'-0"
BORDER WIDTH	0.75" (inset 0")
CORNER RADIUS	3"
MOUNTING	Ground
BACKGROUND	TYPE: IV Reflective
	COLOR: Green
LEGEND/BORDER	TYPE: IV Reflective
	COLOR: White

SYMBOL	X	Y	WID	HT	ANGL
ND_6IN_TYPE D	8.61	59.5	6	9	0
ND_6IN_TYPE D	8.61	46	6	9	0
ND_6IN_TYPE D	7.11	32.25	6	9.01	90
ND_6IN_TYPE D	73.89	11	6	9	270
M1_4	26.84	5	22.5	18	0

Diagram of a variable message sign (VMS) showing dimensions and content. The sign is rectangular with a total width of 7'-6" and a total height of 6'-0". The sign is divided into four horizontal panels. The top three panels are for destination and distance information, and the bottom panel is for route and direction information. The sign is labeled with dimensions in inches and feet, and the total area is 45 Sq.Ft.

STATION(S):
2722+10 Lt

7'-6"

6'-0"

5" 3.5"
6" 9"
7.5" 4.5"
6" 9"
9.2" 7.7"
6" 6"
15.3" 9.2"
6" 18"
11" 5.1"

↑ Verona 18
↑ Oakes 37
← Enderlin 23

JCT 281 30 →

5" 6" 7.5" 6" 4.25" 0.75" 4.25" 6" 4.25" 0.75" 10.25" 6" 6" 11" 11"

0.7" 88.5" 0.8"

AREA: 45 Sq.Ft.

55"

Dimensions are in inches, tenths Letter locations are panel edge to lower left corner

[illegible]

SIGN NUMBER	SS2
WIDTH X HEIGHT	7'-6" x 6'-6"
BORDER WIDTH	1.25" (inset 0.75")
CORNER RADIUS	3"
MOUNTING	Ground
BACKGROUND	TYPE: XI Reflective
	COLOR: Yellow
LEGEND/BORDER	TYPE: XI Non-reflective
	COLOR: Black

[illegible]

Diagram of a rectangular traffic sign with dimensions and area. The sign is divided into two horizontal sections. The top section contains the text "WATCH FOR ENTERING TRAFFIC" in large, bold, black capital letters. The bottom section contains the text "WHEN FLASHING" in smaller, bold, black capital letters. The sign has a white background and a black border. Dimensions are provided in inches: overall width is 7'-6", overall height is 6'-9", top section height is 7", middle section height is 10", bottom section height is 5", and bottom section width is 7". The area is 48.76 Sq.Ft.

STATION(S):
2725+71 Lt

AREA: 48.76 Sq.Ft.

7'-6"

6'-9"

7"

10"

5"

10"

5"

10"

7"

1.25"

8.38"

6"

8.38"

86"

1'-1"

Dimensions are in inches, tenths

Letter locations are panel edge to lower left corner

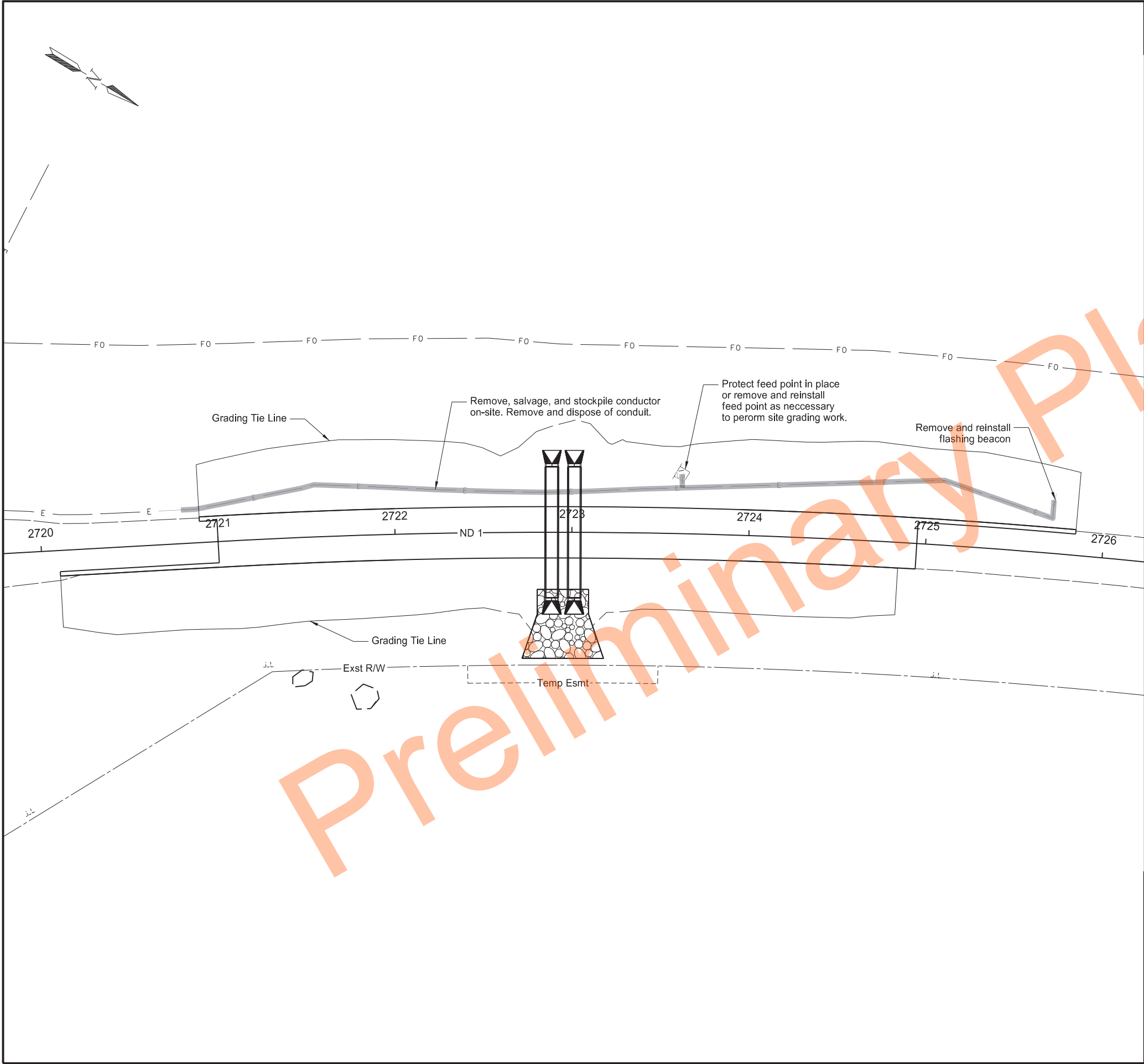
[illegible]

ND 1 Structure Replacements

Signing Special Sign Details

Structure 001-051.506
ND 1





	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	BRN-2-001(085)051	160	1
SPEC CODE BID ITEM 772 2935 REVISE FLASHING BEACON SYSTEM Structure 0001-051.506 QTY UNIT 1 EA				
Note: See Plan Note 772-P01 for more information.				
ND 1 Structure Replacements Flashing Beacon Layout Sta 2720+00 to 2726+00 (SCL_1_506) Structure 0001-051.506 ND 1			REGISTERED PROFESSIONAL ENGINEER Jonathon Backer PE-40302 DATE 09/30/25 NORTH DAKOTA	

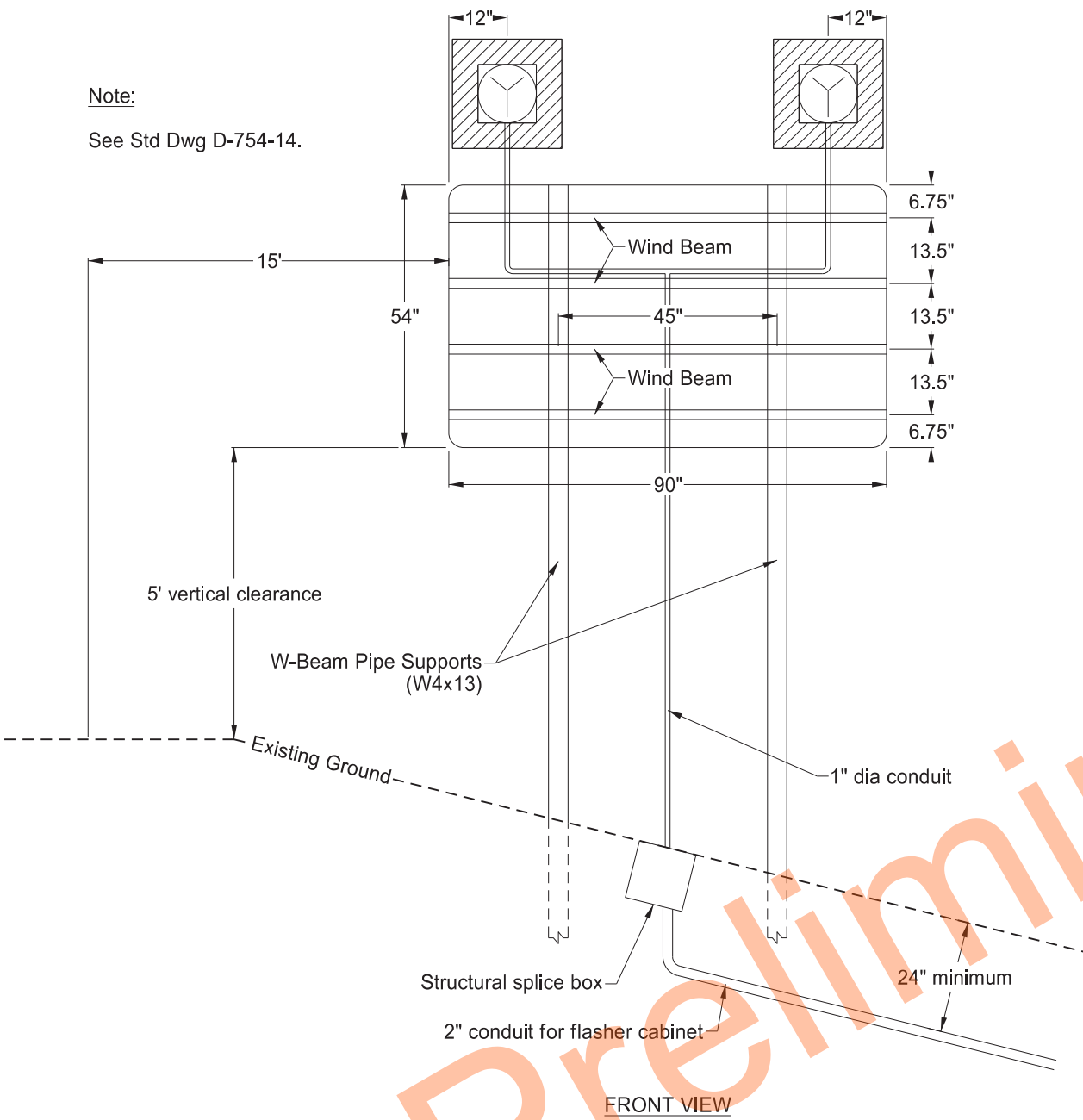
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	BRN-2-001(085)051	160	2

Note:

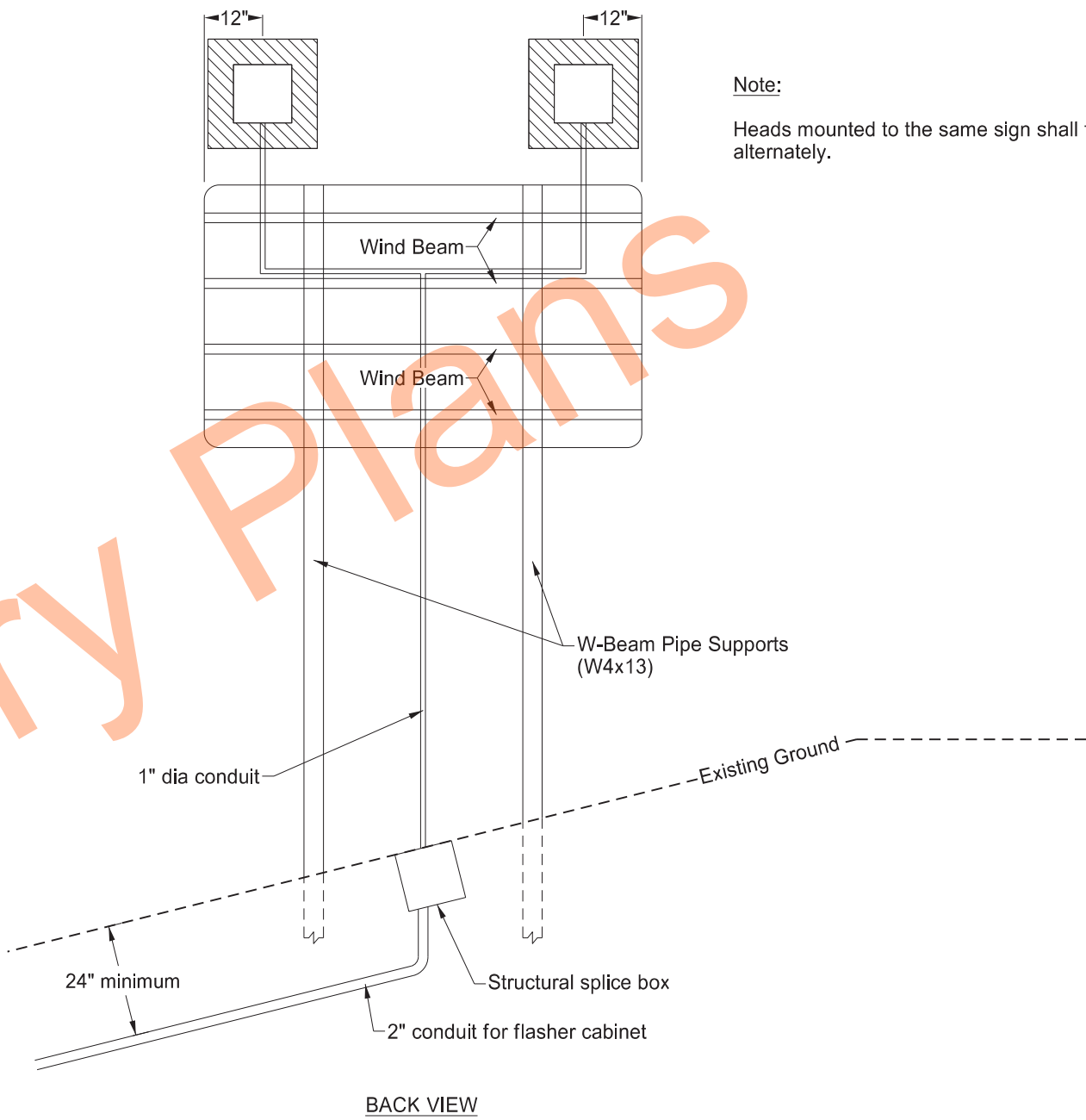
See Std Dwg D-754-14.

Note:

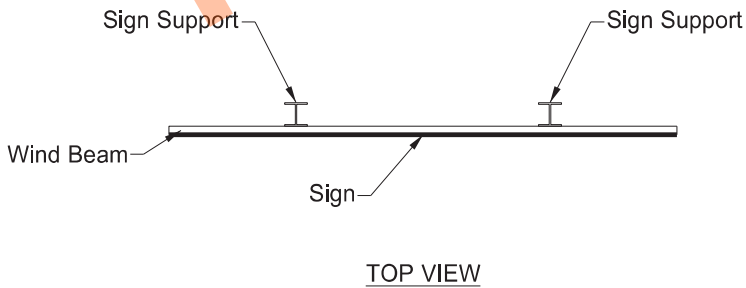
Heads mounted to the same sign shall flash alternately.



FRONT VIEW



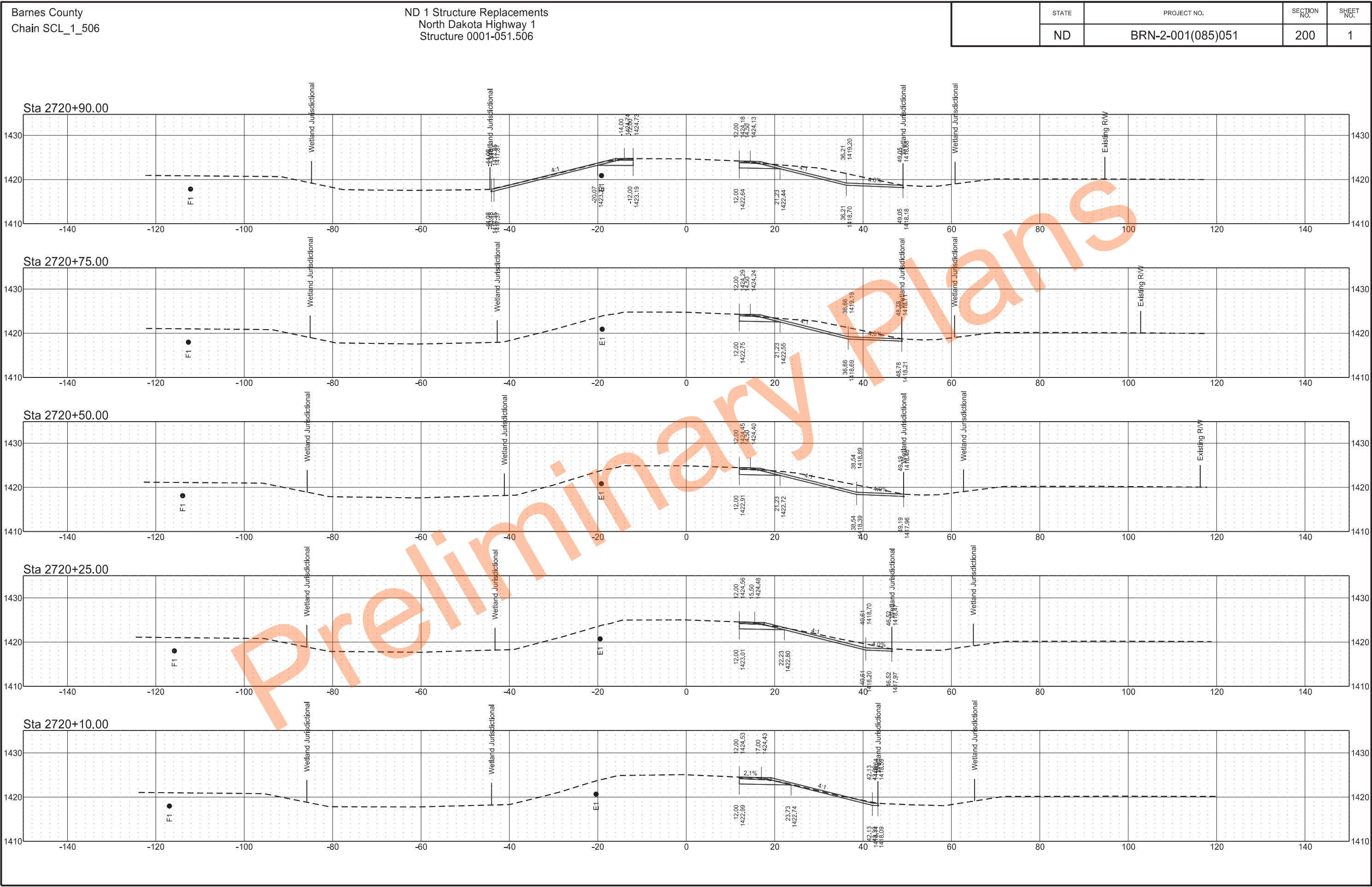
BACK VIEW



TOP VIEW

ND 1 Structure Replacements
Flashing Beacon Detail
Structure 0001-051.506
ND 1



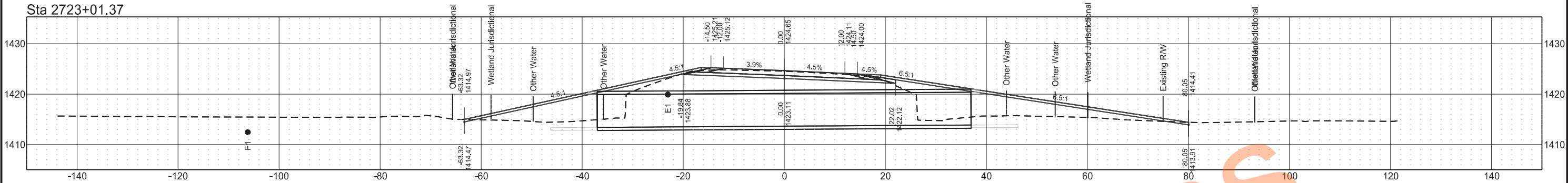


Barnes County
Chain SCL_1_506

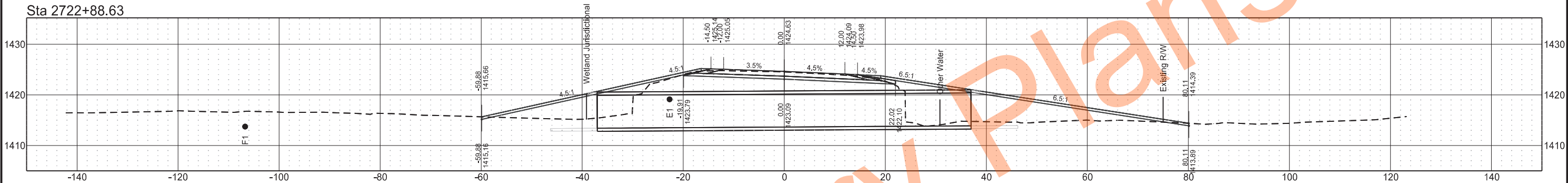
ND 1 Structure Replacements
North Dakota Highway 1
Structure 0001-051.506

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	BRN-2-001(085)051	200	3

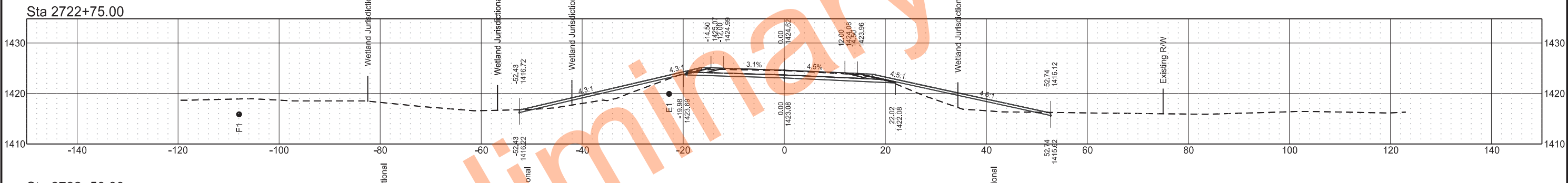
Sta 2723+01.37



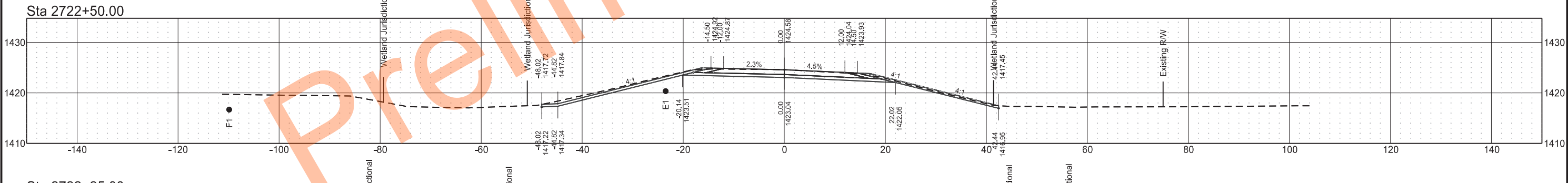
Sta 2722+88.63



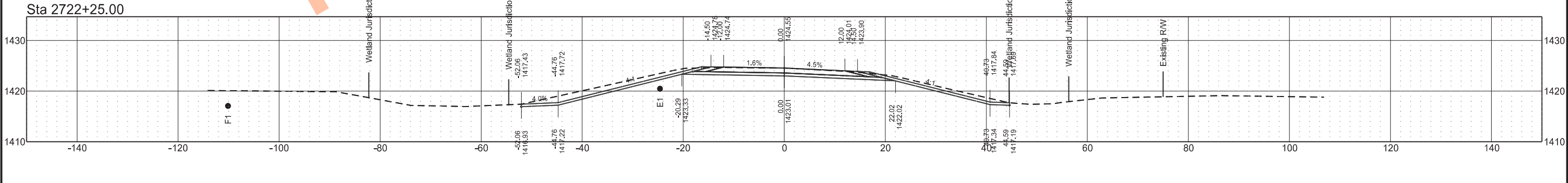
Sta 2722+75.00



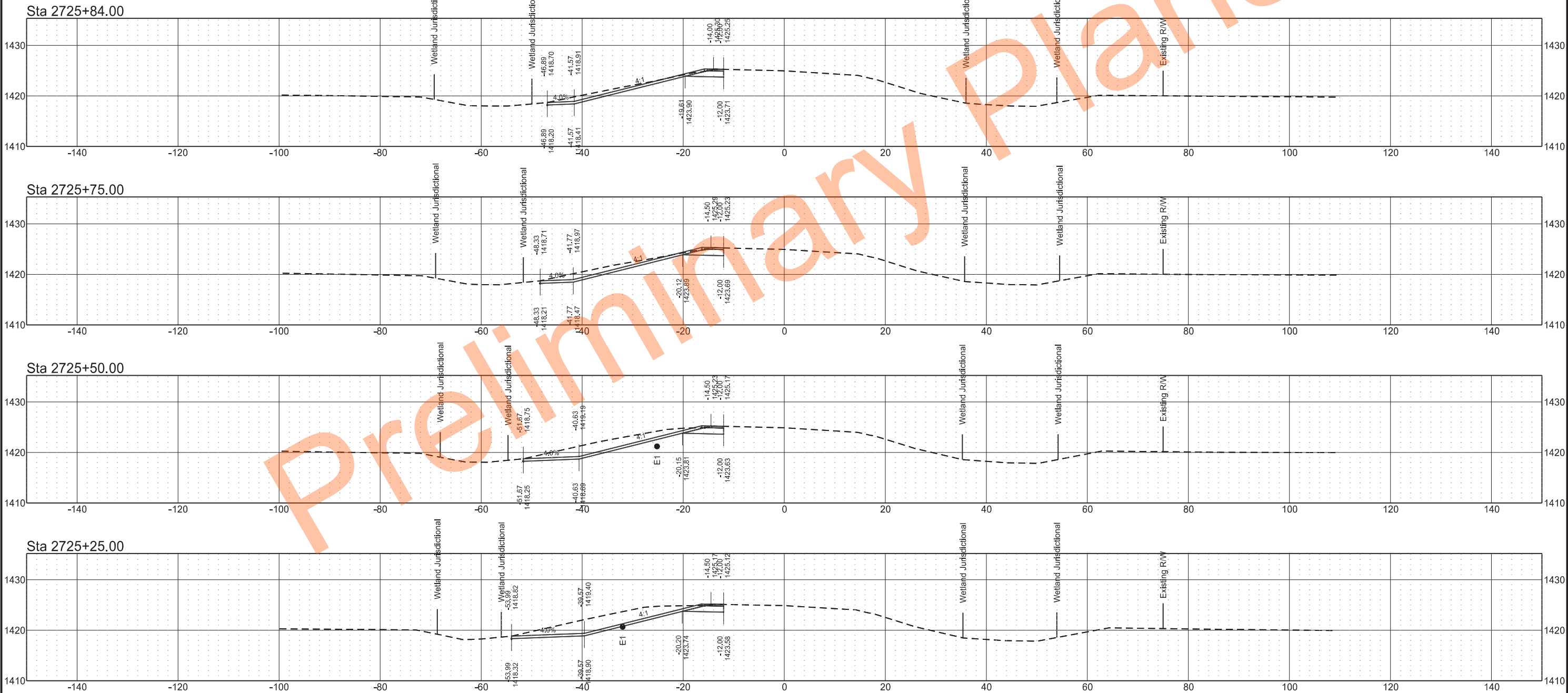
Sta 2722+50.00



Sta 2722+25.00



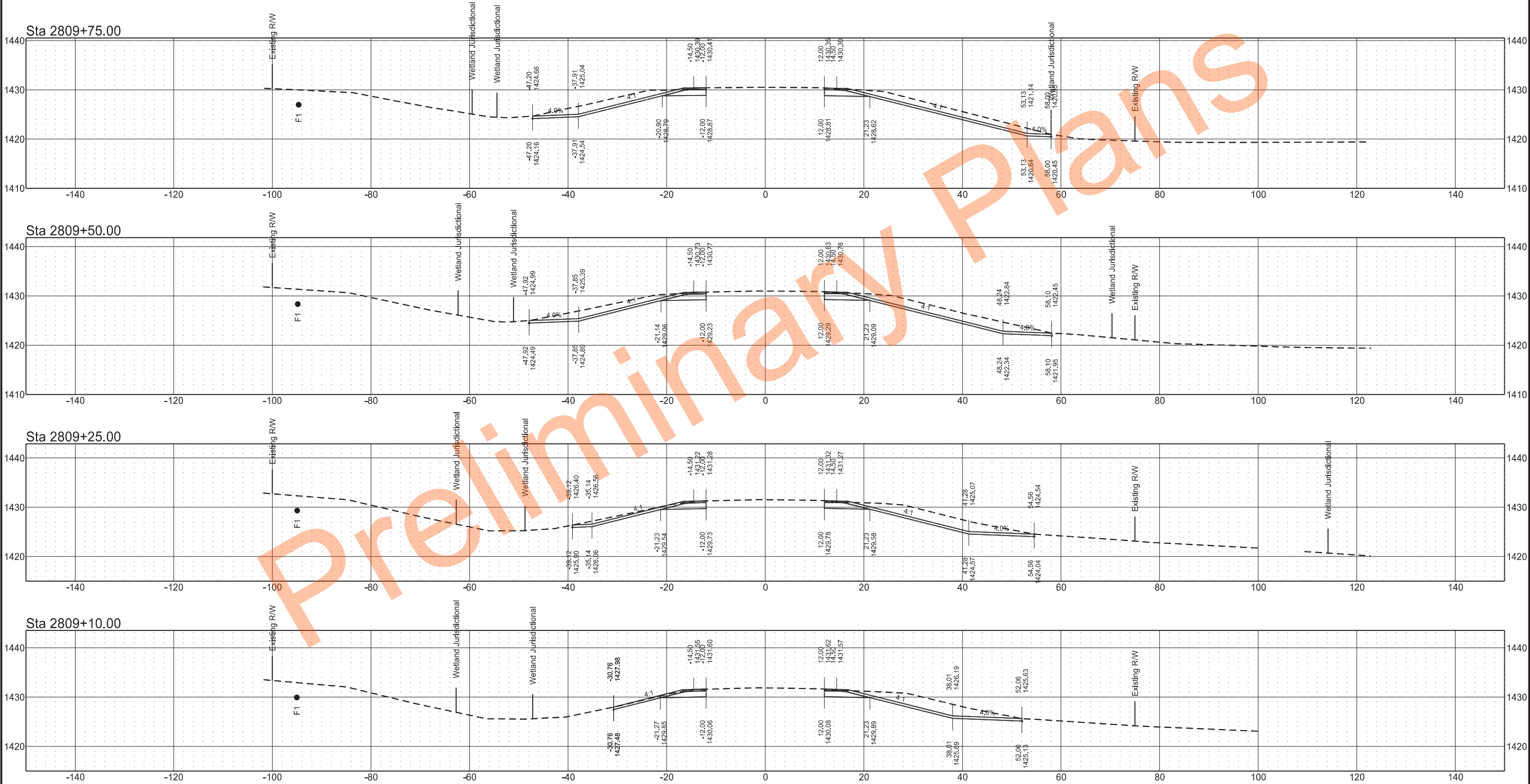
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	BRN-2-001(085)051	200	6



Barnes County
Chain SCL_1_175

ND 1 Structure Replacements
North Dakota Highway 1
Structure 0001-053.175

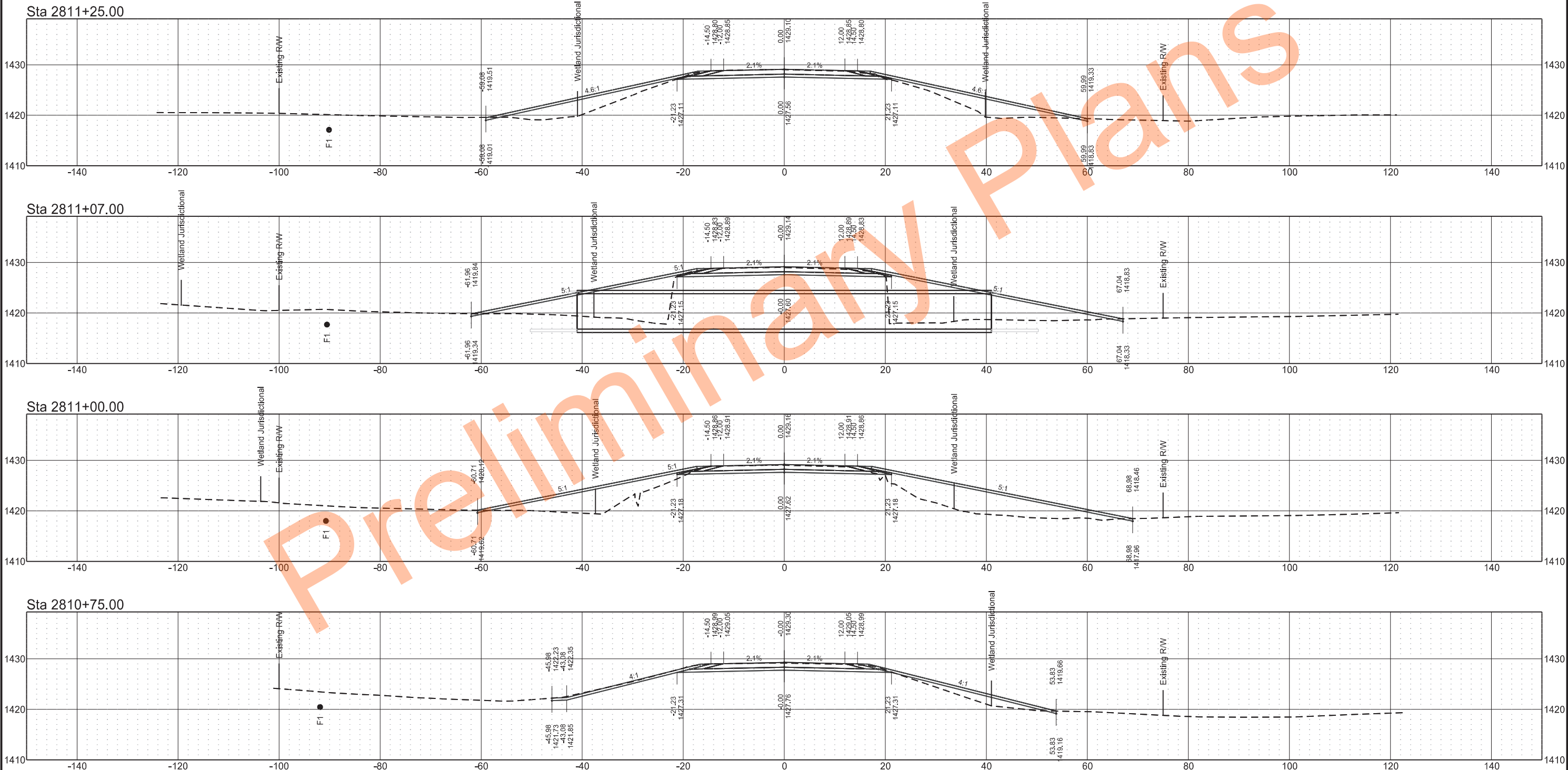
STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	BRN-2-001(085)051	200	8



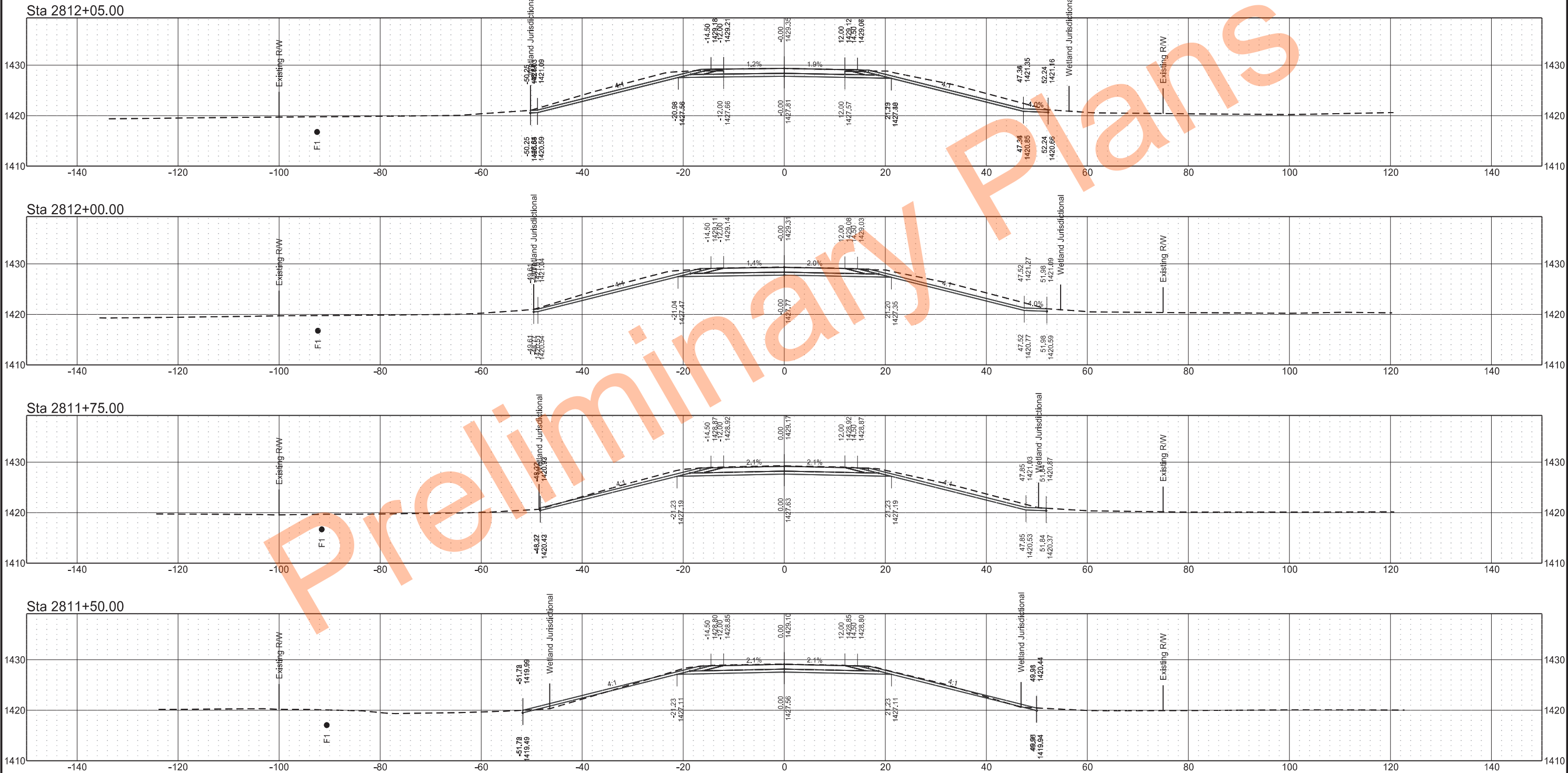
ND 1 Structure Replacements
North Dakota Highway 1
Structure 0001-053.175

The image displays four vertical profile plots for a road project, showing elevation (1410 to 1430) versus stationing (-140 to 140). The plots are labeled Sta 2810+50.00, Sta 2810+25.00, Sta 2810+10.00, and Sta 2810+00.00. Each plot includes an 'Existing RW' (Right of Way) line and an 'Existing RW' label. The plots show the proposed road profile (solid line) and various data points (e.g., -46.40, -37.53, -21.23, -14.50, 0.00, 12.00, 21.23, 54.67). A large 'Preliminary Plans' watermark is overlaid diagonally across the entire image.

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	BRN-2-001(085)051	200	10



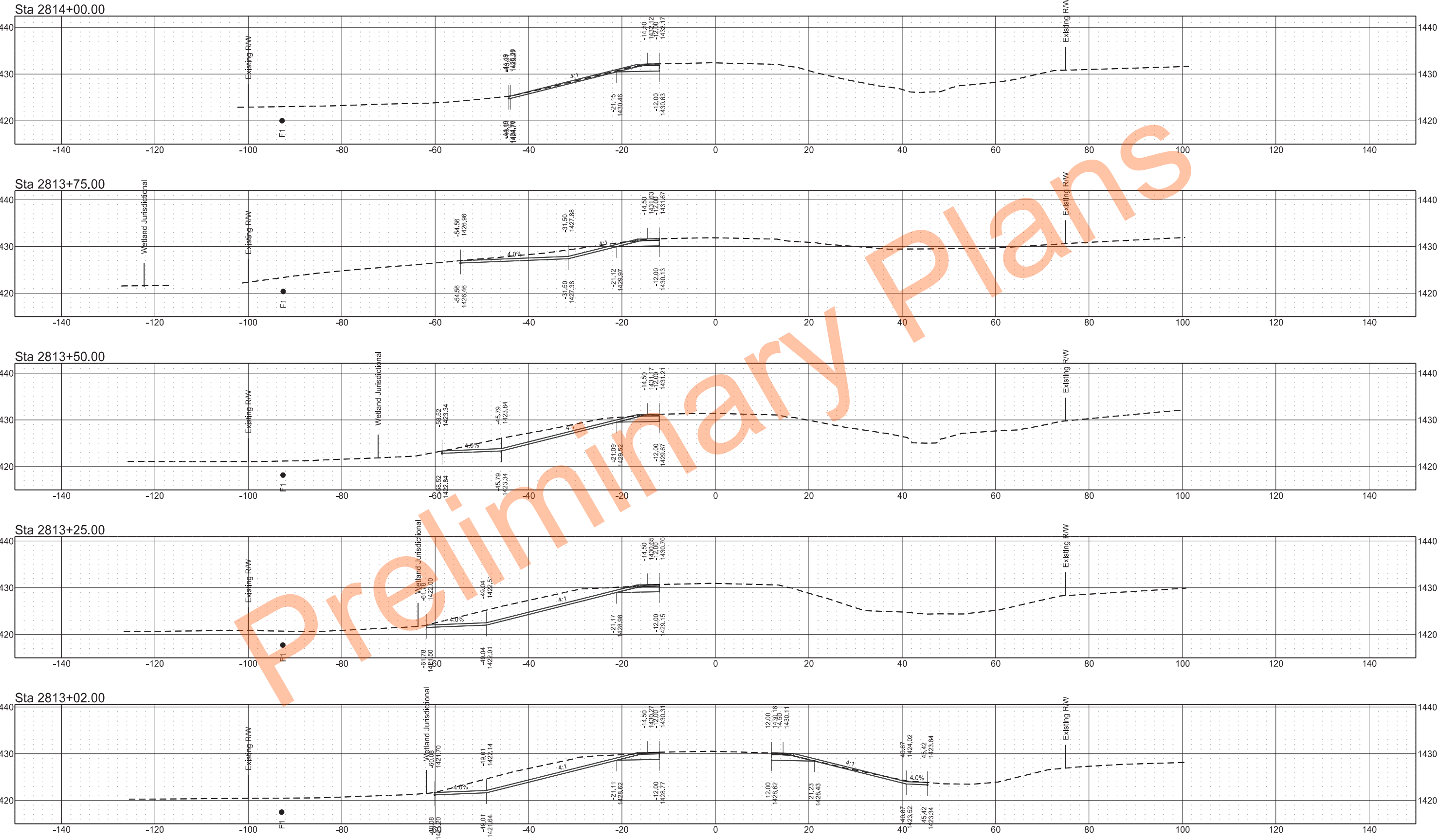
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	BRN-2-001(085)051	200	11



Barnes County
Chain SCL_1_175

ND 1 Structure Replacements
North Dakota Highway 1
Structure 0001-053.175

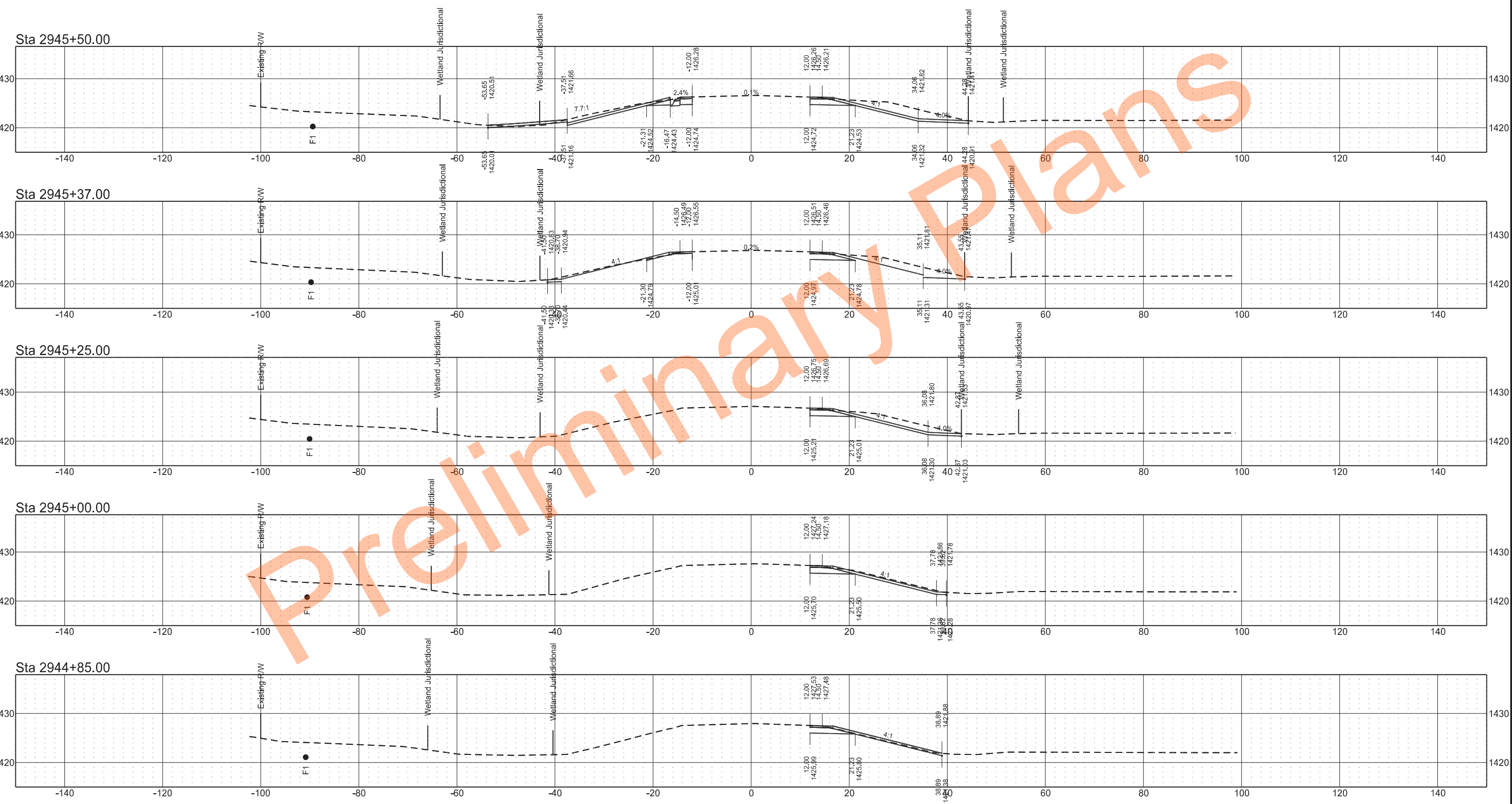
STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	BRN-2-001(085)051	200	13



Barnes County
Chain SCL_1_761

ND 1 Structure Replacements
North Dakota Highway 1
Structure 0001-055.761

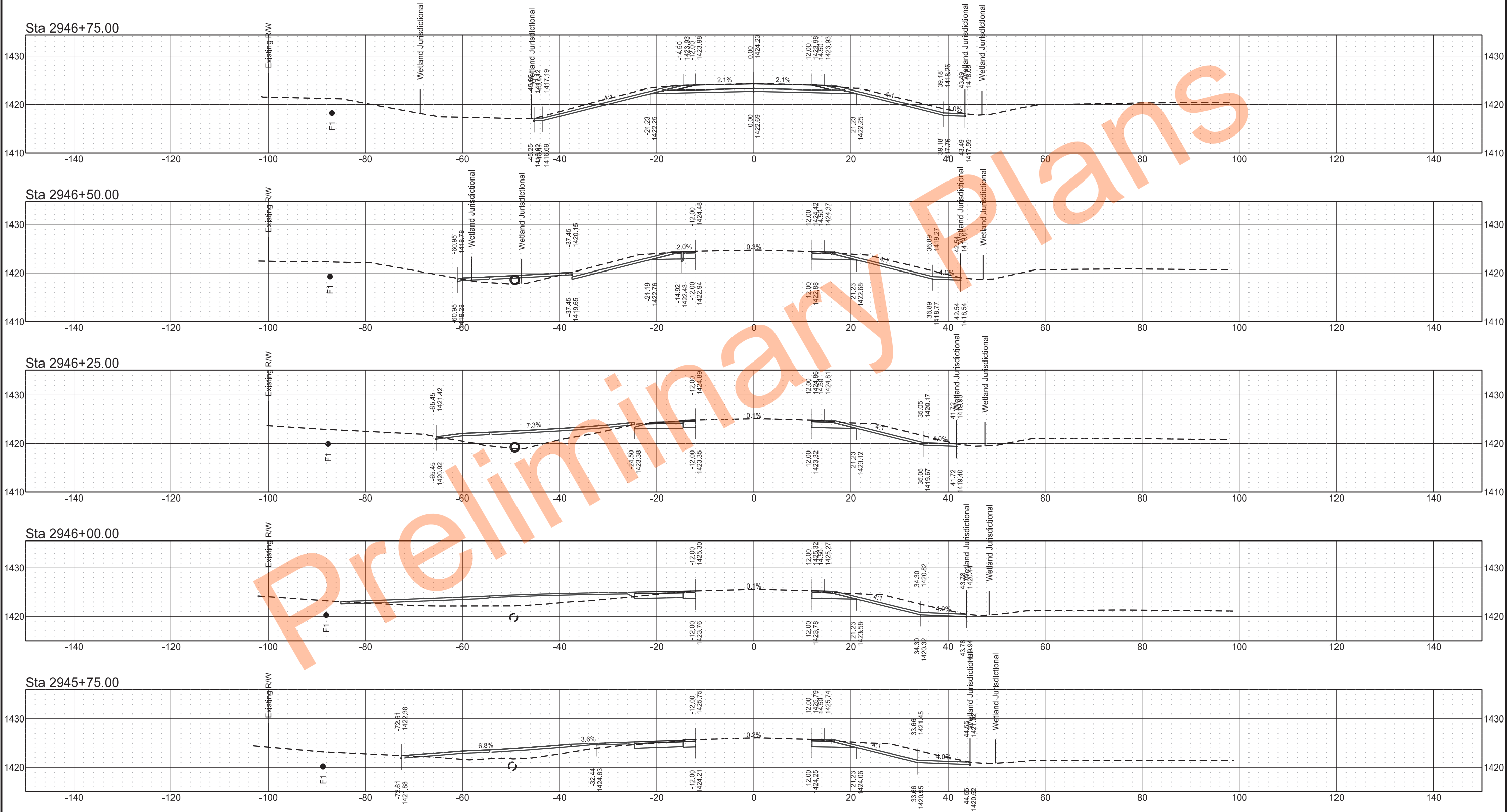
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	BRN-2-001(085)051	200	14



Barnes County
Chain SCL_1_761

ND 1 Structure Replacements
North Dakota Highway 1
Structure 0001-055.761

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	BRN-2-001(085)051	200	15

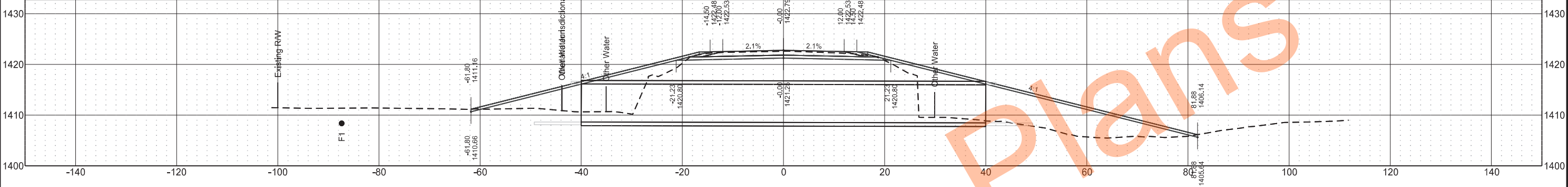


Barnes County
Chain SCL_1_761

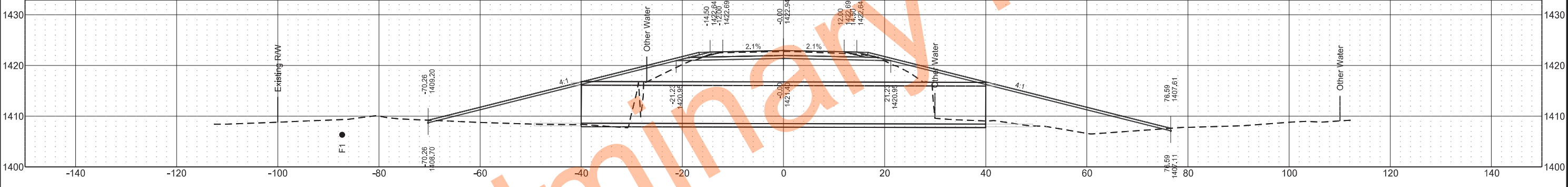
ND 1 Structure Replacements
North Dakota Highway 1
Structure 0001-055.761

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	BRN-2-001(085)051	200	16

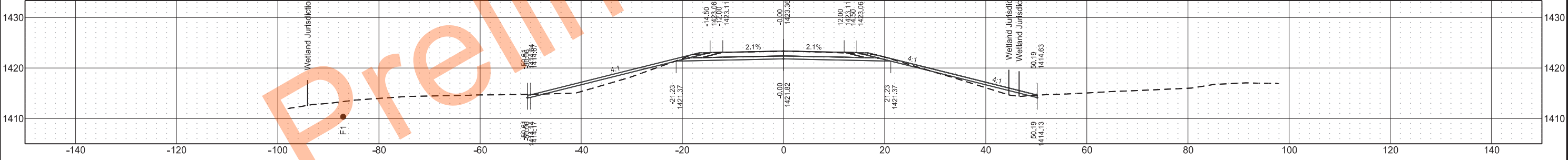
Sta 2947+71.21



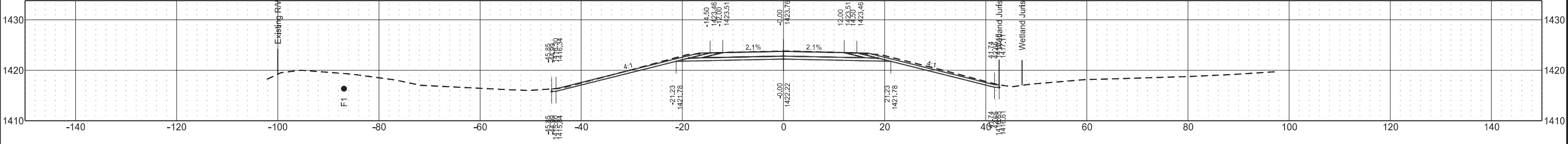
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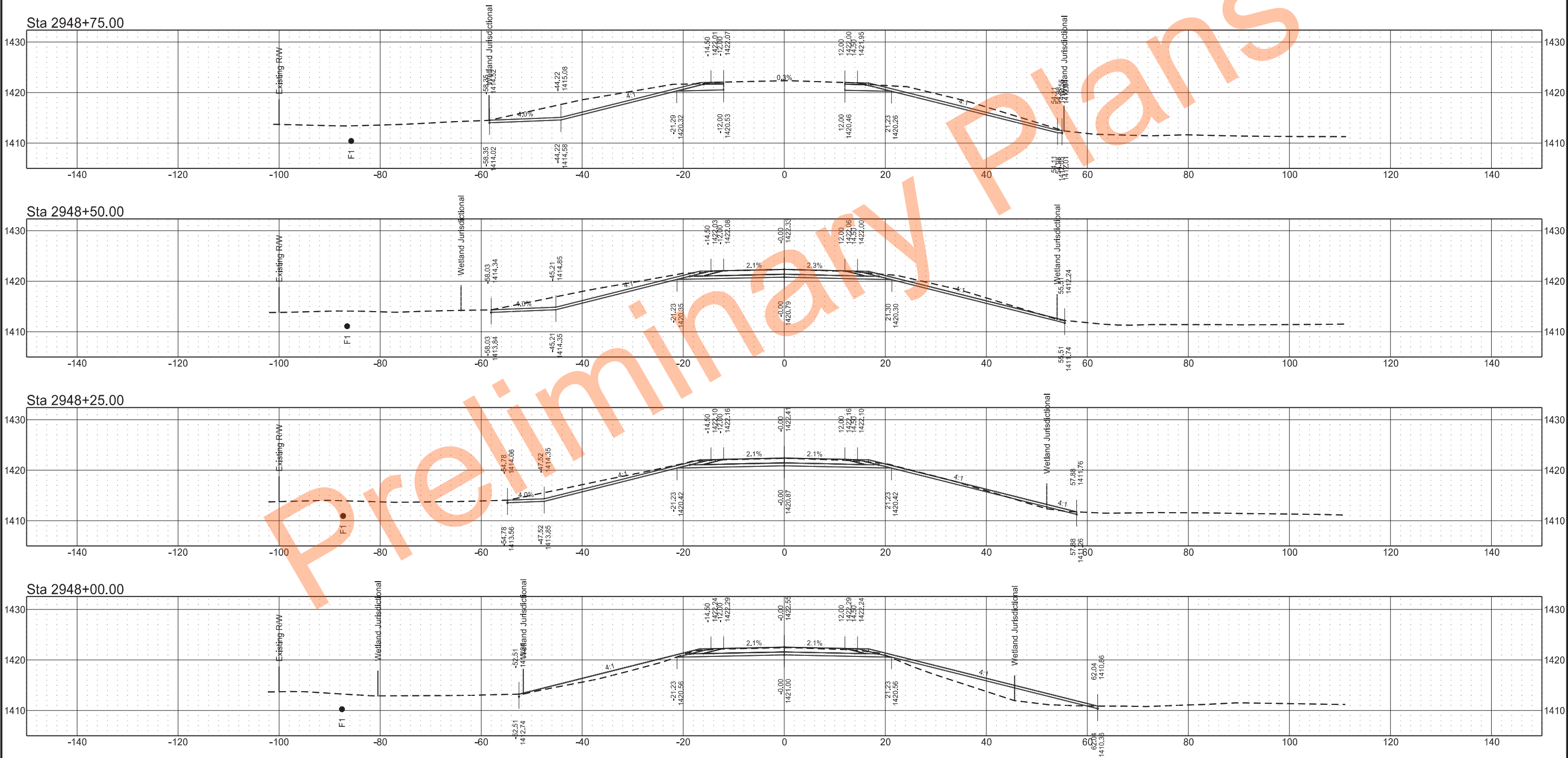
Sta 2947+25.00

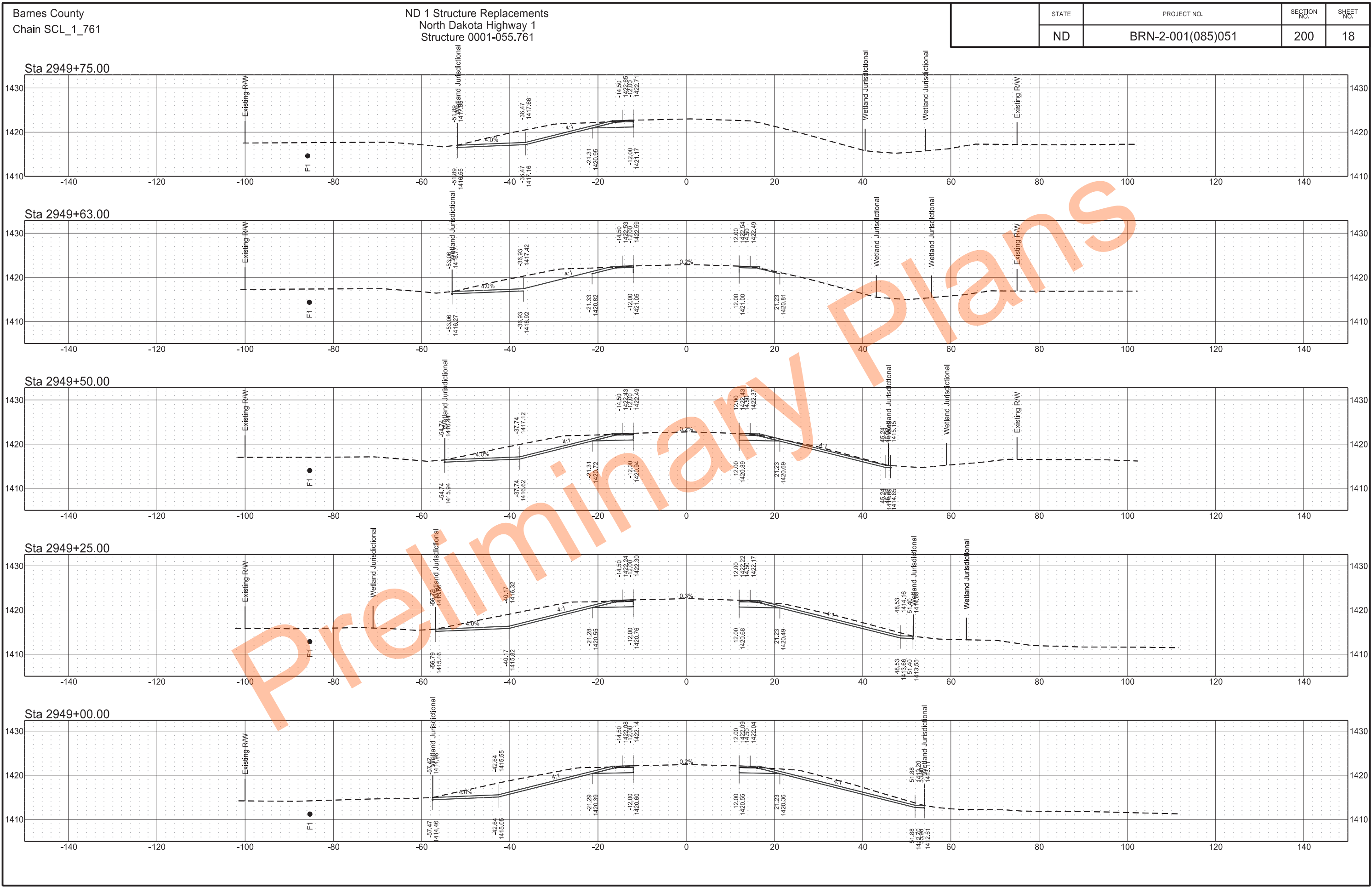


Sta 2947+00.00



	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	BRN-2-001(085)051	200	17





	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	BRN-2-001(085)051	200	19

