DESIGN DATA				
Traffic	Average Daily			
Current 2016	Pass: 445	Trucks: 85	Total: 530	
Forecast 2036	Pass: 605	Trucks: 130	Total: 735	
Clear Zone Distance: NA		Design Speed: 65		
Minimum Sight Dist. for Stopping: 645'		Bridges: NA		
Sight Dist. for No Passing Zone: 1,100'				
Pavement Design Life: NA				
Design Accumulated One-way Flexible ESALs: NA				

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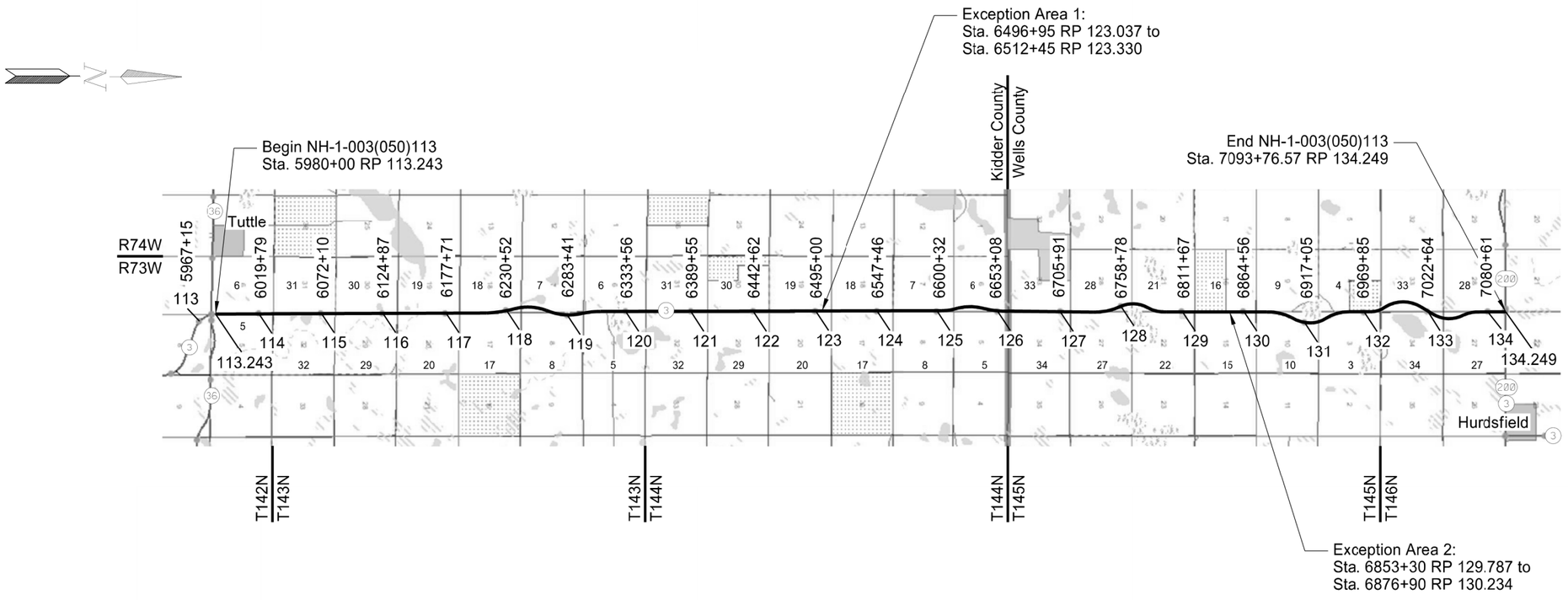
NORTH DAKOTA
DEPARTMENT OF TRANSPORTATION

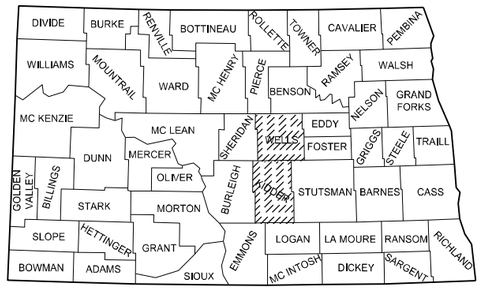
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Kidder County & Wells County
ND 3 Tuttle N to W Jct 200
Grading, Milling, RAP Overlay
Culvert Extensions

GOVERNING SPECIFICATIONS	Date Published and Adopted by the North Dakota Department of Transportation
Standard Specifications	10/1/2020
Supplemental Specifications	NONE

PROJECT NUMBER \ DESCRIPTION	NET MILES	GROSS MILES
NH-1-003(050)113	20.354	21.094





STATE COUNTY MAP

DESIGNER
Kory Kleinknecht
DESIGNER
Mary Boechler
DESIGNER
Jon Iserman

ND DEPARTMENT OF TRANSPORTATION
OFFICE OF PROJECT DEVELOPMENT
Hoff, Kirk J.
03/15/22

Ulteig Engineers, Inc.

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-2774
DATE 12/15/2021
NORTH DAKOTA

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75	1 - 36	Wetland Impacts
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77	1 - 33	Permanent Erosion Control
80	1 - 3	Layouts
81	1 - 6	Survey Coordinate and Curve Data
82	1 - 39	Survey Data Layouts
100	1 - 5	Work Zone Traffic Control
110	1 - 33	Signing
180	1 - 7	Pit Plats and Borrow Areas
200	1 - 621	Cross Sections

SPECIAL PROVISIONS

Number	Description
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56(20)	Cured-In-Place Pipe (CIPP)
PSP 9(20)	Permits and Environmental Considerations
SSP 1	Temporary Erosion and Sediment Best Management Practices
SSP 4	Longitudinal Joint Density
SSP 7	Bitumen Testing Price Adjustments
SSP 9	HMA Acceptance

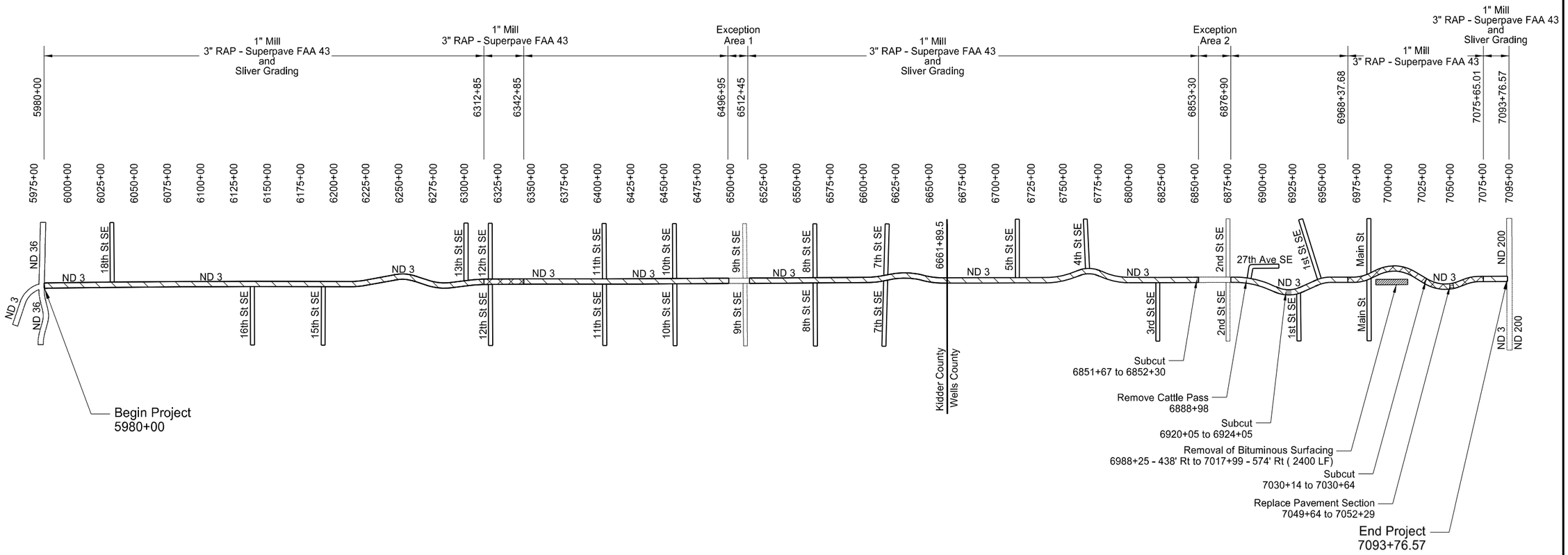
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D-261-1	Erosion Control - Fiber Roll Placement Details
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D-704-5	Contractor Sign Detail
D-704-6	Construction Sign Details - Project Funding Sign
D-704-7	Breakaway Systems For Construction Zone Signs - Perforated Tube
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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-704-24	Shoulder Closures And Bridge Painting Layouts
D-704-26	Miscellaneous Sign Layouts
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D-708-6	Erosion And Siltation Controls - Median Or Ditch Inlet Protection
D-714-1	Reinforced Concrete Pipe Culverts And End Sections (Round Pipe)
D-714-4	Round Corrugated Steel Pipe Culverts And End Sections
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D-752-1	Standard Barbed Wire Fence
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D-762-11	Short-Term Pavement Marking
D-766-1	Mailbox Location Details

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LEGEND

- 1" Mill 3" RAP - Superpave FAA 43 and Sliver Grading
- 1" Mill 3" RAP - Superpave FAA 43
- Subcut / Remove Cattle Pass
- Removal of Bituminous Surfacing
- Replace Pavement Section

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Scope of Work

ND 3
Tuttle N to W Jct 200

5980+00 to 7093+76.57

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NOTES

100-P01 LIMITED ACCESS: The contractor will ensure that no work items commence east of the split rail fence and that the trees east of the fence will not be disturbed during construction located at Sta 6369+40 Rt to 6370+60 Rt.

105-200 UTILITY COORDINATION: A utility coordination meeting is required.

105-P01 UTILITIES: Notify all utility owners of the project schedule as specified in Section 105.03, “Cooperation with Utility Owners”.

Coordinate and perform construction activities in a manner that accommodates the utility coordination requirements included in the Utility Coordination Table.

Protect utilities not listed in the Utility Coordination Table in their existing locations.

Sta		Sta	Appr. Qty	Max Fill (LF)	Max Cut (LF)	Comments	Utility	Offset
6535+55	to	6536+07	52		0.5	Possible conflict with FO Line due to approach lowering	BEK Fiber	Lt
6715+04	to	6715+04	6		2.9	Possible conflict with FO Line due to pipe installation	DAK CENT TEL	Lt
6715+04	to	6715+04	6		1.8	Possible conflict with FO Line due to pipe installation	DAK CENT TEL	Rt
6947+69	to	6947+69	1	0.4		Possible conflict with FO Pedestal due to approach raising	DAK CENT TEL	Lt
6455+98	to	6456+84	85	3.2		Possible conflict with OH Line due approach raising	NTHN PLNS ELEC	Lt
6535+92	to	6535+92	1		0.3	Protect in place PP	NTHN PLNS ELEC	Lt
6741+18	to	6741+29	136	3		Possible conflict with OH Line due approach raising	NTHN PLNS ELEC	Lt
6741+22	to	6741+22	1	3		Possible conflict with PP due approach grading	NTHN PLNS ELEC	Lt

107-P01 MAINTAINING TRAFFIC –DROP-OFFS: 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 B compaction, as specified in 203.04 E.4, “Compaction Control Type B”.

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.

The requirements of Section 704.04 O, “Traffic Control for Uneven Pavement” apply to drop-offs created by milling or the placement of hot mix asphalt.

108-100 WEEKLY PLANNING & REPORTING MEETING: A weekly planning and reporting meeting is required.

202-P01 REMOVAL OF PIPE-ALL TYPES & SIZES: At locations where a portion of metal pipe is removed, vertically cut metal pipe at the removal limit prior to the removal and installing the extension. Include all costs associated with cutting the pipe in the unit price bid for “Removal of Pipe All Types And Sizes.”

202-P02 REMOVAL OF BITUMINOUS SURFACING: The removal of bituminous surfacing includes the removal of aggregate.

203-010 SHRINKAGE: 25 percent additional volume is included for shrinkage in earth embankment.

203-P01 COMPACTION AND DENSITY CONTROL: Compact material for sliver grading as specified in Section 203.04 E.4, Compaction Control, Type B. Compact material for filling at the Cattle Pass removal site location as specified in Section 203.04 E.2, Compaction Control, Type A. Include all costs in the unit price bid for “Common Excavation-Type B”.

203-P02 COMMON EXCAVATION-SUBCUT: Incorporate Common Excavation-Subcut material into sliver grading. Include all costs for subcut, hauling, placing, drying, and compacting material in the unit price bid for “Common Excavation-Subcut.” Engineer will measure Common Excavation-Subcut at plan quantity.



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203-P03 WETLAND EXCAVATION: Excavate at least 6” of the pervious soil materials at the mitigation sites and replace with 6” of clay material. Include all costs for wetland mitigation excavation in the unit bid for “Common Excavation – Type B”.

203-P04 COMMON EXCAVATION-WASTE: Depending on staging of the project, there may be excess material along the backslope that may not need to be removed and wasted at a Contractor furnished waste site. These locations will be approved by the Engineer. The Contractor is responsible for finding the waste sites if needed. Obtain Certification of Approval on all Contractor furnished waste sites in accordance with Section 107.05 of the Standard Specifications.

256-P01 REMOVE AND REPLACE RIPRAP: Remove and relay existing riprap at locations shown in the plans. Include all costs for removing and relaying the existing riprap in the unit price bid for “Remove and Replace Riprap”. Geosynthetic Material Type RR will be paid separately.

261-P01 TEMPORARY EROSION CONTROL WITHIN WETLANDS: Fiber Rolls and Silt Fence have been provided for placement at the back-side of earthen berm at the perimeter of the work area at wetlands. If there is no standing water within the adjacent wetland, immediate temporary seeding and mulching of the earthen berm may replace the fiber roll. If seed/mulch is not immediately applied, fiber rolls or silt fence are required. Fiber rolls will still be required at the weirs within the berm. Temporary seed mix and mulch for this use will be paid for as “Temporary Cover Crop” and “Straw Mulch”.

261-P02 PERMANENT FIBER ROLLS: If fiber rolls are to remain on the project, use fiber rolls that are composed of netting that meets either of the following:

- Plastic or natural fiber photodegradable netting that has a life expectancy between 12 to 24 months. If the photodegradable netting is plastic, the netting color must be either clear or green. Do not use black plastic netting.
- 100 percent biodegradable jute netting that has a life expectancy between 6 to 12 months.

411-P01 MILLED MATERIAL: Stockpile any milled material not used on the project at the State owned pit in Denhoff; located on the north side of ND 200 at RP 234.400. Material must meet a maximum size of 1 ½”, with 90% passing the 1” sieve. Provide the loader and operator to stockpile the milled material. Do not compact stockpiled millings. Do not drive loader onto stockpile. Upon stockpiling at the pit, the material becomes the property of the state. Include the cost of labor, equipment and hauling of pavement millings in the contract unit price for “Milling Pavement Surface”.

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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DATE 03/16/2022
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704-P01 TRAFFIC CONTROL FOR BITUMINOUS PAVEMENT: Provide traffic control consisting of a temporary road closure, flagging, and a pilot car.

Traffic control device quantities are based on a 6 mile limitation and the list below. Provide additional devices at no additional cost to the Department.

1. Standard D-704-2
2. Standard D-704-15, layout A and B
3. Standard D-704-19, layout F
4. Standard D-704-20, layout G
5. Standard D-704-22, layouts K and L
6. Standard D-704-24, layouts R and S
7. Standard D-704-26, layouts BB, CC, EE, GG, and JJ
8. Standard D-704-27
9. Standard D-704-30
10. Standard D-704-56

When installing layout G from Standard D-704-20, move sign W3-5-48 and the sign assembly containing signs R2-1-48 and R2-1aP-24 with the work area as it progresses through the construction zone. Place the R2-1-48 assembly a minimum of 500 feet in advance of flagging signs.

Place flaggers and traffic control devices as shown on Standard D-704-15, layout A at the following intersections when the lane closure spans across them:
1. ND 36
2. ND 200

704-P02 TEMPORARY WIDENING AT CATTLE PASS REMOVAL AND SUBCUTS: Use embankment material to construct temporary widenings at the cattle pass removal location and subcut locations. When temporary widening is no longer required, incorporate material into sliver grading. Include all cost for hauling, placing, and compacting of this material for both uses in the unit price bid for “Common Excavation-Type B”. Payment will be made one time for the double use of this material.

714-P01 REMOVAL OF CATTLE PASS: Include the cost of removing the cattle pass, removing the flared end sections, common excavation, and embankment associated with the cattle pass in the unit price bid for “Removal of Cattle Pass”.

714-P02 PIPE EXTENSION CONNECTIONS: At locations where a portion of metal pipe will be vertically cut, repair damage coatings in accordance to Section 854.02 prior to installing pipe extensions. Include all repair costs in the unit price bid for “Pipe Corr Steel .064IN _IN”.

Install a dimple band to connect the existing pipe that does not have re-rolled ends to the proposed pipe extension. Include all costs associated with the installation in the unit price bid for “Pipe Corr Steel .064IN_IN”

752-P01 TEMPORARY FENCE: Temporary fence will be placed prior to removing the existing fence. The Contractor will supply equipment to provide similar fence and gates for the temporary fence that is similar to the surrounding area as approved by the Engineer.

754-P01 STOP SIGNS – REFLECTIVE STRIPS: Install 2 inch wide red reflective strips on the side of the support that faces the same direction as the stop sign. Begin the strip at the bottom of the sign face and stop the strip 2 feet above the sign support base.

Use reflective material that meets the requirements of Section 894.02 E, “Type XI Retroreflective Sheeting".

Install the strips to all new STOP signs at stations:
- Sta 7094+56 Lt and Rt

Include the cost of furnishing and installing retroreflective strips in the contract unit price for “Steel Galvanized Posts – Telescoping Perforated Tube”

762-200 PERMANENT WATER BASED PAVEMENT MARKING: Replace the first paragraph of 762.04 C.2.a “Method of Application” with the following:

Allow new bituminous treatment to cool to a temperature below 125 °F and cure for a period of 72 hours before applying permanent pavement marking.

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910-P01 PIPE JOINT REPAIR: Repair all joints between pipe sections, except reset pipe joints. Wrap reset pipe joints with Type S2 geosynthetic material. Install external pipe ties at reset pipe joints in accordance with the Standard Drawing D-714-22.

1. Dewater and clean the existing pipe. Remove all unsound mortar, debris, and contaminants to the full depth of the pipe joint. Pressure wash the joints with a high pressure washer.

2. Fill the joints with a concrete repair material that meets the requirements of Section 806.01. Allow the repair material to fully cure prior to performing subsequent work in the area of the repair.

3. Install two adjustable concrete pipe tie bolts at all pipe joint repairs where external pipe tie bolts do not exist or are damaged. Pipe ties shall be designed for internal installation and meet the requirements of Standard Drawing D-714-22. Fill the installation holes in the pipe with an epoxy adhesive resin that conforms to Section 806.02.

Include all costs for labor, materials, equipment, and dewatering in the price bid for “Pipe Joint Repair”.

990-P01 PIPE CLEANOUT: Clean out all centerline and approach pipe designated in the plans for extension before extending or lining them. Pipe cleanout for pipes designated for extension or cured-in-place pipe lining will be measured and paid for as “Pipe Cleanout”.

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DATE 03/16/2022
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ENVIRONMENTAL NOTES

ENVIRONMENTAL NOTES (EN): The 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 AVOIDANCE AREAS: The Project Engineer will contact Jeani Borchert of the Environmental and Transportation Services Division to coordinate any meetings needed to identify the limits of the avoidance areas. The sites are at 32KD78 (approximate Sta. 6289+35 to Sta. 6290+82), 32KD80 (approximate Sta. 6126+52 to Sta. 6127+40). These avoidance areas within the right-of-way must not be disturbed and will be fenced prior to commencement of any construction. Provide the fence and fence posts, install the fence in the location designated in the plans, maintain the fence, and remove the fence upon completion of the project. A quantity of 350 LF of Temporary Safety Fence has been included for this purpose. All costs to provide, place, maintain, and remove the fence shall be included in the price bid for “Temporary Safety Fence”

EN-2 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.

EN-3 WETLAND MITIGATION: Wetland mitigation is required for unavoidable permanent wetland impacts. The wetland mitigation plan is incorporated into the plans for this project. After completion of the mitigation area, the Engineer will complete the Onsite Mitigation Certification Form SFN 61042. Any sedimentation occurring within the mitigation area will be removed.

EN-4 THREATENED AND ENDANGERED SPECIES: The project is located near/within suitable habitat for the species listed in the following table.

SPECIES	HABITAT	PRESENCE
Whooping Crane	Cropland/Wetland Associations	Spring: April 1 - May 15* Fall: September 15 - November 15
Gray Wolf	Forested/Wooded Areas, Open Areas	Year-Round – No known populations, sightings extremely rare

*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).

The NDDOT will request that the utility company install line markers (bird diverters) at a 1:1 ratio (per linear foot) on overhead utility lines to be raised, lowered, and/or moved to reduce the risk of flight collisions. The utility company determines the type, number and placement/spacing of the line markers and may conclude that the placement of line markers is not feasible in certain situations.

REGISTERED PROFESSIONAL ENGINEER
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PE 27746
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NORTH DAKOTA

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Estimated Quantities

SPEC	CODE	ITEM DESCRIPTION	UNIT					TOTAL
103	100	CONTRACT BOND	L SUM	1				1
201	330	CLEARING & GRUBBING	L SUM	1				1
201	370	REMOVAL OF TREES 10IN	EA	5				5
201	380	REMOVAL OF TREES 18IN	EA	3				3
202	132	REMOVAL OF BITUMINOUS SURFACING	SY	11360				11360
202	169	REMOVAL OF END SECTION-ALL TYPES & SIZES	EA	66				66
202	174	REMOVAL OF PIPE ALL TYPES AND SIZES	LF	438				438
202	312	REMOVE EXISTING FENCE	LF	443				443
203	102	COMMON EXCAVATION-TYPE B	CY	271698				271698
203	109	TOPSOIL	CY	147515				147515
203	113	COMMON EXCAVATION-WASTE	CY	13832				13832
203	138	COMMON EXCAVATION-SUBCUT	CY	4074				4074
216	100	WATER	M GAL	3861				3861
230	125	SHOULDER PREPARATION	MILE	5.08				5.08
251	200	SEEDING CLASS II	ACRE	218.75				218.75
251	1000	WETLAND SEED	ACRE	0.12				0.12
251	2000	TEMPORARY COVER CROP	ACRE	218.71				218.71
253	101	STRAW MULCH	ACRE	418.17				418.17
255	101	ECB TYPE 1	SY	93944				93944
255	102	ECB TYPE 2	SY	3620				3620
256	701	REMOVE AND REPLACE RIPRAP	CY	795				795
260	200	SILT FENCE SUPPORTED	LF	15938				15938
260	201	REMOVE SILT FENCE SUPPORTED	LF	15938				15938
261	112	FIBER ROLLS 12IN	LF	100141				100141
261	113	REMOVE FIBER ROLLS 12IN	LF	24160				24160
261	120	FIBER ROLLS 20IN	LF	160				160
261	121	REMOVE FIBER ROLLS 20IN	LF	80				80
262	100	FLOTATION SILT CURTAIN	LF	6200				6200
262	101	REMOVE FLOTATION SILT CURTAIN	LF	6200				6200
302	120	AGGREGATE BASE COURSE CL 5	TON	61589				61589
401	50	TACK COAT	GAL	33996				33996
401	60	PRIME COAT	GAL	25422				25422
401	160	BLOTTER MATERIAL CL 44	TON	545				545
411	105	MILLING PAVEMENT SURFACE	SY	303101				303101
430	143	RAP - SUPERPAVE FAA 43	TON	60711				60711
430	1000	CORED SAMPLE	EA	663				663
430	5803	PG 58S-28 ASPHALT CEMENT	TON	2673				2673
702	100	MOBILIZATION	L SUM	1				1
704	100	FLAGGING	MHR	4000				4000
704	1000	TRAFFIC CONTROL SIGNS	UNIT	4051				4051
704	1048	PORTABLE RUMBLE STRIPS	EA	4				4
704	1052	TYPE III BARRICADE	EA	20				20
704	1060	DELINEATOR DRUMS	EA	107				107
704	1067	TUBULAR MARKERS	EA	396				396
704	1080	STACKABLE VERTICAL PANELS	EA	20				20
704	1185	PILOT CAR	HR	2000				2000
706	500	AGGREGATE LABORATORY	EA	1				1

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	8	2

Estimated Quantities

SPEC	CODE	ITEM DESCRIPTION	UNIT					TOTAL
706	550	BITUMINOUS LABORATORY	EA	1				1
706	600	CONTRACTOR'S LABORATORY	EA	1				1
709	100	GEOSYNTHETIC MATERIAL TYPE G	SY	6681				6681
709	155	GEOSYNTHETIC MATERIAL TYPE RR	SY	1279				1279
714	615	PIPE CONC REINF 24IN CL III	LF	192				192
714	820	PIPE CONC REINF 30IN CL III	LF	228				228
714	905	PIPE CONC REINF 36IN CL III	LF	2				2
714	2518	CURED-IN-PLACE PIPE-18IN	LF	347				347
714	2524	CURED-IN-PLACE PIPE-24IN	LF	156				156
714	2530	CURED-IN-PLACE PIPE-30IN	LF	290				290
714	3020	END SECT-CONC REINF 24IN	EA	6				6
714	3030	END SECT-CONC REINF 30IN	EA	3				3
714	4106	PIPE CONDUIT 24IN-APPROACH	LF	398				398
714	4113	PIPE CONDUIT 30IN-APPROACH	LF	110				110
714	5010	PIPE CORR STEEL .064IN 15IN	LF	60				60
714	5015	PIPE CORR STEEL .064IN 18IN	LF	825				825
714	5035	PIPE CORR STEEL .064IN 24IN	LF	187				187
714	5210	PIPE CORR STEEL .079IN 30IN	LF	6				6
714	5805	END SECT CORR STEEL .064IN 15IN	EA	2				2
714	5810	END SECT CORR STEEL .064IN 18IN	EA	17				17
714	5825	END SECT CORR STEEL .079IN 30IN	EA	2				2
714	6501	END SECT-TRAVERSABLE METAL 18IN	EA	46				46
714	6506	END SECT-TRAVERSABLE METAL 24IN	EA	12				12
714	9200	CATTLE PASS CONC INTERMED SECTION	LF	74				74
714	9602	REMOVAL OF CATTLE PASS	LF	36				36
714	9611	REMOVE & RELAY CONC CATTLE PASS END SECTION	EA	4				4
714	9660	REMOVE & RELAY END SECTION-ALL TYPE & SIZES	EA	58				58
720	110	RIGHT OF WAY MARKERS	EA	126				126
720	125	ALIGNMENT MONUMENTS	EA	74				74
720	130	IRON PIN R/W MONUMENTS	EA	71				71
720	135	IRON PIN REFERENCE MONUMENTS	EA	57				57
752	110	FENCE BARBED WIRE 3 STRAND-STEEL POST	LF	50				50
752	320	FENCE BARBED WIRE 4 STRAND-STEEL POST	LF	288				288
752	905	TEMPORARY FENCE	LF	229				229
752	911	TEMPORARY SAFETY FENCE	LF	350				350
752	930	FENCE RESET EXISTING	LF	52				52
752	993	FENCE TERMINAL	EA	14				14
752	2110	RESET VEHICLE GATE	EA	2				2
752	2120	REMOVE VEHICLE GATE	EA	2				2
752	3150	CORNER ASSEMBLY BARBED WIRE-WOOD POST	EA	2				2
752	4140	DOUBLE BRACE ASSEMBLY BARBED WIRE-WOOD POST	EA	4				4
754	110	FLAT SHEET FOR SIGNS-TYPE XI REFL SHEETING	SF	273				273
754	112	FLAT SHEET FOR SIGNS-TYPE IV REFL SHEETING	SF	172				172
754	150	DELINEATORS-TYPE A	EA	25				25
754	206	STEEL GALV POSTS-TELESCOPING PERFORATED TUBE	LF	1022				1022
754	563	REFERENCE MARKER-TYPE C	EA	19				19
754	592	RESET SIGN PANEL	EA	21				21

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
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Estimated Quantities

SPEC	CODE	ITEM DESCRIPTION	UNIT					TOTAL
754	805	OBJECT MARKERS - CULVERTS	EA	166				166
760	5	RUMBLE STRIPS - ASPHALT SHOULDER	MILE	40.708				40.708
760	7	RUMBLE STRIPS - ASPHALT CENTERLINE	MILE	20.354				20.354
760	10	RUMBLE STRIPS - INTERSECTION	SET	1				1
762	430	SHORT TERM 4IN LINE-TYPE NR	LF	255816				255816
762	1104	PVMT MK PAINTED 4IN LINE	LF	278893				278893
766	100	MAILBOX-ALL TYPES	EA	11				11
910	800	PIPE JOINT REPAIR	EA	2				2
990	400	PIPE CLEANOUT	EA	41				41

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	10	1

BASIS OF ESTIMATE

Shoulder Preparation			
Begin Station	End Station	Location	Quantity (Mile)
6312+85	6342+85	LT & RT	1.14
6968+38	7030+14	LT & RT	2.34
7030+64	7049+64	LT & RT	0.72
7052+29	7075+65	LT & RT	0.88
		Total	**5.08**

Pavement

Milling Pavement Surface @ 2 Ton/CY
Aggregate Base Course CL5 @ 1.875 Ton/CY
Prime Coat @ 0.35 Gal/SY
Blotter Material CL44 @ 15 lbs/SY
Tack Coat @ 0.05 Gal/SY
RAP – Superpave FAA43 @ 2 Ton/CY
– Based on 25% RAP received from milling 1" of existing pavement depth
PG 58S-28 Asphalt Cement @ 4.4%

Remove and Replace Riprap

Based on 2' below water elevation that was surveyed in year 2016
Based on 2' depth

Water

25 MGal/Mile for Dust Palliative
20 Gal/Ton for Aggregates
10 Gal/CY for Embankment

Estimated Available Milled Material Quantities		
Milled Material Available (Sheet)	Milled Area (SY)	Tons (1.875 Ton/CY)
Section 10, Sheet 2	301,129	15,684
Section 20, Sheet 1	1,972	128
Total	**303,101**	**15,812**

Estimated Required & Remaining Milled Material Quantities		
	% RAP by Mix Design	
Milled Material Required for production of RAP - Superpave FAA 43	10% Min	25% Max
(60,887 tons RAP-Superpave FAA 43)	**6,089**	**15,222**
Milled Material to become the property of the NDDOT	**9,723**	**590**

Mailboxes

Station	Type	Work
6003+19 – RT	Single	Replace
6110+99 – LT	Single	Replace
6373+39 – RT	Single	Replace
6485+34 – RT	Single	Replace
6490+18 – RT	Single	Replace
6531+65 – RT	Single	Replace
6561+76 – RT	Single	Replace
6615+15 – RT	Single	Replace
6947+40 – LT	Single	Replace
6954+85 – LT	Double	Replace
6985+97 – LT	Single	Replace

Rumble Strips

Centerline: 5980+00 (RP 113.243) to 6496+95 (RP 123.037) = 9.791 miles
6512+45 (RP 123.330) to 6853+30 (RP 129.787) = 6.456 miles
6876+90 (RP 130.234) to 7093+76.57 (RP 134.249) = 4.107 miles
Total = 20.354 miles
Shoulders: 5980+00 (RP 113.243) to 6496+95 (RP 123.037) = 9.791 miles x 2 sides = 19.582 miles
6512+45 (RP 123.330) to 6853+30 (RP 129.787) = 6.456 miles x 2 sides = 12.912 miles
6876+90 (RP 130.234) to 7093+76.57 (RP 134.249) = 4.107 miles x 2 sides = 8.214 miles
Total = 40.708

Rumble Strips, Intersection

760 0010 Rumble Strips – Intersection = 1 SET (ND 3 & ND 200 intersection)

HMA Cored Samples							
Specification Section	A	B		C	Quantity (A x B x C)	Quantity (1 per mile)	Unit
	Distance (Ft)/1000	Lanes	Joints	Lifts			
430.04 I.2.b(1), "General"	107,467/1,000 = 107	2	N/A	2	428	N/A	EA
SSP 4 Longitudinal Joint Density in HMA Pavements (Centerline)	107,467/1,000 = 107	N/A	1	2	214	N/A	EA
430.04 I.2.b(2), "Pavement Thickness Determination Cores"					N/A	21	EA
				Totals	642	21	EA

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				Stations 5981+00 to 6049+15, 6063+14 to 6131+84		Stations 6049+15 to 6063+14		Stations 6131+84 to 6312+85, 6342+85 to 6496+95, 6512+45 to 6851+67, 6877+90 to 6888+79, 6889+17 to 6920+05, 6924+05 to 6968+37.68, 7075+65.01 to 7092+76.57		Stations 6312+85 to 6342+85, 6968+37.68 to 7030+14, 7030+64 to 7049+64, 7052+29 to 7075+65.01		Cattle Pass Removal Patch 6888+79 to 6889+17	
				Length (ft) =	13,685	Length (ft) =	1,399	Length (ft) =	77,754	Length (ft) =	13,412	Length (ft) =	38
Spec	Code	Material	Unit	Width (ft)	Total Quantity	Width (ft)	Total Quantity	Width (ft)	Total Quantity	Width (ft)	Total Quantity	Width (ft)	Total Quantity
302	0120	Aggregate Base Course CL 5 @ 1.875 Ton/CY	Ton	13.5	4,856.27	13.5	496.45	14	30,399.75			31.7	95.26
401	0050	Tack Coat @ 0.05 Gal/SY (1st Lift)	Gal	24.8	1,929.84	24.8	197.28	24.8	10,964.79	28.8	2,189.44	30.2	6.64
401	0050	Tack Coat @ 0.05 Gal/SY (2nd Lift)	Gal	29.1	2,256.76	29.1	230.71	29.1	12,822.25	29.1	2,211.79	29.1	6.27
401	0060	Prime Coat @ 0.35 Gal/SY	Gal	5.4	2,873.85	5.4	293.79	5.4	16,328.39			31.7	46.85
401	0160	Blotter Material CL 44 @ 15 lbs/SY	Ton	5.4	61.58	5.4	6.30	5.4	349.89			31.7	1.00
411	0105	Milling Pavement Surface	SY	24.8	37,709.78	24.8	3,855.02	24.8	214,256.13	28.8	42,919.46	24.8	104.71
430	0143	RAP - Superpave FAA 43 @ 2 Ton/CY	Ton	28	7,379.76	28	754.42	28	41,929.69	28	7,232.72	28	35.16
430	5803	PG 58S-28 Asphalt Cement @ 4.4%	Ton	28	324.71	28	33.19	28	1,844.91	28	318.24	28	1.55
709	0100	Geosynthetic Material Type G	SY										

				Subcut 6851+67 to 6852+30, 6920+05 to 6924+05		Subcut 7030+14 to 7030+64		Subcut 7049+64 to 7052+29		
				Length (ft) =	463	Length (ft) =	50	Length (ft) =	265	
Spec	Code	Material	Unit	Width (ft)	Total Quantity	Width (ft)	Total Quantity	Width (ft)	Total Quantity	Totals
302	0120	Aggregate Base Course CL 5 @ 1.875 Ton/CY	Ton	31.6	8,958.09	31.6	491.39	31.6	756.72	46,054
401	0050	Tack Coat @ 0.05 Gal/SY (1st Lift)	Gal	30.2	80.90	30.2	8.74	30.2	46.30	15,424
401	0050	Tack Coat @ 0.05 Gal/SY (2nd Lift)	Gal	29.1	76.35	29.1	8.25	29.1	43.70	17,656
401	0060	Prime Coat @ 0.35 Gal/SY	Gal	31.6	568.98	31.6	61.44	31.6	325.66	20,499
401	0160	Blotter Material CL 44 @ 15 lbs/SY	Ton	31.6	12.19	31.6	1.32	31.6	6.98	439
411	0105	Milling Pavement Surface	SY	24.8	1,275.82	28.8	160.00	28.8	848.00	301,129
430	0143	RAP - Superpave FAA 43 @ 2 Ton/CY	Ton	28	426.30	28	46.00	28	243.80	58,048
430	5803	PG 58S-28 Asphalt Cement @ 4.4%	Ton	28	18.76	28	2.02	28	10.73	2,554
709	0100	Geosynthetic Material Type G	SY	77	3,961.22	59	327.78	41.4	1219	5,508

Note: Quantities for transitions from:
5980+00 to 5981+00,
6495+95 to 6496+95,
6512+45 to 6513+45,
6852+30 to 6853+30,
6876+90 to 6877+90,
and 7092+76.57 to 7093+76.57
are shown in the Section 20, Sheet 1 "Milling and Paving End Transitions" Detail

REGISTERED PROFESSIONAL ENGINEER
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PE 27746
DATE 12/15/2021
NORTH DAKOTA

Basis of Estimate

ND 3
Tuttle N to W Jct 200

Pavement Quantities

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
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Centerline Barrier Stripe Locations				
Station	to	Station	Direction	Length (LF)
5980+00	to	5986+10	DBL	610
6071+00	to	6076+10	NB	510
6082+00	to	6083+30	SB	130
6083+30	to	6087+10	DBL	380
6087+10	to	6089+50	NB	240
6094+30	to	6100+50	SB	620
6193+20	to	6197+40	NB	420
6202+60	to	6204+20	NB	160
6204+20	to	6208+30	DBL	410
6208+30	to	6210+60	NB	230
6213+60	to	6221+60	SB	800
6265+90	to	6276+30	NB	1,040
6276+90	to	6287+20	SB	1,030
6360+50	to	6370+30	NB	980
6371+50	to	6381+30	SB	980
6393+20	to	6399+60	NB	640
6404+20	to	6410+60	SB	640
6411+30	to	6416+10	NB	480
6422+30	to	6427+10	SB	480
6444+40	to	6447+00	NB	260
6455+40	to	6458+00	SB	260
6472+40	to	6477+00	NB	460
6483+40	to	6485+00	SB	160
6485+00	to	6487+40	DBL	240
6487+40	to	6488+00	SB	60
6496+00	to	6496+95	SB	095
6535+90	to	6545+00	NB	910
6546+90	to	6555+90	SB	900
6594+40	to	6597+50	NB	310
6605+40	to	6608+50	SB	310
6641+00	to	6650+90	NB	990
6652+00	to	6661+85	SB	985
6664+80	to	6675+80	NB	1,100
6675+80	to	6677+10	DBL	130
6677+10	to	6688+10	SB	1,100
6713+20	to	6720+20	NB	700
6724+20	to	6731+20	SB	700
6736+15	to	6747+15	NB	1,100
6747+15	to	6748+80	DBL	165
6748+80	to	6759+80	SB	1,100
6779+00	to	6790+00	NB	1,100
6790+00	to	6798+60	DBL	860
6798+60	to	6809+60	SB	1,100
6841+40	to	6848+70	NB	730
6852+40	to	6853+30	SB	090
6887+90	to	6898+90	NB	1,100
6898+90	to	6899+20	DBL	30
6899+20	to	6910+20	SB	1,100
6935+90	to	6945+80	NB	990
6946+90	to	6956+80	SB	990
6965+00	to	6973+30	NB	830
6976+00	to	6984+30	SB	830
7050+70	to	7053+80	NB	310
7061+70	to	7062+50	SB	80
7062+50	to	7064+80	DBL	230
7064+80	to	7071+70	NB	690
7073+50	to	7082+70	SB	920
			Total (LF)	**34,795**

Permanent Pavement Marking			
Location - Type	Basis	Quantity	
Centerline – Pvmt MK 4 IN Line 5980+00 to 7093+77	Centerline Skips	26,104	LF
	Barrier Stripe	37,850	LF
Edge Lines – Pvmt MK 4 IN Line	10,560 LF/mile	214,939	LF
	Total	**278,893**	**LF**

Short Term 4IN Line-Type NR			
Location - Type	Basis	Quantity	
Centerline – Top of Milled Surface	Centerline Skips	26,104	LF
	Barrier Stripe	37,850	LF
Centerline – Top of 1st Lift	Centerline Skips	26,104	LF
	Barrier Stripe	37,850	LF
Centerline – Top of 2nd Lift	Centerline Skips	26,104	LF
	Barrier Stripe	37,850	LF
Top of Fogged Centerline Rumble Strip	Centerline Skips	26,104	LF
	Barrier Stripe	37,850	LF
	Total	**255,816**	**LF**

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 12/15/2021
NORTH DAKOTA

Basis of Estimate

ND 3
Tuttle N to W Jct 200

Pavement Marking

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	10	4

SPEC	CODE	BID ITEM	QTY	UNIT
720	0125	ALIGNMENT MONUMENTS	74	EA

Kidder County						
Point	Northing	Easting	Station	Offset	Description	Monument per Standard
8003	538595.59	2101121.96	5984+26.13	0.00	ST	X
201	540670.80	2101087.12	6005+01.63	0.00	1/4 Cor	X
42212	543344.09	2101042.22	6031+75.30	0.00	Sec Cor	X
205	545986.96	2101012.92	6058+18.33	0.00	1/4 Cor	X
5	548629.83	2100983.61	6084+61.36	0.00	Sec Cor	X
249	551286.81	2100959.88	6111+18.45	0.00	1/4 Cor	X
6	553934.66	2100936.23	6137+66.40	0.00	Sec Cor	X
8004	561335.47	2100918.80	6211+67.23	0.00	PC	X
7	561861.45	2100917.56	6216+91.75	24.09	PI	X
269	562335.59	2100828.61	6221+72.69	0.17	Sec line Xing	X
8006	562378.41	2100820.58	6222+16.26	0.00	PT	X
8007	564518.42	2100419.12	6243+93.59	0.00	TS	X
8	565373.87	2100258.63	6252+49.04	-90.45	PI	X
8008	566203.55	2100521.69	6261+04.49	0.00	ST	X
270	566962.21	2100762.23	6269+00.37	0.00	Sec line Xing	X
8009	567159.04	2100824.63	6271+06.86	0.00	PC	X
9	567962.23	2101079.29	6279+36.17	91.83	PI	X
8010	568798.01	2100972.42	6287+65.48	0.00	PT	X
8011	570176.82	2100796.11	6301+55.51	0.00	PC	X
10	570856.03	2100709.26	6308+39.44	-20.44	PI	X
8012	571540.76	2100703.91	6315+23.38	0.00	PT	X
259	572439.04	2100696.89	6324+21.69	0.00	1/4 Cor	X
11	575089.70	2100676.18	6350+72.43	0.00	Sec Cor	X
260	577730.00	2100662.42	6377+12.77	0.00	1/4 Cor	X
12	580370.30	2100648.66	6403+53.10	0.00	Sec Cor	X
261	583015.22	2100623.30	6429+98.14	0.00	1/4 Cor	X
13	585660.14	2100597.94	6456+43.18	0.00	Sec Cor	X
14	588298.77	2100570.82	6482+81.95	0.00	1/4 Cor	X
262	593577.52	2100519.98	6535+60.96	0.00	1/4 Cor	X
80639	596212.77	2100488.59	6561+96.40	0.00	Sec Cor	X
265	598856.47	2100462.94	6588+40.22	0.00	1/4 Cor	X
8013	600081.34	2100451.06	6600+65.15	0.00	PC	X
17	600594.18	2100446.09	6605+76.79	21.72	PI	X
8014	601098.84	2100354.79	6610+88.42	0.00	PT	X
263	601499.45	2100282.32	6614+95.53	0.00	Sec line Xing	X
8015	602047.88	2100183.10	6620+52.86	0.00	PC	X
8016	604133.68	2100230.38	6641+53.40	0.00	PT	X
8017	604498.18	2100313.53	6645+27.27	0.00	PC	X
273	604886.53	2100402.13	6649+24.95	13.83	Sec line Xing	X
19	605143.31	2100460.71	6651+86.05	38.08	PI	X
8018	605805.00	2100456.96	6658+44.84	0.00	PT	X
20	606149.66	2100455.01	6661+89.50	0.00	Sec Cor	X
					TOTAL	42

Wells County						
Point	Northing	Easting	Station	Offset	Description	Monument per Standard
280	122482.01	2100366.39	6688+29.17	0.00	1/4 Cor	X
21	125121.64	2100351.08	6714+68.85	0.00	Sec Cor	X
8019	127292.58	2100336.11	6736+39.84	0.00	PC	X
8020	129309.05	2099954.66	6757+03.20	0.00	PT	X
8021	129624.05	2099833.56	6760+40.69	0.00	TS	X
299	130399.68	2099535.39	6768+49.13	-104.85	Sec line Xing	X
8022	131373.27	2099834.94	6778+45.75	0.00	ST	X
8023	131753.88	2099981.94	6782+53.76	0.00	PC	X
8024	133492.84	2100302.59	6800+32.30	0.00	PT	X
25	135693.40	2100294.01	6822+32.88	0.00	Sec Cor	X
284	138332.29	2100272.26	6848+71.85	0.00	1/4 Cor	X
8025	141518.76	2100248.18	6880+58.42	0.00	PC	X
8026	143943.92	2100717.04	6905+44.26	0.00	PT	X
8027	144483.19	2100936.33	6911+26.40	0.00	TS	X
301	146281.43	2101067.26	6929+69.24	14.34	Sec line Xing	X
8028	146671.64	2100888.22	6933+97.55	0.00	ST	X
8029	147439.36	2100535.97	6942+42.23	0.00	TS	X
8030	148902.96	2100211.41	6957+56.64	0.00	ST	X
287	148922.05	2100211.29	6957+75.73	0.00	1/4 Cor	X
8031	150424.82	2100201.86	6972+78.54	0.00	PC	X
30	151074.84	2100197.78	6979+17.75	72.82	PI	X
302	151571.51	2099956.31	6984+59.22	1.67	Twp line Xing	X
8032	151659.45	2099913.55	6985+56.96	0.00	PT	X
8033	152218.39	2099641.80	6991+78.46	0.00	PC	X
8034	154941.38	2099759.56	7020+18.92	0.00	PT	X
304	155607.15	2100157.72	7027+94.67	0.00	Sec line Xing	X
8035	155837.40	2100295.42	7030+62.95	0.00	PC	X
305	156859.30	2100906.55	7041+91.42	237.60	Sec line Xing	X
8036	158350.90	2100504.88	7056+74.68	0.00	PT	X
8037	158835.70	2100315.34	7061+95.21	0.00	PC	X
33	159326.06	2100123.63	7067+15.91	-47.98	PI	X
8038	159852.55	2100118.80	7072+36.60	0.00	PT	X
					TOTAL	32

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Note:
1. Station and offsets based on Alignment SCL3

2. See Standard Drawing D-720-1 for additional information

Alignment Monuments

ND 3
Tuttle N to W Jct 200

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	10	5

Point	Northing	Easting	Station	Offset	Iron Pin R/W Monument	R/W Marker (witness post)	Iron Pin Reference Monument
6132	538247.97	2101036.55	5980+87.31	-100.00	X	X	
6018	538687.38	2101045.41	5985+19.19	-75.00	X	X	
6016	538686.96	2101020.42	5985+19.19	-100.00	X	X	
6017	538690.32	2101220.39	5985+19.19	100.00	X	X	
6019	538689.90	2101195.39	5985+19.19	75.00	X	X	
6020	543267.84	2100968.49	6031+00.30	-75.00		X	X
6141	543286.95	2100933.17	6031+20.00	-110.00	X	X	
6145	543287.54	2100968.16	6031+20.00	-75.00	X	X	
6142	543312.47	2100932.74	6031+45.52	-110.00	X	X	
6139	543420.78	2101116.38	6032+51.16	75.00		X	X
6022	544229.70	2100957.40	6040+61.80	-75.00	X		
6024	544231.37	2101107.39	6040+61.80	75.00	X		
6025	544231.65	2101132.39	6040+61.80	100.00	X		
6147	545986.13	2100937.92	6058+18.33	-75.00		X	X
6148	545987.79	2101087.91	6058+18.33	75.00		X	X
6030	546629.56	2100930.79	6064+61.80	-75.00	X	X	
6038	548554.00	2100909.45	6083+86.36	-75.00		X	X
6149	548705.82	2101057.94	6085+36.68	75.00		X	X
6151	551286.14	2100884.88	6111+18.45	-75.00		X	X
6043	553840.18	2101032.41	6136+71.07	95.33		X	X
6041	554042.96	2100825.98	6138+74.96	-110.00		X	X
6160	562314.36	2100715.42	6221+71.80	-115.00		X	X
6159	562356.77	2100941.48	6221+73.55	115.00		X	X
6054	562396.85	2100918.86	6222+16.26	100.00		X	
6056	564260.52	2100650.64	6240+97.43	180.00	X	X	
6167	566922.92	2100886.15	6269+00.37	130.00		X	X
6168	567000.67	2100640.92	6269+00.37	-127.25		X	X
6067	568785.32	2100873.23	6287+65.48	-100.00	X		
6078	574970.65	2100797.12	6349+52.43	120.00		X	X
6077	574988.93	2100576.97	6349+72.43	-100.00			X
6177	575188.66	2100575.67	6351+71.91	-100.00		X	X
6080	577057.40	2100765.93	6370+39.63	100.00	X	X (50' Bk)	
6178	577729.48	2100562.42	6377+12.77	-100.00		X	X
6179	577730.52	2100762.42	6377+12.77	100.00		X	X
6084	580270.82	2100749.18	6402+53.10	100.00		X	X
6181	580470.21	2100547.69	6404+53.98	-100.00		X	X
6182	583014.26	2100523.30	6429+98.14	-100.00		X	X
6087	585561.10	2100698.90	6455+43.18	100.00		X	X
6191	585597.92	2100698.54	6455+80.00	100.00	X	X	
6192	585598.30	2100738.54	6455+80.00	140.00	X	X	
6193	585627.21	2100738.26	6456+08.91	140.00	X	X	
6194	585693.20	2100712.61	6456+75.06	115.00	X	X	
6195	585713.14	2100712.40	6456+95.00	115.00	X	X	
6196	585712.78	2100677.40	6456+95.00	80.00	X	X	
6086	585759.24	2100496.92	6457+43.32	-100.00		X	X
6092	587215.88	2100681.95	6471+97.98	100.00	X		
6094	588299.65	2100670.81	6482+81.80	100.00	X	X	
6093	588297.89	2100470.82	Off Chain	---	X	X	
6095	589004.38	2100665.63	6489+86.85	100.00	X	X	

Point	Northing	Easting	Station	Offset	Iron Pin R/W Monument	R/W Marker (witness post)	Iron Pin Reference Monument
6096	589004.60	2100695.63	6489+86.85	130.00	X	X (50' Ahd)	
6097	589515.59	2100691.87	6494+97.85	130.00	X		
6215	593578.71	2100619.97	6535+60.96	100.00		X	X
6213	593576.33	2100419.99	6535+60.96	-100.00		X (50' Bk)	X
6104	594263.04	2100411.81	6542+47.72	-100.00	X		
6105	594262.45	2100361.81	6542+47.72	-150.00	X	X	
6108	596113.97	2100589.77	6560+96.40	100.00		X	X
6217	596311.35	2100387.63	6562+95.95	-100.00		X	X
6218	598855.50	2100362.95	6588+40.22	-100.00		X	X
6219	598857.44	2100562.94	6588+40.22	100.00		X	X
6223	601368.18	2100471.58	6613+32.66	162.87		X	X
6220	601383.26	2100201.72	6613+95.54	-100.00		X	X
6224	601561.01	2100372.80	6615+40.00	100.00	X	X	
6225	601566.59	2100403.61	6615+40.00	131.31	X	X	
6221	601580.06	2100166.11	6615+95.54	-100.00		X	X
6222	601615.66	2100362.92	6615+95.54	100.00		X	X
6120	604162.59	2100103.63	6641+53.40	-130.00	X	X	
6121	604104.76	2100357.12	6641+53.40	130.00	X	X	
6229	604860.63	2100515.66	6649+17.06	130.00		X	X
6228	604918.60	2100261.55	6649+35.18	-130.00		X	X
6125	605805.74	2100586.96	6658+44.84	130.00	X	X	
				TOTAL	34	62	35

Note:
1. Station and offsets based on Alignment SCL3

2. See Standard Drawing D-720-1 for additional information

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 12/15/2021
NORTH DAKOTA

R/W Pins and Monuments

ND 3
Tuttle N to W Jct 200

Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	10	6

Point	Northing	Easting	Station	Offset	Iron Pin R/W Monument	R/W Marker (witness post)	Iron Pin Reference Monument
6127	119961.68	2100261.00	6663+09.50	-120.00		X	X
6277	122481.43	2100266.39	6688+29.17	-100.00		X	X
6278	122482.59	2100466.39	6688+29.17	100.00		X	X
6138	123747.87	2100239.05	6700+95.75	-120.00	X	X	
6139	123747.98	2100259.05	6700+95.75	-100.00	X	X	
6324	125052.09	2100231.49	6714+00.00	-120.00	X	X	
6325	125088.03	2100231.28	6714+35.94	-120.00	X	X	
6150	127742.70	2100214.91	6740+99.29	-100.00	X	X (50' Bk)	
6151	127738.35	2100165.10	6740+99.29	-150.00	X	X	
6280	127764.83	2100413.74	6741+03.96	100.00		X	X
6279	127763.10	2100162.89	6741+24.81	-150.00		X	X
6153	129077.26	2099900.78	6755+01.57	-130.00		X	
6154	129262.40	2099833.32	6757+03.20	-130.00		X	
6282	130365.86	2099447.42	6768+22.34	-194.56		X	X
6281	130477.56	2099737.98	6769+20.87	100.00		X	X
6164	131800.72	2099860.67	6782+53.76	-130.00	X	X	
6166	132587.02	2100087.11	6790+96.01	-130.00		X	
6283	133049.68	2100183.31	6795+79.46	-100.00		X	X
6284	133050.46	2100384.18	6795+98.09	100.00		X	X
6169	133457.43	2100162.60	6799+96.38	-140.00		X	
6170	133492.29	2100162.59	6800+32.30	-140.00	X	X	
6173	134356.69	2100199.22	6808+96.55	-100.00		X	
6285	134461.42	2100198.81	6810+01.27	-100.00	X	X	
6286	134460.09	2099859.09	6810+01.27	-439.73	X	X	
6291	134510.20	2099888.35	6810+51.27	-410.27	X	X	
6292	134511.42	2100198.62	6810+51.27	-100.00	X	X	
6287	134727.88	2099709.28	6812+69.65	-588.49	X	X	
6290	134766.05	2099745.22	6813+07.67	-552.40	X	X	
6288	134844.04	2099468.75	6813+86.74	-828.57	X	X	
6289	134889.06	2099490.49	6814+31.68	-806.65	X	X	
6356	135635.91	2100394.23	6821+75.00	100.00	X	X	
6357	135636.01	2100419.23	6821+75.00	125.00	X	X	
6358	135661.61	2100419.13	6822+00.60	125.00	X	X	
6363	135727.61	2100418.73	6822+66.06	125.00	X	X	
6364	135746.55	2100418.58	6822+85.00	125.00	X	X	
6365	135746.34	2100393.58	6822+85.00	100.00	X	X	
6294	135793.35	2100393.19	6823+32.01	100.00		X	X
6175	135793.44	2100193.18	6823+33.75	-100.00		X	X
6177	136458.41	2100407.71	6829+96.93	120.00		X	
6178	137058.51	2100402.76	6835+97.05	120.00		X	
6180	138056.87	2100174.53	6845+97.25	-100.00	X		
6183	138058.93	2100424.52	6845+97.25	150.00	X	X	
6295	138331.21	2100142.26	6848+71.85	-130.00		X	X
6296	138333.52	2100422.26	6848+71.85	150.00		X	X
6192	141518.33	2100148.18	6880+58.42	-100.00	X		
6193	141519.31	2100378.18	6880+58.42	130.00		X	
6194	141851.55	2100385.62	6883+97.71	130.00	X	X	
6199	144445.52	2101028.96	6911+26.40	100.00	X		
6203	145938.76	2101273.52	6925+97.53	130.00		X	

Point	Northing	Easting	Station	Offset	Iron Pin R/W Monument	R/W Marker (witness post)	Iron Pin Reference Monument
6382	146316.02	2101188.23	6929+63.06	140.00	X	X	
6302	146334.08	2101182.01	6929+81.07	140.00		X	X
6383	146372.93	2101168.08	6930+20.00	140.00	X	X	
6384	146359.12	2101130.54	6930+20.00	100.00	X	X	
6211	147393.49	2100435.99	6942+42.23	-110.00	X		
6388	147781.40	2100251.46	6946+60.00	-130.34	X	X	
6389	147788.12	2100270.65	6946+60.00	-110.00	X	X	
6221	148650.54	2100291.19	6955+00.84	75.00	X	X (50' Bk)	
6222	148650.10	2100281.20	6955+00.84	65.00	X	X (50' Ahd)	
6224	148903.37	2100276.41	6957+56.64	65.00	X	X	
6225	148903.43	2100286.41	6957+56.64	75.00	X	X	
6303	148921.42	2100111.30	6957+75.73	-100.00		X	X
6304	148922.52	2100286.29	6957+75.73	75.00		X	X
6305	151516.09	2099842.32	6984+54.69	-125.00		X	X
6306	151735.28	2100293.17	6984+70.51	376.04		X	X
6307	155667.29	2100057.17	7027+94.67	-117.16		X	X
6308	155540.43	2100269.29	7027+94.67	130.00		X	X
6309	159502.19	2100244.45	7068+71.40	100.00		X	X
6310	159500.15	2100022.03	7068+98.54	-120.76		X	X
				TOTAL	37	64	22

SPEC	CODE	BID ITEM	QTY	UNIT
720	0110	RIGHT OF WAY MARKERS	126	EA
720	0130	IRON PIN R/W MONUMENTS	71	EA
720	0135	IRON PIN REFERENCE MONUMENTS	57	EA

Note:
1. Station and offsets based on Alignment SCL3

2. See Standard Drawing D-720-1 for additional information

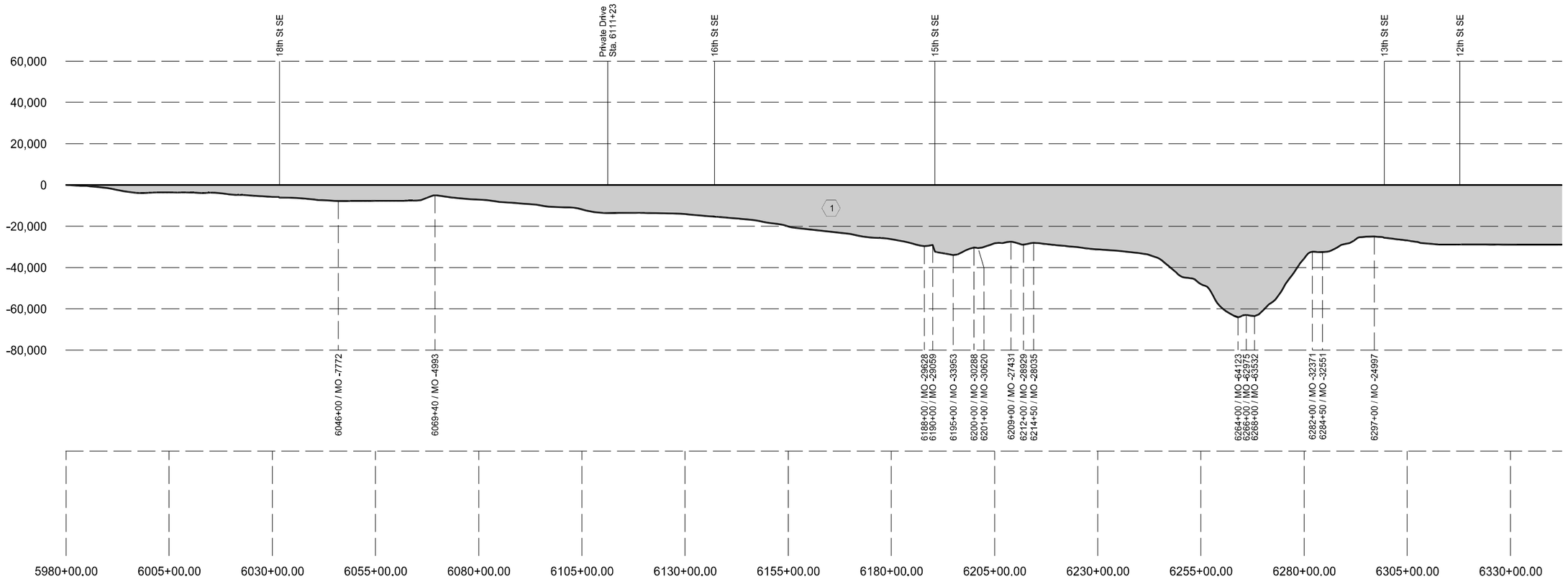
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 12/15/2021
NORTH DAKOTA

R/W Pins and Monuments

ND 3
Tuttle N to W Jct 200

Wells County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	11	1



Balance #	Average Haul Distance	Common Excavation	Embankment	Adjusted Embankment
	Sta	CY	CY	CY
	K	L	M	N=M*1.25
1	124.5	178,909	143,429	179,287
2	63.4	67,936	54,030	67,538
3	5.4	2,237	2,250	2,813
4	6.6	3,106	1,969	2,461
5	82.2	6,137	5,408	6,760
6	44.5	17,447	2,465	3,081
Project Total	99.6	275,772	209,551	261,940

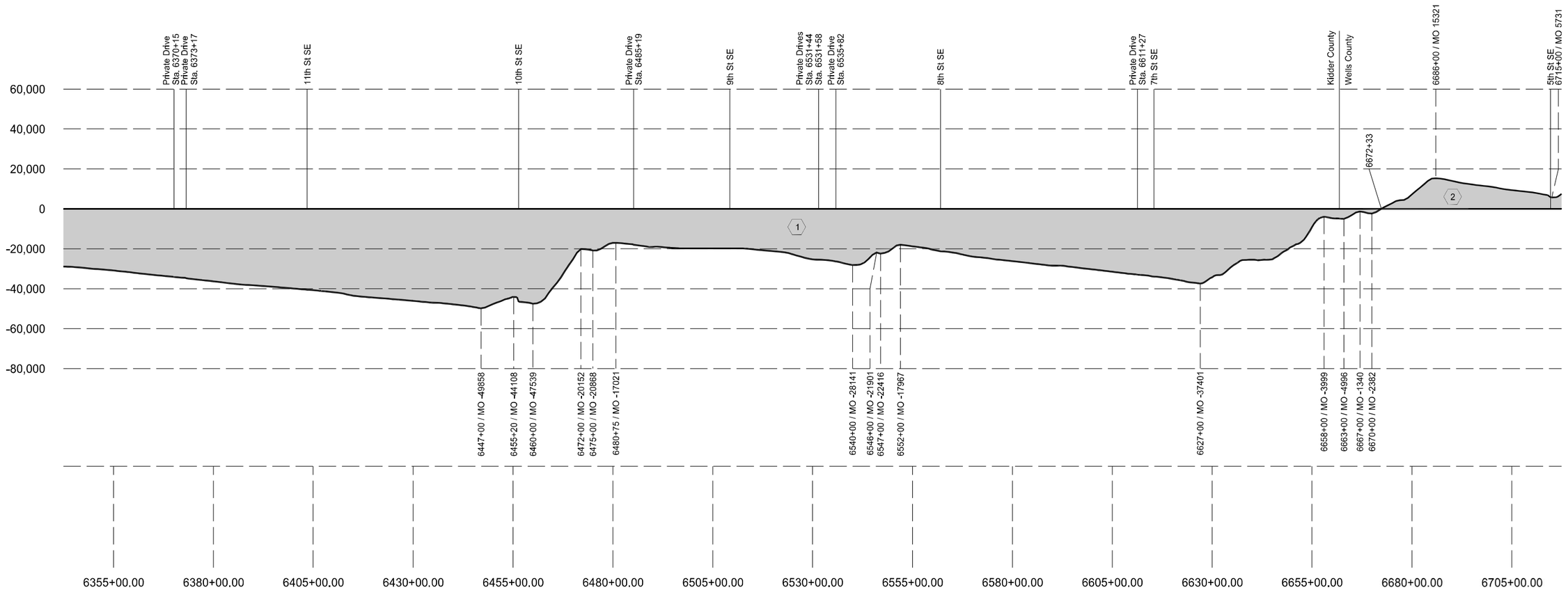
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 12/15/2021
NORTH DAKOTA

Mass Diagram

ND 3
Tuttle N to W Jct 200

5980+00 to 6342+50

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	11	2



Balance #	Average Haul Distance	Common Excavation	Embankment	Adjusted Embankment
	Sta	CY	CY	CY
	K	L	M	N=M*1.25
1	124.5	178,909	143,429	179,287
2	63.4	67,936	54,030	67,538
3	5.4	2,237	2,250	2,813
4	6.6	3,106	1,969	2,461
5	82.2	6,137	5,408	6,760
6	44.5	17,447	2,465	3,081
Project Total	99.6	275,772	209,551	261,940

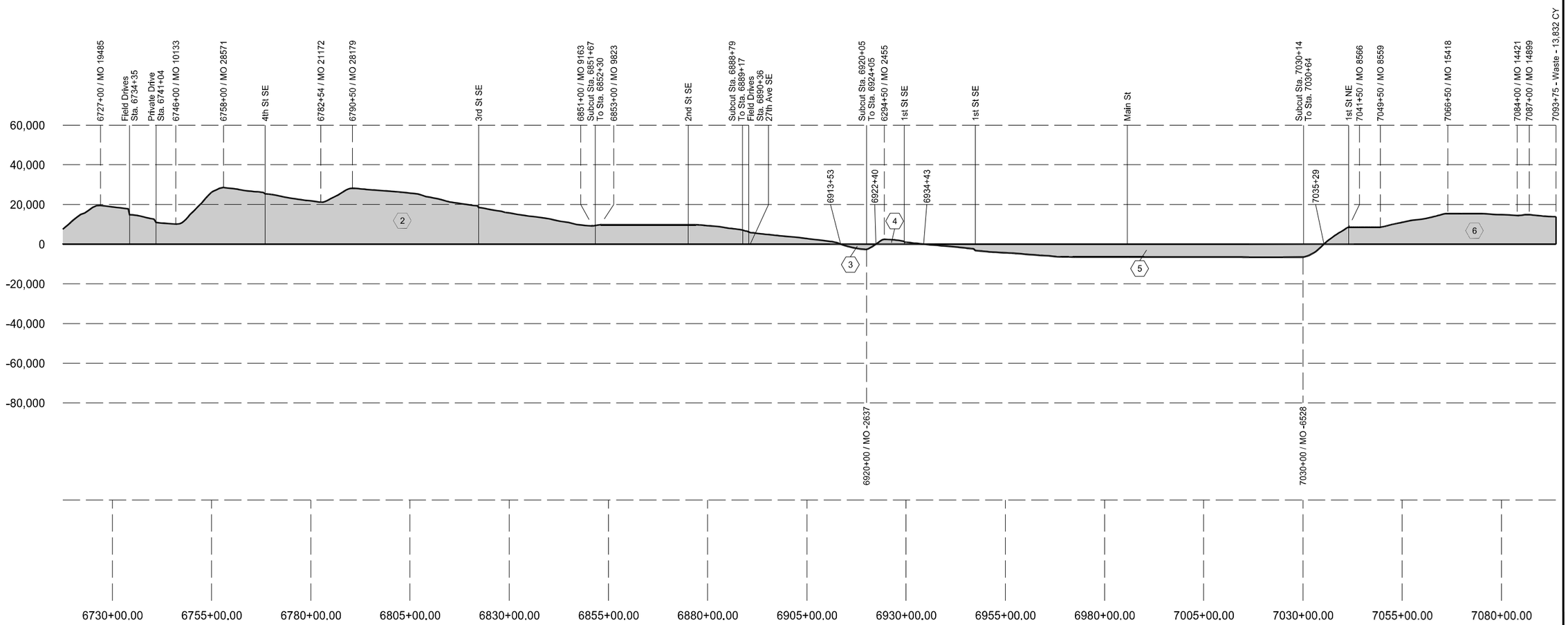
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 12/15/2021
NORTH DAKOTA

Mass Diagram

ND 3
Tuttle N to W Jct 200

6342+50 to 6717+50

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	11	3



Balance #	Average Haul Distance	Common Excavation	Embankment	Adjusted Embankment
	Sta	CY	CY	CY
	K	L	M	N=M*1.25
1	124.5	178,909	143,429	179,287
2	63.4	67,936	54,030	67,538
3	5.4	2,237	2,250	2,813
4	6.6	3,106	1,969	2,461
5	82.2	6,137	5,408	6,760
6	44.5	17,447	2,465	3,081
Project Total	99.6	275,772	209,551	261,940

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 12/15/2021
NORTH DAKOTA

Mass Diagram

ND 3
Tuttle N to W Jct 200

6717+50 to 7093+75

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	11	4

Location	Earthwork Summary					
	Common Excavation Type B (Pay Item)	Common Excavation - Subcut (Pay Item)	Embankment Volume	Common Compacted Volume	Common Excavation - Waste (Pay Item)	Topsoil (Pay Item)
	CY	CY	CY	CY	CY	CY
	J	K	L	M=L * 1.25	N=J+K-M	O
Mainline ND 3	271,515	4,074	195,545	244,432	31,157	147,515
18th St SE - West	0	-	290	363	-363	-
Private Drive - Sta. 6111+23 - West	13	-	26	33	-20	-
16th St SE - East	4	-	87	109	-105	-
15th St SE - East	0	-	2785	3,481	-3,481	-
13th St SE - West	0	-	259	324	-324	-
Private Drive - Sta. 6370+15 - East	3	-	73	92	-89	-
Private Drive - Sta. 6373+17 - East	12	-	192	240	-228	-
11th St SE - East	0	-	129	161	-161	-
11th St SE - West	19	-	49	61	-42	-
10th St SE - East	0	-	615	769	-769	-
10th St SE - West	0	-	1145	1,431	-1,431	-
Private Drive - Sta. 6485+19 - East	0	-	188	235	-235	-
Private Drive - Sta. 6531+44 - East	50	-	27	34	16	-
Private Drive - Sta. 6531+58 - West	31	-	31	39	-8	-
Private Drive - Sta. 6535+82 - West	20	-	105	131	-111	-
8th St SE - East	0	-	128	160	-160	-
8th St SE - West	11	-	140	175	-164	-
Private Drive - Sta. 6611+27 - East	1	-	121	151	-150	-
7th St SE - East	0	-	255	319	-319	-
7th St SE - West	7	-	113	141	-134	-
5th St SE - West	0	-	745	931	-931	-
Field Drive - Sta. 6734+35 - East	0	-	373	466	-466	-
Field Drive - Sta. 6734+35 - West	0	-	1997	2,496	-2,496	-
Private Drive - Sta. 6741+04 - West	0	-	1307	1,634	-1,634	-
4th St SE - East	0	-	403	504	-504	-
4th St SE - West	4	-	185	231	-227	-
3rd St SE - East	0	-	672	840	-840	-
Field Drive - Sta. 6890+36 - East	2	-	297	371	-369	-
27th Ave SE - West	6	-	248	310	-304	-
1st St SE - East	0	-	335	419	-419	-
1st St SE - West	0	-	686	857	-857	-
Totals=	271,698	4,074	209,551	261,940	13,832	147,515

Wetland Mitigation Location	Wetland Excavation
	CY
Sta. 6013+48 to Sta. 6015+11 Lt	289
Sta. 6021+53 to Sta. 6022+76 Lt	145
Total*	434

*The total for wetland excavation is included in the ND 3 quantities and paid for under the bid item "Common Excavation-Type C"

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 12/15/2021
NORTH DAKOTA

Earthwork Summary

ND 3
Tuttle N to W Jct 200

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	11	5

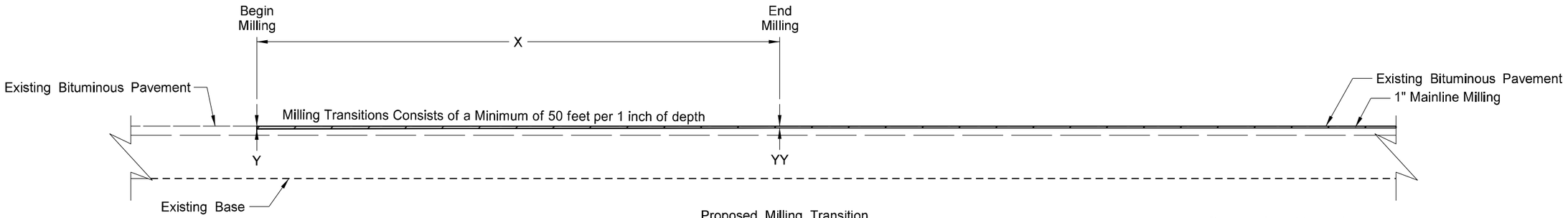
Common Excavation-Subcut				
Station		Length	Average Area	Volume
From	To	(lf)	(sf)	(CY)
6851+67	6852+30	63	198	462
6920+05	6924+05	400	233	3,452
7030+14	7030+64	50	86	160
				4,074

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 12/15/2021
NORTH DAKOTA

Common Excavation-Subcut

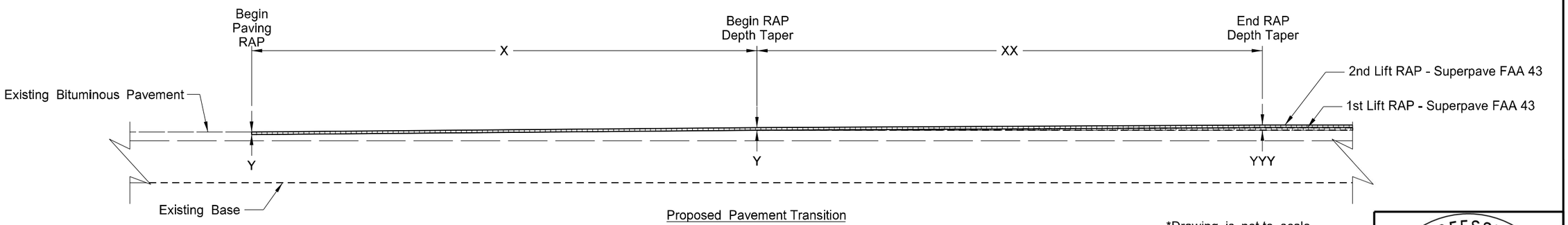
ND 3
Tuttle N to W Jct 200

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	20	1



Proposed Milling Transition

*Drawing is not to scale



Proposed Pavement Transition

*Drawing is not to scale

Milling and Paving Transitions

Location	X	Begin Milling/Paving Station	Y	YY	End Milling Station	XX	YYY	End RAP Depth Taper Station	Mill (SY)	Tack (Gal)	RAP (Ton)	AC (Ton)
Beginning of Project	25 ft	5980+00	1.5 in	1 in	5980+25	75 ft	3.0 in	5981+00	362	31	37	2
Beginning of Exception Area 1	25 ft	6496+95	1.5 in	1 in	6496+70	75 ft	3.0 in	6495+95	305	28	35	2
End of Excepion Area 1	25 ft	6512+45	1.5 in	1 in	6512+70	75 ft	3.0 in	6513+45	300	28	35	2
Beginning of Exception Area 2	25 ft	6853+30	1.5 in	1 in	6853+05	75 ft	3.0 in	6852+30	317	28	35	2
End of Excepion Area 2	25 ft	6876+90	1.5 in	1 in	6877+15	75 ft	3.0 in	6877+90	314	28	35	2
End of Project	25 ft	7093+76.57	1.5 in	1 in	7093+51.57	75 ft	3.0 in	7092+76.57	374	31	37	2
								Total	1972	174	214	12

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 03/16/2022
NORTH DAKOTA

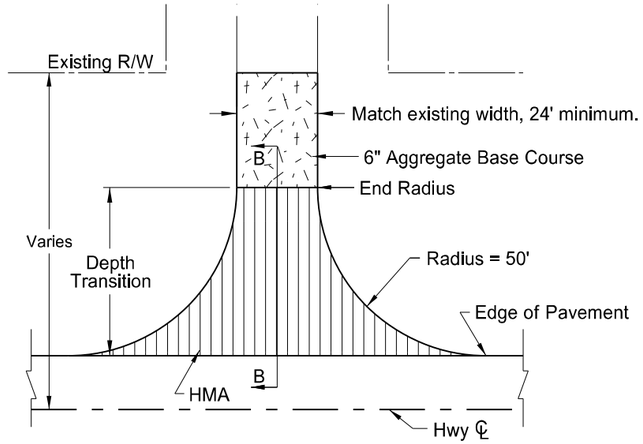
Details

ND 3
Tuttle N to W Jct 200

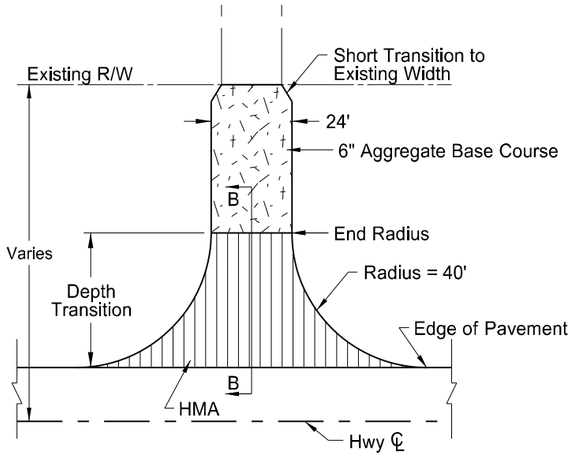
Milling and Paving End Transitions

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	20	2

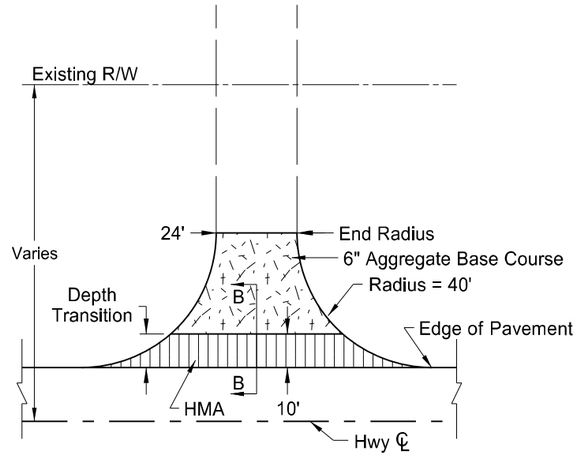
Approach Type			
(1)	(2)	(3)	
6031+82 LT	6003+03 RT	5985+88 LT	6480+76 LT
6137+12 RT	6033+13 RT	5985+99 RT	6524+90 LT
6190+55 RT	6069+41 RT	5991+62 LT	6546+63 RT
6299+43 LT	6111+23 LT	6031+73 RT	6574+99 LT
6403+53 RT	6370+15 RT	6040+88 RT	6574+99 RT
6403+53 LT	6373+17 RT	6078+97 RT	6637+97 RT
6456+41 RT	6485+19 RT	6084+57 LT	6638+03 LT
6456+42 LT	6490+02 RT	6084+60 RT	6651+21 LT
6561+99 LT	6490+62 LT	6110+92 RT	6662+00 LT
6562+00 RT	6531+44 RT	6119+32 RT	6662+01 RT
6615+04 RT	6531+58 LT	6137+67 LT	6676+98 LT
6615+42 LT	6535+82 LT	6151+70 LT	6694+94 LT
6714+71 LT	6611+27 RT	6177+31 RT	6708+73 LT
6768+50 LT	6688+22 RT	6177+41 LT	6714+69 RT
6822+31 RT	6741+04 LT	6190+88 LT	6722+51 LT
6890+73 LT	6820+97 LT	6200+61 LT	6734+35 RT
6929+57 RT	6954+92 RT	6229+96 RT	6734+35 LT
6947+41 LT		6264+67 RT	6746+41 RT
		6293+45 RT	6758+10 LT
		6295+84 LT	6768+44 RT
		6307+98 RT	6791+96 RT
		6350+71 RT	6792+03 LT
		6350+76 LT	6807+93 RT
		6373+24 LT	6807+96 LT
		6406+90 LT	6822+32 LT
		6419+45 RT	6828+92 RT
		6435+35 RT	6849+88 LT
		6435+37 LT	6890+36 RT
		6446+43 LT	6908+99 RT
		6451+42 RT	6947+47 RT
		6459+58 RT	6954+99 LT
		6459+65 LT	7092+27 LT



(1) Gravel Section Line, County Road, or Street Approach



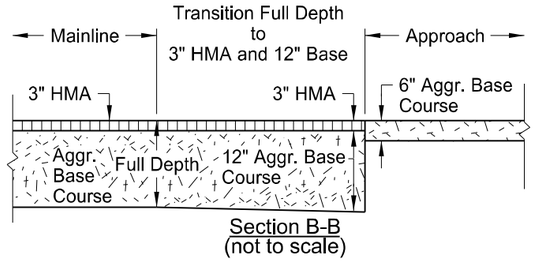
(2) Gravel Private Drive Approach



(3) Field Drive Approach

Notes:

1. Actual HMA paving and aggregate base course locations may vary in the field, as approved by the Engineer.
2. Quantity totals have been included in the bid items of the "Estimate of Quantities" of the plans.



Section B-B
(not to scale)

Basis of Estimate				(1)		(2)		(3)		Totals
Spec	Code	Item	Unit	Gravel Section Line		Gravel Private Drive		Field Drive		
		Number of Locations	#	18		17		64		
				Total	Average	Total	Average	Total	Average	
302	0120	Aggregate Base Course CL 5 @ 1.875 Ton/CY	TON	4819	267.7	3556	209.2	7092	110.8	15467
401	0050	Tack Coat @ 0.05 Gal/SY	GAL	232	12.9	169	9.9	260	4.1	661
401	0060	Prime Coat @ 0.35 Gal/SY	GAL	1706	94.8	1201	70.6	2016	31.5	4923
401	0160	Blotter Material CL 44 @ 15 lbs/SY	TON	37	2.1	26	1.5	43	0.7	106
430	143	Superpave RAP - FAA 43 @ 2 Ton/CY	TON	780	43.3	549	32.3	909	14.2	2238
430	5803	PG 58S-28 Asphalt Cement @ 4.4%	TON	34	1.9	24	1.4	40	0.6	98

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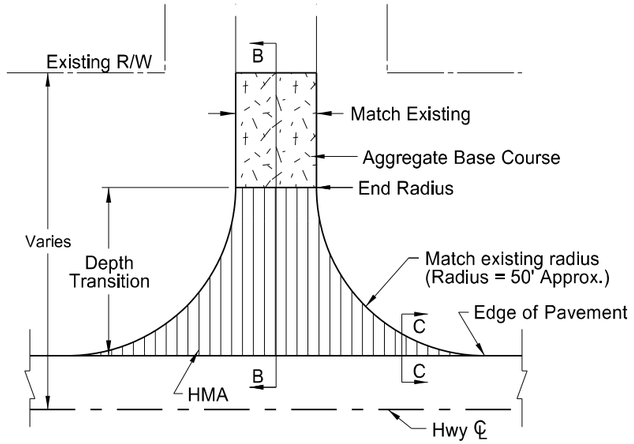
Details

ND 3
Tuttle N to W Jct 200

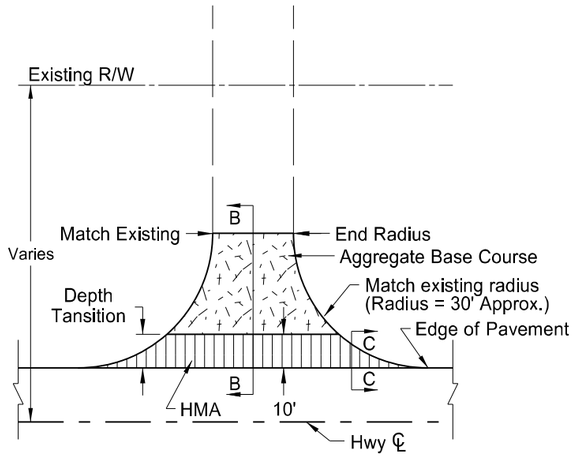
Approach Paving Details for
Regrading Rural Approaches (Approach Grading)

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	20	3

Approach Type	
(4)	(5)
6317+72 RT	6341+69 LT
6317+77 LT	6341+69 RT
6985+77 LT	6971+97 LT
6985+77 RT	6971+97 RT
	7024+10 RT
	7024+11 LT
	7041+52 LT
	7041+56 RT
	7069+68 RT
	7069+75 LT



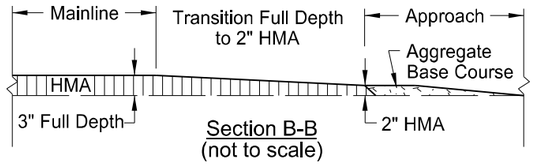
(4) Gravel Section Line, County Road, or Street Approach



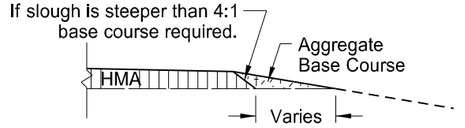
(5) Field Drive Approach

Notes:

1. Actual HMA paving and aggregate base course locations may vary in the field, as approved by the Engineer.
2. Quantity totals have been included in the bid items of the "Estimate of Quantities" of the plans.
3. Aggregate base course has been provided in the quantities to fill in around the radii. This material will be required when sloughs are steeper than 4:1 (see section C-C)



Section B-B
(not to scale)



Section C-C
(not to scale)

Basis of Estimate				(4) Gravel Section Line		(5) Field Drive		Totals
Number of Locations				4		10		
Spec	Code	Item	Unit	Total	Average	Total	Average	
302	0120	Aggregate Base Course CL 5 @ 1.875 Ton/CY	TON	30	7.5	38	3.8	68
401	0050	Tack Coat @ 0.05 Gal/SY	GAL	47	11.8	34	3.4	81
430	0143	RAP - Superpave FAA 43 @ 2 Ton/CY	TON	124	31	87	8.7	211
430	5803	PG 58S-28 Asphalt Cement @ 4.4%	TON	5	1.3	4	0.4	9

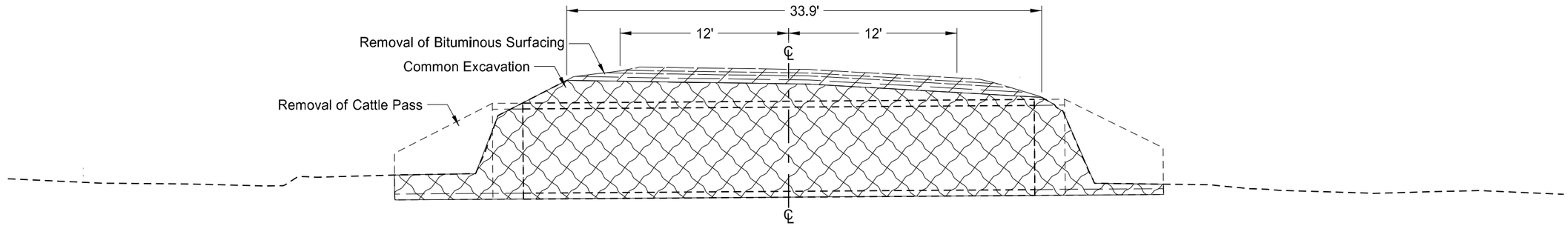


Details

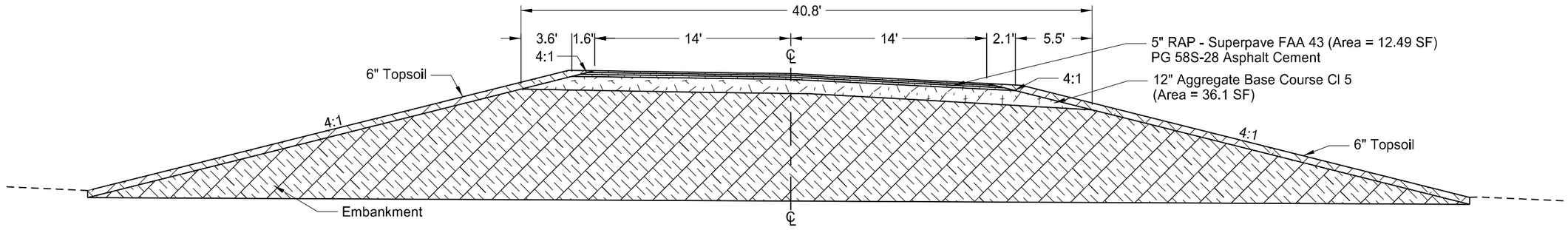
ND 3
Tuttle N to W Jct 200

Approach Paving Details for
Existing Rural Approaches (No Approach Grading)

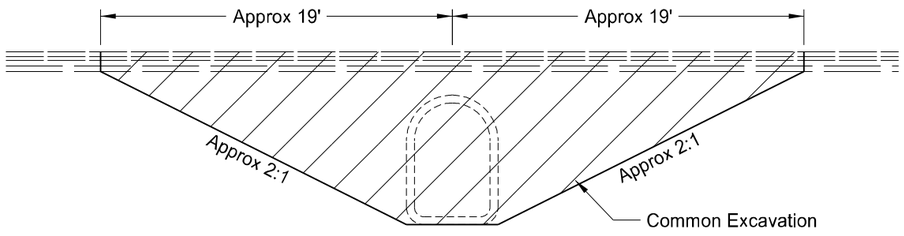
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	20	4



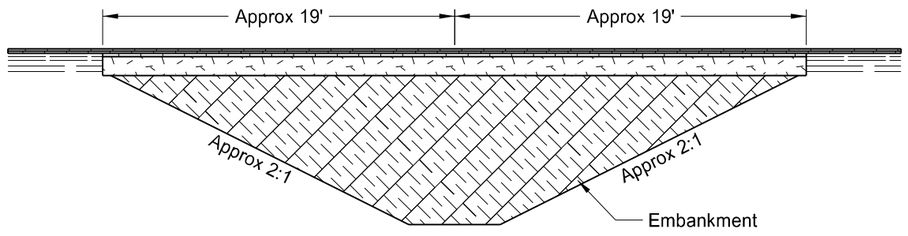
REMOVAL SECTION
Cross Section View



PROPOSED SECTION
Cross Section View



REMOVAL DETAIL
Side View
Flared End Section Not Shown



BACKFILL DETAIL
Side View

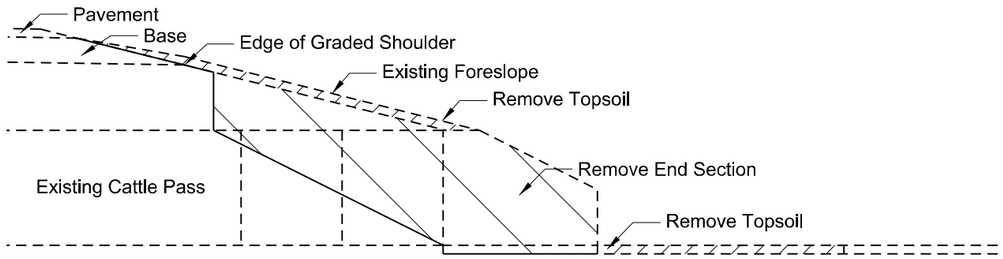


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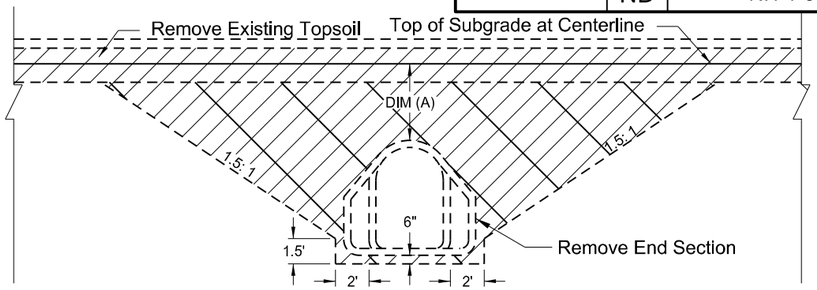
ND 3
Tuttle N to W Jct 200

Removal of Cattle Pass
6888+98

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	20	5



REMOVAL SECTION
Cross Section View

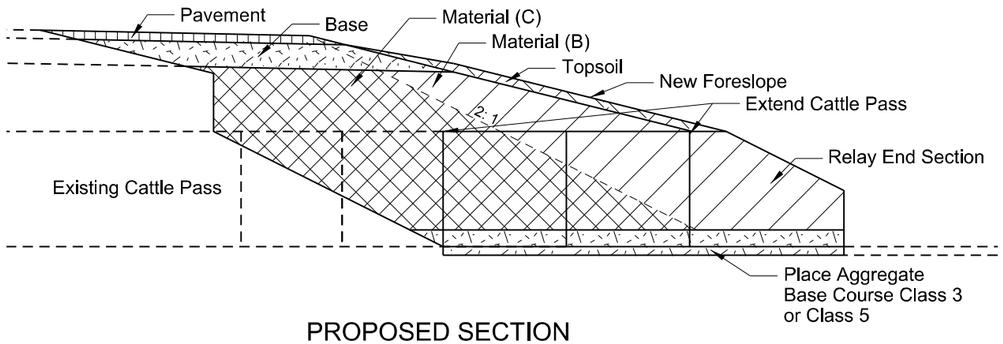


REMOVAL DETAIL
Side View

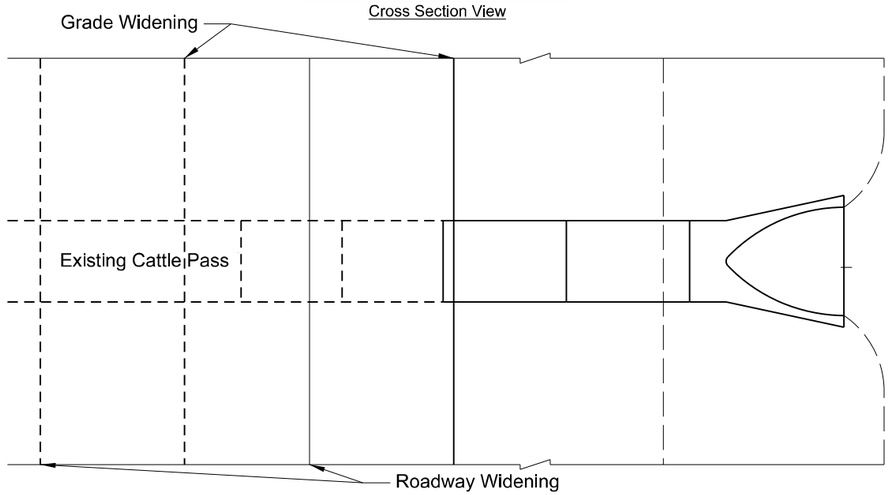
LOCATIONS
6537+47
6845+96

Pay Items
1) Cattle Pass Conc Intermed Section*
2) Remove and Relay End Section
3) Borrow Excavation (Compaction Control Type A)
or Common Excavation-Type A
4) Topsoil
5) Seeding
6) Mulching

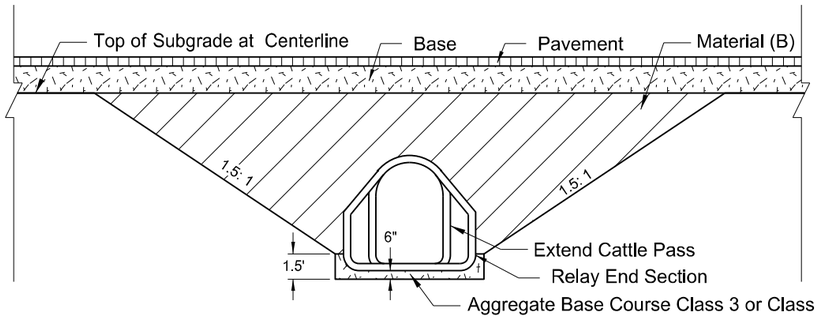
*Included in Cattle Pass Pay Item
1) Cattle Pass
2) Trench excavation
3) Aggregate Base Course Class 3 or Class 5



PROPOSED SECTION
Cross Section View



PROPOSED SECTION
Plan View



BACKFILL DETAIL
Side View (Topsoil Not Shown)

NOTES:
1) Embankment may be either Borrow Excavation or Common Excavation

2) Aggregate may be either Class 3 or Class 5 Aggregate Base Course.

Concrete Cattle Pass		
Dim (A)	Material (B)	Material (C)
< = 4 Feet	Embankment or Aggregate	Aggregate
> 4 Feet	Embankment	Embankment

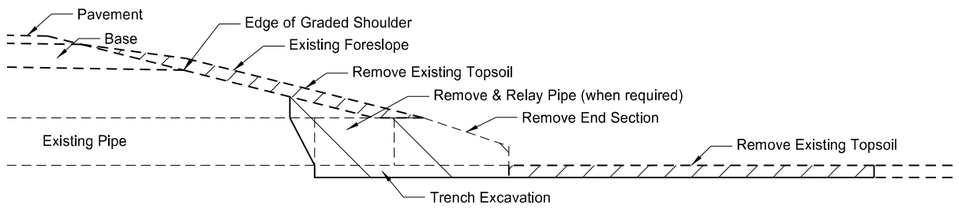
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 03/16/2022
NORTH DAKOTA

Details

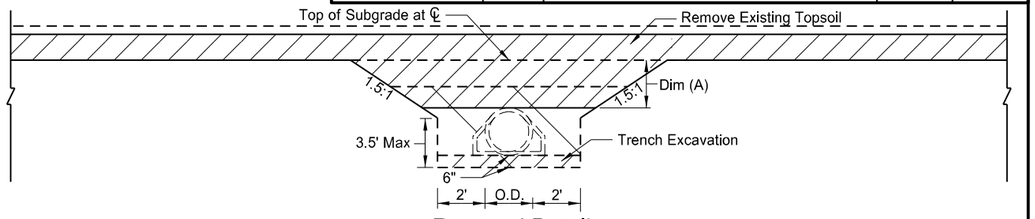
ND 3
Tuttle N to W Jct 200

Mainline Widening CL Cattle Pass Extension Detail

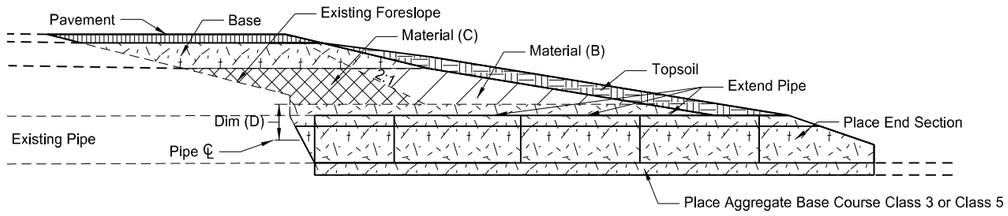
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	20	6



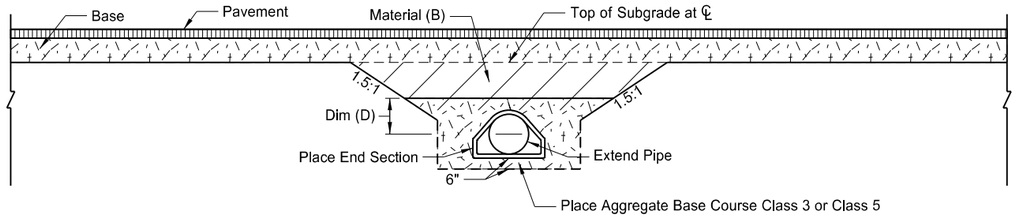
Removal Section
Cross Section View



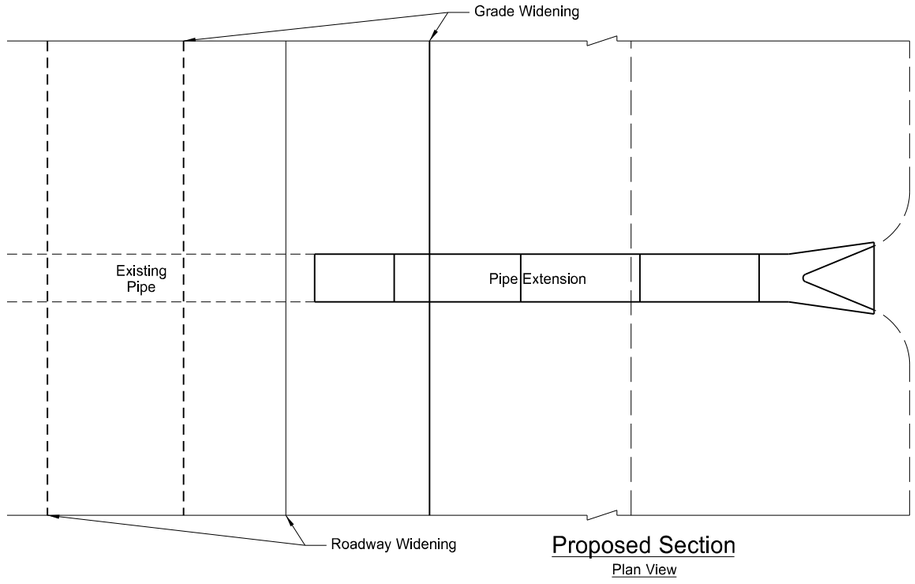
Removal Detail
Side View



Proposed Section
Cross Section View



Backfill Detail
Side View (Topsoil not shown)



Proposed Section
Plan View

Pay Items
1) Pipe*
2) Remove & Relay Pipe - All Types & Sizes (when required)
3) Remove & Reset End Section or
   Remove End Section and Place New End Section
4) Borrow Excavation (Cpmpaction Control Type A)
   or Common Excavation-Type A
5) Topsoil
6) Seeding
7) Mulching

*Included in Pipe Pay Item
1) Pipe
2) Trench excavation
3) Aggregate Base Course Class 3 or Class 5

Pipe Materials	Dim (A)<=4 Feet		Backfill Dimension
	Material (B)	Material (C)	Dim (D)
Concrete	Embank or Aggr	Aggregate	0.5 O.D.
Metal	Embank or Aggr	Aggregate	0.5 O.D.+1 Foot

Pipe Materials	Dim (A)>4 Feet		Backfill Dimension
	Material (B)	Material (C)	Dim (D)
Concrete	Embankment	Embankment	0.5 O.D.
Metal	Embankment	Embankment	0.5 O.D.+1 Foot

NOTES:
1. Embankment may be either Borrow Excavation (Compaction Control - Type A) or Common Excavation - Type A
2. Aggregate may be either Class 3 or Class 5 Aggregate Base Course.

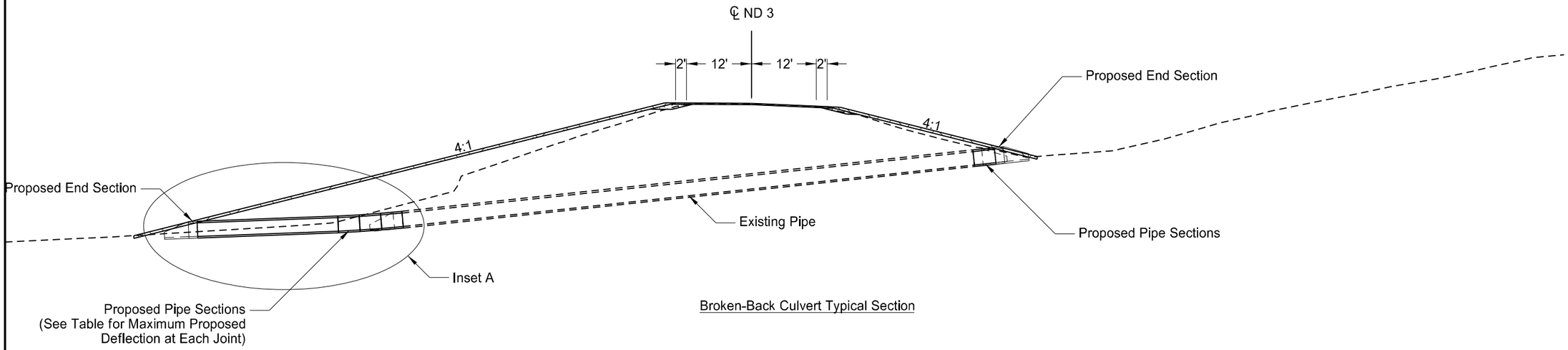
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL
KLEINKNECHT
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NORTH DAKOTA

Details

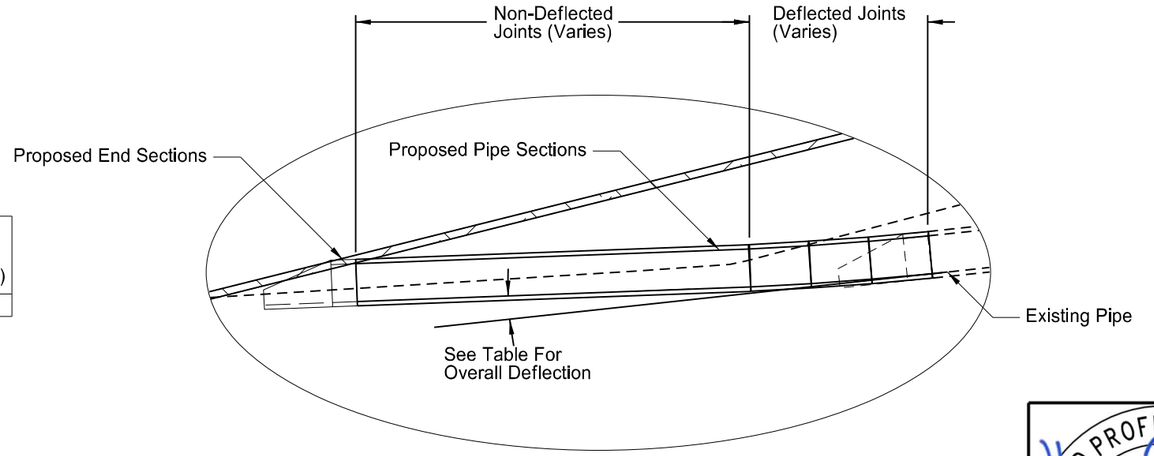
ND 3
Tuttle N to W Jct 200

Mainline Widening CL Pipe Extension Detail

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	20	7



Broken-Back Culvert Typical Section



Inset A

Begin Station	End Station	Offset	Pipe Diameter (Inches)	Pipe Material	Overall Vertical Deflection (Degrees)	Length of Extension (Feet)	Proposed # of Joints to Deflect	Proposed Max. Deflection Per Joint (Deg./Joint)
6246+24.98	6246+25.90	Lt	30	RCP	4	38	4	1

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KLEINKNECHT
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Notes:

1. Install new pipe sections up to the maximum deflection angle per joint to obtain the required invert elevation.
2. Proposed number of joints to deflect is based on 4' pipe segment lengths.
3. Drawing not to scale.

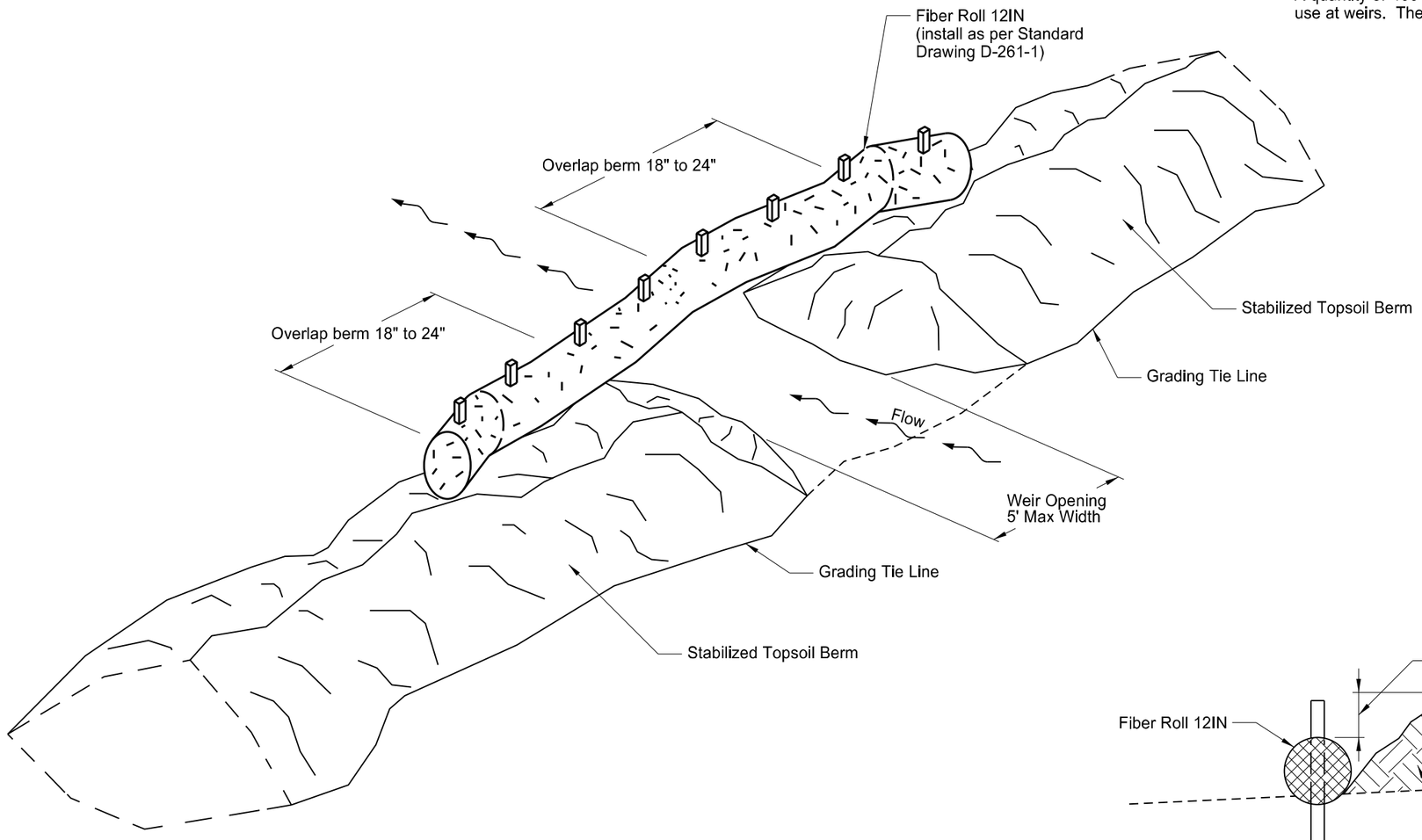
Details

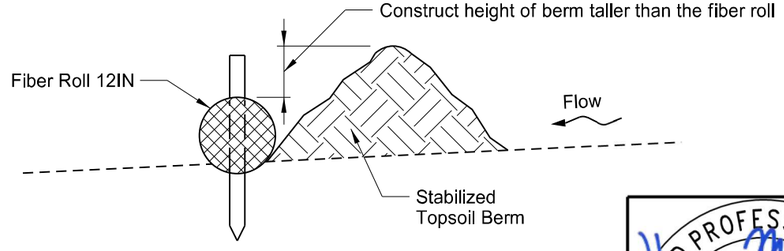
ND 3
Tuttle N to W Jct 200

Broken-Back Culvert Detail

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	20	8

A quantity of 400 LF of Fiber Roll 12IN has been included in the quantities for use at weirs. The Engineer will measure the actual quantity required in the field.





Topsoil Berm Detail

Notes:

1. Windrow the existing topsoil from the foreslope to create a berm at the grading tie line.
2. Stabilize berms in accordance with the Construction General Permit.
3. Place weirs intermittently throughout the length of the berm to allow stormwater to drain through the berm.
4. Avoid placing weirs adjacent to waterbodies.
5. Install fiber rolls as the weirs are created in the topsoil berm.
6. Include costs to create, stabilize, maintain, and dismantle the berm in the unit price bid for "Topsoil".
7. Include costs for fiber rolls in the unit price bid for "Fiber Rolls 12IN".

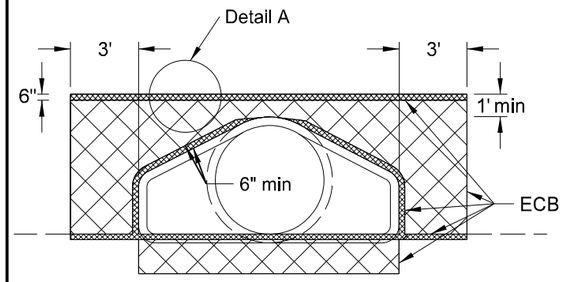
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 03/16/2022
NORTH DAKOTA

Details

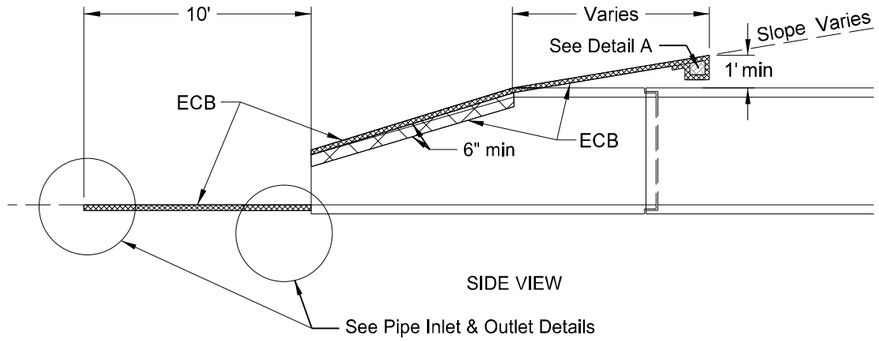
ND 3
Tuttle N to W Jct 200

Temporary Topsoil Berm and Weir

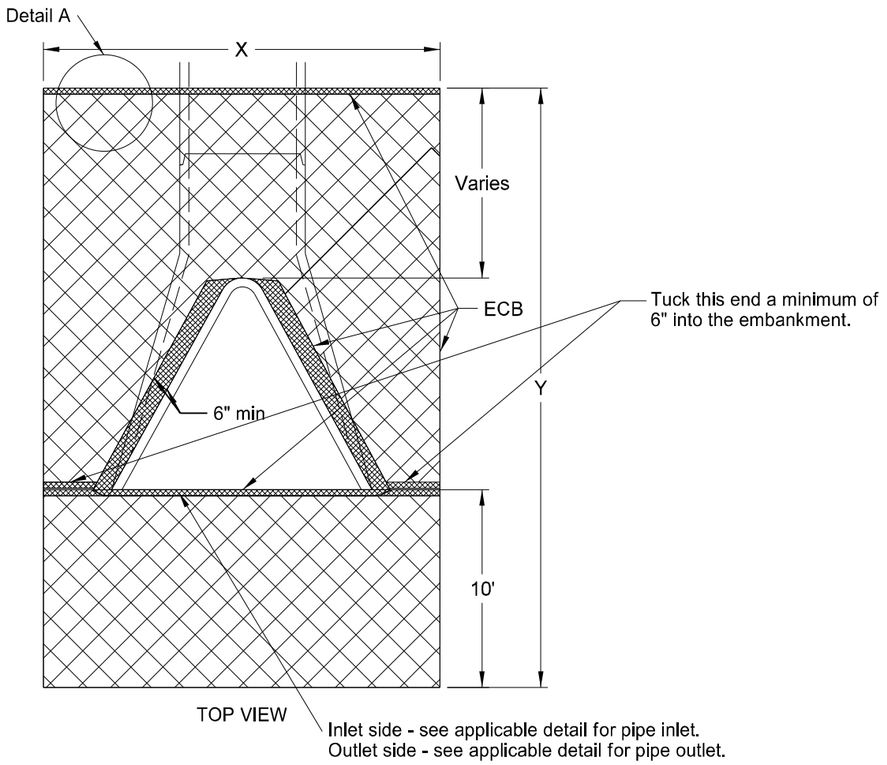
STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	20	9



FRONT VIEW

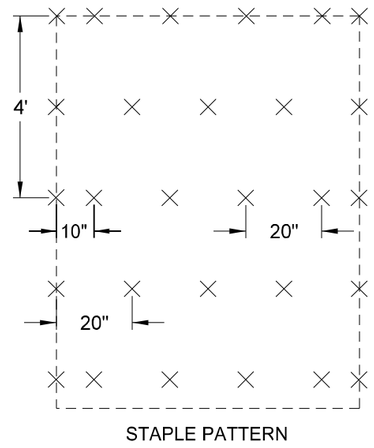


SIDE VIEW

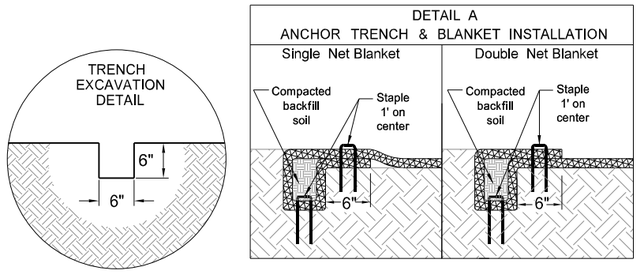


TOP VIEW

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

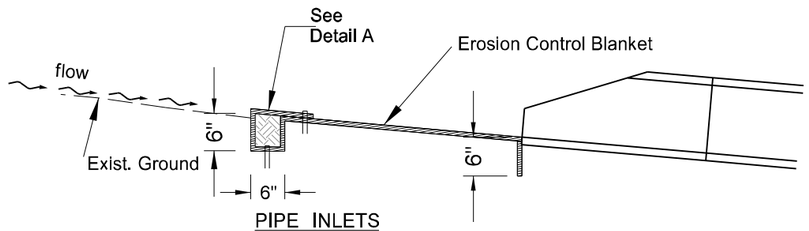


APPROACH CULVERTS				
DIA	X	Y	Surface area to be protected	ECB
In	Ft	Ft	SF	SY
15	9.0	20.0	176.0	20
18	9.5	20.7	190.7	22
21	9.5	21.0	190.9	22
24	10.5	21.6	214.1	24
27	11.0	22.0	226.3	25
30	11.6	22.5	241.5	27
36	12.7	23.3	268.8	30
42	13.3	23.3	279.7	31
48	13.8	24.0	293.2	33
54	14.5	23.4	300.6	34
60	15.0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

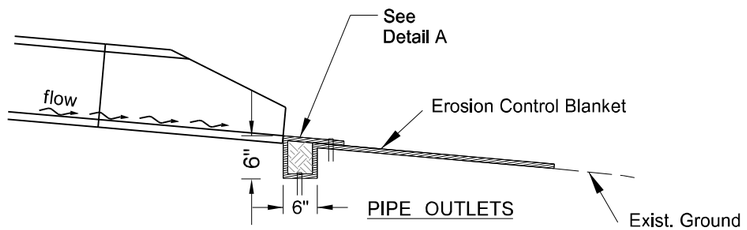
CENTERLINE CULVERTS				
DIA	X	Y	Surface area to be protected	ECB
In	Ft	Ft	SF	SY
18	9.5	16.3	162.0	18
24	10.5	17.6	172.1	20
27	11.0	18.0	182.3	21
30	11.6	18.5	195.1	22
36	12.7	19.2	216.7	24
42	13.3	19.2	225.2	25
48	13.8	20.0	238.0	27
*48	13.8	29.0	362.1	40
54	14.5	19.5	244.7	28
60	15.0	19.0	248.3	28
66	15.6	20.0	264.5	30
72	16.2	20.5	276.8	31
Note: Quantities based on 4:1 slope.				

Note: Pipe locations and quantities listed on next sheet

* Cattle Pass



PIPE INLETS



PIPE OUTLETS

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 03/16/2022
NORTH DAKOTA

Details

ND 3
Tuttle N to W Jct 200

Erosion Control at Culvert Flared End Sections

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	20	10

Erosion Control Blanket (ECB)					
Location to be Protected	Culvert Type Appr/CL	Pipe Diam. (inch)	No.	Unit Quantity (SY)	Total Quantiy
Station					ECB Type 2 (SY)
5985+54	CL	18	2	18	36
5991+65 Lt	Appr	18	2	22	44
5992+55	CL	18	2	18	36
6002+98 Rt (N)	Appr	18	1	22	22
6018+33	CL	18	2	18	36
6023+57	CL	18	2	18	36
6033+11 Rt	Appr	18	2	22	44
6040+89 Rt	Appr	18	2	22	44
6070+89	CL	18	2	18	36
6084+54 Lt	Appr	24	2	24	48
6084+63 Rt	Appr	18	2	22	44
6104+37	CL	18	2	18	36
6111+25 Lt	Appr	18	2	22	44
6130+61	CL	18	2	18	36
6137+09 Rt	Appr	18	2	22	44
6137+64 Lt	Appr	24	2	24	48
6151+67 Lt	Appr	18	2	22	44
6170+97	CL	30	2	22	44
6184+98	CL	24	2	20	40
6191+48	CL	24	2	20	40
6201+17	CL	30	2	22	44
6209+97	CL	30	2	22	44
6224+97	CL	24	2	20	40
6229+95 Rt	Appr	30	4	27	108
6246+28	CL	30	2	22	44
6263+37	CL	30	2	22	44
6285+67	CL	24	2	20	40
6293+46 Rt	Appr	18	2	22	44
6295+37	CL	30	2	22	44
6299+47 Lt	Appr	24	2	24	48
6308+65	CL	24	2	20	40
6360+15	CL	24	2	20	40
6370+13 Rt	Appr	18	2	22	44
6387+97	CL	24	2	20	40
6413+11	CL	24	2	20	40
6435+37 Lt	Appr	18	2	22	44
6443+75	CL	24	2	20	40
6451+39 Rt	Appr	18	2	22	44
6455+48	CL	24	2	20	40
6456+41 Rt	Appr	18	2	22	44
6459+59 Rt	Appr	18	2	22	44
6485+21 Rt	Appr	18	2	22	44
6489+38	CL	30	2	22	44
6524+89 Lt	Appr	15	2	20	40
6526+97	CL	30	2	22	44
6531+49 Rt	Appr	18	2	22	44

Erosion Control Blanket (ECB)					
Location to be Protected	Culvert Type Appr/CL	Pipe Diam. (inch)	No.	Unit Quantity (SY)	Total Quantiy
Station					ECB Type 2 (SY)
6531+53 Lt	Appr	18	2	22	44
6537+47	CL	*48	2	40	80
6556+97	CL	24	2	20	40
6566+98	CL	30	2	22	44
6590+12	CL	24	2	20	40
6615+09 Rt	Appr	18	2	22	44
6615+40 Lt	Appr	18	2	22	44
6640+96	CL	30	2	22	44
6688+23 Rt	Appr	18	2	22	44
6690+96 Rt	CL	30	1	22	22
6701+95	CL	30	2	22	44
6713+96	CL	30	2	22	44
6714+62 Rt	Appr	24	2	24	48
6714+70 Lt	Appr	24	2	24	48
6734+31 Lt	Appr	24	2	24	48
6736+26	CL	30	2	22	44
6757+70	CL	24	2	20	40
6762+81	CL	30	2	22	44
6776+66	CL	30	2	22	44
6807+97 Rt	Appr	18	2	22	44
6808+00 Lt	Appr	18	2	22	44
6820+98 Lt	Appr	24	2	24	48
6822+32 Lt	Appr	24	2	24	48
6822+32 Rt	Appr	24	2	24	48
6840+96	CL	30	2	22	44
6845+96	CL	*48	2	40	80
6884+67	CL	24	2	20	40
6891+99	CL	24	2	20	40
6908+47	CL	24	2	20	40
6917+36	CL	30	2	22	44
6926+97 Lt	CL	24	1	20	20
6929+58 Rt	Appr	18	2	22	44
6932+24 Lt	CL	36	1	24	24
6947+38 Rt	Appr	24	2	24	48
6947+42 Lt	Appr	18	2	22	44
6954+99 Lt	Appr	18	2	22	44
7092+26 Lt	Appr	24	2	24	48
Total=					3620

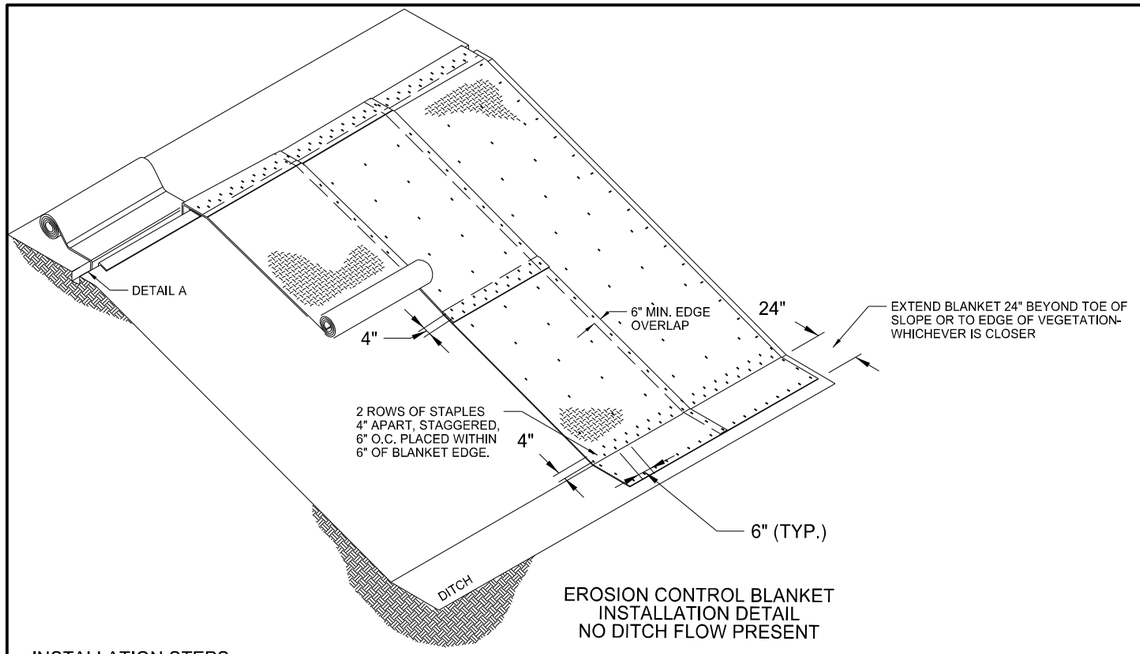
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 03/16/2022
NORTH DAKOTA

Details

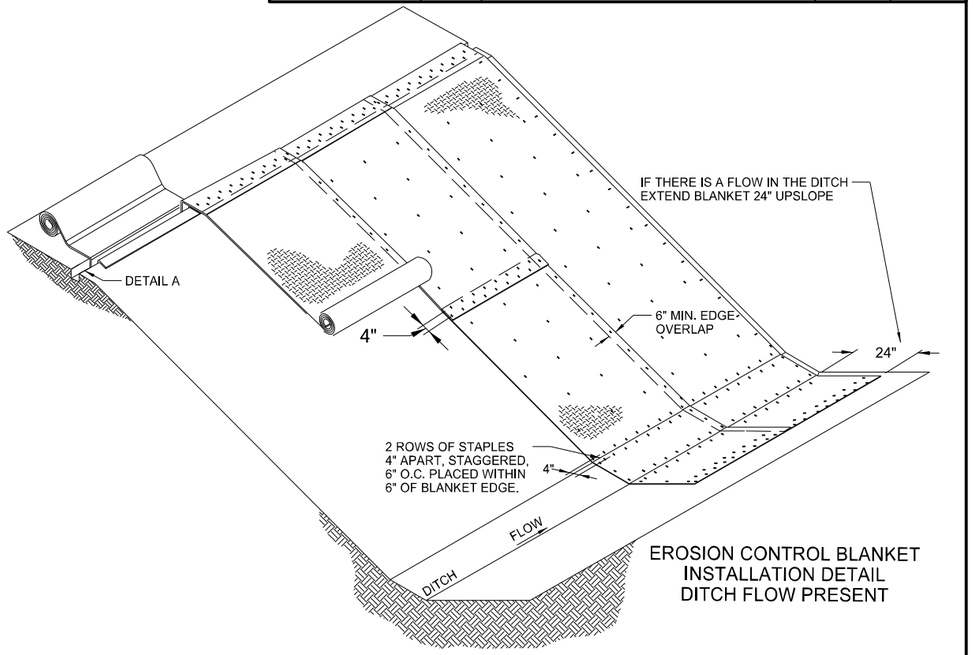
ND 3
Tuttle N to W Jct 200

Erosion Control at Culvert Flared End Sections

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	20	11



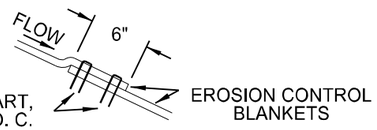
EROSION CONTROL BLANKET
INSTALLATION DETAIL
NO DITCH FLOW PRESENT



EROSION CONTROL BLANKET
INSTALLATION DETAIL
DITCH FLOW PRESENT

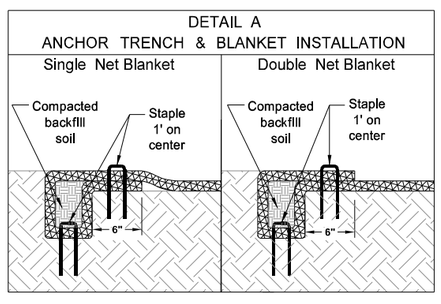
INSTALLATION STEPS:

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.

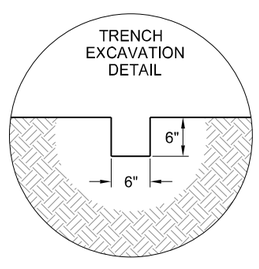


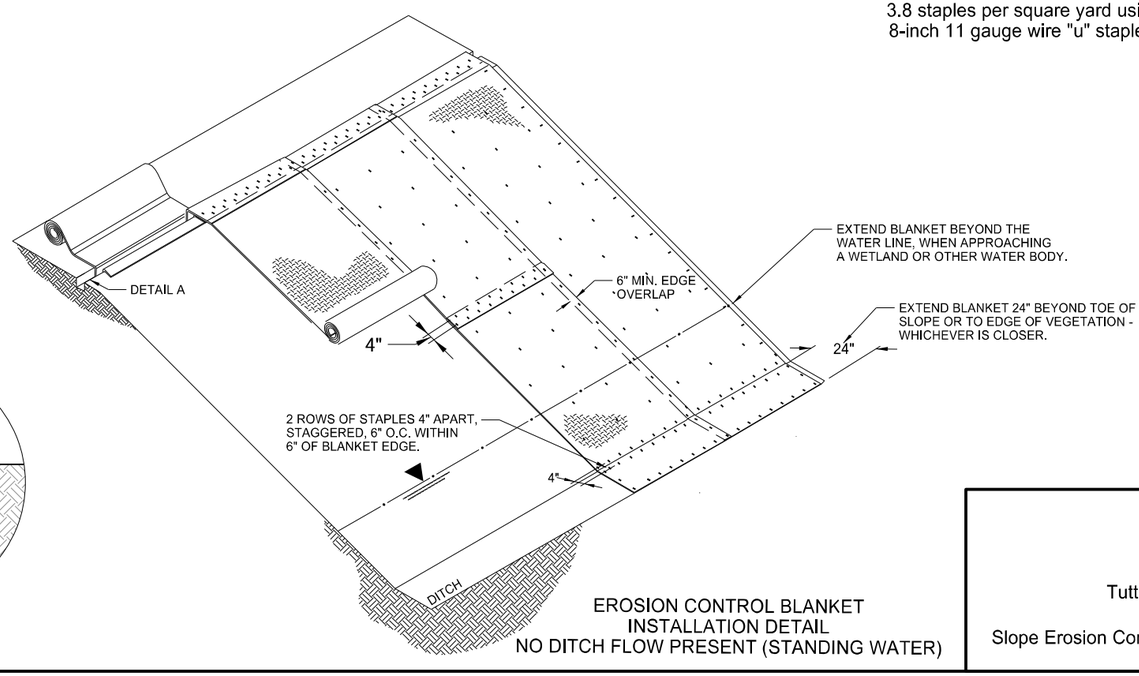
STAPLES ~ 4" APART, STAGGERED, 6" O. C.

EROSION CONTROL BLANKETS

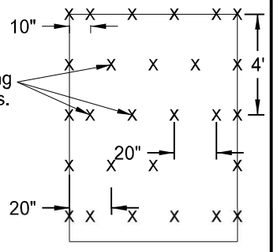


NOTE:
Install Single Net Blanket with netting on top of installed blanket.





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

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
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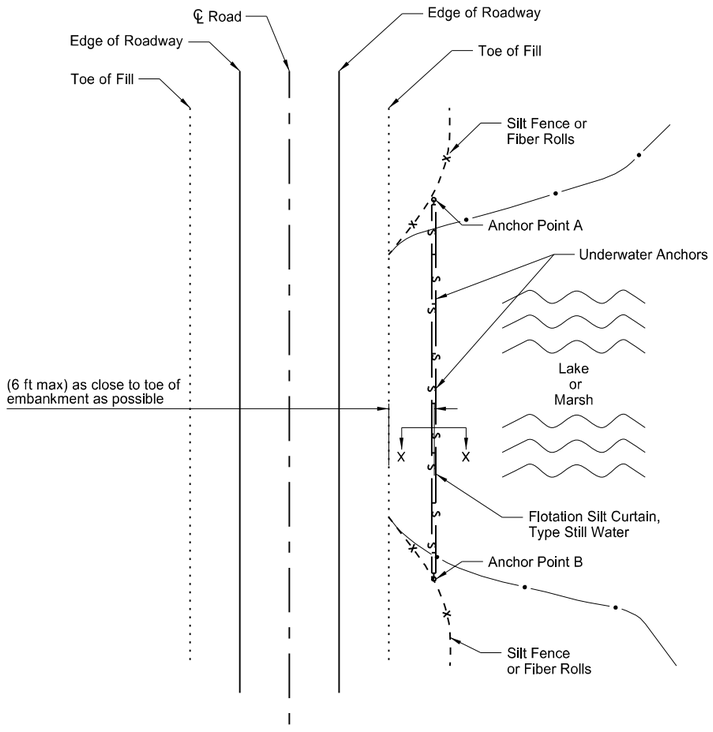
Details

ND 3
Tuttle N to W Jct 200

Slope Erosion Control Blanket Installation Details

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	20	12

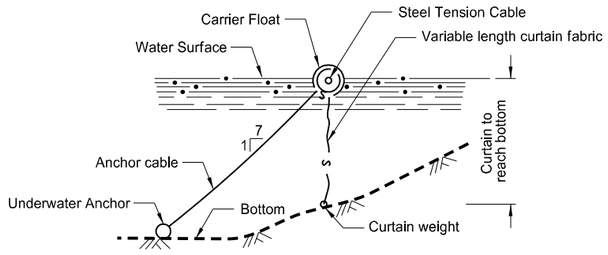
TYPICAL INSTALLATION
May vary with conditions



PLAN VIEW

FLOTATION SILT CURTAIN - TYPE STILL WATER

Extend silt curtain onto shore and anchor there also.



SECTION X-X

FLOTATION SILT CURTAINS

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

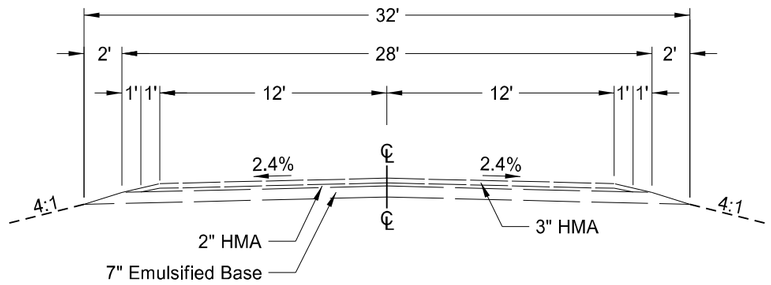
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 03/16/2022
NORTH DAKOTA

Details

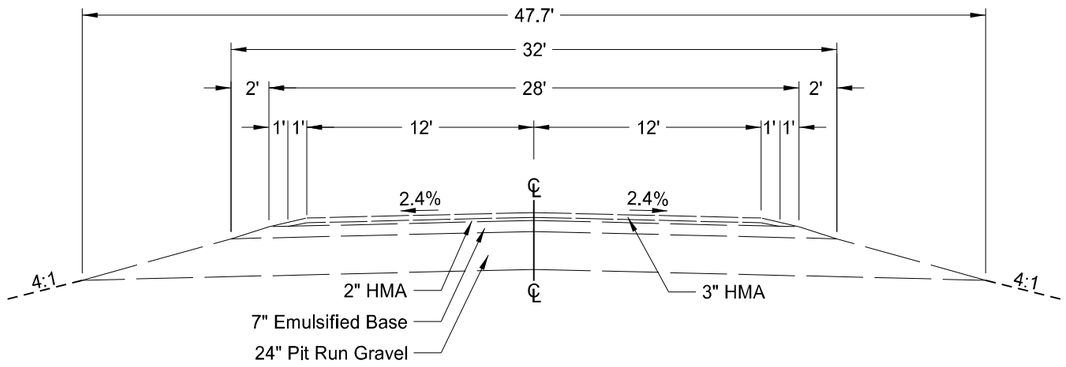
ND 3
Tuttle N to W Jct 200

Temporary Erosion Control - Flotation Silt Curtain

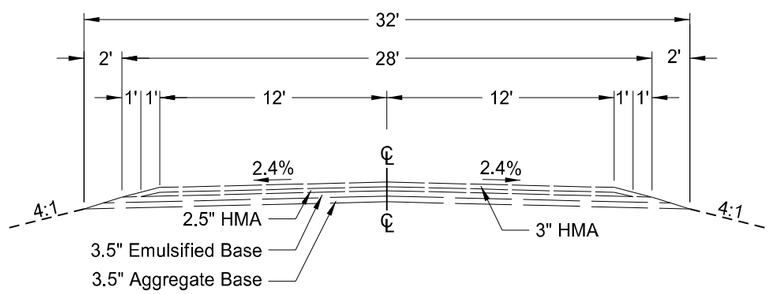
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	ND	NH-1-003(050)113	30	1



5980+00 to 6049+15
6063+14 to 6131+84



6049+15 to 6063+14



6131+84 to 6312+85
6342+85 to 6968+37.68
7075+65.01 to 7093+76.57

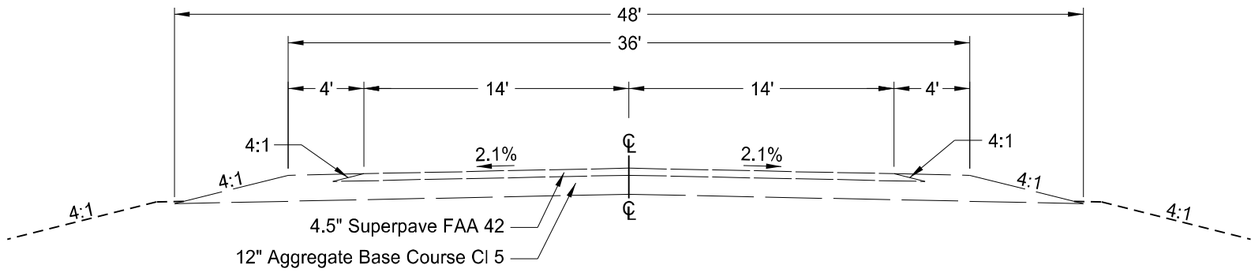
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Existing Typical Sections

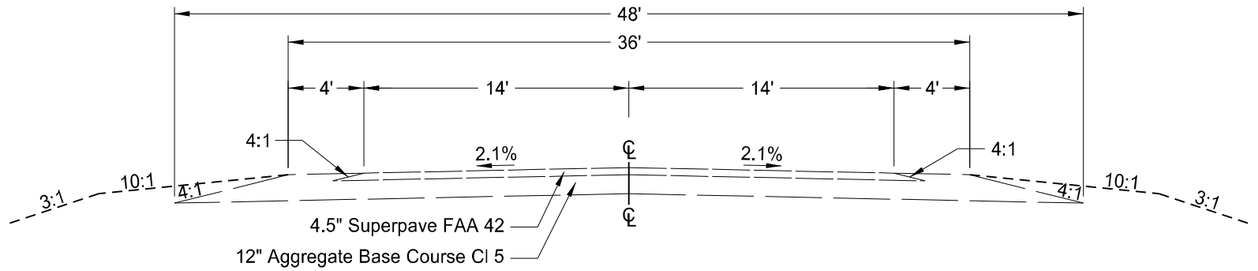
ND 3
Tuttle N to W Jct 200

5980+00 to 6312+85, 6342+85 to 6968+37.68
7075+65.01 to 7093+76.57

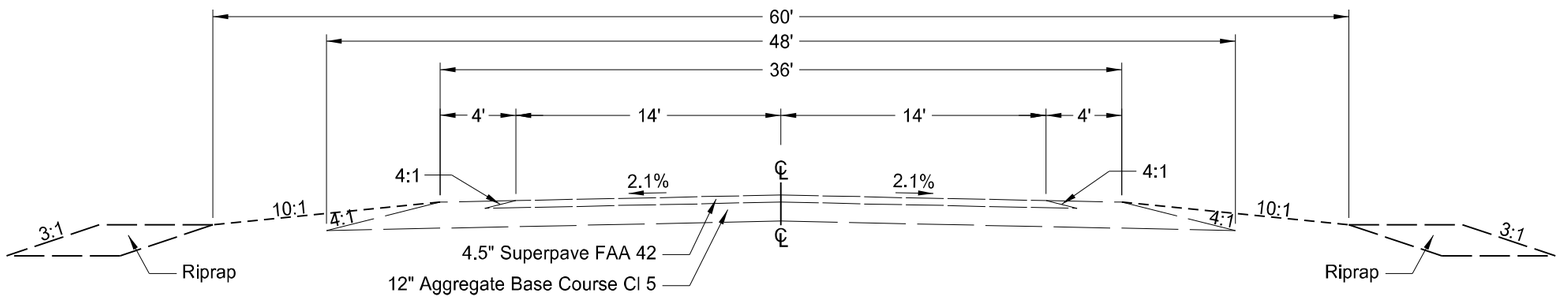
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	30	2



6312+85 to 6317+95
6340+05 to 6342+85



6317+95 to 6319+95
6337+05 to 6340+05



6319+95 to 6337+05

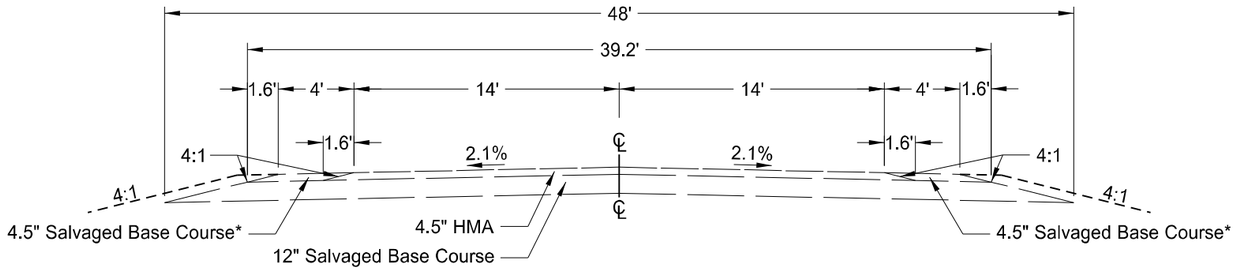
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 12/15/2021
NORTH DAKOTA

Existing Typical Sections

ND 3
Tuttle N to W Jct 200

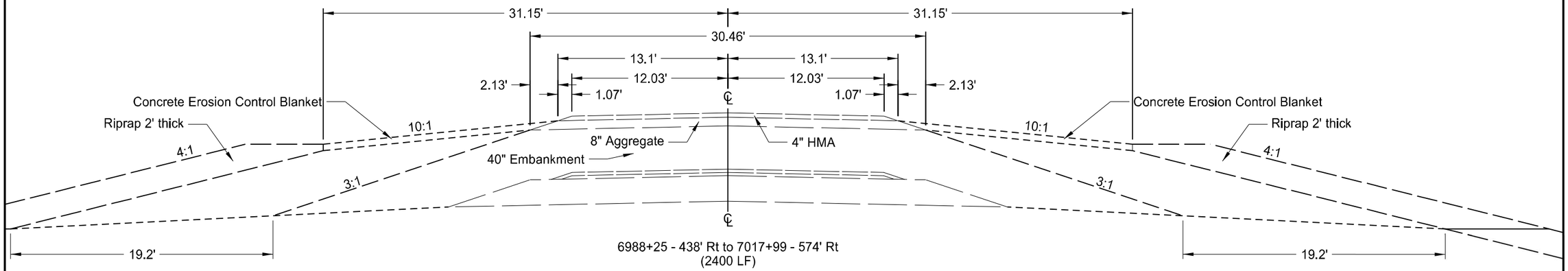
6312+85 to 6342+85

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	30	3



6968+37.68 to 7075+65.01

* 4.5" HMA on high side of curve section



6988+25 - 438' Rt to 7017+99 - 574' Rt
(2400 LF)

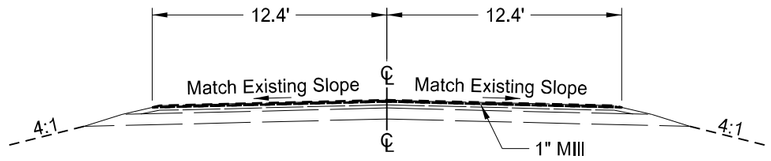
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Existing Typical Sections

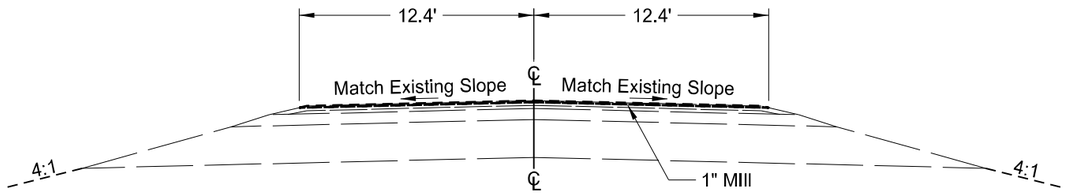
ND 3
Tuttle N to W Jct 200

6968+37.68 to 7075+65.01
6988+25 - 438' Rt to 7017+99 - 574' Rt

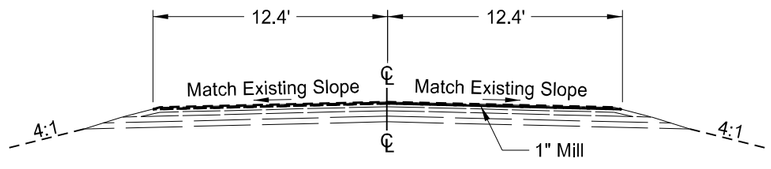
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	30	4



5980+00 to 6049+15
6063+14 to 6131+84



6049+15 to 6063+14



6131+84 to 6312+85
6342+85 to 6968+37.68
7075+65.01 to 7093+76.57

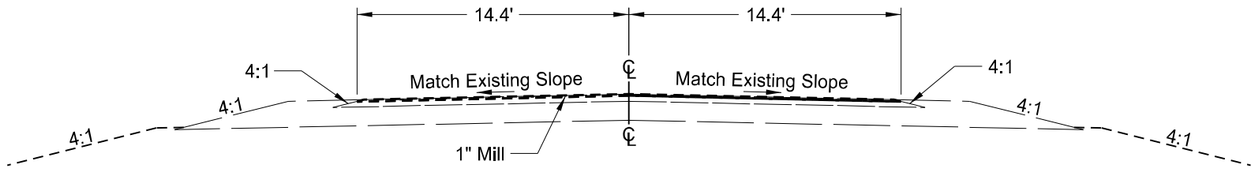
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Milling Typical Sections

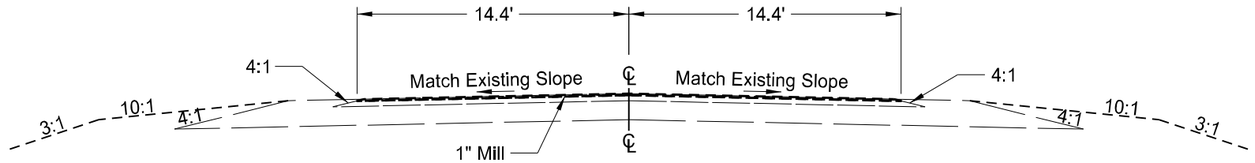
ND 3
Tuttle N to W Jct 200

5980+00 to 6312+85, 6342+85 to 6968+37.68
7075+65.01 to 7093+76.57

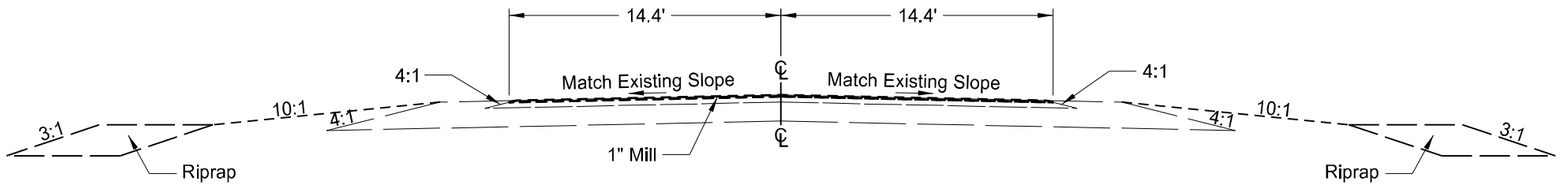
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	30	5



6312+85 to 6317+95
6340+05 to 6342+85



6317+95 to 6319+95
6337+05 to 6340+05



6319+95 to 6337+05

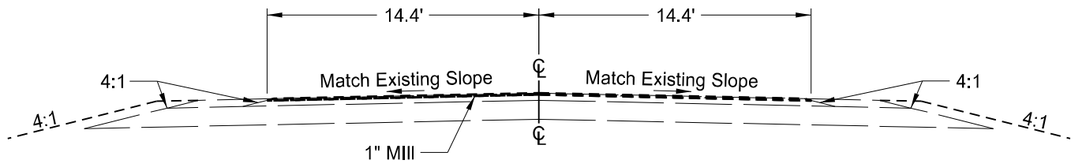


Milling Typical Sections

ND 3
Tuttle N to W Jct 200

6312+85 to 6342+85

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	30	6



6968+37.68 to 7075+65.01

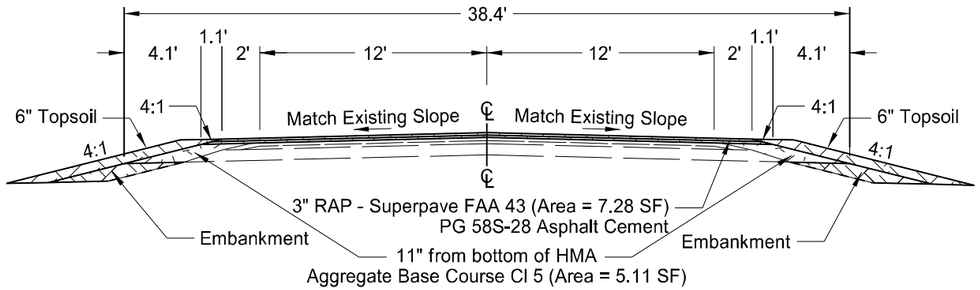
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 12/15/2021
NORTH DAKOTA

Milling Typical Sections

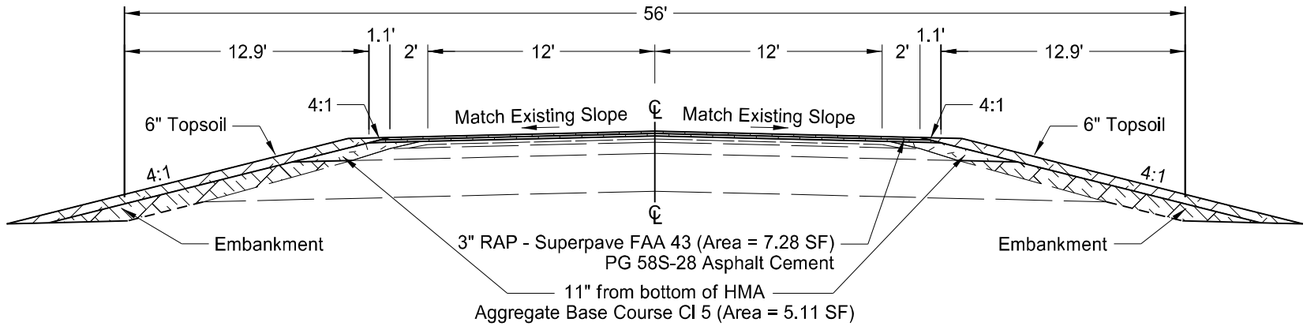
ND 3
Tuttle N to W Jct 200

6968+37.68 to 7075+65.01

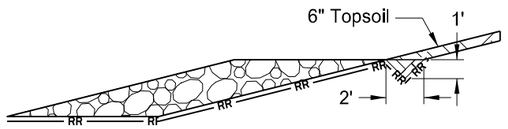
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	30	7



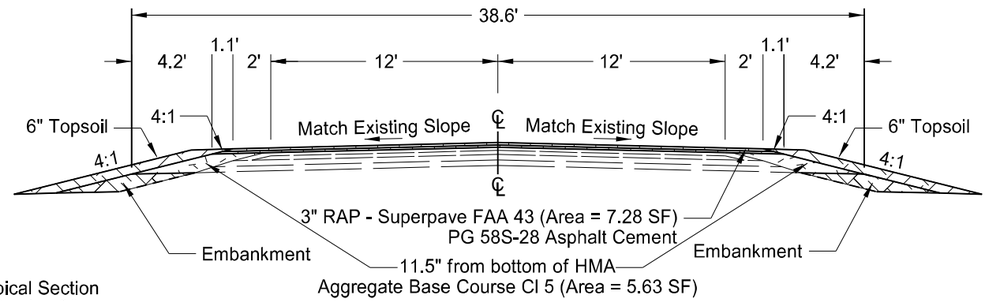
5980+00 to 6049+15
6063+14 to 6131+84



6049+15 to 6063+14



Geosynthetic Material Type RR and
Remove and Replace Riprap Detail
See Section 77 for locations



Note: Removal of Cattle Pass Typical Section
6888+79 to 6889+17, See Section 20

6131+84 to 6312+85, 6342+85 to 6496+95, 6512+45 to 6851+67, 6876+90 to
6920+05, 6924+05 to 6968+37.68, 7075+65.01 to 7093+76.57

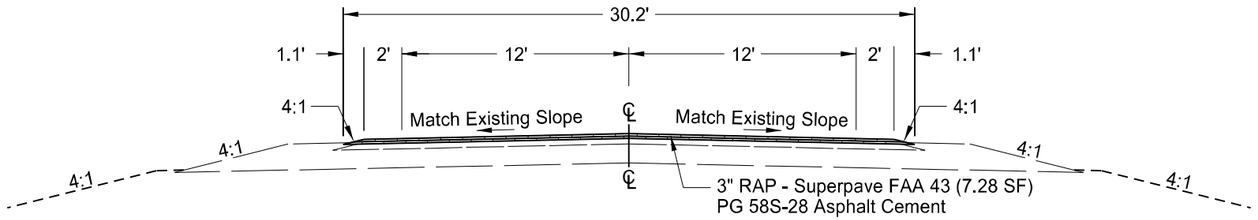
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Proposed Typical Sections

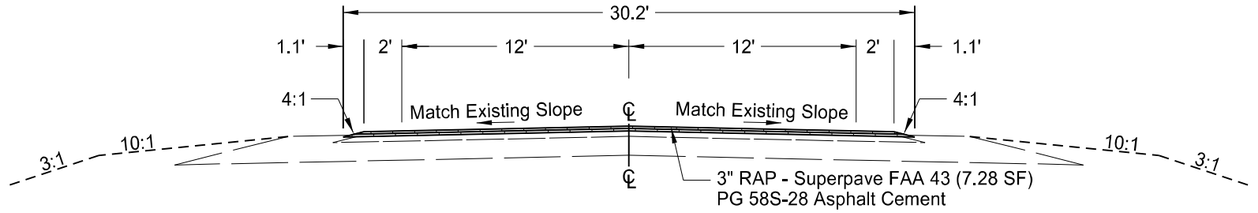
ND 3
Tuttle N to W Jct 200

5980+00 to 6312+85, 6342+85 to 6968+37.68
7075+65.01 to 7093+76.57

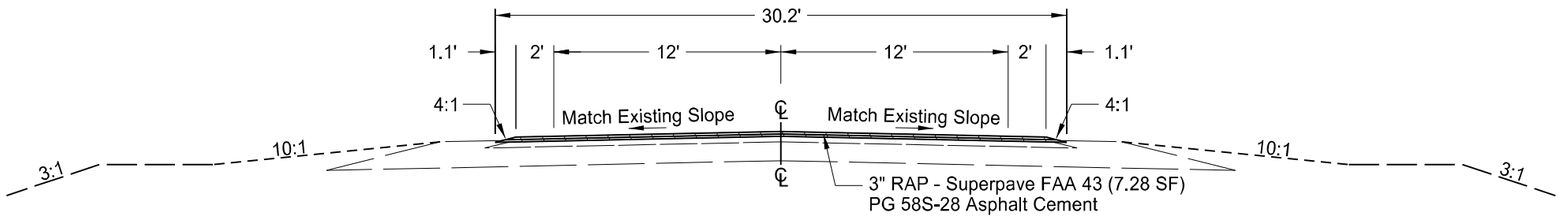
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	30	8



6312+85 to 6317+95
6340+05 to 6342+85



6317+95 to 6319+95
6337+05 to 6340+05



6319+95 to 6337+05

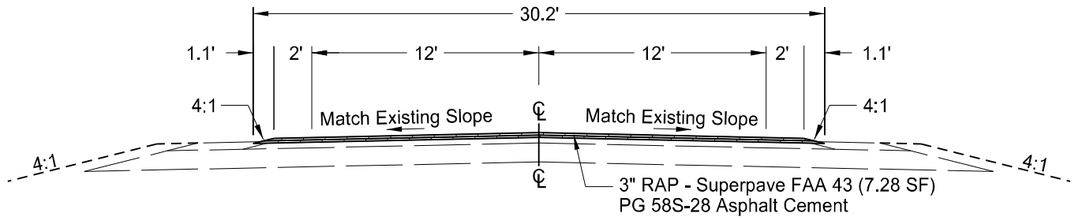


Proposed Typical Sections

ND 3
Tuttle N to W Jct 200

6312+85 to 6342+85

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	30	9



6968+37.68 to 7030+14
7030+64 to 7049+64
7052+29 to 7075+65.01

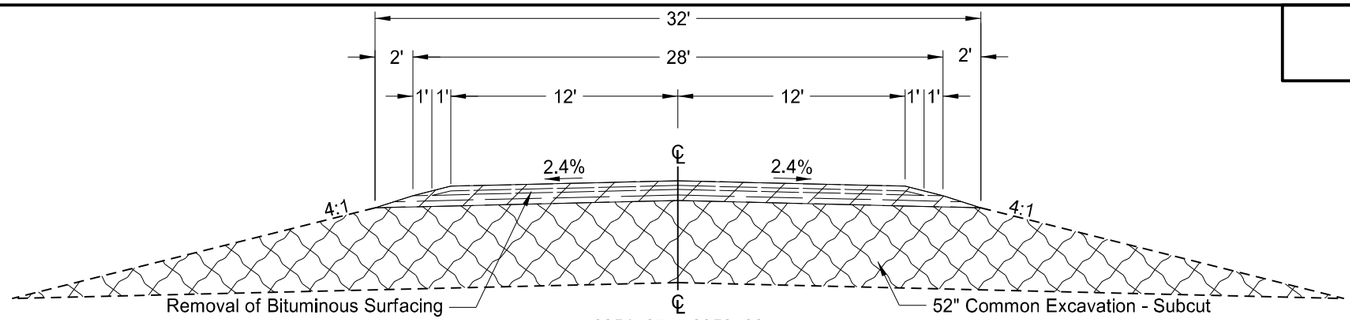
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KORY MICHAEL
KLEINKNECHT
PE 27746
DATE 12/15/2021
NORTH DAKOTA

Proposed Typical Sections

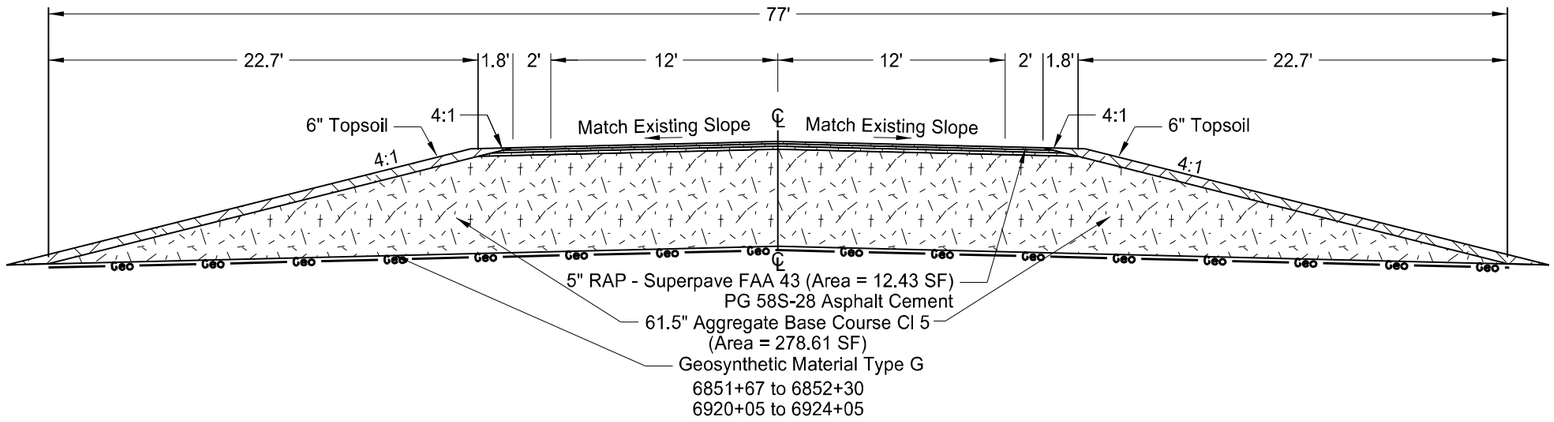
ND 3
Tuttle N to W Jct 200

6968+37.68 to 7030+14, 7030+64 to 7049+64
7052+29 to 7075+65.01

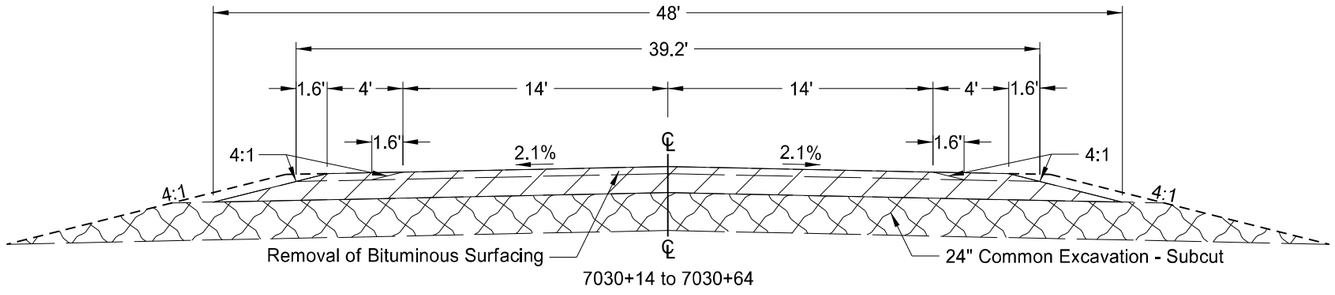
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	30	10



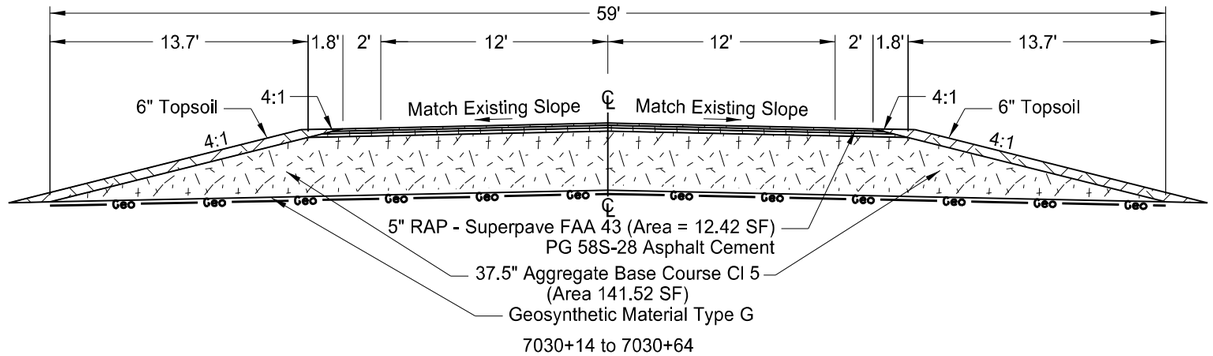
6851+67 to 6852+30
6920+05 to 6924+05



6851+67 to 6852+30
6920+05 to 6924+05



7030+14 to 7030+64



7030+14 to 7030+64

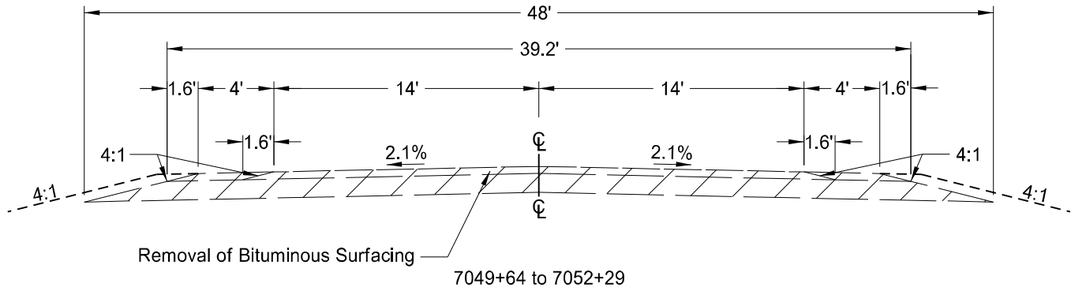
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KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Subcut Typical Sections

ND 3
Tuttle N to W Jct 200

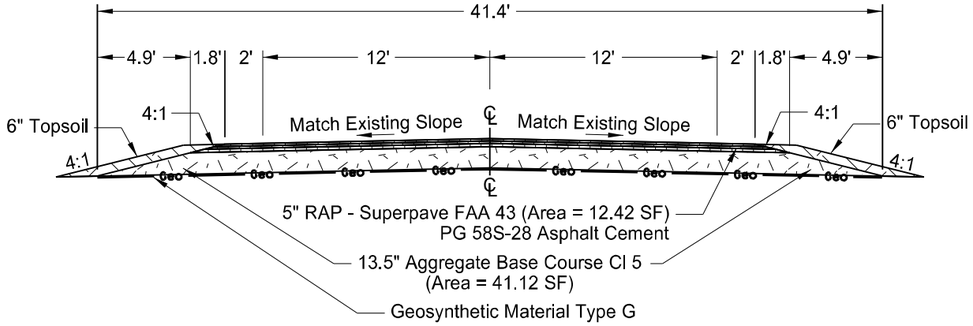
6851+67 to 6852+30, 6920+05 to 6924+05
7030+14 to 7030+64

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	30	11



Removal of Bituminous Surfacing

7049+64 to 7052+29



5" RAP - Superpave FAA 43 (Area = 12.42 SF)
PG 58S-28 Asphalt Cement

13.5" Aggregate Base Course Cl 5
(Area = 41.12 SF)

Geosynthetic Material Type G

7049+64 to 7052+29

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
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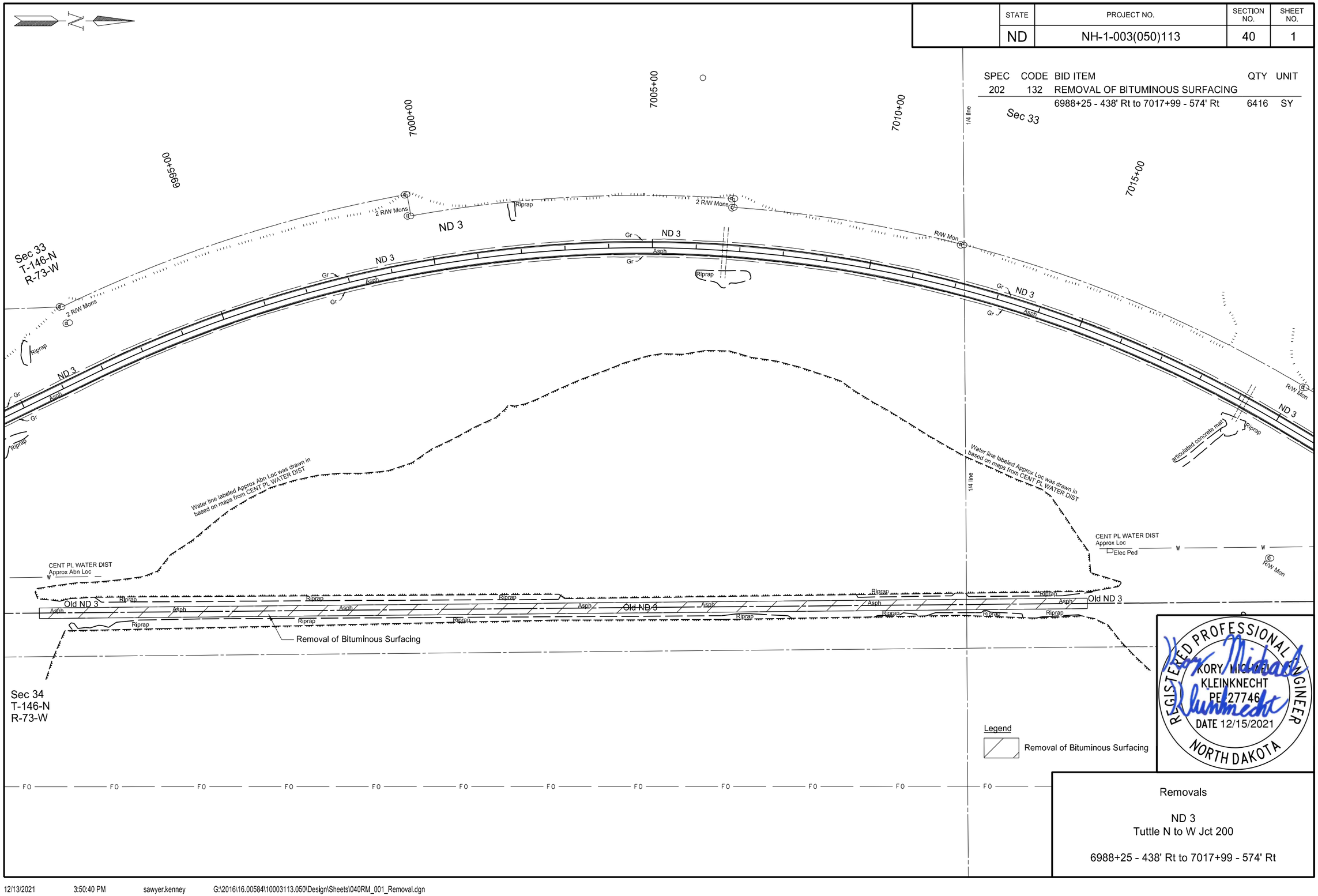
Replace Pavement Section Typical Sections

ND 3
Tuttle N to W Jct 200

7049+64 to 7052+29

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	40	1

SPEC	CODE	BID ITEM	QTY	UNIT
202	132	REMOVAL OF BITUMINOUS SURFACING		
		6988+25 - 438' Rt to 7017+99 - 574' Rt	6416	SY



Legend

Removal of Bituminous Surfacing

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 12/15/2021
NORTH DAKOTA

Removals

ND 3
Tuttle N to W Jct 200

6988+25 - 438' Rt to 7017+99 - 574' Rt

12/13/2021 3:50:40 PM sawyer.kenney G:\2016\16.00584\100003113.050\Design\Sheets\040RM_001_Removal.dgn

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	51	1

Begin Station / Location	Begin Offset	End Station / Location	End Offset	Pipe Installation (Pay Item)			Allowable Material	Required Diameter	Steel Pipe Coatings	Steel Pipe Corrugations or Spiral Ribs	Steel Pipe Minimum Thickness	Geosynthetic Material Type R1 (Pay Item)	(*) End Sections		Applicable Backfill
													Begin	End	
				In	Bid Item	LF		In	Type		In	SY	EA	EA	
5991+23.67	48' Lt	5991+42.66	49' Lt	18	Pipe Corr. Steel - Approach (Extension)	19	Corrugated Steel Pipe	18	Z, A, P	2	0.064		*TES		Specification 714.04 A
5991+87.84	49' Lt	5992+09.84	50' Lt	18	Pipe Corr. Steel - Approach (Extension)	22	Corrugated Steel Pipe	18	Z, A, P	2	0.064			*TES	Specification 714.04 A
5992+53.93	51' Lt	5992+54.07	38' Lt	18	Pipe Corr. Steel (Extension)	13	Corrugated Steel Pipe	18	Z, A, P	2	0.064		*FES		See Section 20
5992+54.93	41' Rt	5992+55.03	50' Rt	18	Pipe Corr. Steel (Extension)	9	Corrugated Steel Pipe	18	Z, A, P	2	0.064			*FES	See Section 20
6003+26.04	62' Rt	6003+31.03	62' Rt	18	Pipe Corr. Steel - Approach (Extension)	5	Corrugated Steel Pipe	18	Z, A, P	2	0.064			*FES	Specification 714.04 A
6018+30.08	38' Lt	6018+30.55	32' Lt	18	Pipe Corr. Steel (Extension)	6	Corrugated Steel Pipe	18	Z, A, P	2	0.064		*FES		See Section 20
6018+35.40	31' Rt	6018+35.94	38' Rt	18	Pipe Corr. Steel (Extension)	7	Corrugated Steel Pipe	18	Z, A, P	2	0.064			*FES	See Section 20
6023+55.61	32' Lt	6023+55.76	27' Lt	18	Pipe Corr. Steel (Extension)	5	Corrugated Steel Pipe	18	Z, A, P	2	0.064		*TES (4:1)		See Section 20
6023+57.42	30' Rt	6023+57.56	35' Rt	18	Pipe Corr. Steel (Extension)	5	Corrugated Steel Pipe	18	Z, A, P	2	0.064			*FES	See Section 20
6032+79.81	57' Rt	6032+87.81	57' Rt	18	Pipe Corr. Steel - Approach (Extension)	8	Corrugated Steel Pipe	18	Z, A, P	2	0.064		*TES		Specification 714.04 A
6033+34.24	58' Rt	6033+41.24	58' Rt	18	Pipe Corr. Steel - Approach (Extension)	7	Corrugated Steel Pipe	18	Z, A, P	2	0.064			*TES	Specification 714.04 A
6040+50.58	59' Rt	6040+66.58	59' Rt	18	Pipe Corr. Steel - Approach (Extension)	16	Corrugated Steel Pipe	18	Z, A, P	2	0.064		*TES		Specification 714.04 A
6041+12.25	59' Rt	6041+28.25	59' Rt	18	Pipe Corr. Steel - Approach (Extension)	16	Corrugated Steel Pipe	18	Z, A, P	2	0.064			*TES	Specification 714.04 A
6070+88.55	38' Lt	6070+88.59	31' Lt	18	Pipe Corr. Steel (Extension)	7	Corrugated Steel Pipe	18	Z, A, P	2	0.064		*FES		See Section 20
6070+88.87	26' Rt	6070+88.93	38' Rt	18	Pipe Corr. Steel (Extension)	12	Corrugated Steel Pipe	18	Z, A, P	2	0.064			*FES	See Section 20
6084+18.46	54' Lt	6084+90.17	49' Lt	24	Pipe Conduit - Approach	72	Reinforced Concrete Pipe - Class III (barrell length = 68 LF)	24					TES	TES	Specification 714.04 A
							Corrugated Steel Pipe	24	A, P	2	0.064				
							Spiral Rib Steel Pipe	24	A, P	3/4, 1	0.064				
							High-Density Polyethylene	24							
							Polypropylene Pipe (AASHTO M330, Type S)	24							
6084+11.77	48' Rt	6084+36.77	48' Rt	18	Pipe Corr. Steel - Approach (Extension)	25	Corrugated Steel Pipe	18	Z, A, P	2	0.064		*TES		Specification 714.04 A
6084+90.28	48' Rt	6085+01.28	48' Rt	18	Pipe Corr. Steel - Approach (Extension)	11	Corrugated Steel Pipe	18	Z, A, P	2	0.064			*TES	Specification 714.04 A
6104+37.41	54' Lt	6104+37.41	46' Lt	18	Pipe Corr. Steel (Extension)	8	Corrugated Steel Pipe	18	Z, A, P	2	0.064		*FES		See Section 20
6104+37.48	49' Rt	6104+37.49	62' Rt	18	Pipe Corr. Steel (Extension)	13	Corrugated Steel Pipe	18	Z, A, P	2	0.064			*FES	See Section 20
6110+93.83	51' Lt	6111+02.82	51' Lt	18	Pipe Corr. Steel - Approach (Extension)	9	Corrugated Steel Pipe	18	Z, A, P	2	0.064		*TES		Specification 714.04 A
6111+49.12	49' Lt	6111+56.12	49' Lt	18	Pipe Corr. Steel - Approach (Extension)	7	Corrugated Steel Pipe	18	Z, A, P	2	0.064			*TES	Specification 714.04 A
6130+59.91	42' Lt	6130+60.11	29' Lt	18	Pipe Corr. Steel (Extension)	13	Corrugated Steel Pipe	18	Z, A, P	2	0.064		*FES		See Section 20
6130+60.92	25' Rt	6130+61.08	35' Rt	18	Pipe Corr. Steel (Extension)	10	Corrugated Steel Pipe	18	Z, A, P	2	0.064			*FES	See Section 20
6136+56.95	44' Rt	6136+74.95	44' Rt	18	Pipe Corr. Steel - Approach (Extension)	18	Corrugated Steel Pipe	18	Z, A, P	2	0.064		*TES		Specification 714.04 A

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 12/15/2021
NORTH DAKOTA

Allowable Pipe List

ND 3
Tuttle N to W Jct 200

Kidder County

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

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

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

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

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	51	2

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 R1 (Pay Item)	(*) End Sections		Applicable Backfill
													Begin	End	
				In	Bid Item	LF		In	Type		In	SY	EA	EA	
6137+29.40	45' Lt	6137+99.10	46' Lt	24	Pipe Conduit - Approach	70	Reinforced Concrete Pipe - Class III (barrell length = 66 LF)	24					TES	TES	Specification 714.04 A
							Corrugated Steel Pipe	24	Z, A, P	2	0.064				
							Spiral Rib Steel Pipe	24	A, P	3/4, 1	0.064				
							High-Density Polyethylene	24							
							Polypropylene Pipe (AASHTO M330, Type S)	24							
6137+44.22	44' Rt	6137+64.22	45' Rt	18	Pipe Corr. Steel - Approach (Extension)	20	Corrugated Steel Pipe	18	Z, A, P	2	0.064			*TES	Specification 714.04 A
6151+41.15	67' Lt	6151+47.15	67' Lt	18	Pipe Corr. Steel - Approach (Extension)	6	Corrugated Steel Pipe	18	Z, A, P	2	0.064		*FES		Specification 714.04 A
6151+87.36	68' Lt	6151+92.36	68' Lt	18	Pipe Corr. Steel - Approach (Extension)	5	Corrugated Steel Pipe	18	Z, A, P	2	0.064			*FES	Specification 714.04 A
6170+97.22	60' Lt	6170+97.23	54' Lt	30	Pipe Conc. Reinf. CL III (Extension)	6	Reinforced Concrete Pipe - Class III (barrel length = 6 LF)	30					Remove & Relay		See Section 20
6170+97.36	72' Rt	6170+97.36	76' Rt	30	Pipe Conc. Reinf. CL III (Extension)	4	Reinforced Concrete Pipe - Class III (barrel length = 4 LF)	30						Remove & Relay	See Section 20
6184+98.56	62' Lt	6184+98.43	52' Lt	24	Pipe Conc. Reinf. CL III (Extension)	10	Reinforced Concrete Pipe - Class III (barrel length = 10 LF)	24					Remove & Relay		See Section 20
6184+96.93	59' Rt	6184+96.85	65' Rt	24	Pipe Conc. Reinf. CL III (Extension)	6	Reinforced Concrete Pipe - Class III (barrel length = 6 LF)	24						Remove & Relay	See Section 20
6191+48.08	43' Lt	6191+48.09	37' Lt	24	Pipe Conc. Reinf. CL III (Extension)	6	Reinforced Concrete Pipe - Class III (barrel length = 6 LF)	24					Remove & Relay		See Section 20
6191+48.22	41' Rt	6191+48.23	45' Rt	24	Pipe Conc. Reinf. CL III (Extension)	4	Reinforced Concrete Pipe - Class III (barrel length = 4 LF)	24						Remove & Relay	See Section 20
6201+17.05	38' Lt	6201+17.04	32'Lt	30	Pipe Conc. Reinf. CL III (Extension)	6	Reinforced Concrete Pipe - Class III (barrel length = 6 LF)	30					Remove & Relay		See Section 20
6201+16.91	66' Rt	6201+16.89	78' Rt	30	Pipe Conc. Reinf. CL III (Extension)	12	Reinforced Concrete Pipe - Class III (barrel length = 12 LF)	30						Remove & Relay	See Section 20
6209+97.43	58' Lt	6209+97.43	50' Lt	30	Pipe Conc. Reinf. CL III (Extension)	8	Reinforced Concrete Pipe - Class III (barrel length = 8 LF)	30					Remove & Relay		See Section 20
6209+97.39	56' Rt	6209+97.39	62' Rt	30	Pipe Conc. Reinf. CL III (Extension)	6	Reinforced Concrete Pipe - Class III (barrel length = 6 LF)	30						Remove & Relay	See Section 20
6224+97.34	40' Lt	6224+97.34	34' Lt	24	Pipe Conc. Reinf. CL III (Extension)	6	Reinforced Concrete Pipe - Class III (barrel length = 6 LF)	24					Remove & Relay		See Section 20
6224+97.36	41' Rt	6224+97.36	45' Rt	24	Pipe Conc. Reinf. CL III (Extension)	4	Reinforced Concrete Pipe - Class III (barrel length = 4 LF)	24						Remove & Relay	See Section 20
6229+67.87	44' Rt	6230+22.87	44' Rt	30	Pipe Conduit - Approach	55	Reinforced Concrete Pipe - Class III (barrell length = 52 LF)	24					TES	TES	Specification 714.04 A
							Corrugated Steel Pipe	30	Z, A, P	2	0.064				
							Spiral Rib Steel Pipe	24	A, P	3/4, 1	0.064				
							High-Density Polyethylene	24							
							Polypropylene Pipe (AASHTO M330, Type S)	24							
6229+67.87	52' Rt	6230+22.87	52' Rt	30	Pipe Conduit - Approach	55	Reinforced Concrete Pipe - Class III (barrell length = 52 LF)	24					TES	TES	Specification 714.04 A
							Corrugated Steel Pipe	30	Z, A, P	2	0.064				
							Spiral Rib Steel Pipe	24	A, P	3/4, 1	0.064				
							High-Density Polyethylene	24							
							Polypropylene Pipe (AASHTO M330, Type S)	24							
6246+24.98	102' Lt	6246+25.90	64' Lt	30	Pipe Conc. Reinf. CL III (Extension)	38	Reinforced Concrete Pipe - Class III (barrel length = 38 LF)	30					Remove & Relay		See Section 20
6246+28.55	41' Rt	6246+28.66	45' Rt	30	Pipe Conc. Reinf. CL III (Extension)	4	Reinforced Concrete Pipe - Class III (barrel length = 4 LF)	30						Remove & Relay	See Section 20
6263+36.83	99' Lt	6263+36.84	83' Lt	30	Pipe Conc. Reinf. CL III (Extension)	16	Reinforced Concrete Pipe - Class III (barrel length = 16 LF)	30					Remove & Relay		See Section 20
6263+36.97	53' Rt	6263+36.98	59' Rt	30	Pipe Conc. Reinf. CL III (Extension)	6	Reinforced Concrete Pipe - Class III (barrel length = 6 LF)	30						Remove & Relay	See Section 20
6285+66.90	59' Lt	6285+66.92	55' Lt	24	Pipe Conc. Reinf. CL III (Extension)	4	Reinforced Concrete Pipe - Class III (barrel length = 4 LF)	24					Remove & Relay		See Section 20

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

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

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

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

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Allowable Pipe List

ND 3
Tuttle N to W Jct 200

Kidder County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	51	3

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 R1 (Pay Item)	(*) End Sections		Applicable Backfill
													Begin	End	
				In	Bid Item	LF		In	Type		In	SY	EA	EA	
6285+67.44	29' Rt	6285+67.49	39' Rt	24	Pipe Conc. Reinf. CL III (Extension)	10	Reinforced Concrete Pipe - Class III (barrel length = 10 LF)	24						Remove & Relay	See Section 20
6293+08.18	44' Rt	6293+11.18	44' Rt	18	Pipe Corr. Steel - Approach (Extension)	3	Corrugated Steel Pipe	18	Z, A, P	2	0.064		*TES		Specification 714.04 A
6293+80.15	46' Rt	6294+02.14	47' Rt	18	Pipe Corr. Steel - Approach (Extension)	22	Corrugated Steel Pipe	18	Z, A, P	2	0.064			*TES	Specification 714.04 A
6295+37.15	36' Lt	6295+37.16	30' Lt	30	Pipe Conc. Reinf. CL III (Extension)	6	Reinforced Concrete Pipe - Class III (barrel length = 6 LF)	30					Remove & Relay		See Section 20
6295+37.28	32' Rt	6295+37.29	38' Rt	30	Pipe Conc. Reinf. CL III (Extension)	6	Reinforced Concrete Pipe - Class III (barrel length = 6 LF)	30						*FES	See Section 20
6299+04.11	54' Lt	6299+15.11	54' Lt	24	Pipe Corr. Steel - Approach (Extension)	11	Corrugated Steel Pipe	24	Z, A, P	2	0.064		*TES		Specification 714.04 A
6299+79.34	53' Lt	6299+95.33	53' Lt	24	Pipe Corr. Steel - Approach (Extension)	16	Corrugated Steel Pipe	24	Z, A, P	2	0.064			*TES	Specification 714.04 A
6308+64.78	33' Lt	6308+64.77	27' Lt	24	Pipe Conc. Reinf. CL III (Extension)	6	Reinforced Concrete Pipe - Class III (barrel length = 6 LF)	24					*FES		See Section 20
6308+64.68	27' Rt	6308+64.67	33' Rt	24	Pipe Conc. Reinf. CL III (Extension)	6	Reinforced Concrete Pipe - Class III (barrel length = 6 LF)	24						*FES	See Section 20
6360+15.61	38' Lt	6360+15.59	34' Lt	24	Pipe Conc. Reinf. CL III (Extension)	4	Reinforced Concrete Pipe - Class III (barrel length = 4 LF)	24					Remove & Relay		See Section 20
6360+15.20	39' Rt	6360+15.15	49' Rt	24	Pipe Conc. Reinf. CL III (Extension)	10	Reinforced Concrete Pipe - Class III (barrel length = 10 LF)	24						Remove & Relay	See Section 20
6369+65.05	44' Rt	6369+71.05	44' Rt	18	Pipe Corr. Steel - Approach (Extension)	6	Corrugated Steel Pipe	18	Z, A, P	2	0.064		*TES		Specification 714.04 A
6370+55.39	42' Rt	6370+70.39	42' Rt	18	Pipe Corr. Steel - Approach (Extension)	15	Corrugated Steel Pipe	18	Z, A, P	2	0.064			*TES	Specification 714.04 A
6387+97.46	33' Lt	6387+97.45	31' Lt	24	Pipe Conc. Reinf. CL III (Extension)	2	Reinforced Concrete Pipe - Class III (barrel length = 2 LF)	24					Remove & Relay		See Section 20
6387+97.02	27' Rt	6387+97.01	29' Rt	24	Pipe Conc. Reinf. CL III (Extension)	2	Reinforced Concrete Pipe - Class III (barrel length = 2 LF)	24						Remove & Relay	See Section 20
6413+11.39	54' Lt	6413+11.37	46' Lt	24	Pipe Conc. Reinf. CL III (Extension)	8	Reinforced Concrete Pipe - Class III (barrel length = 8 LF)	24					Remove & Relay		See Section 20
6413+11.21	26' Rt	6413+11.19	36' Rt	24	Pipe Conc. Reinf. CL III (Extension)	10	Reinforced Concrete Pipe - Class III (barrel length = 10 LF)	24						Remove & Relay	See Section 20
6434+94.62	53' Lt	6435+08.62	53' Lt	18	Pipe Corr. Steel - Approach (Extension)	14	Corrugated Steel Pipe	18	Z, A, P	2	0.064		*TES		Specification 714.04 A
6435+63.66	53' Lt	6435+74.66	52' Lt	18	Pipe Corr. Steel - Approach (Extension)	11	Corrugated Steel Pipe	18	Z, A, P	2	0.064			*TES	Specification 714.04 A
6443+74.97	41' Lt	6443+74.93	35' Lt	24	Pipe Conc. Reinf. CL III (Extension)	6	Reinforced Concrete Pipe - Class III (barrel length = 6 LF)	24					Remove & Relay		See Section 20
6443+74.50	37' Rt	6443+74.47	43' Rt	24	Pipe Conc. Reinf. CL III (Extension)	6	Reinforced Concrete Pipe - Class III (barrel length = 6 LF)	24						*FES	See Section 20
6450+89.87	43' Rt	6450+99.87	43' Rt	18	Pipe Corr. Steel - Approach (Extension)	10	Corrugated Steel Pipe	18	Z, A, P	2	0.064		*TES		Specification 714.04 A
6451+78.57	43' Rt	6451+91.57	43' Rt	18	Pipe Corr. Steel - Approach (Extension)	13	Corrugated Steel Pipe	18	Z, A, P	2	0.064			*TES	Specification 714.04 A
6455+47.96	37' Lt	6455+48.00	31' Lt	24	Pipe Conc. Reinf. CL III (Extension)	6	Reinforced Concrete Pipe - Class III (barrel length = 6 LF)	24					Remove & Relay		See Section 20
6455+48.35	31' Rt	6455+48.38	37' Rt	24	Pipe Conc. Reinf. CL III (Extension)	6	Reinforced Concrete Pipe - Class III (barrel length = 6 LF)	24						Remove & Relay	See Section 20
6455+78.51	48' Rt	6455+99.48	46' Rt	18	Pipe Corr. Steel - Approach (Extension)	21	Corrugated Steel Pipe	18	Z, A, P	2	0.064		*TES		Specification 714.04 A
6456+81.75	42' Rt	6456+90.73	42' Rt	18	Pipe Corr. Steel - Approach (Extension)	9	Corrugated Steel Pipe	18	Z, A, P	2	0.064			*TES	Specification 714.04 A
6458+99.32	40' Rt	6459+30.32	41' Rt	18	Pipe Corr. Steel - Approach (Extension)	31	Corrugated Steel Pipe	18	Z, A, P	2	0.064		*TES		Specification 714.04 A

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P = Polymeric (over Zinc or Aluminum)

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

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

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

Allowable Pipe List

ND 3
Tuttle N to W Jct 200

Kidder County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	51	4

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 R1 (Pay Item)	(*) End Sections		Applicable Backfill
													Begin	End	
				In	Bid Item	LF		In	Type		In	SY	EA	EA	
6459+86.95	41' Rt	6460+01.94	41' Rt	18	Pipe Corr. Steel - Approach (Extension)	15	Corrugated Steel Pipe	18	Z, A, P	2	0.064			*TES	Specification 714.04 A
6484+57.16	60' Rt	6484+73.14	59' Rt	18	Pipe Corr. Steel - Approach (Extension)	16	Corrugated Steel Pipe	18	Z, A, P	2	0.064		*TES		Specification 714.04 A
6489+38.39	71' Lt	6489+38.46	67' Lt	30	Pipe Conc. Reinf. CL III (Extension)	4	Reinforced Concrete Pipe - Class III (barrel length = 4 LF)	30					Remove & Relay		See Section 20
6489+40.38	39' Rt	6489+40.49	45' Rt	30	Pipe Conc. Reinf. CL III (Extension)	6	Reinforced Concrete Pipe - Class III (barrel length = 6 LF)	30						Remove & Relay	See Section 20
6524+41.87	65' Lt	6524+70.82	66' Lt	15	Pipe Corr. Steel - Approach (Extension)	29	Corrugated Steel Pipe	15	Z, A, P	2	0.064		*FES		Specification 714.04 A
6525+09.11	68' Lt	6525+40.06	70' Lt	15	Pipe Corr. Steel - Approach (Extension)	31	Corrugated Steel Pipe	15	Z, A, P	2	0.064			*FES	Specification 714.04 A
6526+97.78	73' Lt	6526+97.76	69' Lt	30	Pipe Conc. Reinf. CL III (Extension)	4	Reinforced Concrete Pipe - Class III (barrel length = 4 LF)	30					Remove & Relay		See Section 20
6526+96.86	70' Rt	6526+96.81	78' Rt	30	Pipe Conc. Reinf. CL III (Extension)	8	Reinforced Concrete Pipe - Class III (barrel length = 8 LF)	30						Remove & Relay	See Section 20
6530+81.27	40' Rt	6531+08.26	41' Rt	18	Pipe Corr. Steel - Approach (Extension)	27	Corrugated Steel Pipe	18	Z, A, P	2	0.064		*TES		Specification 714.04 A
6531+01.44	44' Lt	6531+11.43	44' Lt	18	Pipe Corr. Steel - Approach (Extension)	10	Corrugated Steel Pipe	18	Z, A, P	2	0.064		*TES		Specification 714.04 A
6531+89.87	43' Rt	6531+95.87	43' Rt	18	Pipe Corr. Steel - Approach (Extension)	6	Corrugated Steel Pipe	18	Z, A, P	2	0.064			*TES	Specification 714.04 A
6531+96.28	42' Lt	6532+12.27	41' Lt	18	Pipe Corr. Steel - Approach (Extension)	16	Corrugated Steel Pipe	18	Z, A, P	2	0.064			*TES	Specification 714.04 A
6537+47.40	37' Lt	6537+47.36	17' Lt	48x72	Cattle Pass Intermediate Section (Extension)	20	Reinforced Concrete Pipe - Class III (barrel length = 20 LF)	48x72					Remove & Relay		See Section 20
6537+47.26	26' Rt	6537+47.21	44' Rt	48x72	Cattle Pass Intermediate Section (Extension)	18	Reinforced Concrete Pipe - Class III (barrel length = 18 LF)	48x72						Remove & Relay	See Section 20
6556+97.63	38' Lt	6556+97.60	34' Lt	24	Pipe Conc. Reinf. CL III (Extension)	4	Reinforced Concrete Pipe - Class III (barrel length = 4 LF)	24					Remove & Relay		See Section 20
6556+97.11	36' Rt	6556+97.06	42' Rt	24	Pipe Conc. Reinf. CL III (Extension)	6	Reinforced Concrete Pipe - Class III (barrel length = 6 LF)	24						*FES	See Section 20
6566+97.98	73' Lt	6566+97.99	67' Lt	30	Pipe Conc. Reinf. CL III (Extension)	6	Reinforced Concrete Pipe - Class III (barrel length = 6 LF)	30					Remove & Relay		See Section 20
6566+98.21	66' Rt	6566+98.22	72' Rt	30	Pipe Conc. Reinf. CL III (Extension)	6	Reinforced Concrete Pipe - Class III (barrel length = 6 LF)	30						Remove & Relay	See Section 20
6590+12.36	38' Lt	6590+12.36	32' Lt	24	Pipe Conc. Reinf. CL III (Extension)	6	Reinforced Concrete Pipe - Class III (barrel length = 6 LF)	24					Remove & Relay		See Section 20
6590+12.31	37' Rt	6590+12.31	43' Rt	24	Pipe Conc. Reinf. CL III (Extension)	6	Reinforced Concrete Pipe - Class III (barrel length = 6 LF)	24						Remove & Relay	See Section 20
6614+51.86	43' Rt	6614+74.86	43' Rt	18	Pipe Corr. Steel - Approach (Extension)	23	Corrugated Steel Pipe	18	Z, A, P	2	0.064		*TES		Specification 714.04 A
6614+92.71	52' Lt	6614+97.71	52' Lt	18	Pipe Corr. Steel - Approach (Extension)	5	Corrugated Steel Pipe	18	Z, A, P	2	0.064		*TES		Specification 714.04 A
6615+41.35	43' Rt	6615+60.35	43' Rt	18	Pipe Corr. Steel - Approach (Extension)	19	Corrugated Steel Pipe	18	Z, A, P	2	0.064			*TES	Specification 714.04 A
6615+83.38	52' Lt	6616+01.38	52' Lt	18	Pipe Corr. Steel - Approach (Extension)	18	Corrugated Steel Pipe	18	Z, A, P	2	0.064			*TES	Specification 714.04 A
6640+96.09	58' Lt	6640+96.11	52' Lt	30	Pipe Conc. Reinf. CL III (Extension)	6	Reinforced Concrete Pipe - Class III (barrel length = 6 LF)	30					Remove & Relay		See Section 20
6640+96.49	49' Rt	6640+96.52	55' Rt	30	Pipe Conc. Reinf. CL III (Extension)	6	Reinforced Concrete Pipe - Class III (barrel length = 6 LF)	30						Remove & Relay	See Section 20

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PE-27746
DATE 12/15/2021
NORTH DAKOTA

Allowable Pipe List

ND 3
Tuttle N to W Jct 200

Kidder County

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

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

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

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

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	51	5

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 R1 (Pay Item)	(*) End Sections		Applicable Backfill
													Begin	End	
				In	Bid Item	LF		In	Type		In	SY	EA	EA	
6690+95.24	58' Rt	6690+95.23	60' Rt	30	Pipe Conc. Reinf. CL III (Extension)	2	Reinforced Concrete Pipe - Class III (barrel length = 2 LF)	30						Remove & Relay	See Section 20
6701+94.39	56' Lt	6701+94.42	52' Lt	30	Pipe Conc. Reinf. CL III (Extension)	4	Reinforced Concrete Pipe - Class III (barrel length = 4 LF)	30					*FES		See Section 20
6701+95.27	51' Rt	6701+95.32	57' Rt	30	Pipe Conc. Reinf. CL III (Extension)	6	Reinforced Concrete Pipe - Class III (barrel length = 6 LF)	30						*FES	See Section 20
6713+96.54	54' Lt	6713+96.58	60' Lt	30	Pipe Corr. Steel (Extension)	6	Corrugated Steel Pipe	30	Z, A, P	2	0.079			*FES	See Section 20
6714+11.70	61' Rt	6715+12.63	61' Rt	24	Pipe Conduit - Approach	101	Reinforced Concrete Pipe - Class III (barrell length = 96 LF)	24					TES	TES	Specification 714.04 A
							Corrugated Steel Pipe	24	A, P	2	0.064				
							Spiral Rib Steel Pipe	24	A, P	3/4, 1	0.064				
							High-Density Polyethylene	24							
							Polypropylene Pipe (AASHTO M330, Type S)	24							
6714+23.28	95' Lt	6715+16.35	98' Lt	24	Pipe Conduit - Approach	93	Reinforced Concrete Pipe - Class III (barrell length = 88 LF)	24					FES	FES	Specification 714.04 A
							Corrugated Steel Pipe	24	A, P	2	0.064				
							Spiral Rib Steel Pipe	24	A, P	3/4, 1	0.064				
							High-Density Polyethylene	24							
							Polypropylene Pipe (AASHTO M330, Type S)	24							
6733+78.76	55' Lt	6733+98.76	54' Lt	24	Pipe Corr. Steel - Approach (Extension)	20	Corrugated Steel Pipe	24	Z, A, P	2	0.064		*TES		Specification 714.04 A
6734+61.64	54' Lt	6734+86.64	53' Lt	24	Pipe Corr. Steel - Approach (Extension)	25	Corrugated Steel Pipe	24	Z, A, P	2	0.064			*TES	Specification 714.04 A
6736+26.00	34' Rt	6736+26.00	38' Rt	30	Pipe Conc. Reinf. CL III (Extension)	4	Reinforced Concrete Pipe - Class III (barrel length = 4 LF)	30						Remove & Relay	See Section 20
6757+69.87	35' Lt	6757+69.88	29' Lt	24	Pipe Conc. Reinf. CL III (Extension)	6	Reinforced Concrete Pipe - Class III (barrel length = 6 LF)	24					Remove & Relay		See Section 20
6757+70.02	30' Rt	6757+70.03	36' Rt	24	Pipe Conc. Reinf. CL III (Extension)	6	Reinforced Concrete Pipe - Class III (barrel length = 6 LF)	24						Remove & Relay	See Section 20
6762+81.32	46' Rt	6762+81.33	56' Rt	30	Pipe Conc. Reinf. CL III (Extension)	10	Reinforced Concrete Pipe - Class III (barrel length = 10 LF)	30						Remove & Relay	See Section 20
6776+66.01	37' Lt	6776+65.98	31' Lt	30	Pipe Conc. Reinf. CL III (Extension)	6	Reinforced Concrete Pipe - Class III (barrel length = 6 LF)	30					Remove & Relay		See Section 20
6776+65.57	33' Rt	6776+65.54	39' Rt	30	Pipe Conc. Reinf. CL III (Extension)	6	Reinforced Concrete Pipe - Class III (barrel length = 6 LF)	30						Remove & Relay	See Section 20
6807+50.45	46' Rt	6807+63.45	46' Rt	18	Pipe Corr. Steel - Approach (Extension)	13	Corrugated Steel Pipe	18	Z, A, P	2	0.064		*TES		Specification 714.04 A
6807+57.89	47' Lt	6807+66.88	47' Lt	18	Pipe Corr. Steel - Approach (Extension)	9	Corrugated Steel Pipe	18	Z, A, P	2	0.064		*TES		Specification 714.04 A
6808+30.08	46' Rt	6808+63.08	46' Rt	18	Pipe Corr. Steel - Approach (Extension)	33	Corrugated Steel Pipe	18	Z, A, P	2	0.064			*TES	Specification 714.04 A
6808+33.52	50' Lt	6808+67.48	51' Lt	18	Pipe Corr. Steel - Approach (Extension)	34	Corrugated Steel Pipe	18	Z, A, P	2	0.064			*TES	Specification 714.04 A
6820+47.80	44' Lt	6820+64.79	44' Lt	24	Pipe Corr. Steel - Approach (Extension)	17	Corrugated Steel Pipe	24	Z, A, P	2	0.064		*TES		Specification 714.04 A
6821+31.12	46' Lt	6821+41.12	46' Lt	24	Pipe Corr. Steel - Approach (Extension)	10	Corrugated Steel Pipe	24	Z, A, P	2	0.064			*TES	Specification 714.04 A
6821+84.87	45' Lt	6822+00.86	46' Lt	24	Pipe Corr. Steel - Approach (Extension)	16	Corrugated Steel Pipe	24	Z, A, P	2	0.064		*TES		Specification 714.04 A
6821+81.42	52' Rt	6822+01.38	53' Rt	24	Pipe Corr. Steel - Approach (Extension)	20	Corrugated Steel Pipe	24	Z, A, P	2	0.064		*TES		Specification 714.04 A
6822+63.04	57' Rt	6822+84.99	59' Rt	24	Pipe Corr. Steel - Approach (Extension)	22	Corrugated Steel Pipe	24	Z, A, P	2	0.064			*TES	Specification 714.04 A
6822+62.49	48' Lt	6822+73.49	48' Lt	24	Pipe Corr. Steel - Approach (Extension)	11	Corrugated Steel Pipe	24	Z, A, P	2	0.064			*TES	Specification 714.04 A

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Allowable Pipe List

ND 3
Tuttle N to W Jct 200

Wells County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	51	6

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 R1 (Pay Item)	(*) End Sections		Applicable Backfill
													Begin	End	
				In	Bid Item	LF		In	Type		In	SY	EA	EA	
6840+95.01	55' Lt	6840+95.13	49' Lt	30	Pipe Conc. Reinf. CL III (Extension)	6	Reinforced Concrete Pipe - Class III (barrel length = 6 LF)	30					Remove & Relay		See Section 20
6840+96.97	47' Rt	6840+97.13	55' Rt	30	Pipe Conc. Reinf. CL III (Extension)	8	Reinforced Concrete Pipe - Class III (barrel length = 8 LF)	30						Remove & Relay	See Section 20
6845+95.97	36' Lt	6845+96.12	18' Lt	48x72	Cattle Pass Intermediate Section (Extension)	18	Reinforced Concrete Pipe - Class III (barrel length = 18 LF)	48x72					Remove & Relay		See Section 20
6845+96.42	18' Rt	6845+96.57	36' Rt	48x72	Cattle Pass Intermediate Section (Extension)	18	Reinforced Concrete Pipe - Class III (barrel length = 18 LF)	48x72						Remove & Relay	See Section 20
6884+67.18	47' Lt	6884+67.17	41' Lt	24	Pipe Conc. Reinf. CL III (Extension)	6	Reinforced Concrete Pipe - Class III (barrel length = 6 LF)	24					Remove & Relay		See Section 20
6884+67.01	44' Rt	6884+67.00	50' Rt	24	Pipe Conc. Reinf. CL III (Extension)	6	Reinforced Concrete Pipe - Class III (barrel length = 6 LF)	24						Remove & Relay	See Section 20
6891+98.60	34' Lt	6891+98.60	28' Lt	24	Pipe Conc. Reinf. CL III (Extension)	6	Reinforced Concrete Pipe - Class III (barrel length = 6 LF)	24					Remove & Relay		See Section 20
6891+98.51	59' Rt	6891+98.50	61' Rt	24	Pipe Conc. Reinf. CL III (Extension)	2	Reinforced Concrete Pipe - Class III (barrel length = 2 LF)	24						*FES	See Section 20
6908+47.40	40' Lt	6908+47.39	36' Lt	24	Pipe Conc. Reinf. CL III (Extension)	4	Reinforced Concrete Pipe - Class III (barrel length = 4 LF)	24					*FES		See Section 20
6908+47.19	31' Rt	6908+47.17	35' Rt	24	Pipe Conc. Reinf. CL III (Extension)	4	Reinforced Concrete Pipe - Class III (barrel length = 4 LF)	24						Remove & Relay	See Section 20
6917+35.81	83' Lt	6917+35.95	77' Lt	30	Pipe Conc. Reinf. CL III (Extension)	6	Reinforced Concrete Pipe - Class III (barrel length = 6 LF)	30					Remove & Relay		See Section 20
6917+38.54	45' Rt	6917+38.66	51' Rt	30	Pipe Conc. Reinf. CL III (Extension)	6	Reinforced Concrete Pipe - Class III (barrel length = 6 LF)	30						Remove & Relay	See Section 20
6926+97.37	35' Lt	6926+97.38	27' Lt	24	Pipe Conc. Reinf. CL III (Extension)	8	Reinforced Concrete Pipe - Class III (barrel length = 8 LF)	24					Remove & Relay		See Section 20
6929+25.85	46' Rt	6929+37.28	49' Rt	18	Pipe Corr. Steel - Approach (Extension)	12	Corrugated Steel Pipe	18	Z, A, P	2	0.064		*TES		Specification 714.04 A
6929+78.63	60' Rt	6930+03.06	67' Rt	18	Pipe Corr. Steel - Approach (Extension)	26	Corrugated Steel Pipe	18	Z, A, P	2	0.064			*FES	Specification 714.04 A
6932+23.76	52' Lt	6932+23.75	50' Lt	36	Pipe Conc. Reinf. CL III (Extension)	2	Reinforced Concrete Pipe - Class III (barrel length = 2 LF)	36					Remove & Relay		See Section 20
6946+72.97	45' Lt	6947+08.41	45' Lt	18	Pipe Corr. Steel - Approach (Extension)	36	Corrugated Steel Pipe	18	Z, A, P	2	0.064		*TES		Specification 714.04 A
6947+02.03	40' Rt	6947+04.05	40' Rt	24	Pipe Corr. Steel - Approach (Extension)	2	Corrugated Steel Pipe	24	Z, A, P	2	0.064		*TES		Specification 714.04 A
6947+70.37	44' Rt	6947+87.62	44' Rt	24	Pipe Corr. Steel - Approach (Extension)	17	Corrugated Steel Pipe	24	Z, A, P	2	0.064			*TES	Specification 714.04 A
6947+75.52	47' Lt	6947+94.20	47' Lt	18	Pipe Corr. Steel - Approach (Extension)	19	Corrugated Steel Pipe	18	Z, A, P	2	0.064			*TES	Specification 714.04 A
6954+56.88	45' Lt	6954+70.66	45' Lt	18	Pipe Corr. Steel - Approach (Extension)	14	Corrugated Steel Pipe	18	Z, A, P	2	0.064		*TES		Specification 714.04 A
6955+28.07	44' Lt	6955+44.88	44' Lt	18	Pipe Corr. Steel - Approach (Extension)	17	Corrugated Steel Pipe	18	Z, A, P	2	0.064			*TES	Specification 714.04 A
7091+95.13	46' Lt	7092+57.12	46' Lt	24	Pipe Conduit - Approach	62	Reinforced Concrete Pipe - Class III (barrell length = 58 LF)	18					TES	TES	Specification 714.04 A
							Corrugated Steel Pipe	24	A, P	2	0.064				
							Spiral Rib Steel Pipe	18	A, P	3/4, 1	0.064				
							High-Density Polyethylene	18							
							Polypropylene Pipe (AASHTO M330, Type S)	18							

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

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

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

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

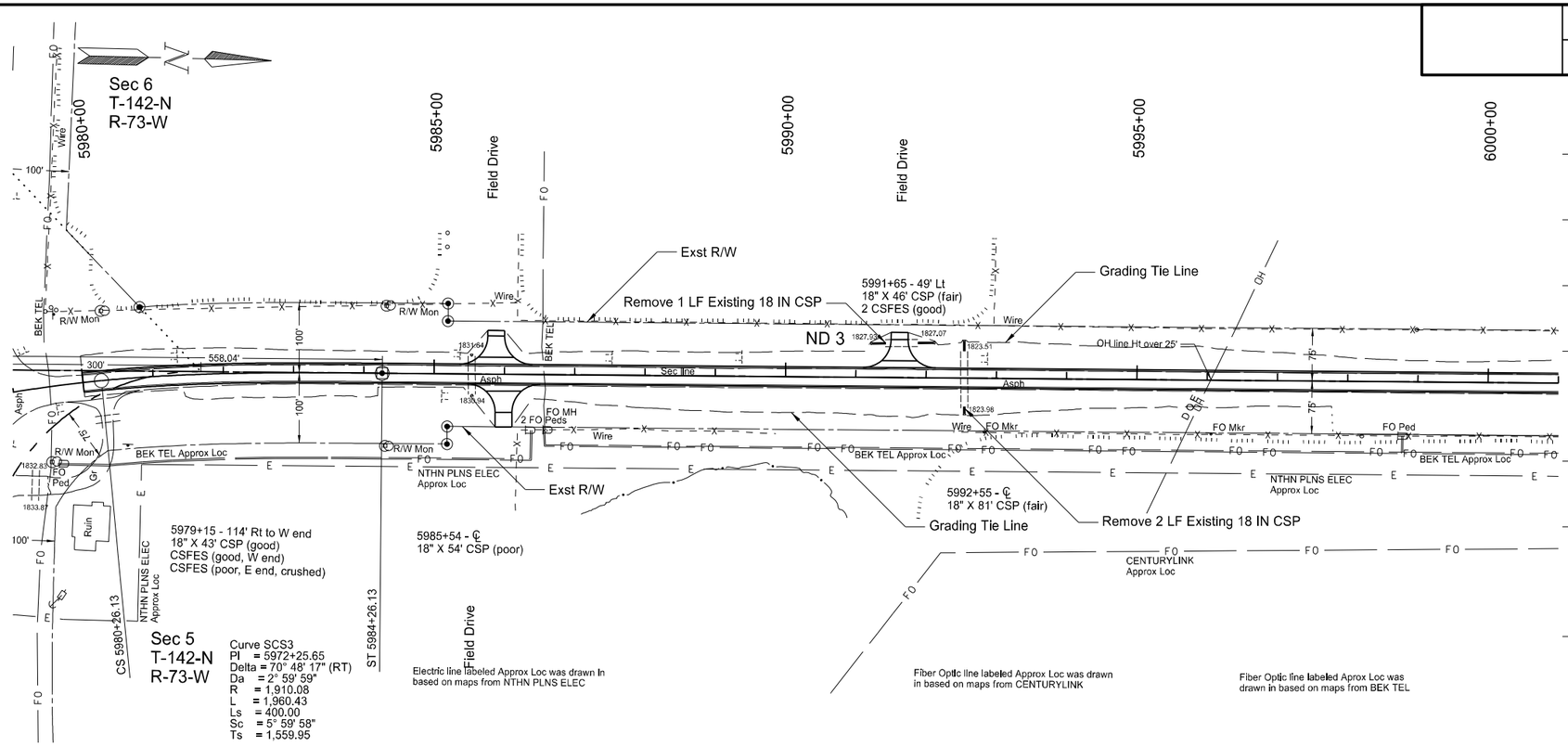
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

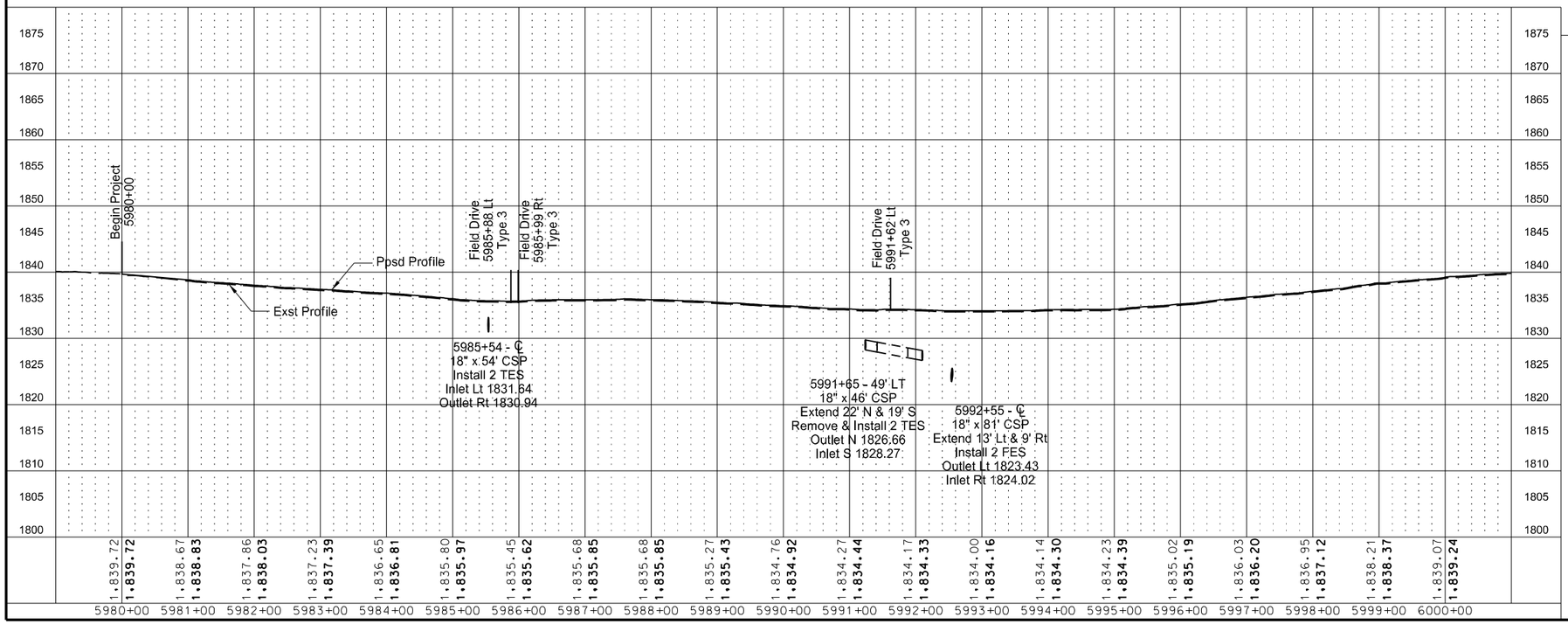
Allowable Pipe List

ND 3
Tuttle N to W Jct 200

Wells County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	60	1





SPEC	CODE	BID ITEM	QTY	UNIT
202	0169	REMOVAL OF END SECTION-ALL TYPES & SIZES		
		5991+42 Lt	1	EA
		5991+88 Lt	1	EA
202	0174	REMOVAL OF PIPE ALL TYPES AND SIZES		
		5991+42 - 49' Lt to 5991+43 - 49' Lt	1	LF
		5992+55 Rt	2	LF
714	2518	CURED-IN-PLACE PIPE-18IN		
		5985+54	54	LF
		5992+55	101	LF
714	5015	PIPE CORR STEEL .064IN 18IN		
		5991+24 - 48' Lt to 5991+43 - 49' Lt	19	LF
		5991+88 - 49' Lt to 5992+10 - 50' Lt	22	LF
		5992+54 - 51' Lt to 5992+54 - 38' Lt	13	LF
		5992+55 - 41' Rt to 5992+55 - 50' Rt	9	LF
714	5810	END SECT CORR STEEL .064IN 18IN		
		5992+54 Lt	1	EA
		5992+55 Rt	1	EA
714	6501	END SECT-TRAVERSABLE METAL 18IN		
		5985+53 Lt	1	EA
		5985+54 Rt	1	EA
		5991+24 Lt	1	EA
		5992+10 Lt	1	EA
754	0805	OBJECT MARKERS - CULVERTS		
		5985+53 Lt	1	EA
		5985+54 Rt	1	EA
		5991+24 Lt	1	EA
		5992+10 Lt	1	EA
		5992+54 Lt	1	EA
		5992+55 Rt	1	EA
990	0400	PIPE CLEANOUT		
		5985+54	1	EA
		5992+55	1	EA

Legend

Removal of Bituminous Surfacing

Clearing & Grubbing

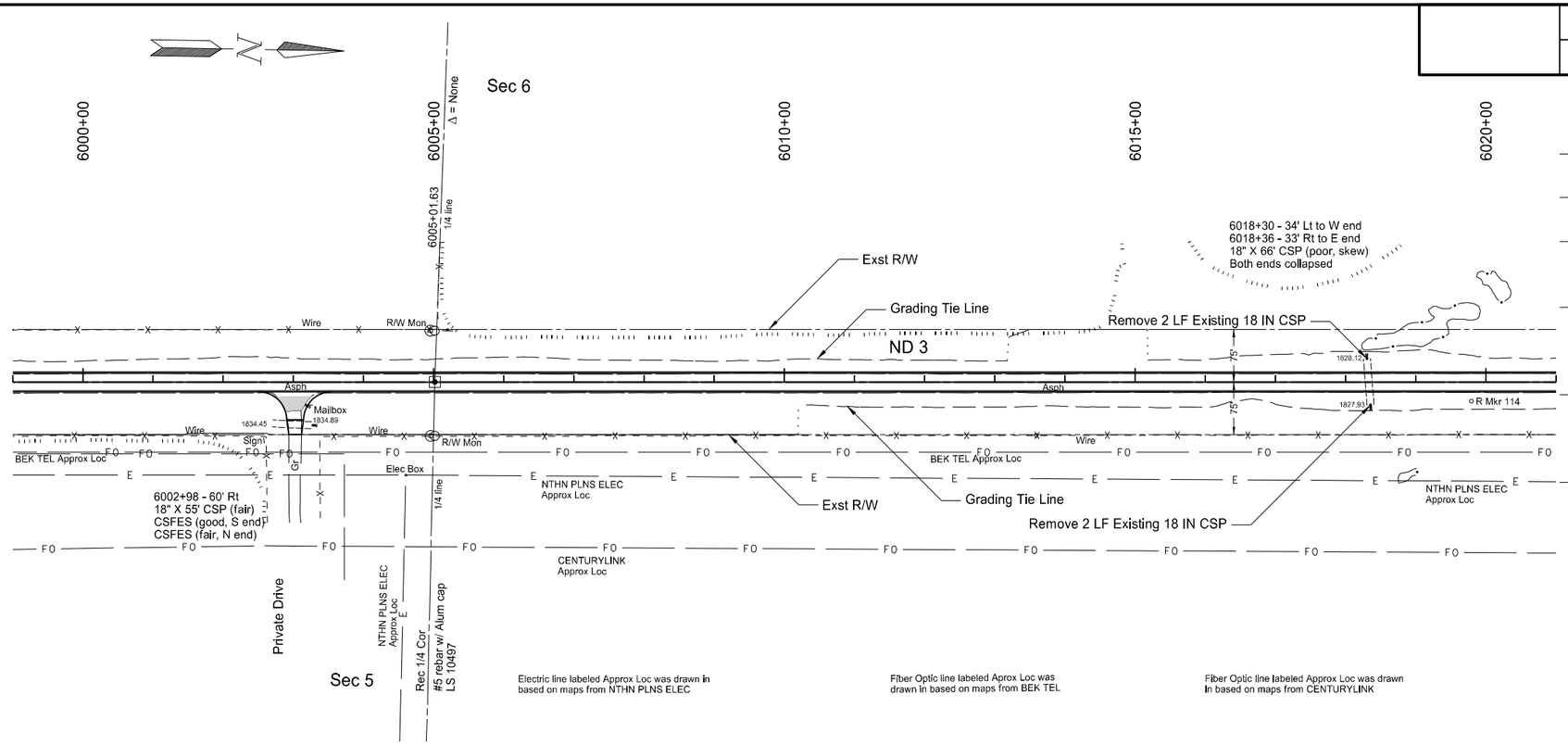
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 12/15/2021
NORTH DAKOTA

Plan & Profile

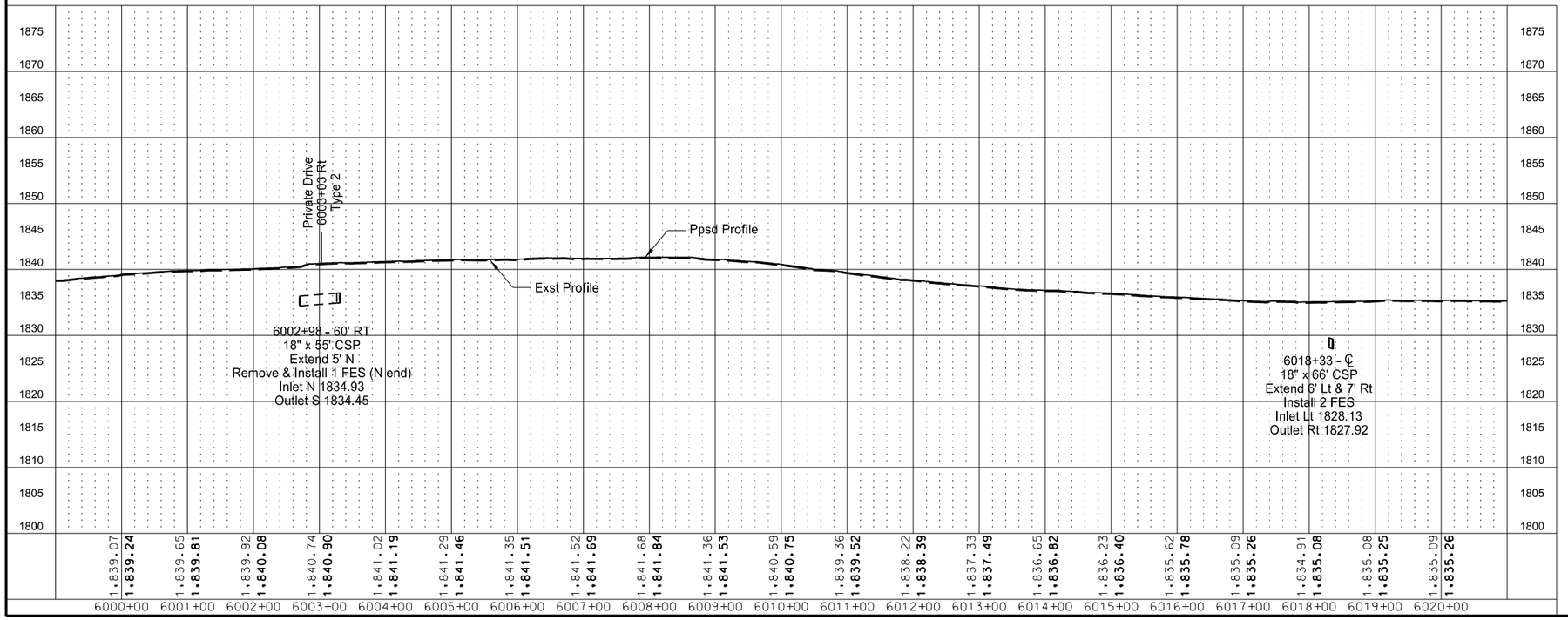
ND 3
Tuttle N to W Jct 200

5980+00 to 6000+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	60	2



SPEC	CODE	BID ITEM	QTY	UNIT
202	0132	REMOVAL OF BITUMINOUS SURFACING		
		6003+03 Rt	82	SY
202	0169	REMOVAL OF END SECTION-ALL TYPES & SIZES		
		6003+26 Rt	1	EA
202	0174	REMOVAL OF PIPE ALL TYPES AND SIZES		
		6018+30 Lt	2	LF
		6018+36 Rt	2	LF
714	5015	PIPE CORR STEEL .064IN 18IN		
		6003+26 - 62' Rt to 6003+31 - 62' Rt	5	LF
		6018+30 - 38' Lt to 6018+31 - 32' Lt	6	LF
		6018+35 - 31' Rt to 6018+36 - 38' Rt	7	LF
714	5810	END SECT CORR STEEL .064IN 18IN		
		6003+31 Rt	1	EA
		6018+30 Lt	1	EA
		6018+36 Rt	1	EA
754	0805	OBJECT MARKERS - CULVERTS		
		6003+31 Rt	1	EA
		6018+30 Lt	1	EA
		6018+36 Rt	1	EA



Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

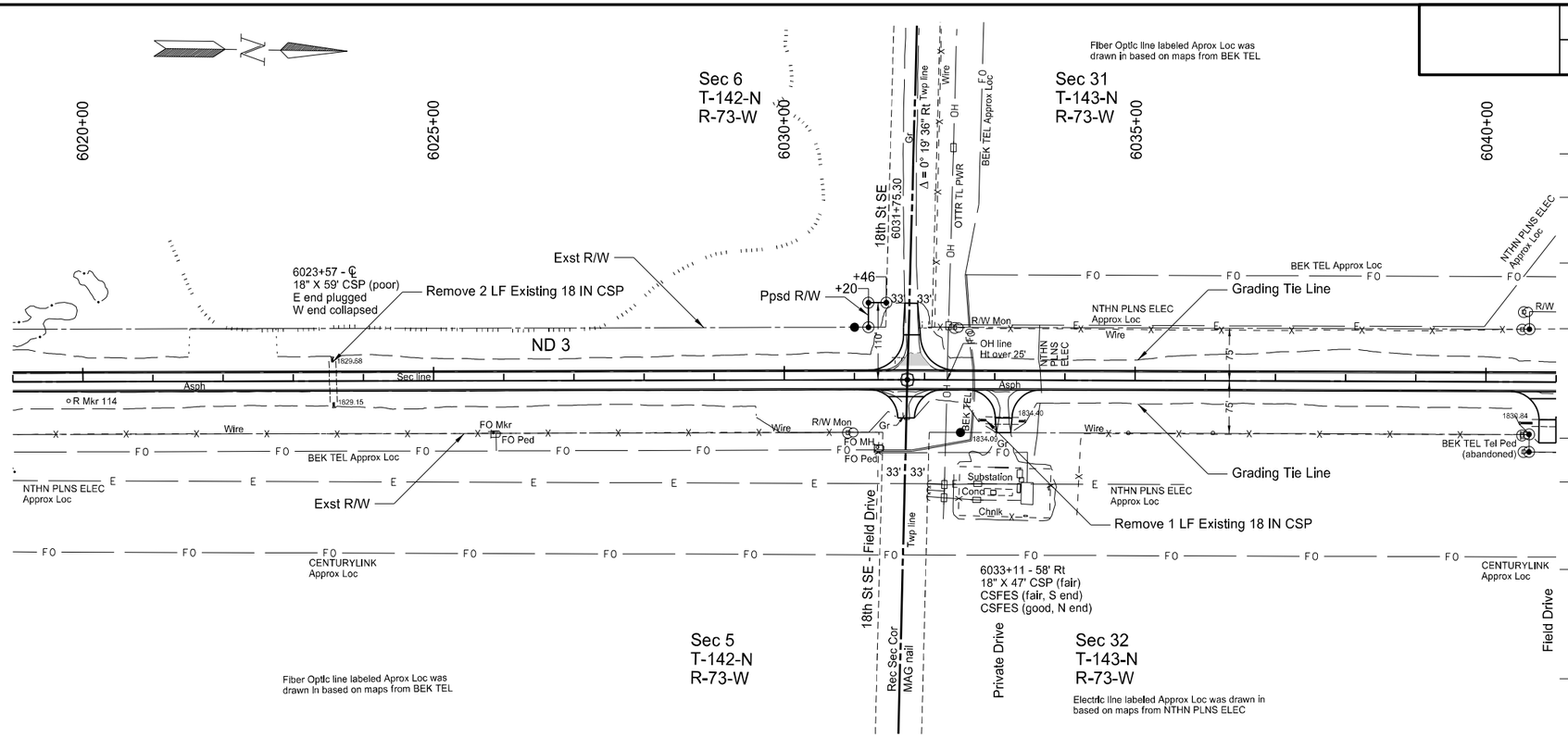
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 12/15/2021
NORTH DAKOTA

Plan & Profile

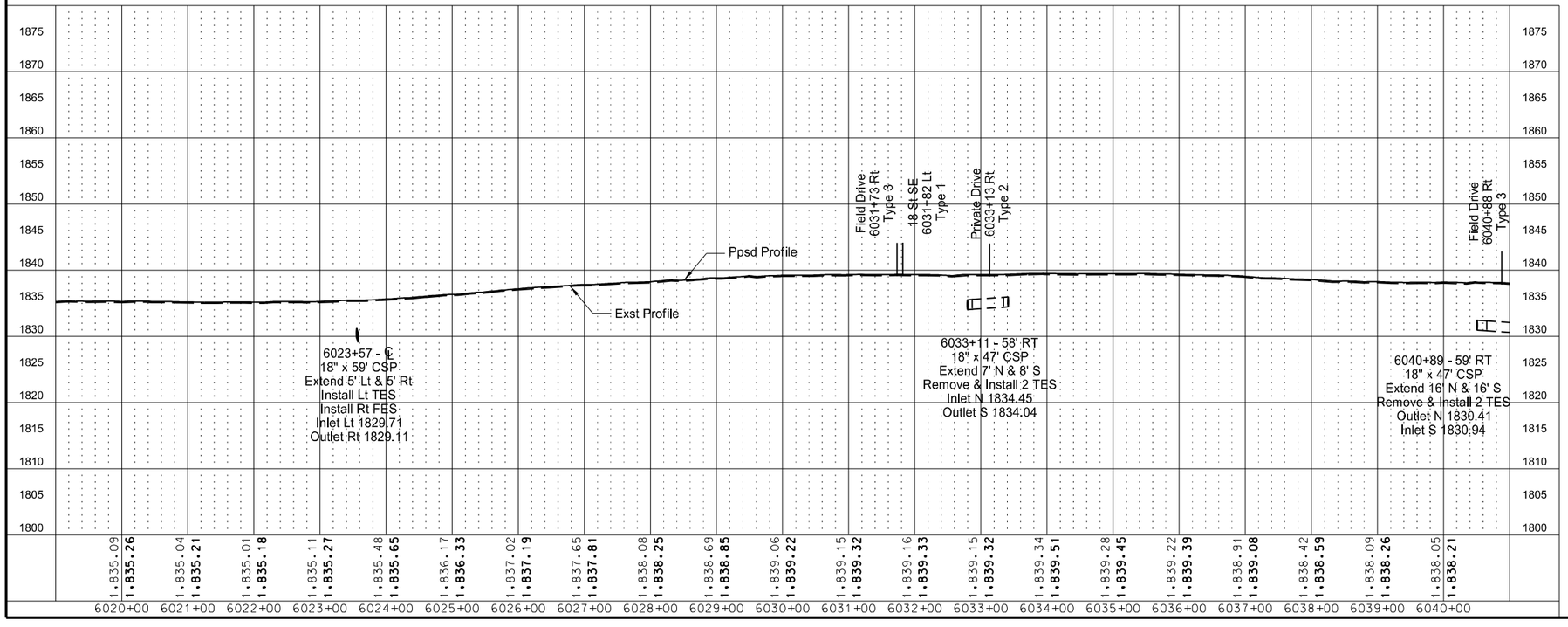
ND 3
Tuttle N to W Jct 200

6000+00 to 6020+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	60	3



SPEC	CODE	BID ITEM	QTY	UNIT
202	0132	REMOVAL OF BITUMINOUS SURFACING		
		6031+82 Lt	60	SY
202	0169	REMOVAL OF END SECTION-ALL TYPES & SIZES		
		6032+87 Rt	1	EA
		6033+34 Rt	1	EA
202	0174	REMOVAL OF PIPE ALL TYPES AND SIZES		
		6023+57 Lt	2	LF
		6032+87 - 57' Rt to 6032+88 - 57' Rt	1	LF
714	5015	PIPE CORR STEEL .064IN 18IN		
		6023+56 - 32' Lt to 6023+56 - 27' Lt	5	LF
		6023+57 - 30' Rt to 6023+58 - 35' Rt	5	LF
		6032+80 - 57' Rt to 6032+88 - 57' Rt	8	LF
		6033+34 - 58' Rt to 6033+41 - 58' Rt	7	LF
714	5810	END SECT CORR STEEL .064IN 18IN		
		6023+58 Rt	1	EA
714	6501	END SECT-TRAVERSABLE METAL 18IN		
		6023+56 Lt	1	EA
		6032+80 Rt	1	EA
		6033+41 Rt	1	EA
754	0805	OBJECT MARKERS - CULVERTS		
		6023+56 Lt	1	EA
		6023+58 Rt	1	EA
		6032+80 Rt	1	EA
		6033+41 Rt	1	EA
990	0400	PIPE CLEANOUT		
		6023+57	1	EA



Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

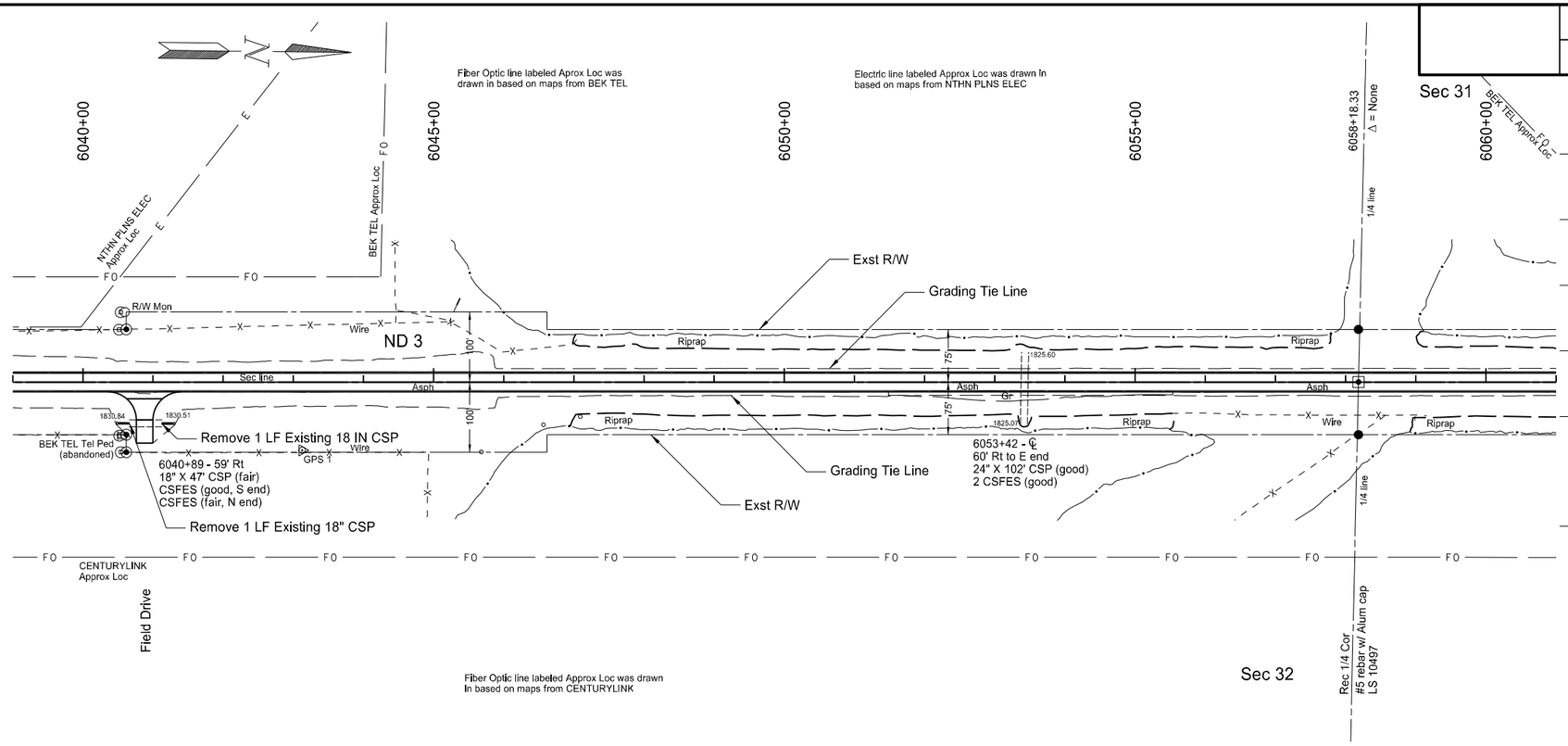
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PE-27746
DATE 12/15/2021
NORTH DAKOTA

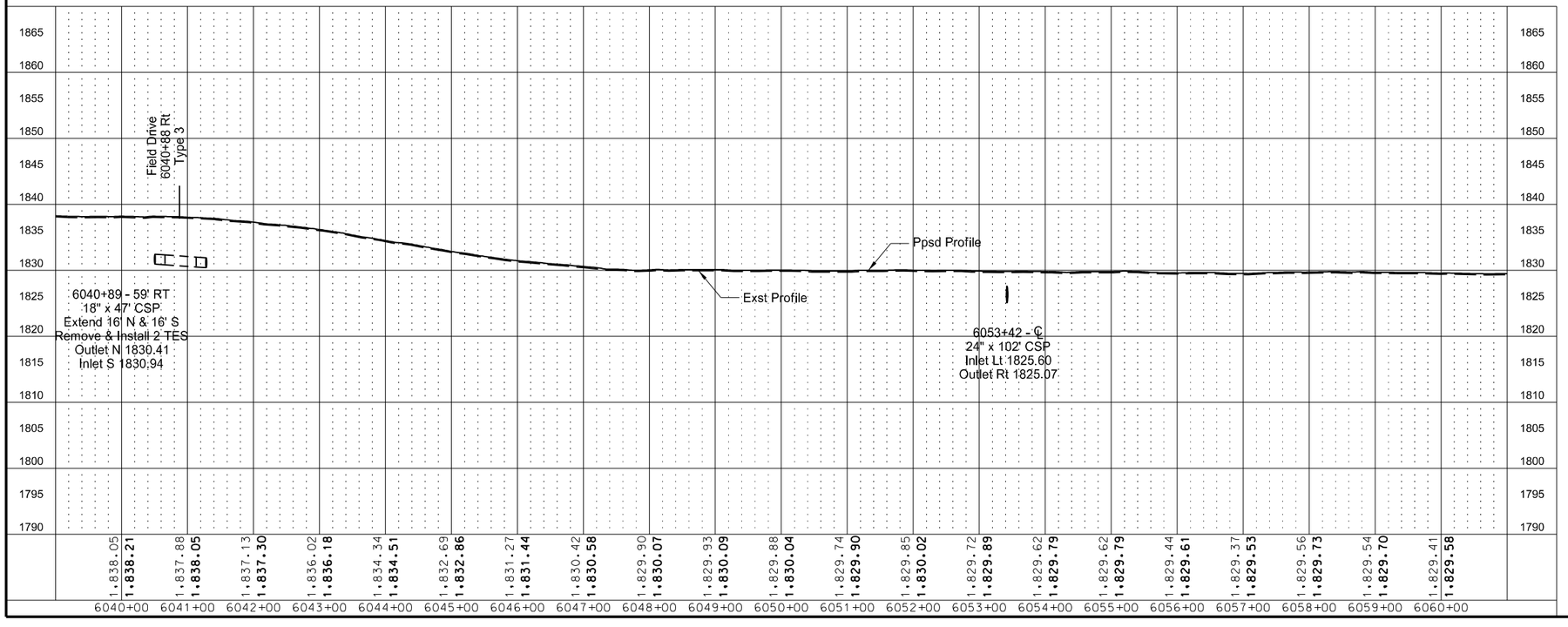
Plan & Profile

ND 3
Tuttle N to W Jct 200

6020+00 to 6040+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	60	4





SPEC	CODE	BID ITEM	QTY	UNIT
202	0169	REMOVAL OF END SECTION-ALL TYPES & SIZES		
		6040+66 Rt	1	EA
		6041+13 Rt	1	EA
202	0174	REMOVAL OF PIPE ALL TYPES AND SIZES		
		6040+66 - 59' Rt to 6040+67 - 59' Rt	1	LF
		6041+12 - 59' Rt to 6041+13 - 59' Rt	1	LF
714	5015	PIPE CORR STEEL .064IN 18IN		
		6040+51 - 59' Rt to 6040+67 - 59' Rt	16	LF
		6041+12 - 59' Rt to 6041+28 - 59' Rt	16	LF
714	6501	END SECT-TRAVERSABLE METAL 18IN		
		6040+51 Rt	1	EA
		6041+28 Rt	1	EA
754	0805	OBJECT MARKERS - CULVERTS		
		6040+51 Rt	1	EA
		6041+28 Rt	1	EA
		6053+42 Rt	1	EA
		6053+43 Lt	1	EA
990	0400	PIPE CLEANOUT		
		6053+42	1	EA

Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

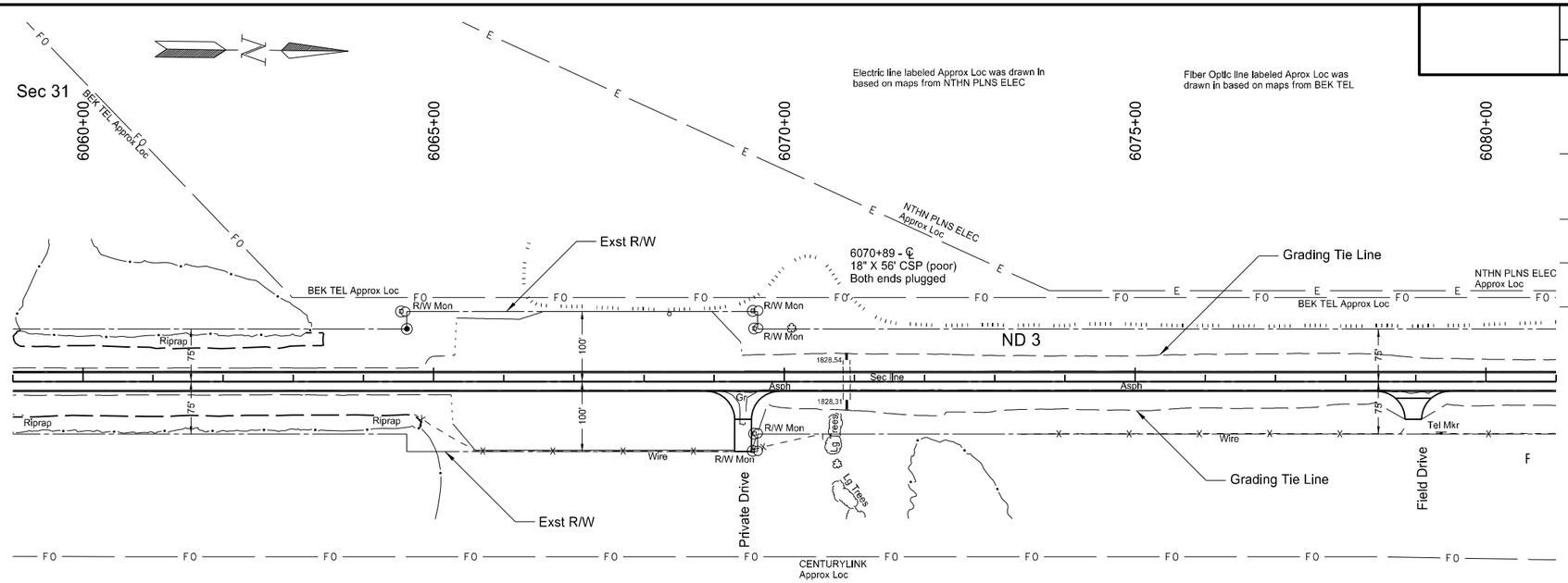
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DATE 12/15/2021
NORTH DAKOTA

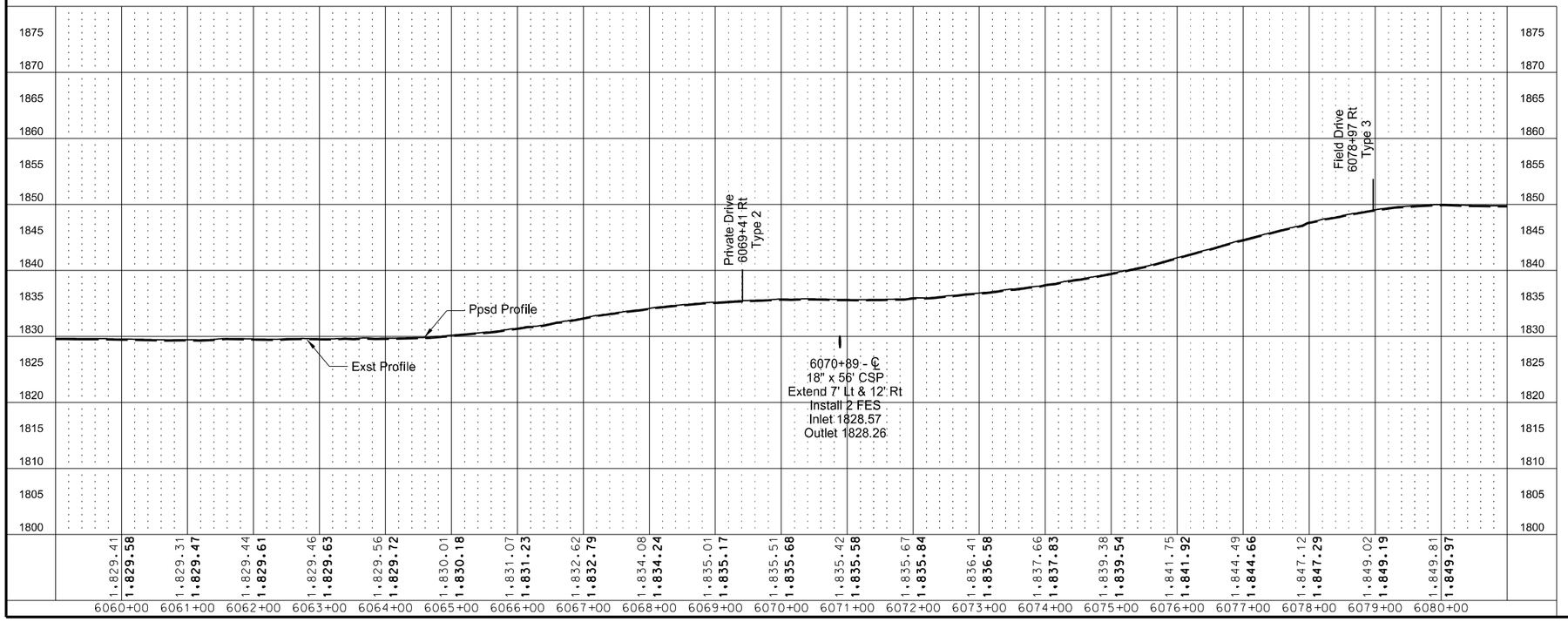
Plan & Profile

ND 3
Tuttle N to W Jct 200

6040+00 to 6060+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	60	5





SPEC	CODE	BID ITEM	QTY	UNIT
714	5015	PIPE CORR STEEL .064IN 18IN		
		6070+89 - 38' Lt to 6070+89 - 31' Lt	7	LF
		6070+89 - 26' Rt to 6070+89 - 38' Rt	12	LF
714	5810	END SECT CORR STEEL .064IN 18IN		
		6070+89 Lt & Rt	2	EA
754	0805	OBJECT MARKERS - CULVERTS		
		6070+89 Lt & Rt	2	EA
990	0400	PIPE CLEANOUT		
		6070+89	1	EA

Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

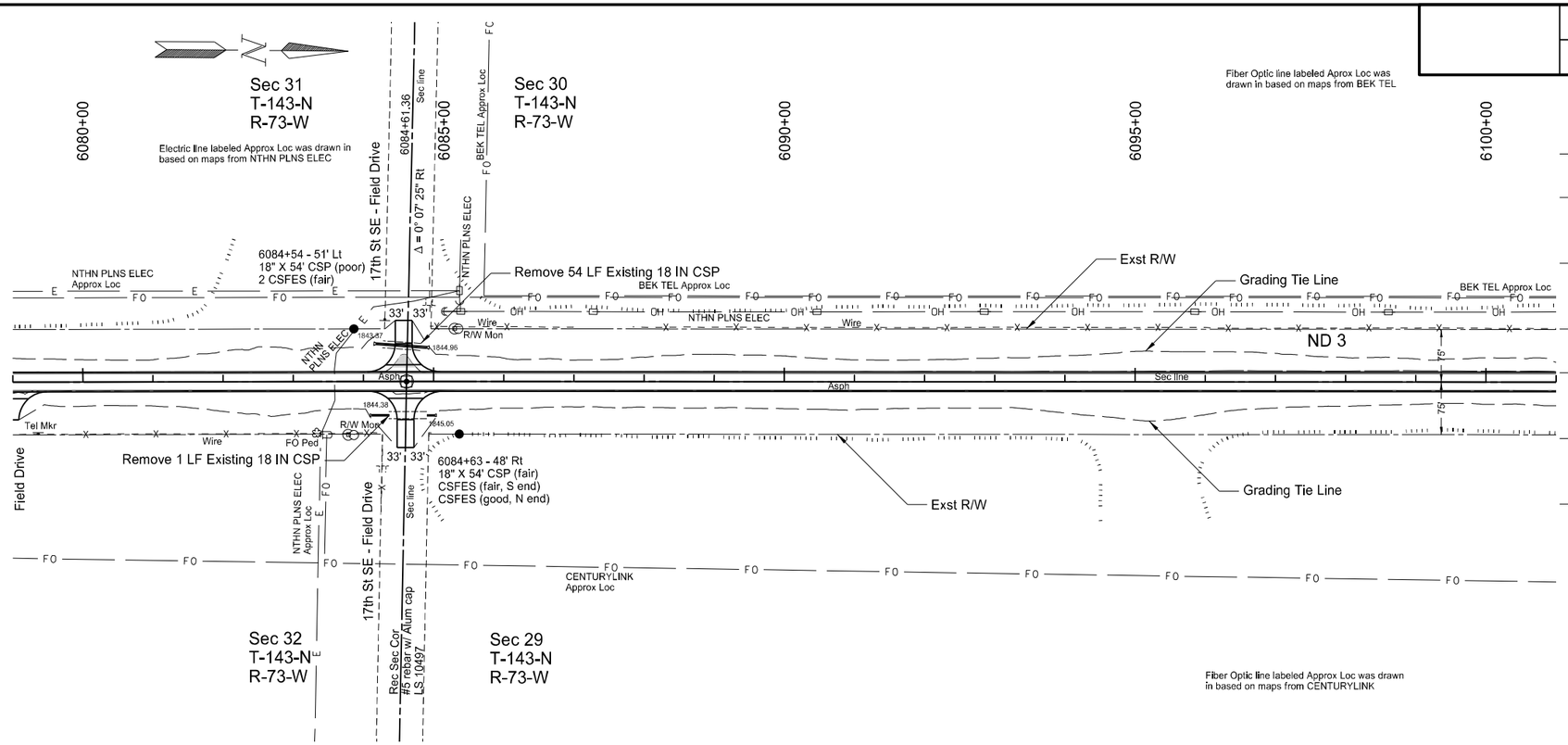
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KORY M. KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

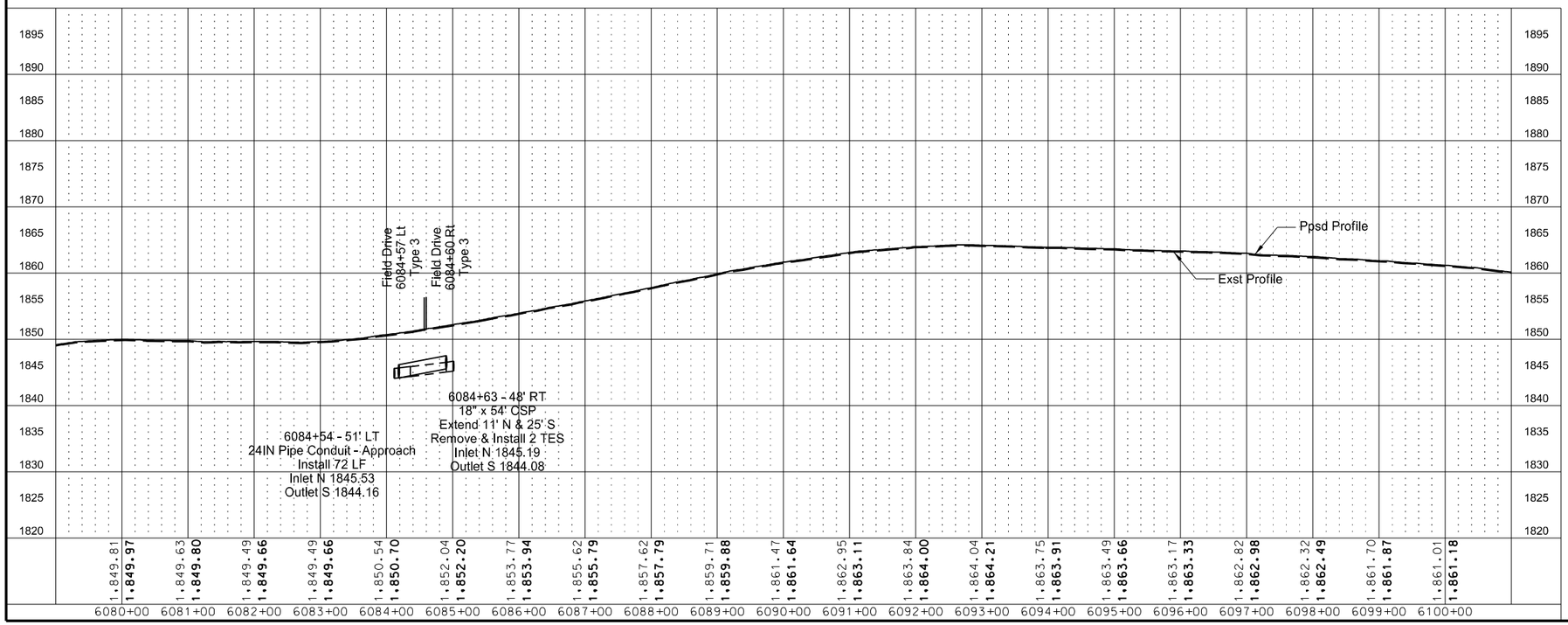
Plan & Profile

ND 3
Tuttle N to W Jct 200

6060+00 to 6080+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	60	6





SPEC	CODE	BID ITEM	QTY	UNIT
202	0132	REMOVAL OF BITUMINOUS SURFACING		
		6084+57 Lt	41	SY
202	0169	REMOVAL OF END SECTION-ALL TYPES & SIZES		
		6084+36 Rt	1	EA
		6084+90 Rt	1	EA
202	0174	REMOVAL OF PIPE ALL TYPES AND SIZES		
		6084+27 - 53' Lt to 6084+81 - 49' Lt	54	LF
		6084+36 - 48' Rt to 6084+37 - 48' Rt	1	LF
714	4106	PIPE CONDUIT 24IN-APPROACH		
		6084+18 - 54' Lt to 6084+90 - 49' Lt	72	LF
714	5015	PIPE CORR STEEL .064IN 18IN		
		6084+12 - 48' Rt to 6084+37 - 48' Rt	25	LF
		6084+90 - 48' Rt to 6085+01 - 48' Rt	11	LF
714	6501	END SECT-TRAVERSABLE METAL 18IN		
		6084+12 Rt	1	EA
		6085+01 Rt	1	EA
754	0805	OBJECT MARKERS - CULVERTS		
		6084+18 Lt	1	EA
		6084+12 Rt	1	EA
		6084+90 Lt	1	EA
		6085+01 Rt	1	EA

Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

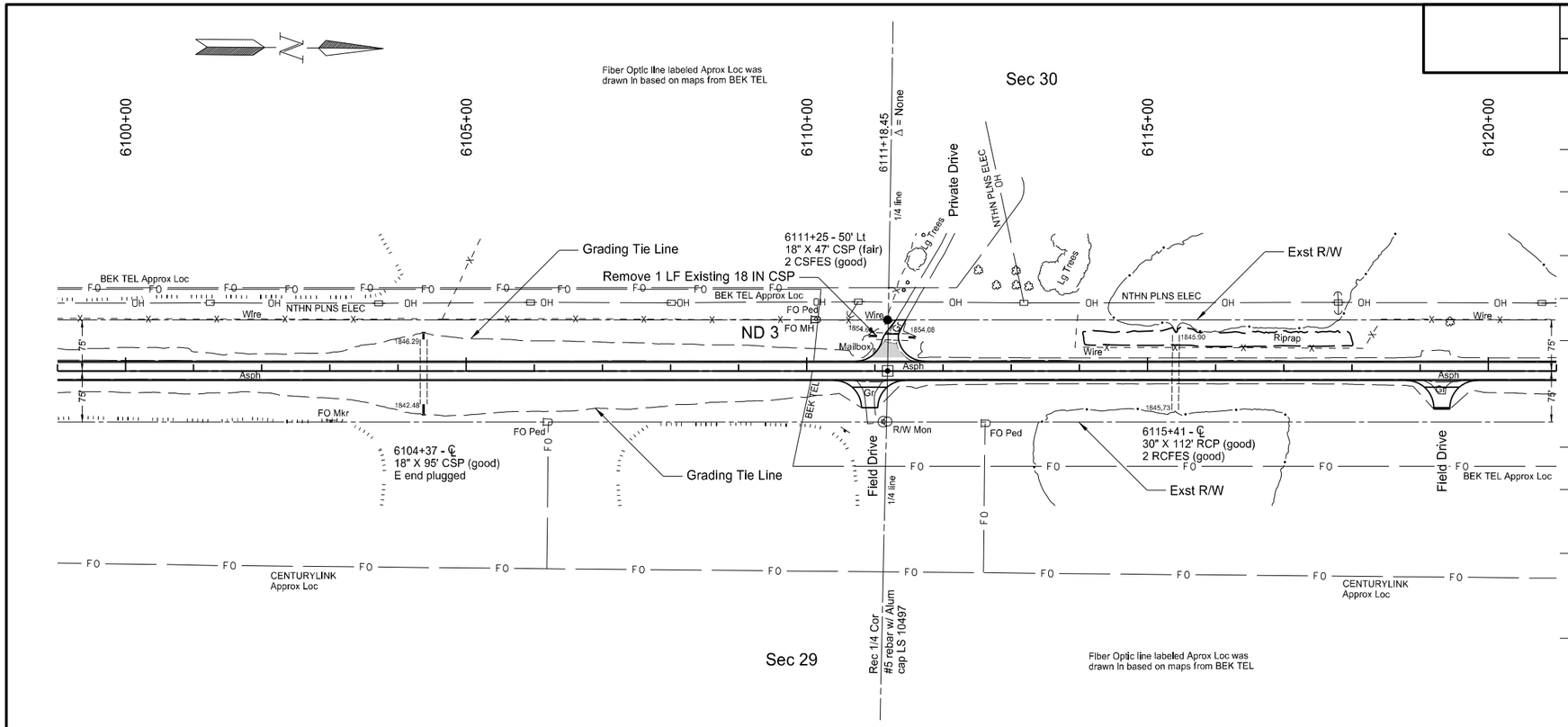
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KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Plan & Profile

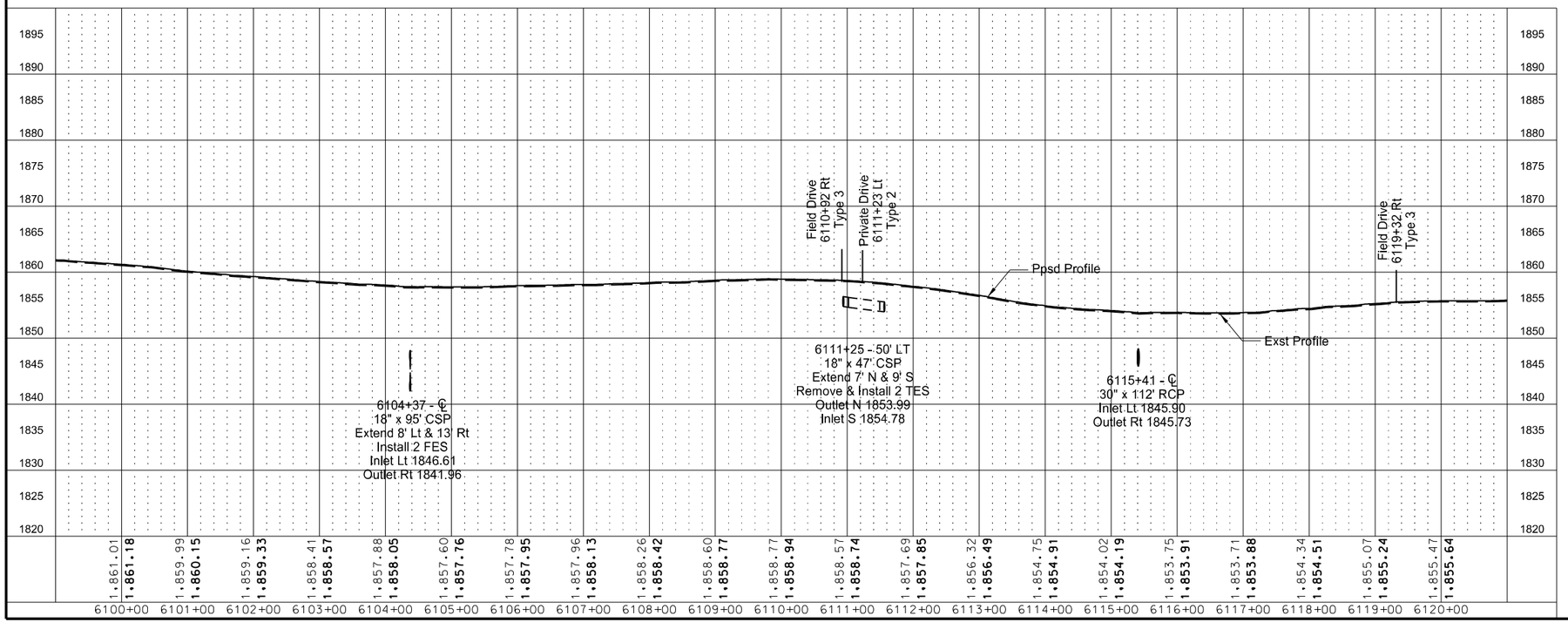
ND 3
Tuttle N to W Jct 200

6080+00 to 6100+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	60	7



SPEC	CODE	BID ITEM	QTY	UNIT
202	0132	REMOVAL OF BITUMINOUS SURFACING		
		6111+23 Lt	79	SY
202	0169	REMOVAL OF END SECTION-ALL TYPES & SIZES		
		6111+02 Lt	1	EA
		6111+49 Lt	1	EA
202	0174	REMOVAL OF PIPE ALL TYPES AND SIZES		
		6111+02 - 51' Lt to 6111+03 - 51' Lt	1	LF
714	2518	CURED-IN-PLACE PIPE-18IN		
		6104+37	116	LF
714	5015	PIPE CORR STEEL .064IN 18IN		
		6104+37 - 54' Lt to 6104+37 - 46' Lt	8	LF
		6104+37 - 49' Rt to 6104+37 - 62' Rt	13	LF
		6110+94 - 51' Lt to 6111+03 - 51' Lt	9	LF
		6111+49 - 49' Lt to 6111+56 - 49' Lt	7	LF
714	5810	END SECT CORR STEEL .064IN 18IN		
		6104+37 Lt & Rt	2	EA
714	6501	END SECT-TRAVERSABLE METAL 18IN		
		6110+94 Lt	1	EA
		6111+56 Lt	1	EA
754	0805	OBJECT MARKERS - CULVERTS		
		6104+37 Lt & Rt	2	EA
		6110+94 Lt	1	EA
		6111+56 Lt	1	EA
990	0400	PIPE CLEANOUT		
		6104+37	1	EA



Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

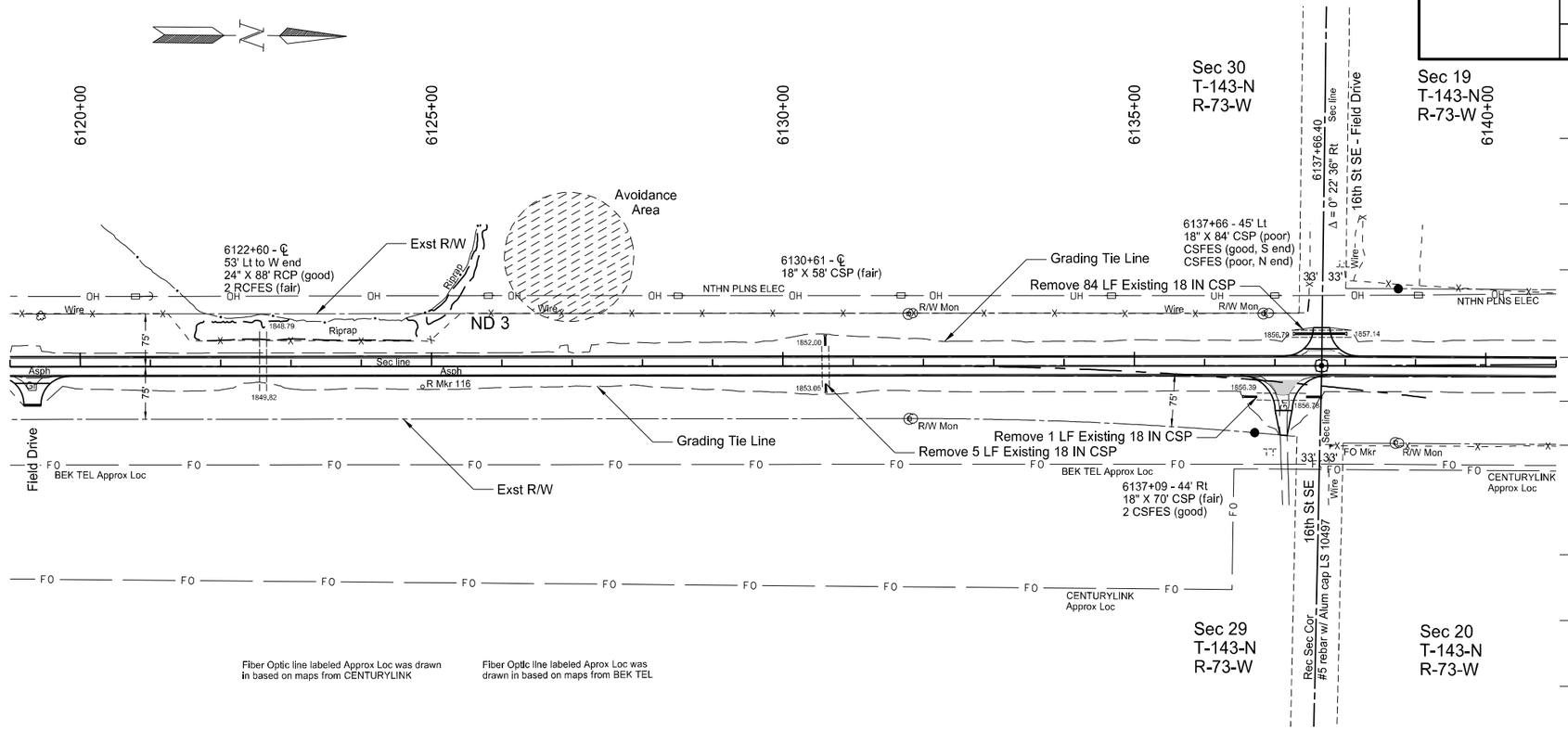
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KORY MICHAEL KLEINKNECHT
PE 27746
DATE 12/15/2021
NORTH DAKOTA

Plan & Profile

ND 3
Tuttle N to W Jct 200

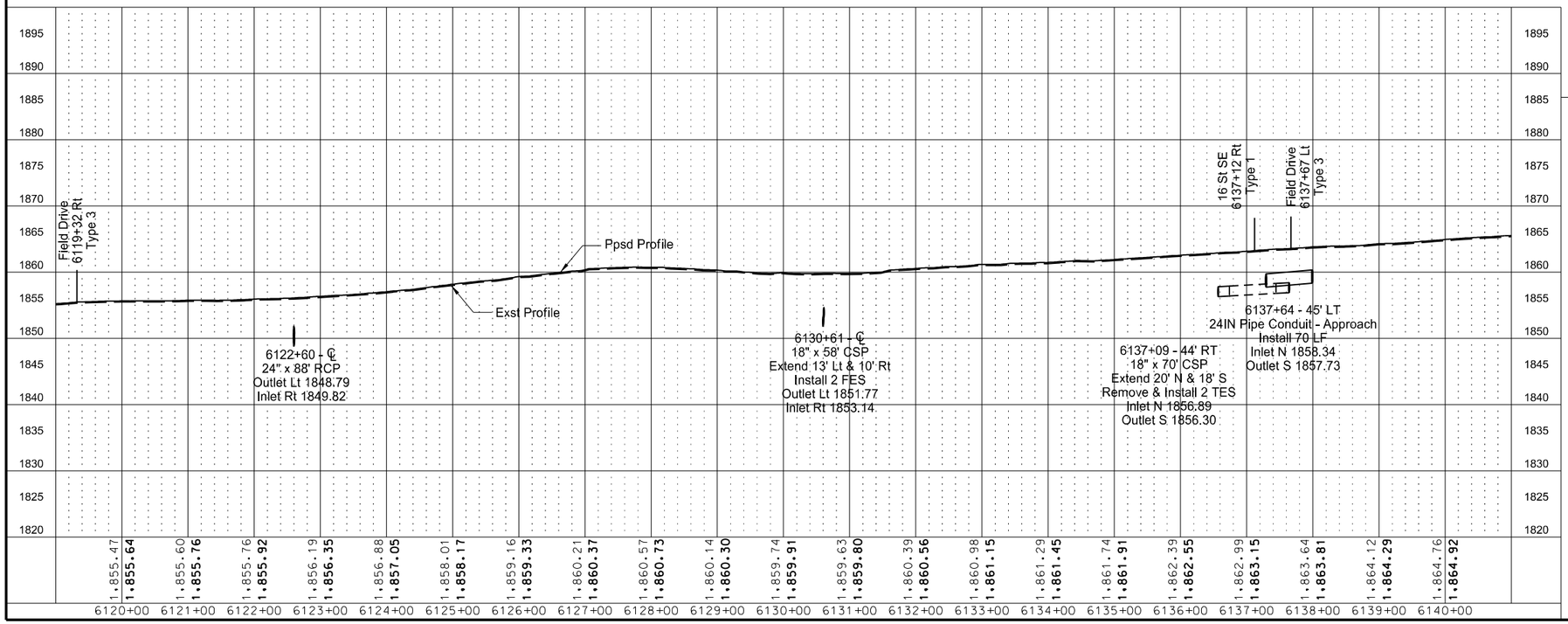
6100+00 to 6120+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	60	8



Fiber Optic line labeled Approx Loc was drawn in based on maps from CENTURYLINK

Fiber Optic line labeled Aprox Loc was drawn in based on maps from BEK TEL



SPEC	CODE	BID ITEM	QTY	UNIT
202	0132	REMOVAL OF BITUMINOUS SURFACING		
		6137+12 Rt	72	SY
		6137+67 Lt	10	SY
202	0169	REMOVAL OF END SECTION-ALL TYPES & SIZES		
		6136+74 Rt	1	EA
		6137+44 Rt	1	EA
202	0174	REMOVAL OF PIPE ALL TYPES AND SIZES		
		6130+61 Rt	5	LF
		6136+74 - 44' Rt to 6136+75 - 44' Rt	1	LF
		6137+24 - 45' Lt to 6138+09 - 46' Lt	84	LF
714	2518	CURED-IN-PLACE PIPE-18IN		
		6130+61	76	LF
714	4106	PIPE CONDUIT 24IN-APPROACH		
		6137+29 - 45' Lt to 6137+99 - 46' Lt	70	LF
714	5015	PIPE CORR STEEL .064IN 18IN		
		6130+60 - 42' Lt to 6130+60 - 29' Lt	13	LF
		6130+61 - 25' Rt to 6130+61 - 35' Rt	10	LF
		6136+57 - 44' Rt to 6136+75 - 44' Rt	18	LF
		6137+44 - 44' Rt to 6137+64 - 45' Rt	20	LF
714	5810	END SECT CORR STEEL .064IN 18IN		
		6130+60 Lt	1	EA
		6130+61 Rt	1	EA
714	6501	END SECT-TRAVERSABLE METAL 18IN		
		6136+57 Rt	1	EA
		6137+64 Rt	1	EA
754	0805	OBJECT MARKERS - CULVERTS		
		6130+60 Lt	1	EA
		6130+61 Rt	1	EA
		6136+57 Rt	1	EA
		6137+29 Lt	1	EA
		6137+64 Rt	1	EA
		6137+99 Lt	1	EA
990	0400	PIPE CLEANOUT		
		6130+61	1	EA

Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

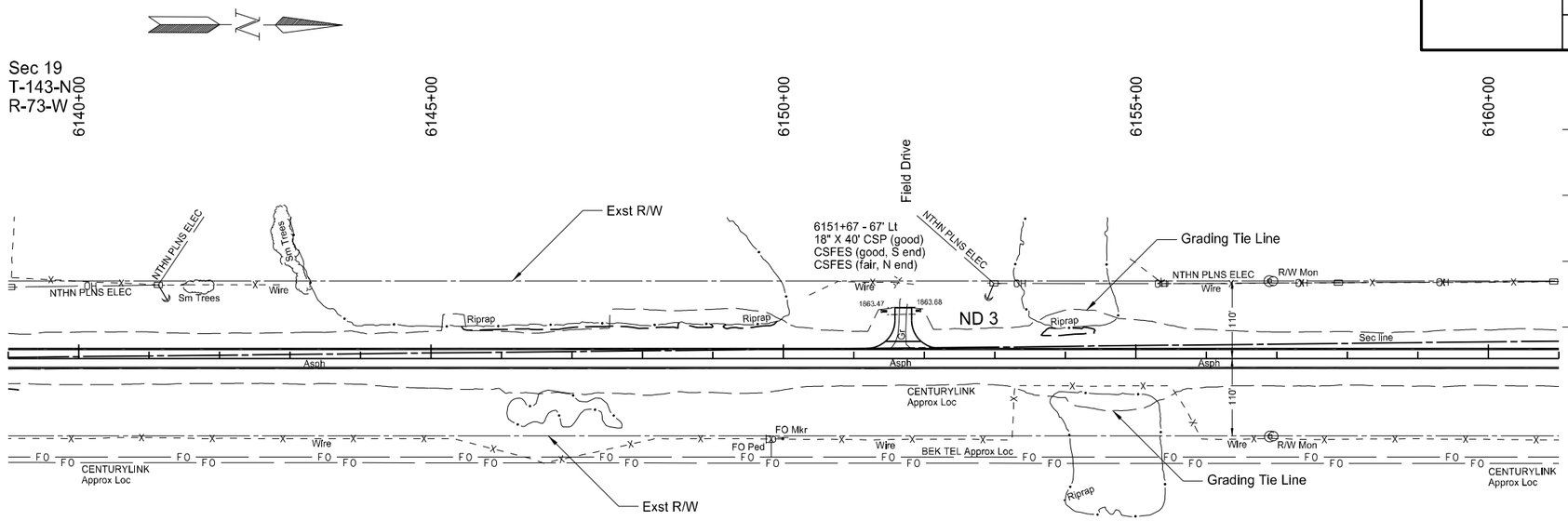
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Plan & Profile

ND 3
Tuttle N to W Jct 200

6120+00 to 6140+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	60	9

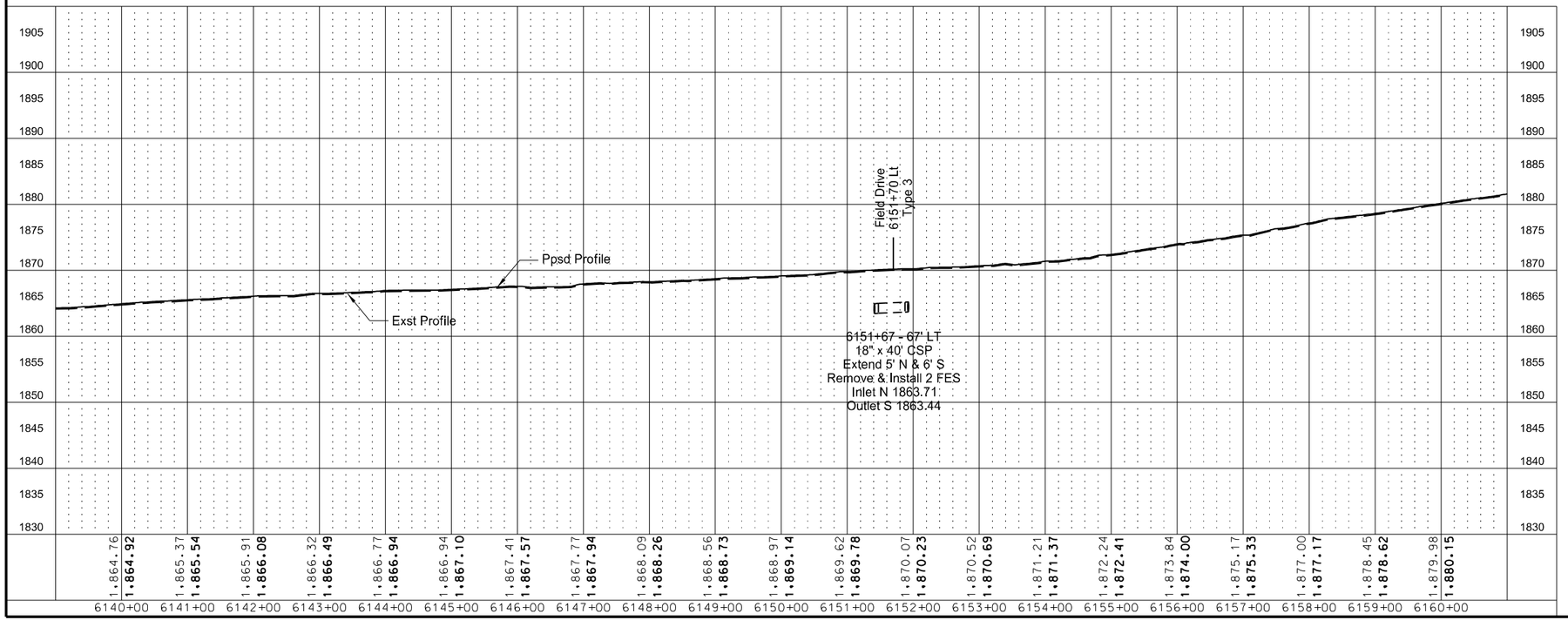


SPEC	CODE	BID ITEM	QTY	UNIT
202	0169	REMOVAL OF END SECTION-ALL TYPES & SIZES		
		6151+47 Lt	1	EA
		6151+87 Lt	1	EA
714	5015	PIPE CORR STEEL .064IN 18IN		
		6151+41 - 67' Lt to 6151+47 - 67' Lt	6	LF
		6151+87 - 68' Lt to 6151+92 - 68' Lt	5	LF
714	5810	END SECT CORR STEEL .064IN 18IN		
		6151+41 Lt	1	EA
		6151+92 Lt	1	EA
754	0805	OBJECT MARKERS - CULVERTS		
		6151+41 Lt	1	EA
		6151+92 Lt	1	EA

Sec 20
T-143-N
R-73-W

Fiber Optic line labeled Approx Loc was drawn in based on maps from CENTURYLINK

Fiber Optic line labeled Aprox Loc was drawn in based on maps from BEK TEL



Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

REGISTERED PROFESSIONAL ENGINEER
KORY M. KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

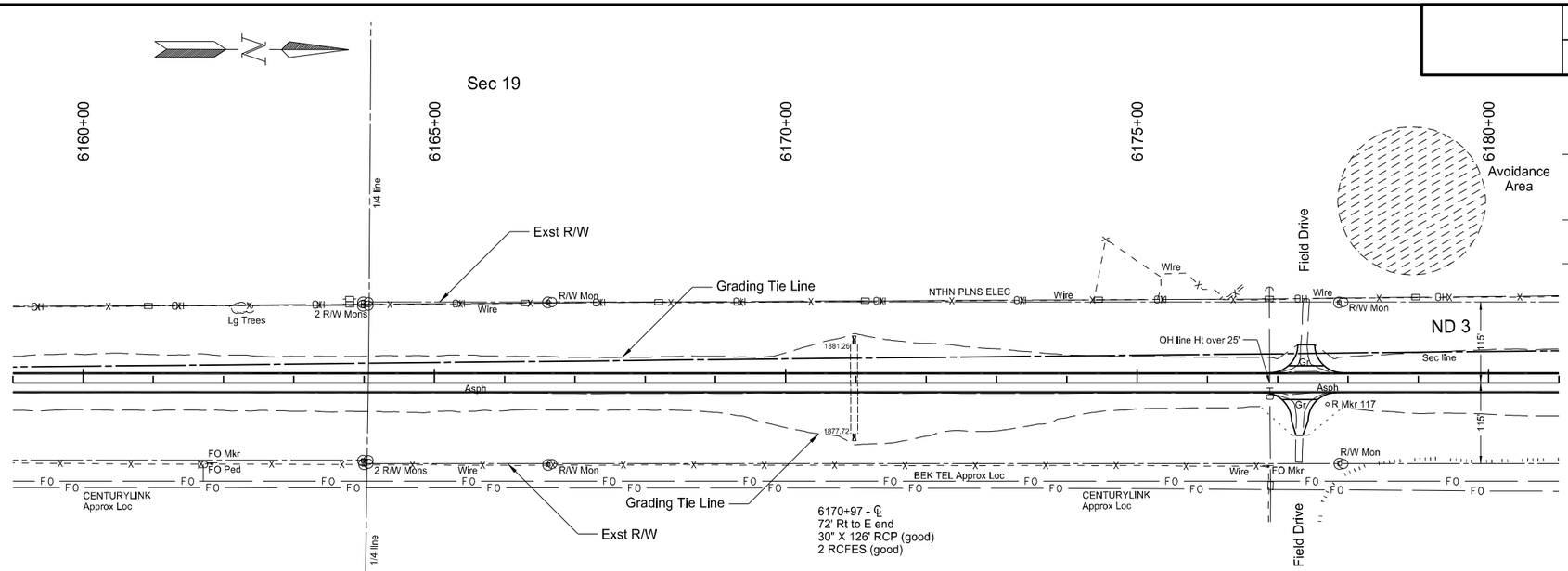
Plan & Profile

ND 3
Tuttle N to W Jct 200

6140+00 to 6160+00
Kidder County

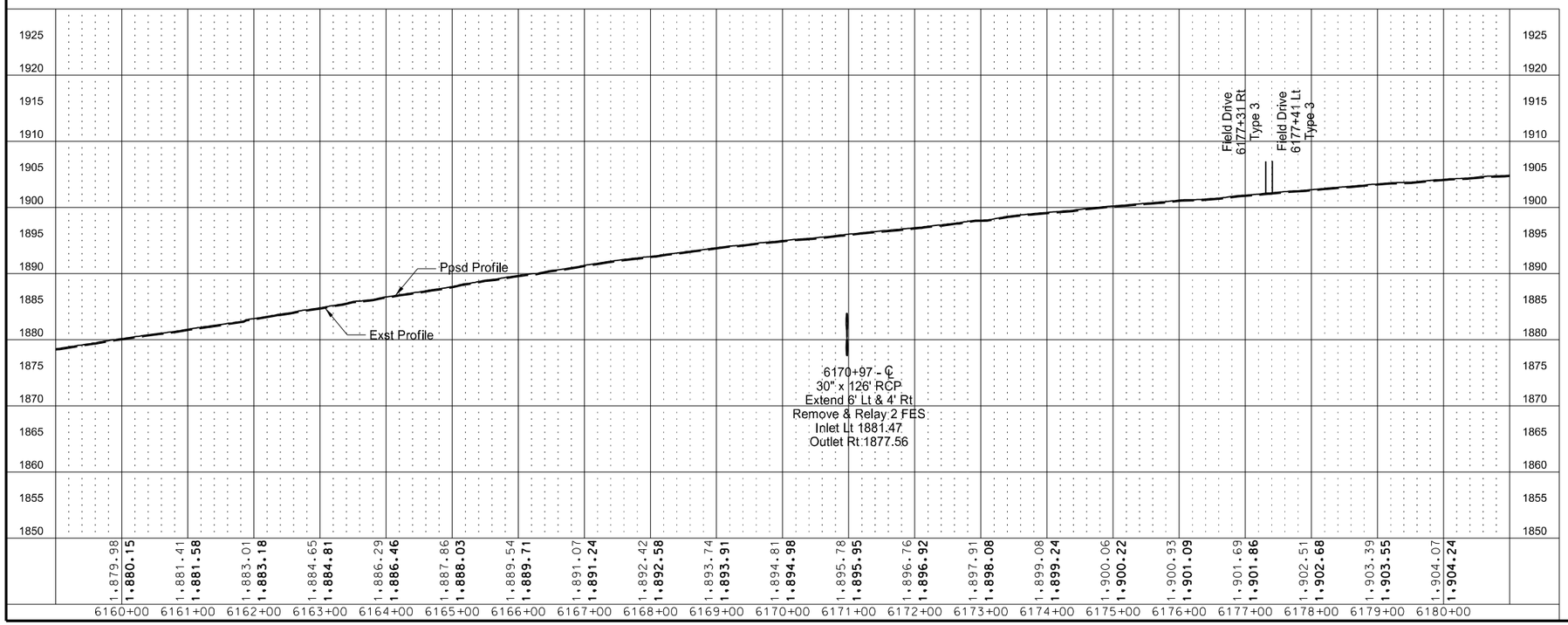
STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	60	10

SPEC	CODE	BID ITEM	QTY	UNIT
714	0820	PIPE CONC REINF 30IN CL III		
		6170+97 - 60' Lt to 6170+97 - 54' Lt	6	LF
		6170+97 - 72' Rt to 6170+97 - 76' Rt	4	LF
714	9660	REMOVE&RELAY END SECTION-ALL TYPES&SIZES		
		6170+97 Lt & Rt	2	EA
754	0805	OBJECT MARKERS - CULVERTS		
		6170+97 Lt & Rt	2	EA



Fiber Optic line labeled Aprox Loc was drawn in based on maps from BEK TEL

Fiber Optic line labeled Approx Loc was drawn In based on maps from CENTURYLINK



Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

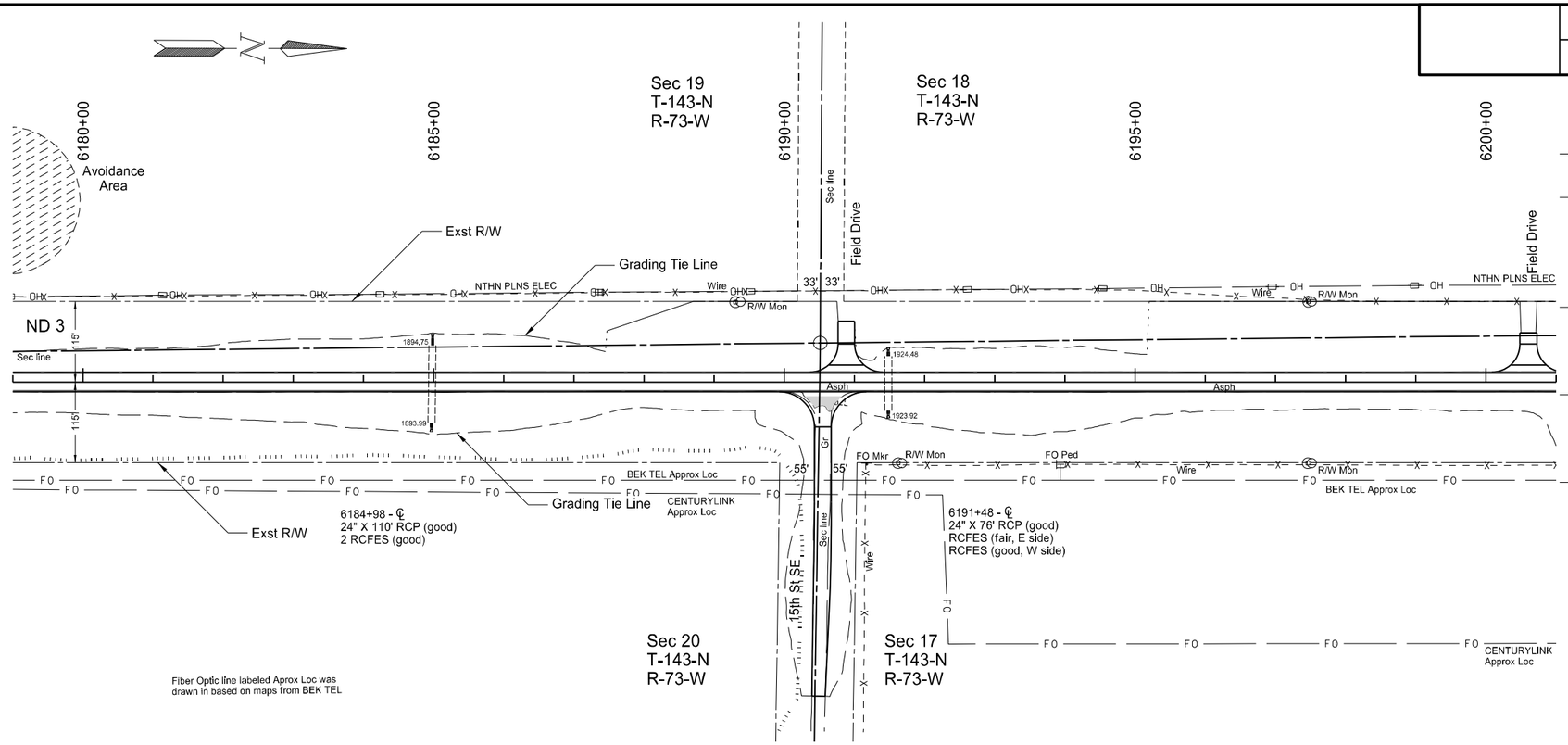
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

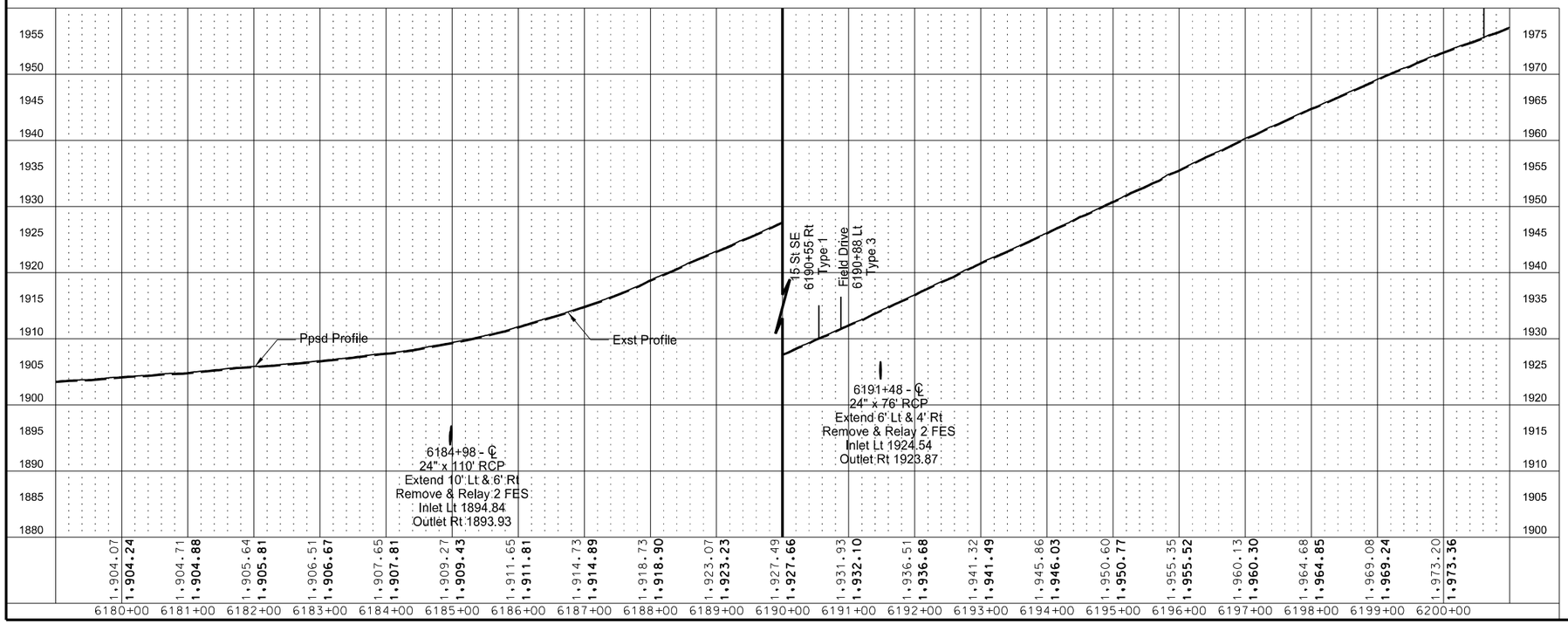
Plan & Profile

ND 3
Tuttle N to W Jct 200

6160+00 to 6180+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	60	11





SPEC	CODE	BID ITEM	QTY	UNIT
202	0132	REMOVAL OF BITUMINOUS SURFACING		
		6190+55 Rt	71	SY
714	0615	PIPE CONC REINF 24IN CL III		
		6184+99 - 62' Lt to 6184+98 - 52' Lt	10	LF
		6184+97 - 59' Rt to 6184+97 - 65' Rt	6	LF
		6191+48 - 43' Lt to 6191+48 - 37' Lt	6	LF
		6191+48 - 41' Rt to 6191+48 - 45' Rt	4	LF
714	9660	REMOVE&RELAY END SECTION-ALL TYPES&SIZES		
		6184+99 Lt	1	EA
		6184+97 Rt	1	EA
		6191+48 Lt & Rt	2	EA
754	0805	OBJECT MARKERS - CULVERTS		
		6184+99 Lt	1	EA
		6184+97 Rt	1	EA
		6191+48 Lt & Rt	2	EA
990	0400	PIPE CLEANOUT		
		6184+98	1	EA

Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

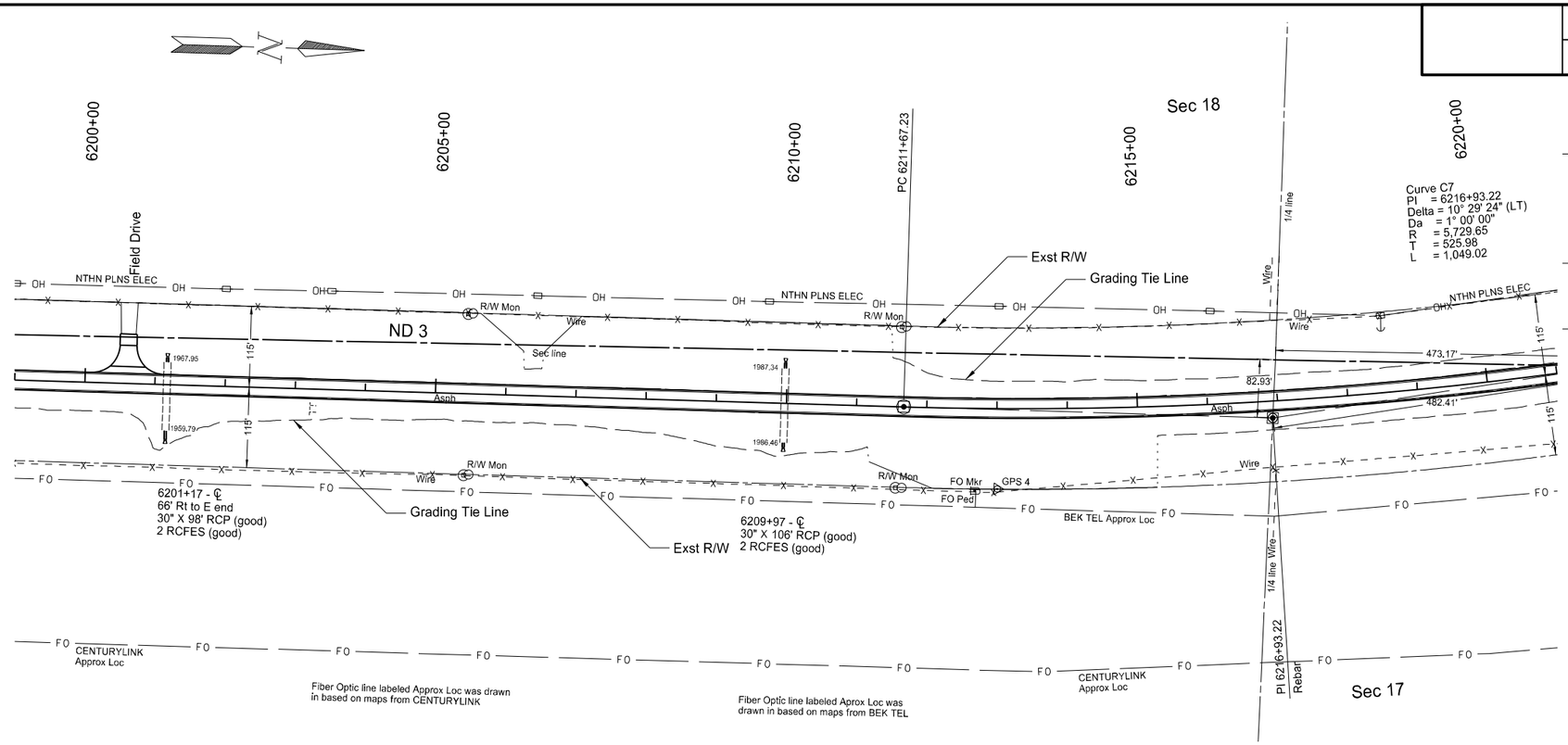
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Plan & Profile

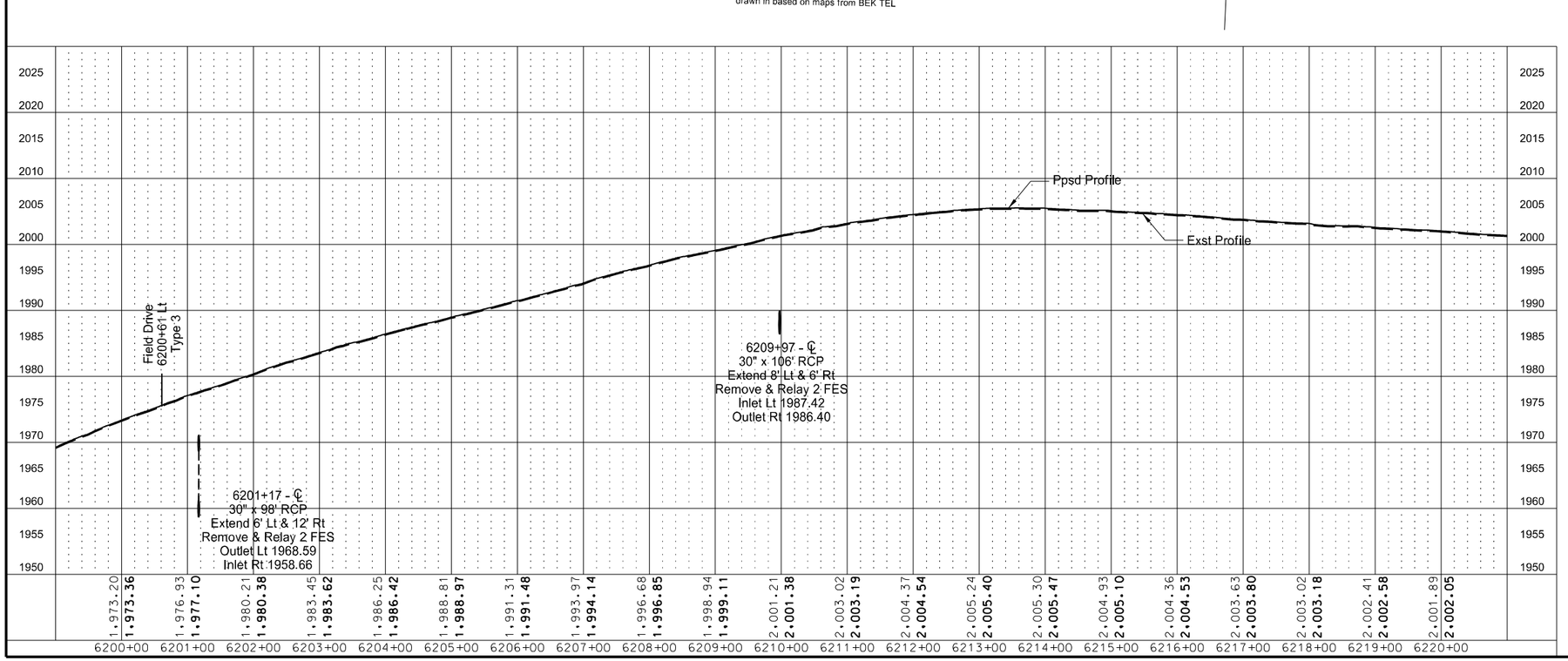
ND 3
Tuttle N to W Jct 200

6180+00 to 6200+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	60	12



SPEC	CODE	BID ITEM	QTY	UNIT
714	0820	PIPE CONC REINF 30IN CL III		
		6201+17 - 38' Lt to 6201+17 - 32' Lt	6	LF
		6201+17 - 66' Rt to 6201+17 - 78' Rt	12	LF
		6209+97 - 58' Lt to 6209+97 - 50' Lt	8	LF
		6209+97 - 56' Rt to 6209+97 - 62' Rt	6	LF
714	9660	REMOVE&RELAY END SECTION-ALL TYPES&SIZES		
		6201+17 Lt & Rt	2	EA
		6209+97 Lt & Rt	2	EA
754	0805	OBJECT MARKERS - CULVERTS		
		6201+17 Lt & Rt	2	EA
		6209+97 Lt & Rt	2	EA



Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

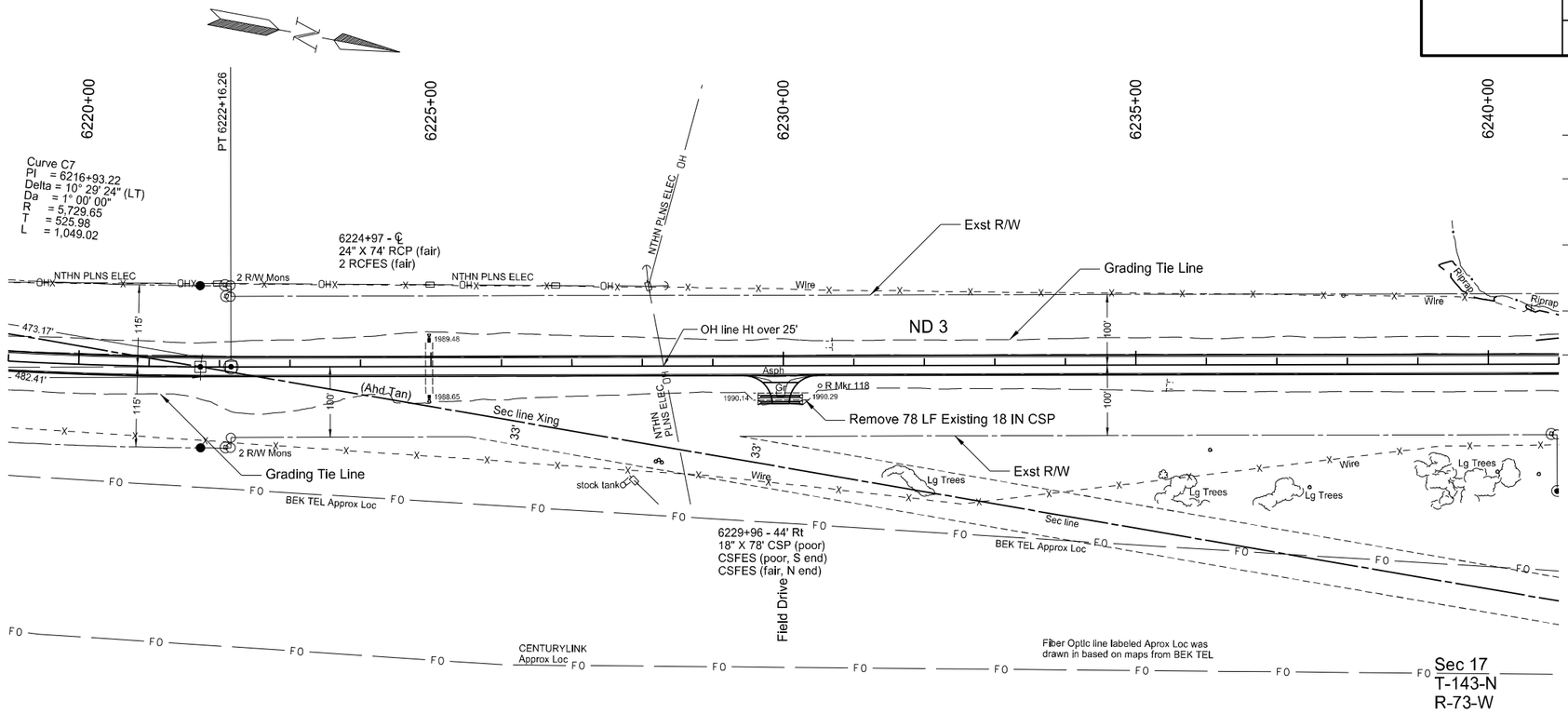
Plan & Profile

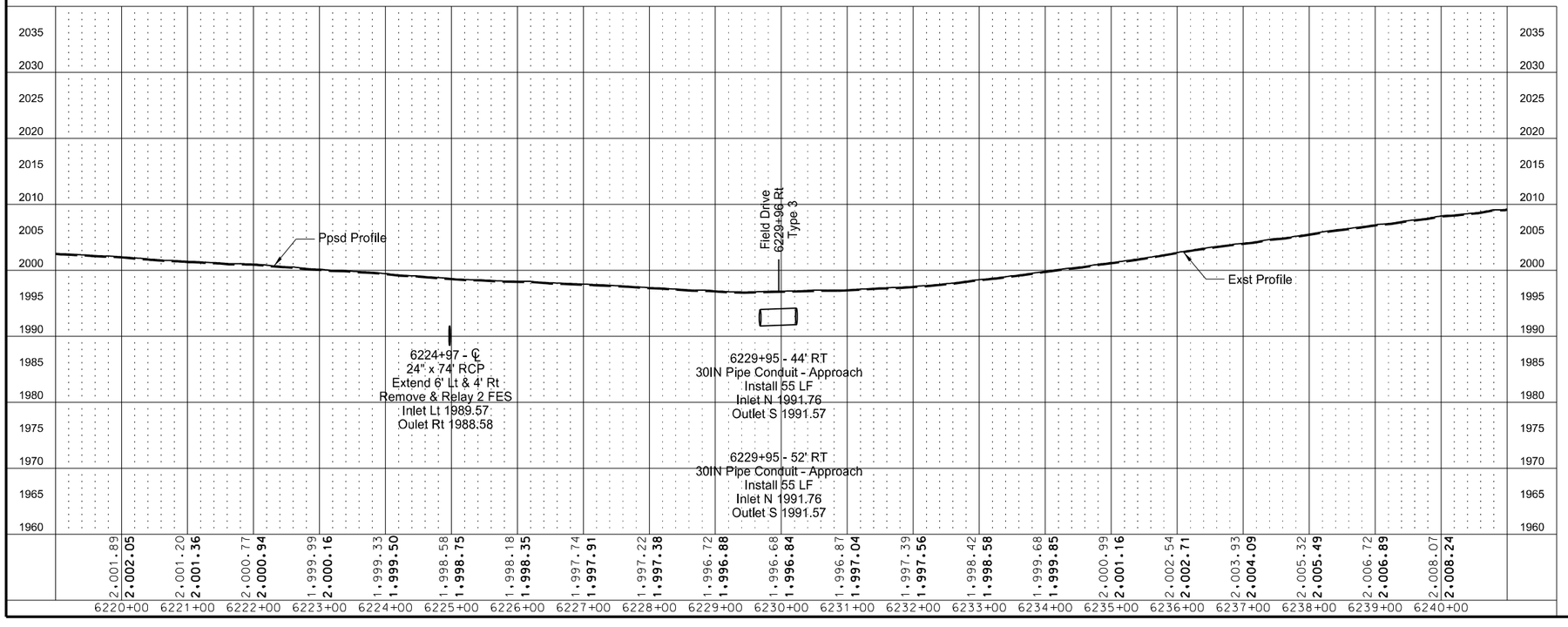
ND 3
Tuttle N to W Jct 200

6200+00 to 6220+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	60	13

SPEC	CODE	BID ITEM	QTY	UNIT
202	0174	REMOVAL OF PIPE ALL TYPES AND SIZES		
		6229+57 - 44' Rt to 6230+35 - 44' Rt	78	LF
714	0615	PIPE CONC REINF 24IN CL III		
		6224+97 - 40' Lt to 6224+97 - 34' Lt	6	LF
		6224+97 - 41' Rt to 6224+97 - 45' Rt	4	LF
714	4113	PIPE CONDUIT 30IN-APPROACH		
		6229+68 - 44' Rt to 6230+23 - 44' Rt	55	LF
		6229+68 - 52' Rt to 6230+23 - 52' Rt	55	LF
714	9660	REMOVE&RELAY END SECTION-ALL TYPES&SIZES		
		6224+97 Lt & Rt	2	EA
754	0805	OBJECT MARKERS - CULVERTS		
		6224+97 Lt & Rt	2	EA
		6229+68 Rt	2	EA
		6230+23 Rt	2	EA





Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

REGISTERED PROFESSIONAL ENGINEER
KORY M. KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

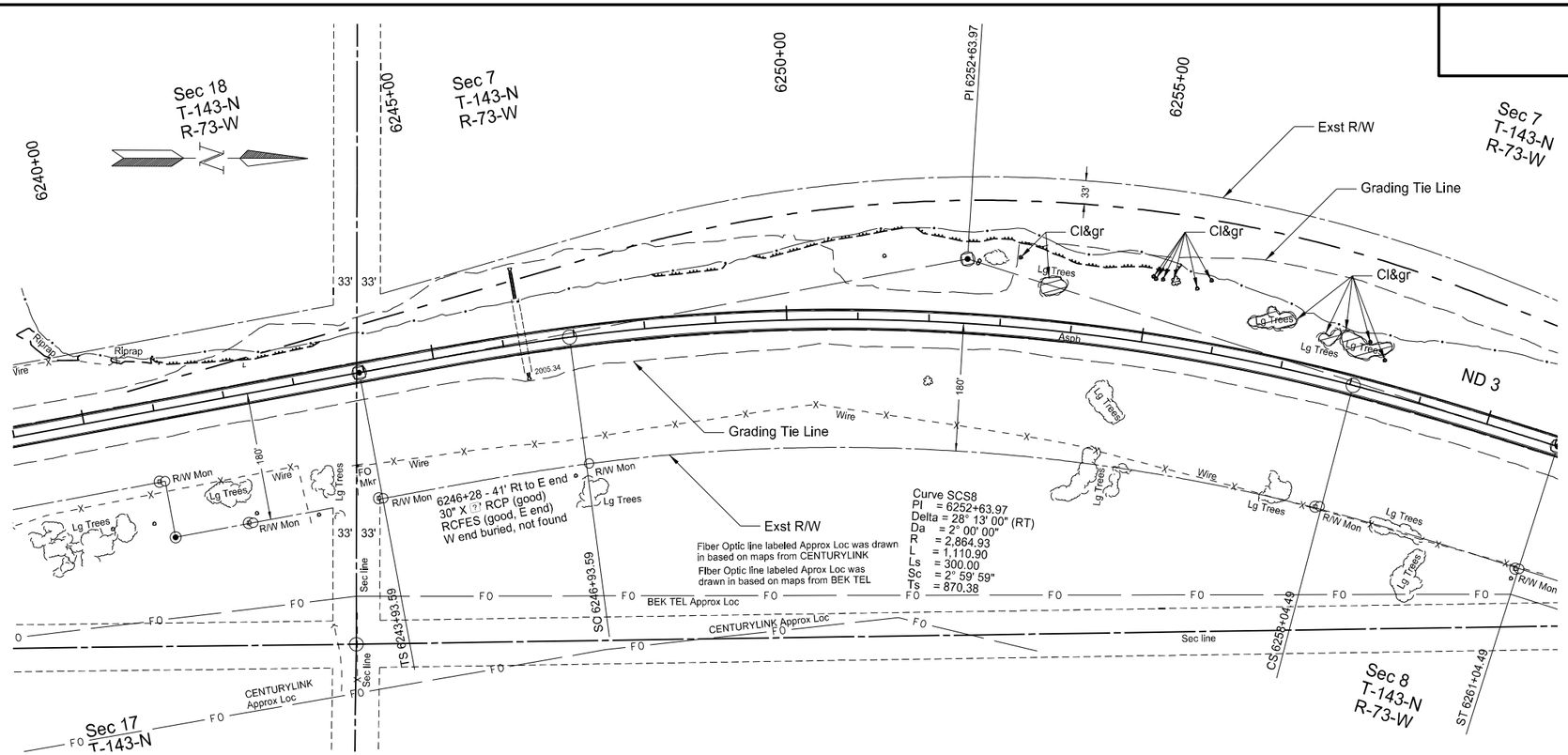
Plan & Profile

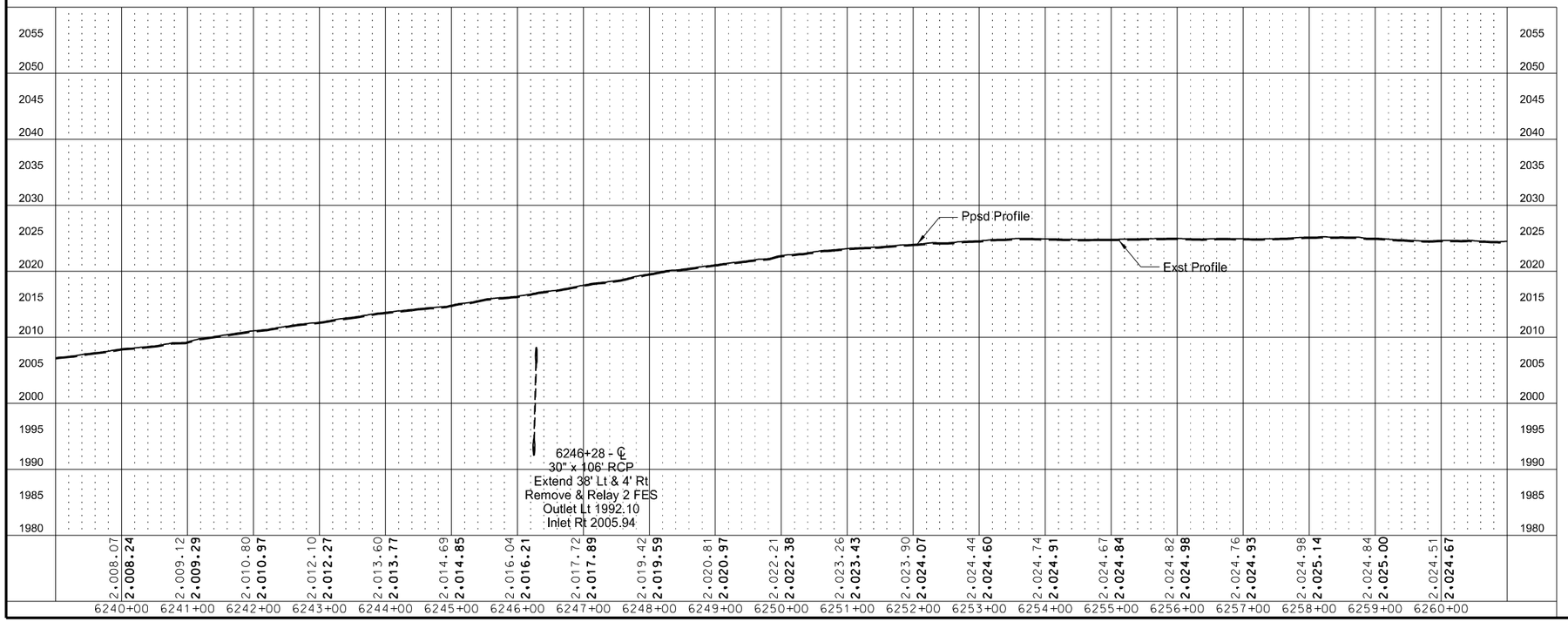
ND 3
Tuttle N to W Jct 200

6220+00 to 6240+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	60	14

SPEC	CODE	BID ITEM	QTY	UNIT
714	0820	PIPE CONC REINF 30IN CL III		
		6246+25 - 102' Lt to 6246+26 - 64' Lt	38	LF
		6246+29 - 41' Rt to 6246+29 - 45' Rt	4	LF
714	9660	REMOVE&RELAY END SECTION-ALL TYPES&SIZES		
		6246+25 Lt	1	EA
		6246+29 Rt	1	EA
754	0805	OBJECT MARKERS - CULVERTS		
		6246+25 Lt	1	EA
		6246+29 Rt	1	EA





Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

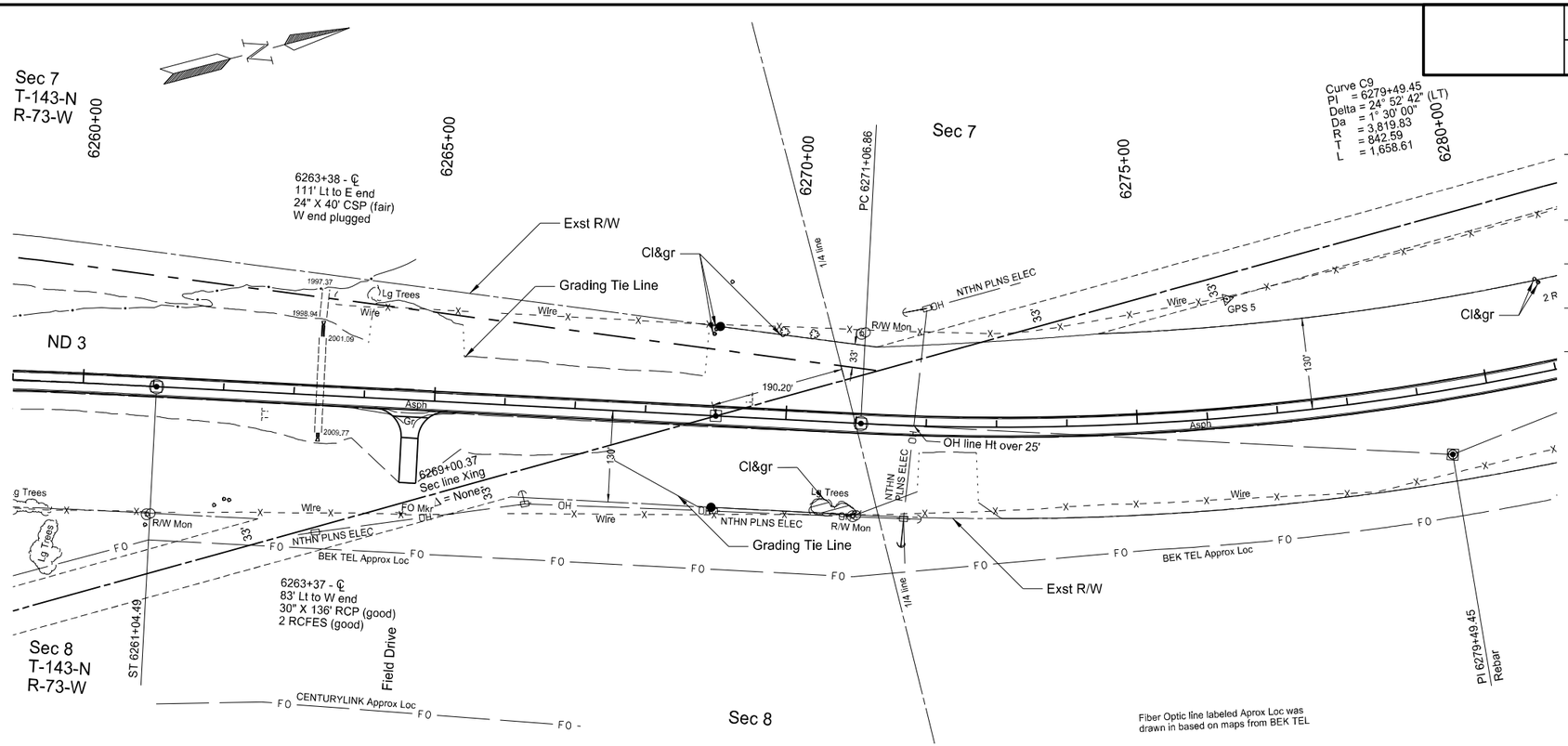
Plan & Profile

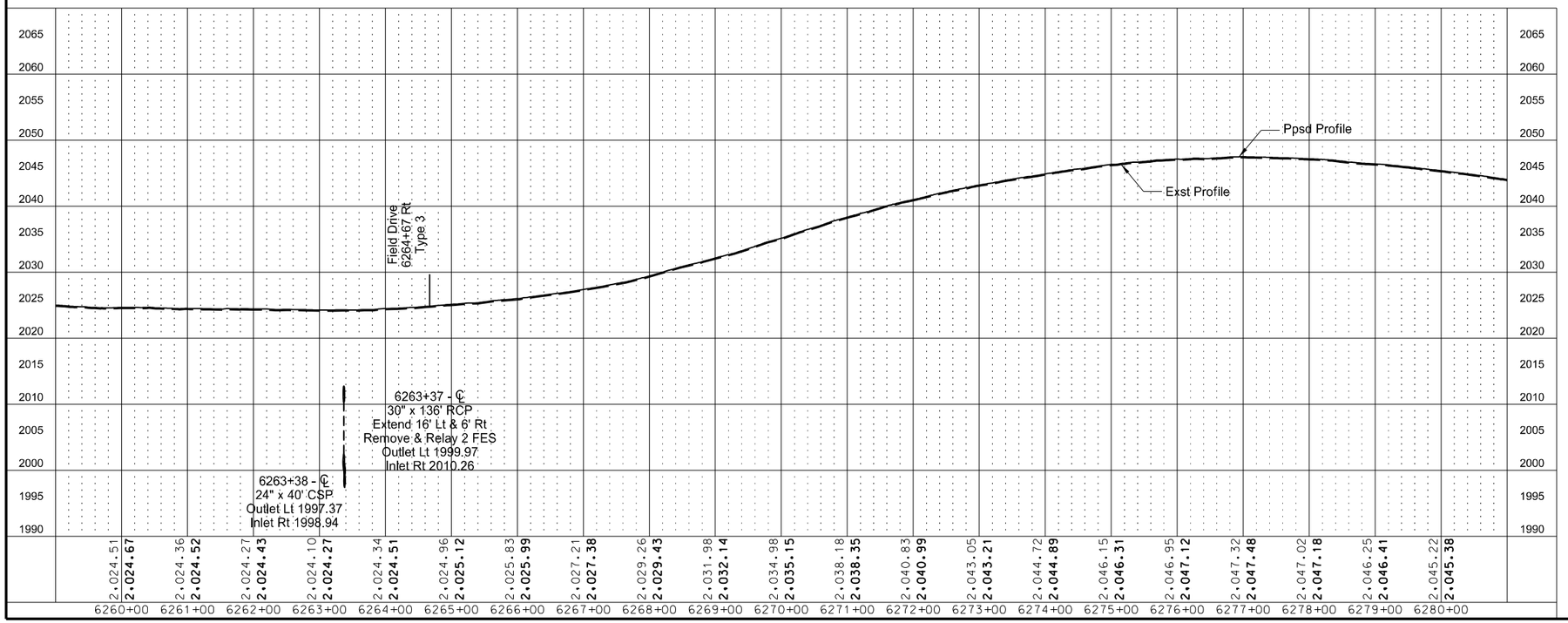
ND 3
Tuttle N to W Jct 200

6240+00 to 6260+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	60	15

SPEC	CODE	BID ITEM	QTY	UNIT
714	0820	PIPE CONC REINF 30IN CL III		
		6263+37 - 99' Lt to 6263+37 - 83' Lt	16	LF
		6263+37 - 53' Rt to 6263+37 - 59' Rt	6	LF
714	2530	CURED-IN-PLACE PIPE-30IN		
		6263+37	158	LF
714	9660	REMOVE&RELAY END SECTION-ALL TYPES&SIZES		
		6263+37 Lt & Rt	2	EA
754	0805	OBJECT MARKERS - CULVERTS		
		6263+37 Lt & Rt	2	EA
990	0400	PIPE CLEANOUT		
		6263+37	1	EA





Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

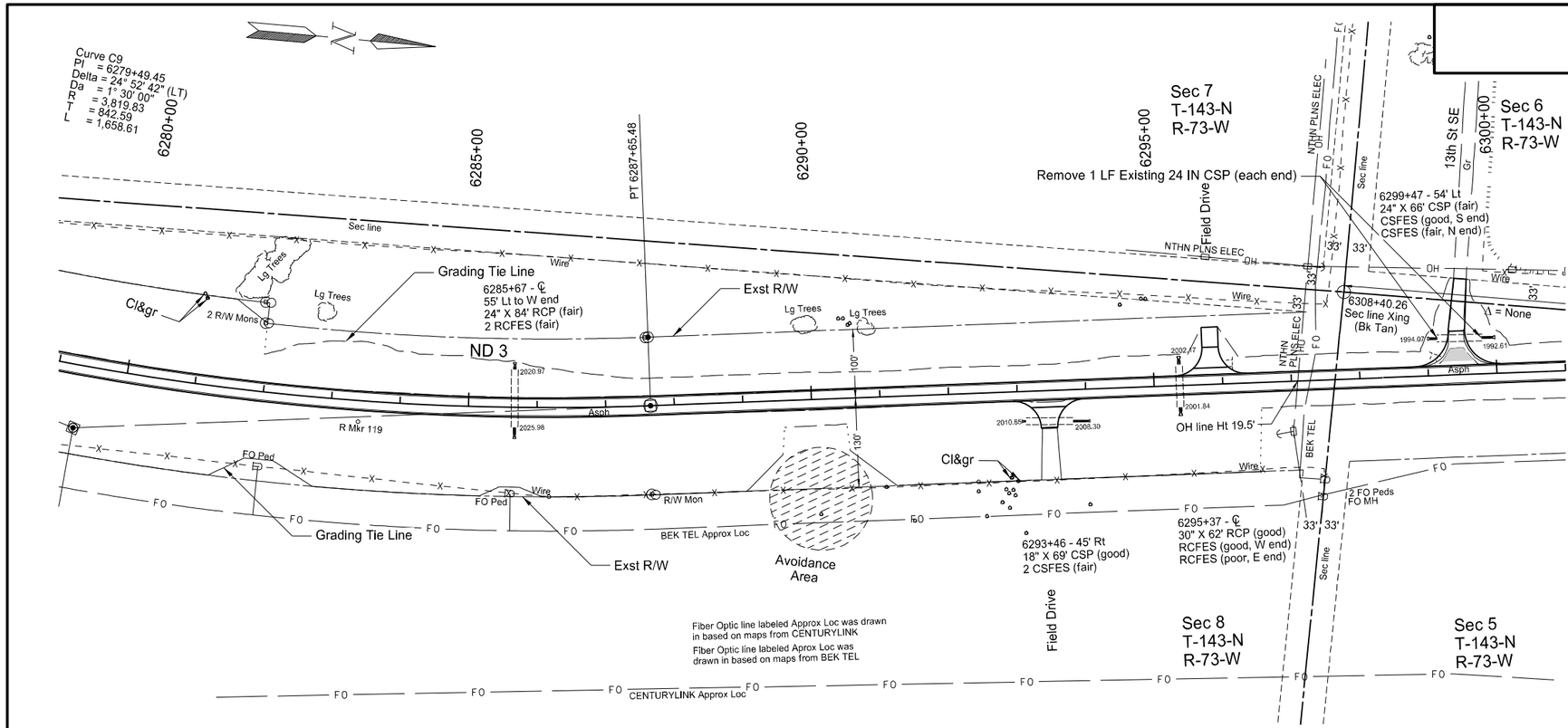
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

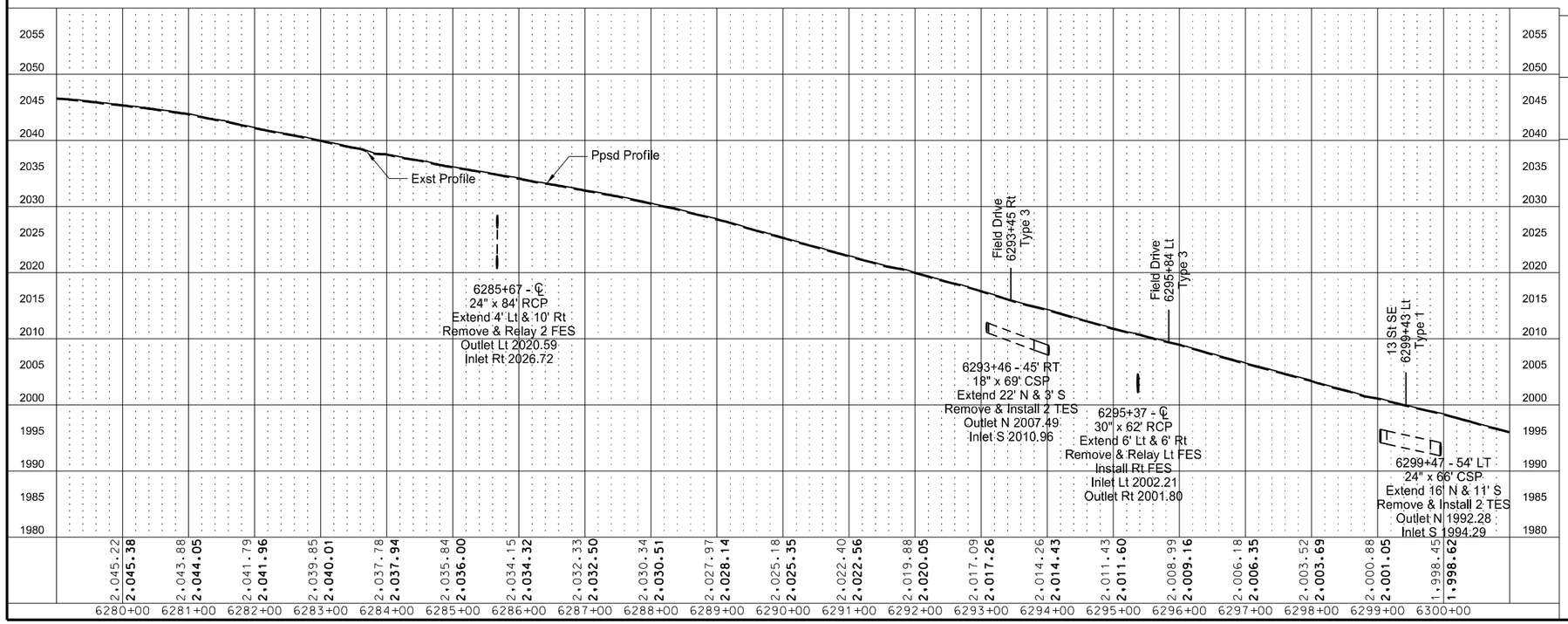
Plan & Profile

ND 3
Tuttle N to W Jct 200

6260+00 to 6280+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	60	16





SPEC	CODE	BID ITEM	QTY	UNIT
202	0132	REMOVAL OF BITUMINOUS SURFACING		
		6299+43 Lt	69	SY
202	0169	REMOVAL OF END SECTION-ALL TYPES & SIZES		
		6293+11 Rt	1	EA
		6293+80 Rt	1	EA
		6295+37 Rt	1	EA
		6299+14 Lt	1	EA
		6299+80 Lt	1	EA
202	0174	REMOVAL OF PIPE ALL TYPES AND SIZES		
		6299+14 - 54' Lt to 6299+15 - 54' Lt	1	LF
		6299+79 - 53' Lt to 6299+80 - 53' Lt	1	LF
714	0615	PIPE CONC REINF 24IN CL III		
		6285+67 - 59' Lt to 6285+67 - 55' Lt	4	LF
		6285+67 - 29' Rt to 6285+67 - 39' Rt	10	LF
714	0820	PIPE CONC REINF 30IN CL III		
		6295+37 - 36' Lt to 6295+37 - 30' Lt	6	LF
		6295+37 - 32' Rt to 6295+37 - 38' Rt	6	LF
714	3030	END SECT-CONC REINF 30IN		
		6295+37 Rt	1	EA
714	5015	PIPE CORR STEEL .064IN 18IN		
		6293+08 - 44' Rt to 6293+11 - 44' Rt	3	LF
		6293+80 - 46' Rt to 6294+02 - 47' Rt	22	LF
714	5035	PIPE CORR STEEL .064IN 24IN		
		6299+04 - 54' Lt to 6299+15 - 54' Lt	11	LF
		6299+79 - 53' Lt to 6299+95 - 53' Lt	16	LF
714	6501	END SECT-TRAVERSABLE METAL 18IN		
		6293+08 Rt	1	EA
		6294+02 Rt	1	EA
714	6506	END SECT-TRAVERSABLE METAL 24IN		
		6299+04 Lt	1	EA
		6299+95 Lt	1	EA
714	9660	REMOVE&RELAY END SECTION-ALL TYPES		
		6285+67 Lt & Rt	2	EA
		6295+37 Lt	1	EA
754	0805	OBJECT MARKERS - CULVERTS		

6285+67 Lt & Rt	2	EA	6295+37 Lt & Rt	2	EA
6293+08 Rt	1	EA	6299+04 Lt	1	EA
6294+02 Rt	1	EA	6299+95 Lt	1	EA

Legend

Removal of Bituminous Surfacing

Clearing & Grubbing

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Plan & Profile

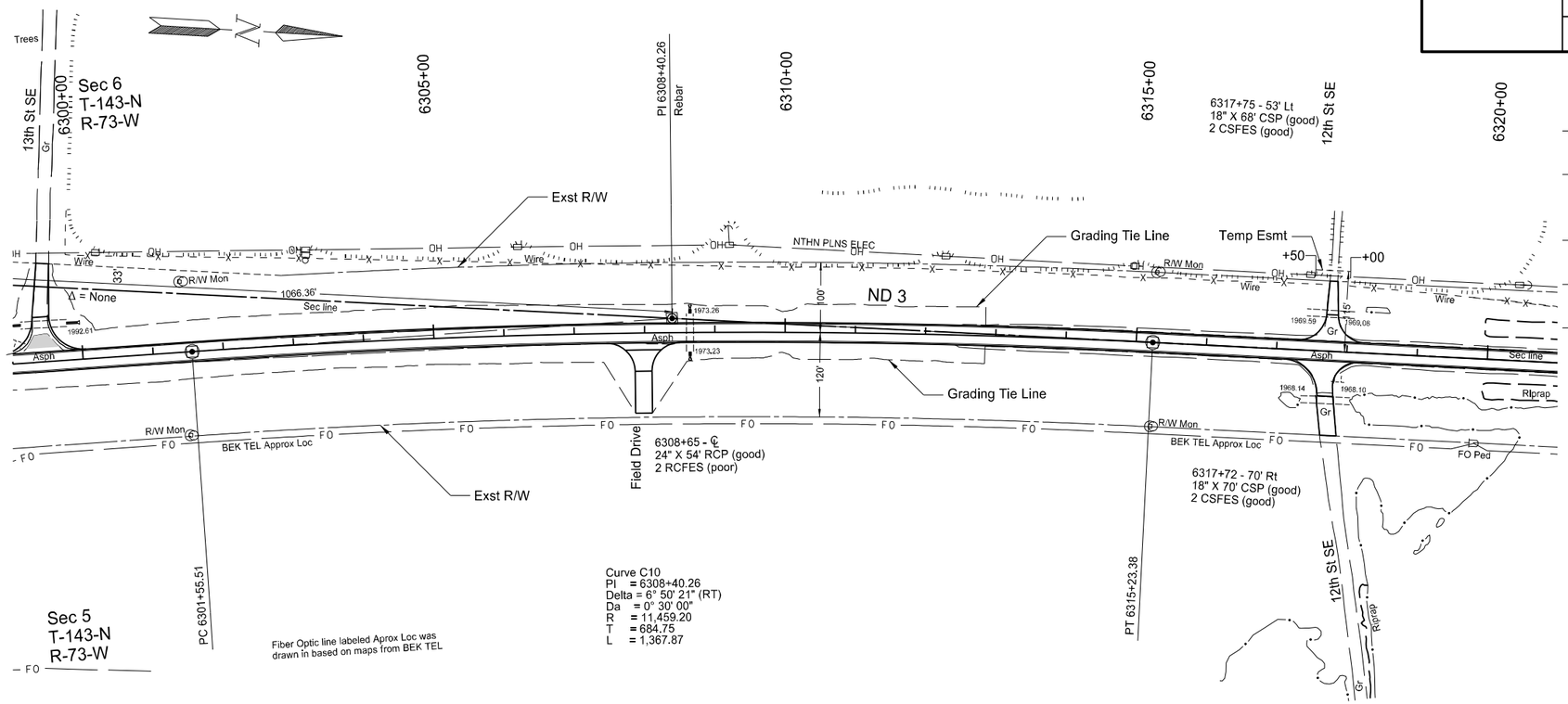
ND 3
Tuttle N to W Jct 200

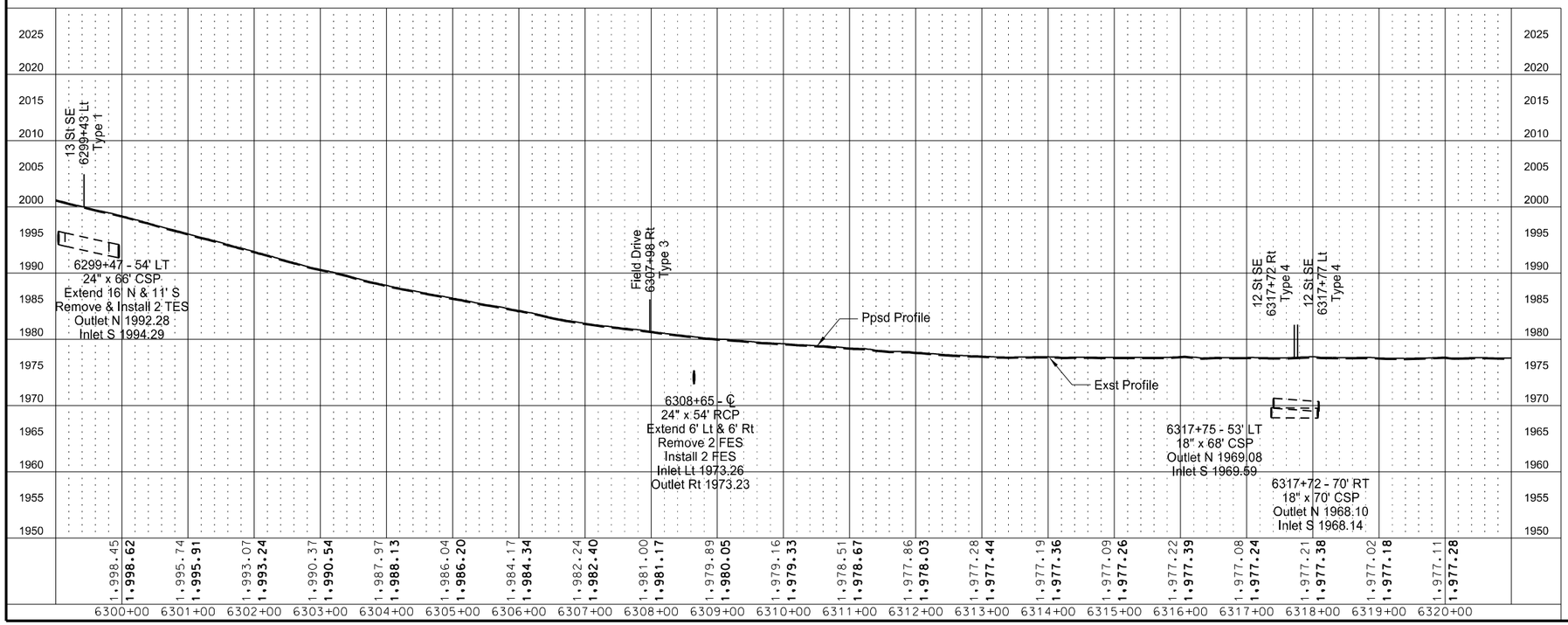
6280+00 to 6300+00
Kidder County

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STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	60	17

SPEC	CODE	BID ITEM	QTY	UNIT
202	0169	REMOVAL OF END SECTION-ALL TYPES & SIZES		
		6308+65 Lt & Rt	2	EA
714	0615	PIPE CONC REINF 24IN CL III		
		6308+65 - 33' Lt to 6308+65 - 27' Lt	6	LF
		6308+65 - 27' Rt to 6308+65 - 33' Rt	6	LF
714	3020	END SECT-CONC REINF 24IN		
		6308+65 Lt & Rt	2	EA
754	0805	OBJECT MARKERS - CULVERTS		
		6308+65 Lt & Rt	2	EA
990	0400	PIPE CLEANOUT		
		6308+65	1	EA
		6317+72 Rt	1	EA





Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

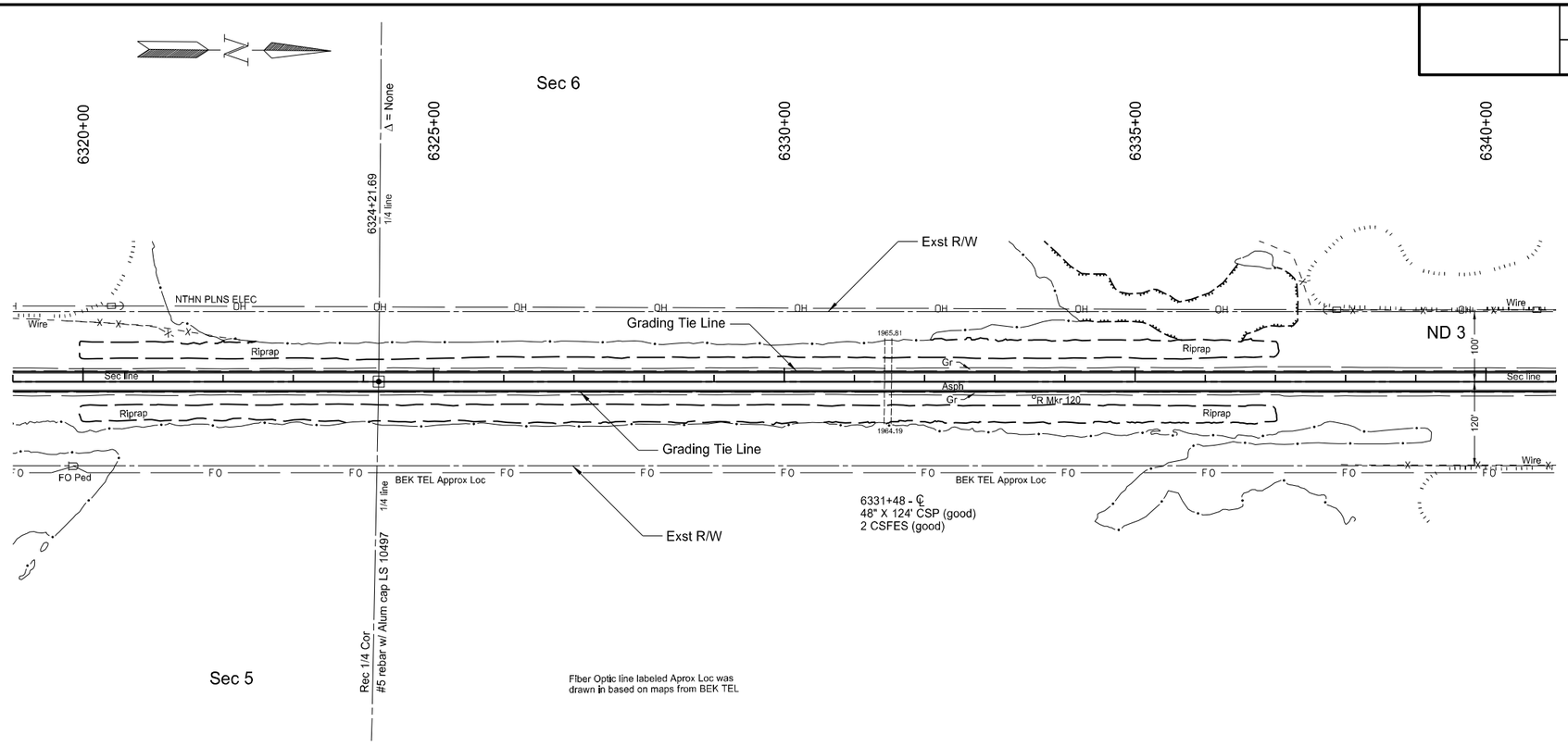
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

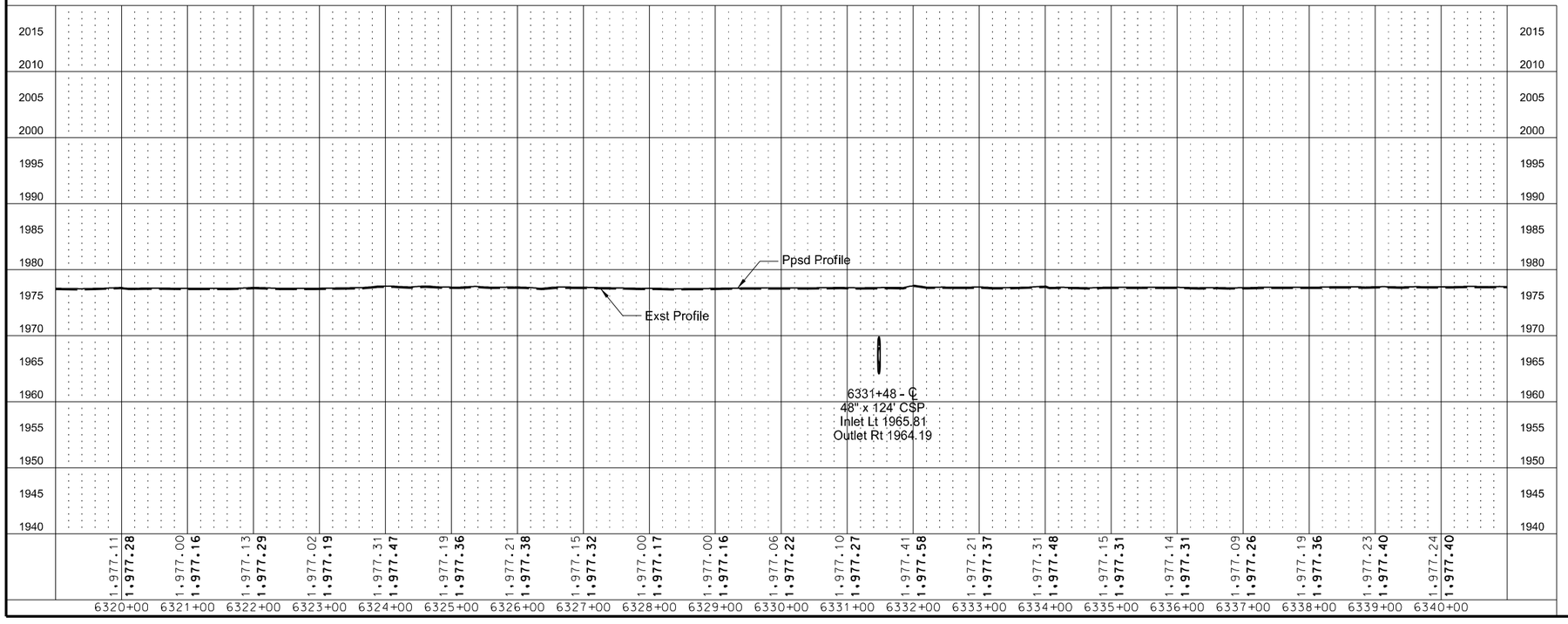
Plan & Profile

ND 3
Tuttle N to W Jct 200

6300+00 to 6320+00
Kidder County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	60	18





Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

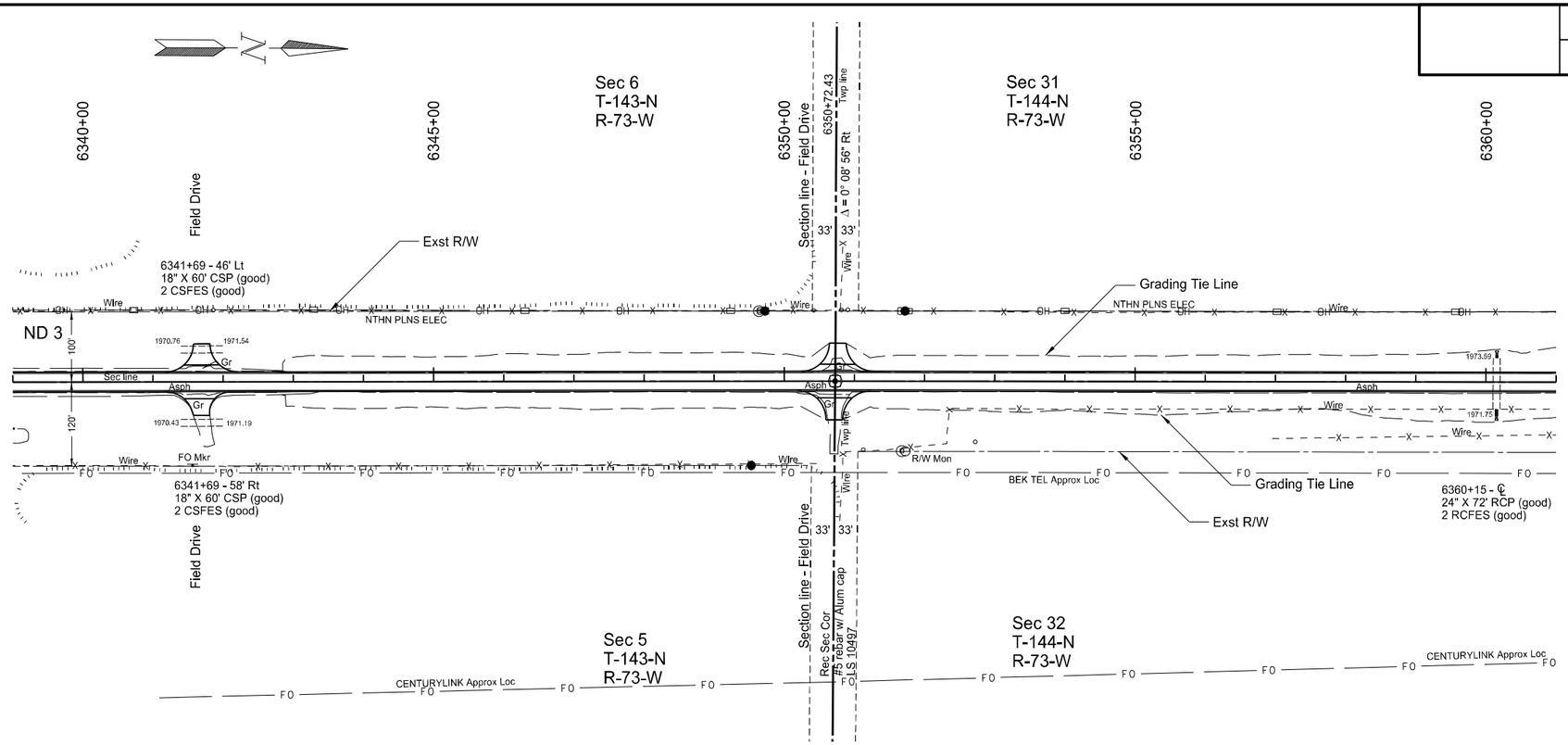
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KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

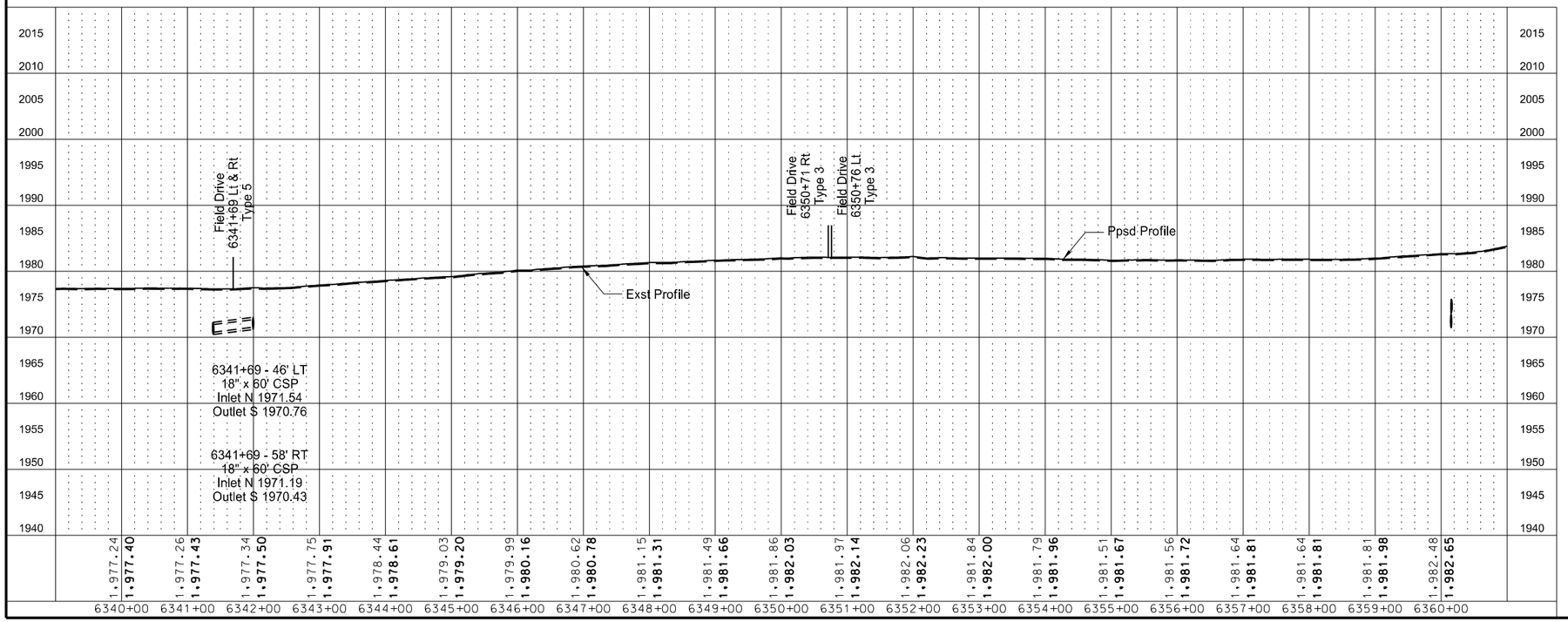
Plan & Profile

ND 3
Tuttle N to W Jct 200

6320+00 to 6340+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	60	19





Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

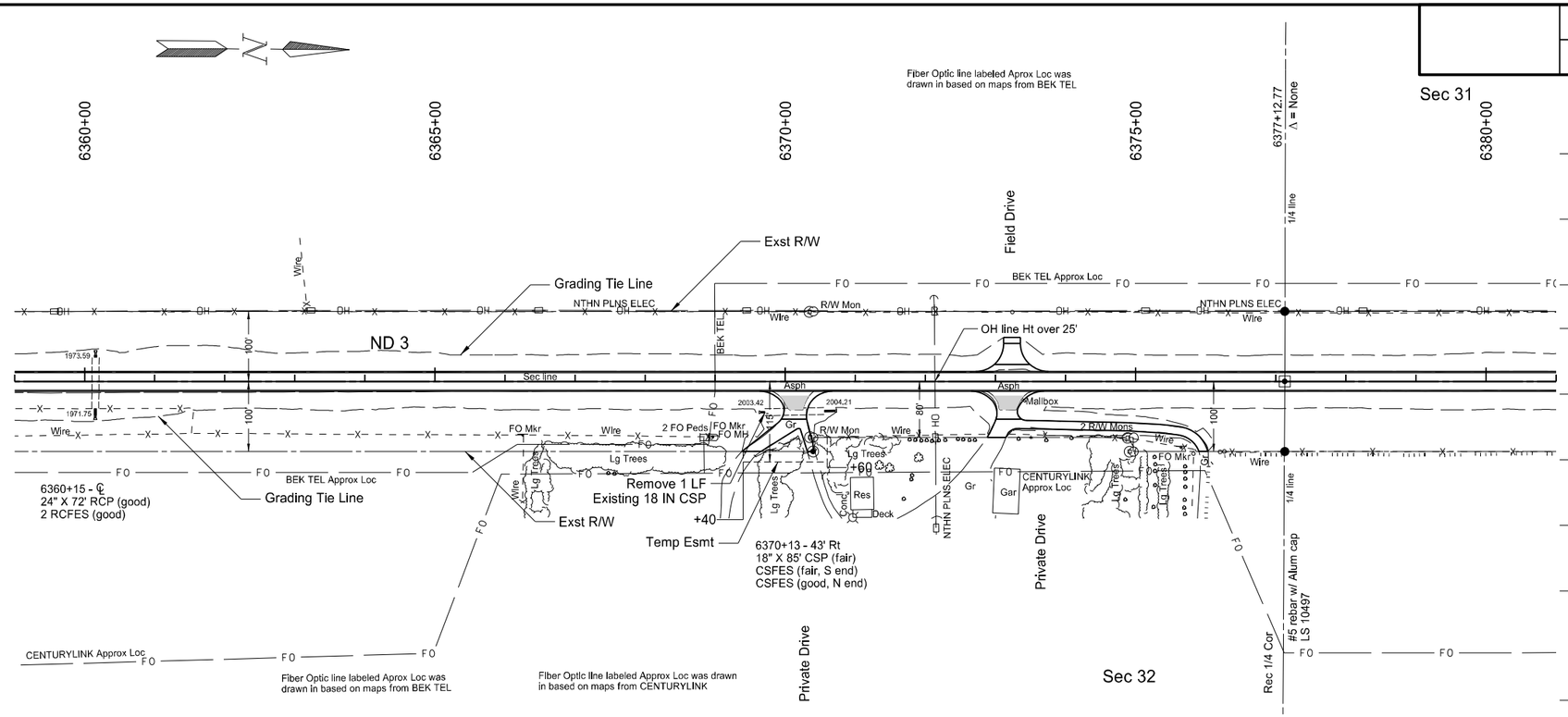
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Tuttle N to W Jct 200

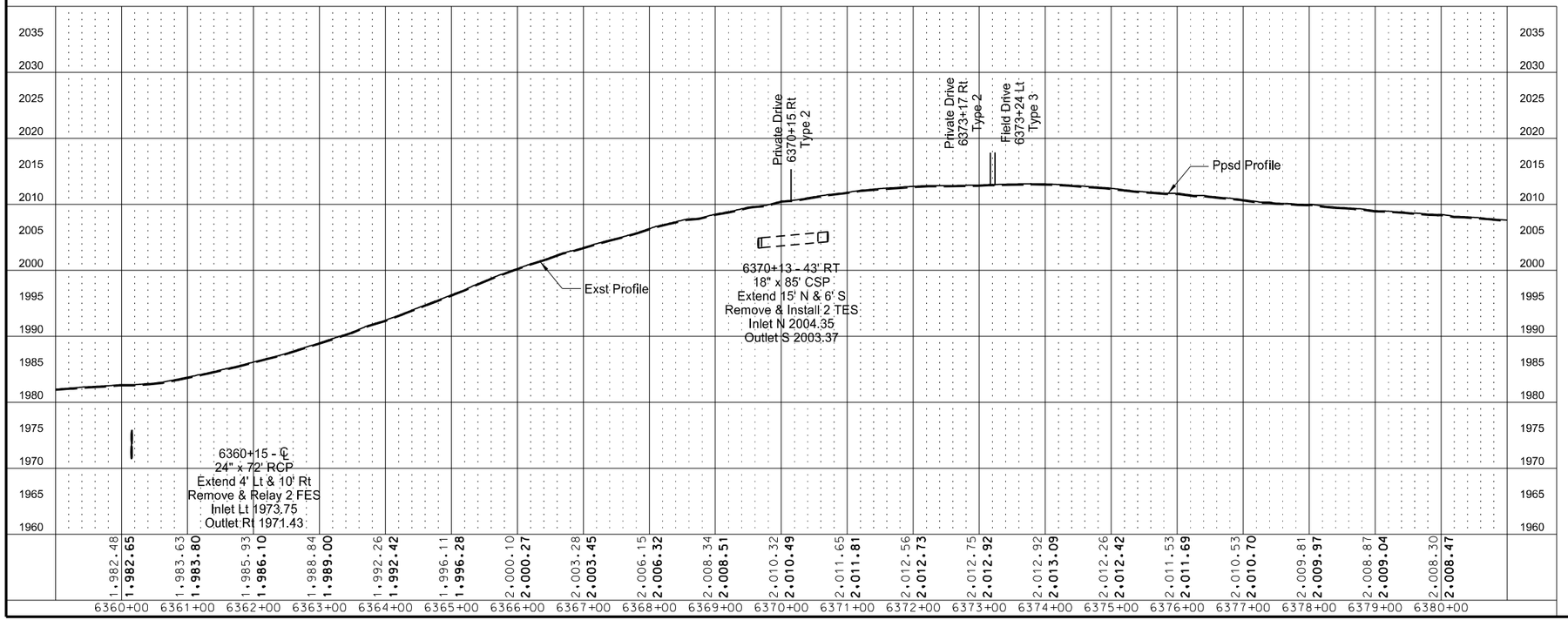
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Kidder County

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STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	60	20



SPEC	CODE	BID ITEM	QTY	UNIT
202	0132	REMOVAL OF BITUMINOUS SURFACING		
		6370+15 Rt	70	SY
		6373+17 Rt	73	SY
202	0169	REMOVAL OF END SECTION-ALL TYPES & SIZES		
		6369+70 Rt	1	EA
		6370+55 Rt	1	EA
202	0174	REMOVAL OF PIPE ALL TYPES AND SIZES		
		6369+70 - 44' Rt to 6369+71 - 44' Rt	1	LF
714	0615	PIPE CONC REINF 24IN CL III		
		6360+16 - 38' Lt to 6360+16 - 34' Lt	4	LF
		6360+15 - 39' Rt to 6360+15 - 49' Rt	10	LF
714	5015	PIPE CORR STEEL .064IN 18IN		
		6369+65 - 44' Rt to 6369+71 - 44' Rt	6	LF
		6370+55 - 42' Rt to 6370+70 - 42' Rt	15	LF
714	6501	END SECT-TRAVERSABLE METAL 18IN		
		6369+65 Rt	1	EA
		6370+70 Rt	1	EA
714	9660	REMOVE&RELAY END SECTION-ALL TYPES&SIZES		
		6360+16 Lt	1	EA
		6360+15 Rt	1	EA
754	0805	OBJECT MARKERS - CULVERTS		
		6360+16 Lt	1	EA
		6360+15 Rt	1	EA
		6369+65 Rt	1	EA
		6370+70 Rt	1	EA
990	0400	PIPE CLEANOUT		
		6360+15	1	EA



Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

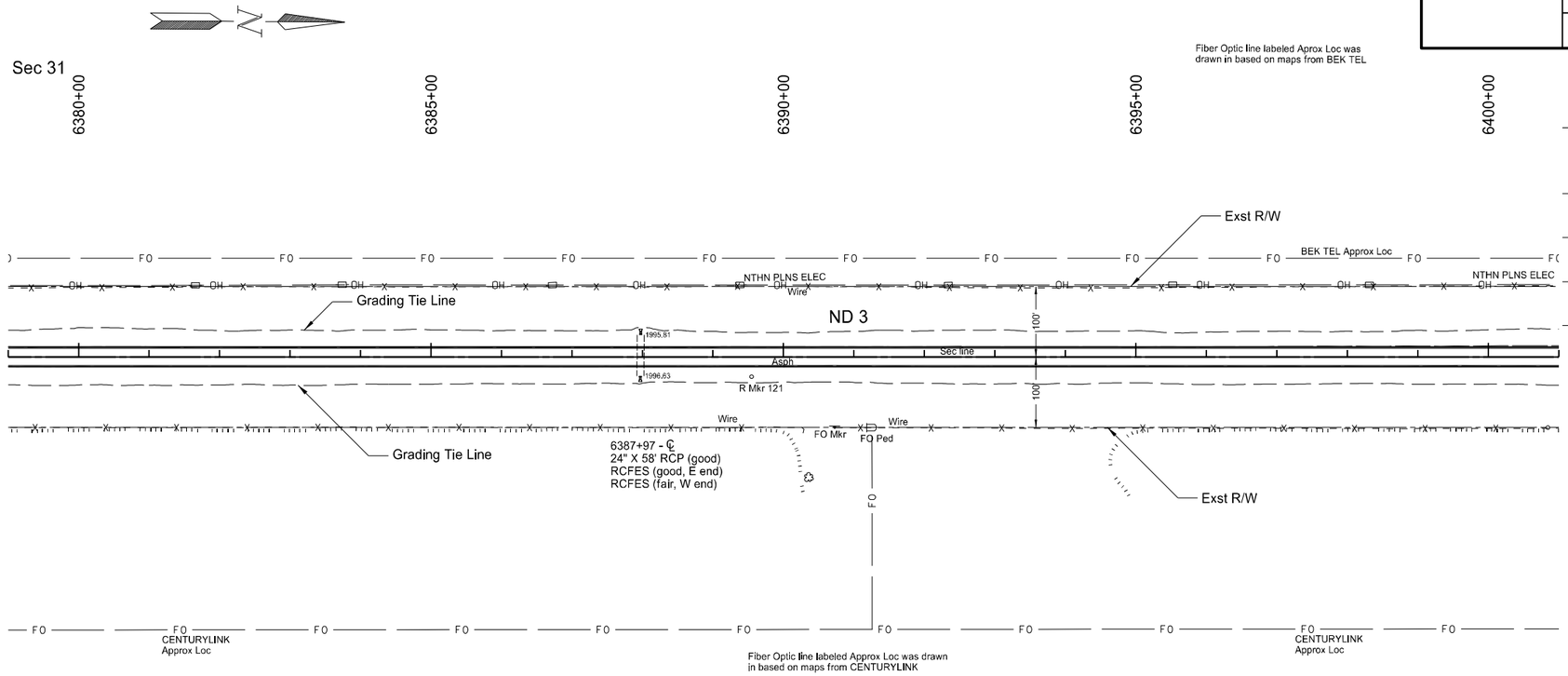
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KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Plan & Profile

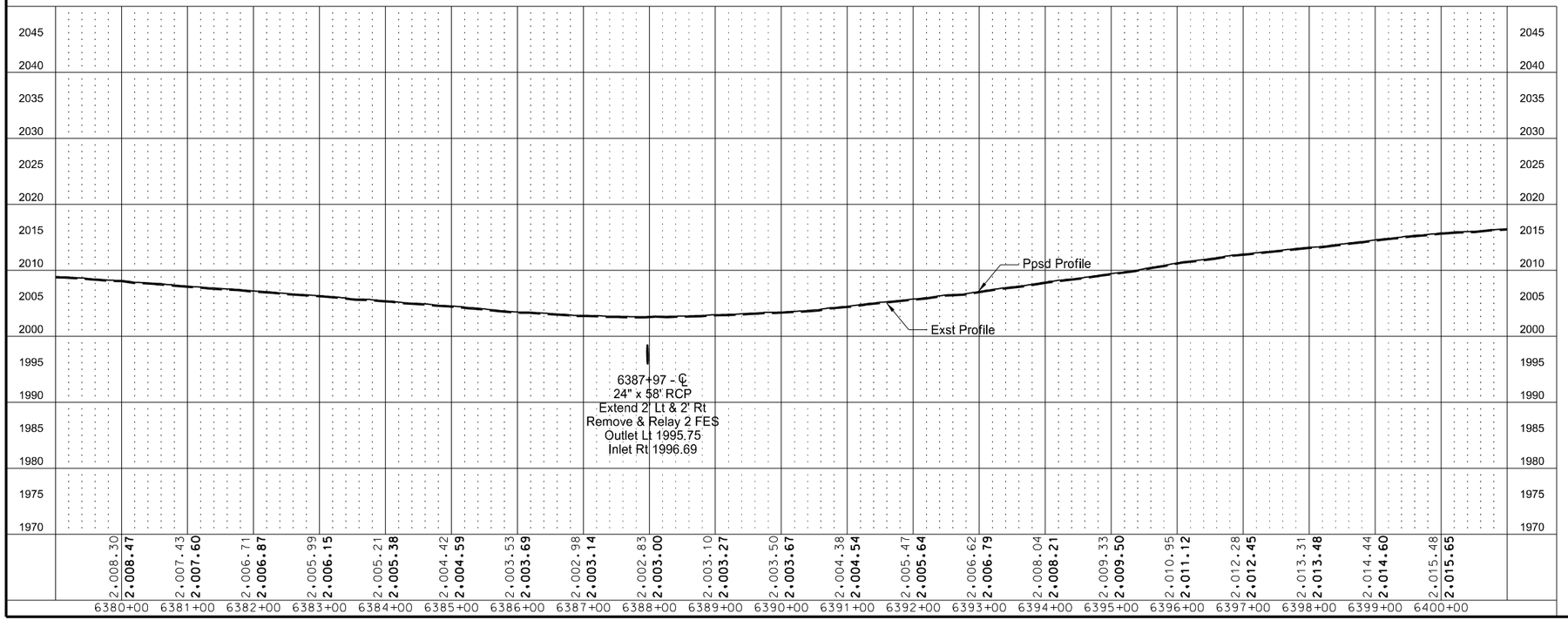
ND 3
Tuttle N to W Jct 200

6360+00 to 6380+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	60	21



SPEC	CODE	BID ITEM	QTY	UNIT
714	0615	PIPE CONC REINF 24IN CL III		
		6387+97 - 33' Lt to 6387+97 - 31' Lt	2	LF
		6387+97 - 27' Rt to 6387+97 - 29' Rt	2	LF
714	2524	CURED-IN-PLACE PIPE-24IN		
		6387+97	62	LF
714	9660	REMOVE&RELAY END SECTION-ALL TYPES&SIZES		
		6387+97 Lt & Rt	2	EA
754	0805	OBJECT MARKERS - CULVERTS		
		6387+97 Lt & Rt	2	EA
990	0400	PIPE CLEANOUT		
		6387+97	1	EA



Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

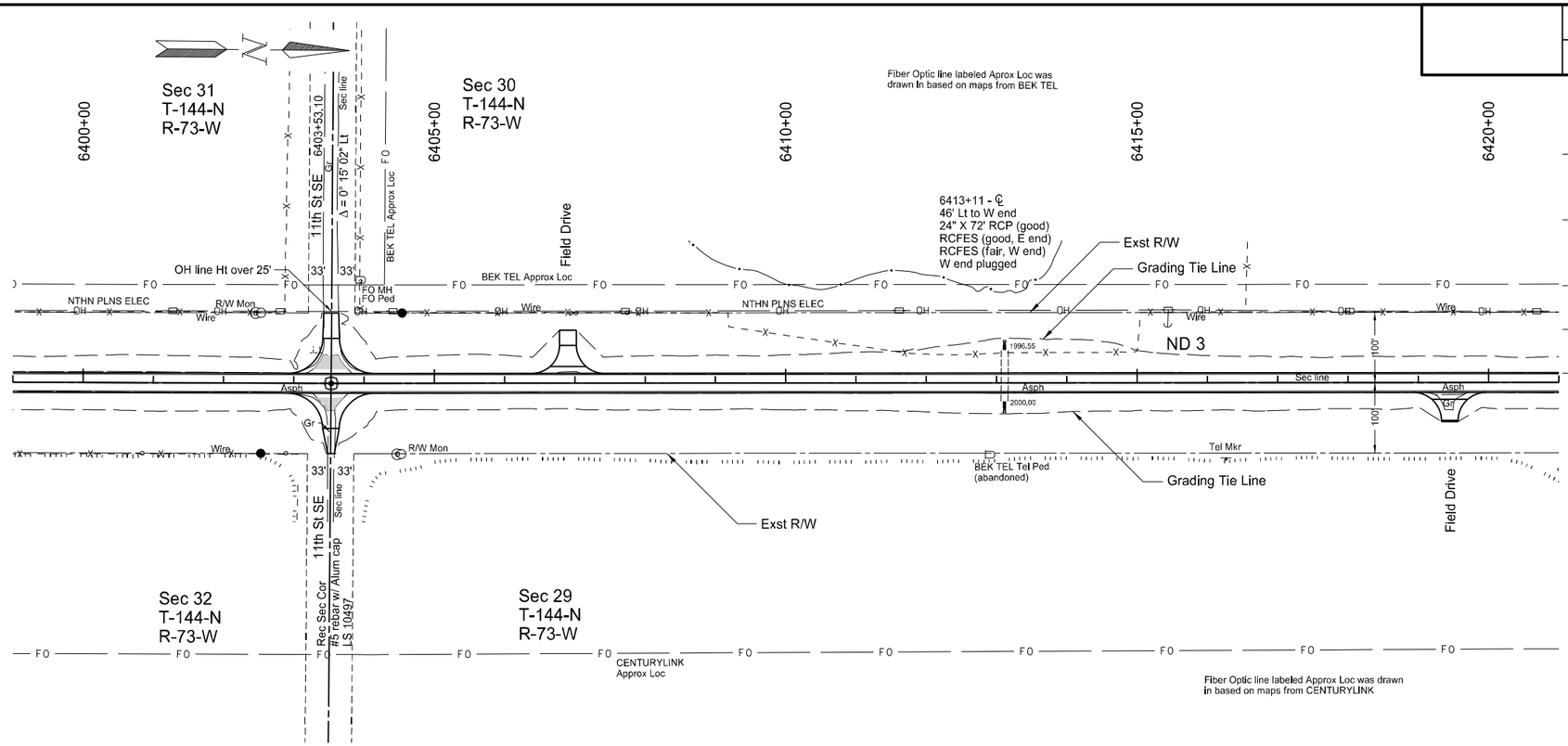
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

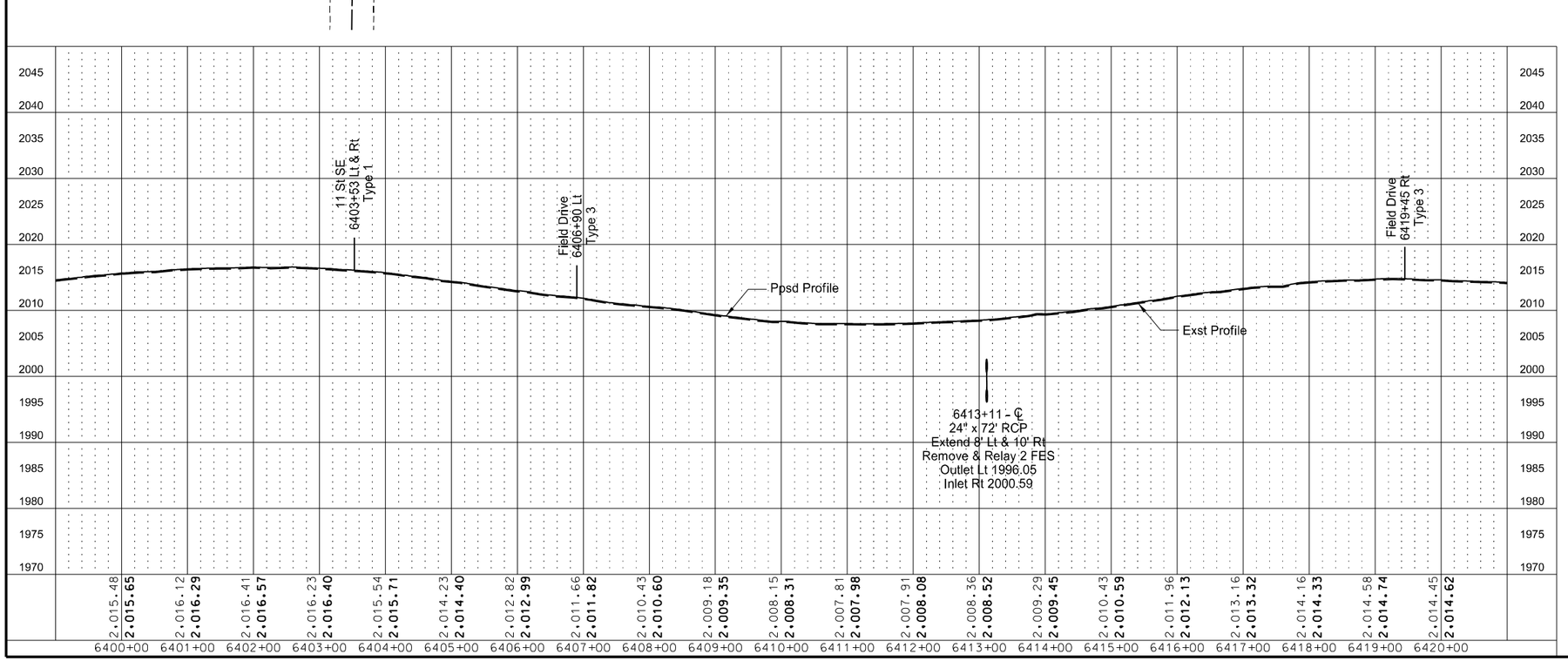
Plan & Profile

ND 3
Tuttle N to W Jct 200

6380+00 to 6400+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	60	22





SPEC	CODE	BID ITEM	QTY	UNIT
202	0132	REMOVAL OF BITUMINOUS SURFACING		
		6403+53 Rt	46	SY
		6403+53 Lt	74	SY
714	0615	PIPE CONC REINF 24IN CL III		
		6413+11 - 54' Lt to 6413+11 - 46' Lt	8	LF
		6413+11 - 26' Rt to 6413+11 - 36' Rt	10	LF
714	9660	REMOVE&RELAY END SECTION-ALL TYPES&SIZES		
		6413+11 Lt & Rt	2	EA
754	0805	OBJECT MARKERS - CULVERTS		
		6413+11 Lt & Rt	2	EA
990	0400	PIPE CLEANOUT		
		6413+11	1	EA

Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

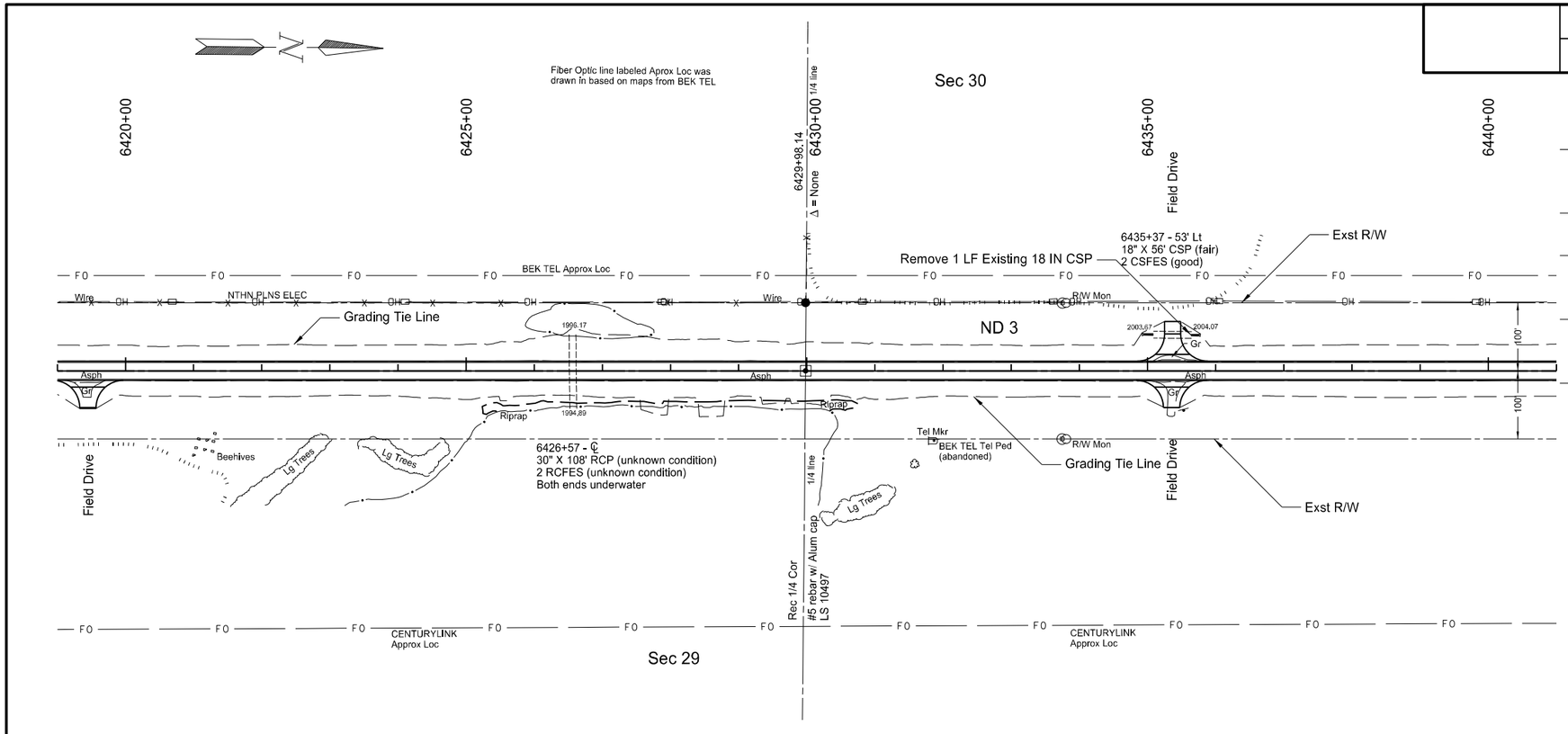
Plan & Profile

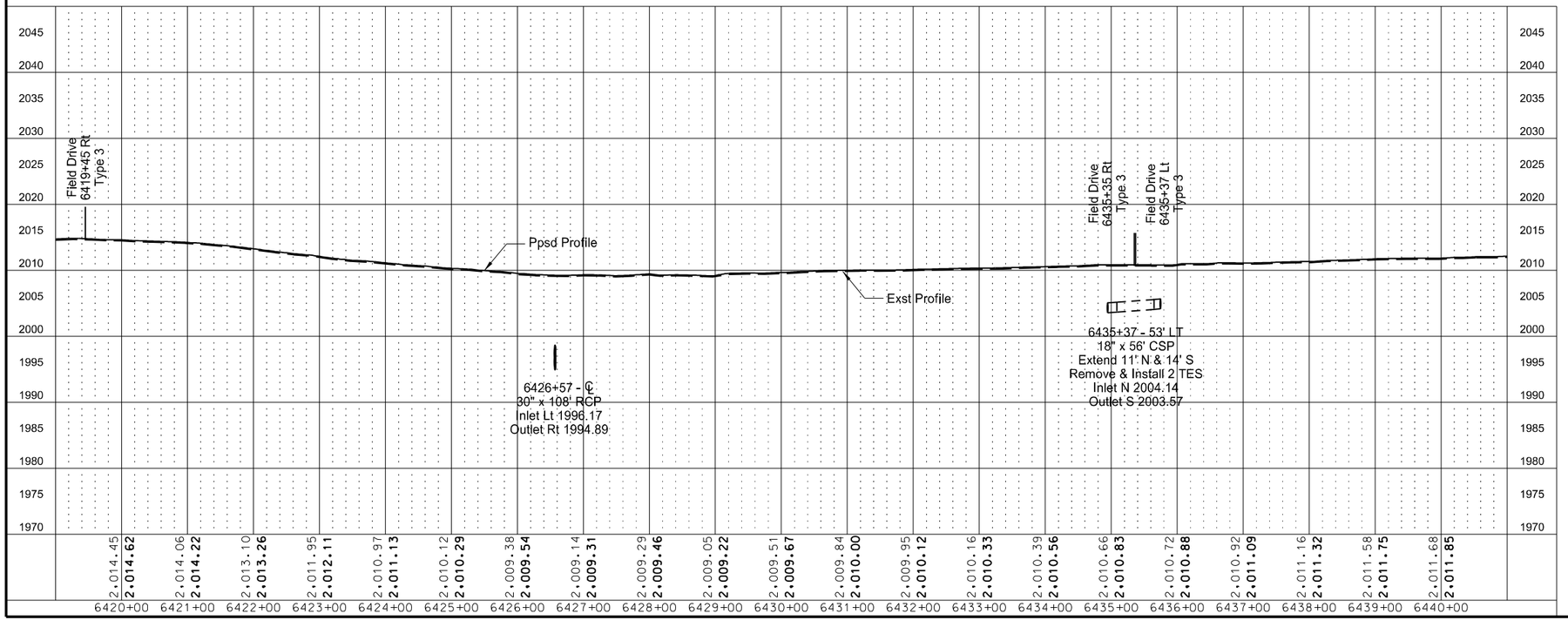
ND 3
Tuttle N to W Jct 200

6400+00 to 6420+00
Kidder County

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STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	60	23





SPEC	CODE	BID ITEM	QTY	UNIT
202	0169	REMOVAL OF END SECTION-ALL TYPES & SIZES		
		6435+09 Lt	1	EA
		6435+65 Lt	1	EA
202	0174	REMOVAL OF PIPE ALL TYPES AND SIZES		
		6435+64 - 53' Lt to 6435+65 - 53' Lt	1	LF
714	5015	PIPE CORR STEEL .064IN 18IN		
		6434+95 - 53' Lt to 6435+09 - 53' Lt	14	LF
		6435+64 - 53' Lt to 6435+75 - 52' Lt	11	LF
714	6501	END SECT-TRAVERSABLE METAL 18IN		
		6434+95 Lt	1	EA
		6435+75 Lt	1	EA
754	0805	OBJECT MARKERS - CULVERTS		
		6434+95 Lt	1	EA
		6435+75 Lt	1	EA

Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

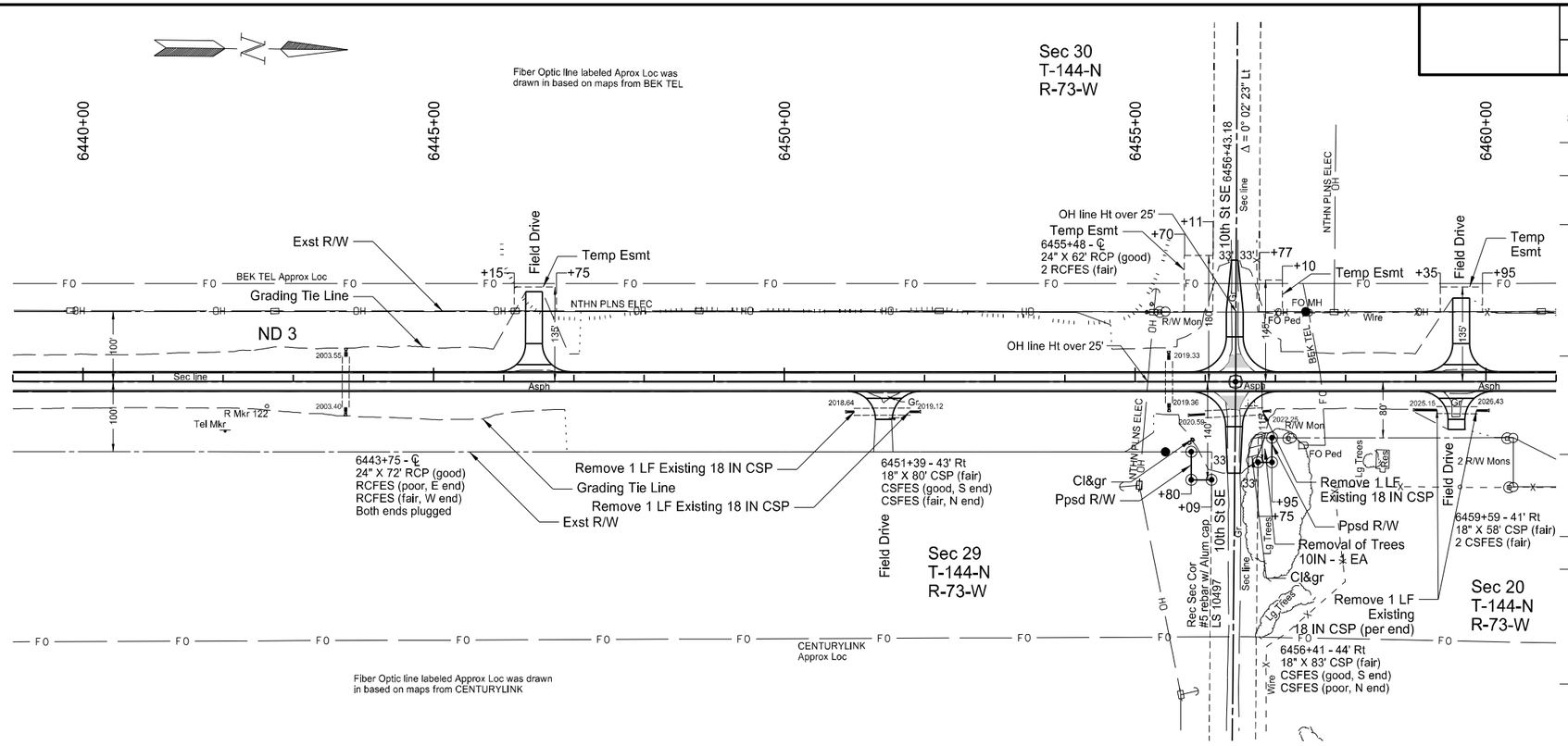
REGISTERED PROFESSIONAL ENGINEER
KORY M. KLEINKNECHT
PE-27748
DATE 12/15/2021
NORTH DAKOTA

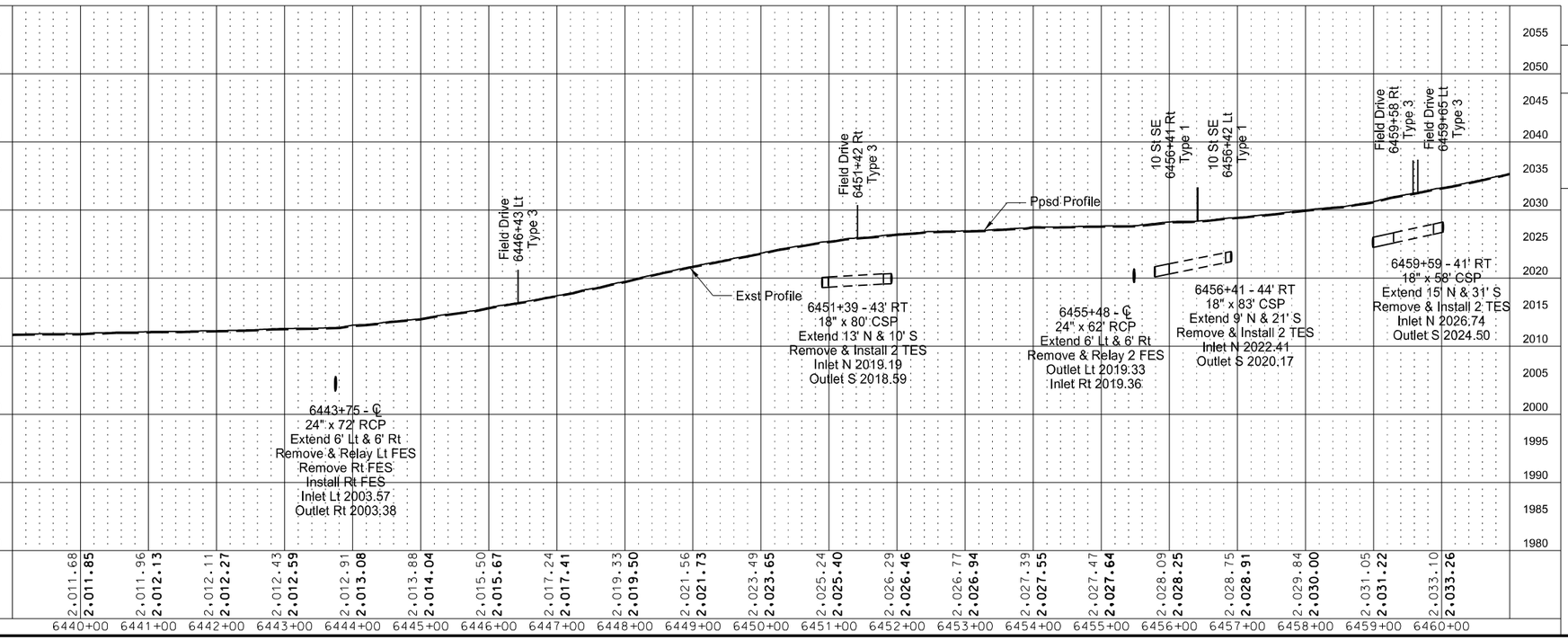
Plan & Profile

ND 3
Tuttle N to W Jct 200

6420+00 to 6440+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	60	24





SPEC	CODE	BID ITEM	QTY	UNIT
201	0370	REMOVAL OF TREES 10IN		
		6456+85 Rt	1	EA
202	0132	REMOVAL OF BITUMINOUS SURFACING		
		6456+41 Rt	51	SY
		6456+42 Lt	49	SY
202	0169	REMOVAL OF END SECTION-ALL TYPES & SIZES		
		6443+75 Rt	1	EA
		6450+99 Rt	1	EA
		6451+80 Rt	1	EA
		6455+99 Rt	1	EA
		6456+83 Rt	1	EA
		6459+29 Rt	1	EA
		6459+88 Rt	1	EA
202	0174	REMOVAL OF PIPE ALL TYPES AND SIZES		
		6450+99 - 43' Rt to 6451+00 - 43' Rt	1	LF
		6451+79 - 43' Rt to 6451+80 - 43' Rt	1	LF
		6456+82 - 42' Rt to 6456+83 - 42' Rt	1	LF
		6459+29 - 41' Rt to 6459+30 - 41' Rt	1	LF
		6459+87 - 41' Rt to 6459+88 - 41' Rt	1	LF
714	0615	PIPE CONC REINF 24IN CL III		
		6443+75 - 41' Lt to 6443+75 - 35' Lt	6	LF
		6443+75 - 37' Rt to 6443+74 - 43' Rt	6	LF
		6455+48 - 37' Lt to 6455+48 - 31' Lt	6	LF
		6455+48 - 31' Rt to 6455+48 - 37' Rt	6	LF
714	3020	END SECT-CONC REINF 24IN		
		6443+74 Rt	1	EA
714	5015	PIPE CORR STEEL .064IN 18IN		
		6450+90 - 43' Rt to 6451+00 - 43' Rt	10	LF
		6451+79 - 43' Rt to 6451+92 - 43' Rt	13	LF
		6455+79 - 48' Rt to 6455+99 - 46' Rt	21	LF
		6456+82 - 42' Rt to 6456+91 - 42' Rt	9	LF
		6458+99 - 40' Rt to 6459+30 - 41' Rt	31	LF
		6459+87 - 41' Rt to 6460+02 - 41' Rt	15	LF
714	6501	END SECT-TRAVERSABLE METAL 18IN		
		6450+90 Rt	1	EA
		6451+92 Rt	1	EA
		6455+79 Rt	1	EA
		6456+91 Rt	1	EA
		6458+99 Rt	1	EA
		6460+02 Rt	1	EA
714	9660	REMOVE&RELAY END SECTION-ALL TYPES&SIZES		
		6443+75 Lt	1	EA
		6455+48 Lt & Rt	2	EA

754	0805	OBJECT MARKERS - CULVERTS					
		6443+75 Lt	1	EA	6455+79 Rt	1	EA
		6443+74 Rt	1	EA	6456+91 Rt	1	EA
		6450+90 Rt	1	EA	6458+99 Rt	1	EA
		6451+92 Rt	1	EA	6460+02 Rt	1	EA
		6455+48 Lt & Rt	2	EA			
990	0400	PIPE CLEANOUT					
		6443+75	1	EA	6455+48	1	EA
		6451+39 Rt	1	EA			

Legend

Removal of Bituminous Surfacing

Clearing & Grubbing

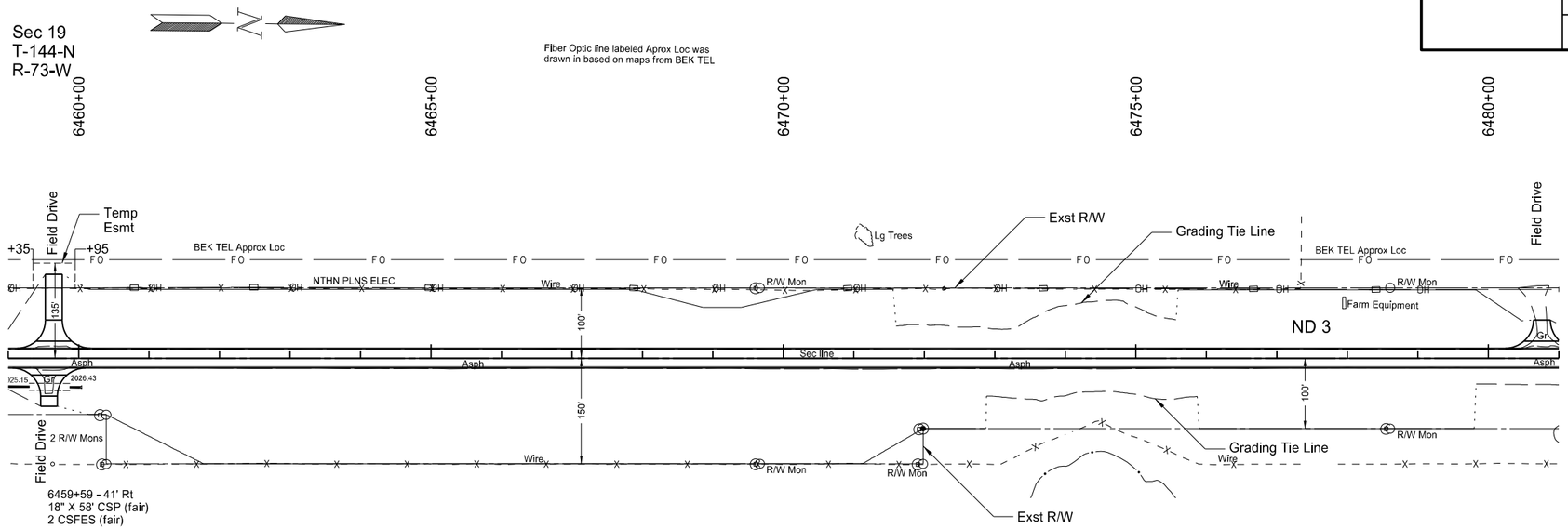
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27748
DATE 12/15/2021
NORTH DAKOTA

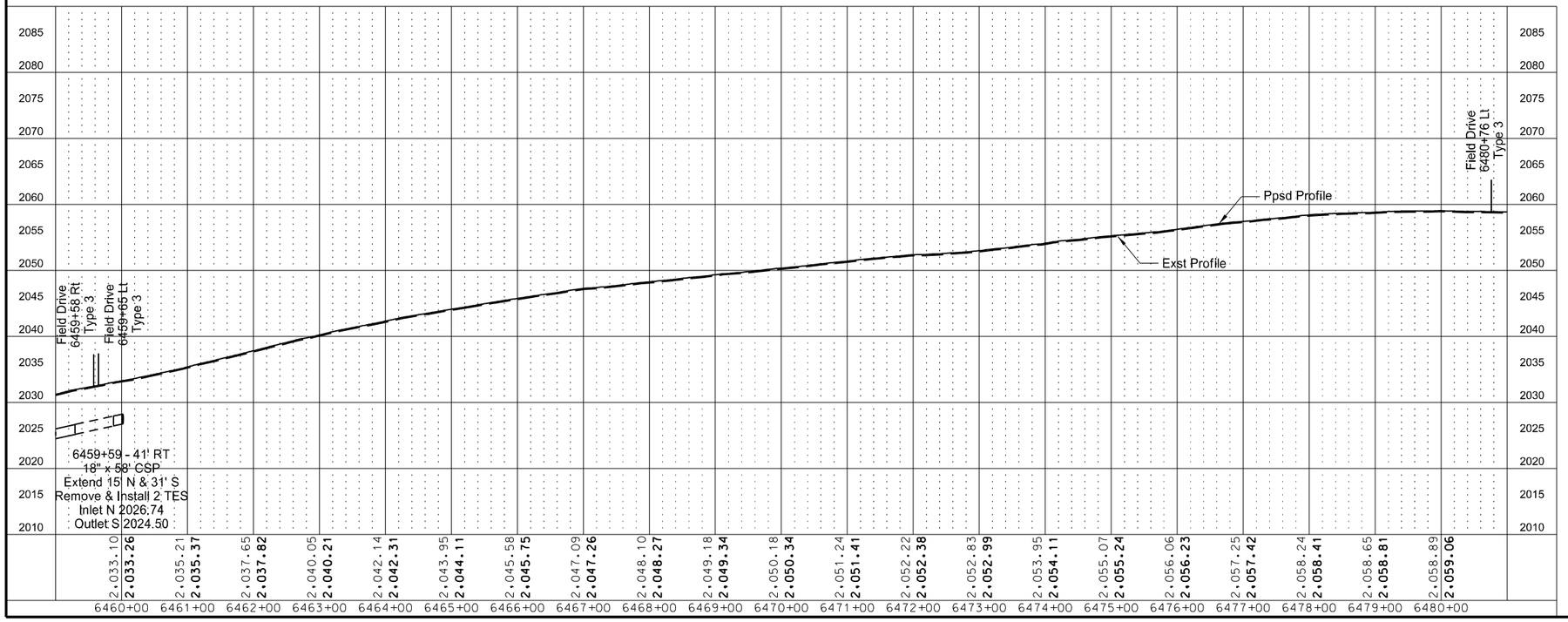
Plan & Profile

ND 3
Tuttle N to W Jct 200

6440+00 to 6460+00
Kidder County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	60	25





Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

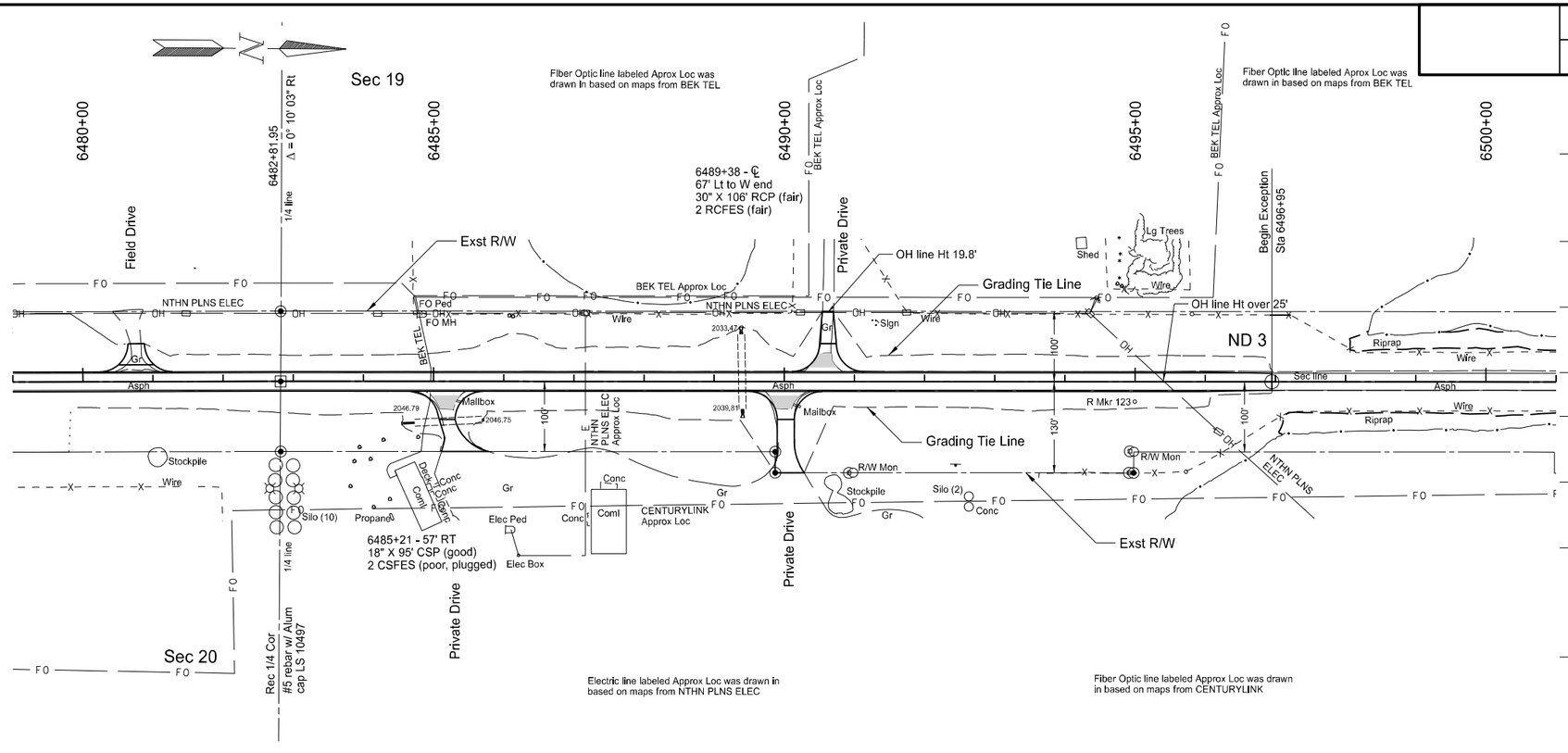
REGISTERED PROFESSIONAL ENGINEER
KORY M. KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Plan & Profile

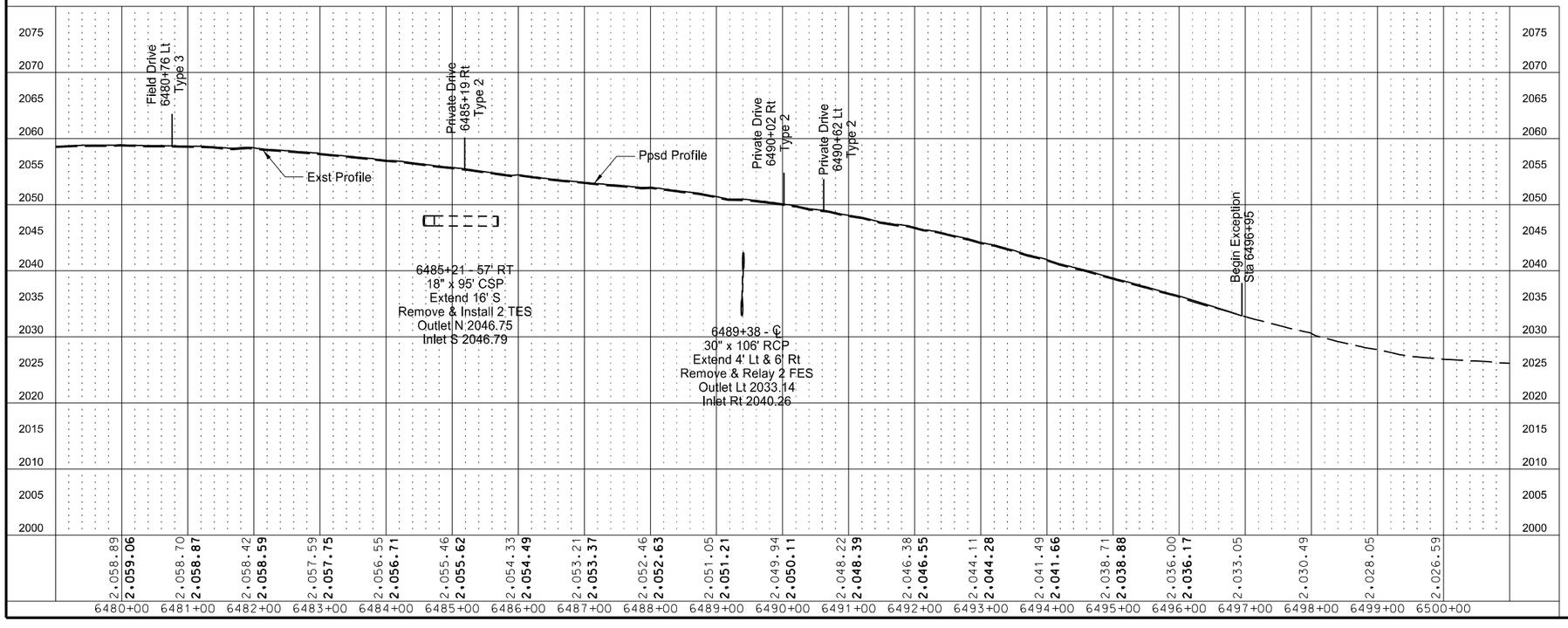
ND 3
Tuttle N to W Jct 200

6460+00 to 6480+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	60	26



SPEC	CODE	BID ITEM	QTY	UNIT
202	0132	REMOVAL OF BITUMINOUS SURFACING		
		6485+19 Rt	61	SY
		6490+02 Rt	66	SY
		6490+62 Lt	64	SY
202	0169	REMOVAL OF END SECTION-ALL TYPES & SIZES		
		6484+73 Rt	1	EA
		6485+69 Rt	1	EA
714	0820	PIPE CONC REINF 30IN CL III		
		6489+38 - 71' Lt to 6489+38 - 67' Lt	4	LF
		6489+40 - 39' Rt to 6489+40 - 45' Rt	6	LF
714	5015	PIPE CORR STEEL .064IN 18IN		
		6484+57 - 60' Rt to 6484+73 - 59' Rt	16	LF
714	6501	END SECT-TRAVERSABLE METAL 18IN		
		6484+57 Rt	1	EA
		6485+69 Rt	1	EA
714	9660	REMOVE&RELAY END SECTION-ALL TYPES&SIZES		
		6489+38 Lt	1	EA
		6489+40 Rt	1	EA
754	0805	OBJECT MARKERS - CULVERTS		
		6484+57 Rt	1	EA
		6485+69 Rt	1	EA
		6489+38 Lt	1	EA
		6489+40 Rt	1	EA
990	0400	PIPE CLEANOUT		
		6485+21 Rt	1	EA



Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

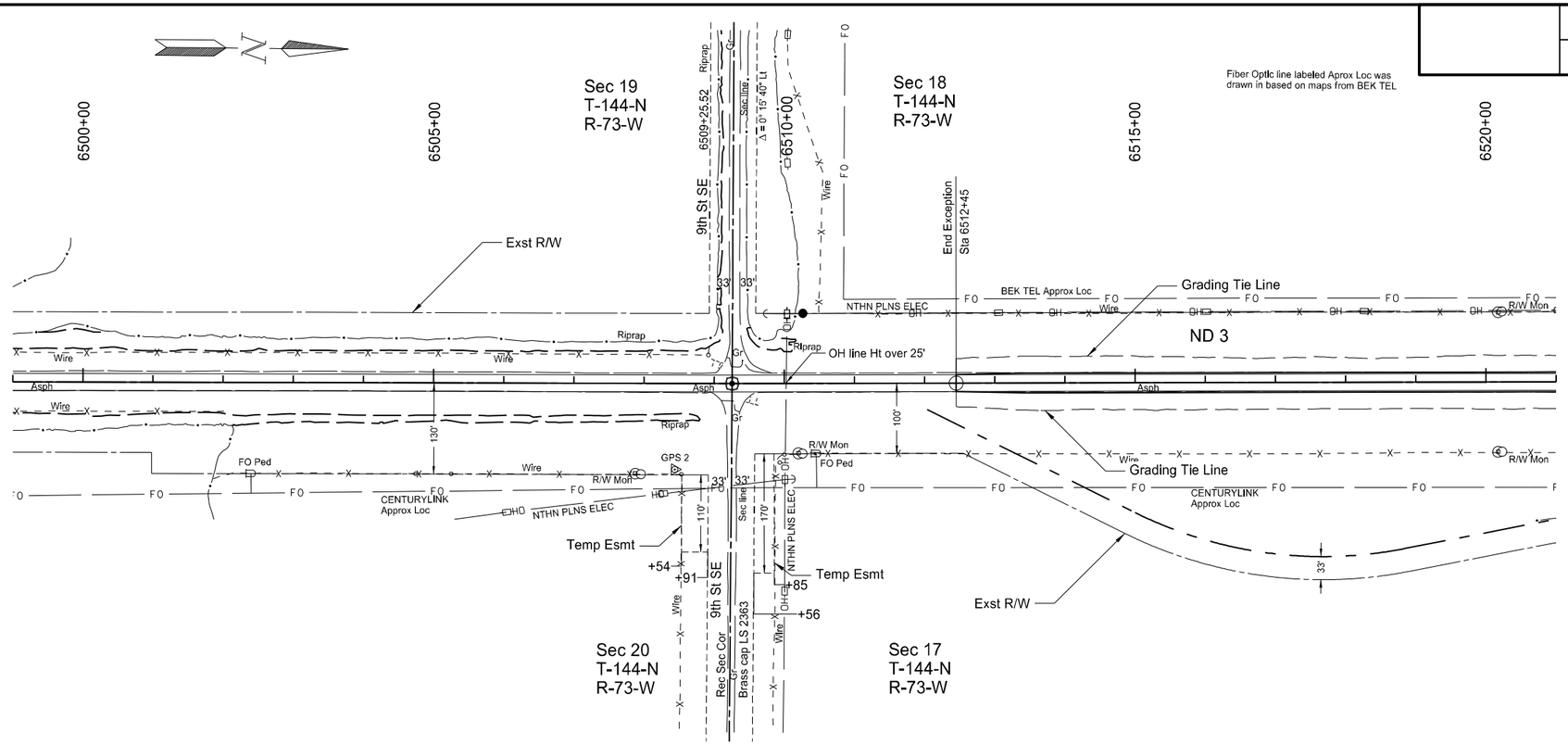
REGISTERED PROFESSIONAL ENGINEER
KORY L. KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

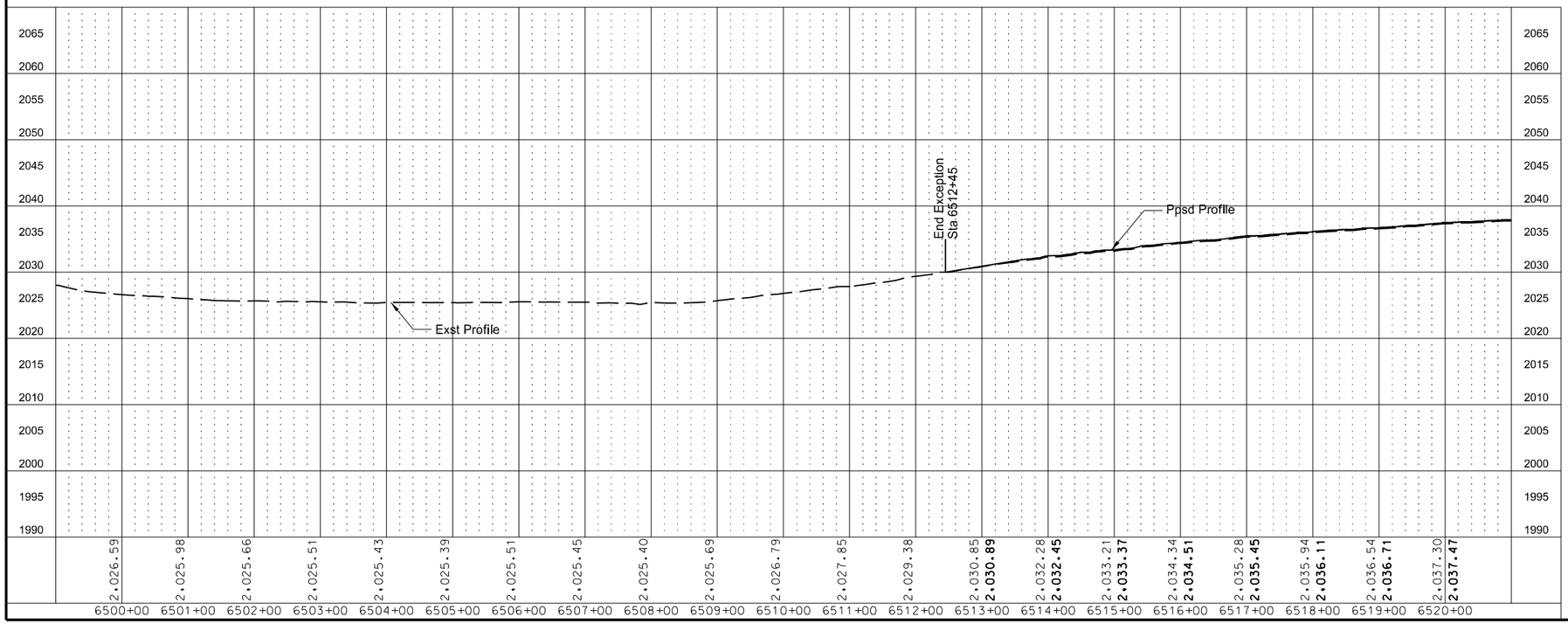
Plan & Profile

ND 3
Tuttle N to W Jct 200

6480+00 to 6500+00
Kidder County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	60	27





Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

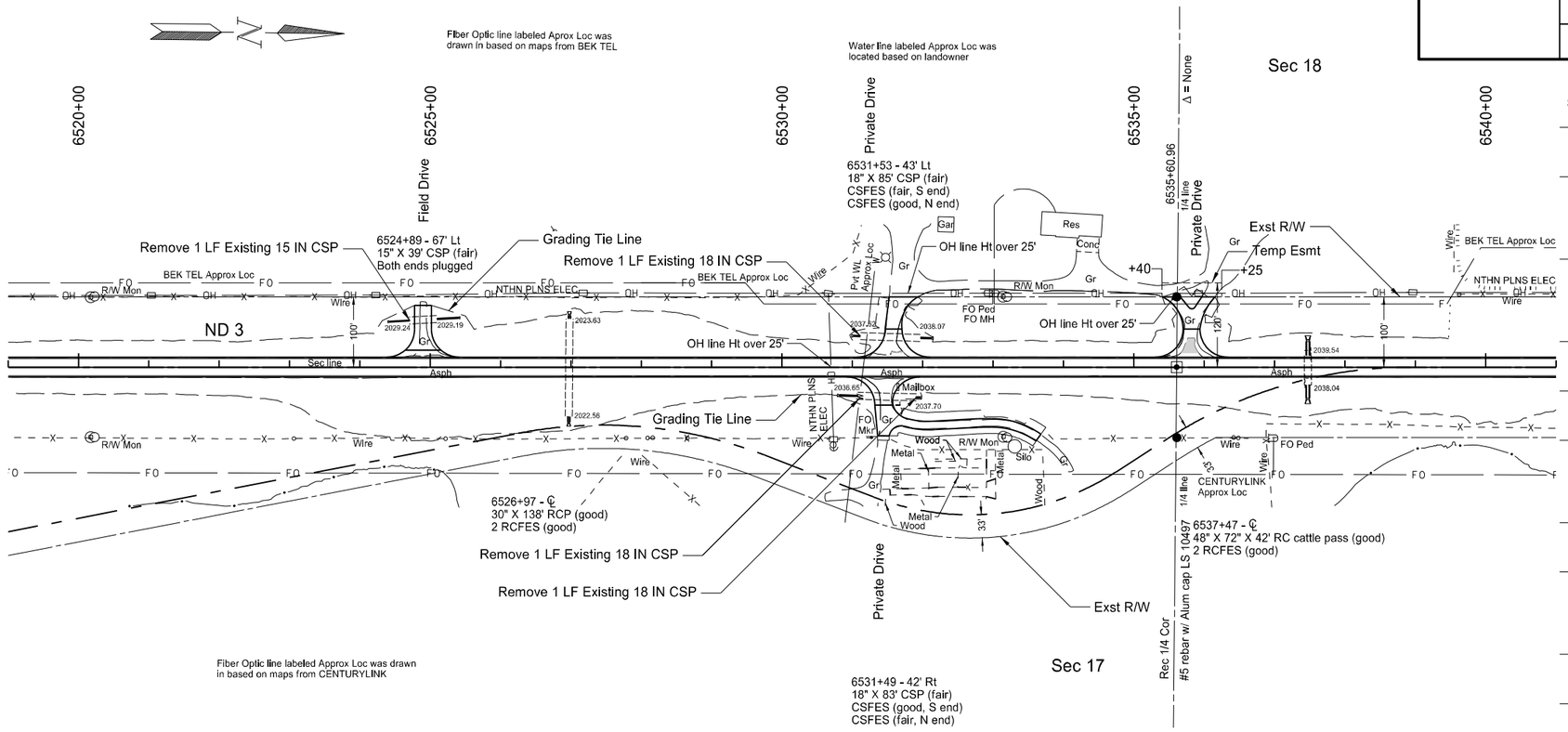
Plan & Profile

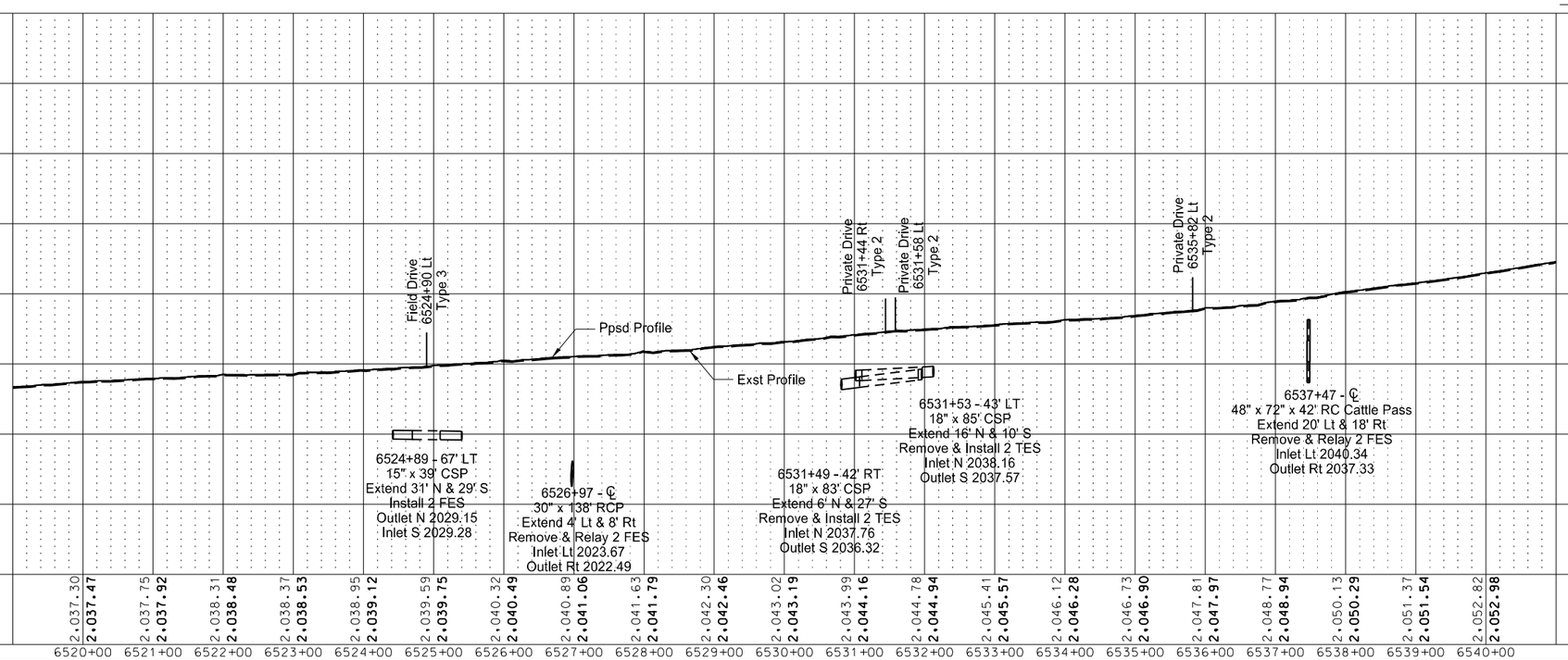
ND 3
Tuttle N to W Jct 200

6500+00 to 6520+00
Kidder County

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STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	60	28





SPEC	CODE	BID ITEM	QTY	UNIT
202	0132	REMOVAL OF BITUMINOUS SURFACING		
		6531+58 Lt	4	SY
		6535+82 Lt	36	SY
202	0169	REMOVAL OF END SECTION-ALL TYPES & SIZES		
		6531+07 Rt	1	EA
		6531+10 Lt	1	EA
		6531+91 Rt	1	EA
		6531+96 Lt	1	EA
202	0174	REMOVAL OF PIPE ALL TYPES AND SIZES		
		6524+70 - 66' Lt to 6524+71 - 66' Lt	1	LF
		6531+07 - 41' Rt to 6531+08 - 41' Rt	1	LF
		6531+10 - 44' Lt to 6531+11 - 44'Lt	1	LF
		6531+90 - 43' Rt to 6531+91 - 43' Rt	1	LF
714	0820	PIPE CONC REINF 30IN CL III		
		6526+98 - 73' Lt to 6526+98 - 69' Lt	4	LF
		6526+97 - 70' Rt to 6526+97 - 78' Rt	8	LF
714	5010	PIPE CORR STEEL .064IN 15IN		
		6524+42 - 65' Lt to 6524+71 - 66' Lt	29	LF
		6525+09 - 68' Lt to 6525+40 - 70' Lt	31	LF
714	5015	PIPE CORR STEEL .064IN 18IN		
		6530+81 - 40' Rt to 6531+08 - 41' Rt	27	LF
		6531+01 - 44' Lt to 6531+11 - 44' Lt	10	LF
		6531+90 - 43' Rt to 6531+96 - 43' Rt	6	LF
		6531+96 - 42' Lt to 6532+12 - 41' Lt	16	LF
714	5805	END SECT CORR STEEL .064IN 15IN		
		6524+42 Lt	1	EA
		6525+40 Lt	1	EA
714	6501	END SECT-TRAVERSABLE METAL 18IN		
		6530+81 Rt	1	EA
		6531+01 Lt	1	EA
		6531+96 Rt	1	EA
		6532+12 Lt	1	EA
714	9200	CATTLE PASS CONC INTERMED SECTION		
		6537+47 - 37' Lt to 6537+47 - 17' Lt	20	LF
		6537+47 - 26' Rt to 6537+47 - 44' Rt	18	LF
714	9611	REMOVE & RELAY CONC CATTLE PASS END SECTION		
		6537+47 Lt & Rt	2	EA
714	9660	REMOVE&RELAY END SECTION-ALL TYPES&SIZES		
		6526+98 Lt	1	EA
		6526+97 Rt	1	EA
754	0805	OBJECT MARKERS - CULVERTS		
		6524+42 Lt 1 EA 6530+81 Rt 1 EA		
		6525+40 Lt 1 EA 6531+01 Lt 1 EA		
		6526+98 Lt 1 EA 6531+96 Rt 1 EA		
		6526+97 Rt 1 EA 6532+12 Lt 1 EA		
		6537+47 Lt 1 EA 6537+47 Rt 1 EA		
910	0800	PIPE JOINT REPAIR		
		6537+47	1	EA
990	0400	PIPE CLEANOUT		
		6524+89 Lt	1	EA
		6531+49 Rt	1	EA
		6531+53 Lt	1	EA
		6537+47	1	EA

Legend

Removal of Bituminous Surfacing

Clearing & Grubbing

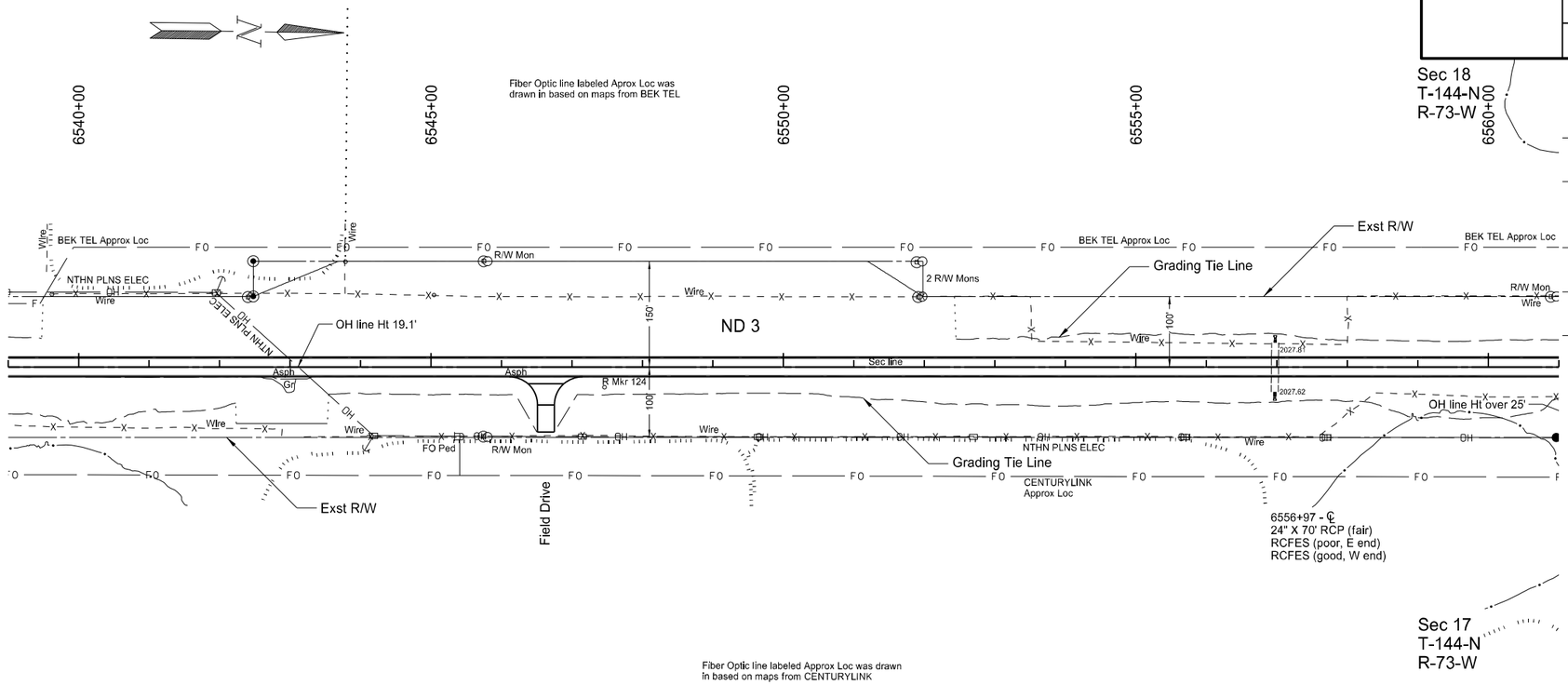
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27748
DATE 12/15/2021
NORTH DAKOTA

Plan & Profile

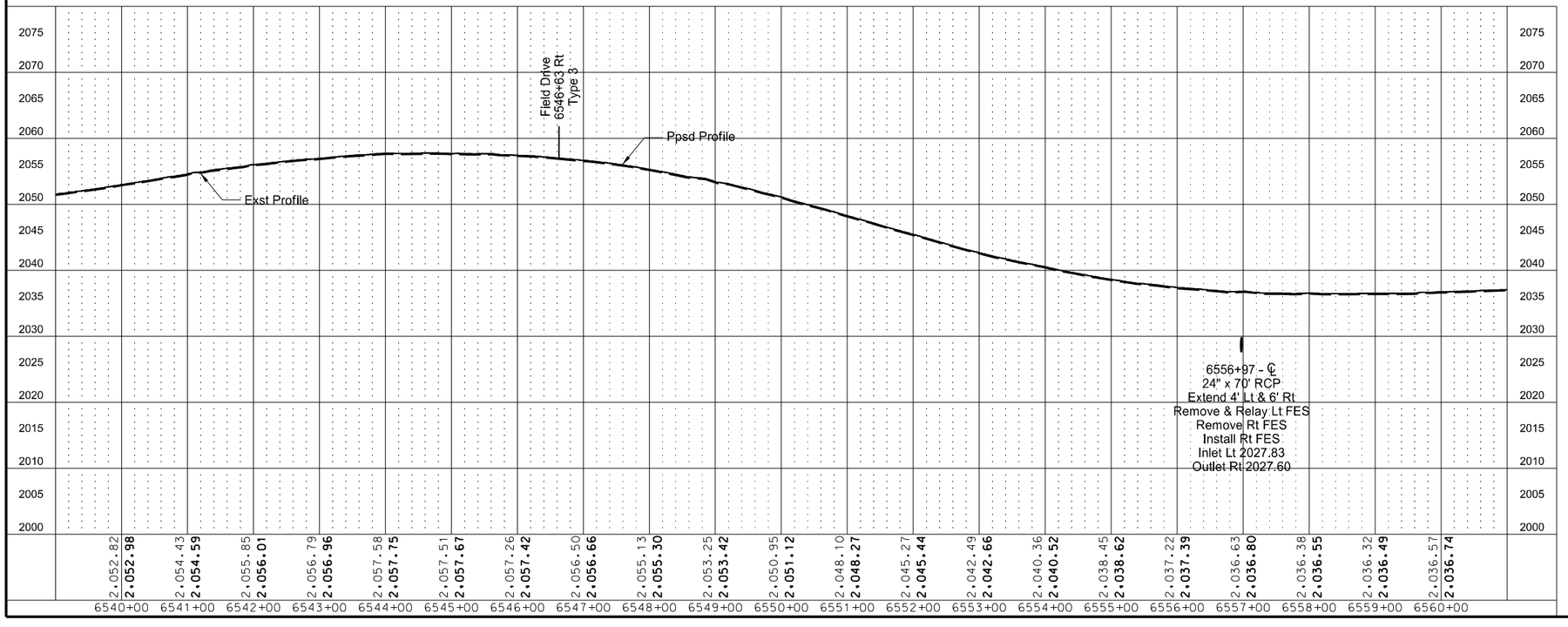
ND 3
Tuttle N to W Jct 200

6520+00 to 6540+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	60	29



SPEC	CODE	BID ITEM	QTY	UNIT
202	0169	REMOVAL OF END SECTION-ALL TYPES & SIZES		
		6556+97 Rt	1	EA
714	0615	PIPE CONC REINF 24IN CL III		
		6556+98 - 38' Lt to 6556+98 - 34' Lt	4	LF
		6556+97 - 36' Rt to 6556+97 - 42' Rt	6	LF
714	3020	END SECT-CONC REINF 24IN		
		6556+97 Rt	1	EA
714	9660	REMOVE&RELAY END SECTION-ALL TYPES&SIZES		
		6556+98 Lt	1	EA
754	0805	OBJECT MARKERS - CULVERTS		
		6556+98 Lt	1	EA
		6556+97 Rt	1	EA



Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

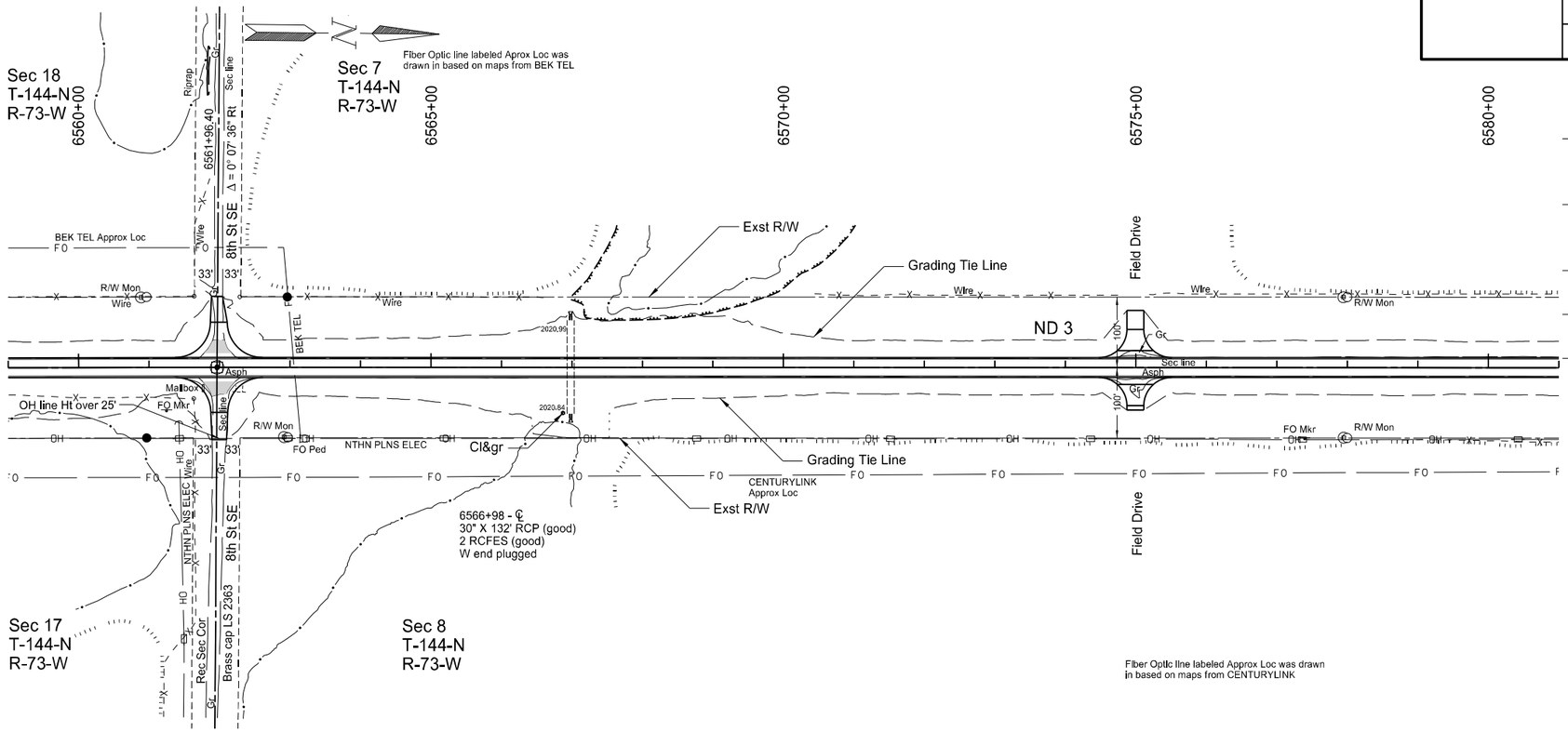
REGISTERED PROFESSIONAL ENGINEER
KORY M. KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Plan & Profile

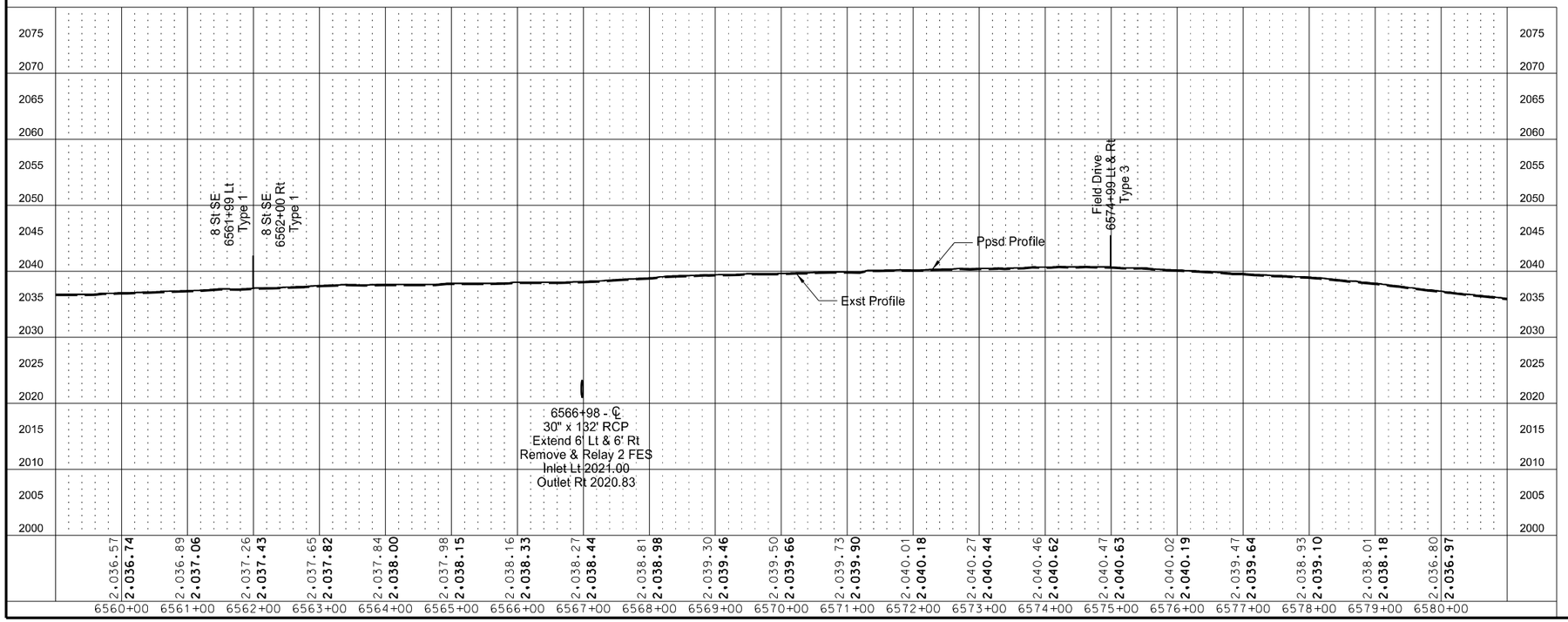
ND 3
Tuttle N to W Jct 200

6540+00 to 6560+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	60	30



SPEC	CODE	BID ITEM	QTY	UNIT
202	0132	REMOVAL OF BITUMINOUS SURFACING		
		6561+99 Lt	54	SY
		6562+00 Rt	66	SY
714	0820	PIPE CONC REINF 30IN CL III		
		6566+98 - 73' Lt to 6566+98 - 67' Lt	6	LF
		6566+98 - 66' Rt to 6566+98 - 72' Rt	6	LF
714	9660	REMOVE&RELAY END SECTION-ALL TYPES&SIZES		
		6566+98 Lt & Rt	2	EA
754	0805	OBJECT MARKERS - CULVERTS		
		6566+98 Lt & Rt	2	EA
990	0400	PIPE CLEANOUT		
		6566+98	1	EA



Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

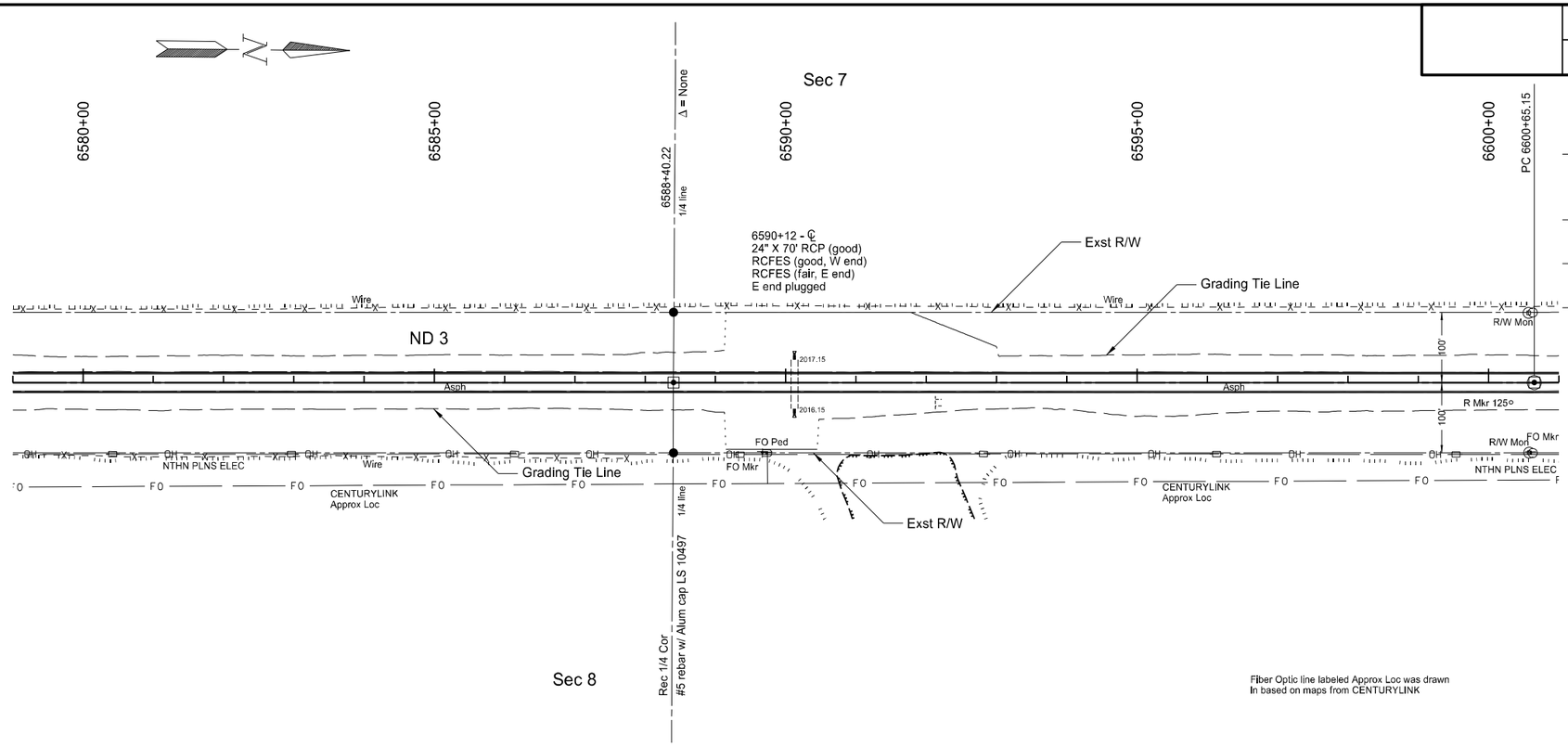
Plan & Profile

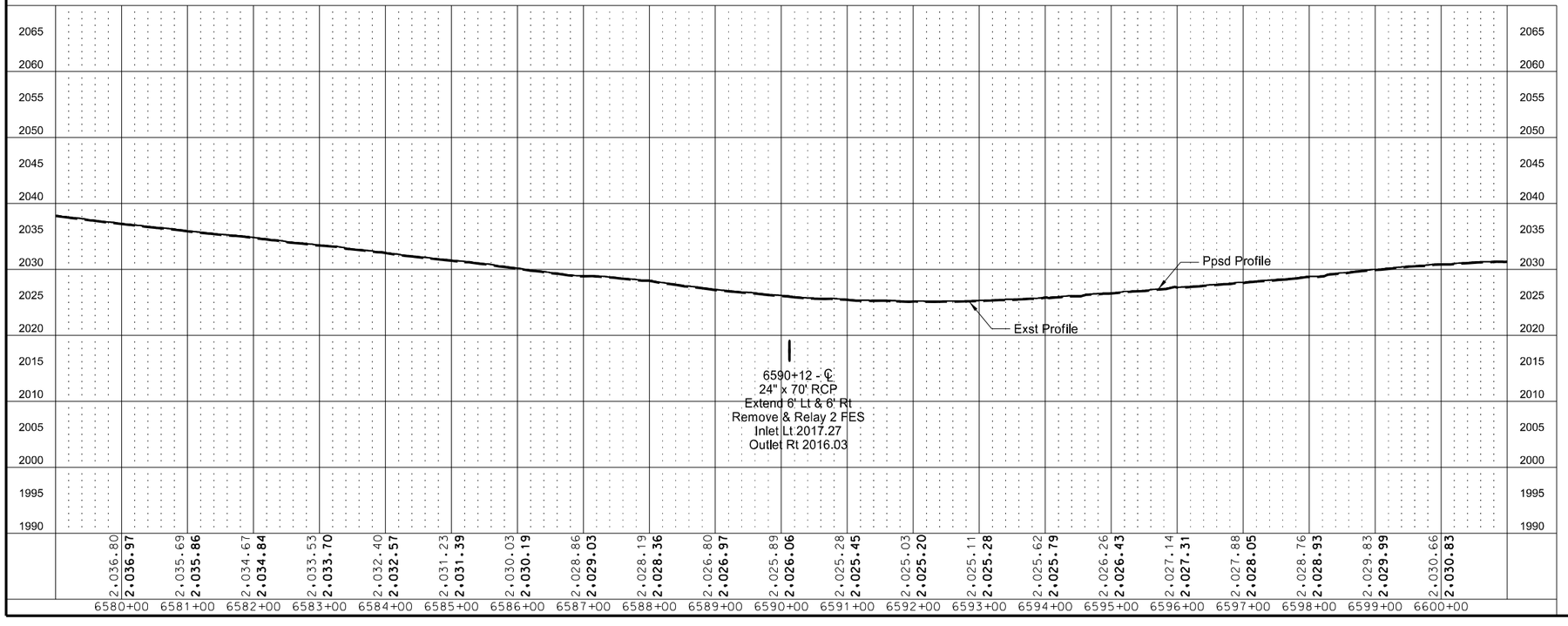
ND 3
Tuttle N to W Jct 200

6560+00 to 6580+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	60	31

SPEC	CODE	BID ITEM	QTY	UNIT
714	0615	PIPE CONC REINF 24IN CL III		
		6590+12 - 38' Lt to 6590+12 - 32' Lt	6	LF
		6590+12 - 37' Rt to 6590+12 - 43' Rt	6	LF
714	9660	REMOVE&RELAY END SECTION-ALL TYPES&SIZES		
		6590+12 Lt & Rt	2	EA
754	0805	OBJECT MARKERS - CULVERTS		
		6590+12 Lt & Rt	2	EA
990	0400	PIPE CLEANOUT		
		6590+12	1	EA





Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

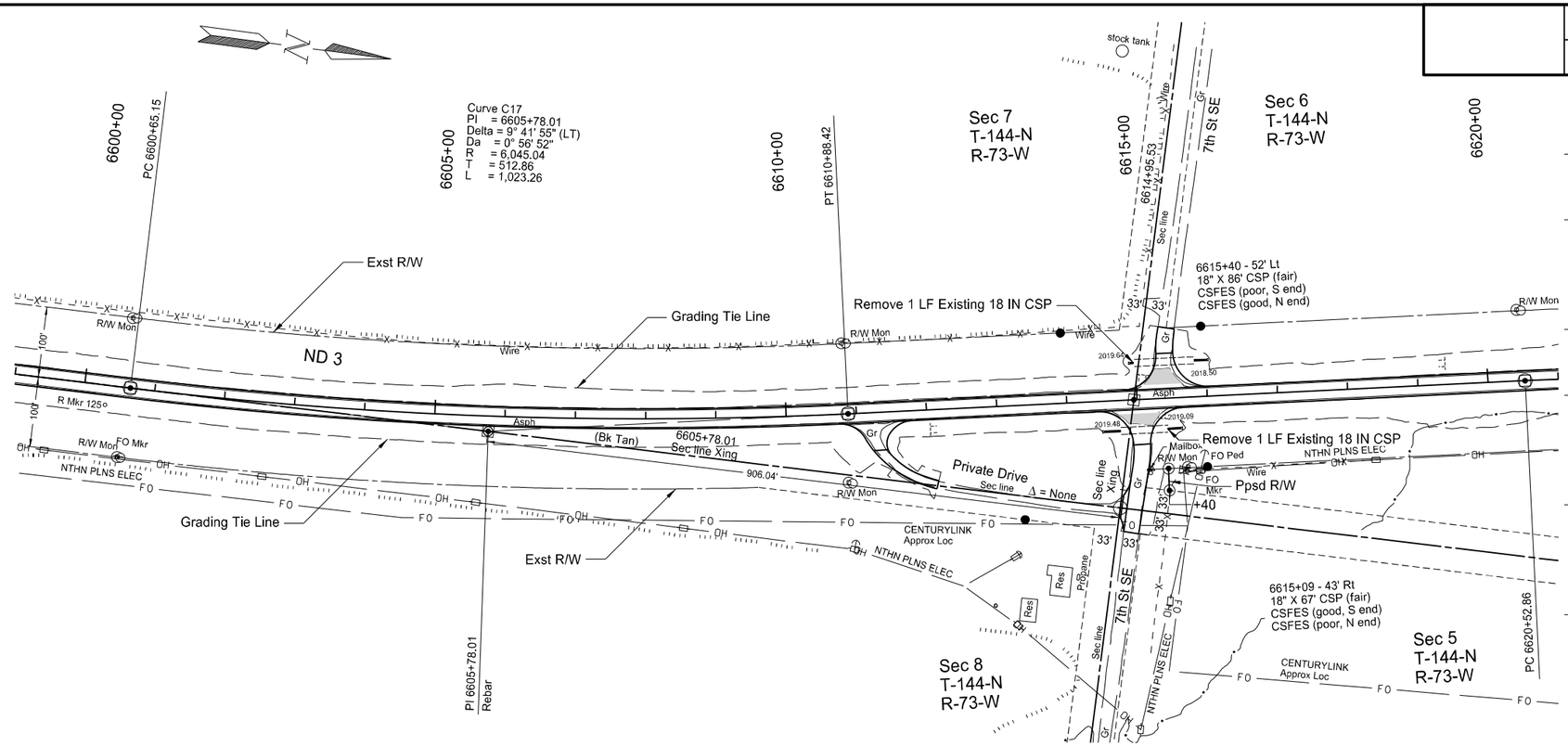
REGISTERED PROFESSIONAL ENGINEER
KORY M. KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Plan & Profile

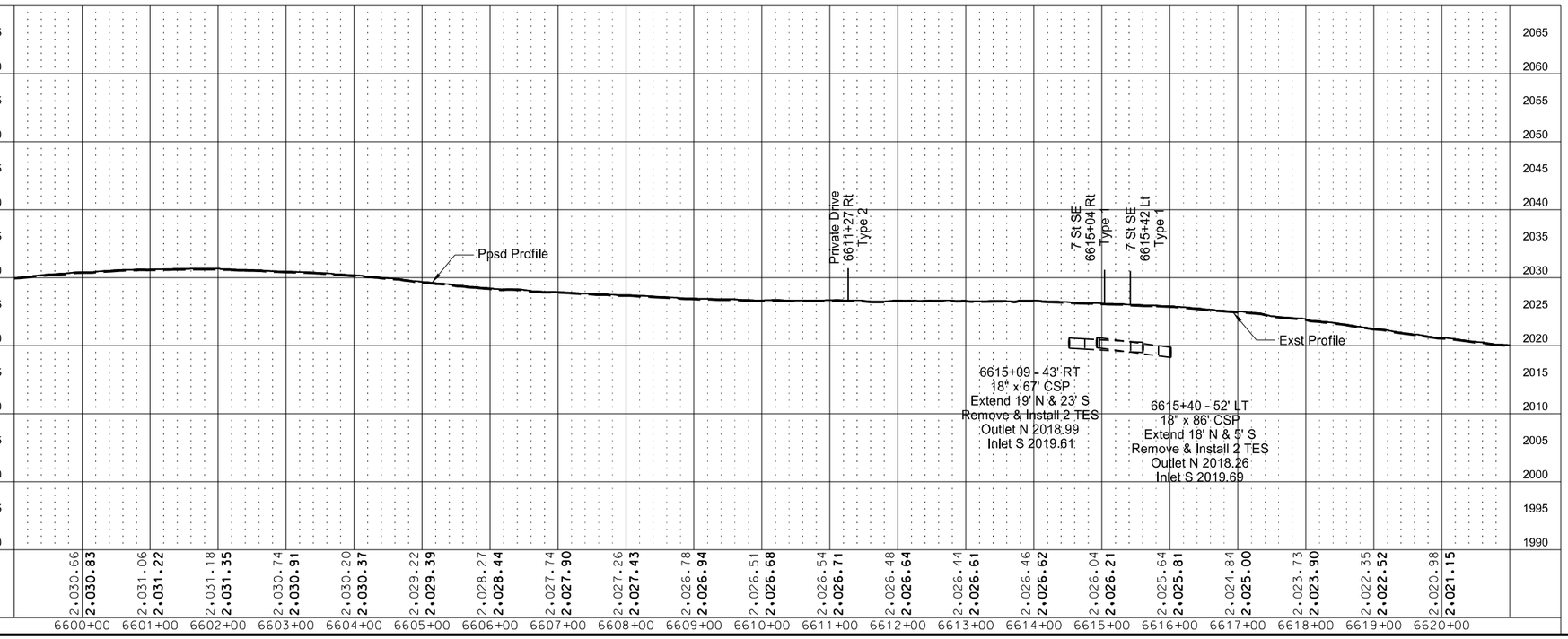
ND 3
Tuttle N to W Jct 200

6580+00 to 6600+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	60	32



SPEC	CODE	BID ITEM	QTY	UNIT
202	0132	REMOVAL OF BITUMINOUS SURFACING		
		6615+04 Rt	78	SY
		6615+42 Lt	91	SY
202	0169	REMOVAL OF END SECTION-ALL TYPES & SIZES		
		6614+75 Rt	1	EA
		6614+97 Lt	1	EA
		6615+42 Rt	1	EA
		6615+83 Lt	1	EA
202	0174	REMOVAL OF PIPE ALL TYPES AND SIZES		
		6614+97 - 52' Lt to 6614+98 - 52' Lt	1	LF
		6615+41 - 43' Rt to 6615+42 - 43' Rt	1	LF
714	5015	PIPE CORR STEEL .064IN 18IN		
		6614+52 - 43' Rt to 6614+75 - 43' Rt	23	LF
		6614+93 - 52' Lt to 6614+98 - 52' Lt	5	LF
		6615+41 - 43' Rt to 6615+60 - 43' Rt	19	LF
		6615+83 - 52' Lt to 6616+01 - 52' Lt	18	LF
714	6501	END SECT-TRAVERSABLE METAL 18IN		
		6614+52 Rt	1	EA
		6614+93 Lt	1	EA
		6615+60 Rt	1	EA
		6616+01 Lt	1	EA
754	0805	OBJECT MARKERS - CULVERTS		
		6614+52 Rt	1	EA
		6614+93 Lt	1	EA
		6615+60 Rt	1	EA
		6616+01 Lt	1	EA



Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

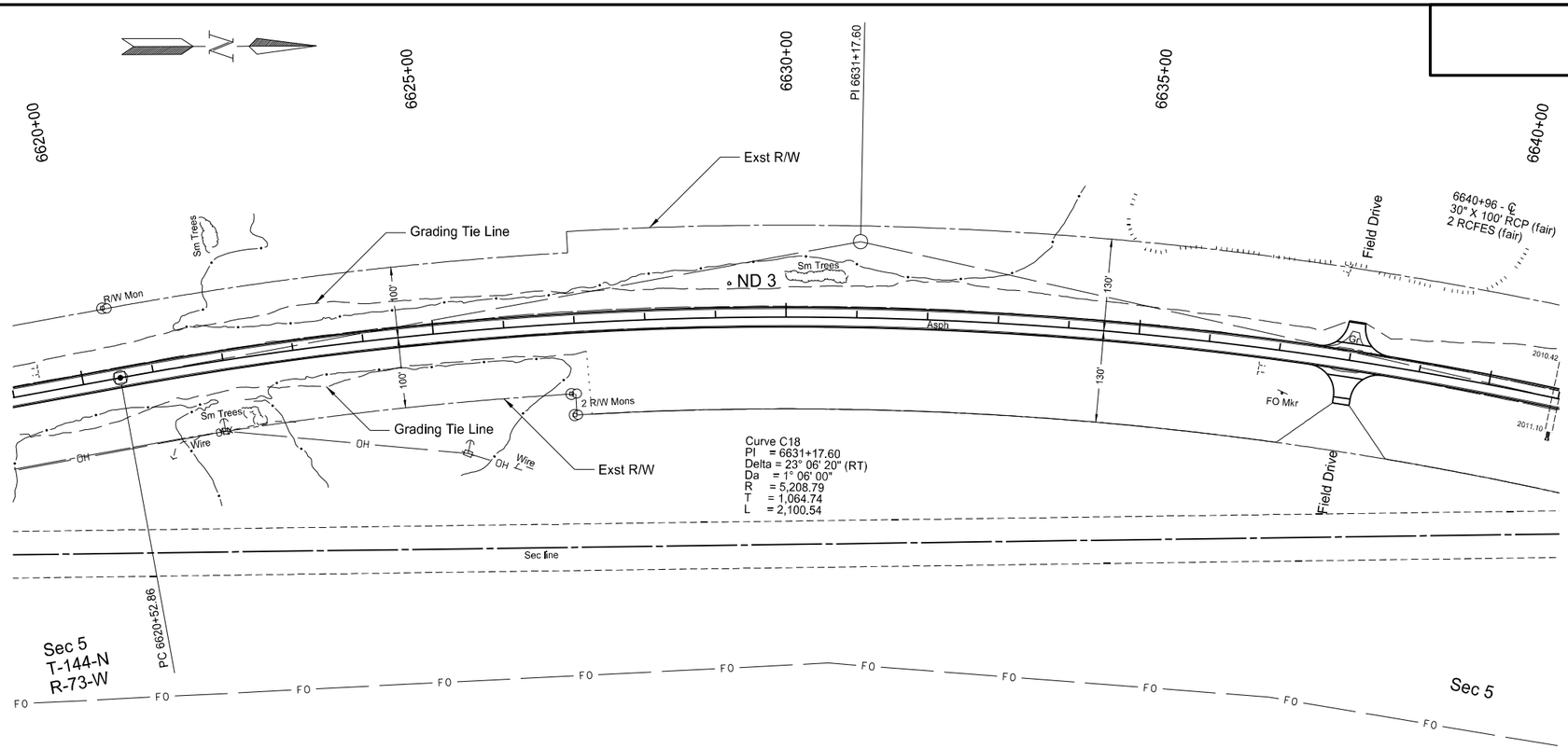
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 12/15/2021
NORTH DAKOTA

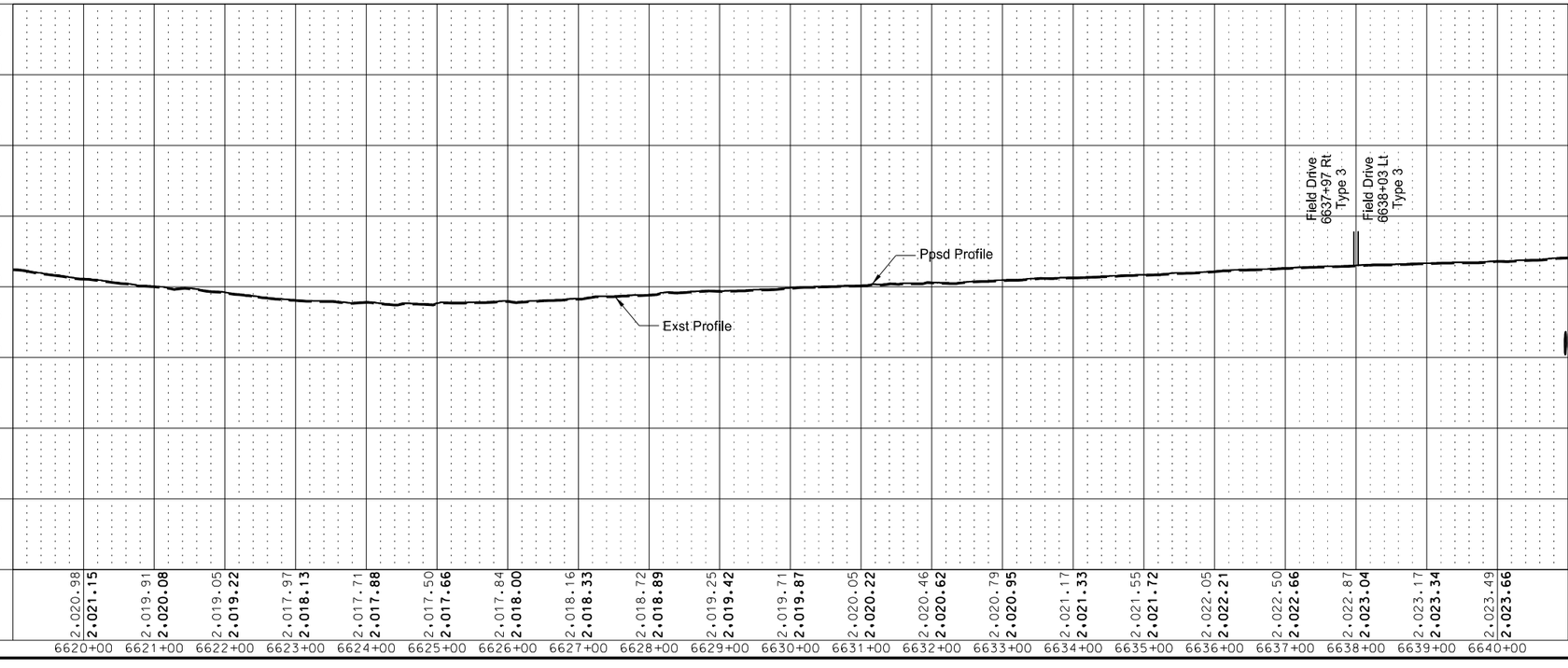
Plan & Profile

ND 3
Tuttle N to W Jct 200

6600+00 to 6620+00
Kidder County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	60	33





Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 12/15/2021
NORTH DAKOTA

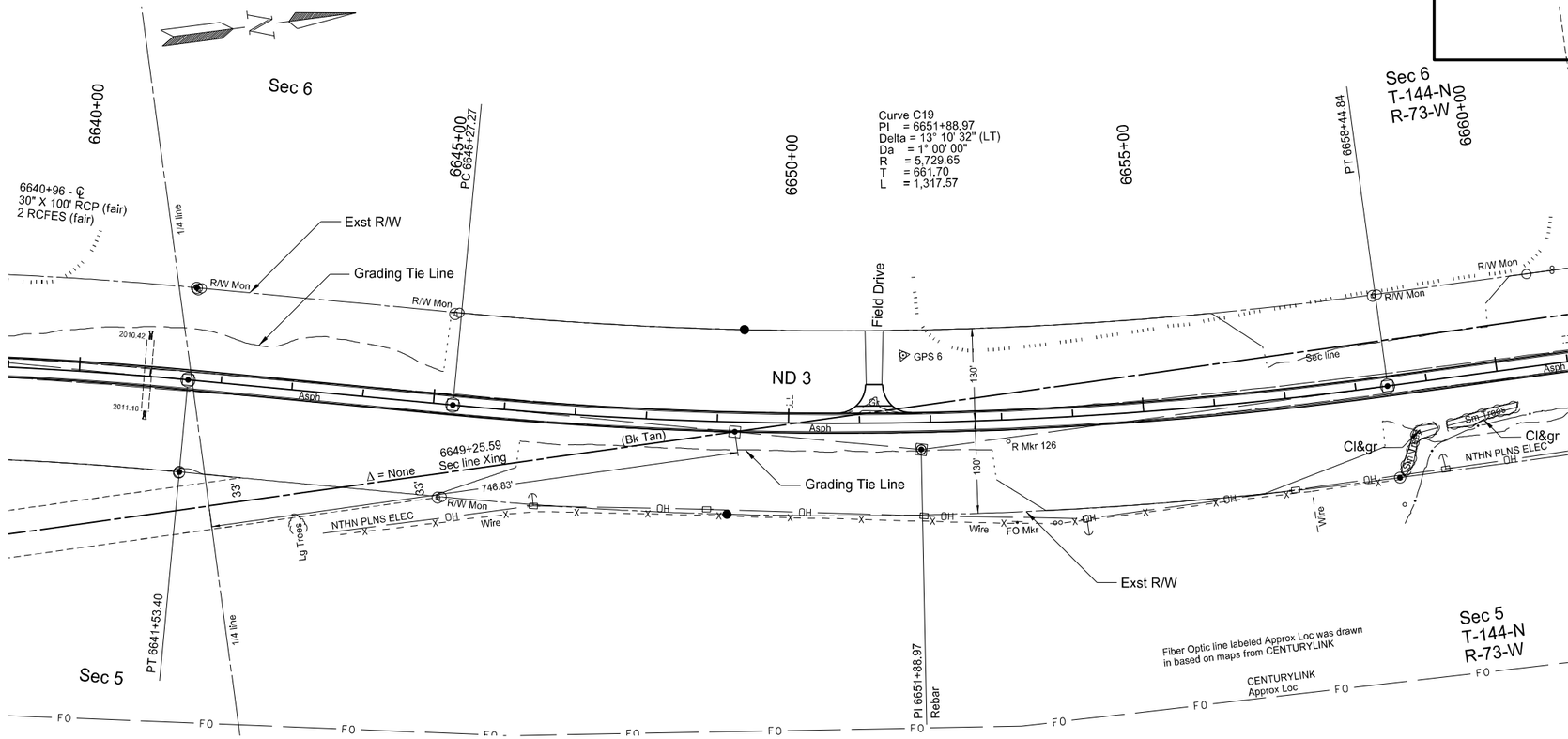
Plan & Profile

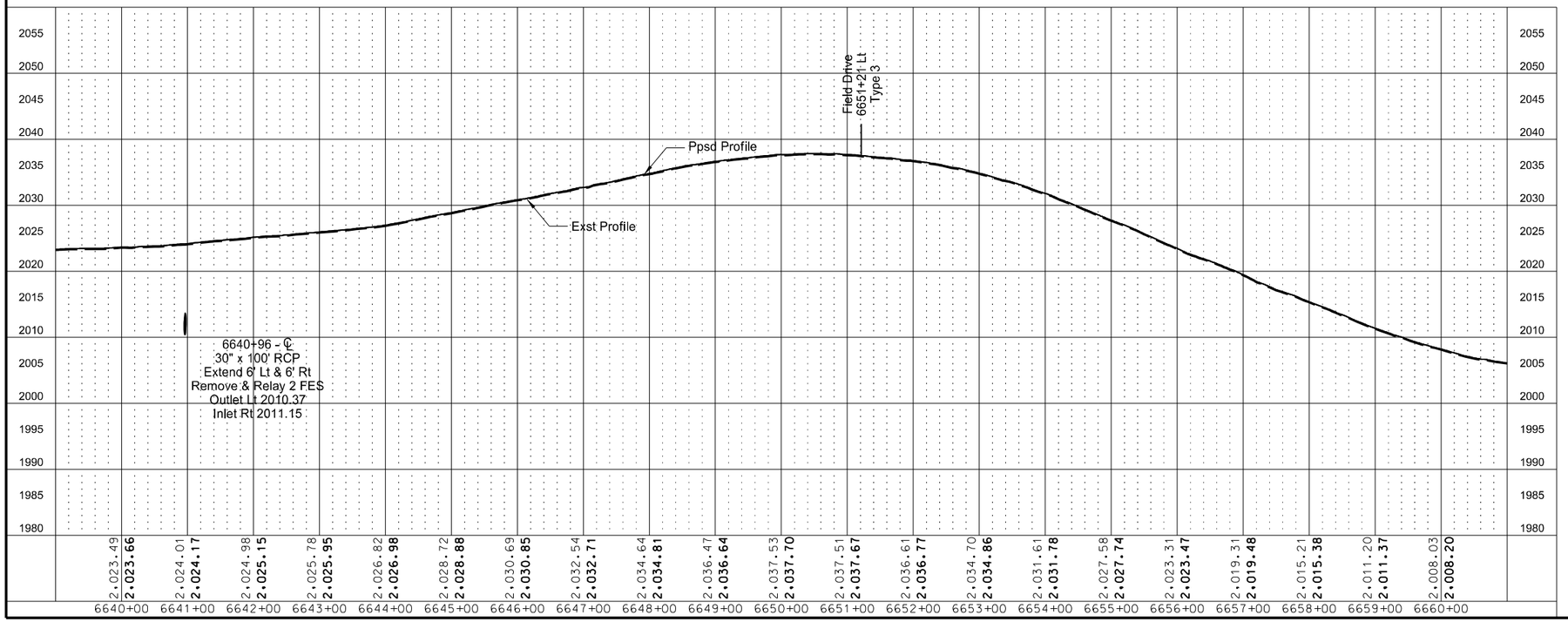
ND 3
Tuttle N to W Jct 200

6620+00 to 6640+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	60	34

SPEC	CODE	BID ITEM	QTY	UNIT
714	0820	PIPE CONC REINF 30IN CL III		
		6640+96 - 58' Lt to 6640+96 - 52' Lt	6	LF
		6640+96 - 49' Rt to 6640+97 - 55' Rt	6	LF
714	9660	REMOVE&RELAY END SECTION-ALL TYPES&SIZES		
		6640+96 Lt	1	EA
		6640+97 Rt	1	EA
754	0805	OBJECT MARKERS - CULVERTS		
		6640+96 Lt	1	EA
		6640+97 Rt	1	EA
990	0400	PIPE CLEANOUT		
		6640+96	1	EA





Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

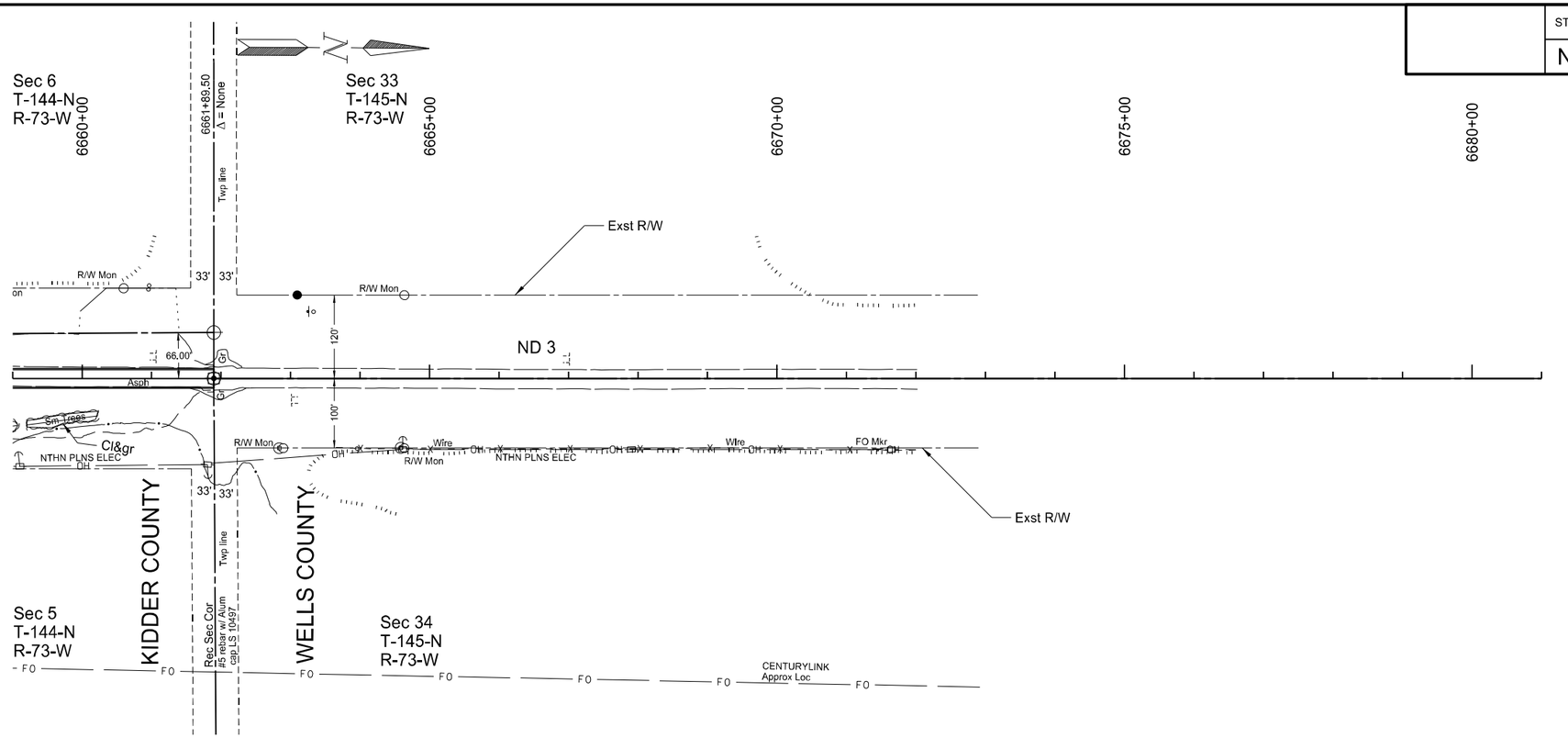
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 12/15/2021
NORTH DAKOTA

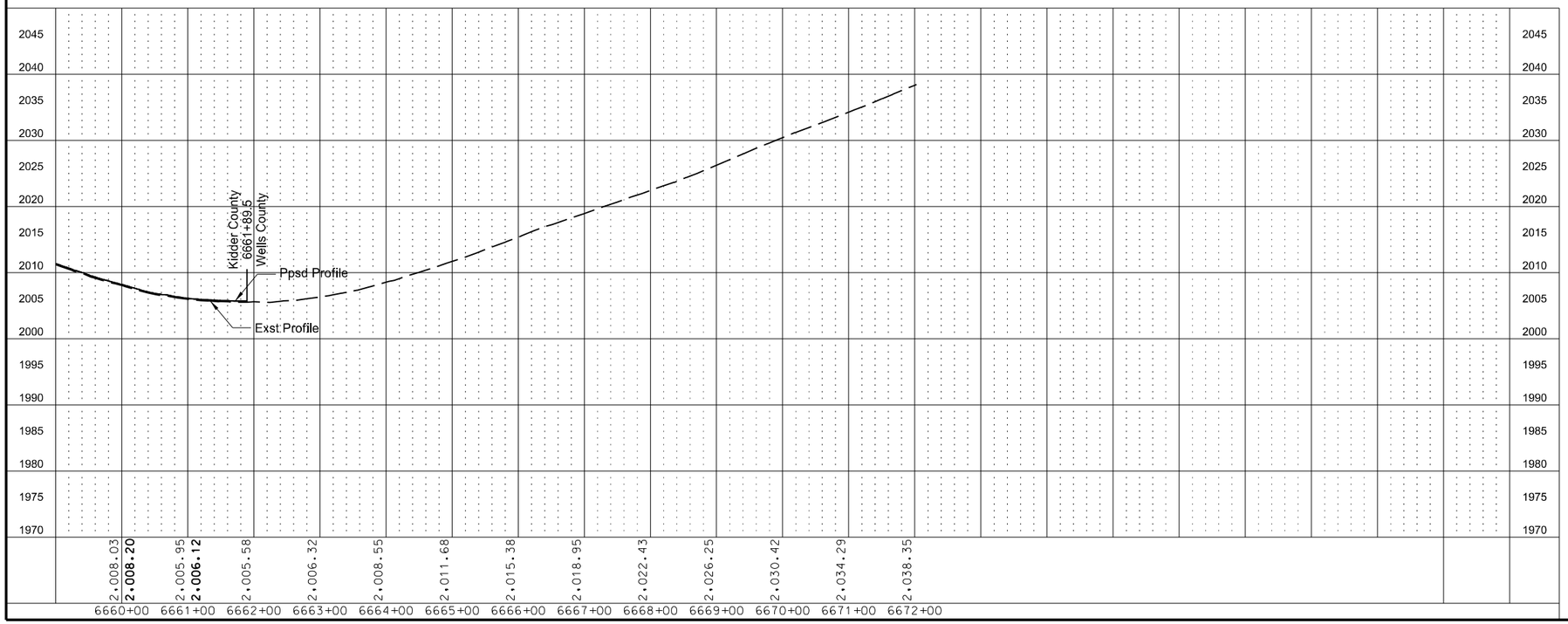
Plan & Profile

ND 3
Tuttle N to W Jct 200

6640+00 to 6660+00
Kidder County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	60	35





Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

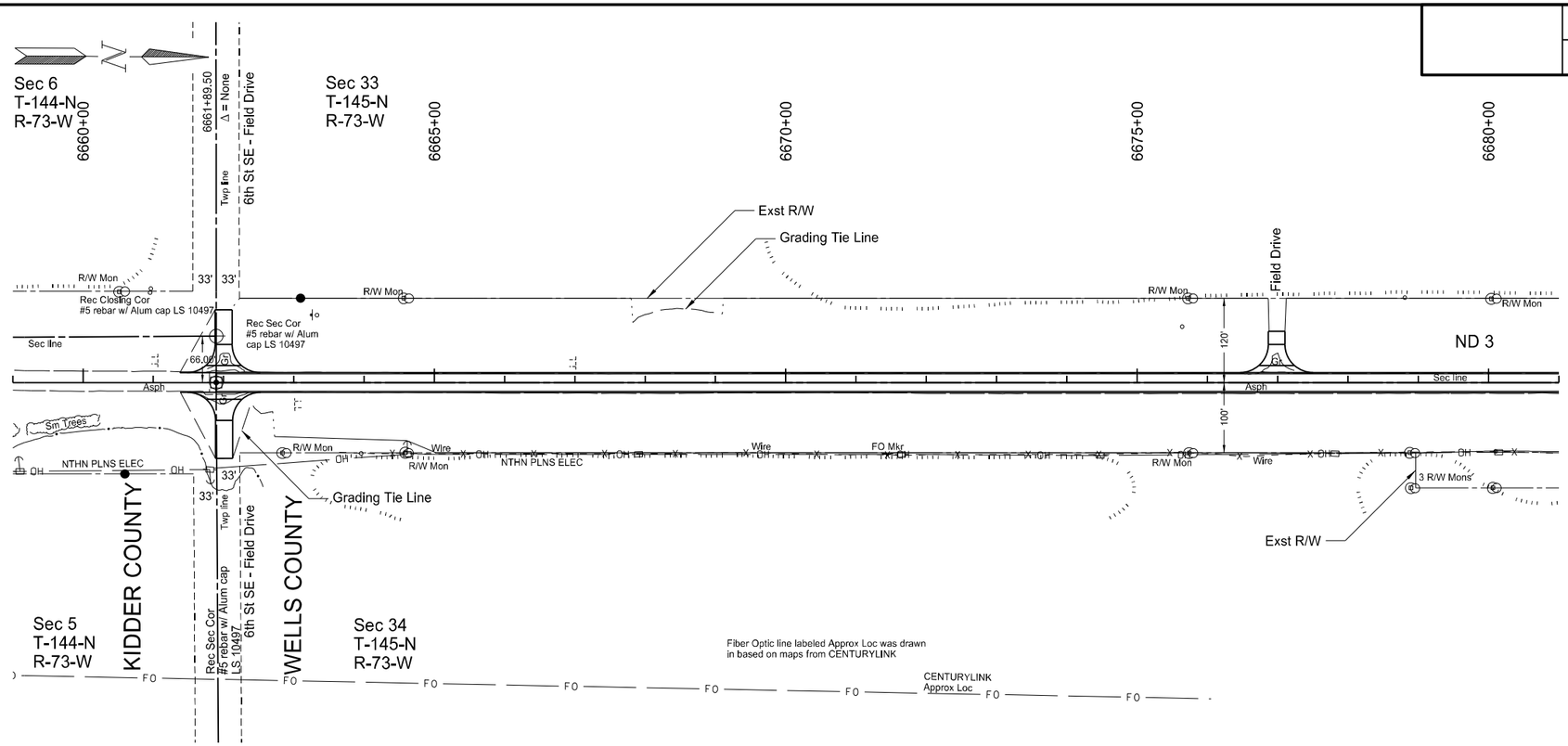
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 12/15/2021
NORTH DAKOTA

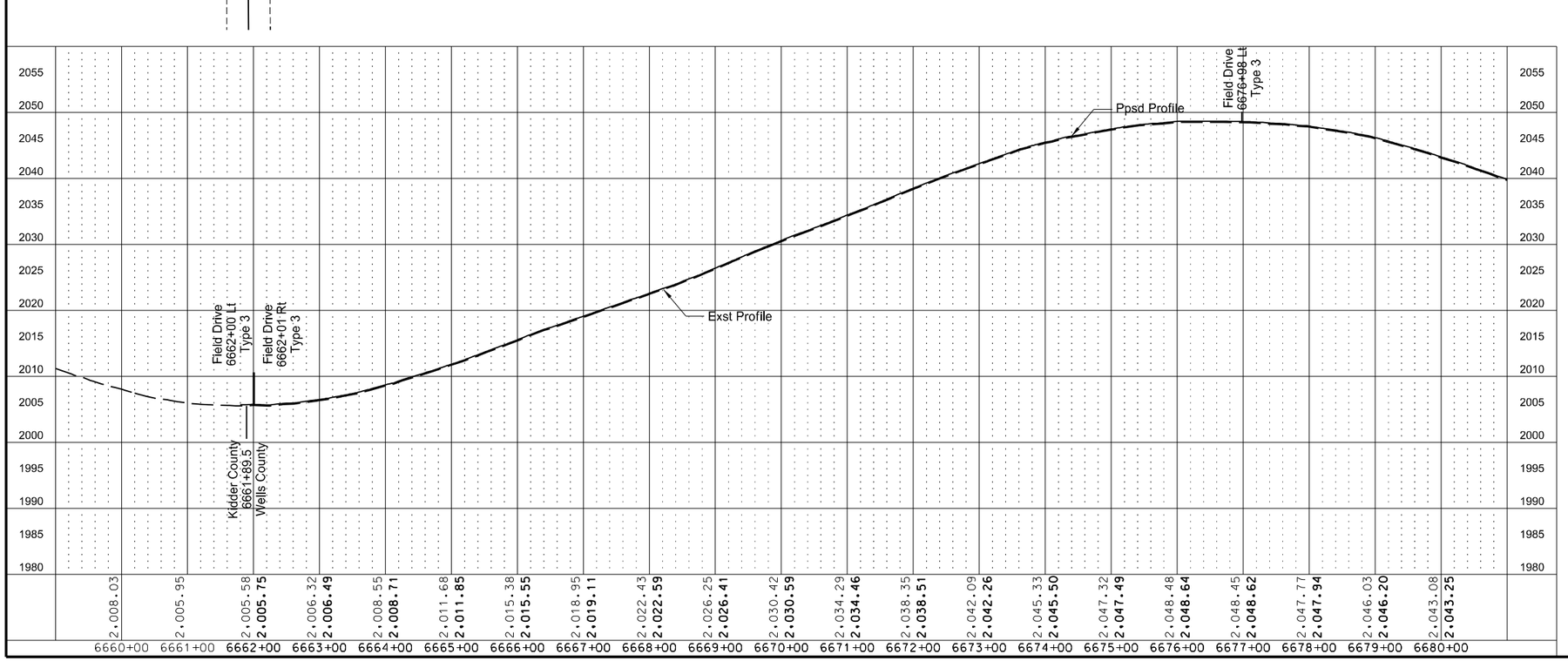
Plan & Profile

ND 3
Tuttle N to W Jct 200

6660+00 to 6661+89.5
Kidder County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	60	36





Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

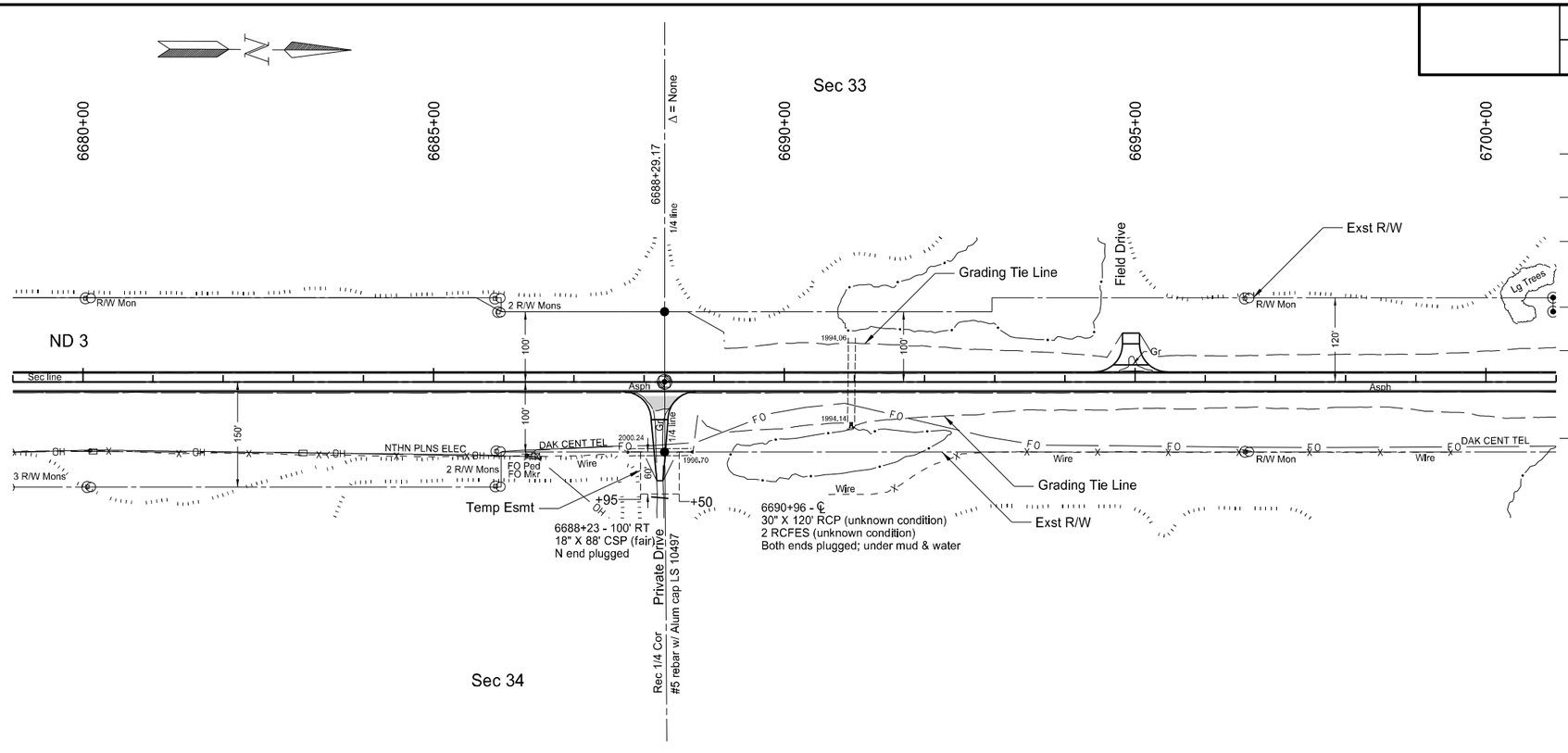
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 12/15/2021
NORTH DAKOTA

Plan & Profile

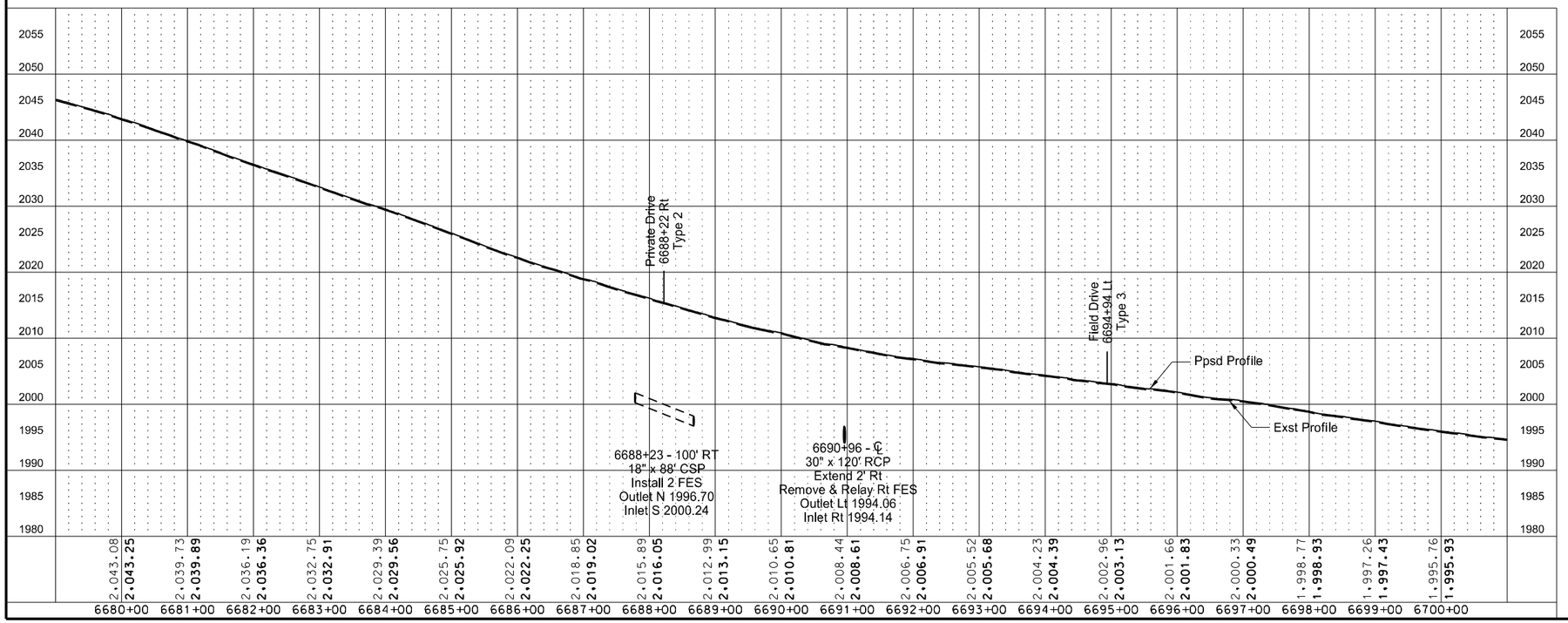
ND 3
Tuttle N to W Jct 200

6661+89.5 to 6680+00
Wells County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	60	37



SPEC	CODE	BID ITEM	QTY	UNIT
202	0132	REMOVAL OF BITUMINOUS SURFACING		
		6688+22 Rt	82	SY
714	0820	PIPE CONC REINF 30IN CL III		
		6690+95 - 58' Rt to 6690+95 - 60' Rt	2	LF
714	5810	END SECT CORR STEEL .064IN 18IN		
		6687+78 Rt	1	EA
		6688+67 Rt	1	EA
714	9660	REMOVE&RELAY END SECTION-ALL TYPES&SIZES		
		6690+95 Rt	1	EA
754	0805	OBJECT MARKERS - CULVERTS		
		6687+78 Rt	1	EA
		6688+67 Rt	1	EA
		6690+95 Rt	1	EA
990	0400	PIPE CLEANOUT		
		6690+96	1	EA



Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

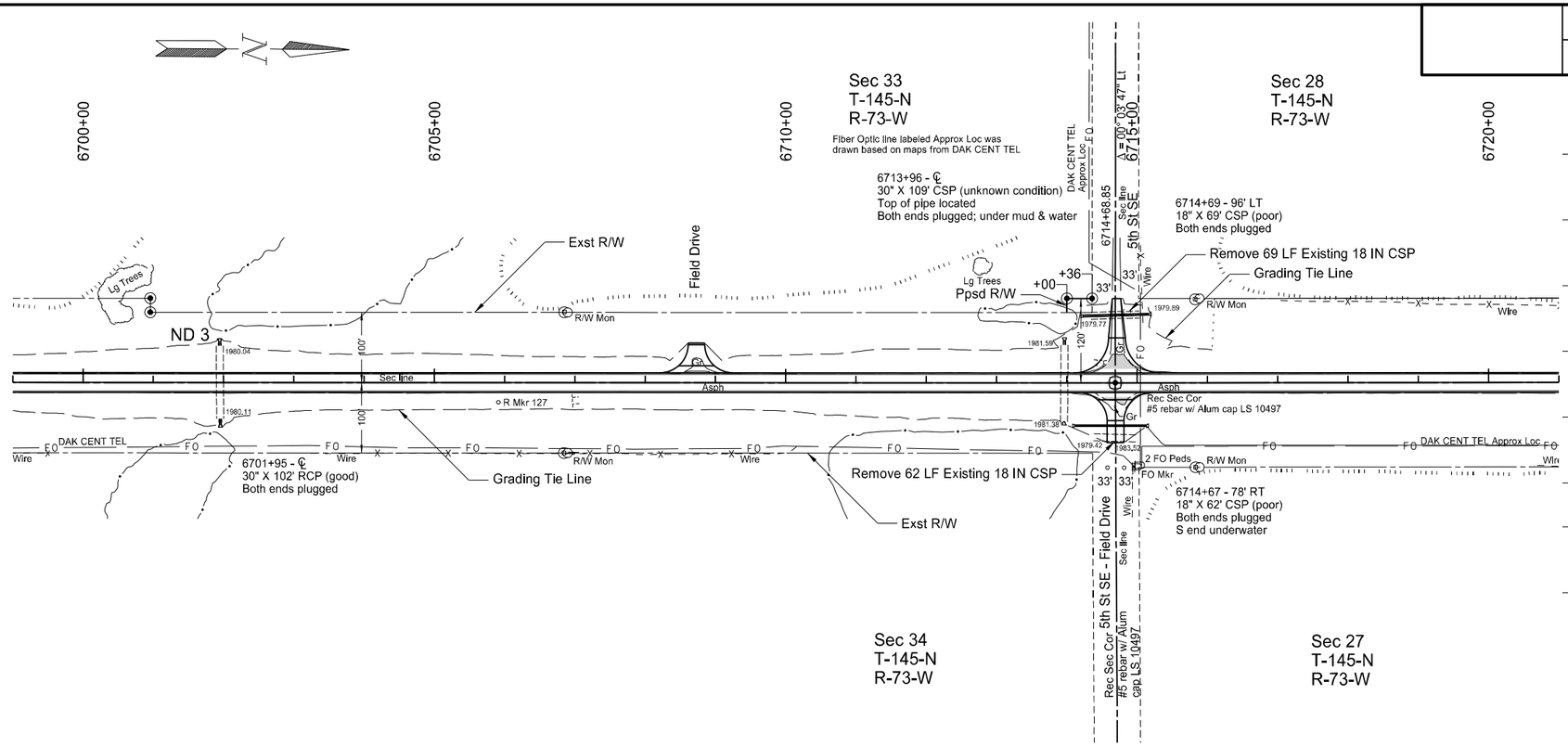
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 12/15/2021
NORTH DAKOTA

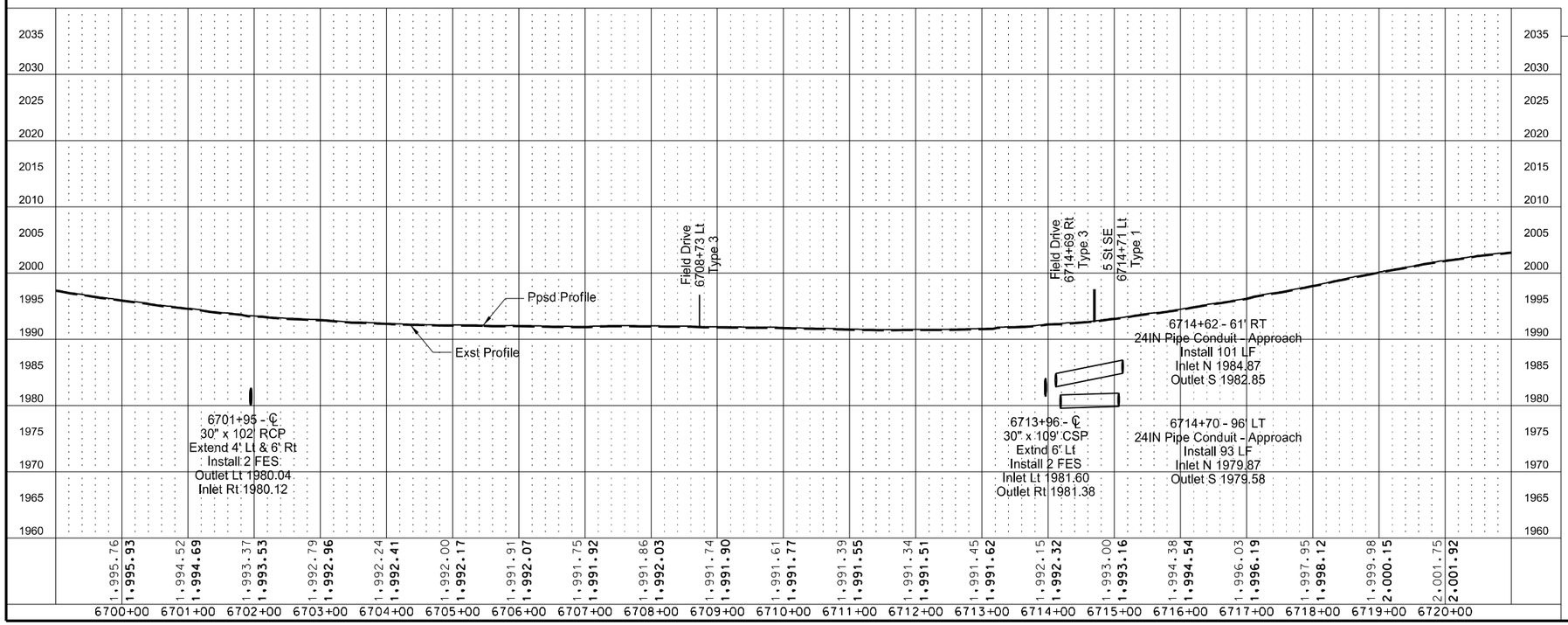
Plan & Profile

ND 3
Tuttle N to W Jct 200

6680+00 to 6700+00
Wells County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	60	38





SPEC	CODE	BID ITEM	QTY	UNIT
202	0132	REMOVAL OF BITUMINOUS SURFACING		
		6714+69 Rt	25	SY
		6714+71 Lt	70	SY
202	0174	REMOVAL OF PIPE ALL TYPES AND SIZES		
		6714+34 - 95' Lt to 6715+04 - 97' Lt	69	LF
		6714+36 - 78' Rt to 6714+98 - 79' Rt	62	LF
714	0820	PIPE CONC REINF 30IN CL III		
		6701+94 - 56' Lt to 6701+94 - 52' Lt	4	LF
		6701+95 - 51' Rt to 6701+95 - 57' Rt	6	LF
714	3030	END SECT-CONC REINF 30IN		
		6701+94 Lt	1	EA
		6701+95 Rt	1	EA
714	4106	PIPE CONDUIT 24IN-APPROACH		
		6714+12 - 61' Rt to 6715+13 - 61' Rt	101	LF
		6714+23 - 95' Lt to 6715+16 - 98' Lt	93	LF
714	5210	PIPE CORR STEEL .079IN 30IN		
		6713+97 - 54' Lt to 6713+97 - 60' Lt	6	LF
714	5825	END SECT CORR STEEL .079IN 30IN		
		6713+96 Rt	1	EA
		6713+97 Lt	1	EA
754	0805	OBJECT MARKERS - CULVERTS		
		6701+94 Lt	1	EA
		6701+95 Rt	1	EA
		6713+96 Rt	1	EA
		6713+97 Lt	1	EA
		6714+12 Rt	1	EA
		6714+23 Lt	1	EA
		6715+13 Rt	1	EA
		6715+16 Lt	1	EA
990	0400	PIPE CLEANOUT		
		6701+95	1	EA
		6713+96	1	EA

Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

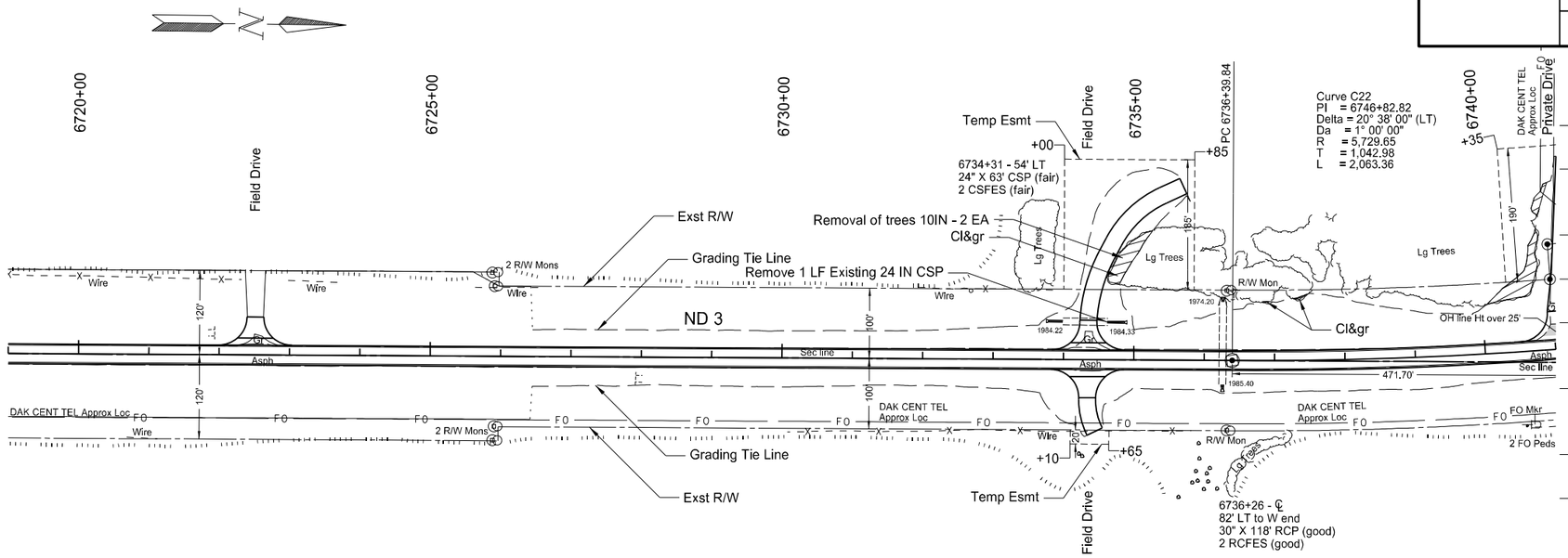
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 12/15/2021
NORTH DAKOTA

Plan & Profile

ND 3
Tuttle N to W Jct 200

6700+00 to 6720+00
Wells County

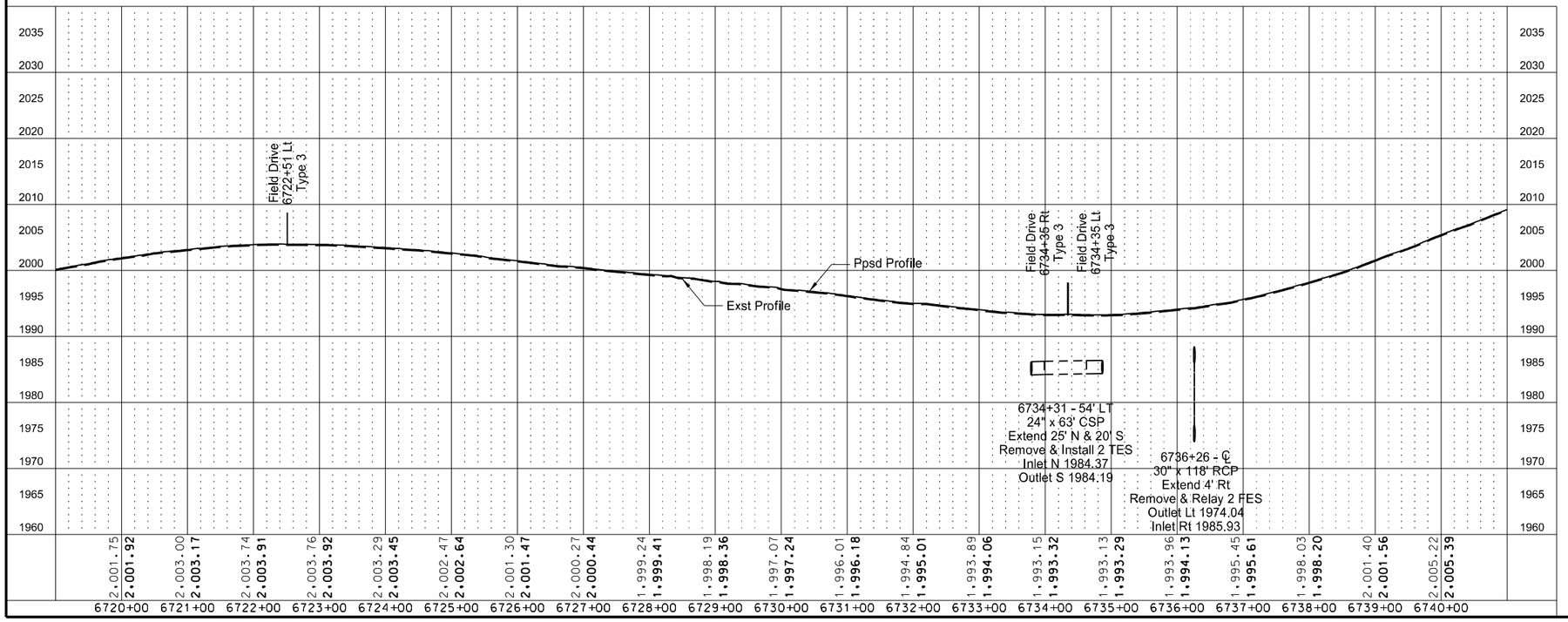
STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	60	39



SPEC	CODE	BID ITEM	QTY	UNIT
201	0370	REMOVAL OF TREES 10IN		
		6734+75 Lt	2	EA
202	0169	REMOVAL OF END SECTION-ALL TYPES & SIZES		
		6733+99 Lt	1	EA
		6734+63 Lt	1	EA
202	0174	REMOVAL OF PIPE ALL TYPES AND SIZES		
		6734+62 - 54' Lt to 6734+63 - 54' Lt	1	LF
714	0820	PIPE CONC REINF 30IN CL III		
		6736+26 - 34' Rt to 6736+26 - 38' Rt	4	LF
714	5035	PIPE CORR STEEL .064IN 24IN		
		6733+79 - 55' Lt to 6733+99 - 54' Lt	20	LF
		6734+62 - 54' Lt to 6734+87 - 53' Lt	25	LF
714	6506	END SECT-TRAVERSABLE METAL 24IN		
		6733+79 Lt	1	EA
		6734+87 Lt	1	EA
714	9660	REMOVE&RELAY END SECTION-ALL TYPES&SIZES		
		6736+26 Lt & Rt	2	EA
754	0805	OBJECT MARKERS - CULVERTS		
		6733+79 Lt	1	EA
		6734+87 Lt	1	EA
		6736+26 Lt & Rt	2	EA

Fiber Optic line labeled Approx Loc was drawn based on maps from DAK CENT TEL

Sec 27



Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

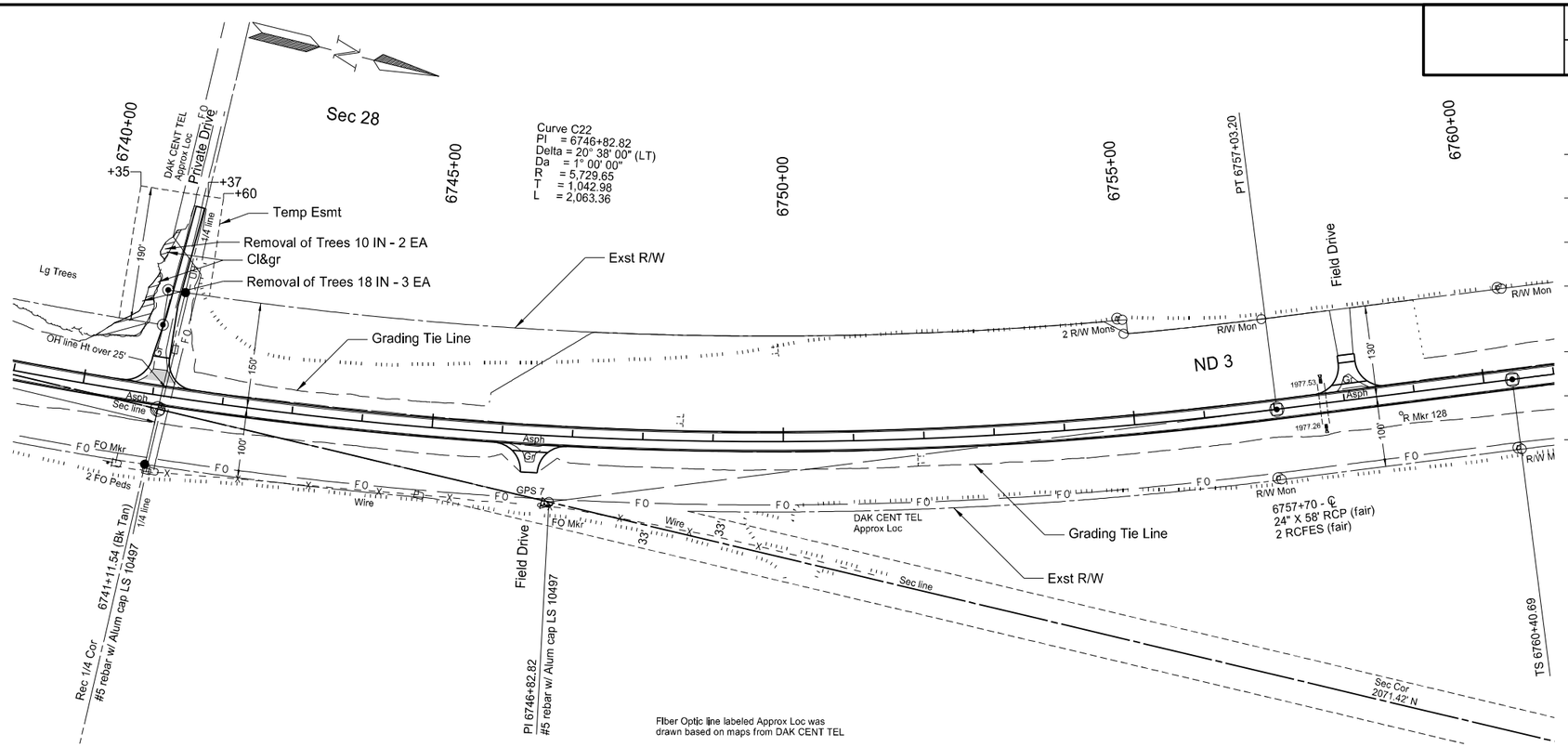
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
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DATE 12/15/2021
NORTH DAKOTA

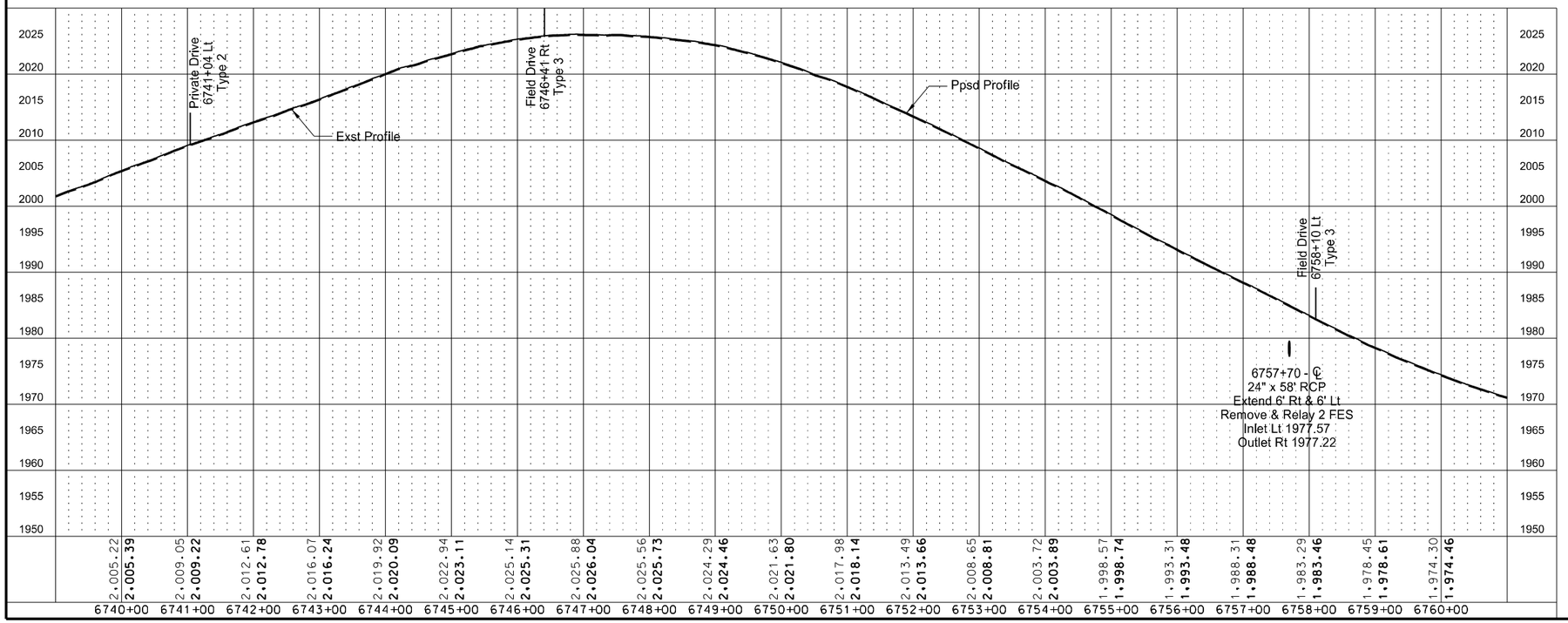
Plan & Profile

ND 3
Tuttle N to W Jct 200

6720+00 to 6740+00
Wells County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	60	40





SPEC	CODE	BID ITEM	QTY	UNIT
201	0370	REMOVAL OF TREES 10IN		
		6740+85 Lt	2	EA
201	0380	REMOVAL OF TREES 18IN		
		6740+70 Lt	3	EA
202	0132	REMOVAL OF BITUMINOUS SURFACING		
		6741+04 Lt	58	SY
714	0615	PIPE CONC REINF 24IN CL III		
		6757+70 - 35' Lt to 6757+70 - 29' Lt	6	LF
		6757+70 - 30' Rt to 6757+70 - 36' Rt	6	LF
714	9660	REMOVE&RELAY END SECTION-ALL TYPES&SIZES		
		6757+70 Lt & Rt	2	EA
754	0805	OBJECT MARKERS - CULVERTS		
		6757+70 Lt & Rt	2	EA
990	0400	PIPE CLEANOUT		
		6757+70	1	EA

Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

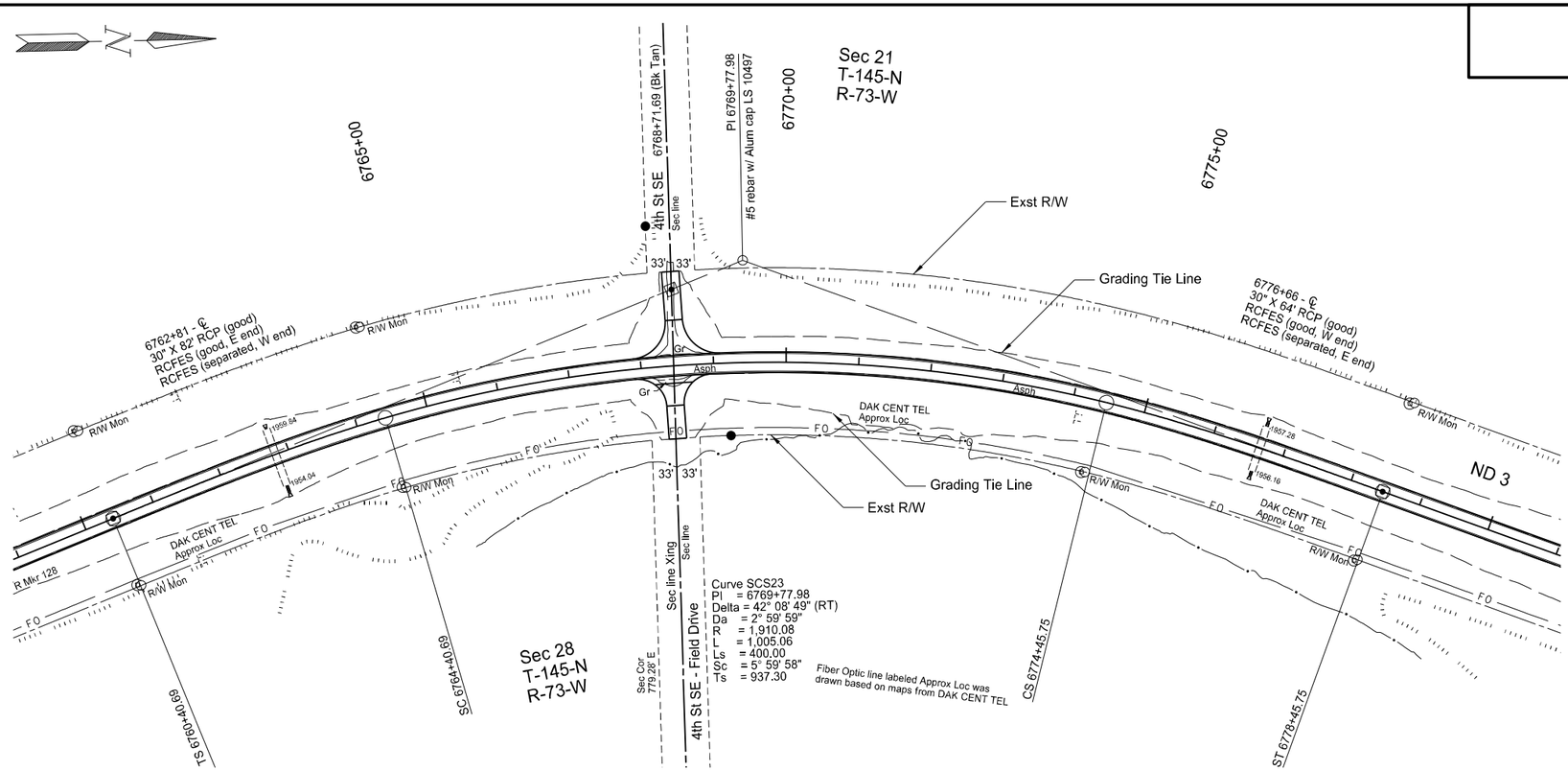
REGISTERED PROFESSIONAL ENGINEER
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PE 27746
DATE 12/15/2021
NORTH DAKOTA

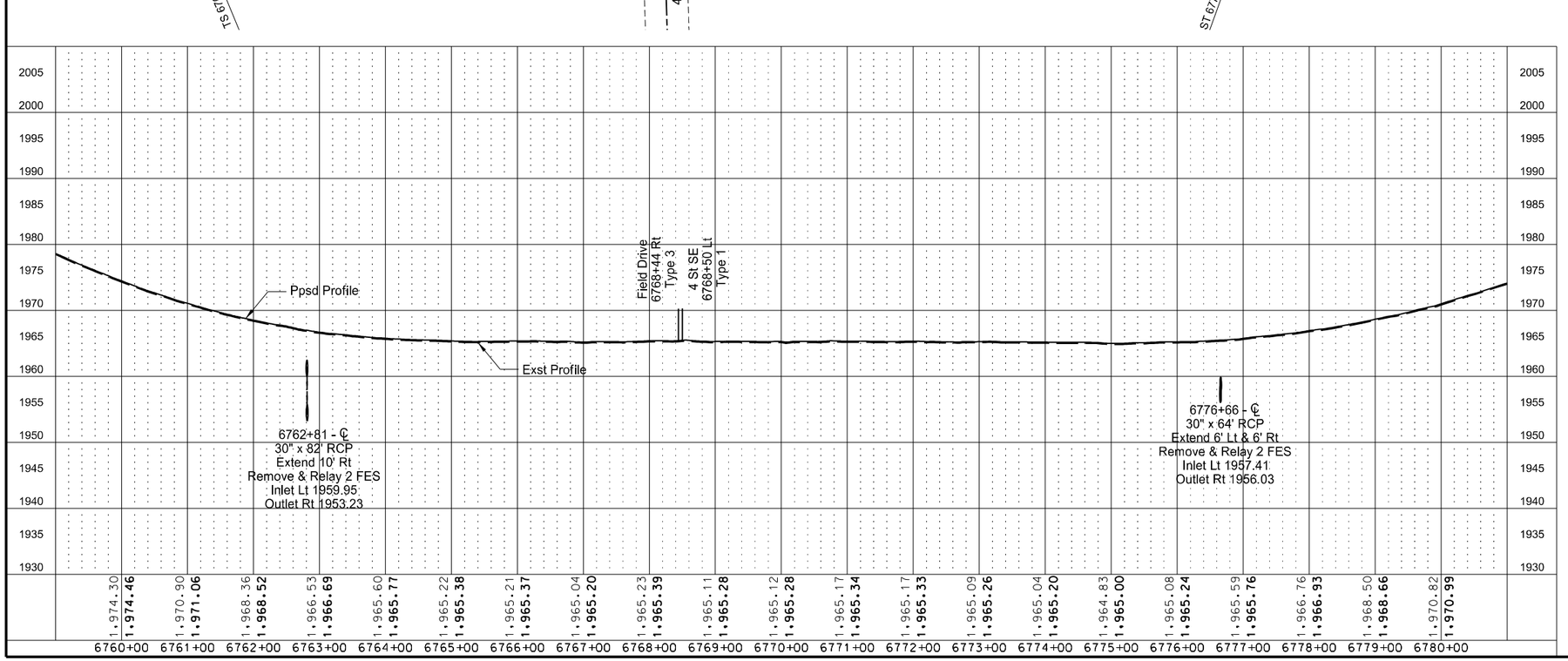
Plan & Profile

ND 3
Tuttle N to W Jct 200

6740+00 to 6760+00
Wells County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	60	41





SPEC	CODE	BID ITEM	QTY	UNIT
714	0820	PIPE CONC REINF 30IN CL III		
		6762+81 - 46' Rt to 6762+81 - 56' Rt	10	LF
		6776+66 - 37' Lt to 6776+66 - 31' Lt	6	LF
		6776+66 - 33' Rt to 6776+66 - 39' Rt	6	LF
714	9660	REMOVE&RELAY END SECTION-ALL TYPES&SIZES		
		6762+81 Lt & Rt	2	EA
		6776+66 Lt & Rt	2	EA
754	0805	OBJECT MARKERS - CULVERTS		
		6762+81 Lt & Rt	2	EA
		6776+66 Lt & Rt	2	EA

Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

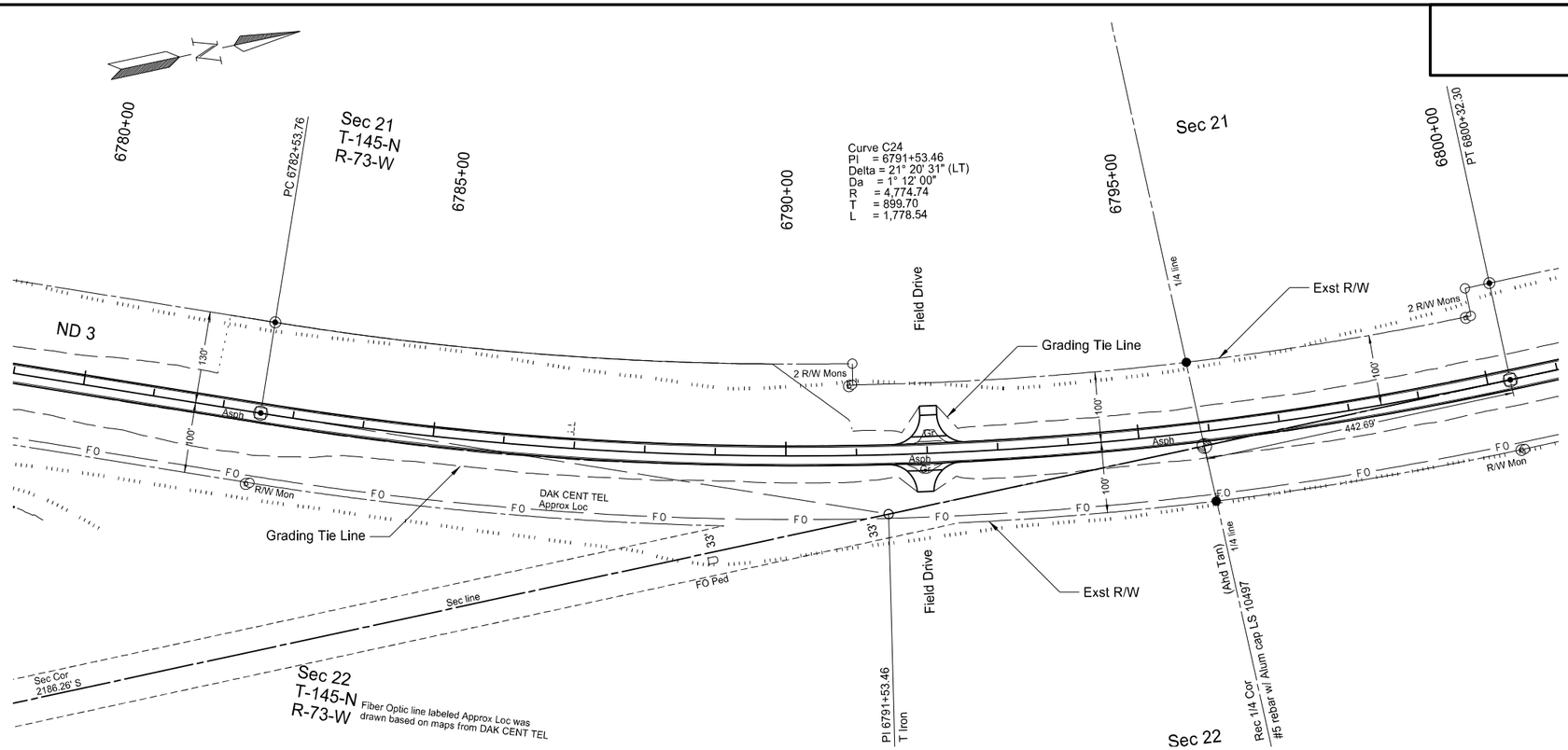
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

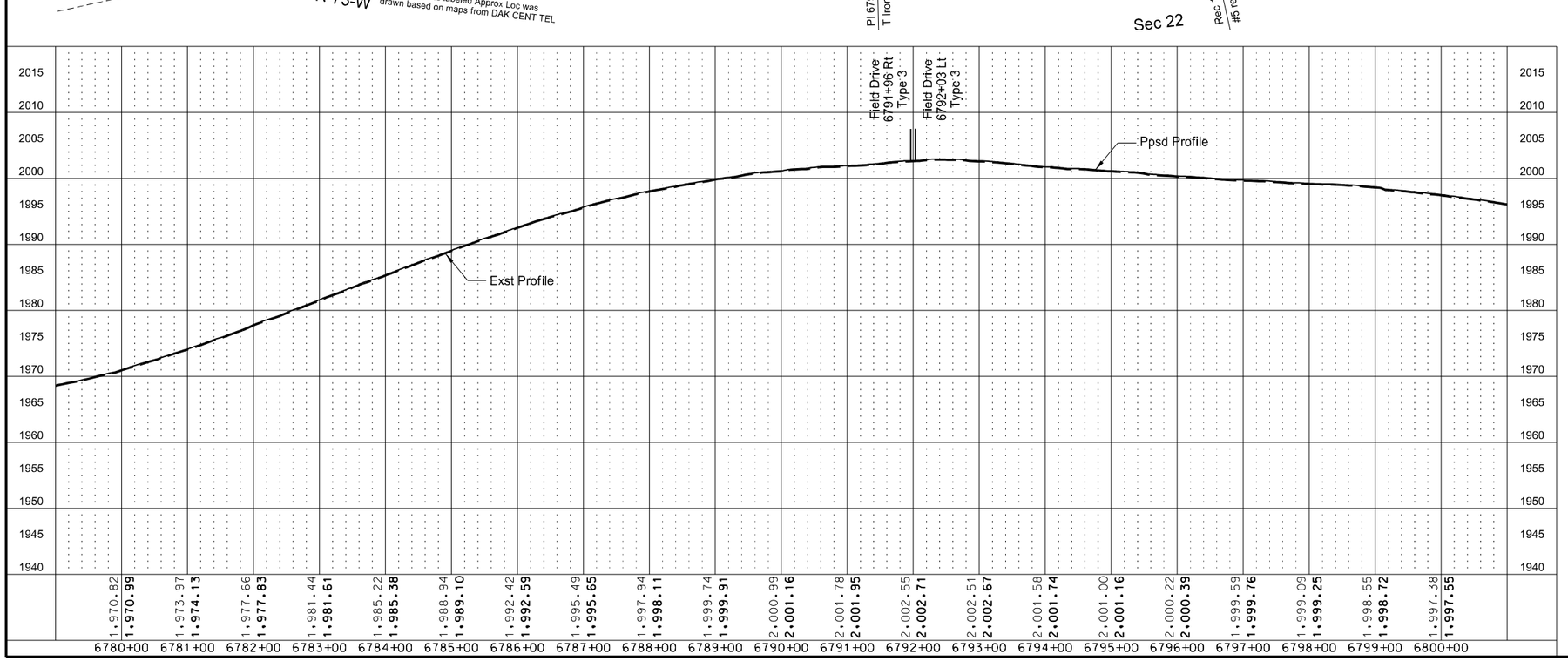
Plan & Profile

ND 3
Tuttle N to W Jct 200

6760+00 to 6780+00
Wells County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	60	42





Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

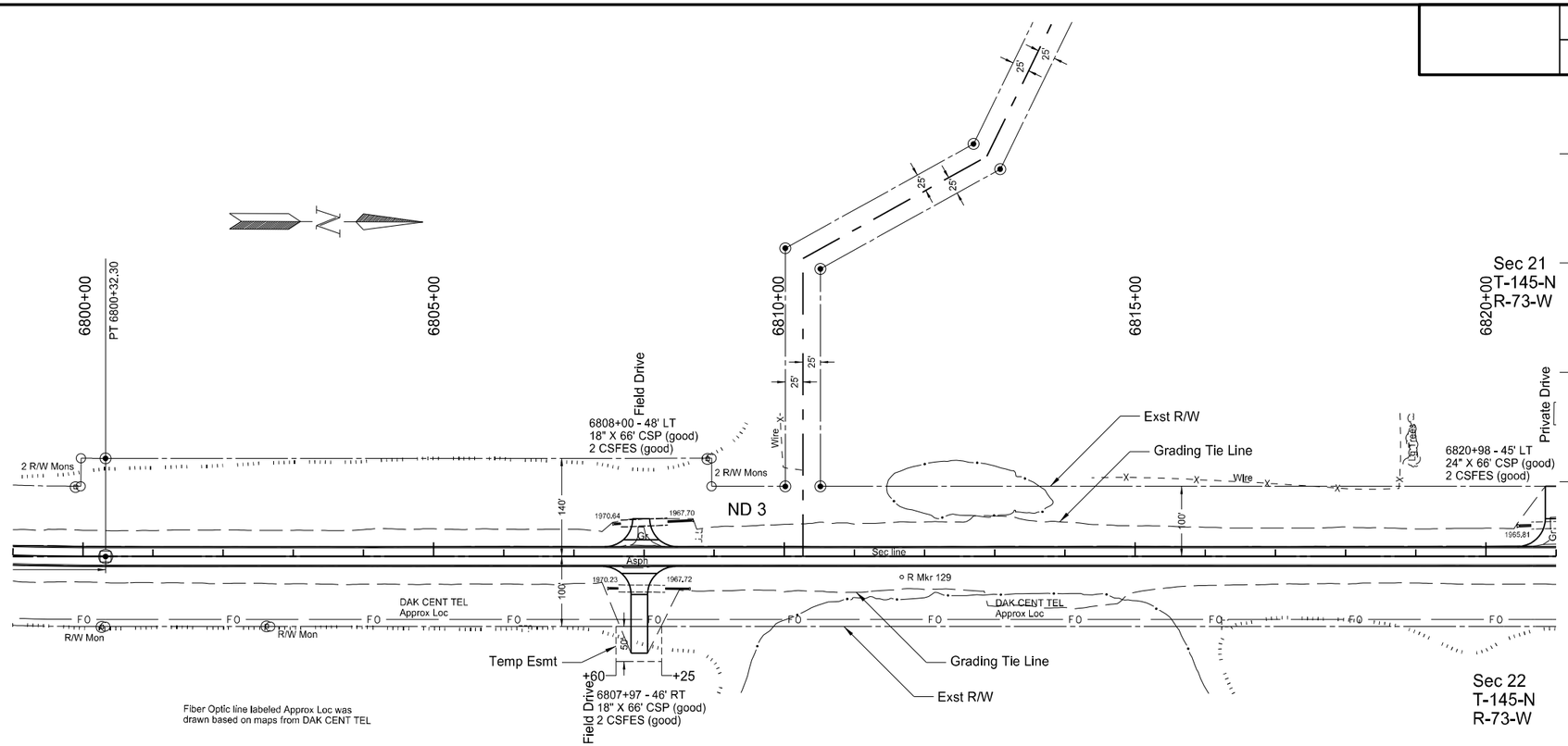
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 12/15/2021
NORTH DAKOTA

Plan & Profile

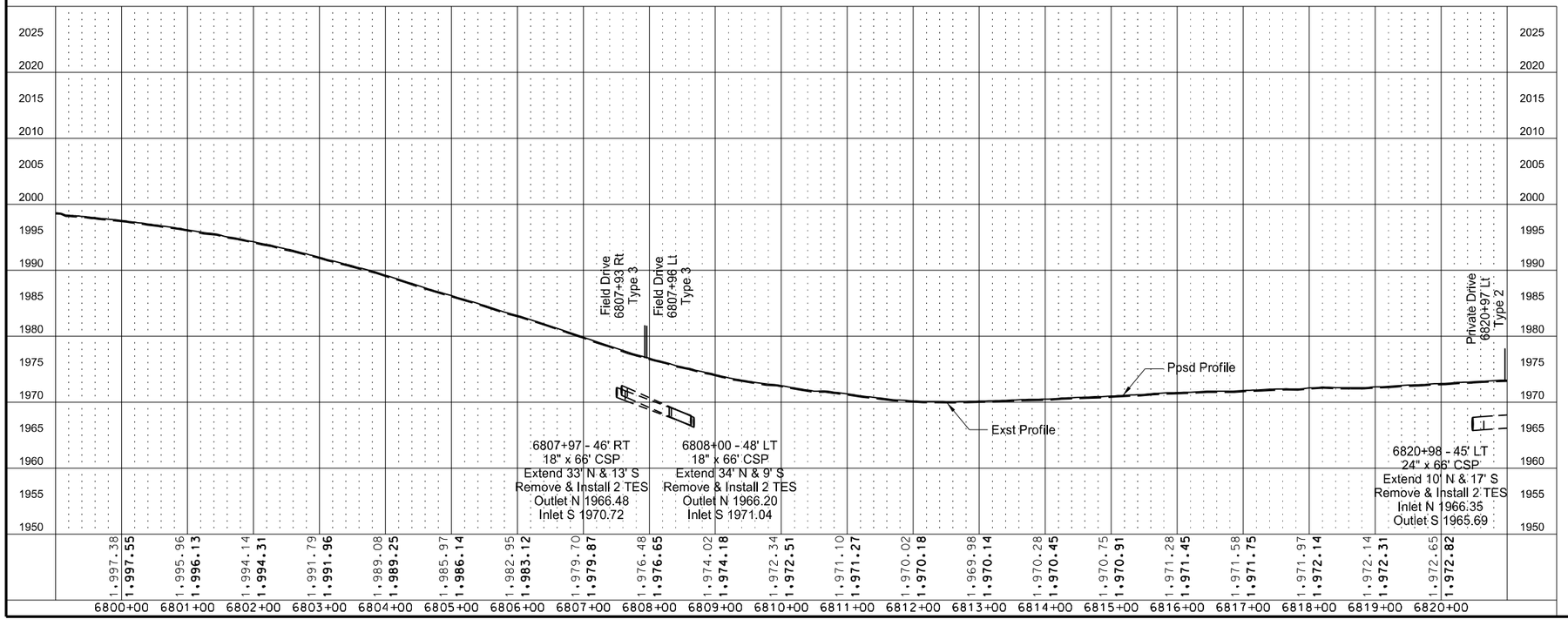
ND 3
Tuttle N to W Jct 200

6780+00 to 6800+00
Wells County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	60	43



SPEC	CODE	BID ITEM	QTY	UNIT
202	0169	REMOVAL OF END SECTION-ALL TYPES & SIZES		
		6807+63 Rt	1	EA
		6807+67 Lt	1	EA
		6808+30 Rt	1	EA
		6808+34 Lt	1	EA
714	5015	PIPE CORR STEEL .064IN 18IN		
		6807+50 - 46' Rt to 6807+63 - 46' Rt	13	LF
		6807+58 - 47' Lt to 6807+67 - 47' Lt	9	LF
		6808+30 - 46' Rt to 6808+63 - 46' Rt	33	LF
		6808+34 - 50' Lt to 6808+67 - 51' Lt	34	LF
714	6501	END SECT-TRAVERSABLE METAL 18IN		
		6807+50 Rt	1	EA
		6807+58 Lt	1	EA
		6808+63 Rt	1	EA
		6808+67 Lt	1	EA
754	0805	OBJECT MARKERS - CULVERTS		
		6807+50 Rt	1	EA
		6807+58 Lt	1	EA
		6808+63 Rt	1	EA
		6808+67 Lt	1	EA



Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

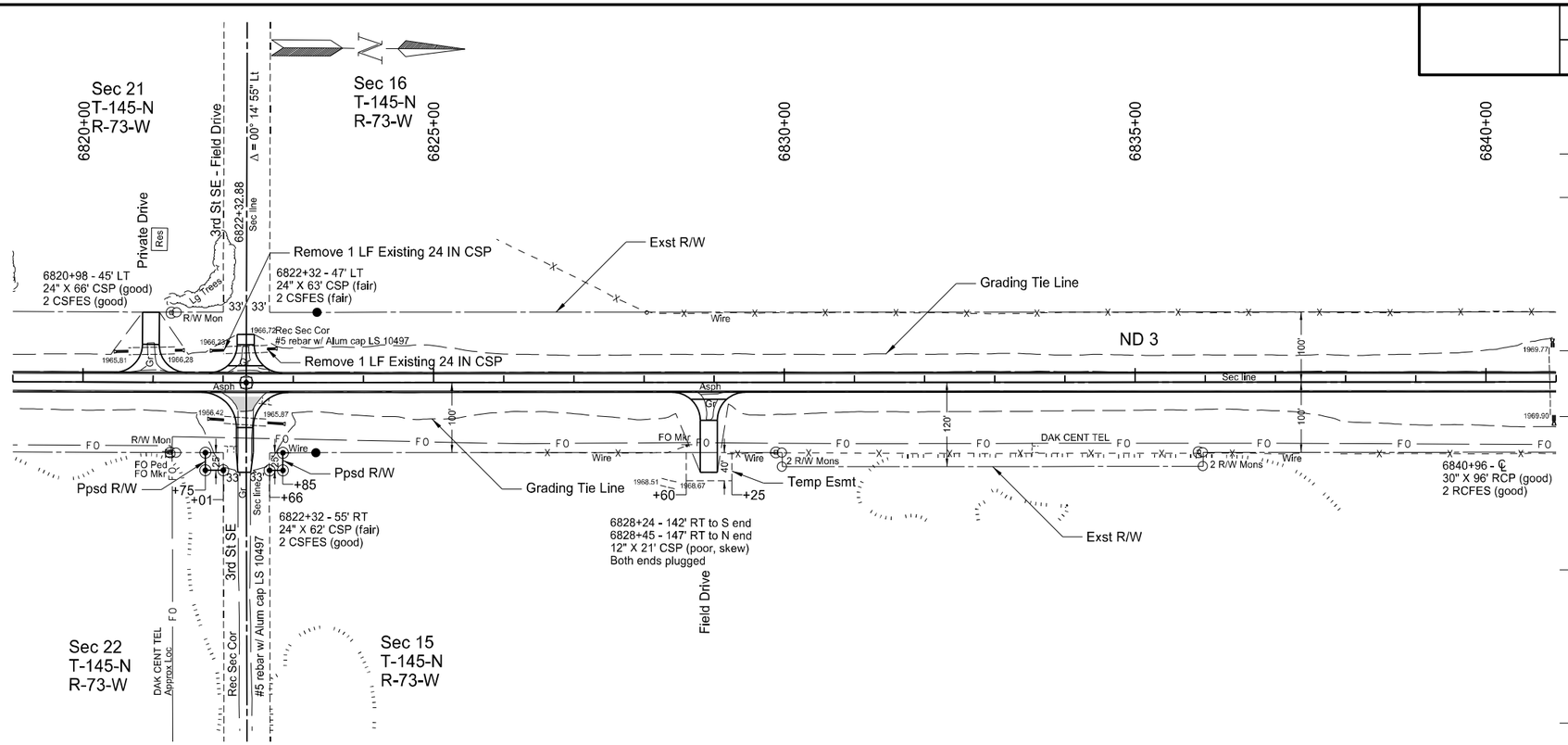
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 12/15/2021
NORTH DAKOTA

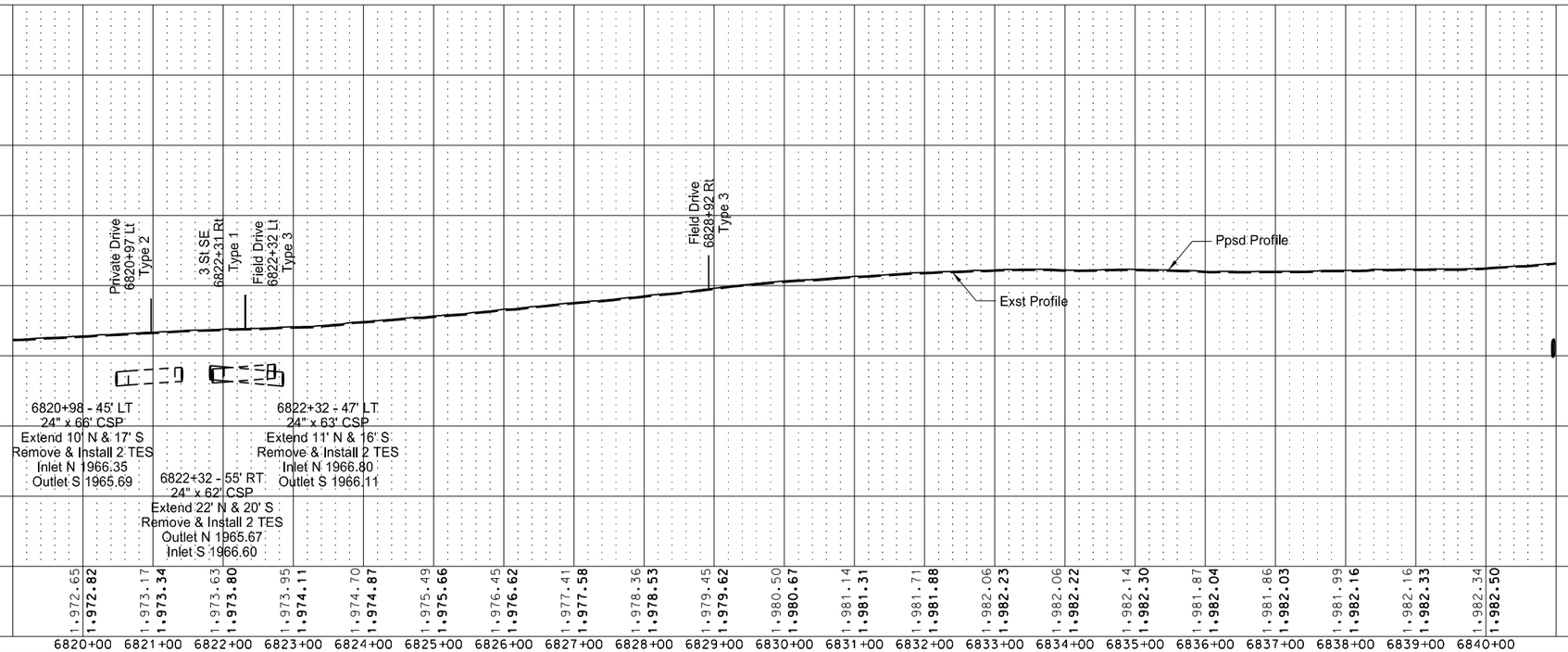
Plan & Profile

ND 3
Tuttle N to W Jct 200

6800+00 to 6820+00
Wells County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	60	44





SPEC	CODE	BID ITEM	QTY	UNIT
202	0132	REMOVAL OF BITUMINOUS SURFACING		
		6822+31 Rt	73	SY
202	0169	REMOVAL OF END SECTION-ALL TYPES & SIZES		
		6820+65 Lt	1	EA
		6821+31 Lt	1	EA
		6822+00 Lt	1	EA
		6822+01 Rt	1	EA
		6822+63 Lt	1	EA
		6822+63 Rt	1	EA
202	0174	REMOVAL OF PIPE ALL TYPES AND SIZES		
		6822+00 - 46' Lt to 6822+01 - 46' Lt	1	LF
		6822+62 - 48' Lt to 6822+63 - 48' Lt	1	LF
714	5035	PIPE CORR STEEL .064IN 24IN		
		6820+48 - 44' Lt to 6820+65 - 44' Lt	17	LF
		6821+31 - 46' Lt to 6821+41 - 46' Lt	10	LF
		6821+81 - 52' Rt to 6822+01 - 53' Rt	20	LF
		6821+85 - 45' Lt to 6822+01 - 46' Lt	16	LF
		6822+62 - 48' Lt to 6822+73 - 48' Lt	11	LF
		6822+63 - 57' Rt to 6822+85 - 59' Rt	22	LF
714	6506	END SECT-TRAVERSABLE METAL 24IN		
		6820+48 Lt	1	EA
		6821+41 Lt	1	EA
		6821+81 Rt	1	EA
		6821+85 Lt	1	EA
		6822+73 Lt	1	EA
		6822+85 Rt	1	EA
754	0805	OBJECT MARKERS - CULVERTS		
		6820+48 Lt	1	EA
		6821+41 Lt	1	EA
		6821+81 Rt	1	EA
		6821+85 Lt	1	EA
		6822+73 Lt	1	EA
		6822+85 Rt	1	EA
990	0400	PIPE CLEANOUT		
		6822+32 Lt	1	EA

Legend

Removal of Bituminous Surfacing

Clearing & Grubbing

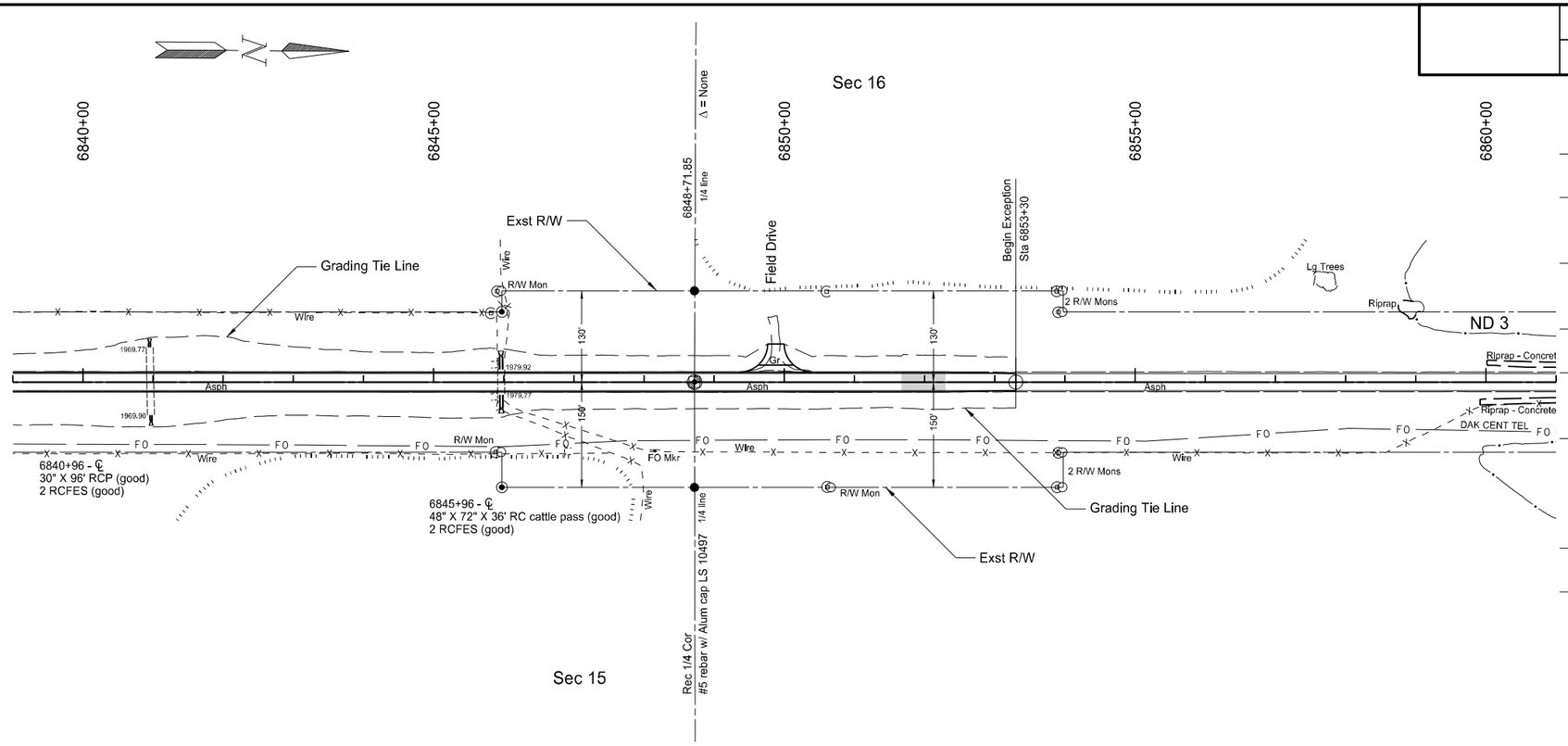
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 12/15/2021
NORTH DAKOTA

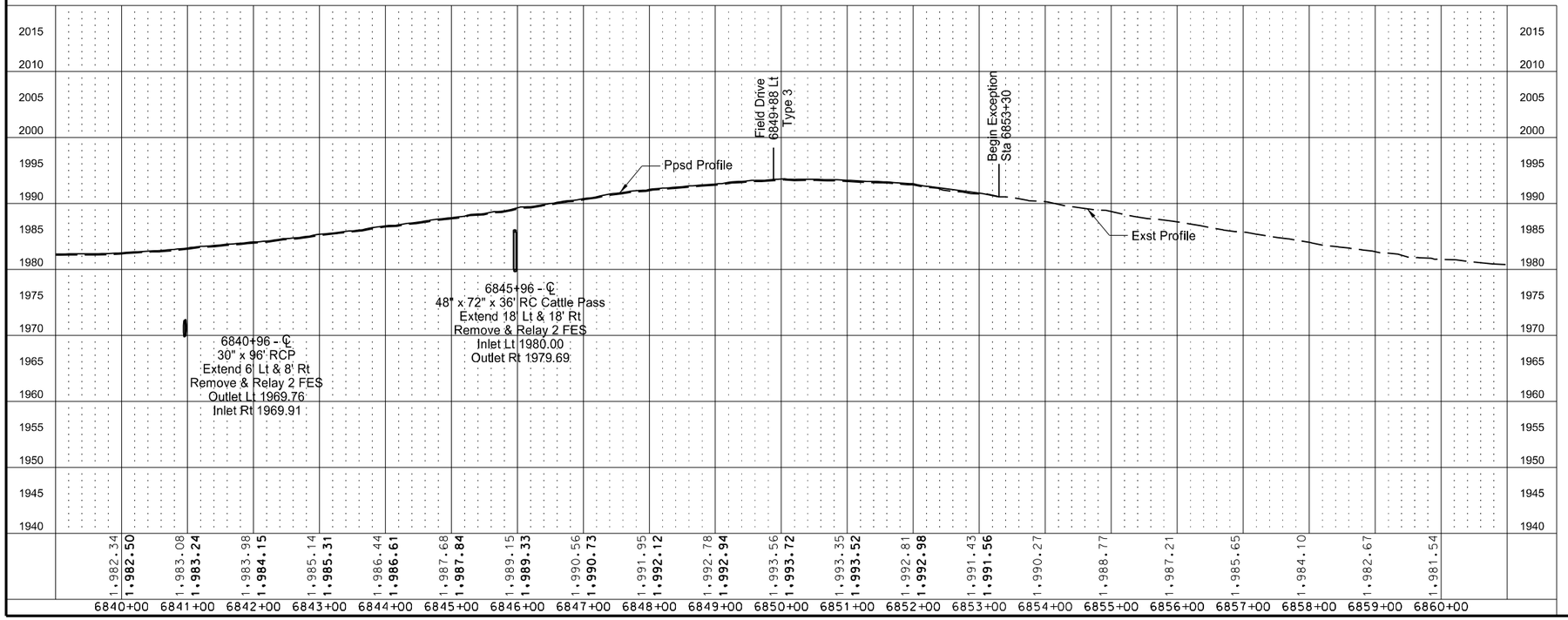
Plan & Profile

ND 3
Tuttle N to W Jct 200

6820+00 to 6840+00
Wells County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	60	45





SPEC	CODE	BID ITEM	QTY	UNIT
202	0132	REMOVAL OF BITUMINOUS SURFACING		
		6851+67 to 6853+67	201	SY
714	0820	PIPE CONC REINF 30IN CL III		
		6840+95 - 55' Lt to 6840+95 - 49' Lt	6	LF
		6840+97 - 47' Rt to 6840+97 - 55' Rt	8	LF
714	9200	CATTLE PASS CONC INTERMED SECTION		
		6845+96 - 36' Lt to 6845+96 - 18' Lt	18	LF
		6845+96 - 18' Rt to 6845+97 - 36' Rt	18	LF
714	9611	REMOVE&RELAY CONC CATTLE PASS END SECTION		
		6845+96 Lt & Rt	2	EA
714	9660	REMOVE&RELAY END SECTION-ALL TYPES&SIZES		
		6840+95 Lt	1	EA
		6840+97 Rt	1	EA
754	0805	OBJECT MARKERS - CULVERTS		
		6840+95 Lt	1	EA
		6840+97 Rt	1	EA
		6845+96 Lt	1	EA
		6845+97 Rt	1	EA
910	0800	PIPE JOINT REPAIR		
		6845+96	1	EA
990	0400	PIPE CLEANOUT		
		6840+96	1	EA
		6845+96	1	EA

Legend

Removal of Bituminous Surfacing

Clearing & Grubbing

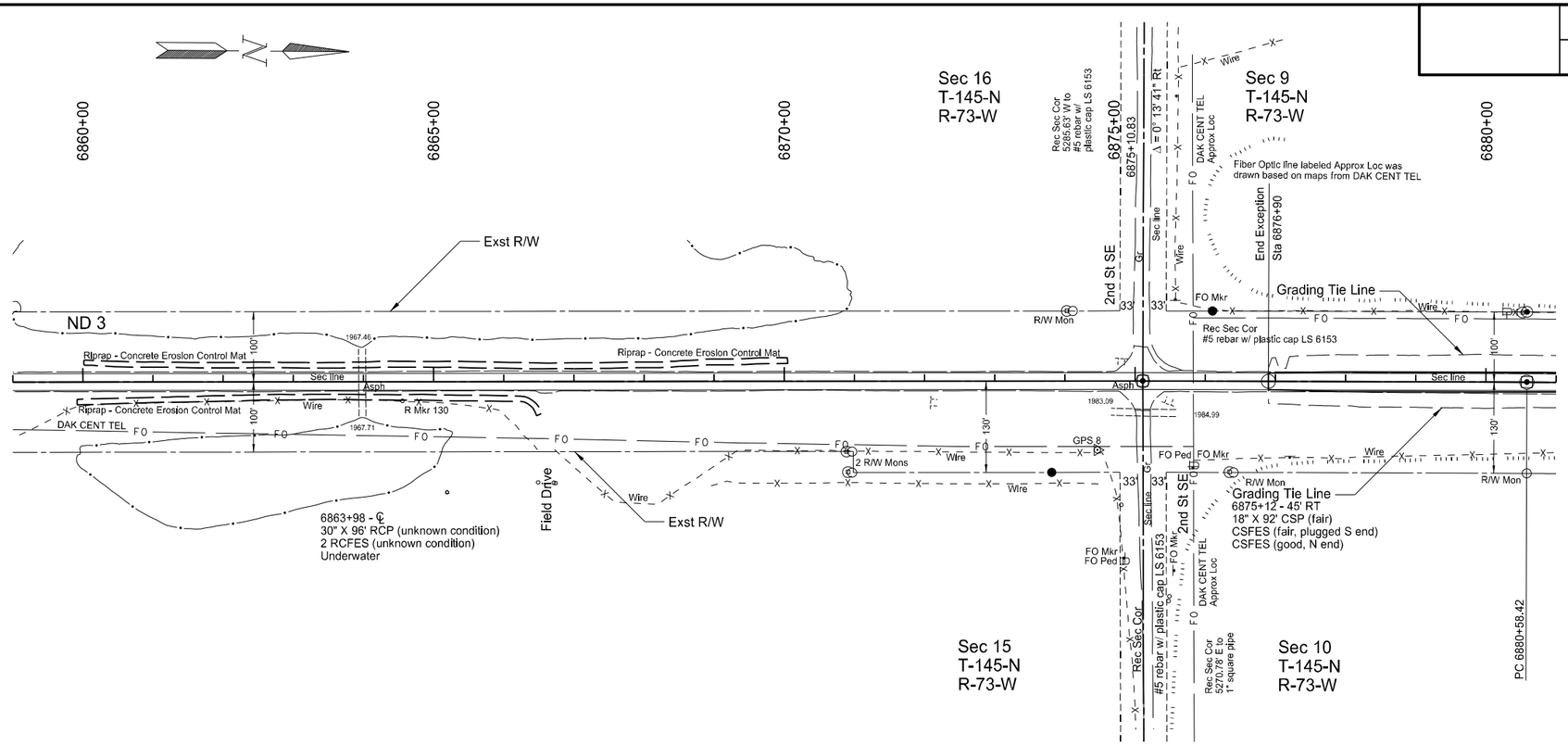
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 12/15/2021
NORTH DAKOTA

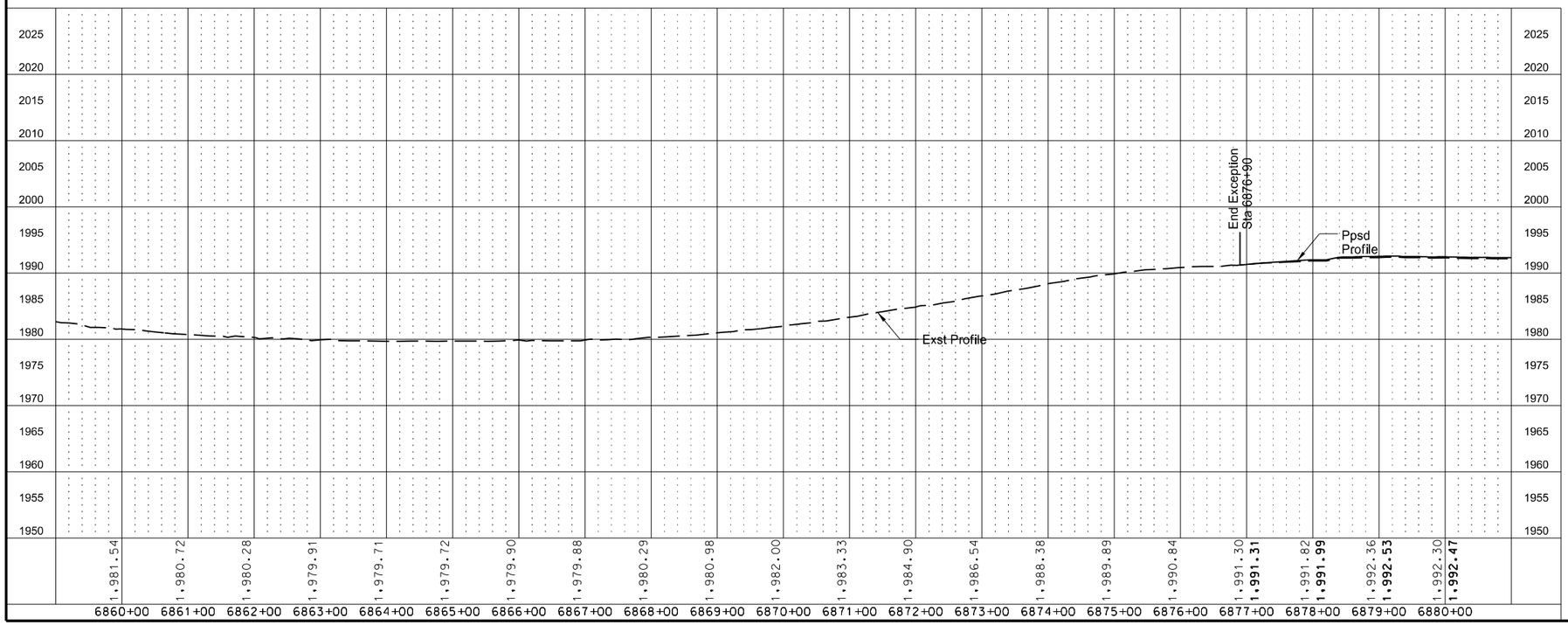
Plan & Profile

ND 3
Tuttle N to W Jct 200

6840+00 to 6860+00
Wells County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	60	46





Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 12/15/2021
NORTH DAKOTA

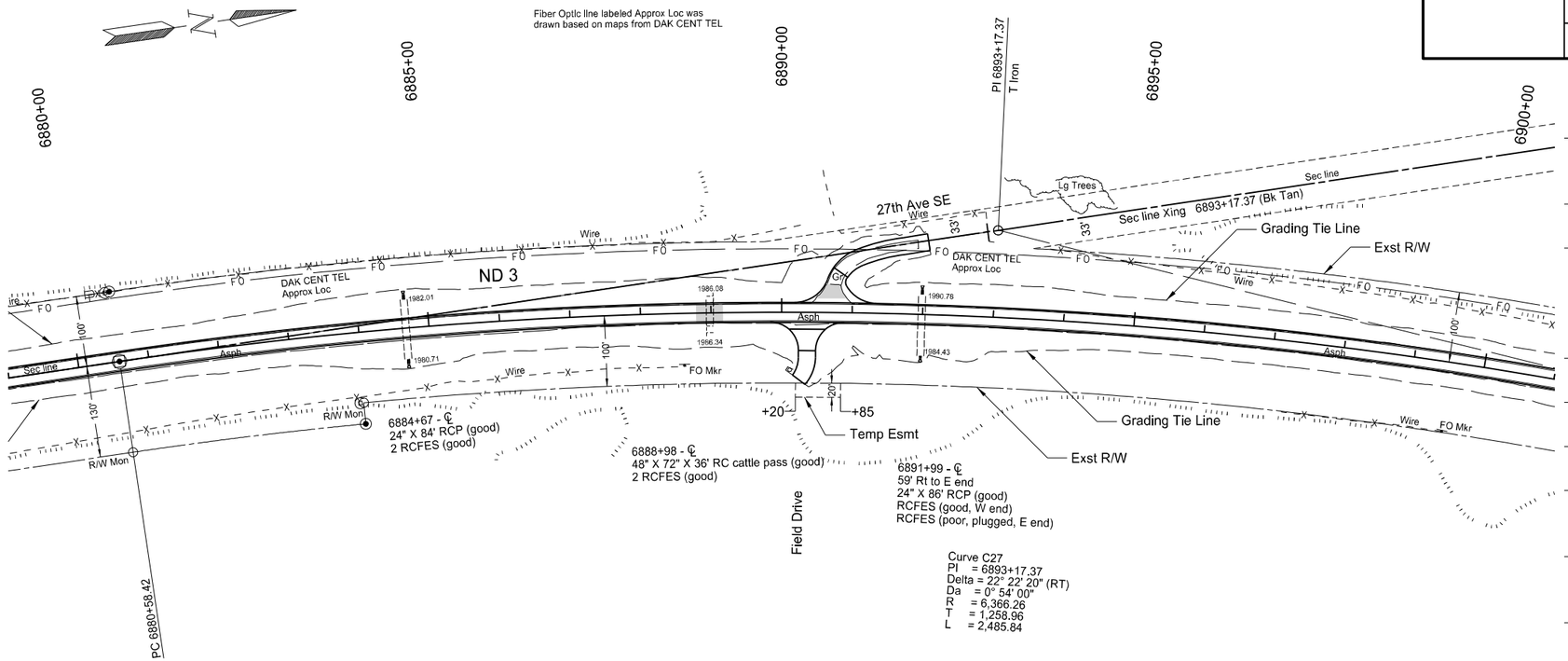
Plan & Profile

ND 3
Tuttle N to W Jct 200

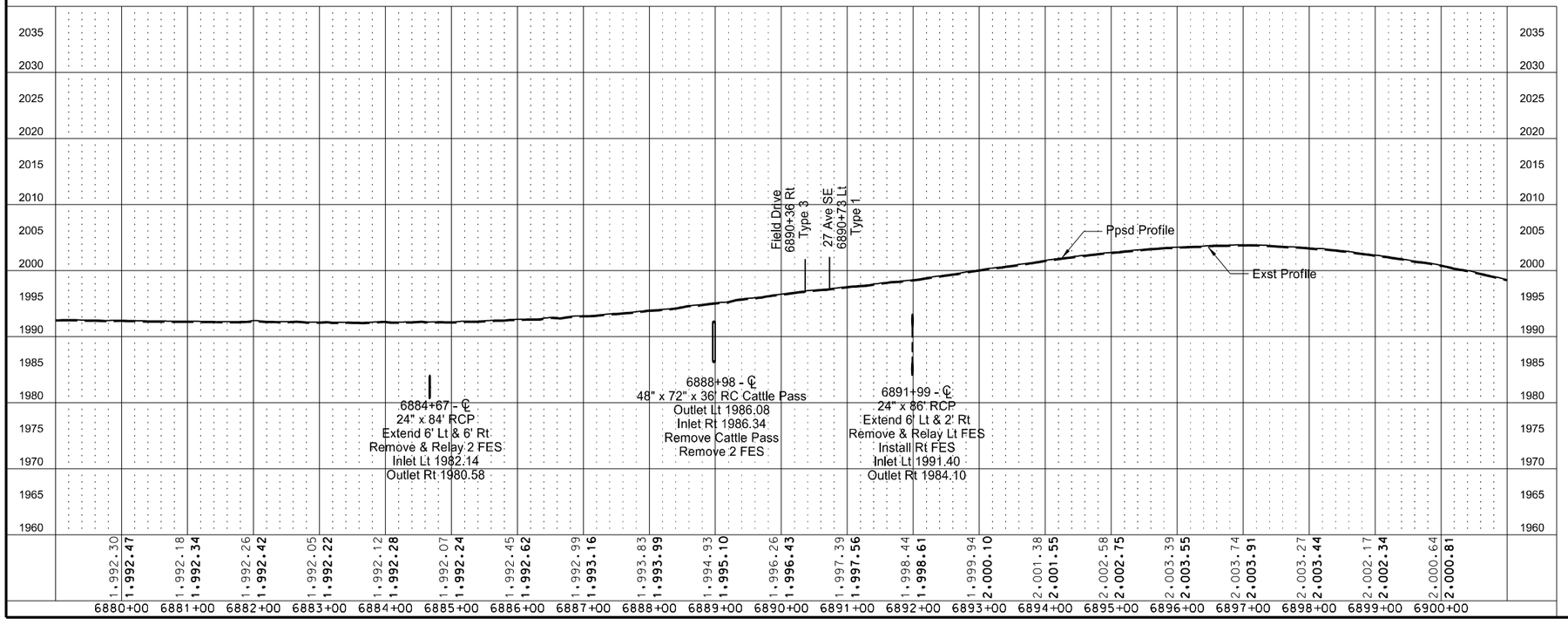
6860+00 to 6880+00
Wells County

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STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	60	47



SPEC	CODE	BID ITEM	QTY	UNIT
202	0132	REMOVAL OF BITUMINOUS SURFACING		
		6888+79 to 6889+17	111	SY
		6890+73 Lt	67	SY
202	0169	REMOVAL OF END SECTION-ALL TYPES & SIZES		
		6891+99 Rt	1	EA
714	0615	PIPE CONC REINF 24IN CL III		
		6884+67 - 47' Lt to 6884+67 - 41' Lt	6	LF
		6884+67 - 44' Rt to 6884+67 - 50' Rt	6	LF
		6891+99 - 34' Lt to 6891+99 - 28' Lt	6	LF
		6891+99 - 59' Rt to 6891+99 - 61' Rt	2	LF
714	2524	CURED-IN-PLACE PIPE-24IN		
		6891+99	94	LF
714	3020	END SECT-CONC REINF 24IN		
		6891+99 Rt	1	EA
714	9602	REMOVAL OF CATTLE PASS		
		6888+98 - 18' Rt to 6888+98 - 19' Lt	36	LF
714	9660	REMOVE&RELAY END SECTION-ALL TYPES&SIZES		
		6884+67 Lt & Rt	2	EA
		6891+99 Lt	1	EA
754	0805	OBJECT MARKERS - CULVERTS		
		6884+67 Lt & Rt	2	EA
		6891+99 Lt & Rt	2	EA
990	0400	PIPE CLEANOUT		
		6884+67	1	EA
		6891+99	1	EA



Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 12/15/2021
NORTH DAKOTA

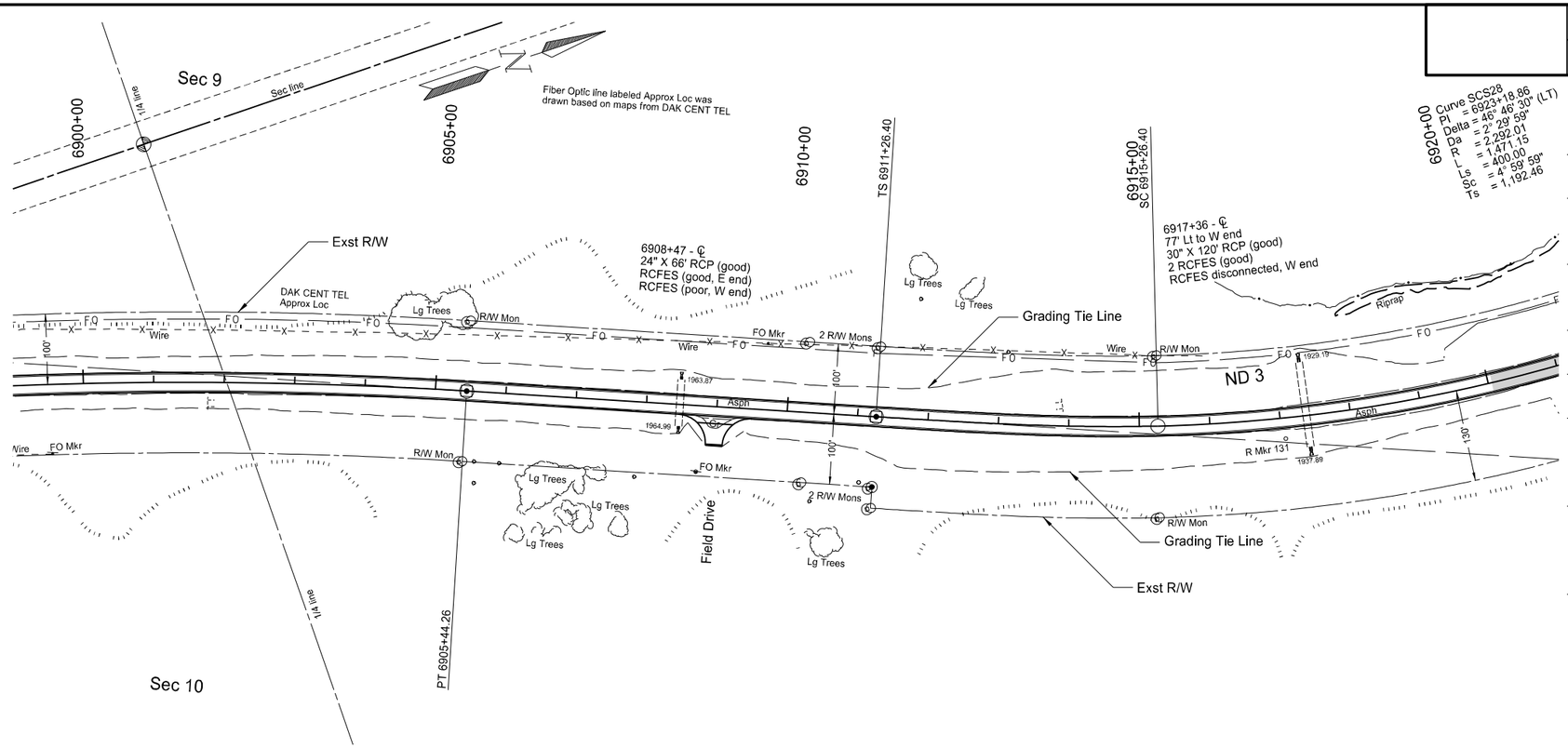
Plan & Profile

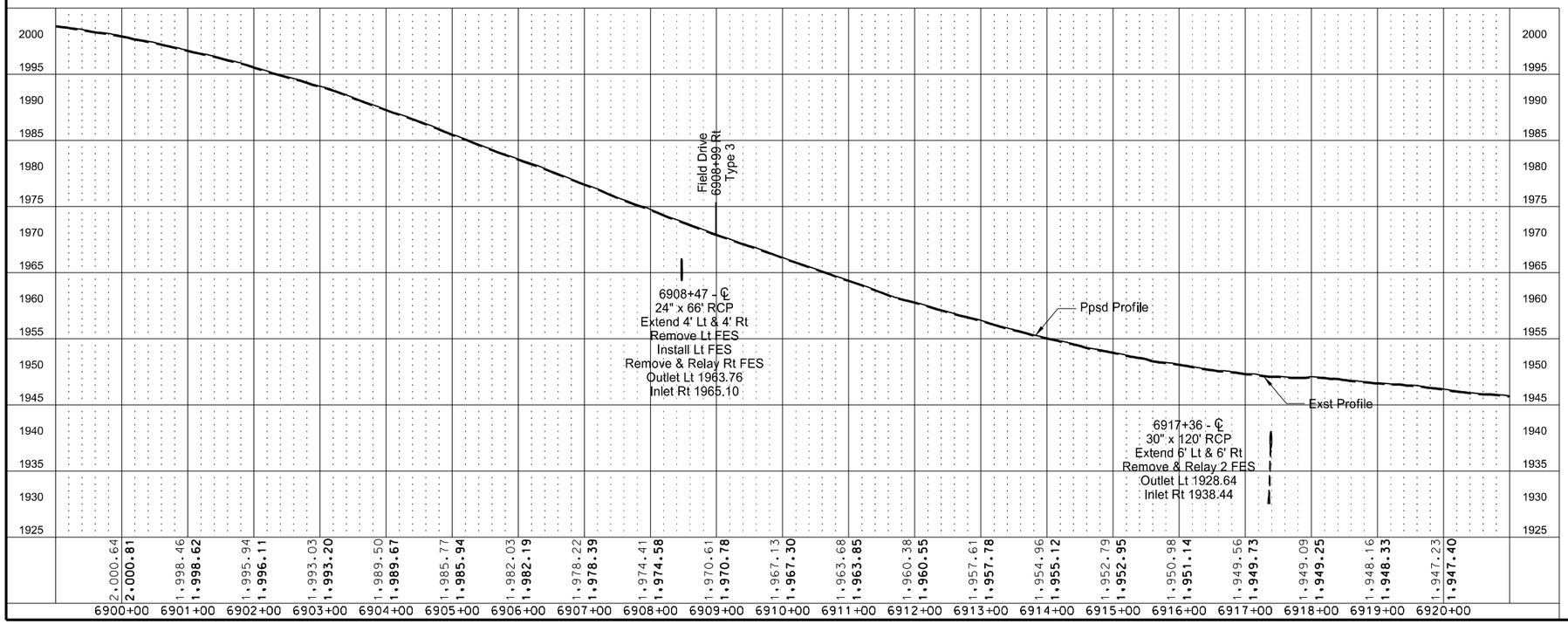
ND 3
Tuttle N to W Jct 200

6880+00 to 6900+00
Wells County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	60	48

SPEC	CODE	BID ITEM	QTY	UNIT
202	0169	REMOVAL OF END SECTION-ALL TYPES & SIZES		
		6908+47 Lt	1	EA
714	0615	PIPE CONC REINF 24IN CL III		
		6908+47 - 40' Lt to 6908+47 - 36' Lt	4	LF
		6908+47 - 31' Rt to 6908+47 - 35' Rt	4	LF
714	0820	PIPE CONC REINF 30IN CL III		
		6917+36 - 83' Lt to 6917+36 - 77' Lt	6	LF
		6917+39 - 45' Rt to 6917+39 - 51' Rt	6	LF
714	2530	CURED-IN-PLACE PIPE-30IN		
		6917+36	132	LF
714	3020	END SECT-CONC REINF 24IN		
		6908+47 Lt	1	EA
714	9660	REMOVE&RELAY END SECTION-ALL TYPES&SIZES		
		6908+47 Rt	1	EA
		6917+36 Lt	1	EA
		6917+39 Rt	1	EA
754	0805	OBJECT MARKERS - CULVERTS		
		6908+47 Lt & Rt	2	EA
		6917+36 Lt	1	EA
		6917+39 Rt	1	EA
990	0400	PIPE CLEANOUT		
		6908+47	1	EA
		6917+36	1	EA





Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

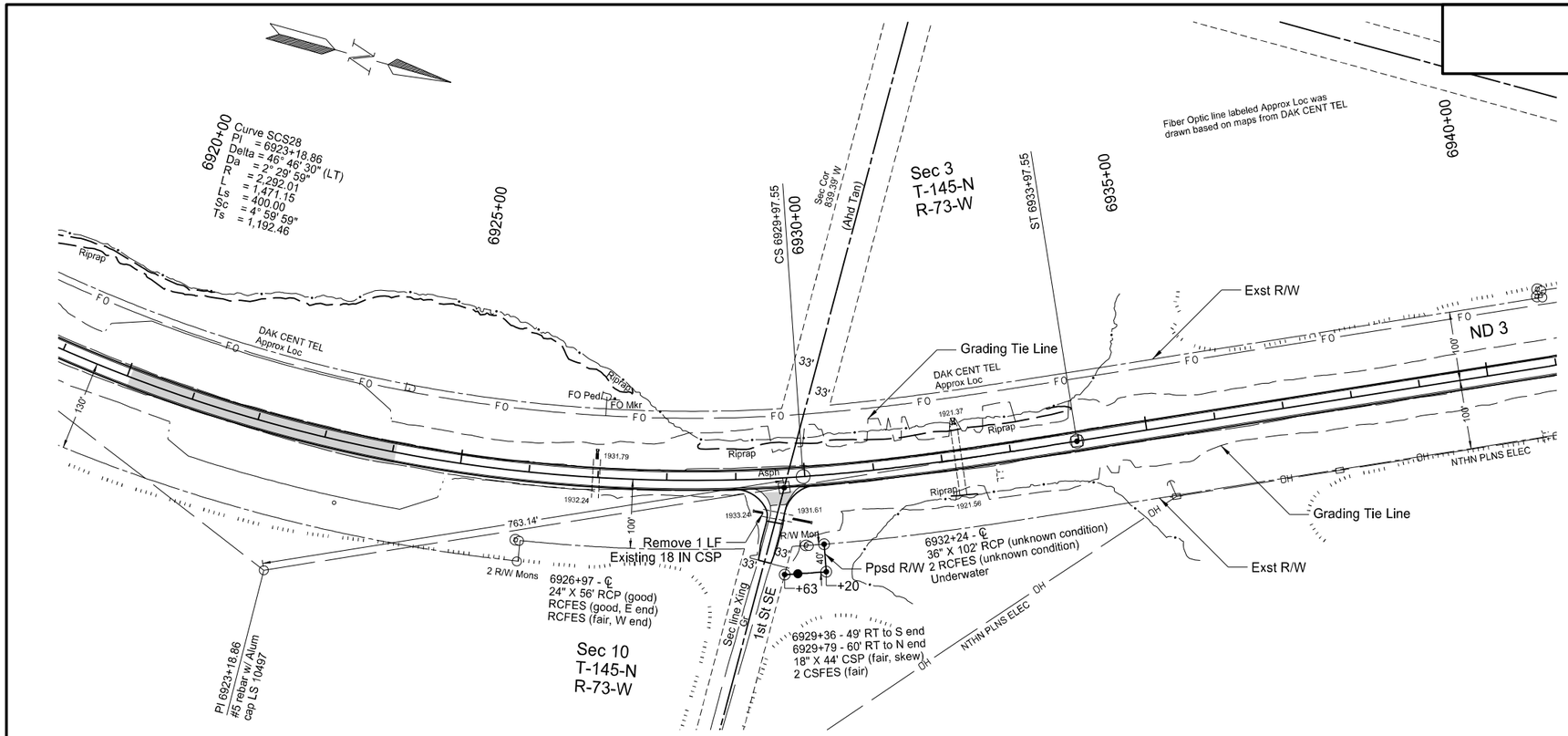
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 12/15/2021
NORTH DAKOTA

Plan & Profile

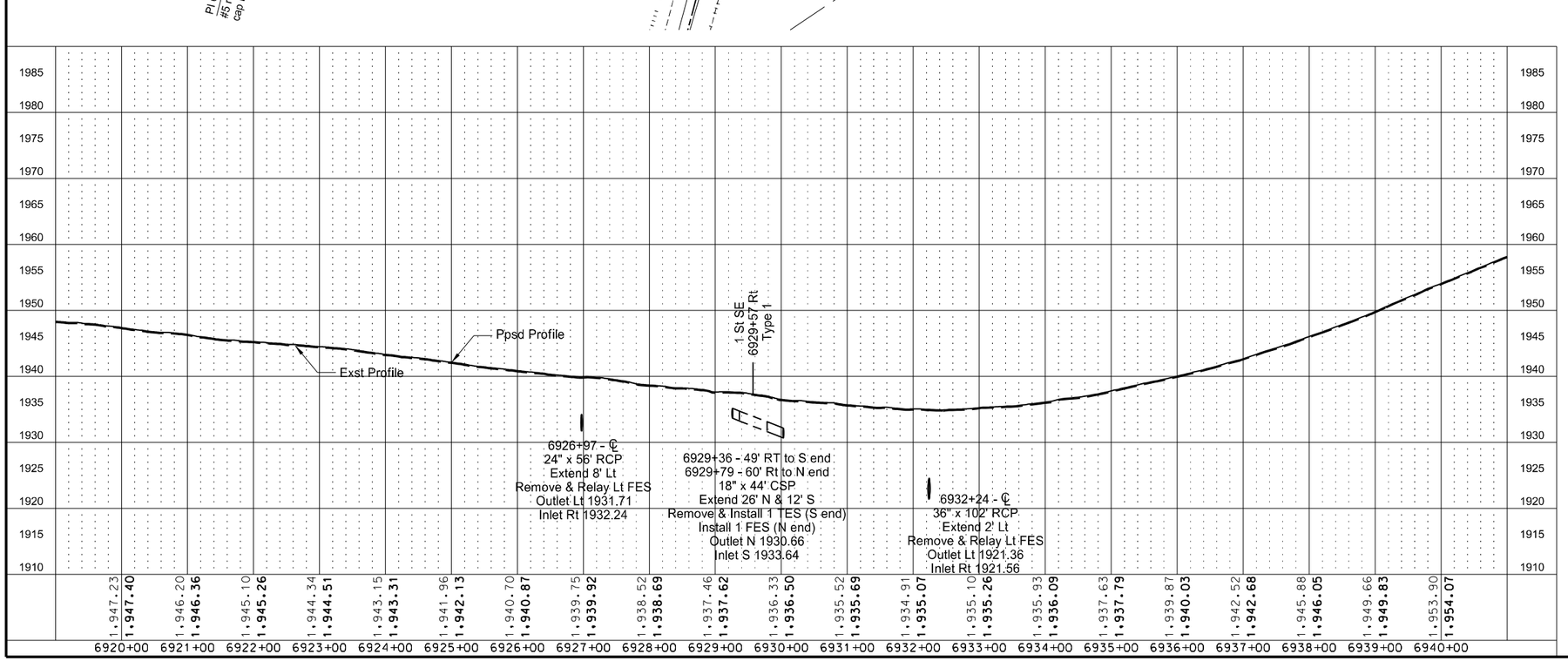
ND 3
Tuttle N to W Jct 200

6900+00 to 6920+00
Wells County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	60	49



SPEC	CODE	BID ITEM	QTY	UNIT
202	0132	REMOVAL OF BITUMINOUS SURFACING		
		6920+05 to 6924+05	1412	SY
		6929+57 Rt	72	SY
202	0169	REMOVAL OF END SECTION-ALL TYPES & SIZES		
		6929+36 Rt	1	EA
		6929+79 Rt	1	EA
202	0174	REMOVAL OF PIPE ALL TYPES AND SIZES		
		6929+36 - 49' Rt to 6929+37 - 49' Rt	1	LF
714	0615	PIPE CONC REINF 24IN CL III		
		6926+97 - 35' Lt to 6926+97 - 27' Lt	8	LF
714	0905	PIPE CONC REINF 36IN CL III		
		6932+24 - 52' Lt to 6932+24 - 50' Lt	2	LF
714	5015	PIPE CORR STEEL .064IN 18IN		
		6929+26 - 46' Rt to 6929+37 - 49' Rt	12	LF
		6929+79 - 60' Rt to 6930+03 - 67' Rt	26	LF
714	5810	END SECT CORR STEEL .064IN 18IN		
		6930+03 Rt	1	EA
714	6501	END SECT-TRAVERSABLE METAL 18IN		
		6929+26 Rt	1	EA
714	9660	REMOVE&RELAY END SECTION-ALL TYPES&SIZES		
		6926+97 Lt	1	EA
		6932+24 Lt	1	EA
754	0805	OBJECT MARKERS - CULVERTS		
		6926+97 Lt	1	EA
		6932+24 Lt	1	EA
		6929+26 Rt	1	EA
		6930+03 Rt	1	EA



Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

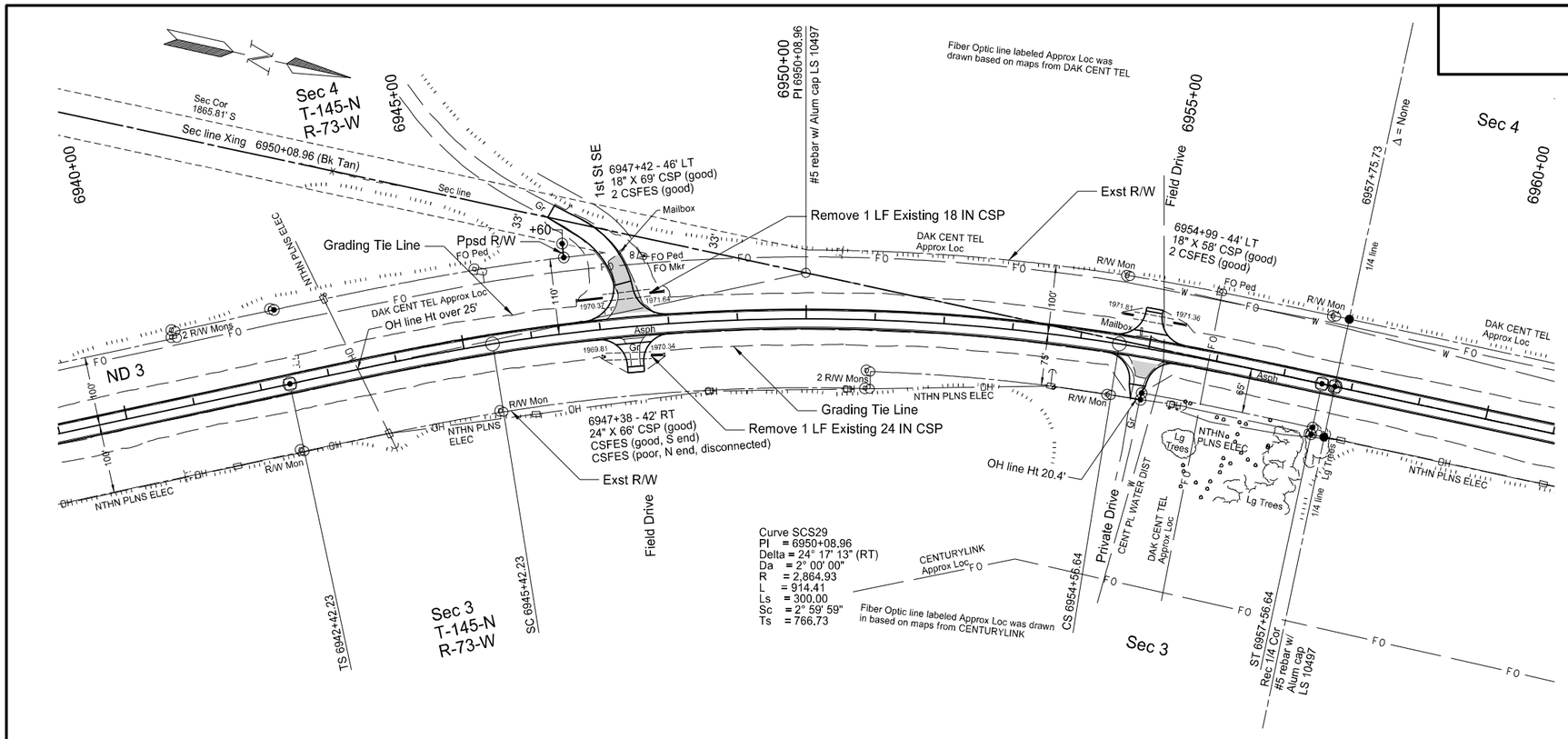
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 12/15/2021
NORTH DAKOTA

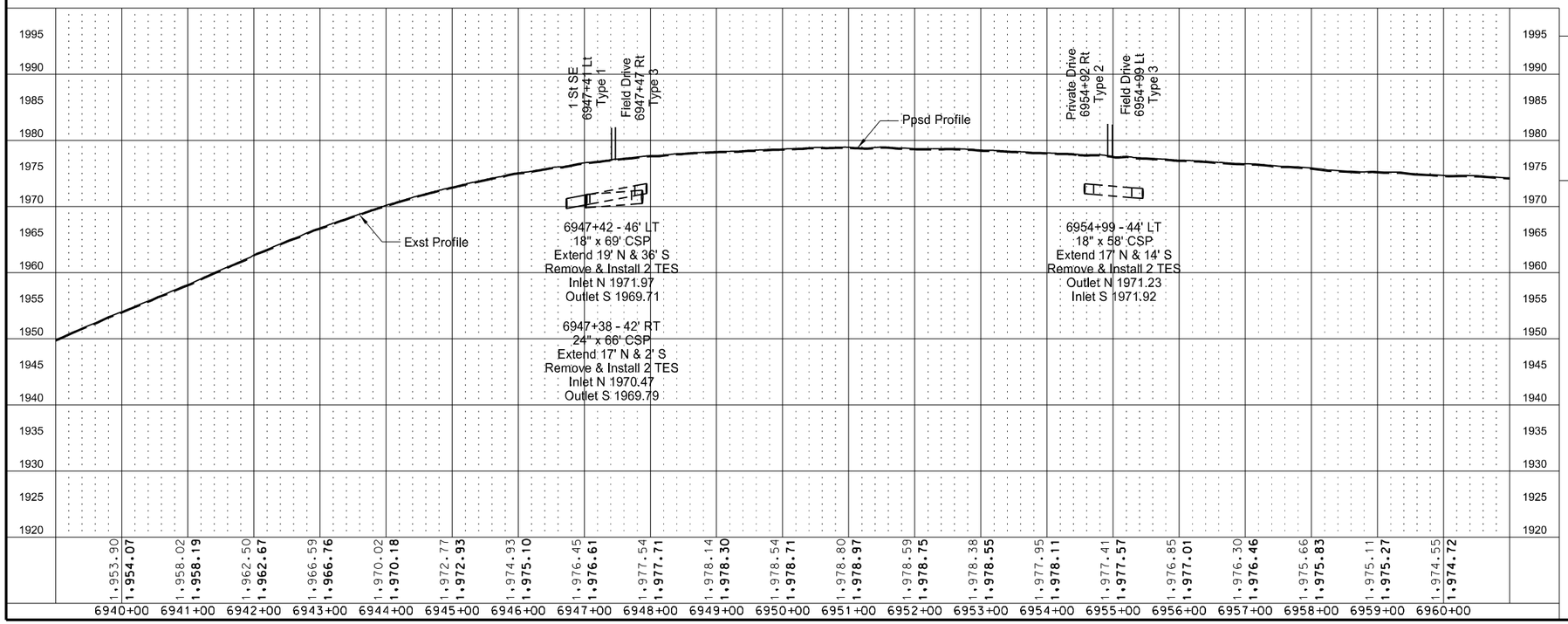
Plan & Profile

ND 3
Tuttle N to W Jct 200

6920+00 to 6940+00
Wells County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	60	50





SPEC	CODE	BID ITEM	QTY	UNIT
202	0132	REMOVAL OF BITUMINOUS SURFACING		
		6947+41 Lt	289	SY
		6954+92 Rt	68	SY
202	0169	REMOVAL OF END SECTION-ALL TYPES & SIZES		
		6947+04 Rt	1	EA
		6947+08 Lt	1	EA
		6947+71 Rt	1	EA
		6947+77 Lt	1	EA
		6954+71 Lt	1	EA
		6955+28 Lt	1	EA
202	0174	REMOVAL OF PIPE ALL TYPES AND SIZES		
		6947+70 - 44' Rt to 6947+71 - 44' Rt	1	LF
		6947+76 - 47' Lt to 6947+77 - 47' Lt	1	LF
714	5015	PIPE CORR STEEL .064IN 18IN		
		6946+73 - 45' Lt to 6947+08 - 45' Lt	36	LF
		6947+76 - 47' Lt to 6947+94 - 47' Lt	19	LF
		6954+57 - 45' Lt to 6954+71 - 45' Lt	14	LF
		6955+28 - 44' Lt to 6955+45 - 44' Lt	17	LF
714	5035	PIPE CORR STEEL .064IN 24IN		
		6947+02 - 40' Rt to 6947+04 - 40' Rt	2	LF
		6947+70 - 44' Rt to 6947+88 - 44' Rt	17	LF
714	6501	END SECT-TRAVERSABLE METAL 18IN		
		6946+73 Lt	1	EA
		6947+94 Lt	1	EA
		6954+57 Lt	1	EA
		6955+45 Lt	1	EA
714	6506	END SECT-TRAVERSABLE METAL 24IN		
		6947+02 Rt	1	EA
		6947+88 Rt	1	EA
754	0805	OBJECT MARKERS - CULVERTS		
		6946+73 Lt	1	EA
		6947+02 Rt	1	EA
		6947+88 Rt	1	EA
		6947+94 Lt	1	EA
		6954+57 Lt	1	EA
		6955+45 Lt	1	EA
990	0400	PIPE CLEANOUT		
		6947+42 Lt	1	EA

Legend

Removal of Bituminous Surfacing

Clearing & Grubbing

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 12/15/2021
NORTH DAKOTA

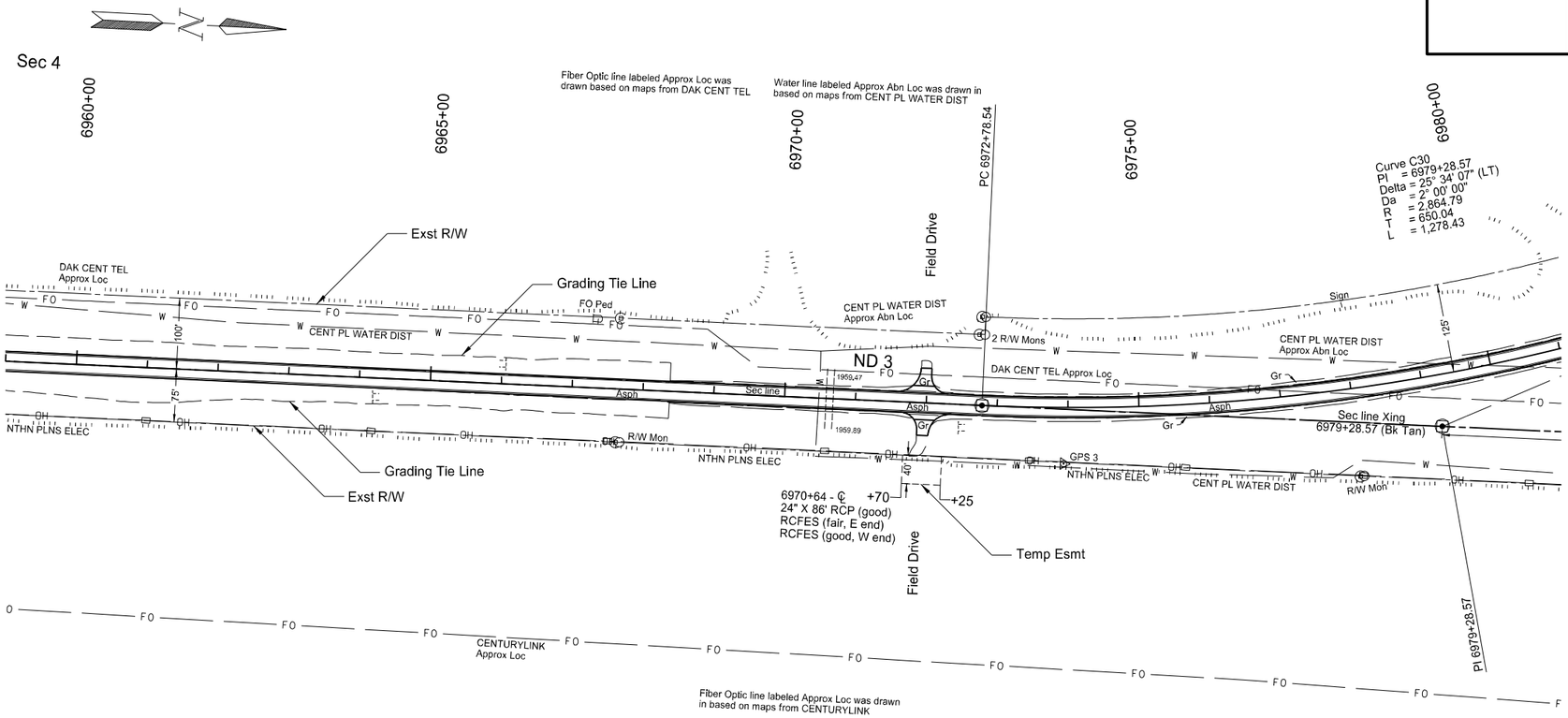
Plan & Profile

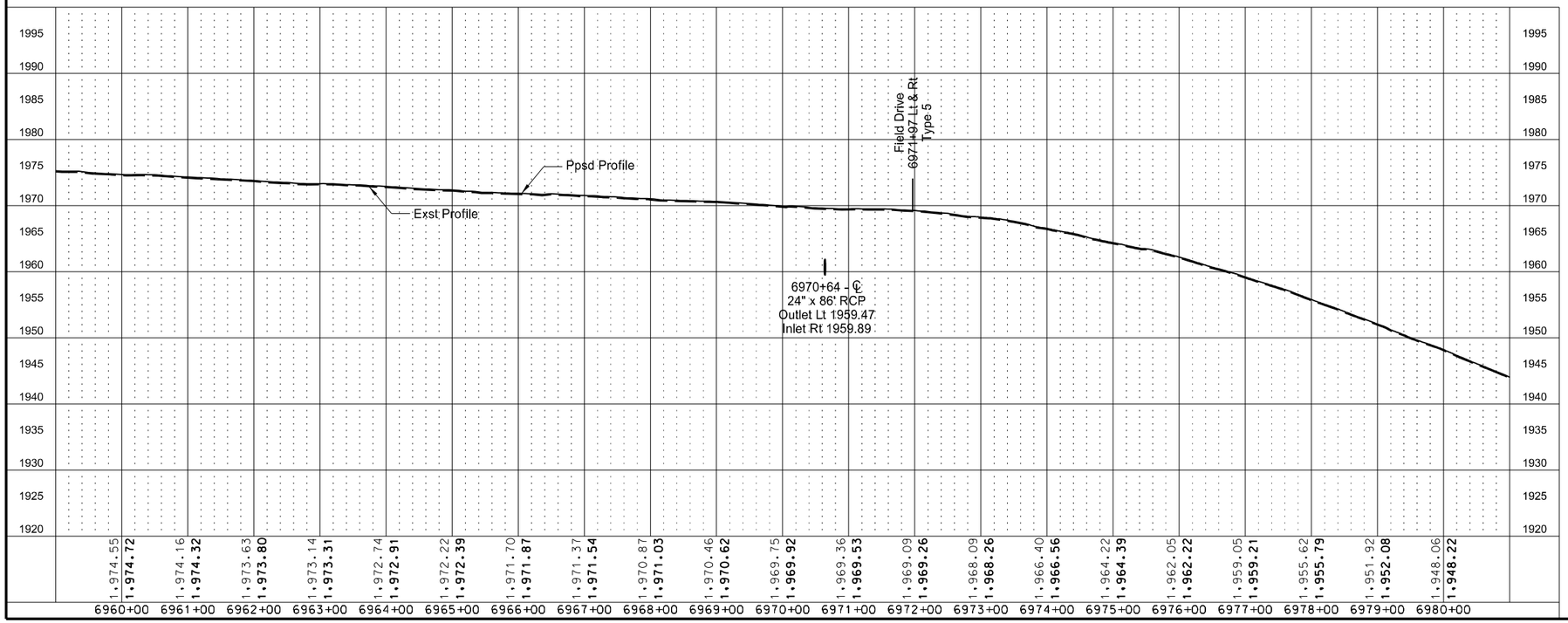
ND 3
Tuttle N to W Jct 200

6940+00 to 6960+00
Wells County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	60	51

SPEC	CODE	BID ITEM	QTY	UNIT
990	0400	PIPE CLEANOUT		
		6970+64	1	EA





Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 12/15/2021
NORTH DAKOTA

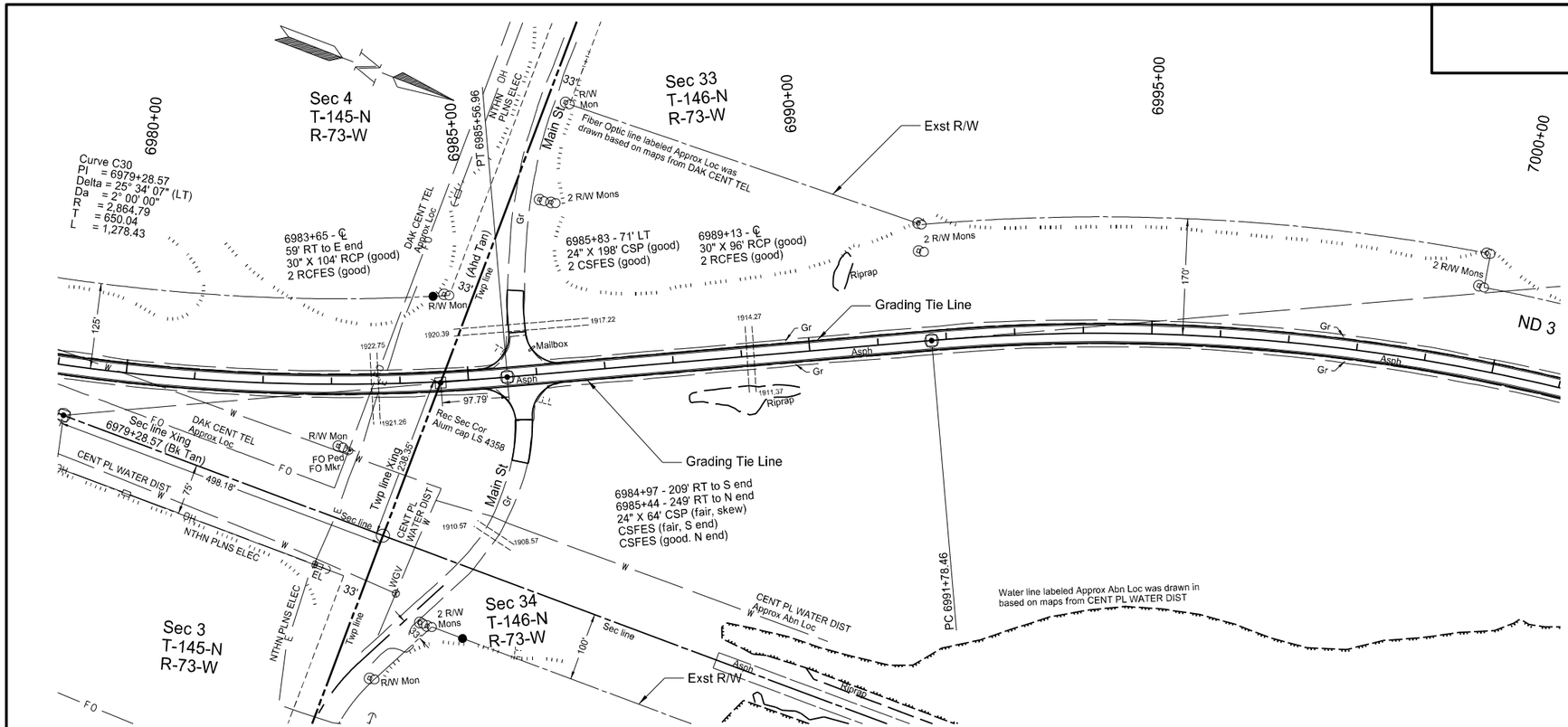
Plan & Profile

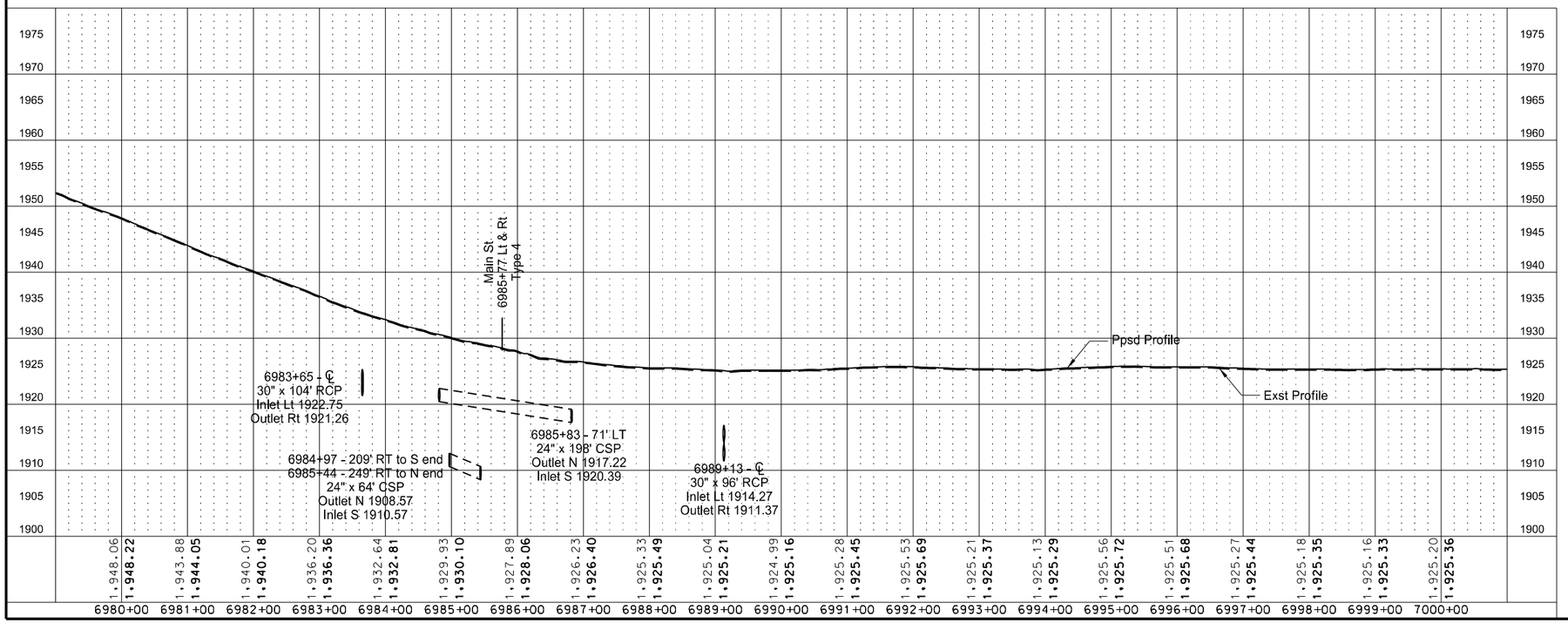
ND 3
Tuttle N to W Jct 200

6960+00 to 6980+00
Wells County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	60	52

SPEC	CODE	BID ITEM	QTY	UNIT
990	0400	PIPE CLEANOUT		
		6983+65	1	EA





Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

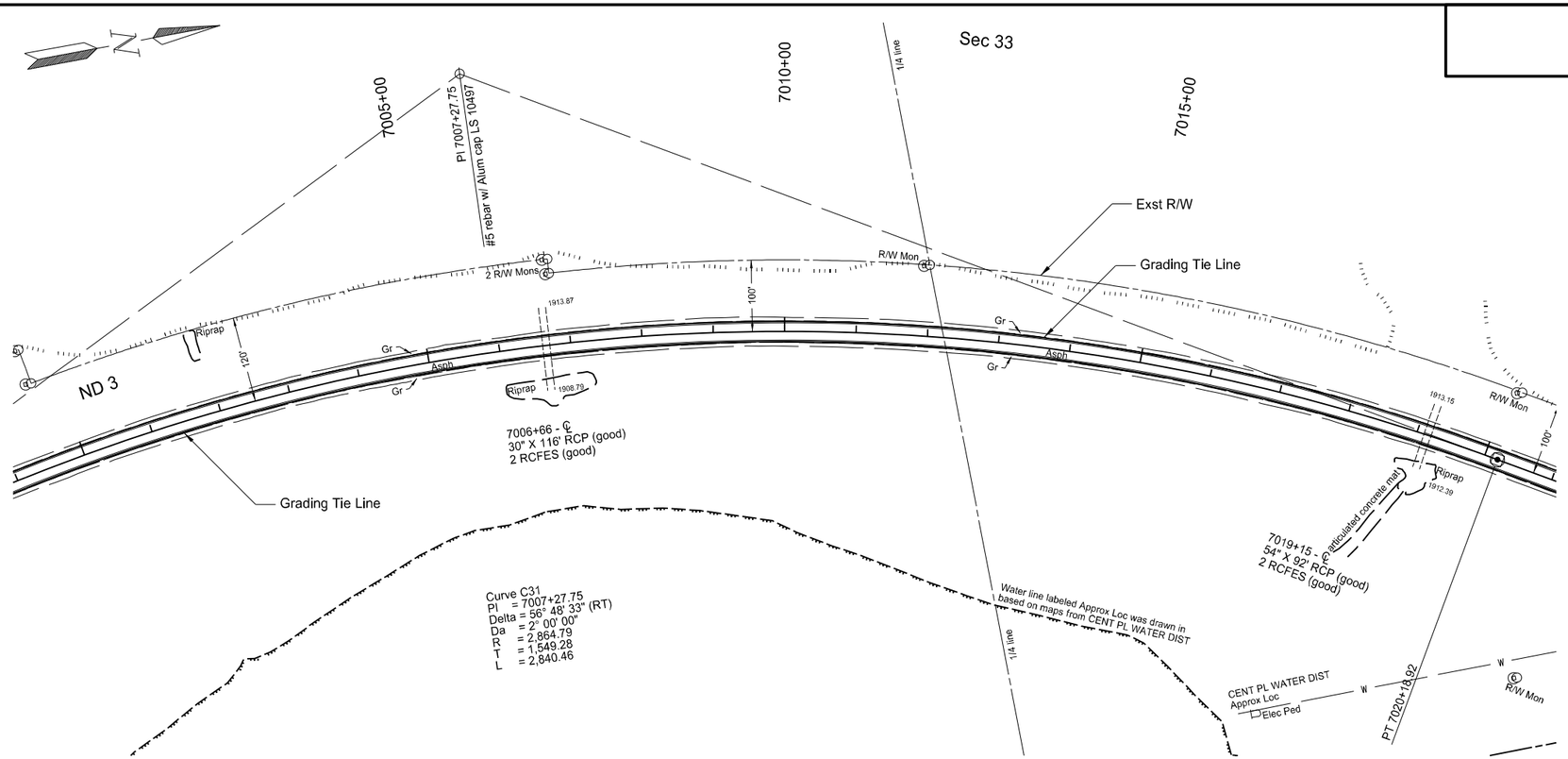
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KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

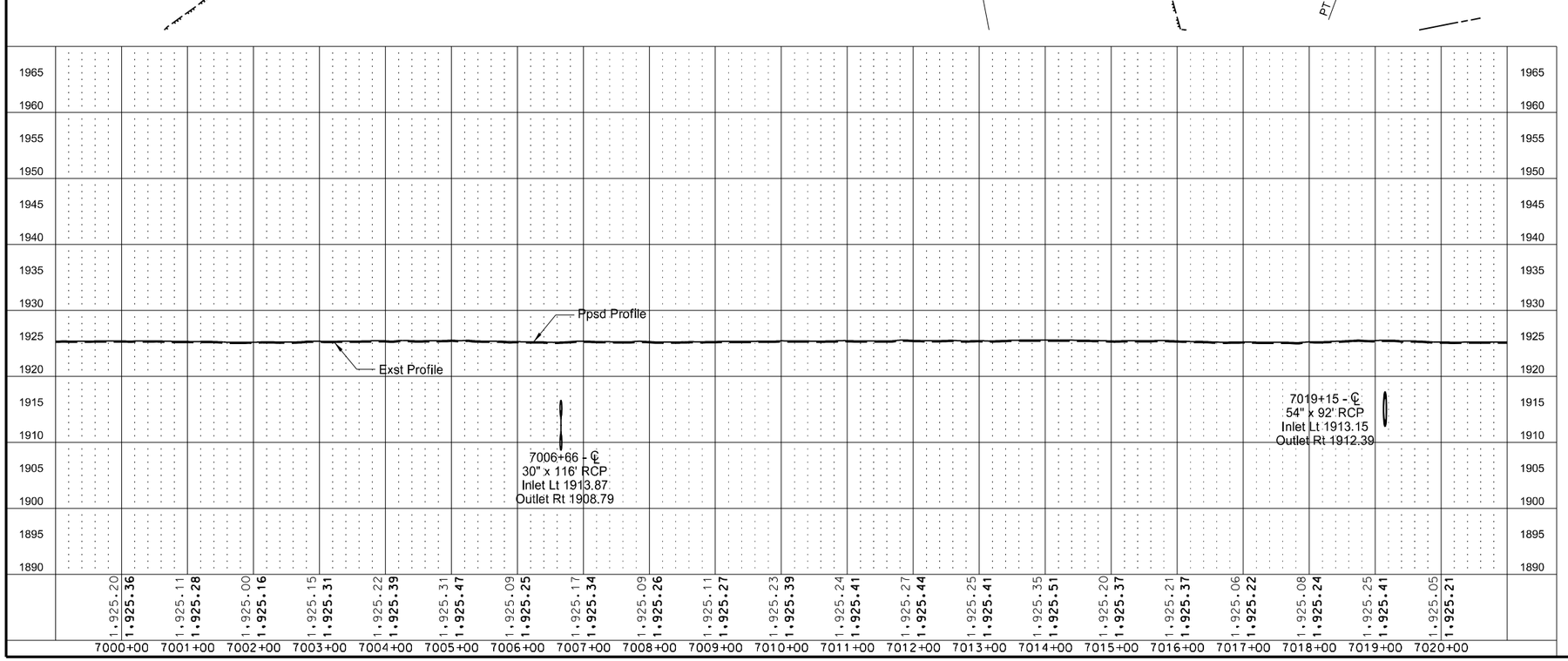
Plan & Profile

ND 3
Tuttle N to W Jct 200

6980+00 to 7000+00
Wells County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	60	53





Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

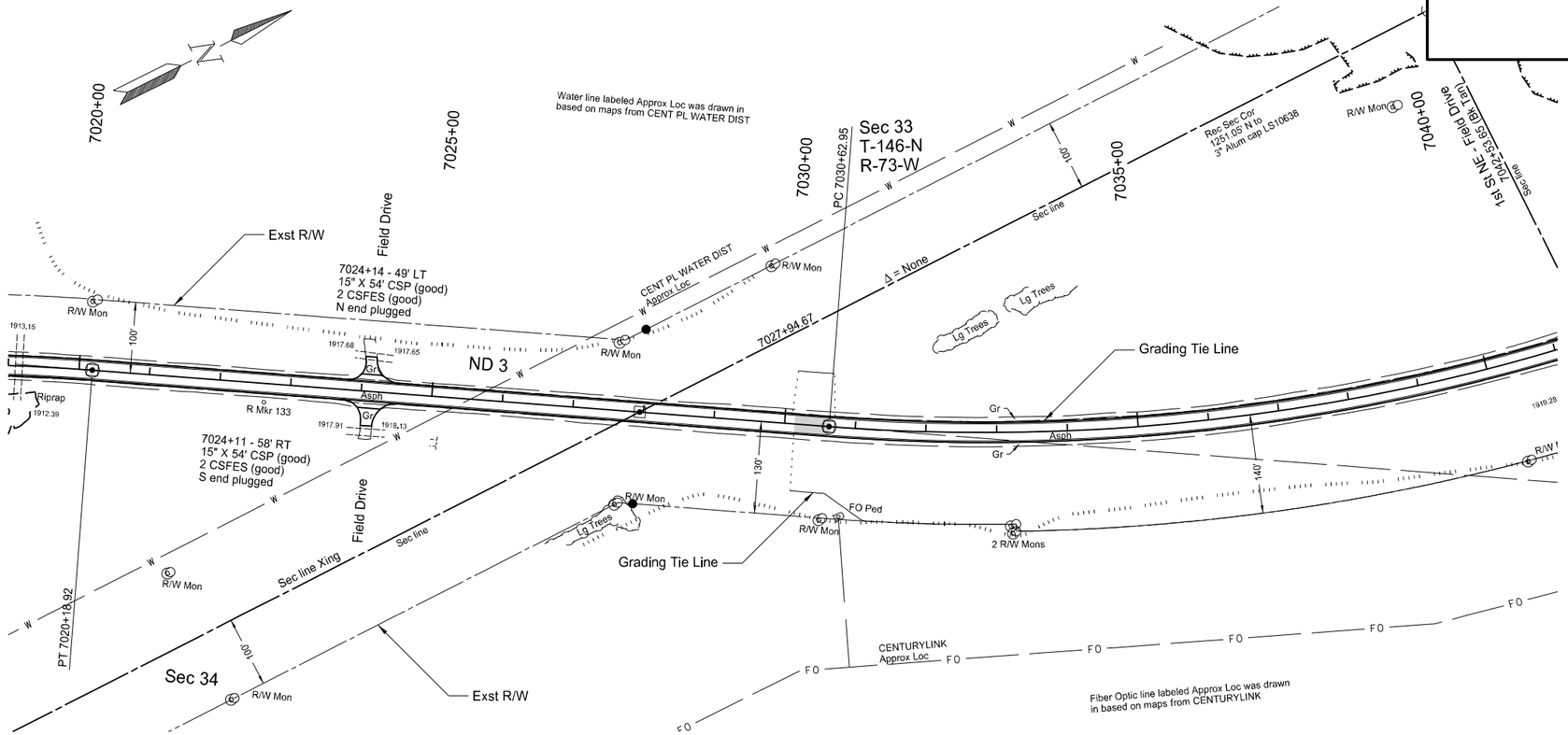
Plan & Profile

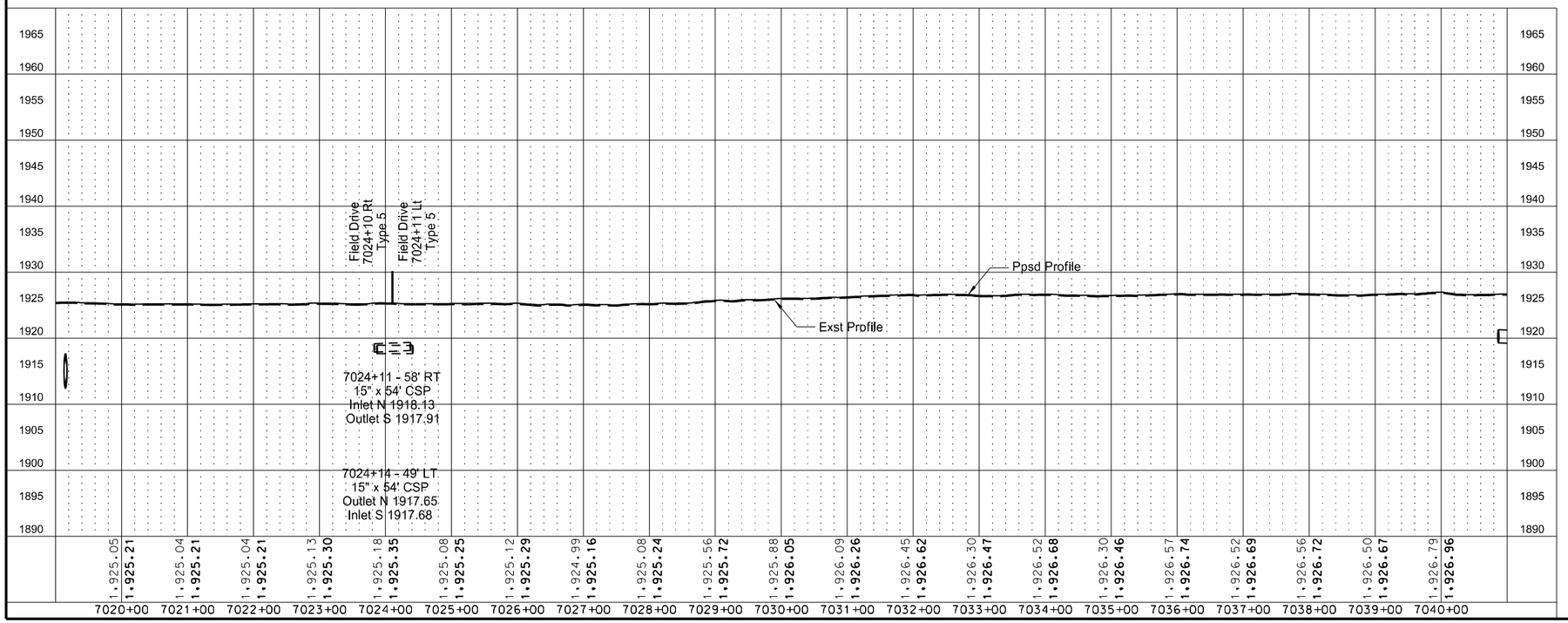
ND 3
Tuttle N to W Jct 200

7000+00 to 7020+00
Wells County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	60	54

SPEC	CODE	BID ITEM	QTY	UNIT
202	0132	REMOVAL OF BITUMINOUS SURFACING		
		7030+14 to 7030+64	161	SY
990	0400	PIPE CLEANOUT		
		7024+11 Rt	1	EA
		7024+14 Lt	1	EA





Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

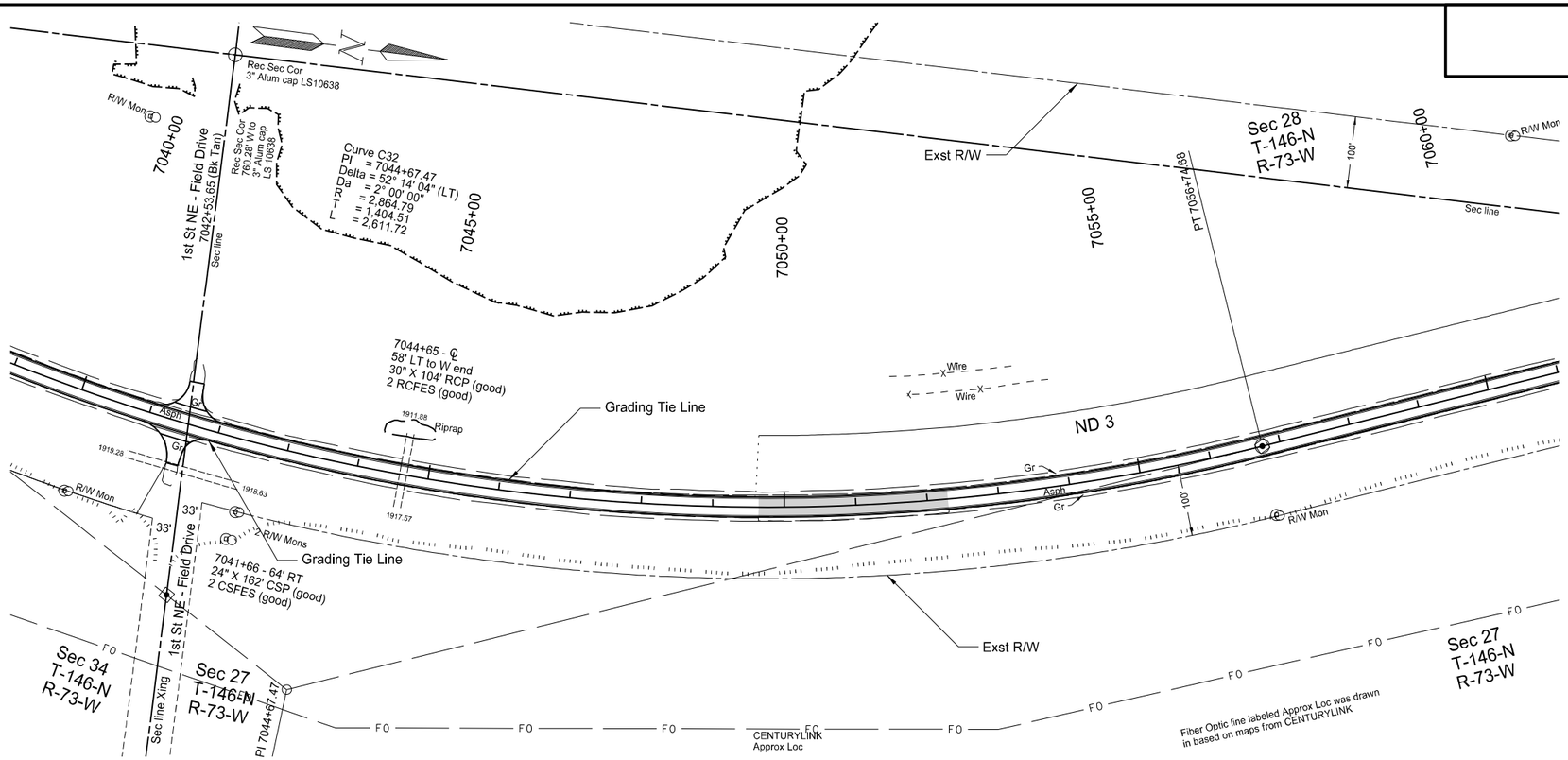
Plan & Profile

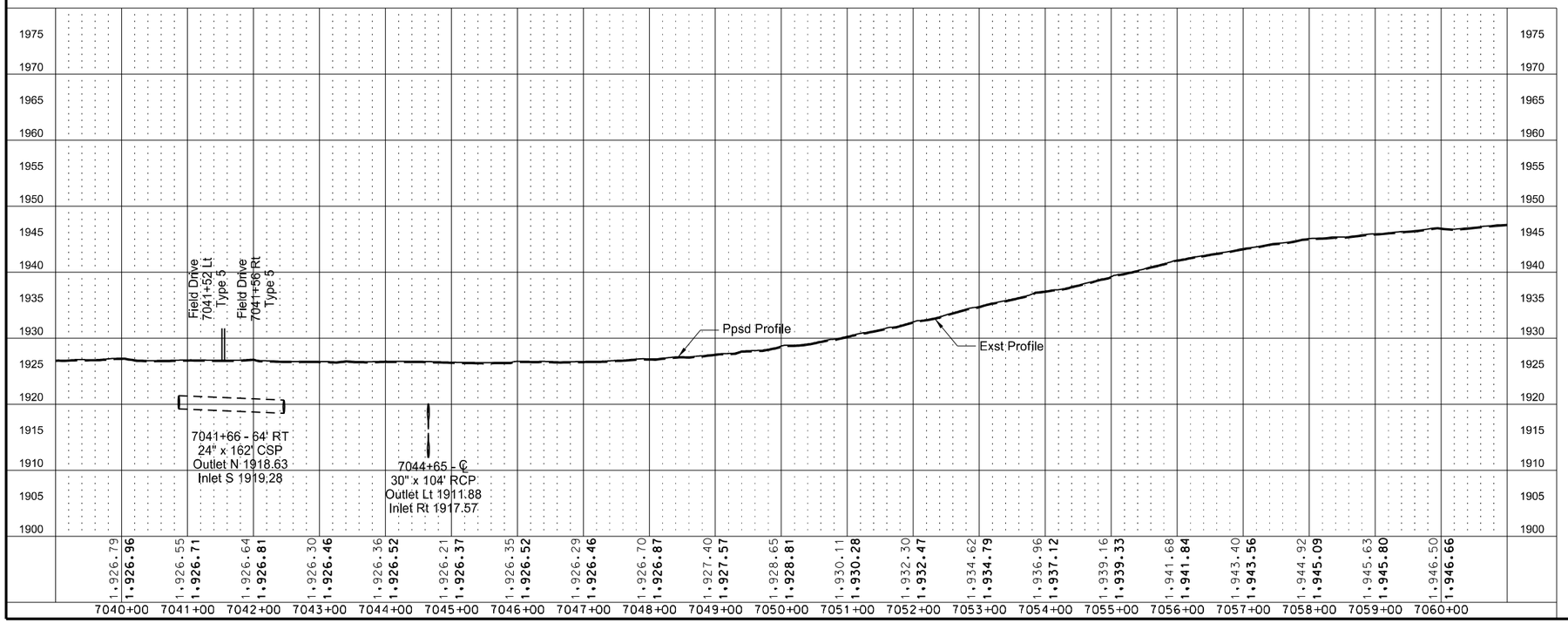
ND 3
Tuttle N to W Jct 200

7020+00 to 7040+00
Wells County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	60	55

SPEC	CODE	BID ITEM	QTY	UNIT
202	0132	REMOVAL OF BITUMINOUS SURFACING		
		7049+64 to 7052+29	888	SY





Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

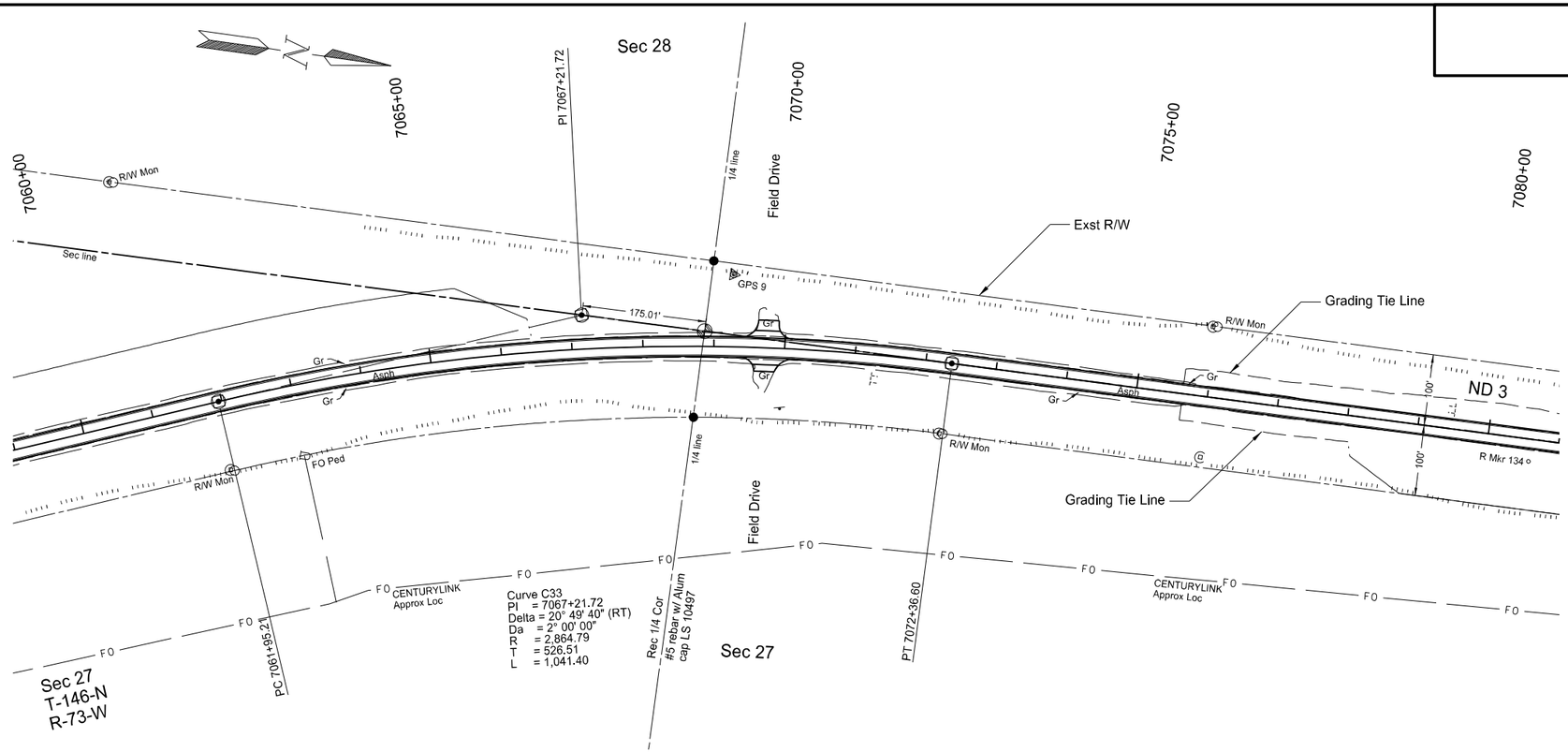
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

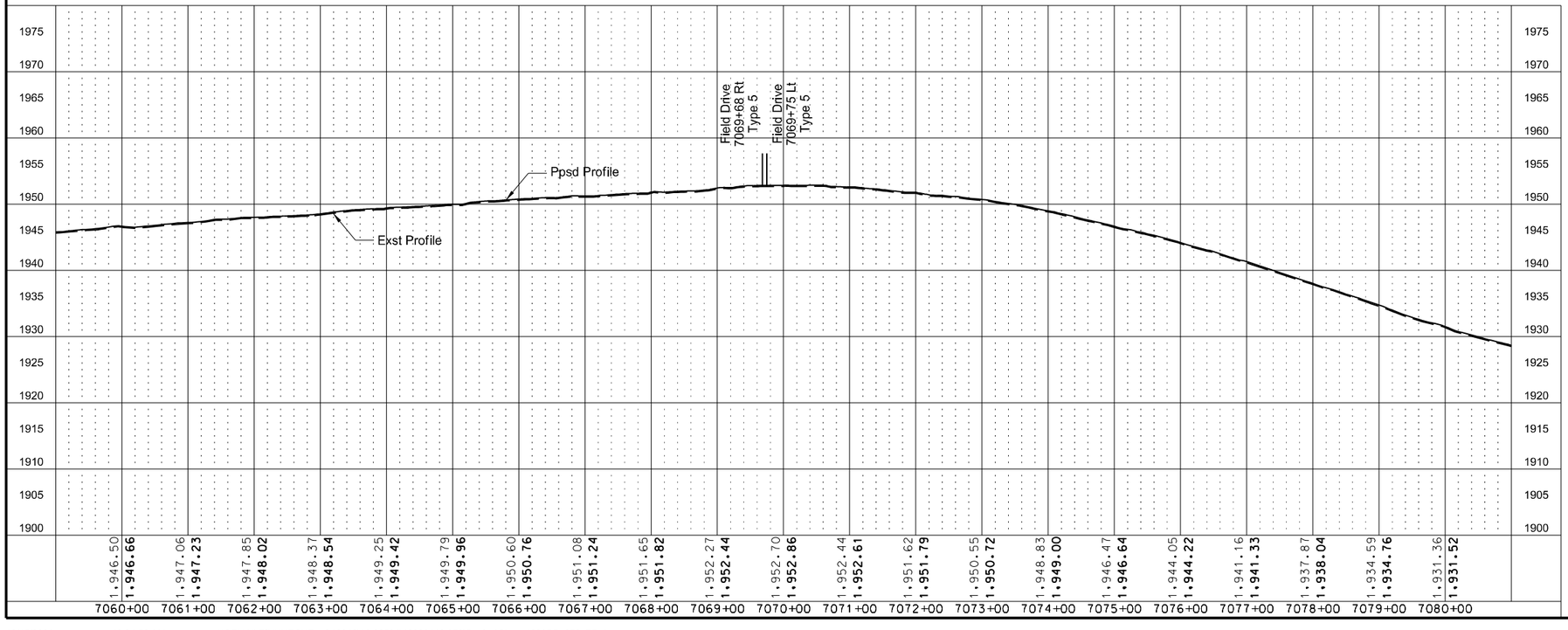
Plan & Profile

ND 3
Tuttle N to W Jct 200

7040+00 to 7060+00
Wells County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	60	56





Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

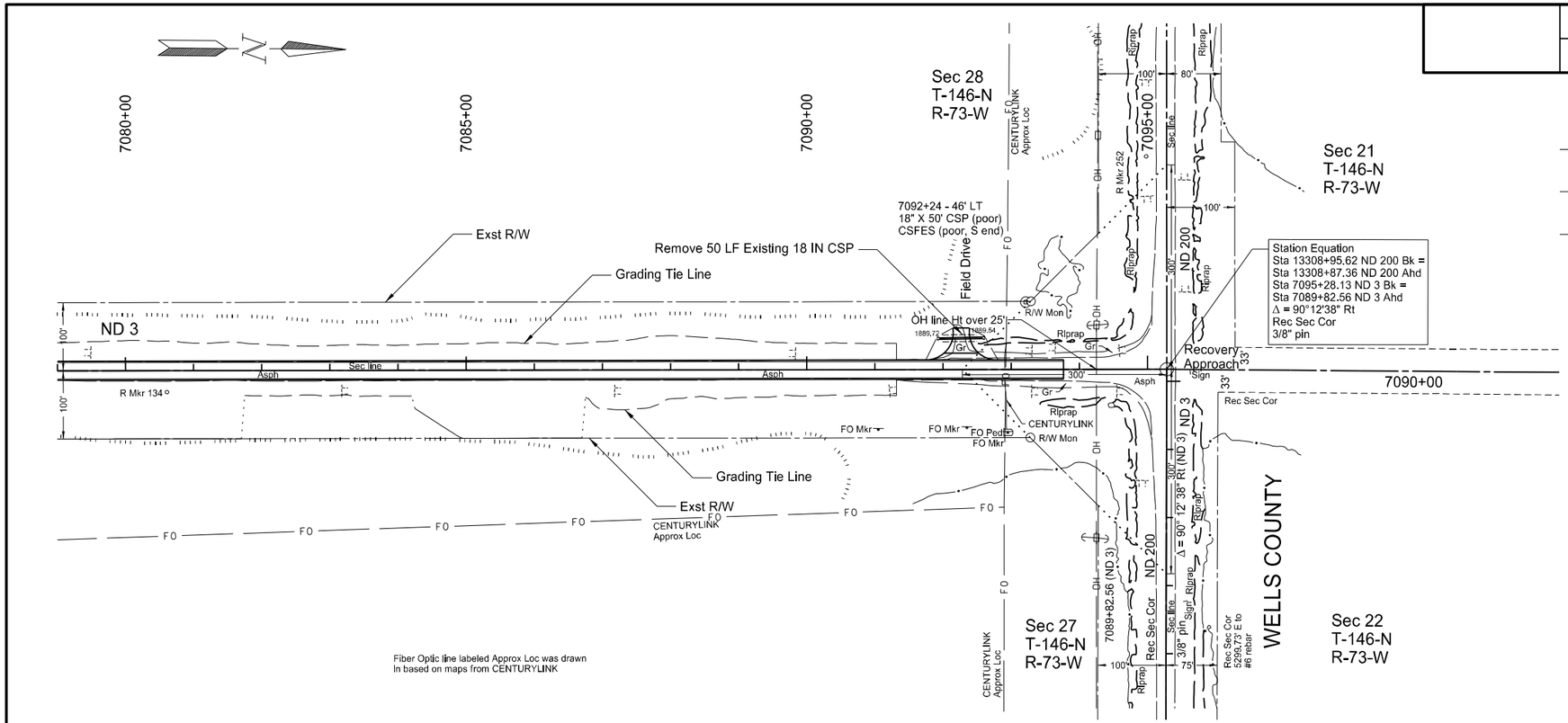
Plan & Profile

ND 3
Tuttle N to W Jct 200

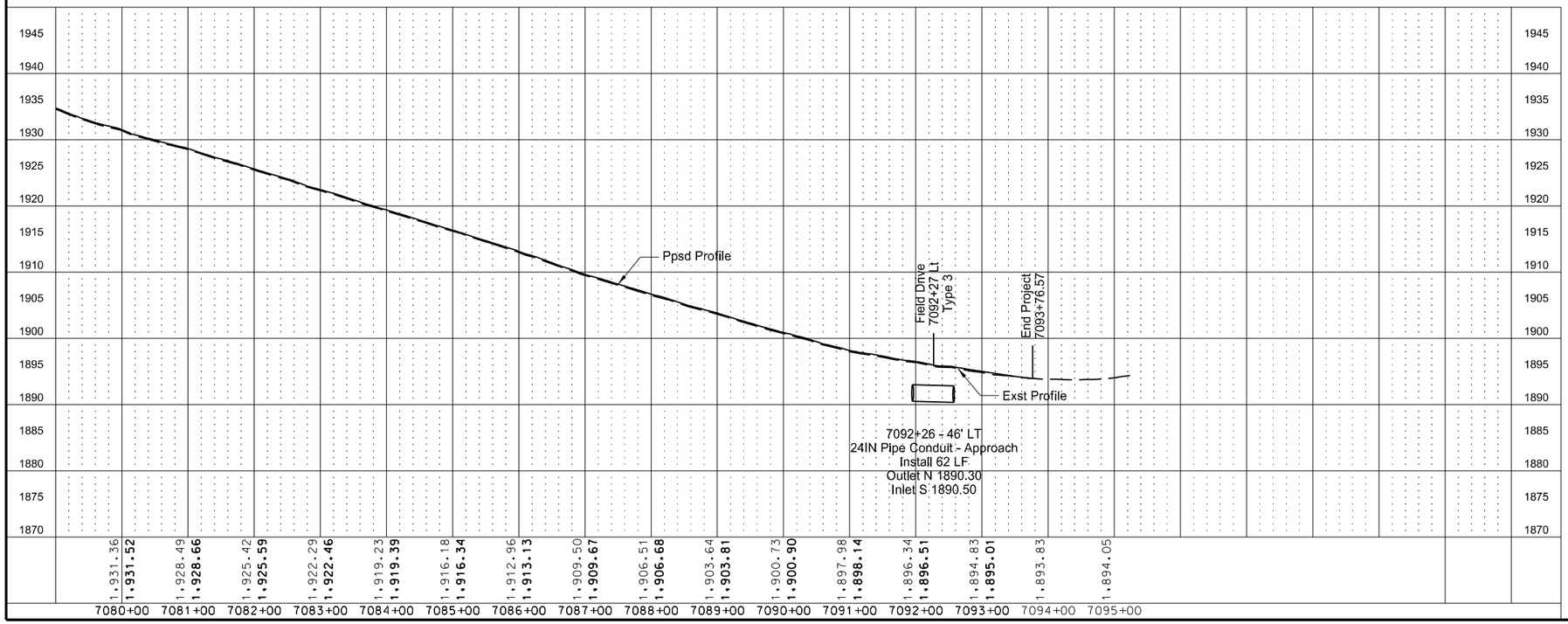
7060+00 to 7080+00
Wells County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	60	57

SPEC	CODE	BID ITEM	QTY	UNIT
202	0174	REMOVAL OF PIPE ALL TYPES AND SIZES		
		7091+99 - 46' Lt to 7092+49 - 46' Lt	50	LF
714	4106	PIPE CONDUIT 24IN-APPROACH		
		7091+95 - 46' Lt to 7092+57 - 46' Lt	62	LF
754	0805	OBJECT MARKERS - CULVERTS		
		7091+95 Lt	1	EA
		7092+57 Lt	1	EA



Fiber Optic line labeled Approx Loc was drawn
In based on maps from CENTURYLINK



Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

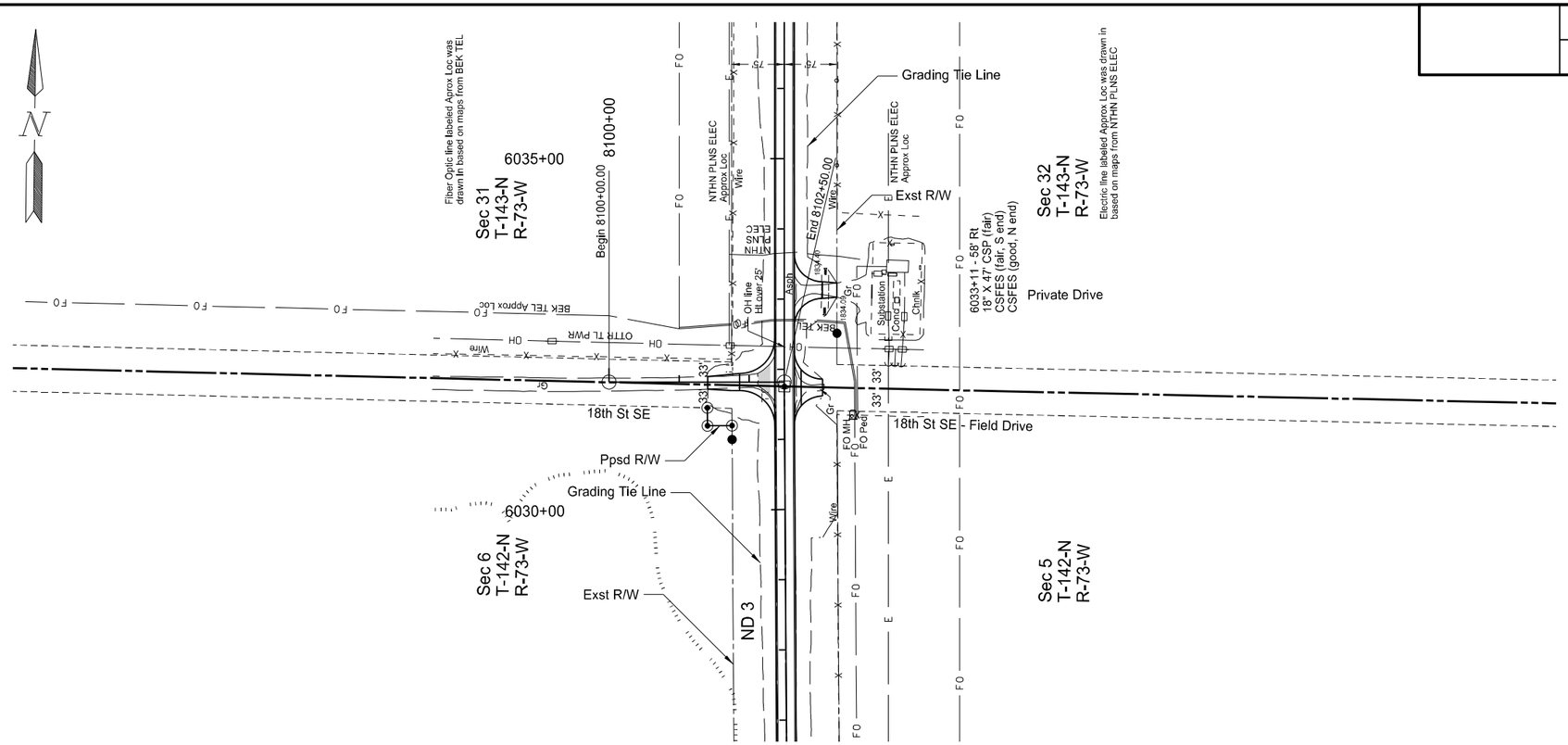
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 12/15/2021
NORTH DAKOTA

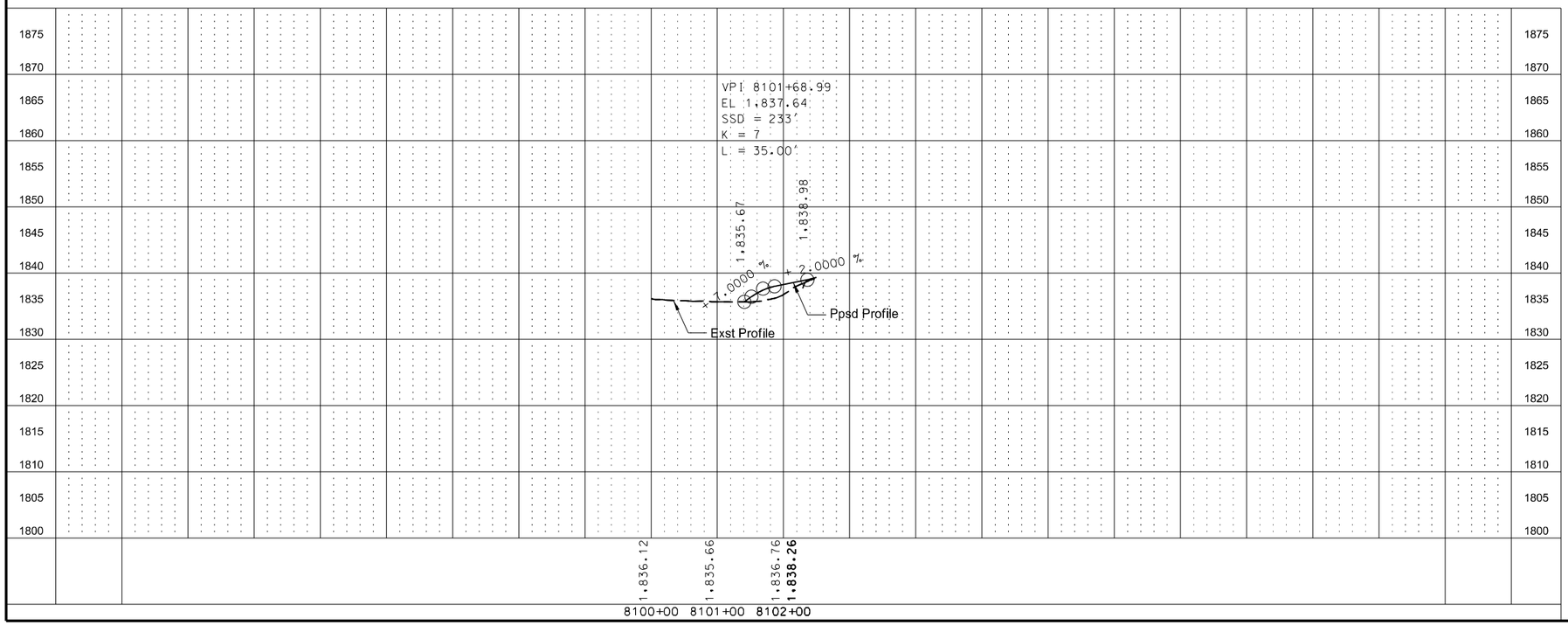
Plan & Profile

ND 3
Tuttle N to W Jct 200

7080+00 to 7093+76.57
Wells County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	60	58





Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

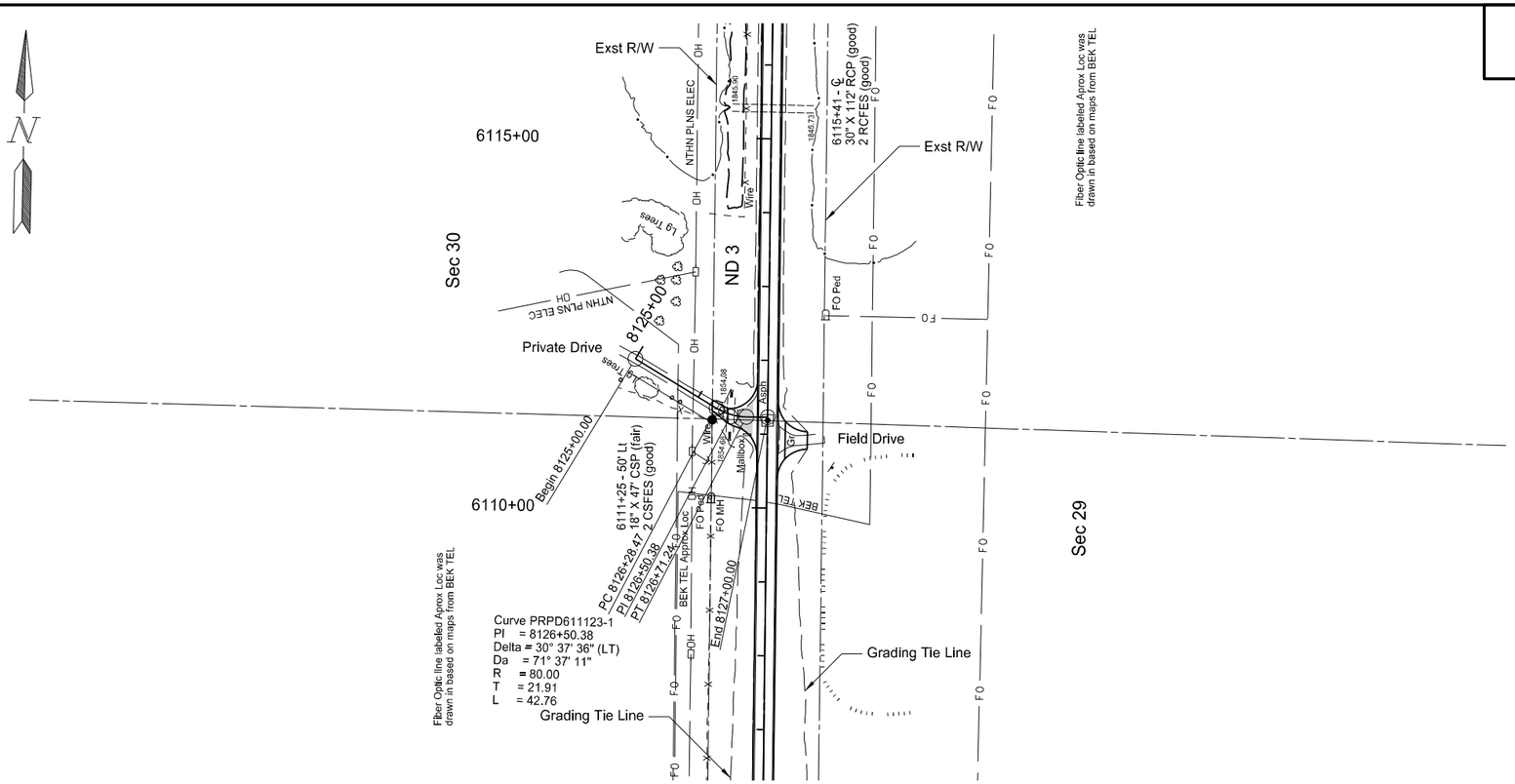
Plan & Profile

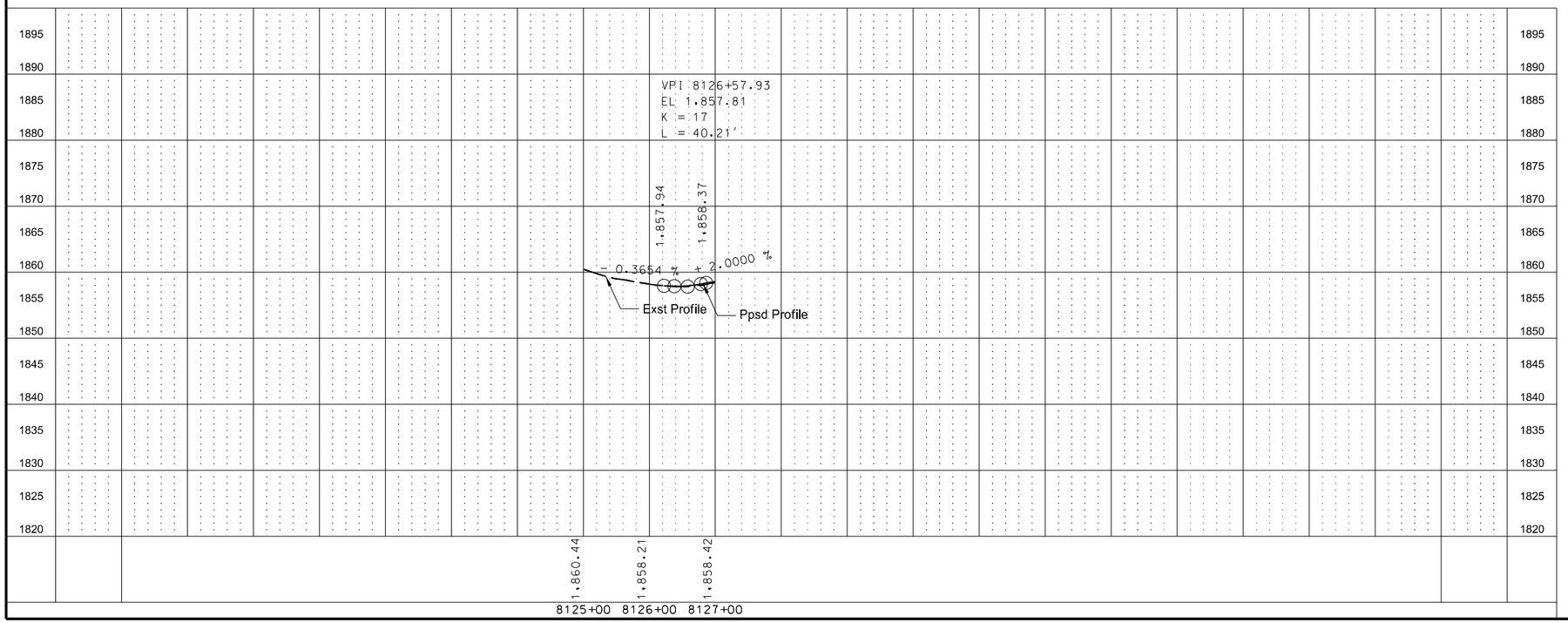
ND 3
Tuttle N to W Jct 200

18th St SE West
Kidder County

12/15/2021 10:25:00 AM KORY.KLEINKNECHT G:\2016\16.00584\10003113.050\Design\Sheets\060PP_058_PP.dgn

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	60	59





Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

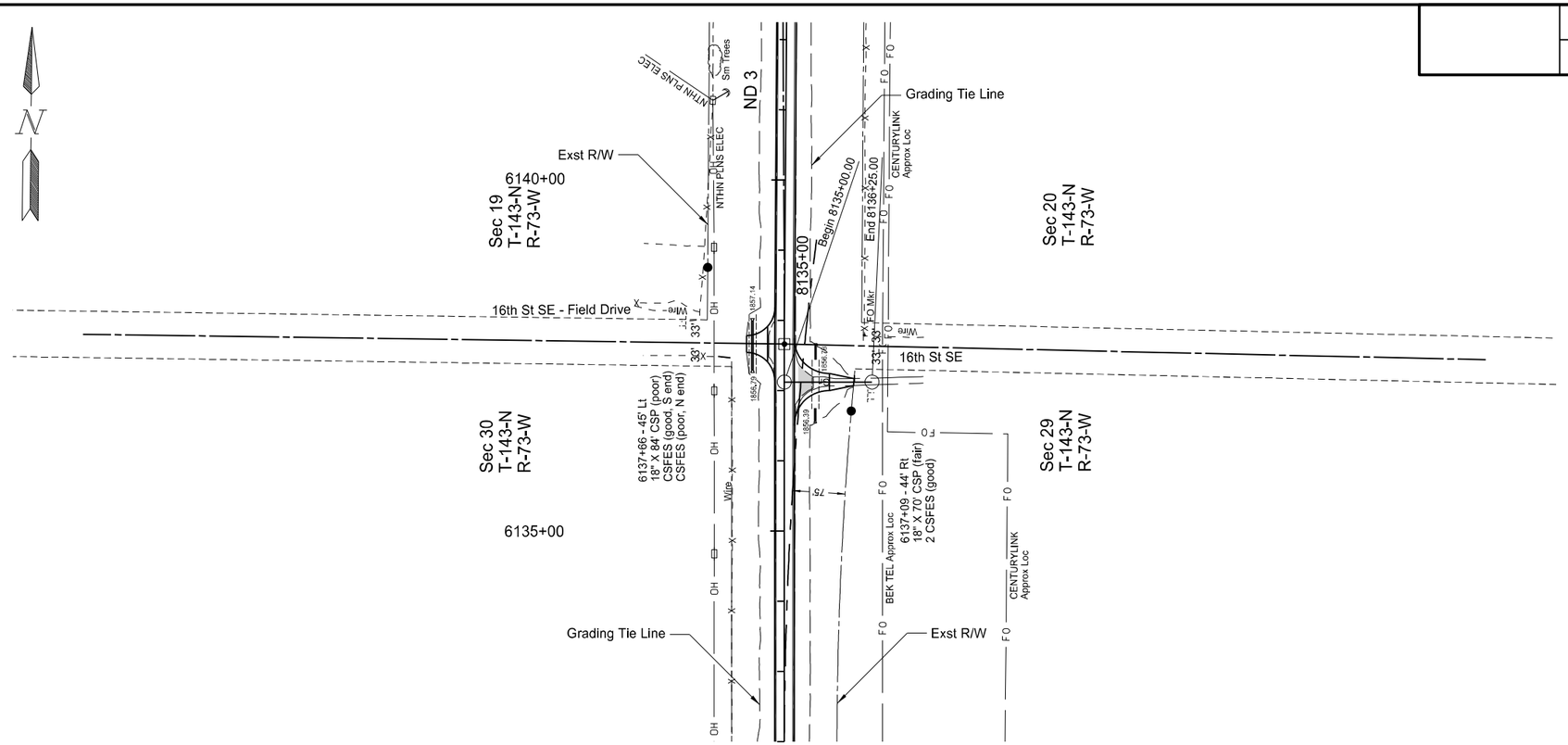
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

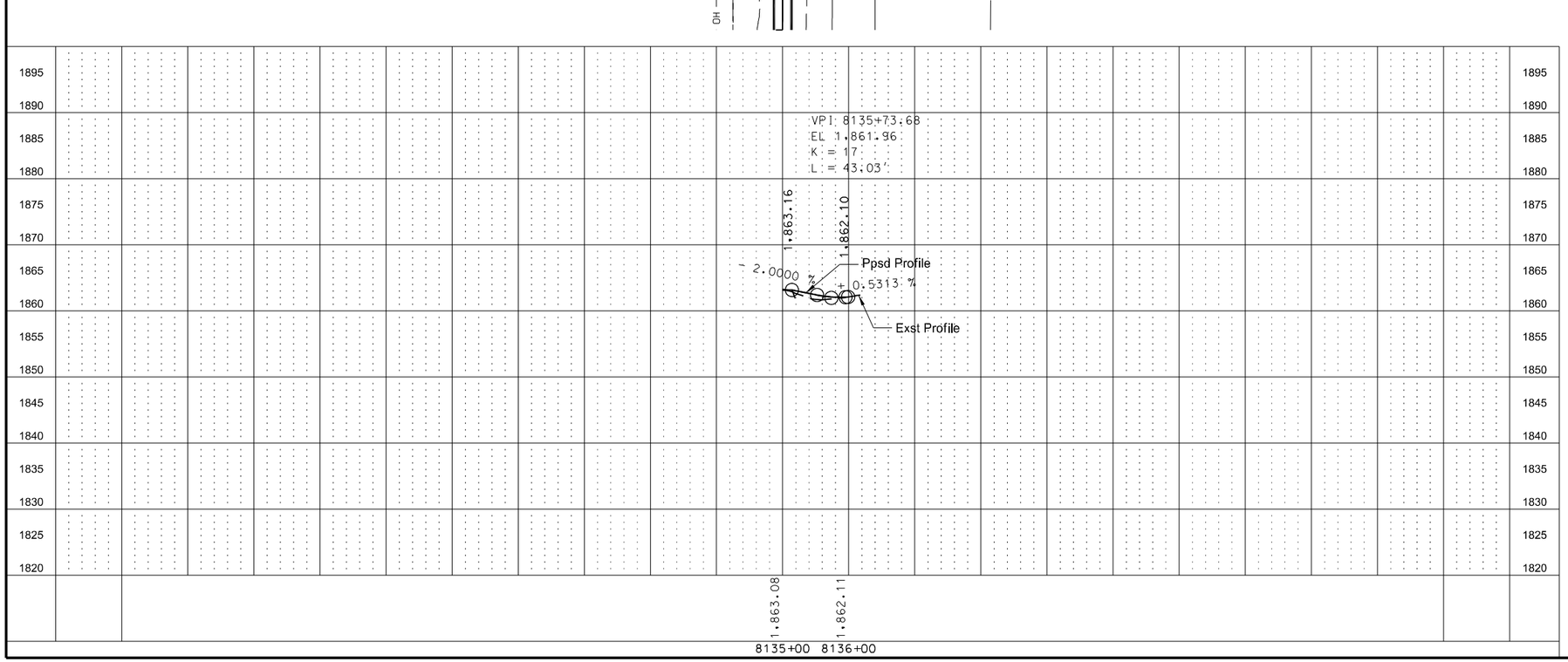
Plan & Profile

ND 3
Tuttle N to W Jct 200

Private Drive 6111+23 Lt
Kidder County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	60	60





Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

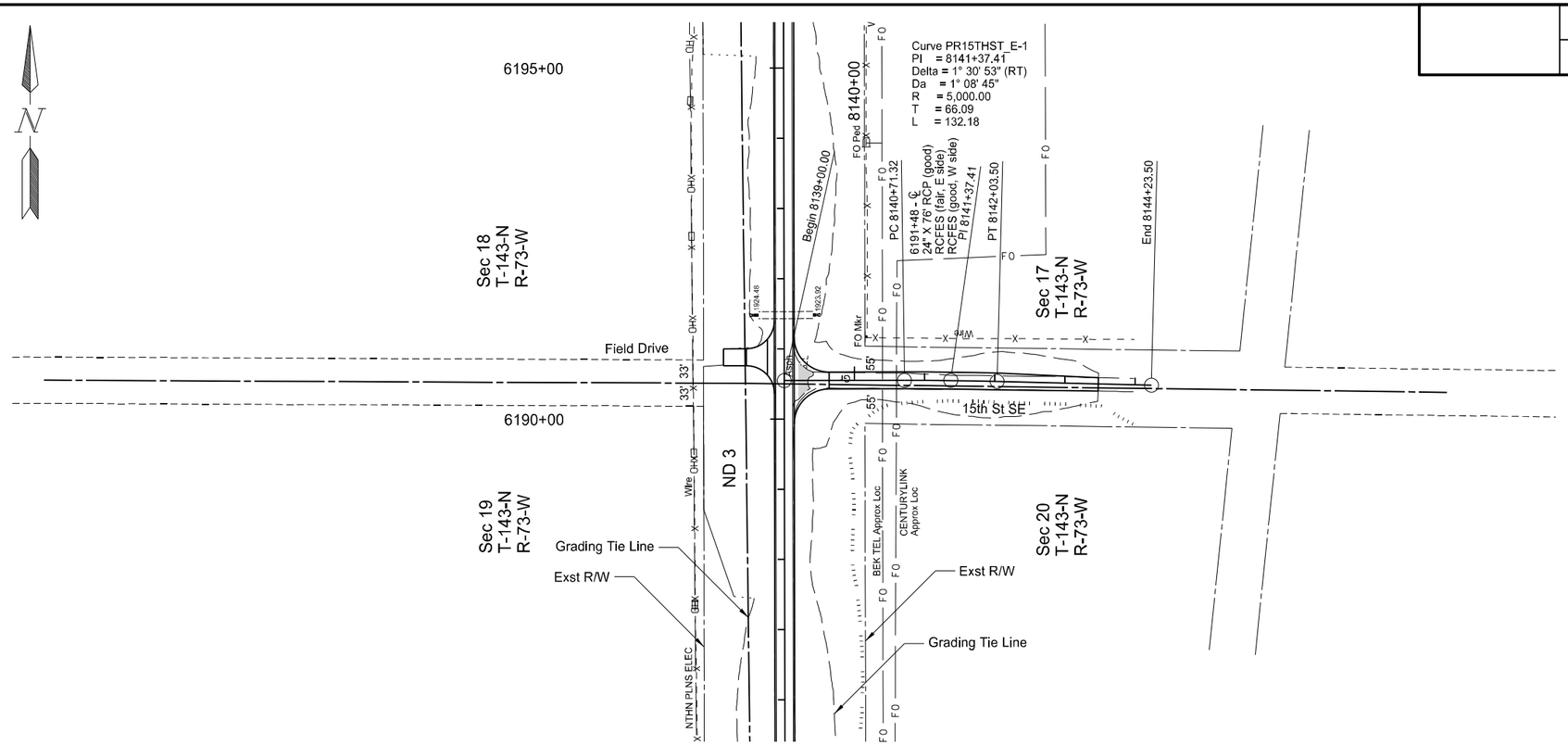
Plan & Profile

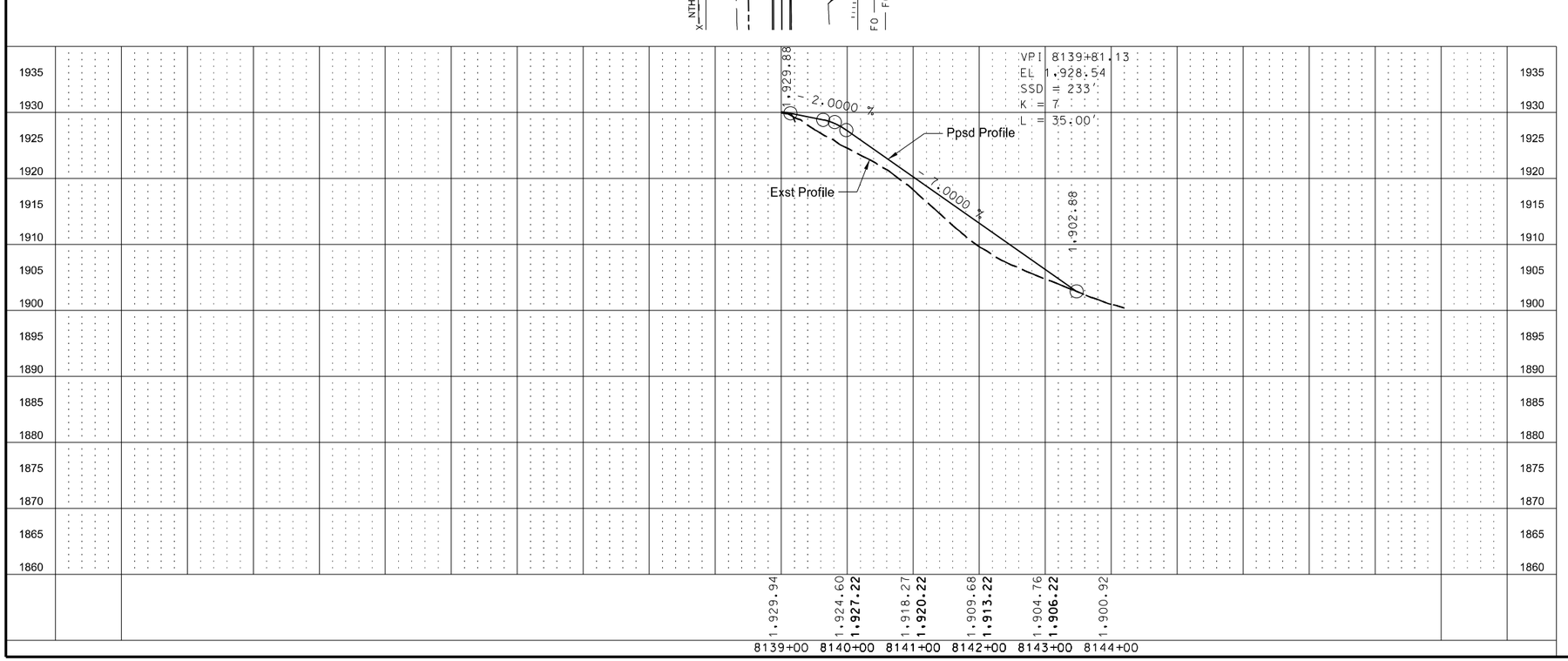
ND 3
Tuttle N to W Jct 200

16th St SE East
Kidder County

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STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	60	61





Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

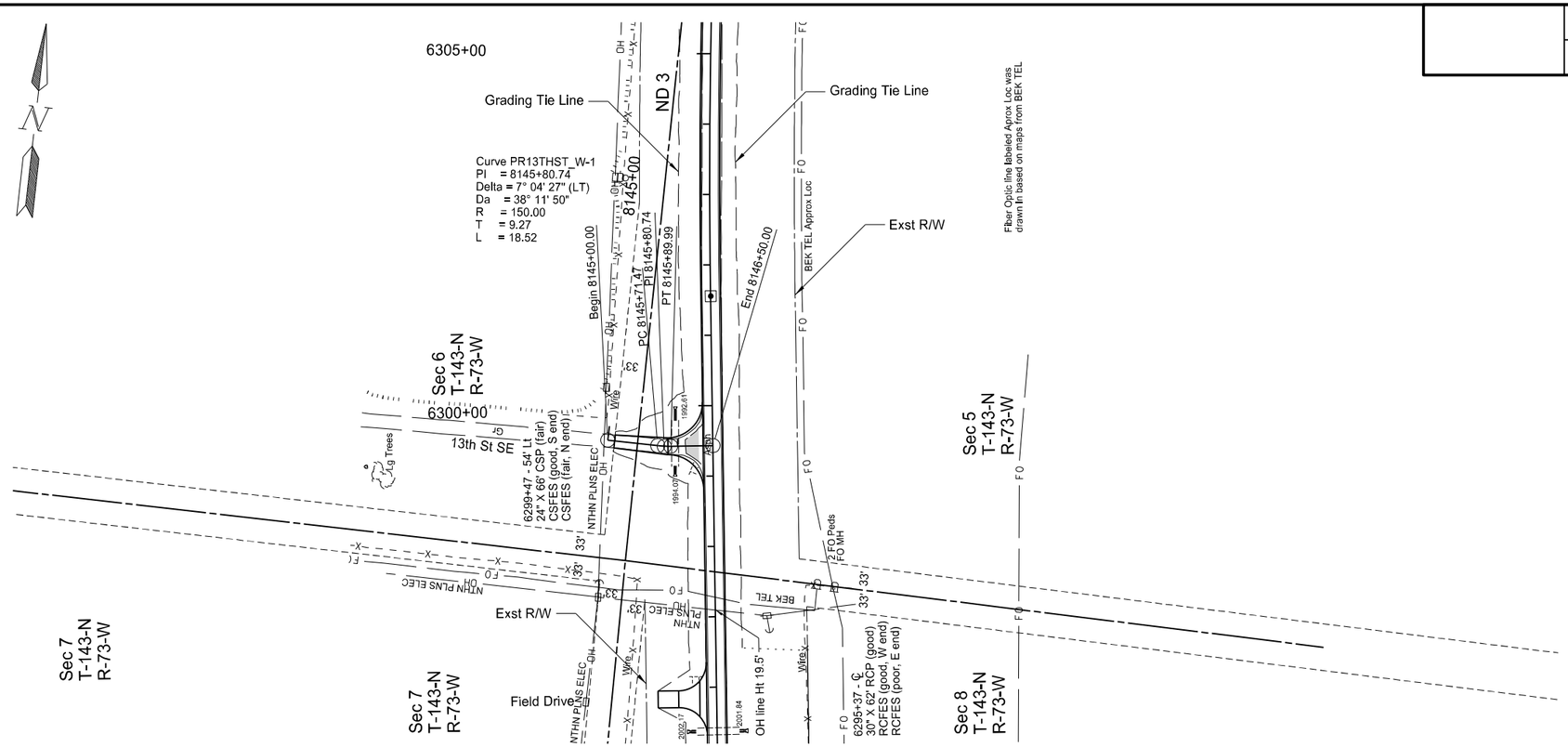
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

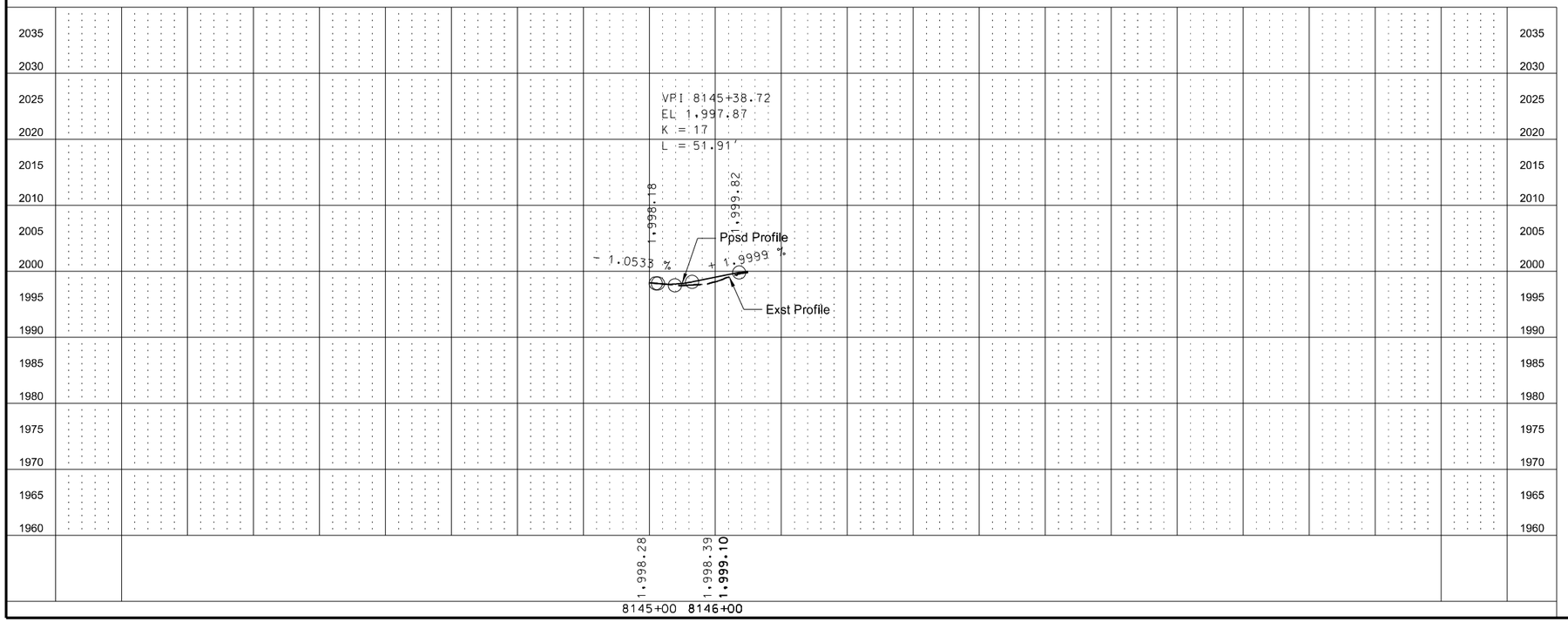
Plan & Profile

ND 3
Tuttle N to W Jct 200

15th St SE East
Kidder County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	60	62





Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

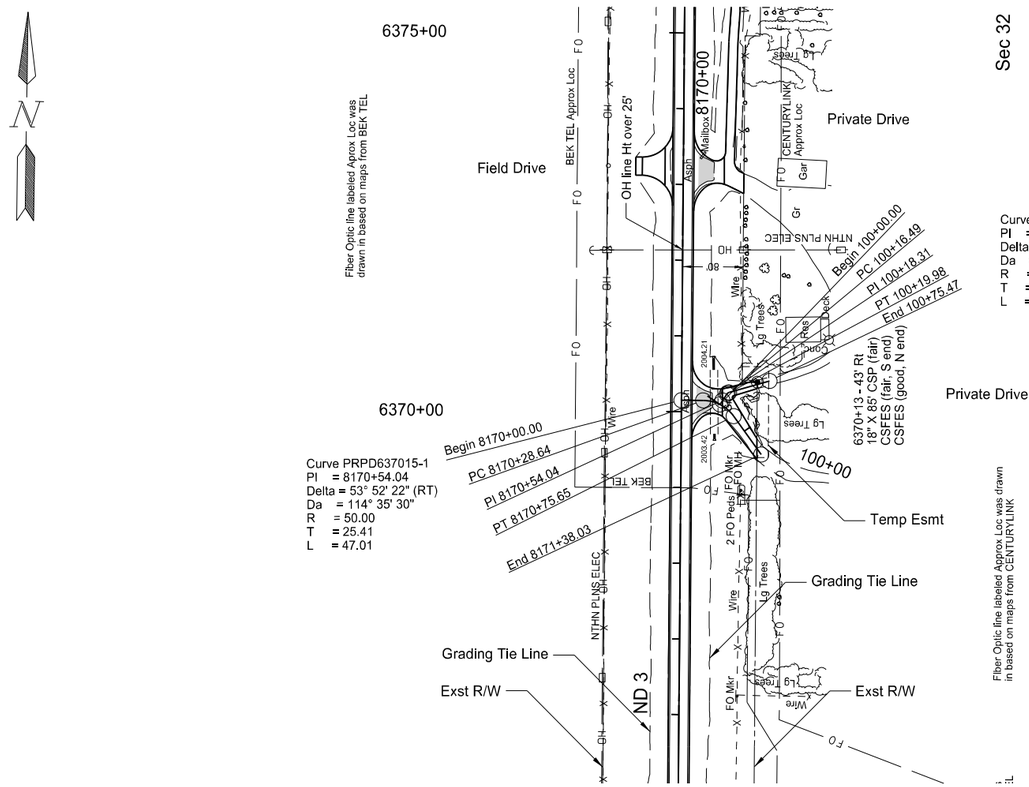
Plan & Profile

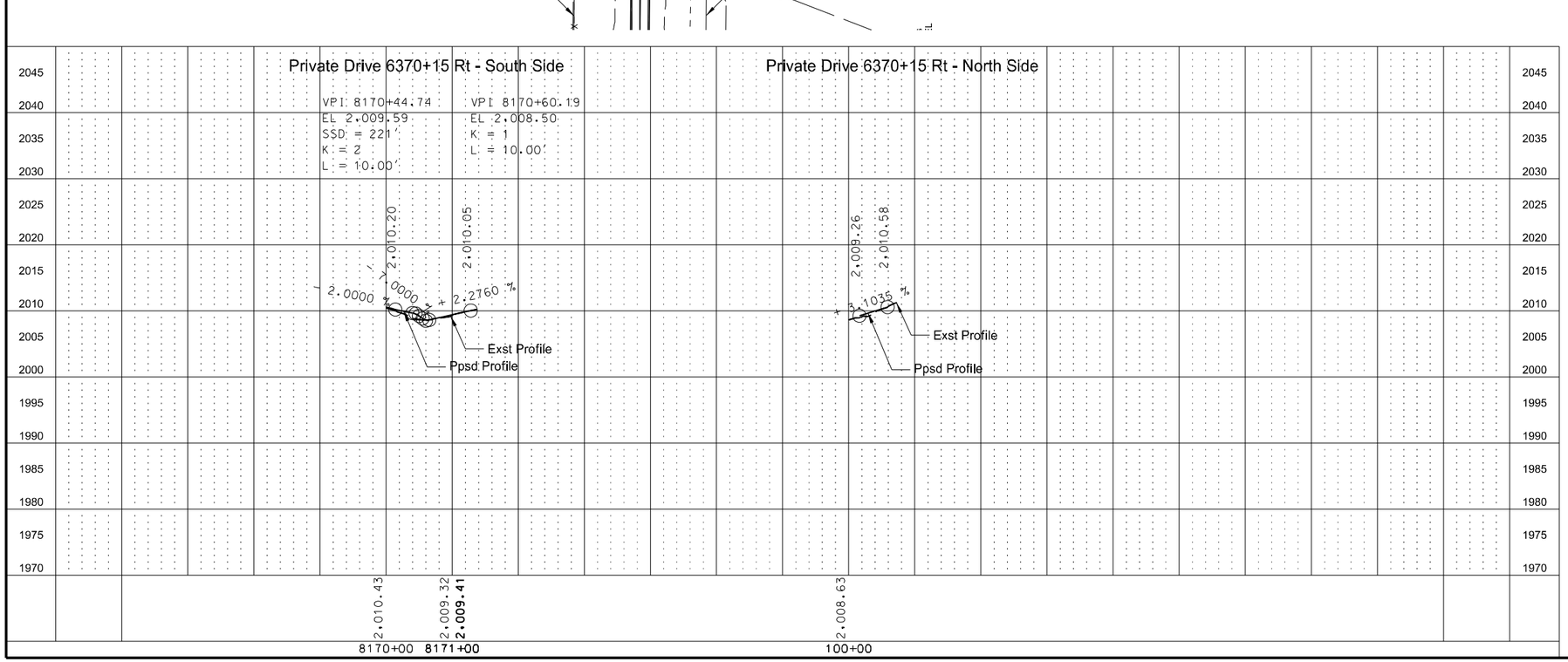
ND 3
Tuttle N to W Jct 200

13th St SE West
Kidder County

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	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	60	63





Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

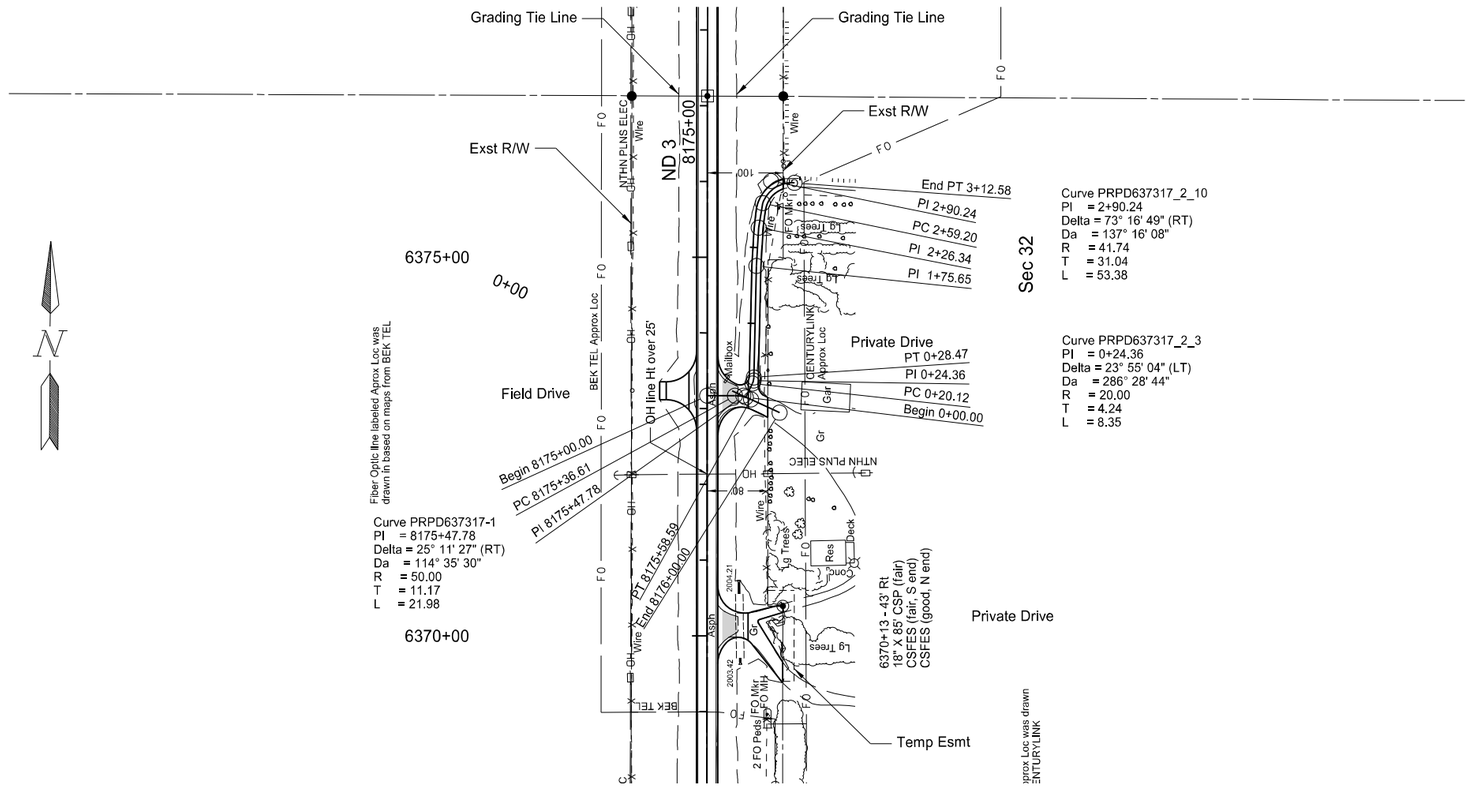
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

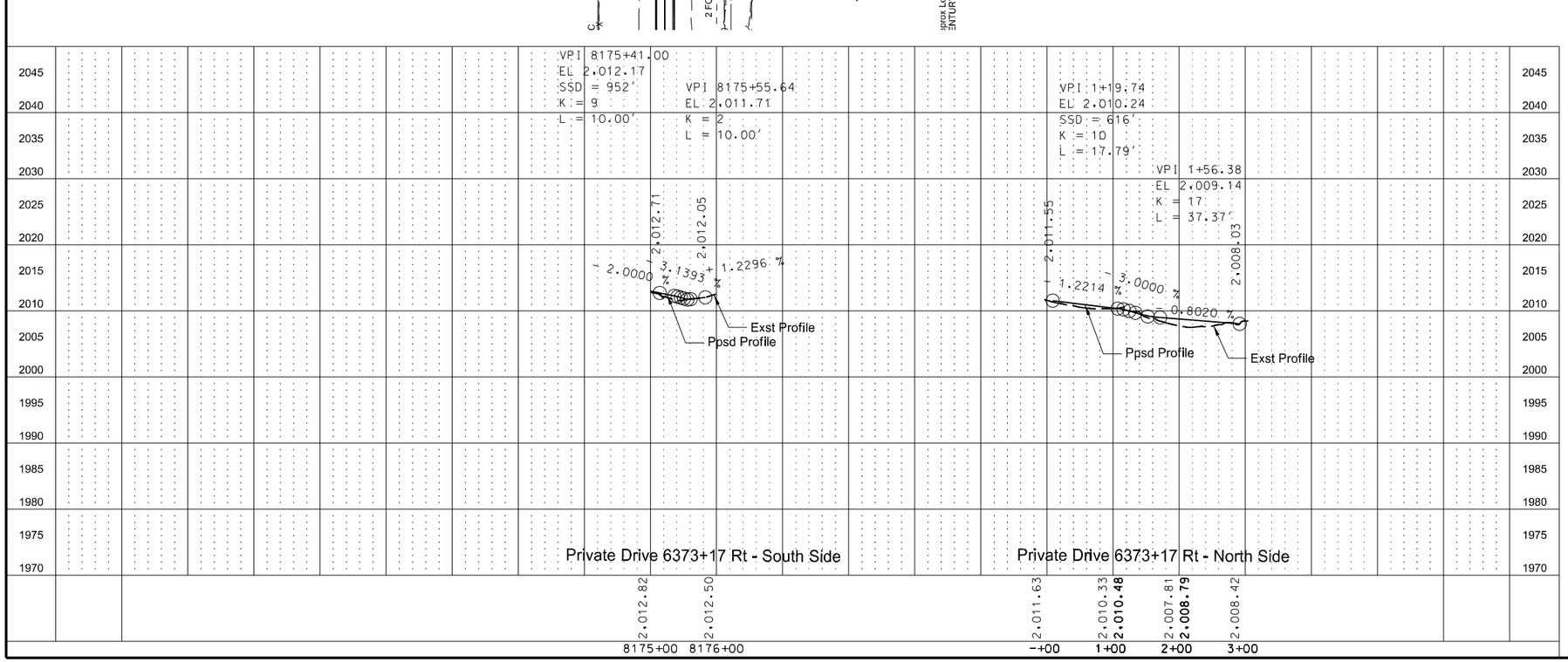
Plan & Profile

ND 3
Tuttle N to W Jct 200

Private Drive 6370+15 Rt
Kidder County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	60	64





Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

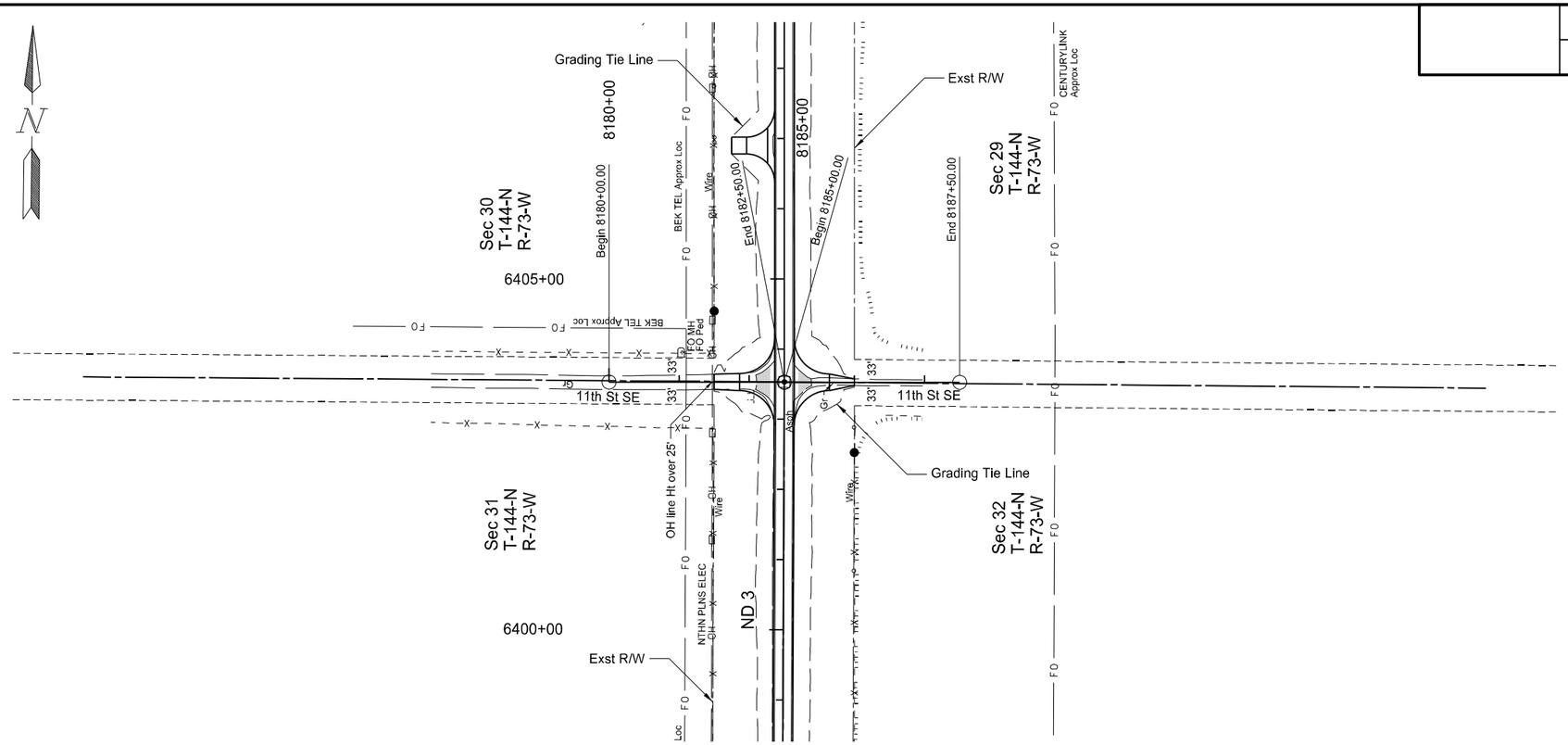
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

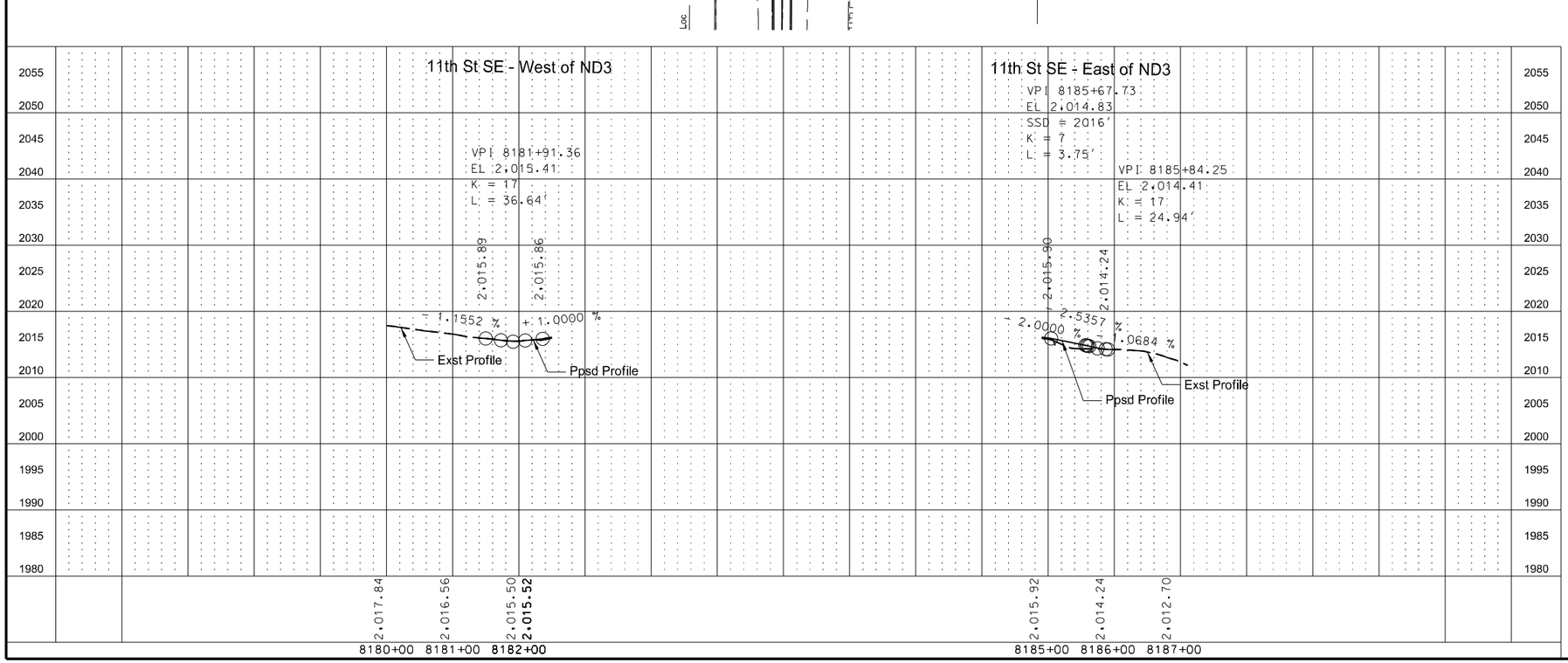
Plan & Profile

ND 3
Tuttle N to W Jct 200

Private Drive 6373+17 Rt
Kidder County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	60	65





Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

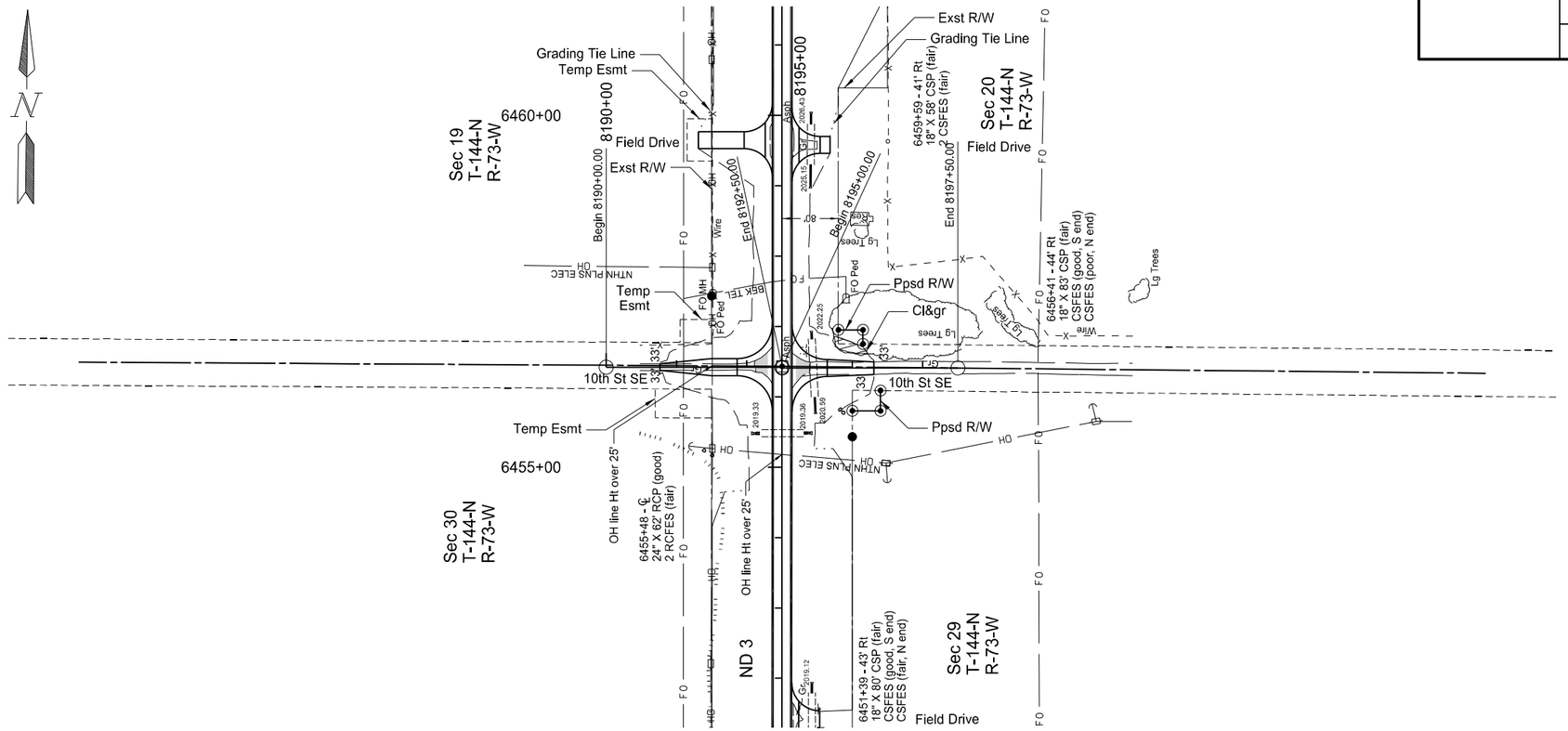
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

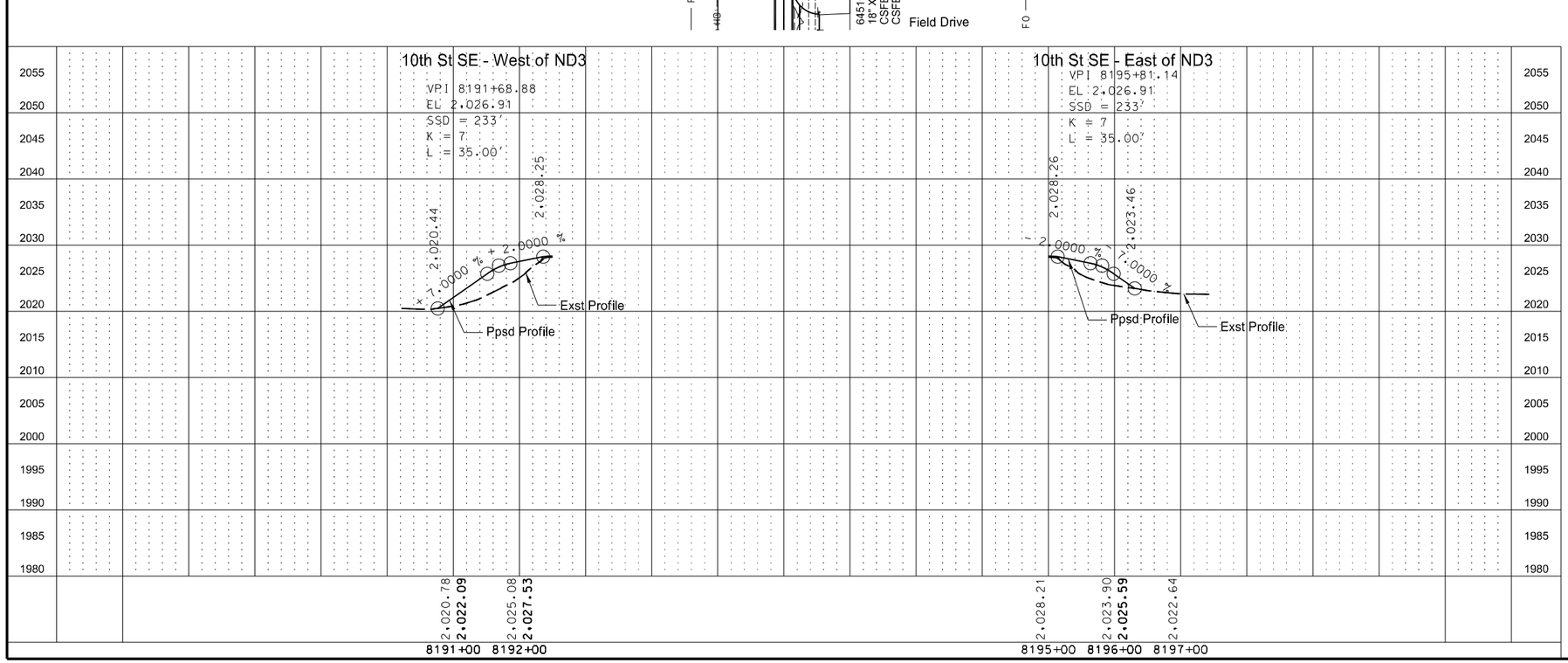
Plan & Profile

ND 3
Tuttle N to W Jct 200

11th St SE
Kidder County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	60	66





Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

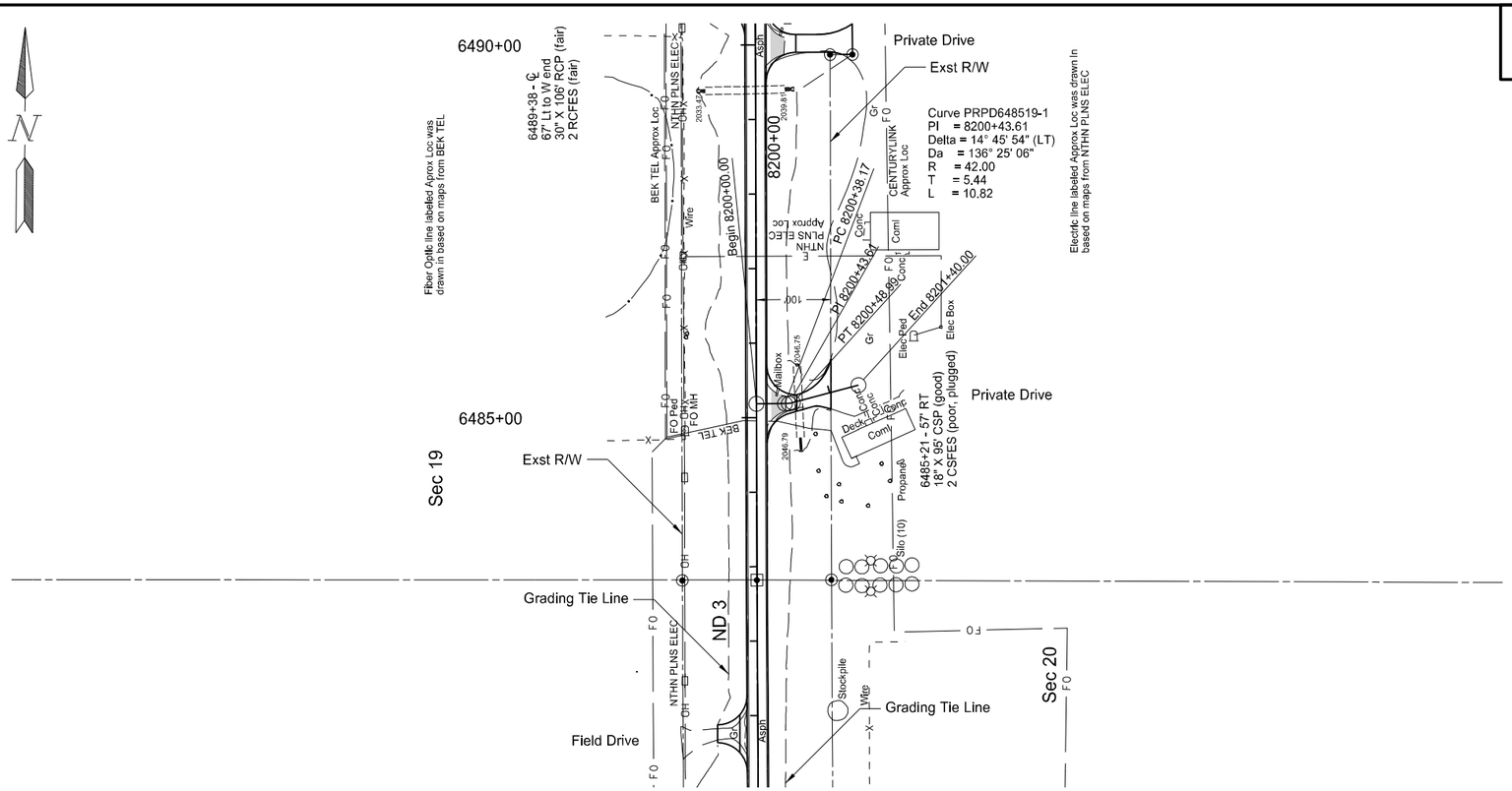
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

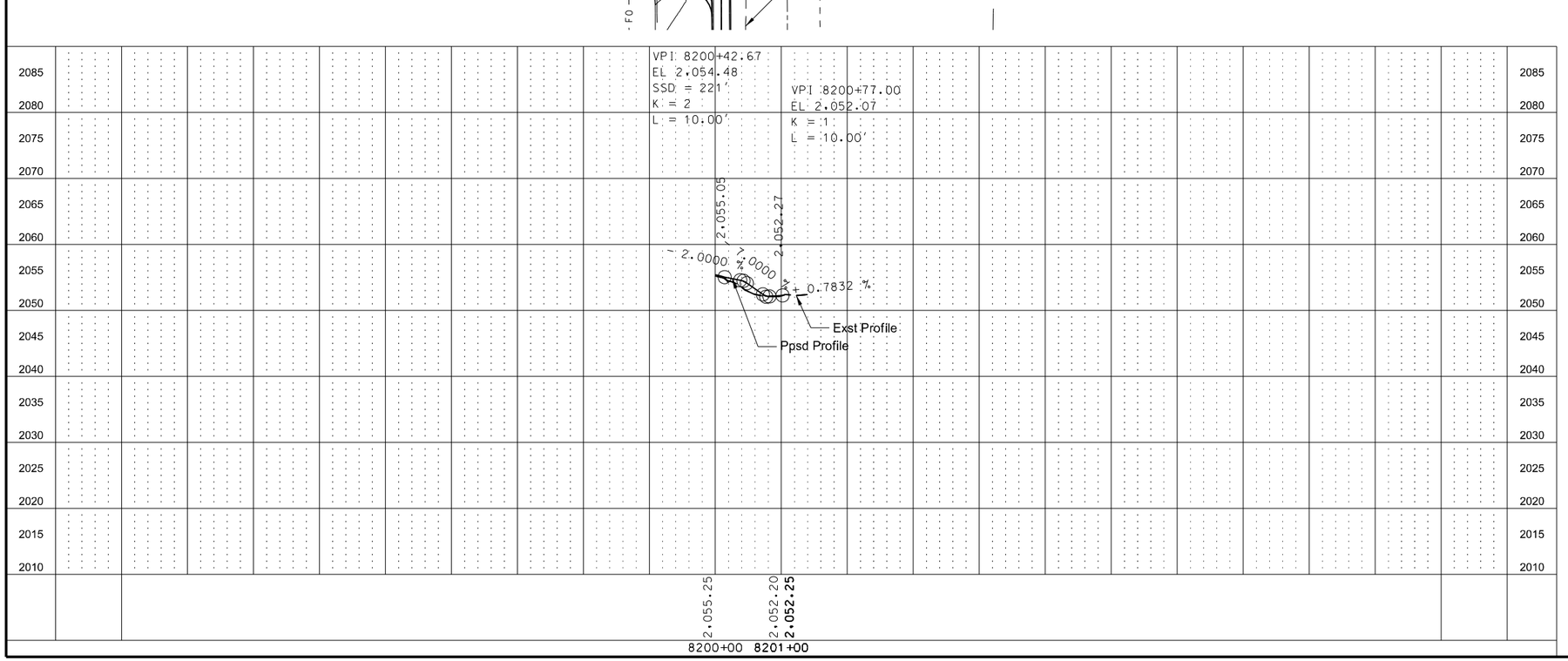
Plan & Profile

ND 3
Tuttle N to W Jct 200

10th St SE
Kidder County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	60	67





Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

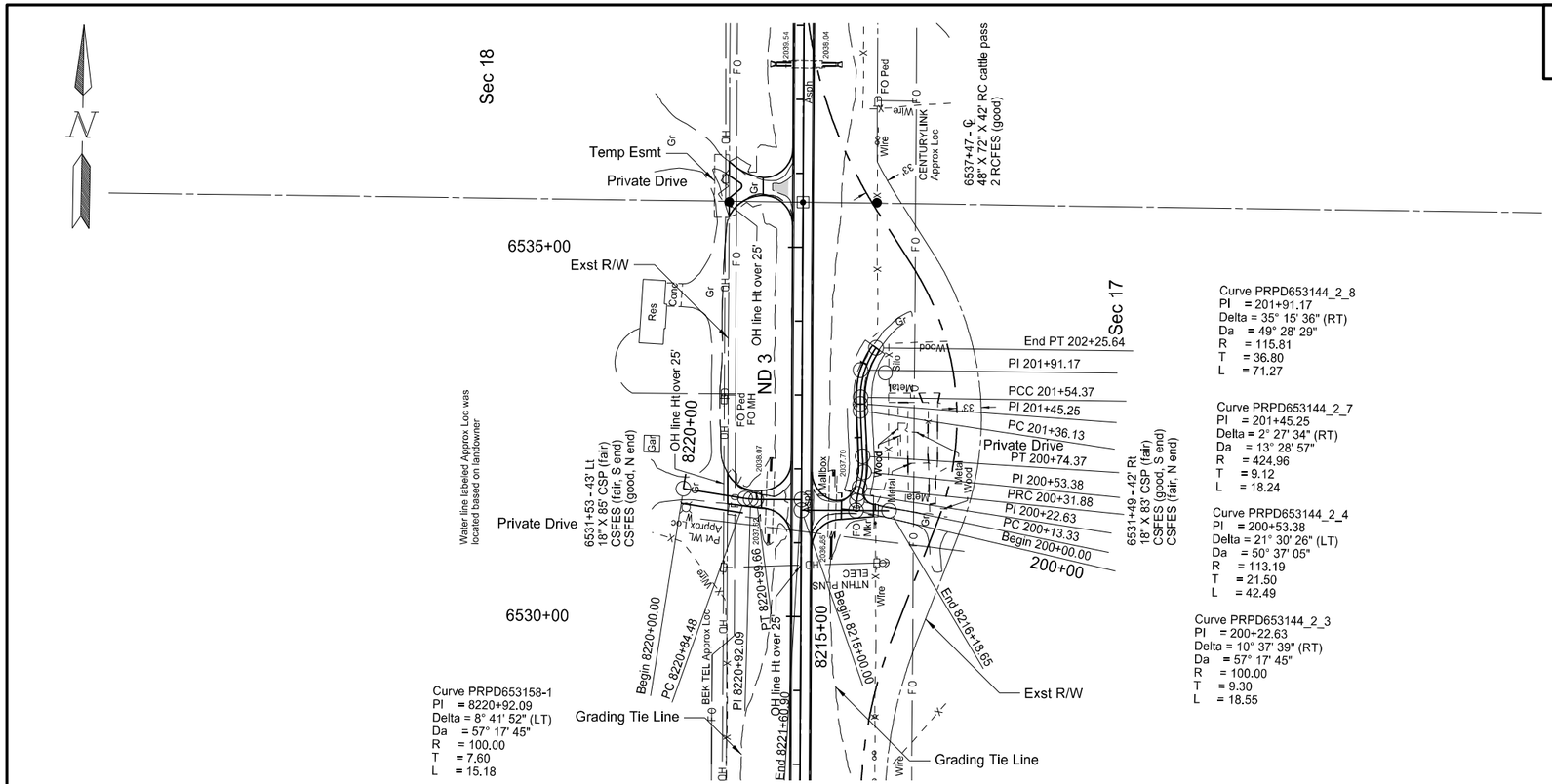
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Plan & Profile

ND 3
Tuttle N to W Jct 200

Private Drive 6485+19 Rt
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	60	68



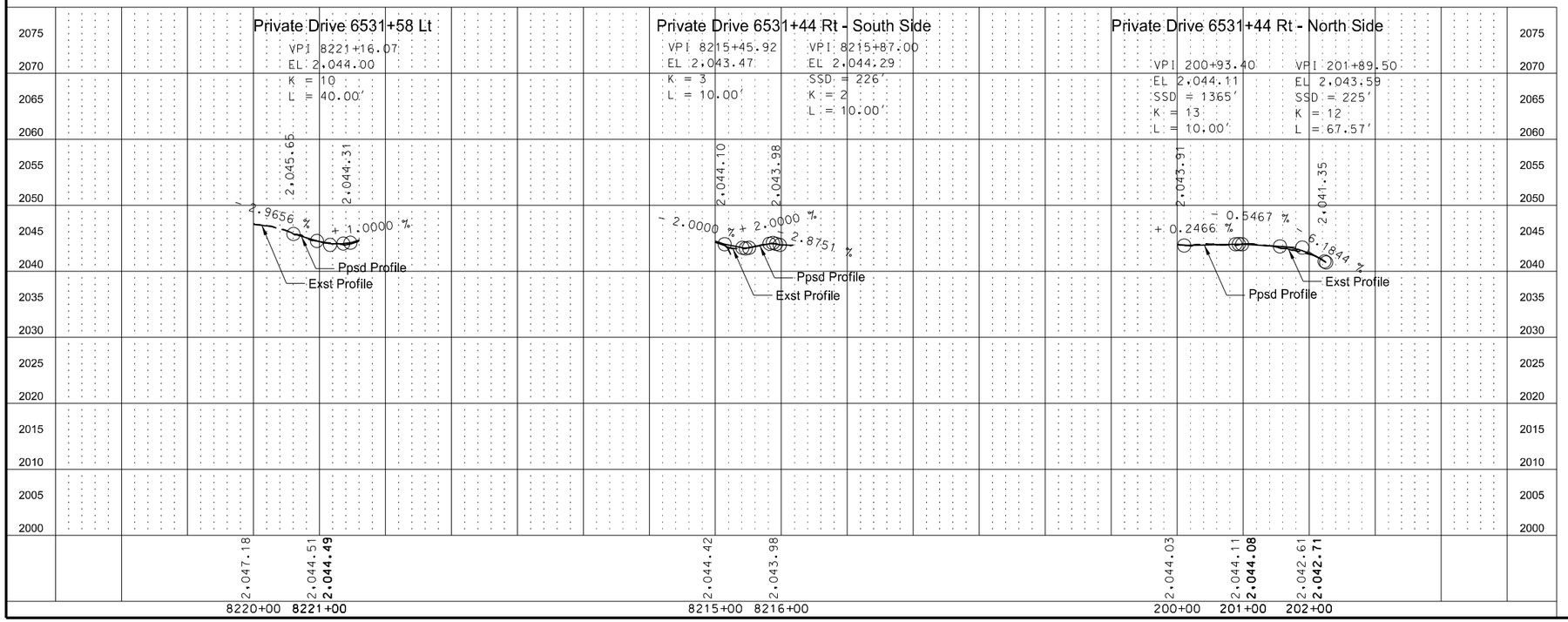
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PI = 8220+92.09
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Da = 57° 17' 45"
R = 100.00
T = 7.60
L = 15.18

Curve PRPD653144_2_8
PI = 201+91.17
Delta = 35° 15' 36" (RT)
Da = 49° 28' 29"
R = 115.81
T = 36.80
L = 71.27

Curve PRPD653144_2_7
PI = 201+45.25
Delta = 2° 27' 34" (RT)
Da = 13° 28' 57"
R = 424.96
T = 9.12
L = 18.24

Curve PRPD653144_2_4
PI = 200+53.38
Delta = 21° 30' 26" (LT)
Da = 50° 37' 05"
R = 113.19
T = 21.50
L = 42.49

Curve PRPD653144_2_3
PI = 200+22.63
Delta = 10° 37' 39" (RT)
Da = 57° 17' 45"
R = 100.00
T = 9.30
L = 18.55



Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

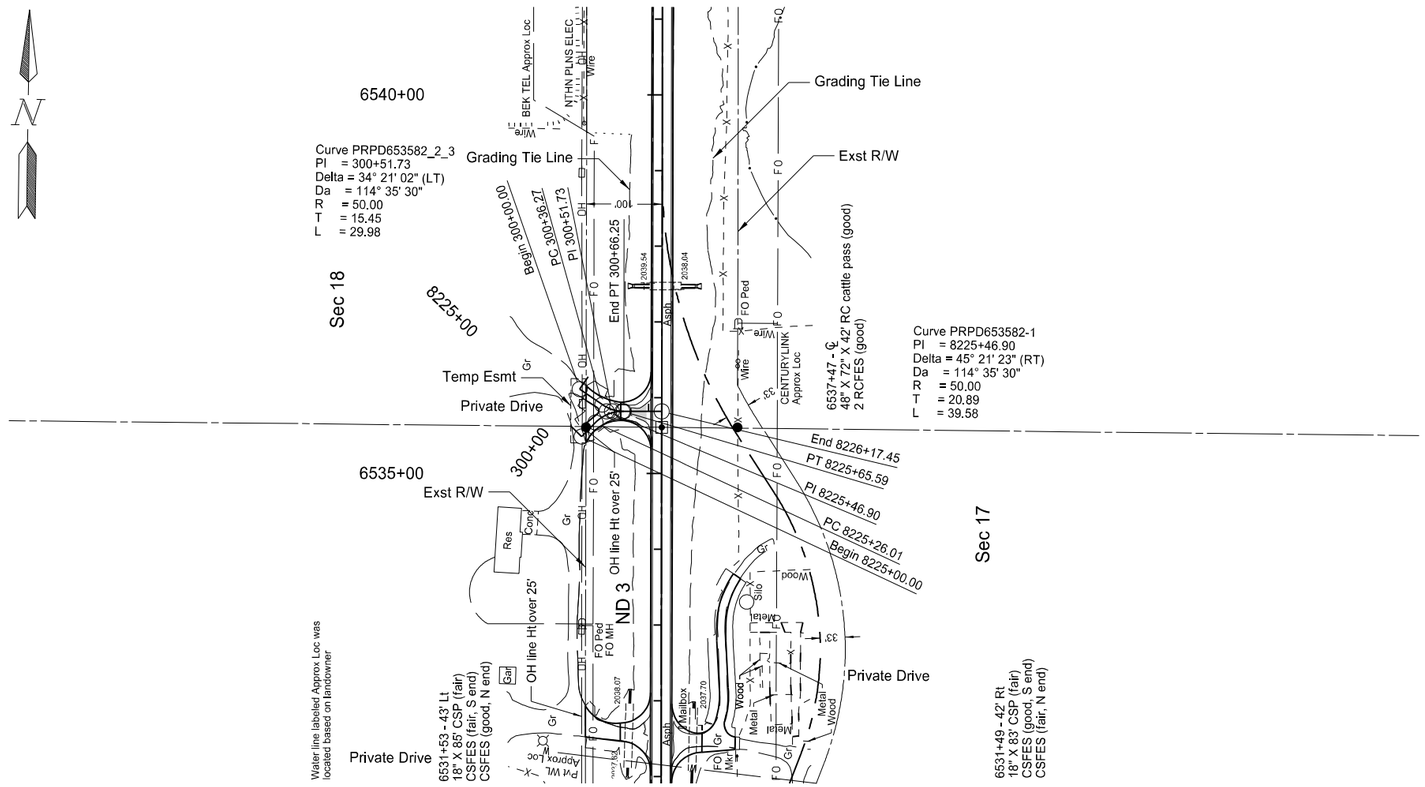
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 12/15/2021
NORTH DAKOTA

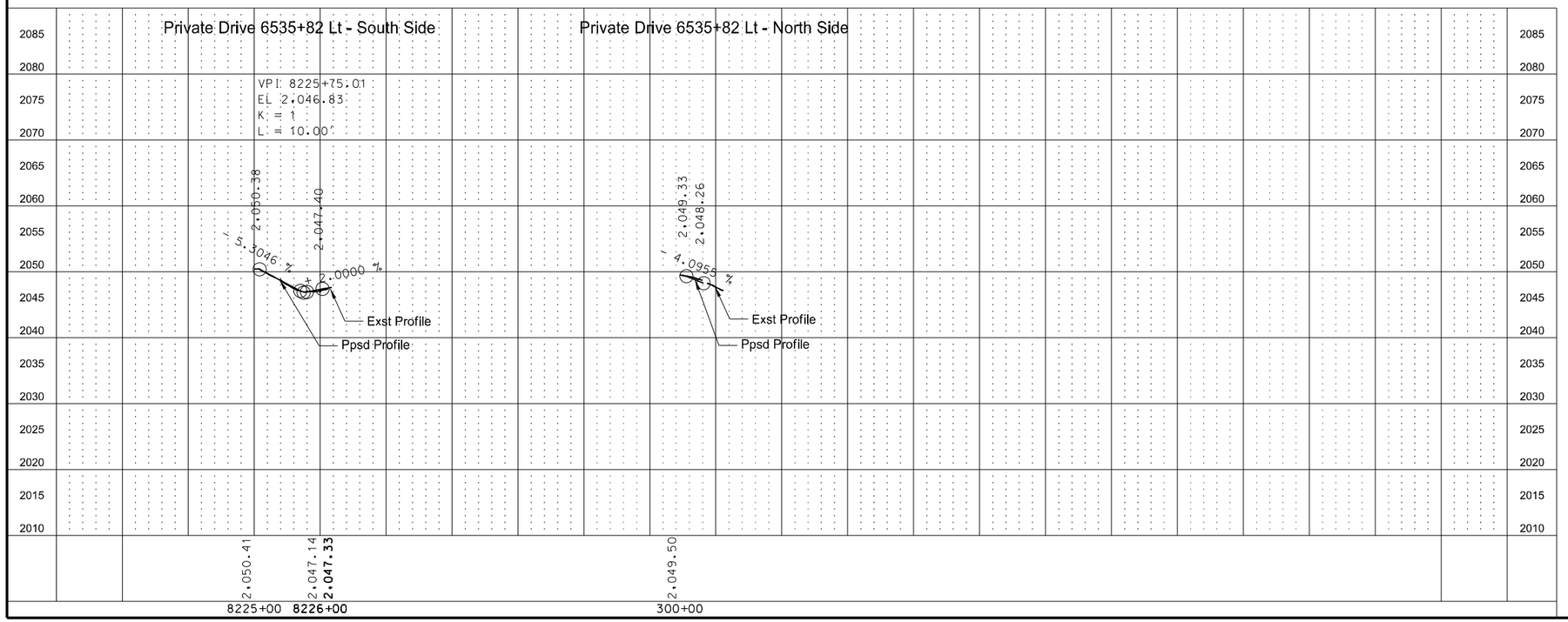
Plan & Profile

ND 3
Tuttle N to W Jct 200

Private Drives 6531+58 Lt & 6531+44 Rt
Kidder County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	60	69





Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

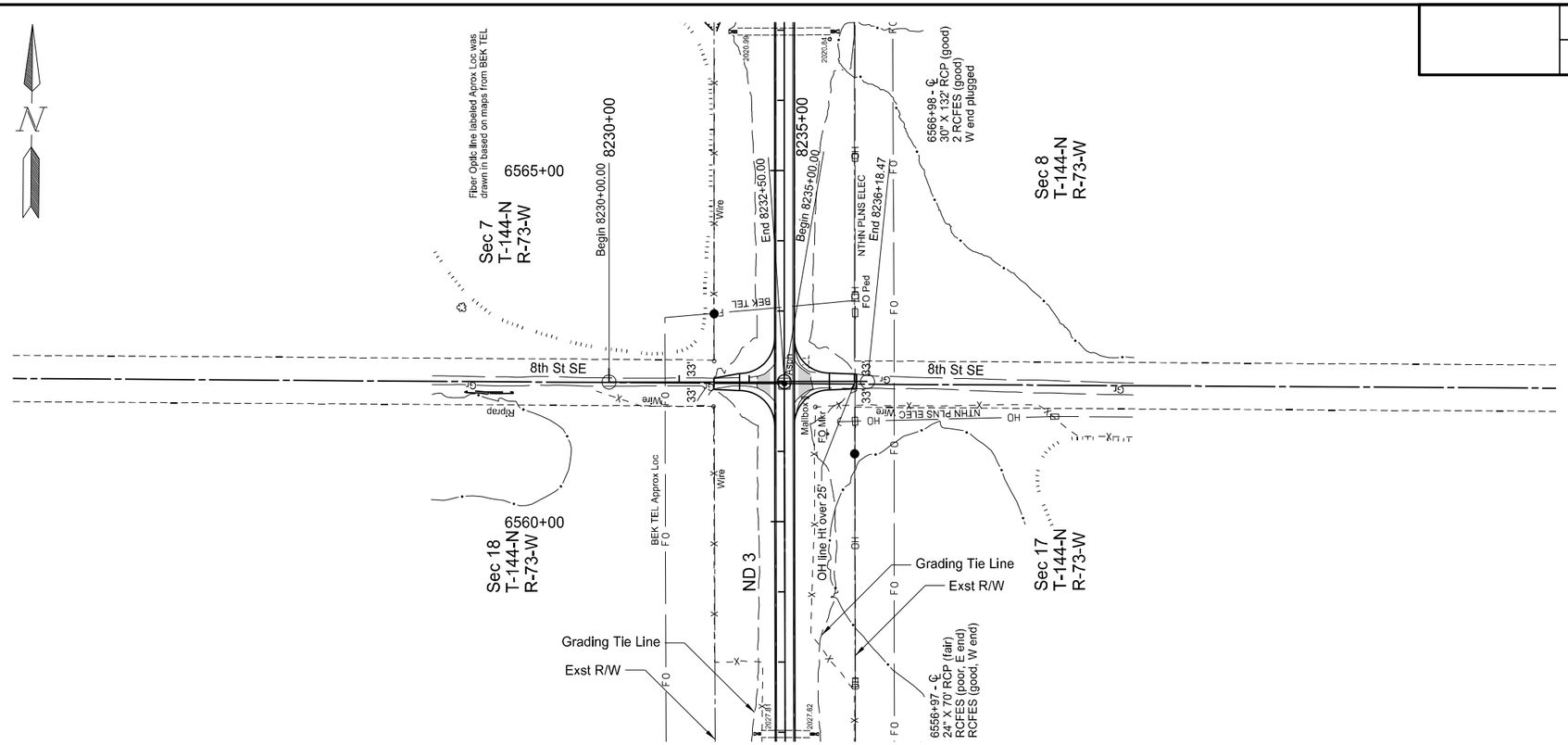
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

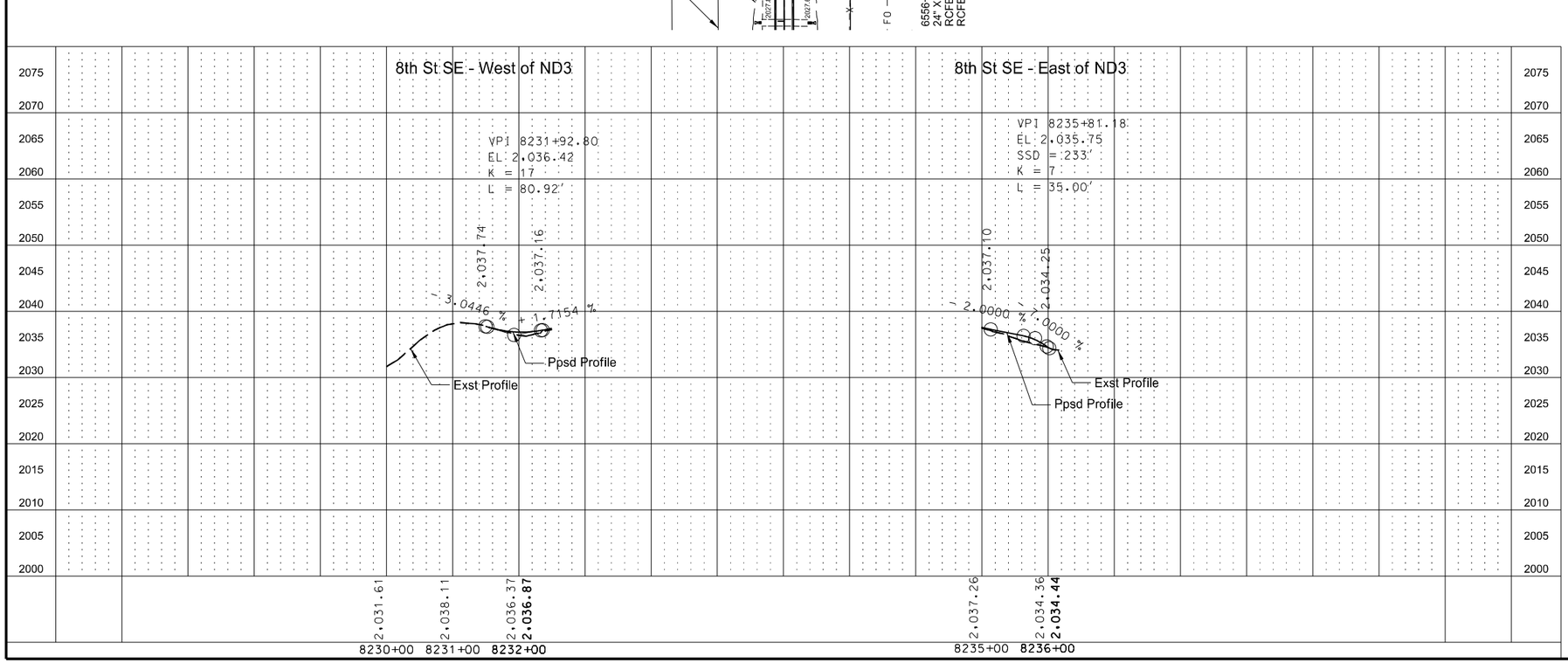
Plan & Profile

ND 3
Tuttle N to W Jct 200

Private Drive 6535+82 Lt
Kidder County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	60	70





Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

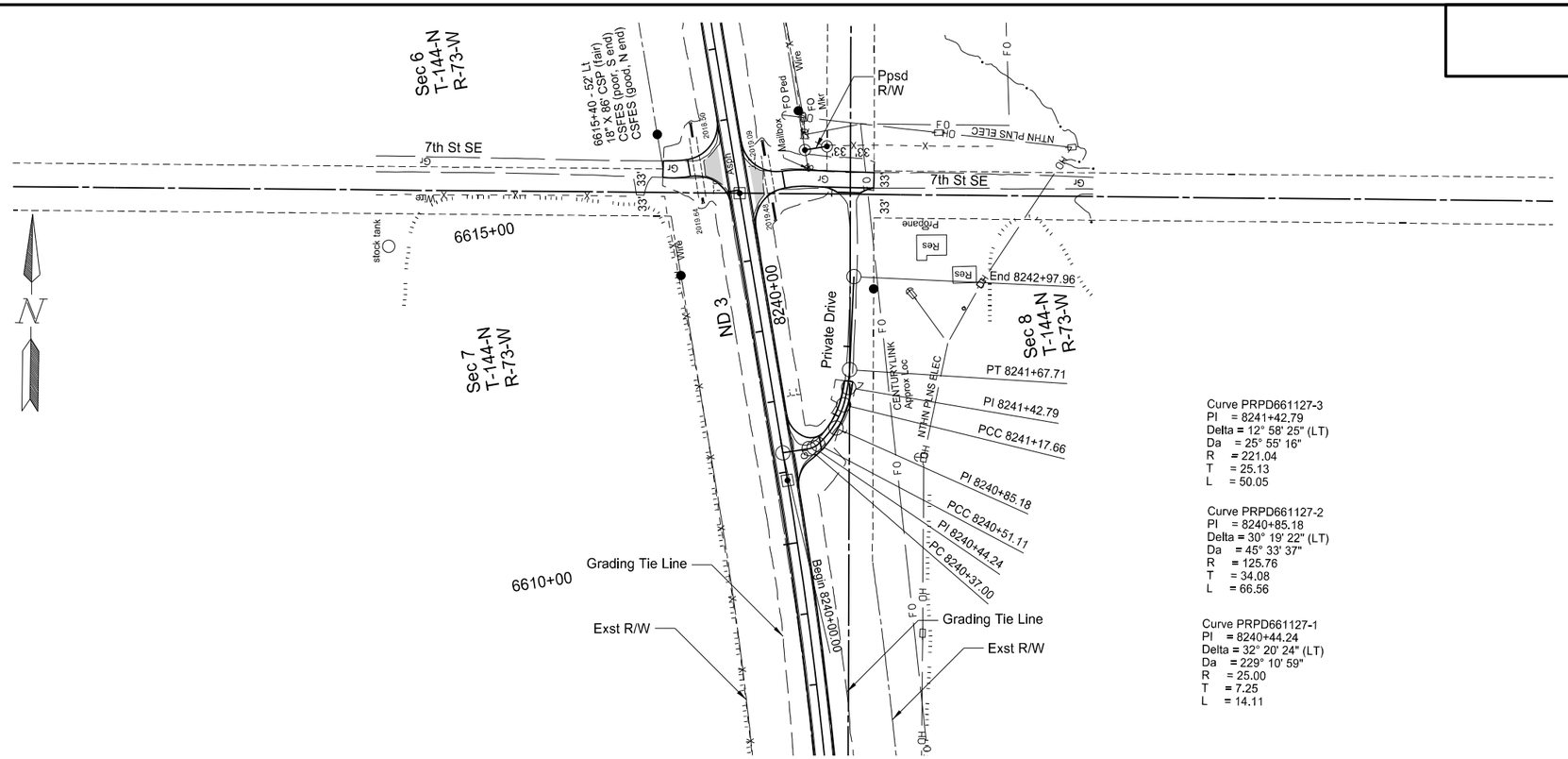
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Plan & Profile

ND 3
Tuttle N to W Jct 200

8th St SE
Kidder County

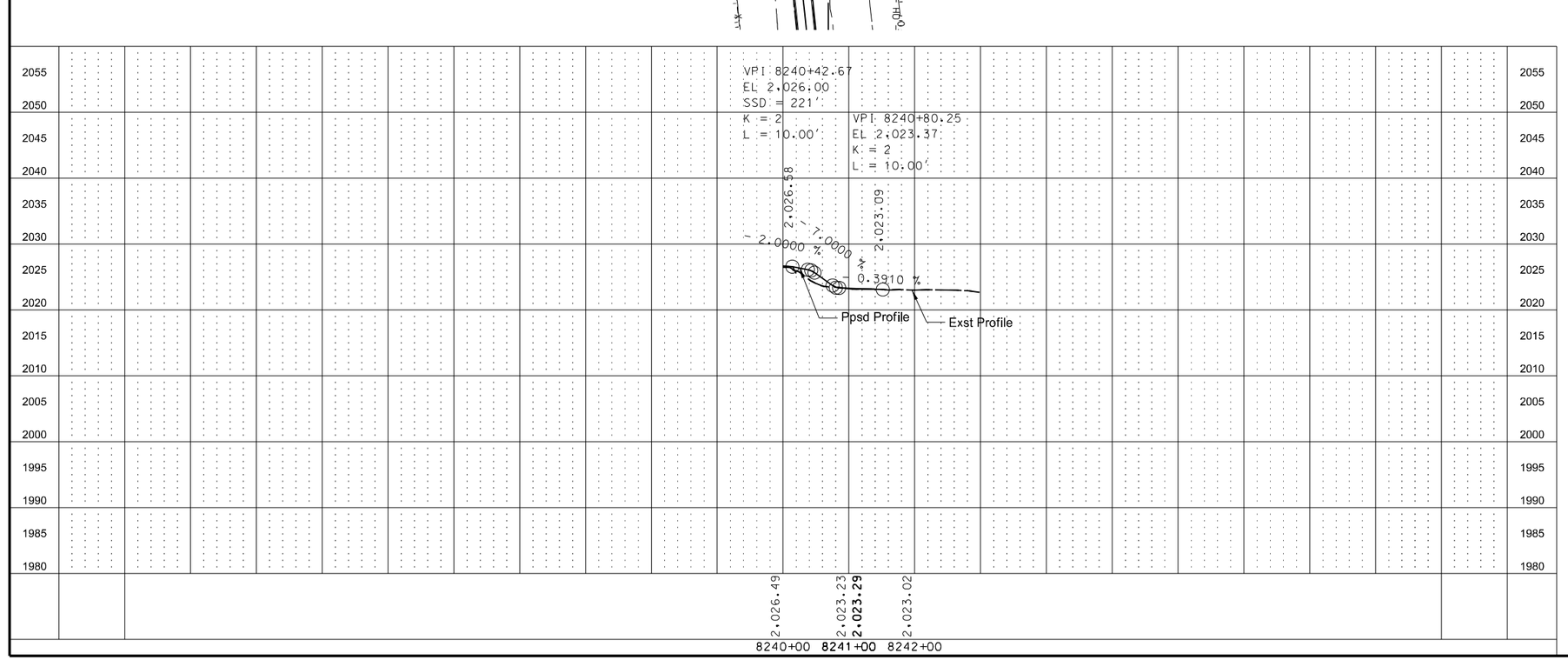
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	60	71



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PI = 8241+42.79
Delta = 12° 58' 25" (LT)
Da = 25° 55' 16"
R = 221.04
T = 25.13
L = 50.05

Curve PRPD661127-2
PI = 8240+85.18
Delta = 30° 19' 22" (LT)
Da = 45° 33' 37"
R = 125.76
T = 34.08
L = 66.56

Curve PRPD661127-1
PI = 8240+44.24
Delta = 32° 20' 24" (LT)
Da = 229° 10' 59"
R = 25.00
T = 7.25
L = 14.11



Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

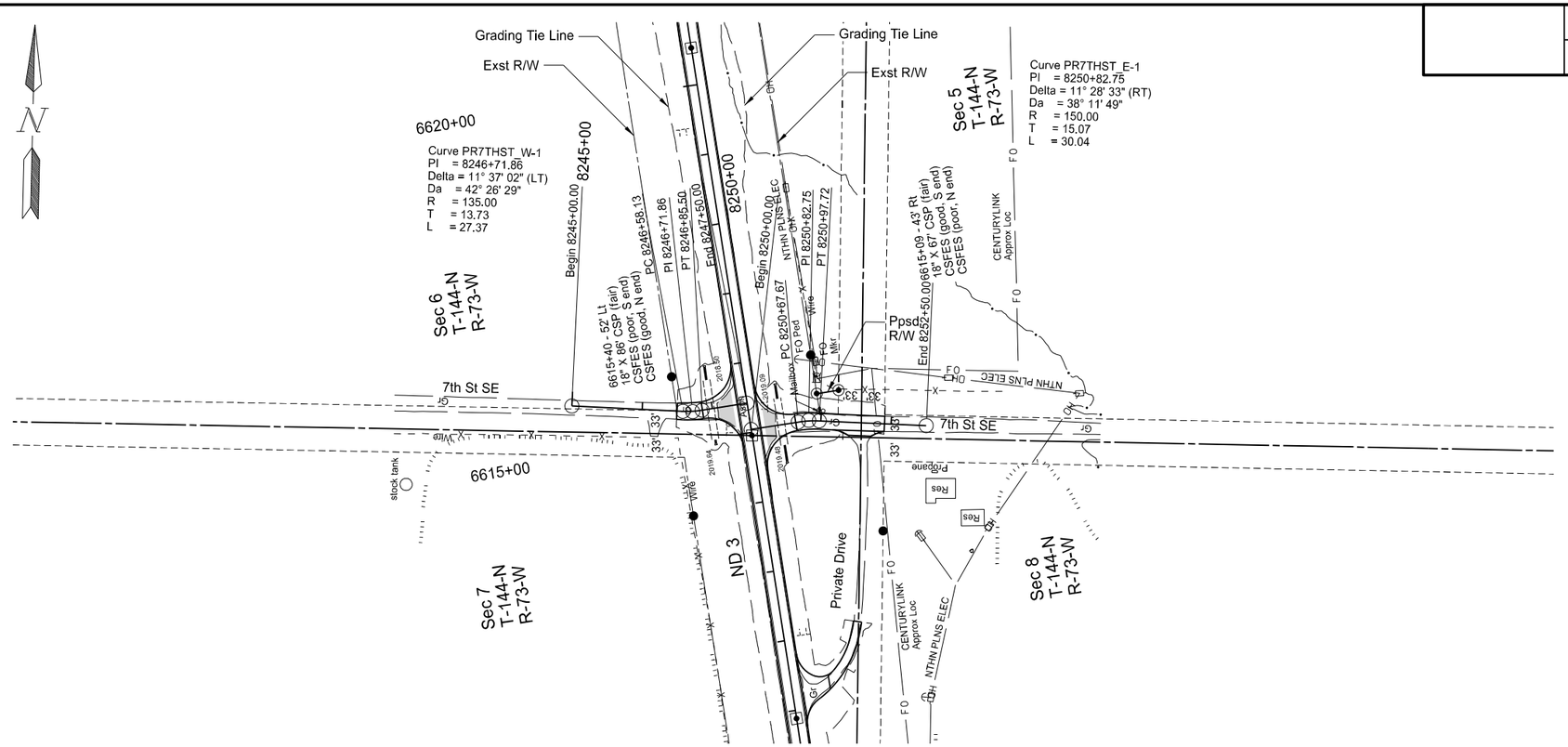
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

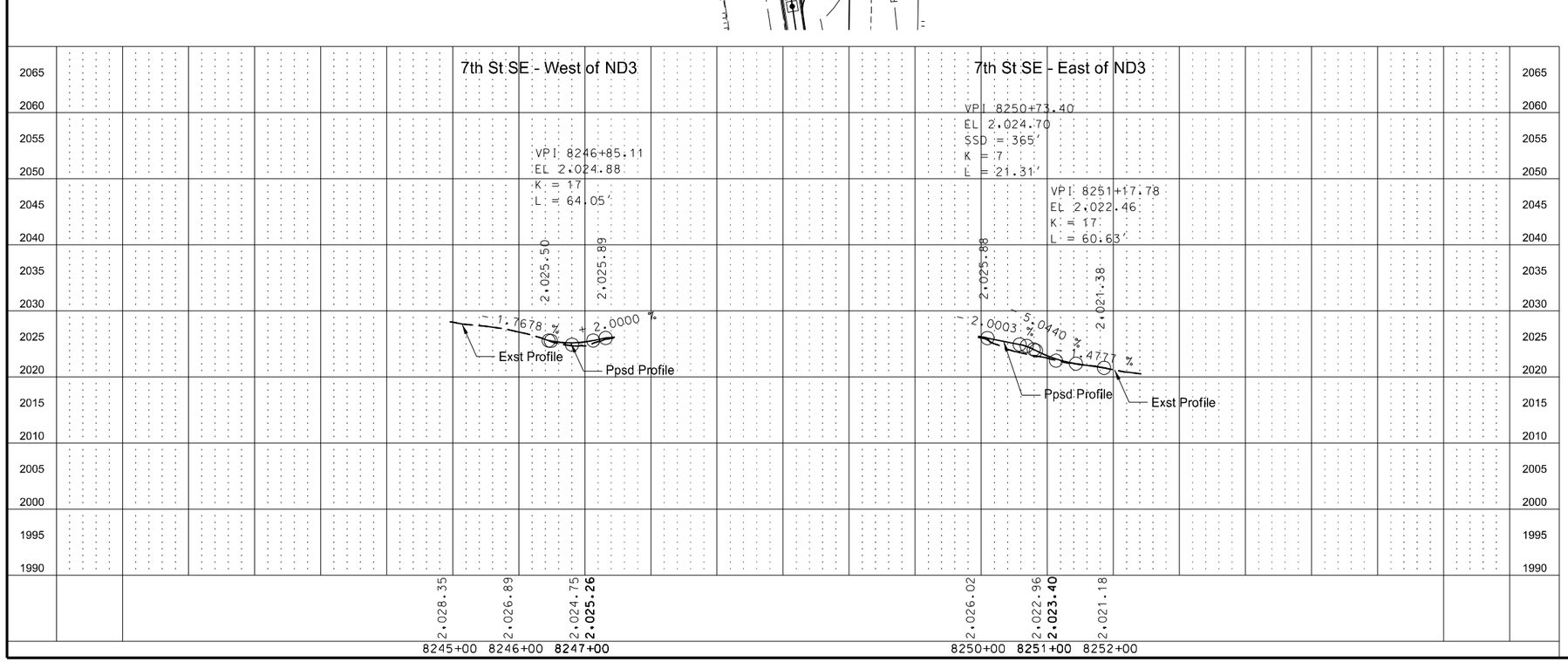
Plan & Profile

ND 3
Tuttle N to W Jct 200

Private Drive 6611+27 Rt
Kidder County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	60	72





Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

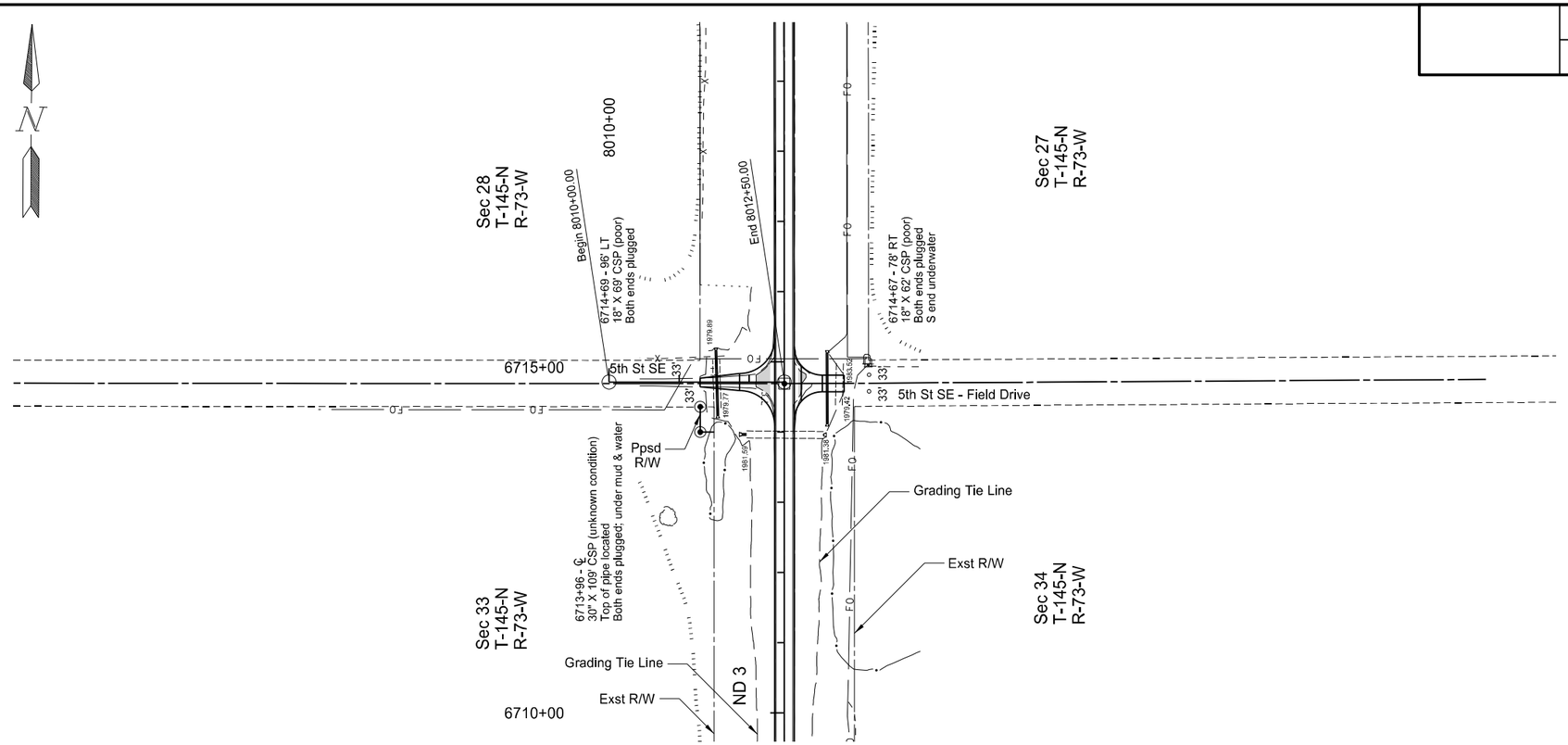
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

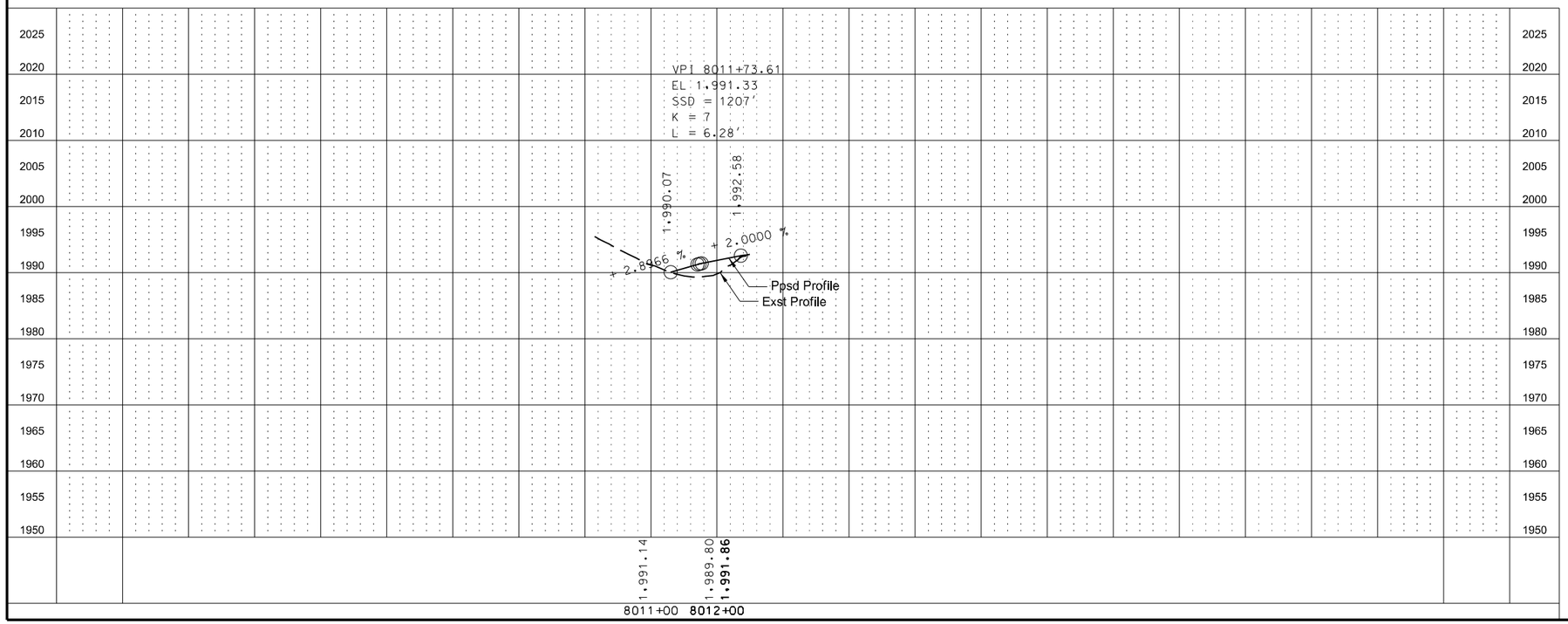
Plan & Profile

ND 3
Tuttle N to W Jct 200

7th St SE
Kidder County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	60	73





Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

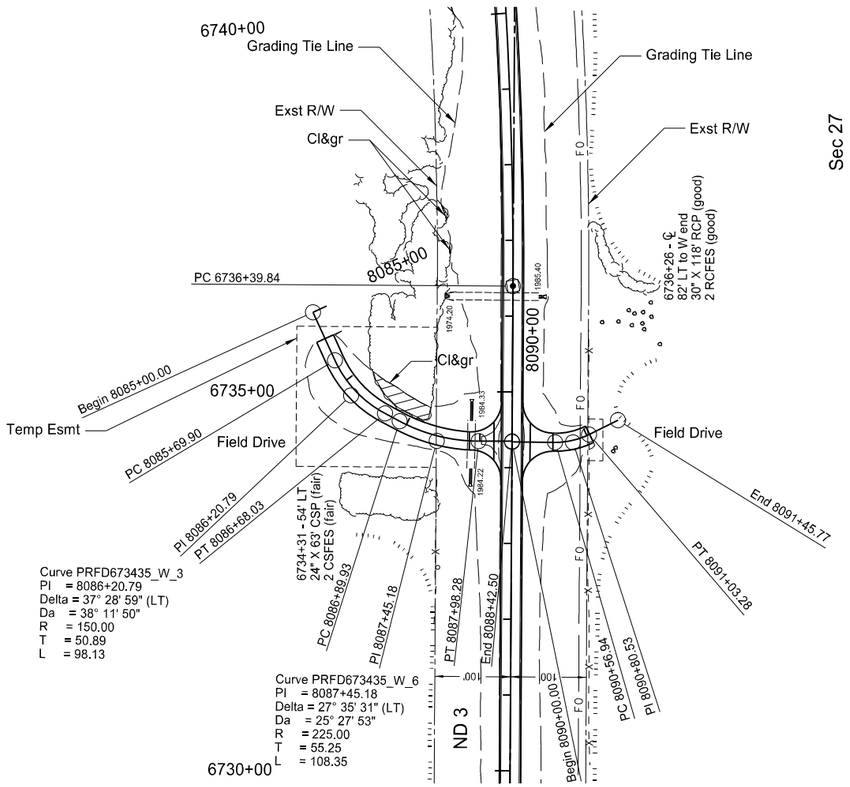
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

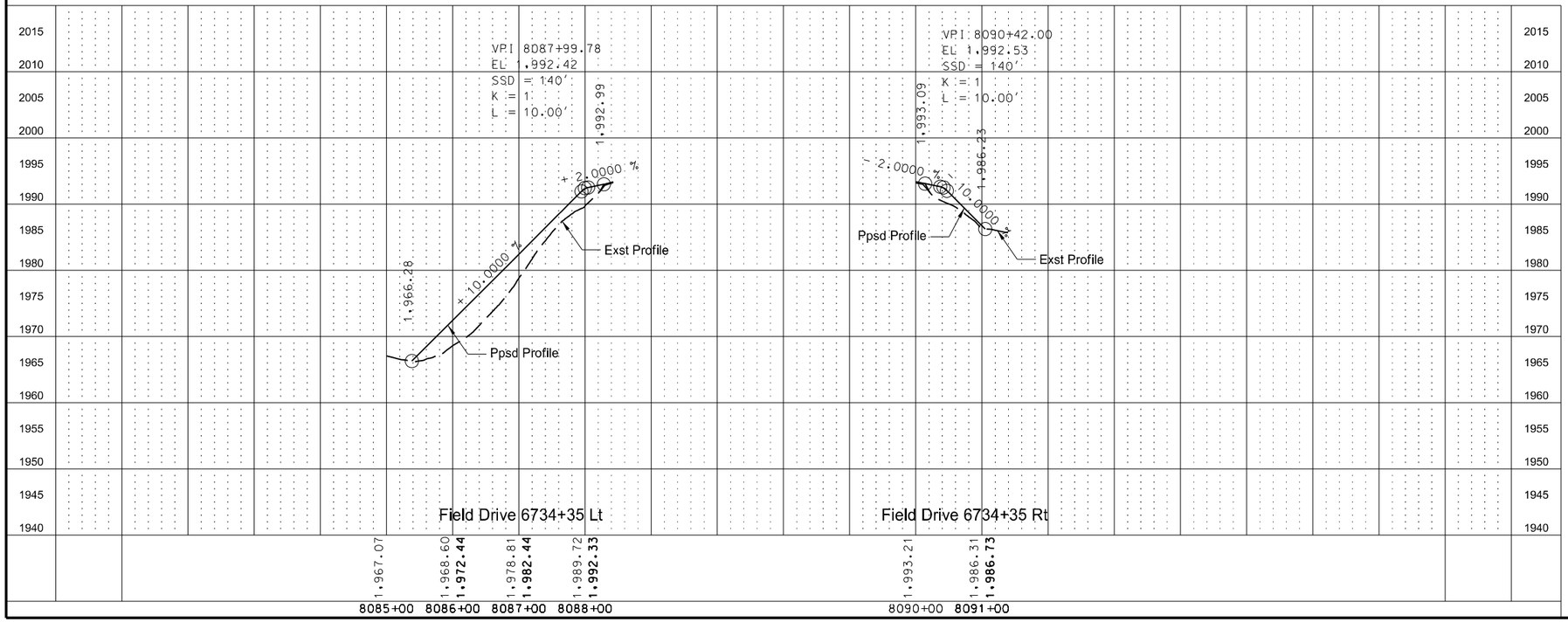
Plan & Profile

ND 3
Tuttle N to W Jct 200

5th St SE West
Wells County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	60	74





Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

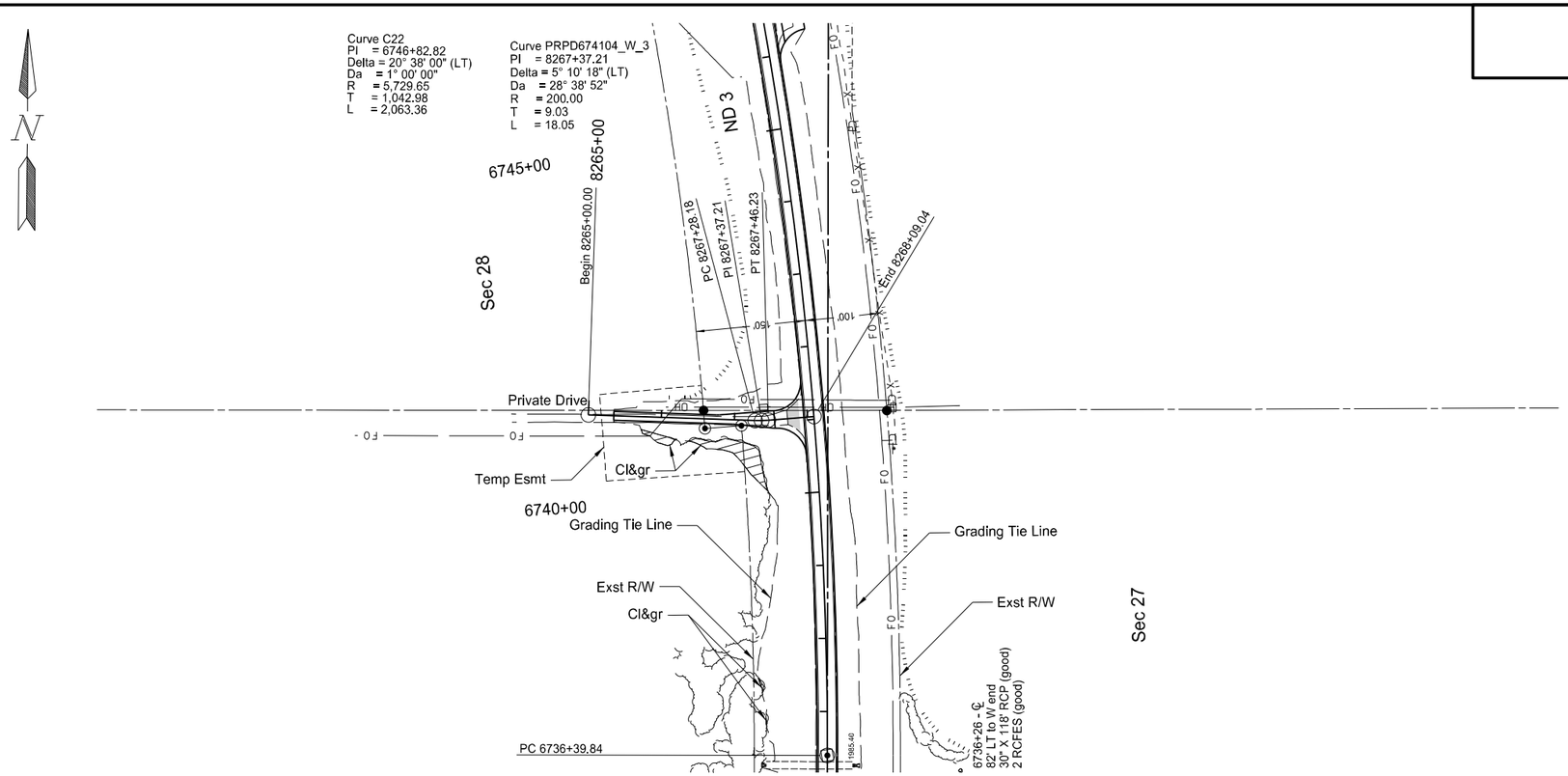
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

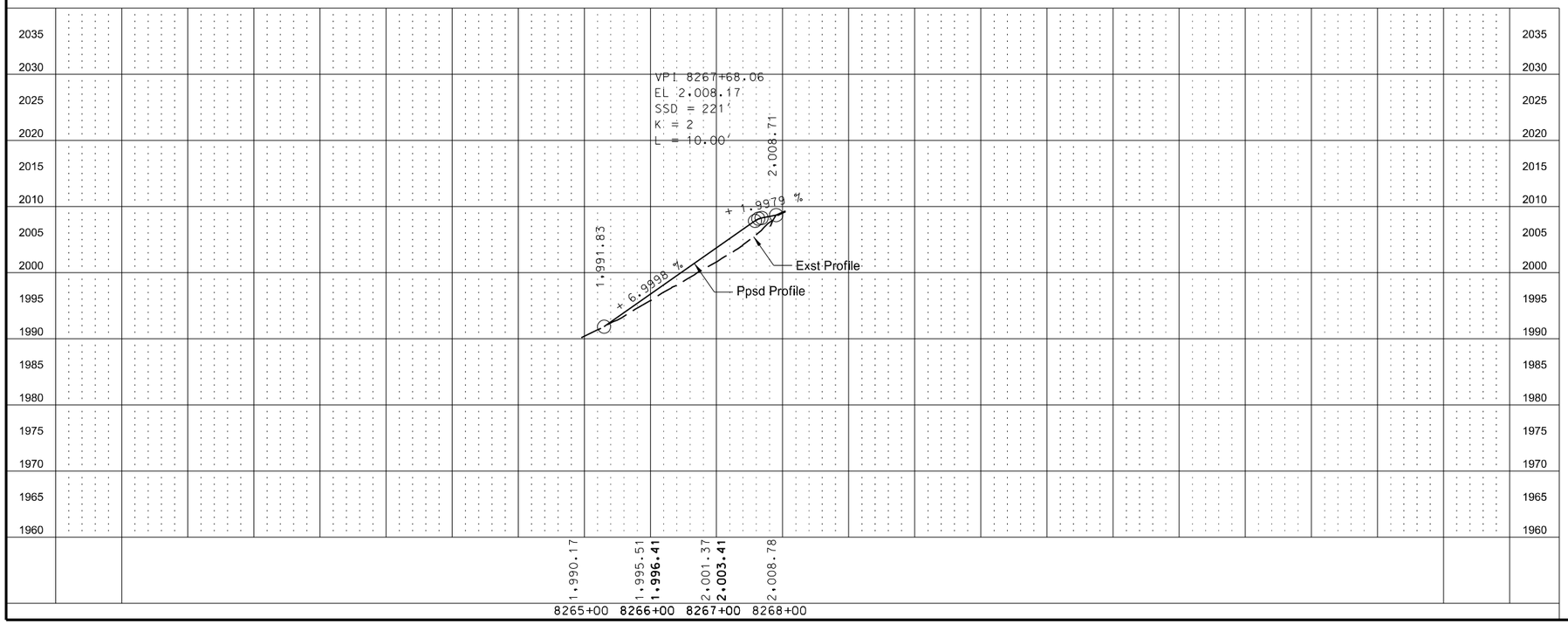
Plan & Profile

ND 3
Tuttle N to W Jct 200

Field Drives 6734+35 Lt & Rt
Wells County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	60	75





Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

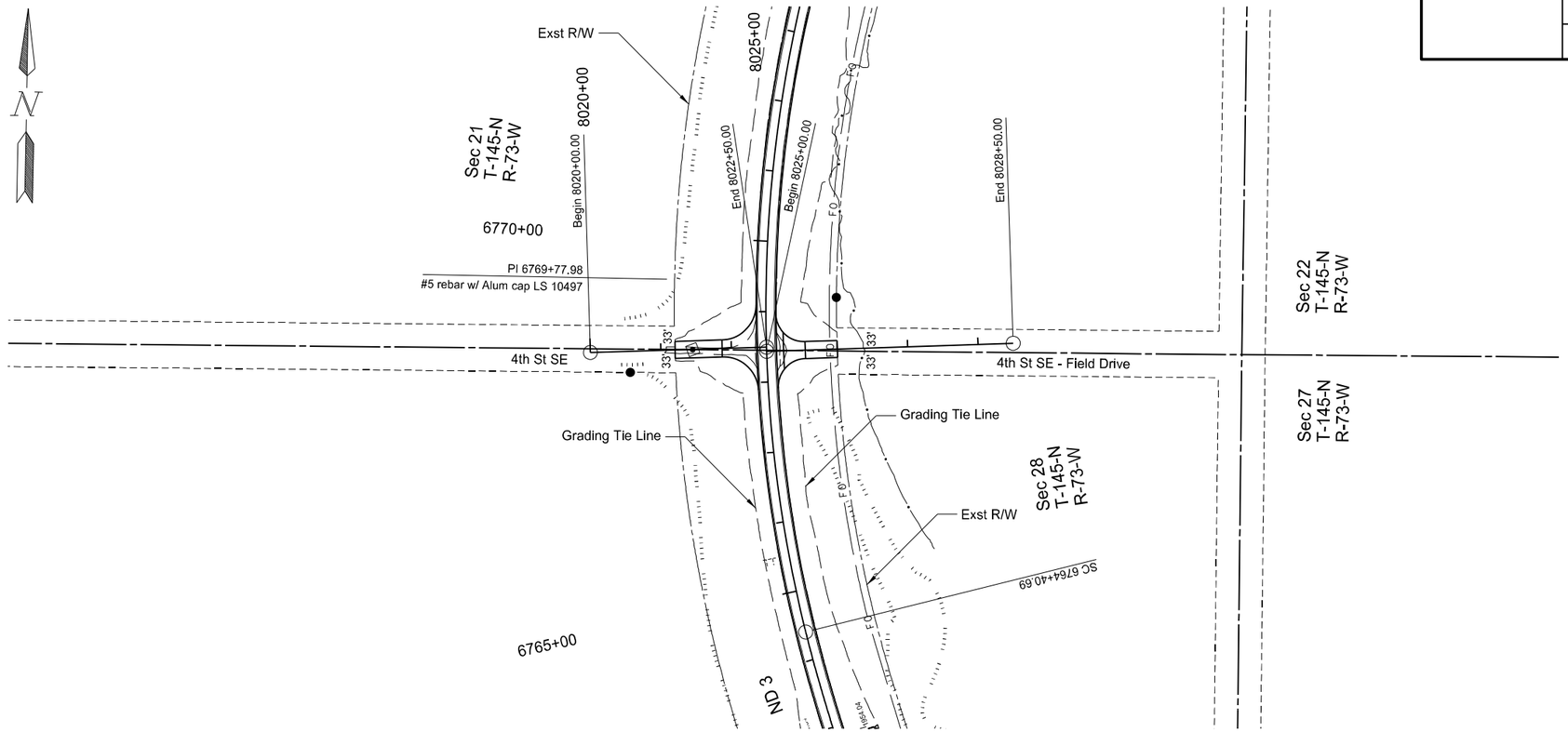
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

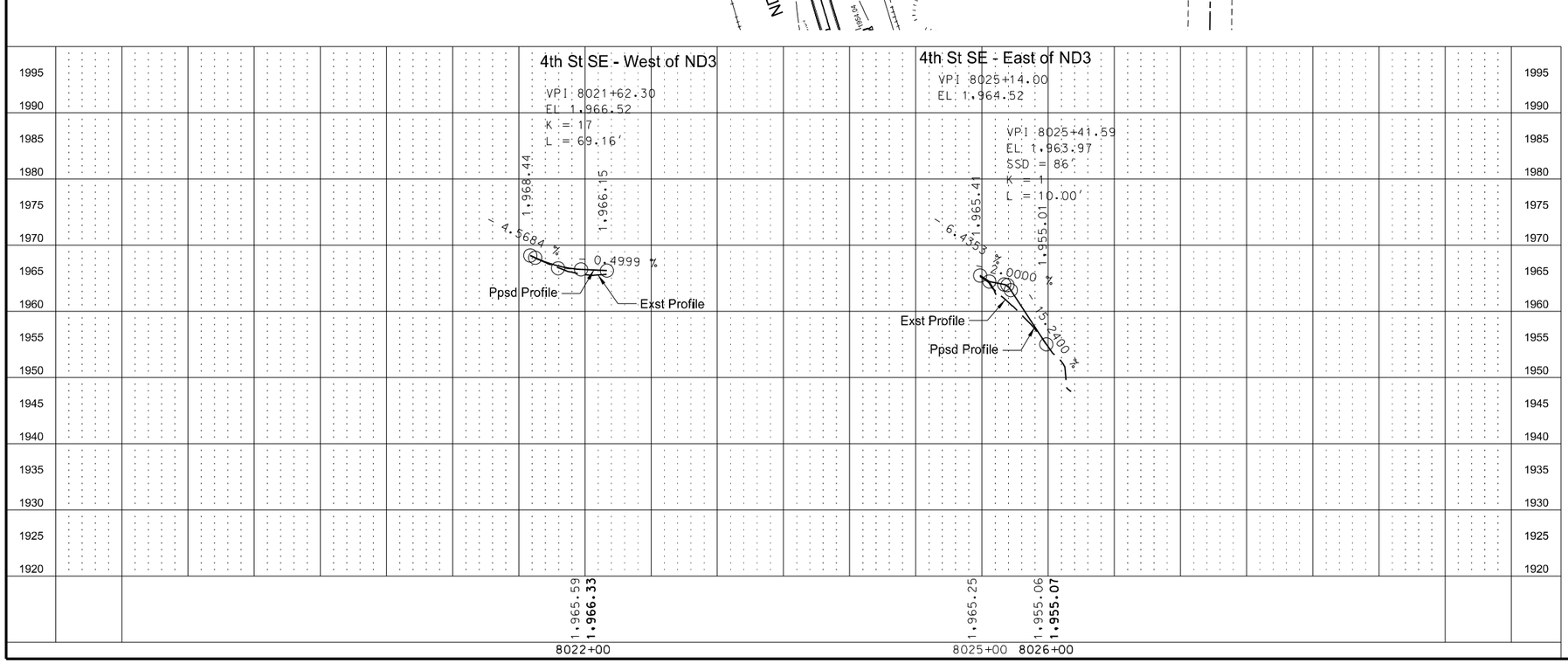
Plan & Profile

ND 3
Tuttle N to W Jct 200

Private Drive 6741+04 Lt
Wells County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	60	76





Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

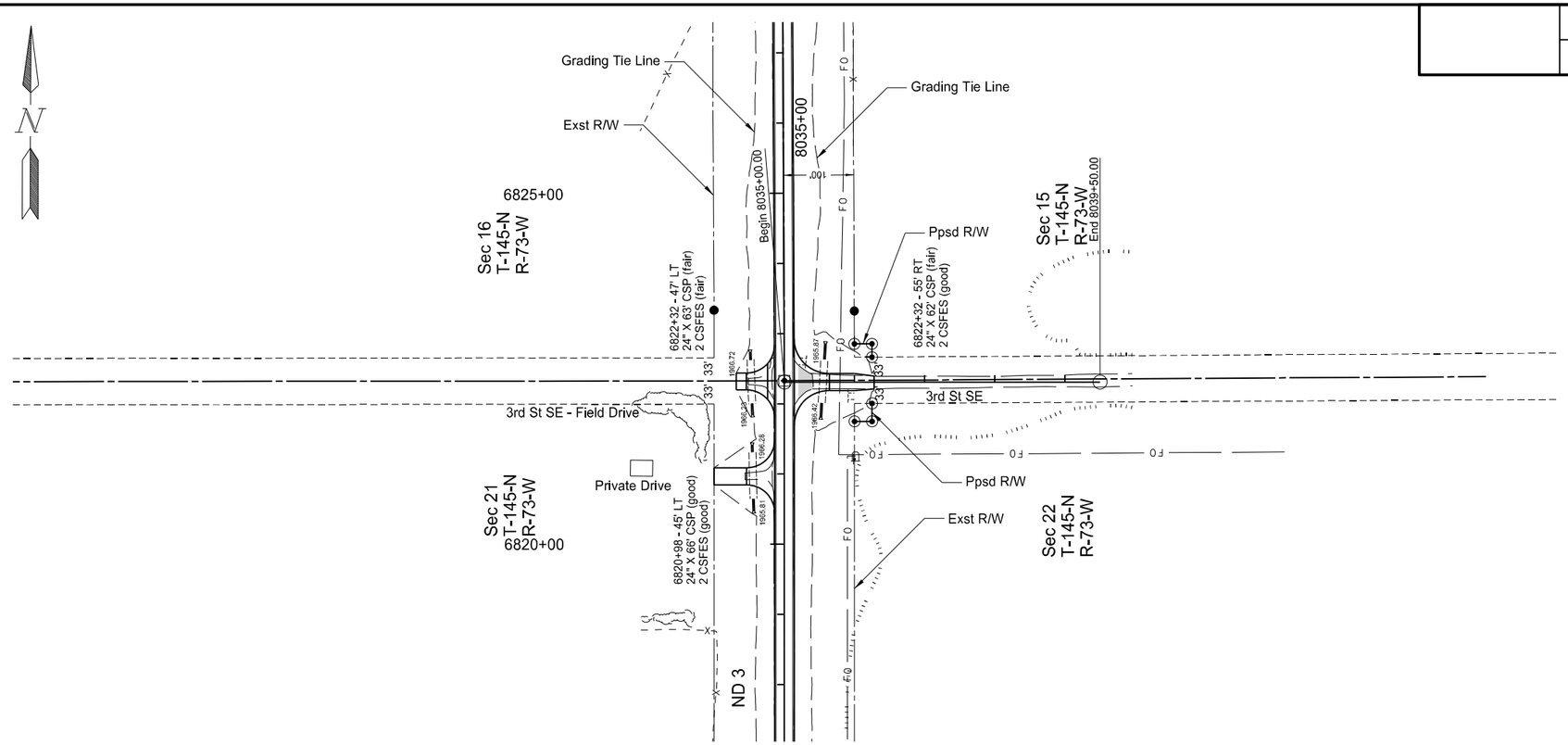
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

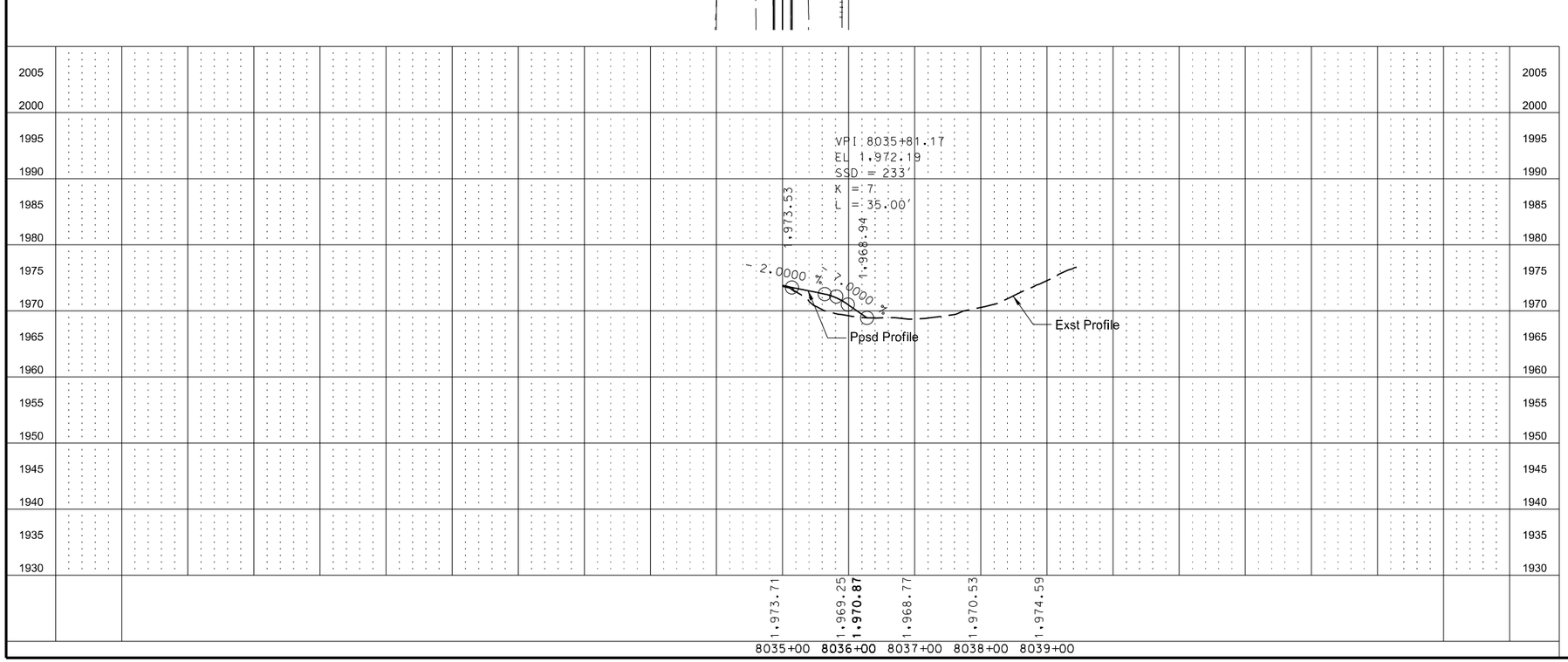
Plan & Profile

ND 3
Tuttle N to W Jct 200

4th St SE
Wells County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	60	77





Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

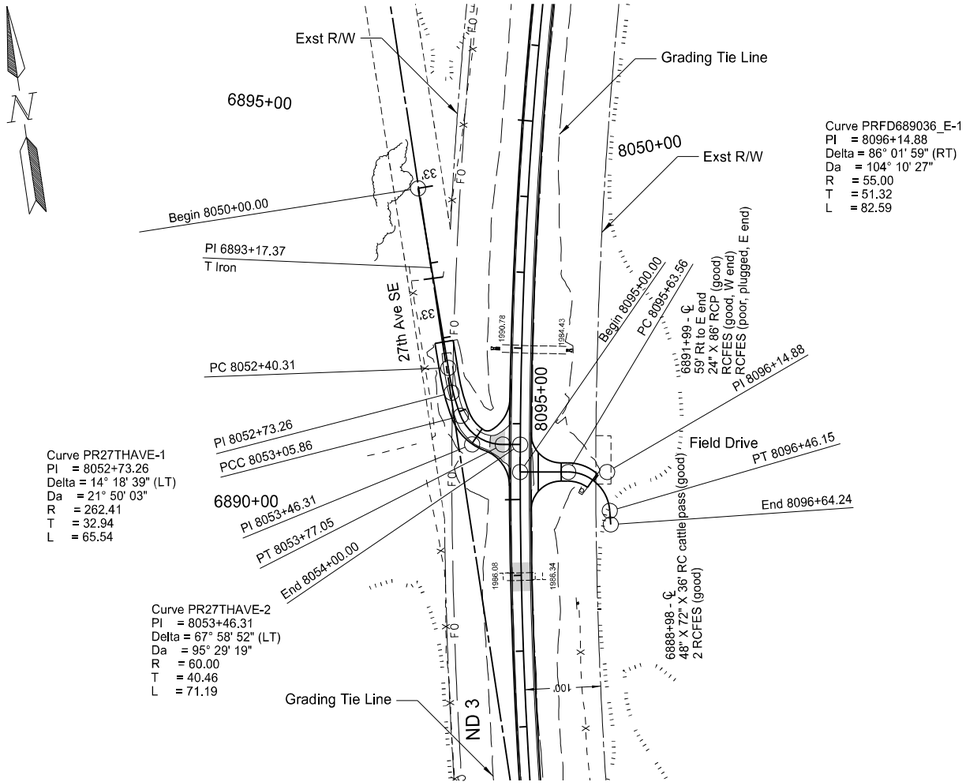
Plan & Profile

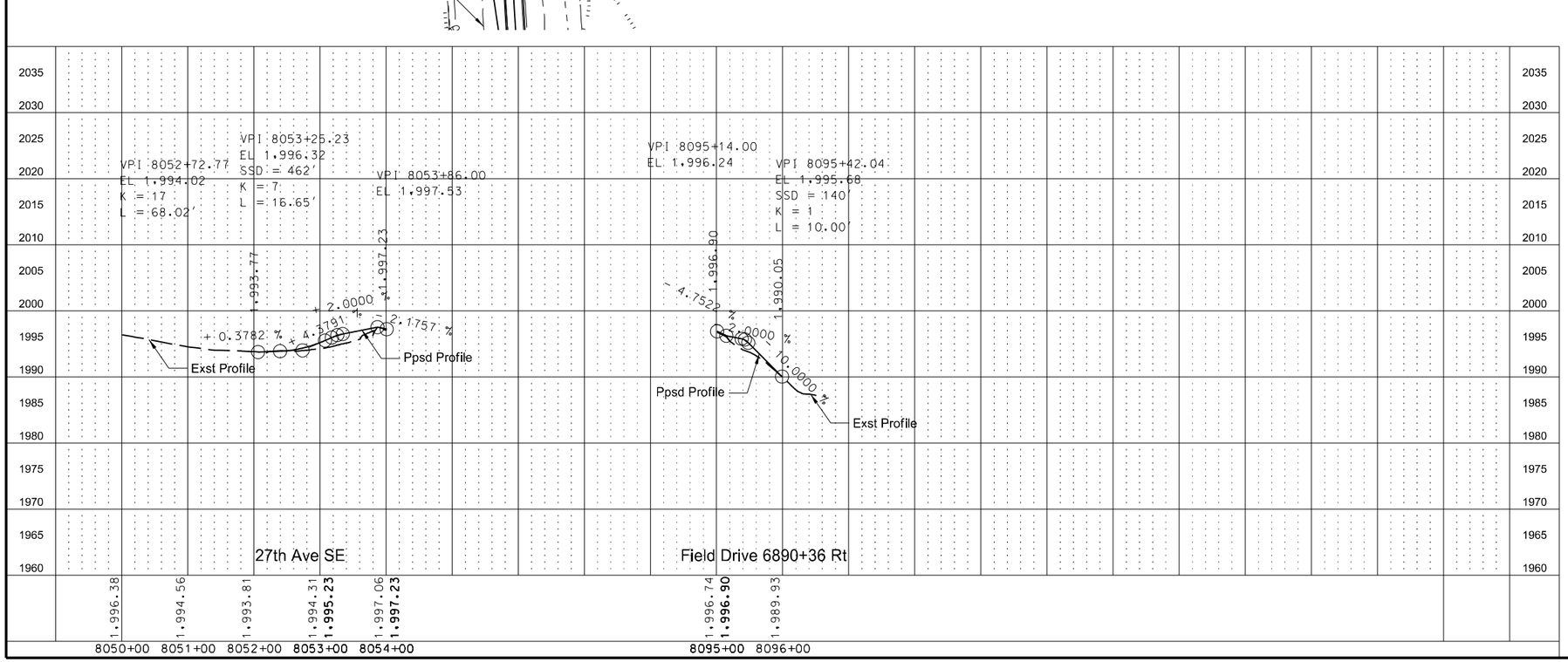
ND 3
Tuttle N to W Jct 200

3rd St SE East
Wells County

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	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	60	78





Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

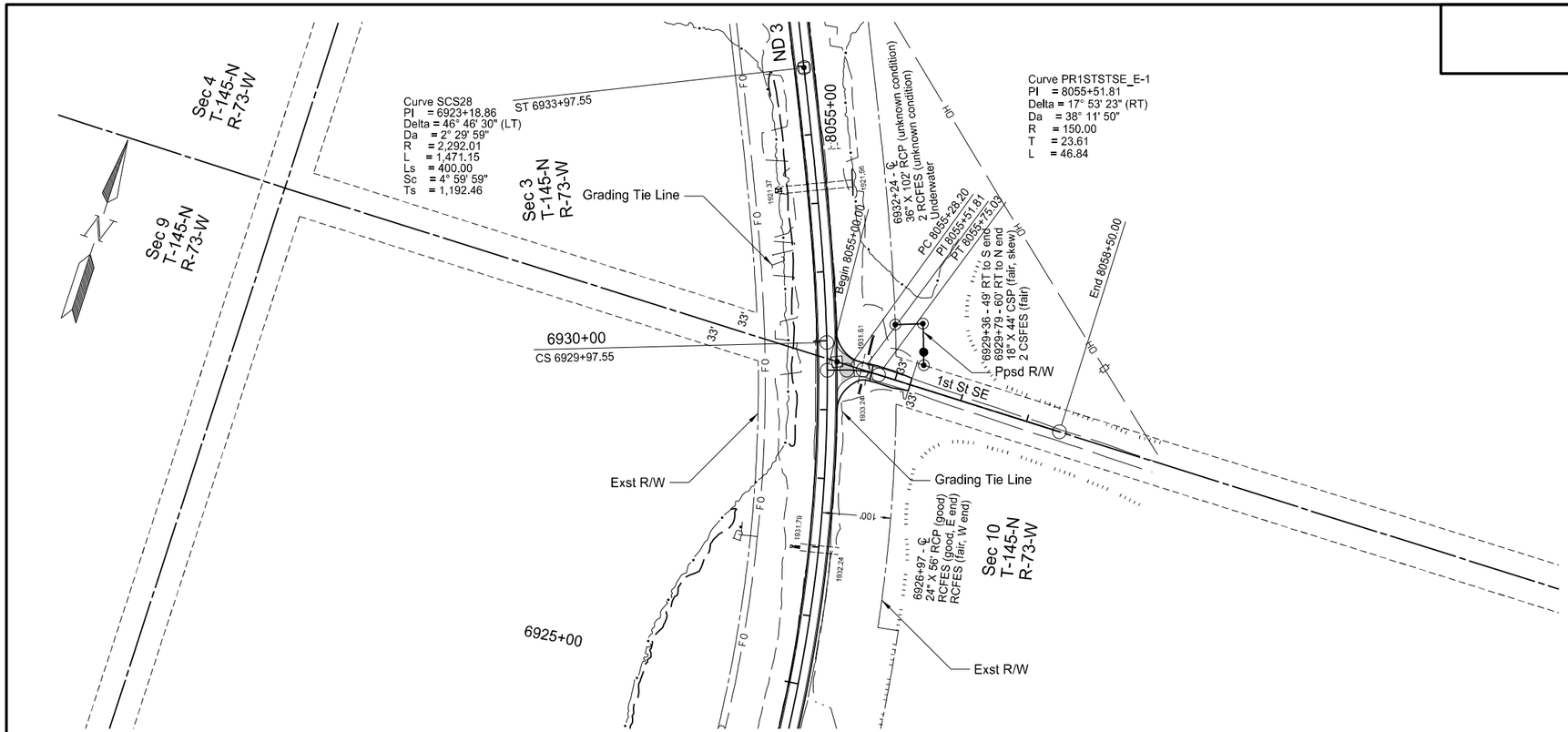
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

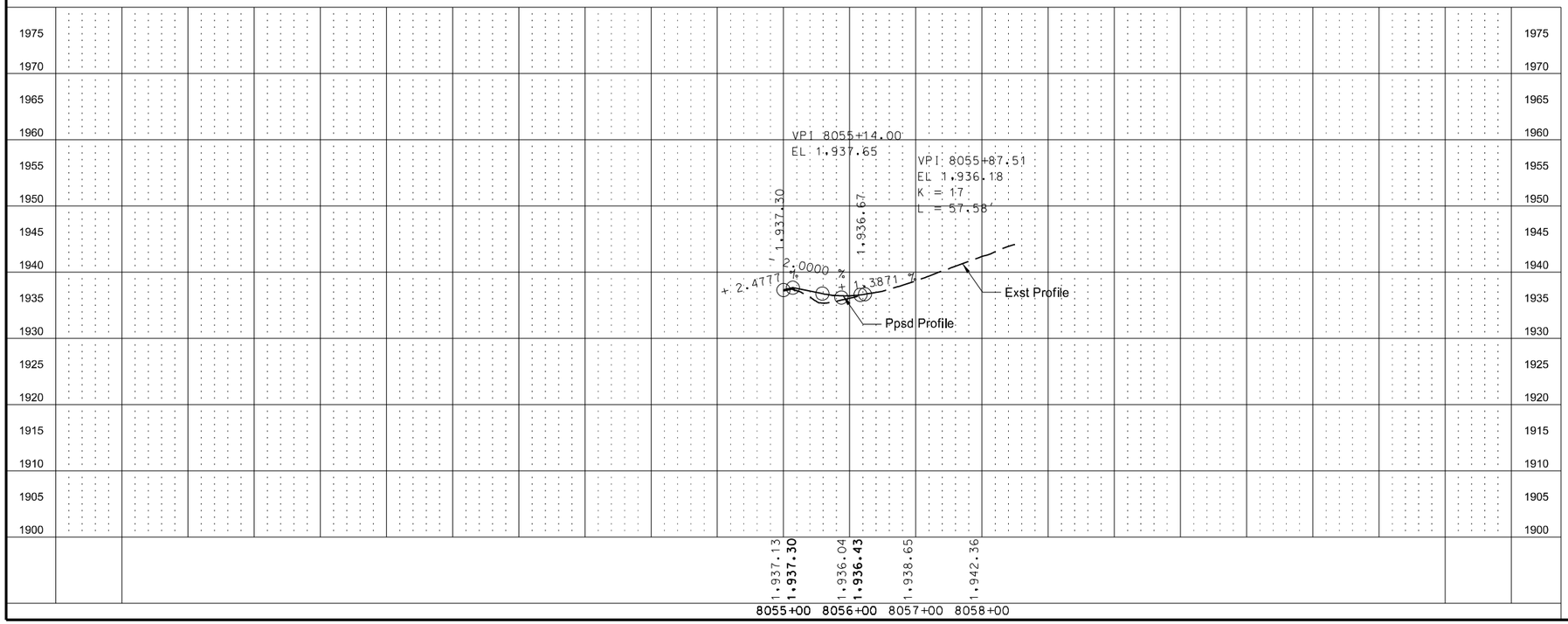
Plan & Profile

ND 3
Tuttle N to W Jct 200

27th Ave SE & Field Drive 6890+36 Rt
Wells County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	60	79





Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

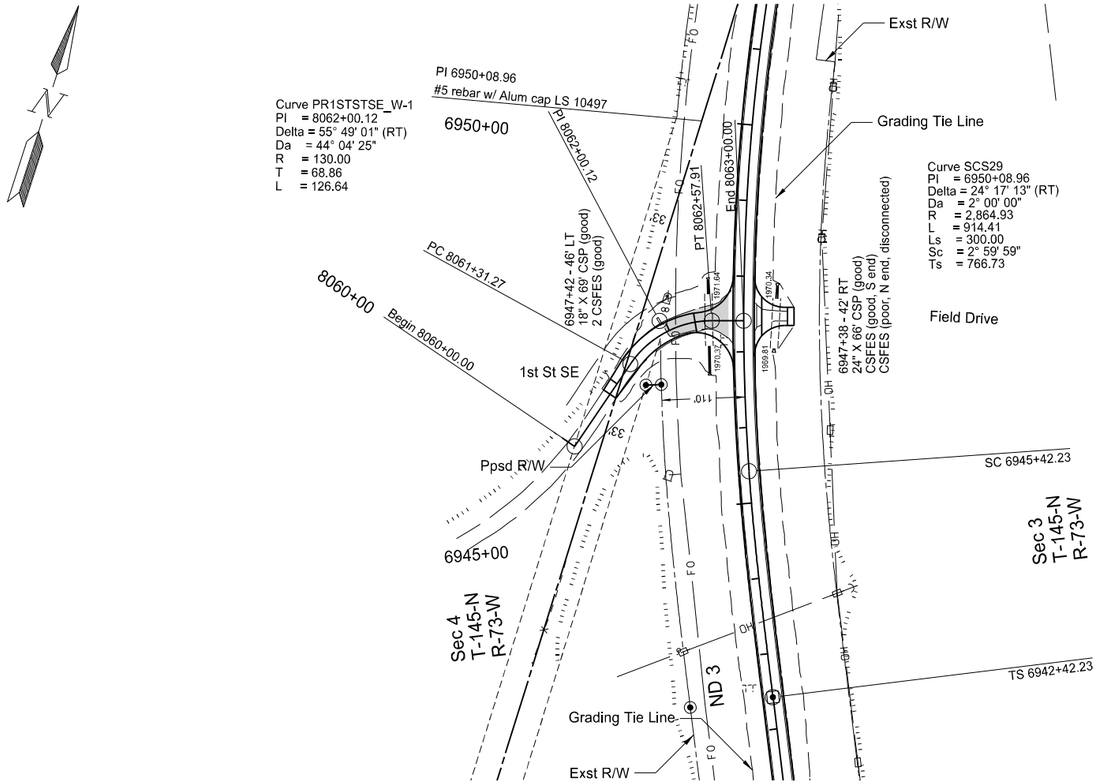
Plan & Profile

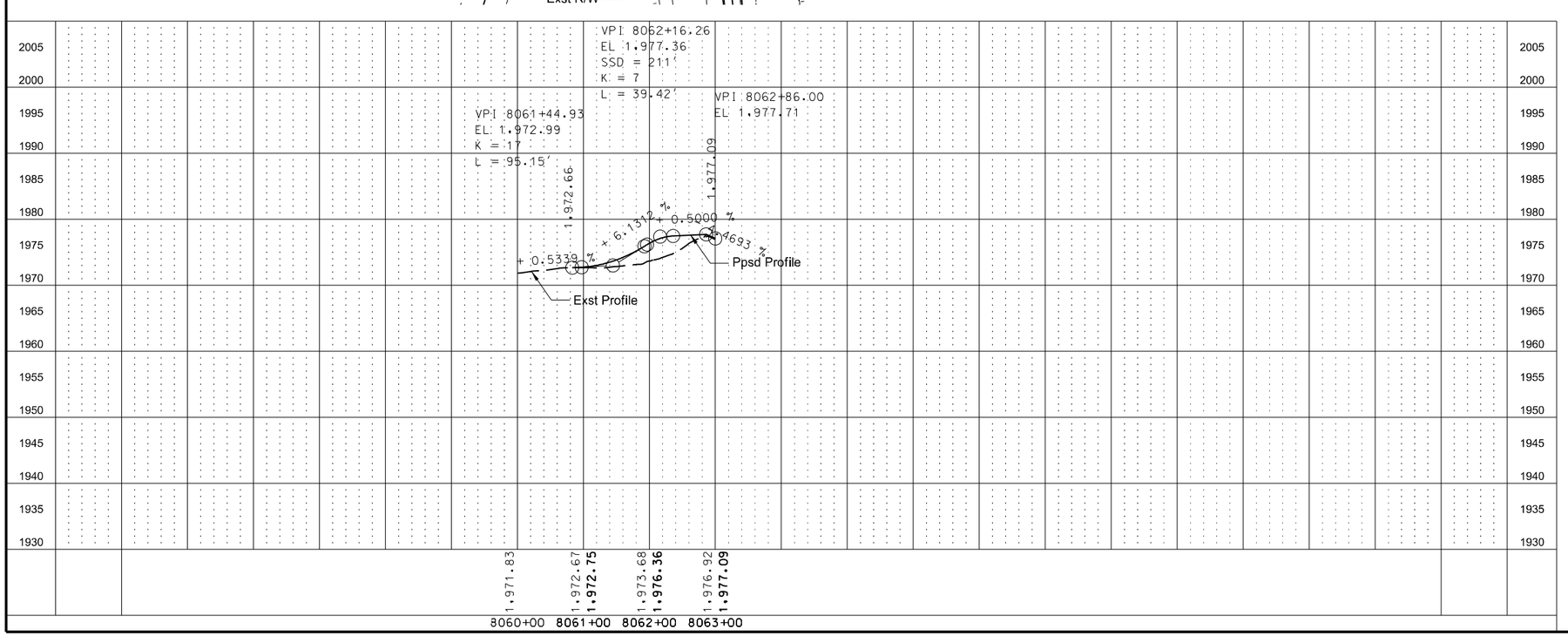
ND 3
Tuttle N to W Jct 200

1st St SE East
Wells County

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	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	60	80





Legend

- Removal of Bituminous Surfacing
- Clearing & Grubbing

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 12/15/2021
NORTH DAKOTA

Plan & Profile

ND 3
Tuttle N to W Jct 200

1st St SE West
Wells County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	75	1

Wetland Impact Table

Wetland Number	Location	Wetland Feature	USACE Jurisdictional Wetlands	Wetland Impacts Acre(s)		USFWS Easement Impacts Acre(s)		Wetland Mitigation												
								Mitigation Required			USACE/11990 Bank		11990 Bank		USFWS Bank		Onsite			
				Temp.	Perm.	Temp.	Perm.	EO 11990	USACE	USFWS	Location	Acre(s)	Location	Acre(s)	Location	Acre(s)	MItIgatIon Location; Ratio	Acre(s)	Constructed Site #	Constructed Size Acre(s)
1	Sec 6 T 142N R 73W	Artificial	No	0.00	0.00	0.00	0.00	N	N	N										
2a	Sec 5 T 142N R 73W	Natural	No	0.05	0.04	0.00	0.00	Y	N	N			Vollrath 16/17 11990	0.04						
2b	Sec 6 T 142N R 73W	Natural	No	0.04	0.03	0.00	0.00	Y	N	N			Vollrath 16/17 11990	0.03						
3a	Sec 6 T 142N R 73W	Natural	Yes	0.19	0.05	0.00	0.00	Y	Y	N							Site 1; (1:1)	0.05	1	0.07
3b	Sec 5 T 142N R 73W	Artificial	Yes	0.02	0.01	0.00	0.00	N	N	N										
3c	Sec 5 T 142N R 73W	Natural	Yes	0.16	0.05	0.00	0.00	Y	Y	N							Site 1; (1:1) Site 2; (1:1)	0.02 0.03		
3d	Sec 6 T 142N R 73W	Natural	Yes	0.05	0.02	0.00	0.00	Y	Y	N							Site 2; (1:1)	0.02	2	0.05
3e	Sec 5 T 142N R 73W	Artificial	Yes	0.08	0.02	0.00	0.00	N	N	N										
4	Sec 6 T 142N R 73W	Natural	No	0.02	0.01	0.00	0.02	Y	N	Y			Vollrath 16/17 11990	0.01	Vollrath 15/21 USFWS Easement	0.02				
5	Sec 31 T 143N R 73W	Natural	No	0.03	0.02	0.00	0.00	Y	N	N			Vollrath 16/17 11990	0.02						
6a	Sec 31 T 143N R 73W	Natural	Yes	0.01	0.00	0.00	0.00	N	N	N										
6b	Sec 32 T 143N R 73W	Natural	Yes	0.00	0.00	0.00	0.00	N	N	N										
7a	Sec 31 T 143N R 73W	Artificial	No	0.02	0.00	0.00	0.00	N	N	N										
7b	Sec 31 T 143N R 73W	Natural	No	0.04	0.02	0.00	0.00	Y	N	N			Vollrath 16/17 11990	0.02						
7c	Sec 31 T 143N R 73W	Artificial	No	0.03	0.01	0.00	0.00	N	N	N										
7d	Sec 32 T 143N R 73W	Natural	No	0.01	0.02	0.00	0.00	Y	N	N			Vollrath 16/17 11990	0.02						
7e	Sec 32 T 143N R 73W	Natural	No	0.05	0.03	0.00	0.00	Y	N	N			Vollrath 16/17 11990	0.03						
7f	Sec 32 T 143N R 73W	Artificial	No	0.02	0.01	0.00	0.00	N	N	N										
8a	Sec 31 T 143N R 73W	Natural	Yes	0.02	0.00	0.00	0.00	N	N	N										
8b	Sec 32 T 143N R 73W	Natural	Yes	0.04	0.02	0.00	0.00	Y	N	N			Vollrath 16/17 11990	0.02						
9a	Sec 30 T 143N R 73W	Natural	Yes	0.00	0.00	0.00	0.00	N	N	N										
9b	Sec 30 T 143N R 73W	Artificial	Yes	0.00	0.00	0.00	0.00	N	N	N										
9c	Sec 29 T 143N R 73W	Natural	Yes	0.00	0.00	0.00	0.00	N	N	N										

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Wetlands

ND 3
Tuttle N to W Jct 200

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	75	2

Wetland Impact Table

Wetland Number	Location	Wetland Feature	USACE Jurisdictional Wetlands	Wetland Impacts Acre(s)		USFWS Easement Impacts Acre(s)		Wetland Mitigation													
								Mitigation Required			USACE/11990 Bank		11990 Bank		USFWS Bank		Onsite				
				Temp.	Perm.	Temp.	Perm.	EO 11990	USACE	USFWS	Location	Acre(s)	Location	Acre(s)	Location	Acre(s)	MItIgatIon Location; Ratio	Acre(s)	Constructed Site #	Constructed Size Acre(s)
9d	Sec 30 T 143N R 73W	Natural	Yes	0.00	0.00	0.00	0.00	N	N	N										
9e	Sec 30 T 143N R 73W	Natural	Yes	0.03	0.00	0.00	0.00	N	N	N										
10a	Sec 19 T 143N R 73W	Artificial	Yes	0.06	0.00	0.00	0.00	N	N	N										
10b	Sec 19 T 143N R 73W	Natural	Yes	0.08	0.02	0.00	0.00	Y	N	N			Vollrath 16/17 11990	0.02						
10c	Sec 20 T 143N R 73W	Natural	Yes	0.10	0.03	0.00	0.00	Y	N	N			Vollrath 16/17 11990	0.03						
11a	Sec 19 T 143N R 73W	Artificial	Yes	0.01	0.01	0.00	0.00	N	N	N										
11b	Sec 19 T 143N R 73W	Natural	Yes	0.05	0.03	0.00	0.00	Y	N	N			Vollrath 16/17 11990	0.03						
11c	Sec 20 T 143N R 73W	Natural	Yes	0.05	0.04	0.00	0.00	Y	N	N			Vollrath 16/17 11990	0.04						
12	Sec 19 T 143N R 73W	Natural	Yes	0.00	0.00	0.00	0.00	N	N	N										
13	Sec 20 T 143N R 73W	Natural	No	0.00	0.00	0.00	0.00	N	N	N										
14	Sec 17 T 143N R 73W	Natural	No	0.00	0.00	0.00	0.00	N	N	N										
15	Sec 18 T 143N R 73W	Natural	No	0.00	0.00	0.00	0.00	N	N	N										
16	Sec 18 T 143N R 73W	Artificial	No	0.03	0.00	0.00	0.00	N	N	N										
17	Sec 18 T 143N R 73W	Natural	No	0.00	0.00	0.00	0.00	N	N	N										
18a	Sec 18 T 143N R 73W	Artificial	No	0.01	0.01	0.00	0.00	N	N	N										
18b	Sec 18 T 143N R 73W	Artificial	No	0.02	0.01	0.00	0.00	N	N	N										
19	Sec 7 T 143N R 73W	Natural	No	0.00	0.00	0.00	0.00	N	N	N										
20	Sec 8 T 143N R 73W	Natural	No	0.00	0.00	0.00	0.00	N	N	N										
21	Sec 7 T 143N R 73W	Natural	No	0.00	0.00	0.00	0.00	N	N	N										
22	Sec 8 T 143N R 73W	Natural	No	0.00	0.00	0.00	0.00	N	N	N										
23a	Sec 6 T 143N R 73W	Artificial	No	0.05	0.00	0.00	0.00	N	N	N										
23b	Sec 5 T 143N R 73W	Artificial	No	0.06	0.00	0.00	0.00	N	N	N										
23c	Sec 6 T 143N R 73W	Natural	No	0.00	0.00	0.00	0.00	N	N	N										

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Wetlands

ND 3
Tuttle N to W Jct 200

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	75	3

Wetland Impact Table

Wetland Number	Location	Wetland Feature	USACE Jurisdictional Wetlands	Wetland Impacts Acre(s)		USFWS Easement Impacts Acre(s)		Wetland Mitigation													
								Mitigation Required			USACE/11990 Bank		11990 Bank		USFWS Bank		Onsite				
				Temp.	Perm.	Temp.	Perm.	EO 11990	USACE	USFWS	Location	Acre(s)	Location	Acre(s)	Location	Acre(s)	MItIgatIon Location; Ratio	Acre(s)	Constructed Site #	Constructed Size Acre(s)
23d	Sec 6 T 143N R 73W	Natural	No	0.00	0.00	0.00	0.00	N	N	N										
23e	Sec 5 T 143N R 73W	Natural	No	0.00	0.00	0.00	0.00	N	N	N										
23f	Sec 6 T 143N R 73W	Artificial	No	0.00	0.00	0.00	0.00	N	N	N										
23g	Sec 5 T 143N R 73W	Artificial	No	0.00	0.00	0.00	0.00	N	N	N										
23h	Sec 5 T 143N R 73W	Artificial	No	0.00	0.00	0.00	0.00	N	N	N										
24	Sec 6 T 143N R 73W	Natural	No	0.00	0.00	0.00	0.00	N	N	N										
25	Sec 32 T 144N R 73W	Natural	No	0.19	0.04	0.00	0.00	Y	N	N			Vollrath 16/17 11990	0.04						
26	Sec 31 T 144N R 73W	Natural	No	0.04	0.00	0.00	0.00	N	N	N										
27	Sec 31 T 144N R 73W	Natural	No	0.00	0.00	0.00	0.00	N	N	N										
28	Sec 32 T 144N R 73W	Natural	No	0.00	0.00	0.00	0.00	N	N	N										
29	Sec 30 T 144N R 73W	Natural	No	0.06	0.03	0.00	0.00	Y	N	N			Vollrath 16/17 11990	0.03						
30a	Sec 30 T 144N R 73W	Natural	No	0.14	0.04	0.00	0.00	Y	N	N			Vollrath 16/17 11990	0.04						
30b	Sec 29 T 144N R 73W	Natural	No	0.04	0.02	0.00	0.00	Y	N	N			Vollrath 16/17 11990	0.02						
30c	Sec 30 T 144N R 73W	Artificial	No	0.03	0.00	0.00	0.00	N	N	N										
30d	Sec 30 T 144N R 73W	Natural	No	0.07	0.02	0.00	0.00	Y	N	N			Vollrath 16/17 11990	0.02						
30e	Sec 30 T 144N R 73W	Natural	No	0.07	0.03	0.00	0.00	Y	N	N			Vollrath 16/17 11990	0.03						
30f	Sec 29 T 144N R 73W	Natural	No	0.05	0.01	0.00	0.00	Y	N	N			Vollrath 16/17 11990	0.01						
31	Sec 29 T 144N R 73W	Natural	No	0.00	0.00	0.00	0.00	N	N	N										
32a	Sec 30 T 144N R 73W	Natural	No	0.02	0.02	0.01	0.01	Y	N	Y			Vollrath 16/17 11990	0.02	Vollrath 15/21 USFWS Easement	0.01				
32b	Sec 29 T 144N R 73W	Natural	No	0.01	0.03	0.00	0.03	Y	N	Y			Vollrath 16/17 11990	0.03	Vollrath 15/21 USFWS Easement	0.05[1]				
33	Sec 19 T 144N R 73W	Natural	No	0.01	0.02	0.01	0.01	Y	N	Y			Vollrath 16/17 11990	0.02	Vollrath 15/21 USFWS Easement	0.01				
34	Sec 19 T 144N R 73W	Natural	No	0.00	0.00	0.00	0.00	N	N	N										
35	Sec 19 T 144N R 73W	Natural	No	0.00	0.00	0.00	0.00	N	N	N										

[1]Mitigation acreage includes USFWS mapped wetland within new ROW area in Section 20, T144N, R73W

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Wetlands

ND 3
Tuttle N to W Jct 200

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	75	4

Wetland Impact Table

Wetland Number	Location	Wetland Feature	USACE Jurisdictional Wetlands	Wetland Impacts Acre(s)		USFWS Easement Impacts Acre(s)		Wetland Mitigation												
								Mitigation Required			USACE/11990 Bank		11990 Bank		USFWS Bank		Onsite			
				Temp.	Perm.	Temp.	Perm.	EO 11990	USACE	USFWS	Location	Acre(s)	Location	Acre(s)	Location	Acre(s)	Mitigation Location; Ratio	Acre(s)	Constructed Site #	Constructed Size Acre(s)
36	Sec 20 T 144N R 73W	Natural	No	0.00	0.00	0.00	0.00	N	N	N										
37	Sec 19 T 144N R 73W	Natural	No	0.00	0.00	0.00	0.00	N	N	N										
38a	Sec 19 T 144N R 73W	Natural	No	0.00	0.00	0.00	0.00	N	N	N										
38b	Sec 20 T 144N R 73W	Natural	No	0.00	0.00	0.00	0.00	N	N	N										
38c	Sec 20 T 144N R 73W	Artificial	No	0.00	0.00	0.00	0.00	N	N	N										
39a	Sec 18 T 144N R 73W	Natural	No	0.00	0.00	0.00	0.00	N	N	N										
39b	Sec 17 T 144N R 73W	Artificial	No	0.00	0.00	0.00	0.00	N	N	N										
40	Sec 17 T 144N R 73W	Natural	No	0.03	0.00	0.00	0.00	N	N	N										
41	Sec 17 T 144N R 73W	Natural	No	0.00	0.00	0.00	0.00	N	N	N										
42	Sec 18 T 144N R 73W	Natural	No	0.00	0.00	0.00	0.00	N	N	N										
43a	Sec 17 T 144N R 73W	Natural	No	0.01	0.00	0.00	0.00	N	N	N										
43b	Sec 17 T 144N R 73W	Natural	No	0.05	0.06	0.00	0.00	Y	N	N			Vollrath 16/17 11990	0.06						
44a	Sec 7 T 144N R 73W	Natural	No	0.02	0.00	0.00	0.00	N	N	N										
44b	Sec 8 T 144N R 73W	Natural	No	0.01	0.04	0.00	0.00	Y	N	N			Vollrath 16/17 11990	0.04						
45	Sec 8 T 144N R 73W	Natural	No	0.01	0.00	0.00	0.00	N	N	N										
46a	Sec 6 T 144N R 73W	Natural	No	0.08	0.01	0.00	0.00	Y	N	N			Vollrath 16/17 11990	0.01						
46b	Sec 6 T 144N R 73W	Natural	No	0.07	0.00	0.00	0.00	N	N	N										
47	Sec 5 T 144N R 73W	Artificial	No	0.00	0.00	0.00	0.00	N	N	N										
48	Sec 6 T 144N R 73W	Natural	No	0.03	0.03	0.00	0.00	Y	N	N			Vollrath 16/17 11990	0.03						
49	Sec 34 T 145N R 73W	Natural	No	0.02	0.00	0.00	0.00	N	N	N										
50	Sec 33 T 145N R 73W	Natural	No	0.00	0.00	0.00	0.00	N	N	N										
51	Sec 34 T 145N R 73W	Natural	No	0.00	0.00	0.00	0.00	N	N	N										
52a	Sec 33 T 145N R 73W	Natural	No	0.00	0.00	0.00	0.00	N	N	N										

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KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Wetlands

ND 3
Tuttle N to W Jct 200

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	75	5

Wetland Impact Table

Wetland Number	Location	Wetland Feature	USACE Jurisdictional Wetlands	Wetland Impacts Acre(s)		USFWS Easement Impacts Acre(s)		Wetland Mitigation												
								Mitigation Required			USACE/11990 Bank		11990 Bank		USFWS Bank		Onsite			
				Temp.	Perm.	Temp.	Perm.	EO 11990	USACE	USFWS	Location	Acre(s)	Location	Acre(s)	Location	Acre(s)	Mitigation Location; Ratio	Acre(s)	Constructed Site #	Constructed Size Acre(s)
52b	Sec 34 T 145N R 73W	Natural	No	0.02	0.00	0.00	0.00	N	N	N										
52c	Sec 34 T 145N R 73W	Artificial	No	0.01	0.00	0.00	0.00	N	N	N										
53a	Sec 33 T 145N R 73W	Natural	No	0.02	0.00	0.00	0.00	N	N	N										
53b	Sec 34 T 145N R 73W	Natural	No	0.01	0.01	0.00	0.00	Y	N	N			Vollrath 16/17 11990	0.01						
54a	Sec 33 T 145N R 73W	Natural	No	0.01	0.01	0.00	0.00	Y	N	N			Vollrath 16/17 11990	0.01						
54b	Sec 34 T 145N R 73W	Natural	No	0.01	0.00	0.00	0.00	N	N	N										
55	Sec 28 T 145N R 73W	Natural	No	0.01	0.00	0.00	0.00	N	N	N										
56	Sec 27 T 145N R 73W	Natural	No	0.00	0.00	0.00	0.00	N	N	N										
57	Sec 28 T 145N R 73W	Natural	No	0.01	0.00	0.00	0.00	N	N	N										
58a	Sec 21 T 145N R 73W	Natural	No	0.02	0.00	0.00	0.00	N	N	N										
58b	Sec 22 T 145N R 73W	Natural	No	0.04	0.02	0.00	0.00	Y	N	N			Vollrath 16/17 11990	0.02						
59	Sec 22 T 145N R 73W	Natural	No	0.03	0.00	0.00	0.00	N	N	N										
60a	Sec 21 T 145N R 73W	Natural	No	0.01	0.01	0.00	0.00	Y	N	N			Vollrath 16/17 11990	0.01						
60b	Sec 16 T 145N R 73W	Natural	No	0.06	0.03	0.00	0.00	Y	N	N			Vollrath 16/17 11990	0.03						
61	Sec 22 T 145N R 73W	Natural	No	0.03	0.04	0.00	0.00	Y	N	N			Vollrath 16/17 11990	0.04						
62a	Sec 15 T 145N R 73W	Natural	No	0.03	0.03	0.00	0.01	Y	N	Y			Vollrath 16/17 11990	0.03	Vollrath 15/21 USFWS Easement	0.01				
62b	Sec 15 T 145N R 73W	Natural	No	0.00	0.00	0.00	0.00	N	N	N										
63	Sec 15 T 145N R 73W	Natural	No	0.00	0.00	0.00	0.00	N	N	N										
64	Sec 16 T 145N R 73W	Natural	No	0.00	0.00	0.00	0.00	N	N	N										
65	Sec 15 T 145N R 73W	Natural	No	0.06	0.02	0.00	0.00	Y	N	N			Vollrath 16/17 11990	0.02						
66	Sec 16 T 145N R 73W	Natural	No	0.00	0.00	0.00	0.00	N	N	N										
67	Sec 15 T 145N R 73W	Natural	No	0.01	0.00	0.00	0.00	N	N	N										
68	Sec 15 T 145N R 73W	Natural	No	0.00	0.00	0.00	0.00	N	N	N										

REGISTERED PROFESSIONAL ENGINEER
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PE-27746
DATE 12/15/2021
NORTH DAKOTA

Wetlands

ND 3
Tuttle N to W Jct 200

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	75	6

Wetland Impact Table

Wetland Number	Location	Wetland Feature	USACE Jurisdictional Wetlands	Wetland Impacts Acre(s)		USFWS Easement Impacts Acre(s)		Wetland Mitigation												
								Mitigation Required			USACE/11990 Bank		11990 Bank		USFWS Bank		Onsite			
				Temp.	Perm.	Temp.	Perm.	EO 11990	USACE	USFWS	Location	Acre(s)	Location	Acre(s)	Location	Acre(s)	MItIgatIon Location; Ratio	Acre(s)	Constructed Site #	Constructed Size Acre(s)
69a	Sec 16 T 145N R 73W	Natural	No	0.00	0.00	0.00	0.00	N	N	N										
69b	Sec 15 T 145N R 73W	Natural	No	0.00	0.00	0.00	0.00	N	N	N										
69c	Sec 15 T 145N R 73W	Natural	No	0.00	0.00	0.00	0.00	N	N	N										
70	Sec 10 T 145N R 73W	Natural	No	0.01	0.00	0.00	0.00	N	N	N										
71	Sec 10 T 145N R 73W	Natural	No	0.04	0.01	0.00	0.00	Y	N	N			Vollrath 16/17 11990	0.01						
72a	Sec 10 T 145N R 73W	Natural	No	0.00	0.00	0.00	0.00	N	N	N										
72b	Sec 3 T 145N R 73W	Natural	No	0.11	0.06	0.00	0.00	Y	N	N			Vollrath 16/17 11990	0.06						
72c	Sec 3 T 145N R 73W	Natural	No	0.02	0.02	0.00	0.01	Y	N	Y			Vollrath 16/17 11990	0.02	Vollrath 15/21 USFWS Easement	0.01				
73	Sec 33 T 146N R 73W	Artificial	No	0.00	0.00	0.00	0.00	N	N	N										
74	Sec 33 T 146N R 73W	Artificial	No	0.00	0.00	0.00	0.00	N	N	N										
75a	Sec 33 T 146N R 73W	Natural	No	0.00	0.00	0.00	0.00	N	N	N										
75b	Sec 33 T 146N R 73W	Artificial	No	0.00	0.00	0.00	0.00	N	N	N										
75c	Sec 34 T 146N R 73W	Natural	No	0.00	0.00	0.00	0.00	N	N	N										
76	Sec 28 T 146N R 73W	Artificial	No	0.00	0.00	0.00	0.00	N	N	N										
77	Sec 27 T 146N R 73W	Artificial	No	0.01	0.00	0.00	0.00	N	N	N										
78	Sec 28 T 146N R 73W	Artificial	No	0.02	0.00	0.00	0.00	N	N	N										
79a	Sec 27 T 146N R 73W	Artificial	No	0.02	0.01	0.00	0.00	N	N	N										
79b	Sec 28 T 146N R 73W	Natural	No	0.01	0.00	0.00	0.00	N	N	N										
79c	Sec 27 T 146N R 73W	Natural	No	0.00	0.00	0.00	0.00	N	N	N										
79d	Sec 21 T 146N R 73W	Natural	No	0.00	0.00	0.00	0.00	N	N	N										
80	Sec 28 T 145N R 73W	Natural	No	0.00	0.00	0.00	0.00	N	N	N										
81a	Sec 27 T 146N R 73W	Natural	No	0.00	0.00	0.00	0.00	N	N	N										
81b	Sec 34 T 146N R 73W	Natural	No	0.00	0.00	0.00	0.00	N	N	N										

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Wetlands

ND 3
Tuttle N to W Jct 200

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	75	7

Wetland Impact Table

Wetland Number	Location	Wetland Feature	USACE Jurisdictional Wetlands[1]	Wetland Impacts Acre(s)		USFWS Easement Impacts Acre(s)		Wetland Mitigation												
								Mitigation Required			USACE/11990 Bank		11990 Bank		USFWS Bank		Onsite			
				Temp.	Perm.	Temp.	Perm.	EO 11990	USACE	USFWS	Location	Acre(s)	Location	Acre(s)	Location	Acre(s)	MItIgatIon Location; Ratio	Acre(s)	Constructed Site #	Constructed Size Acre(s)
81c	Sec 34 T 146N R 73W	Natural	No	0.00	0.00	0.00	0.00	N	N	N										
82	Sec 3 T 145N R 73W	Natural	Yes	0.00	0.00	0.00	0.00	N	N	N										
				3.12	1.18	0.02	0.09					0.00		0.97		0.11		0.12		0.12

[1] A wetland Jurisdictional Determination was issued by the USACE on 1/9/2017 and 3/16/2018; NWO-2015-0183-BIS.
[2] 11990 Mitigation requirements - All impacts to natural wetlands (natural/jurisdictional and natural/non-jurisdictional), regardless of size, as well as impacts greater than 0.10 acre to wetlands require mitigation.
USACE Mitigation Requirements All jurisdictional impacts greater than 0.10 acre to each resource (cumulative. eg 1a ,1b,1c..etc.) requires mitigation. Other Water impact greater than 300 linear feet requires 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.

Impact Summary Table

Permanent Impact Summary		Temporary Impacts and additional information	
Wetland Type	Total (Acres)	Wetland Type	Total (Acres/Lf)
Natural/JD	0.26	Temporary JD	0.95
Natural/Non -JD	0.92	Non-JD Temporary	2.19
Artificial/JD	0.04	Permanent JD > 0.10	0.15
Artificial /Non-JD	0.05	Permanent OW	0 ac / 0 ft.
Total	1.27	Temporary OW	0 / 0

Mitigation Summary Table

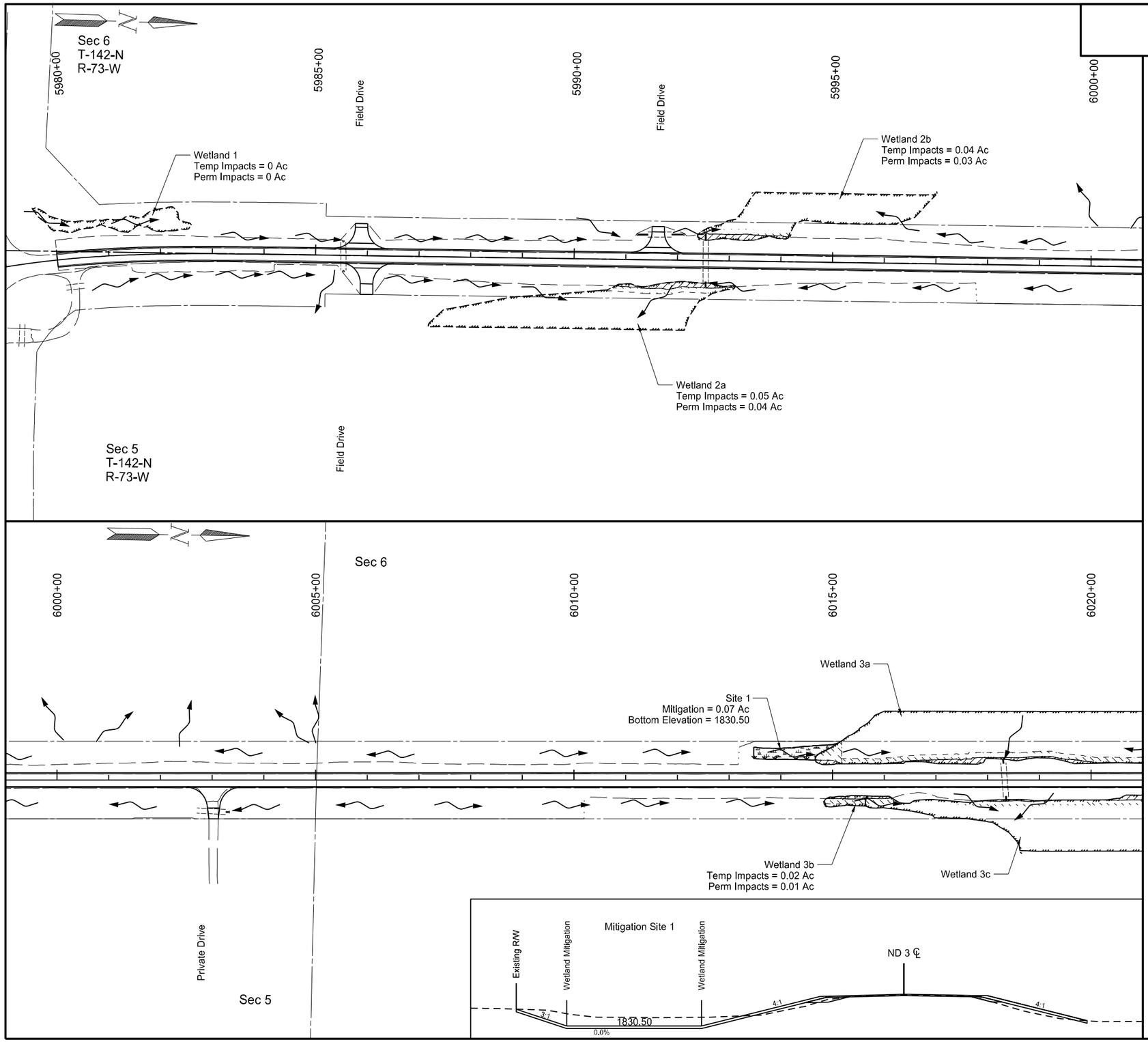
	Location	Onsite Acre(s)	11990 Bank Acre(s)	USACE/11990 Bank Acre(s)	USFWS Bank Acre(s)
USACE Only					
EO 11990 Only	Volrath 16/17 11990		0.97		
USACE/11990	Onsite	0.12			
USFWS	Vollrath 15/21 USFWS Easement				0.11
	Total	0.12	0.97	0	0.11

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Wetlands

ND 3
Tuttle N to W Jct 200

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	75	8



Legend

- Wetlands Created
- Permanent Impact
- Temporary Impact
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- Existing Delineated Wetland
- Flow Direction

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PE-27746
DATE 12/15/2021
NORTH DAKOTA

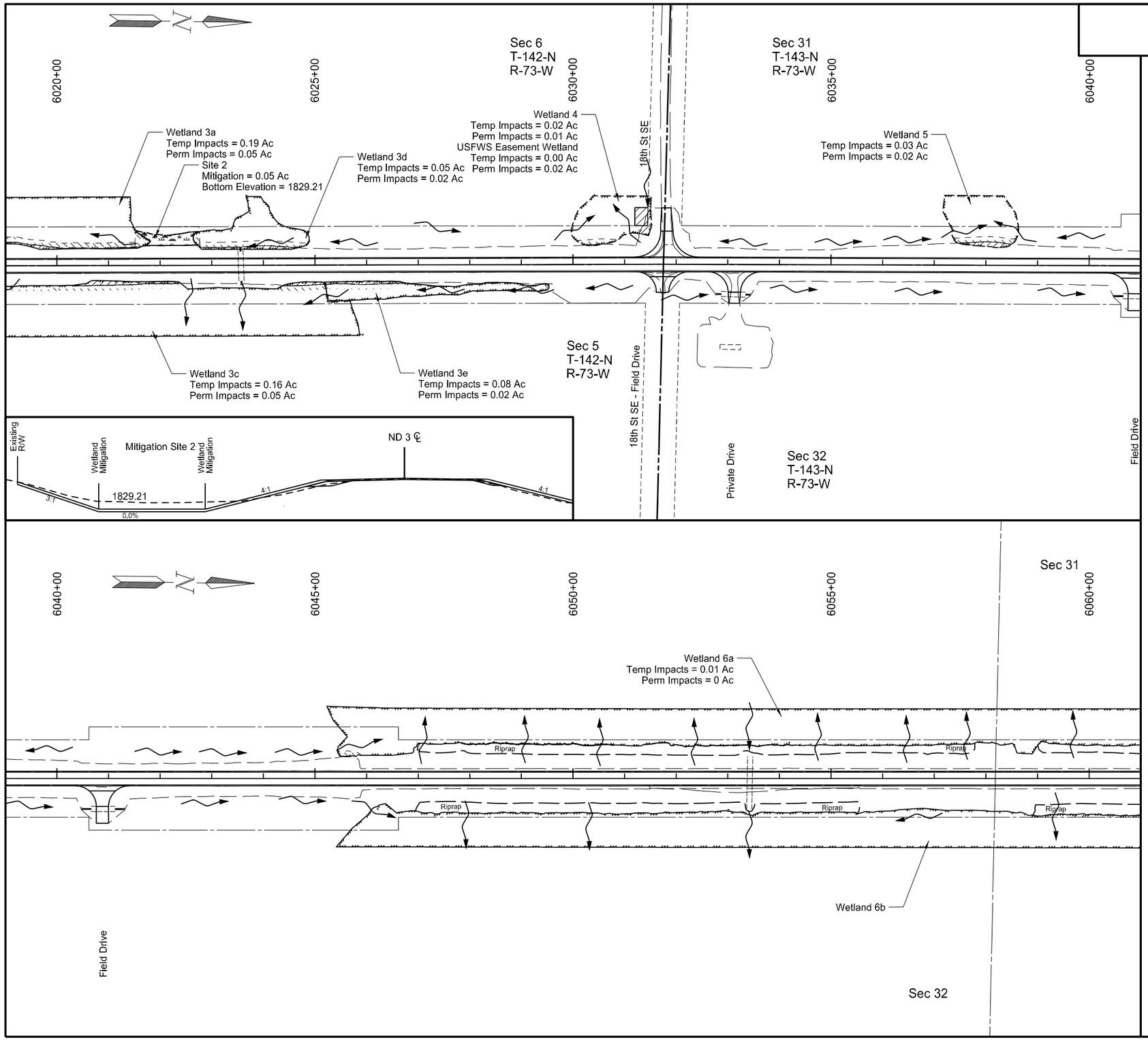
Wetlands

ND 3
Tuttle N to W Jct 200

5980+00 to 6020+00
Kidder County

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STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	75	9



Legend

- Wetlands Created
- Permanent Impact
- Temporary Impact
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- Existing Delineated Wetland
- Flow Direction

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

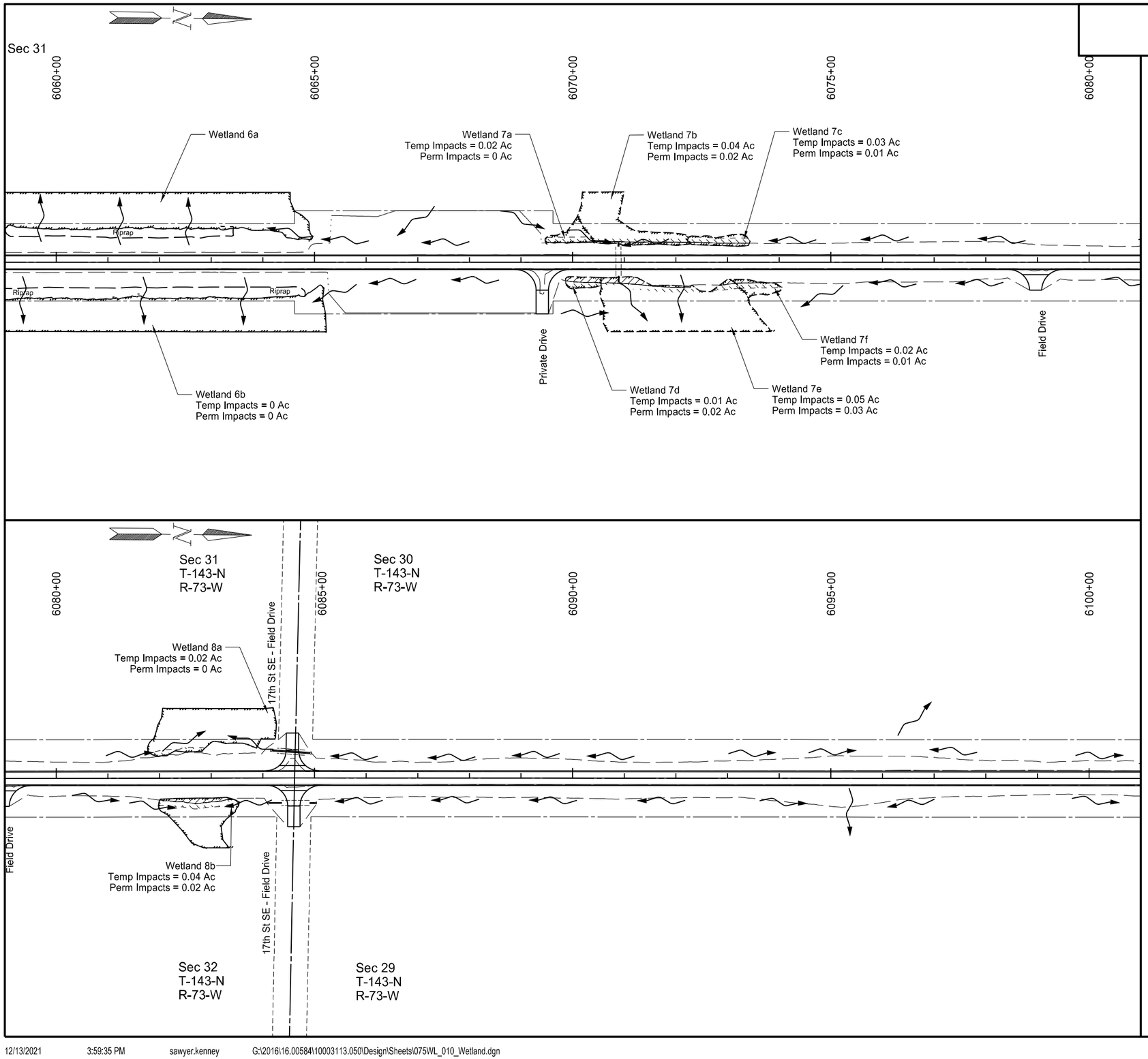
Wetlands

ND 3
Tuttle N to W Jct 200

6020+00 to 6060+00
Kidder County

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STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	75	10



Legend

- Wetlands Created
- Permanent Impact
- Temporary Impact
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- Existing Delineated Wetland
- Flow Direction

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

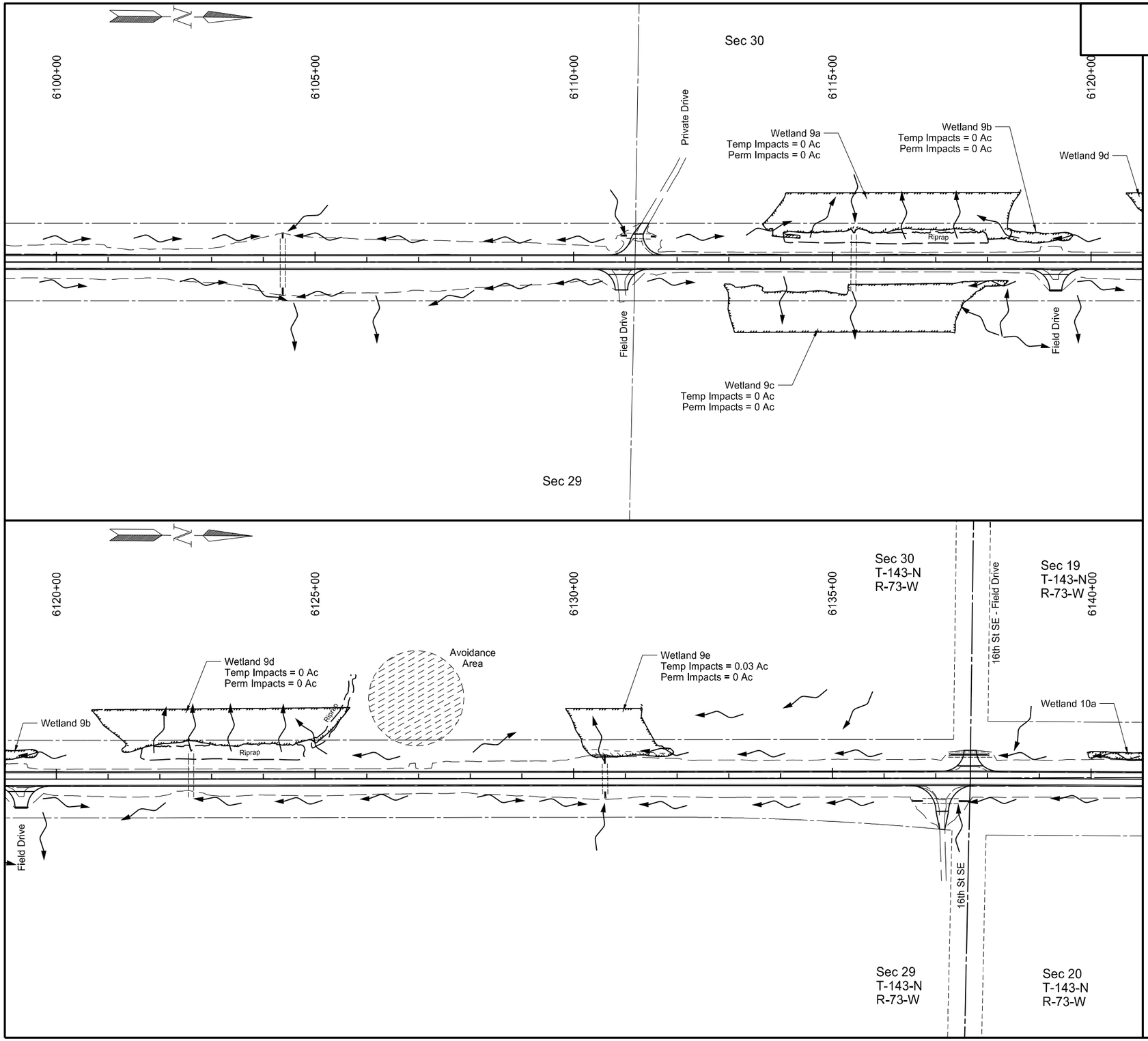
Wetlands

ND 3
Tuttle N to W Jct 200

6060+00 to 6100+00
Kidder County

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STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	75	11



Legend

- Wetlands Created
- Permanent Impact
- Temporary Impact
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- Existing Delineated Wetland
- Flow Direction

REGISTERED PROFESSIONAL ENGINEER
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DATE 12/15/2021
NORTH DAKOTA

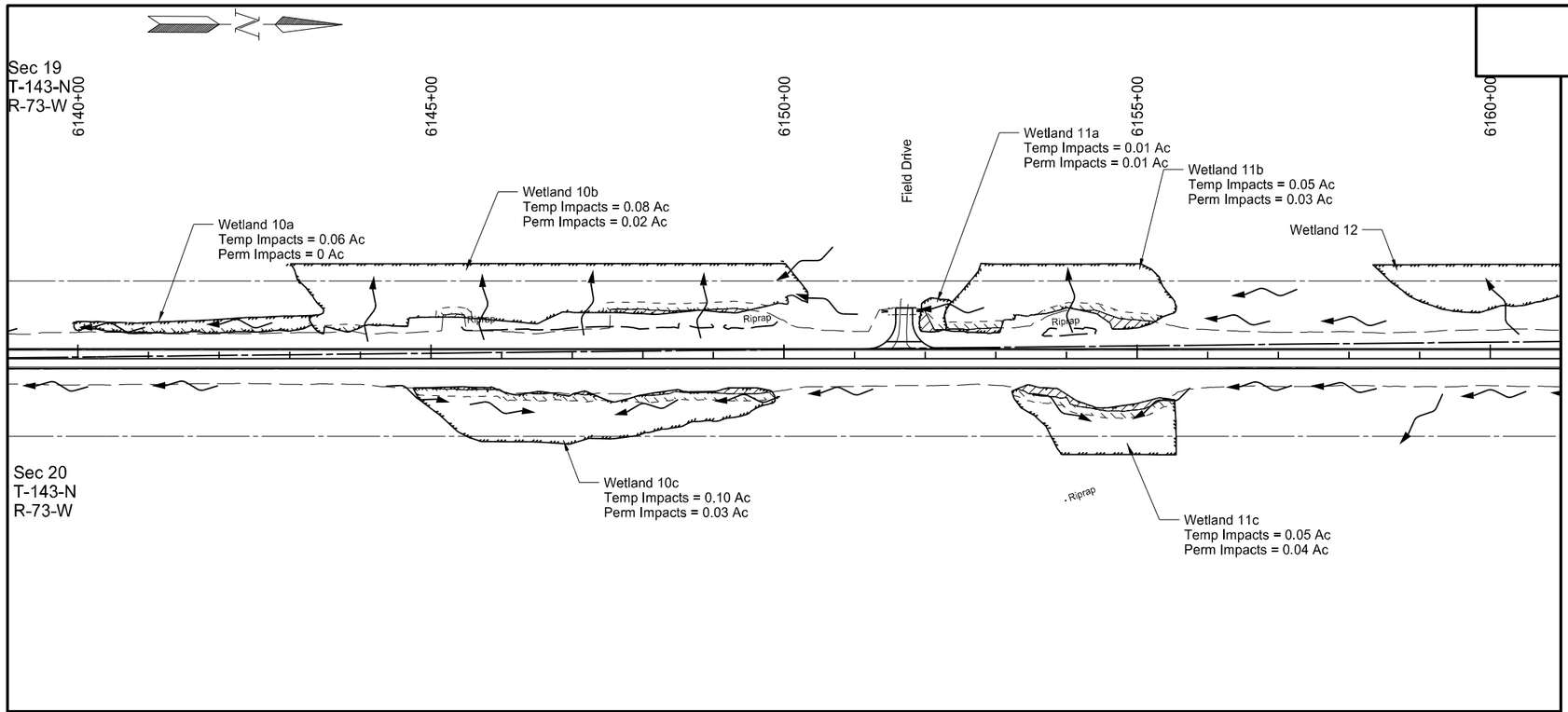
Wetlands

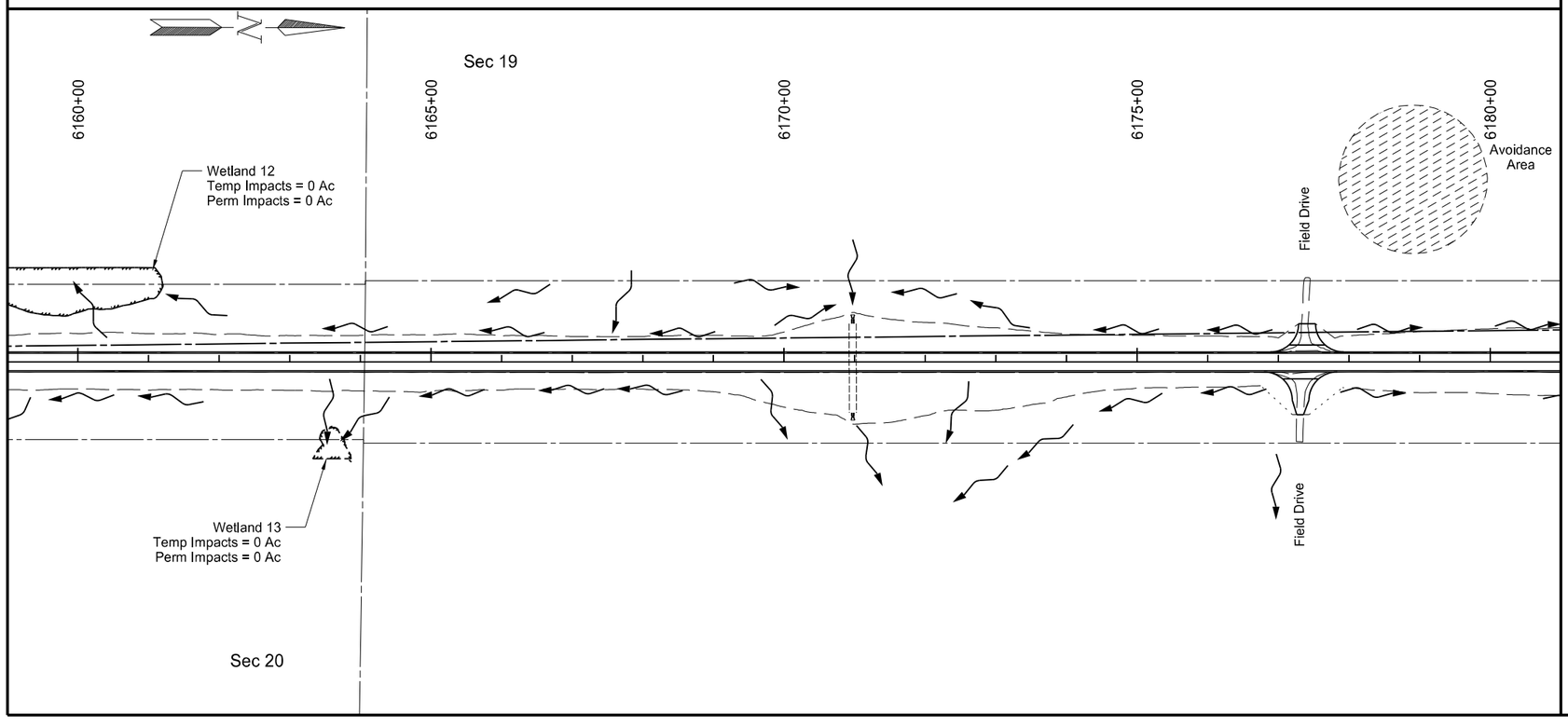
ND 3
Tuttle N to W Jct 200

6100+00 to 6140+00
Kidder County

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STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	75	12





Legend

- Wetlands Created
- Permanent Impact
- Temporary Impact
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- Existing Delineated Wetland
- Flow Direction

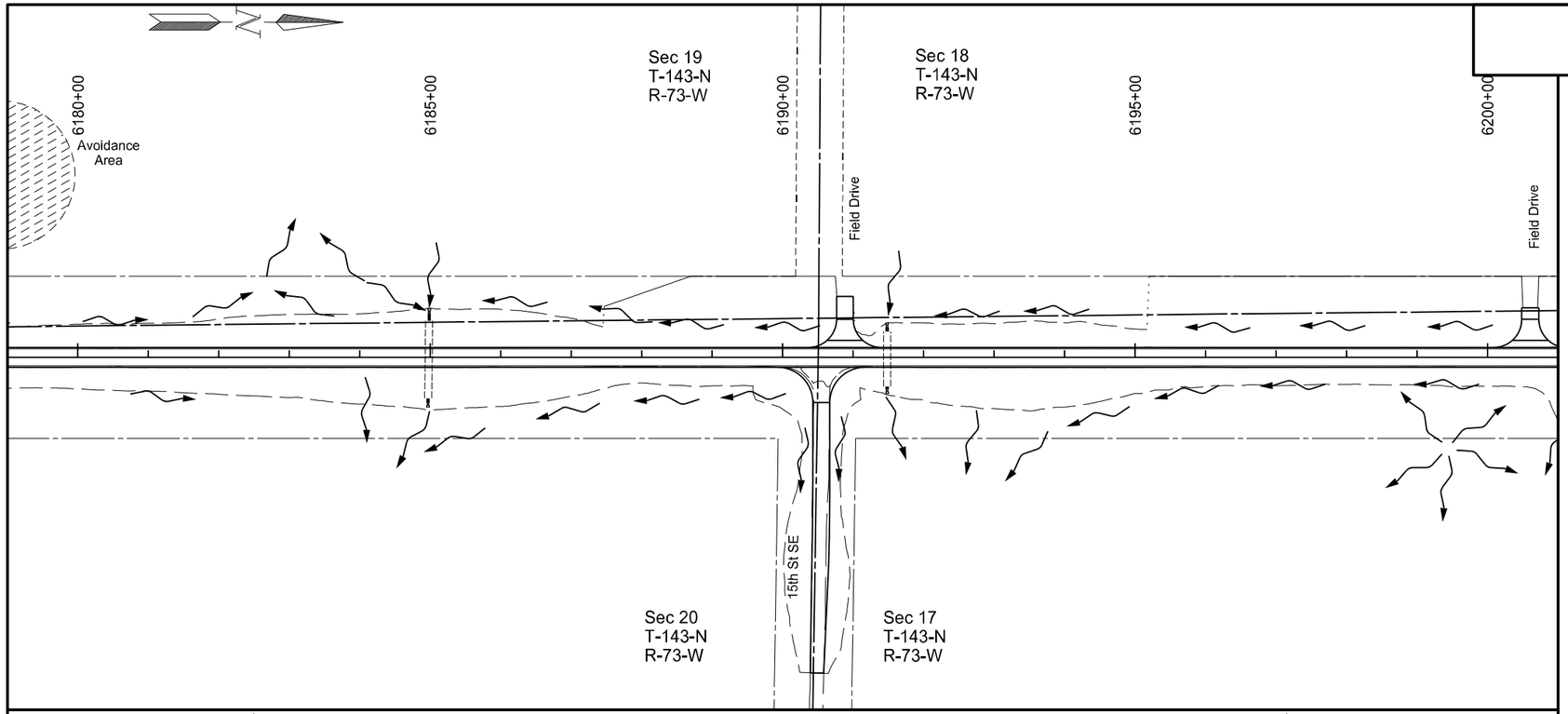
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KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

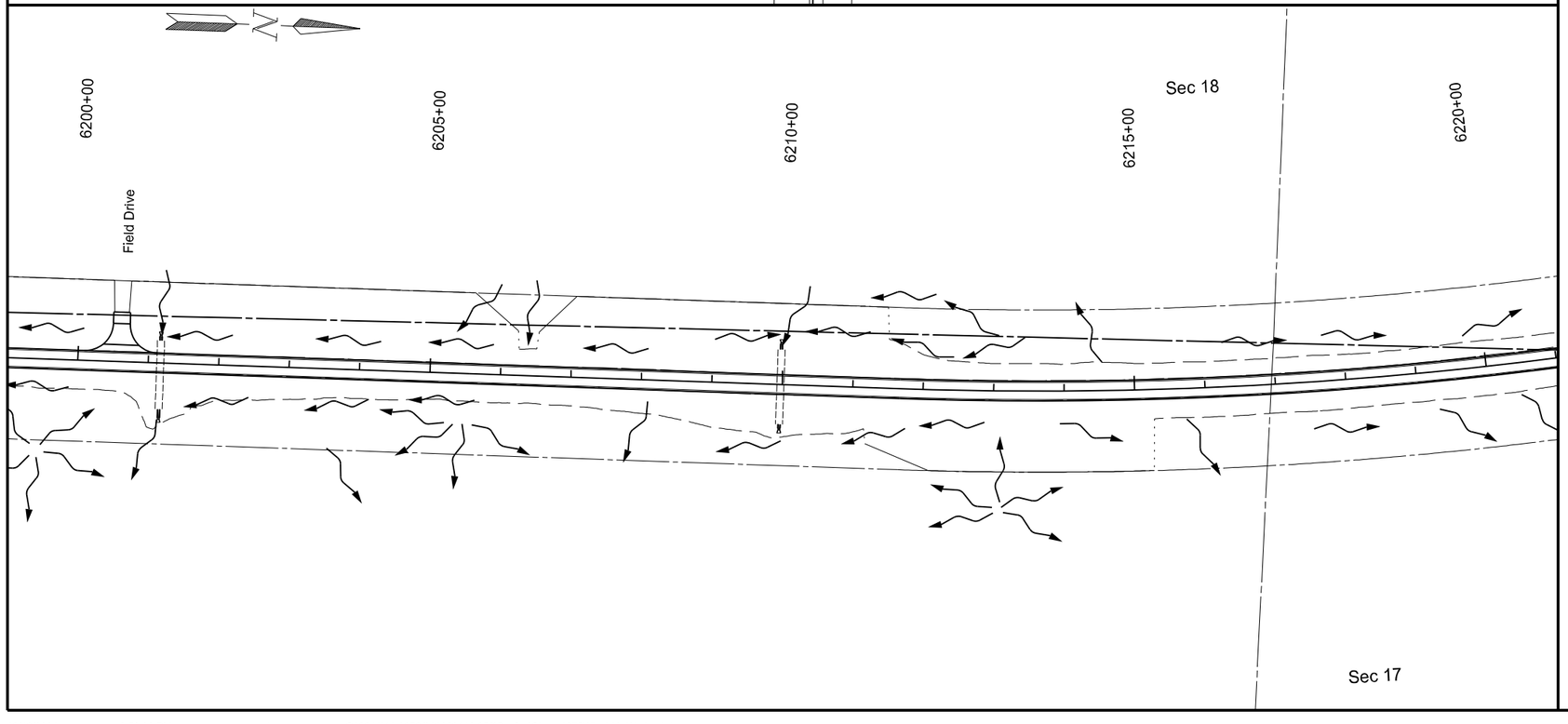
Wetlands

ND 3
Tuttle N to W Jct 200

6140+00 to 6180+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	75	13





Legend

- Wetlands Created
- Permanent Impact
- Temporary Impact
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- Existing Delineated Wetland
- Flow Direction

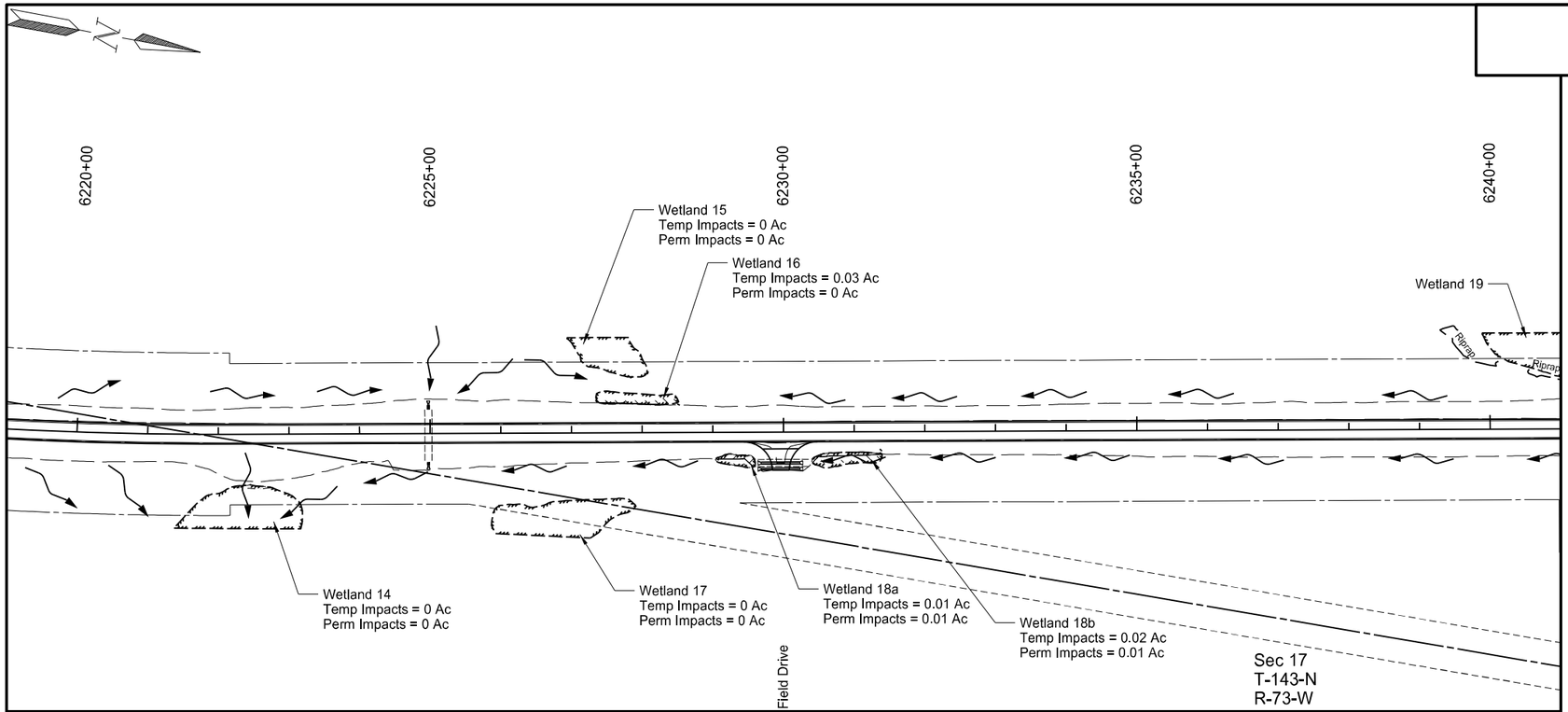
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KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

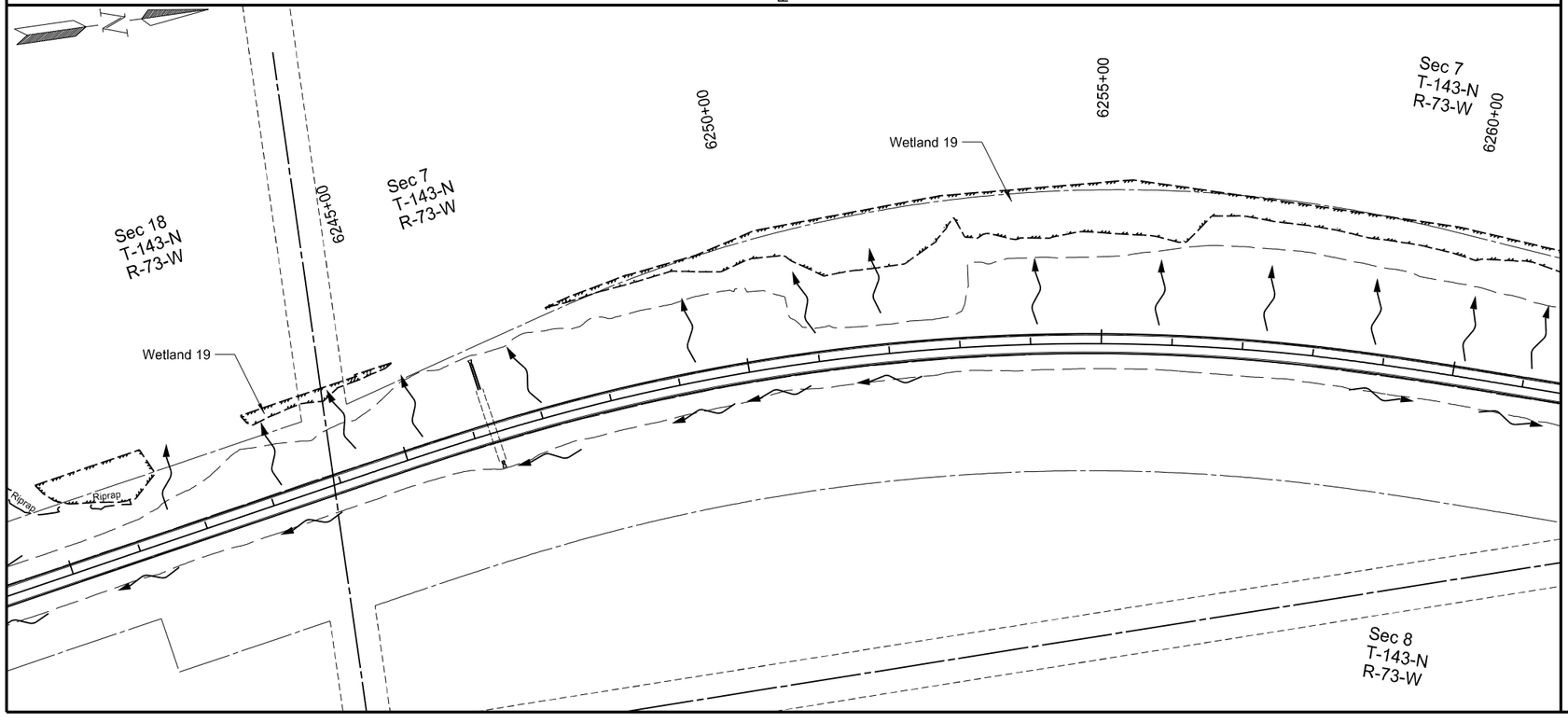
Wetlands

ND 3
Tuttle N to W Jct 200

6180+00 to 6220+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	75	14





Legend

- Wetlands Created
- Permanent Impact
- Temporary Impact
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- Existing Delineated Wetland
- Flow Direction

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

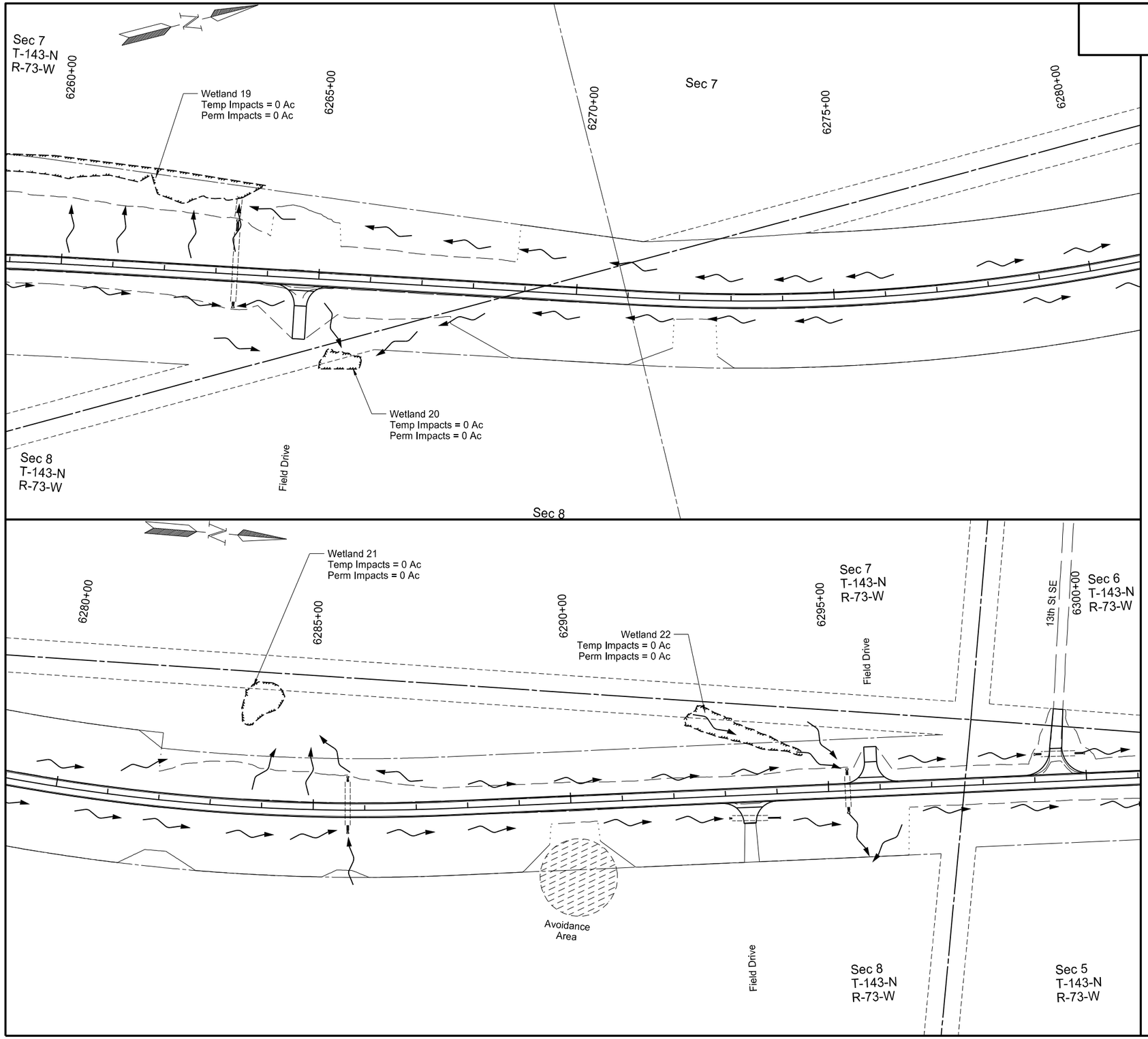
Wetlands

ND 3
Tuttle N to W Jct 200

6220+00 to 6260+00
Kidder County

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STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	75	15



Legend

- Wetlands Created
- Permanent Impact
- Temporary Impact
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- Existing Delineated Wetland
- Flow Direction

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

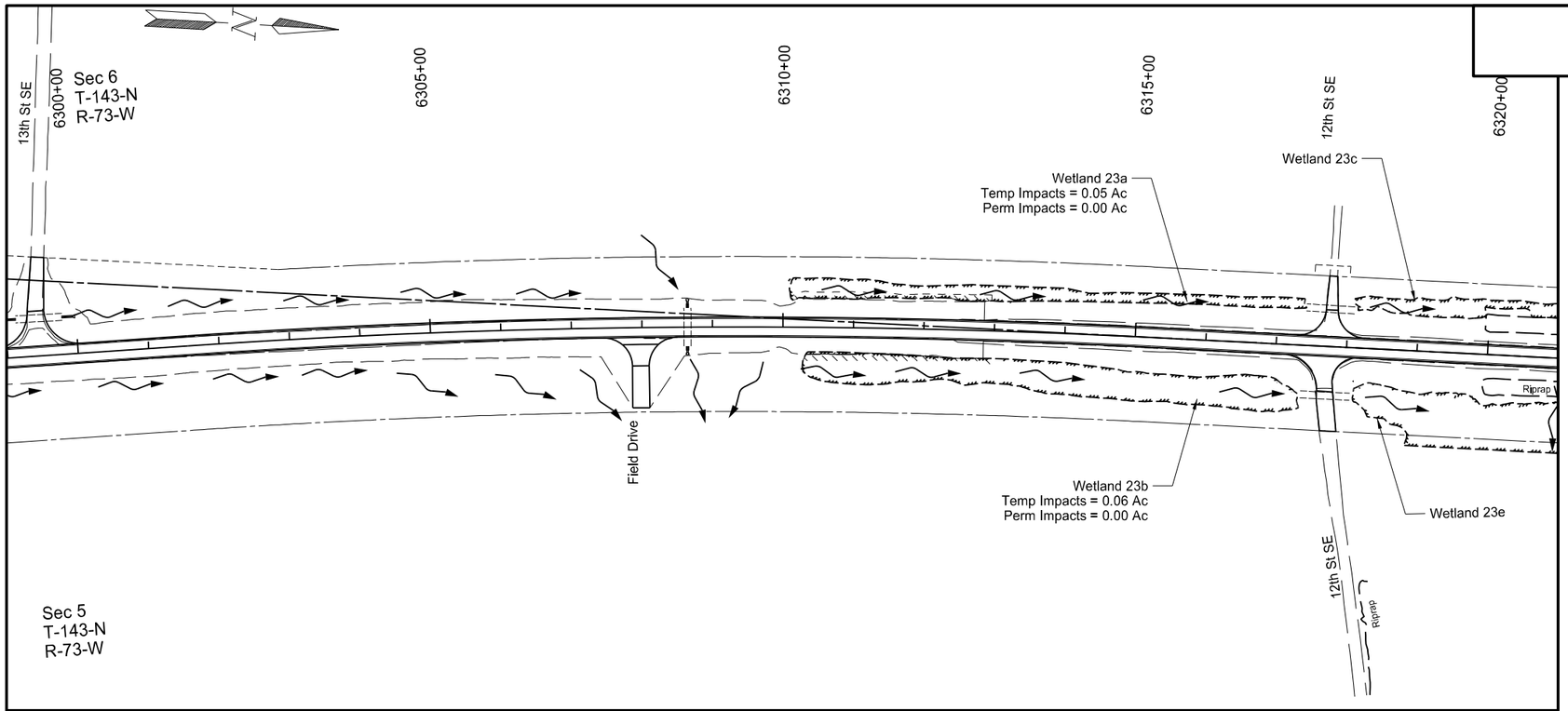
Wetlands

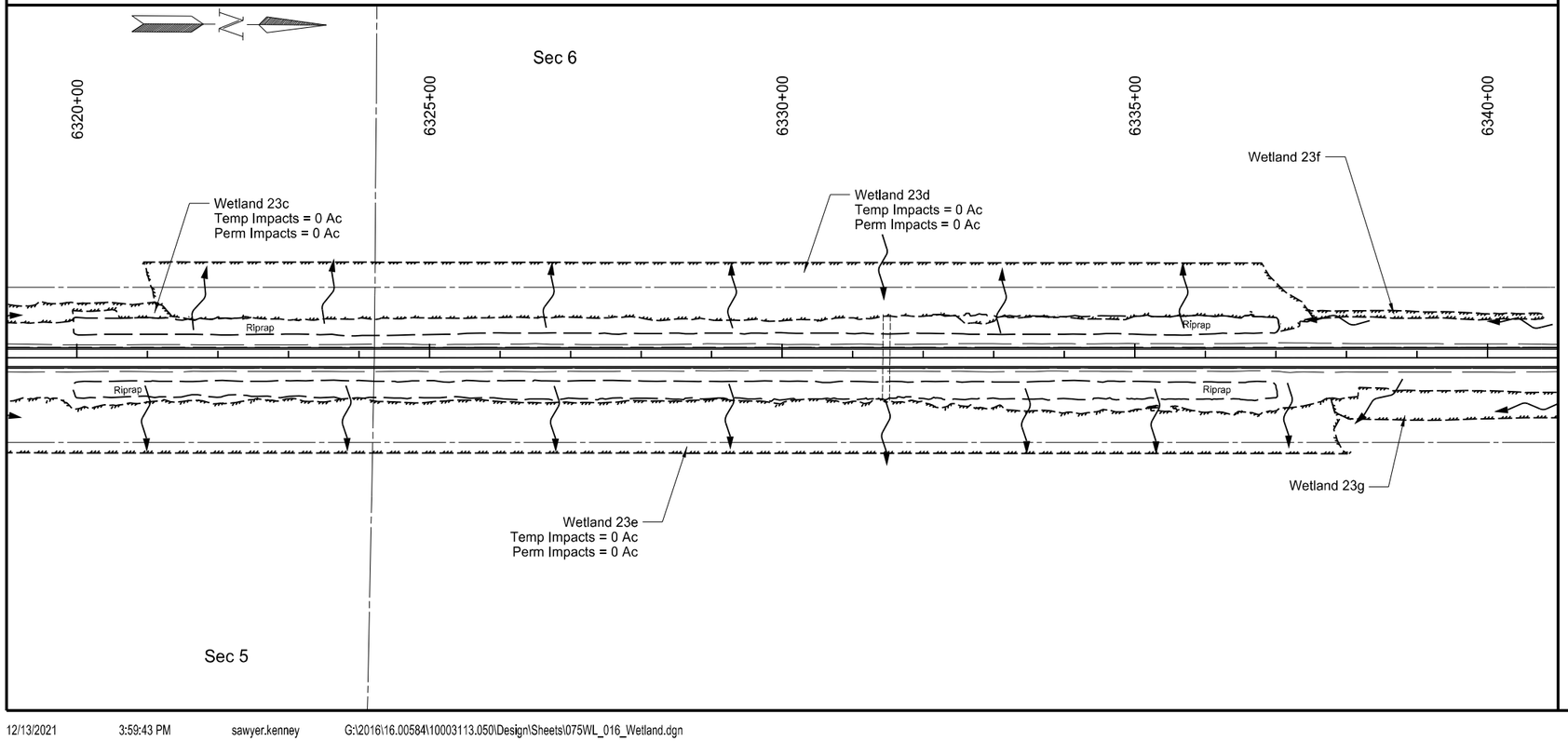
ND 3
Tuttle N to W Jct 200

6260+00 to 6300+00
Kidder County

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STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	75	16





Legend

- Wetlands Created
- Permanent Impact
- Temporary Impact
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- Existing Delineated Wetland
- Flow Direction

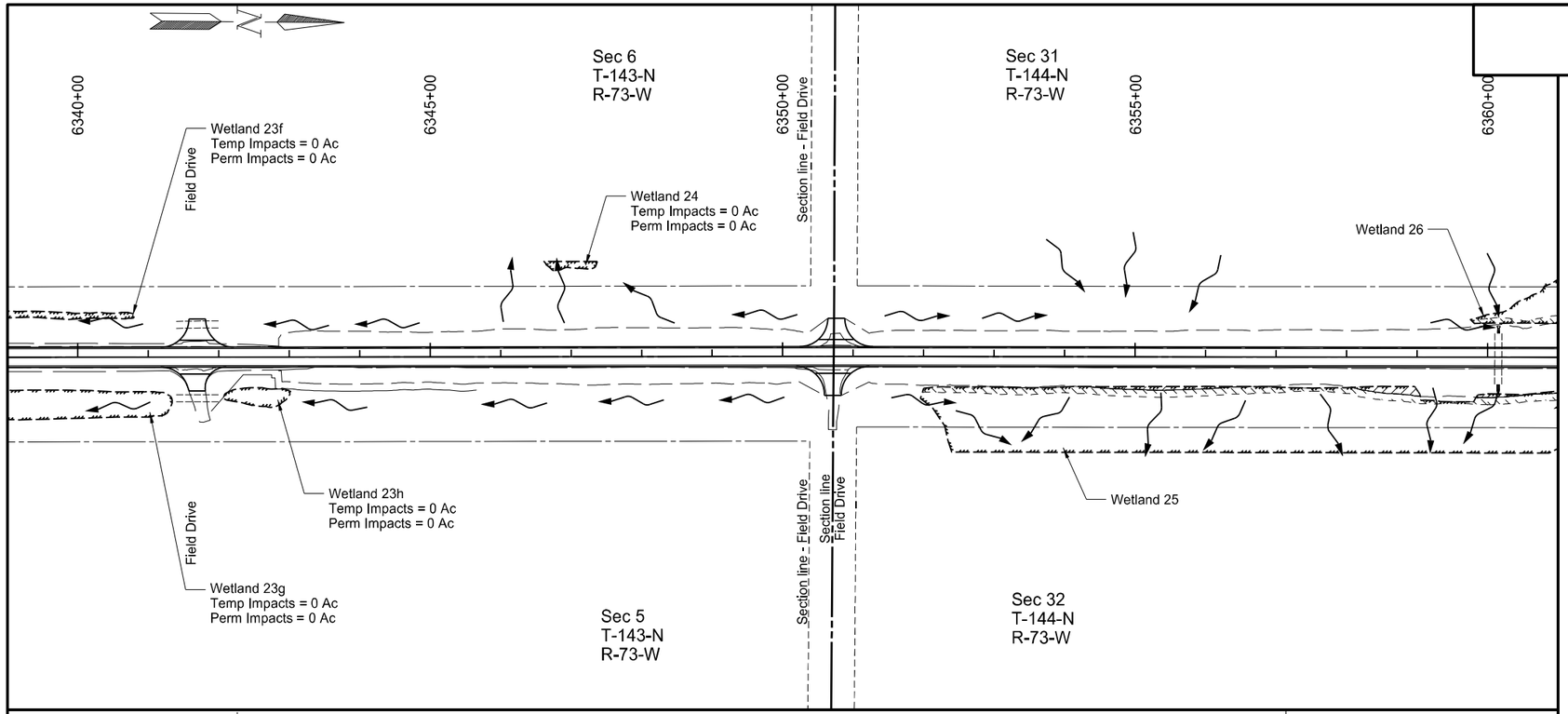
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DATE 12/15/2021
NORTH DAKOTA

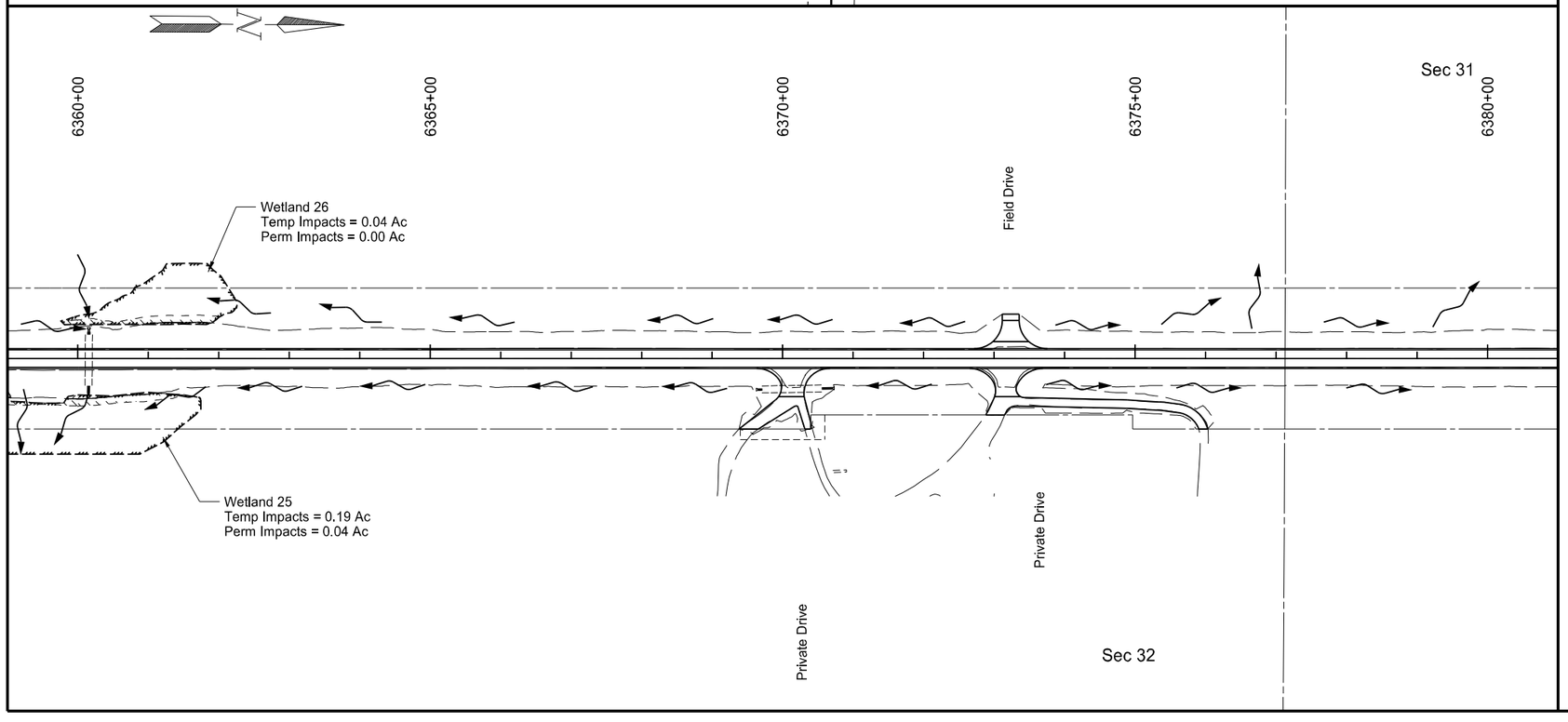
Wetlands

ND 3
Tuttle N to W Jct 200

6300+00 to 6340+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	75	17





Legend

- Wetlands Created
- Permanent Impact
- Temporary Impact
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- Existing Delineated Wetland
- Flow Direction

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

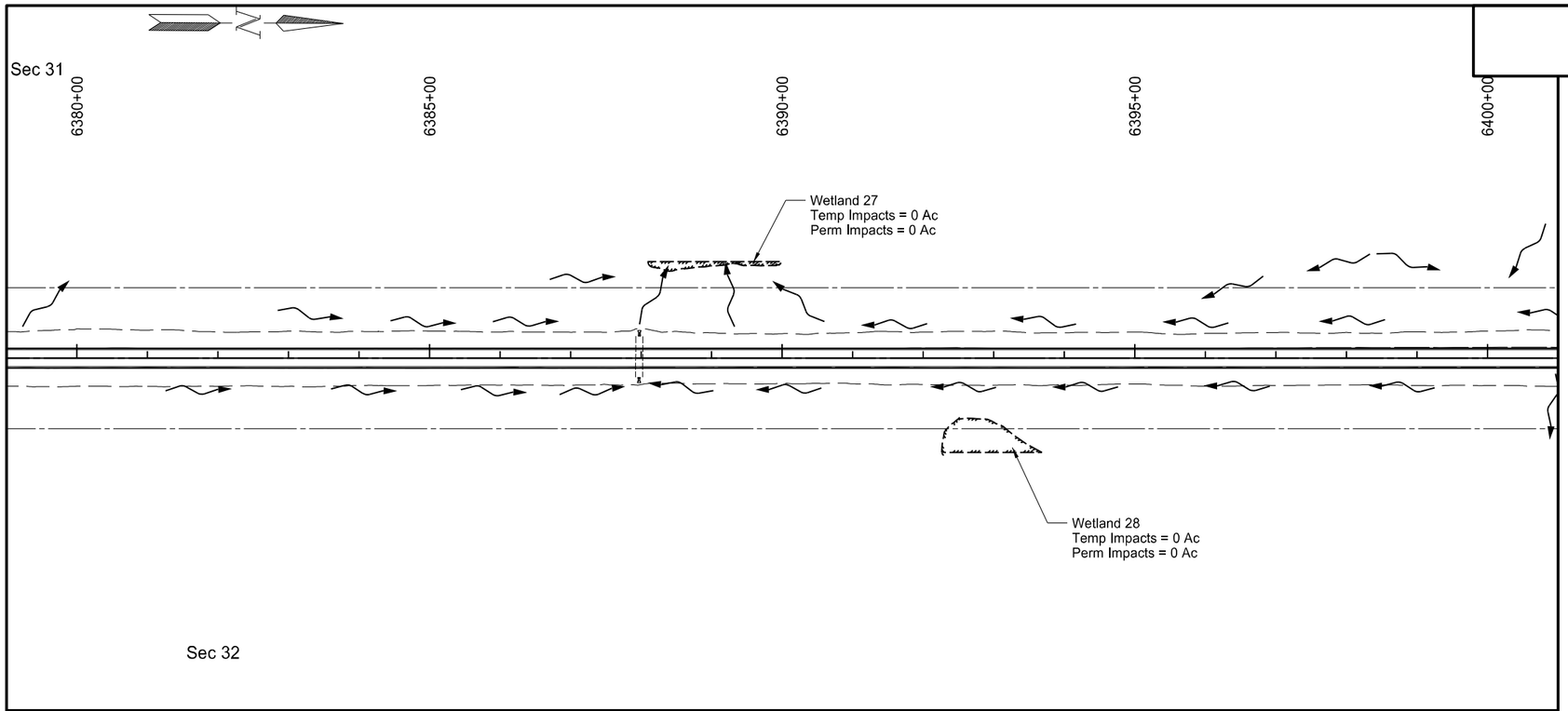
Wetlands

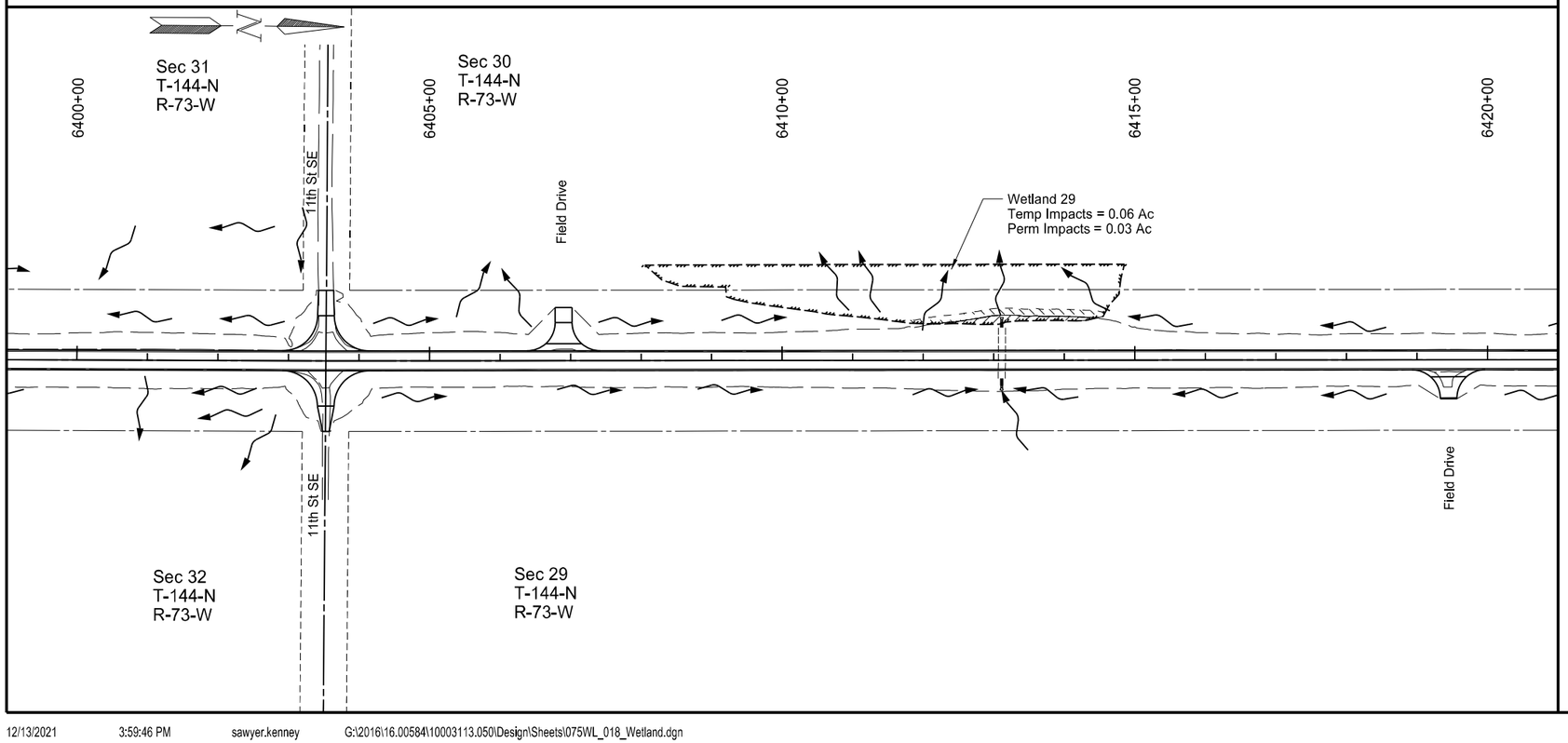
ND 3
Tuttle N to W Jct 200

6340+00 to 6380+00
Kidder County

12/13/2021 3:59:44 PM sawyer.kenney G:\2016\16.00584\10003113.050\Design\Sheets\075WL_017_Wetland.dgn

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	75	18





Legend

- Wetlands Created
- Permanent Impact
- Temporary Impact
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- Existing Delineated Wetland
- Flow Direction

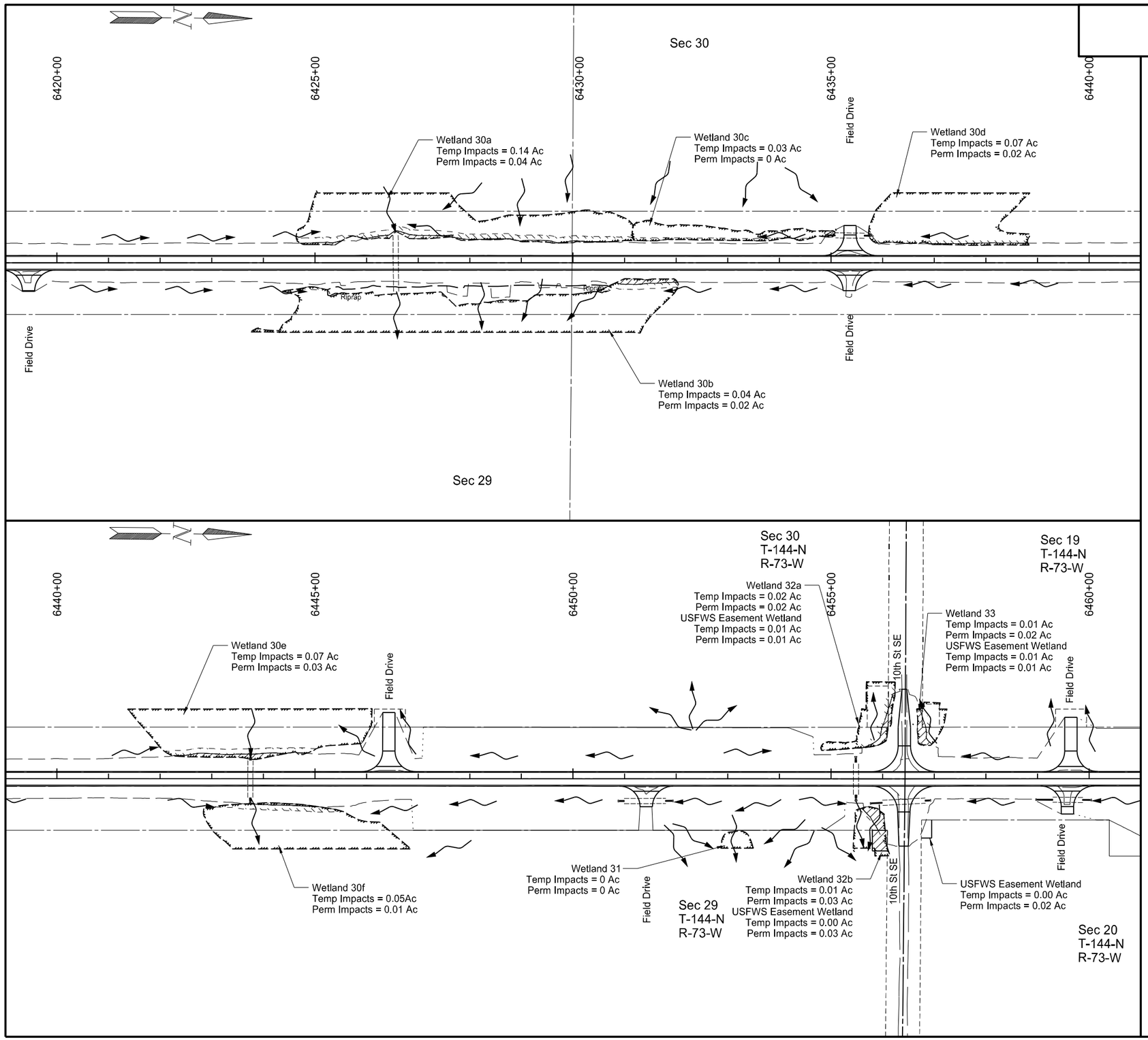
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Wetlands

ND 3
Tuttle N to W Jct 200

6380+00 to 6420+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	75	19



Legend

- Wetlands Created
- Permanent Impact
- Temporary Impact
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- Existing Delineated Wetland
- Flow Direction

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Wetlands

ND 3
Tuttle N to W Jct 200

6420+00 to 6460+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	75	20

Sec 19
T-144-N
R-73-W

6460+00 6465+00 6470+00 6475+00 6480+00

Field Drive

Wetland 34
Temp Impacts = 0 Ac
Perm Impacts = 0 Ac

Wetland 35
Temp Impacts = 0 Ac
Perm Impacts = 0 Ac

Field Drive

Field Drive

Wetland 36
Temp Impacts = 0 Ac
Perm Impacts = 0 Ac

Sec 20
T-144-N
R-73-W

Sec 19

6480+00 6485+00 6490+00 6495+00 6500+00

Field Drive

Wetland 37
Temp Impacts = 0 Ac
Perm Impacts = 0 Ac

Private Drive

Begin Exception
Sta 6496+95

Wetland 38a

Riprap

Riprap

Private Drive

Private Drive

Wetland 38b

Sec 20

Legend

- Wetlands Created
- Permanent Impact
- Temporary Impact
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- Existing Delineated Wetland
- Flow Direction

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

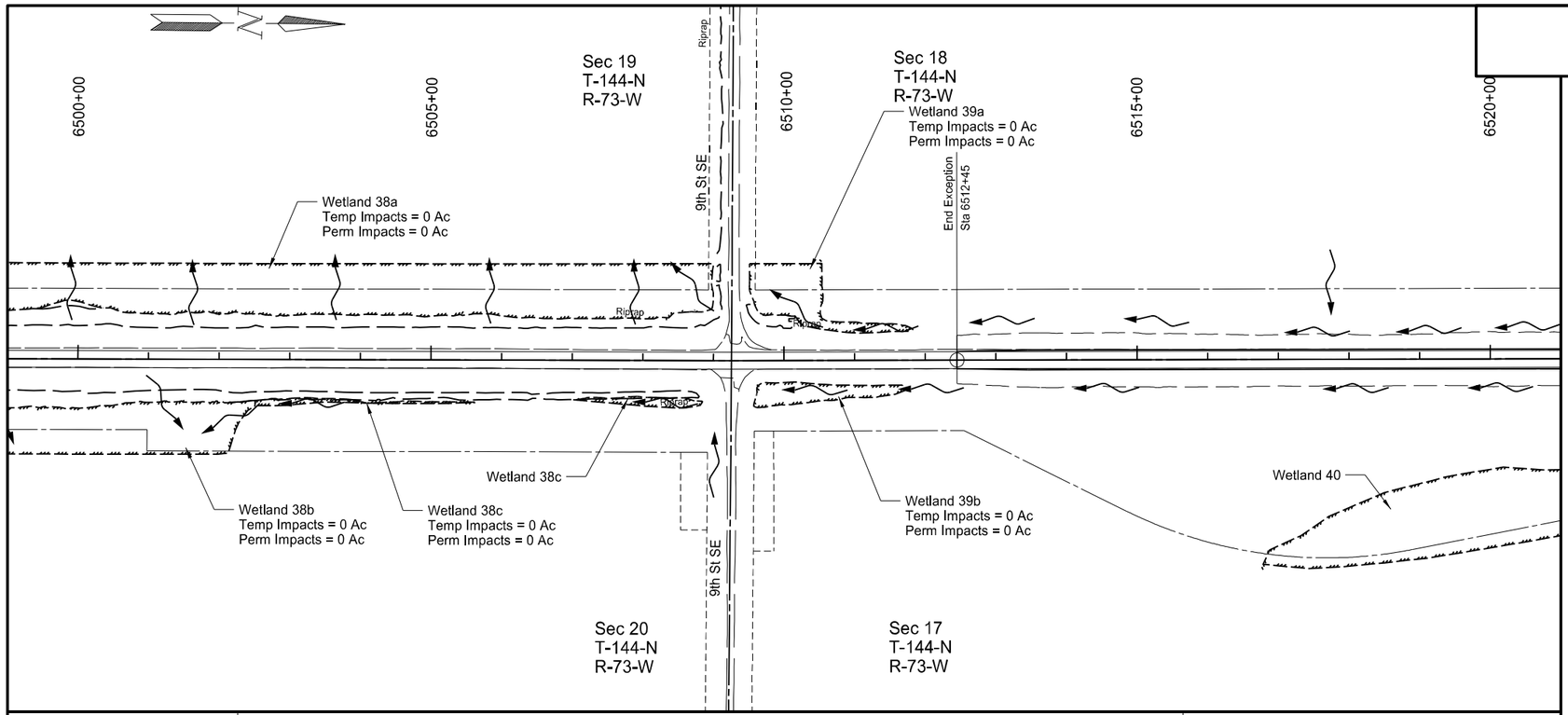
Wetlands

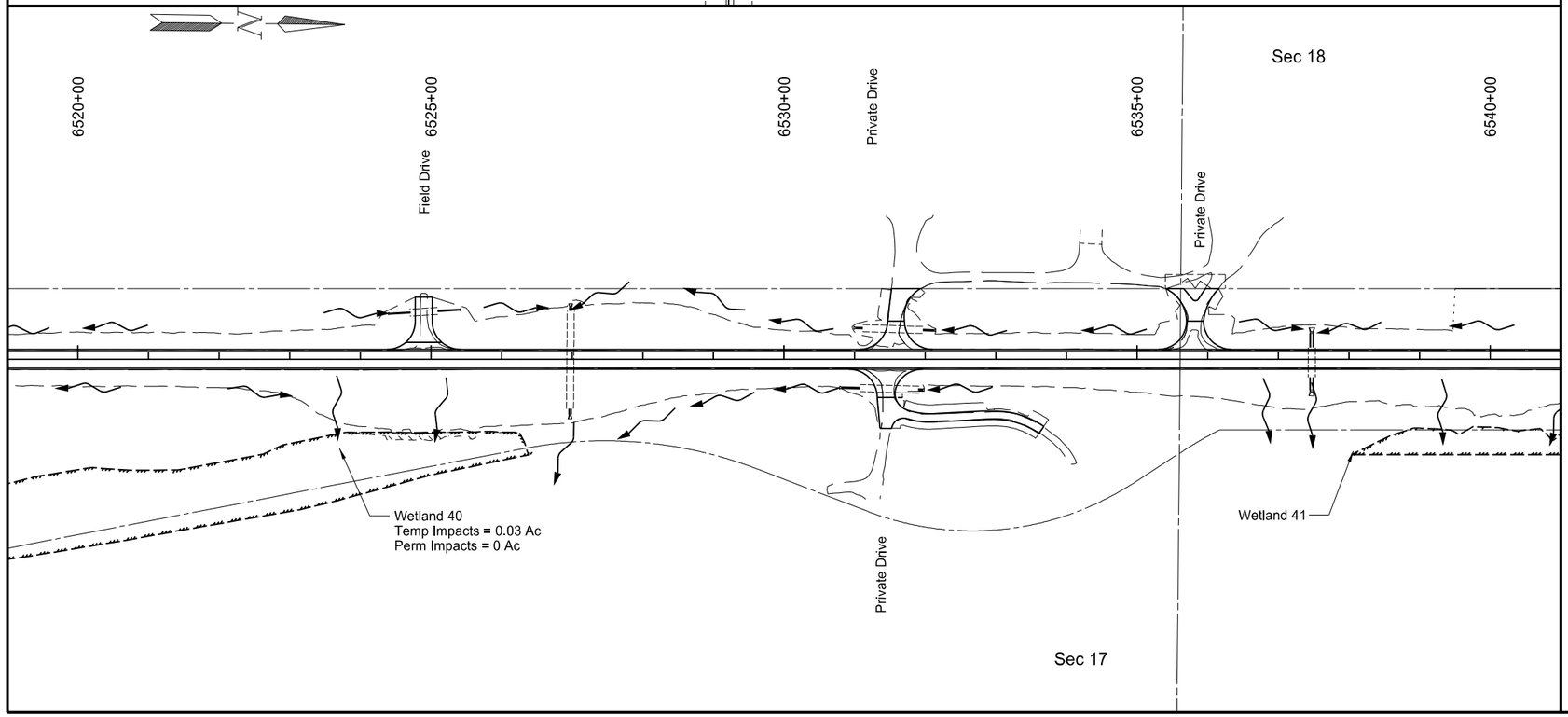
ND 3
Tuttle N to W Jct 200

6460+00 to 6500+00
Kidder County

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STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	75	21





Legend

- Wetlands Created
- Permanent Impact
- Temporary Impact
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- Existing Delineated Wetland
- Flow Direction

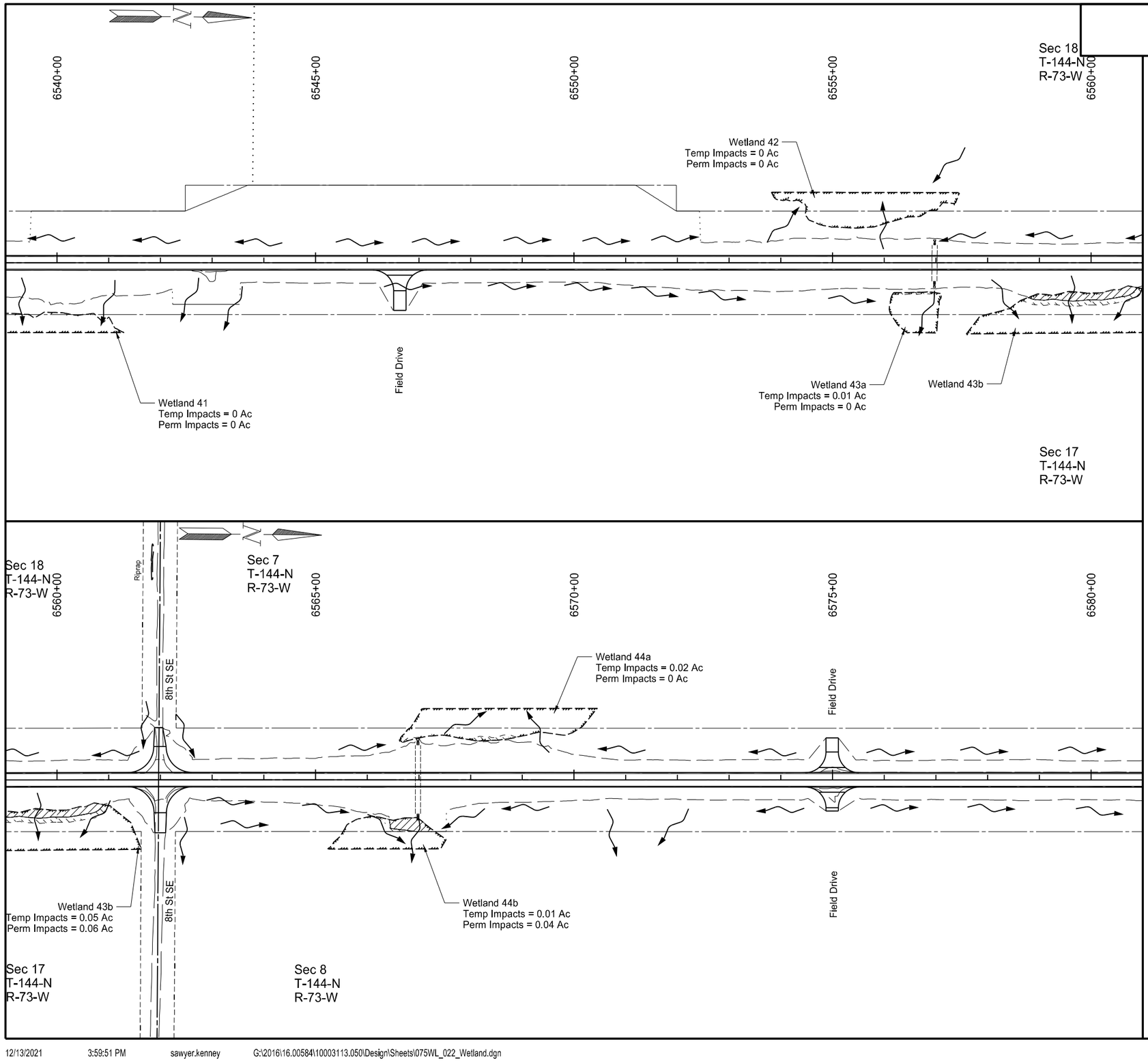
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Wetlands

ND 3
Tuttle N to W Jct 200

6500+00 to 6540+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	75	22



Legend

- Wetlands Created
- Permanent Impact
- Temporary Impact
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- Existing Delineated Wetland
- Flow Direction

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

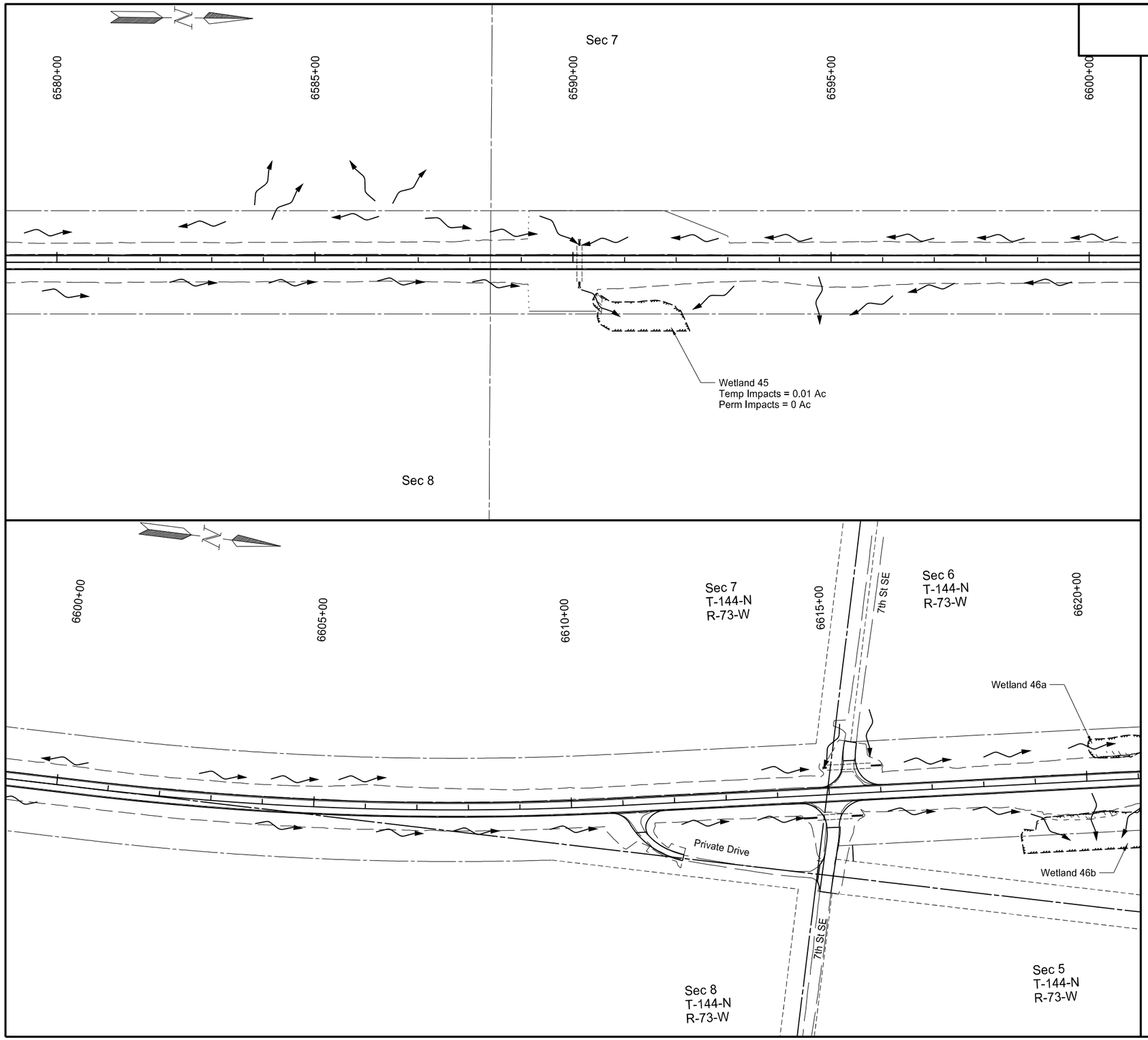
Wetlands

ND 3
Tuttle N to W Jct 200

6540+00 to 6580+00
Kidder County

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STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	75	23



Legend

- Wetlands Created
- Permanent Impact
- Temporary Impact
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- Existing Delineated Wetland
- Flow Direction

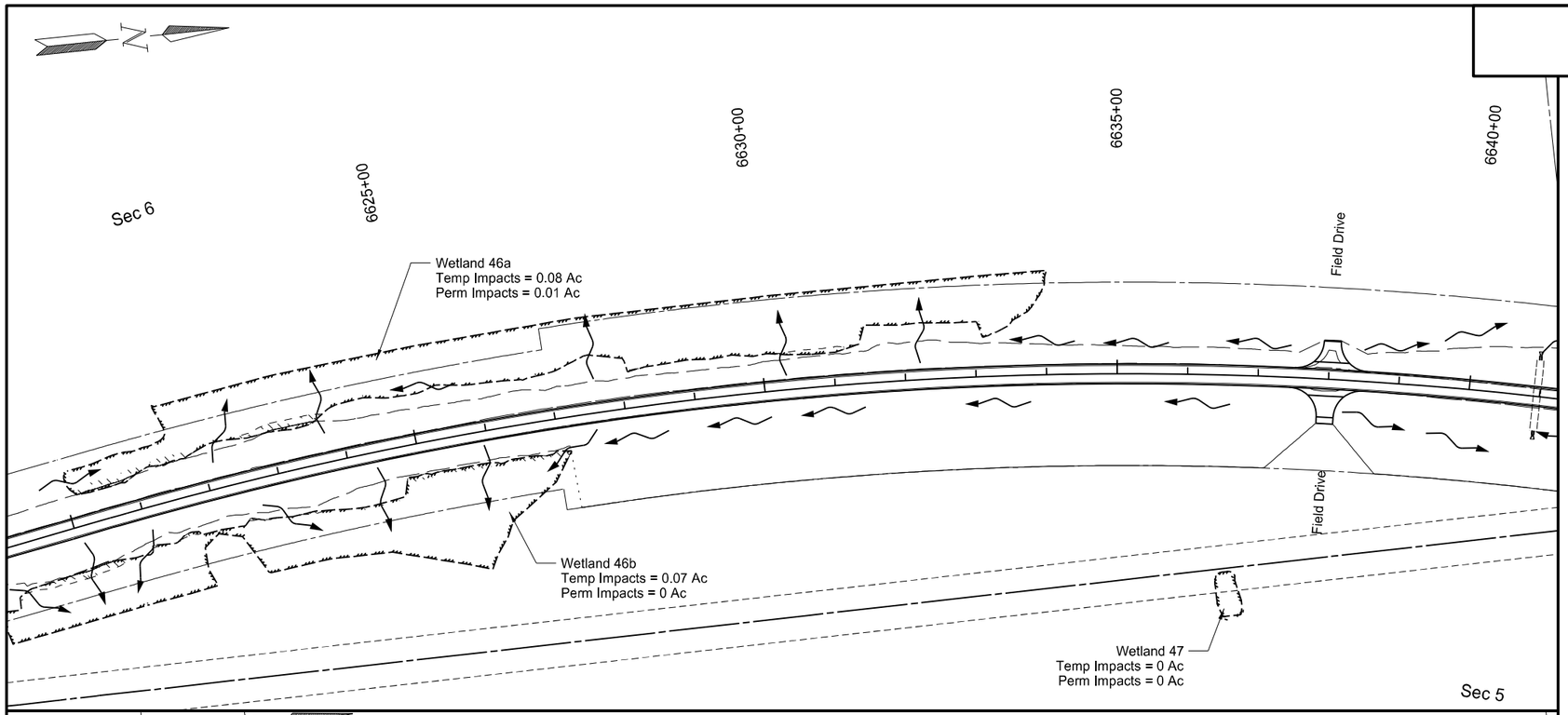
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27748
DATE 12/15/2021
NORTH DAKOTA

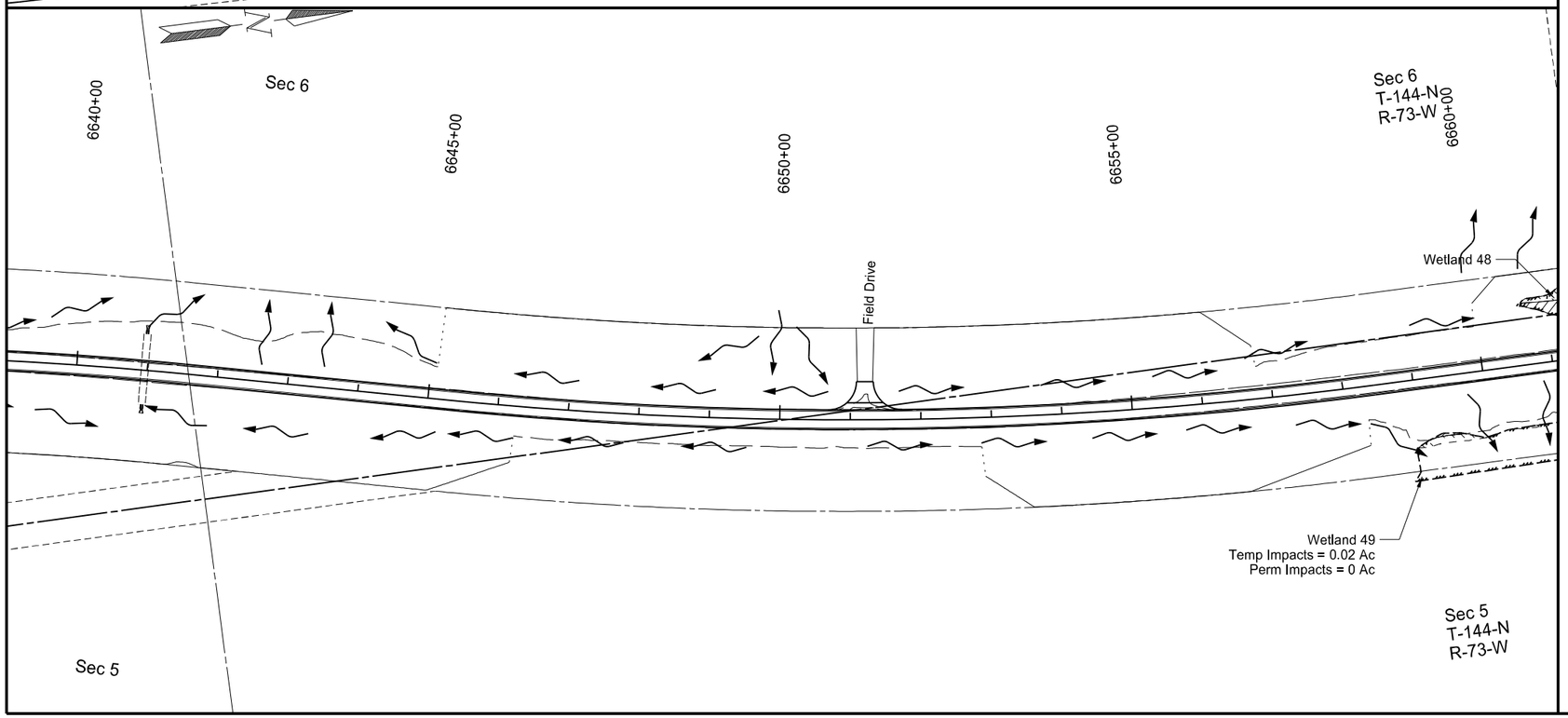
Wetlands

ND 3
Tuttle N to W Jct 200

6580+00 to 6620+00
Kidder County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	75	24





Legend

- Wetlands Created
- Permanent Impact
- Temporary Impact
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- Existing Delineated Wetland
- Flow Direction

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

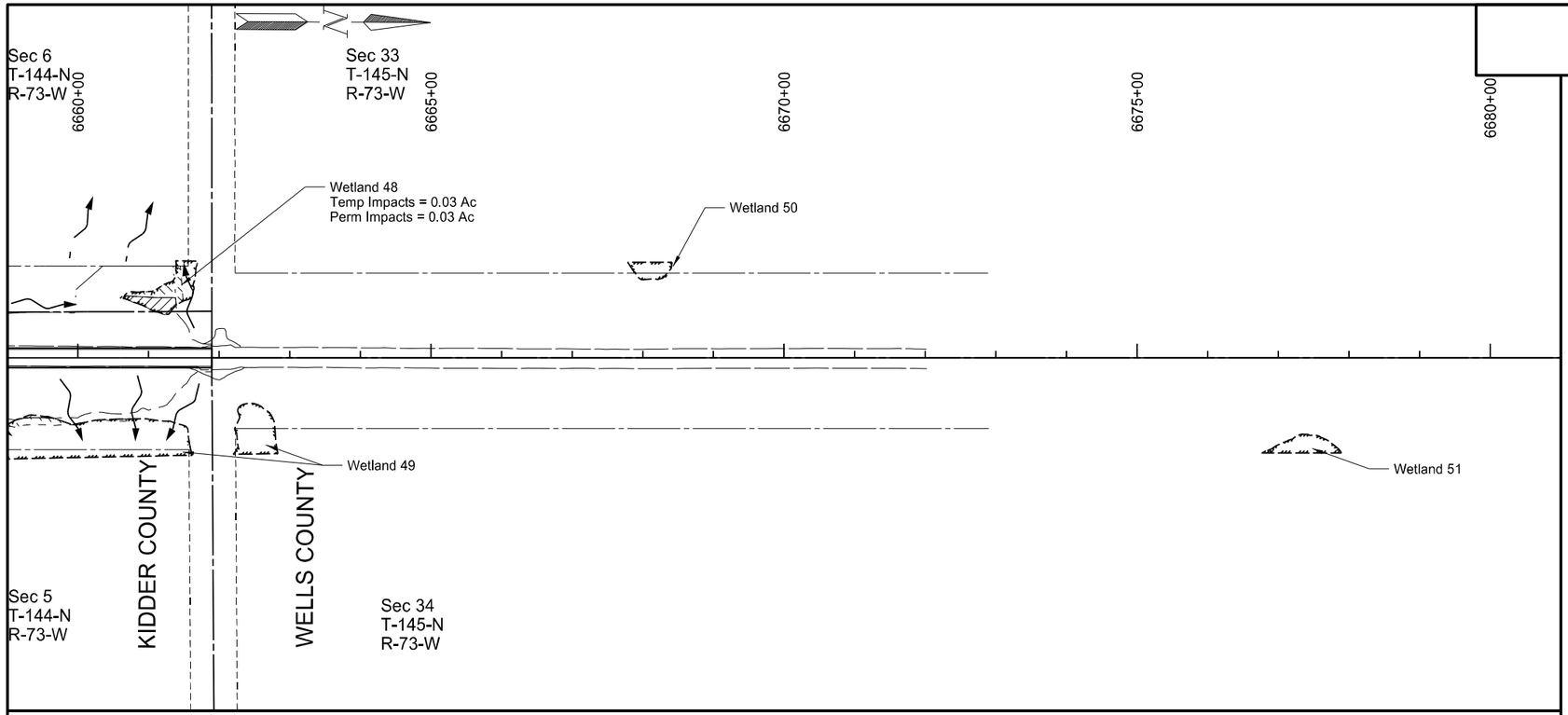
Wetlands

ND 3
Tuttle N to W Jct 200

6620+00 to 6660+00
Kidder County

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STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	75	25



Legend

- Wetlands Created
- Permanent Impact
- Temporary Impact
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- Existing Delineated Wetland
- Flow Direction

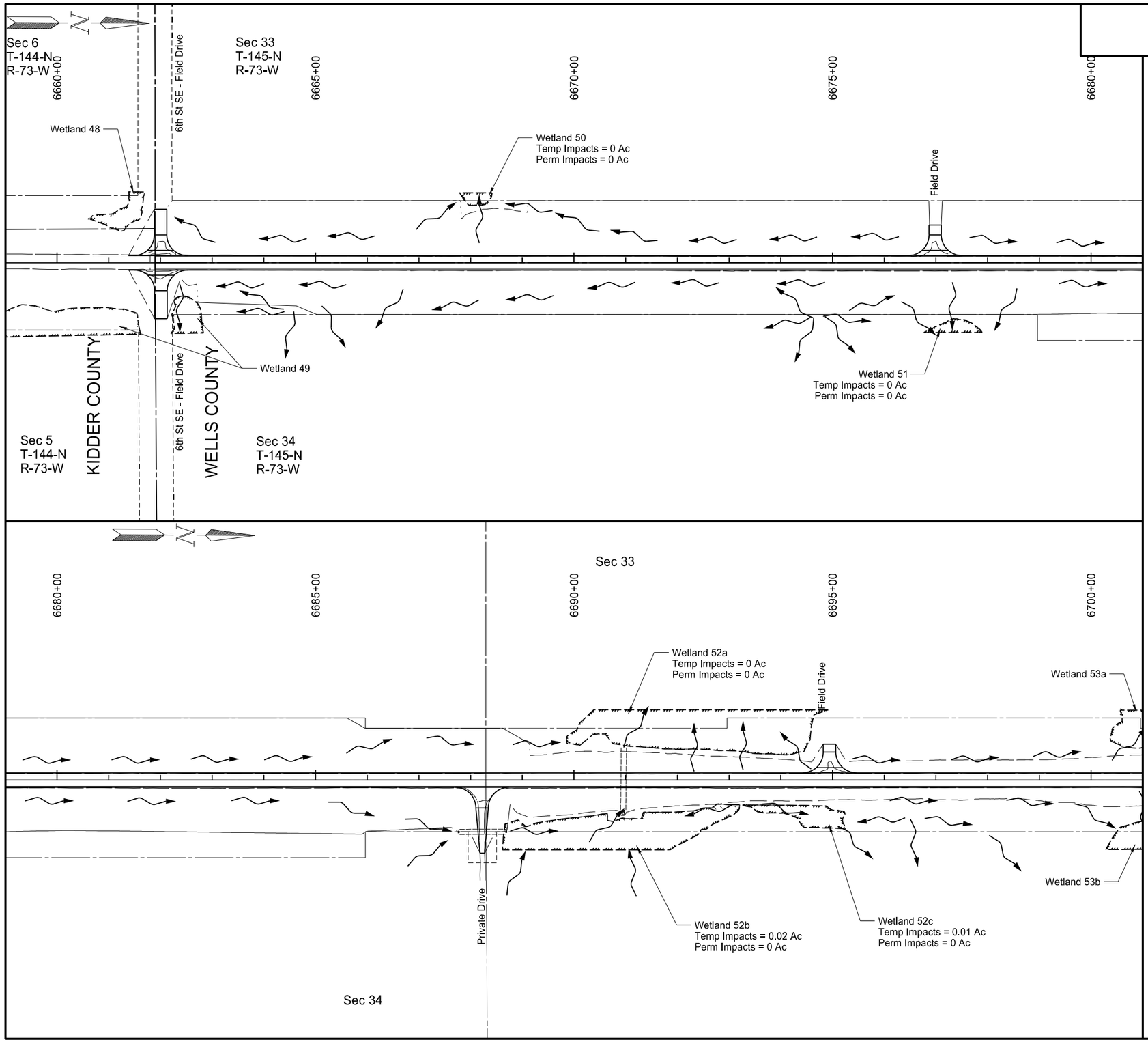
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Wetlands

ND 3
Tuttle N to W Jct 200

6660+00 to 6661+89.5
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	75	26



Legend

- Wetlands Created
- Permanent Impact
- Temporary Impact
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- Existing Delineated Wetland
- Flow Direction

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

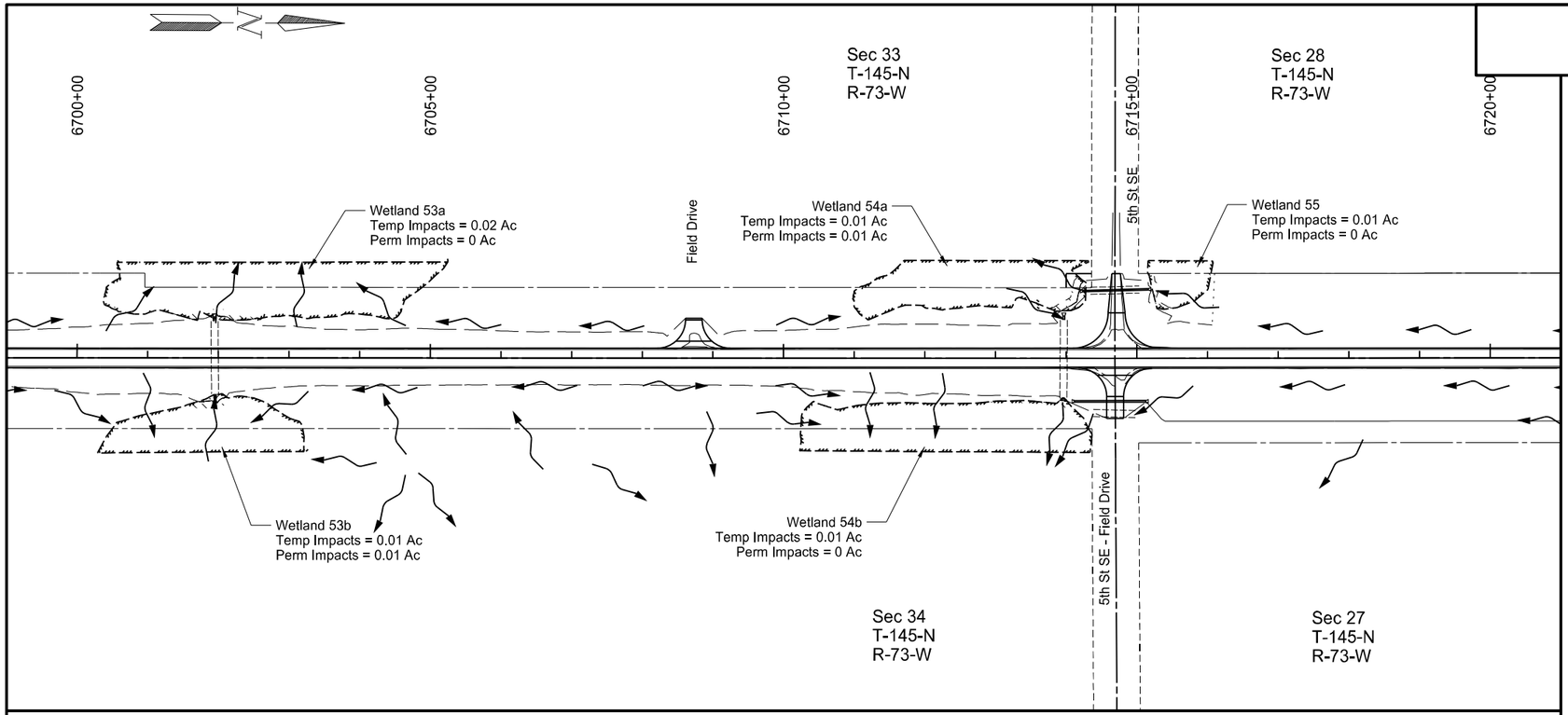
Wetlands

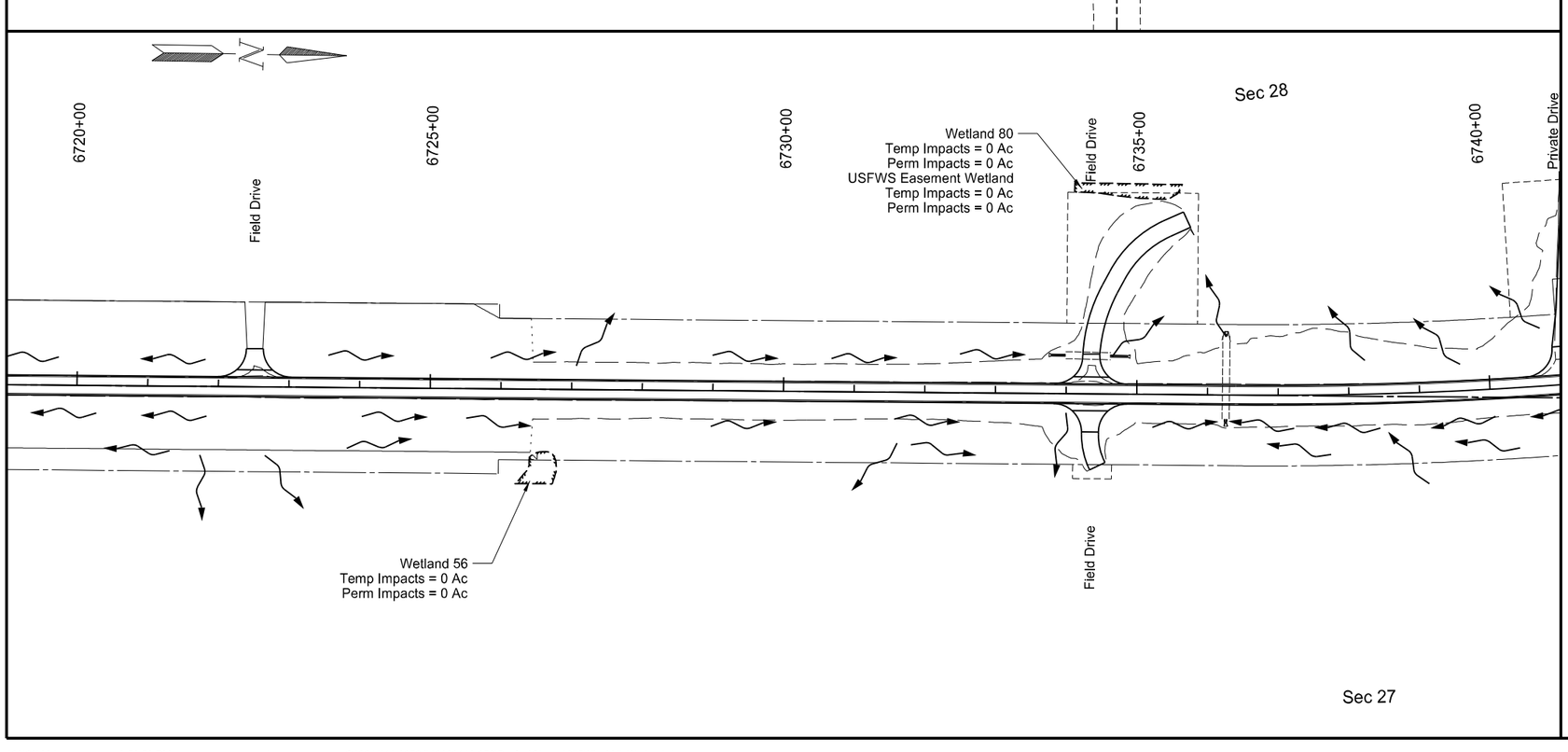
ND 3
Tuttle N to W Jct 200

6661+89.5 to 6700+00
Wells County

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STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	75	27





Legend

- Wetlands Created
- Permanent Impact
- Temporary Impact
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- Existing Delineated Wetland
- Flow Direction

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

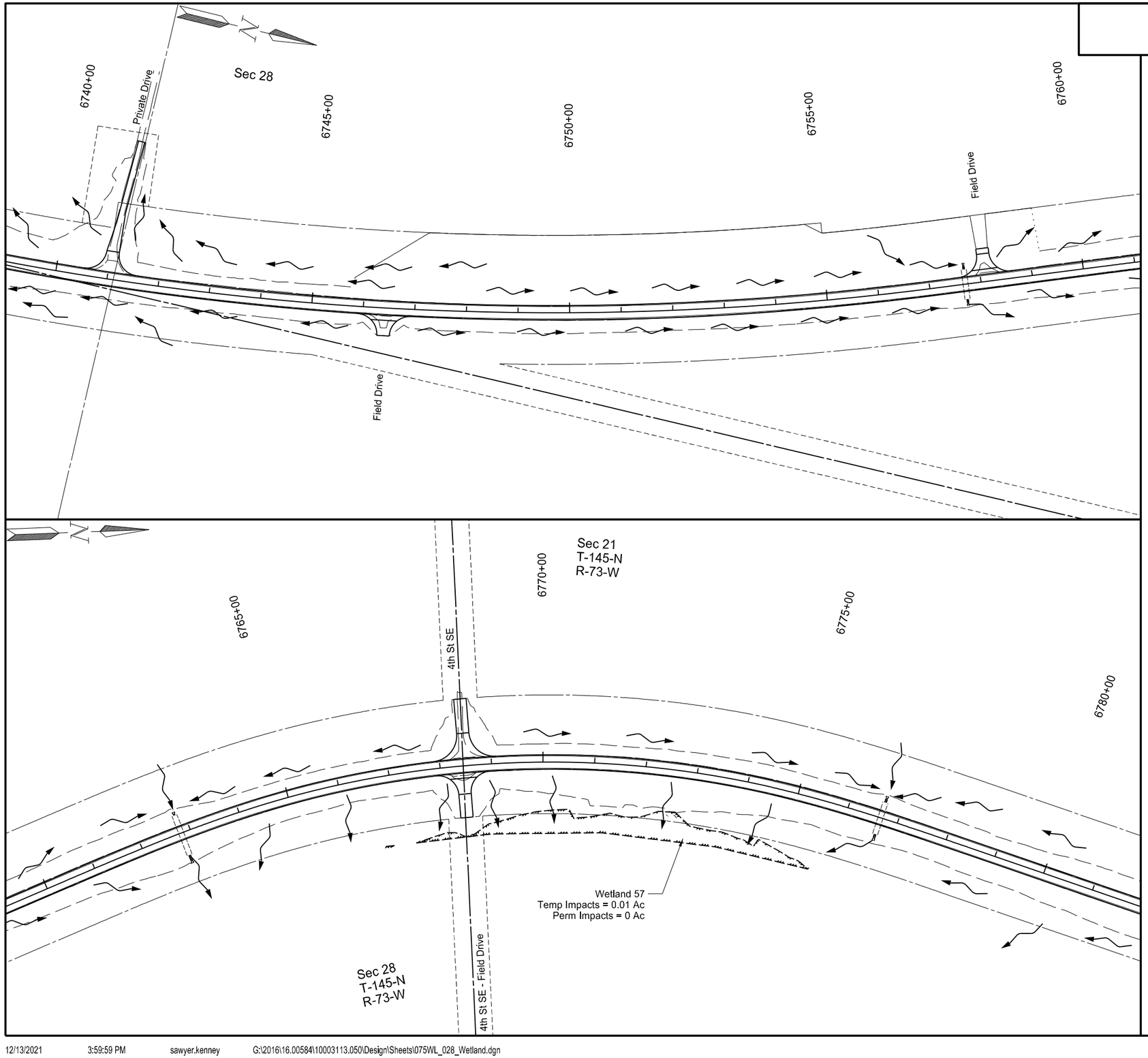
Wetlands

ND 3
Tuttle N to W Jct 200

6700+00 to 6740+00
Wells County

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	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	75	28



Legend

- Wetlands Created
- Permanent Impact
- Temporary Impact
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- Existing Delineated Wetland
- Flow Direction

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

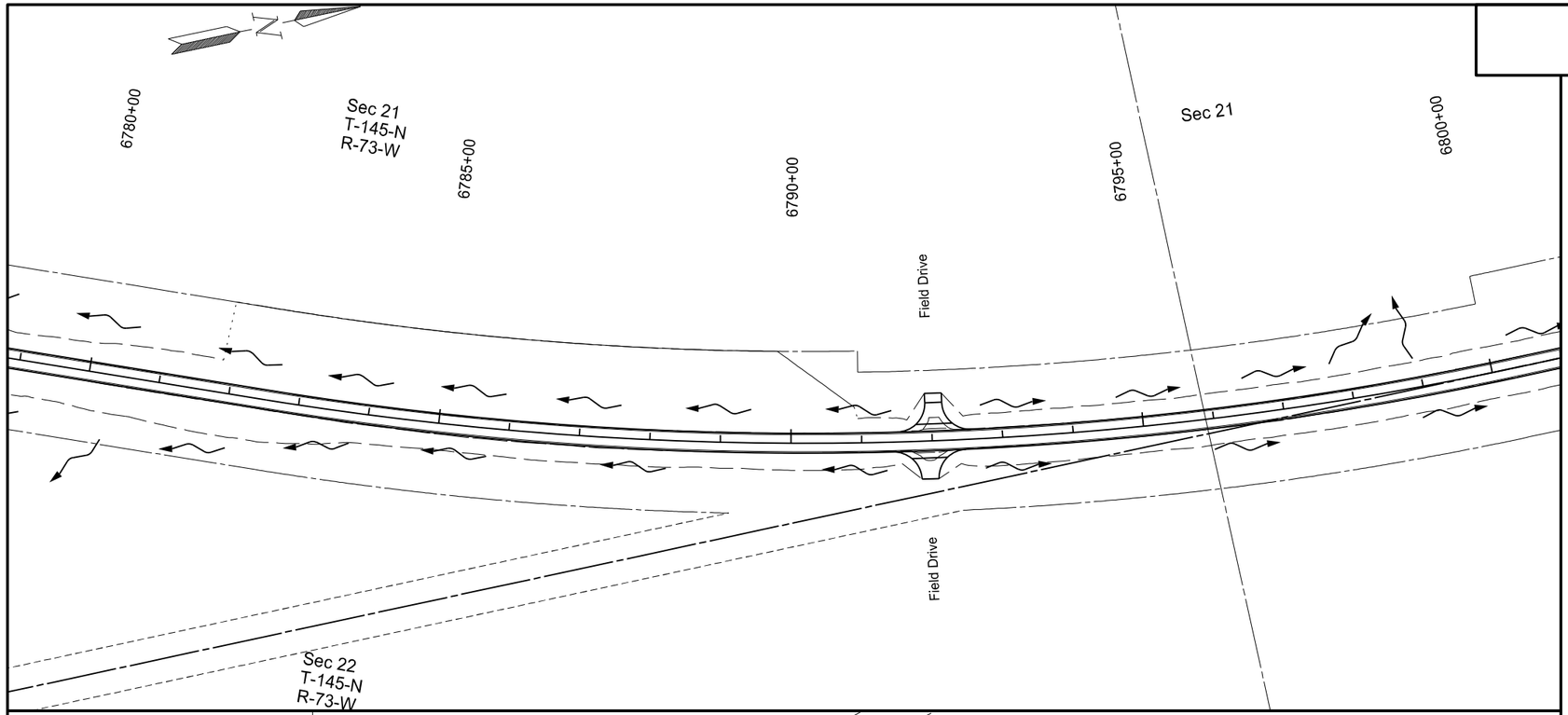
Wetlands

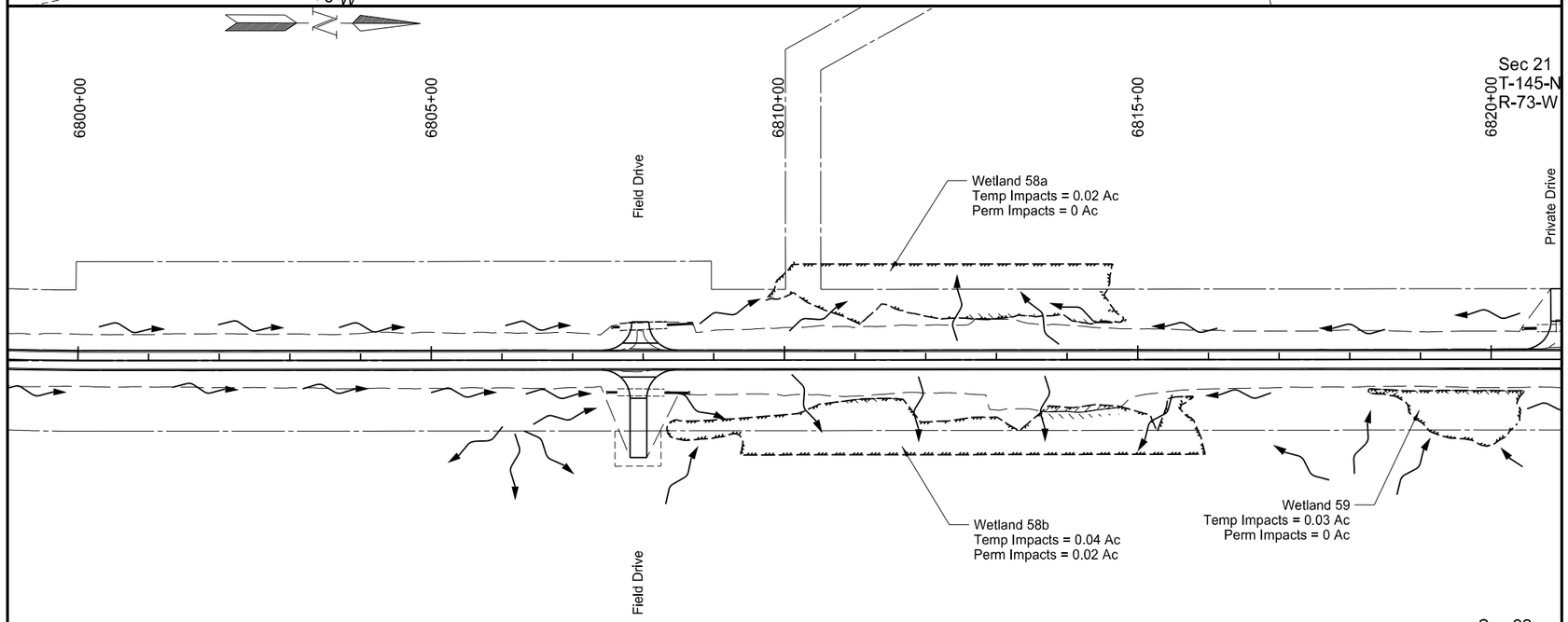
ND 3
Tuttle N to W Jct 200

6740+00 to 6780+00
Wells County

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STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	75	29





Legend

- Wetlands Created
- Permanent Impact
- Temporary Impact
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- Existing Delineated Wetland
- Flow Direction

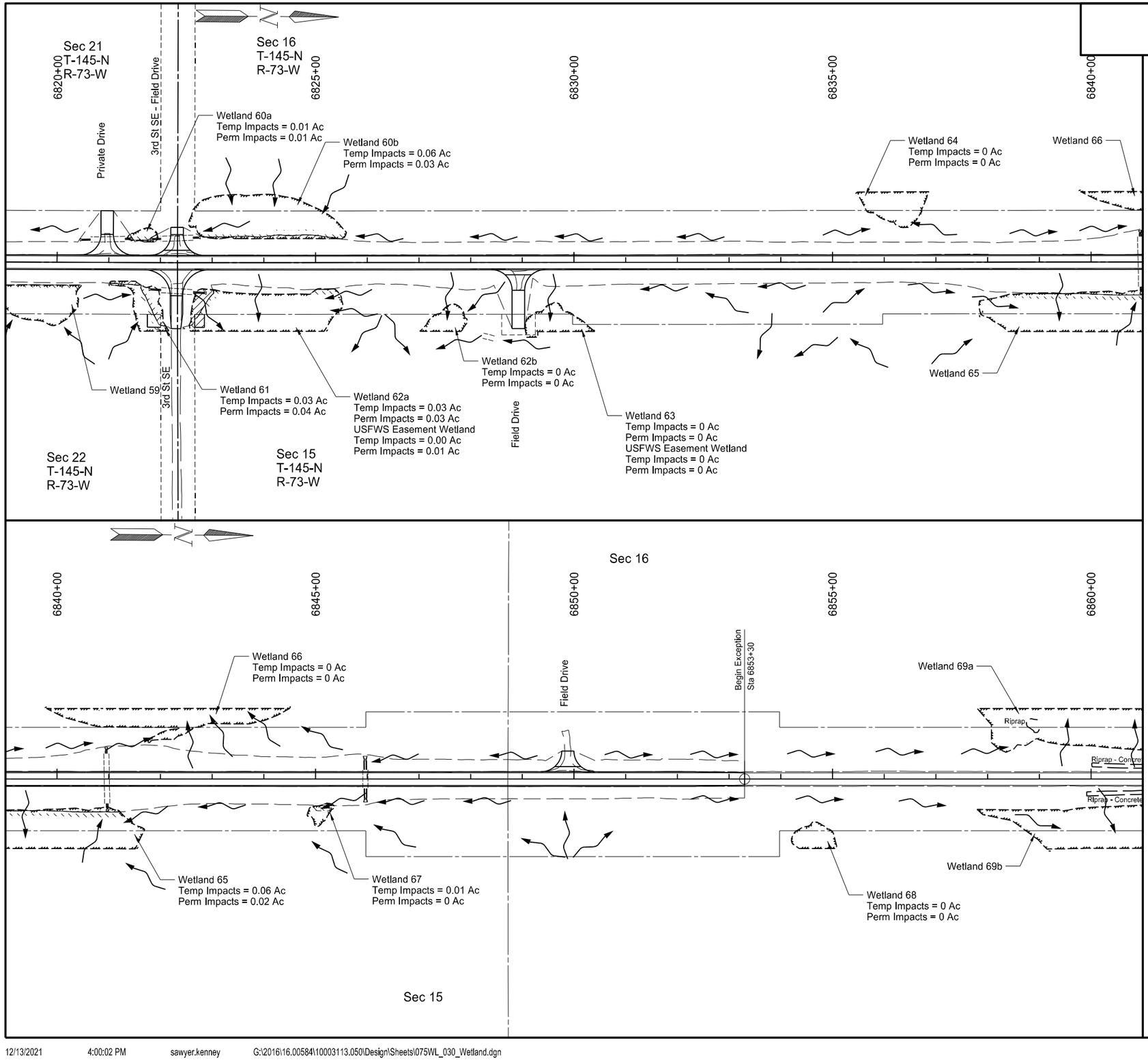
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Wetlands

ND 3
Tuttle N to W Jct 200

6780+00 to 6820+00
Wells County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	75	30



Legend

- Wetlands Created
- Permanent Impact
- Temporary Impact
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- Existing Delineated Wetland
- Flow Direction

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

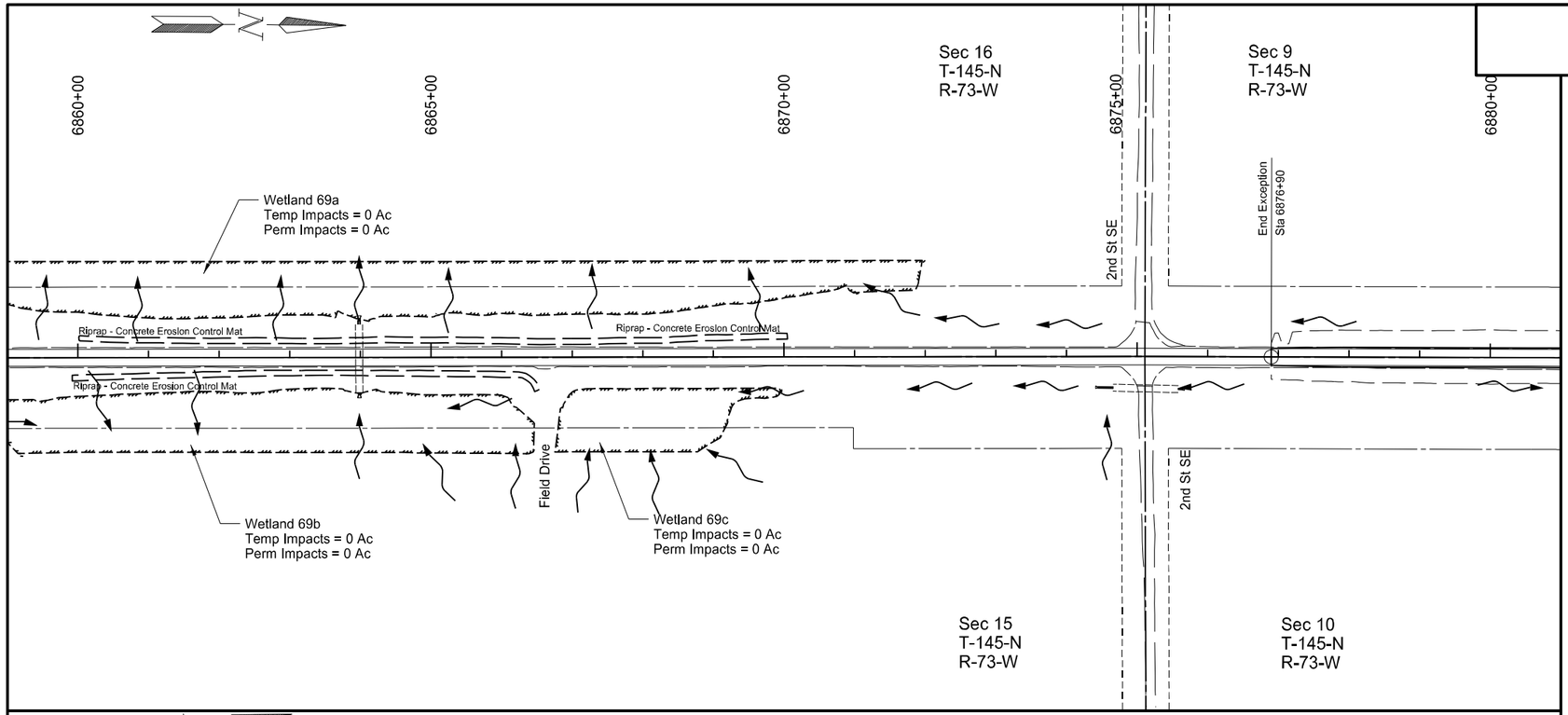
Wetlands

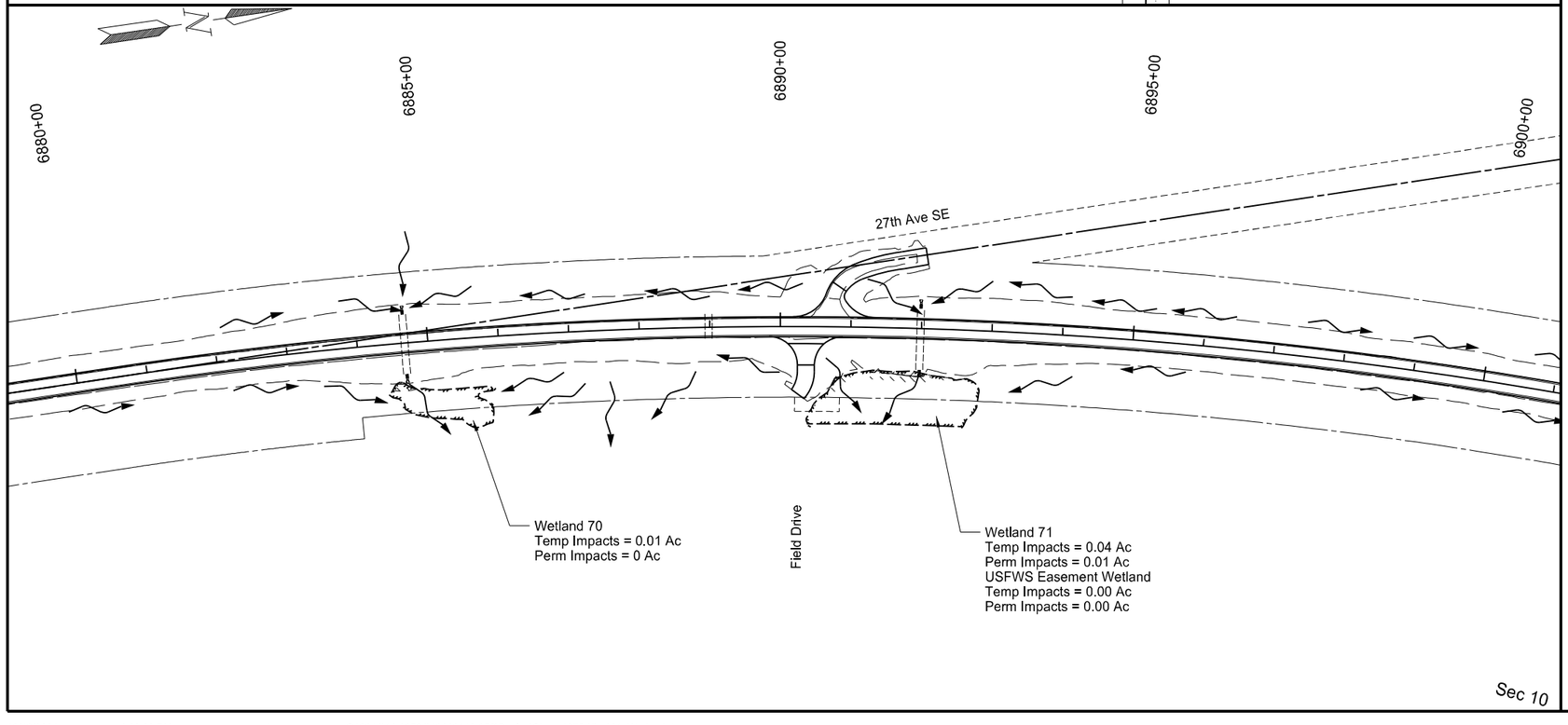
ND 3
Tuttle N to W Jct 200

6820+00 to 6860+00
Wells County

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STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	75	31





Legend

- Wetlands Created
- Permanent Impact
- Temporary Impact
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- Existing Delineated Wetland
- Flow Direction

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Wetlands

ND 3
Tuttle N to W Jct 200

6860+00 to 6900+00
Wells County

12/13/2021 4:00:03 PM sawyer.kenney G:\2016\16.00584\10003113.050\Design\Sheets\075WL_031_Wetland.dgn

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	75	32

Sec 9

6900+00

6905+00

6910+00

6915+00

6920+00

Wetland 72a

Riprap

Field Drive

Sec 10

6920+00

6925+00

6930+00

Sec 3
T-145-N
R-73-W

6935+00

6940+00

Wetland 72a
Temp Impacts = 0 Ac
Perm Impacts = 0 Ac

Riprap

Wetland 72b
Temp Impacts = 0.11 Ac
Perm Impacts = 0.06 Ac

Riprap

Riprap

Riprap

Wetland 72c
Temp Impacts = 0.02 Ac
Perm Impacts = 0.02 Ac
USFWS Easement Wetland
Temp Impacts = 0.00 Ac
Perm Impacts = 0.01 Ac

1st St SE

Sec 10
T-145-N
R-73-W

Legend

- Wetlands Created
- Permanent Impact
- Temporary Impact
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- Existing Delineated Wetland
- Flow Direction

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

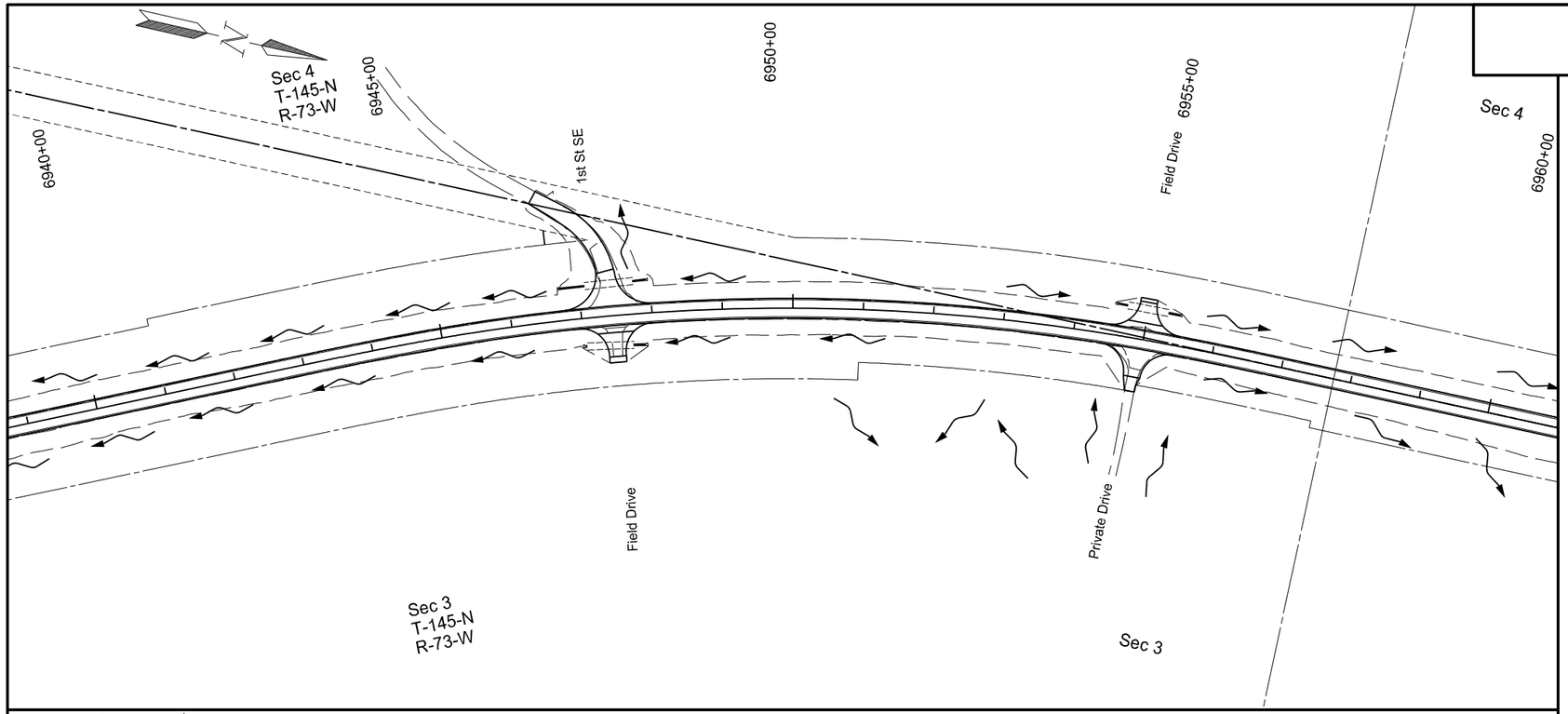
Wetlands

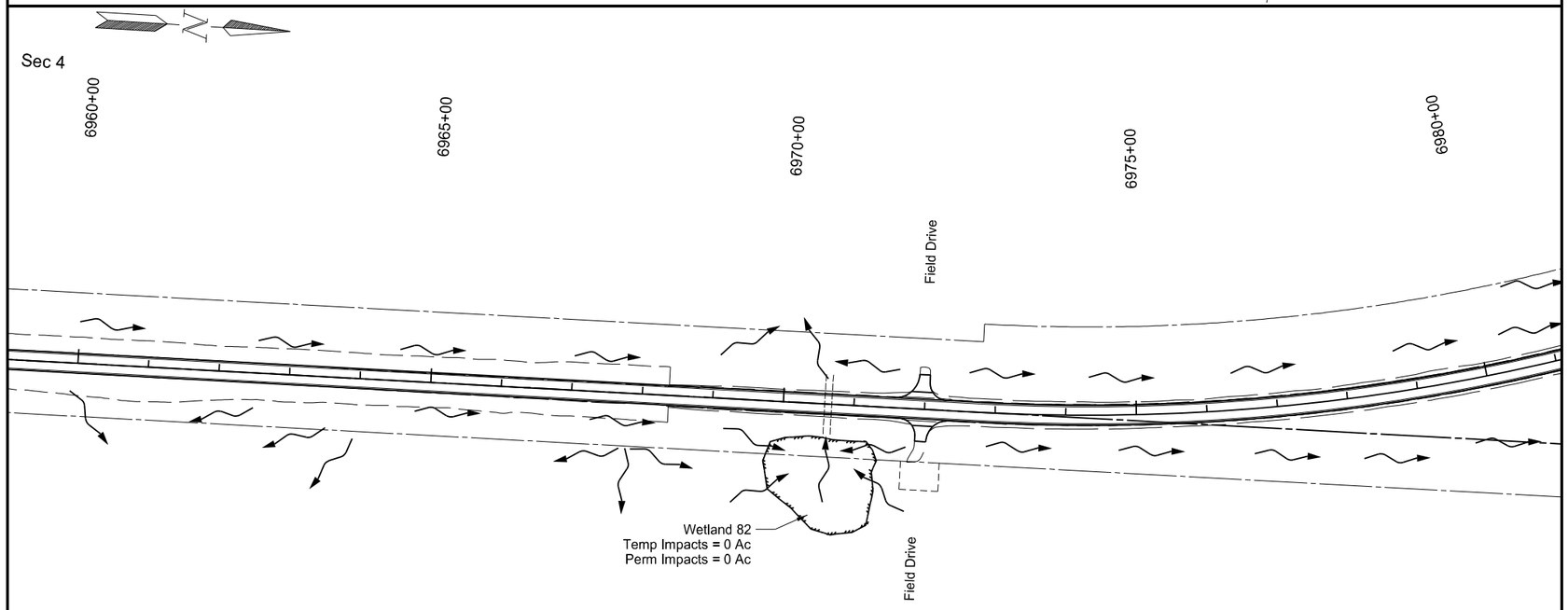
ND 3
Tuttle N to W Jct 200

6900+00 to 6940+00
Wells County

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STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	75	33





Legend

- Wetlands Created
- Permanent Impact
- Temporary Impact
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- Existing Delineated Wetland
- Flow Direction

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

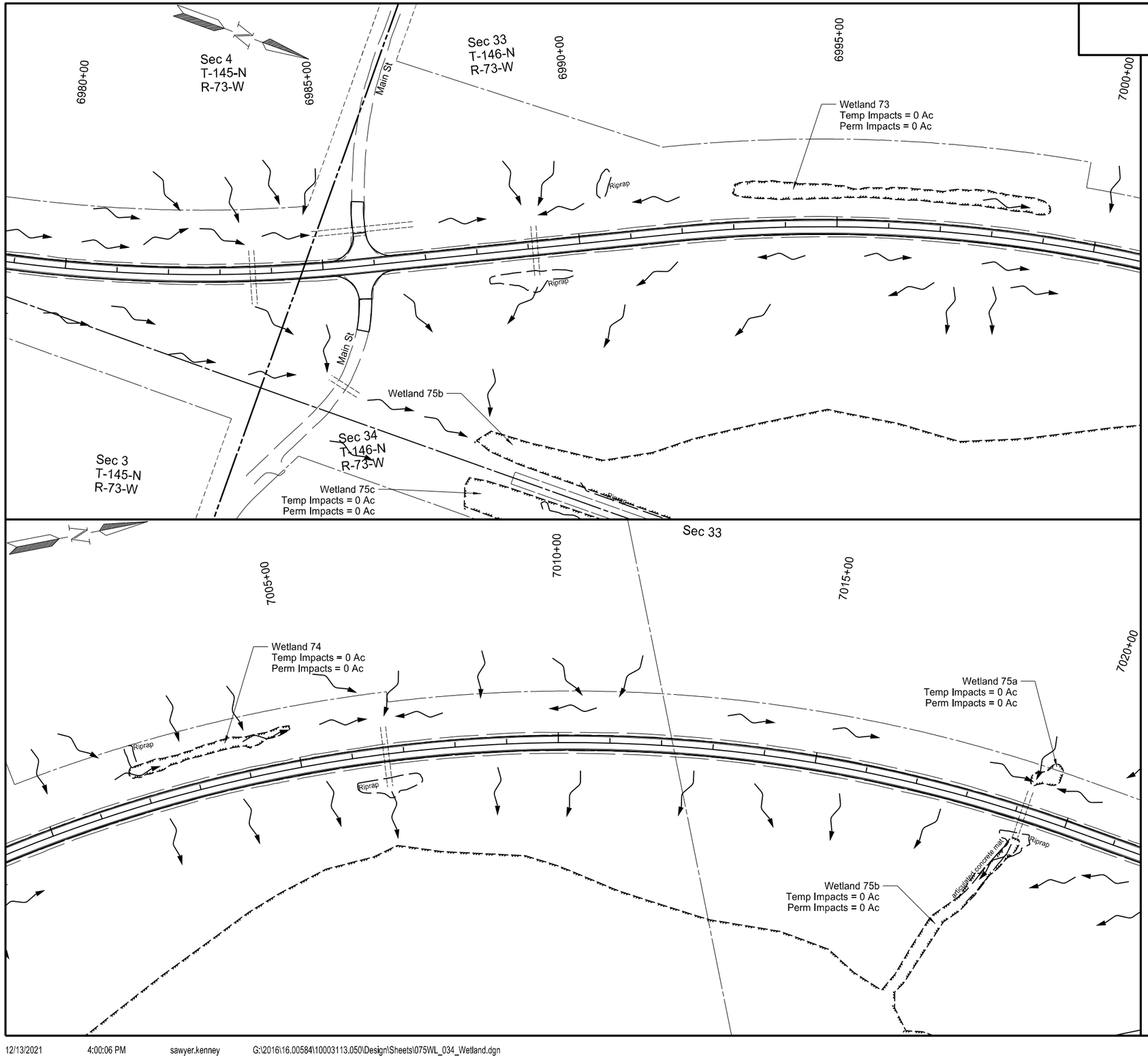
Wetlands

ND 3
Tuttle N to W Jct 200

6940+00 to 6980+00
Wells County

12/13/2021 4:00:05 PM sawyer.kenney G:\2016\16.00584\10003113.050\Design\Sheets\075WL_033_Wetland.dgn

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	75	34



Legend

- Wetlands Created
- Permanent Impact
- Temporary Impact
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- Existing Delineated Wetland
- Flow Direction

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

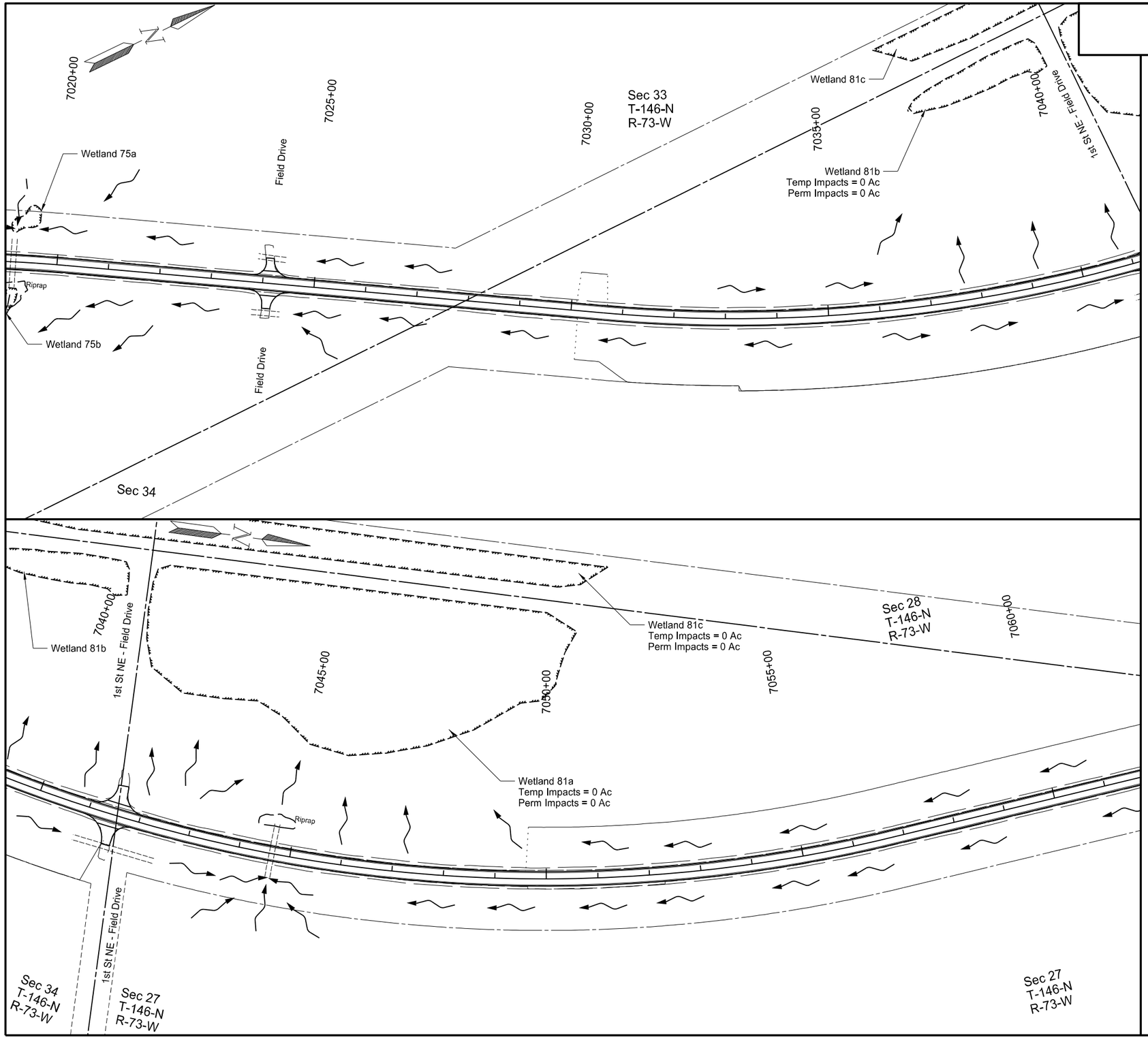
Wetlands

ND 3
Tuttle N to W Jct 200

6980+00 to 7020+00
Wells County

12/13/2021 4:00:06 PM sawyer.kenney G:\2016\16.00584\10003113.050\Design\Sheets\075WL_034_Wetland.dgn

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	75	35



Legend

- Wetlands Created
- Permanent Impact
- Temporary Impact
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- Existing Delineated Wetland
- Flow Direction

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

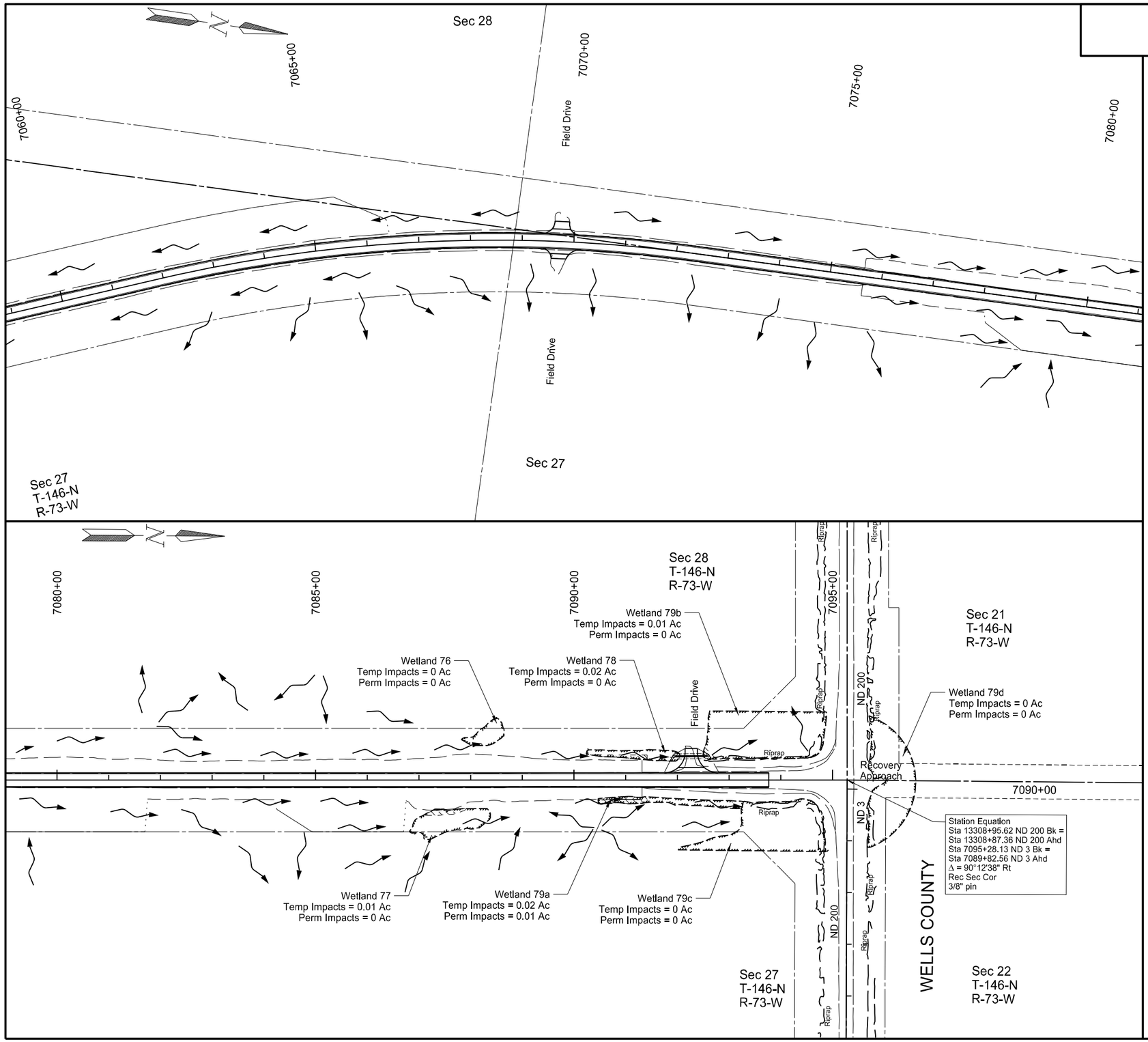
Wetlands

ND 3
Tuttle N to W Jct 200

7020+00 to 7060+00
Wells County

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	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	75	36



Legend

- Wetlands Created
- Permanent Impact
- Temporary Impact
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- Existing Delineated Wetland
- Flow Direction

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

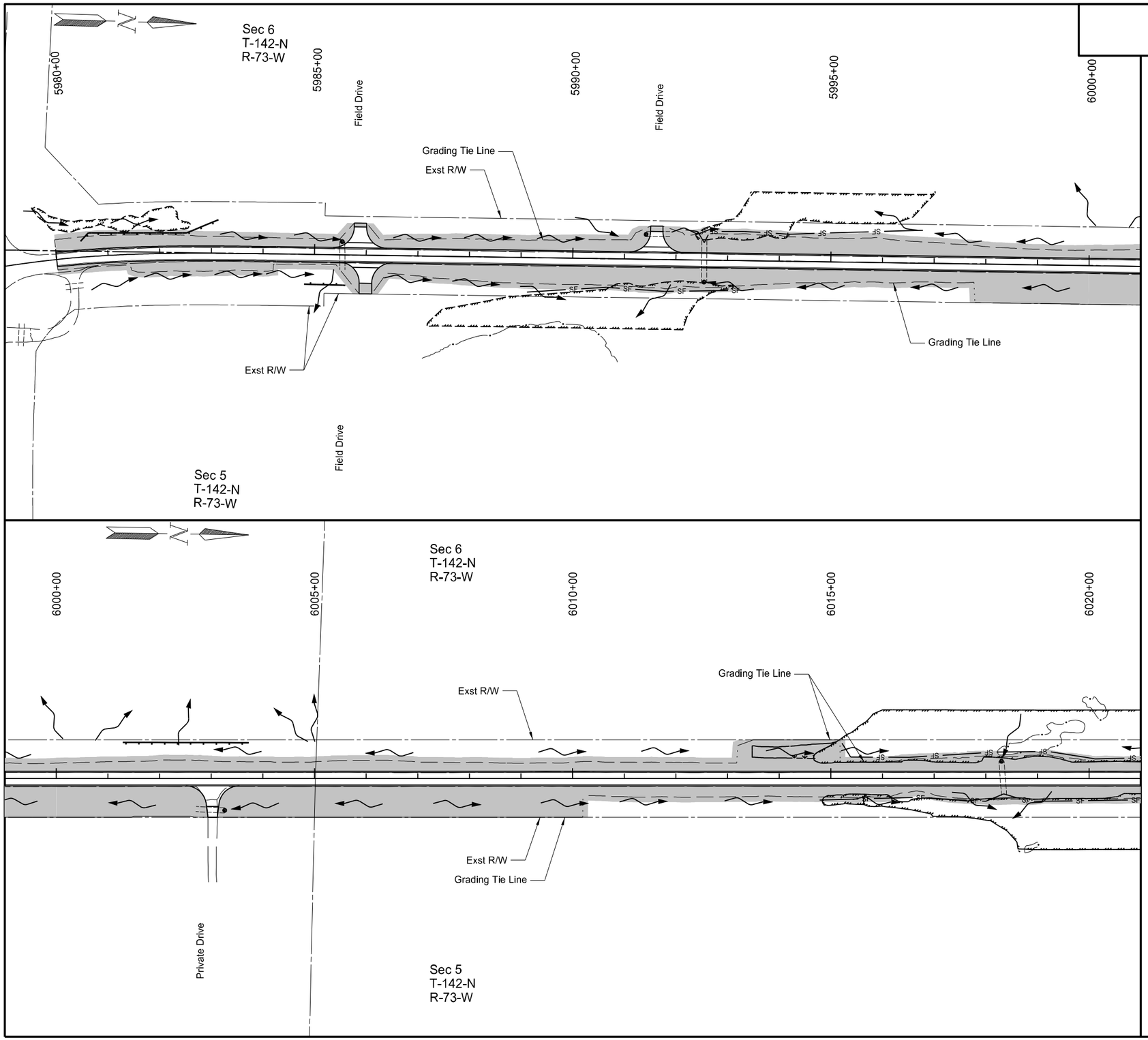
Wetlands

ND 3
Tuttle N to W Jct 200

7060+00 to 7093+76.57
Wells County

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STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	76	1



SPEC	CODE	BID ITEM			QTY	UNIT
251	2000	TEMPORARY COVER CROP				
		Sta 5980+00	to Sta 6020+00		6.93	ACRE
253	0101	STRAW MULCH				
		Sta 5980+00	to Sta 6020+00		6.93	ACRE
260	0200	SILT FENCE SUPPORTED				
		Sta 5989+12	RT to Sta 5993+32	RT	421	LF
		Sta 5992+18	LT to Sta 5996+77	LT	486	LF
		Sta 6014+78	RT to Sta 6020+00	RT	527	LF
		Sta 6015+18	LT to Sta 6020+00	LT	503	LF
260	0201	REMOVE SILT FENCE SUPPORTED				
		Sta 5989+12	RT to Sta 5993+32	RT	421	LF
		Sta 5992+18	LT to Sta 5996+77	LT	486	LF
		Sta 6014+78	RT to Sta 6020+00	RT	527	LF
		Sta 6015+18	LT to Sta 6020+00	LT	503	LF

*NOTE: See Section 76, Sheets 30 & 31 for Fiber Roll data.

Legend

- Temporary Cover Crop/ Straw Mulch
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- SF — Silt Fence
- Fiber Roll(12" or 20")
- Culvert Protection(12" or 20")
- S — Flotation Silt Curtain

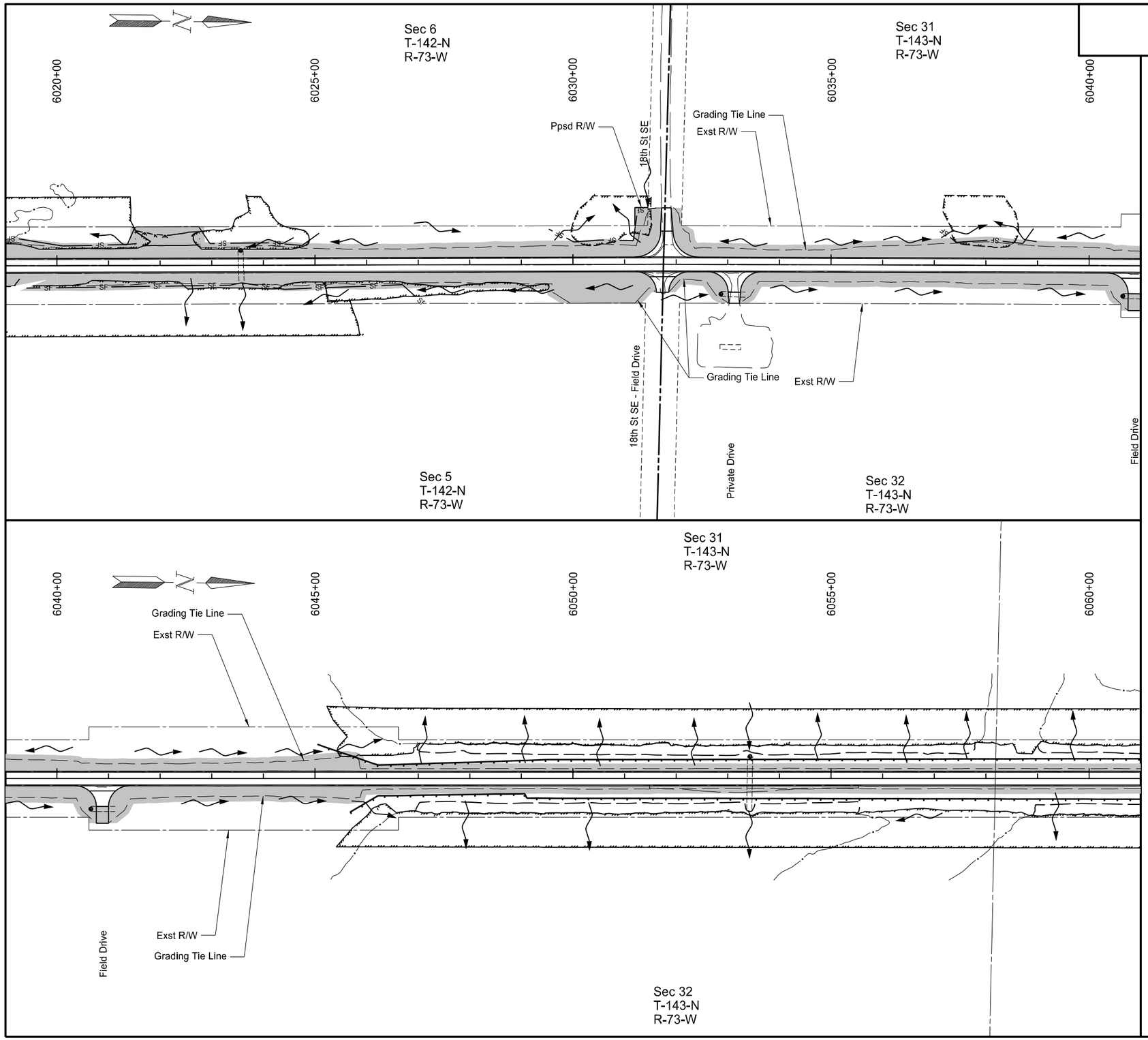
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Temporary Erosion Control

ND 3
Tuttle N to W Jct 200

5980+00 to 6020+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	76	2



SPEC	CODE	BID ITEM				QTY	UNIT
251	2000	TEMPORARY COVER CROP					
		Sta 6020+00		to Sta 6060+00		5.02	ACRE
253	0101	STRAW MULCH					
		Sta 6020+00		to Sta 6060+00		5.02	ACRE
260	0200	SILT FENCE SUPPORTED					
		Sta 6020+00	LT	to Sta 6021+51	LT	173	LF
		Sta 6020+00	RT	to Sta 6027+10	RT	726	LF
		Sta 6022+76	LT	to Sta 6025+08	LT	256	LF
		Sta 6029+53	LT	to Sta 6031+61	LT	265	LF
		Sta 6037+10	LT	to Sta 6038+92	LT	207	LF
260	0201	REMOVE SILT FENCE SUPPORTED					
		Sta 6020+00	LT	to Sta 6021+51	LT	173	LF
		Sta 6020+00	RT	to Sta 6027+10	RT	726	LF
		Sta 6022+76	LT	to Sta 6025+08	LT	256	LF
		Sta 6029+53	LT	to Sta 6031+61	LT	265	LF
		Sta 6037+10	LT	to Sta 6038+92	LT	207	LF

*NOTE: See Section 76, Sheets 30 & 31 for Fiber Roll data.

Legend

- Temporary Cover Crop/ Straw Mulch
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- SF — Silt Fence
- Fiber Roll(12" or 20")
- Culvert Protection(12" or 20")
- S — Flotation Silt Curtain

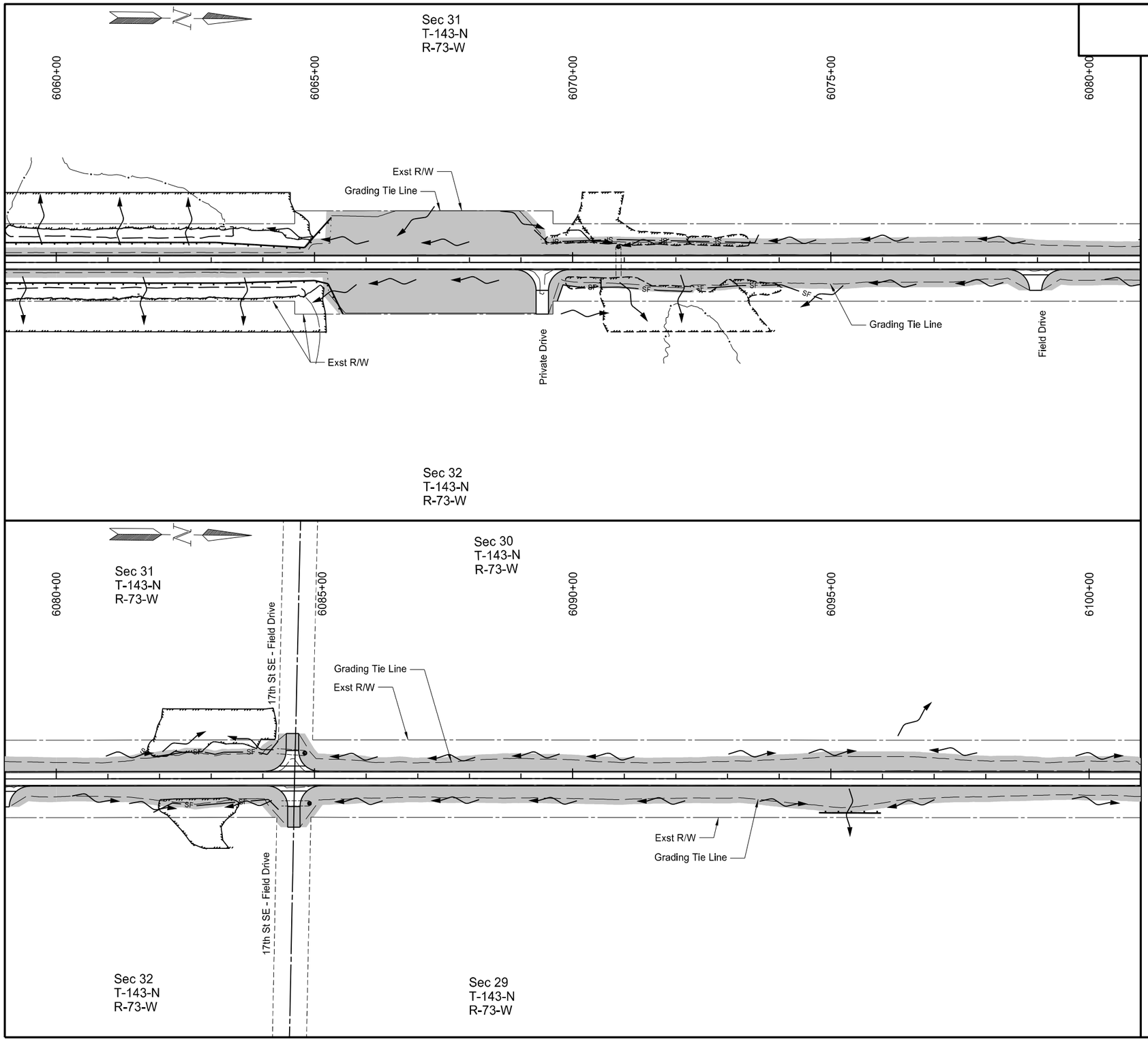
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL
KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Temporary Erosion Control

ND 3
Tuttle N to W Jct 200

6020+00 to 6060+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	76	3



SPEC	CODE	BID ITEM				QTY	UNIT
251	2000	TEMPORARY COVER CROP					
		Sta 6060+00	to	Sta 6100+00		6.86	ACRE
253	0101	STRAW MULCH					
		Sta 6060+00	to	Sta 6100+00		6.86	ACRE
260	0200	SILT FENCE SUPPORTED					
		Sta 6069+25	LT	to Sta 6073+60	LT	454	LF
		Sta 6069+71	RT	to Sta 6074+83	RT	542	LF
		Sta 6081+60	LT	to Sta 6084+30	LT	288	LF
		Sta 6081+88	RT	to Sta 6084+30	RT	255	LF
260	0201	REMOVE SILT FENCE SUPPORTED					
		Sta 6069+25	LT	to Sta 6073+60	LT	454	LF
		Sta 6069+71	RT	to Sta 6074+83	RT	542	LF
		Sta 6081+60	LT	to Sta 6084+30	LT	288	LF
		Sta 6081+88	RT	to Sta 6084+30	RT	255	LF

*NOTE: See Section 76, Sheets 30 & 31 for Fiber Roll data.

Legend

- Temporary Cover Crop/ Straw Mulch
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- SF — Silt Fence
- Fiber Roll(12" or 20")
- Culvert Protection(12" or 20")
- S — Flotation Silt Curtain

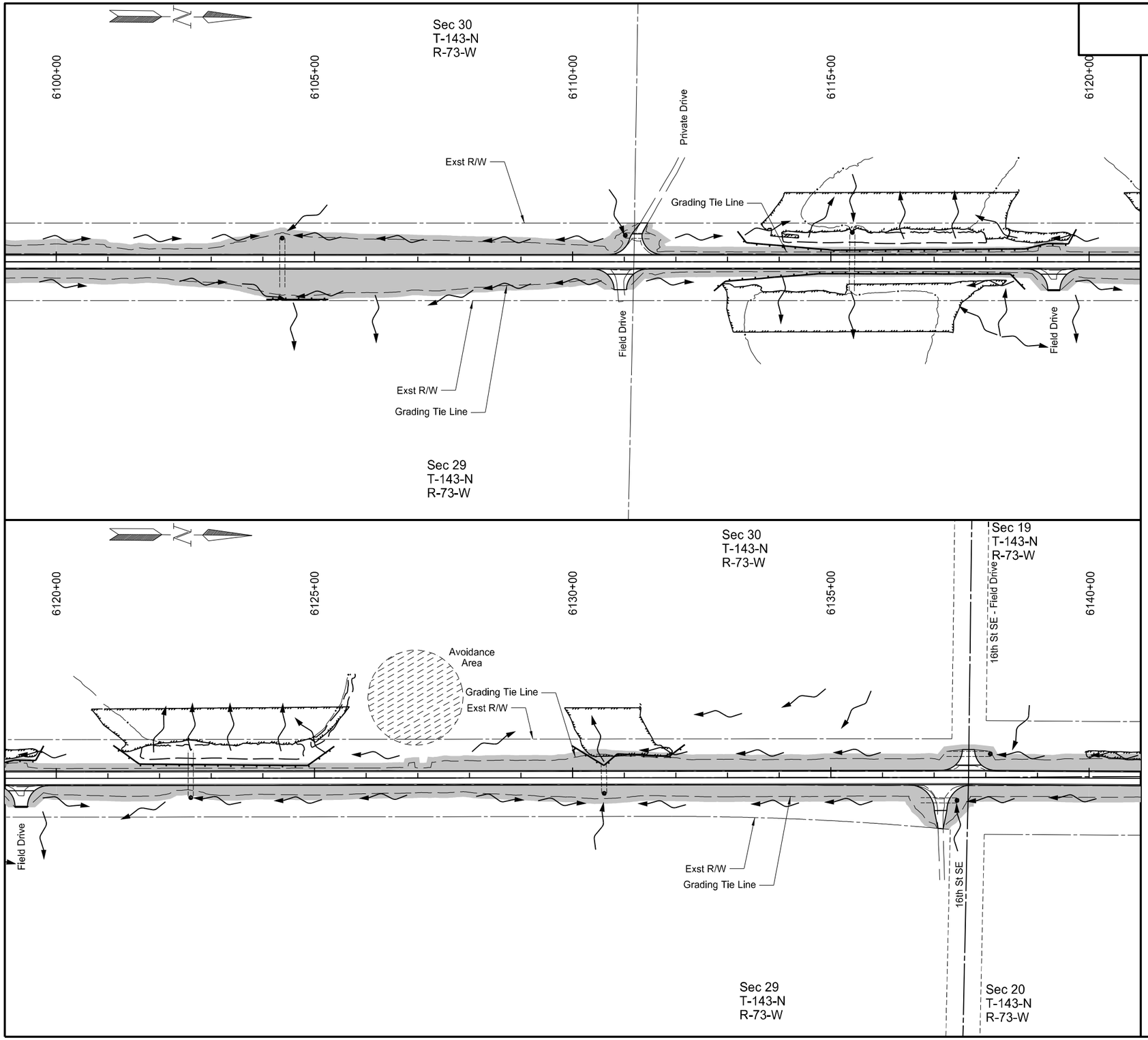
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Temporary Erosion Control

ND 3
Tuttle N to W Jct 200

6060+00 to 6100+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	76	4



SPEC	CODE	BID ITEM		QTY	UNIT
251	2000	TEMPORARY COVER CROP			
		Sta 6100+00	to Sta 6140+00	5.26	ACRE
253	0101	STRAW MULCH			
		Sta 6100+00	to Sta 6140+00	5.26	ACRE

*NOTE: See Section 76, Sheets 30 & 31 for Fiber Roll data.

Legend

- Temporary Cover Crop/ Straw Mulch
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- SF — Silt Fence
- Fiber Roll(12" or 20")
- Culvert Protection(12" or 20")
- S — Flotation Silt Curtain

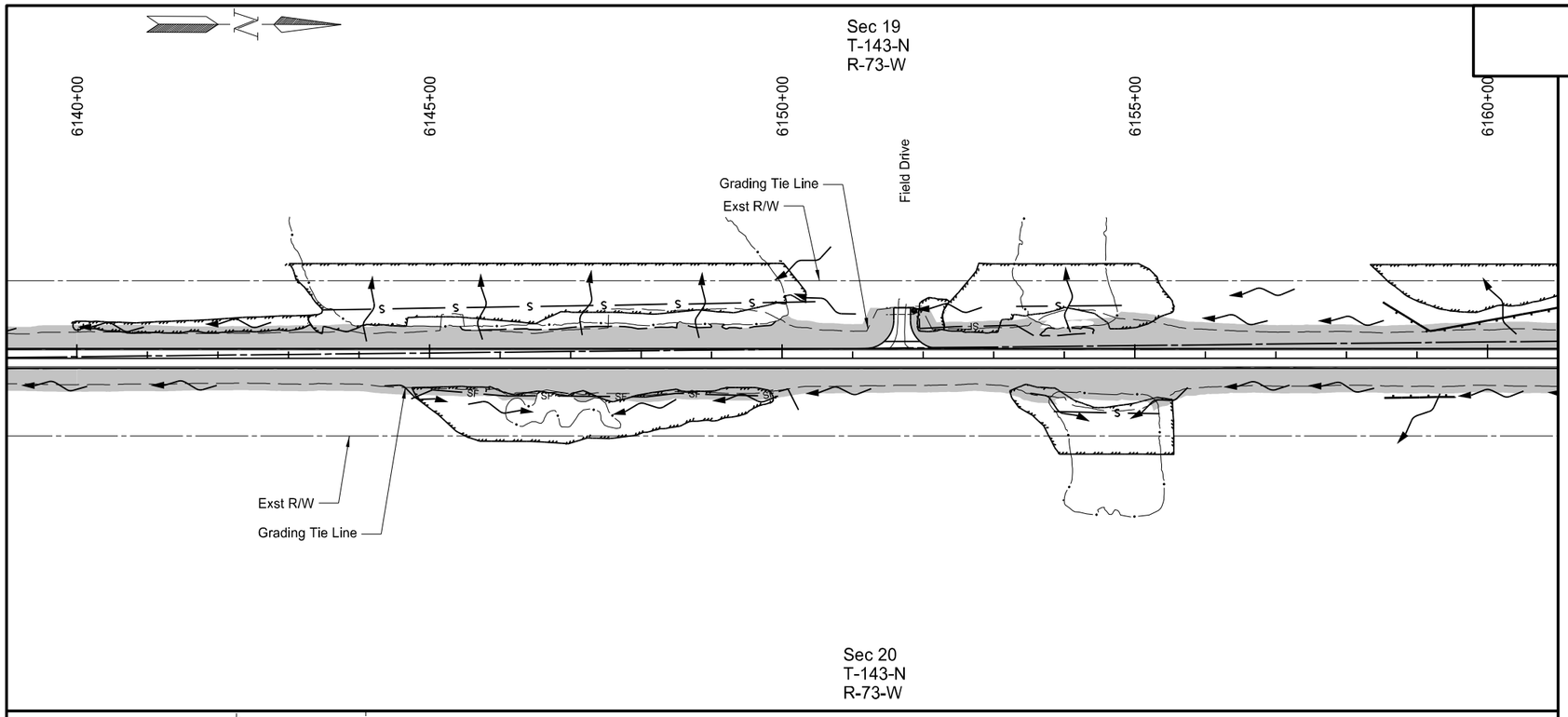
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

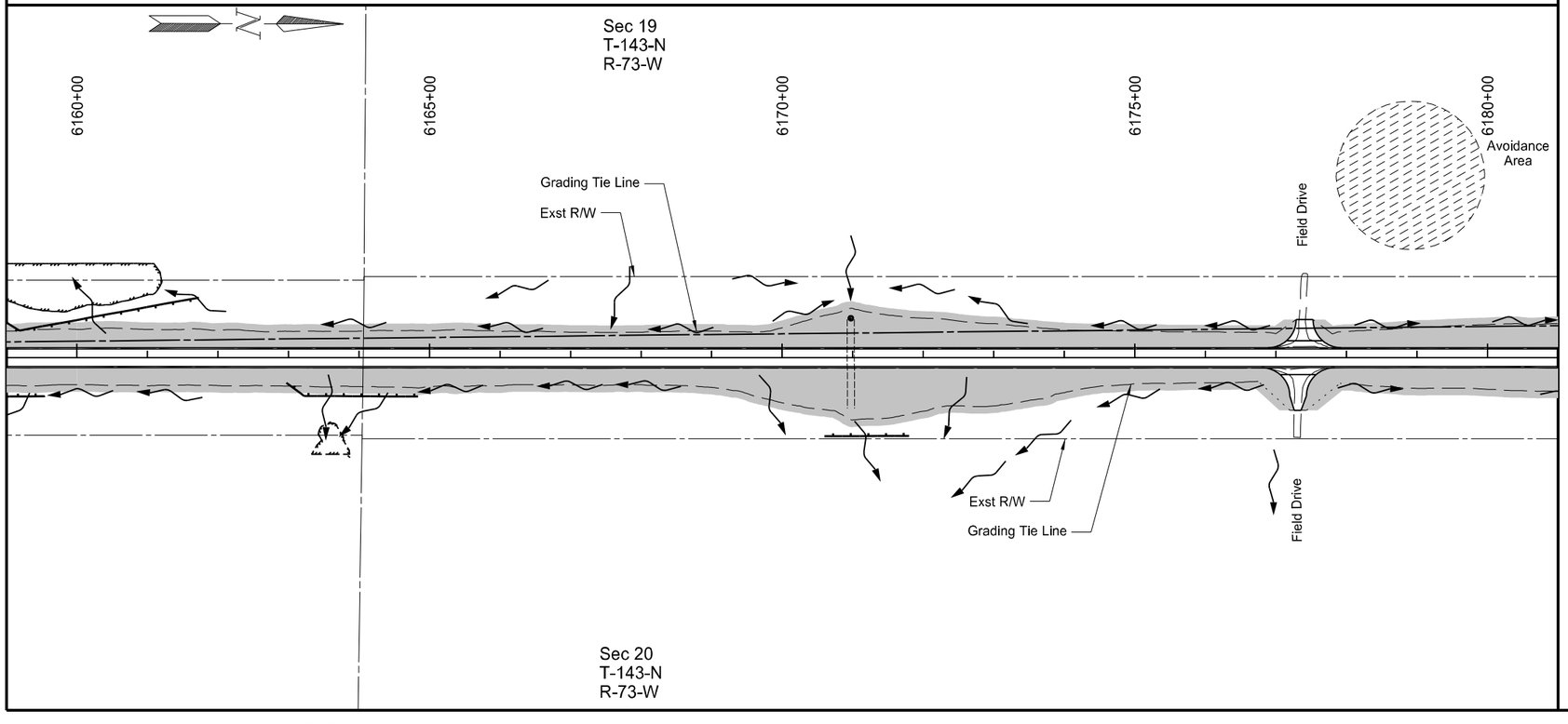
Temporary Erosion Control

ND 3
Tuttle N to W Jct 200

6100+00 to 6140+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	76	5





SPEC	CODE	BID ITEM			QTY	UNIT
251	2000	TEMPORARY COVER CROP				
		Sta 6140+00	to Sta 6180+00		6.97	ACRE
253	0101	STRAW MULCH				
		Sta 6140+00	to Sta 6180+00		6.97	ACRE
260	0200	SILT FENCE SUPPORTED				
		Sta 6144+74	RT to Sta 6150+23	RT	572	LF
		Sta 6151+93	LT to Sta 6153+57	LT	198	LF
260	0201	REMOVE SILT FENCE SUPPORTED				
		Sta 6144+74	RT to Sta 6150+23	RT	572	LF
		Sta 6151+93	LT to Sta 6153+57	LT	198	LF
262	0100	FLOTATION SILT CURTAIN				
		Sta 6143+47	LT to Sta 6150+47	LT	700	LF
		Sta 6153+32	LT to Sta 6154+82	LT	150	LF
		Sta 6153+85	RT to Sta 6155+35	RT	150	LF
262	0101	REMOVE FLOTATION SILT CURTAIN				
		Sta 6143+47	LT to Sta 6150+47	LT	700	LF
		Sta 6153+32	LT to Sta 6154+82	LT	150	LF
		Sta 6153+85	RT to Sta 6155+35	RT	150	LF

*NOTE: See Section 76, Sheets 30 & 31 for Fiber Roll data.

Legend

- Temporary Cover Crop/ Straw Mulch
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- SF — Silt Fence
- Fiber Roll(12" or 20")
- Culvert Protection(12" or 20")
- S — Flotation Silt Curtain

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Temporary Erosion Control

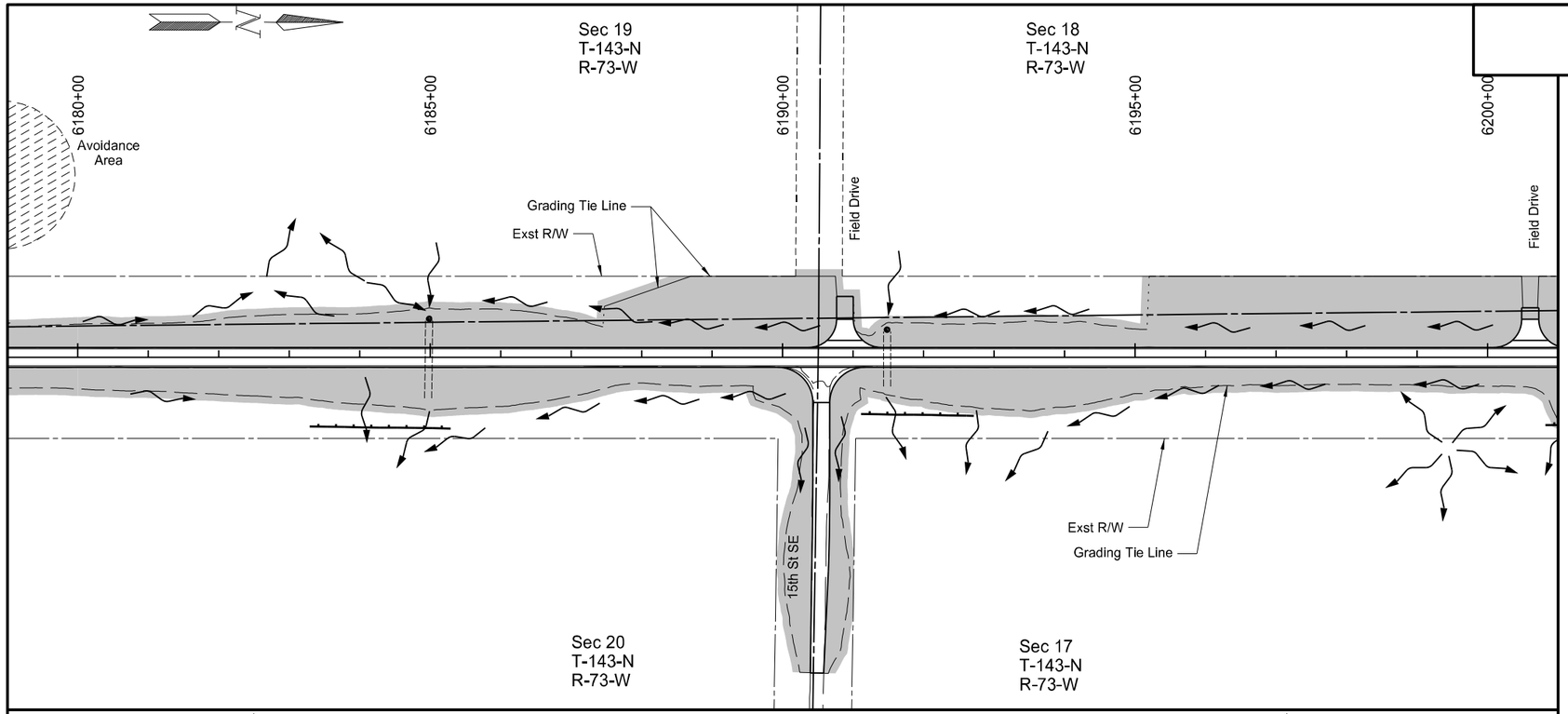
ND 3
Tuttle N to W Jct 200

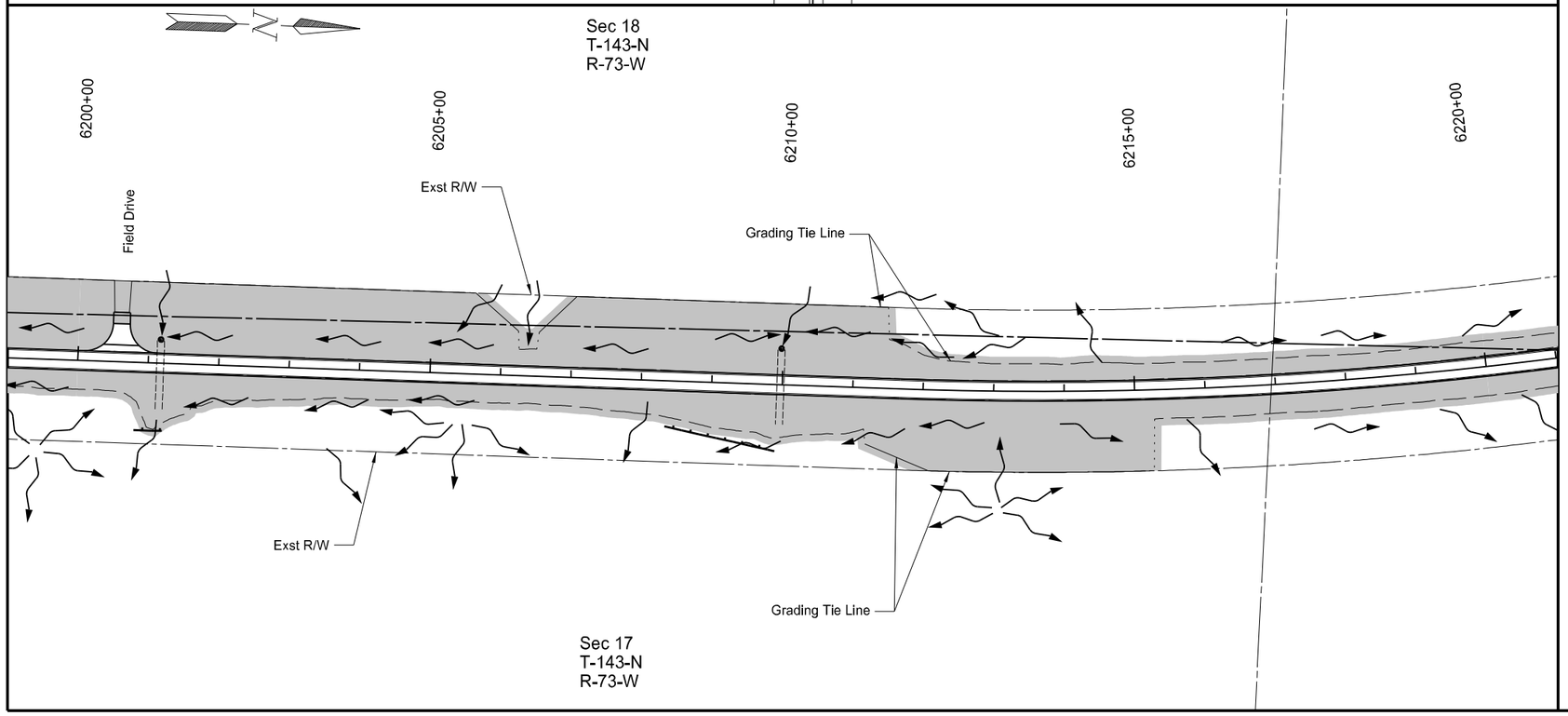
6140+00 to 6180+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	76	6

SPEC	CODE	BID ITEM		QTY	UNIT
251	2000	TEMPORARY COVER CROP			
		Sta 6180+00	to Sta 6220+00	11.93	ACRE
253	0101	STRAW MULCH			
		Sta 6180+00	to Sta 6220+00	11.93	ACRE

*NOTE: See Section 76, Sheets 30 & 31 for Fiber Roll data.





Legend

- Temporary Cover Crop/ Straw Mulch
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- SF — Silt Fence
- Fiber Roll(12" or 20")
- Culvert Protection(12" or 20")
- S — Flotation Silt Curtain

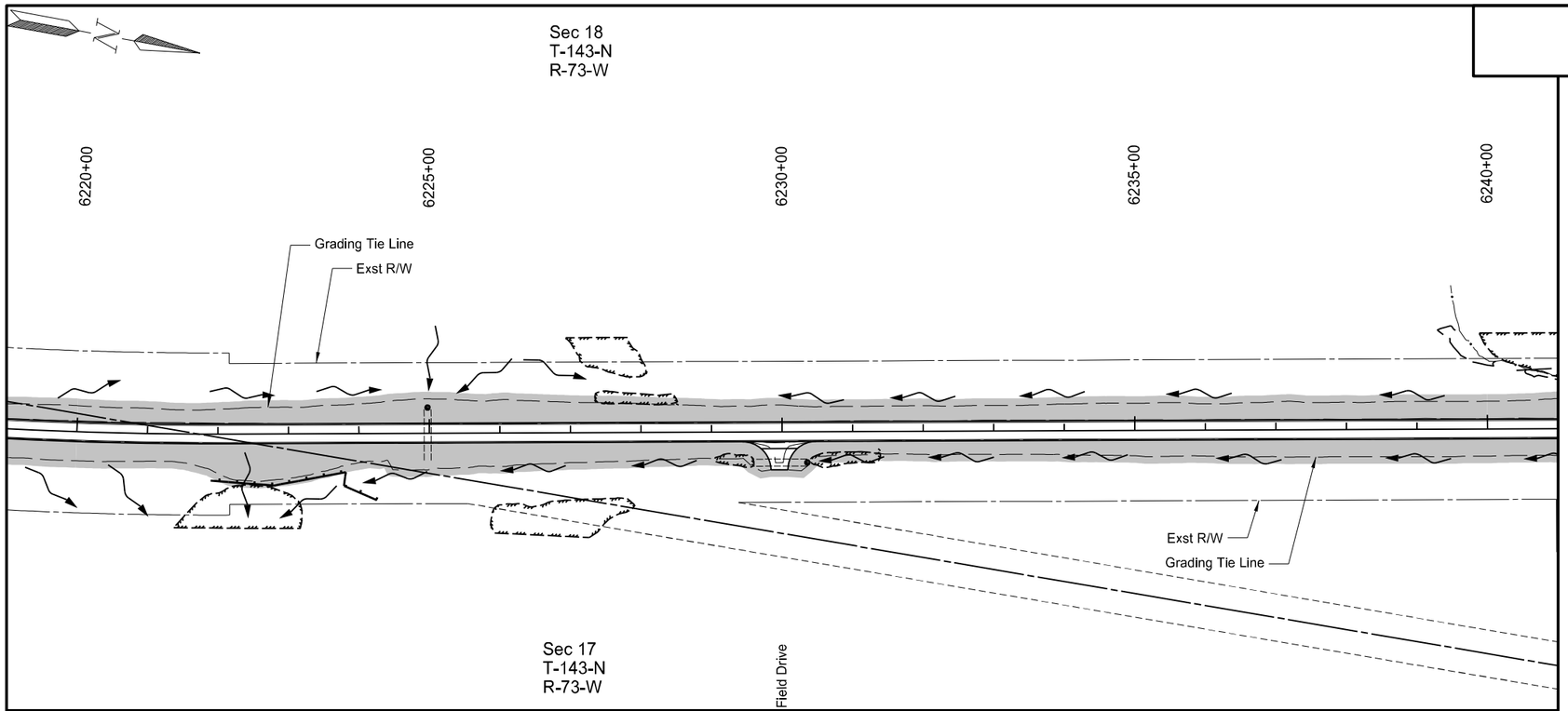
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

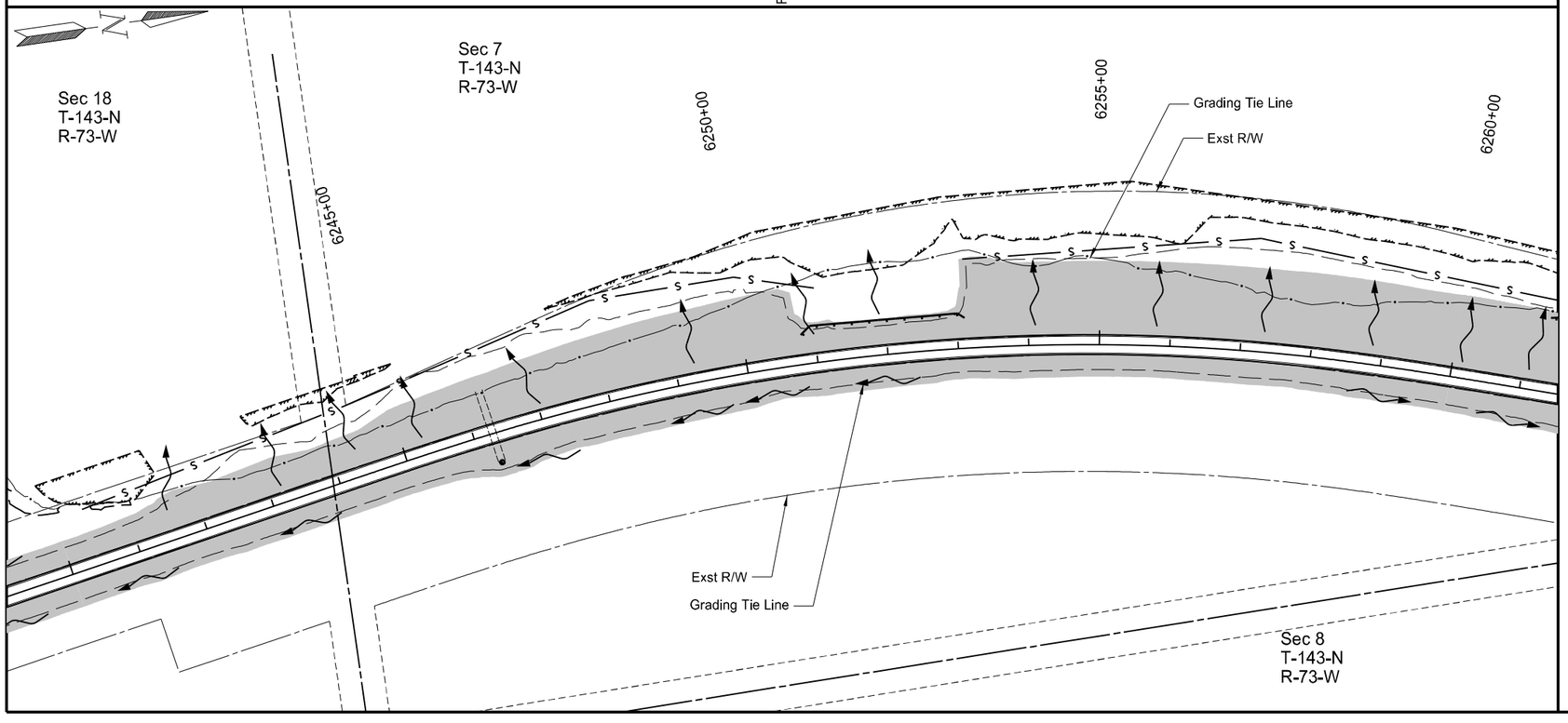
Temporary Erosion Control

ND 3
Tuttle N to W Jct 200

6180+00 to 6220+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	76	7





SPEC	CODE	BID ITEM			QTY	UNIT
251	2000	TEMPORARY COVER CROP				
		Sta 6220+00	to Sta 6260+00		8.48	ACRE
253	0101	STRAW MULCH				
		Sta 6220+00	to Sta 6260+00		8.48	ACRE
262	0100	FLOTATION SILT CURTAIN				
		Sta 6240+41	LT to Sta 6251+08	LT	1100	LF
		Sta 6253+13	LT to Sta 6260+00	LT	721	LF
262	0101	REMOVE FLOTATION SILT CURTAIN				
		Sta 6240+41	LT to Sta 6251+08	LT	1100	LF
		Sta 6253+13	LT to Sta 6260+00	LT	721	LF

*NOTE: See Section 76, Sheets 30 & 31 for Fiber Roll data.

Legend

- Temporary Cover Crop/ Straw Mulch
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- SF — Silt Fence
- Fiber Roll(12" or 20")
- Culvert Protection(12" or 20")
- S — Flotation Silt Curtain

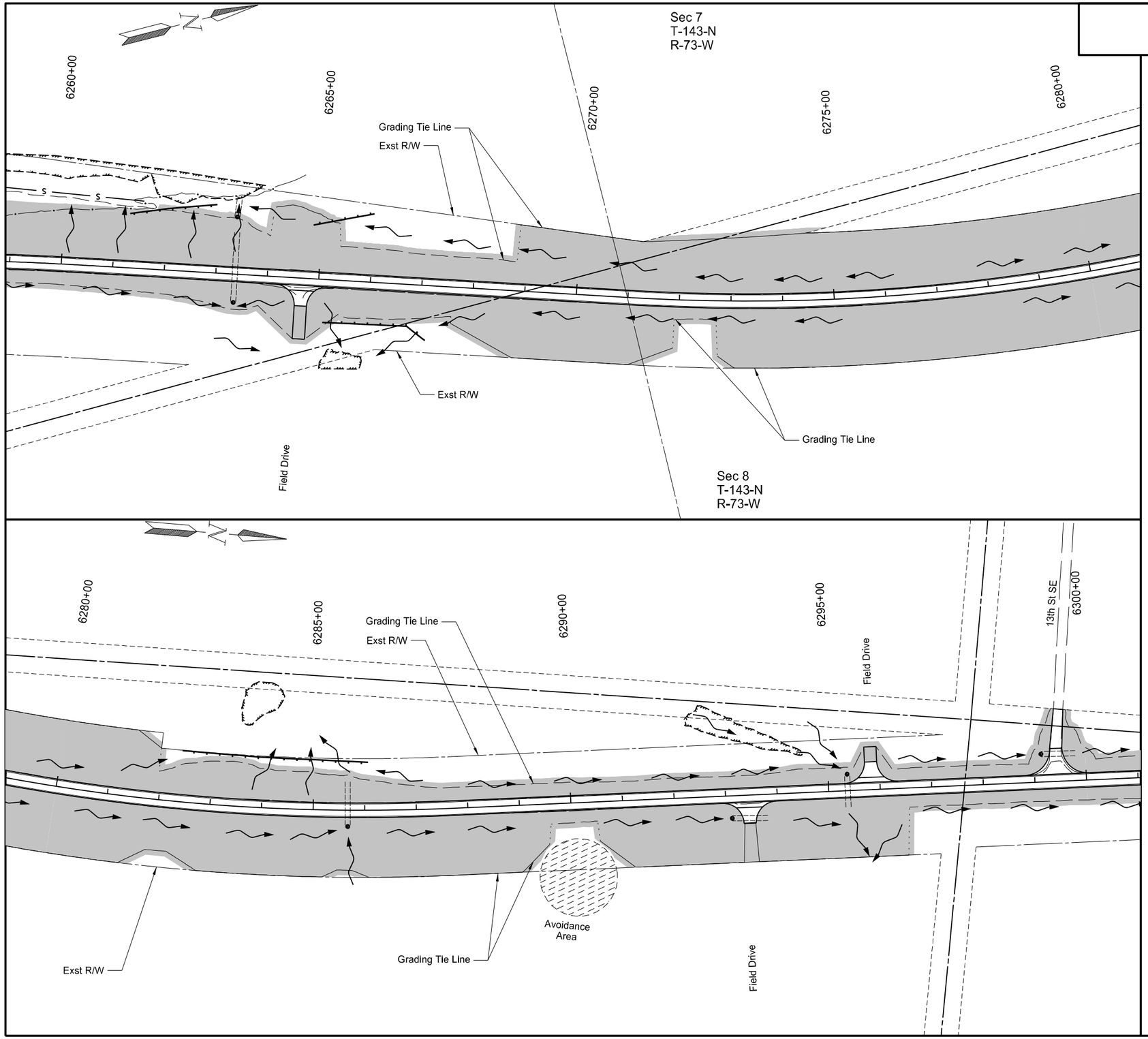
REGISTERED PROFESSIONAL ENGINEER
KORY M. KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Temporary Erosion Control

ND 3
Tuttle N to W Jct 200

6220+00 to 6260+00
Kidder County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	76	8



SPEC	CODE	BID ITEM	QTY	UNIT
251	2000	TEMPORARY COVER CROP		
		Sta 6260+00 to Sta 6300+00	15.74	ACRE
253	0101	STRAW MULCH		
		Sta 6260+00 to Sta 6300+00	15.74	ACRE
262	0100	FLOTATION SILT CURTAIN		
		Sta 6260+00 LT to Sta 6261+53 LT	154	LF
262	0101	REMOVE FLOTATION SILT CURTAIN		
		Sta 6260+00 LT to Sta 6261+53 LT	154	LF

*NOTE: See Section 76, Sheets 30 & 31 for Fiber Roll data.

Legend

- Temporary Cover Crop/ Straw Mulch
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- SF — Silt Fence
- Fiber Roll(12" or 20")
- Culvert Protection(12" or 20")
- S — Flotation Silt Curtain

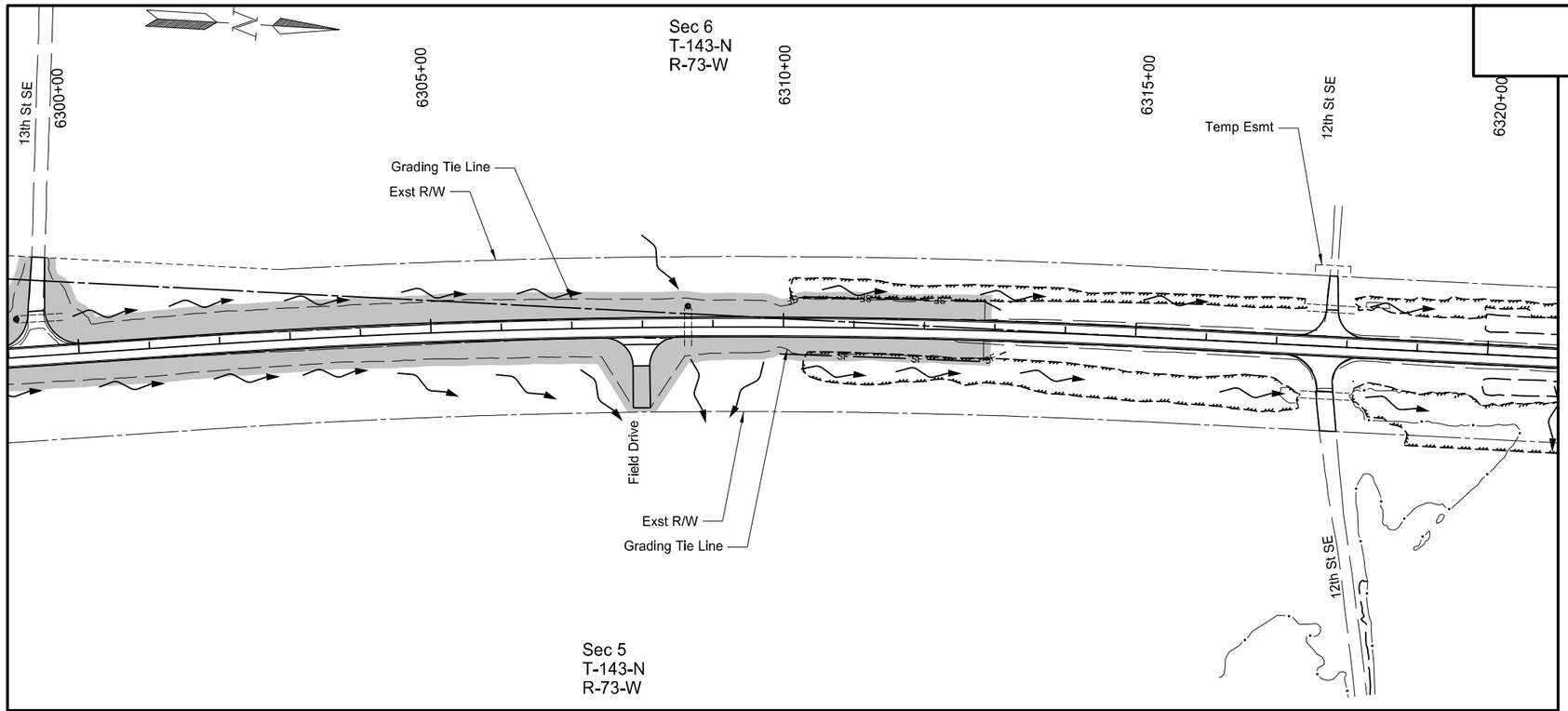
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

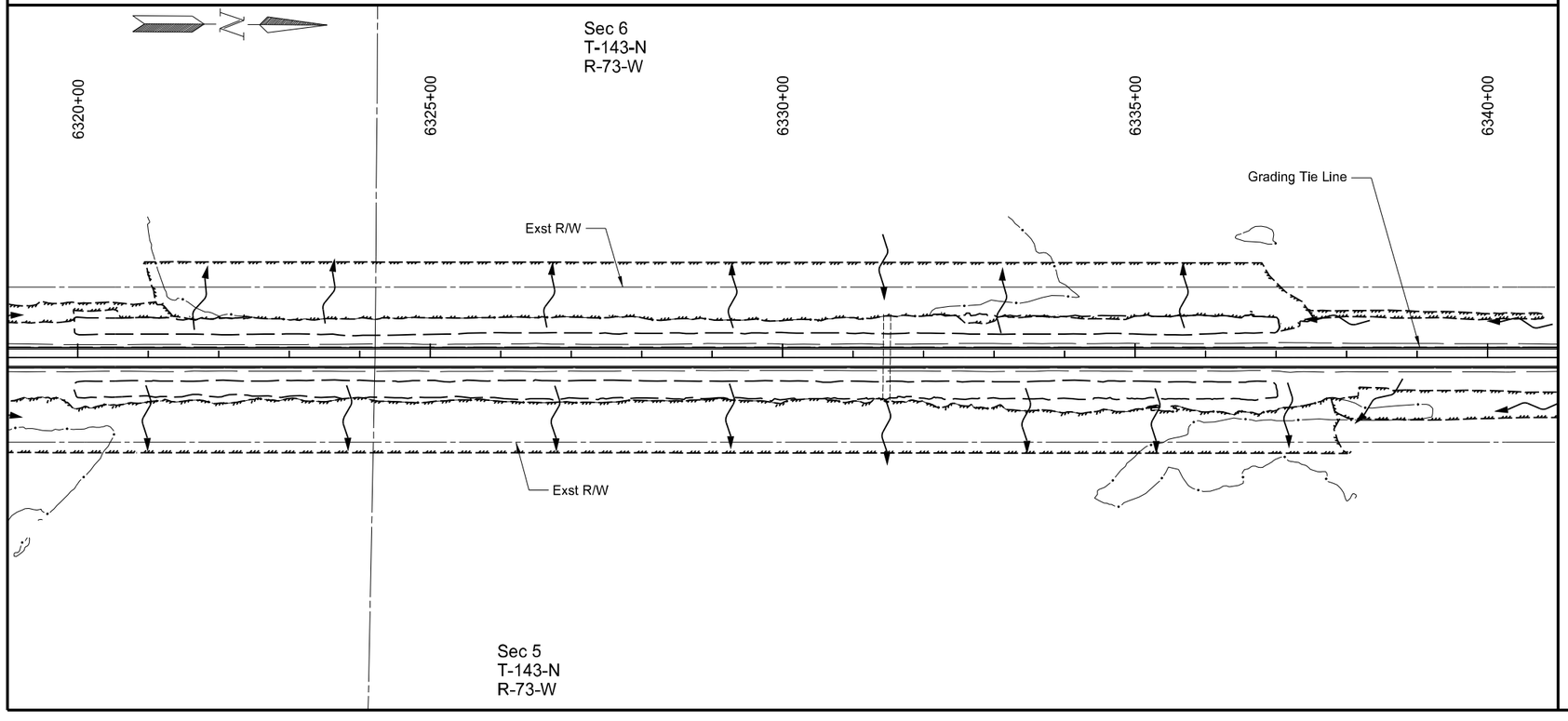
Temporary Erosion Control

ND 3
Tuttle N to W Jct 200

6260+00 to 6300+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	76	9





SPEC	CODE	BID ITEM			QTY	UNIT
251	2000	TEMPORARY COVER CROP				
		Sta 6300+00	to Sta 6340+00		2.25	ACRE
253	0101	STRAW MULCH				
		Sta 6300+00	to Sta 6340+00		2.25	ACRE
260	0200	SILT FENCE SUPPORTED				
		Sta 6309+94	RT to Sta 6313+17	RT	325	LF
		Sta 6310+06	LT to Sta 6313+08	LT	307	LF
260	0201	REMOVE SILT FENCE SUPPORTED				
		Sta 6309+94	RT to Sta 6313+17	RT	325	LF
		Sta 6310+06	LT to Sta 6313+08	LT	307	LF

*NOTE: See Section 76, Sheets 30 & 31 for Fiber Roll data.

Legend

- Temporary Cover Crop/ Straw Mulch
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- SF — Silt Fence
- Fiber Roll(12" or 20")
- Culvert Protection(12" or 20")
- S — Flotation Silt Curtain

REGISTERED PROFESSIONAL ENGINEER
KORY M. KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Temporary Erosion Control

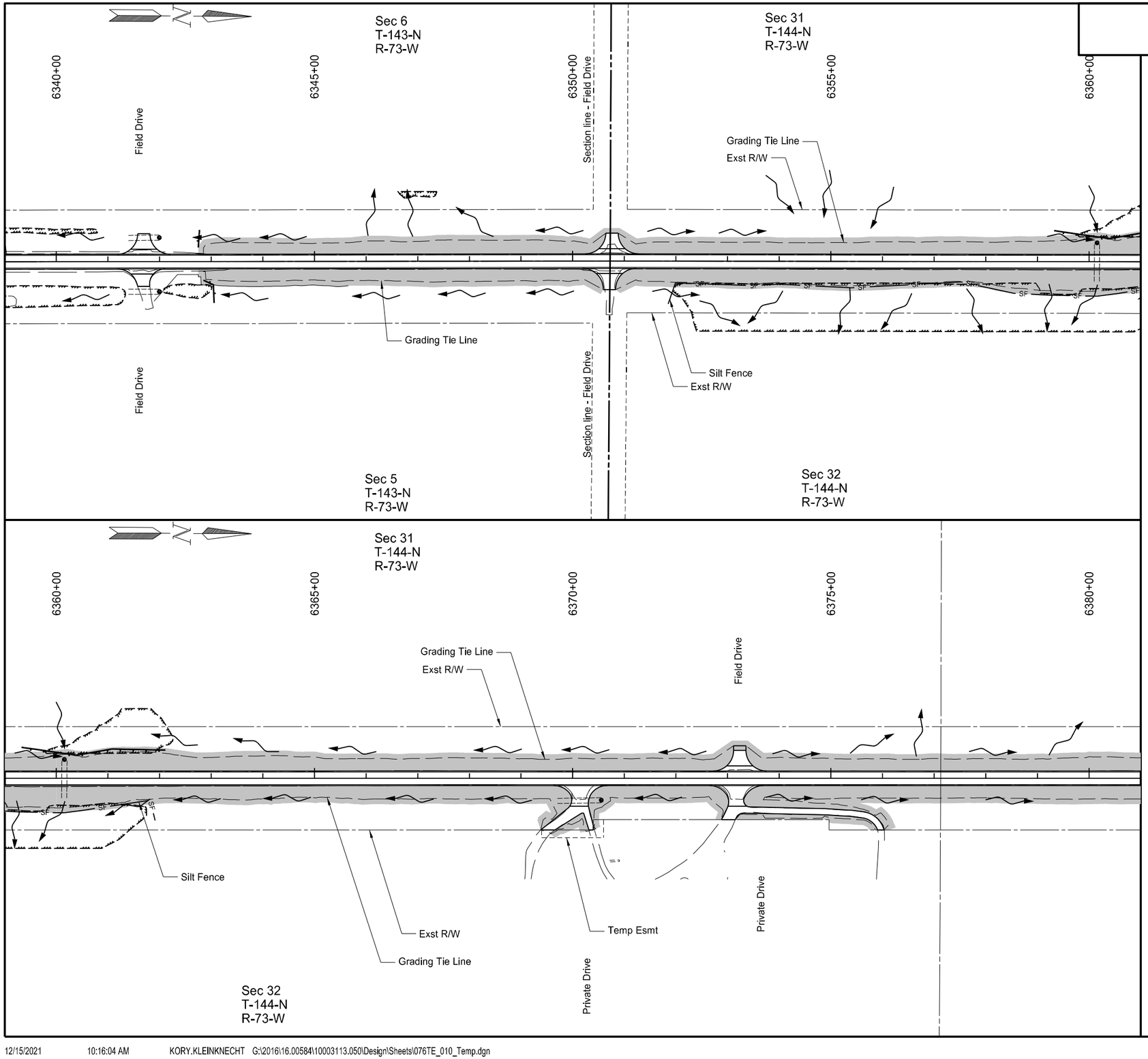
ND 3
Tuttle N to W Jct 200

6300+00 to 6340+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	76	10

SPEC	CODE	BID ITEM	QTY	UNIT
251	2000	TEMPORARY COVER CROP		
		Sta 6340+00 to Sta 6380+00	6.27	ACRE
253	0101	STRAW MULCH		
		Sta 6340+00 to Sta 6380+00	6.27	ACRE
260	0200	SILT FENCE SUPPORTED		
		Sta 6351+85 RT to Sta 6361+91 RT	1072	LF
260	0201	REMOVE SILT FENCE SUPPORTED		
		Sta 6351+85 RT to Sta 6361+91 RT	1072	LF

*NOTE: See Section 76, Sheets 30 & 31 for Fiber Roll data.



Legend

- Temporary Cover Crop/ Straw Mulch
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- SF — Silt Fence
- Fiber Roll(12" or 20")
- Culvert Protection(12" or 20")
- S — Flotation Silt Curtain

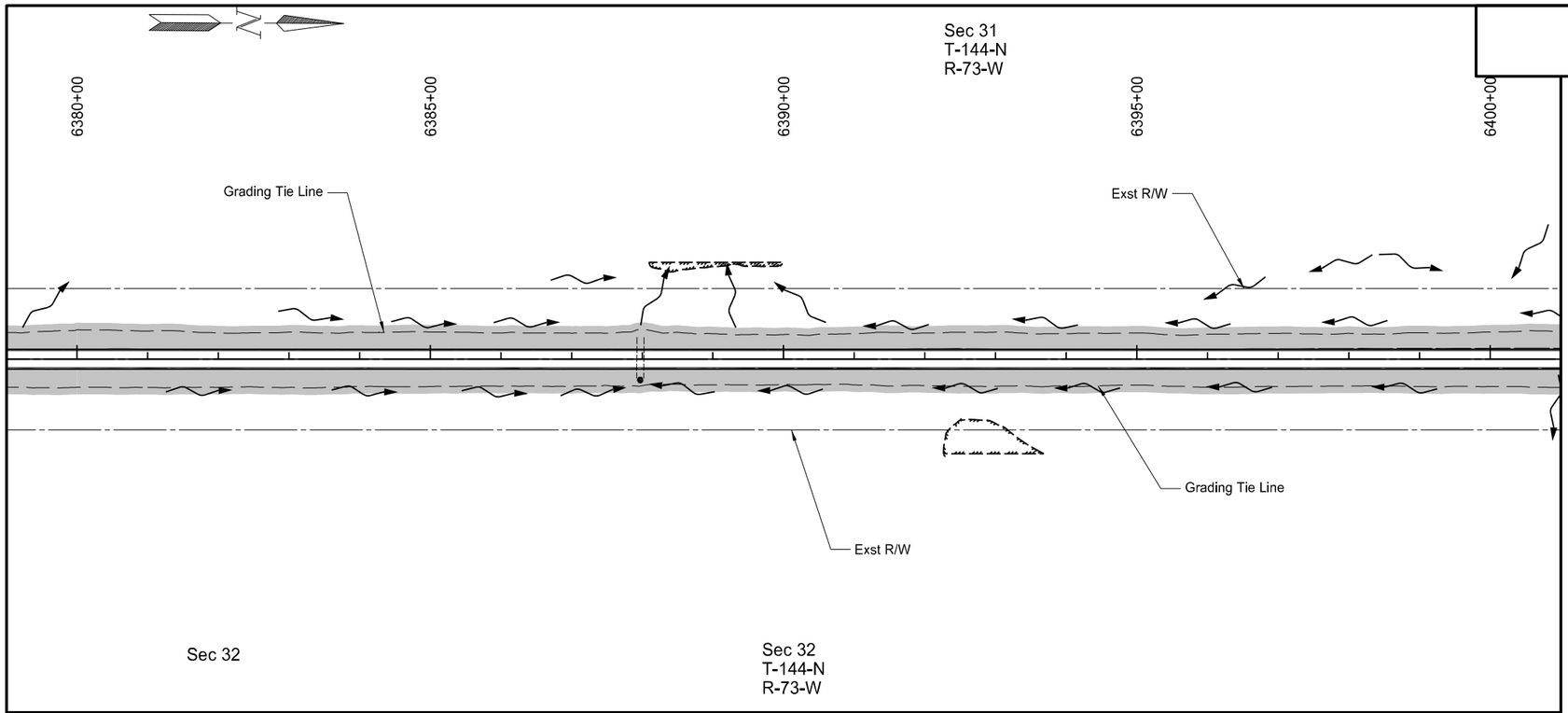
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

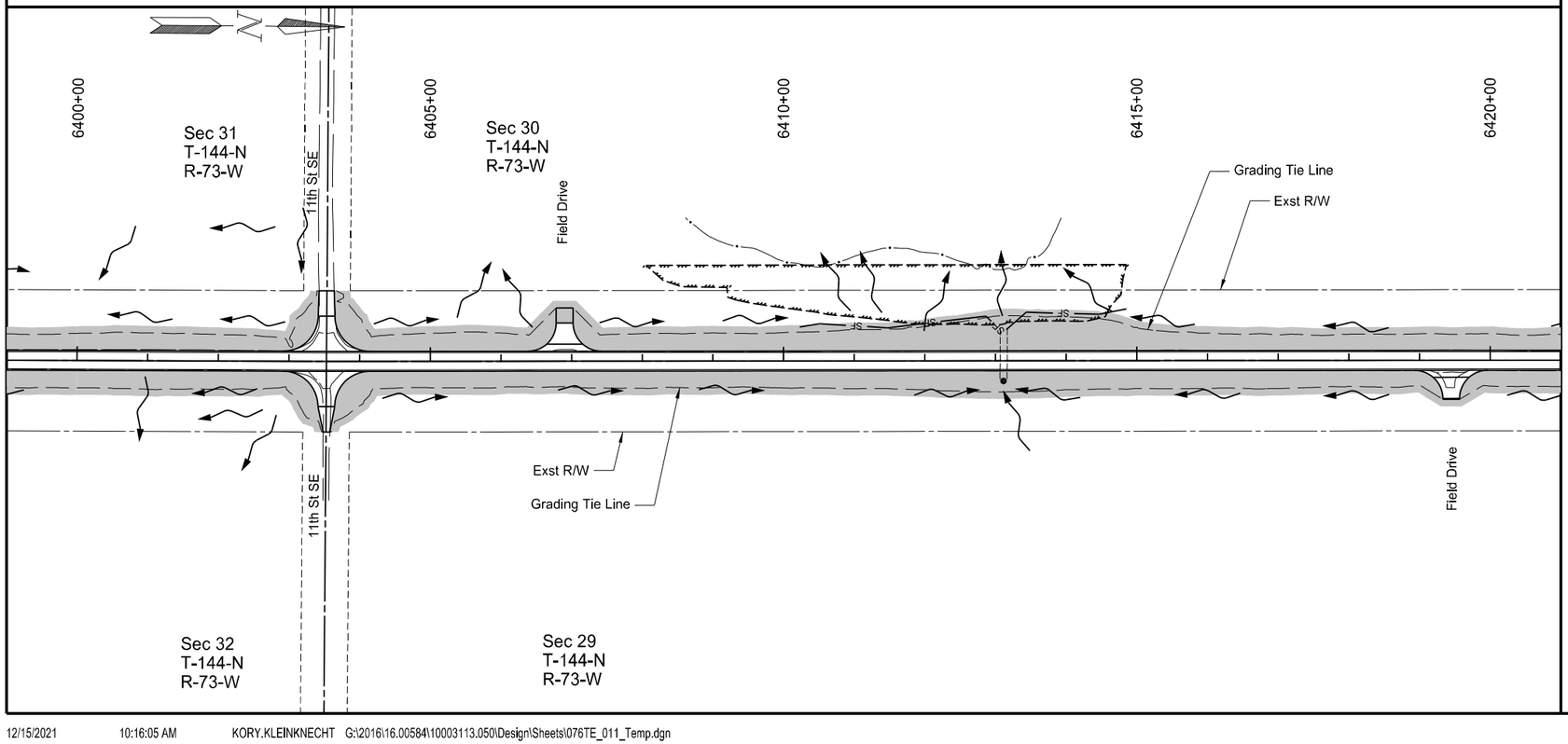
Temporary Erosion Control

ND 3
Tuttle N to W Jct 200

6340+00 to 6380+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	76	11





SPEC	CODE	BID ITEM	QTY	UNIT
251	2000	TEMPORARY COVER CROP		
		Sta 6380+00 to Sta 6420+00	6.52	ACRE
253	0101	STRAW MULCH		
		Sta 6380+00 to Sta 6420+00	6.52	ACRE
260	0200	SILT FENCE SUPPORTED		
		Sta 6410+23 LT to Sta 6414+85 LT	486	LF
260	0201	REMOVE SILT FENCE SUPPORTED		
		Sta 6410+23 LT to Sta 6414+85 LT	486	LF

*NOTE: See Section 76, Sheets 30 & 31 for Fiber Roll data.

Legend

- Temporary Cover Crop/ Straw Mulch
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- SF — Silt Fence
- Fiber Roll(12" or 20")
- Culvert Protection(12" or 20")
- S — Flotation Silt Curtain

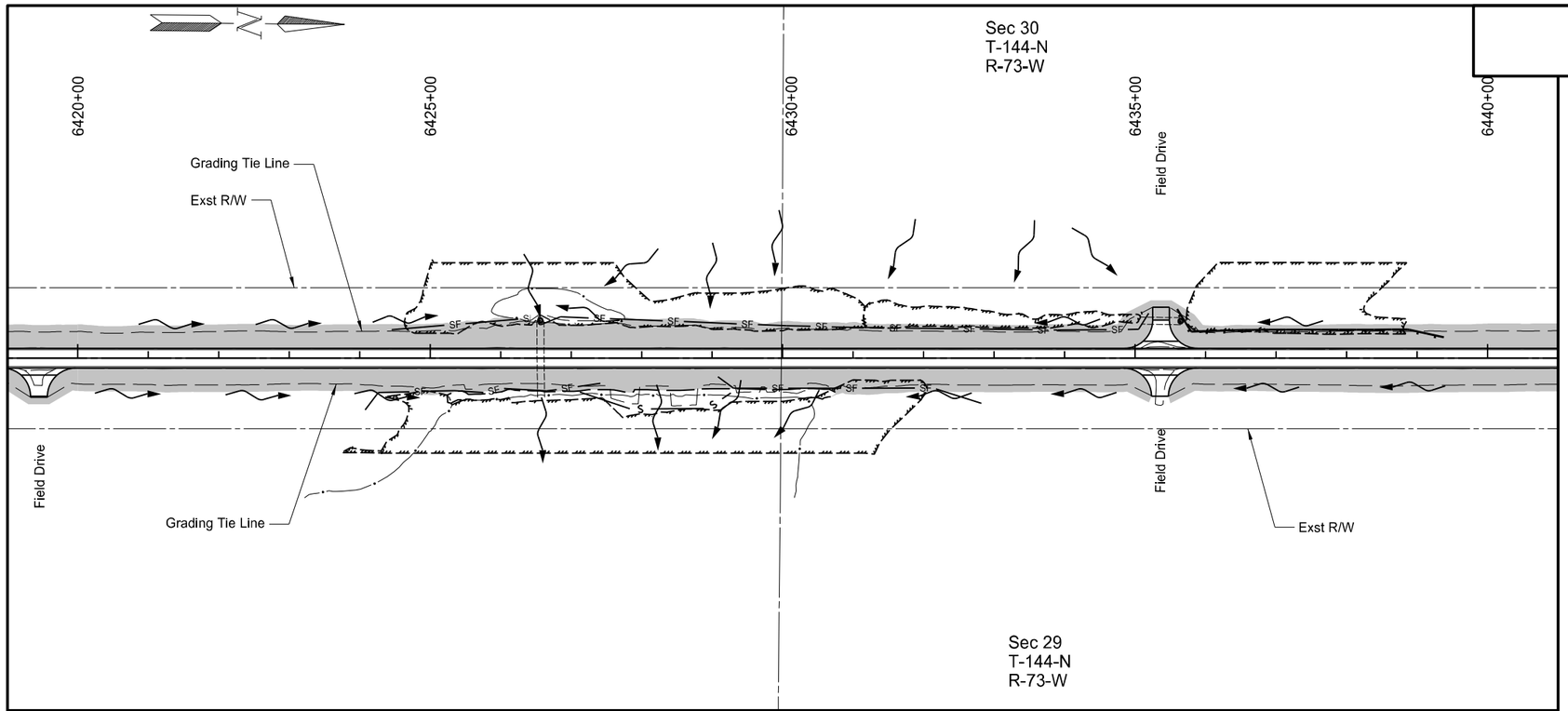
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

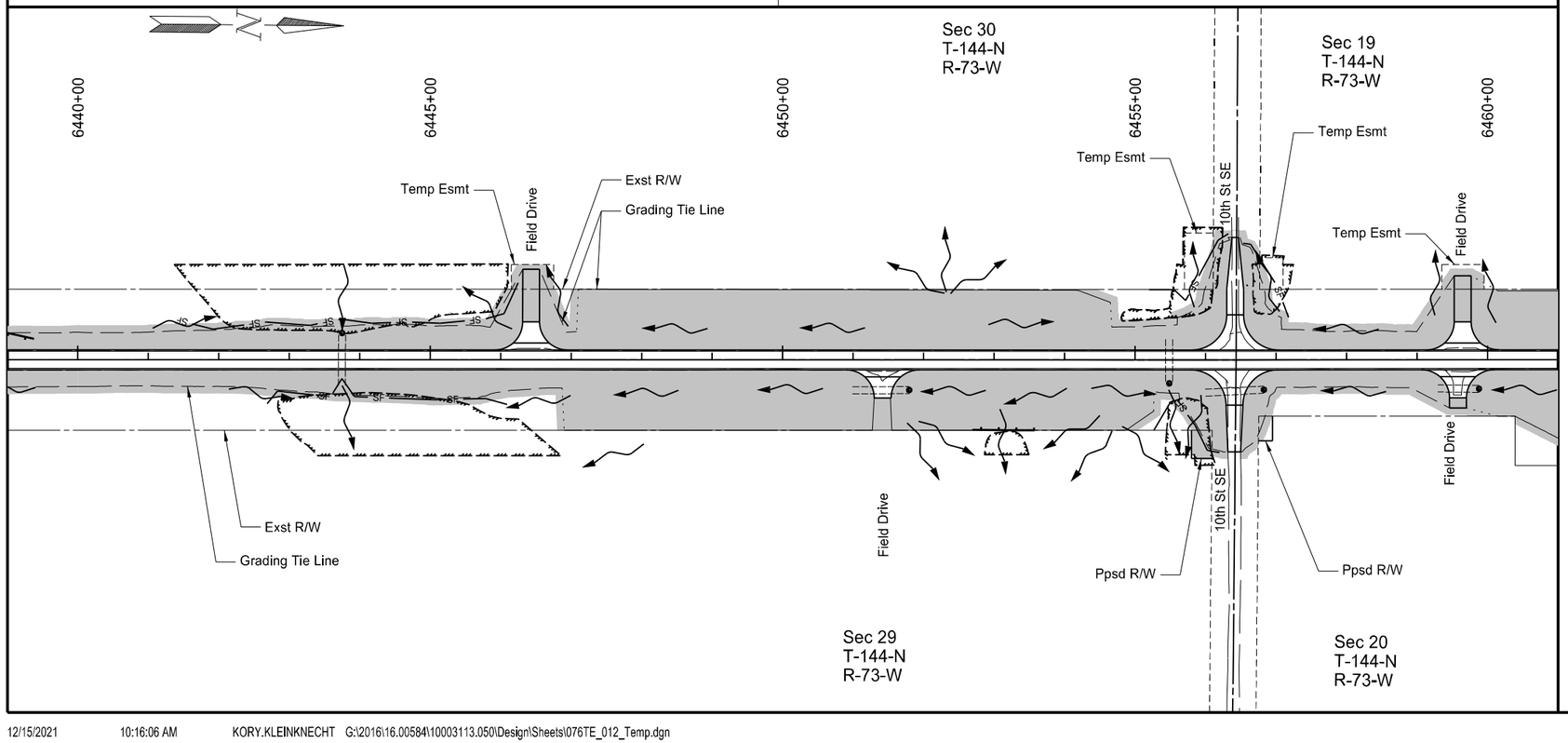
Temporary Erosion Control

ND 3
Tuttle N to W Jct 200

6380+00 to 6420+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	76	12





SPEC	CODE	BID ITEM				QTY	UNIT
251	2000	TEMPORARY COVER CROP					
		Sta 6420+00	to	Sta 6460+00		9.02	ACRE
253	0101	STRAW MULCH					
		Sta 6420+00	to	Sta 6460+00		9.02	ACRE
260	0200	SILT FENCE SUPPORTED					
		Sta 6424+08	RT	to Sta 6427+41	RT	347	LF
		Sta 6424+45	LT	to Sta 6435+19	LT	1093	LF
		Sta 6429+08	RT	to Sta 6432+82	RT	383	LF
		Sta 6441+38	LT	to Sta 6446+25	LT	520	LF
		Sta 6442+69	RT	to Sta 6446+09	RT	378	LF
		Sta 6455+20	LT	to Sta 6456+32	LT	173	LF
		Sta 6455+27	RT	to Sta 6456+20	RT	155	LF
		Sta 6456+54	LT	to Sta 6457+18	LT	128	LF
260	0201	REMOVE SILT FENCE SUPPORTED					
		Sta 6424+08	RT	to Sta 6427+41	RT	347	LF
		Sta 6424+45	LT	to Sta 6435+19	LT	1093	LF
		Sta 6429+08	RT	to Sta 6432+82	RT	383	LF
		Sta 6441+38	LT	to Sta 6446+25	LT	520	LF
		Sta 6442+69	RT	to Sta 6446+09	RT	378	LF
		Sta 6455+20	LT	to Sta 6456+32	LT	173	LF
		Sta 6455+27	RT	to Sta 6456+20	RT	155	LF
		Sta 6456+54	LT	to Sta 6457+18	LT	128	LF
262	0100	FLOTATION SILT CURTAIN					
		Sta 6427+12	RT	to Sta 6429+27	RT	225	LF
262	0101	REMOVE FLOTATION SILT CURTAIN					
		Sta 6427+12	RT	to Sta 6429+27	RT	225	LF

*NOTE: See Section 76, Sheets 30 & 31 for Fiber Roll data.

Legend

- Temporary Cover Crop/ Straw Mulch
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- SF — Silt Fence
- Fiber Roll(12" or 20")
- Culvert Protection(12" or 20")
- S — Flotation Silt Curtain

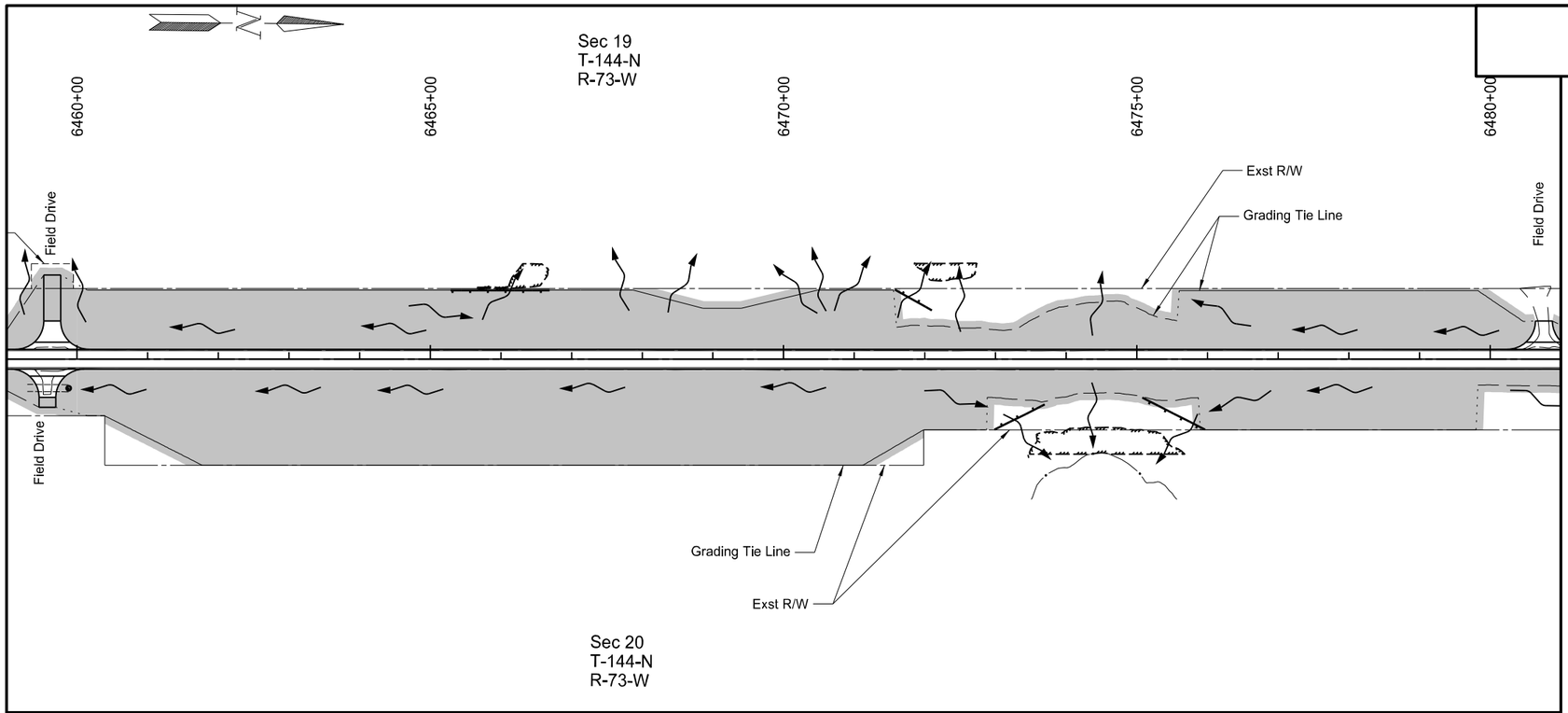
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

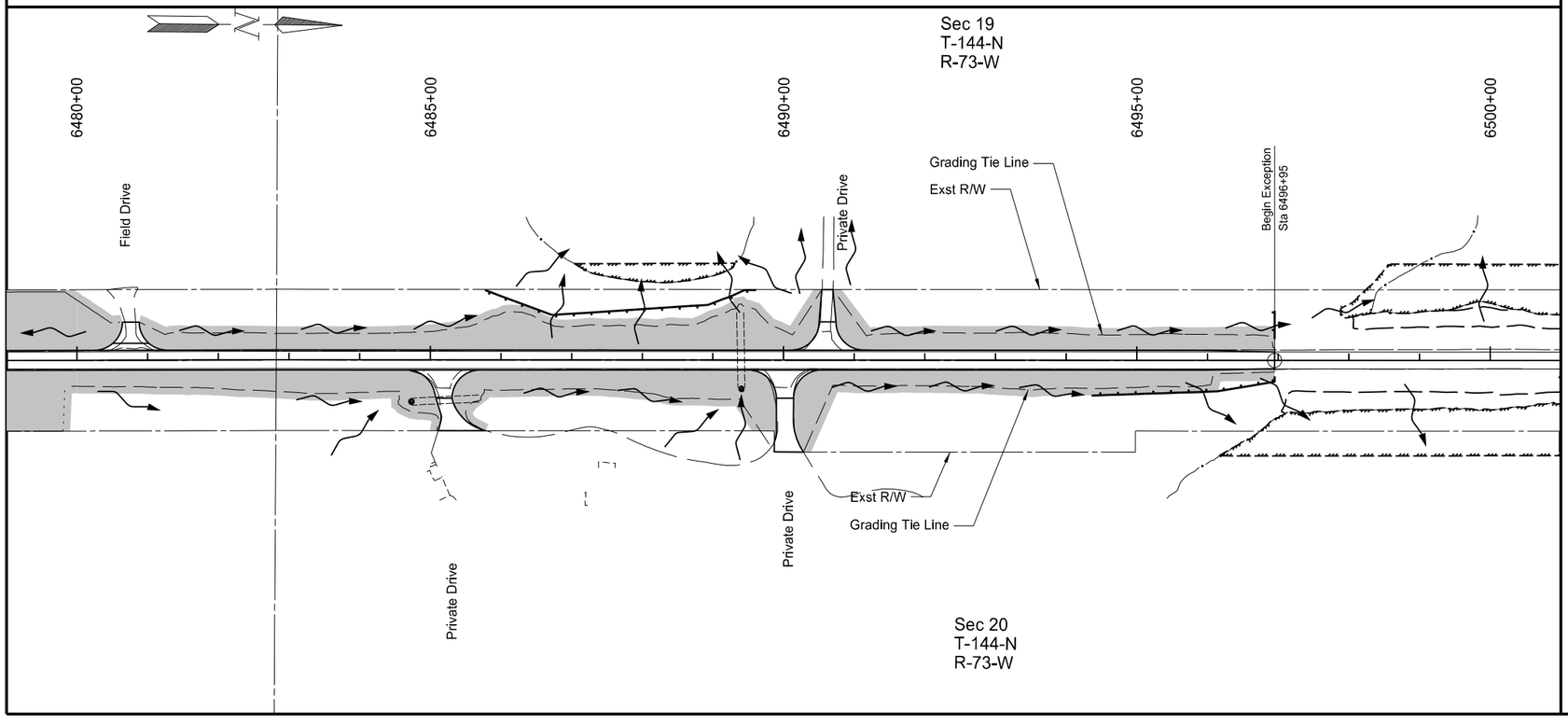
Temporary Erosion Control

ND 3
Tuttle N to W Jct 200

6420+00 to 6460+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	76	13





SPEC	CODE	BID ITEM		QTY	UNIT
251	2000	TEMPORARY COVER CROP			
		Sta 6460+00	to Sta 6500+00	11.65	ACRE
253	0101	STRAW MULCH			
		Sta 6460+00	to Sta 6500+00	11.65	ACRE

*NOTE: See Section 76, Sheets 30 & 31 for Fiber Roll data.

Legend

- Temporary Cover Crop/ Straw Mulch
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- SF — Silt Fence
- Fiber Roll(12" or 20")
- Culvert Protection(12" or 20")
- S — Flotation Silt Curtain

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-2774
DATE 12/15/2021
NORTH DAKOTA

Temporary Erosion Control

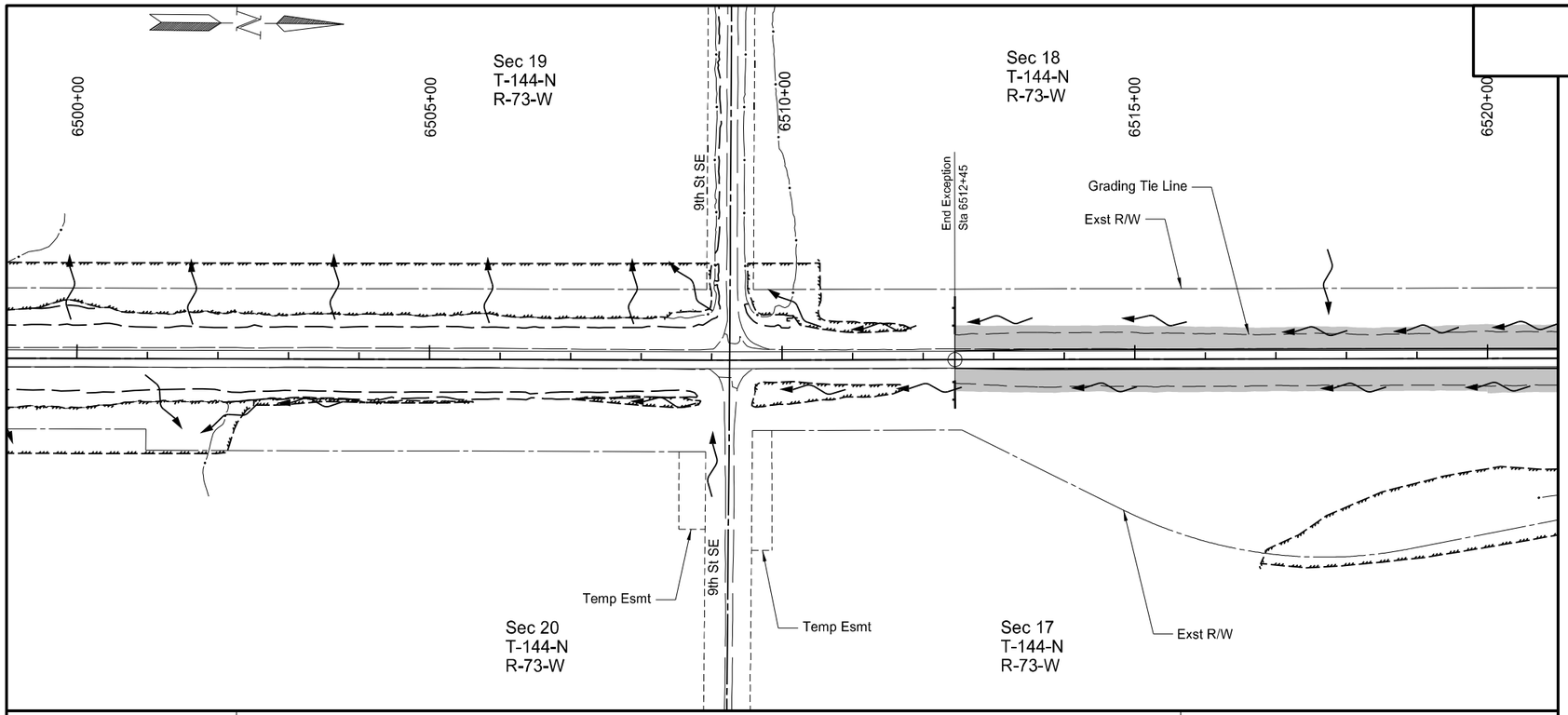
ND 3
Tuttle N to W Jct 200

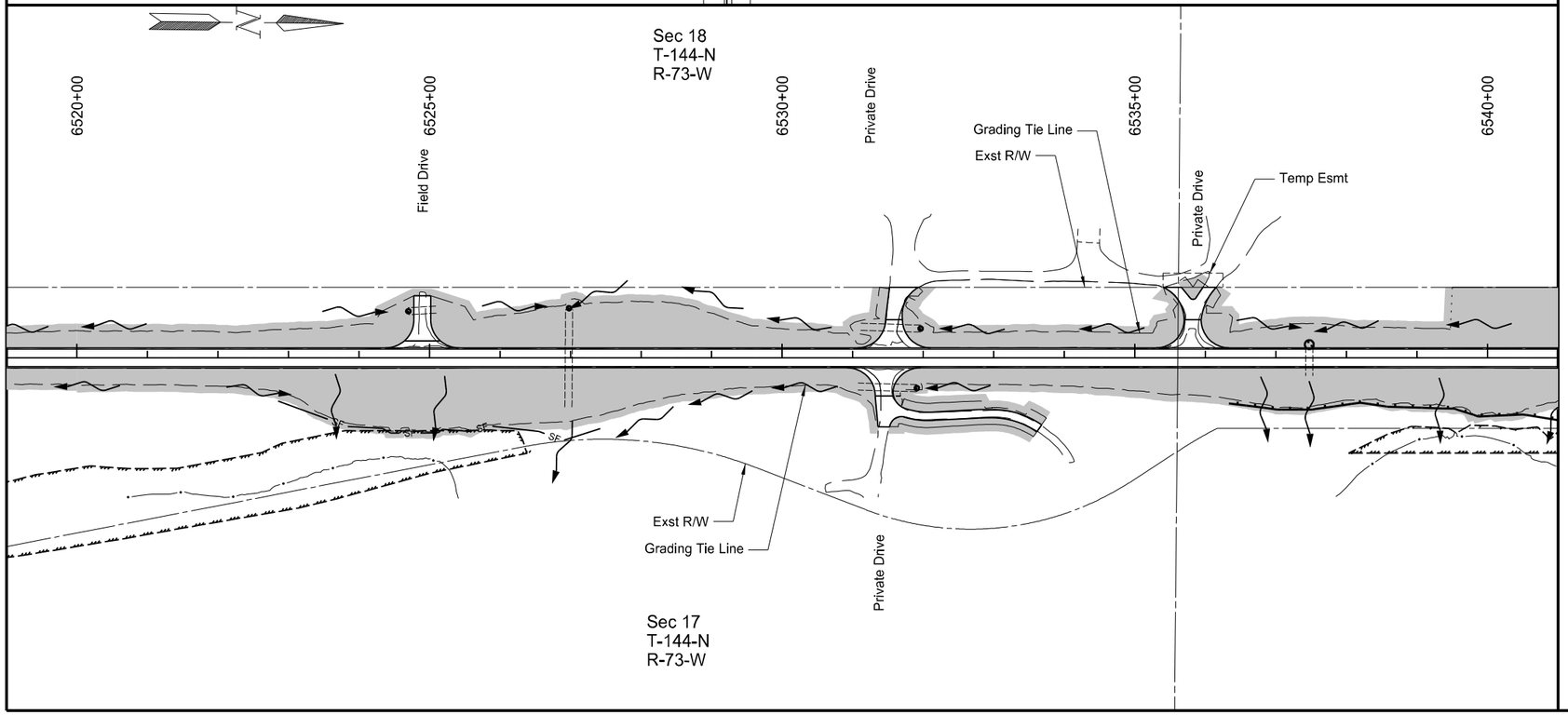
6460+00 to 6500+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	76	14

SPEC	CODE	BID ITEM	QTY	UNIT
251	2000	TEMPORARY COVER CROP		
		Sta 6500+00 to Sta 6540+00	6.02	ACRE
253	0101	STRAW MULCH		
		Sta 6500+00 to Sta 6540+00	6.02	ACRE
260	0200	SILT FENCE SUPPORTED		
		Sta 6522+85 RT to Sta 6527+42 RT	474	LF
260	0201	REMOVE SILT FENCE SUPPORTED		
		Sta 6522+85 RT to Sta 6527+42 RT	474	LF

*NOTE: See Section 76, Sheets 30 & 31 for Fiber Roll data.





Legend

- Temporary Cover Crop/ Straw Mulch
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- SF — Silt Fence
- Fiber Roll(12" or 20")
- Culvert Protection(12" or 20")
- S — Flotation Silt Curtain

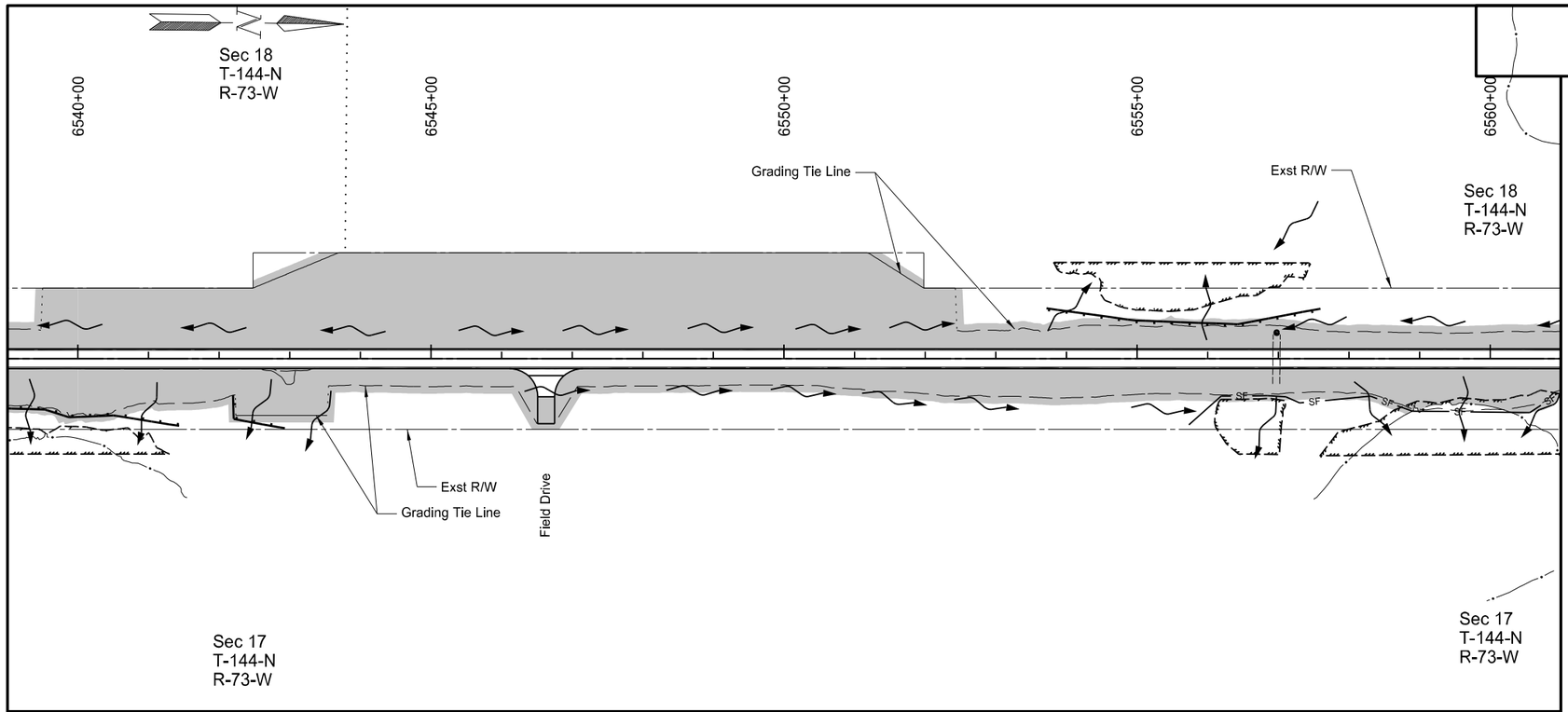
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27748
DATE 12/15/2021
NORTH DAKOTA

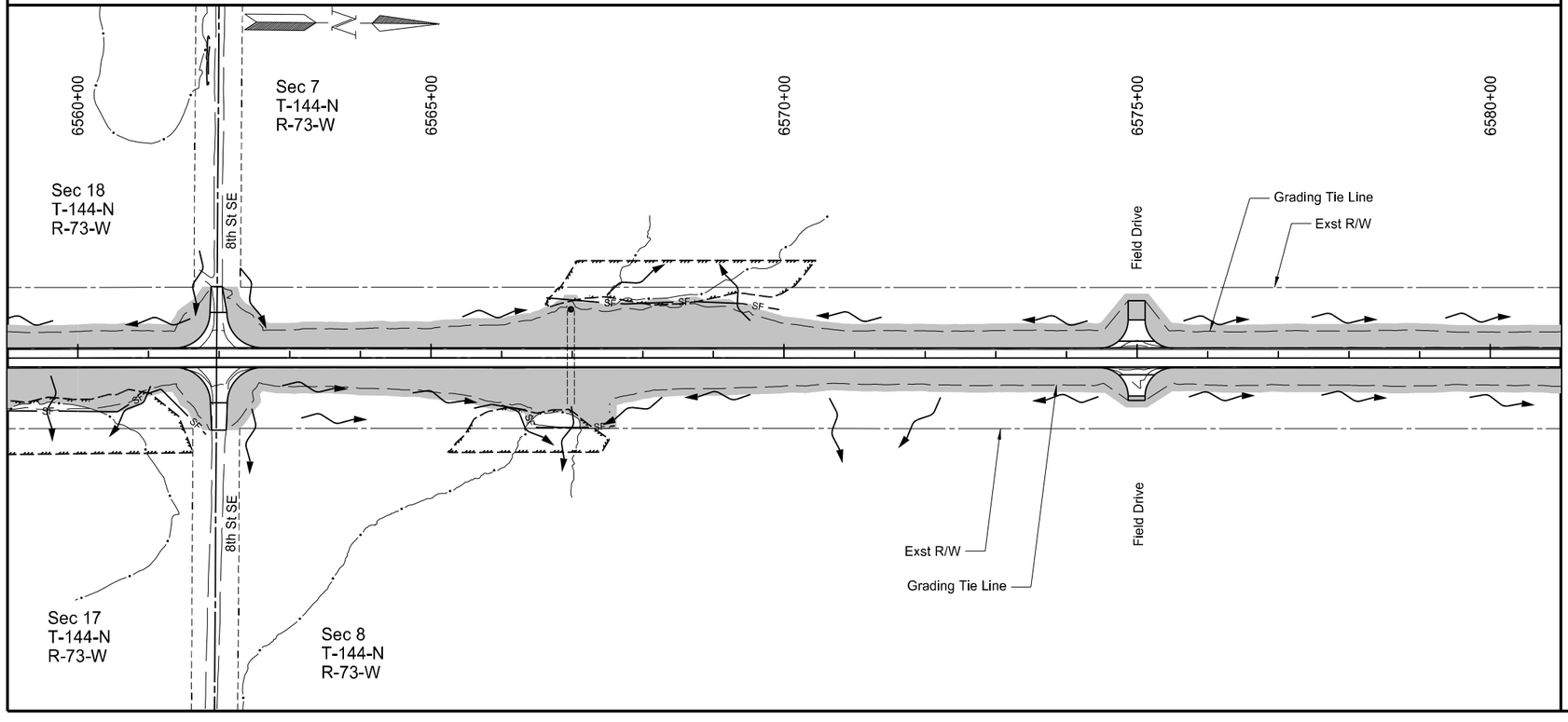
Temporary Erosion Control

ND 3
Tuttle N to W Jct 200

6500+00 to 6540+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	76	15





SPEC	CODE	BID ITEM			QTY	UNIT
251	2000	TEMPORARY COVER CROP				
		Sta 6540+00	to Sta 6580+00		10.20	ACRE
253	0101	STRAW MULCH				
		Sta 6540+00	to Sta 6580+00		10.20	ACRE
260	0200	SILT FENCE SUPPORTED				
		Sta 6555+74	RT to Sta 6561+81	RT	664	LF
		Sta 6565+61	RT to Sta 6567+60	RT	217	LF
		Sta 6566+63	LT to Sta 6569+93	LT	331	LF
260	0201	REMOVE SILT FENCE SUPPORTED				
		Sta 6555+74	RT to Sta 6561+81	RT	664	LF
		Sta 6565+61	RT to Sta 6567+60	RT	217	LF
		Sta 6566+63	LT to Sta 6569+93	LT	331	LF

*NOTE: See Section 76, Sheets 30 & 31 for Fiber Roll data.

Legend

- Temporary Cover Crop/ Straw Mulch
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- SF — Silt Fence
- Fiber Roll(12" or 20")
- Culvert Protection(12" or 20")
- S — Flotation Silt Curtain

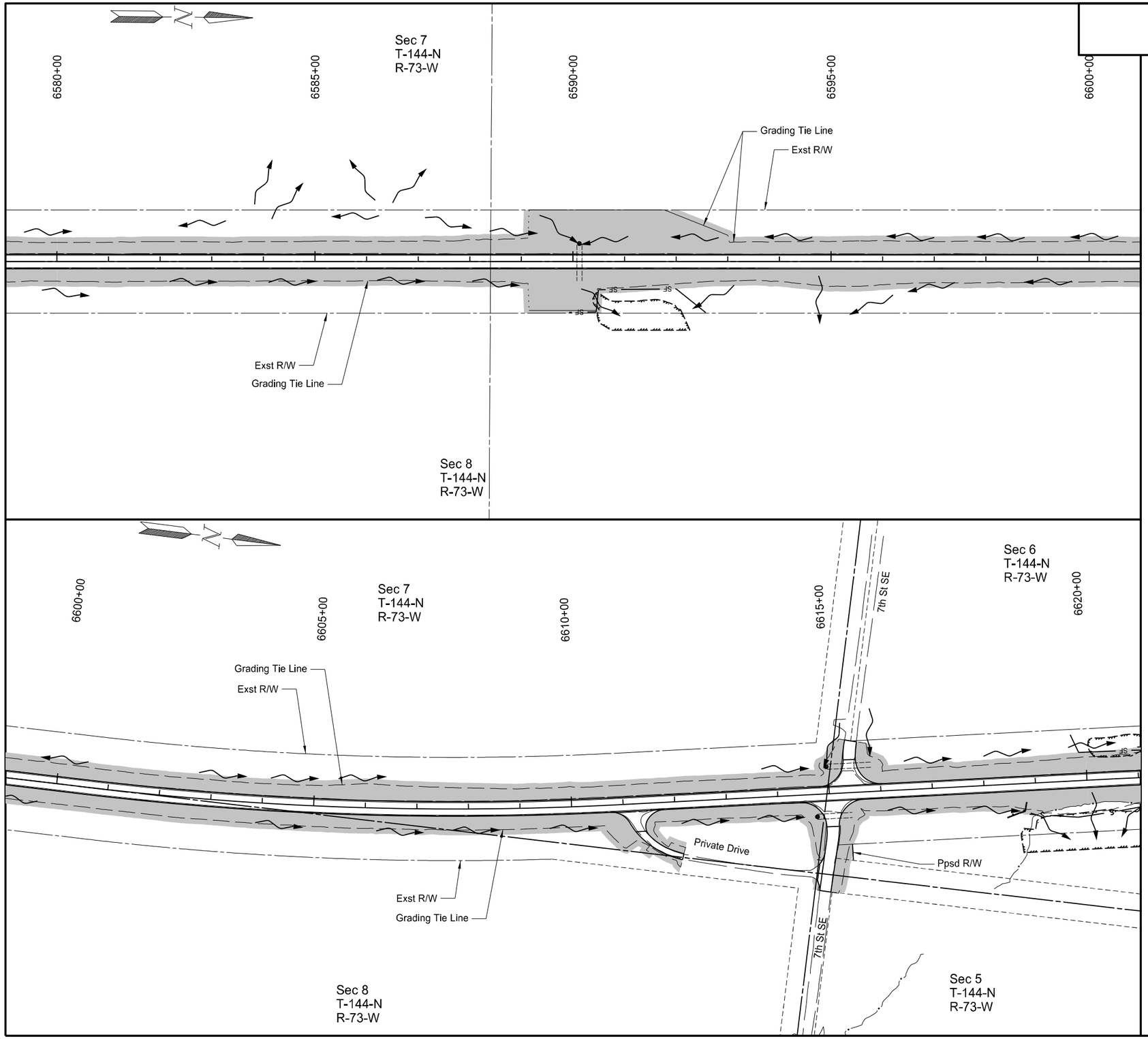
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Temporary Erosion Control

ND 3
Tuttle N to W Jct 200

6540+00 to 6580+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	76	16



SPEC	CODE	BID ITEM	QTY	UNIT
251	2000	TEMPORARY COVER CROP		
		Sta 6580+00 to Sta 6620+00	7.44	ACRE
253	0101	STRAW MULCH		
		Sta 6580+00 to Sta 6620+00	7.44	ACRE
260	0200	SILT FENCE SUPPORTED		
		Sta 6589+92 RT to Sta 6592+57 RT	320	LF
		Sta 6619+72 LT to Sta 6620+00 LT	51	LF
260	0201	REMOVE SILT FENCE SUPPORTED		
		Sta 6589+92 RT to Sta 6592+57 RT	320	LF
		Sta 6619+72 LT to Sta 6620+00 LT	51	LF
262	0100	FLOTATION SILT CURTAIN		
		Sta 6618+86 RT to Sta 6620+00 RT	115	LF
262	0101	REMOVE FLOTATION SILT CURTAIN		
		Sta 6618+86 RT to Sta 6620+00 RT	115	LF

*NOTE: See Section 76, Sheets 30 & 31 for Fiber Roll data.

Legend

- Temporary Cover Crop/ Straw Mulch
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- SF — Silt Fence
- Fiber Roll(12" or 20")
- Culvert Protection(12" or 20")
- S — Flotation Silt Curtain

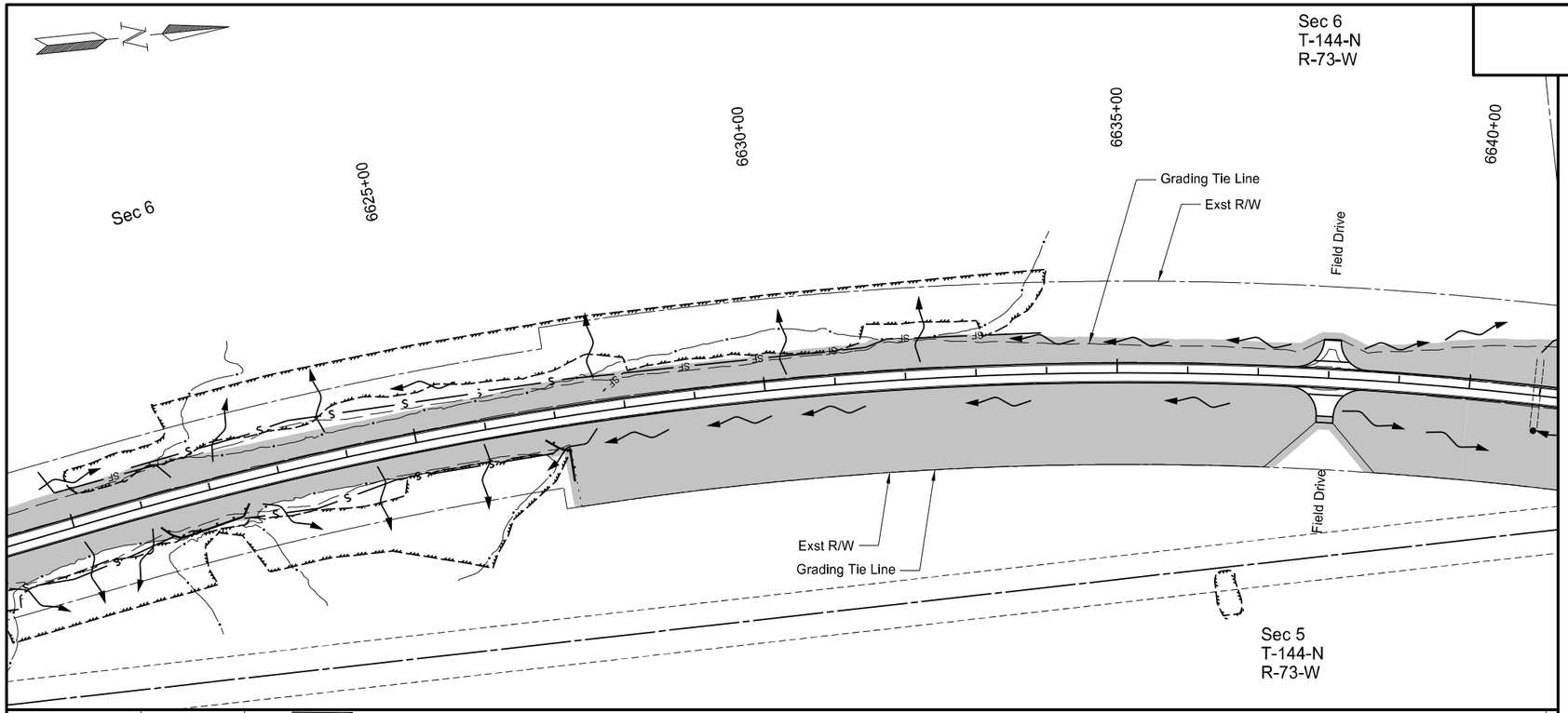
REGISTERED PROFESSIONAL ENGINEER
KORY M. KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

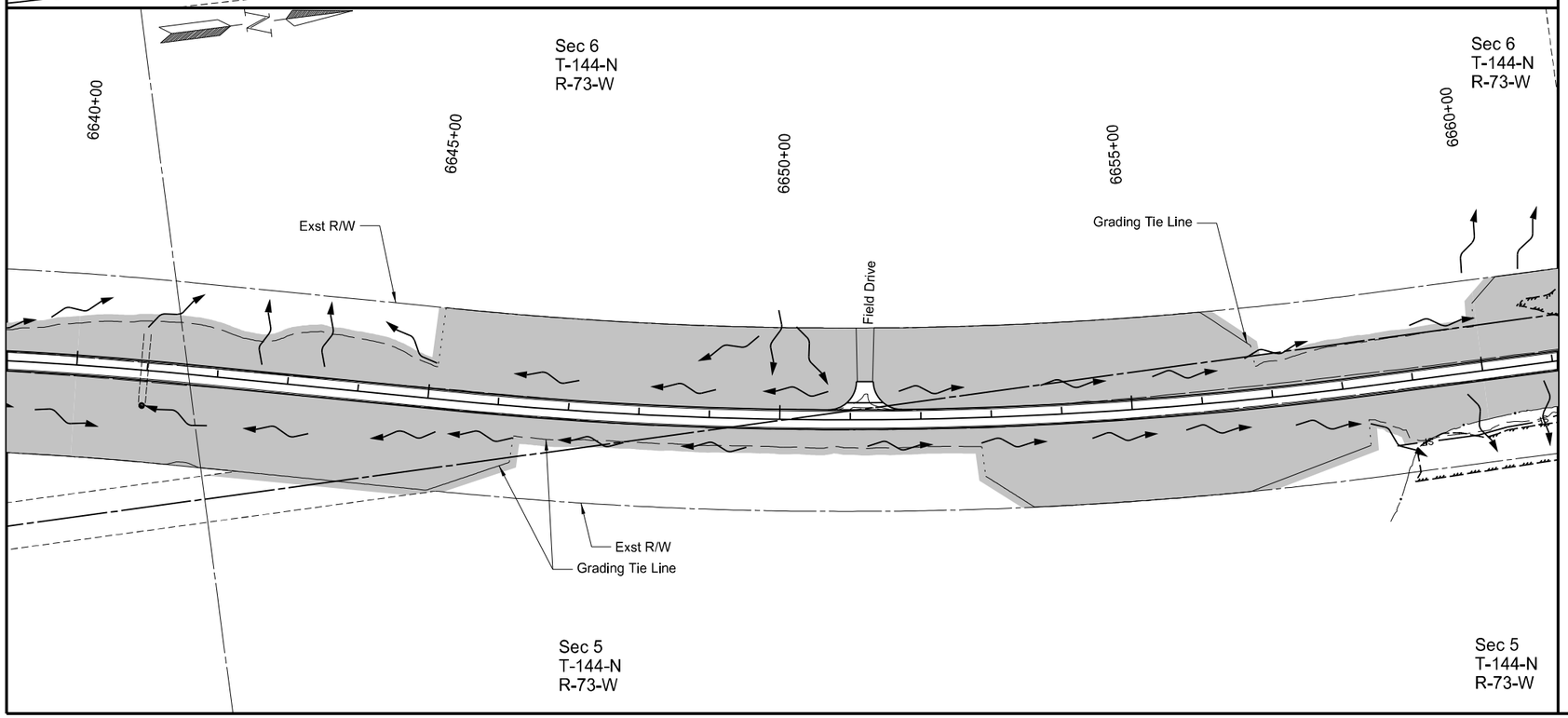
Temporary Erosion Control

ND 3
Tuttle N to W Jct 200

6580+00 to 6620+00
Kidder County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	76	17





SPEC	CODE	BID ITEM	QTY	UNIT
251	2000	TEMPORARY COVER CROP		
		Sta 6620+00 to Sta 6660+00	13.64	ACRE
253	0101	STRAW MULCH		
		Sta 6620+00 to Sta 6660+00	13.64	ACRE
260	0200	SILT FENCE SUPPORTED		
		Sta 6620+00 LT to Sta 6621+51 LT	164	LF
		Sta 6627+73 LT to Sta 6633+94 LT	635	LF
		Sta 6658+66 RT to Sta 6660+00 RT	134	LF
260	0201	REMOVE SILT FENCE SUPPORTED		
		Sta 6620+00 LT to Sta 6621+51 LT	164	LF
		Sta 6627+73 LT to Sta 6633+94 LT	635	LF
		Sta 6658+66 RT to Sta 6660+00 RT	134	LF
262	0100	FLOTATION SILT CURTAIN		
		Sta 6620+00 RT to Sta 6621+35 RT	135	LF
		Sta 6621+00 LT to Sta 6627+92 LT	700	LF
		Sta 6622+37 RT to Sta 6626+90 RT	450	LF
262	0101	REMOVE FLOTATION SILT CURTAIN		
		Sta 6620+00 RT to Sta 6621+35 RT	135	LF
		Sta 6621+00 LT to Sta 6627+92 LT	700	LF
		Sta 6622+37 RT to Sta 6626+90 RT	450	LF

*NOTE: See Section 76, Sheets 30 & 31 for Fiber Roll data.

Legend

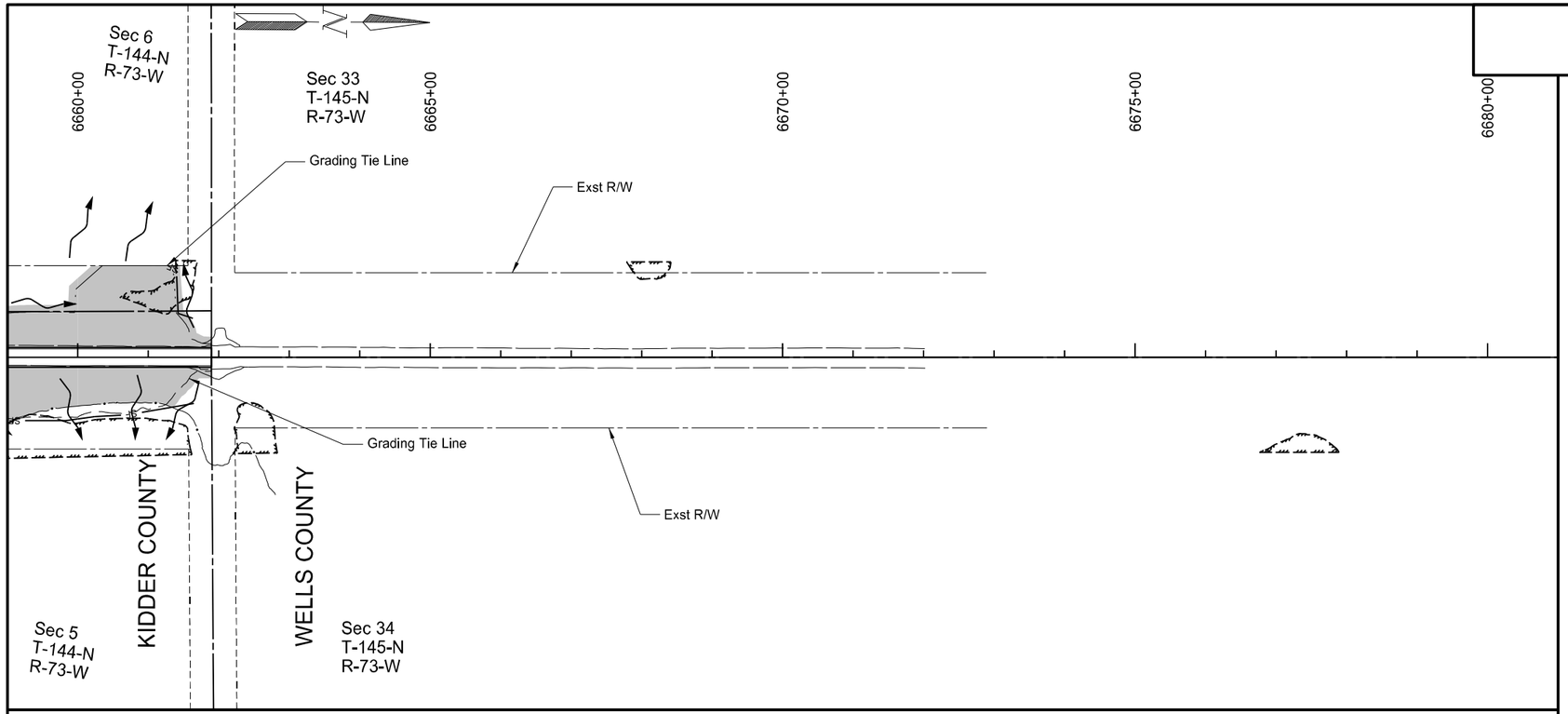
- Temporary Cover Crop/ Straw Mulch
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- SF — Silt Fence
- Fiber Roll(12" or 20")
- Culvert Protection(12" or 20")
- S — Flotation Silt Curtain

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Temporary Erosion Control

ND 3
Tuttle N to W Jct 200

6620+00 to 6660+00
Kidder County



STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	76	18

SPEC	CODE	BID ITEM	QTY	UNIT
251	2000	TEMPORARY COVER CROP		
		Sta 6660+00 to Sta 6661+90	0.61	ACRE
253	0101	STRAW MULCH		
		Sta 6660+00 to Sta 6661+90	0.61	ACRE
260	0200	SILT FENCE SUPPORTED		
		Sta 6660+00 RT to Sta 6661+65 RT	166	LF
		Sta 6661+28 LT to Sta 6661+63 LT	98	LF
260	0201	REMOVE SILT FENCE SUPPORTED		
		Sta 6660+00 RT to Sta 6661+65 RT	166	LF
		Sta 6661+28 LT to Sta 6661+63 LT	98	LF

*NOTE: See Section 76, Sheets 30 & 31 for Fiber Roll data.

Legend

- Temporary Cover Crop/ Straw Mulch
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- SF — Silt Fence
- Fiber Roll(12" or 20")
- Culvert Protection(12" or 20")
- S — Flotation Silt Curtain

REGISTERED PROFESSIONAL ENGINEER
KORY M. KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Temporary Erosion Control

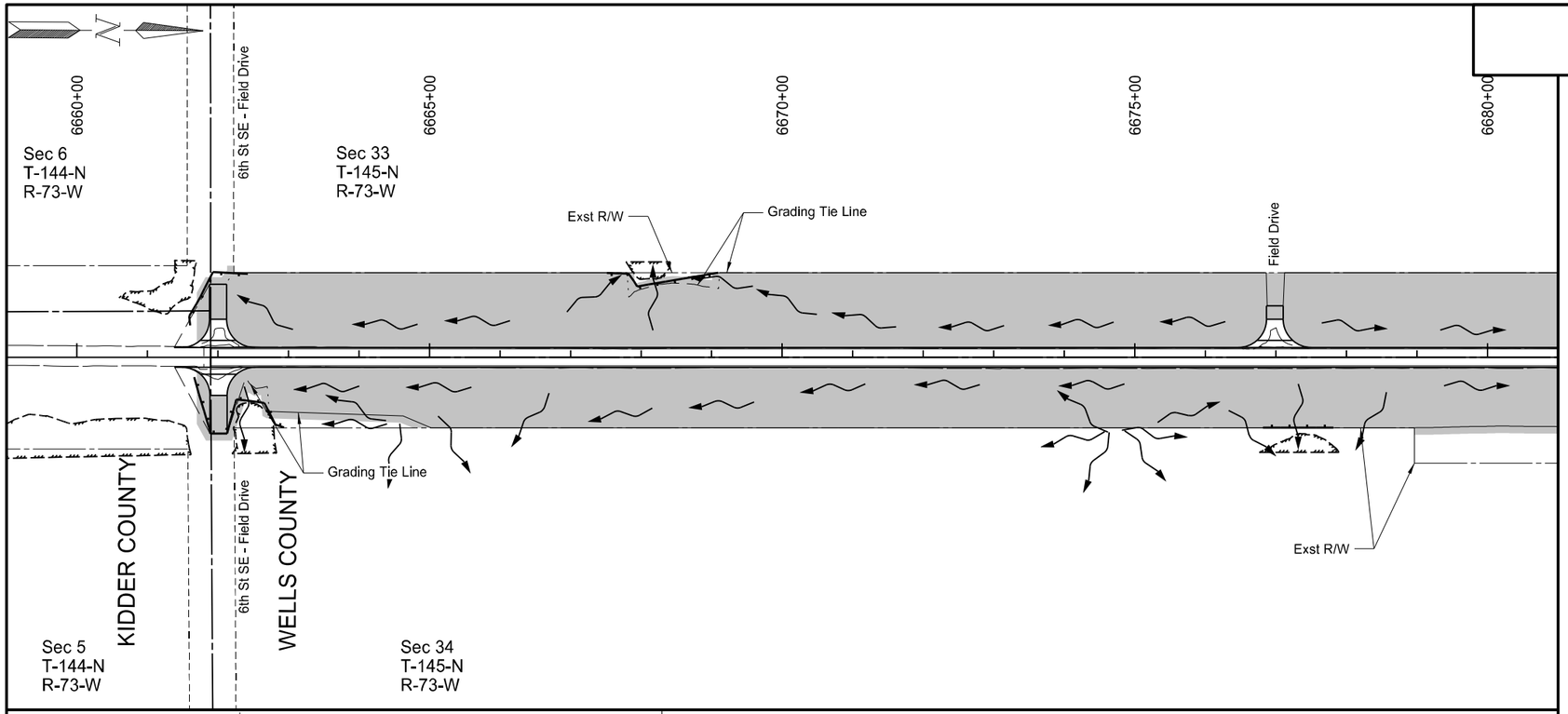
ND 3
Tuttle N to W Jct 200

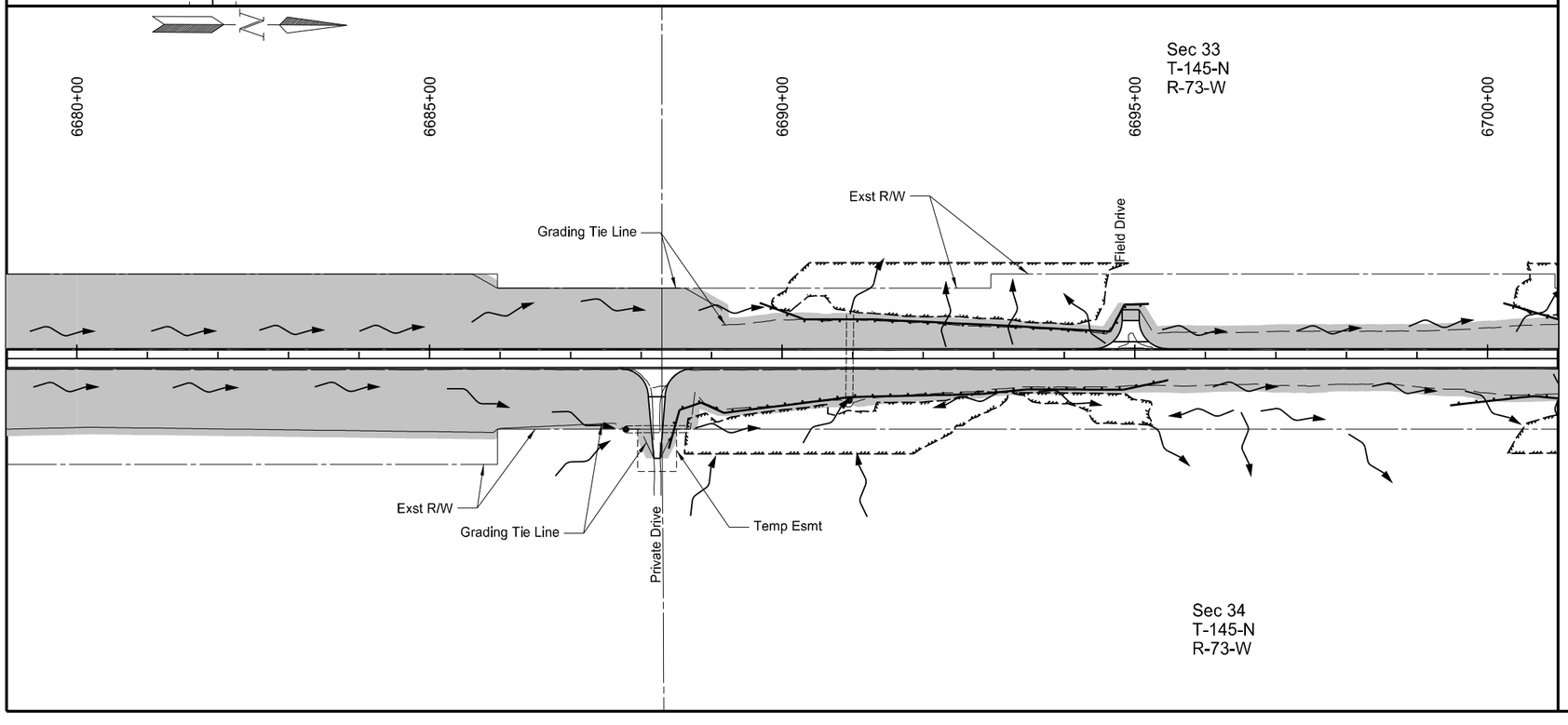
6660+00 to 6661+89.5
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	76	19

SPEC	CODE	BID ITEM		QTY	UNIT
251	2000	TEMPORARY COVER CROP			
		Sta 6661+90	to Sta 6700+00	13.91	ACRE
253	0101	STRAW MULCH			
		Sta 6661+90	to Sta 6700+00	13.91	ACRE

*NOTE: See Section 76, Sheets 30 & 31 for Fiber Roll data.





Legend

- Temporary Cover Crop/ Straw Mulch
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- SF — Silt Fence
- Fiber Roll(12" or 20")
- Culvert Protection(12" or 20")
- S — Flotation Silt Curtain

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL
KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Temporary Erosion Control

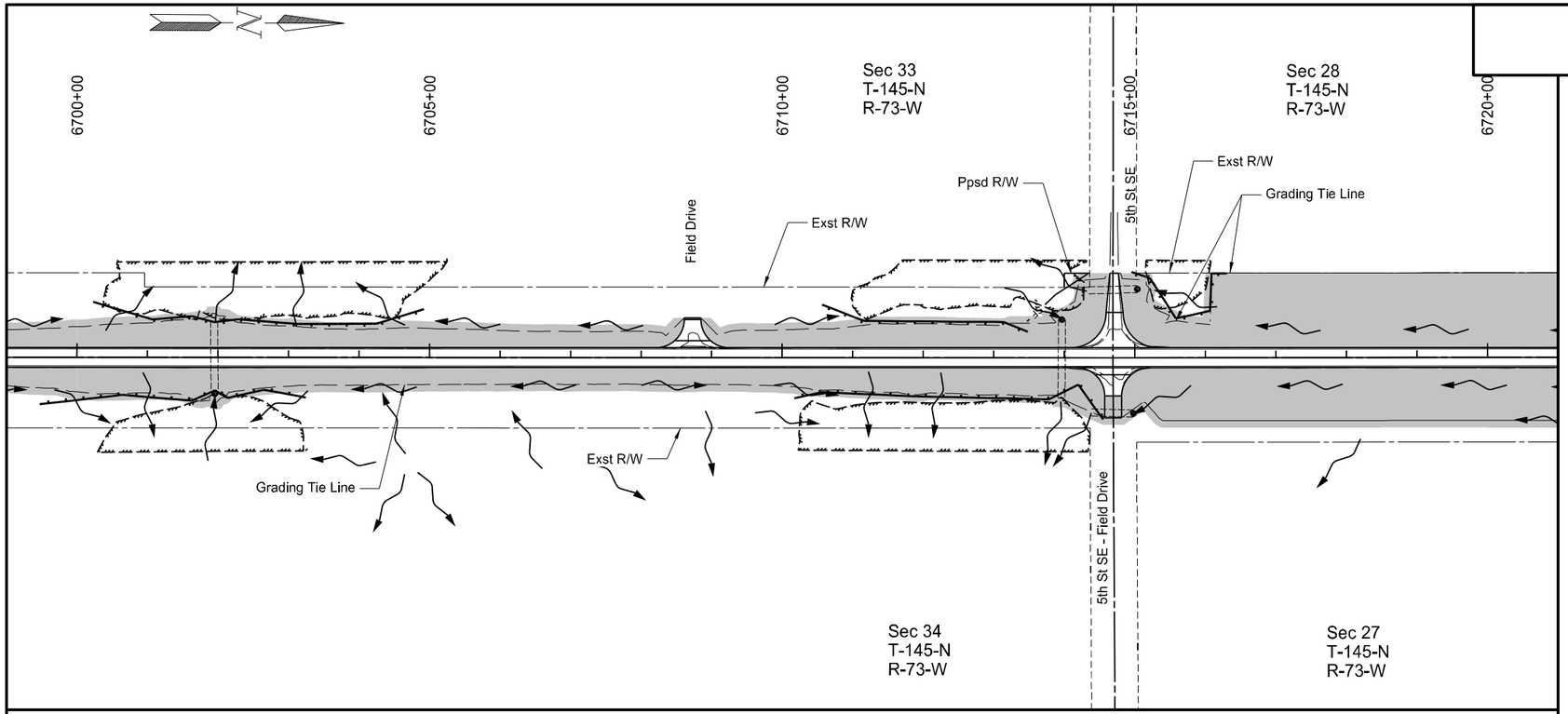
ND 3
Tuttle N to W Jct 200

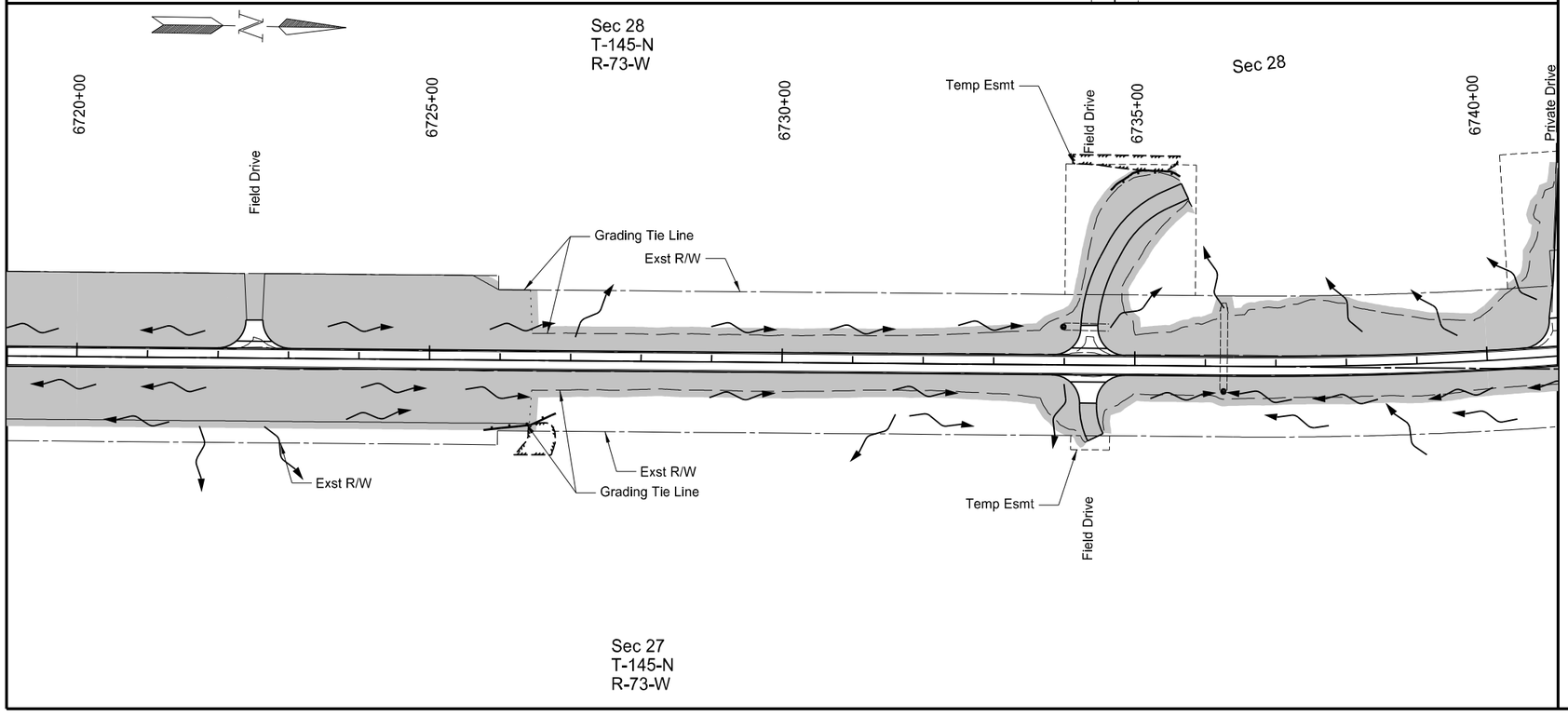
6661+89.5 to 6700+00
Wells County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	76	20

SPEC	CODE	BID ITEM	QTY	UNIT
251	2000	TEMPORARY COVER CROP		
		Sta 6700+00 to Sta 6740+00	10.96	ACRE
253	0101	STRAW MULCH		
		Sta 6700+00 to Sta 6740+00	10.96	ACRE
260	0200	SILT FENCE SUPPORTED		
		Sta 6713+47 LT to Sta 6714+33 LT	110	LF
260	0201	REMOVE SILT FENCE SUPPORTED		
		Sta 6713+47 LT to Sta 6714+33 LT	110	LF

*NOTE: See Section 76, Sheets 30 & 31 for Fiber Roll data.





Legend

- Temporary Cover Crop/ Straw Mulch
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- SF — Silt Fence
- Fiber Roll(12" or 20")
- Culvert Protection(12" or 20")
- S — Flotation Silt Curtain

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL
KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Temporary Erosion Control

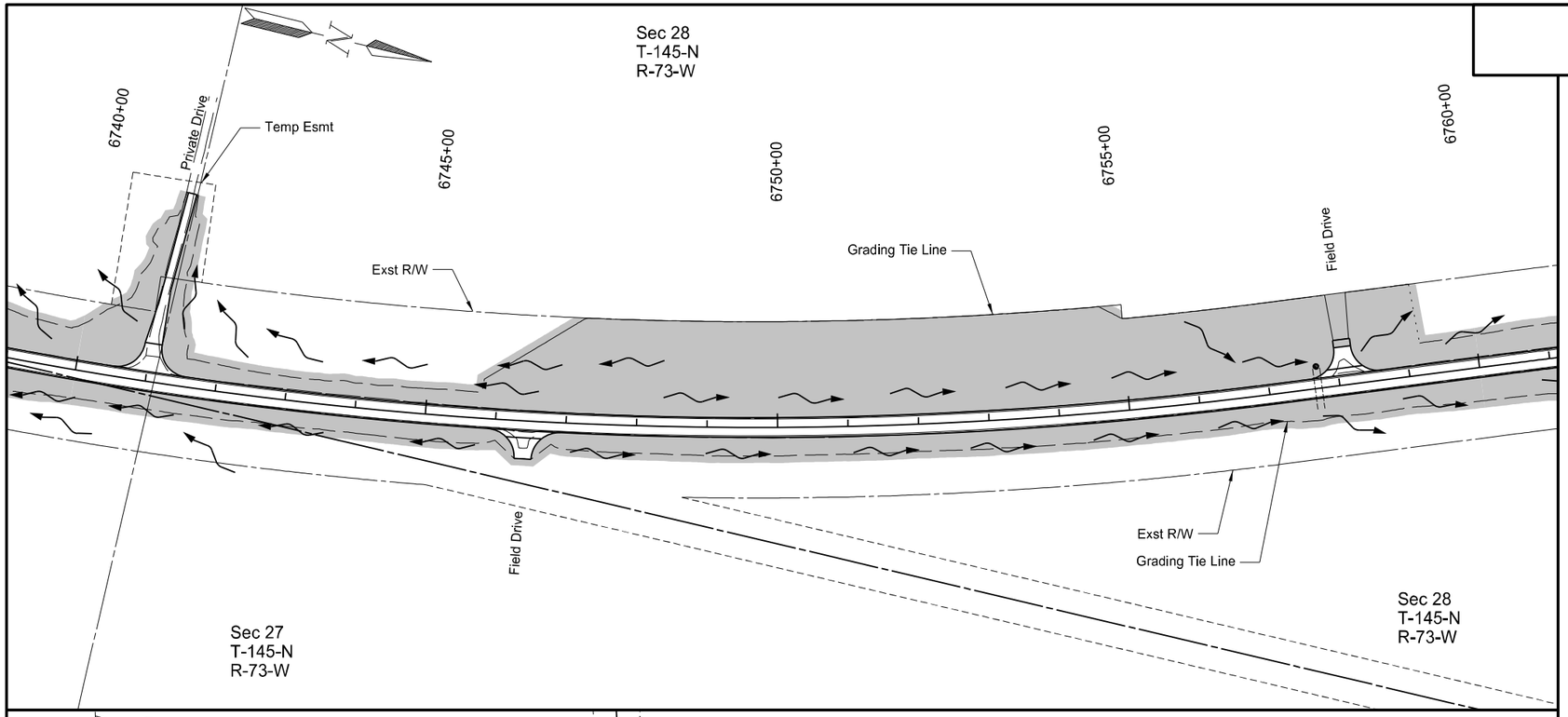
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Tuttle N to W Jct 200

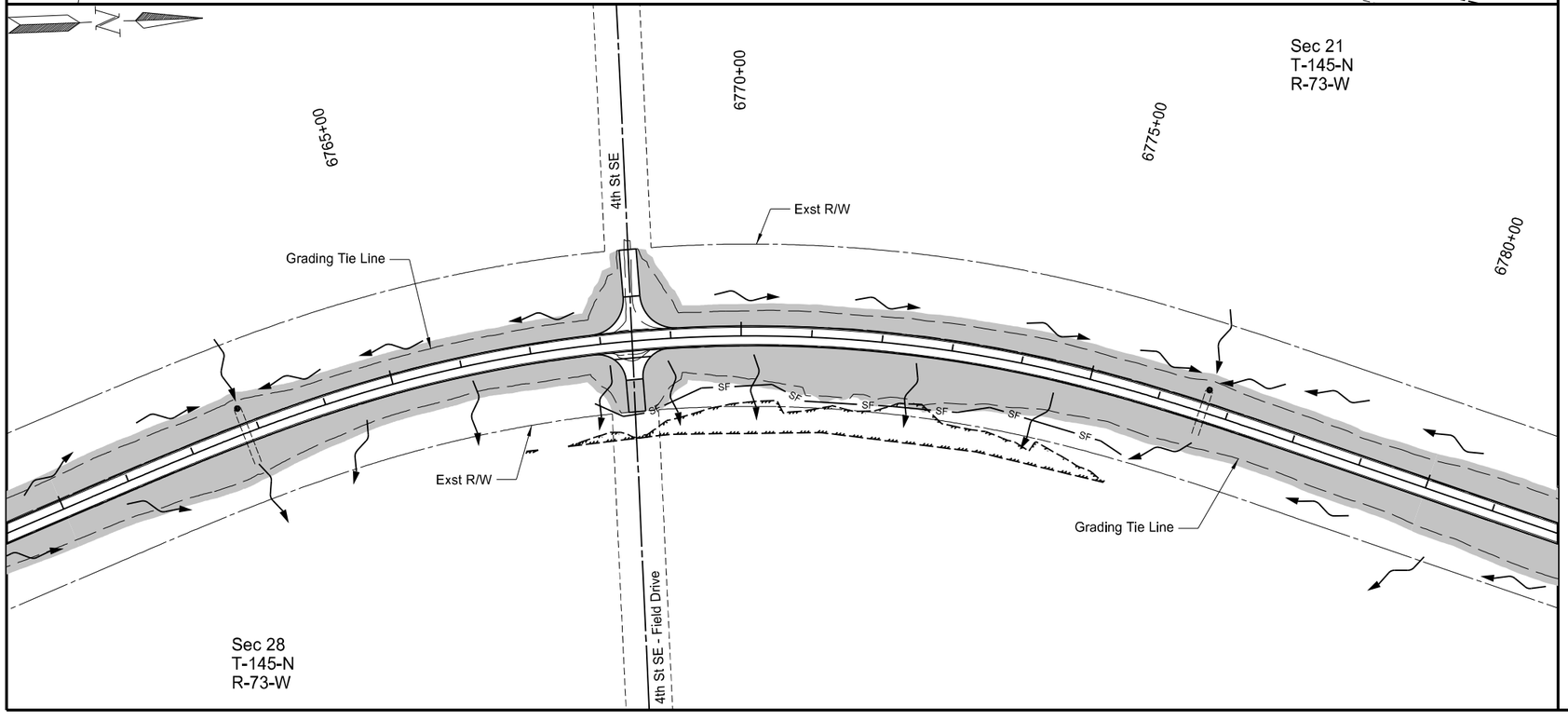
6700+00 to 6740+00
Wells County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	76	21

SPEC	CODE	BID ITEM	QTY	UNIT
251	2000	TEMPORARY COVER CROP		
		Sta 6740+00 to Sta 6780+00	10.39	ACRE
253	0101	STRAW MULCH		
		Sta 6740+00 to Sta 6780+00	10.39	ACRE
260	0200	SILT FENCE SUPPORTED		
		Sta 6767+82 RT to Sta 6775+72 RT	779	LF
260	0201	REMOVE SILT FENCE SUPPORTED		
		Sta 6767+82 RT to Sta 6775+72 RT	779	LF

*NOTE: See Section 76, Sheets 30 & 31 for Fiber Roll data.





Legend

- Temporary Cover Crop/ Straw Mulch
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- SF — Silt Fence
- Fiber Roll(12" or 20")
- Culvert Protection(12" or 20")
- S — Flotation Silt Curtain

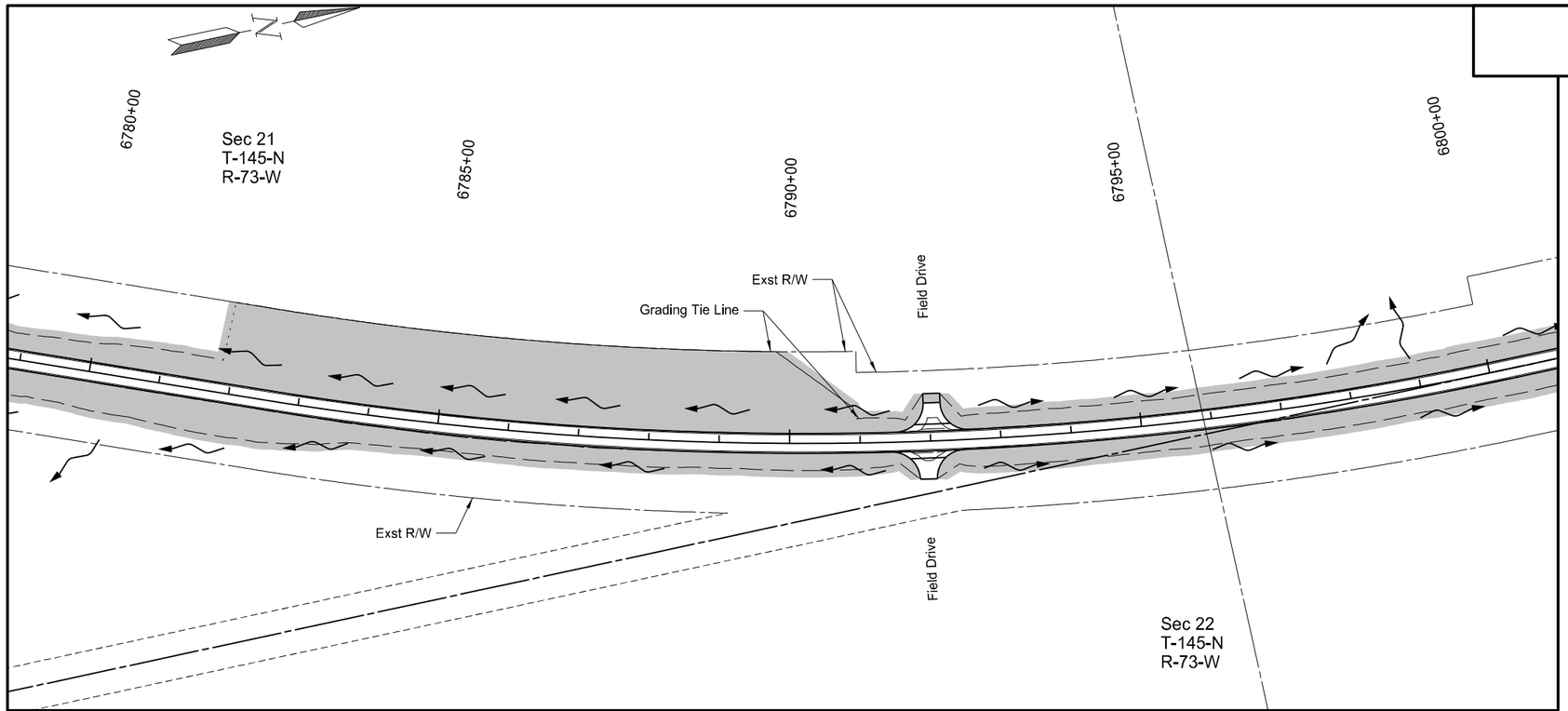
REGISTERED PROFESSIONAL ENGINEER
KORY M. KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

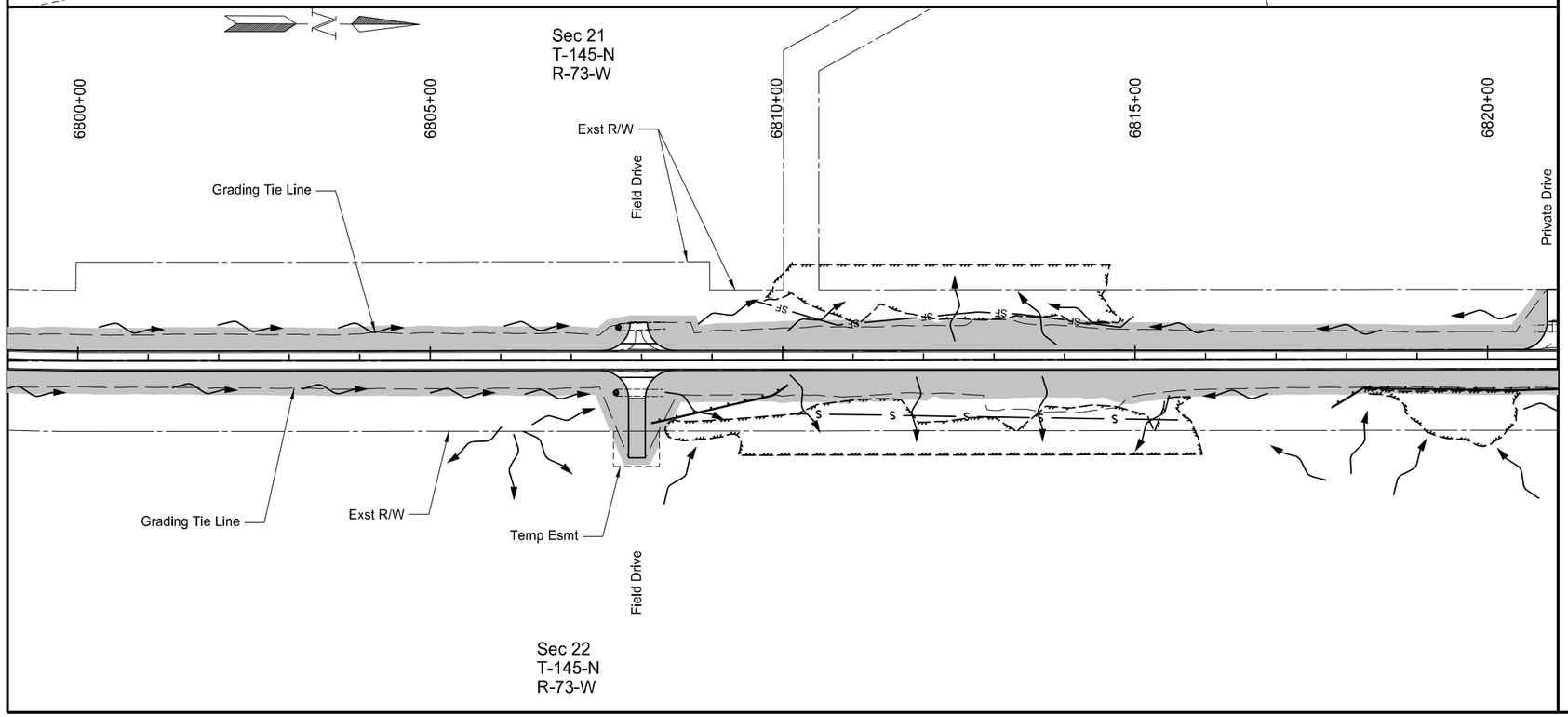
Temporary Erosion Control

ND 3
Tuttle N to W Jct 200

6740+00 to 6780+00
Wells County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	76	22





SPEC	CODE	BID ITEM	QTY	UNIT
251	2000	TEMPORARY COVER CROP		
		Sta 6780+00 to Sta 6820+00	8.47	ACRE
253	0101	STRAW MULCH		
		Sta 6780+00 to Sta 6820+00	8.47	ACRE
260	0200	SILT FENCE SUPPORTED		
		Sta 6809+56 LT to Sta 6814+98 LT	555	LF
260	0201	REMOVE SILT FENCE SUPPORTED		
		Sta 6809+56 LT to Sta 6814+98 LT	555	LF
262	0100	FLOTATION SILT CURTAIN		
		Sta 6810+11 RT to Sta 6815+61 RT	550	LF
262	0101	REMOVE FLOTATION SILT CURTAIN		
		Sta 6810+11 RT to Sta 6815+61 RT	550	LF

*NOTE: See Section 76, Sheets 30 & 31 for Fiber Roll data.

Legend

- Temporary Cover Crop/ Straw Mulch
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- SF — Silt Fence
- Fiber Roll(12" or 20")
- Culvert Protection(12" or 20")
- S — Flotation Silt Curtain

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Temporary Erosion Control

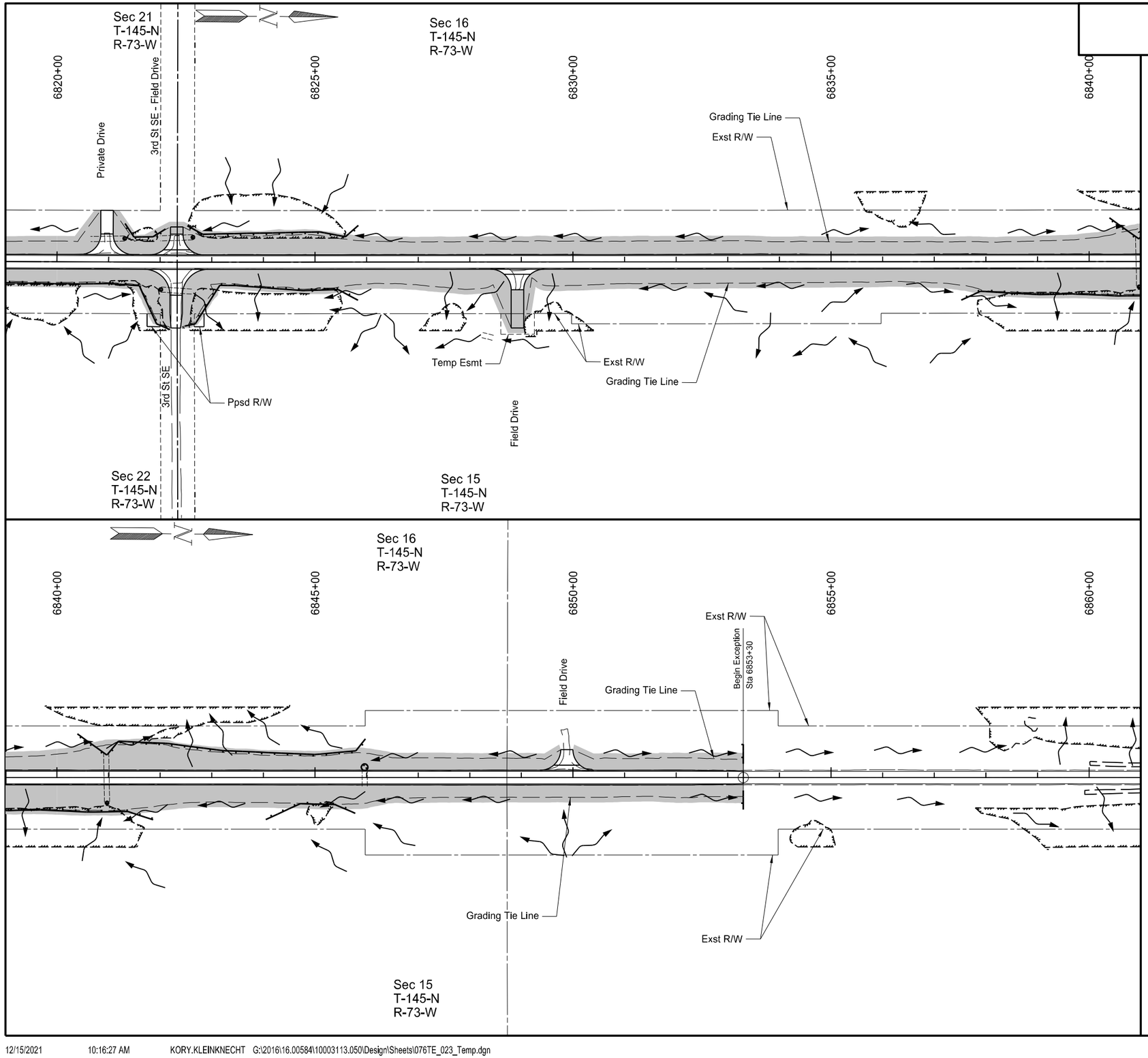
ND 3
Tuttle N to W Jct 200

6780+00 to 6820+00
Wells County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	76	23

SPEC	CODE	BID ITEM		QTY	UNIT
251	2000	TEMPORARY COVER CROP			
		Sta 6820+00	to Sta 6860+00	6.32	ACRE
253	0101	STRAW MULCH			
		Sta 6820+00	to Sta 6860+00	6.32	ACRE

*NOTE: See Section 76, Sheets 30 & 31 for Fiber Roll data.



Legend

- Temporary Cover Crop/ Straw Mulch
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- SF — Silt Fence
- Fiber Roll(12" or 20")
- Culvert Protection(12" or 20")
- S — Flotation Silt Curtain

REGISTERED PROFESSIONAL ENGINEER
KORY M. KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Temporary Erosion Control

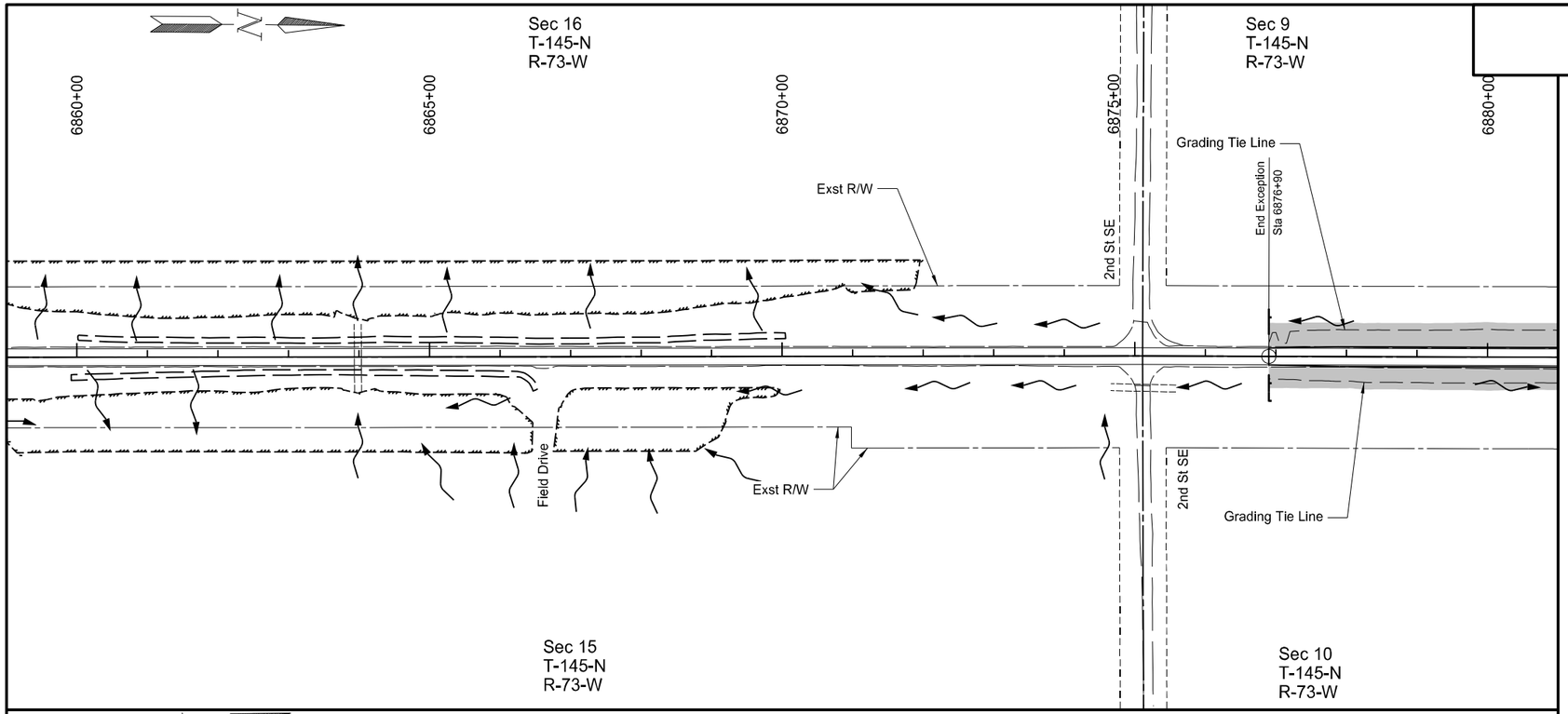
ND 3
Tuttle N to W Jct 200

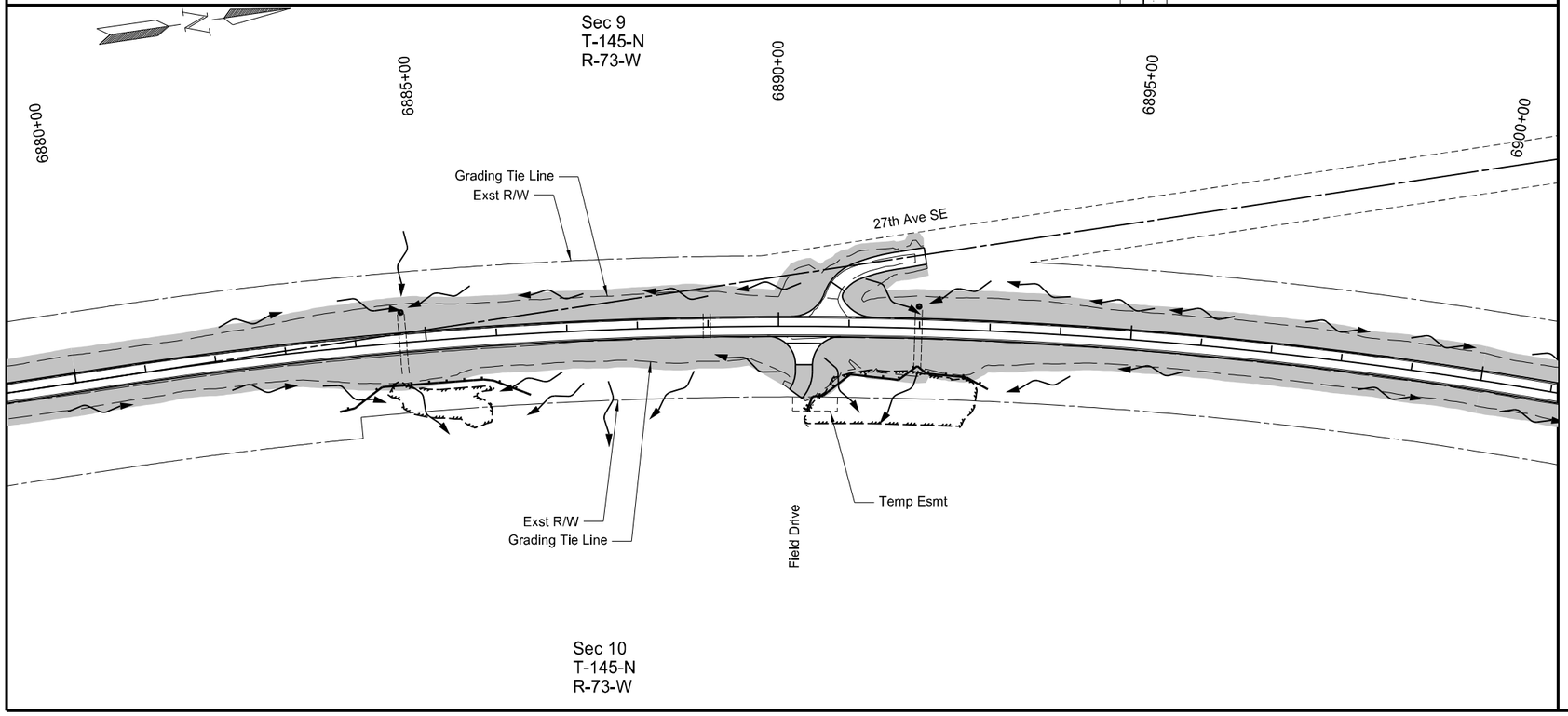
6820+00 to 6860+00
Wells County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	76	24

SPEC	CODE	BID ITEM		QTY	UNIT
251	2000	TEMPORARY COVER CROP			
		Sta 6860+00	to Sta 6900+00	4.34	ACRE
253	0101	STRAW MULCH			
		Sta 6860+00	to Sta 6900+00	4.34	ACRE

*NOTE: See Section 76, Sheets 30 & 31 for Fiber Roll data.





Legend

- Temporary Cover Crop/ Straw Mulch
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- SF — Silt Fence
- Fiber Roll(12" or 20")
- Culvert Protection(12" or 20")
- S — Flotation Silt Curtain

REGISTERED PROFESSIONAL ENGINEER
KORY M. KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Temporary Erosion Control

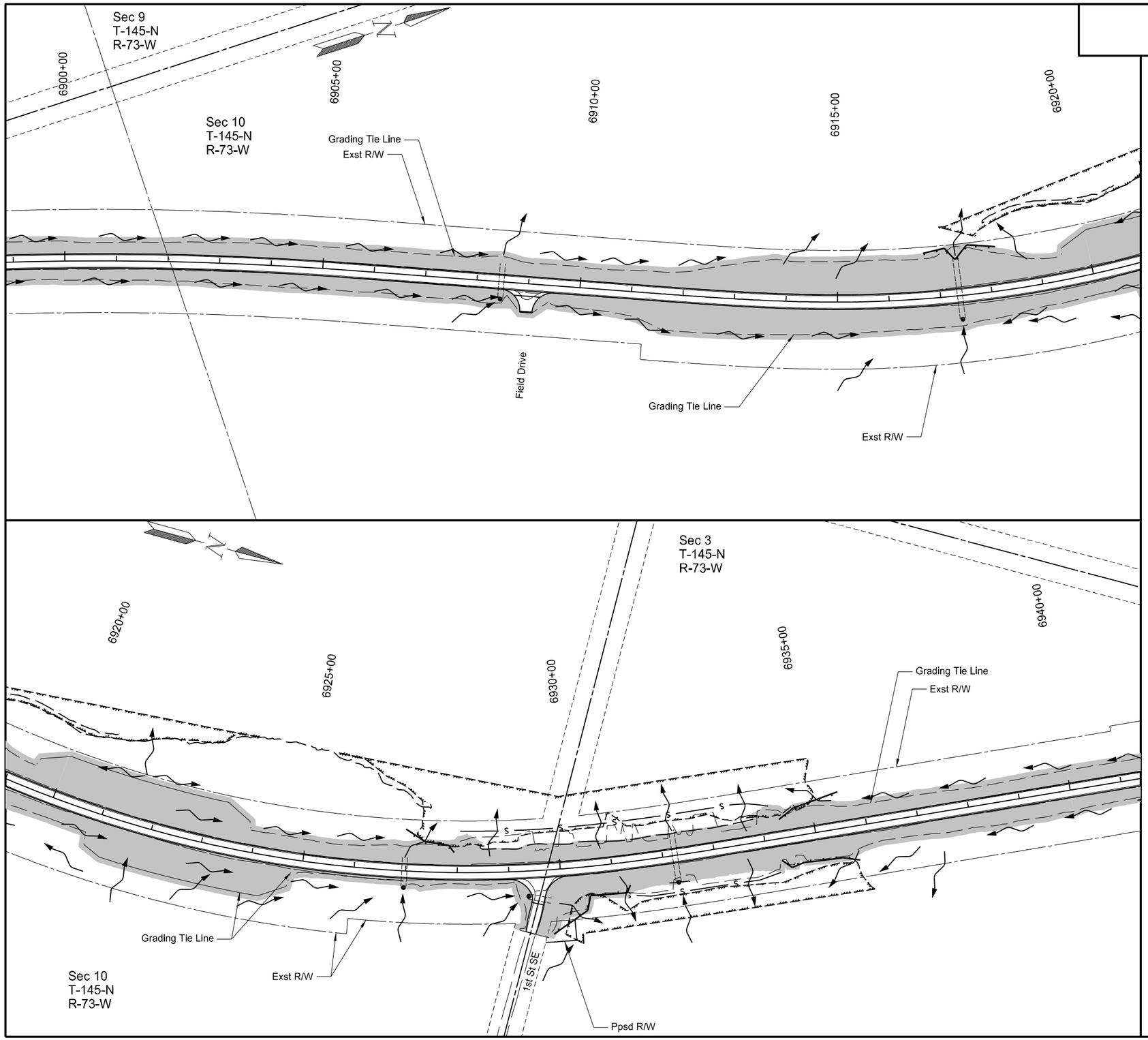
ND 3
Tuttle N to W Jct 200

6860+00 to 6900+00
Wells County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	76	25

SPEC	CODE	BID ITEM	QTY	UNIT
251	2000	TEMPORARY COVER CROP		
		Sta 6900+00 to Sta 6940+00	8.45	ACRE
253	0101	STRAW MULCH		
		Sta 6900+00 to Sta 6940+00	8.45	ACRE
262	0100	FLOTATION SILT CURTAIN		
		Sta 6928+05 LT to Sta 6934+17 LT	600	LF
		Sta 6931+25 RT to Sta 6934+21 RT	300	LF
262	0101	REMOVE FLOTATION SILT CURTAIN		
		Sta 6928+05 LT to Sta 6934+17 LT	600	LF
		Sta 6931+25 RT to Sta 6934+21 RT	300	LF

*NOTE: See Section 76, Sheets 30 & 31 for Fiber Roll data.



Legend

- Temporary Cover Crop/ Straw Mulch
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- SF — Silt Fence
- Fiber Roll(12" or 20")
- Culvert Protection(12" or 20")
- S — Flotation Silt Curtain

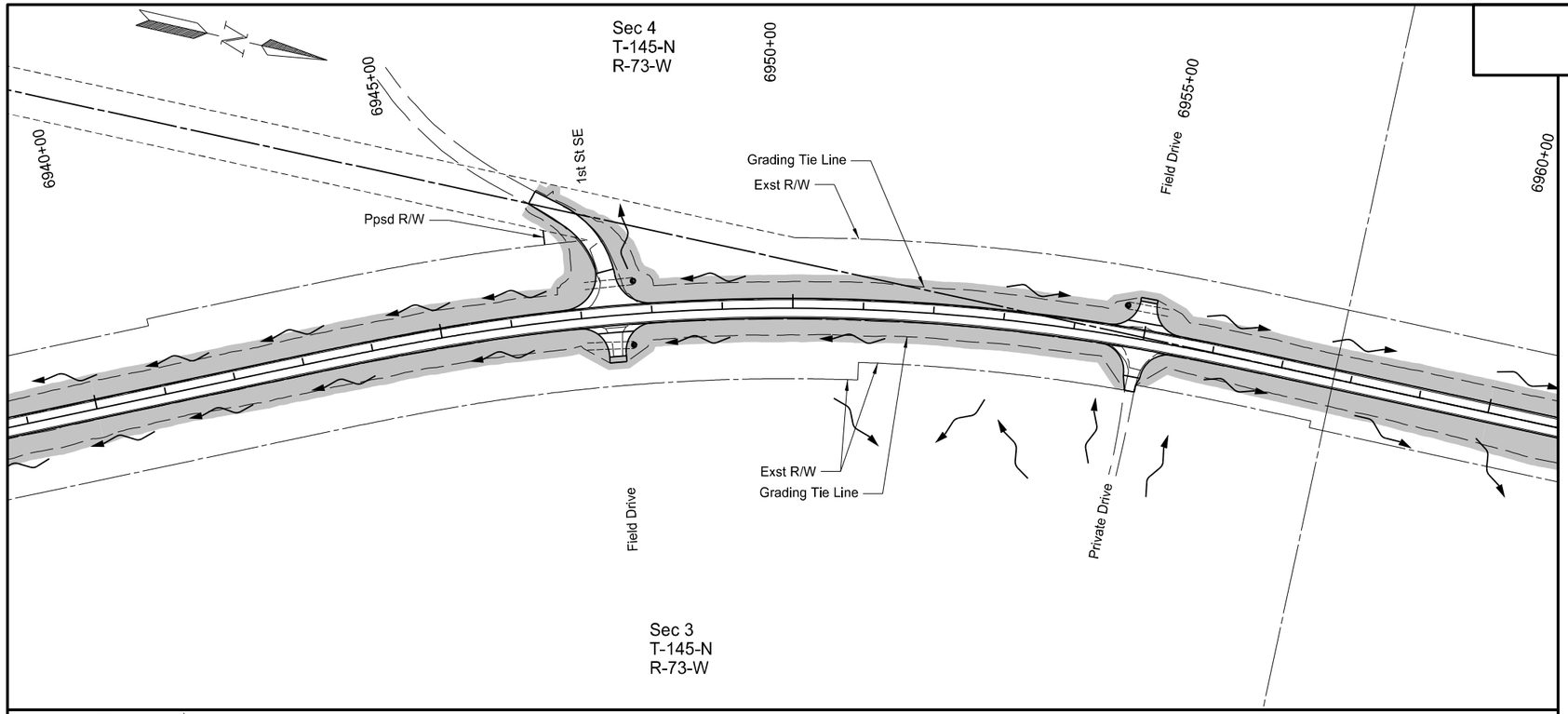
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

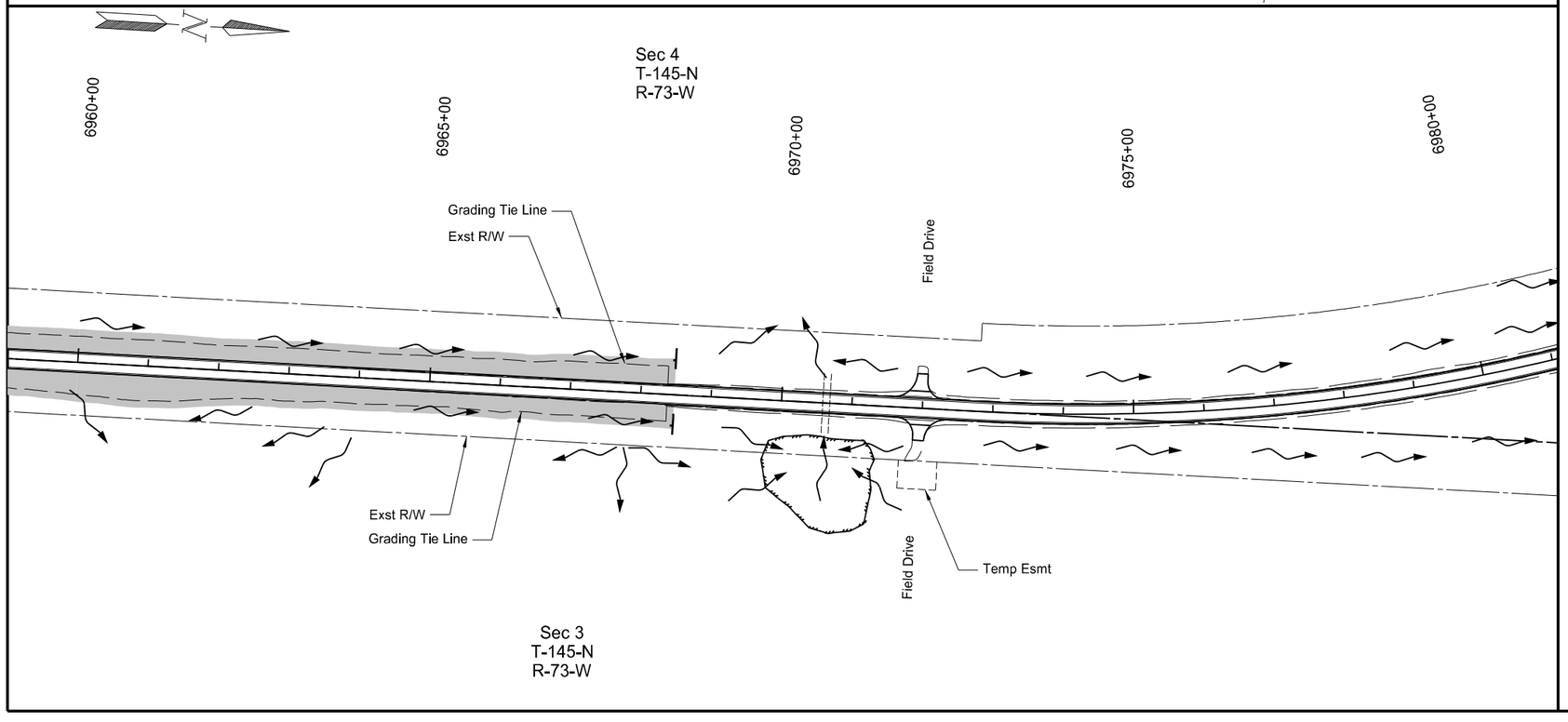
Temporary Erosion Control

ND 3
Tuttle N to W Jct 200

6900+00 to 6940+00
Wells County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	76	26





SPEC	CODE	BID ITEM		QTY	UNIT
251	2000	TEMPORARY COVER CROP			
		Sta 6940+00	to Sta 6980+00	4.63	ACRE
253	0101	STRAW MULCH			
		Sta 6940+00	to Sta 6980+00	4.63	ACRE

*NOTE: See Section 76, Sheets 30 & 31 for Fiber Roll data.

Legend

- Temporary Cover Crop/ Straw Mulch
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- SF — Silt Fence
- Fiber Roll(12" or 20")
- Culvert Protection(12" or 20")
- S — Flotation Silt Curtain

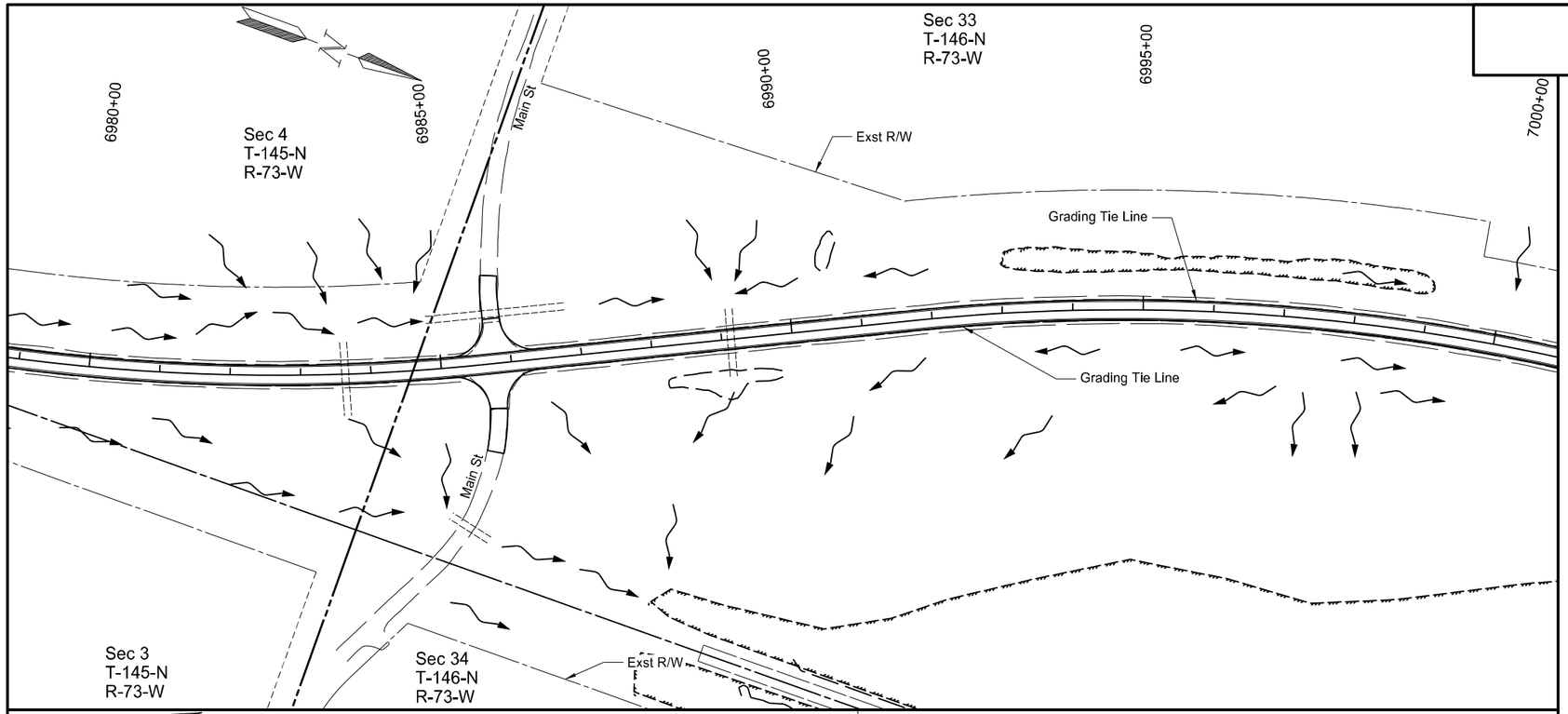
REGISTERED PROFESSIONAL ENGINEER
KORY M. KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

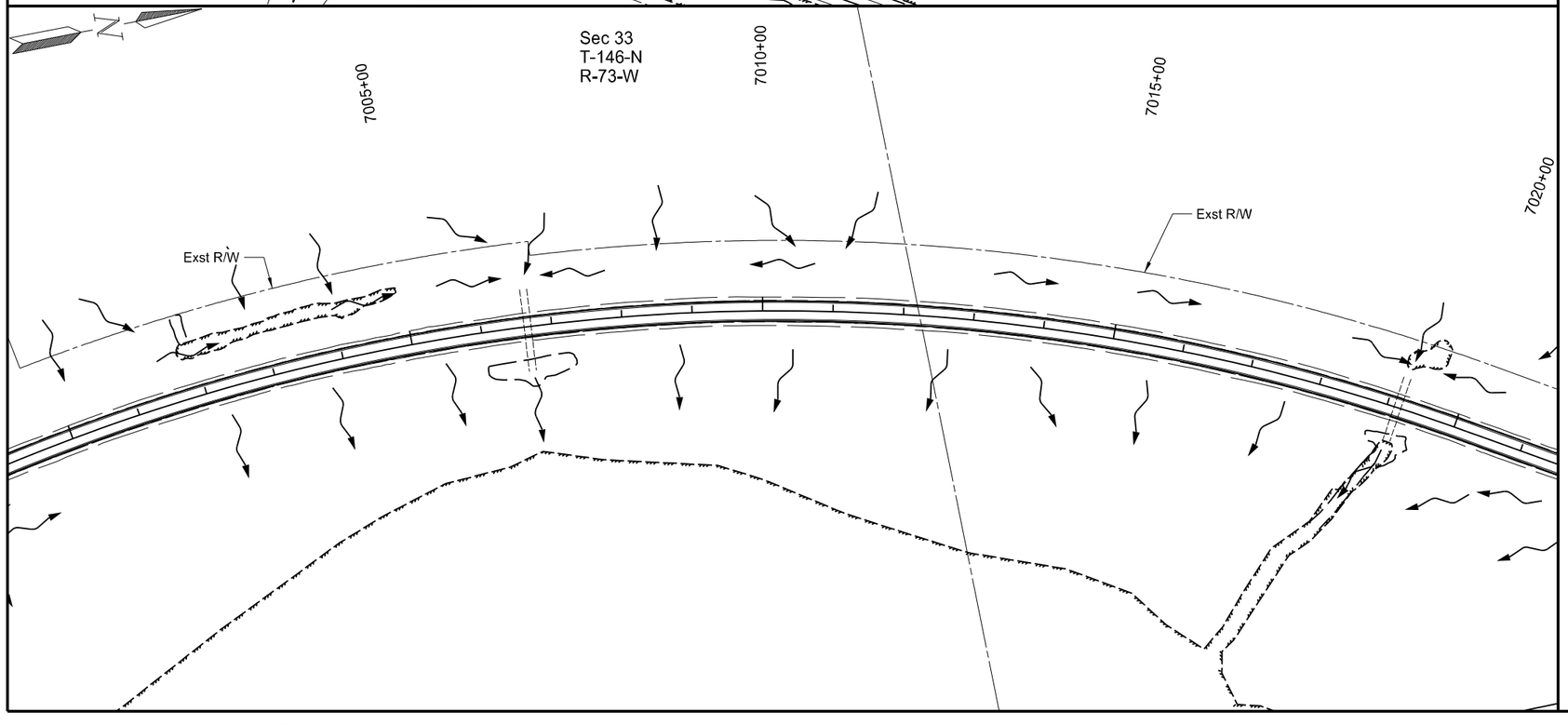
Temporary Erosion Control

ND 3
Tuttle N to W Jct 200

6940+00 to 6980+00
Wells County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	76	27





Legend

- Temporary Cover Crop/ Straw Mulch
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- SF — Silt Fence
- Fiber Roll(12" or 20")
- Culvert Protection(12" or 20")
- S — Flotation Silt Curtain

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Temporary Erosion Control

ND 3
Tuttle N to W Jct 200

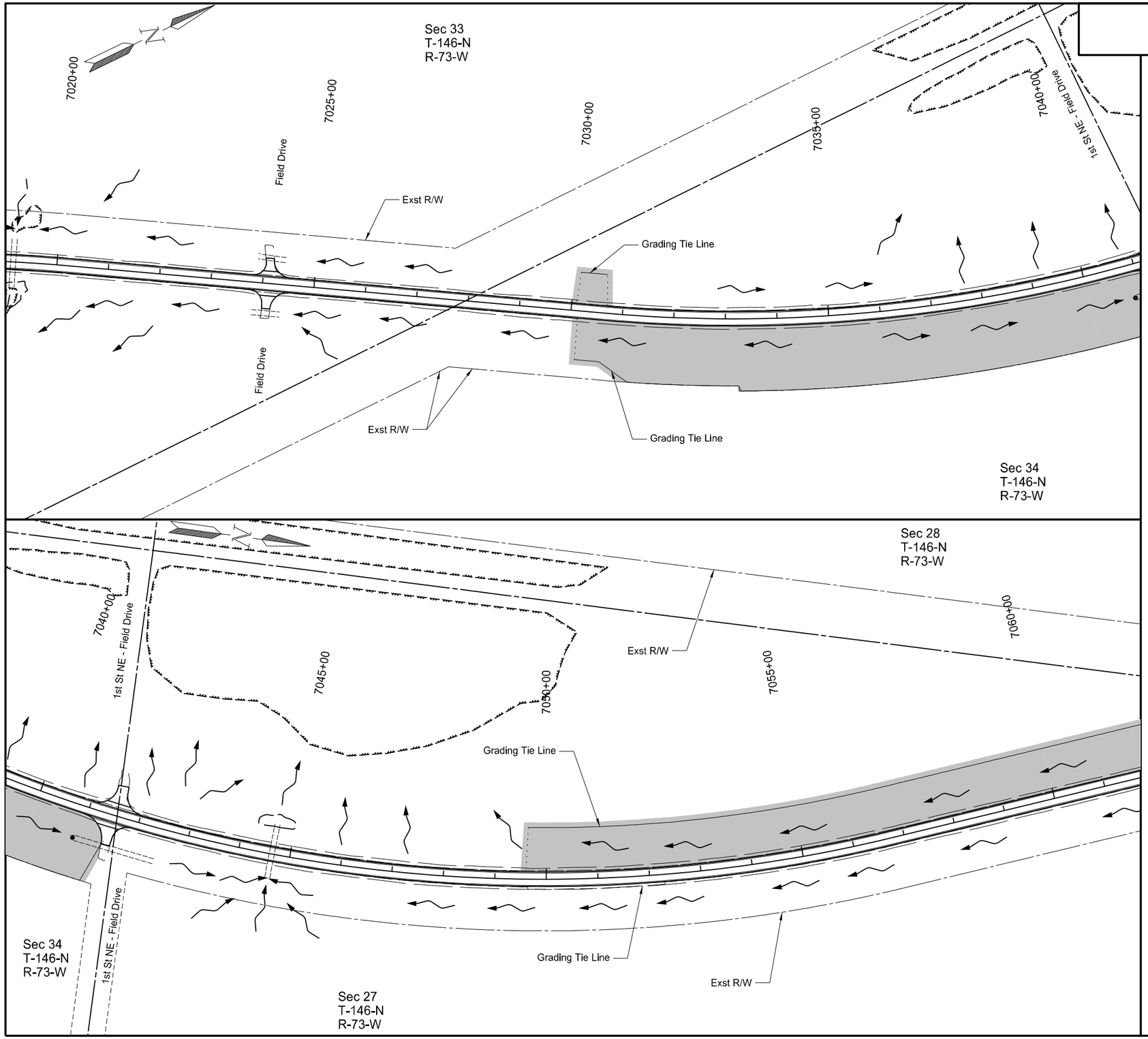
6980+00 to 7020+00
Wells County

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STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	76	28

SPEC	CODE	BID ITEM		QTY	UNIT
251	2000	TEMPORARY COVER CROP			
		Sta 7020+00	to Sta 7060+00	5.63	ACRE
253	0101	STRAW MULCH			
		Sta 7020+00	to Sta 7060+00	5.63	ACRE

*NOTE: See Section 76, Sheets 30 & 31 for Fiber Roll data.



Legend

- Temporary Cover Crop/ Straw Mulch
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- SF — Silt Fence
- Fiber Roll(12" or 20")
- Culvert Protection(12" or 20")
- S — Flotation Silt Curtain

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Temporary Erosion Control

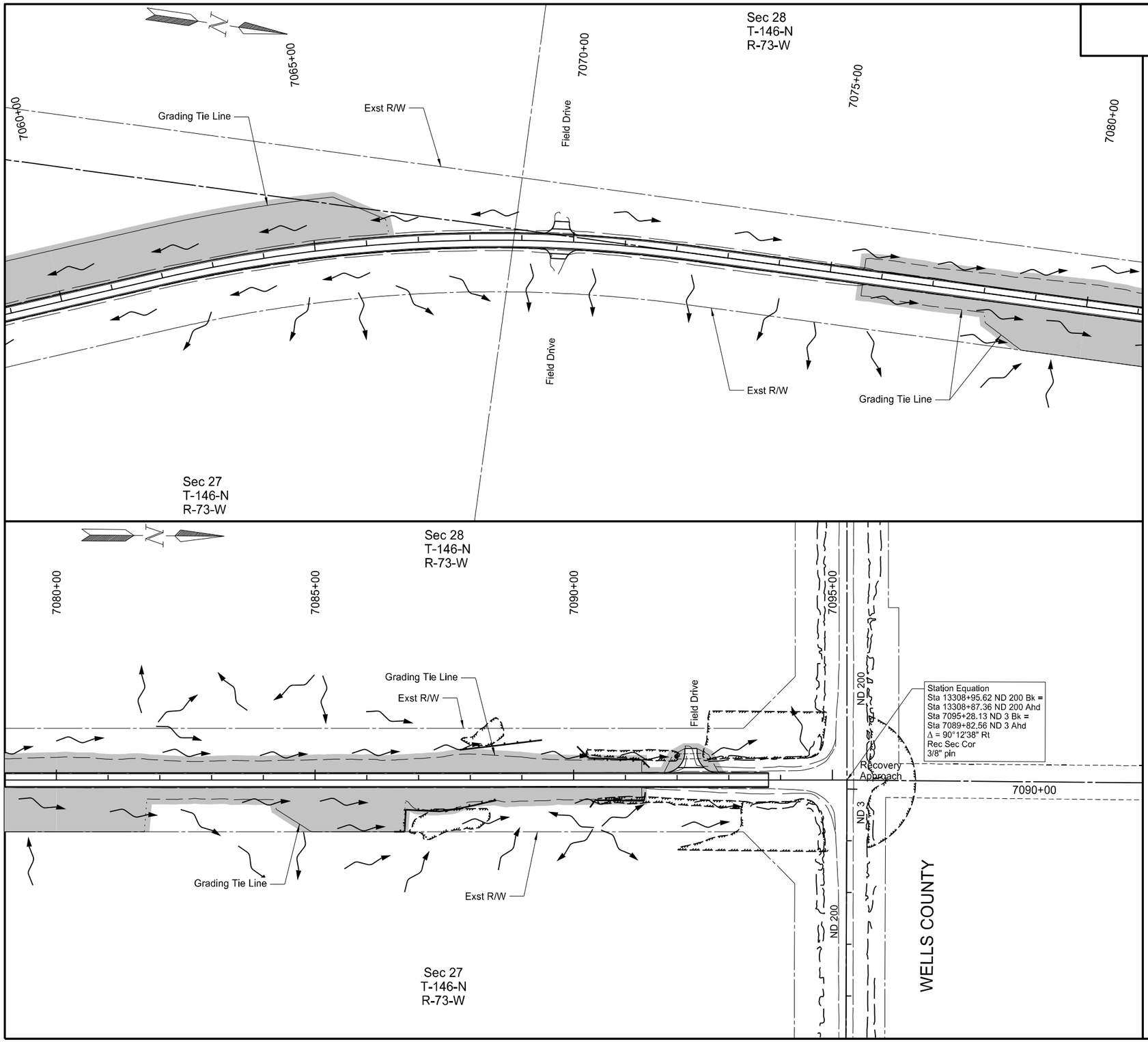
ND 3
Tuttle N to W Jct 200

7020+00 to 7060+00
Wells County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	76	29

SPEC	CODE	BID ITEM		QTY	UNIT
251	2000	TEMPORARY COVER CROP			
		Sta 7060+00	to Sta 7093+76	4.80	ACRE
253	0101	STRAW MULCH			
		Sta 7060+00	to Sta 7093+76	4.80	ACRE

*NOTE: See Section 76, Sheets 30 & 31 for Fiber Roll data.



Legend

- Temporary Cover Crop/ Straw Mulch
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- SF — Silt Fence
- Fiber Roll(12" or 20")
- Culvert Protection(12" or 20")
- S — Flotation Silt Curtain

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Temporary Erosion Control

ND 3
Tuttle N to W Jct 200

7060+00 to 7093+76.57
Wells County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	76	30

SPEC	CODE	BID ITEM		QTY	UNIT
261	0112	FIBER ROLLS 12IN			
		Sta 5980+49	to Sta 6191+51	8519	LF
		Sta 6200+82	to Sta 6472+10	3119	LF
		Sta 6472+98	to Sta 6715+01	6223	LF
261	0113	REMOVE FIBER ROLLS 12IN			
		Sta 5980+49	to Sta 6191+51	8519	LF
		Sta 6200+82	to Sta 6472+10	3119	LF
		Sta 6472+98	to Sta 6715+01	6223	LF

TEMPORARY EROSION CONTROL - CULVERT PROTECTION & RUNOFF PROTECTION

12" Fiber Rolls

Station	to	Station	Offset	Length (LF)
5980+49	to	5983+13	LT	279
5984+80	to	5985+60	RT	80
5985+50	to	5985+56	LT	20
5991+38	to	5991+45	LT	20
5992+52	to	5992+58	RT	20
6001+28	to	6003+72	LT	244
6003+23	to	6003+29	RT	20
6018+27	to	6018+34	LT	20
6023+53	to	6023+59	LT	20
6032+84	to	6032+90	RT	20
6040+62	to	6040+69	RT	20
6045+05	to	6065+32	LT	2061
6045+68	to	6065+55	RT	2038
6053+40	to	6053+46	LT	20
6070+85	to	6070+92	LT	20
6084+78	to	6084+84	LT	20
6084+87	to	6084+93	RT	20
6094+77	to	6095+97	RT	120
6104+07	to	6105+27	RT	120
6104+34	to	6104+41	LT	20
6110+99	to	6111+05	LT	20
6112+74	to	6118+76	RT	623
6113+19	to	6119+75	LT	686
6115+38	to	6115+45	LT	20
6121+10	to	6125+38	LT	452
6122+57	to	6122+63	RT	20
6129+98	to	6132+17	LT	246
6130+58	to	6130+64	RT	20
6137+41	to	6137+47	RT	20
6138+05	to	6138+12	LT	20
6151+84	to	6151+91	LT	20
6158+52	to	6161+73	LT	337
6158+54	to	6159+54	RT	100
6162+97	to	6164+84	RT	193
6170+60	to	6171+80	RT	120
6170+94	to	6171+00	LT	20
6183+29	to	6185+29	RT	200
6184+95	to	6185+02	LT	20
6191+11	to	6192+71	RT	160
6191+45	to	6191+51	LT	20
			TOTAL	8519

12" Fiber Rolls

Station	to	Station	Offset	Length (LF)
6200+82	to	6201+22	RT	40
6201+14	to	6201+20	LT	20
6208+35	to	6209+92	RT	160
6209+94	to	6210+00	LT	20
6221+90	to	6224+25	RT	264
6224+94	to	6225+00	LT	20
6230+32	to	6230+39	RT	20
6246+25	to	6246+32	RT	20
6250+81	to	6253+12	LT	241
6261+28	to	6262+95	LT	170
6263+33	to	6263+38	LT	20
6263+34	to	6263+40	RT	20
6264+84	to	6266+00	LT	120
6265+12	to	6267+12	RT	208
6282+37	to	6286+07	LT	360
6285+64	to	6285+71	RT	20
6293+08	to	6293+14	RT	20
6295+34	to	6295+40	LT	20
6299+11	to	6299+17	LT	20
6308+62	to	6308+68	LT	20
6341+96	to	6342+03	LT	20
6341+96	to	6342+03	RT	20
6359+32	to	6362+11	LT	281
6360+12	to	6360+19	LT	20
6370+52	to	6370+59	RT	20
6387+94	to	6388+00	RT	20
6413+08	to	6413+14	RT	20
6426+53	to	6426+59	LT	20
6435+60	to	6439+38	LT	397
6435+61	to	6435+68	LT	20
6342+75	to	6342+77	LT	34
6342+85	to	6343+05	RT	56
6443+72	to	6443+78	LT	20
6451+76	to	6451+83	RT	20
6452+69	to	6453+58	RT	88
6455+45	to	6455+52	RT	20
6456+80	to	6456+86	RT	20
6459+85	to	6459+91	RT	20
6465+29	to	6466+69	LT	140
6471+57	to	6472+10	LT	60
			TOTAL	3119

12" Fiber Rolls

Station	to	Station	Offset	Length (LF)
6472+98	to	6473+70	RT	80
6475+08	to	6475+97	RT	100
6484+70	to	6484+76	RT	20
6485+77	to	6489+61	LT	394
6489+37	to	6489+44	RT	20
6494+36	to	6496+95	RT	268
6496+95	to	9496+95	LT	40
6512+45	to	6512+45	LT	45
6512+45	to	6512+45	RT	40
6524+67	to	6524+73	LT	20
6526+95	to	6527+01	LT	20
6531+88	to	6531+94	RT	20
6531+93	to	6531+99	LT	20
6536+33	to	6541+43	RT	515
6542+20	to	6542+93	RT	107
6553+72	to	6557+60	LT	391
6556+94	to	6557+00	LT	20
6566+95	to	6567+01	LT	20
6590+09	to	6590+16	LT	20
6614+72	to	6614+78	RT	20
6614+94	to	6615+00	LT	20
6618+42	to	6618+81	RT	55
6621+19	to	6622+50	RT	147
6626+81	to	6627+14	RT	83
6640+93	to	6641+00	RT	20
6661+59	to	6662+42	LT	134
6661+66	to	6662+94	RT	244
6667+51	to	6669+09	LT	169
6676+82	to	6677+82	RT	100
6687+75	to	6687+82	RT	20
6688+39	to	6695+47	RT	758
6689+68	to	6695+20	LT	580
6690+92	to	6690+98	RT	20
6699+47	to	6703+25	RT	387
6700+22	to	6704+92	LT	478
6701+92	to	6701+98	RT	20
6710+17	to	6714+55	RT	469
6710+56	to	6713+48	LT	299
6713+93	to	6714+00	LT	20
6714+95	to	6715+01	RT	20
			TOTAL	6223

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27748
DATE 12/15/2021
NORTH DAKOTA

Temporary Erosion Control

ND 3
Tuttle N to W Jct 200

12" Fiber Rolls

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	76	31

TEMPORARY EROSION CONTROL - CULVERT PROTECTION & RUNOFF PROTECTION

12" Fiber Rolls

Station	to	Station	Offset	Length (LF)
6714+95	to	6716+31	LT	220
6715+00	to	6715+07	LT	20
6725+77	to	6726+80	RT	107
6733+95	to	6734+02	LT	20
6734+64	to	6735+62	LT	109
6736+23	to	6736+29	RT	20
6757+67	to	6757+73	LT	20
6762+78	to	6762+84	LT	20
6776+63	to	6776+69	LT	20
6807+60	to	6807+66	RT	20
6807+64	to	6807+70	LT	20
6808+13	to	6810+08	RT	203
6817+79	to	6822+20	RT	499
6821+28	to	6821+34	LT	20
6821+32	to	6822+10	LT	97
6821+98	to	6822+04	RT	20
6822+48	to	6825+83	RT	383
6822+52	to	6825+84	LT	345
6822+60	to	6822+66	LT	20
6837+52	to	6841+86	RT	440
6840+39	to	6845+98	LT	596
6840+94	to	6841+00	RT	20
6844+04	to	6845+78	RT	184
6853+30	to	6853+30	LT	38
6853+30	to	6853+30	RT	37
6876+90	to	6876+90	LT	37
6876+90	to	6876+90	RT	38
6883+68	to	6886+44	RT	286
6884+64	to	6884+70	LT	20
6890+35	to	6893+01	RT	302
6891+95	to	6892+01	LT	20
6908+44	to	6908+50	RT	20
6916+73	to	6918+18	LT	164
6917+35	to	6917+41	RT	20
6926+94	to	6927+00	RT	20
6926+97	to	6927+94	LT	108
6929+33	to	6929+39	RT	20
6929+80	to	6931+31	RT	196
6932+21	to	6932+27	RT	20
6934+27	to	6935+77	RT	159
			TOTAL	4928

12" Fiber Rolls

Station	to	Station	Offset	Length (LF)
6934+34	to	6935+55	LT	127
6947+68	to	6947+74	RT	20
6947+74	to	6947+80	LT	20
6954+68	to	6954+74	LT	20
6968+48	to	6968+48	LT	30
6968+48	to	6968+48	RT	30
7040+84	to	7040+90	RT	20
7086+53	to	7088+50	RT	240
7087+80	to	7089+39	LT	160
7090+06	to	7091+46	LT	156
7090+31	to	7091+38	RT	128
7091+96	to	7092+02	LT	20
			TOTAL	971

20" Fiber Rolls

Station	to	Station	Offset	Length (LF)
6537+41	to	6537+54	LT	40
6845+90	to	6846+02	LT	40
			TOTAL	80

SPEC	CODE	BID ITEM		QTY	UNIT
261	0112	FIBER ROLLS 12IN			
		Sta 6714+95	to Sta 6935+77	4929	LF
		Sta 6934+34	to Sta 7092+02	971	LF
261	0113	REMOVE FIBER ROLLS 12IN			
		Sta 6714+95	to Sta 6935+77	4929	LF
		Sta 6934+34	to Sta 7092+02	971	LF
261	0120	FIBER ROLLS 20IN			
		Sta 6537+41	to Sta 6846+02	80	LF
261	0121	REMOVE FIBER ROLLS 20IN			
		Sta 6537+41	to Sta 6846+02	80	LF

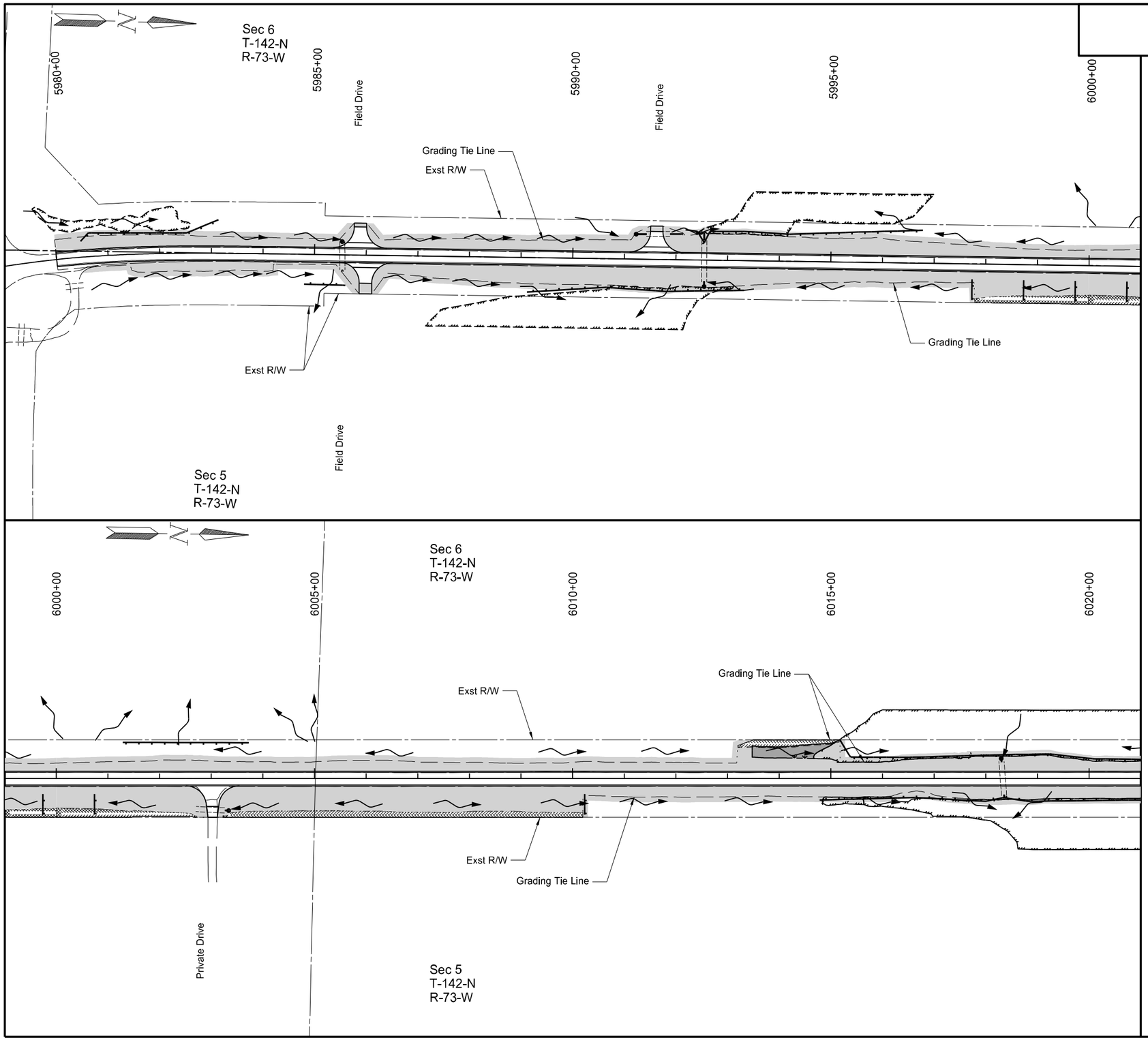
REGISTERED PROFESSIONAL ENGINEER
KORY M. KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Temporary Erosion Control

ND 3
Tuttle N to W Jct 200

12" & 20" Fiber Rolls

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	77	1



SPEC	CODE	BID ITEM		QTY	UNIT
251	0200	SEEDING CLASS II			
		Sta 5980+00	to Sta 6020+00	6.85	ACRE
251	1000	WETLAND SEED			
		Sta 5980+00	to Sta 6020+00	0.07	ACRE
253	0101	STRAW MULCH			
		Sta 5980+00	to Sta 6020+00	6.55	ACRE
255	0101	ECB TYPE 1			
		Sta 5980+00	to Sta 6020+00	1813	SY

*NOTE: See Section 77, Sheets 30-33 for Fiber Roll data.

Legend

- Seeding Class II Straw Mulch
- Wetland Seeding Straw Mulch
- Erosion Control Blanket
- Rolled Concrete Erosion Control Blanket
- Remove and Replace Riprap
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- Fiber Roll(12" or 20")
- Culvert Protection(12" or 20")

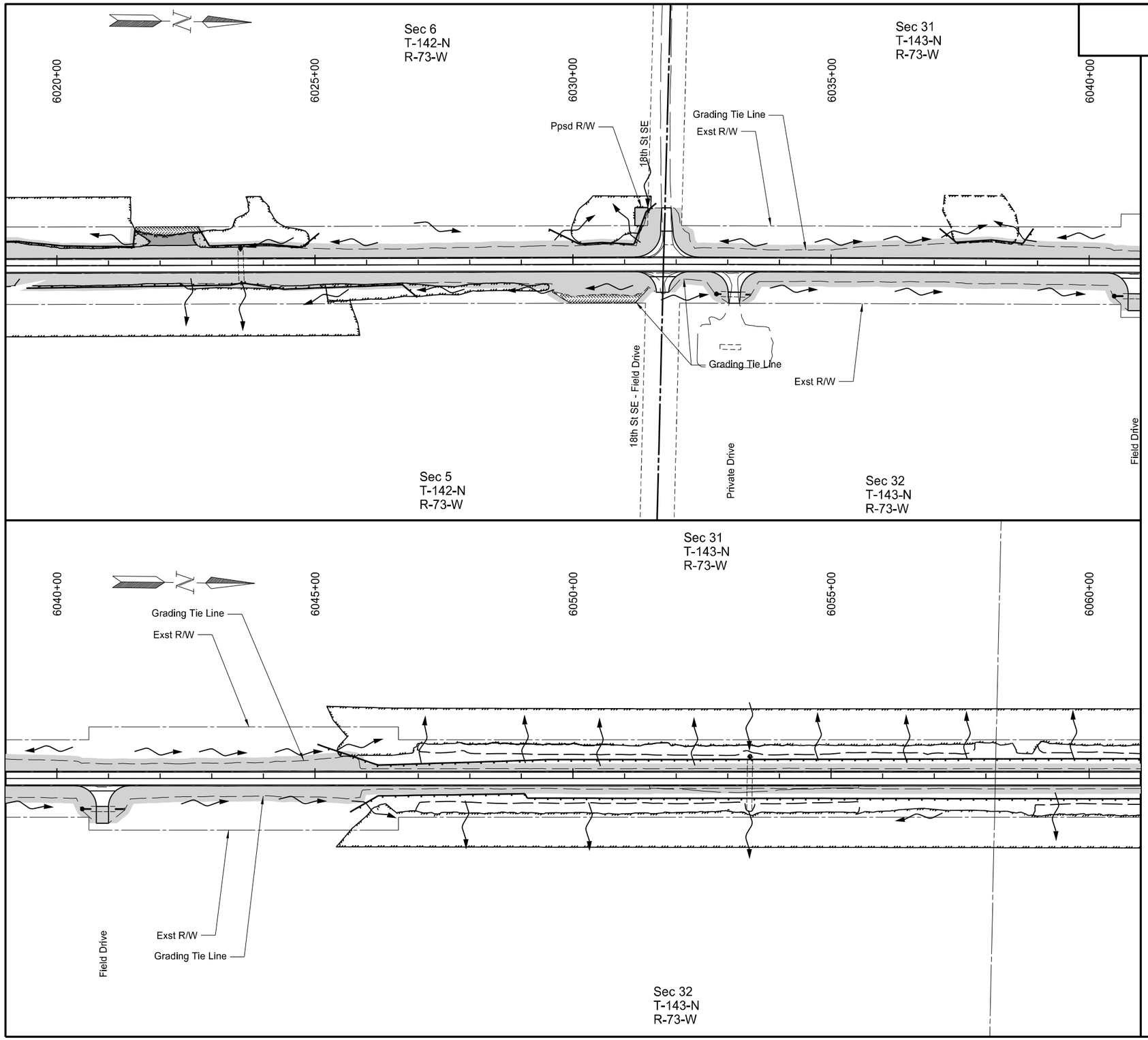
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Permanent Erosion Control

ND 3
Tuttle N to W Jct 200

5980+00 to 6020+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	77	2



SPEC	CODE	BID ITEM		QTY	UNIT
251	0200	SEEDING CLASS II			
		Sta 6020+00	to Sta 6060+00	4.97	ACRE
251	1000	WETLAND SEED			
		Sta 6020+00	to Sta 6060+00	0.05	ACRE
253	0101	STRAW MULCH			
		Sta 6020+00	to Sta 6060+00	4.92	ACRE
255	0101	ECB TYPE 1			
		Sta 6020+00	to Sta 6060+00	479	SY

*NOTE: See Section 77, Sheets 30-33 for Fiber Roll data.

Legend

- Seeding Class II Straw Mulch
- Wetland Seeding Straw Mulch
- Erosion Control Blanket
- Rolled Concrete Erosion Control Blanket
- Remove and Replace Riprap
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- Fiber Roll(12" or 20")
- Culvert Protection(12" or 20")

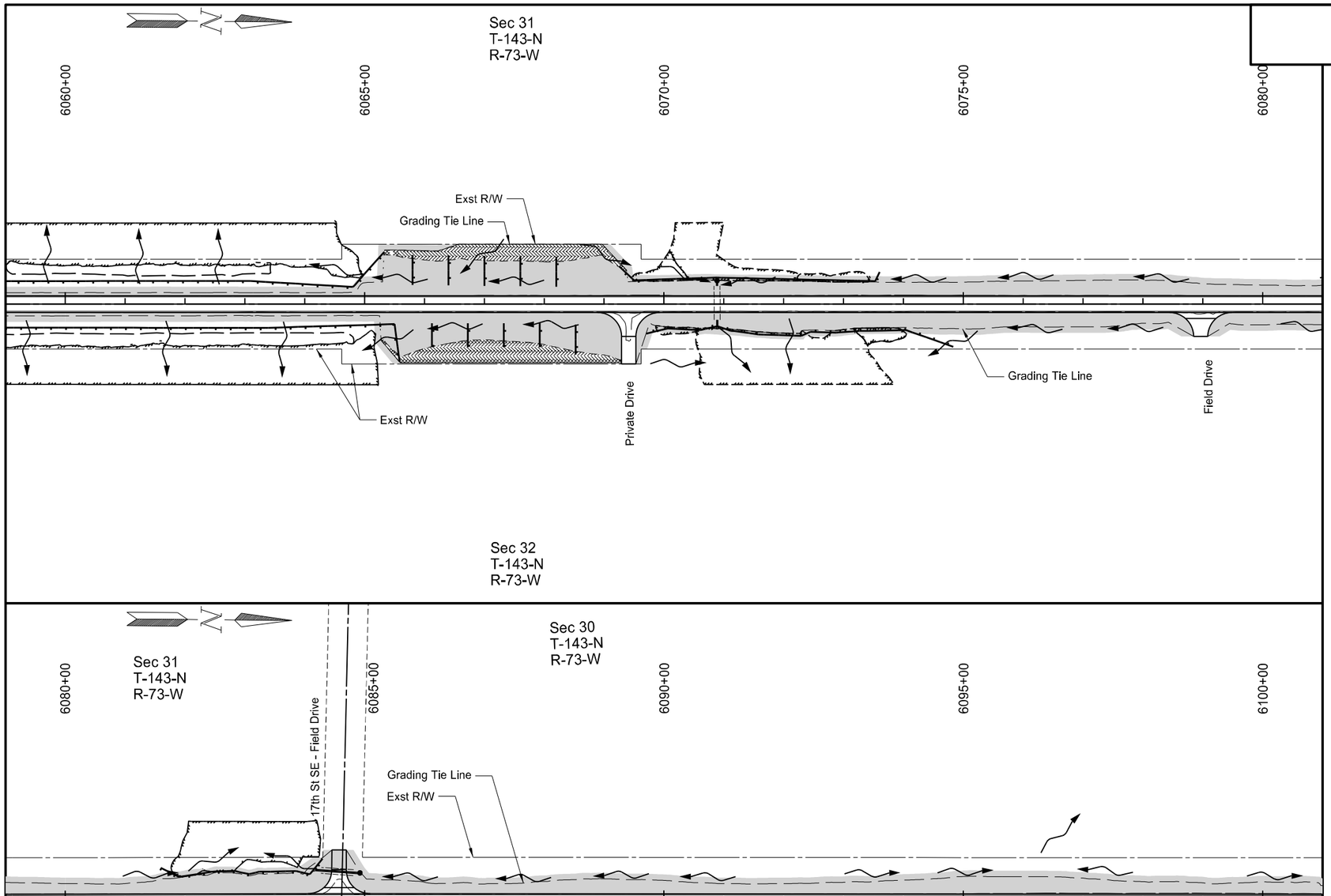
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Permanent Erosion Control

ND 3
Tuttle N to W Jct 200

6020+00 to 6060+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	77	3



SPEC	CODE	BID ITEM		QTY	UNIT
251	0200	SEEDING CLASS II			
		Sta 6060+00	to Sta 6100+00	6.86	ACRE
253	0101	STRAW MULCH			
		Sta 6060+00	to Sta 6100+00	6.43	ACRE
255	0101	ECB TYPE 1			
		Sta 6060+00	to Sta 6100+00	2084	SY

*NOTE: See Section 77, Sheets 30-33 for Fiber Roll data.

Legend

- Seeding Class II Straw Mulch
- Wetland Seeding Straw Mulch
- Erosion Control Blanket
- Rolled Concrete Erosion Control Blanket
- Remove and Replace Riprap
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- Fiber Roll(12" or 20")
- Culvert Protection(12" or 20")

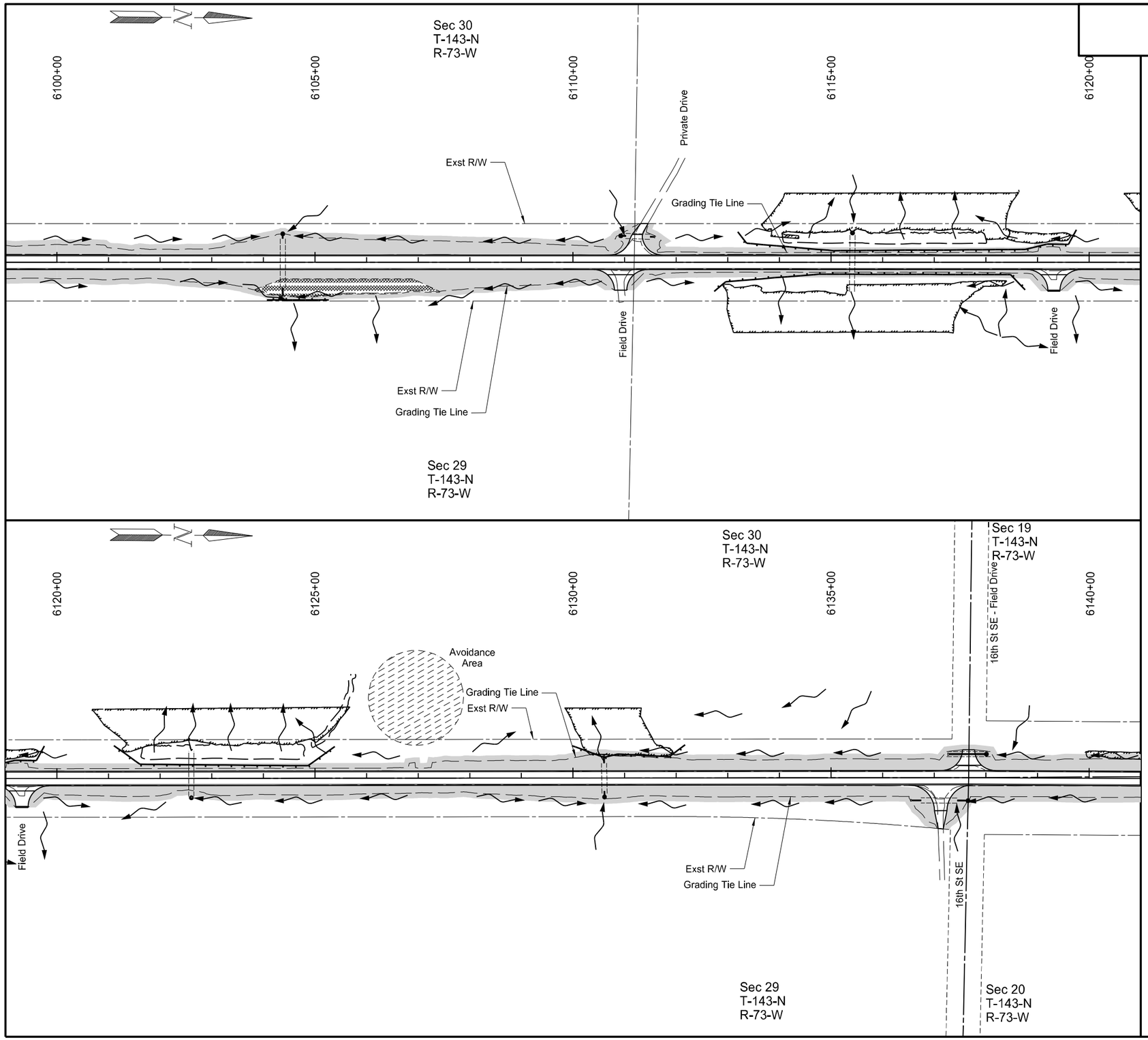
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Permanent Erosion Control

ND 3
Tuttle N to W Jct 200

6060+00 to 6100+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	77	4



SPEC	CODE	BID ITEM		QTY	UNIT
251	0200	SEEDING CLASS II			
		Sta 6100+00	to Sta 6140+00	5.25	ACRE
253	0101	STRAW MULCH			
		Sta 6100+00	to Sta 6140+00	5.03	ACRE
255	0101	ECB TYPE 1			
		Sta 6100+00	to Sta 6140+00	1067	SY

*NOTE: See Section 77, Sheets 30-33 for Fiber Roll data.

Legend

- Seeding Class II Straw Mulch
- Wetland Seeding Straw Mulch
- Erosion Control Blanket
- Rolled Concrete Erosion Control Blanket
- Remove and Replace Riprap
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- Fiber Roll(12" or 20")
- Culvert Protection(12" or 20")

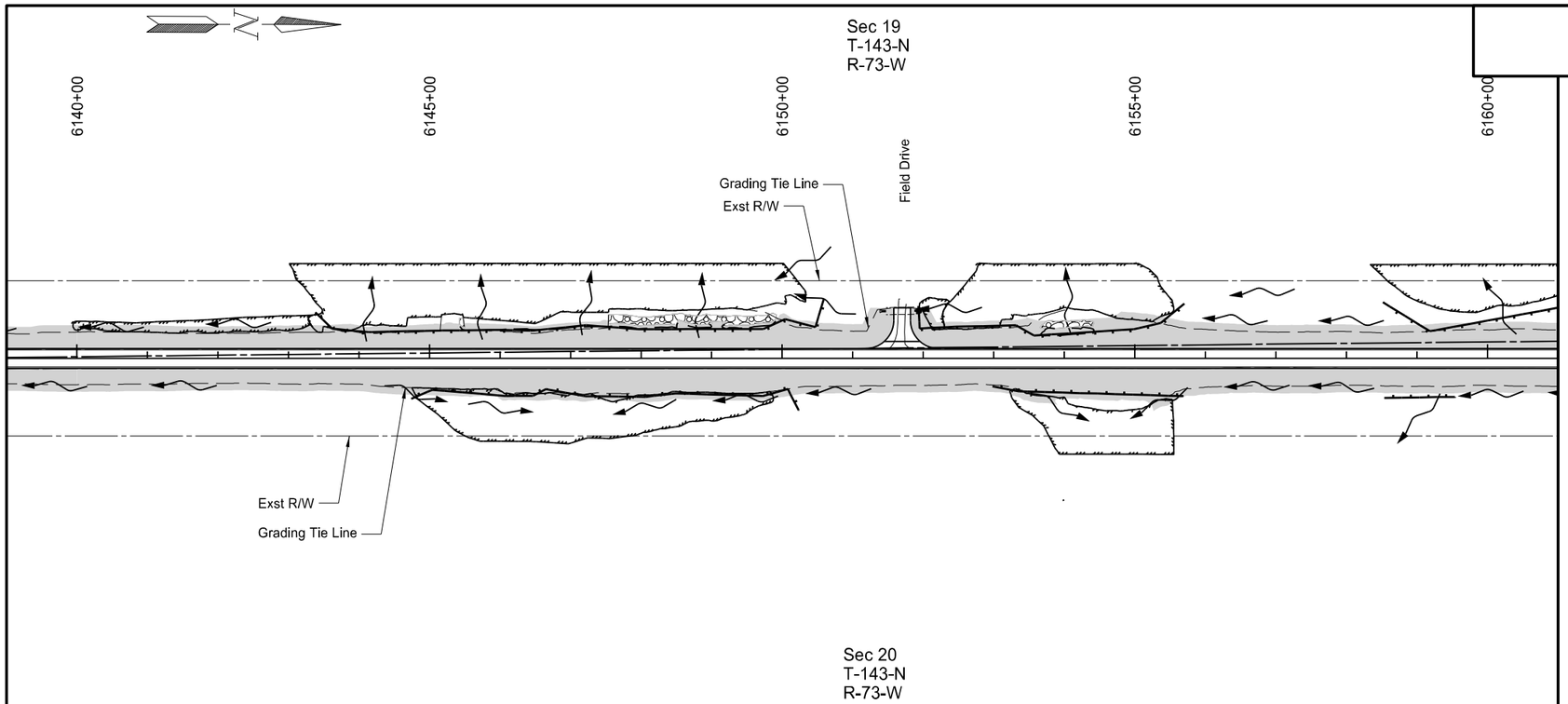
REGISTERED PROFESSIONAL ENGINEER
KORY M. KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

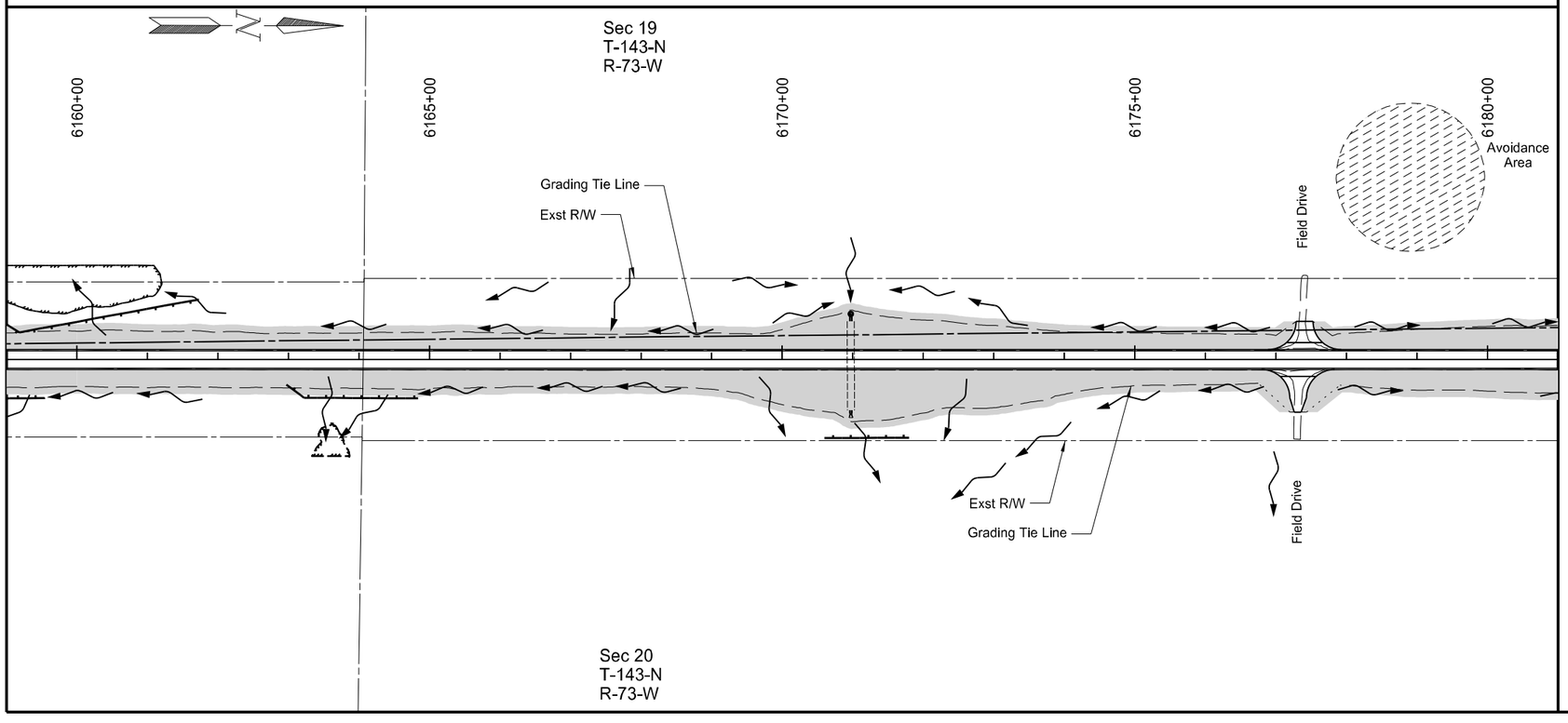
Permanent Erosion Control

ND 3
Tuttle N to W Jct 200

6100+00 to 6140+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	77	5





SPEC	CODE	BID ITEM			QTY	UNIT
251	0200	SEEDING CLASS II				
		Sta 6140+00	to Sta 6180+00		7.05	ACRE
253	0101	STRAW MULCH				
		Sta 6140+00	to Sta 6180+00		7.05	ACRE
256	0701	REMOVE AND REPLACE RIPRAP				
		Sta 6145+42	LT to Sta 6145+50	LT	5	CY
		Sta 6147+53	LT to Sta 6149+92	LT	213	CY
		Sta 6153+66	LT to Sta 6154+42	LT	49	CY
709	0155	GEOSYNTHETIC MATERIAL TYPE RR				
		Sta 6145+42	LT to Sta 6145+50	LT	11	SY
		Sta 6147+53	LT to Sta 6149+92	LT	400	SY
		Sta 6153+66	LT to Sta 6154+42	LT	99	SY

*NOTE: See Section 77, Sheets 30-33 for Fiber Roll data.

Legend

- Seeding Class II / Straw Mulch
- Wetland Seeding / Straw Mulch
- Erosion Control Blanket
- Rolled Concrete Erosion Control Blanket
- Remove and Replace Riprap
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- Fiber Roll(12" or 20")
- Culvert Protection(12" or 20")

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Permanent Erosion Control

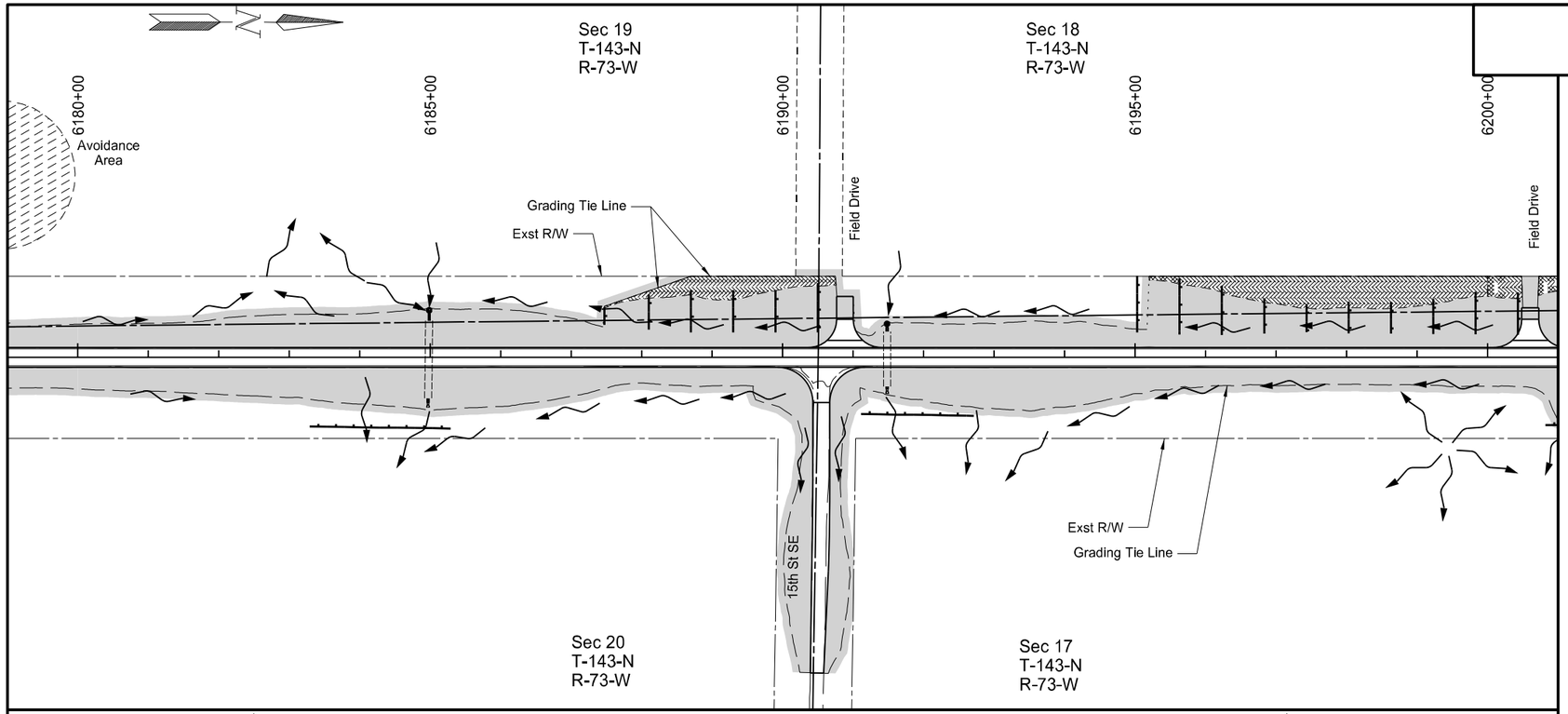
ND 3
Tuttle N to W Jct 200

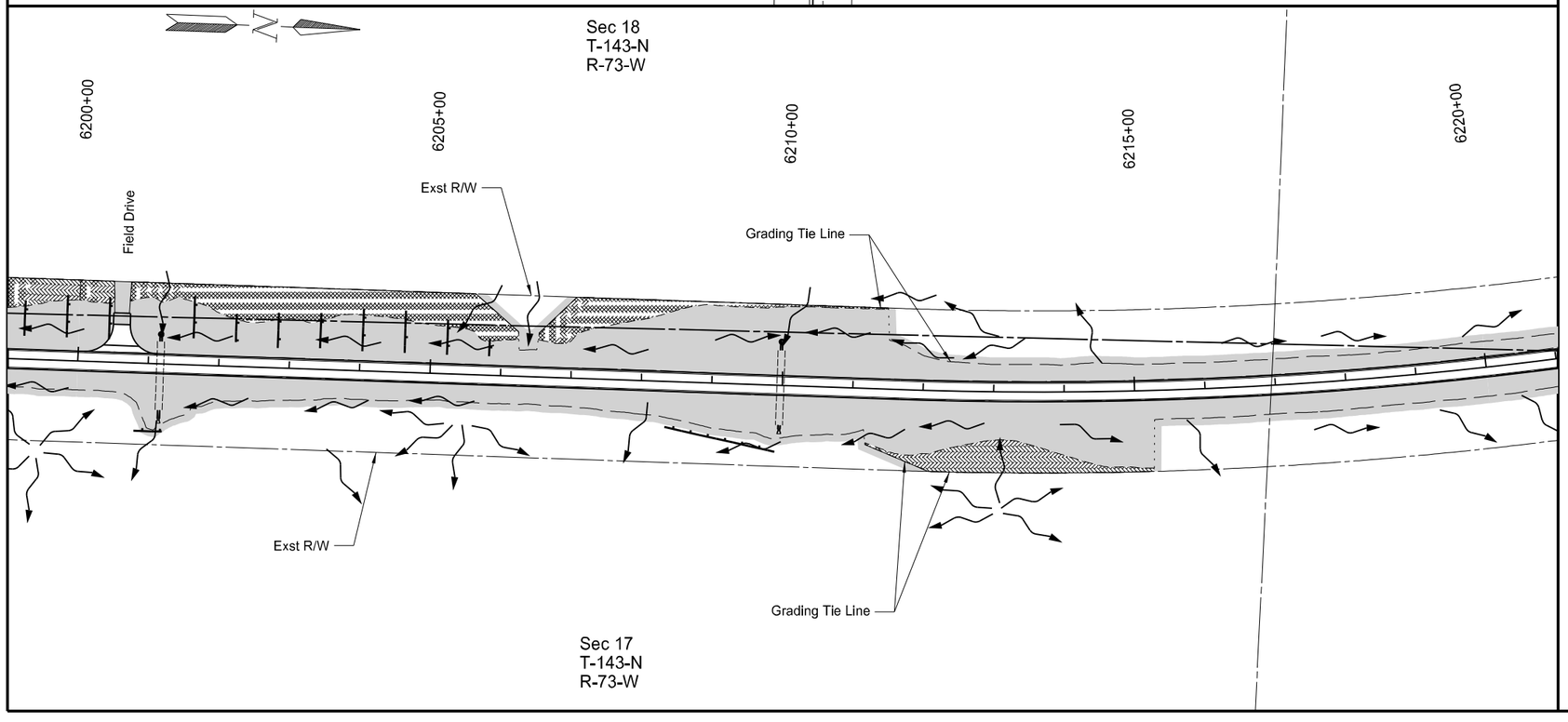
6140+00 to 6180+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	77	6

SPEC	CODE	BID ITEM		QTY	UNIT
251	0200	SEEDING CLASS II			
		Sta 6180+00	to Sta 6220+00	11.94	ACRE
253	0101	STRAW MULCH			
		Sta 6180+00	to Sta 6220+00	10.49	ACRE
255	0101	ECB TYPE 1			
		Sta 6180+00	to Sta 6220+00	6991	SY

*NOTE: See Section 77, Sheets 30-33 for Fiber Roll data.





Legend

- Seeding Class II Straw Mulch
- Wetland Seeding Straw Mulch
- Erosion Control Blanket
- Rolled Concrete Erosion Control Blanket
- Remove and Replace Riprap
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- Fiber Roll(12" or 20")
- Culvert Protection(12" or 20")

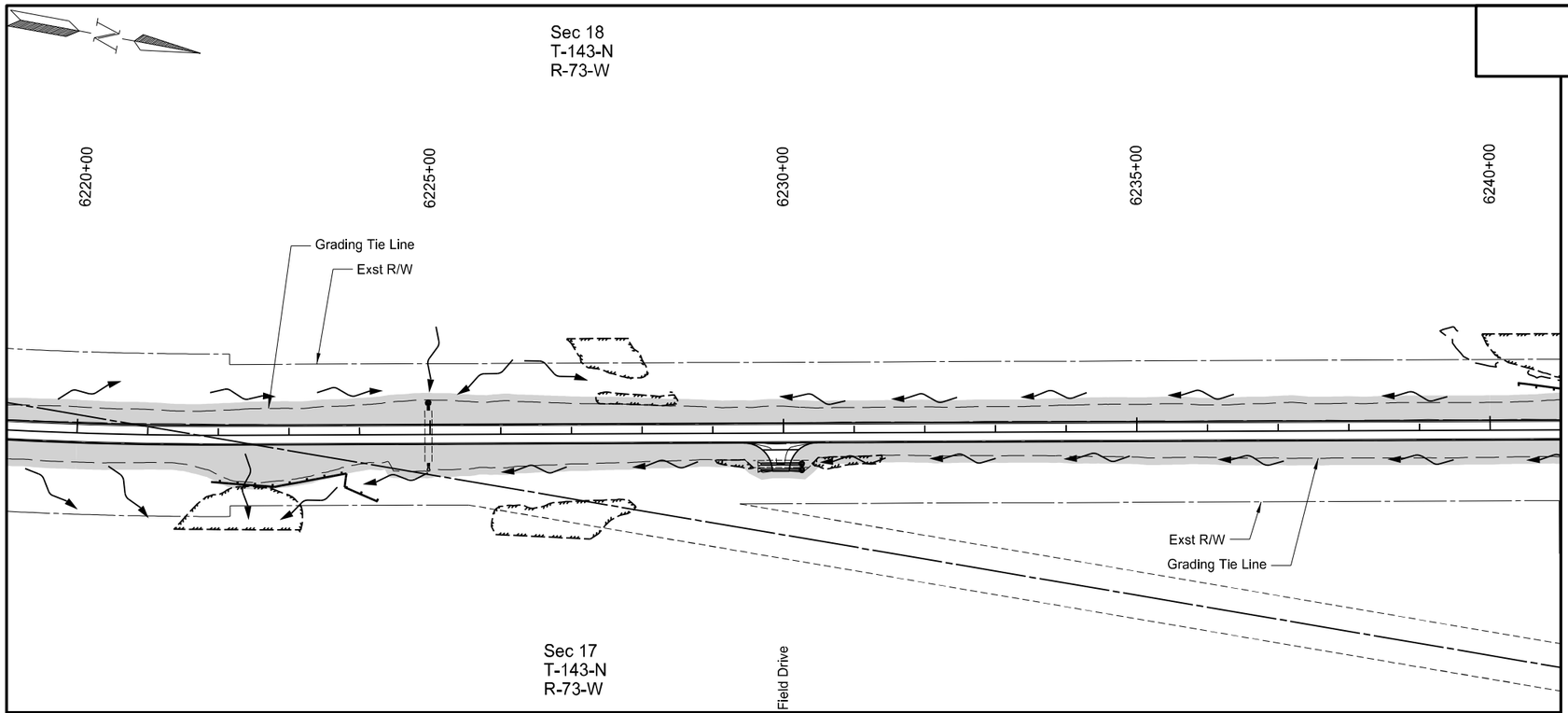
REGISTERED PROFESSIONAL ENGINEER
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DATE 12/15/2021
NORTH DAKOTA

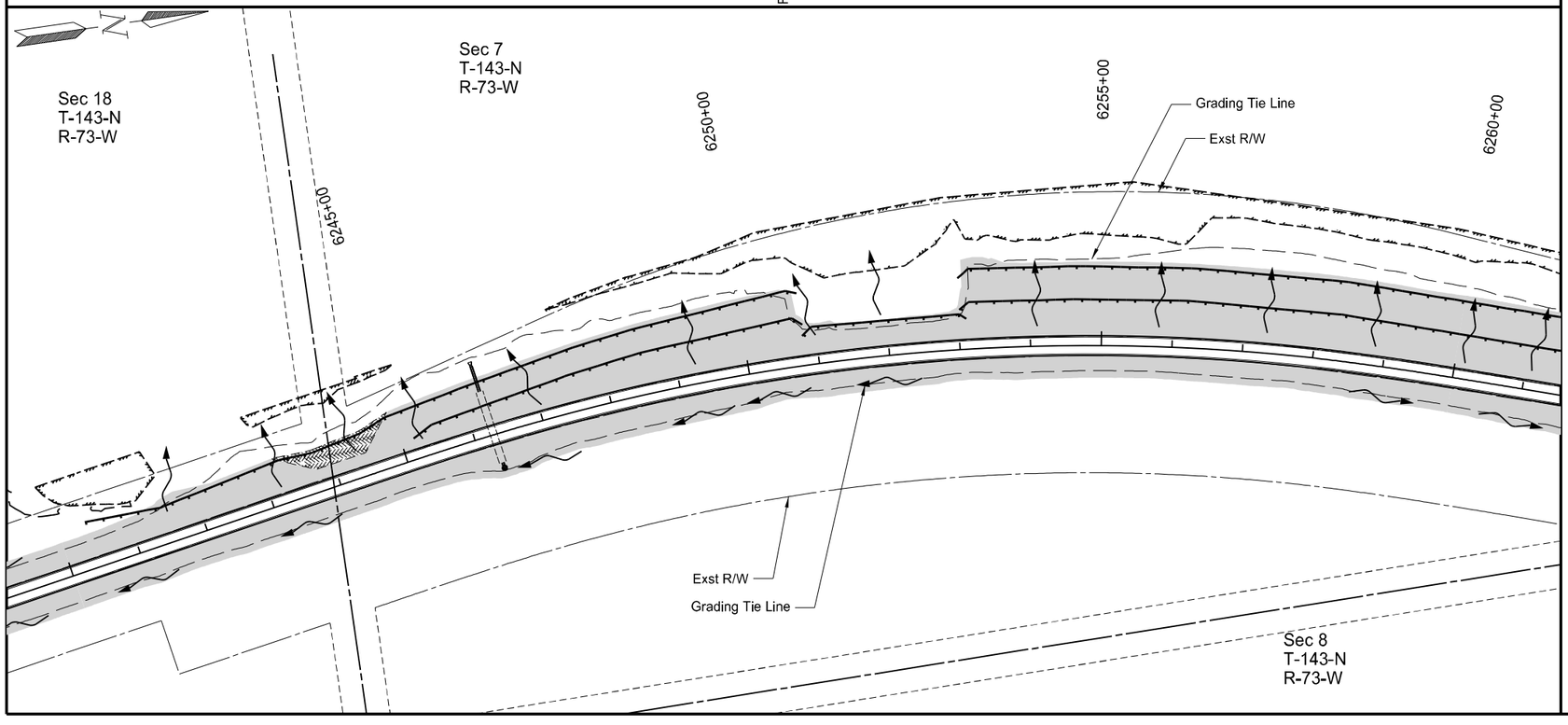
Permanent Erosion Control

ND 3
Tuttle N to W Jct 200

6180+00 to 6220+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	77	7





SPEC	CODE	BID ITEM		QTY	UNIT
251	0200	SEEDING CLASS II			
		Sta 6220+00	to Sta 6260+00	8.48	ACRE
253	0101	STRAW MULCH			
		Sta 6220+00	to Sta 6260+00	8.39	ACRE
255	0101	ECB TYPE 1			
		Sta 6220+00	to Sta 6260+00	415	SY

*NOTE: See Section 77, Sheets 30-33 for Fiber Roll data.

Legend

- Seeding Class II Straw Mulch
- Wetland Seeding Straw Mulch
- Erosion Control Blanket
- Rolled Concrete Erosion Control Blanket
- Remove and Replace Riprap
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- Fiber Roll(12" or 20")
- Culvert Protection(12" or 20")

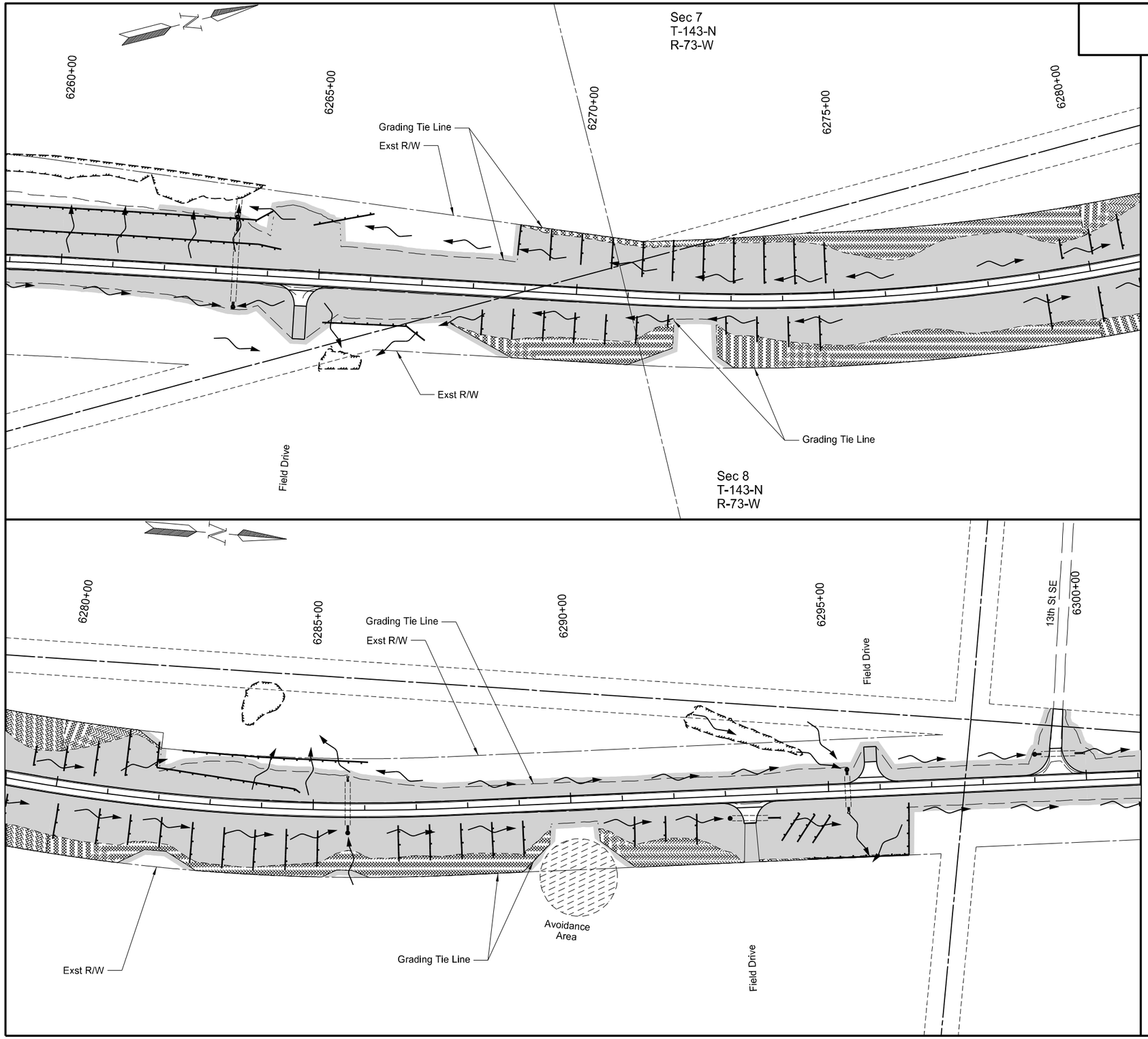
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KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Permanent Erosion Control

ND 3
Tuttle N to W Jct 200

6220+00 to 6260+00
Kidder County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	77	8



SPEC	CODE	BID ITEM		QTY	UNIT
251	0200	SEEDING CLASS II			
		Sta 6260+00	to Sta 6300+00	15.66	ACRE
253	0101	STRAW MULCH			
		Sta 6260+00	to Sta 6300+00	12.76	ACRE
255	0101	ECB TYPE 1			
		Sta 6260+00	to Sta 6300+00	14060	SY

*NOTE: See Section 77, Sheets 30-33 for Fiber Roll data.

Legend

- Seeding Class II Straw Mulch
- Wetland Seeding Straw Mulch
- Erosion Control Blanket
- Rolled Concrete Erosion Control Blanket
- Remove and Replace Riprap
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- Fiber Roll(12" or 20")
- Culvert Protection(12" or 20")

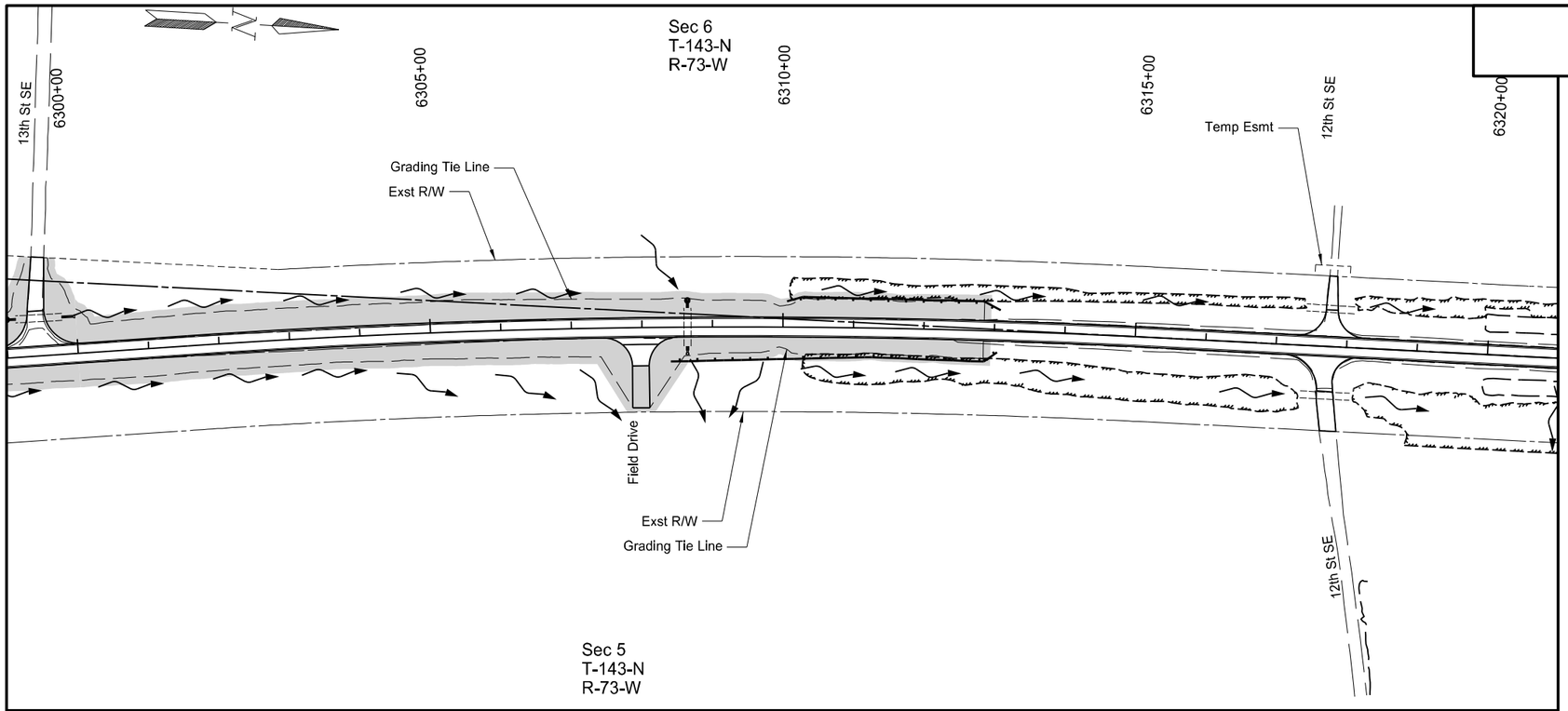
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KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

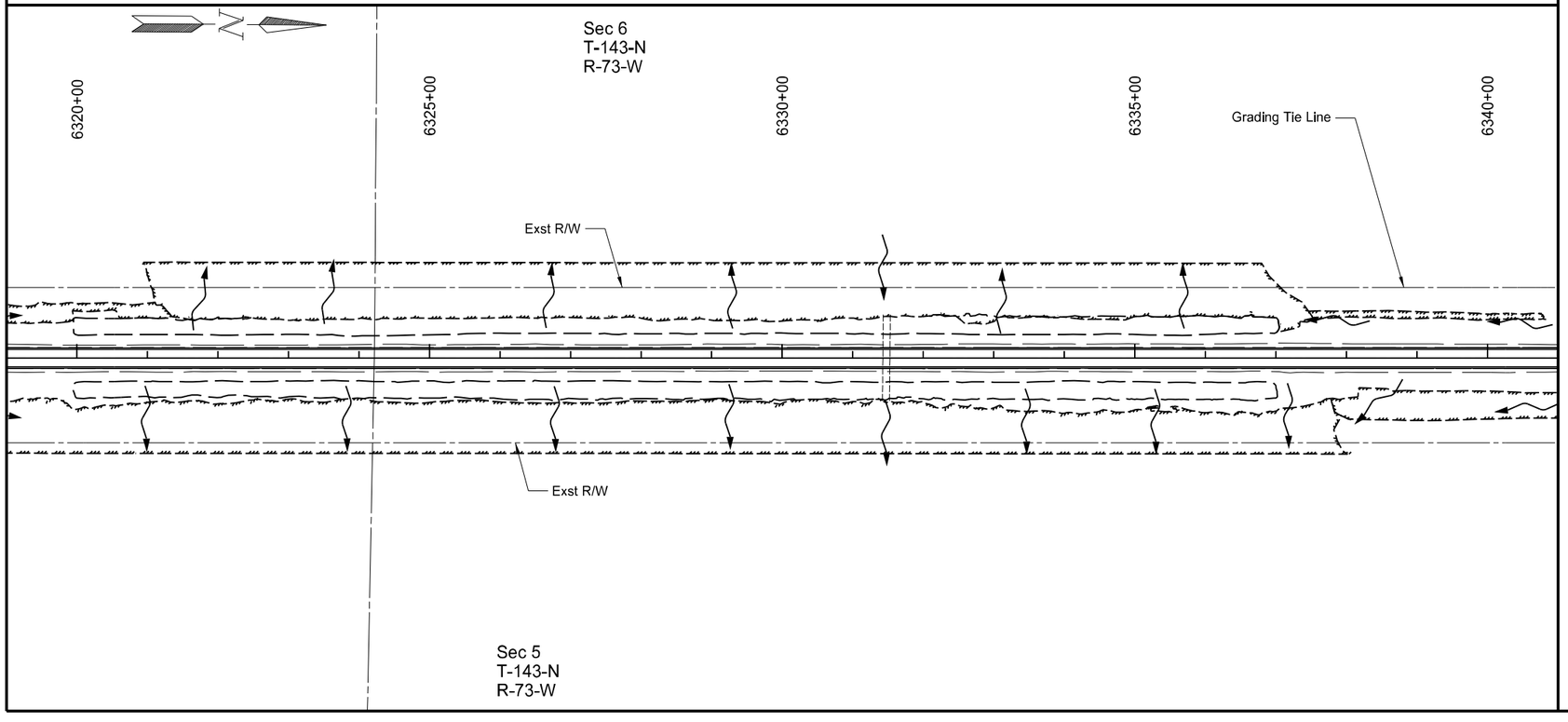
Permanent Erosion Control

ND 3
Tuttle N to W Jct 200

6260+00 to 6300+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	77	9





SPEC	CODE	BID ITEM		QTY	UNIT
251	0200	SEEDING CLASS II			
		Sta 6300+00	to Sta 6340+00	2.25	ACRE
253	0101	STRAW MULCH			
		Sta 6300+00	to Sta 6340+00	2.25	ACRE

*NOTE: See Section 77, Sheets 30-33 for Fiber Roll data.

Legend

- Seeding Class II Straw Mulch
- Wetland Seeding Straw Mulch
- Erosion Control Blanket
- Rolled Concrete Erosion Control Blanket
- Remove and Replace Riprap
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- Fiber Roll(12" or 20")
- Culvert Protection(12" or 20")

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KORY M. KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Permanent Erosion Control

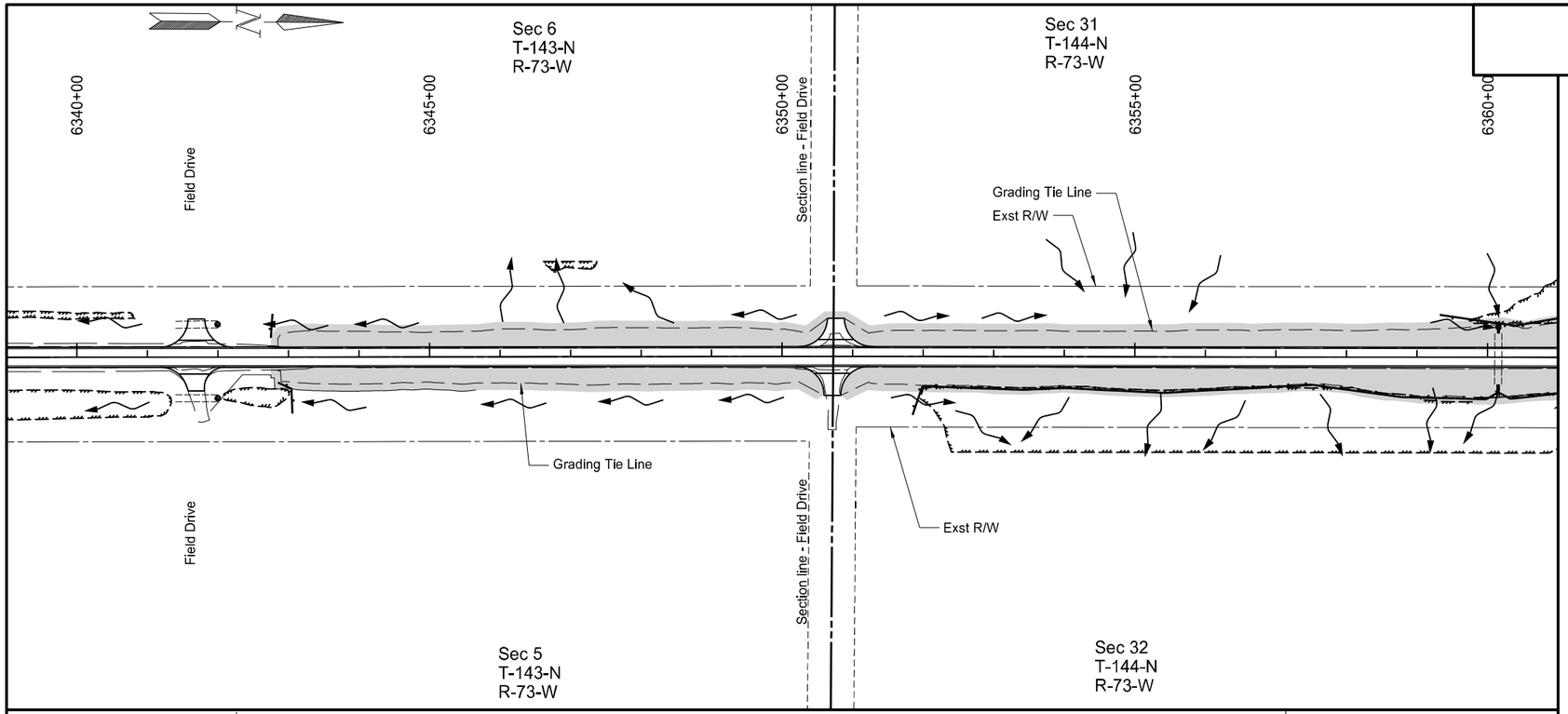
ND 3
Tuttle N to W Jct 200

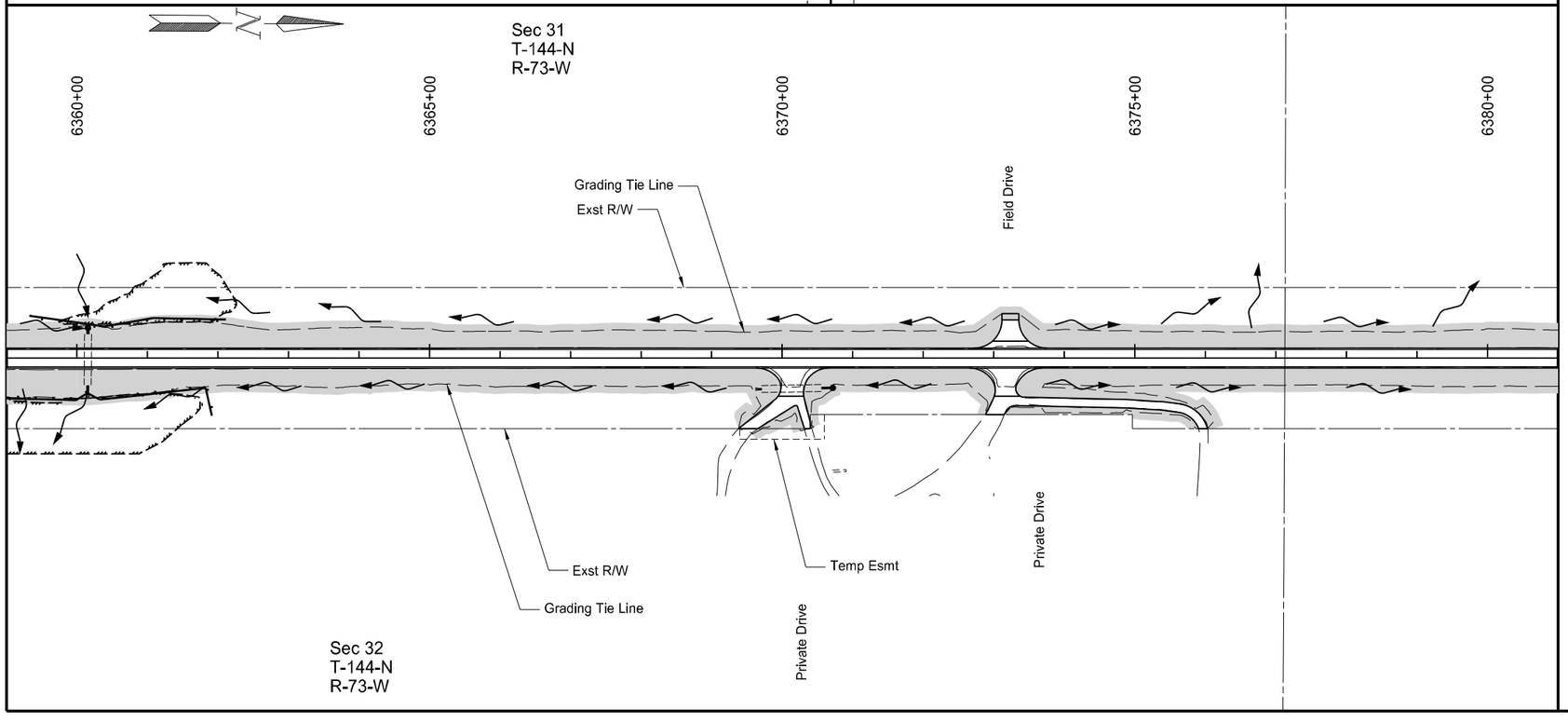
6300+00 to 6340+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	77	10

SPEC	CODE	BID ITEM		QTY	UNIT
251	0200	SEEDING CLASS II			
		Sta 6340+00	to Sta 6380+00	6.27	ACRE
253	0101	STRAW MULCH			
		Sta 6340+00	to Sta 6380+00	6.27	ACRE

*NOTE: See Section 77, Sheets 30-33 for Fiber Roll data.





Legend

- Seeding Class II Straw Mulch
- Wetland Seeding Straw Mulch
- Erosion Control Blanket
- Rolled Concrete Erosion Control Blanket
- Remove and Replace Riprap
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- Fiber Roll(12" or 20")
- Culvert Protection(12" or 20")

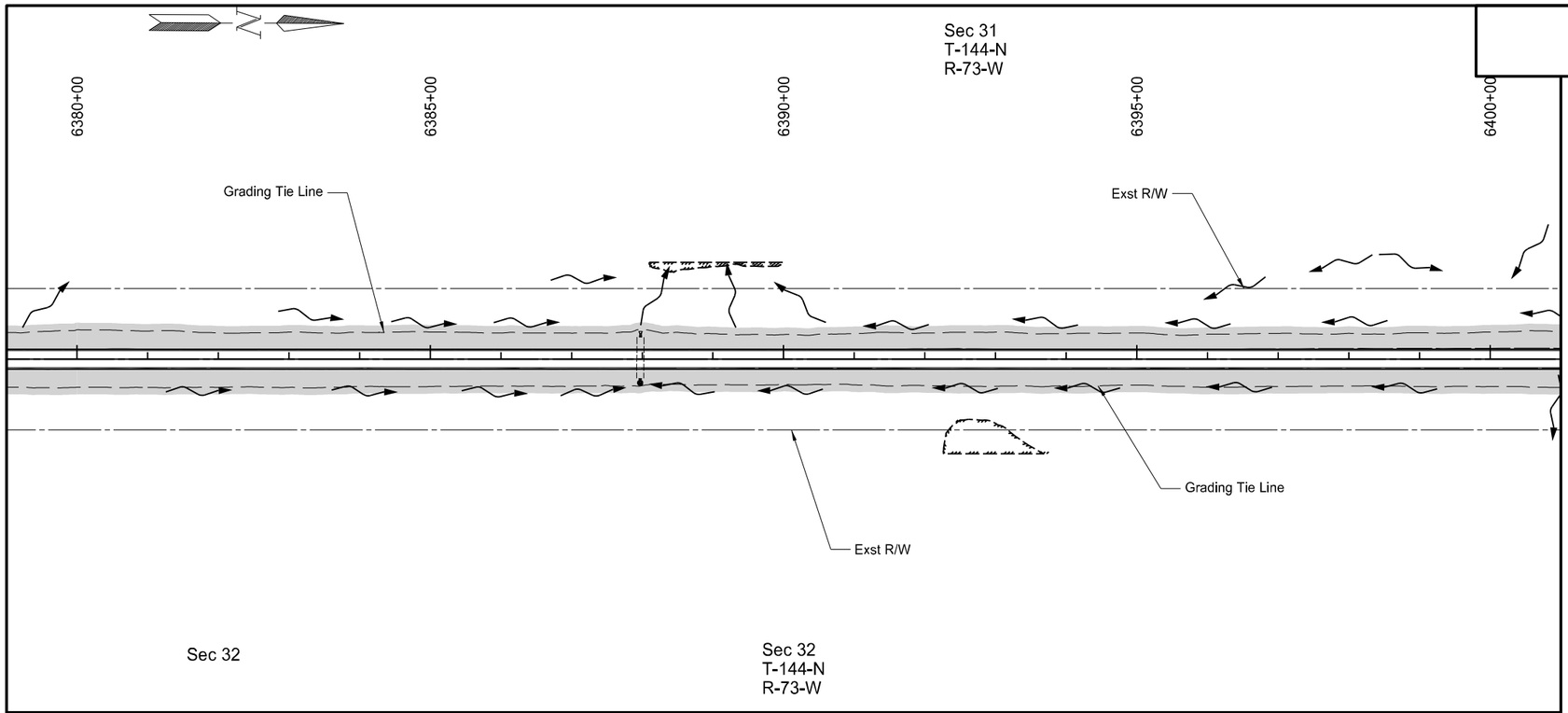
REGISTERED PROFESSIONAL ENGINEER
KORY M. KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

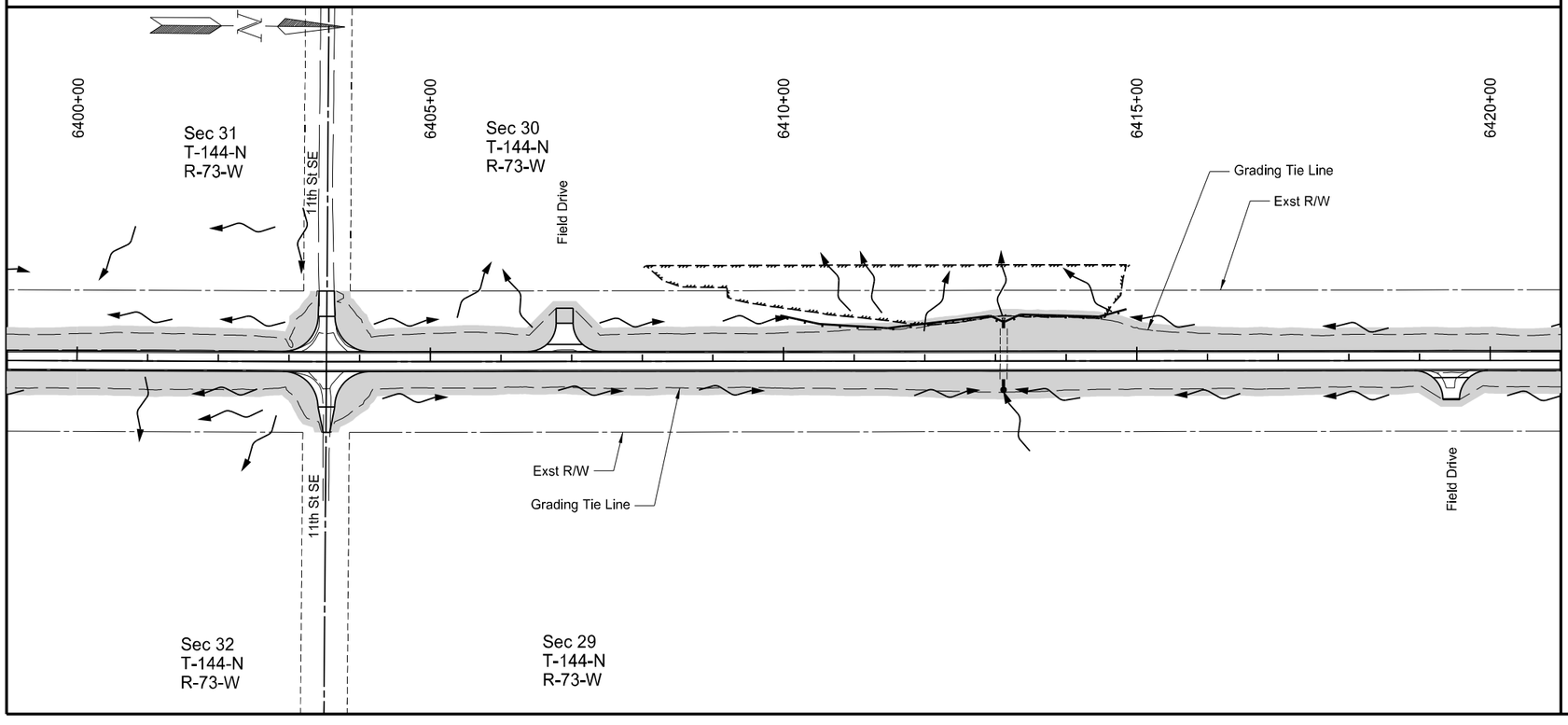
Permanent Erosion Control

ND 3
Tuttle N to W Jct 200

6340+00 to 6380+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	77	11





SPEC	CODE	BID ITEM		QTY	UNIT
251	0200	SEEDING CLASS II			
		Sta 6380+00	to Sta 6420+00	6.52	ACRE
253	0101	STRAW MULCH			
		Sta 6380+00	to Sta 6420+00	6.52	ACRE

*NOTE: See Section 77, Sheets 30-33 for Fiber Roll data.

Legend

- Seeding Class II Straw Mulch
- Wetland Seeding Straw Mulch
- Erosion Control Blanket
- Rolled Concrete Erosion Control Blanket
- Remove and Replace Riprap
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- Fiber Roll(12" or 20")
- Culvert Protection(12" or 20")

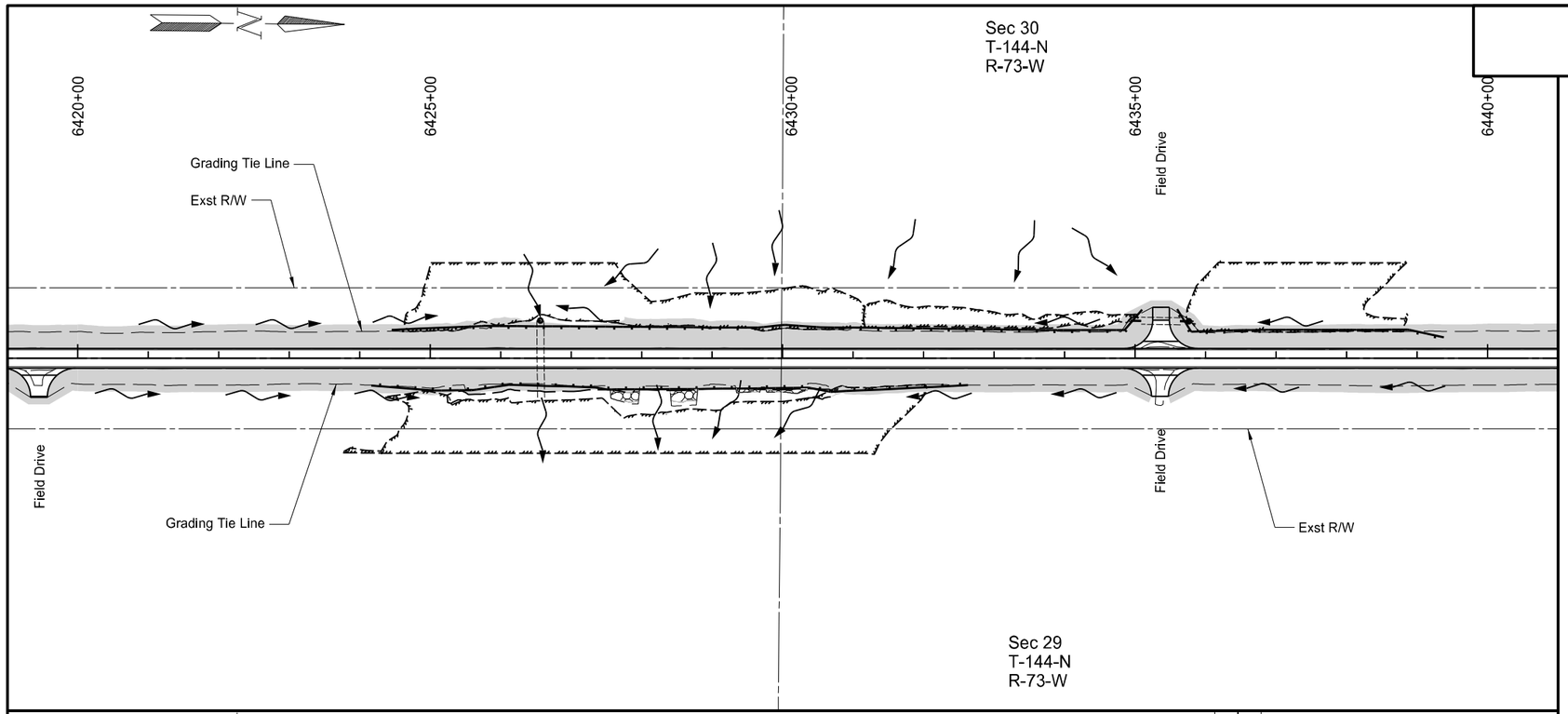
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

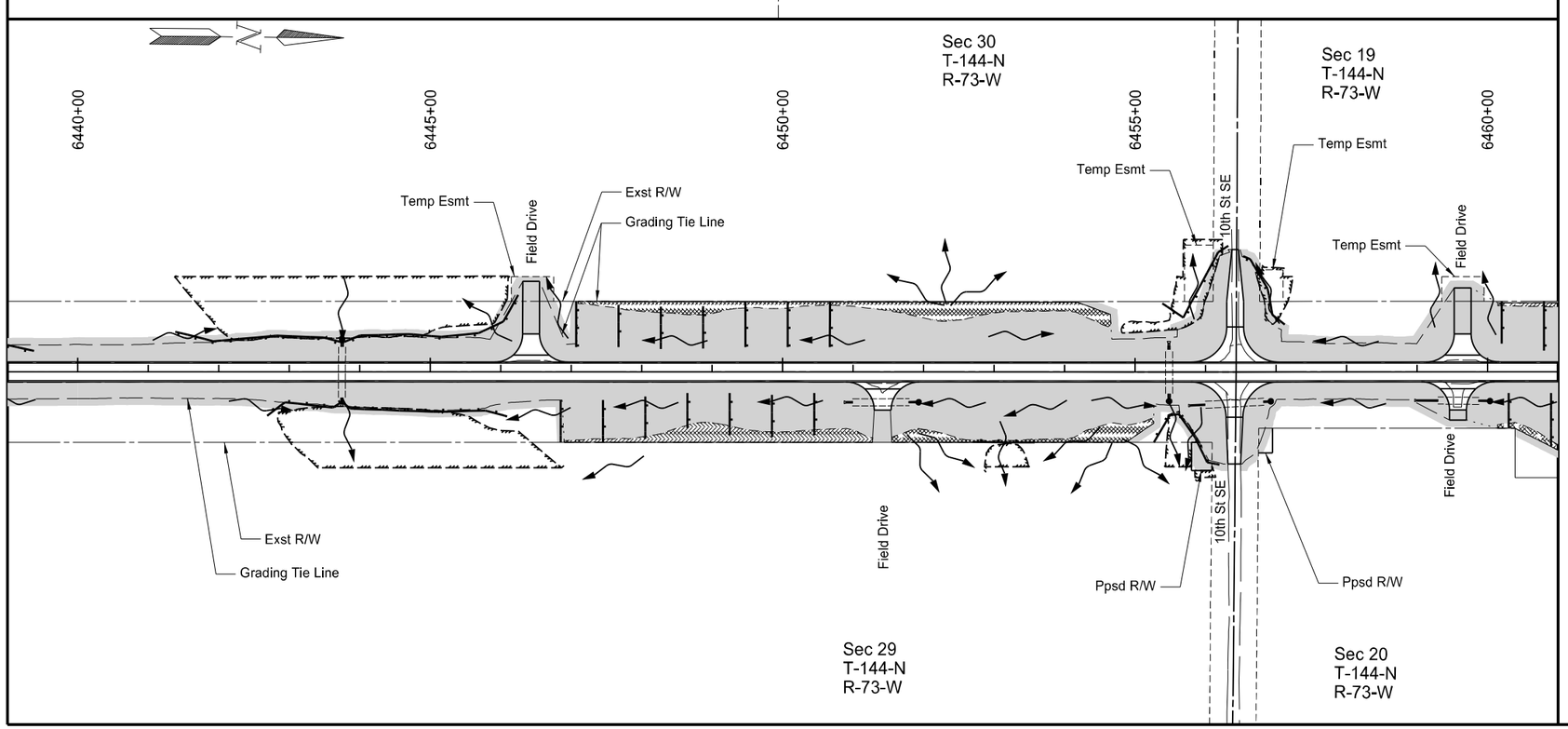
Permanent Erosion Control

ND 3
Tuttle N to W Jct 200

6380+00 to 6420+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	77	12





SPEC	CODE	BID ITEM			QTY	UNIT
251	0200	SEEDING CLASS II				
		Sta 6420+00	to Sta 6460+00		9.01	ACRE
253	0101	STRAW MULCH				
		Sta 6420+00	to Sta 6460+00		8.53	ACRE
255	0101	ECB TYPE 1				
		Sta 6420+00	to Sta 6460+00		2310	SY
256	0701	REMOVE AND REPLACE RIPRAP				
		Sta 6427+55	RT to Sta 6427+97	RT	41	CY
		Sta 6428+40	RT to Sta 6428+80	RT	44	CY
		Sta 6429+34	RT to Sta 6429+68	RT	11	CY
		Sta 6429+76	RT to Sta 6430+35	RT	18	CY
709	0155	GEOSYNTHETIC MATERIAL TYPE RR				
		Sta 6427+55	RT to Sta 6427+97	RT	76	SY
		Sta 6428+40	RT to Sta 6428+80	RT	79	SY
		Sta 6429+34	RT to Sta 6429+68	RT	28	SY
		Sta 6429+76	RT to Sta 6430+35	RT	46	SY

*NOTE: See Section 77, Sheets 30-33 for Fiber Roll data.

Legend

- Seeding Class II Straw Mulch
- Wetland Seeding Straw Mulch
- Erosion Control Blanket
- Rolled Concrete Erosion Control Blanket
- Remove and Replace Riprap
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- Fiber Roll(12" or 20")
- Culvert Protection(12" or 20")

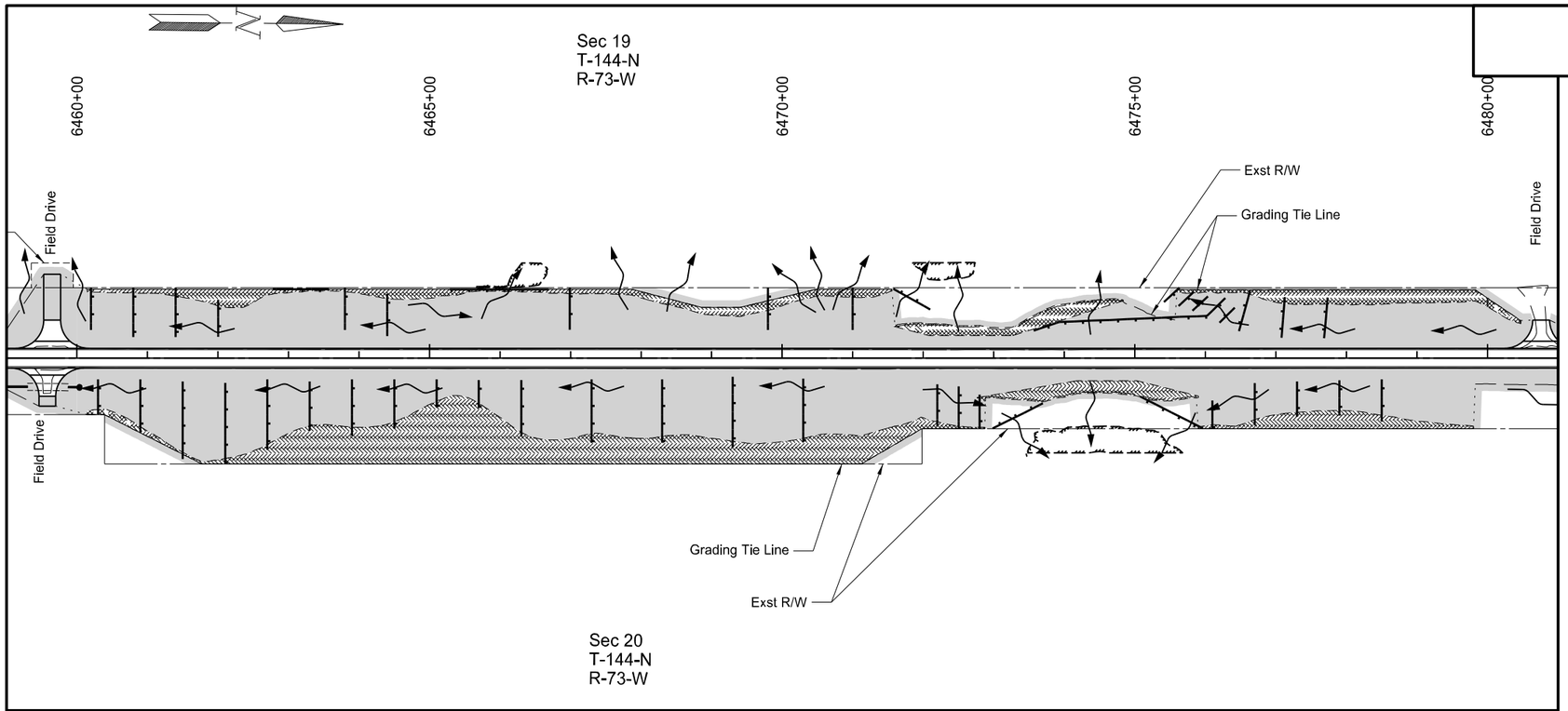
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

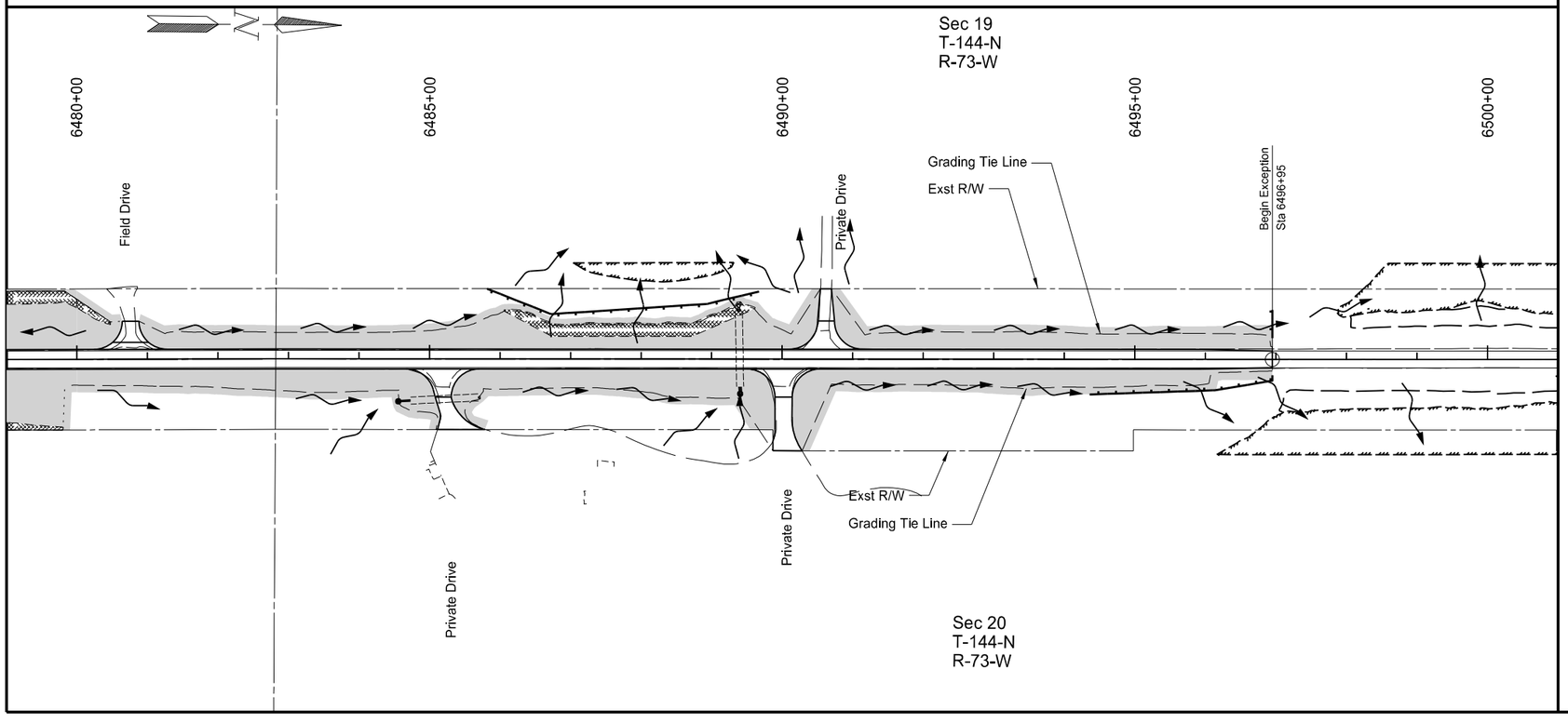
Permanent Erosion Control

ND 3
Tuttle N to W Jct 200

6420+00 to 6460+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	77	13





SPEC	CODE	BID ITEM		QTY	UNIT
251	0200	SEEDING CLASS II			
		Sta 6460+00	to Sta 6500+00	11.65	ACRE
253	0101	STRAW MULCH			
		Sta 6460+00	to Sta 6500+00	9.70	ACRE
255	0101	ECB TYPE 1			
		Sta 6460+00	to Sta 6500+00	9450	SY

*NOTE: See Section 77, Sheets 30-33 for Fiber Roll data.

Legend

- Seeding Class II Straw Mulch
- Wetland Seeding Straw Mulch
- Erosion Control Blanket
- Rolled Concrete Erosion Control Blanket
- Remove and Replace Riprap
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- Fiber Roll(12" or 20")
- Culvert Protection(12" or 20")

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Permanent Erosion Control

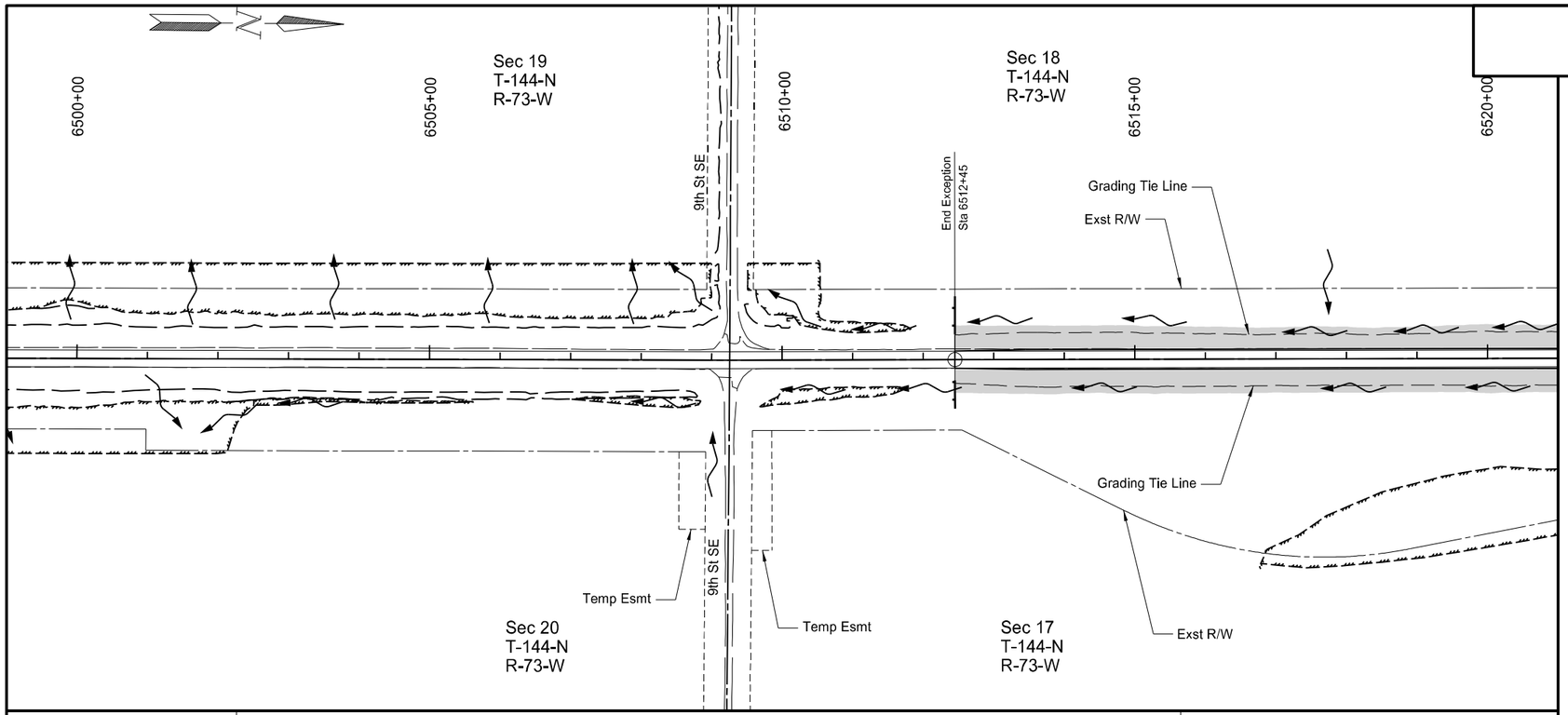
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Tuttle N to W Jct 200

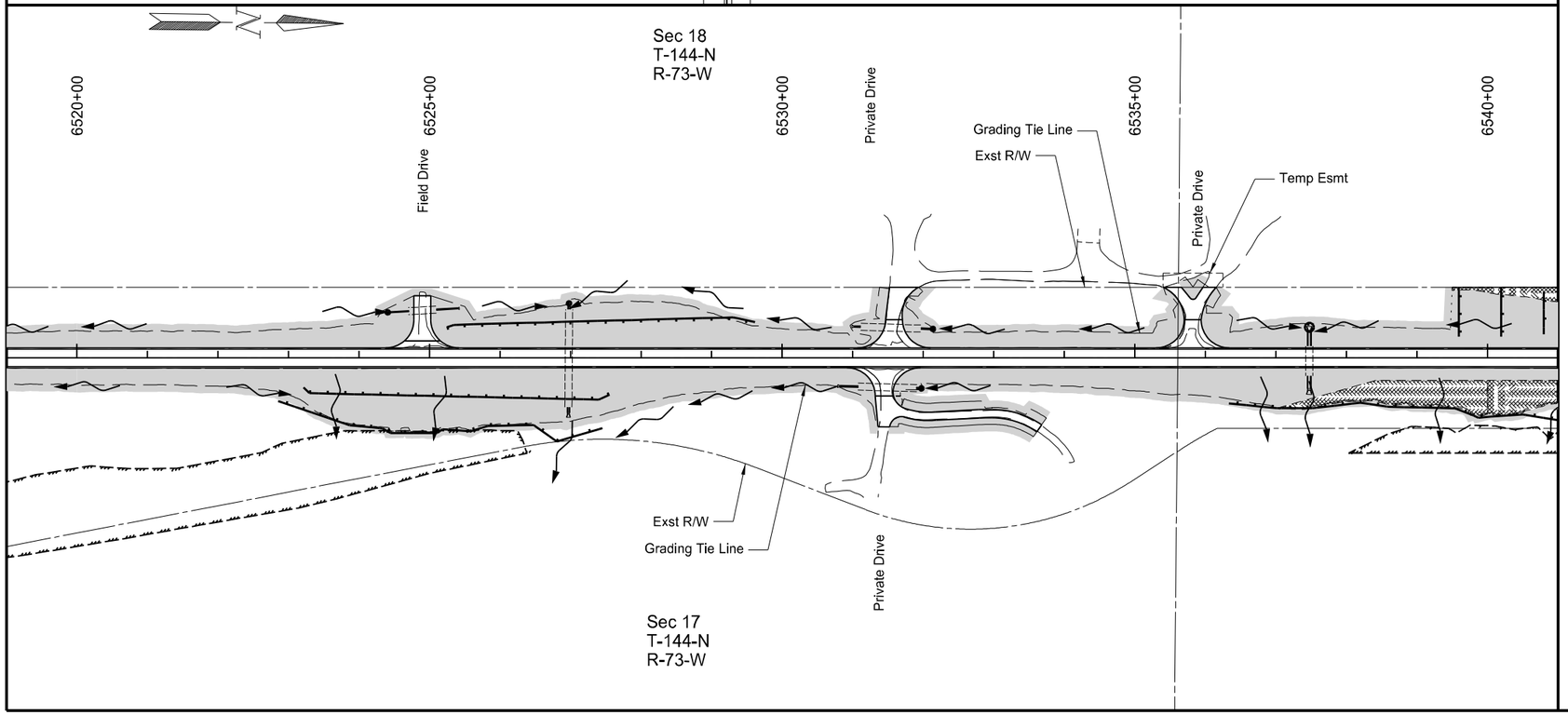
6460+00 to 6500+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	77	14

SPEC	CODE	BID ITEM		QTY	UNIT
251	0200	SEEDING CLASS II			
		Sta 6500+00	to Sta 6540+00	6.02	ACRE
253	0101	STRAW MULCH			
		Sta 6500+00	to Sta 6540+00	5.83	ACRE
255	0101	ECB TYPE 1			
		Sta 6500+00	to Sta 6540+00	938	SY

*NOTE: See Section 77, Sheets 30-33 for Fiber Roll data.





Legend

- Seeding Class II Straw Mulch
- Wetland Seeding Straw Mulch
- Erosion Control Blanket
- Rolled Concrete Erosion Control Blanket
- Remove and Replace Riprap
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- Fiber Roll(12" or 20")
- Culvert Protection(12" or 20")

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Permanent Erosion Control

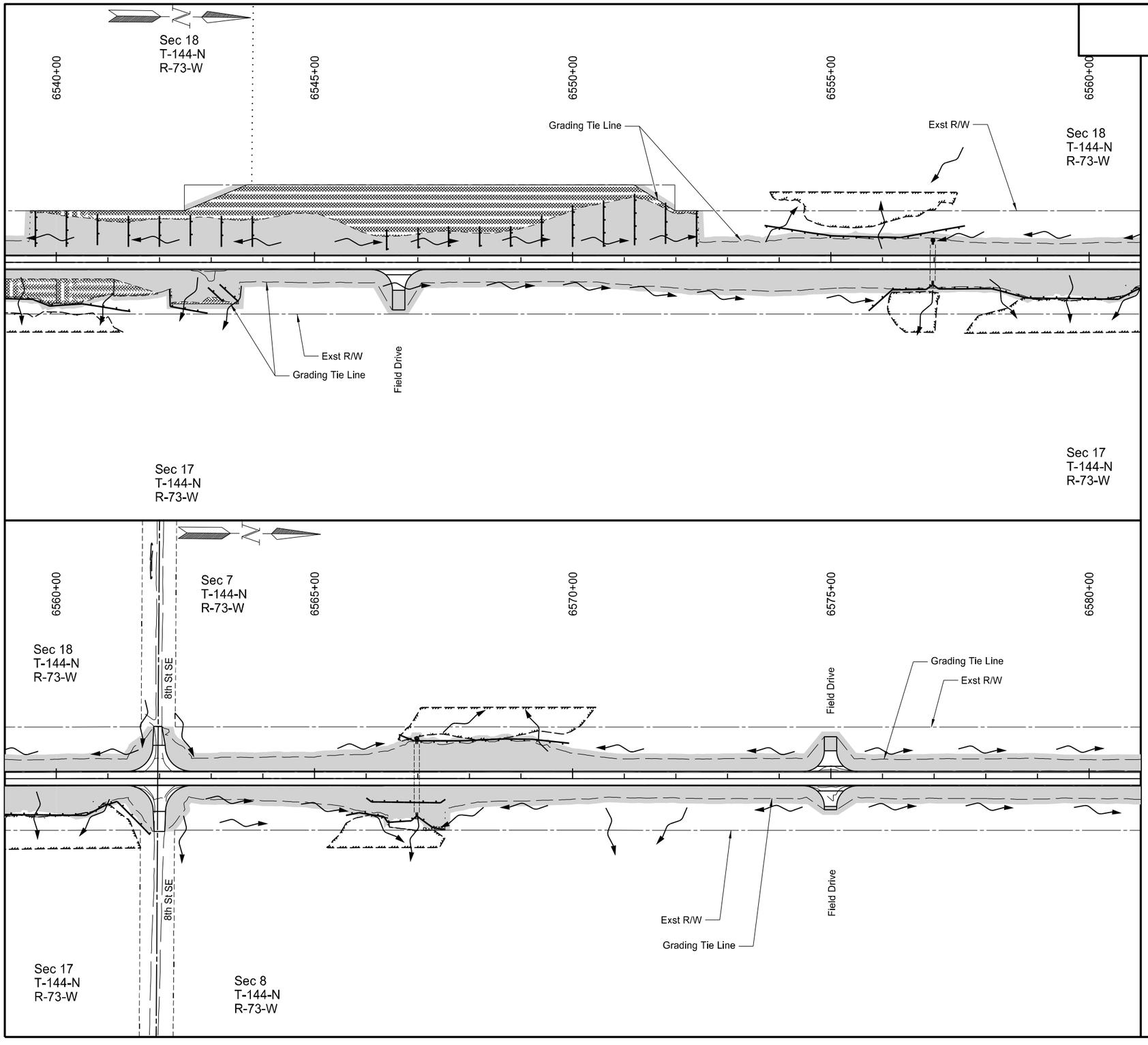
ND 3
Tuttle N to W Jct 200

6500+00 to 6540+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	77	15

SPEC	CODE	BID ITEM		QTY	UNIT
251	0200	SEEDING CLASS II			
		Sta 6540+00	to Sta 6580+00	10.20	ACRE
253	0101	STRAW MULCH			
		Sta 6540+00	to Sta 6580+00	8.55	ACRE
255	0101	ECB TYPE 1			
		Sta 6540+00	to Sta 6580+00	7969	SY

*NOTE: See Section 77, Sheets 30-33 for Fiber Roll data.



Legend

- Seeding Class II Straw Mulch
- Wetland Seeding Straw Mulch
- Erosion Control Blanket
- Rolled Concrete Erosion Control Blanket
- Remove and Replace Riprap
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- Fiber Roll(12" or 20")
- Culvert Protection(12" or 20")

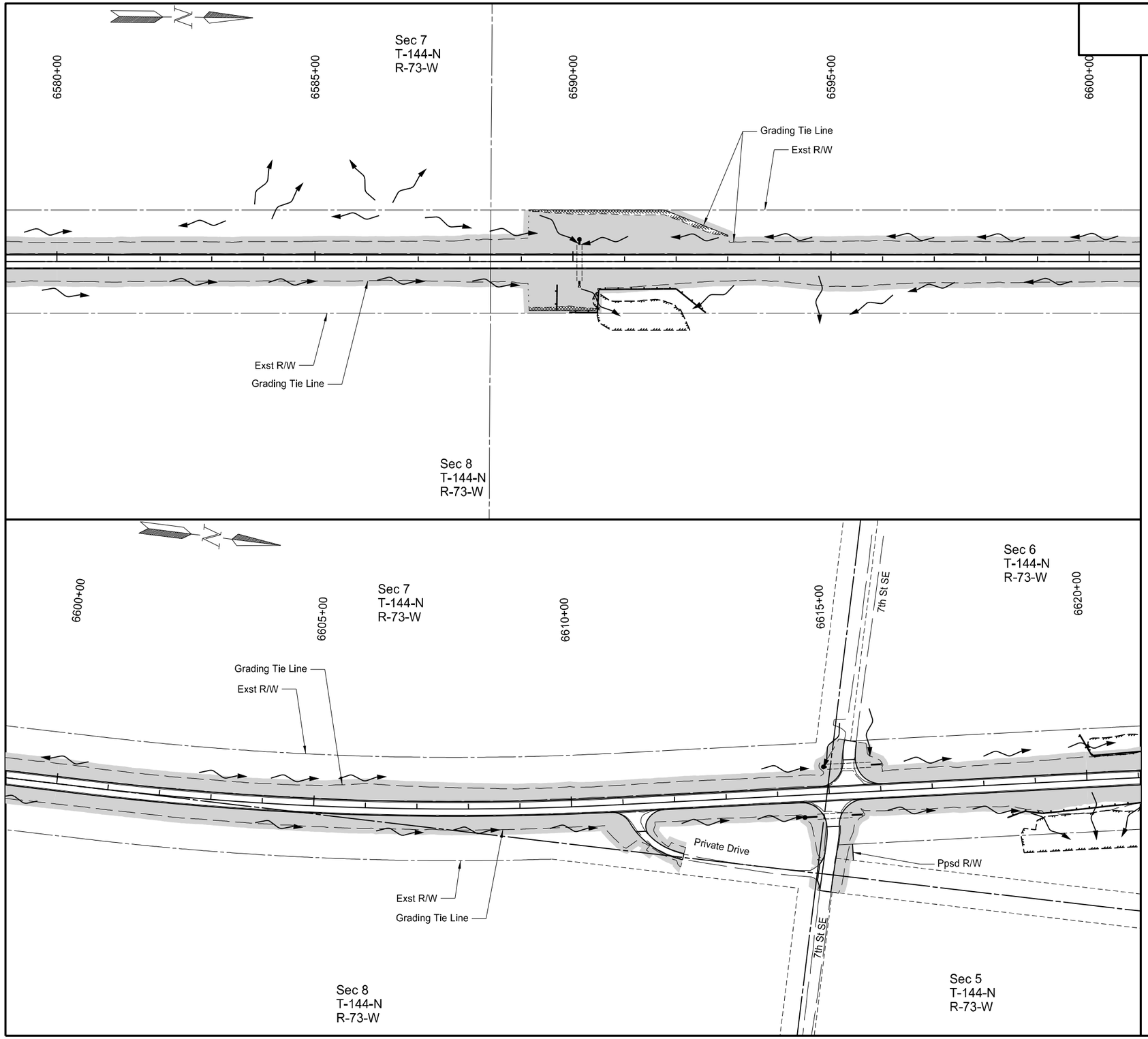
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KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Permanent Erosion Control

ND 3
Tuttle N to W Jct 200

6540+00 to 6580+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	77	16



SPEC	CODE	BID ITEM		QTY	UNIT
251	0200	SEEDING CLASS II			
		Sta 6580+00	to Sta 6620+00	7.44	ACRE
253	0101	STRAW MULCH			
		Sta 6580+00	to Sta 6620+00	7.35	ACRE
255	0101	ECB TYPE 1			
		Sta 6580+00	to Sta 6620+00	433	SY

*NOTE: See Section 77, Sheets 30-33 for Fiber Roll data.

Legend

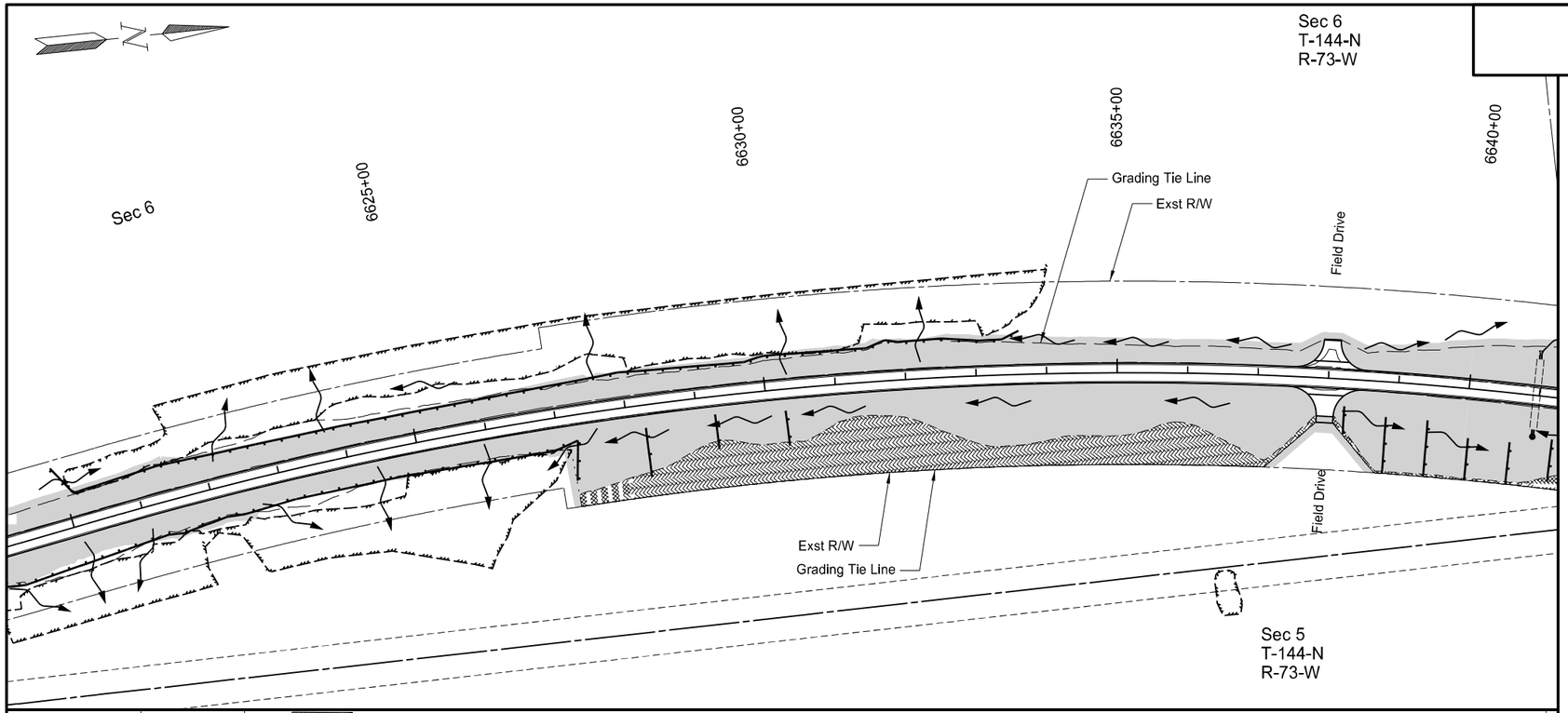
- Seeding Class II Straw Mulch
- Wetland Seeding Straw Mulch
- Erosion Control Blanket
- Rolled Concrete Erosion Control Blanket
- Remove and Replace Riprap
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- Fiber Roll(12" or 20")
- Culvert Protection(12" or 20")

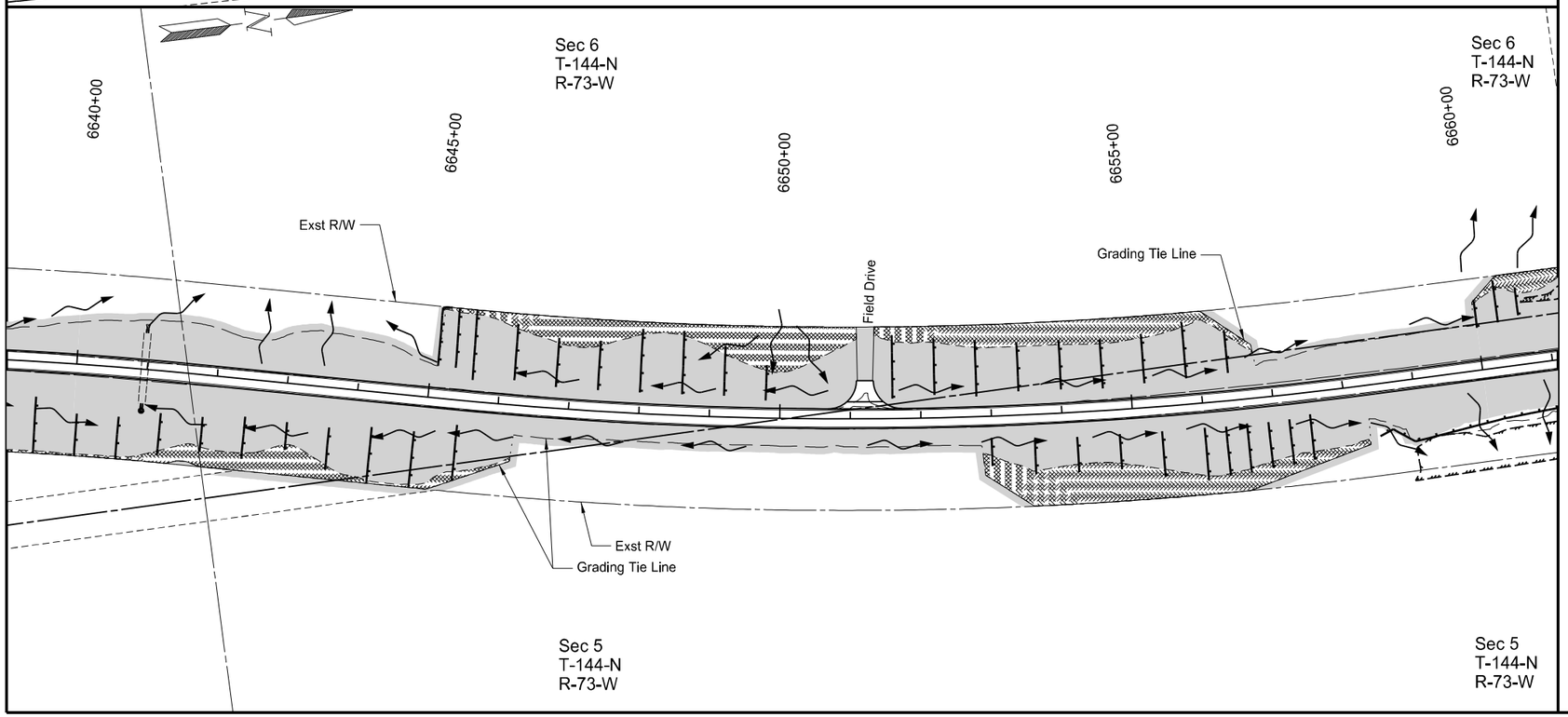
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Permanent Erosion Control

ND 3
Tuttle N to W Jct 200

6580+00 to 6620+00
Kidder County





STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	77	17

SPEC	CODE	BID ITEM		QTY	UNIT
251	0200	SEEDING CLASS II			
		Sta 6620+00	to Sta 6660+00	13.64	ACRE
253	0101	STRAW MULCH			
		Sta 6620+00	to Sta 6660+00	11.12	ACRE
255	0101	ECB TYPE 1			
		Sta 6620+00	to Sta 6660+00	12198	SY

*NOTE: See Section 77, Sheets 30-33 for Fiber Roll data.

Legend

- Seeding Class II Straw Mulch
- Wetland Seeding Straw Mulch
- Erosion Control Blanket
- Rolled Concrete Erosion Control Blanket
- Remove and Replace Riprap
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- Fiber Roll(12" or 20")
- Culvert Protection(12" or 20")

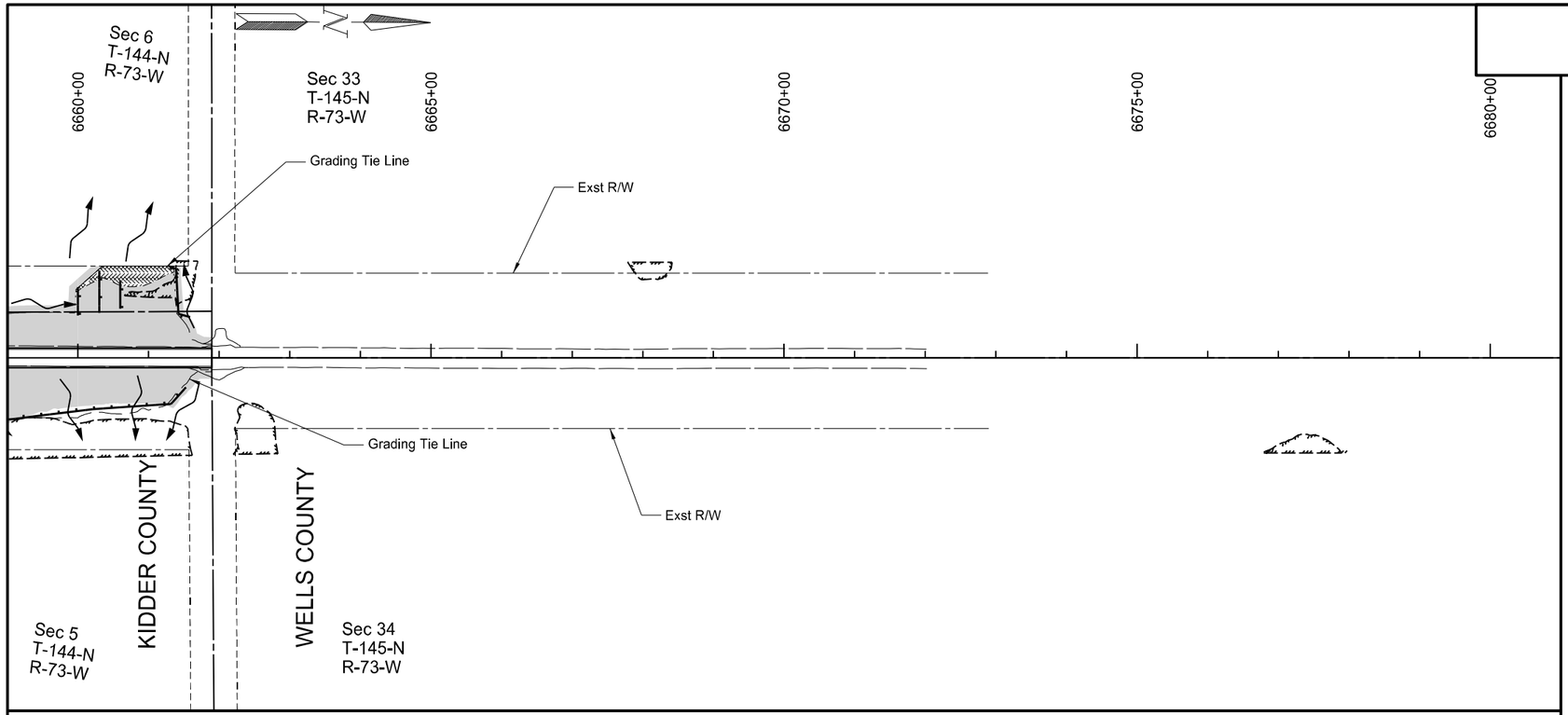
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Permanent Erosion Control

ND 3
Tuttle N to W Jct 200

6620+00 to 6660+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	77	18



SPEC	CODE	BID ITEM		QTY	UNIT
251	0200	SEEDING CLASS II			
		Sta 6660+00	to Sta 6661+90	0.61	ACRE
253	0101	STRAW MULCH			
		Sta 6660+00	to Sta 6661+90	0.55	ACRE
255	0101	ECB TYPE 1			
		Sta 6660+00	to Sta 6661+90	290	SY

*NOTE: See Section 77, Sheets 30-33 for Fiber Roll data.

Legend

- Seeding Class II Straw Mulch
- Wetland Seeding Straw Mulch
- Erosion Control Blanket
- Rolled Concrete Erosion Control Blanket
- Remove and Replace Riprap
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- Fiber Roll(12" or 20")
- Culvert Protection(12" or 20")

REGISTERED PROFESSIONAL ENGINEER
KORY M. KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Permanent Erosion Control

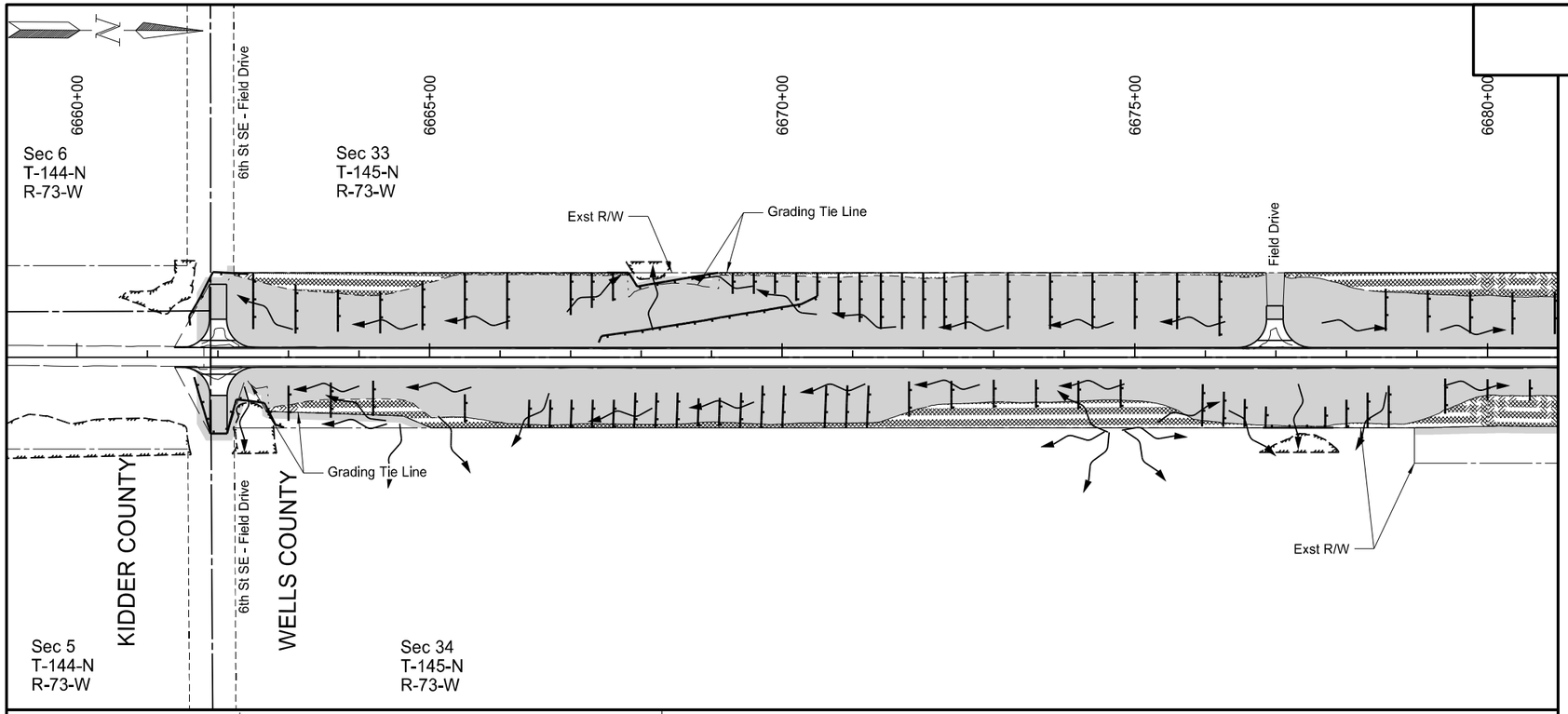
ND 3
Tuttle N to W Jct 200

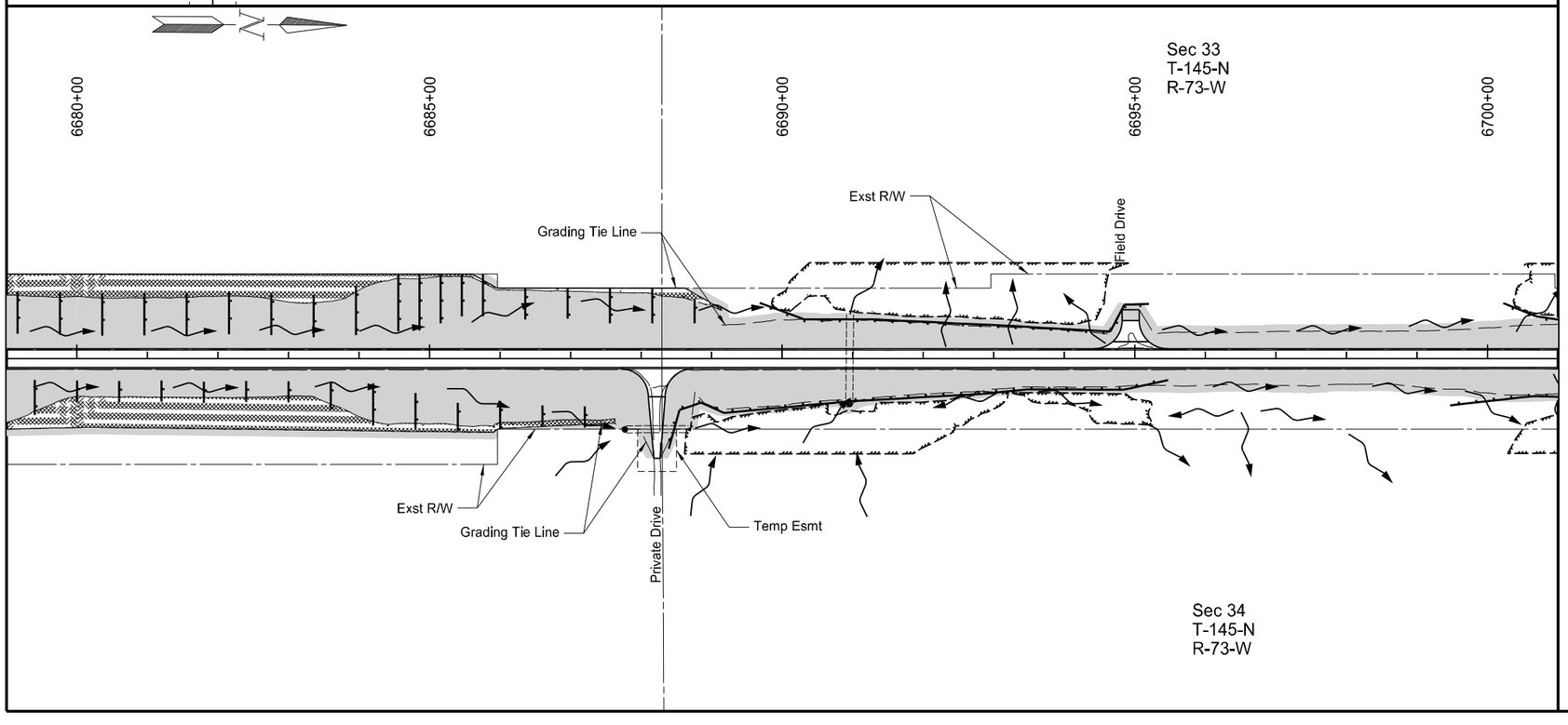
6660+00 to 6661+89.5
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	77	19

SPEC	CODE	BID ITEM		QTY	UNIT
251	0200	SEEDING CLASS II			
		Sta 6661+90	to Sta 6700+00	13.91	ACRE
253	0101	STRAW MULCH			
		Sta 6661+90	to Sta 6700+00	12.01	ACRE
255	0101	ECB TYPE 1			
		Sta 6661+90	to Sta 6700+00	9207	SY

*NOTE: See Section 77, Sheets 30-33 for Fiber Roll data.





Legend

- Seeding Class II Straw Mulch
- Wetland Seeding Straw Mulch
- Erosion Control Blanket
- Rolled Concrete Erosion Control Blanket
- Remove and Replace Riprap
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- Fiber Roll(12" or 20")
- Culvert Protection(12" or 20")

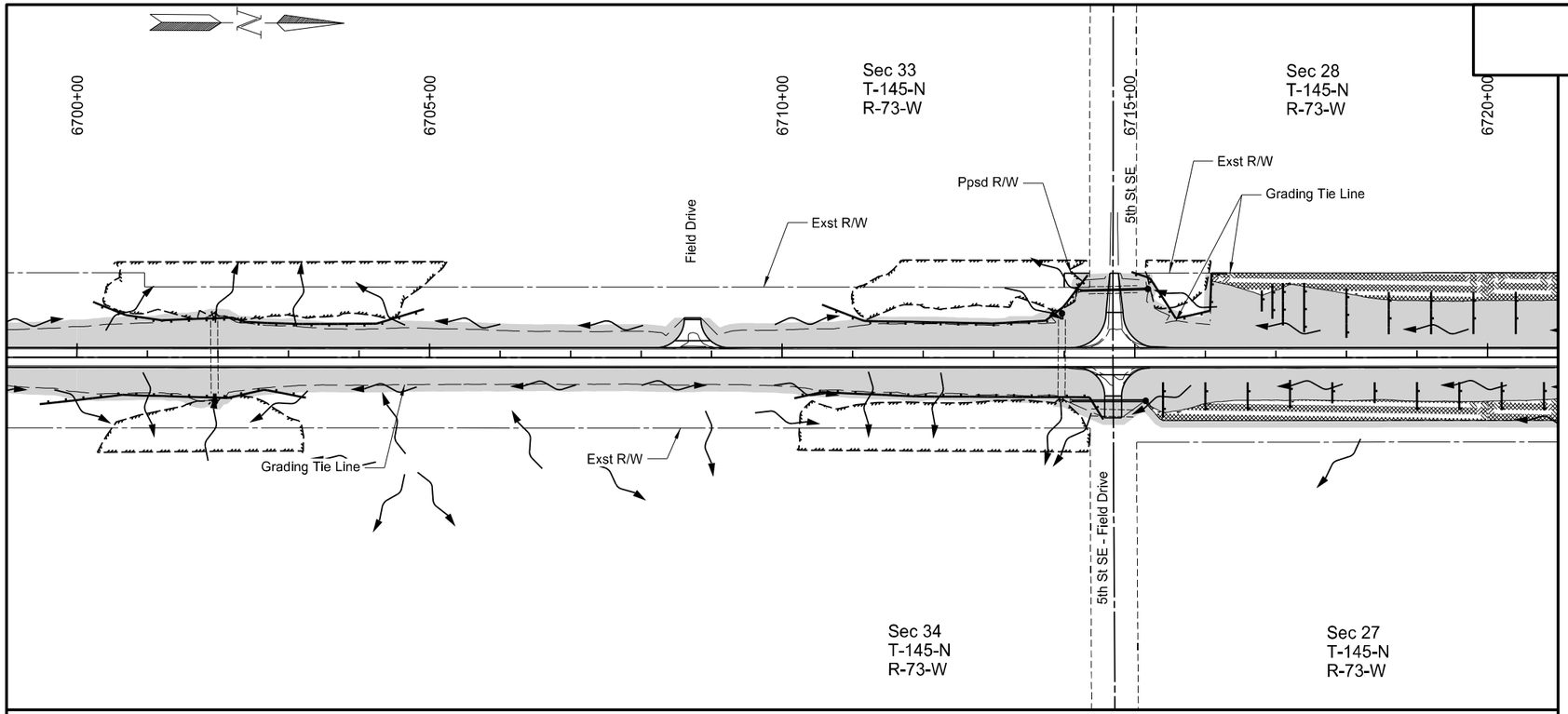
REGISTERED PROFESSIONAL ENGINEER
KORY [illegible]
KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

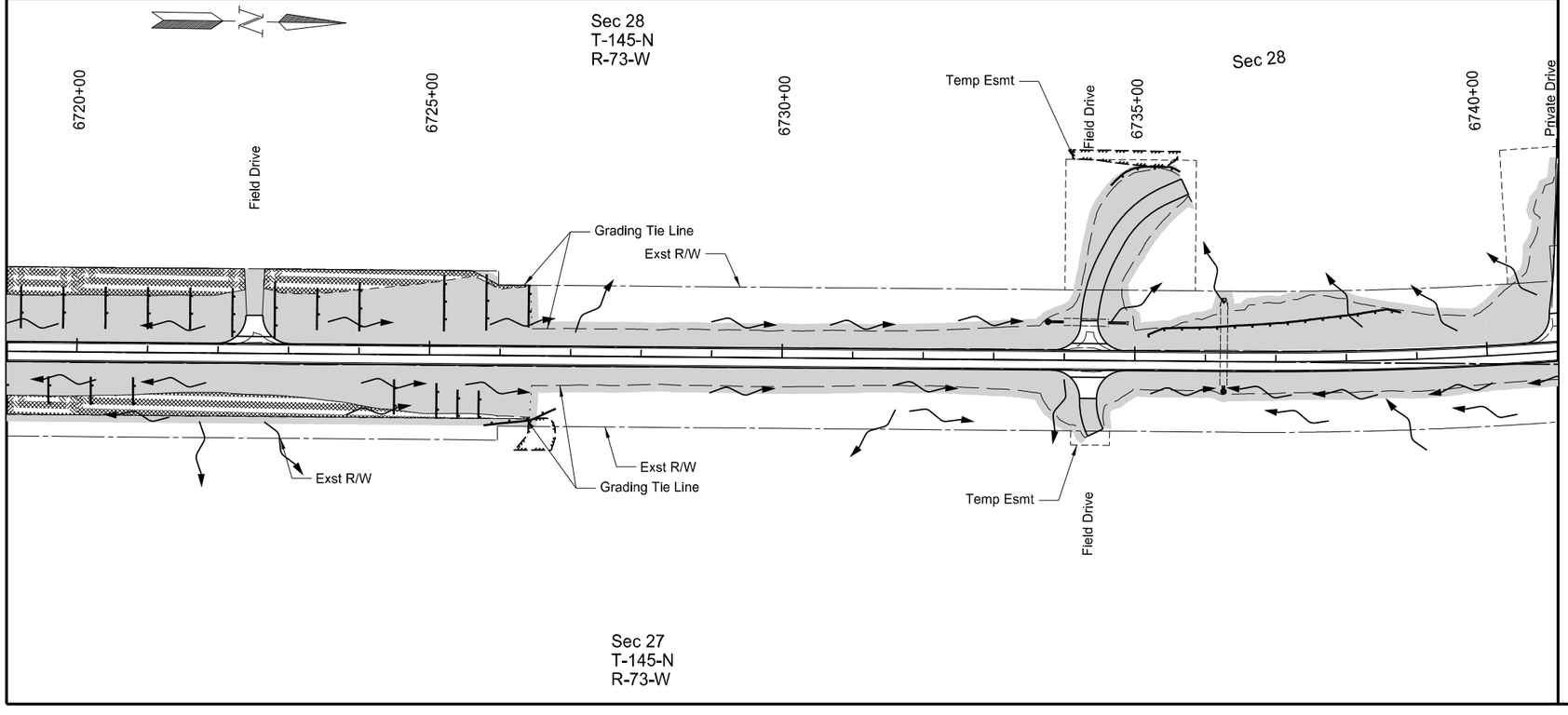
Permanent Erosion Control

ND 3
Tuttle N to W Jct 200

6661+89.5 to 6700+00
Wells County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	77	20





SPEC	CODE	BID ITEM		QTY	UNIT
251	0200	SEEDING CLASS II			
		Sta 6700+00	to Sta 6740+00	10.93	ACRE
253	0101	STRAW MULCH			
		Sta 6700+00	to Sta 6740+00	9.68	ACRE
255	0101	ECB TYPE 1			
		Sta 6700+00	to Sta 6740+00	6059	SY

*NOTE: See Section 77, Sheets 30-33 for Fiber Roll data.

Legend

- Seeding Class II Straw Mulch
- Wetland Seeding Straw Mulch
- Erosion Control Blanket
- Rolled Concrete Erosion Control Blanket
- Remove and Replace Riprap
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- Fiber Roll(12" or 20")
- Culvert Protection(12" or 20")

REGISTERED PROFESSIONAL ENGINEER
KORY M. KLEINKNECHT
PE-27748
DATE 12/15/2021
NORTH DAKOTA

Permanent Erosion Control

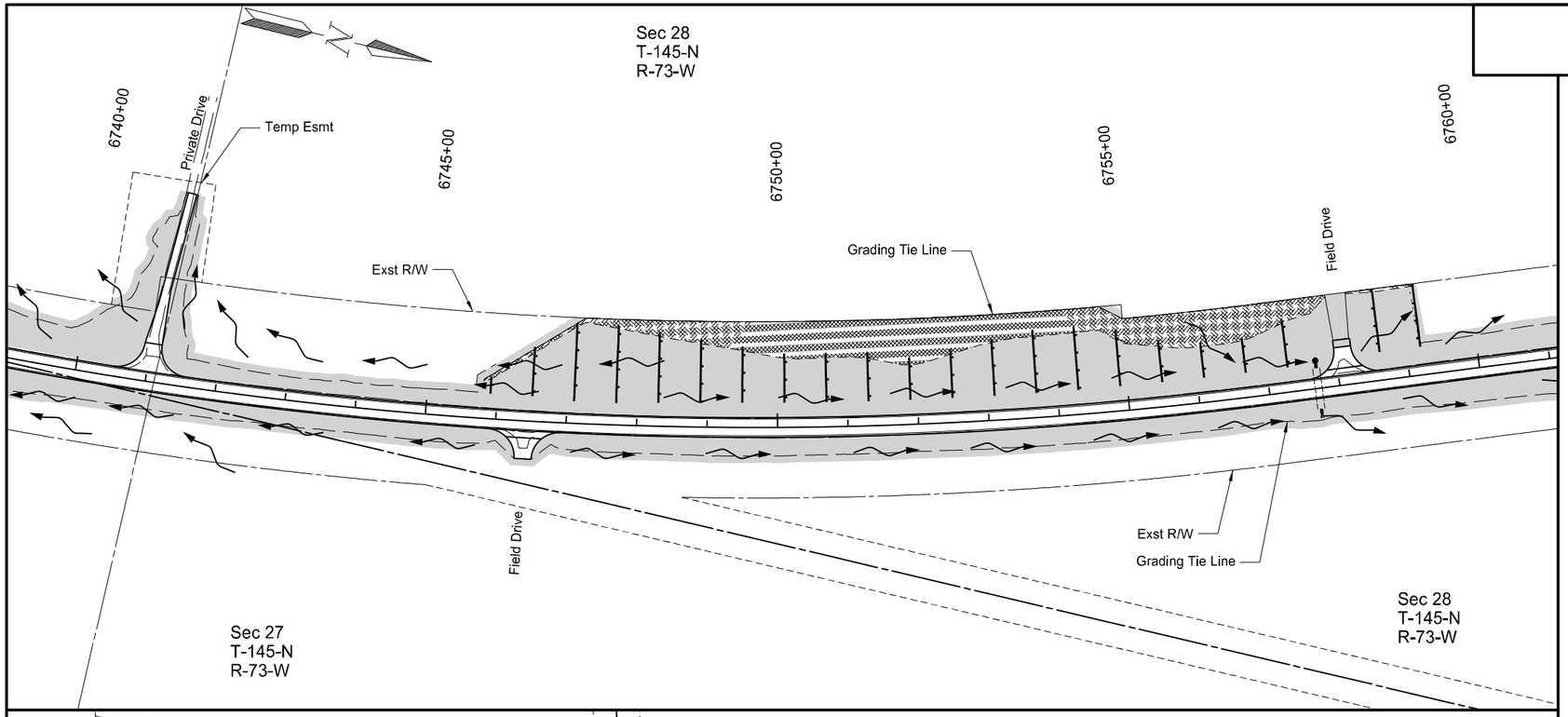
ND 3
Tuttle N to W Jct 200

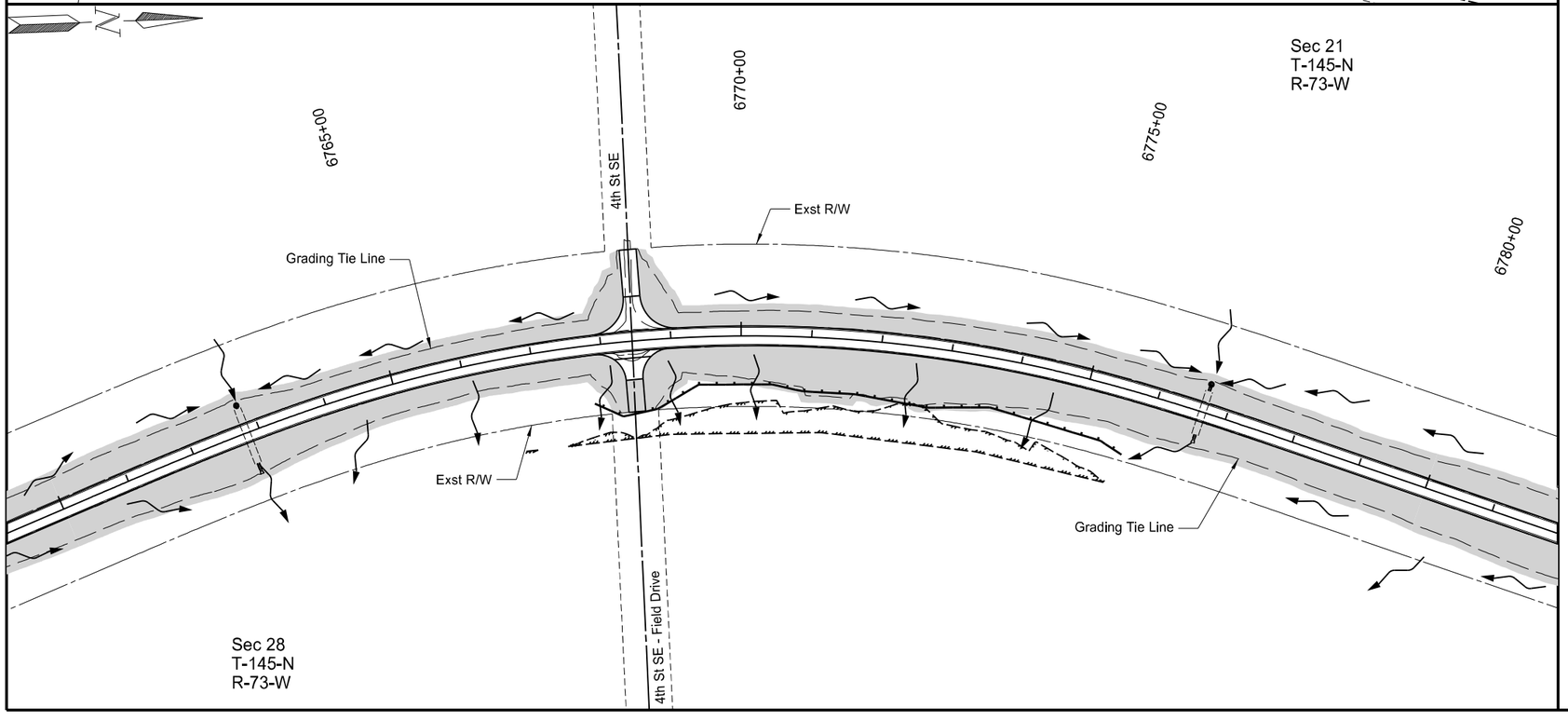
6700+00 to 6740+00
Wells County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	77	21

SPEC	CODE	BID ITEM		QTY	UNIT
251	0200	SEEDING CLASS II			
		Sta 6740+00	to Sta 6780+00	10.36	ACRE
253	0101	STRAW MULCH			
		Sta 6740+00	to Sta 6780+00	9.38	ACRE
255	0101	ECB TYPE 1			
		Sta 6740+00	to Sta 6780+00	4743	SY

*NOTE: See Section 77, Sheets 30-33 for Fiber Roll data.





Legend

- Seeding Class II Straw Mulch
- Wetland Seeding Straw Mulch
- Erosion Control Blanket
- Rolled Concrete Erosion Control Blanket
- Remove and Replace Riprap
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- Fiber Roll(12" or 20")
- Culvert Protection(12" or 20")

REGISTERED PROFESSIONAL ENGINEER
KORY M. KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Permanent Erosion Control

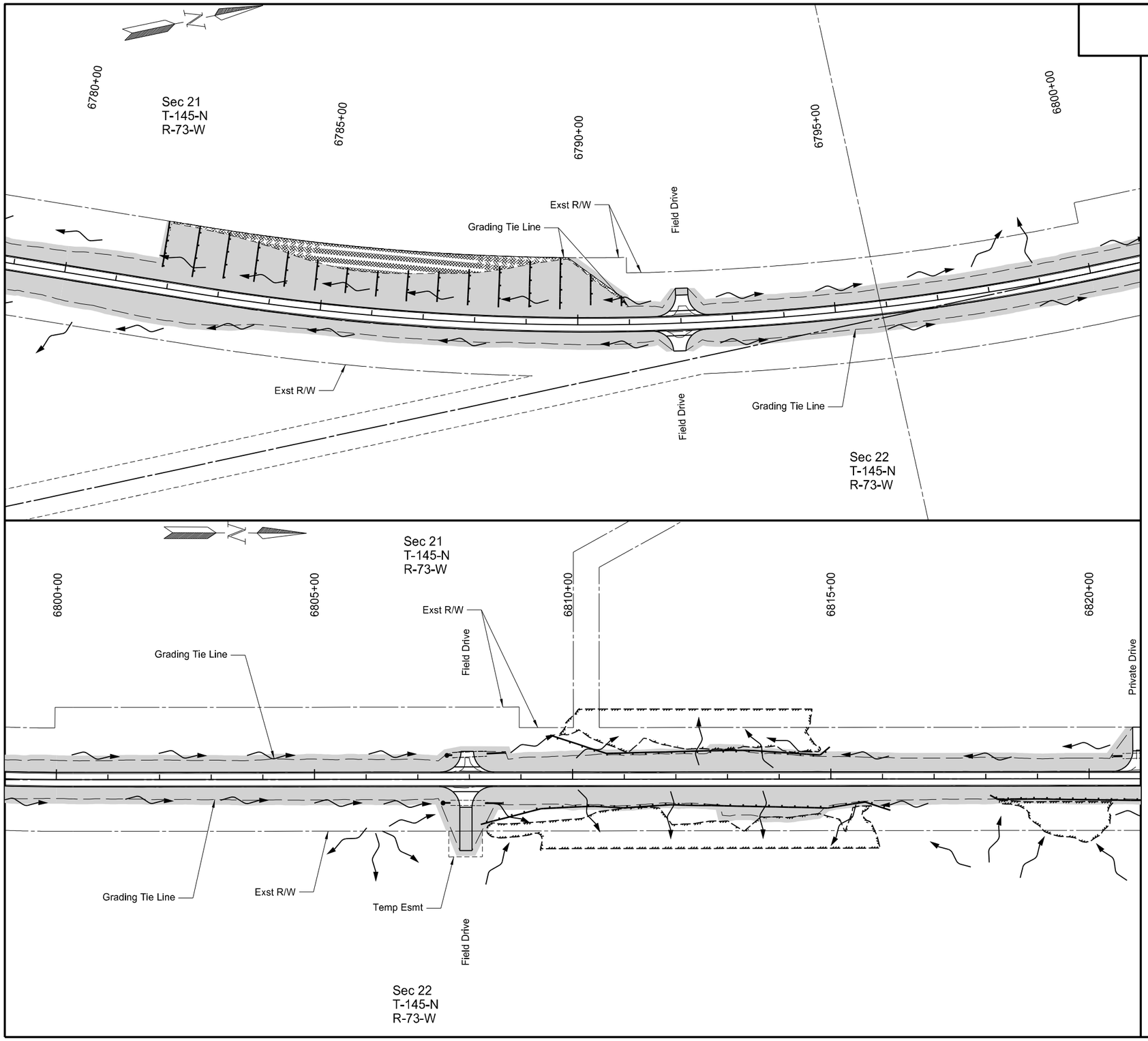
ND 3
Tuttle N to W Jct 200

6740+00 to 6780+00
Wells County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	77	22

SPEC	CODE	BID ITEM		QTY	UNIT
251	0200	SEEDING CLASS II			
		Sta 6780+00	to Sta 6820+00	8.62	ACRE
253	0101	STRAW MULCH			
		Sta 6780+00	to Sta 6820+00	8.13	ACRE
255	0101	ECB TYPE 1			
		Sta 6780+00	to Sta 6820+00	2372	SY

*NOTE: See Section 77, Sheets 30-33 for Fiber Roll data.



Legend

- Seeding Class II Straw Mulch
- Wetland Seeding Straw Mulch
- Erosion Control Blanket
- Rolled Concrete Erosion Control Blanket
- Remove and Replace Riprap
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- Fiber Roll(12" or 20")
- Culvert Protection(12" or 20")

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 12/15/2021
NORTH DAKOTA

Permanent Erosion Control

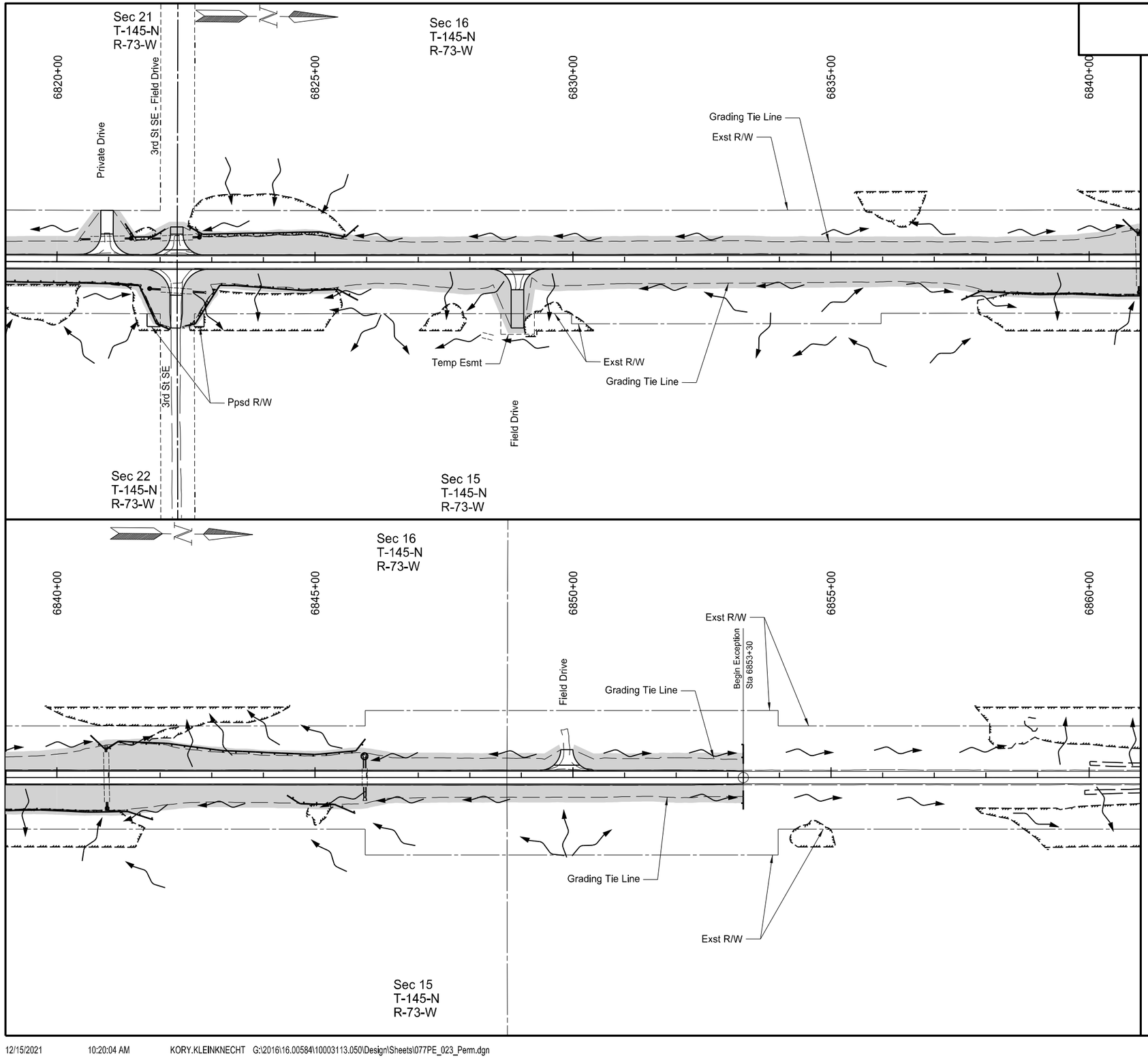
ND 3
Tuttle N to W Jct 200

6780+00 to 6820+00
Wells County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	77	23

SPEC	CODE	BID ITEM		QTY	UNIT
251	0200	SEEDING CLASS II			
		Sta 6820+00	to Sta 6860+00	6.32	ACRE
253	0101	STRAW MULCH			
		Sta 6820+00	to Sta 6860+00	6.32	ACRE

*NOTE: See Section 77, Sheets 30-33 for Fiber Roll data.



Legend

- Seeding Class II Straw Mulch
- Wetland Seeding Straw Mulch
- Erosion Control Blanket
- Rolled Concrete Erosion Control Blanket
- Remove and Replace Riprap
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- Fiber Roll(12" or 20")
- Culvert Protection(12" or 20")

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-2774
DATE 12/15/2021
NORTH DAKOTA

Permanent Erosion Control

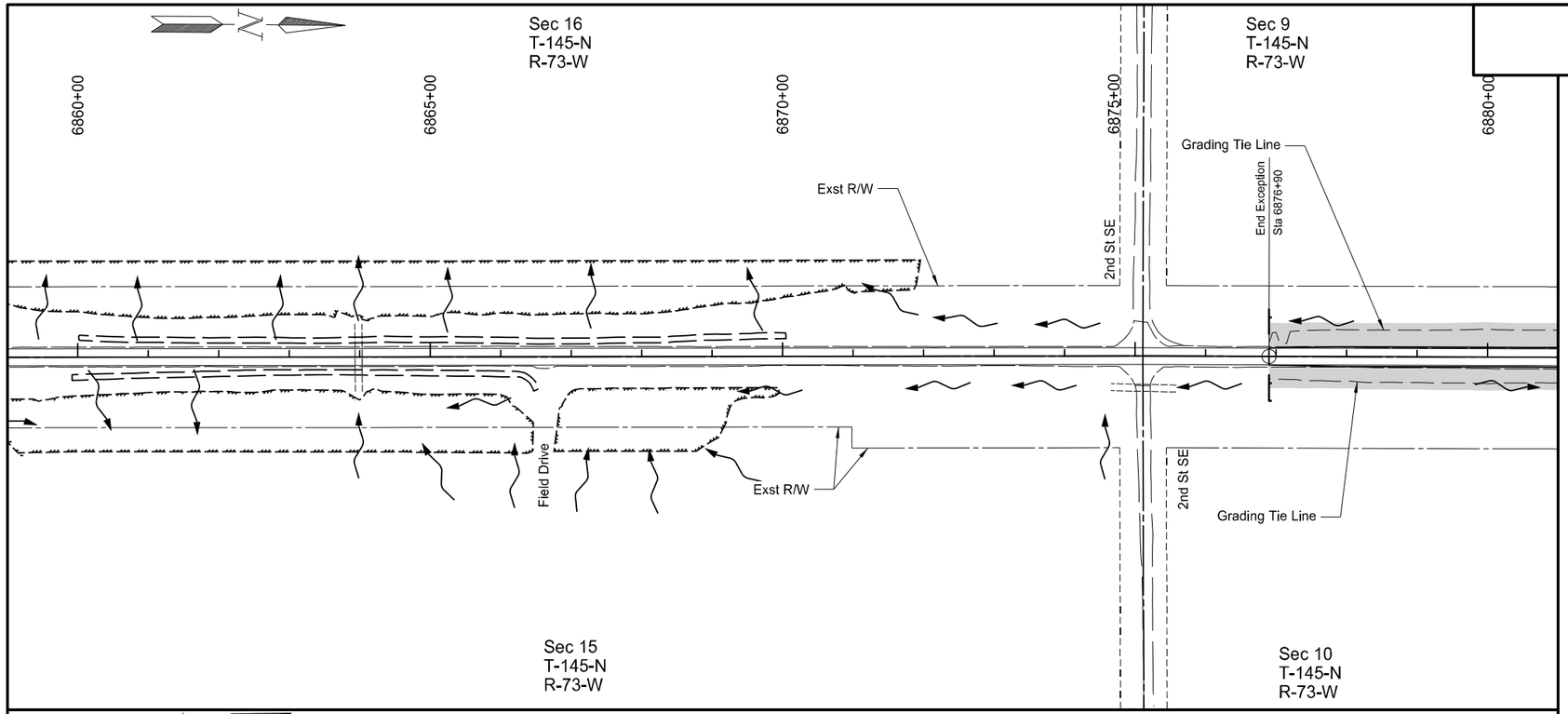
ND 3
Tuttle N to W Jct 200

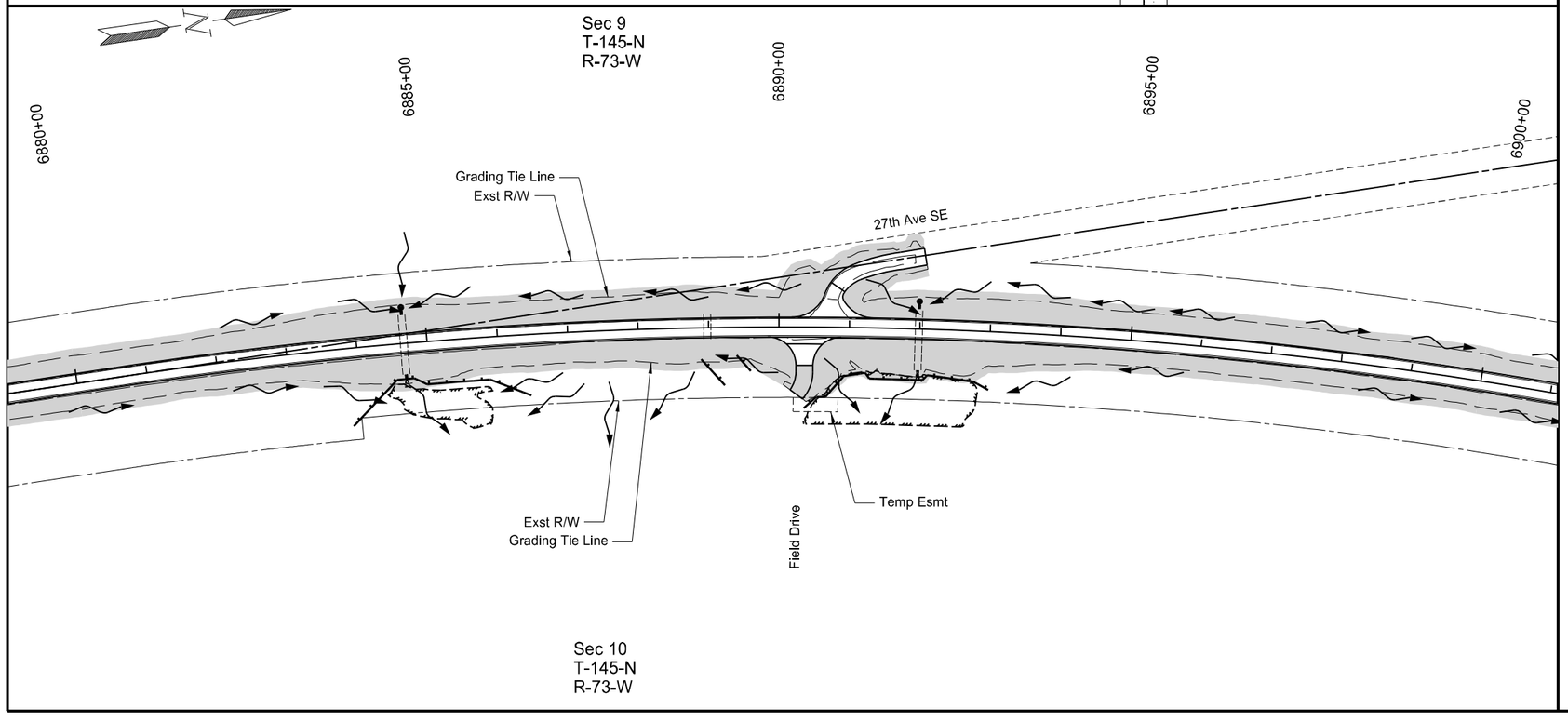
6820+00 to 6860+00
Wells County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	77	24

SPEC	CODE	BID ITEM		QTY	UNIT
251	0200	SEEDING CLASS II			
		Sta 6860+00	to Sta 6900+00	4.34	ACRE
253	0101	STRAW MULCH			
		Sta 6860+00	to Sta 6900+00	4.34	ACRE

*NOTE: See Section 77, Sheets 30-33 for Fiber Roll data.





Legend

- Seeding Class II Straw Mulch
- Wetland Seeding Straw Mulch
- Erosion Control Blanket
- Rolled Concrete Erosion Control Blanket
- Remove and Replace Riprap
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- Fiber Roll(12" or 20")
- Culvert Protection(12" or 20")

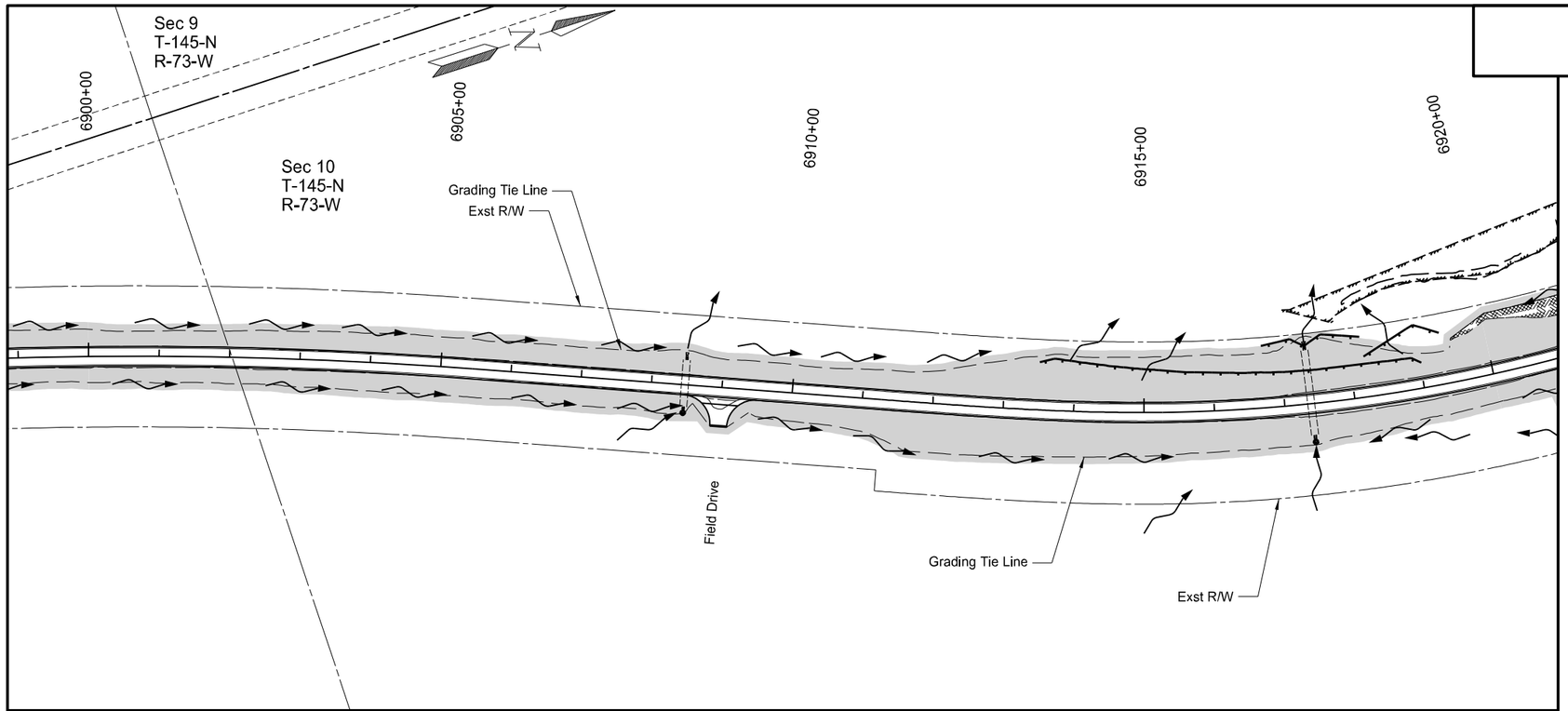
REGISTERED PROFESSIONAL ENGINEER
KORY M. KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

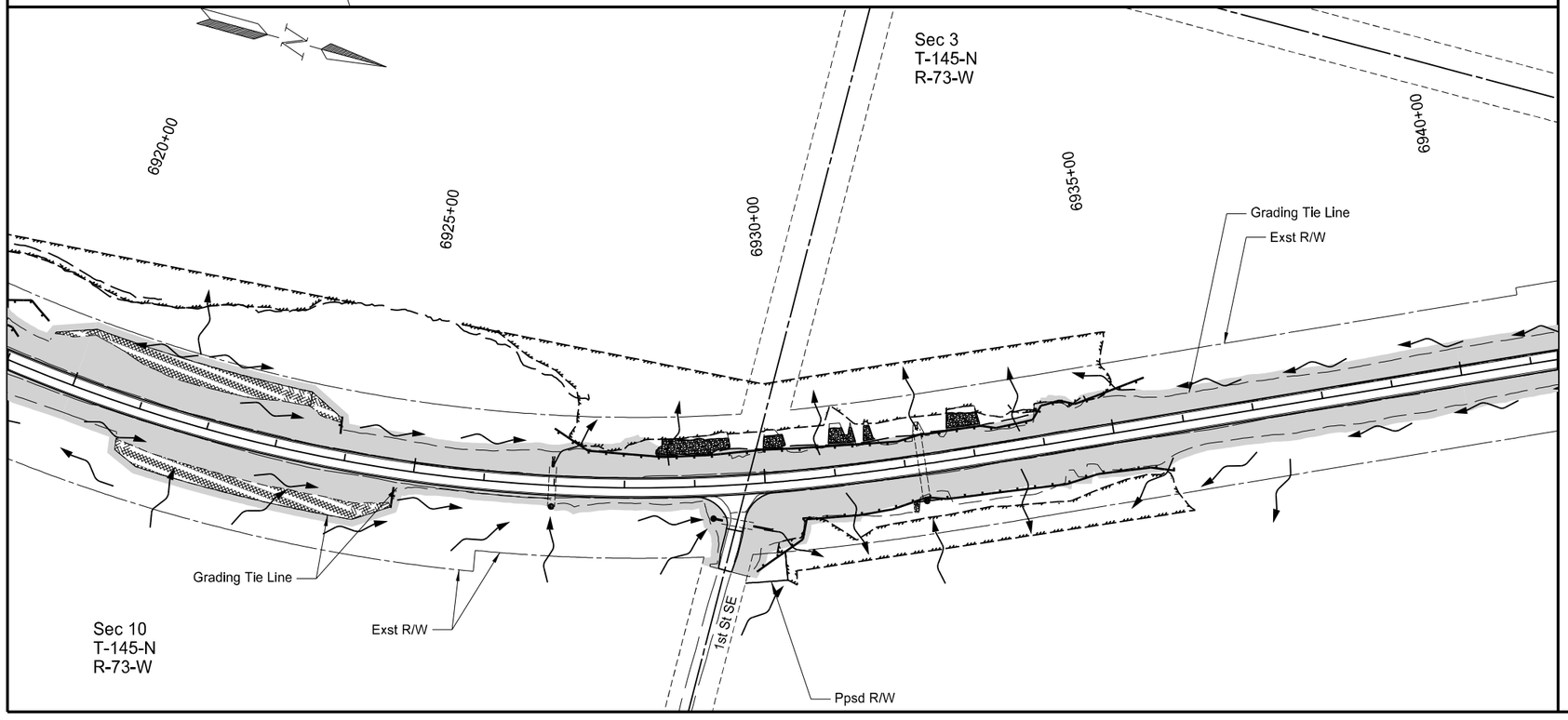
Permanent Erosion Control

ND 3
Tuttle N to W Jct 200

6860+00 to 6900+00
Wells County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	77	25





SPEC	CODE	BID ITEM				QTY	UNIT
251	0200	SEEDING CLASS II					
		Sta 6900+00		to Sta 6940+00		8.44	ACRE
253	0101	STRAW MULCH					
		Sta 6900+00		to Sta 6940+00		8.02	ACRE
255	0101	ECB TYPE 1					
		Sta 6900+00		to Sta 6940+00		2008	SY
256	0701	REMOVE AND REPLACE RIPRAP					
		Sta 6928+45	LT	to Sta 6929+53	LT	142	CY
		Sta 6930+01	LT	to Sta 6930+33	LT	36	CY
		Sta 6930+96	LT	to Sta 6931+34	LT	48	CY
		Sta 6931+46	LT	to Sta 6931+63	LT	16	CY
		Sta 6932+04	RT	to Sta 6932+14	RT	9	CY
		Sta 6932+66	LT	to Sta 6933+14	LT	62	CY
		Sta 6933+93	LT	to Sta 6933+97	LT	1	CY
709	0155	GEOSYNTHETIC MATERIAL TYPE RR					
		Sta 6928+45	LT	to Sta 6929+53	LT	250	SY
		Sta 6930+01	LT	to Sta 6930+33	LT	64	SY
		Sta 6930+96	LT	to Sta 6931+34	LT	85	SY
		Sta 6931+46	LT	to Sta 6931+63	LT	30	SY
		Sta 6932+04	RT	to Sta 6932+14	RT	17	SY
		Sta 6932+66	LT	to Sta 6933+14	LT	109	SY
		Sta 6933+93	LT	to Sta 6933+97	LT	3	SY

*NOTE: See Section 77, Sheets 30-33 for Fiber Roll data.

Legend

- Seeding Class II Straw Mulch
- Wetland Seeding Straw Mulch
- Erosion Control Blanket
- Rolled Concrete Erosion Control Blanket
- Remove and Replace Riprap
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- Fiber Roll(12" or 20")
- Culvert Protection(12" or 20")

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

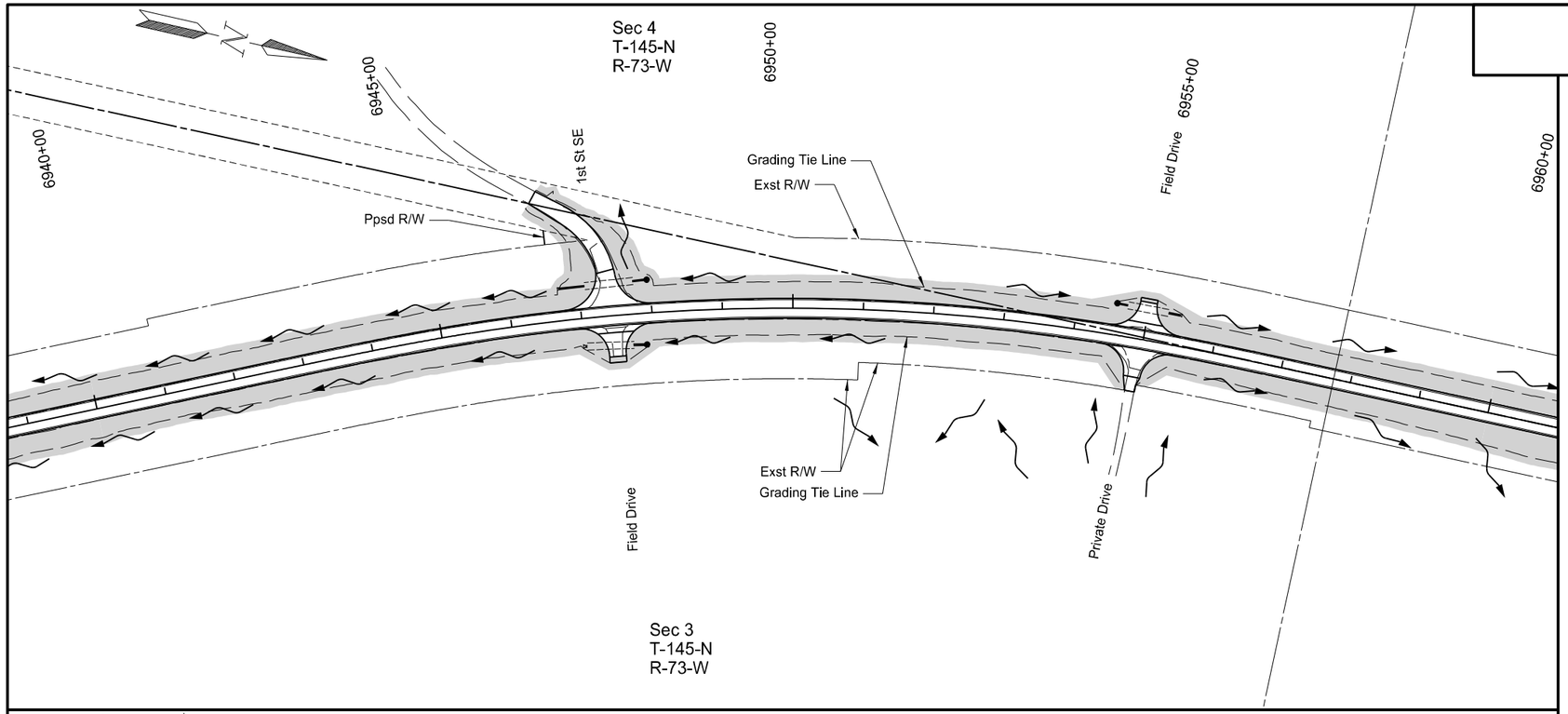
Permanent Erosion Control

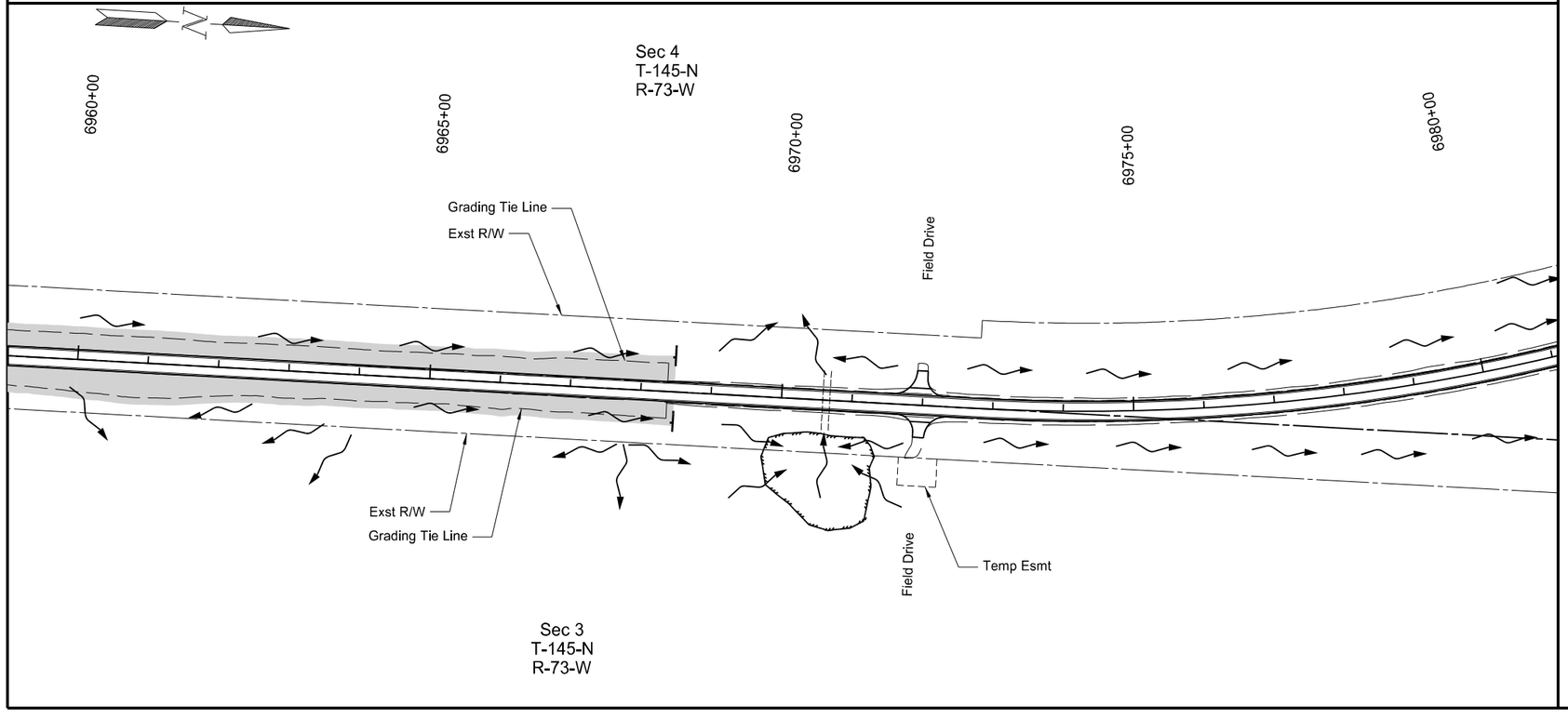
ND 3
Tuttle N to W Jct 200

6900+00 to 6940+00
Wells County

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STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	77	26





SPEC	CODE	BID ITEM		QTY	UNIT
251	0200	SEEDING CLASS II			
		Sta 6940+00	to Sta 6980+00	4.63	ACRE
253	0101	STRAW MULCH			
		Sta 6940+00	to Sta 6980+00	4.63	ACRE

*NOTE: See Section 77, Sheets 30-33 for Fiber Roll data.

Legend

- Seeding Class II Straw Mulch
- Wetland Seeding Straw Mulch
- Erosion Control Blanket
- Rolled Concrete Erosion Control Blanket
- Remove and Replace Riprap
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- Fiber Roll(12" or 20")
- Culvert Protection(12" or 20")

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27748
DATE 12/15/2021
NORTH DAKOTA

Permanent Erosion Control

ND 3
Tuttle N to W Jct 200

6940+00 to 6980+00
Wells County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	77	27



Legend

- Seeding Class II Straw Mulch
- Wetland Seeding Straw Mulch
- Erosion Control Blanket
- Rolled Concrete Erosion Control Blanket
- Remove and Replace Riprap
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- Fiber Roll(12" or 20")
- Culvert Protection(12" or 20")

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL
KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Permanent Erosion Control

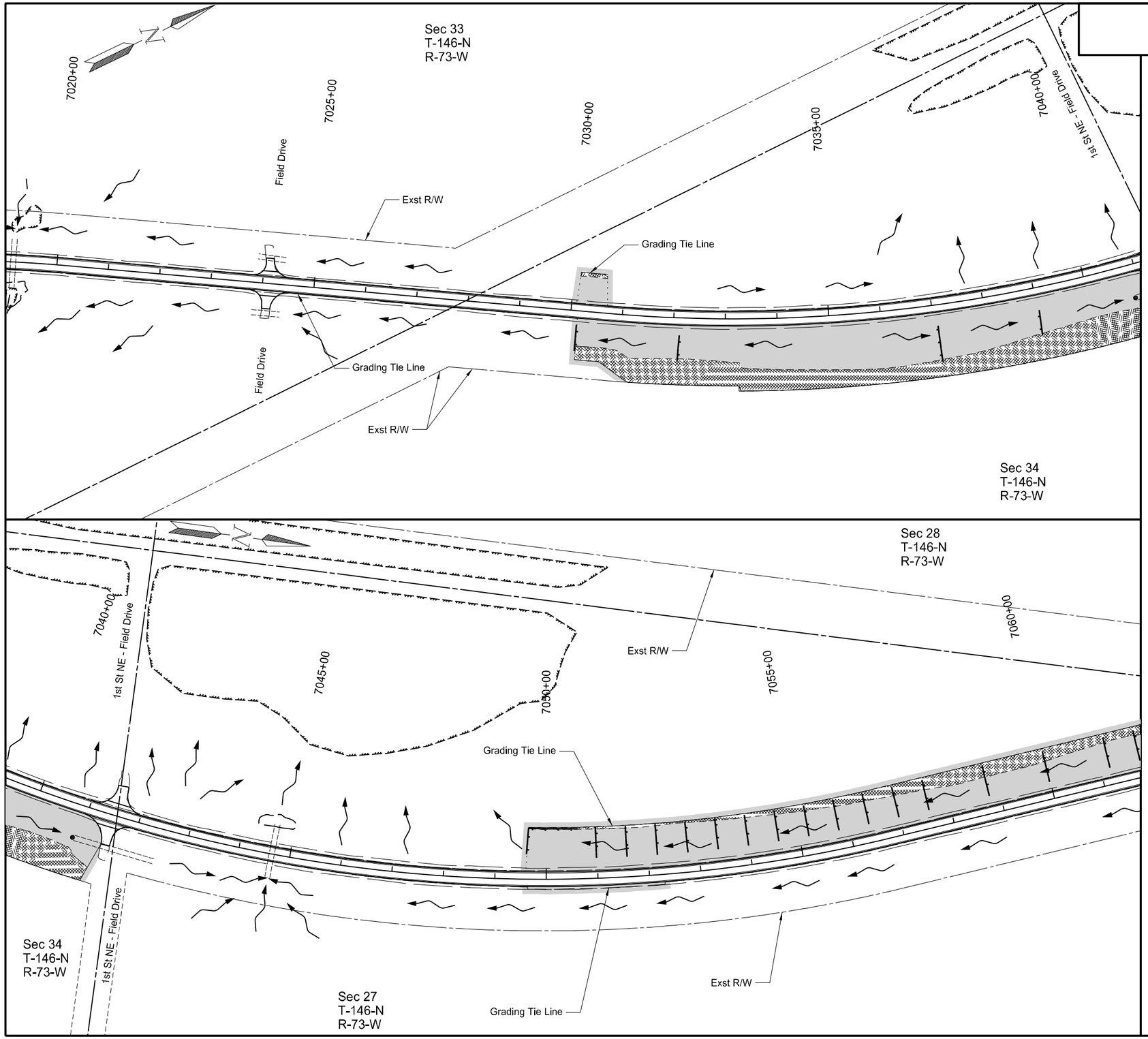
ND 3
Tuttle N to W Jct 200

6980+00 to 7020+00
Wells County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	77	28

SPEC	CODE	BID ITEM		QTY	UNIT
251	0200	SEEDING CLASS II			
		Sta 7020+00	to Sta 7060+00	5.73	ACRE
253	0101	STRAW MULCH			
		Sta 7020+00	to Sta 7060+00	4.28	ACRE
255	0101	ECB TYPE 1			
		Sta 7020+00	to Sta 7060+00	7019	SY

*NOTE: See Section 77, Sheets 30-33 for Fiber Roll data.



Legend

- Seeding Class II Straw Mulch
- Wetland Seeding Straw Mulch
- Erosion Control Blanket
- Rolled Concrete Erosion Control Blanket
- Remove and Replace Riprap
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- Fiber Roll(12" or 20")
- Culvert Protection(12" or 20")

REGISTERED PROFESSIONAL ENGINEER
KORY M. KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Permanent Erosion Control

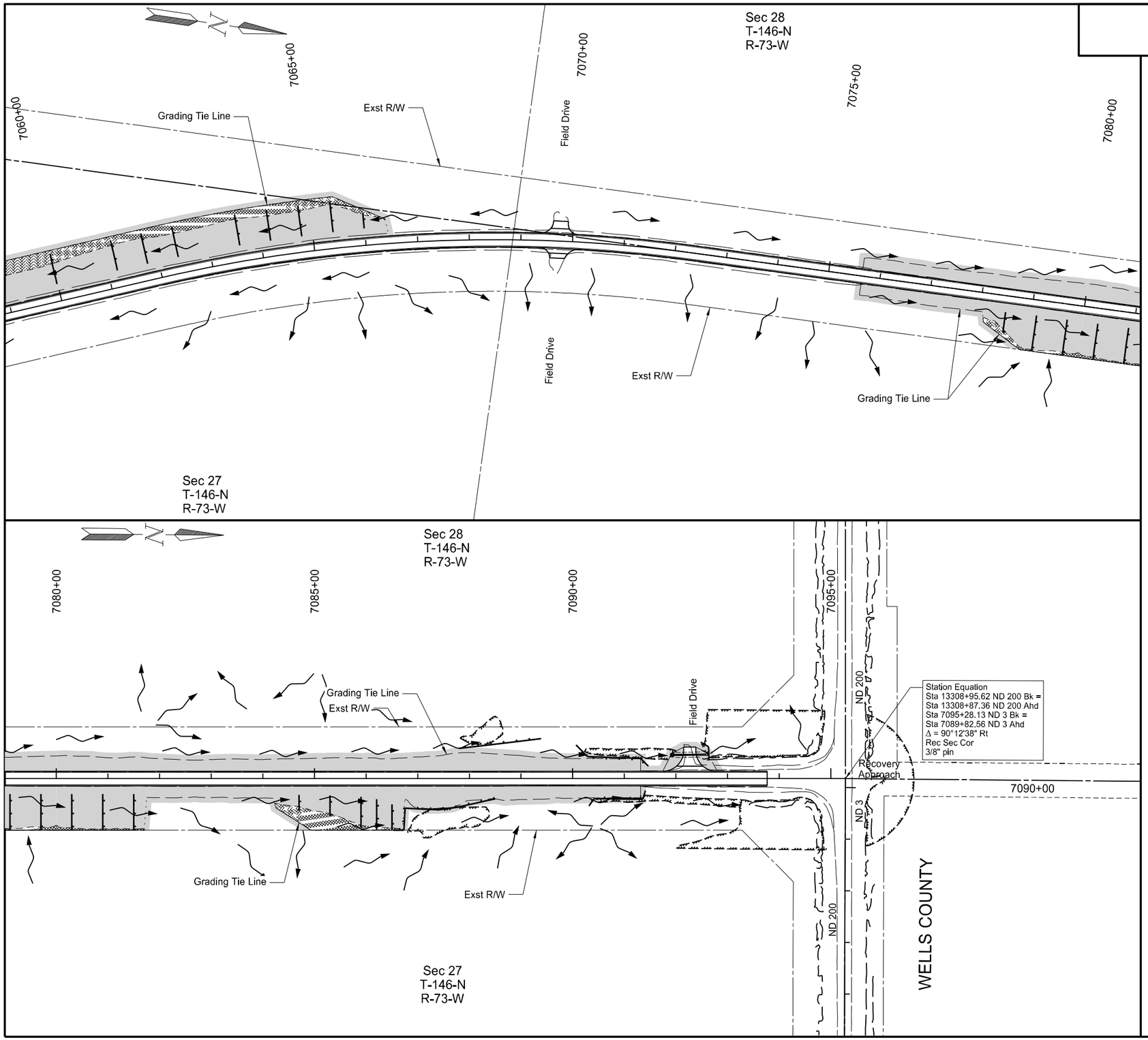
ND 3
Tuttle N to W Jct 200

7020+00 to 7060+00
Wells County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	77	29

SPEC	CODE	BID ITEM		QTY	UNIT
251	0200	SEEDING CLASS II			
		Sta 7060+00	to Sta 7093+76	4.80	ACRE
253	0101	STRAW MULCH			
		Sta 7060+00	to Sta 7093+76	4.38	ACRE
255	0101	ECB TYPE 1			
		Sta 7060+00	to Sta 7093+76	2039	SY

*NOTE: See Section 77, Sheets 30-33 for Fiber Roll data.



Legend

- Seeding Class II Straw Mulch
- Wetland Seeding Straw Mulch
- Erosion Control Blanket
- Rolled Concrete Erosion Control Blanket
- Remove and Replace Riprap
- Grading Tie Line (Fill)
- Grading Tie Line (Cut)
- Grading Tie Line (Transition)
- Fiber Roll(12" or 20")
- Culvert Protection(12" or 20")

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27748
DATE 12/15/2021
NORTH DAKOTA

Permanent Erosion Control

ND 3
Tuttle N to W Jct 200

7060+00 to 7093+76.57
Wells County

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	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	77	30

PERMANENT EROSION CONTROL - DITCH CHECKS, CULVERT PROTECTION & RUNOFF PROTECTION

12" Fiber Rolls

Station	to	Station	Offset	Length (LF)
5980+49	to	5983+13	LT	279
5984+80	to	5985+60	RT	80
5985+50	to	5985+56	LT	20
5989+12	to	5993+32	RT	421
5991+19	to	5991+25	LT	20
5992+18	to	5996+77	LT	486
5992+52	to	5992+58	RT	20
5997+74	to	5997+74	RT	40
5998+74	to	5998+74	RT	40
5999+74	to	5999+74	RT	40
6000+74	to	6000+74	RT	40
6001+28	to	6003+72	LT	244
6003+32	to	6003+37	RT	20
6010+23	to	6010+23	RT	40
6014+78	to	6026+98	RT	1232
6015+18	to	6021+51	LT	684
6018+27	to	6018+33	LT	20
6022+75	to	6025+08	LT	262
6023+53	to	6023+59	LT	20
6029+53	to	6031+61	LT	265
6032+75	to	6032+81	RT	20
6037+10	to	6038+92	LT	207
6040+46	to	6040+52	RT	20
6045+05	to	6065+32	LT	2061
6045+68	to	6065+58	RT	2059
6053+40	to	6053+46	LT	20
6065+80	to	6065+80	LT	50
6066+12	to	6066+12	RT	40
6066+40	to	6066+40	LT	50
6066+72	to	6066+72	RT	40
6067+00	to	6067+00	LT	50
6067+32	to	6067+32	RT	40
6067+60	to	6067+60	LT	50
6067+92	to	6067+92	RT	40
6068+20	to	6068+20	LT	50
6068+52	to	6068+52	RT	50
6069+25	to	6073+60	LT	454
6069+71	to	6074+83	RT	522
6070+85	to	6070+92	LT	20
6081+60	to	6084+30	LT	288
			TOTAL	**10404**

12" Fiber Rolls

Station	to	Station	Offset	Length (LF)
6081+88	to	6084+30	RT	255
6084+89	to	6084+95	LT	20
6085+00	to	6085+06	RT	20
6094+77	to	6095+97	RT	120
6104+07	to	6105+27	RT	120
6104+34	to	6104+41	LT	20
6110+89	to	6110+96	LT	20
6112+74	to	6118+76	RT	623
6113+19	to	6119+75	LT	686
6115+38	to	6115+45	LT	20
6121+10	to	6125+38	LT	452
6122+57	to	6122+63	RT	20
6129+98	to	6132+17	LT	232
6130+58	to	6130+64	RT	20
6137+62	to	6137+69	RT	20
6137+98	to	6138+04	LT	20
6143+38	to	6150+59	LT	765
6144+74	to	6150+23	RT	575
6151+93	to	6155+70	LT	422
6151+91	to	6151+97	LT	20
6152+98	to	6155+69	RT	272
6158+52	to	6161+73	LT	337
6158+54	to	6159+54	RT	100
6162+97	to	6164+84	RT	193
6170+60	to	6171+80	RT	120
6170+94	to	6171+00	LT	20
6183+29	to	6185+29	RT	200
6184+95	to	6185+02	LT	20
6187+47	to	6187+47	LT	25
6188+10	to	6188+10	LT	50
6188+70	to	6188+70	LT	60
6189+30	to	6189+30	LT	60
6189+90	to	6189+90	LT	60
6190+50	to	6190+50	LT	70
6191+11	to	6192+71	RT	160
6191+45	to	6191+51	LT	20
6195+03	to	6195+03	LT	80
6195+63	to	6195+63	LT	80
6196+23	to	6196+23	LT	70
6196+83	to	6196+83	LT	50
			TOTAL	**6497**

12" Fiber Rolls

Station	to	Station	Offset	Length (LF)
6197+43	to	6197+43	LT	40
6198+03	to	6198+03	LT	45
6198+63	to	6198+63	LT	45
6199+23	to	6199+23	LT	50
6199+83	to	6199+83	LT	60
6200+43	to	6200+43	LT	60
6200+82	to	6201+22	RT	40
6201+14	to	6201+20	LT	20
6201+63	to	6201+63	LT	60
6202+23	to	6202+23	LT	40
6202+83	to	6202+83	LT	50
6203+43	to	6203+43	LT	50
6204+03	to	6204+03	LT	60
6204+63	to	6204+63	LT	60
6205+23	to	6205+23	LT	50
6205+83	to	6205+83	LT	25
6208+35	to	6209+92	RT	160
6209+94	to	6210+01	LT	20
6221+90	to	6224+25	RT	264
6224+94	to	6225+00	LT	20
6230+23	to	6230+29	RT	20
6230+23	to	6230+29	RT	20
6240+40	to	6250+82	LT	1064
6245+18	to	6250+83	LT	582
6246+26	to	6246+32	RT	20
6250+81	to	6253+12	LT	241
6253+02	to	6264+04	LT	1137
6253+03	to	6264+24	LT	1140
6263+33	to	6263+39	LT	20
6263+34	to	6263+40	RT	20
6264+84	to	6266+00	LT	120
6265+12	to	6267+12	RT	208
6268+20	to	6268+20	RT	50
6268+80	to	6268+80	RT	60
6268+82	to	6268+85	LT	60
6269+40	to	6269+40	RT	60
6269+45	to	6269+45	LT	60
6270+00	to	6270+00	RT	60
6270+05	to	6270+05	LT	60
6270+60	to	6270+60	RT	60
			TOTAL	**6281**

12" Fiber Rolls

Station	to	Station	Offset	Length (LF)
6270+65	to	6270+65	LT	60
6271+20	to	6271+20	RT	55
6271+25	to	6271+25	LT	70
6271+79	to	6271+80	RT	25
6271+85	to	6271+85	LT	80
6272+45	to	6272+45	LT	80
6272+90	to	6272+91	RT	35
6273+05	to	6273+04	LT	90
6273+50	to	6273+50	RT	50
6273+65	to	6273+65	LT	90
6274+10	to	6274+10	RT	60
6274+25	to	6274+25	LT	90
6274+70	to	6274+70	RT	70
6274+85	to	6274+85	LT	80
6279+10	to	6279+10	RT	70
6279+50	to	6279+50	LT	40
6280+09	to	6280+09	RT	70
6280+10	to	6280+10	LT	50
6280+70	to	6280+70	LT	70
6280+90	to	6280+90	RT	70
6281+30	to	6281+30	LT	90
6281+50	to	6281+50	RT	60
6281+90	to	6284+74	LT	333
6282+10	to	6282+10	RT	60
6282+37	to	6286+07	LT	360
6282+70	to	6282+70	RT	80
6283+31	to	6283+31	RT	80
6283+90	to	6283+90	RT	80
6284+50	to	6284+50	RT	80
6285+10	to	6285+10	RT	70
6285+64	to	6285+71	RT	20
6286+64	to	6286+65	RT	70
6287+24	to	6287+25	RT	70
6287+85	to	6287+85	RT	70
6288+45	to	6288+45	RT	70
6289+05	to	6289+05	RT	70
6291+20	to	6291+22	RT	60
6291+80	to	6291+82	RT	50
6292+41	to	6292+42	RT	60
6293+04	to	6293+10	RT	20
			TOTAL	**3158**

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Permanent Erosion Control

ND 3
Tuttle N to W Jct 200

12" Fiber Rolls

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	77	31

PERMANENT EROSION CONTROL - DITCH CHECKS, CULVERT PROTECTION & RUNOFF PROTECTION

12" Fiber Rolls

Station	to	Station	Offset	Length (LF)
6294+05	to	6294+42	RT	63
6294+35	to	6294+72	RT	63
6294+54	to	6296+54	RT	297
6294+65	to	6295+02	RT	63
6295+34	to	6295+40	LT	20
6298+99	to	6299+05	LT	20
6308+41	to	6313+04	RT	467
6308+62	to	6308+68	LT	20
6310+06	to	6313+08	LT	307
6341+96	to	6342+03	RT	20
6341+96	to	6342+03	LT	20
6342+75	to	6342+77	LT	34
6342+85	to	6343+05	RT	56
6351+85	to	6361+91	RT	1075
6359+32	to	6362+11	LT	281
6360+12	to	6360+19	LT	20
6370+69	to	6370+75	RT	20
6387+94	to	6388+00	RT	20
6409+95	to	6414+85	LT	499
6413+08	to	6413+14	RT	20
6424+16	to	6432+63	RT	848
6424+45	to	6435+10	LT	1078
6426+53	to	6426+59	LT	20
6435+60	to	6439+38	LT	397
6435+73	to	6435+79	LT	20
6441+38	to	6446+25	LT	518
6442+69	to	6446+09	RT	354
6443+72	to	6443+78	LT	20
6446+85	to	6446+85	RT	60
6447+07	to	6447+07	LT	65
6447+45	to	6447+45	RT	60
6447+67	to	6447+67	LT	60
6448+05	to	6448+05	RT	60
6448+27	to	6448+27	LT	60
6448+65	to	6448+65	RT	50
6448+87	to	6448+87	LT	60
6449+25	to	6449+25	RT	60
6449+47	to	6449+47	LT	65
6449+85	to	6449+85	RT	60
6450+07	to	6450+07	LT	65
			TOTAL	**7365**

12" Fiber Rolls

Station	to	Station	Offset	Length (LF)
6450+45	to	6450+45	RT	60
6450+67	to	6450+67	LT	65
6451+90	to	6451+96	RT	20
6452+69	to	6453+58	RT	88
6455+27	to	6456+20	RT	155
6455+39	to	6456+32	LT	158
6455+45	to	6455+52	RT	20
6456+54	to	6457+12	LT	119
6456+89	to	6456+96	RT	20
6460+00	to	6460+07	RT	20
6460+20	to	6460+20	LT	60
6460+30	to	6460+30	RT	50
6460+80	to	6460+80	LT	70
6460+90	to	6460+90	RT	76
6461+40	to	6461+40	LT	70
6461+50	to	6461+50	RT	110
6462+00	to	6462+00	LT	52
6462+10	to	6462+10	RT	115
6462+70	to	6462+70	RT	100
6462+77	to	6463+57	LT	80
6463+30	to	6463+30	RT	70
6463+80	to	6463+80	LT	60
6463+90	to	6463+90	RT	80
6464+40	to	6464+40	LT	60
6464+50	to	6464+50	RT	70
6465+10	to	6465+10	RT	40
6465+29	to	6466+69	LT	140
6465+70	to	6465+70	RT	40
6466+30	to	6466+30	RT	80
6466+99	to	6466+99	LT	60
6467+30	to	6467+30	RT	90
6468+30	to	6468+30	RT	90
6469+30	to	6469+30	RT	100
6469+80	to	6469+80	LT	60
6470+30	to	6470+30	RT	90
6471+00	to	6471+00	LT	60
6471+57	to	6472+10	LT	60
6472+20	to	6472+20	RT	60
6472+50	to	6472+50	RT	60
6472+80	to	6472+80	RT	48
			TOTAL	**2926**

12" Fiber Rolls

Station	to	Station	Offset	Length (LF)
6472+98	to	6473+70	RT	80
6473+56	to	6476+28	LT	284
6475+08	to	6475+97	RT	100
6475+41	to	6475+63	LT	30
6475+62	to	6475+84	LT	30
6475+82	to	6476+04	LT	30
6476+10	to	6476+10	RT	40
6476+20	to	6476+41	LT	30
6476+48	to	6476+64	LT	60
6476+70	to	6476+70	RT	60
6477+08	to	6477+13	LT	58
6477+30	to	6477+30	RT	50
6477+69	to	6477+73	LT	58
6477+90	to	6477+90	RT	50
6478+50	to	6478+50	RT	60
6484+52	to	6484+59	RT	20
6485+81	to	6489+67	LT	395
6489+37	to	6489+44	RT	20
6494+36	to	6496+95	RT	268
6496+95	to	9496+95	LT	40
6512+45	to	6512+45	LT	45
6512+45	to	6512+45	RT	40
6522+85	to	6527+45	RT	481
6523+21	to	6527+55	RT	439
6524+37	to	6524+44	LT	20
6525+24	to	6529+61	LT	439
6526+95	to	6527+01	LT	20
6531+94	to	6532+00	RT	20
6532+10	to	6532+17	LT	20
6536+33	to	6541+43	RT	515
6539+59	to	6539+59	LT	70
6540+19	to	6540+19	LT	70
6540+80	to	6540+80	LT	60
6541+39	to	6541+39	LT	60
6541+99	to	6541+99	LT	60
6542+20	to	6542+93	RT	107
6542+60	to	6542+60	LT	60
6542+94	to	6543+23	RT	40
6543+16	to	6543+53	RT	50
6543+19	to	6543+19	LT	60
			TOTAL	**4439**

12" Fiber Rolls

Station	to	Station	Offset	Length (LF)
6543+79	to	6543+79	LT	60
6546+40	to	6546+40	LT	40
6547+01	to	6547+01	LT	40
6547+60	to	6547+60	LT	40
6548+20	to	6548+20	LT	40
6548+80	to	6548+80	LT	40
6549+40	to	6549+40	LT	60
6550+00	to	6550+00	LT	80
6550+60	to	6550+60	LT	90
6551+20	to	6551+20	LT	100
6551+80	to	6551+80	LT	80
6552+40	to	6552+40	LT	70
6553+72	to	6557+60	LT	392
6555+74	to	6561+81	RT	664
6556+94	to	6557+01	LT	20
6565+61	to	6567+52	RT	209
6566+00	to	6567+53	RT	158
6566+63	to	6569+93	LT	333
6566+95	to	6567+01	LT	20
6589+69	to	6589+69	RT	50
6589+92	to	6592+57	RT	323
6590+09	to	6590+16	LT	20
6614+47	to	6614+54	RT	20
6614+88	to	6614+95	LT	20
6618+42	to	6627+27	RT	941
6619+90	to	6633+62	LT	1416
6628+25	to	6628+26	RT	70
6629+26	to	6629+27	RT	50
6630+26	to	6630+28	RT	50
6638+25	to	6638+25	RT	40
6638+85	to	6638+85	RT	80
6639+45	to	6639+45	RT	80
6640+05	to	6640+05	RT	60
6640+65	to	6640+65	RT	60
6640+93	to	6641+00	RT	20
6641+25	to	6641+25	RT	60
6641+85	to	6641+85	RT	50
6642+45	to	6642+45	RT	60
6643+05	to	6643+05	RT	40
6643+65	to	6643+65	RT	60
			TOTAL	**6106**

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Permanent Erosion Control

ND 3
Tuttle N to W Jct 200

12" Fiber Rolls

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	77	32

PERMANENT EROSION CONTROL - DITCH CHECKS, CULVERT PROTECTION & RUNOFF PROTECTION

12" Fiber Rolls

Station	to	Station	Offset	Length (LF)
6644+25	to	6644+25	RT	80
6644+85	to	6644+85	RT	80
6645+09	to	6645+23	LT	97
6645+33	to	6645+35	LT	85
6645+45	to	6645+45	RT	80
6645+59	to	6645+61	LT	100
6646+19	to	6646+20	LT	80
6646+80	to	6646+80	LT	70
6647+40	to	6647+40	LT	70
6648+00	to	6648+00	LT	90
6648+60	to	6648+60	LT	90
6649+20	to	6649+20	LT	70
6649+79	to	6649+80	LT	50
6651+60	to	6651+60	LT	90
6652+20	to	6652+20	LT	80
6652+80	to	6652+80	LT	80
6652+99	to	6652+99	RT	40
6653+40	to	6653+40	LT	70
6653+60	to	6653+60	RT	50
6654+01	to	6654+01	LT	70
6654+20	to	6654+20	RT	50
6654+60	to	6654+60	LT	70
6654+80	to	6654+80	RT	50
6655+20	to	6655+20	LT	70
6655+40	to	6655+40	RT	65
6655+80	to	6655+80	LT	80
6656+00	to	6656+00	RT	75
6656+30	to	6656+30	RT	70
6656+40	to	6656+40	LT	60
6656+60	to	6656+60	RT	70
6656+90	to	6656+90	RT	65
6657+20	to	6657+20	RT	65
6657+49	to	6657+50	RT	65
6658+44	to	6661+53	RT	329
6660+00	to	6660+00	LT	40
6660+30	to	6660+30	LT	60
6660+60	to	6660+60	LT	40
6661+28	to	6661+59	LT	92
6661+59	to	6662+42	LT	134
6661+66	to	6662+94	RT	244
			TOTAL	**3316**

12" Fiber Rolls

Station	to	Station	Offset	Length (LF)
6662+50	to	6662+50	LT	80
6663+00	to	6663+00	RT	50
6663+10	to	6663+10	LT	70
6663+60	to	6663+60	RT	50
6663+70	to	6663+70	LT	60
6664+20	to	6664+20	RT	50
6664+30	to	6664+30	LT	60
6664+90	to	6664+90	LT	70
6665+50	to	6665+50	LT	80
6665+50	to	6665+50	RT	40
6666+10	to	6666+10	LT	80
6666+40	to	6666+41	RT	40
6666+70	to	6666+71	RT	40
6667+00	to	6667+00	LT	60
6667+00	to	6667+01	RT	40
6667+30	to	6667+30	LT	50
6667+30	to	6667+31	RT	40
6667+40	to	6670+50	LT	356
6667+51	to	6669+09	LT	170
6667+60	to	6667+60	LT	40
6667+60	to	6667+61	RT	40
6667+90	to	6667+92	RT	50
6668+20	to	6668+22	RT	50
6668+50	to	6668+52	RT	50
6668+80	to	6668+81	RT	40
6669+10	to	6669+12	RT	40
6669+30	to	6669+30	LT	30
6669+40	to	6669+42	RT	50
6669+60	to	6669+60	LT	30
6669+70	to	6669+72	RT	60
6669+90	to	6669+90	LT	30
6670+00	to	6670+02	RT	60
6670+20	to	6670+20	LT	40
6670+60	to	6670+62	RT	60
6670+80	to	6670+80	LT	60
6670+90	to	6670+92	RT	60
6671+10	to	6671+10	LT	70
6671+20	to	6671+22	RT	60
6671+40	to	6671+40	LT	80
6671+70	to	6671+70	LT	80
			TOTAL	**2566**

12" Fiber Rolls

Station	to	Station	Offset	Length (LF)
6671+80	to	6671+80	RT	50
6672+00	to	6672+00	LT	80
6672+30	to	6672+30	LT	80
6672+40	to	6672+40	RT	40
6672+60	to	6672+60	LT	80
6673+00	to	6673+00	RT	40
6673+20	to	6673+20	LT	80
6673+60	to	6673+60	RT	40
6673+80	to	6673+80	LT	80
6674+20	to	6674+20	RT	40
6674+40	to	6674+40	LT	80
6674+80	to	6674+80	RT	40
6675+00	to	6675+00	LT	80
6675+60	to	6675+60	LT	80
6675+95	to	6675+96	RT	60
6676+20	to	6676+20	LT	90
6676+25	to	6676+26	RT	50
6676+55	to	6676+56	RT	40
6676+82	to	6677+82	RT	100
6676+85	to	6676+86	RT	30
6677+70	to	6677+70	RT	30
6678+00	to	6678+00	RT	40
6678+30	to	6678+30	RT	50
6678+56	to	6678+56	LT	60
6678+60	to	6678+60	RT	60
6679+16	to	6679+16	LT	60
6679+40	to	6679+40	RT	50
6679+76	to	6679+76	LT	60
6680+00	to	6680+00	RT	30
6680+36	to	6680+36	LT	60
6680+60	to	6680+60	RT	30
6680+96	to	6680+96	LT	60
6681+20	to	6681+20	RT	30
6681+56	to	6681+56	LT	60
6681+80	to	6681+80	RT	30
6682+15	to	6682+15	LT	60
6682+40	to	6682+40	RT	30
6682+76	to	6682+76	LT	60
6683+00	to	6683+00	RT	30
6683+36	to	6683+36	LT	60
			TOTAL	**2210**

12" Fiber Rolls

Station	to	Station	Offset	Length (LF)
6683+60	to	6683+60	RT	40
6683+96	to	6683+96	LT	70
6684+20	to	6684+20	RT	60
6684+56	to	6684+56	LT	80
6684+80	to	6684+80	RT	50
6684+86	to	6684+86	LT	80
6685+16	to	6685+16	LT	70
6685+40	to	6685+40	RT	40
6685+46	to	6685+46	LT	60
6685+76	to	6685+76	LT	60
6686+00	to	6686+00	RT	40
6686+36	to	6686+36	LT	44
6686+60	to	6686+60	RT	30
6686+96	to	6686+96	LT	43
6687+20	to	6687+20	RT	30
6687+56	to	6687+56	LT	50
6687+74	to	6687+80	RT	20
6688+16	to	6688+16	LT	50
6688+76	to	6688+76	LT	35
6688+39	to	6695+47	RT	758
6689+68	to	6695+20	LT	580
6690+92	to	6690+99	RT	20
6699+47	to	6703+25	RT	381
6700+22	to	6704+92	LT	478
6701+92	to	6701+99	RT	20
6710+17	to	6714+55	RT	457
6710+56	to	6714+33	LT	410
6713+94	to	6714+00	LT	20
6714+95	to	6716+31	LT	220
6715+12	to	6715+19	RT	20
6715+15	to	6715+22	LT	20
6715+40	to	6715+40	RT	50
6716+00	to	6716+00	RT	40
6716+60	to	6716+60	RT	40
6716+80	to	6716+80	LT	30
6716+95	to	6716+95	LT	50
6717+10	to	6717+10	LT	60
6717+20	to	6717+20	RT	40
6717+40	to	6717+40	LT	70
6717+80	to	6717+80	RT	30
			TOTAL	**4746**

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Permanent Erosion Control

ND 3
Tuttle N to W Jct 200

12" Fiber Rolls

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	77	33

PERMANENT EROSION CONTROL - DITCH CHECKS, CULVERT PROTECTION & RUNOFF PROTECTION

12" Fiber Rolls

Station	to	Station	Offset	Length (LF)
6718+00	to	6718+00	LT	70
6718+40	to	6718+40	RT	30
6718+60	to	6718+60	LT	60
6719+00	to	6719+00	RT	40
6719+20	to	6719+20	LT	60
6719+60	to	6719+60	RT	40
6719+80	to	6719+80	LT	60
6720+20	to	6720+20	RT	40
6720+40	to	6720+40	LT	60
6720+80	to	6720+80	RT	40
6721+00	to	6721+00	LT	60
6721+60	to	6721+60	LT	60
6722+20	to	6722+20	LT	70
6722+80	to	6722+80	LT	80
6723+40	to	6723+40	LT	60
6724+00	to	6724+00	LT	70
6724+50	to	6724+50	RT	50
6725+10	to	6725+10	RT	50
6725+20	to	6725+20	LT	80
6725+40	to	6725+40	RT	40
6725+70	to	6725+70	RT	40
6725+77	to	6726+80	RT	107
6725+80	to	6725+80	LT	80
6726+40	to	6726+40	LT	60
6733+73	to	6733+80	LT	20
6734+64	to	6735+62	LT	109
6735+18	to	6738+80	LT	363
6736+23	to	6736+29	RT	20
6745+90	to	6745+90	LT	25
6746+50	to	6746+50	LT	70
6747+10	to	6747+10	LT	110
6747+70	to	6747+70	LT	110
6748+30	to	6748+30	LT	100
6748+90	to	6748+90	LT	90
6749+50	to	6749+50	LT	80
6750+10	to	6750+10	LT	70
6750+70	to	6750+70	LT	70
6751+30	to	6751+30	LT	70
6751+90	to	6751+90	LT	60
6752+50	to	6752+50	LT	70
			TOTAL	2844

12" Fiber Rolls

Station	to	Station	Offset	Length (LF)
6753+10	to	6753+10	LT	80
6753+70	to	6753+70	LT	90
6754+30	to	6754+30	LT	90
6754+90	to	6754+90	LT	80
6755+50	to	6755+50	LT	60
6756+10	to	6756+10	LT	50
6756+70	to	6756+70	LT	50
6757+30	to	6757+30	LT	70
6757+67	to	6757+73	LT	20
6758+62	to	6758+62	LT	90
6759+20	to	6759+20	LT	90
6762+78	to	6762+84	LT	20
6767+82	to	6775+72	RT	777
6776+63	to	6776+69	LT	20
6781+85	to	6781+85	LT	90
6782+45	to	6782+45	LT	100
6783+05	to	6783+05	LT	90
6783+65	to	6783+65	LT	79
6784+25	to	6784+25	LT	70
6784+85	to	6784+85	LT	60
6785+45	to	6785+45	LT	50
6786+05	to	6786+05	LT	50
6786+65	to	6786+65	LT	60
6787+25	to	6787+25	LT	60
6787+85	to	6787+85	LT	70
6788+45	to	6788+45	LT	80
6789+05	to	6789+05	LT	90
6789+65	to	6789+65	LT	100
6790+25	to	6790+25	LT	60
6790+85	to	6790+85	LT	20
6807+46	to	6807+52	RT	20
6807+53	to	6807+59	LT	20
6808+22	to	6816+15	RT	801
6809+56	to	6814+98	LT	553
6818+08	to	6822+20	RT	463
6821+32	to	6822+10	LT	97
6821+40	to	6821+47	LT	20
6821+77	to	6821+83	RT	20
6822+48	to	6825+83	RT	383
6822+52	to	6825+84	LT	345
			TOTAL	5438

12" Fiber Rolls

Station	to	Station	Offset	Length (LF)
6822+73	to	6822+79	LT	20
6837+52	to	6841+86	RT	440
6840+65	to	6845+98	LT	562
6840+94	to	6841+00	RT	20
6844+46	to	6845+78	RT	141
6853+30	to	6853+30	LT	38
6853+30	to	6853+30	RT	37
6876+90	to	6876+90	LT	37
6876+90	to	6876+90	RT	38
6883+85	to	6886+44	RT	287
6884+64	to	6884+70	LT	20
6888+89	to	6889+22	RT	50
6889+39	to	6889+60	RT	30
6890+35	to	6893+01	RT	293
6891+95	to	6892+02	LT	20
6908+44	to	6908+50	RT	20
6913+49	to	6919+02	LT	546
6916+73	to	6918+18	LT	148
6917+36	to	6917+42	RT	20
6918+20	to	6919+34	LT	121
6923+86	to	6923+88	LT	25
6924+75	to	6924+75	RT	30
6926+94	to	6927+00	RT	20
6926+97	to	6935+55	LT	870
6929+21	to	6929+27	RT	20
6929+80	to	6935+77	RT	639
6932+21	to	6932+27	RT	20
6947+87	to	6947+93	RT	20
6947+93	to	6947+99	LT	20
6954+52	to	6954+58	LT	20
6968+48	to	6968+48	LT	30
6968+48	to	6968+48	RT	30
7030+13	to	7030+13	RT	50
7032+09	to	7032+12	RT	50
7037+07	to	7037+08	RT	70
7039+00	to	7039+03	RT	50
7040+84	to	7040+90	RT	20
7049+61	to	7050+63	LT	146
7050+99	to	7050+99	LT	60
7051+59	to	7051+59	LT	60
			TOTAL	5138

12" Fiber Rolls

Station	to	Station	Offset	Length (LF)
7052+19	to	7052+19	LT	60
7052+79	to	7052+79	LT	60
7053+39	to	7053+39	LT	60
7053+99	to	7053+99	LT	60
7054+59	to	7054+59	LT	60
7055+19	to	7055+19	LT	60
7055+79	to	7055+79	LT	60
7056+39	to	7056+39	LT	60
7056+99	to	7056+99	LT	60
7057+59	to	7057+59	LT	60
7058+79	to	7058+79	LT	60
7059+99	to	7059+99	LT	60
7061+19	to	7061+19	LT	60
7061+79	to	7061+79	LT	60
7062+39	to	7062+39	LT	60
7063+59	to	7063+59	LT	60
7064+19	to	7064+19	LT	60
7064+79	to	7064+79	LT	60
7065+39	to	7065+39	LT	60
7065+99	to	7065+99	LT	30
7078+50	to	7078+50	RT	40
7079+10	to	7079+10	RT	70
7079+70	to	7079+70	RT	70
7080+30	to	7080+30	RT	70
7080+90	to	7080+90	RT	70
7081+50	to	7081+50	RT	70
7084+70	to	7084+70	RT	30
7085+30	to	7085+30	RT	40
7085+90	to	7085+90	RT	60
7086+20	to	7086+20	RT	60
7086+50	to	7086+50	RT	50
7086+53	to	7088+50	RT	240
7087+80	to	7089+39	LT	160
7090+06	to	7091+46	LT	156
7090+31	to	7091+41	RT	129
7091+90	to	7092+96	LT	20
7092+48	to	7092+64	LT	42
			TOTAL	2547

20" Fiber Rolls

Station	to	Station	Offset	Length (LF)
6537+41	to	6537+54	LT	40
6845+90	to	6846+02	LT	40
			TOTAL	80

SPEC	CODE	BID ITEM	QTY	UNIT
261	0112	FIBER ROLLS 12IN		
Sta 5980+49		to Sta 6084+30	10404	LF
Sta 6081+88		to Sta 6196+83	6497	LF
Sta 6197+43		to Sta 6270+60	6281	LF
Sta 6270+65		to Sta 6293+10	3158	LF
Sta 6294+05		to Sta 6450+07	7365	LF
Sta 6450+45		to Sta 6472+80	2926	LF
Sta 6472+98		to Sta 6543+19	4439	LF
Sta 6543+79		to Sta 6643+65	6106	LF
Sta 6644+25		to Sta 6662+94	3316	LF
Sta 6662+50		to Sta 6671+70	2566	LF
Sta 6671+80		to Sta 6683+36	2210	LF
Sta 6683+60		to Sta 6717+80	4746	LF
Sta 6718+00		to Sta 6752+50	2844	LF
Sta 6753+10		to Sta 6825+84	5438	LF
Sta 6822+73		to Sta 7051+59	5138	LF
Sta 7052+19		to Sta 7092+64	2547	LF
261	0120	FIBER ROLLS 20IN		
Sta 6537+41		to Sta 6846+02	80	LF

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 12/15/2021
NORTH DAKOTA

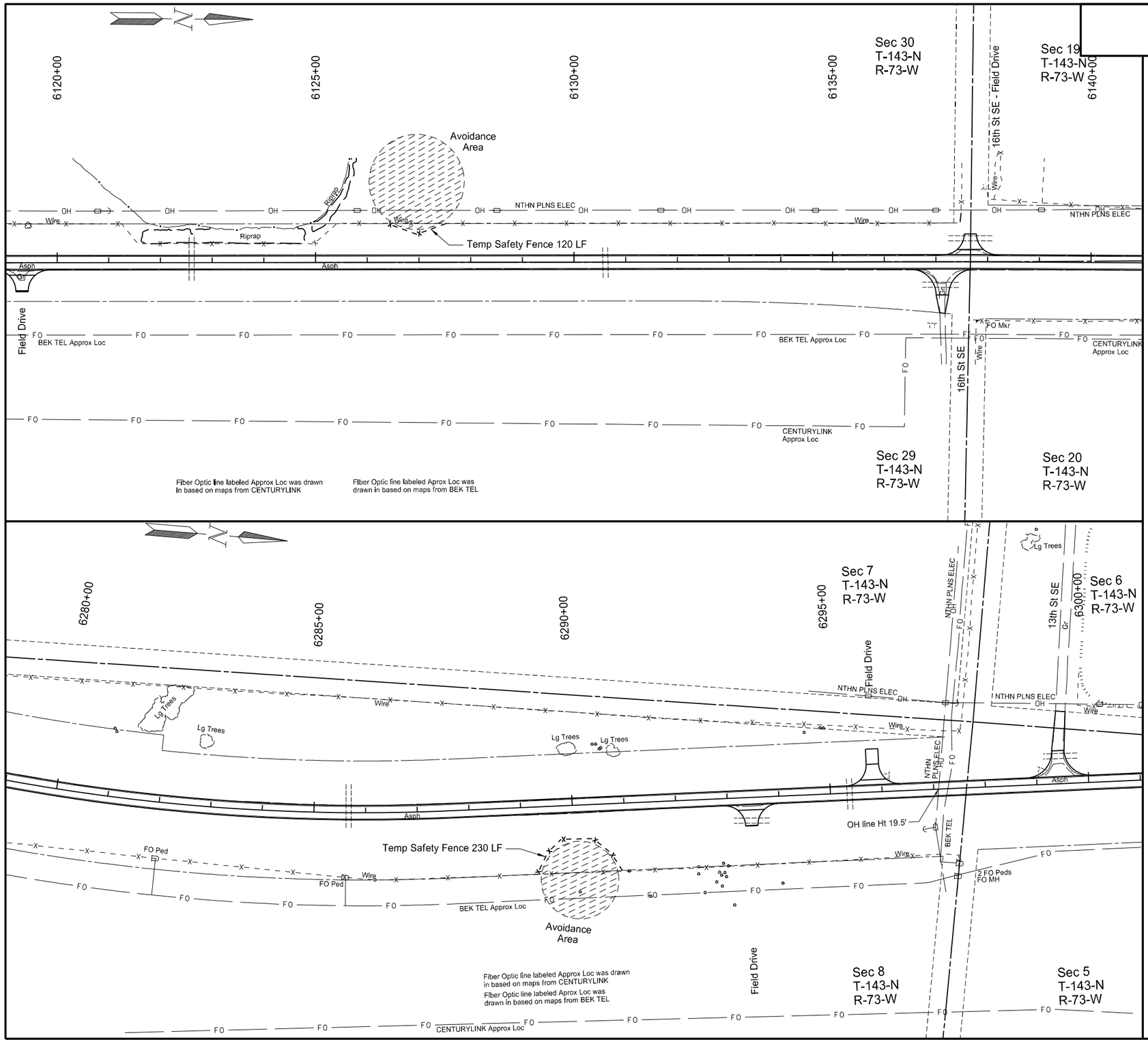
Permanent Erosion Control

ND 3
Tuttle N to W Jct 200

12" & 20" Fiber Rolls

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	80	1

SPEC	CODE	BID ITEM	QTY	UNIT
752	0911	TEMPORARY SAFETY FENCE		
		6126+40 - 75' Lt to 6126+96 - 54' Lt		
		6126+96 - 54' Lt to 6127+52 - 75' Lt	120	LF
		6289+27 - 130' Rt to 6289+48 - 90' Rt		
		6289+48 - 90' Rt to 6289+76 - 65' Rt		
		6289+76 - 65' Rt to 6290+38 - 66' Rt		
		6290+38 - 66' Rt to 6290+71 - 95' Rt		
		6290+71 - 95' Rt to 6290+92 - 130' Rt	230	LF



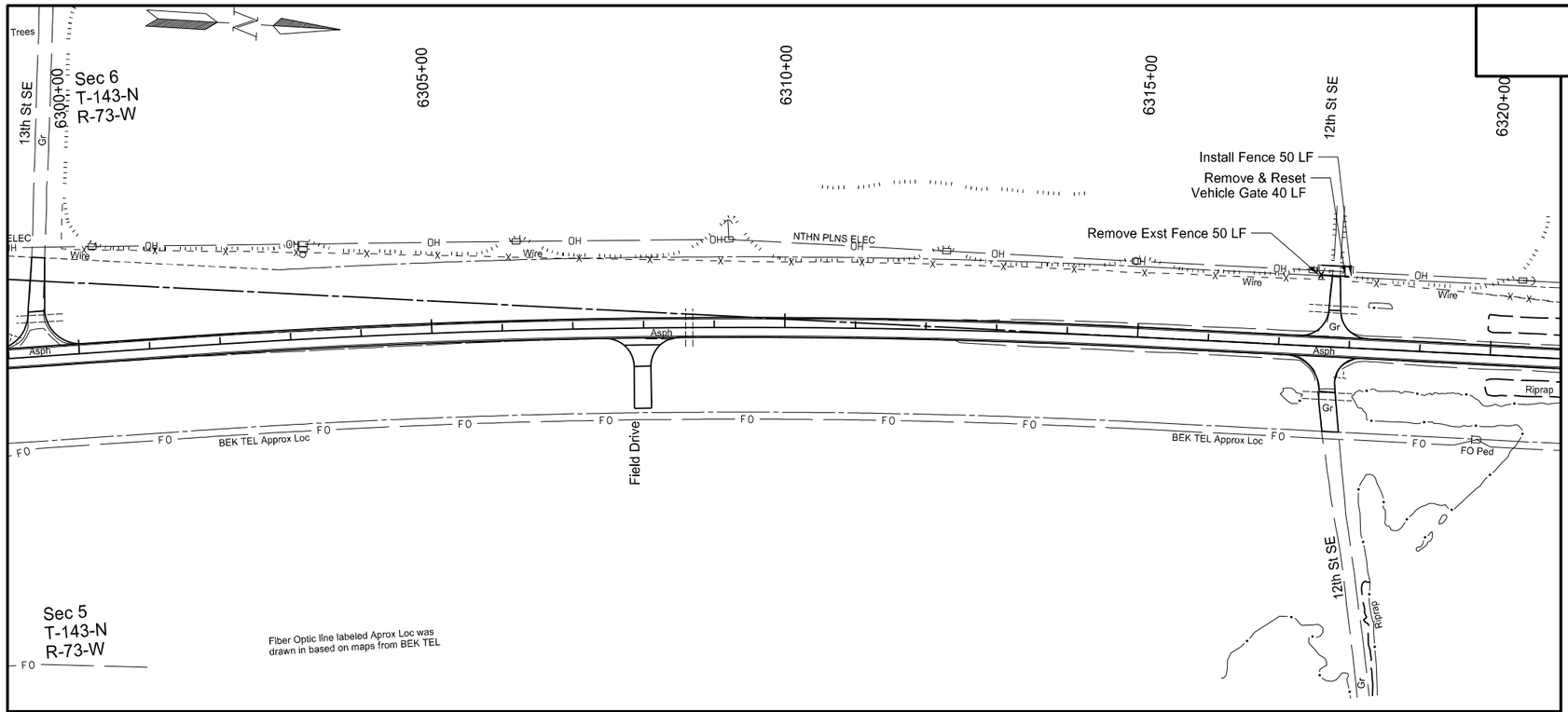
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

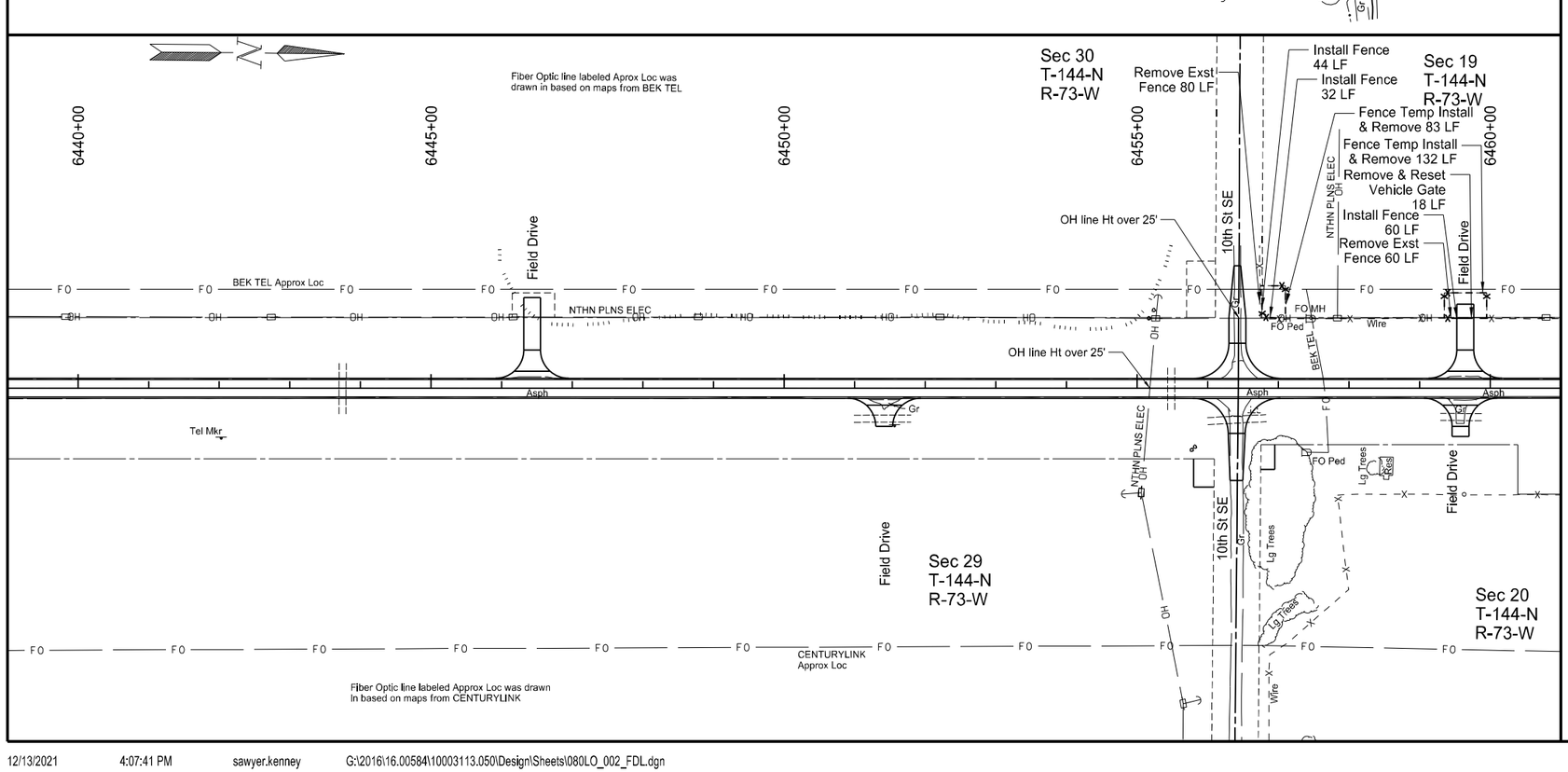
Fencing Layout

ND 3
Tuttle N to W Jct 200
6120+00 to 6140+00
6280+00 to 6300+00
Kidder County

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STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	80	2





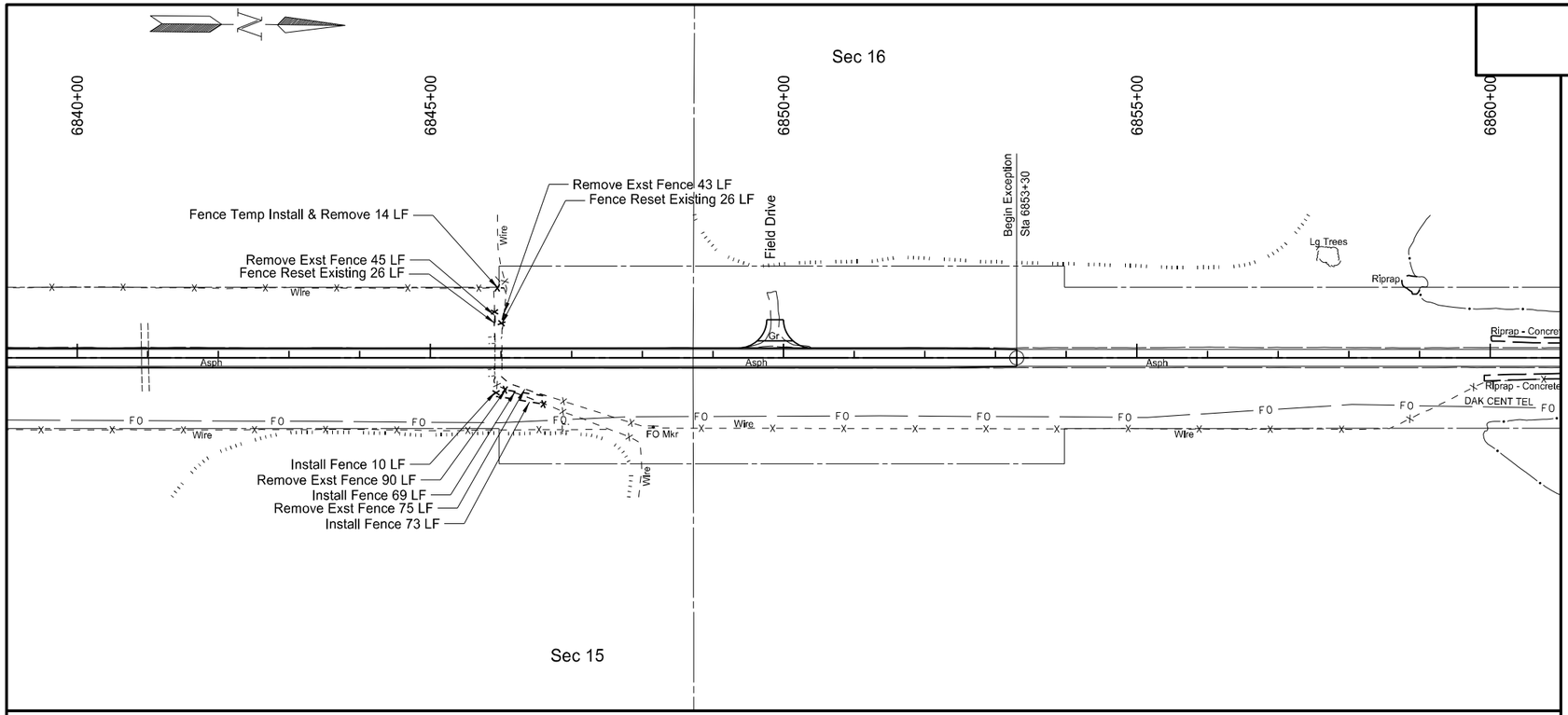
SPEC	CODE	BID ITEM	QTY	UNIT
202	0312	REMOVE EXISTING FENCE		
		6317+50 - 101' Lt to 6318+00 - 101' Lt	50	LF
		6456+74 - 145' Lt to 6457+10 - 98' Lt	80	LF
		6459+35 - 99' Lt to 6459+95 - 99' Lt	60	LF
752	0110	FENCE BARBED WIRE 3 STRAND-STEEL POST		
		6317+50 - 101' Lt to 6318+00 - 101' Lt	50	LF
752	0320	FENCE BARBED WIRE 4 STRAND-STEEL POST		
		6456+74 - 145' Lt to 6457+10 - 98' Lt	76	LF
		6459+35 - 99' Lt to 6459+95 - 99' Lt	60	LF
752	0905	TEMPORARY FENCE		
		6456+74 - 145' Lt to 6457+10 - 145' Lt	36	LF
		6457+10 - 145' Lt to 6457+10 - 98' Lt	47	LF
		6459+35 - 99' Lt to 6459+35 - 135' Lt	36	LF
		6459+35 - 135' Lt to 6459+95 - 135' Lt	60	LF
		6459+95 - 135' Lt to 6459+95 - 99' Lt	36	LF
752	0993	FENCE TERMINAL		
		6317+50 - 101' Lt	1	EA
		6318+00 - 101' Lt	1	EA
		6456+74 - 145' Lt	1	EA
		6457+10 - 98' Lt	1	EA
		6459+35 - 99' Lt	1	EA
		6459+95 - 99' Lt	1	EA
752	2110	RESET VEHICLE GATE		
		6317+54 - 101' Lt to 6317+94 - 101' Lt	1	EA
		6459+56 - 99' Lt to 6459+74 - 99' Lt	1	EA
752	2120	REMOVE VEHICLE GATE		
		6317+54 - 101' Lt to 6317+94 - 101' Lt	1	EA
		6459+51 - 99' Lt to 6459+69 - 99' Lt	1	EA
752	3150	CORNER ASSEMBLY BARBED WIRE-WOOD POST		
		6456+78 - 101' Lt	1	EA
752	4140	DOUBLE BRACE ASSEMBLY BARBED WIRE-WOOD POST		
		6317+54 - 101' Lt	1	EA
		6317+94 - 101' Lt	1	EA
		6459+56 - 99' Lt	1	EA
		6459+74 - 99' Lt	1	EA

REGISTERED PROFESSIONAL ENGINEER
KORY KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Fencing Layout

ND 3
Tuttle N to W Jct 200
6300+00 to 6320+00
6440+00 to 6460+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	80	3



SPEC	CODE	BID ITEM	QTY	UNIT
202	0312	REMOVE EXISTING FENCE		
		6845+91 - 25' Lt to 6845+91 - 70' Lt	45	LF
		6846+00 - 27' Lt to 6846+05 - 70' Lt	43	LF
		6845+92 - 26' Rt to 6846+65 - 66' Rt	90	LF
		6846+00 - 26' Rt to 6846+69 - 55' Rt	75	LF
752	0320	FENCE BARBED WIRE 4 STRAND-STEEL POST		
		6845+93 - 44' Rt to 6846+65 - 66' Rt	83	LF
		6846+00 - 44' Rt to 6846+69 - 55' Rt	69	LF
752	0905	TEMPORARY FENCE		
		6845+90 - 99' Lt to 6846+04 - 99' Lt	14	LF
752	0930	FENCE RESET EXISTING		
		6845+92 - 44' Lt to 6845+91 - 70' Lt	26	LF
		6846+00 - 44' Lt to 6846+05 - 70' Lt	26	LF
752	0993	FENCE TERMINAL		
		6845+92 - 44' Lt	1	EA
		6845+91 - 70' Lt	1	EA
		6846+00 - 44' Lt	1	EA
		6846+05 - 70' Lt	1	EA
		6845+93 - 44' Rt	1	EA
		6846+65 - 66' Rt	1	EA
		6846+00 - 44' Rt	1	EA
		6846+69 - 55' Rt	1	EA
752	3150	CORNER ASSEMBLY BARBED WIRE-WOOD POST		
		6845+93 - 54' Rt	1	EA

REGISTERED PROFESSIONAL ENGINEER
KORY M. KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Fencing Layout

ND 3
Tuttle N to W Jct 200

6840+00 to 6860+00
Wells County

PRELIMINARY SURVEY COORDINATE AND CURVE DATA - ND 3 from Tuttle N to W Jct 200

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	81	1

HORIZONTAL ALIGNMENT

PNT	STATION	NORTHING	EASTING
ND 3 (SCL3)			
Begin	5940+92.08	536055.41	2104124.39
TS	5956+65.70	536547.78	2102629.78
SC	5960+65.70	536686.05	2102254.64
PI SCS3	5972+25.65	537035.87	2101148.16
Station Equation ND 3 (SCL3) at ND 36 (SCL36)			
ND 3	5978+64.96	538037.35	2101168.88
ND 36	2054+76.48	538037.35	2101168.88
Sec line Xing	Ahd Tan - 558.04' to ST	538037.64	2101131.33
CS	5980+26.13	538196.32	2101142.62
ST	5984+26.13	538595.59	2101121.96
Rec 1/4 Cor	6005+01.63	540670.80	2101087.12
Rec Sec Cor	6031+75.30	543344.09	2101042.22
Rec 1/4 Cor	6058+18.33	545986.96	2101012.92
Rec Sec Cor	6084+61.36	548629.83	2100983.61
Rec 1/4 Cor	6111+18.45	551286.81	2100959.88
Rec Sec Cor	6137+66.40	553934.66	2100936.23
PC	6211+67.23	561335.47	2100918.80
PI C7	6216+93.22	561861.45	2100917.56
Sec line Xing	Ahd Tan - 482.41' to PI	562335.59	2100828.61
PT	6222+16.26	562378.41	2100820.58
TS	6243+93.59	564518.42	2100419.12
SC	6246+93.59	564814.16	2100368.96
PI SCS8	6252+63.97	565373.87	2100258.63
CS	6258+04.49	565916.08	2100436.03
ST	6261+04.49	566203.55	2100521.69
Sec line Xing	6269+00.37	566962.21	2100762.23

CURVE DATA

ARC DEFINITION

Curve SCS3	
PI Sta	= 5972+25.65
Delta	= 70° 48' 17" (RT)
Da	= 2° 59' 59"
R	= 1910.08'
L	= 1960.43'
Ls	= 400.00'
Sc	= 5° 59' 58"
Ts	= 1559.95'
Curve C7	
PI Sta	= 6216+93.22
Delta	= 10° 29' 24" (LT)
Da	= 1° 00' 00"
R	= 5729.65'
T	= 525.98'
L	= 1049.02'
Curve SCS8	
PI Sta	= 6252+63.97
Delta	= 28° 13' 00" (RT)
Da	= 2° 00' 00"
R	= 2864.93'
L	= 1110.90'
Ls	= 300.00'
Sc	= 2° 59' 59"
Ts	= 870.38'

US PUBLIC LAND SURVEY DATA

DESC.	SEC-TWP-RGE	NORTHING	EASTING
SW Sec Cor	Sec 7 T-142-N R-73-W	532841.28	2096252.50
SE Sec Cor	Sec 7 T-142-N R-73-W	532751.04	2101186.44
SE Sec Cor	Sec 8 T-142-N R-73-W	532734.71	2106454.40
NW Sec Cor	Sec 7 T-142-N R-73-W	538126.95	2096215.07
NE Sec Cor	Sec 7 T-142-N R-73-W	538037.64	2101131.33
NE Sec Cor	Sec 8 T-142-N R-73-W	537997.69	2106364.14
E 1/4 Cor	Sec 6 T-142-N R-73-W	540670.80	2101087.12
NW Sec Cor	Sec 6 T-142-N R-73-W	543405.74	2096173.47
NE Sec Cor	Sec 6 T-142-N R-73-W	543344.09	2101042.22
NE Sec Cor	Sec 5 T-142-N R-73-W	543287.45	2106302.35
E 1/4 Cor	Sec 31 T-143-N R-73-W	545986.96	2101012.92
NW Sec Cor	Sec 31 T-143-N R-73-W	548695.54	2096137.62
NE Sec Cor	Sec 31 T-143-N R-73-W	548629.83	2100983.61
E 1/4 Cor	Sec 30 T-143-N R-73-W	551286.81	2100959.88
NE Sec Cor	Sec 30 T-143-N R-73-W	553934.66	2100936.23
E 1/4 Cor	Sec 19 T-143-N R-73-W	556574.56	2100902.29
NE Sec Cor	Sec 19 T-143-N R-73-W	559219.14	2100868.29
E 1/4 Cor	Sec 18 T-143-N R-73-W	561862.47	2100834.63
NE Sec Cor	Sec 18 T-143-N R-73-W	564514.73	2100800.86
E 1/4 Cor	Sec 7 T-143-N R-73-W	567152.38	2100759.22
NW Sec Cor	Sec 7 T-143-N R-73-W	569797.06	2095994.23
NE Sec Cor	Sec 7 T-143-N R-73-W	569789.71	2100717.59
E 1/4 Cor	Sec 6 T-143-N R-73-W	572439.04	2100696.89
NE Sec Cor	Sec 6 T-143-N R-73-W	575089.70	2100676.18
E 1/4 Cor	Sec 31 T-144-N R-73-W	577730.00	2100662.42
NE Sec Cor	Sec 31 T-144-N R-73-W	580370.30	2100648.66
E 1/4 Cor	Sec 30 T-144-N R-73-W	583015.22	2100623.30
NE Sec Cor	Sec 30 T-144-N R-73-W	585660.14	2100597.94
E 1/4 Cor	Sec 19 T-144-N R-73-W	588298.77	2100570.82
NW Sec Cor	Sec 19 T-144-N R-73-W	590920.95	2095857.95
NE Sec Cor	Sec 19 T-144-N R-73-W	590942.27	2100551.37
N 1/4 Cor	Sec 20 T-144-N R-73-W	590946.74	2103170.28

SURVEY CONTROL POINTS

PNT	NORTHING	EASTING	ELEV	STATION	OFFSET
CONTROL POINT DESCRIPTION					
GPS 1	544482.36	2101126.66	1836.12	6043+13	97' RT
#5 Rebar w/ plastic cap stamped "SURVEY CONTROL"					
GPS 2	590861.58	2100674.55	2037.72	6508+44	123' RT
#5 Rebar w/ plastic cap stamped "SURVEY CONTROL"					
GPS 4	561472.44	2101031.47	2013.43	6213+01	115' RT
#5 Rebar w/ plastic cap stamped "SURVEY CONTROL"					
GPS 5	567707.10	2100784.68	2062.65	6276+42	168' LT
#5 Rebar w/ plastic cap stamped "SURVEY CONTROL"					
GPS 6	605135.22	2100325.82	2038.99	6651+63	95' LT
#5 Rebar w/ plastic cap stamped "SURVEY CONTROL"					

NOTES: Sheet 1 of 3 - Kidder County
Sheet 1 of 6 Total

Date Survey Completed 08/31/17

☐ Assumed Coordinates

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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 12B

REGISTERED PROFESSIONAL LAND SURVEYOR
Kurt Kisch
Kurt Kisch
ND 4597-LS
08/14/18
NORTH DAKOTA

PRELIMINARY SURVEY COORDINATE AND CURVE DATA - ND 3 from Tuttle N to W Jct 200

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	81	2

HORIZONTAL ALIGNMENT

PNT	STATION	NORTHING	EASTING
ND 3 (SCL3) continued			
PC	6271+06.86	567159.04	2100824.63
PI C9	6279+49.45	567962.23	2101079.29
PT	6287+65.48	568798.01	2100972.42
PC	6301+55.51	570176.82	2100796.11
PI C10	6308+40.26	570856.03	2100709.26
PT	6315+23.38	571540.76	2100703.91
Rec 1/4 Cor	6324+21.69	572439.04	2100696.89
Rec Sec Cor	6350+72.43	575089.70	2100676.18
Rec 1/4 Cor	6377+12.77	577730.00	2100662.42
Rec Sec Cor	6403+53.10	580370.30	2100648.66
Rec 1/4 Cor	6429+98.14	583015.22	2100623.30
Rec Sec Cor	6456+43.18	585660.14	2100597.94
Rec 1/4 Cor	6482+81.95	588298.77	2100570.82
Rec Sec Cor	6509+25.52	590942.27	2100551.37
Rec 1/4 Cor	6535+60.96	593577.52	2100519.98
Rec Sec Cor	6561+96.40	596212.77	2100488.59
Rec 1/4 Cor	6588+40.22	598856.47	2100462.94
PC	6600+65.15	600081.34	2100451.06
PI C17	6605+78.01	600594.18	2100446.09
PT	6610+88.42	601098.84	2100354.79
Sec line Xing	6614+95.53	601499.45	2100282.32
PC	6620+52.86	602047.88	2100183.10
PI C18	6631+17.60	603095.61	2099993.56
PT	6641+53.40	604133.68	2100230.38

CURVE DATA

ARC DEFINITION

Curve C9	
PI Sta	= 6279+49.45
Delta	= 24° 52' 42" (LT)
Da	= 1° 30' 00"
R	= 3819.83'
T	= 842.59'
L	= 1658.61'
Curve C10	
PI Sta	= 6308+40.26
Delta	= 6° 50' 21" (RT)
Da	= 0° 30' 00"
R	= 11459.20'
T	= 684.75'
L	= 1367.87'
Curve C17	
PI Sta	= 6605+78.01
Delta	= 9° 41' 55" (LT)
Da	= 0° 56' 52"
R	= 6045.04'
T	= 512.86'
L	= 1023.26'
Curve C18	
PI Sta	= 6631+17.60
Delta	= 23° 06' 20" (RT)
Da	= 1° 06' 00"
R	= 5208.79'
T	= 1064.74'
L	= 2100.54'

US PUBLIC LAND SURVEY DATA

DESC.	SEC-TWP-RGE	NORTHING	EASTING
NE Sec Cor	Sec 20 T-144-N R-73-W	590951.52	2105814.23
E 1/4 Cor	Sec 18 T-144-N R-73-W	593577.52	2100519.98
NW Sec Cor	Sec 18 T-144-N R-73-W	596199.06	2095821.43
NE Sec Cor	Sec 18 T-144-N R-73-W	596212.77	2100488.59
NE Sec Cor	Sec 17 T-144-N R-73-W	596233.53	2105733.71
E 1/4 Cor	Sec 7 T-144-N R-73-W	598856.47	2100462.94
NW Sec Cor	Sec 7 T-144-N R-73-W	601478.56	2095793.94
N 1/4 Cor	Sec 7 T-144-N R-73-W	601487.97	2097791.51
NE Sec Cor	Sec 7 T-144-N R-73-W	601500.17	2100437.30
NW Closing Cor	Sec 6 T-144-N R-73-W	606120.28	2095769.77
E 1/4 Cor	Sec 6 T-144-N R-73-W	604139.74	2100409.88
NE Closing Cor	Sec 6 T-144-N R-73-W	606149.25	2100389.01

SURVEY CONTROL POINTS

PNT	NORTHING	EASTING	ELEV	STATION	OFFSET
CONTROL POINT DESCRIPTION					

REFERENCE MARKERS

R Mkr #	Northing	Easting	Station	Offset	Alignment
113	537065.95	2101736.98	5967+15	26' RT	SCL3
114	542148.90	2101089.59	6019+79	27' RT	SCL3
116	552655.68	2100976.60	6124+87	29' RT	SCL3
117	557939.24	2100957.21	6177+71	30' RT	SCL3
118	563204.85	2100694.69	6230+52	29' RT	SCL3
119	568375.19	2101033.45	6283+41	31' RT	SCL3
120	573373.25	2100711.28	6333+56	22' RT	SCL3
121	578972.12	2100684.10	6389+55	28' RT	SCL3
122	584279.76	2100646.31	6442+62	35' RT	SCL3
123	589516.54	2100590.37	6495+00	29' RT	SCL3
124	594762.90	2100534.61	6547+46	29' RT	SCL3
125	600048.50	2100479.52	6600+32	28' RT	SCL3
126	605266.48	2100465.28	6653+08	30' RT	SCL3

NOTES: Sheet 2 of 3 - Kidder County
Sheet 2 of 6 Total

Date Survey Completed 08/31/17

☐ Assumed Coordinates

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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 12B

REGISTERED PROFESSIONAL LAND SURVEYOR
Kurt Kisch
Kurt Kisch
ND 4597-LS
08/14/18
NORTH DAKOTA

PRELIMINARY SURVEY COORDINATE AND CURVE DATA - ND 3 from Tuttle N to W Jct 200

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	81	3

HORIZONTAL ALIGNMENT

PNT	STATION	NORTHING	EASTING
ND 3 (SCL3) continued			
PC	6645+27.27	604498.18	2100313.53
Sec line Xing	6649+25.59 (Bk Tan)	604886.53	2100402.13
PI C19	6651+88.97	605143.31	2100460.71
PT	6658+44.84	605805.00	2100456.96
Rec Sec Cor	6661+89.50	606149.66	2100455.01
ND 3 (SCL3) continues in Wells County on Sheet 4 of 6			
ND 36 (SCL36)			
Rec Sec Cor Begin	2005+21.86	538126.95	2096215.07
Rec Sec Cor	2054+38.94	538037.64	2101131.33
Station Equation ND 3 (SCL3) at ND 36 (SCL36)			
ND 3	5978+64.96	538037.35	2101168.88
ND 36	2054+76.48	538037.35	2101168.88
TS	2056+37.73	538036.12	2101330.12
SC	2059+37.73	538039.06	2101630.07
PI SCS42	2061+57.22	538032.15	2101849.59
CS	2063+72.34	538091.29	2102061.11
ST	2066+72.34	538160.06	2102353.09
TS	2070+66.57	538257.13	2102735.18
SC	2074+66.57	538341.99	2103125.87
PI SCS43	2077+74.49	538431.43	2103421.30
CS	2080+57.84	538335.69	2103714.75
ST	2084+57.84	538242.48	2104103.54
PC	2089+36.89	538114.62	2104565.21
PI C44	2094+73.08	537971.51	2105081.94
PT	2100+02.30	537976.19	2105618.11
End	2107+48.69	537982.70	2106364.48

NOTES: Sheet 3 of 3 - Kidder County
Sheet 3 of 6 Total

CURVE DATA

ARC DEFINITION	
Curve C19	
PI Sta	= 6651+88.97
Delta	= 13° 10' 32" (LT)
Da	= 1° 00' 00"
R	= 5729.65'
T	= 661.70'
L	= 1317.57'
Curve SCS42	
PI Sta	= 2061+57.22
Delta	= 14° 41' 29" (LT)
Da	= 2° 00' 00"
R	= 2864.93'
L	= 434.61'
Ls	= 300.00'
Sc	= 2° 59' 59"
Ts	= 519.49'
Curve SCS43	
PI Sta	= 2077+74.49
Delta	= 29° 44' 04" (RT)
Da	= 2° 59' 59"
R	= 1910.08'
L	= 591.27'
Ls	= 400.00'
Sc	= 5° 59' 58"
Ts	= 707.92'
Curve C44	
PI Sta	= 2094+73.08
Delta	= 15° 58' 50" (LT)
Da	= 1° 30' 00"
R	= 3819.83'
T	= 536.19'
L	= 1065.41'

Date Survey Completed 08/31/17

US PUBLIC LAND SURVEY DATA

DESC.	SEC-TWP-RGE	NORTHING	EASTING

☐ Assumed Coordinates

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SURVEY CONTROL POINTS

PNT	NORTHING	EASTING	ELEV	STATION	OFFSET	CONTROL POINT DESCRIPTION

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 12B

REGISTERED PROFESSIONAL LAND SURVEYOR
Kurt Kisch
Kurt Kisch
ND 4597-LS
08/14/18
NORTH DAKOTA

PRELIMINARY SURVEY COORDINATE AND CURVE DATA - ND 3 from Tuttle N to W Jct 200

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	81	4

HORIZONTAL ALIGNMENT

PNT	STATION	NORTHING	EASTING
ND 3 (SCL3) Continued from Kidder County on Sheet 3 of 6			
Rec Sec Cor	6661+89.50	119842.37	2100381.69
Rec 1/4 Cor	6688+29.17	122482.01	2100366.39
Rec Sec Cor	6714+68.85	125121.64	2100351.08
PC	6736+39.84	127292.58	2100336.11
Rec 1/4 Cor	6741+11.54	127764.27	2100332.86
PI C22	6746+82.82	128335.53	2100328.92
PT	6757+03.20	129309.05	2099954.66
TS	6760+40.69	129624.05	2099833.56
SC	6764+40.69	130002.01	2099703.21
Sec line Xing	6768+71.69 (Bk Tan)	130399.68	2099535.39
PI SCS23	6769+77.98	130498.93	2099497.23
CS	6774+45.75	130995.52	2099703.99
ST	6778+45.75	131373.27	2099834.94
PC	6782+53.76	131753.88	2099981.94
PI C24	6791+53.46	132593.15	2100306.10
Rec 1/4 Cor	Ahd Tan - 442.69' to PT	133050.15	2100304.32
PT	6800+32.30	133492.84	2100302.59
Rec Sec Cor	6822+32.88	135693.40	2100294.01
Rec 1/4 Cor	6848+71.85	138332.29	2100272.26
Rec Sec Cor	6875+10.83	140971.17	2100250.51
PC	6880+58.42	141518.76	2100248.18
PI C27	6893+17.37	142777.70	2100242.82
PT	6905+44.26	143943.92	2100717.04
TS	6911+26.40	144483.19	2100936.33
SC	6915+26.40	144857.83	2101076.11
PI SCS28	6923+18.86	145587.82	2101385.50
Sec line Xing	Ahd Tan - 763.14' to PI	146281.43	2101067.26
CS	6929+97.55	146303.50	2101044.34
ST	6933+97.55	146671.64	2100888.22

CURVE DATA

ARC DEFINITION

Curve C22		Curve SCS28	
PI Sta	= 6746+82.82	PI Sta	= 6923+18.86
Delta	= 20° 38' 00" (LT)	Delta	= 46° 46' 30" (LT)
Da	= 1° 00' 00"	Da	= 2° 29' 59"
R	= 5729.65'	R	= 2292.01
T	= 1042.98'	L	= 1471.15
L	= 2063.36'	Ls	= 400.00
		Sc	= 4° 59' 59"
Curve SCS23		Ts	= 1192.46
PI Sta	= 6769+77.98		
Delta	= 42° 08' 49" (RT)		
Da	= 2° 59' 59"		
R	= 1910.08'		
L	= 1005.06'		
Ls	= 400.00'		
Sc	= 5° 59' 58"		
Ts	= 937.30'		
Curve C24			
PI Sta	= 6791+53.46		
Delta	= 21° 20' 31" (LT)		
Da	= 1° 12' 00"		
R	= 4774.74'		
T	= 899.70'		
L	= 1778.54'		
Curve C27			
PI Sta	= 6893+17.37		
Delta	= 22° 22' 20" (RT)		
Da	= 0° 54' 00"		
R	= 6366.26		
T	= 1258.96		
L	= 2485.84		

US PUBLIC LAND SURVEY DATA

DESC.	SEC-TWP-RGE	NORTHING	EASTING
SW Sec Cor	Sec 33 T-145-N R-73-W	119808.55	2095102.49
S 1/4 Cor	Sec 33 T-145-N R-73-W	119825.46	2097742.09
SE Sec Cor	Sec 33 T-145-N R-73-W	119842.37	2100381.69
E 1/4 Cor	Sec 33 T-145-N R-73-W	122482.01	2100366.39
N 1/4 Cor	Sec 33 T-145-N R-73-W	125108.22	2097706.96
NE Sec Cor	Sec 33 T-145-N R-73-W	125121.64	2100351.08
E 1/4 Cor	Sec 28 T-145-N R-73-W	127764.27	2100332.86
N 1/4 Cor	Sec 28 T-145-N R-73-W	130382.41	2097672.21
NE Sec Cor	Sec 28 T-145-N R-73-W	130406.90	2100314.63
E 1/4 Cor	Sec 21 T-145-N R-73-W	133050.15	2100304.32
N 1/4 Cor	Sec 21 T-145-N R-73-W	135679.98	2097664.06
NE Sec Cor	Sec 21 T-145-N R-73-W	135693.40	2100294.01
E 1/4 Cor	Sec 16 T-145-N R-73-W	138332.29	2100272.26
NW Sec Cor	Sec 16 T-145-N R-73-W	140953.40	2094964.91
NE Sec Cor	Sec 16 T-145-N R-73-W	140971.17	2100250.51
NE Sec Cor	Sec 15 T-145-N R-73-W	141024.46	2105521.02
E 1/4 Cor	Sec 9 T-145-N R-73-W	143620.82	2100239.23
NW Sec Cor	Sec 9 T-145-N R-73-W	146236.00	2094930.39
NE Sec Cor	Sec 9 T-145-N R-73-W	146270.46	2100227.94
NE Sec Cor	Sec 10 T-145-N R-73-W	146339.18	2105485.10
E 1/4 Cor	Sec 4 T-145-N R-73-W	148922.05	2100211.29
NW Sec Cor	Sec 4 T-145-N R-73-W	151539.50	2094907.77
NE Sec Cor	Sec 4 T-145-N R-73-W	151573.02	2100194.65
NE Sec Cor	Sec 3 T-145-N R-73-W	151607.88	2105481.58
E 1/4 Cor	Sec 33 T-146-N R-73-W	154215.58	2100170.46
NE Sec Cor	Sec 33 T-146-N R-73-W	156858.15	2100146.27
N 1/4 Cor	Sec 34 T-146-N R-73-W	156862.15	2102775.71
NE Sec Cor	Sec 34 T-146-N R-73-W	156890.47	2105436.92
E 1/4 Cor	Sec 28 T-146-N R-73-W	159501.06	2100122.02
NW Sec Cor	Sec 28 T-146-N R-73-W	162098.66	2094814.75
NE Sec Cor	Sec 28 T-146-N R-73-W	162143.98	2100097.78
NE Sec Cor	Sec 27 T-146-N R-73-W	162173.11	2105397.42

SURVEY CONTROL POINTS

PNT	NORTHING	EASTING	ELEV	STATION	OFFSET
CONTROL POINT DESCRIPTION					
GPS3	150544.03	2100277.87	1969.29	6973+94	79' Rt
#5 Rebar w/ plastic cap stamped "SURVEY CONTROL"					
GPS6	118827.90	2100252.63	2038.99	6651+63	95' Lt
#5 Rebar w/ plastic cap stamped "SURVEY CONTROL"					
GPS7	128329.55	2100332.93	2029.41	6746+65	97' Rt
#5 Rebar w/ plastic cap stamped "SURVEY CONTROL"					
GPS8	140907.26	2100349.18	1996.18	6874+46	98' Rt
#5 Rebar w/ plastic cap stamped "SURVEY CONTROL"					
GPS9	159530.54	2100037.30	1948.35	7069+26	102' Lt
#5 Rebar w/ plastic cap stamped "SURVEY CONTROL"					

NOTES: Sheet 1 of 3 - Wells County
Sheet 4 of 6 Total

Date Survey Completed 08/31/17

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INITIALIZING BENCH MARK
NDGPS Stations (OPUS)

☒ NAVD-88
☐ NGVD-29
☐ GEOID 09 ☐ _____
☒ GEOID 12B

REGISTERED PROFESSIONAL LAND SURVEYOR
Kurt Kisch
Kurt Kisch
ND 4597-LS
08/14/18
NORTH DAKOTA

PRELIMINARY SURVEY COORDINATE AND CURVE DATA - ND 3 from Tuttle N to W Jct 200

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	81	5

HORIZONTAL ALIGNMENT

PNT	STATION	NORTHING	EASTING
ND 3 (SCL3) continued			
TS	6942+42.23	147439.36	2100535.97
SC	6945+42.23	147714.14	2100415.66
PI SCS29	6950+08.96	148136.24	2100216.23
CS	6954+56.64	148603.08	2100218.53
ST	6957+56.64	148902.96	2100211.41
Rec 1/4 Cor	6957+75.73	148922.05	2100211.29
PC	6972+78.54	150424.82	2100201.86
PI C30	6979+28.57	151074.84	2100197.78
Twp line Xing	Ahd Tan - 97.79' to PT	151571.51	2099956.31
PT	6985+56.96	151659.45	2099913.55
PC	6991+78.46	152218.39	2099641.80
PI C31	7007+27.75	153611.73	2098964.39
PT	7020+18.92	154941.38	2099759.56
Sec line Xing	7027+94.67	155607.15	2100157.72
PC	7030+62.95	155837.40	2100295.42
Sec line Xing	7042+53.65 (Bk Tan)	156859.30	2100906.55
PI C32	7044+67.47	157042.80	2101016.29
PT	7056+74.68	158350.90	2100504.88
PC	7061+95.21	158835.70	2100315.34
PI C33	7067+21.72	159326.06	2100123.63
Rec 1/4 Cor	Ahd Tan - 175.01' to PI	159501.06	2100122.02
PT	7072+36.60	159852.55	2100118.80
Station Equation ND 3 (SCL3) at ND 200 (SCL200) Rec Sec Cor			
ND 3 Bk	7095+28.13	162143.98	2100097.78
ND 3 Ahd	7089+82.56	162143.98	2100097.78
ND 200 Bk	13308+95.62	162143.98	2100097.78
ND 200 Ahd	13308+87.36	162143.98	2100097.78
Rec Sec Cor End	7142+82.29	162173.11	2105397.42

CURVE DATA

ARC DEFINITION

Curve SCS29		Curve C33	
PI Sta	= 6950+08.96	PI Sta	= 7067+21.72
Delta	= 24° 17' 13" (RT)	Delta	= 20° 49' 40" (RT)
Da	= 2° 00' 00"	Da	= 2° 00' 00"
R	= 2864.93	R	= 2864.79
L	= 914.41	T	= 526.51
Ls	= 300.00	L	= 1041.40
Sc	= 2° 59' 59"		
Ts	= 766.73		

Curve C30	
PI Sta	= 6979+28.57
Delta	= 25° 34' 07" (LT)
Da	= 2° 00' 00"
R	= 2864.79
T	= 650.04
L	= 1278.43

Curve C31	
PI Sta	= 7007+27.75
Delta	= 56° 48' 33" (RT)
Da	= 2° 00' 00"
R	= 2864.79
T	= 1549.28
L	= 2840.46

Curve C32	
PI Sta	= 7044+67.47
Delta	= 52° 14' 04" (LT)
Da	= 2° 00' 00"
R	= 2864.79
T	= 1404.51
L	= 2611.72

US PUBLIC LAND SURVEY DATA

DESC.	SEC-TWP-RGE	NORTHING	EASTING

SURVEY CONTROL POINTS

PNT	NORTHING	EASTING	ELEV	STATION	OFFSET	CONTROL POINT DESCRIPTION

REFERENCE MARKERS

R Mkr #	Northing	Easting	Station	Offset	Alignment
127	124244.07	2100384.10	6705+91	28' Rt	SCL3
128	129482.00	2099918.05	6758+78	28' Rt	SCL3
129	134628.10	2100327.52	6811+67	29' Rt	SCL3
130	139916.17	2100286.56	6864+56	27' Rt	SCL3
131	145024.27	2101150.87	6917+05	29' Rt	SCL3
133	155137.98	2099908.36	7022+64	27' Rt	SCL3
134	160677.07	2100142.72	7080+61	31' Rt	SCL3
252	162111.41	2099785.44	13305+83	30' Rt	SCL200

NOTES: Sheet 2 of 3 - Wells County
Sheet 5 of 6 Total

Date Survey Completed 08/31/17

☐ Assumed Coordinates

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INITIALIZING BENCH MARK
NDGPS Stations (OPUS)

☒ NAVD-88
☐ NGVD-29
☐ GEOID 09 ☐ _____
☒ GEOID 12B

REGISTERED PROFESSIONAL LAND SURVEYOR
Kurt Kisch
Kurt Kisch
ND 4597-LS
08/14/18
NORTH DAKOTA

PRELIMINARY SURVEY COORDINATE AND CURVE DATA - ND 3 from Tuttle N to W Jct 200

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	81	6

HORIZONTAL ALIGNMENT

PNT	STATION	NORTHING	EASTING
ND 200 (SCL200)			
Rec Sec Cor Begin	13256+12.41	162098.66	2094814.76
Station Equation ND 3 (SCL3) at ND 200 (SCL200) Rec Sec Cor			
ND 3 Bk	7095+28.13	162143.98	2100097.78
ND 3 Ahd	7089+82.56	162143.98	2100097.78
ND 200 Bk	13308+95.62	162143.98	2100097.78
ND 200 Ahd	13308+87.36	162143.98	2100097.78

CURVE DATA

ARC DEFINITION

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 3 of 3 - Wells County
Sheet 6 of 6 Total

Date Survey Completed 08/31/17

☐ Assumed Coordinates

☒ All coordinates on this sheet are Wells County ground coordinates. They are derived from the NAD83(2011) reference frame; North Dakota North Zone Combination Factor (cf) = 0.9998895

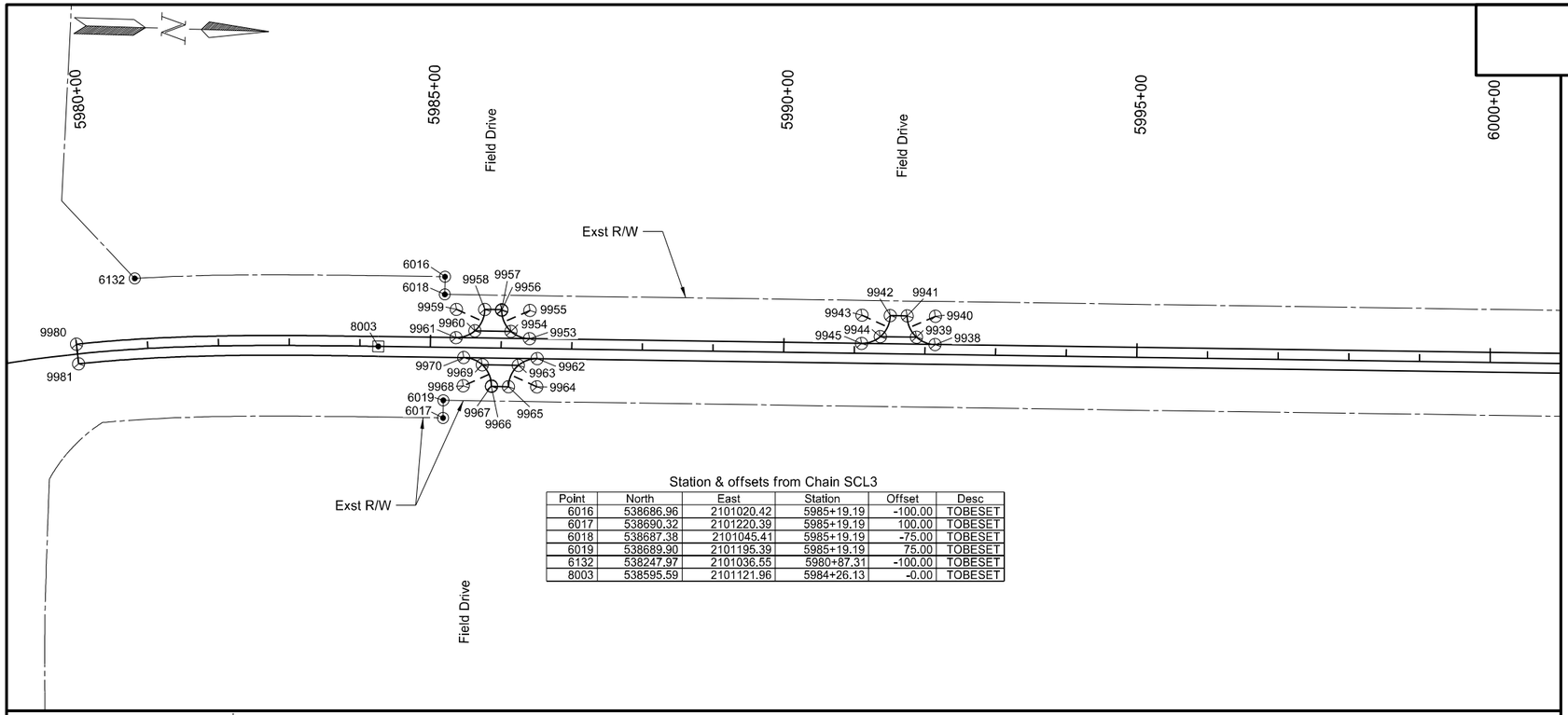
All coordinates and measurements on this document derived from the International Foot definition.

INITIALIZING BENCH MARK
NDGPS Stations (OPUS)

☒ NAVD-88
☐ NGVD-29
☐ GEOID 09 ☐ _____
☒ GEOID 12B

REGISTERED PROFESSIONAL LAND SURVEYOR
Kurt Kisch
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ND 4597-LS
08/14/18
NORTH DAKOTA

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	82	1

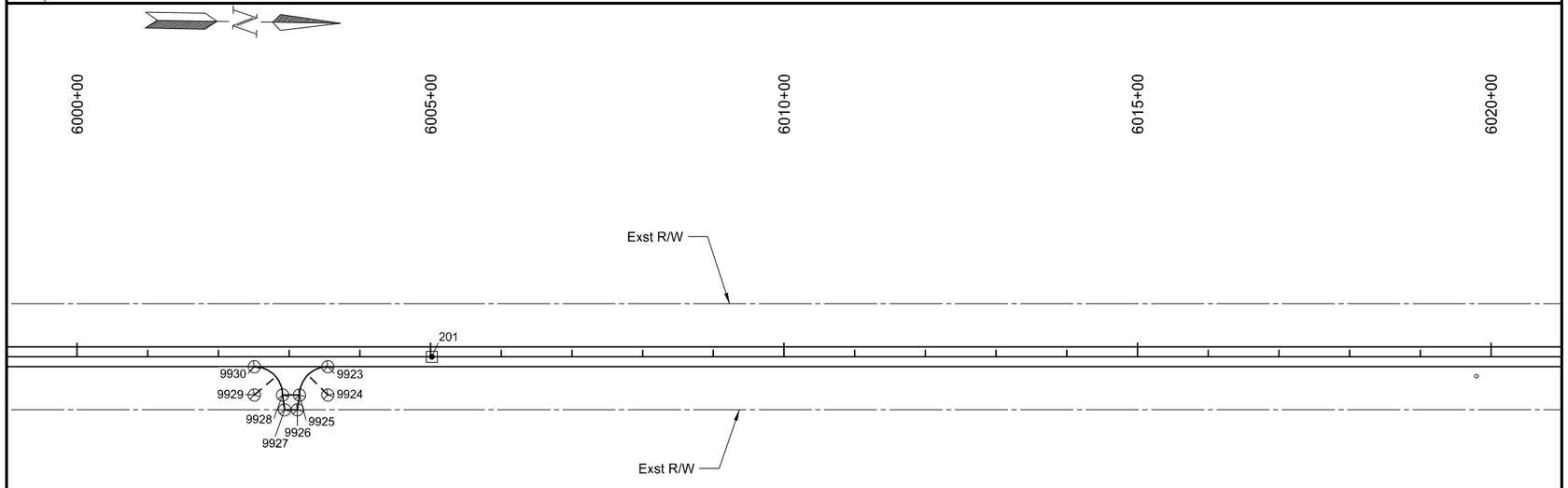


Station & offsets from Chain SCL3

Point	North	East	Station	Offset	Desc
6016	538686.96	2101020.42	5985+19.19	-100.00	TOBESET
6017	538690.32	2101220.39	5985+19.19	100.00	TOBESET
6018	538687.38	2101045.41	5985+19.19	-75.00	TOBESET
6019	538689.90	2101195.39	5985+19.19	75.00	TOBESET
6132	538247.97	2101036.55	5980+87.31	-100.00	TOBESET
8003	538595.59	2101121.96	5984+26.13	-0.00	TOBESET

Station & offsets from Chain EX3_K

Point	North	East	Station	Offset	Desc
9938	539383.16	2101094.74	5992+14.04	-14.00	ASP
9939	539356.54	2101085.18	5991+87.58	-24.00	ASP
9940	539382.49	2101054.74	5992+14.04	-54.00	RAD
9941	539342.49	2101055.41	5991+74.04	-54.00	GRV
9942	539318.50	2101055.82	5991+50.04	-54.00	GRV
9943	539278.50	2101056.49	5991+10.04	-54.00	RAD
9944	539305.46	2101086.04	5991+36.50	-24.00	ASP
9945	539279.17	2101096.48	5991+10.04	-14.00	ASP
9953	538809.23	2101104.37	5986+40.03	-14.00	ASP
9954	538782.61	2101094.82	5986+13.58	-24.00	ASP
9955	538808.56	2101064.38	5986+40.03	-54.00	RAD
9956	538768.58	2101065.49	5986+00.04	-53.56	GRV
9957	538768.55	2101064.61	5986+00.03	-54.44	GRV
9958	538744.55	2101065.02	5985+76.03	-54.44	GRV
9959	538704.57	2101066.13	5985+36.03	-54.00	RAD
9960	538731.53	2101095.68	5985+62.49	-24.00	ASP
9961	538705.24	2101106.12	5985+36.03	-14.00	ASP
9962	538820.88	2101132.18	5986+51.22	14.00	ASP
9963	538794.60	2101142.63	5986+24.76	24.00	ASP
9964	538821.55	2101172.18	5986+51.22	54.00	RAD
9965	538781.57	2101173.29	5986+11.22	54.44	GRV
9966	538757.57	2101173.69	5985+87.22	54.44	GRV
9967	538757.55	2101172.81	5985+87.21	53.56	GRV
9968	538717.56	2101173.92	5985+47.21	54.00	RAD
9969	538743.51	2101143.48	5985+73.67	24.00	ASP
9970	538716.89	2101133.93	5985+47.21	14.00	ASP
9980	538168.52	2101132.09	5980+00.00	-14.00	ASP
9981	538172.29	2101159.84	5980+00.00	14.00	ASP



Station & offsets from Chain SCL3

Point	North	East	Station	Offset	Desc
201	540670.80	2101087.12	6005+01.63	0.00	EQCOR

Station & offsets from Chain EX3_K

Point	North	East	Station	Offset	Desc
9923	540523.94	2101103.58	6003+54.51	14.00	ASP
9924	540524.61	2101143.58	6003+54.51	54.00	RAD
9925	540484.62	2101144.25	6003+14.51	54.00	ASP
9926	540482.03	2101165.30	6003+11.58	75.00	GRV
9927	540463.91	2101165.60	6002+93.45	75.00	GRV
9928	540460.62	2101144.65	6002+90.51	54.00	ASP
9929	540420.63	2101145.32	6002+50.51	54.00	RAD
9930	540419.95	2101105.33	6002+50.51	14.00	ASP

Legend

- Iron Pin Reference Monument
- Alignment Monument
- Iron Pin R/W Monument
- Temporary R/W / Staking Point
- Found R/W Monument or Property Corner
- Found R/W Marker

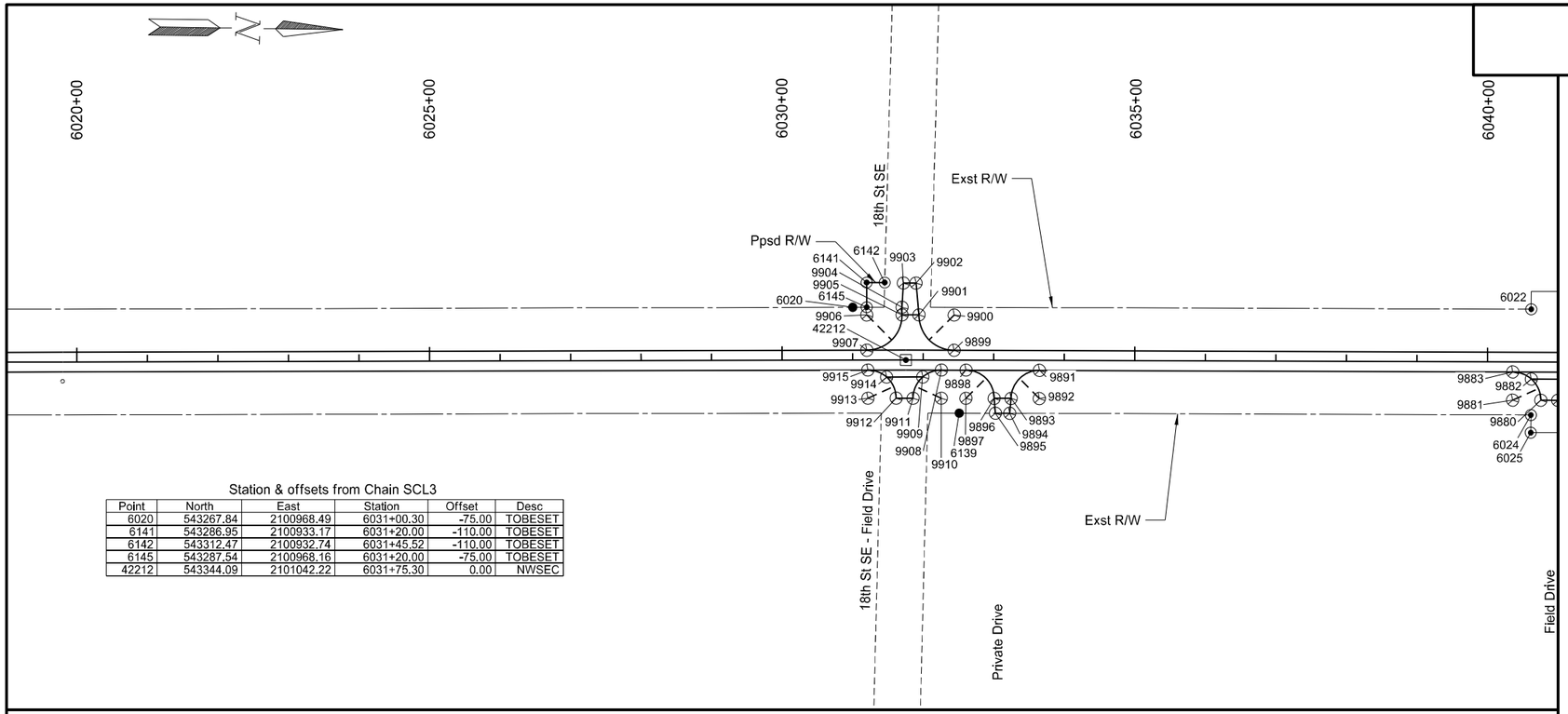
REGISTERED PROFESSIONAL ENGINEER
KORY M. KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Survey Data Layout

ND 3
Tuttle N to W Jct 200

5900+65 to 6020+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	82	2

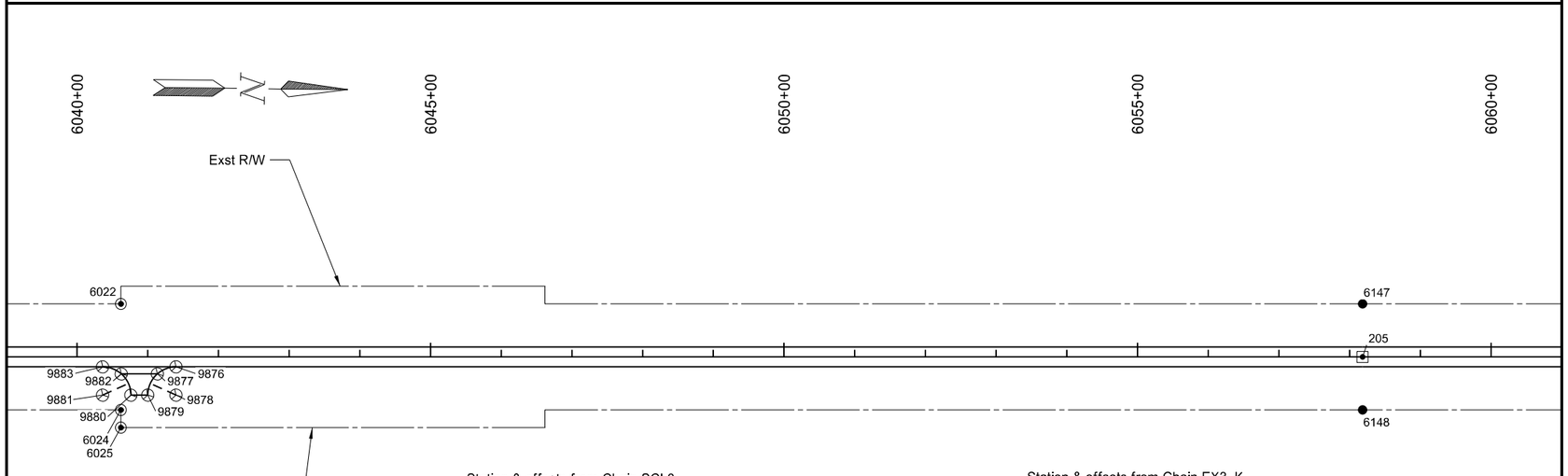


Station & offsets from Chain SCL3

Point	North	East	Station	Offset	Desc
6020	543267.84	2100968.49	6031+00.30	-75.00	TOBESET
6141	543286.95	2100933.17	6031+20.00	-110.00	TOBESET
6142	543312.47	2100932.74	6031+45.52	-110.00	TOBESET
6145	543287.54	2100968.16	6031+20.00	-75.00	TOBESET
42212	543344.09	2101042.22	6031+75.30	0.00	NWSEC

Station & offsets from Chain EX3_K

Point	North	East	Station	Offset	Desc
9891	543533.60	2101054.12	6033+64.66	14.00	ASP
9892	543534.04	2101094.12	6033+64.66	54.00	RAD
9893	543494.04	2101094.56	6033+24.66	54.00	ASP
9894	543492.42	2101115.58	6033+22.80	75.00	GRV
9895	543472.14	2101115.81	6033+02.52	75.00	GRV
9896	543470.05	2101094.83	6033+00.66	54.00	ASP
9897	543430.05	2101095.27	6032+60.66	54.00	RAD
9898	543429.60	2101055.28	6032+60.66	14.00	ASP
9899	543412.31	2101027.47	6032+43.68	-14.00	ASP
9900	543411.76	2100977.47	6032+43.68	-64.00	RAD
9901	543361.76	2100978.02	6031+93.68	-64.00	ASP
9902	543356.85	2100932.85	6031+89.27	-109.23	GRV
9903	543339.04	2100933.04	6031+72.08	-109.25	GRV
9904	543337.64	2100967.40	6031+70.10	-74.92	GRV
9905	543337.76	2100978.61	6031+70.04	-63.71	ASP
9906	543287.77	2100979.16	6031+20.04	-64.00	RAD
9907	543288.61	2101029.15	6031+20.04	-14.00	ASP
9908	543394.67	2101055.66	6032+25.73	14.00	ASP
9909	543368.48	2101065.82	6031+99.43	23.86	ASP
9910	543395.12	2101095.66	6032+25.73	54.00	RAD
9911	543355.12	2101096.33	6031+85.73	54.23	GRV
9912	543331.12	2101096.45	6031+61.42	54.00	GRV
9913	543291.13	2101097.12	6031+21.42	54.00	RAD
9914	543317.08	2101066.68	6031+47.88	24.00	ASP
9915	543290.46	2101057.13	6031+21.42	14.00	ASP



Station & offsets from Chain SCL3

Point	North	East	Station	Offset	Desc
205	545986.96	2101012.92	6058+18.33	0.00	EQCOR
6022	544229.70	2100957.40	6040+61.80	-75.00	TOBESET
6024	544231.37	2101107.39	6040+61.80	75.00	TOBESET
6025	544231.65	2101132.39	6040+61.80	100.00	TOBESET
6147	545986.13	2100937.92	6058+18.33	-75.00	TOBESET
6148	545987.79	2101087.91	6058+18.33	75.00	TOBESET

Station & offsets from Chain EX3_K

Point	North	East	Station	Offset	Desc
9876	544308.77	2101045.53	6041+39.88	14.00	ASP
9877	544282.42	2101055.82	6041+13.42	24.00	ASP
9878	544309.21	2101085.53	6041+39.88	54.00	RAD
9879	544269.21	2101085.97	6040+99.88	54.00	GRV
9880	544245.21	2101086.23	6040+75.88	54.00	GRV
9881	544205.22	2101086.68	6040+35.88	54.00	RAD
9882	544231.34	2101056.39	6040+62.33	24.00	ASP
9883	544204.77	2101046.68	6040+35.88	14.00	ASP

Legend

- Iron Pin Reference Monument
- Alignment Monument
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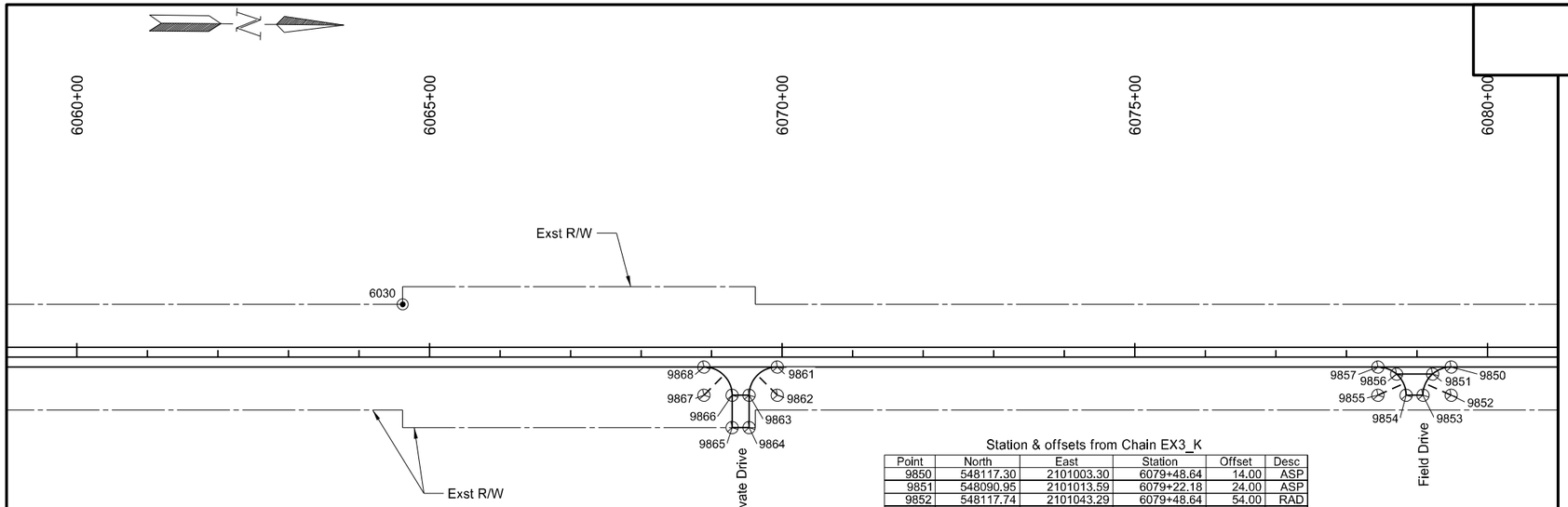
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 12/15/2021
NORTH DAKOTA

Survey Data Layout

ND 3
Tuttle N to W Jct 200

6020+00 to 6060+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	82	3

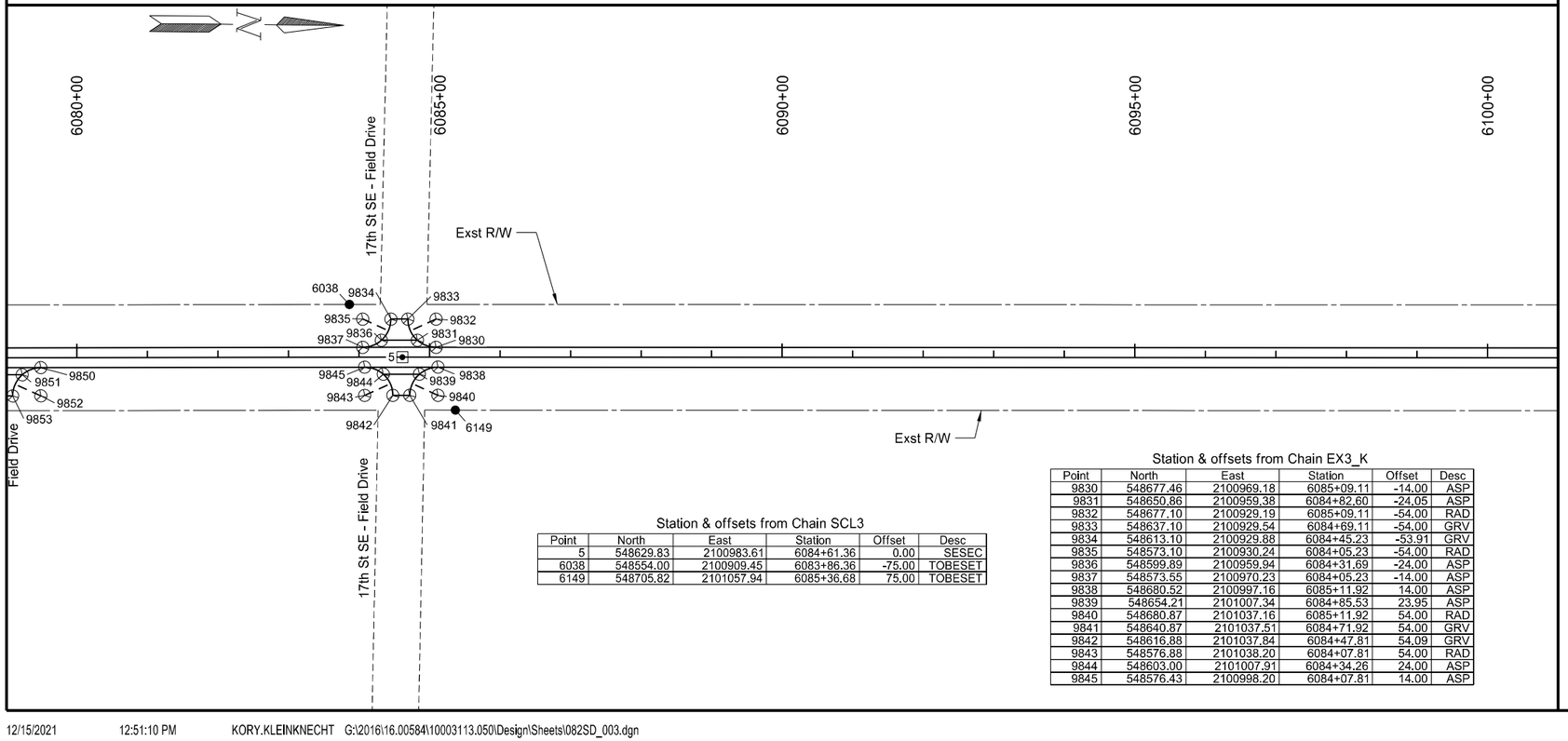


Station & offsets from Chain SCL3

Point	North	East	Station	Offset	Desc
6030	546629.56	2100930.79	6064+61.80	-75.00	TOBESET

Station & offsets from Chain EX3_K

Point	North	East	Station	Offset	Desc
9850	548117.30	2101003.30	6079+48.64	14.00	ASP
9851	548090.95	2101013.59	6079+22.18	24.00	ASP
9852	548117.74	2101043.29	6079+48.64	54.00	RAD
9853	548077.74	2101043.74	6079+08.64	54.00	GRV
9854	548053.74	2101044.00	6078+84.64	54.00	GRV
9855	548013.75	2101044.45	6078+44.64	54.00	RAD
9856	548039.87	2101014.15	6078+71.10	24.00	ASP
9857	548013.30	2101004.45	6078+44.64	14.00	ASP
9861	547161.65	2101013.89	6069+92.94	14.00	ASP
9862	547162.10	2101053.89	6069+92.94	54.00	RAD
9863	547122.10	2101054.33	6069+52.94	54.00	ASP
9864	547122.61	2101100.33	6069+52.94	100.00	GRV
9865	547098.61	2101100.60	6069+28.94	100.00	GRV
9866	547098.10	2101054.60	6069+28.94	54.00	ASP
9867	547058.10	2101055.04	6068+88.94	54.00	RAD
9868	547057.66	2101015.05	6068+88.94	14.00	ASP



Station & offsets from Chain SCL3

Point	North	East	Station	Offset	Desc
5	548629.83	2100983.61	6084+61.36	0.00	SESEC
6038	548554.00	2100909.45	6083+86.36	-75.00	TOBESET
6149	548705.82	2101057.94	6085+36.68	75.00	TOBESET

Station & offsets from Chain EX3_K

Point	North	East	Station	Offset	Desc
9830	548677.46	2100969.18	6085+09.11	-14.00	ASP
9831	548650.86	2100959.38	6084+82.60	-24.05	ASP
9832	548677.10	2100929.19	6085+09.11	-54.00	RAD
9833	548637.10	2100929.54	6084+69.11	-54.00	GRV
9834	548613.10	2100929.88	6084+45.23	-53.91	GRV
9835	548573.10	2100930.24	6084+05.23	-54.00	RAD
9836	548599.89	2100959.94	6084+31.69	-24.00	ASP
9837	548573.55	2100970.23	6084+05.23	-14.00	ASP
9838	548680.52	2100997.16	6085+11.92	14.00	ASP
9839	548654.21	2101007.34	6084+85.53	23.95	ASP
9840	548680.87	2101037.16	6085+11.92	54.00	RAD
9841	548640.87	2101037.51	6084+71.92	54.00	GRV
9842	548616.88	2101037.84	6084+47.81	54.09	GRV
9843	548576.88	2101038.20	6084+07.81	54.00	RAD
9844	548603.00	2101007.91	6084+34.26	24.00	ASP
9845	548576.43	2100998.20	6084+07.81	14.00	ASP

Legend

- Iron Pin Reference Monument
- Alignment Monument
- Iron Pin R/W Monument
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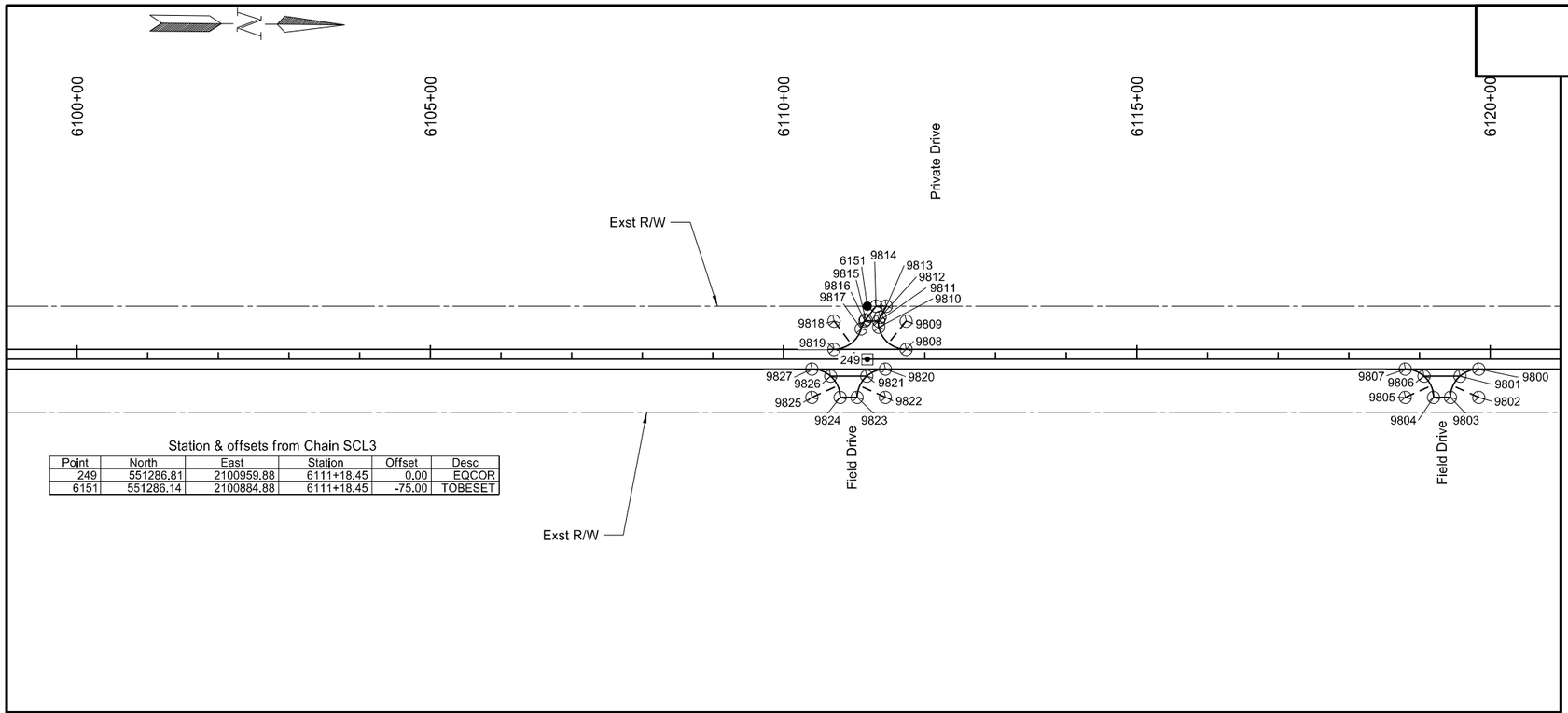
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Survey Data Layout

ND 3
Tuttle N to W Jct 200

6060+00 to 6100+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	82	4

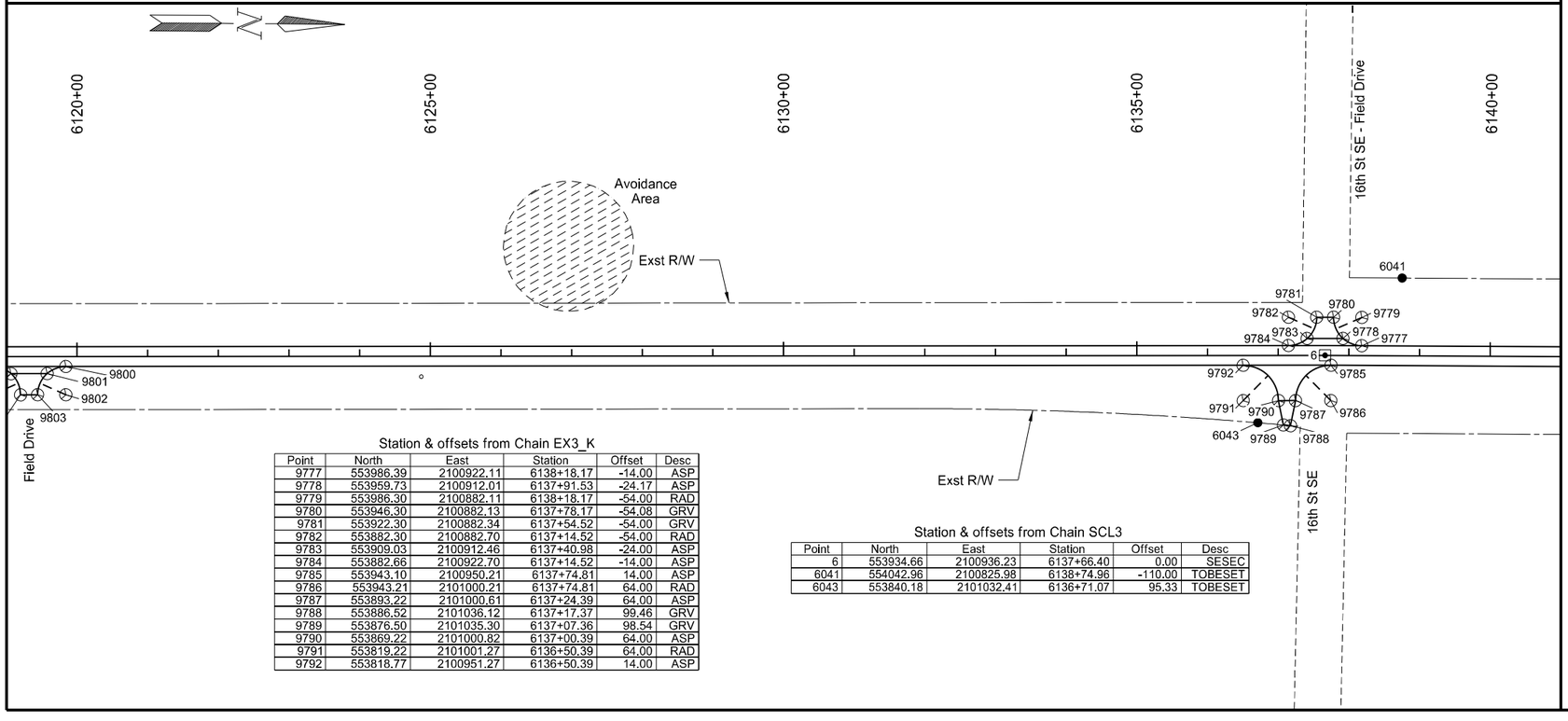


Station & offsets from Chain SCL3

Point	North	East	Station	Offset	Desc
249	551286.81	2100959.88	6111+18.45	0.00	EQCOR
6151	551286.14	2100884.88	6111+18.45	-75.00	TOBESET

Station & offsets from Chain EX3_K

Point	North	East	Station	Offset	Desc
9800	552152.35	2100966.15	6119+83.90	14.00	ASP
9801	552125.98	2100976.39	6119+57.44	24.00	ASP
9802	552152.71	2101006.15	6119+83.90	54.00	RAD
9803	552112.71	2101006.51	6119+43.90	54.00	GRV
9804	552088.71	2101006.72	6119+19.90	54.00	GRV
9805	552048.71	2101007.08	6118+79.90	54.00	RAD
9806	552074.90	2100976.84	6119+06.35	24.00	ASP
9807	552048.35	2100967.08	6118+79.90	14.00	ASP
9808	551341.81	2100945.39	6111+73.58	-14.00	ASP
9809	551341.46	2100905.39	6111+73.58	-54.00	RAD
9810	551302.50	2100914.49	6111+34.55	-45.25	ASP
9811	551302.43	2100905.74	6111+34.55	-54.00	ASP
9812	551304.46	2100900.29	6111+36.63	-59.43	GRV
9813	551313.08	2100884.64	6111+45.39	-75.00	GRV
9814	551298.53	2100884.77	6111+30.84	-75.00	GRV
9815	551284.04	2100903.92	6111+16.17	-55.98	GRV
9816	551282.65	2100905.92	6111+14.77	-54.00	ASP
9817	551277.62	2100917.03	6111+09.64	-42.93	ASP
9818	551239.09	2100906.31	6110+71.20	-54.00	RAD
9819	551239.44	2100946.30	6110+71.20	-14.00	ASP
9820	551312.59	2100973.65	6111+44.10	14.00	ASP
9821	551286.22	2100983.89	6111+17.64	24.00	ASP
9822	551312.95	2101013.65	6111+44.10	54.00	RAD
9823	551272.95	2101014.01	6111+04.10	54.00	GRV
9824	551248.95	2101014.22	6110+80.10	54.00	GRV
9825	551208.95	2101014.58	6110+40.10	54.00	RAD
9826	551235.14	2100984.34	6110+66.56	24.00	ASP
9827	551208.59	2100974.58	6110+40.10	14.00	ASP



Station & offsets from Chain EX3_K

Point	North	East	Station	Offset	Desc
9777	553986.39	2100922.11	6138+18.17	-14.00	ASP
9778	553959.73	2100912.01	6137+91.53	-24.17	ASP
9779	553986.30	2100882.11	6138+18.17	-54.00	RAD
9780	553946.30	2100882.13	6137+78.17	-54.08	GRV
9781	553922.30	2100882.34	6137+54.52	-54.00	GRV
9782	553882.30	2100882.70	6137+14.52	-54.00	RAD
9783	553909.03	2100912.46	6137+40.98	-24.00	ASP
9784	553882.66	2100922.70	6137+14.52	-14.00	ASP
9785	553943.10	2100950.21	6137+74.81	14.00	ASP
9786	553943.21	2101000.21	6137+74.81	64.00	RAD
9787	553893.22	2101000.61	6137+24.39	64.00	ASP
9788	553886.52	2101036.12	6137+17.37	99.46	GRV
9789	553876.50	2101035.30	6137+07.36	98.54	GRV
9790	553869.22	2101000.82	6137+00.39	64.00	ASP
9791	553819.22	2101001.27	6136+50.39	64.00	RAD
9792	553818.77	2100951.27	6136+50.39	14.00	ASP

Station & offsets from Chain SCL3

Point	North	East	Station	Offset	Desc
6	553934.66	2100936.23	6137+66.40	0.00	SESEC
6041	554042.96	2100825.98	6138+74.96	-110.00	TOBESET
6043	553840.18	2101032.41	6136+71.07	95.33	TOBESET

Station & offsets from Chain EX3_K

Point	North	East	Station	Offset	Desc
9800	552152.35	2100966.15	6119+83.90	14.00	ASP
9801	552125.98	2100976.39	6119+57.44	24.00	ASP
9802	552152.71	2101006.15	6119+83.90	54.00	RAD
9803	552112.71	2101006.51	6119+43.90	54.00	GRV
9804	552088.71	2101006.72	6119+19.90	54.00	GRV
9805	552048.71	2101007.08	6118+79.90	54.00	RAD
9806	552074.90	2100976.84	6119+06.35	24.00	ASP
9807	552048.35	2100967.08	6118+79.90	14.00	ASP
9808	551341.81	2100945.39	6111+73.58	-14.00	ASP
9809	551341.46	2100905.39	6111+73.58	-54.00	RAD
9810	551302.50	2100914.49	6111+34.55	-45.25	ASP
9811	551302.43	2100905.74	6111+34.55	-54.00	ASP
9812	551304.46	2100900.29	6111+36.63	-59.43	GRV
9813	551313.08	2100884.64	6111+45.39	-75.00	GRV
9814	551298.53	2100884.77	6111+30.84	-75.00	GRV
9815	551284.04	2100903.92	6111+16.17	-55.98	GRV
9816	551282.65	2100905.92	6111+14.77	-54.00	ASP
9817	551277.62	2100917.03	6111+09.64	-42.93	ASP
9818	551239.09	2100906.31	6110+71.20	-54.00	RAD
9819	551239.44	2100946.30	6110+71.20	-14.00	ASP
9820	551312.59	2100973.65	6111+44.10	14.00	ASP
9821	551286.22	2100983.89	6111+17.64	24.00	ASP
9822	551312.95	2101013.65	6111+44.10	54.00	RAD
9823	551272.95	2101014.01	6111+04.10	54.00	GRV
9824	551248.95	2101014.22	6110+80.10	54.00	GRV
9825	551208.95	2101014.58	6110+40.10	54.00	RAD
9826	551235.14	2100984.34	6110+66.56	24.00	ASP
9827	551208.59	2100974.58	6110+40.10	14.00	ASP

Legend

- Iron Pin Reference Monument
- Alignment Monument
- Iron Pin R/W Monument
- Temporary R/W / Staking Point
- Found R/W Monument or Property Corner
- Found R/W Marker

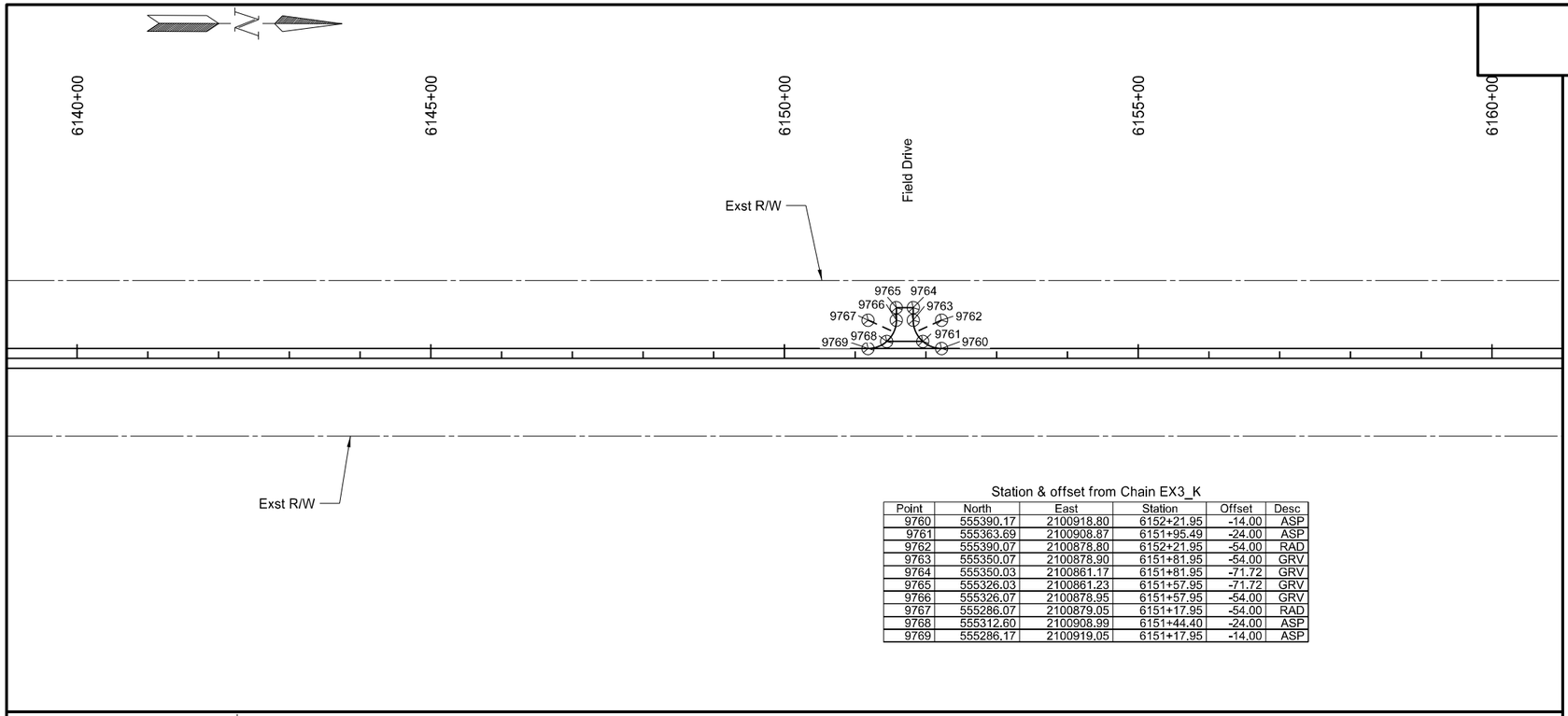
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Survey Data Layout

ND 3
Tuttle N to W Jct 200

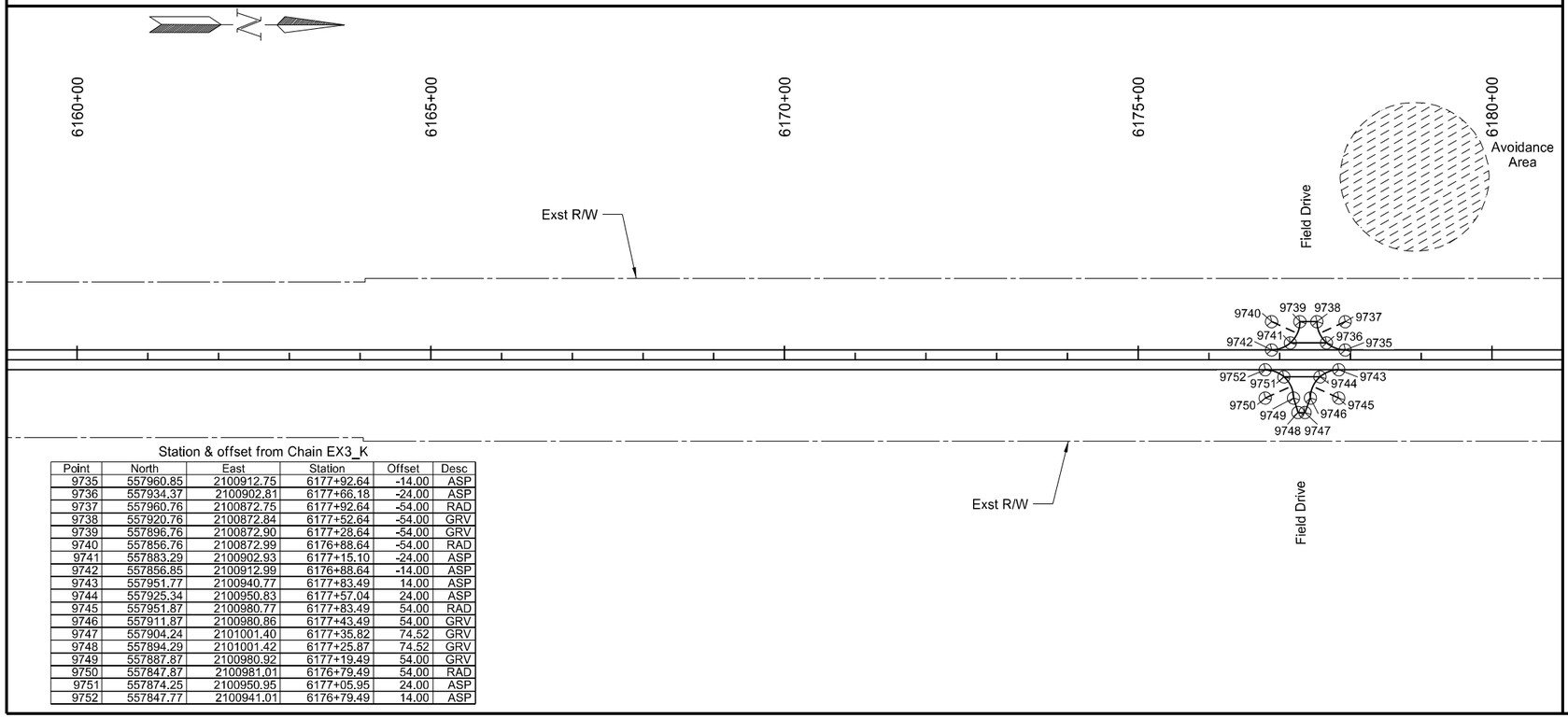
6100+00 to 6140+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	82	5



Station & offset from Chain EX3_K

Point	North	East	Station	Offset	Desc
9760	555390.17	2100918.80	6152+21.95	-14.00	ASP
9761	555363.69	2100908.87	6151+95.49	-24.00	ASP
9762	555390.07	2100878.80	6152+21.95	-54.00	RAD
9763	555350.07	2100878.90	6151+81.95	-54.00	GRV
9764	555350.03	2100861.17	6151+81.95	-71.72	GRV
9765	555326.03	2100861.23	6151+57.95	-71.72	GRV
9766	555326.07	2100878.95	6151+57.95	-54.00	GRV
9767	555286.07	2100879.05	6151+17.95	-54.00	RAD
9768	555312.60	2100908.99	6151+44.40	-24.00	ASP
9769	555286.17	2100919.05	6151+17.95	-14.00	ASP



Station & offset from Chain EX3_K

Point	North	East	Station	Offset	Desc
9735	557960.85	2100912.75	6177+92.64	-14.00	ASP
9736	557934.37	2100902.81	6177+66.18	-24.00	ASP
9737	557960.76	2100872.75	6177+92.64	-54.00	RAD
9738	557920.76	2100872.84	6177+52.64	-54.00	GRV
9739	557896.76	2100872.90	6177+28.64	-54.00	GRV
9740	557856.76	2100872.99	6176+88.64	-54.00	RAD
9741	557883.29	2100902.93	6177+15.10	-24.00	ASP
9742	557856.85	2100912.99	6176+88.64	-14.00	ASP
9743	557951.77	2100940.77	6177+83.49	14.00	ASP
9744	557925.34	2100950.83	6177+57.04	24.00	ASP
9745	557951.87	2100980.77	6177+83.49	54.00	RAD
9746	557911.87	2100980.86	6177+43.49	54.00	GRV
9747	557904.24	2101001.40	6177+35.82	74.52	GRV
9748	557894.29	2101001.42	6177+25.87	74.52	GRV
9749	557887.87	2100980.92	6177+19.49	54.00	GRV
9750	557847.87	2100981.01	6176+79.49	54.00	RAD
9751	557874.25	2100950.95	6177+05.95	24.00	ASP
9752	557847.77	2100941.01	6176+79.49	14.00	ASP

Legend

- Iron Pin Reference Monument
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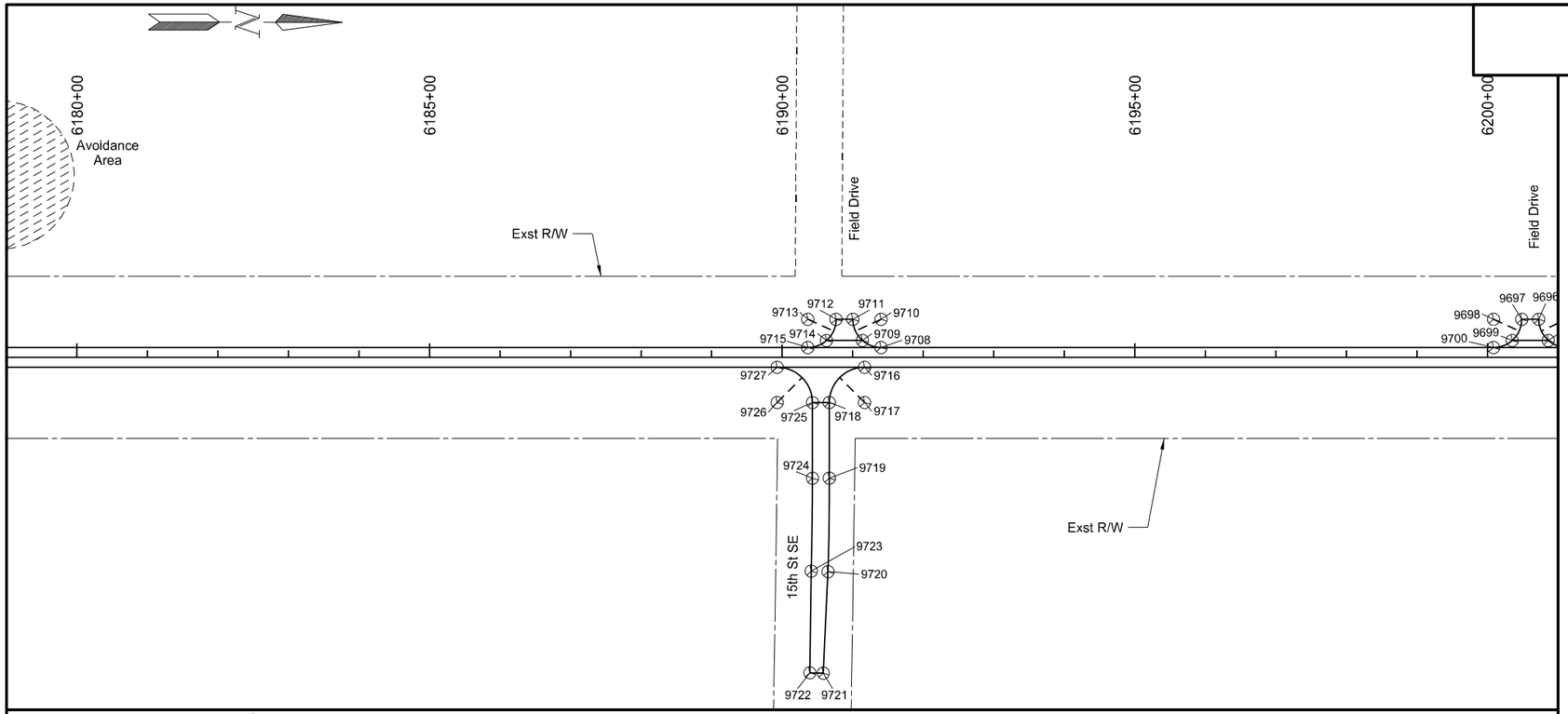
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

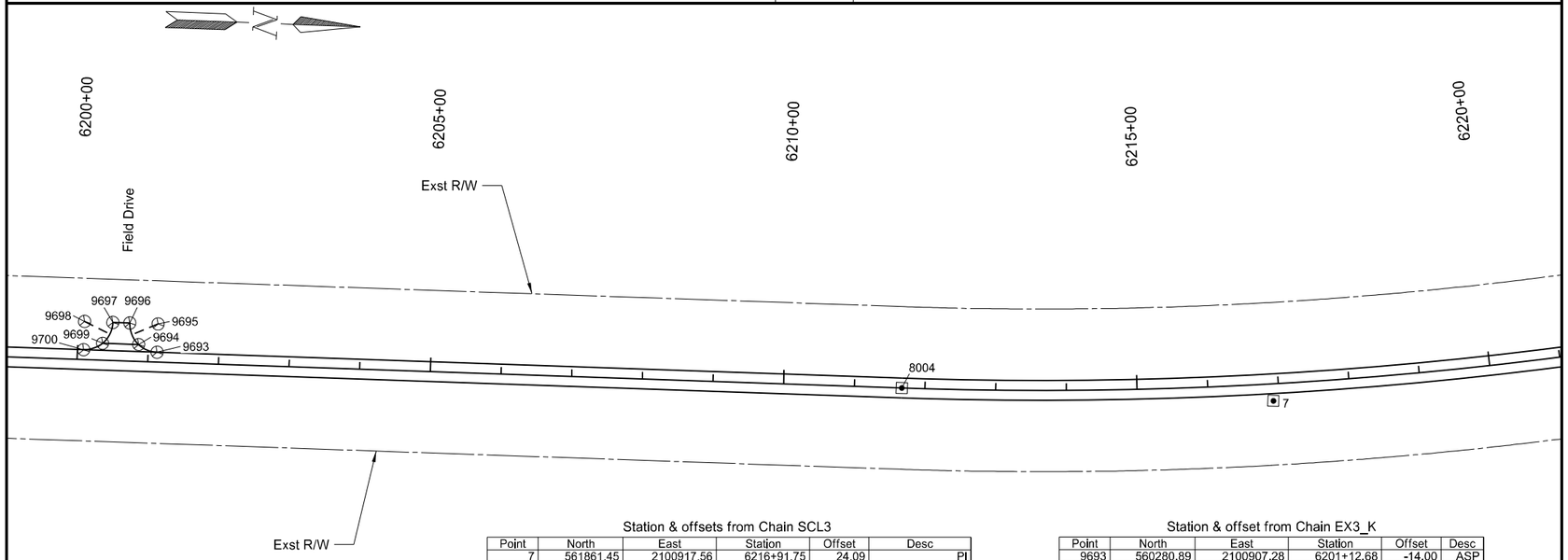
Survey Data Layout

ND 3
Tuttle N to W Jct 200

6140+00 to 6180+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	82	6





Station & offset from Chain EX3_K

Point	North	East	Station	Offset	Desc
9708	559308.40	2100909.57	6191+40.19	-14.00	ASP
9709	559281.92	2100899.64	6191+13.73	-24.00	ASP
9710	559308.30	2100869.57	6191+40.19	-54.00	RAD
9711	559268.30	2100869.67	6191+00.19	-54.00	GRV
9712	559244.30	2100869.72	6190+76.19	-54.00	GRV
9713	559204.30	2100869.82	6190+36.19	-54.00	RAD
9714	559230.83	2100899.76	6190+62.65	-24.00	ASP
9715	559204.40	2100909.82	6190+36.19	-14.00	ASP
9716	559285.08	2100937.63	6191+16.80	14.00	ASP
9717	559285.19	2100987.63	6191+16.80	64.00	RAD
9718	559235.19	2100987.75	6190+66.80	64.00	ASP
9719	559235.45	2101095.07	6190+66.80	171.32	GRV
9720	559234.01	2101227.55	6190+65.05	303.80	GRV
9721	559227.54	2101371.59	6190+58.24	447.82	GRV
9722	559208.43	2101371.13	6190+39.14	447.32	GRV
9723	559210.02	2101226.97	6190+41.06	303.16	GRV
9724	559211.45	2101095.12	6190+42.80	171.32	GRV
9725	559211.19	2100987.80	6190+42.80	64.00	ASP
9726	559161.19	2100987.92	6189+92.80	64.00	RAD
9727	559161.08	2100937.92	6189+92.80	14.00	ASP

Station & offsets from Chain SCL3

Point	North	East	Station	Offset	Desc
7	561861.45	2100917.56	6216+91.75	24.09	PI
8004	561335.47	2100918.80	6211+67.23	0.00	PC

Station & offset from Chain EX3_K

Point	North	East	Station	Offset	Desc
9693	560280.89	2100907.28	6201+12.68	-14.00	ASP
9694	560254.40	2100897.34	6200+86.22	-24.00	ASP
9695	560280.79	2100867.28	6201+12.68	-54.00	RAD
9696	560240.79	2100867.38	6200+72.68	-54.00	GRV
9697	560216.79	2100867.43	6200+48.68	-54.00	GRV
9698	560176.79	2100867.53	6200+08.68	-54.00	RAD
9699	560203.32	2100897.46	6200+35.14	-24.00	ASP
9700	560176.89	2100907.53	6200+08.68	-14.00	ASP

Legend

- Iron Pin Reference Monument
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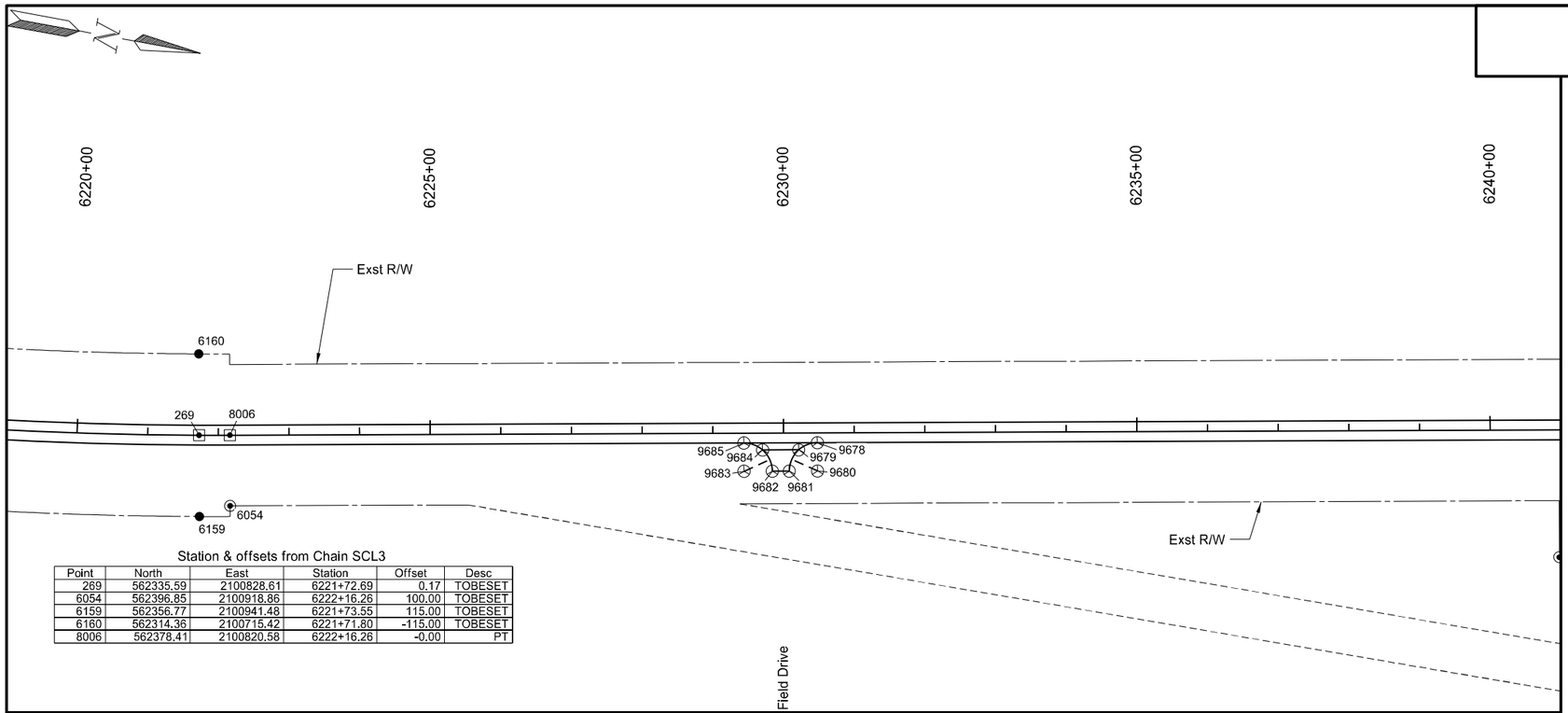
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 12/15/2021
NORTH DAKOTA

Survey Data Layout

ND 3
Tuttle N to W Jct 200

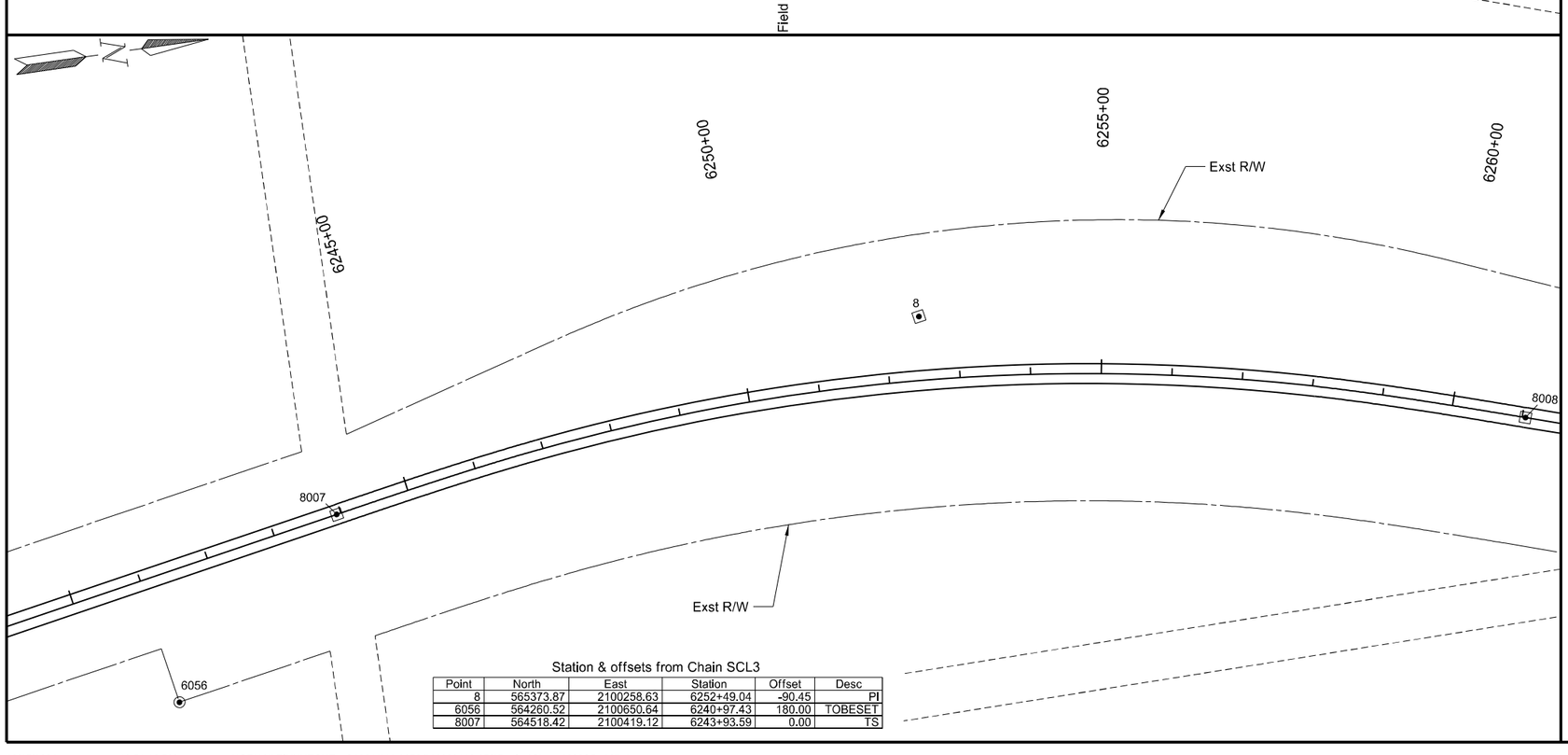
6180+00 to 6220+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	82	7



Station & offsets from Chain SCL3

Point	North	East	Station	Offset	Desc
269	562335.59	2100828.61	6221+72.69	0.17	TOBESET
6054	562396.85	2100918.86	6222+16.26	100.00	TOBESET
6159	562356.77	2100941.48	6221+73.55	115.00	TOBESET
6160	562314.36	2100715.42	6221+71.80	-115.00	TOBESET
8006	562378.41	2100820.58	6222+16.26	-0.00	PT



Station & offsets from Chain SCL3

Point	North	East	Station	Offset	Desc
8	565373.87	2100258.63	6252+49.04	-90.45	PI
6056	564260.52	2100650.64	6240+97.43	180.00	TOBESET
8007	564518.42	2100419.12	6243+93.59	0.00	TS

Station & offsets from Chain EX3_K

Point	North	East	Station	Offset	Desc
9678	563198.35	2100681.00	6230+47.87	14.00	ASP
9679	563174.19	2100695.71	6230+21.41	24.00	ASP
9680	563205.72	2100720.32	6230+47.87	54.00	RAD
9681	563166.41	2100727.69	6230+07.87	54.00	GRV
9682	563142.82	2100732.12	6229+83.87	54.00	GRV
9683	563103.51	2100739.49	6229+43.87	54.00	RAD
9684	563123.98	2100705.13	6229+70.33	24.00	ASP
9685	563096.13	2100700.18	6229+43.87	14.00	ASP

Legend

- Iron Pin Reference Monument
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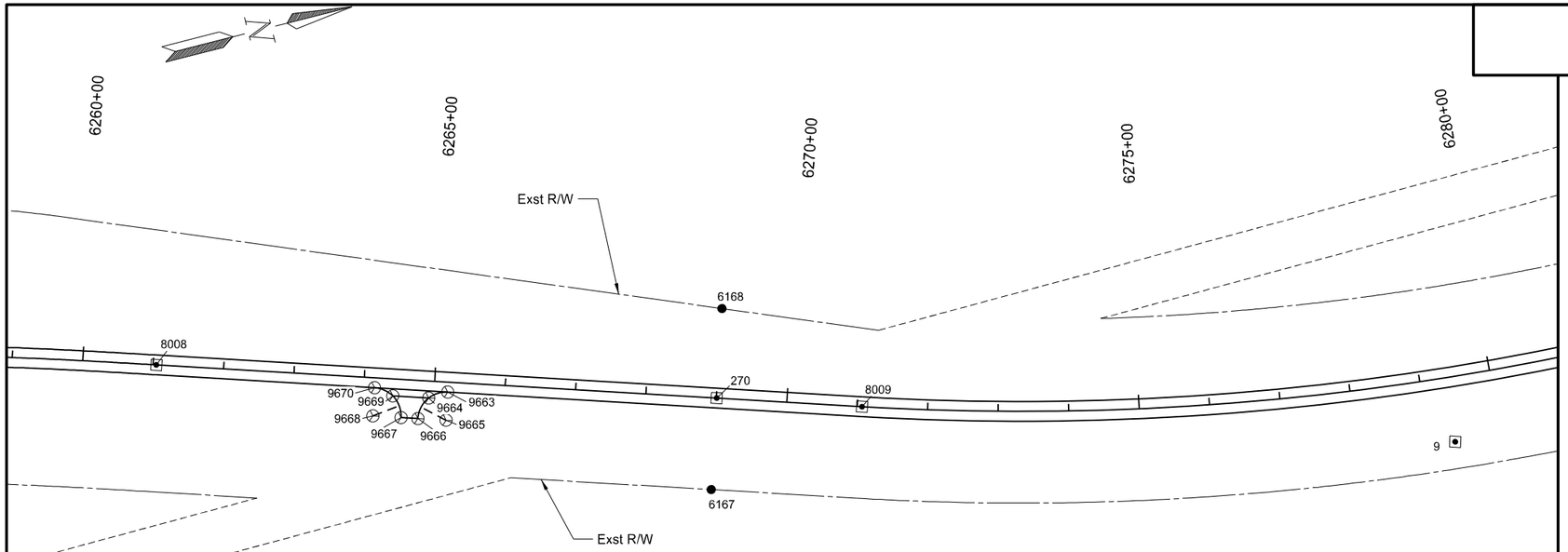
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Survey Data Layout

ND 3
Tuttle N to W Jct 200

6220+00 to 6260+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	82	8

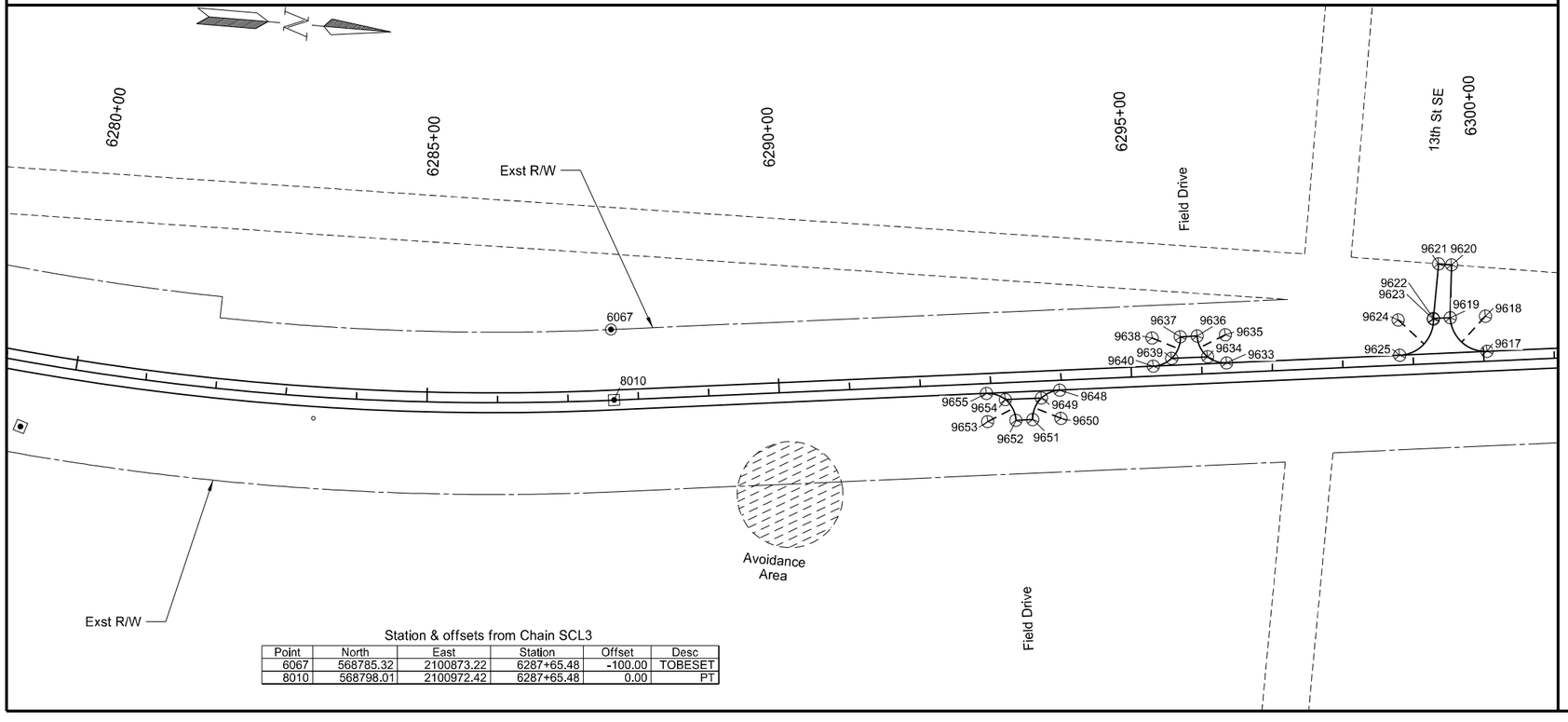


Station & offsets from Chain SCL3

Point	North	East	Station	Offset	Desc
9	567962.23	2101079.29	6279+36.17	91.83	PI
270	566962.21	2100762.23	6269+00.37	0.00	TOBESET
6167	566922.92	2100886.15	6269+00.37	130.00	TOBESET
6168	567000.67	2100640.92	6269+00.37	-127.25	TOBESET
8008	566203.55	2100521.69	6261+04.49	-0.00	ST
8009	567159.04	2100824.63	6271+06.86	0.00	PC

Station & offsets from Chain EX3_K

Point	North	East	Station	Offset	Desc
9663	566594.69	2100660.39	6265+19.26	14.00	ASP
9664	566566.45	2100661.93	6264+92.81	24.00	ASP
9665	566582.60	2100698.52	6265+19.26	54.00	RAD
9666	566544.47	2100686.43	6264+79.26	54.00	GRV
9667	566521.59	2100679.18	6264+55.26	54.00	GRV
9668	566483.46	2100667.09	6264+15.26	54.00	RAD
9669	566483.46	2100667.09	6264+15.26	54.00	ASP
9670	566495.55	2100628.96	6264+15.26	14.00	ASP



Station & offsets from Chain SCL3

Point	North	East	Station	Offset	Desc
6067	568785.32	2100873.22	6287+65.48	-100.00	TOBESET
8010	568798.01	2100972.42	6287+65.48	0.00	PT

Station & offsets from Chain EX3_K

Point	North	East	Station	Offset	Desc
9617	570025.93	2100801.29	6300+05.18	-14.00	ASP
9618	570019.58	2100751.69	6300+05.18	-64.00	RAD
9619	569969.99	2100758.03	6299+55.18	-64.00	ASP
9620	569965.60	2100683.21	6299+60.32	-138.77	GRV
9621	569947.35	2100683.35	6299+42.20	-140.95	GRV
9622	569946.19	2100761.08	6299+31.19	-64.00	ASP
9623	569946.29	2100761.95	6299+31.18	-63.13	ASP
9624	569896.59	2100767.42	6298+81.18	-64.00	RAD
9625	569902.93	2100817.02	6298+81.18	-14.00	ASP
9633	569659.23	2100848.18	6296+35.50	-14.00	ASP
9634	569631.72	2100841.61	6296+09.05	-24.00	ASP
9635	569654.16	2100808.50	6296+35.50	-54.00	RAD
9636	569614.48	2100813.57	6295+95.50	-54.00	GRV
9637	569590.68	2100816.62	6295+71.50	-54.00	GRV
9638	569551.00	2100821.69	6295+31.50	-54.00	RAD
9639	569581.05	2100848.09	6295+57.96	-24.00	ASP
9640	569556.07	2100861.37	6295+31.50	-14.00	ASP
9648	569426.56	2100906.16	6293+97.35	14.00	ASP
9649	569401.58	2100919.43	6293+70.90	24.00	ASP
9650	569431.63	2100945.84	6293+97.35	54.00	RAD
9651	569391.95	2100950.91	6293+57.35	54.00	GRV
9652	569368.15	2100953.95	6293+33.35	54.00	GRV
9653	569328.47	2100959.03	6292+93.35	54.00	RAD
9654	569350.91	2100925.91	6293+19.81	24.00	ASP
9655	569323.40	2100919.35	6292+93.35	14.00	ASP

Legend

- Iron Pin Reference Monument
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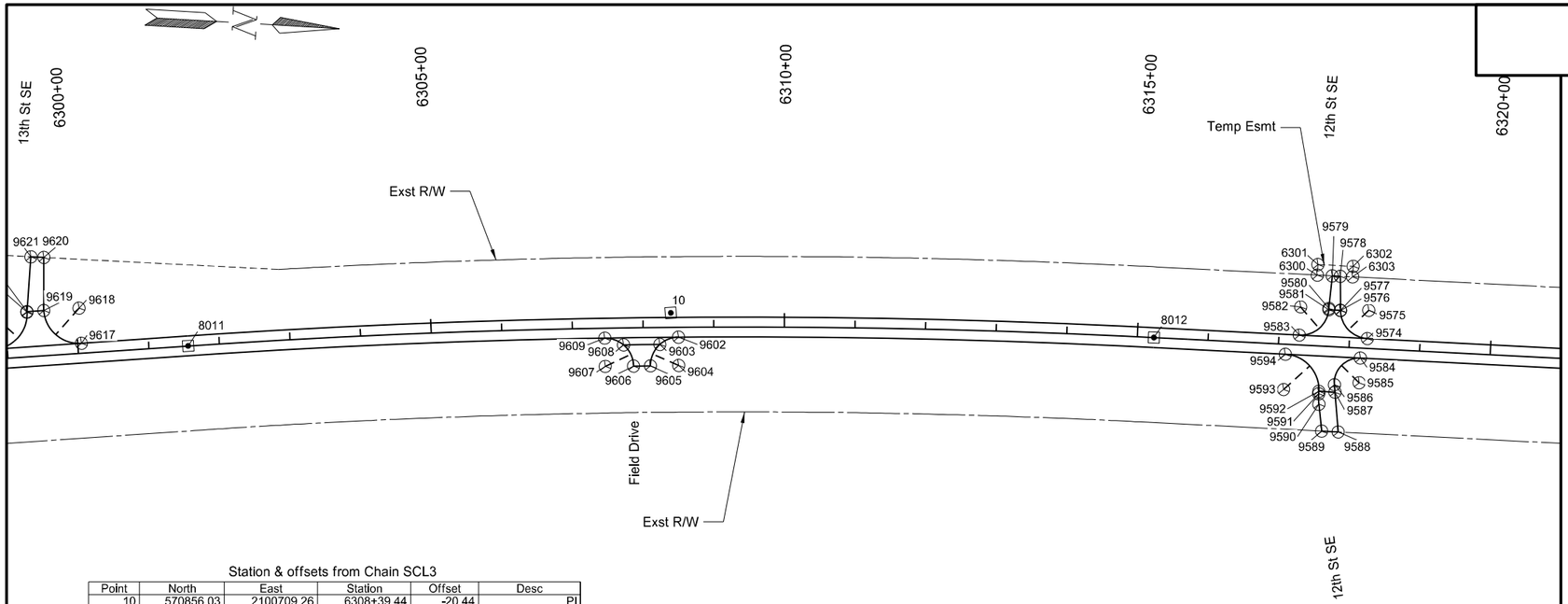
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Survey Data Layout

ND 3
Tuttle N to W Jct 200

6260+00 to 6300+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	82	9

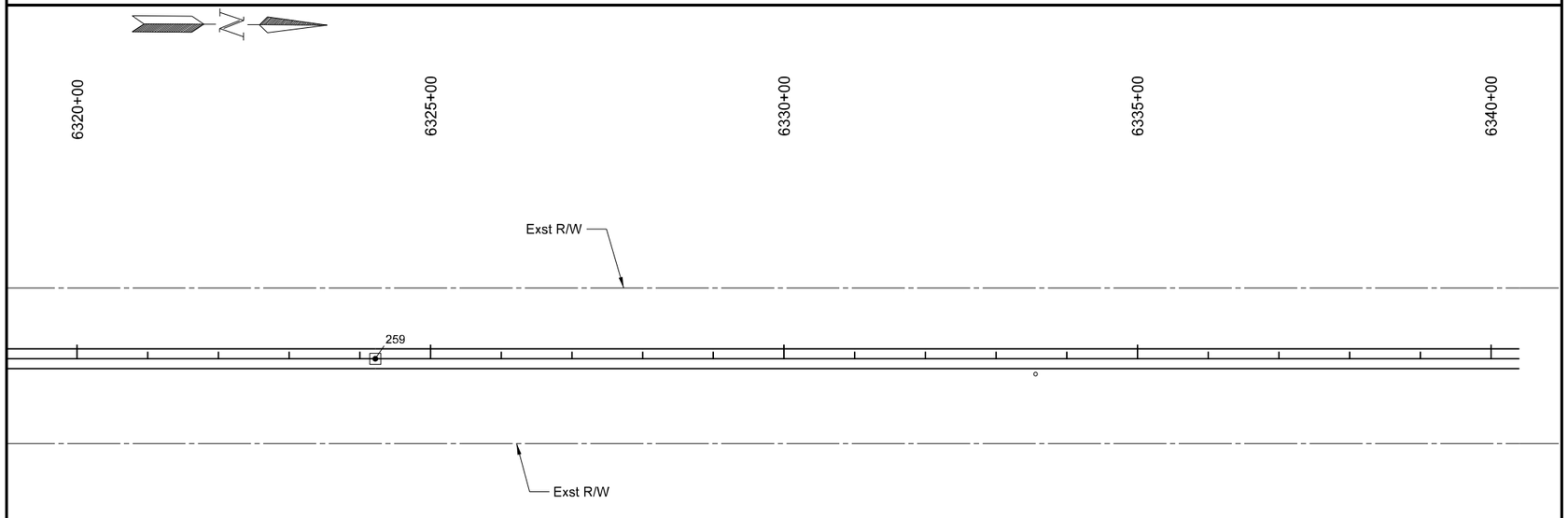


Station & offsets from Chain SCL3

Point	North	East	Station	Offset	Desc
10	570856.03	2100709.26	6308+39.44	-20.44	PI
6300	571766.59	2100602.14	6317+50.00	-100.00	TEMP ESMT
6301	571766.47	2100587.14	6317+50.00	-115.00	TEMP ESMT
6302	571816.47	2100586.75	6318+00.00	-115.00	TEMP ESMT
6303	571816.59	2100601.75	6318+00.00	-100.00	TEMP ESMT
8011	570176.82	2100796.11	6301+55.51	0.00	PC
8012	571540.76	2100703.91	6315+23.38	-0.00	PT

Station & offsets from Chain EX3 K

Point	North	East	Station	Offset	Desc
9574	571842.47	2100687.55	6318+25.21	-14.00	ASP
9575	571842.16	2100647.55	6318+25.21	-54.00	RAD
9576	571802.24	2100650.21	6317+85.28	-51.65	ASP
9577	571802.22	2100649.79	6317+85.25	-52.07	ASP
9578	571799.03	2100601.89	6317+82.44	-100.00	GRV
9579	571787.62	2100601.98	6317+71.03	-100.00	GRV
9580	571785.76	2100648.09	6317+68.81	-53.90	GRV
9581	571785.68	2100649.92	6317+68.72	-52.07	ASP
9582	571745.72	2100648.31	6317+28.76	-54.00	RAD
9583	571746.03	2100688.30	6317+28.76	-14.00	ASP
9584	571834.23	2100715.62	6318+16.75	14.00	ASP
9585	571834.51	2100750.61	6318+16.75	49.00	RAD
9586	571799.83	2100755.34	6317+82.04	53.46	ASP
9587	571801.26	2100765.87	6317+83.39	64.00	ASP
9588	571808.89	2100821.82	6317+90.58	120.00	GRV
9589	571785.51	2100822.00	6317+67.20	120.00	GRV
9590	571779.52	2100784.32	6317+61.51	82.28	GRV
9591	571778.29	2100769.47	6317+60.40	67.42	GRV
9592	571778.27	2100766.05	6317+60.40	64.00	ASP
9593	571728.27	2100766.44	6317+10.40	64.00	RAD
9594	571727.88	2100716.45	6317+10.40	14.00	ASP
9602	570869.01	2100742.90	6308+50.14	14.00	ASP
9603	570843.24	2100754.67	6308+23.59	24.00	ASP
9604	570871.67	2100782.82	6308+50.14	54.00	RAD
9605	570831.77	2100785.66	6308+09.95	54.11	GRV
9606	570807.83	2100787.36	6307+85.83	54.11	GRV
9607	570767.93	2100790.21	6307+45.64	54.00	RAD
9608	570792.08	2100758.32	6307+72.19	24.00	ASP
9609	570764.91	2100750.32	6307+45.64	14.00	ASP



Station & offsets from Chain SCL3

Point	North	East	Station	Offset	Desc
259	572439.04	2100696.89	6324+21.69	0.0000	EQCOR

Legend

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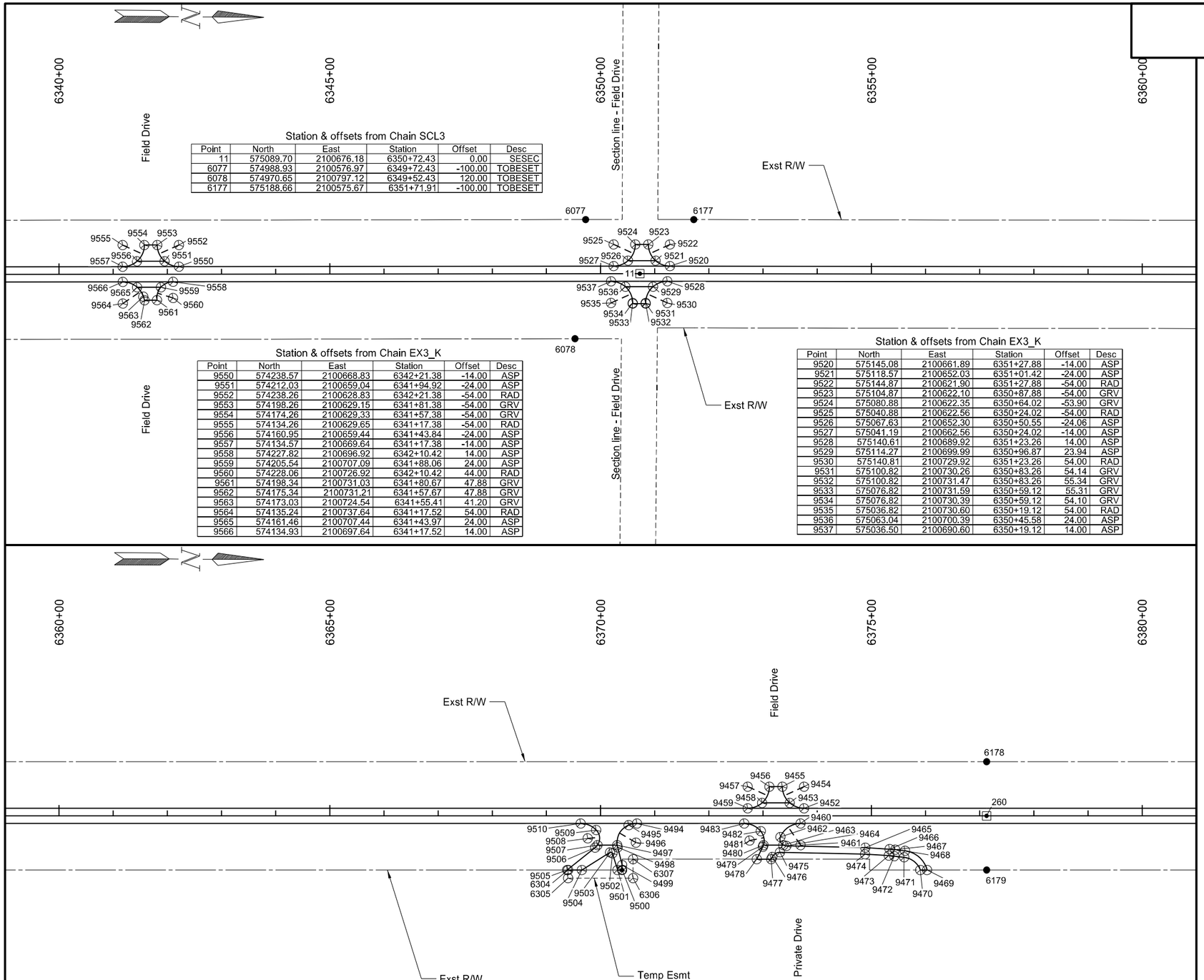
REGISTERED PROFESSIONAL ENGINEER
KORY KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Survey Data Layout

ND 3
Tuttle N to W Jct 200

6300+00 to 6340+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	82	10



Station & offsets from Chain SCL3

Point	North	East	Station	Offset	Desc
11	575089.70	2100676.18	6350+72.43	0.00	SESEC
6077	574988.93	2100576.97	6349+72.43	-100.00	TOBESET
6078	574970.65	2100797.12	6349+52.43	120.00	TOBESET
6177	575188.66	2100575.67	6351+71.91	-100.00	TOBESET

Station & offsets from Chain EX3_K

Point	North	East	Station	Offset	Desc
9550	574238.57	2100668.83	6342+21.38	-14.00	ASP
9551	574212.03	2100659.04	6341+94.92	-24.00	ASP
9552	574238.26	2100628.83	6342+21.38	-54.00	RAD
9553	574198.26	2100629.15	6341+81.38	-54.00	GRV
9554	574174.26	2100629.33	6341+57.38	-54.00	GRV
9555	574134.26	2100629.65	6341+17.38	-54.00	RAD
9556	574160.95	2100659.44	6341+43.84	-24.00	ASP
9557	574134.57	2100669.64	6341+17.38	-14.00	ASP
9558	574227.82	2100696.92	6342+10.42	14.00	ASP
9559	574205.54	2100707.09	6341+88.06	24.00	ASP
9560	574228.06	2100726.92	6342+10.42	44.00	RAD
9561	574198.34	2100731.03	6341+80.67	47.88	GRV
9562	574175.34	2100731.21	6341+57.67	47.88	GRV
9563	574173.03	2100724.54	6341+55.41	41.20	GRV
9564	574135.24	2100737.64	6341+17.52	54.00	RAD
9565	574161.46	2100707.44	6341+43.97	24.00	ASP
9566	574134.93	2100697.64	6341+17.52	14.00	ASP

Station & offsets from Chain EX3_K

Point	North	East	Station	Offset	Desc
9520	575145.08	2100661.89	6351+27.88	-14.00	ASP
9521	575118.57	2100652.03	6351+01.42	-24.00	ASP
9522	575144.87	2100621.90	6351+27.88	-54.00	RAD
9523	575104.87	2100622.10	6350+87.88	-54.00	GRV
9524	575080.88	2100622.35	6350+64.02	-53.90	GRV
9525	575040.88	2100622.56	6350+24.02	-54.00	RAD
9526	575067.63	2100652.30	6350+50.55	-24.06	ASP
9527	575041.19	2100662.56	6350+24.02	-14.00	ASP
9528	575140.61	2100689.92	6351+23.26	14.00	ASP
9529	575114.27	2100699.99	6350+96.87	23.94	ASP
9530	575140.81	2100729.92	6351+23.26	54.00	RAD
9531	575100.82	2100730.26	6350+83.26	54.14	GRV
9532	575100.82	2100731.47	6350+83.26	55.34	GRV
9533	575076.82	2100731.59	6350+59.12	55.31	GRV
9534	575076.82	2100730.39	6350+59.12	54.10	GRV
9535	575036.82	2100730.60	6350+19.12	54.00	RAD
9536	575063.04	2100700.39	6350+45.58	24.00	ASP
9537	575036.50	2100690.60	6350+19.12	14.00	ASP

Station & offsets from Chain EX3_K

Point	North	East	Station	Offset	Desc
9452	577392.79	2100650.18	6373+75.62	-14.00	ASP
9453	577366.28	2100640.32	6373+49.16	-24.00	ASP
9454	577392.58	2100610.18	6373+75.62	-54.00	RAD
9455	577352.58	2100610.39	6373+35.62	-54.00	GRV
9456	577328.58	2100610.51	6373+11.62	-54.00	GRV
9457	577288.58	2100610.72	6372+71.62	-54.00	RAD
9458	577315.19	2100640.58	6372+98.07	-24.00	ASP
9459	577288.79	2100650.72	6372+71.62	-14.00	ASP
9460	577386.46	2100678.21	6373+69.15	14.00	ASP
9461	577386.67	2100718.21	6373+69.15	54.00	RAD
9462	577349.51	2100703.40	6373+32.07	39.00	ASP
9463	577354.91	2100718.38	6373+37.38	54.00	ASP
9464	577360.46	2100719.84	6373+42.92	55.50	GRV
9465	577506.24	2100722.32	6374+88.70	58.74	GRV
9466	577551.21	2100724.74	6375+33.65	61.38	GRV
9467	577561.54	2100725.65	6375+43.97	62.35	GRV
9468	577579.78	2100727.71	6375+62.20	64.51	GRV
9469	577620.58	2100762.99	6376+02.82	100.00	GRV
9470	577608.05	2100763.06	6375+90.29	100.00	GRV
9471	577578.11	2100739.60	6375+60.47	76.39	GRV
9472	577559.96	2100737.58	6375+42.34	74.27	GRV
9473	577549.74	2100736.67	6375+32.11	73.31	GRV
9474	577505.82	2100734.32	6374+88.21	70.73	GRV
9475	577348.71	2100731.65	6373+31.11	67.24	GRV
9476	577334.85	2100740.33	6373+17.21	75.85	GRV
9477	577332.63	2100744.49	6373+14.97	80.00	GRV
9478	577306.06	2100744.63	6372+88.40	80.00	GRV
9479	577317.05	2100721.67	6372+99.51	57.10	GRV
9480	577318.26	2100718.57	6373+00.73	54.00	ASP
9481	577292.56	2100710.30	6372+75.07	45.60	RAD
9482	577313.08	2100692.76	6372+95.69	28.17	ASP
9483	577282.47	2100678.75	6372+65.15	14.00	ASP
9494	577084.47	2100679.78	6370+67.15	14.00	ASP
9495	577069.21	2100682.90	6370+51.87	17.03	ASP
9496	577082.75	2100715.17	6370+65.24	49.38	RAD
9497	577048.08	2100719.98	6370+30.55	54.00	ASP
9498	577048.87	2100723.97	6370+31.32	58.00	GRV
9499	577057.35	2100756.62	6370+39.63	90.69	GRV
9500	577057.40	2100765.93	6370+39.63	100.00	GRV
9501	577048.95	2100765.97	6370+31.19	100.00	GRV
9502	577039.43	2100735.22	6370+21.82	69.20	GRV
9503	577035.13	2100733.47	6370+17.53	67.42	GRV
9504	576983.14	2100766.31	6369+65.36	100.00	GRV
9505	576955.85	2100766.46	6369+38.08	100.00	GRV
9506	577007.35	2100724.82	6369+89.80	58.63	GRV
9507	577011.65	2100720.16	6369+94.12	54.00	ASP
9508	576993.52	2100707.71	6369+76.05	41.45	RAD
9509	577009.21	2100692.29	6369+91.82	26.11	ASP
9510	577009.21	2100692.29	6369+91.82	26.11	ASP

Station & offsets from Chain SCL3

Point	North	East	Station	Offset	Desc
6304	576957.77	2100766.45	6369+40.00	100.00	TEMP ESMT
6305	576957.85	2100781.45	6369+40.00	115.00	TEMP ESMT
6306	577077.84	2100780.82	6370+60.00	115.00	TEMP ESMT
6307	577077.66	2100745.82	6370+60.00	80.00	TEMP ESMT

Legend

- Iron Pin Reference Monument
- Alignment Monument
- Iron Pin R/W Monument
- Temporary R/W / Staking Point
- Found R/W Monument or Property Corner
- Found R/W Marker

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

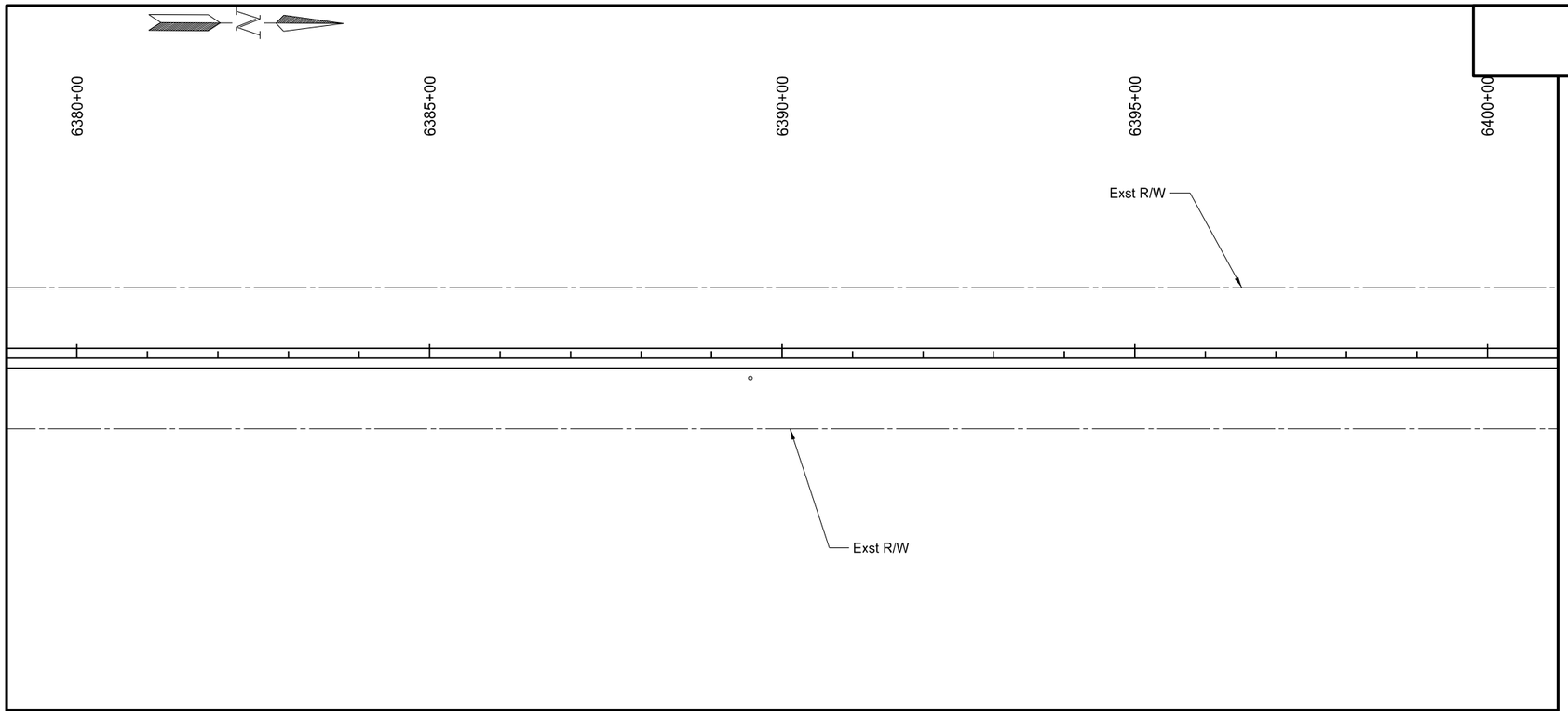
Survey Data Layout

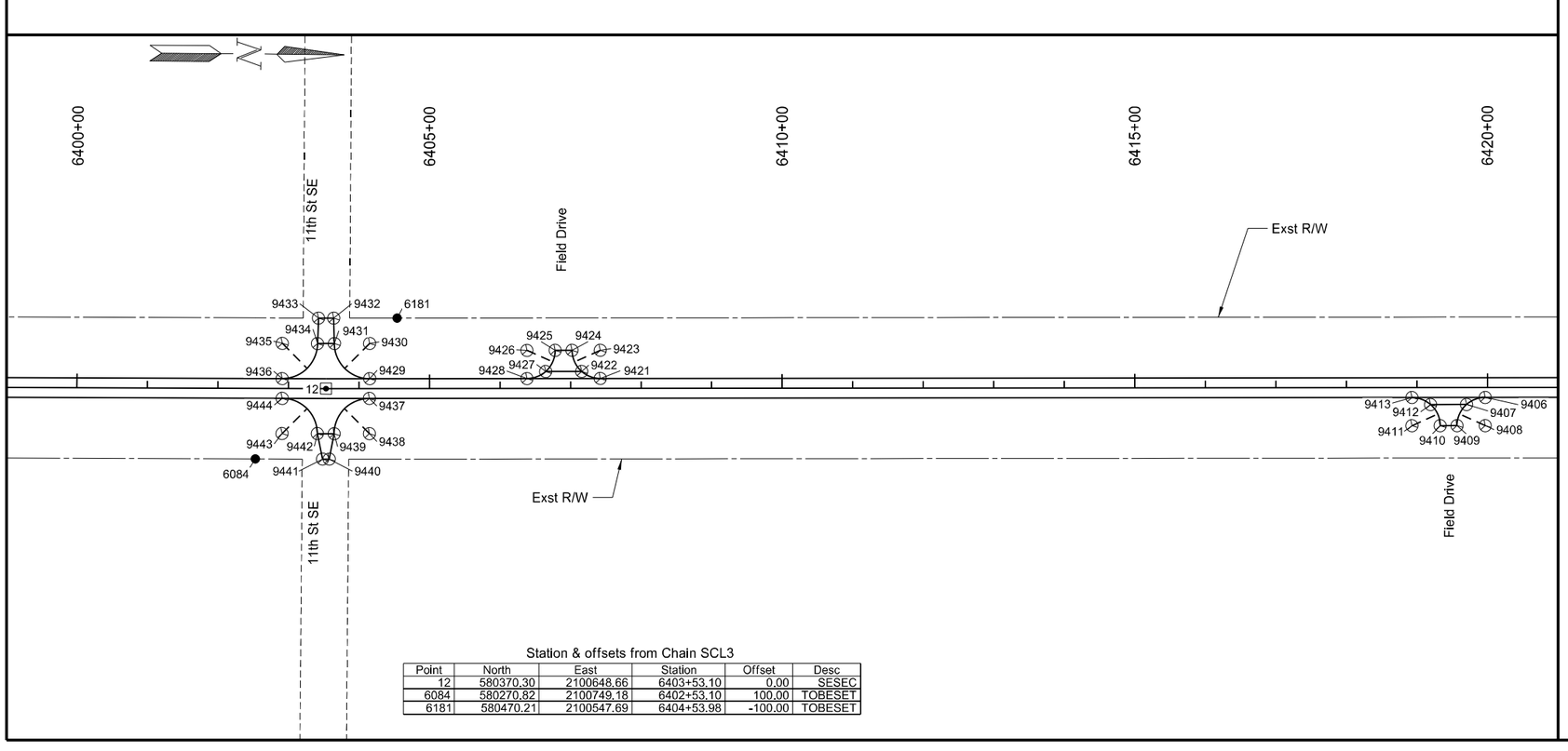
ND 3
Tuttle N to W Jct 200

6340+00 to 6380+00
Kidder County

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STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	82	11





Station & offsets from Chain EX3_K

Point	North	East	Station	Offset	Desc
9406	582014.08	2100646.90	6419+96.82	14.00	ASP
9407	581987.72	2100657.15	6419+70.36	24.00	ASP
9408	582014.46	2100686.90	6419+96.82	54.00	RAD
9409	581974.46	2100687.28	6419+56.82	54.00	GRV
9410	581950.46	2100687.51	6419+32.82	54.00	GRV
9411	581910.46	2100687.89	6418+92.82	54.00	RAD
9412	581936.63	2100657.64	6419+19.28	24.00	ASP
9413	581910.08	2100647.89	6418+92.82	14.00	ASP
9421	580759.11	2100630.93	6407+42.06	-14.00	ASP
9422	580732.55	2100621.18	6407+15.60	-24.00	ASP
9423	580758.72	2100590.93	6407+42.06	-54.00	RAD
9424	580718.73	2100591.31	6407+02.06	-54.00	GRV
9425	580694.73	2100591.54	6406+78.06	-54.00	GRV
9426	580654.73	2100591.93	6406+38.06	-54.00	RAD
9427	580681.47	2100621.67	6406+64.52	-24.00	ASP
9428	580655.11	2100631.92	6406+38.06	-14.00	ASP
9429	580432.11	2100634.06	6404+15.05	-14.00	ASP
9430	580431.64	2100584.06	6404+15.05	-64.00	RAD
9431	580381.64	2100584.54	6403+65.05	-64.00	ASP
9432	580380.27	2100548.49	6403+64.03	-100.07	GRV
9433	580358.76	2100548.69	6403+42.09	-100.02	GRV
9434	580357.64	2100584.77	6403+40.77	-63.95	ASP
9435	580307.64	2100584.98	6402+90.77	-64.00	RAD
9436	580307.90	2100634.98	6402+90.77	-14.00	ASP
9437	580431.95	2100662.07	6404+14.62	14.00	ASP
9438	580432.43	2100712.06	6404+14.62	64.00	RAD
9439	580382.44	2100712.54	6403+64.62	64.00	ASP
9440	580375.68	2100748.54	6403+57.53	99.93	GRV
9441	580366.31	2100748.63	6403+48.59	99.95	GRV
9442	580358.43	2100712.50	6403+40.90	63.78	ASP
9443	580308.44	2100712.98	6402+90.90	64.00	RAD
9444	580308.18	2100662.98	6402+90.90	14.00	ASP

Station & offsets from Chain SCL3

Point	North	East	Station	Offset	Desc
12	580370.30	2100648.66	6403+53.10	0.00	SESEC
6084	580270.82	2100749.18	6402+53.10	100.00	TOBESET
6181	580470.21	2100547.69	6404+53.98	-100.00	TOBESET

Legend

- Iron Pin Reference Monument
- Alignment Monument
- Iron Pin R/W Monument
- Temporary R/W / Staking Point
- Found R/W Monument or Property Corner
- Found R/W Marker

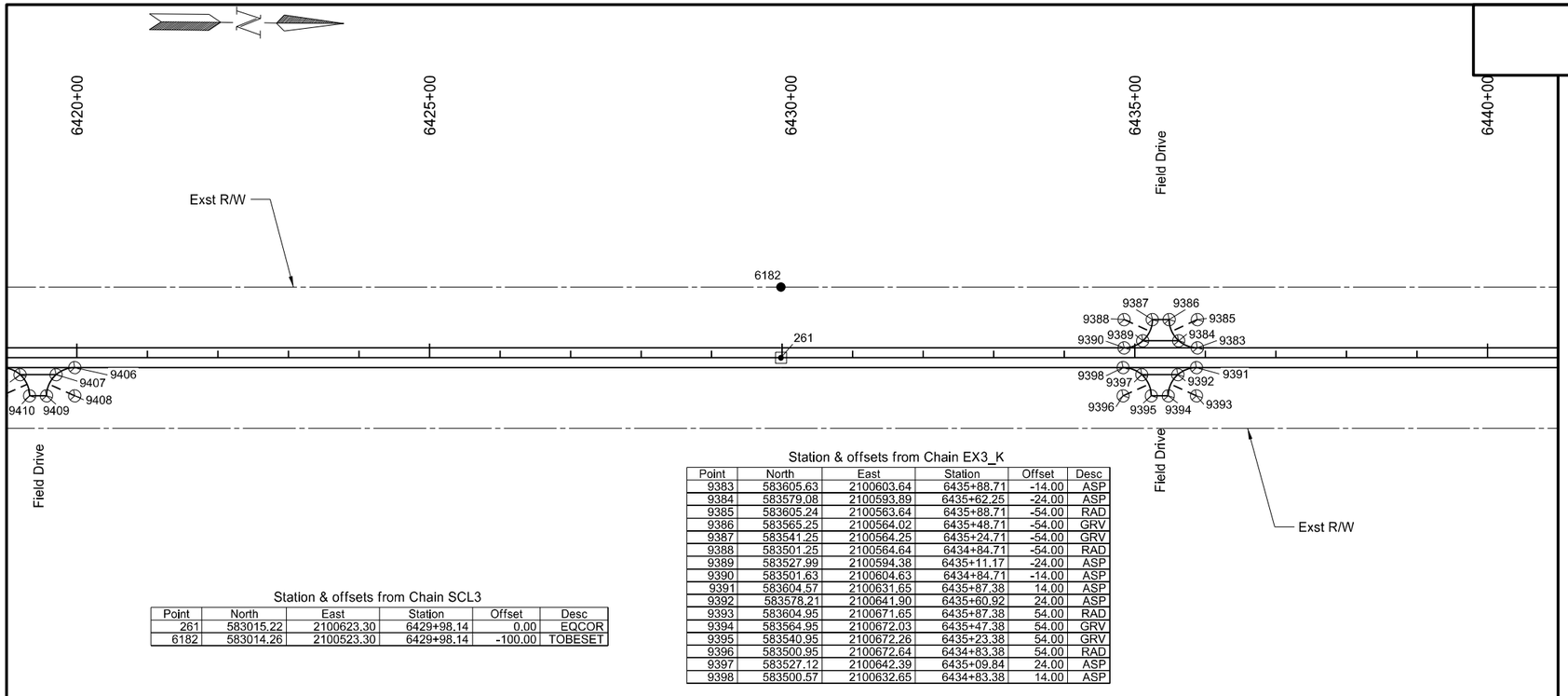
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Survey Data Layout

ND 3
Tuttle N to W Jct 200

6380+00 to 6420+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	82	12

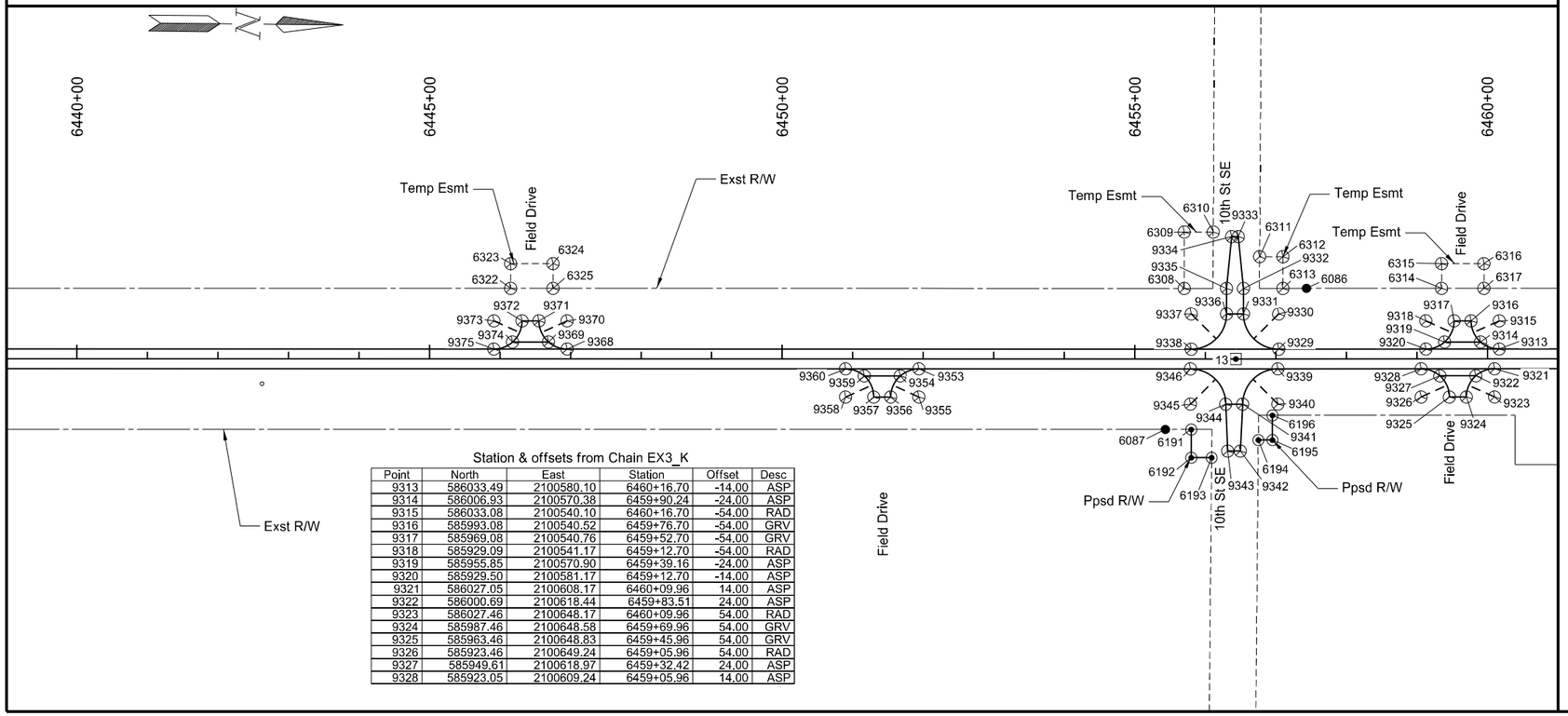


Station & offsets from Chain EX3_K

Point	North	East	Station	Offset	Desc
9383	583605.63	2100603.64	6435+88.71	-14.00	ASP
9384	583579.08	2100593.89	6435+62.25	-24.00	ASP
9385	583605.24	2100563.64	6435+88.71	-54.00	RAD
9386	583565.25	2100564.02	6435+48.71	-54.00	GRV
9387	583541.25	2100564.25	6435+24.71	-54.00	GRV
9388	583501.25	2100564.64	6434+84.71	-54.00	RAD
9389	583527.99	2100594.38	6435+11.17	-24.00	ASP
9390	583501.63	2100604.63	6434+84.71	-14.00	ASP
9391	583604.57	2100631.65	6435+87.38	14.00	ASP
9392	583578.21	2100641.90	6435+60.92	24.00	ASP
9393	583604.95	2100671.65	6435+87.38	54.00	RAD
9394	583564.95	2100672.03	6435+47.38	54.00	GRV
9395	583540.95	2100672.26	6435+23.38	54.00	GRV
9396	583500.95	2100672.64	6434+83.38	54.00	RAD
9397	583527.12	2100642.39	6435+09.84	24.00	ASP
9398	583500.57	2100632.65	6434+83.38	14.00	ASP

Station & offsets from Chain SCL3

Point	North	East	Station	Offset	Desc
261	583015.22	2100623.30	6429+98.14	0.00	EQCOR
6182	583014.26	2100523.30	6429+98.14	-100.00	TOBESET



Station & offsets from Chain EX3_K

Point	North	East	Station	Offset	Desc
9313	586033.49	2100580.10	6460+16.70	-14.00	ASP
9314	586006.93	2100570.38	6459+90.24	-24.00	ASP
9315	586033.08	2100540.10	6460+16.70	-54.00	RAD
9316	585993.08	2100540.52	6459+76.70	-54.00	GRV
9317	585969.08	2100540.76	6459+52.70	-54.00	GRV
9318	585929.09	2100541.17	6459+12.70	-54.00	RAD
9319	585955.85	2100570.90	6459+39.16	-24.00	ASP
9320	585929.50	2100581.17	6459+12.70	-14.00	ASP
9321	586027.05	2100608.17	6460+09.96	14.00	ASP
9322	586000.69	2100618.44	6459+83.51	24.00	ASP
9323	586027.46	2100648.17	6460+09.96	54.00	RAD
9324	585987.46	2100648.58	6459+69.96	54.00	GRV
9325	585963.46	2100648.83	6459+45.96	54.00	GRV
9326	585923.46	2100649.24	6459+05.96	54.00	RAD
9327	585949.61	2100618.97	6459+32.42	24.00	ASP
9328	585923.05	2100609.24	6459+05.96	14.00	ASP

Station & offsets from Chain SCL3

Point	North	East	Station	Offset	Desc
13	585660.14	2100597.94	6456+43.18	0.00	SESEC
6191	585597.92	2100698.54	6455+80.00	100.00	TOBESET
6192	585598.30	2100738.54	6455+80.00	140.00	TOBESET
6193	585627.21	2100738.26	6456+08.91	140.00	TOBESET
6194	585693.20	2100712.61	6456+75.06	115.00	TOBESET
6195	585713.14	2100712.40	6456+95.00	115.00	TOBESET
6196	585712.78	2100677.40	6456+95.00	80.00	TOBESET
6308	585586.00	2100498.65	6455+70.00	-100.00	TEMP ESMT
6309	585585.23	2100418.65	6455+70.00	-180.00	TEMP ESMT
6310	585626.37	2100418.26	6456+11.13	-180.00	TEMP ESMT
6311	585692.51	2100452.60	6456+77.05	-145.00	TEMP ESMT
6312	585725.46	2100452.26	6457+10.00	-145.00	TEMP ESMT
6313	585725.93	2100497.26	6457+10.00	-100.00	TEMP ESMT
6314	585950.91	2100494.95	6459+35.00	-100.00	TEMP ESMT
6315	585950.55	2100459.95	6459+35.00	-135.00	TEMP ESMT
6316	586010.55	2100459.33	6459+95.00	-135.00	TEMP ESMT
6317	586010.91	2100494.33	6459+95.00	-100.00	TEMP ESMT
6322	584631.05	2100507.80	6446+15.00	-100.00	TEMP ESMT
6323	584630.71	2100472.80	6446+15.00	-135.00	TEMP ESMT
6324	584690.71	2100472.23	6446+75.00	-135.00	TEMP ESMT
6325	584691.04	2100507.23	6446+75.00	-100.00	TEMP ESMT

Station & offsets from Chain EX3_K

Point	North	East	Station	Offset	Desc
9329	585720.89	2100583.32	6457+04.08	-14.00	ASP
9330	585720.37	2100533.32	6457+04.08	-64.00	RAD
9331	585670.37	2100533.83	6456+54.08	-64.00	ASP
9332	585670.00	2100497.83	6456+54.08	-100.01	GRV
9333	585662.00	2100424.34	6456+46.83	-173.57	GRV
9334	585652.57	2100424.44	6456+37.27	-173.57	GRV
9335	585646.00	2100498.07	6456+30.01	-100.01	GRV
9336	585646.37	2100534.04	6456+30.03	-64.03	ASP
9337	585596.38	2100534.55	6455+80.03	-64.00	RAD
9338	585596.86	2100584.55	6455+80.03	-14.00	ASP
9339	585719.94	2100611.33	6457+02.85	14.00	ASP
9340	585720.46	2100661.33	6457+02.85	64.00	RAD
9341	585670.46	2100661.85	6456+52.85	64.01	ASP
9342	585667.69	2100728.38	6456+49.39	130.51	GRV
9343	585649.77	2100728.57	6456+31.56	130.52	GRV
9344	585646.46	2100662.08	6456+28.89	64.00	ASP
9345	585596.46	2100662.56	6455+78.89	64.00	RAD
9346	585595.98	2100612.56	6455+78.89	14.00	ASP
9353	585210.93	2100616.25	6451+93.82	14.00	ASP
9354	585184.57	2100626.50	6451+67.36	24.00	ASP
9355	585211.31	2100656.25	6451+93.82	54.00	RAD
9356	585171.31	2100656.63	6451+53.82	54.00	GRV
9357	585147.31	2100656.86	6451+29.82	54.00	GRV
9358	585107.32	2100657.24	6450+89.82	54.00	RAD
9359	585133.48	2100626.99	6451+16.27	24.00	ASP
9360	585106.93	2100617.25	6450+89.82	14.00	ASP
9368	584711.89	2100593.03	6446+95.02	-14.00	ASP
9369	584685.34	2100583.29	6446+68.57	-24.00	ASP
9370	584711.51	2100553.03	6446+95.02	-54.00	RAD
9371	584671.51	2100553.42	6446+55.02	-54.00	GRV
9372	584647.51	2100553.65	6446+31.02	-54.00	GRV
9373	584607.51	2100554.03	6445+91.02	-54.00	RAD
9374	584634.25	2100583.78	6446+17.48	-24.00	ASP
9375	584607.89	2100594.03	6445+91.02	-14.00	ASP

Legend

- Iron Pin Reference Monument
- Alignment Monument
- Iron Pin R/W Monument
- Temporary R/W / Staking Point
- Found R/W Monument or Property Corner
- Found R/W Marker

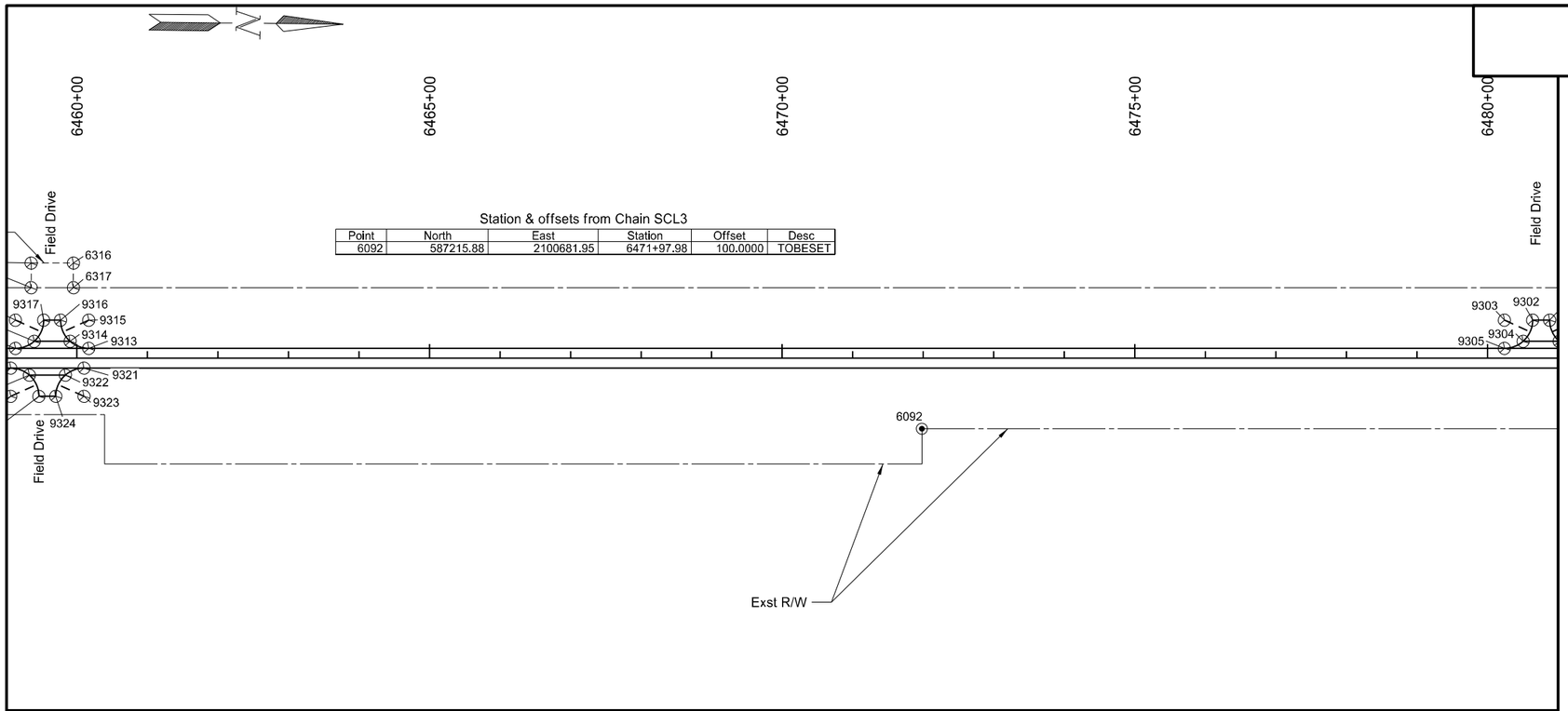
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Survey Data Layout

ND 3
Tuttle N to W Jct 200

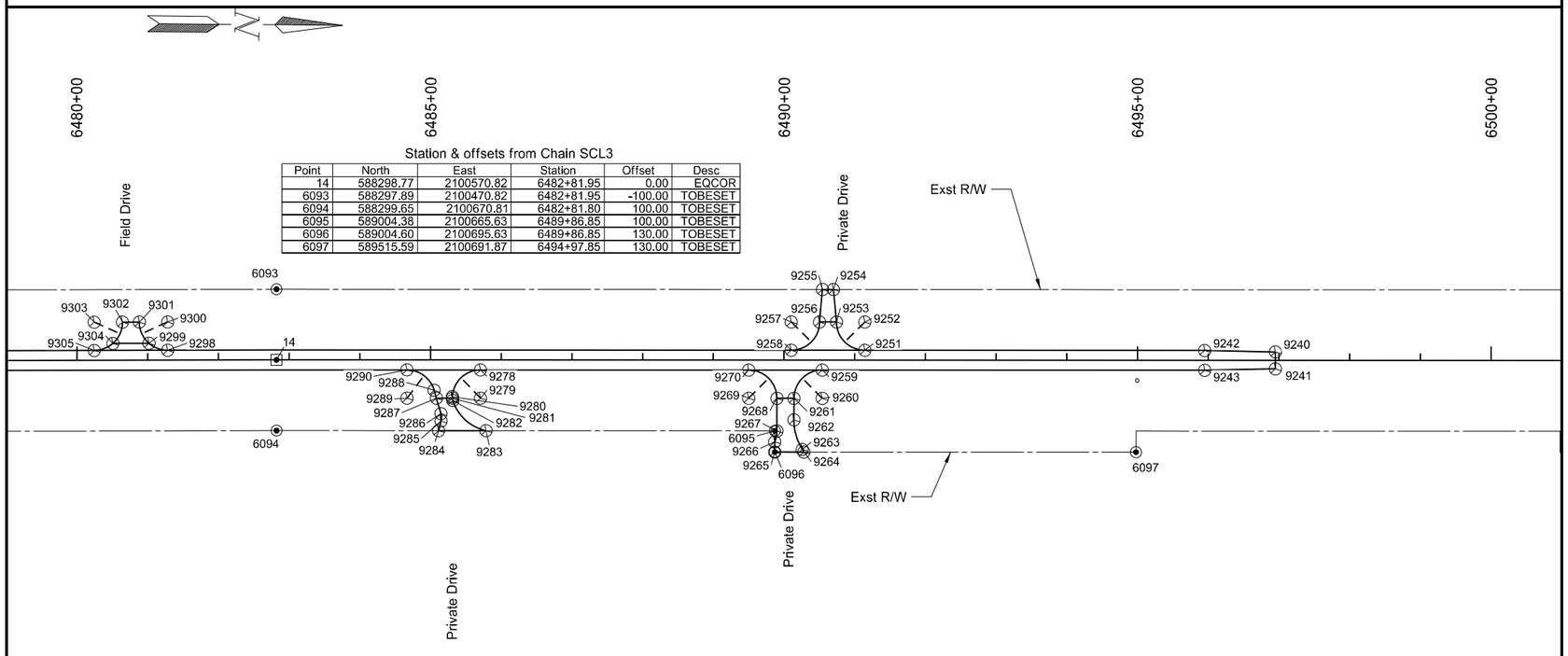
6420+00 to 6460+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	82	13



Station & offsets from Chain SCL3

Point	North	East	Station	Offset	Desc
6092	587215.88	2100681.95	6471+97.98	100.0000	TOBESET



Station & offsets from Chain SCL3

Point	North	East	Station	Offset	Desc
14	588298.77	2100570.82	6482+81.95	0.00	EQCOR
6093	588297.89	2100470.82	6482+81.95	-100.00	TOBESET
6094	588299.65	2100670.81	6482+81.80	100.00	TOBESET
6095	589004.38	2100665.63	6489+86.85	100.00	TOBESET
6096	589004.60	2100695.63	6489+86.85	130.00	TOBESET
6097	589515.59	2100691.87	6494+97.85	130.00	TOBESET

Station & offsets from Chain EX3_K

Point	North	East	Station	Offset	Desc
9240	589711.69	2100548.42	6496+95.00	-12.00	ASP
9241	589711.87	2100572.42	6496+95.00	12.00	ASP
9242	589611.68	2100547.16	6495+95.00	-14.00	ASP
9243	589611.88	2100575.16	6495+95.00	14.00	ASP
9251	589130.85	2100550.69	6491+14.16	-14.00	ASP
9252	589130.56	2100510.70	6491+14.16	-54.00	RAD
9253	589090.56	2100510.99	6490+74.16	-54.00	ASP
9254	589085.84	2100465.02	6490+69.78	-100.00	GRV
9255	589070.21	2100465.14	6490+54.15	-100.00	GRV
9256	589066.56	2100511.17	6490+50.16	-54.00	ASP
9257	589026.56	2100511.46	6490+10.16	-54.00	RAD
9258	589026.85	2100551.46	6490+10.16	-14.00	ASP
9259	589070.87	2100579.14	6490+53.97	14.00	ASP
9260	589071.16	2100619.14	6490+53.97	54.00	RAD
9261	589031.16	2100619.43	6490+13.97	54.00	ASP
9262	589031.39	2100649.91	6490+13.97	84.48	GRV
9263	589043.49	2100691.63	6490+25.76	126.29	GRV
9264	589045.79	2100695.32	6490+28.04	130.00	GRV
9265	589004.60	2100695.63	6489+86.85	130.00	GRV
9266	589004.50	2100681.24	6489+86.85	115.61	GRV
9267	589007.50	2100665.73	6489+89.97	100.13	GRV
9268	589007.16	2100619.61	6489+89.97	54.00	ASP
9269	588967.16	2100619.90	6489+49.97	54.00	RAD
9270	588966.87	2100579.90	6489+49.97	14.00	ASP
9278	588587.51	2100582.69	6485+70.60	14.00	ASP
9279	588587.80	2100622.69	6485+70.60	54.00	RAD
9280	588547.84	2100620.87	6485+30.65	51.89	ASP
9281	588547.90	2100622.98	6485+30.69	54.00	ASP
9282	588548.58	2100626.23	6485+31.35	57.25	GRV
9283	588595.99	2100668.63	6485+78.45	100.00	GRV
9284	588528.81	2100669.13	6485+11.27	100.00	GRV
9285	588532.18	2100655.50	6485+14.73	86.40	GRV
9286	588531.94	2100645.01	6485+14.57	75.91	GRV
9287	588525.44	2100623.15	6485+08.23	54.00	ASP
9288	588522.15	2100612.07	6485+05.02	42.89	ASP
9289	588483.81	2100623.46	6484+66.60	54.00	RAD
9290	588483.51	2100583.46	6484+66.60	14.00	ASP
9298	588144.78	2100558.40	6481+28.10	-14.00	ASP
9299	588118.22	2100548.67	6481+01.64	-24.00	ASP
9300	588144.37	2100518.40	6481+28.10	-54.00	RAD
9301	588104.37	2100518.81	6480+88.10	-54.00	GRV
9302	588080.37	2100519.06	6480+64.10	-54.00	GRV
9303	588040.37	2100519.47	6480+24.10	-54.00	RAD
9304	588067.14	2100549.20	6480+50.56	-24.00	ASP
9305	588040.79	2100559.47	6480+24.10	-14.00	ASP

Legend

- Iron Pin Reference Monument
- Alignment Monument
- Iron Pin R/W Monument
- Temporary R/W / Staking Point
- Found R/W Monument or Property Corner
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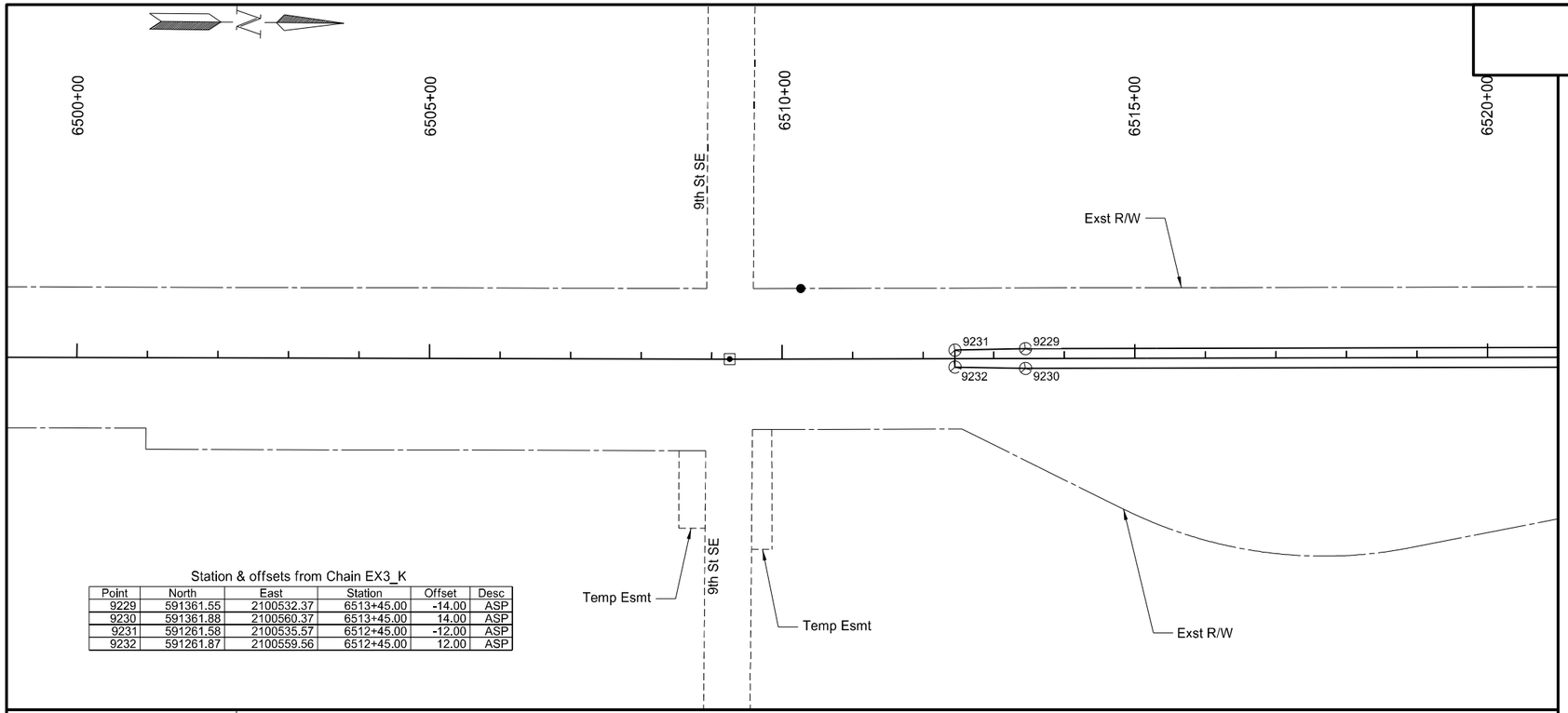
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Survey Data Layout

ND 3
Tuttle N to W Jct 200

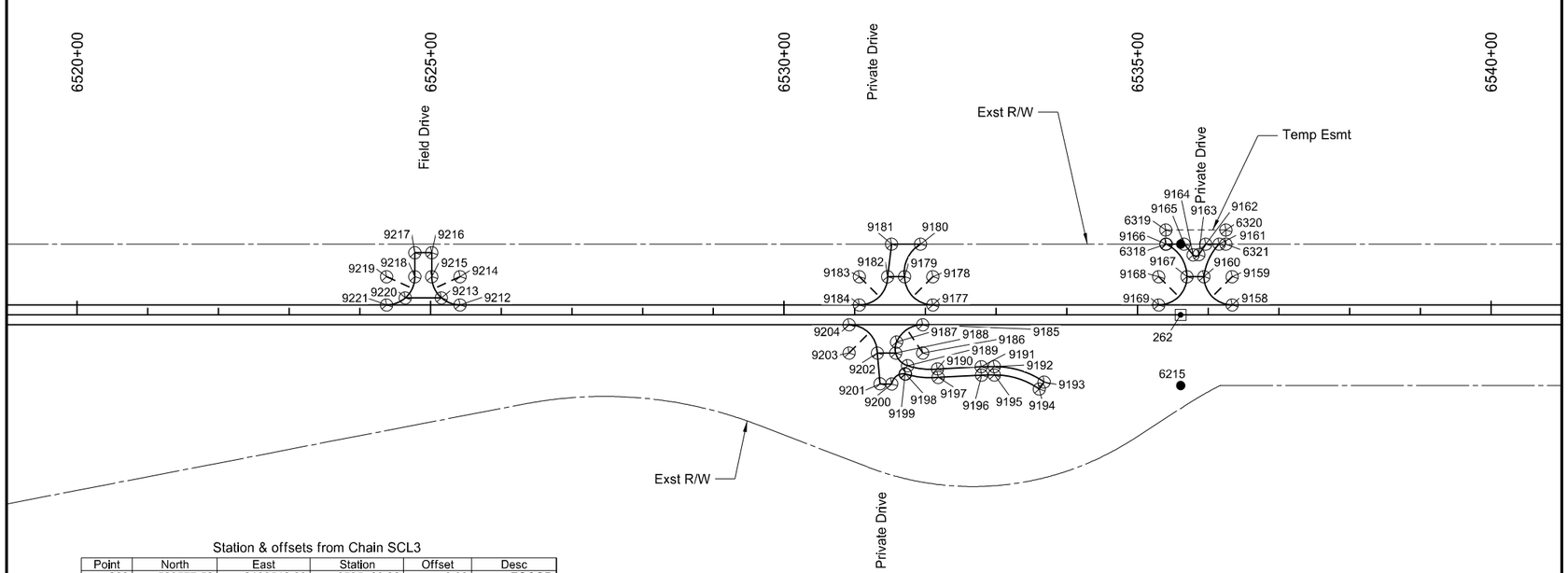
6460+00 to 6500+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	82	14



Station & offsets from Chain EX3_K

Point	North	East	Station	Offset	Desc
9229	591361.55	2100532.37	6513+45.00	-14.00	ASP
9230	591361.88	2100560.37	6513+45.00	14.00	ASP
9231	591261.58	2100535.57	6512+45.00	-12.00	ASP
9232	591261.87	2100559.56	6512+45.00	12.00	ASP



Station & offsets from Chain SCL3

Point	North	East	Station	Offset	Desc
262	593577.52	2100519.98	6535+60.96	0.00	EOCOR
6215	593578.71	2100619.97	6535+60.96	100.00	TOBESET
6318	593555.37	2100420.24	6535+40.00	-100.00	TEMP ESMT
6319	593555.13	2100400.24	6535+40.00	-120.00	TEMP ESMT
6320	593640.12	2100399.22	6536+25.00	-120.00	TEMP ESMT
6321	593640.36	2100419.22	6536+25.00	-100.00	TEMP ESMT

Station & offsets from Chain EX3_K

Point	North	East	Station	Offset	Desc
9158	593650.33	2100505.11	6536+33.95	-14.00	ASP
9159	593649.86	2100465.11	6536+33.95	-54.00	RAD
9160	593609.86	2100465.59	6535+93.95	-54.00	ASP
9161	593630.80	2100419.34	6536+15.44	-100.00	GRV
9162	593611.74	2100419.56	6535+96.38	-100.00	GRV
9163	593602.25	2100434.45	6535+86.71	-85.23	GRV
9164	593594.26	2100435.04	6535+78.71	-84.74	GRV
9165	593581.17	2100419.93	6535+65.80	-100.00	GRV
9166	593556.02	2100420.23	6535+40.65	-100.00	GRV
9167	593585.86	2100465.88	6535+69.95	-54.00	ASP
9168	593545.86	2100466.35	6535+29.95	-54.00	RAD
9169	593546.34	2100506.35	6535+29.95	-14.00	ASP
9177	593226.86	2100510.16	6532+10.44	-14.00	ASP
9178	593226.38	2100470.16	6532+10.44	-54.00	RAD
9179	593186.39	2100470.63	6531+70.44	-54.00	ASP
9180	593208.43	2100424.37	6531+93.04	-100.00	GRV
9181	593167.45	2100424.86	6531+52.05	-100.00	GRV
9182	593162.39	2100470.92	6531+46.44	-54.00	ASP
9183	593122.39	2100471.40	6531+06.44	-54.00	RAD
9184	593122.87	2100511.39	6531+06.44	-14.00	ASP
9185	593212.73	2100538.33	6531+95.98	14.00	ASP
9186	593213.20	2100578.32	6531+95.98	54.00	RAD
9187	593176.19	2100563.17	6531+59.14	38.40	ASP
9188	593175.09	2100578.78	6531+57.86	54.00	ASP
9189	593192.07	2100596.56	6531+74.63	71.99	GRV
9190	593234.55	2100600.57	6532+17.05	76.50	GRV
9191	593296.37	2100596.68	6532+78.91	73.35	GRV
9192	593314.87	2100596.25	6532+97.42	73.13	GRV
9193	593385.52	2100617.35	6533+67.81	95.08	GRV
9194	593378.77	2100627.27	6533+60.94	104.92	GRV
9195	593314.98	2100608.25	6532+97.39	85.14	GRV
9196	593297.01	2100608.66	6532+79.42	85.34	GRV
9197	593235.55	2100612.53	6532+17.92	88.47	GRV
9198	593189.49	2100608.32	6531+71.91	83.71	GRV
9199	593188.67	2100608.15	6531+71.08	83.53	GRV
9200	593169.99	2100622.63	6531+52.24	97.79	GRV
9201	593153.46	2100622.55	6531+35.71	97.52	GRV
9202	593149.21	2100579.08	6531+31.98	54.00	ASP
9203	593109.21	2100579.56	6530+91.98	54.00	RAD
9204	593108.73	2100539.56	6530+91.98	14.00	ASP
9212	592558.11	2100518.12	6525+41.64	-14.00	ASP
9213	592531.53	2100508.44	6525+15.19	-24.00	ASP
9214	592557.63	2100478.12	6525+41.64	-54.00	RAD
9215	592517.63	2100478.60	6525+01.64	-54.00	GRV
9216	592517.23	2100444.72	6525+01.64	-87.88	GRV
9217	592493.23	2100445.01	6524+77.64	-87.88	GRV
9218	592493.64	2100478.89	6524+77.64	-54.00	GRV
9219	592453.64	2100479.36	6524+37.64	-54.00	RAD
9220	592480.45	2100509.05	6524+64.10	-24.00	ASP
9221	592454.12	2100519.36	6524+37.64	-14.00	ASP

Legend

- Iron Pin Reference Monument
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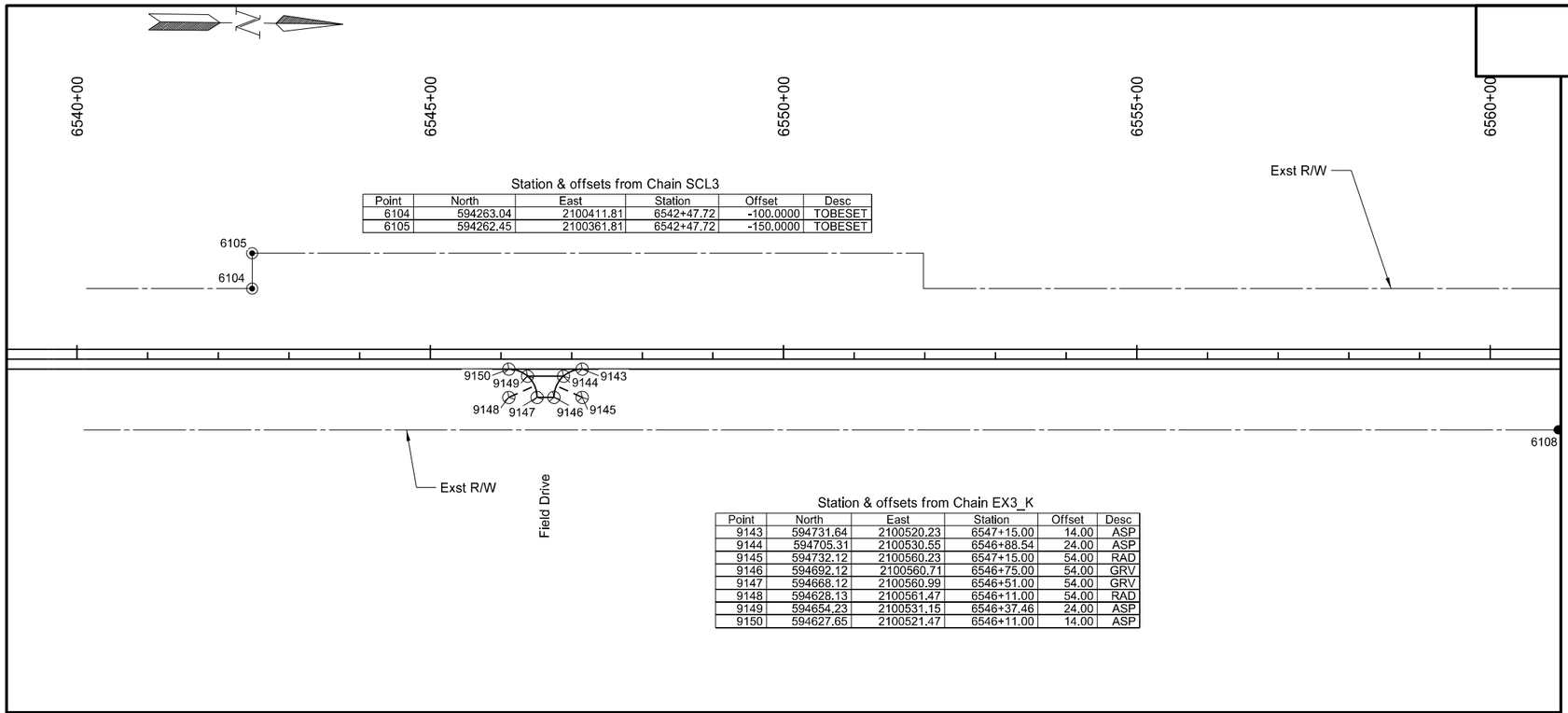
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Survey Data Layout

ND 3
Tuttle N to W Jct 200

6500+00 to 6540+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	82	15



Station & offsets from Chain SCL3

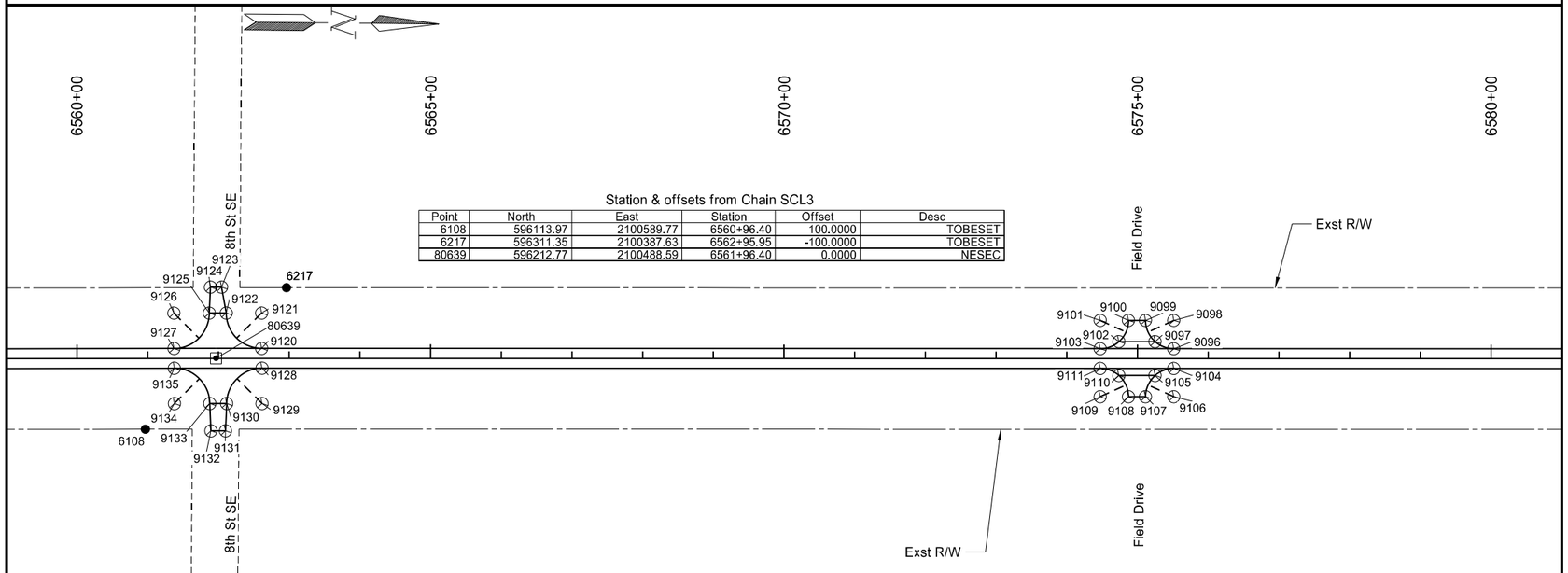
Point	North	East	Station	Offset	Desc
6104	594263.04	2100411.81	6542+47.72	-100.0000	TOBESET
6105	594262.45	2100361.81	6542+47.72	-150.0000	TOBESET

Station & offsets from Chain EX3_K

Point	North	East	Station	Offset	Desc
9143	594731.64	2100520.23	6547+15.00	14.00	ASP
9144	594705.31	2100530.55	6546+88.54	24.00	ASP
9145	594732.12	2100560.23	6547+15.00	54.00	RAD
9146	594692.12	2100560.71	6546+75.00	54.00	GRV
9147	594668.12	2100560.99	6546+51.00	54.00	GRV
9148	594628.13	2100561.47	6546+11.00	54.00	RAD
9149	594654.23	2100531.15	6546+37.46	24.00	ASP
9150	594627.65	2100521.47	6546+11.00	14.00	ASP

Station & offsets from Chain EX3_K

Point	North	East	Station	Offset	Desc
9096	597567.34	2100461.45	6575+51.17	-14.00	ASP
9097	597540.79	2100451.71	6575+24.71	-24.00	ASP
9098	597566.96	2100421.45	6575+51.17	-54.00	RAD
9099	597526.96	2100421.84	6575+11.17	-54.00	GRV
9100	597502.96	2100422.07	6574+87.17	-54.00	GRV
9101	597462.96	2100422.46	6574+47.17	-54.00	RAD
9102	597489.71	2100452.20	6574+73.63	-24.00	ASP
9103	597463.35	2100462.46	6574+47.17	-14.00	ASP
9104	597567.61	2100489.45	6575+51.17	14.00	ASP
9105	597541.26	2100499.70	6575+24.71	24.00	ASP
9106	597568.00	2100529.44	6575+51.17	54.00	RAD
9107	597528.00	2100529.83	6575+11.17	54.00	GRV
9108	597504.01	2100530.07	6574+87.17	54.00	GRV
9109	597464.01	2100530.45	6574+47.17	54.00	RAD
9110	597490.17	2100500.20	6574+73.63	24.00	ASP
9111	597463.62	2100490.46	6574+47.17	14.00	ASP
9120	596277.05	2100473.96	6562+60.81	-14.00	ASP
9121	596276.56	2100423.97	6562+60.81	-64.00	RAD
9122	596226.56	2100424.45	6562+10.81	-64.00	ASP
9123	596219.54	2100387.89	6562+04.14	-100.63	GRV
9124	596203.93	2100388.04	6561+88.76	-100.65	GRV
9125	596202.57	2100424.82	6561+86.95	-63.89	ASP
9126	596152.57	2100425.30	6561+36.95	-64.00	RAD
9127	596153.16	2100475.30	6561+36.95	-14.00	ASP
9128	596278.04	2100501.96	6562+61.53	14.00	ASP
9129	596278.52	2100551.95	6562+61.53	64.00	RAD
9130	596228.52	2100552.44	6562+11.53	64.00	ASP
9131	596227.31	2100591.16	6562+09.94	102.71	GRV
9132	596206.54	2100591.36	6561+88.95	102.69	GRV
9133	596204.53	2100552.67	6561+87.39	63.98	ASP
9134	596154.53	2100553.29	6561+37.39	64.00	RAD
9135	596153.93	2100503.29	6561+37.39	14.00	ASP



Station & offsets from Chain SCL3

Point	North	East	Station	Offset	Desc
6108	596113.97	2100589.77	6560+96.40	100.0000	TOBESET
6217	596311.35	2100387.63	6562+95.95	-100.0000	TOBESET
80639	596212.77	2100488.59	6561+96.40	0.0000	NESEC

Legend

- Iron Pin Reference Monument
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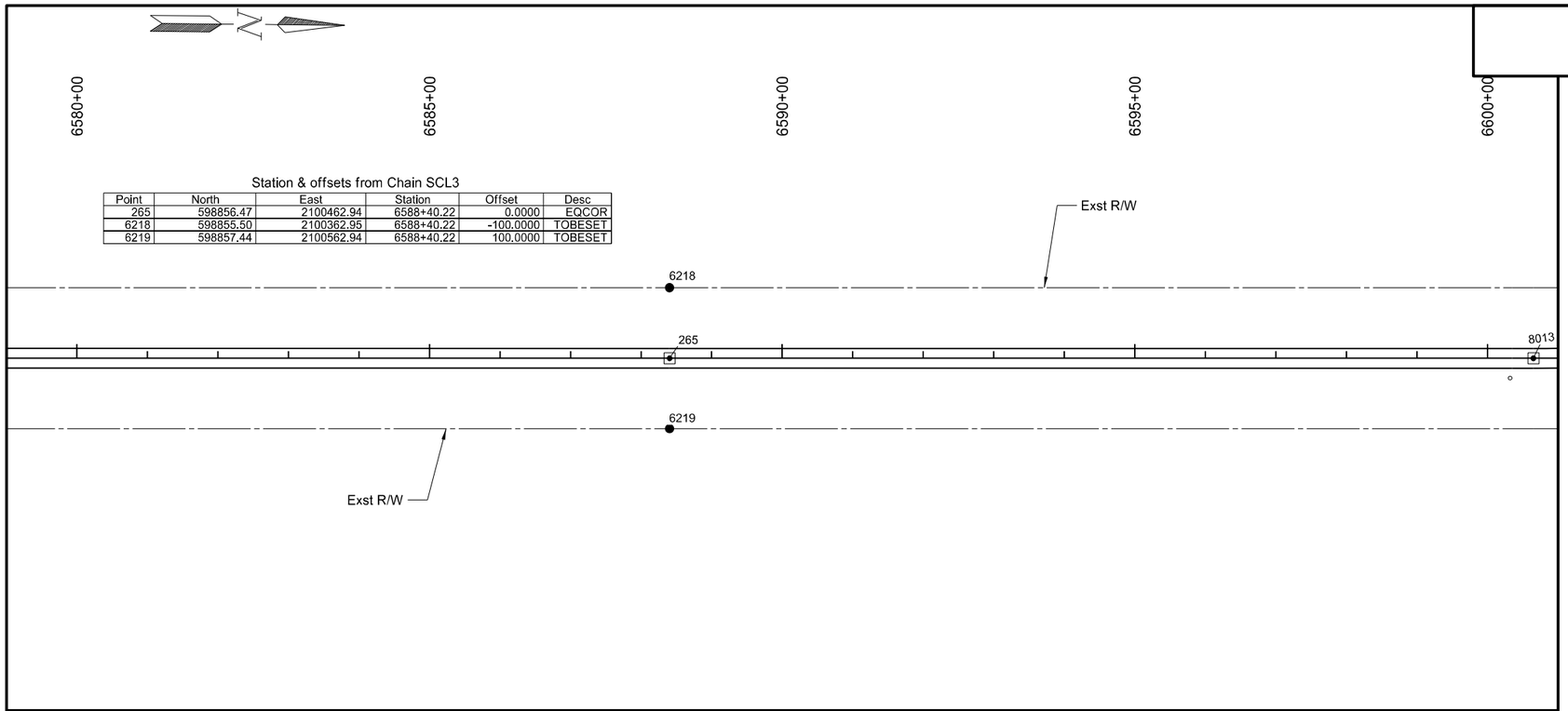
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Survey Data Layout

ND 3
Tuttle N to W Jct 200

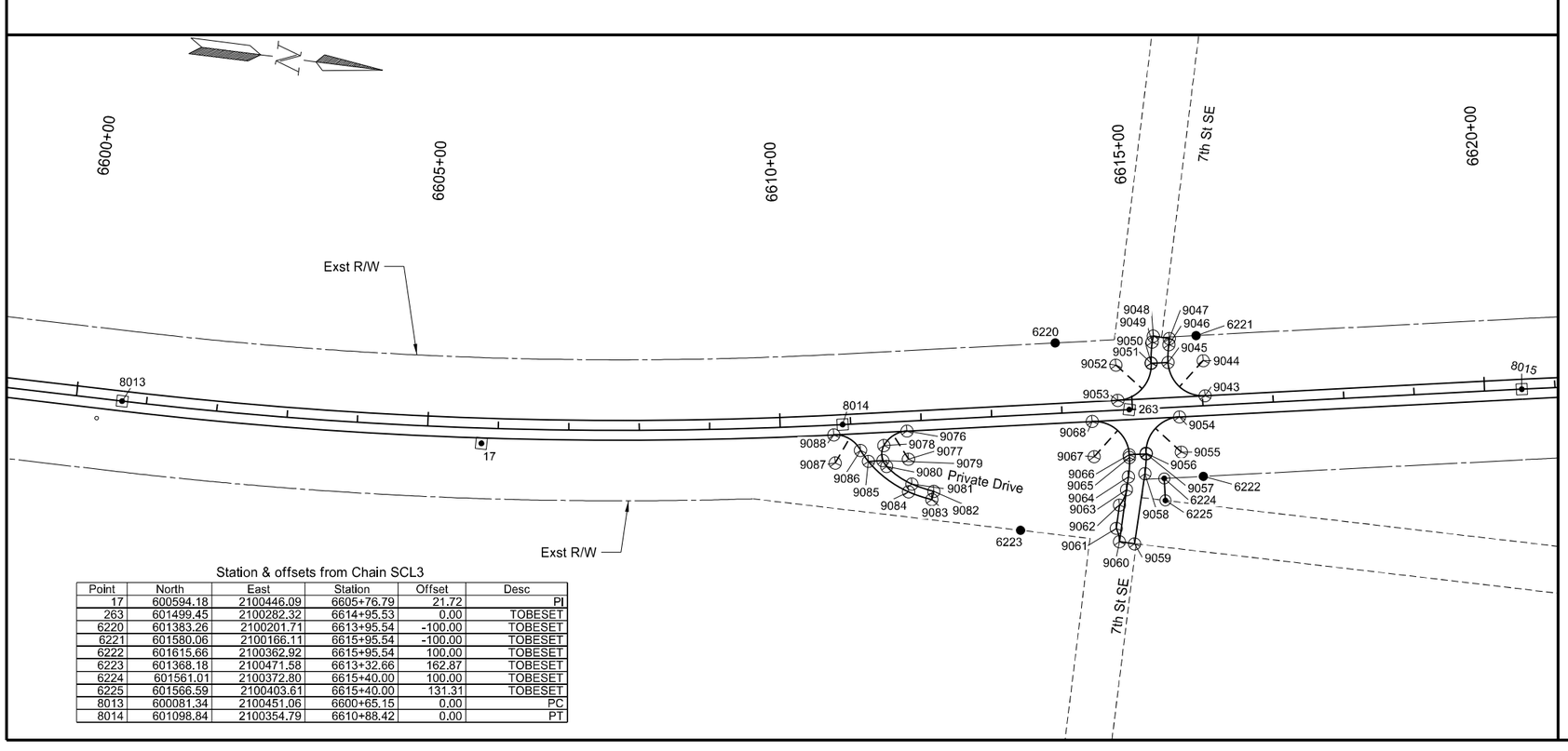
6540+00 to 6580+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	82	16



Station & offsets from Chain SCL3

Point	North	East	Station	Offset	Desc
265	598856.47	2100462.94	6588+40.22	0.0000	EQCOR
6218	598855.50	2100362.95	6588+40.22	-100.0000	TOBESET
6219	598857.44	2100562.94	6588+40.22	100.0000	TOBESET



Station & offsets from Chain SCL3

Point	North	East	Station	Offset	Desc
17	600594.18	2100446.09	6605+76.79	21.72	PI
263	601499.45	2100282.32	6614+95.53	0.00	TOBESET
6220	601383.26	2100201.71	6613+95.54	-100.00	TOBESET
6221	601580.06	2100166.11	6615+95.54	-100.00	TOBESET
6222	601615.66	2100362.92	6615+95.54	100.00	TOBESET
6223	601368.18	2100471.58	6613+32.66	162.87	TOBESET
6224	601561.01	2100372.80	6615+40.00	100.00	TOBESET
6225	601566.59	2100403.61	6615+40.00	131.31	TOBESET
8013	600081.34	2100451.06	6600+65.15	0.00	PC
8014	601098.84	2100354.79	6610+88.42	0.00	PT

Station & offsets from Chain EX3_K

Point	North	East	Station	Offset	Desc
9043	601603.65	2100249.24	6616+03.95	-14.00	ASP
9044	601594.75	2100200.04	6616+03.95	-64.00	RAD
9045	601545.54	2100208.94	6615+53.95	-64.00	ASP
9046	601543.53	2100183.63	6615+56.47	-89.27	GRV
9047	601543.05	2100175.09	6615+57.52	-97.75	GRV
9048	601520.01	2100174.55	6615+34.94	-102.39	GRV
9049	601519.53	2100183.06	6615+32.96	-94.10	GRV
9050	601521.84	2100212.72	6615+29.95	-64.50	GRV
9051	601521.93	2100213.21	6615+29.95	-64.00	ASP
9052	601472.73	2100222.11	6614+79.95	-64.00	RAD
9053	601481.63	2100271.31	6614+79.95	-14.00	ASP
9054	601571.51	2100283.51	6615+66.23	14.00	ASP
9055	601580.42	2100332.71	6615+66.23	64.00	RAD
9056	601531.05	2100340.64	6615+16.24	63.01	ASP
9057	601531.20	2100341.61	6615+16.22	64.00	ASP
9058	601533.07	2100369.62	6615+13.07	91.89	GRV
9059	601531.02	2100470.31	6614+93.13	190.61	GRV
9060	601509.29	2100469.85	6614+71.83	186.28	GRV
9061	601502.47	2100451.63	6614+68.36	167.15	GRV
9062	601502.80	2100418.46	6614+74.59	134.57	GRV
9063	601510.03	2100395.54	6614+85.78	113.30	GRV
9064	601510.42	2100377.01	6614+89.47	95.13	GRV
9065	601508.25	2100349.50	6614+92.23	67.67	GRV
9066	601507.60	2100345.88	6614+92.23	64.00	ASP
9067	601458.40	2100354.78	6614+42.23	64.00	RAD
9068	601449.50	2100305.58	6614+42.23	14.00	ASP
9076	601190.70	2100352.40	6611+79.24	14.00	ASP
9077	601197.82	2100391.76	6611+79.24	54.00	RAD
9078	601160.69	2100376.89	6611+45.35	32.75	ASP
9079	601162.00	2100398.24	6611+42.83	54.00	ASP
9080	601168.46	2100405.85	6611+47.84	62.64	GRV
9081	601207.14	2100426.09	6611+82.29	89.44	GRV
9082	601239.29	2100432.32	6612+12.82	101.30	GRV
9083	601237.91	2100444.25	6612+09.34	112.78	GRV
9084	601203.78	2100437.61	6611+76.94	100.18	GRV
9085	601141.82	2100401.89	6611+22.33	54.00	ASP
9086	601128.72	2100388.00	6611+11.90	38.00	ASP
9087	601095.48	2100410.26	6610+75.35	54.00	RAD
9088	601088.45	2100370.88	6610+75.35	14.00	ASP

Legend

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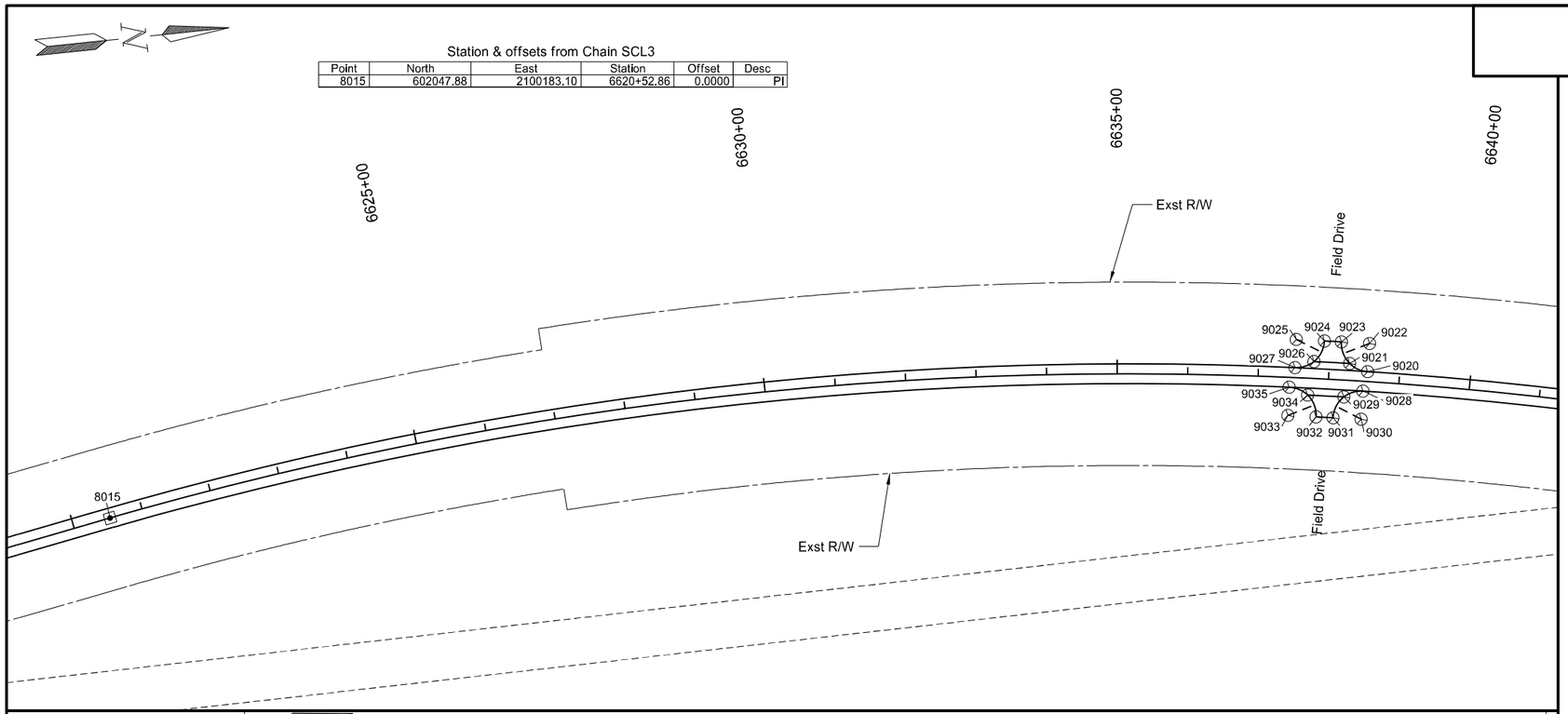
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

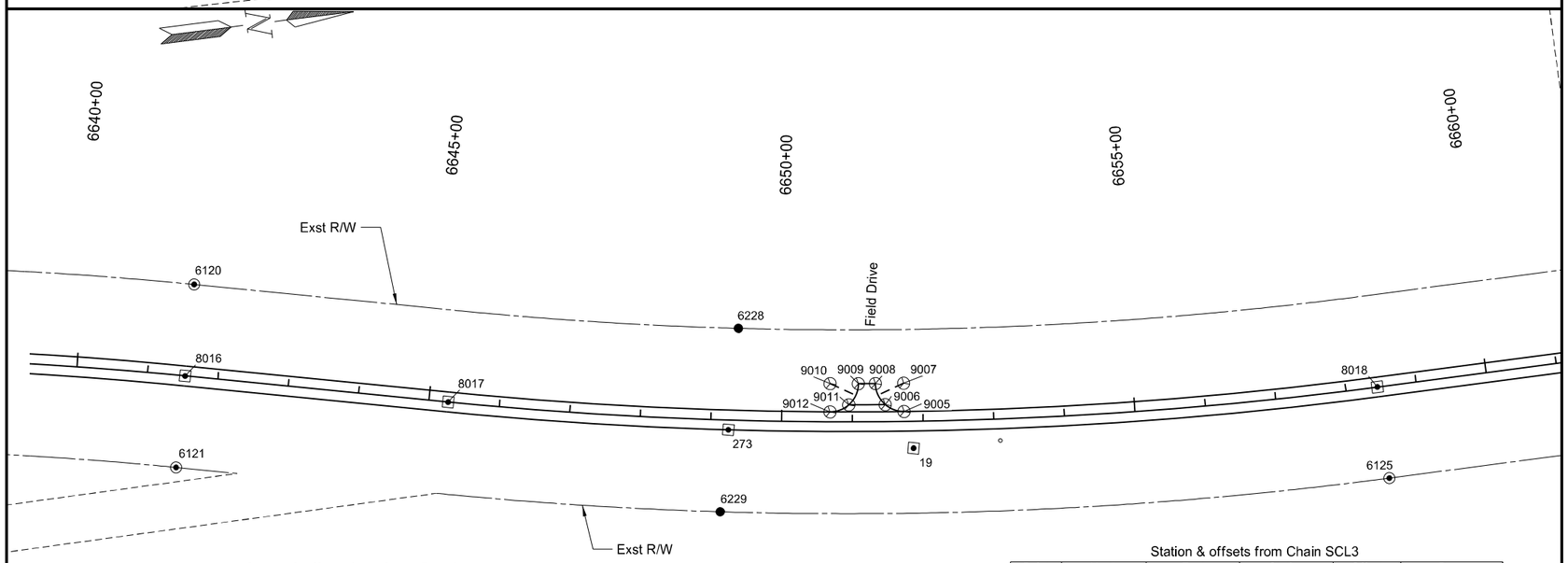
Survey Data Layout

ND 3
Tuttle N to W Jct 200

6580+00 to 6620+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	82	17





Station & offsets from Chain SCL3

Point	North	East	Station	Offset	Desc
8015	602047.88	2100183.10	6620+52.86	0.0000	PI

Station & offsets from Chain EX3_K

Point	North	East	Station	Offset	Desc
9020	603843.10	2100158.53	6638+54.76	-14.00	ASP
9021	603818.73	2100144.35	6638+28.49	-24.00	ASP
9022	603849.74	2100119.08	6638+54.76	-54.00	RAD
9023	603810.24	2100112.83	6638+15.17	-53.76	GRV
9024	603786.53	2100109.07	6637+91.41	-53.76	GRV
9025	603747.03	2100102.82	6637+51.82	-54.00	RAD
9026	603768.71	2100136.43	6637+78.08	-24.00	ASP
9027	603741.16	2100142.38	6637+51.82	-14.00	ASP
9028	603833.56	2100185.32	6638+49.79	14.00	ASP
9029	603805.73	2100190.86	6638+23.13	24.00	ASP
9030	603826.95	2100224.77	6638+49.79	54.00	RAD
9031	603787.44	2100218.56	6638+09.37	54.25	GRV
9032	603763.73	2100214.83	6637+85.12	54.25	GRV
9033	603724.21	2100208.62	6637+44.70	54.00	RAD
9034	603754.81	2100182.86	6637+71.36	24.00	ASP
9035	603730.02	2100169.04	6637+44.70	14.00	ASP

Station & offsets from Chain EX3_K

Point	North	East	Station	Offset	Desc
9005	605136.40	2100407.54	6651+73.35	-14.00	ASP
9006	605111.16	2100394.59	6651+46.71	-24.00	ASP
9007	605140.85	2100367.79	6651+73.35	-54.00	RAD
9008	605101.11	2100363.20	6651+32.97	-54.00	GRV
9009	605077.29	2100360.31	6651+08.74	-54.00	GRV
9010	605037.61	2100355.27	6650+68.36	-54.00	RAD
9011	605060.03	2100388.39	6650+95.00	-24.00	ASP
9012	605032.43	2100394.93	6650+68.36	-14.00	ASP

Station & offsets from Chain SCL3

Point	North	East	Station	Offset	Desc
19	605143.31	2100460.71	6651+86.05	38.08	PI
273	604886.53	2100402.13	6649+24.95	13.83	TOBESET
6120	604162.59	2100103.63	6641+53.40	-130.00	TOBESET
6121	604104.76	2100357.12	6641+53.40	130.00	TOBESET
6125	605805.74	2100586.96	6658+44.84	130.00	TOBESET
6228	604918.60	2100261.55	6649+35.18	-130.00	TOBESET
6229	604860.63	2100515.66	6649+17.06	130.00	TOBESET
8016	604133.68	2100230.38	6641+53.40	-0.00	PT
8017	604498.18	2100313.53	6645+27.27	0.00	PC
8018	605805.00	2100456.96	6658+44.84	-0.00	PT

Legend

- Iron Pin Reference Monument
- Alignment Monument
- Iron Pin R/W Monument
- Temporary R/W / Staking Point
- Found R/W Monument or Property Corner
- Found R/W Marker

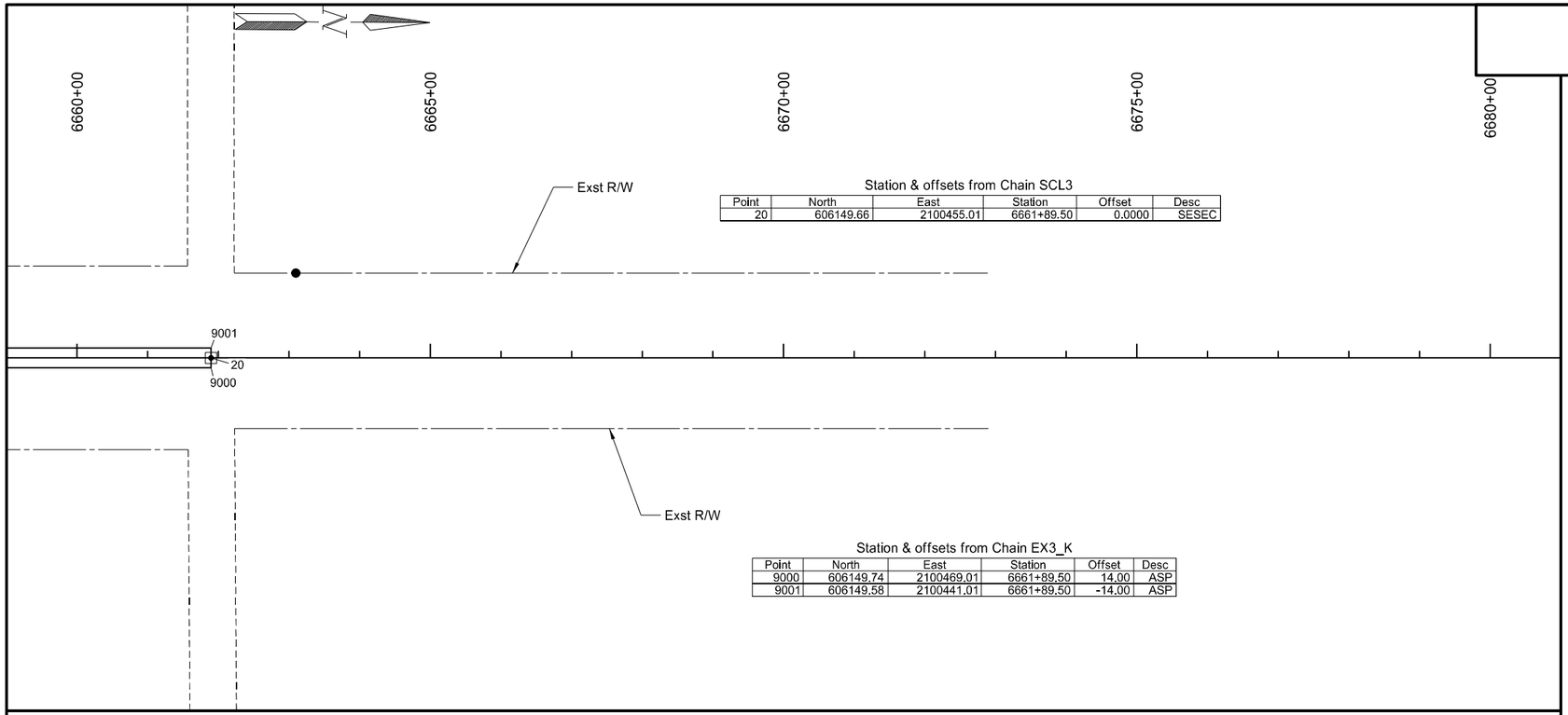
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 12/15/2021
NORTH DAKOTA

Survey Data Layout

ND 3
Tuttle N to W Jct 200

6620+00 to 6660+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	82	18



Station & offsets from Chain SCL3

Point	North	East	Station	Offset	Desc
20	606149.66	2100455.01	6661+89.50	0.0000	SESEC

Station & offsets from Chain EX3_K

Point	North	East	Station	Offset	Desc
9000	606149.74	2100469.01	6661+89.50	14.00	ASP
9001	606149.58	2100441.01	6661+89.50	-14.00	ASP

Legend

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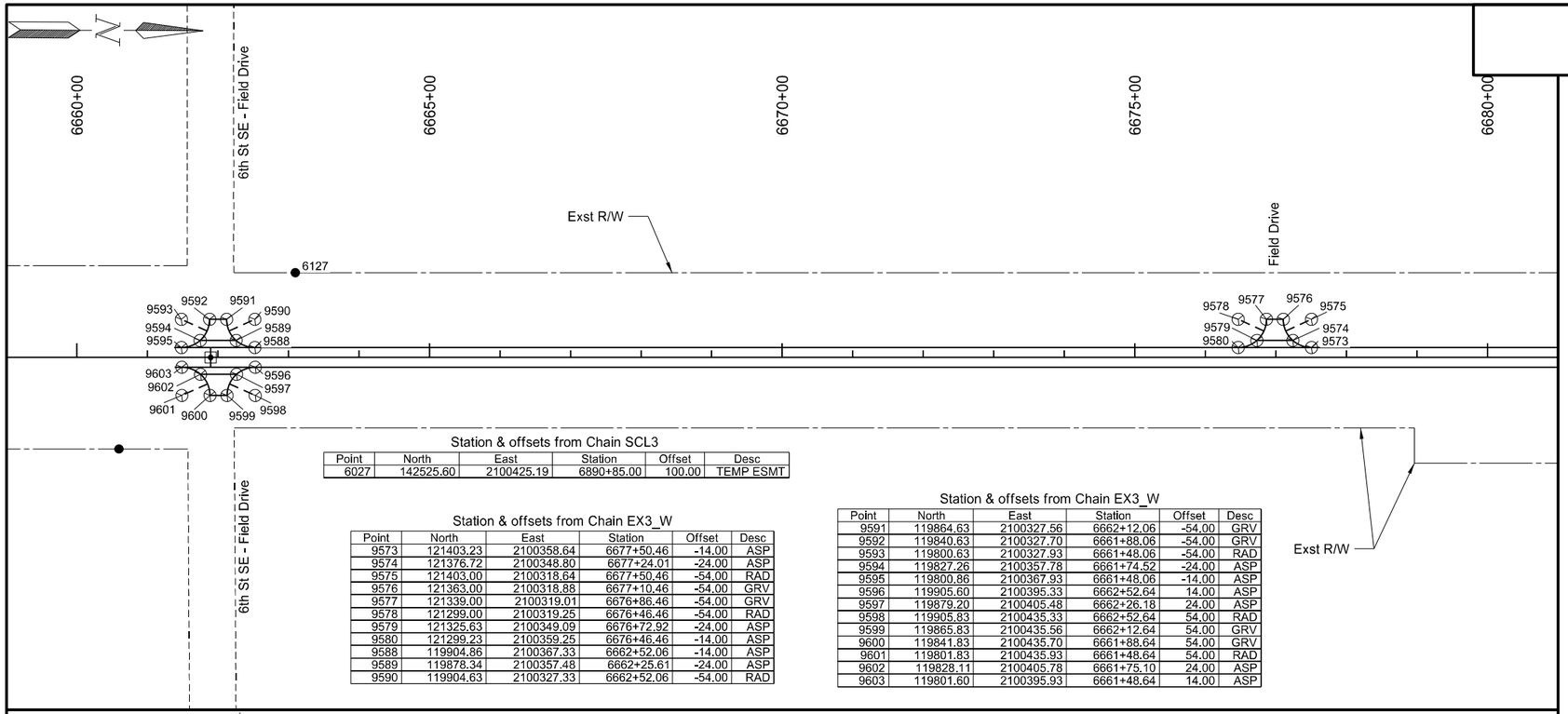
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Survey Data Layout

ND 3
Tuttle N to W Jct 200

6660+00 to 6661+89.5
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	82	19



Station & offsets from Chain SCL3

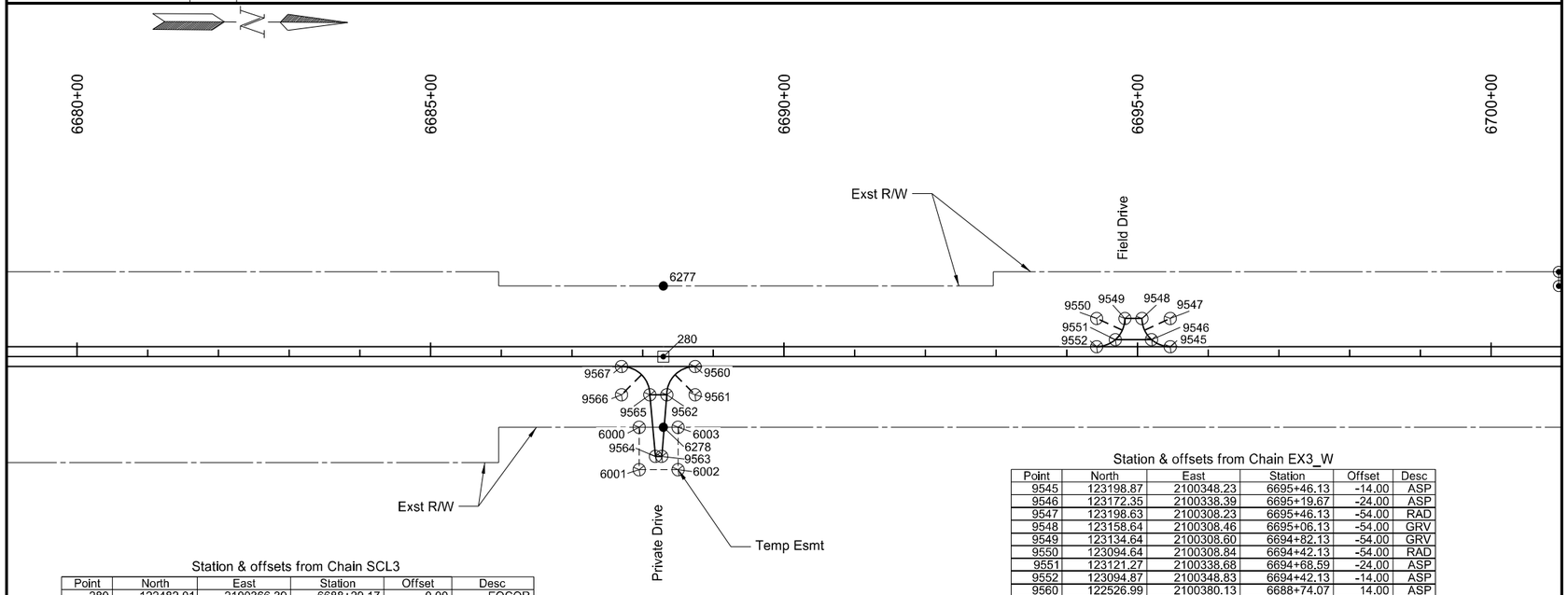
Point	North	East	Station	Offset	Desc
6027	142525.60	2100425.19	6890+85.00	100.00	TEMP ESMT

Station & offsets from Chain EX3_W

Point	North	East	Station	Offset	Desc
9573	121403.23	2100358.64	6677+50.46	-14.00	ASP
9574	121376.72	2100348.80	6677+24.01	-24.00	ASP
9575	121403.00	2100318.64	6677+50.46	-54.00	RAD
9576	121363.00	2100318.88	6677+10.46	-54.00	GRV
9577	121339.00	2100319.01	6676+86.46	-54.00	GRV
9578	121299.00	2100319.25	6676+46.46	-54.00	RAD
9579	121325.63	2100349.09	6676+72.92	-24.00	ASP
9580	121299.23	2100359.25	6676+46.46	-14.00	ASP
9588	119904.86	2100367.33	6662+52.06	-14.00	ASP
9589	119878.34	2100357.48	6662+25.61	-24.00	ASP
9590	119904.63	2100327.33	6662+52.06	-54.00	RAD

Station & offsets from Chain EX3_W

Point	North	East	Station	Offset	Desc
9591	119864.63	2100327.56	6662+12.06	-54.00	GRV
9592	119840.63	2100327.70	6661+88.06	-54.00	GRV
9593	119800.63	2100327.93	6661+48.06	-54.00	RAD
9594	119827.26	2100357.78	6661+74.52	-24.00	ASP
9595	119800.86	2100367.93	6661+48.06	-14.00	ASP
9596	119905.60	2100395.33	6662+52.64	14.00	ASP
9597	119879.20	2100405.48	6662+26.18	24.00	ASP
9598	119905.83	2100435.33	6662+52.64	54.00	RAD
9599	119865.83	2100435.56	6662+12.64	54.00	GRV
9600	119841.83	2100435.70	6661+88.64	54.00	GRV
9601	119801.83	2100435.93	6661+48.64	54.00	RAD
9602	119828.11	2100405.78	6661+75.10	24.00	ASP
9603	119801.60	2100395.93	6661+48.64	14.00	ASP



Station & offsets from Chain SCL3

Point	North	East	Station	Offset	Desc
280	122482.01	2100366.39	6688+29.17	0.00	EQCOR
6000	122448.41	2100466.58	6687+95.00	100.00	TEMP ESMT
6001	122448.76	2100526.58	6687+95.00	160.00	TEMP ESMT
6002	122503.76	2100526.26	6688+50.00	160.00	TEMP ESMT
6003	122503.41	2100466.27	6688+50.00	100.00	TEMP ESMT
6277	122481.43	2100266.39	6688+29.17	-100.00	TOBESET

Station & offsets from Chain EX3_W

Point	North	East	Station	Offset	Desc
9545	123198.87	2100348.23	6695+46.13	-14.00	ASP
9546	123172.35	2100338.39	6695+19.67	-24.00	ASP
9547	123198.63	2100308.23	6695+46.13	-54.00	RAD
9548	123158.64	2100308.46	6695+06.13	-54.00	GRV
9549	123134.64	2100308.60	6694+82.13	-54.00	GRV
9550	123094.64	2100308.84	6694+42.13	-54.00	RAD
9551	123121.27	2100338.68	6694+68.59	-24.00	ASP
9552	123094.87	2100348.83	6694+42.13	-14.00	ASP
9560	122526.99	2100380.13	6688+74.07	14.00	ASP
9561	122527.22	2100420.13	6688+74.07	54.00	RAD
9562	122487.22	2100420.36	6688+34.07	54.00	ASP
9563	122480.70	2100507.54	6688+27.05	141.14	GRV
9564	122471.72	2100507.60	6688+18.07	141.14	GRV
9565	122463.22	2100420.50	6688+10.07	54.00	ASP
9566	122423.22	2100420.73	6687+70.07	54.00	RAD
9567	122422.99	2100380.73	6687+70.07	14.00	ASP

Legend

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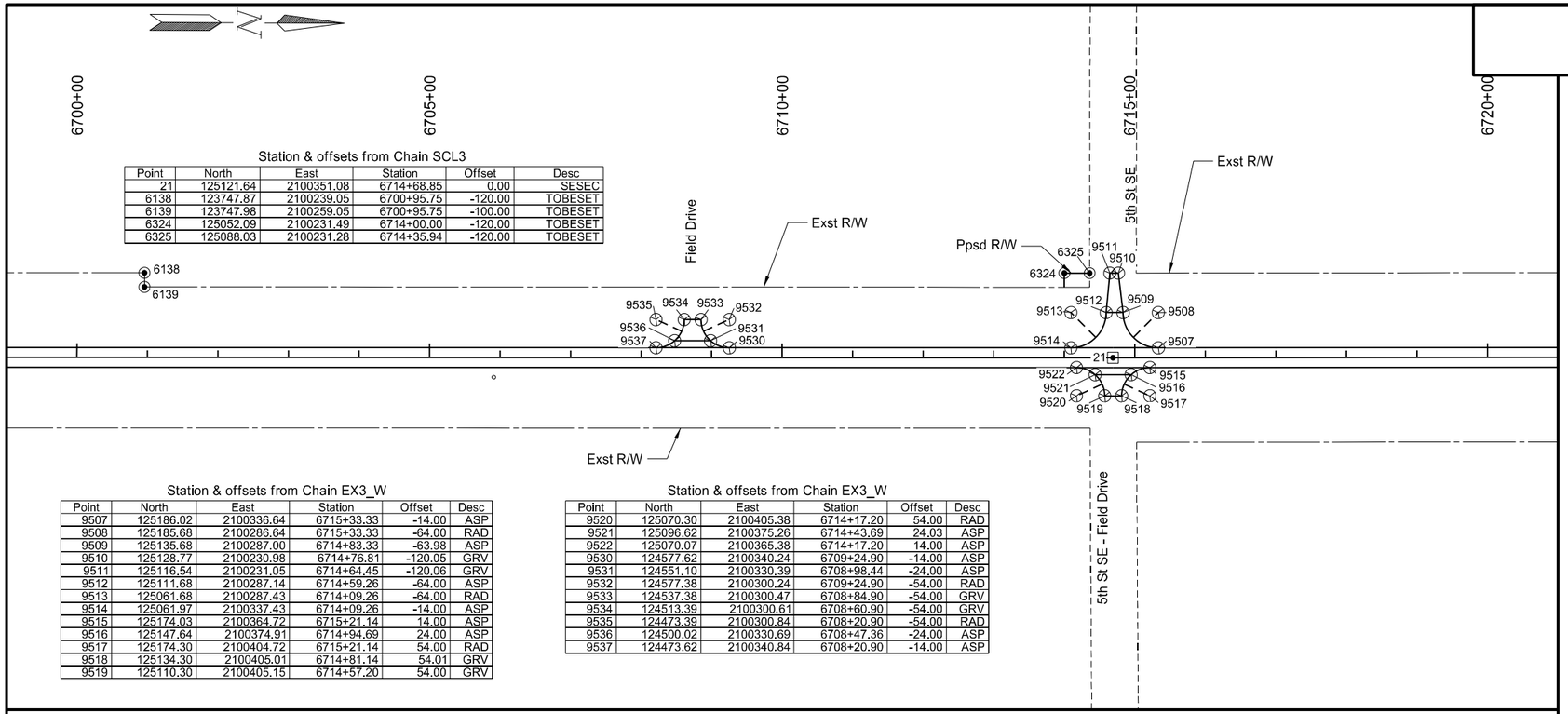
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 12/15/2021
NORTH DAKOTA

Survey Data Layout

ND 3
Tuttle N to W Jct 200

6661+89.5 to 6700+00
Wells County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	82	20



Station & offsets from Chain SCL3

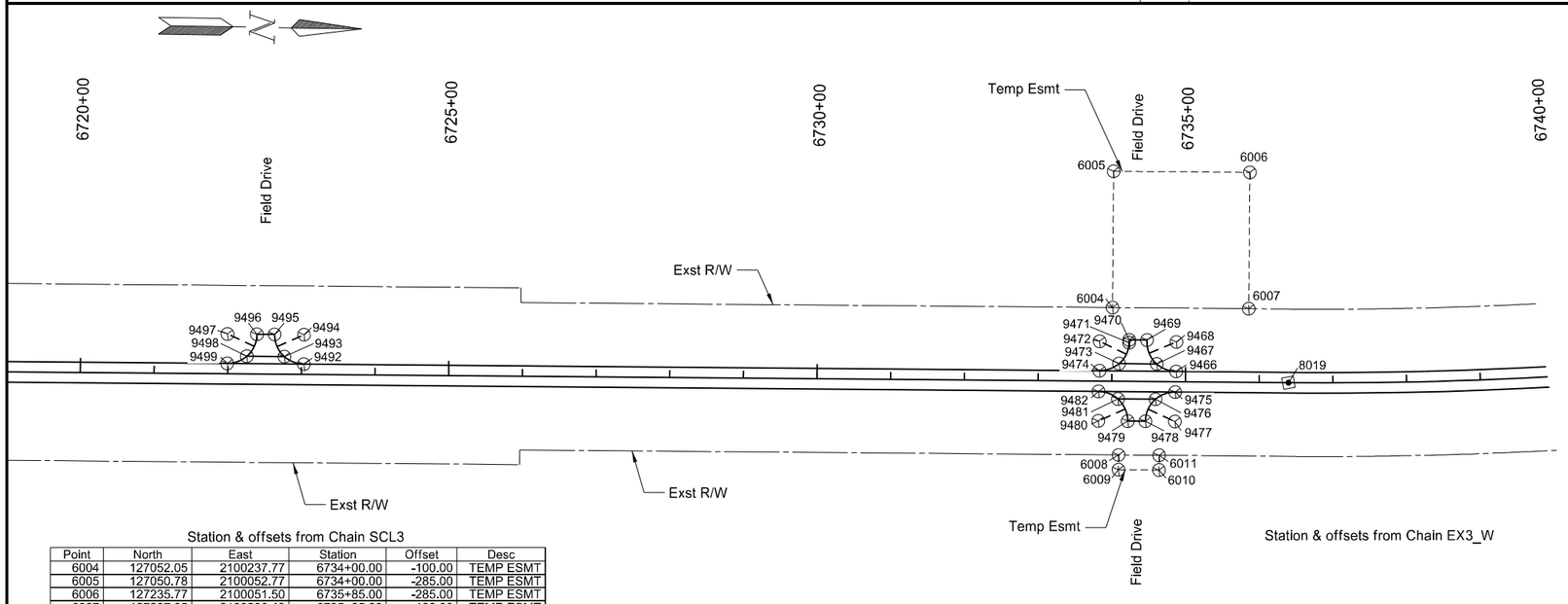
Point	North	East	Station	Offset	Desc
21	125121.64	2100351.08	6714+68.85	0.00	SESEC
6138	123747.87	2100239.05	6700+95.75	-120.00	TOBESET
6139	123747.98	2100259.05	6700+95.75	-100.00	TOBESET
6324	125052.09	2100231.49	6714+00.00	-120.00	TOBESET
6325	125088.03	2100231.28	6714+35.94	-120.00	TOBESET

Station & offsets from Chain EX3_W

Point	North	East	Station	Offset	Desc
9507	125186.02	2100336.64	6715+33.33	-14.00	ASP
9508	125185.68	2100286.64	6715+33.33	-64.00	RAD
9509	125135.68	2100287.00	6714+83.33	-63.98	ASP
9510	125128.77	2100230.98	6714+76.81	-120.05	GRV
9511	125116.54	2100231.05	6714+64.45	-120.06	GRV
9512	125111.68	2100287.14	6714+59.26	-64.00	ASP
9513	125061.68	2100287.43	6714+09.26	-64.00	RAD
9514	125061.97	2100337.43	6714+09.26	-14.00	ASP
9515	125174.03	2100364.72	6715+21.14	14.00	ASP
9516	125147.64	2100374.91	6714+94.69	24.00	ASP
9517	125174.30	2100404.72	6715+21.14	54.00	RAD
9518	125134.30	2100405.01	6714+81.14	54.01	GRV
9519	125110.30	2100405.15	6714+57.20	54.00	GRV

Station & offsets from Chain EX3_W

Point	North	East	Station	Offset	Desc
9520	125070.30	2100405.38	6714+17.20	54.00	RAD
9521	125096.62	2100375.26	6714+43.69	24.03	ASP
9522	125070.07	2100365.38	6714+17.20	14.00	ASP
9530	124577.62	2100340.24	6709+24.90	-14.00	ASP
9531	124551.10	2100330.39	6708+98.44	-24.00	ASP
9532	124577.38	2100300.24	6709+24.90	-54.00	RAD
9533	124537.38	2100300.47	6708+84.90	-54.00	GRV
9534	124513.39	2100300.61	6708+60.90	-54.00	GRV
9535	124473.39	2100300.84	6708+20.90	-54.00	RAD
9536	124500.02	2100330.69	6708+47.36	-24.00	ASP
9537	124473.62	2100340.84	6708+20.90	-14.00	ASP



Station & offsets from Chain SCL3

Point	North	East	Station	Offset	Desc
6004	127052.05	2100237.77	6734+00.00	-100.00	TEMP ESMT
6005	127050.78	2100052.77	6734+00.00	-285.00	TEMP ESMT
6006	127235.77	2100051.50	6735+85.00	-285.00	TEMP ESMT
6007	127237.05	2100236.49	6735+85.00	-100.00	TEMP ESMT
6008	127063.43	2100437.69	6734+10.00	100.00	TEMP ESMT
6009	127063.57	2100457.69	6734+10.00	120.00	TEMP ESMT
6010	127118.57	2100457.31	6734+65.00	120.00	TEMP ESMT
6011	127118.43	2100437.31	6734+65.00	100.00	TEMP ESMT
8019	127292.58	2100336.11	6736+39.84	0.00	PC

Station & offsets from Chain EX3_W

Point	North	East	Station	Offset	Desc
9466	127139.84	2100323.16	6734+87.19	-14.00	ASP
9467	127113.31	2100313.35	6734+60.74	-24.00	ASP
9468	127139.56	2100283.17	6734+87.19	-54.00	RAD
9469	127099.61	2100281.18	6734+47.26	-56.26	GRV
9470	127075.57	2100281.34	6734+23.22	-56.26	GRV
9471	127075.44	2100285.02	6734+23.06	-52.59	GRV
9472	127035.46	2100283.88	6733+83.09	-54.00	RAD
9473	127062.12	2100313.70	6734+09.55	-24.00	ASP
9474	127035.73	2100323.88	6733+83.09	-14.00	ASP
9475	127138.87	2100351.17	6734+86.04	14.00	ASP
9476	127112.49	2100361.35	6734+59.58	24.00	ASP
9477	127139.15	2100391.17	6734+86.04	54.00	RAD
9478	127099.15	2100391.45	6734+46.04	54.00	GRV
9479	127075.15	2100391.61	6734+22.04	54.00	GRV
9480	127035.15	2100391.89	6733+82.04	54.00	RAD
9481	127061.40	2100361.71	6734+08.50	24.00	ASP
9482	127034.88	2100351.89	6733+82.04	14.00	ASP
9492	125955.80	2100331.33	6723+03.13	-14.00	ASP
9493	125929.27	2100321.51	6722+76.67	-24.00	ASP
9494	125955.52	2100291.33	6723+03.13	-54.00	RAD
9495	125915.52	2100291.61	6722+63.13	-54.00	GRV
9496	125891.52	2100291.77	6722+39.13	-54.00	GRV
9497	125851.53	2100292.05	6721+99.13	-54.00	RAD
9498	125878.19	2100321.87	6722+25.59	-24.00	ASP
9499	125851.80	2100332.05	6721+99.13	-14.00	ASP

Legend

- Iron Pin Reference Monument
- Alignment Monument
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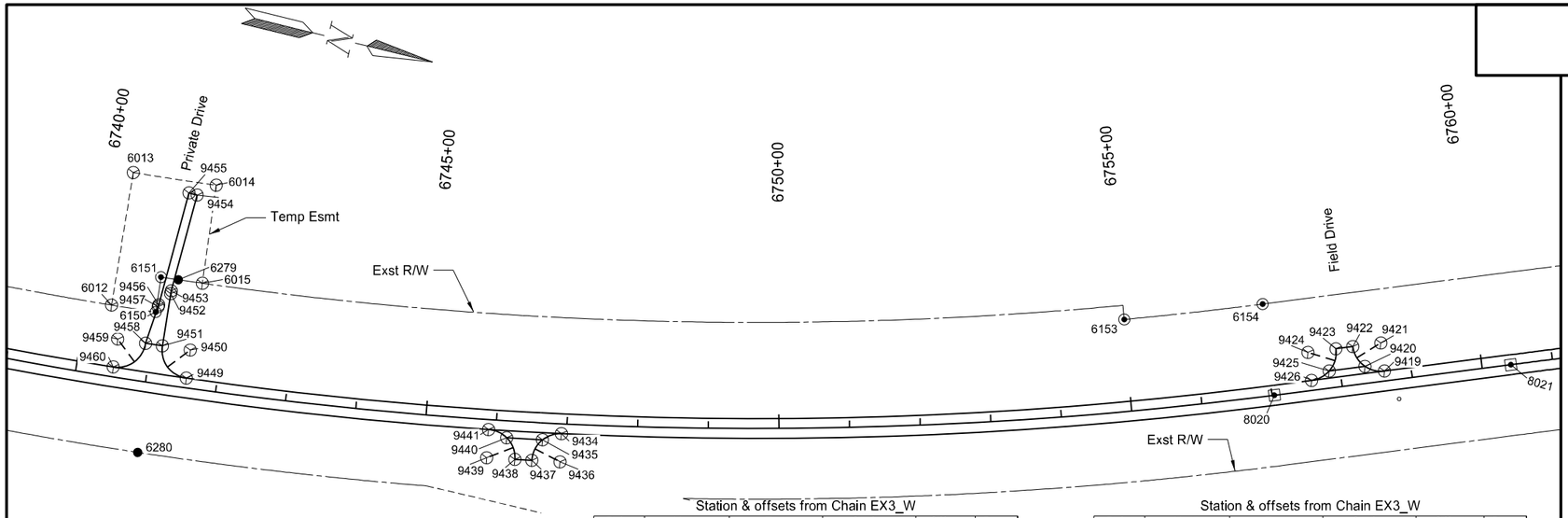
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Survey Data Layout

ND 3
Tuttle N to W Jct 200

6700+00 to 6740+00
Wells County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	82	21



Station & offsets from Chain SCL3

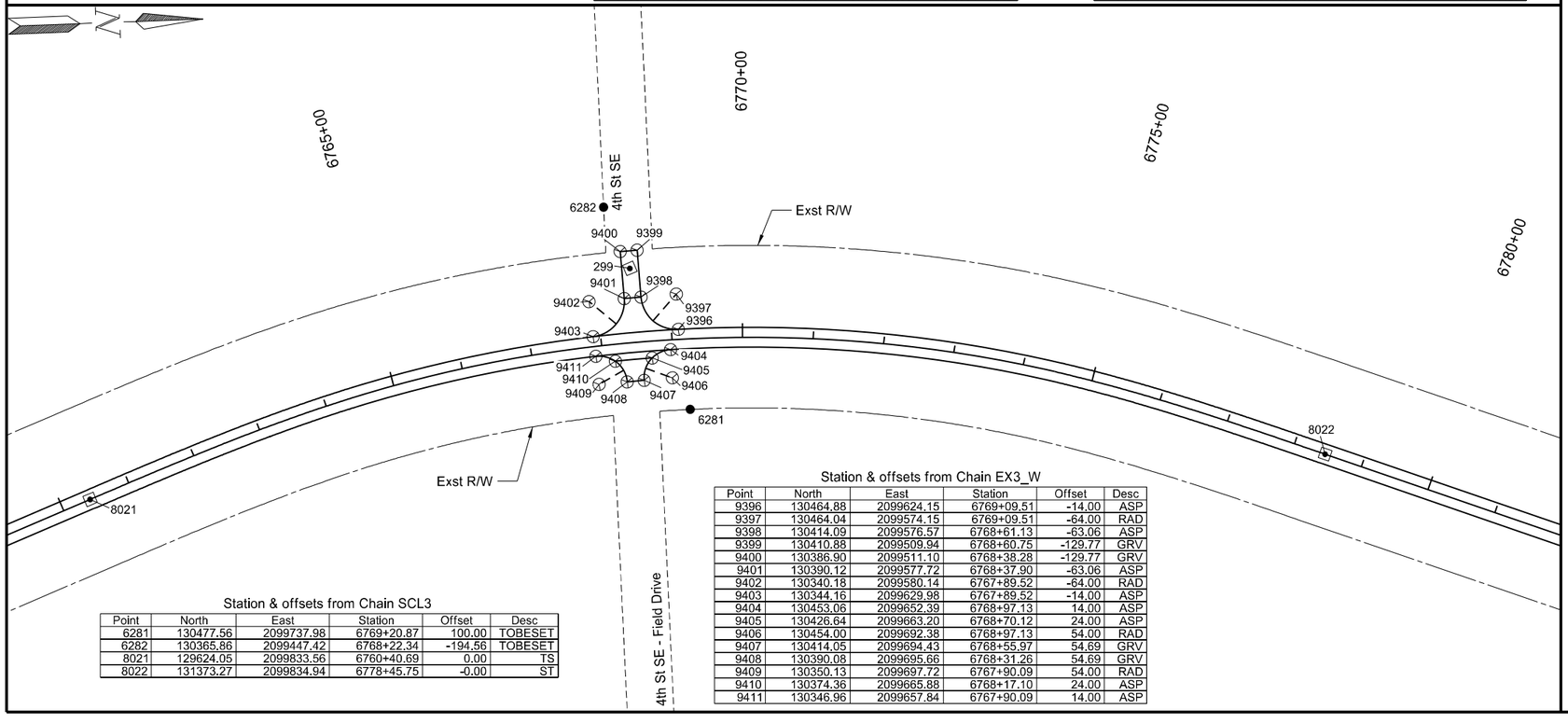
Point	North	East	Station	Offset	Desc
6012	127679.74	2100220.05	6740+35.00	-100.00	TEMP ESMT
6013	127665.34	2100030.60	6740+35.00	-290.00	TEMP ESMT
6014	127783.56	2100020.32	6741+60.00	-290.00	TEMP ESMT
6015	127797.22	2100159.65	6741+60.00	-150.00	TEMP ESMT
6150	127742.70	2100214.91	6740+99.29	-100.00	TOBESET
6151	127738.35	2100165.10	6740+99.29	-150.00	TOBESET
6153	129077.26	2099900.78	6755+01.57	-130.00	TOBESET
6154	129262.40	2099833.32	6757+03.20	-130.00	TOBESET
6279	127763.10	2100162.89	6741+24.81	-150.00	TOBESET
8020	129309.05	2099954.66	6757+03.20	-0.00	PT

Station & offsets from Chain EX3_W

Point	North	East	Station	Offset	Desc
9419	129452.34	2099884.58	6758+62.11	-14.00	ASP
9420	129424.06	2099884.74	6758+35.65	-24.00	ASP
9421	129437.99	2099847.24	6758+62.11	-54.00	RAD
9422	129400.65	2099861.59	6758+22.11	-54.00	GRV
9423	129378.25	2099870.21	6757+98.11	-54.00	GRV
9424	129340.92	2099884.56	6757+58.11	-54.00	RAD
9425	129376.38	2099903.07	6757+84.56	-24.00	ASP
9426	129355.27	2099921.89	6757+58.11	-14.00	ASP
9434	128341.41	2100246.19	6746+92.63	14.00	ASP
9435	128317.39	2100260.95	6746+66.35	24.00	ASP
9436	128348.99	2100285.47	6746+92.63	54.00	RAD
9437	128309.65	2100292.69	6746+53.00	53.78	GRV
9438	128286.05	2100297.03	6746+29.23	53.78	GRV
9439	128246.70	2100304.25	6745+89.60	54.00	RAD

Station & offsets from Chain EX3_W

Point	North	East	Station	Offset	Desc
9440	128267.54	2100270.11	6746+15.88	24.00	ASP
9441	128239.83	2100264.85	6745+89.60	14.00	ASP
9449	127806.92	2100295.35	6741+56.41	-14.00	ASP
9450	127803.04	2100255.54	6741+56.41	-54.00	RAD
9451	127763.19	2100259.05	6741+16.03	-54.23	ASP
9452	127757.19	2100184.61	6741+16.76	-128.90	GRV
9453	127757.07	2100180.38	6741+17.03	-133.13	GRV
9454	127760.65	2100040.21	6741+34.02	-272.38	GRV
9455	127748.66	2100039.90	6741+21.51	-273.79	GRV
9456	127744.47	2100203.95	6741+02.06	-110.77	GRV
9457	127744.31	2100206.59	6741+01.67	-108.15	GRV
9458	127739.29	2100261.16	6740+91.80	-54.23	ASP
9459	127699.44	2100264.67	6740+51.42	-54.00	RAD
9460	127702.59	2100304.54	6740+51.42	-14.00	ASP



Station & offsets from Chain SCL3

Point	North	East	Station	Offset	Desc
6281	130477.56	2099737.98	6769+20.87	100.00	TOBESET
6282	130365.86	2099447.42	6768+22.34	-194.56	TOBESET
8021	129624.05	2099833.56	6760+40.69	0.00	TS
8022	131373.27	2099834.94	6778+45.75	-0.00	ST

Station & offsets from Chain EX3_W

Point	North	East	Station	Offset	Desc
9396	130464.88	2099624.15	6769+09.51	-14.00	ASP
9397	130464.04	2099574.15	6769+09.51	-64.00	RAD
9398	130414.09	2099576.57	6768+61.13	-63.06	ASP
9399	130410.88	2099509.94	6768+60.75	-129.77	GRV
9400	130386.90	2099511.10	6768+38.28	-129.77	GRV
9401	130390.12	2099577.72	6768+37.90	-63.06	ASP
9402	130340.18	2099580.14	6767+89.52	-64.00	RAD
9403	130344.16	2099629.98	6767+89.52	-14.00	ASP
9404	130453.06	2099652.39	6768+97.13	14.00	ASP
9405	130426.64	2099663.20	6768+70.12	24.00	ASP
9406	130454.00	2099692.38	6768+97.13	54.00	RAD
9407	130414.05	2099694.43	6768+55.97	54.69	GRV
9408	130390.08	2099695.66	6768+31.26	54.69	GRV
9409	130350.13	2099697.72	6767+90.09	54.00	RAD
9410	130374.36	2099665.88	6768+17.10	24.00	ASP
9411	130346.96	2099657.84	6767+90.09	14.00	ASP

Legend

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- Found R/W Monument or Property Corner
- Found R/W Marker

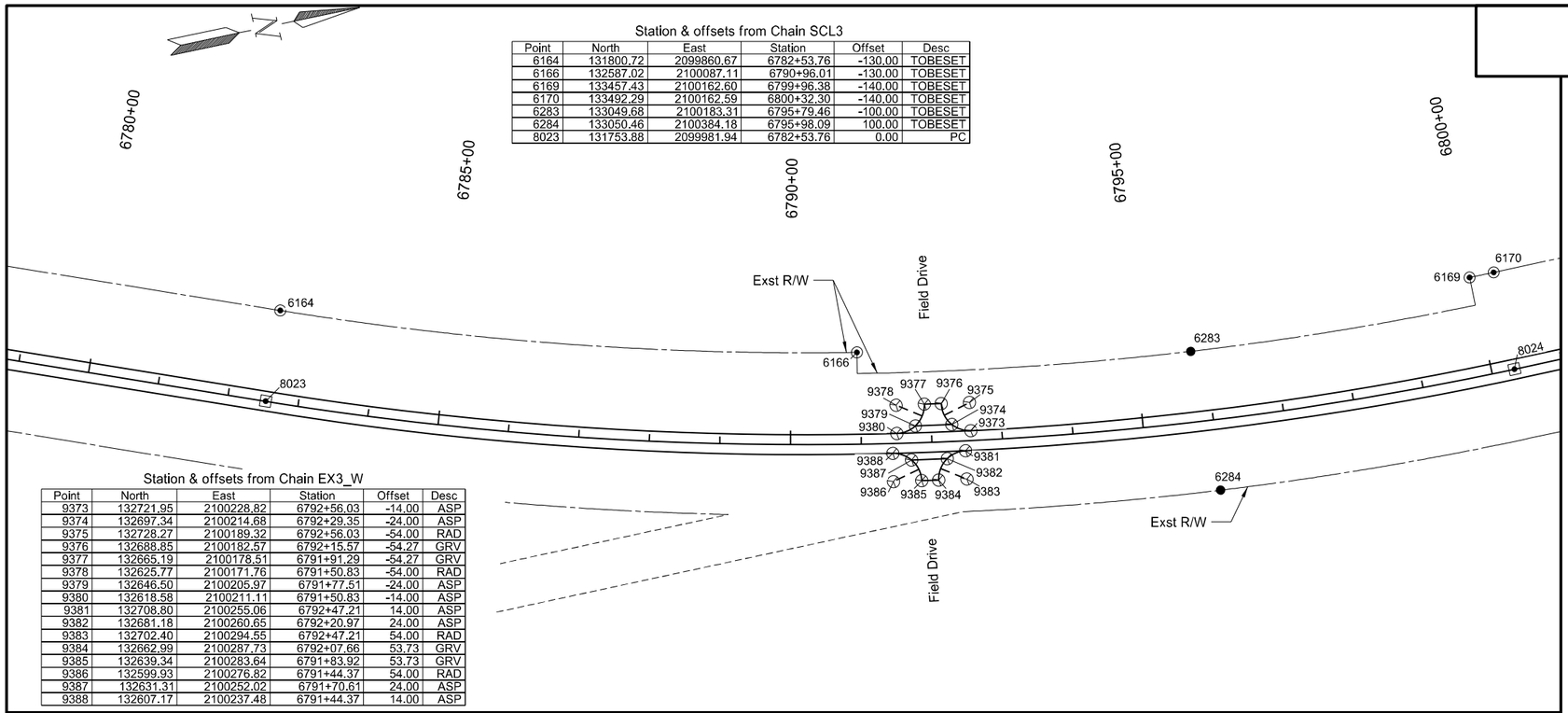
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Survey Data Layout

ND 3
Tuttle N to W Jct 200

6740+00 to 6780+00
Wells County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	82	22

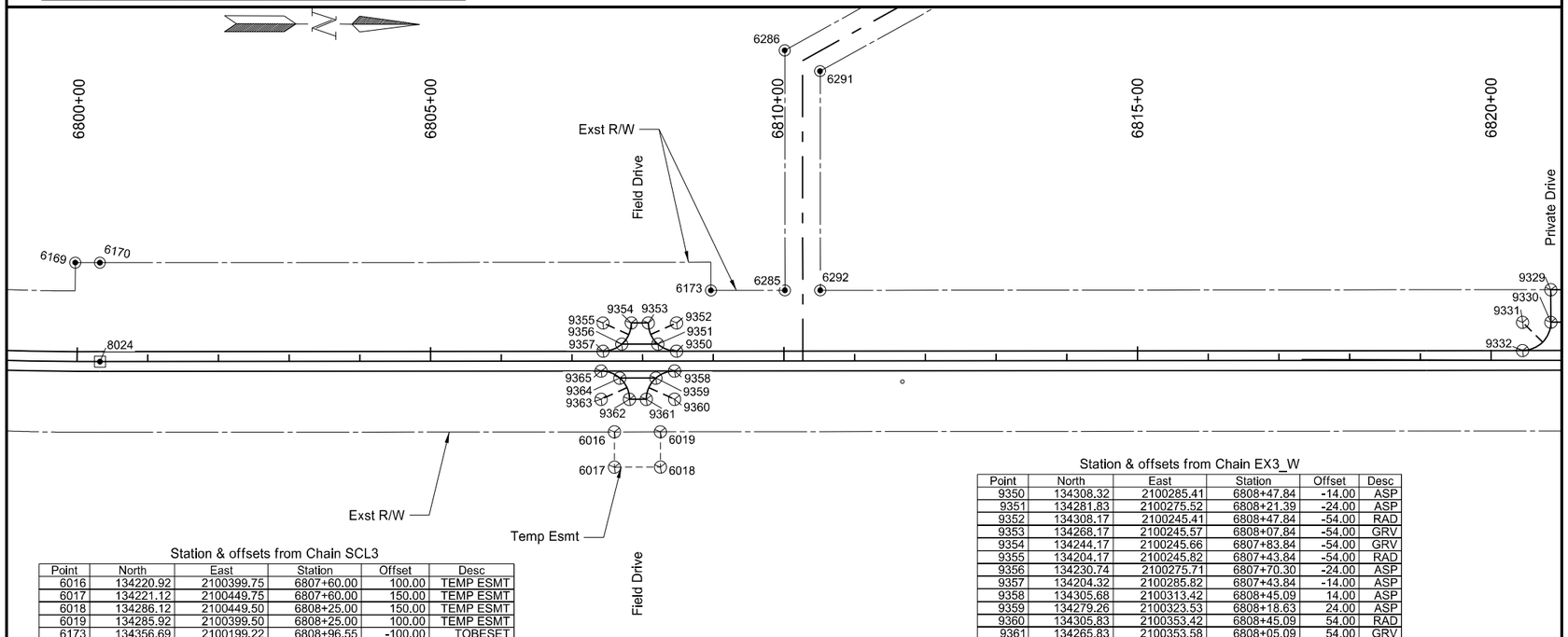


Station & offsets from Chain SCL3

Point	North	East	Station	Offset	Desc
6164	131800.72	2099860.67	6782+53.76	-130.00	TOBESET
6166	132587.02	2100087.11	6790+96.01	-130.00	TOBESET
6169	133457.43	2100162.60	6799+96.38	-140.00	TOBESET
6170	133492.29	2100162.59	6800+32.30	-140.00	TOBESET
6283	133049.68	2100183.31	6795+79.46	-100.00	TOBESET
6284	133050.46	2100384.18	6795+98.09	100.00	TOBESET
8023	131753.88	2099981.94	6782+53.76	0.00	PC

Station & offsets from Chain EX3_W

Point	North	East	Station	Offset	Desc
9373	132721.95	2100228.82	6792+56.03	-14.00	ASP
9374	132697.34	2100214.68	6792+29.35	-24.00	ASP
9375	132728.27	2100189.32	6792+56.03	-54.00	RAD
9376	132688.85	2100182.57	6792+15.57	-54.27	GRV
9377	132665.19	2100178.51	6791+91.29	-54.27	GRV
9378	132625.77	2100171.76	6791+50.83	-54.00	RAD
9379	132646.50	2100205.97	6791+77.51	-24.00	ASP
9380	132618.58	2100211.11	6791+50.83	-14.00	ASP
9381	132708.80	2100255.06	6792+47.21	14.00	ASP
9382	132681.18	2100260.65	6792+20.97	24.00	ASP
9383	132702.40	2100294.55	6792+47.21	54.00	RAD
9384	132662.99	2100287.73	6792+07.66	53.73	GRV
9385	132639.34	2100283.64	6791+83.92	53.73	GRV
9386	132599.93	2100276.82	6791+44.37	54.00	RAD
9387	132631.31	2100252.02	6791+70.61	24.00	ASP
9388	132607.17	2100237.48	6791+44.37	14.00	ASP



Station & offsets from Chain SCL3

Point	North	East	Station	Offset	Desc
6016	134220.92	2100399.75	6807+60.00	100.00	TEMP ESMT
6017	134221.12	2100449.75	6807+60.00	150.00	TEMP ESMT
6018	134286.12	2100449.50	6808+25.00	150.00	TEMP ESMT
6019	134285.92	2100399.50	6808+25.00	100.00	TEMP ESMT
6173	134356.69	2100199.22	6808+96.55	-100.00	TOBESET
6285	134461.42	2100198.81	6810+01.27	-100.00	TOBESET
6286	134460.09	2099859.09	6810+01.27	-439.73	TOBESET
6291	134510.20	2099888.35	6810+51.27	-410.27	TOBESET
6292	134511.42	2100198.62	6810+51.27	-100.00	TOBESET
8024	133492.84	2100302.59	6800+32.30	0.00	PT

Station & offsets from Chain EX3_W

Point	North	East	Station	Offset	Desc
9350	134308.32	2100285.41	6808+47.84	-14.00	ASP
9351	134281.83	2100275.52	6808+21.39	-24.00	ASP
9352	134308.17	2100245.41	6808+47.84	-54.00	RAD
9353	134268.17	2100245.57	6808+07.84	-54.00	GRV
9354	134244.17	2100245.66	6807+83.84	-54.00	GRV
9355	134204.17	2100245.82	6807+43.84	-54.00	RAD
9356	134230.74	2100275.71	6807+70.30	-24.00	ASP
9357	134204.32	2100285.82	6807+43.84	-14.00	ASP
9358	134305.68	2100313.42	6808+45.09	14.00	ASP
9359	134279.26	2100323.53	6808+18.63	24.00	ASP
9360	134305.83	2100353.42	6808+45.09	54.00	RAD
9361	134265.83	2100353.58	6808+05.09	54.00	GRV
9362	134241.83	2100353.67	6807+81.09	54.00	GRV
9363	134201.83	2100353.83	6807+41.09	54.00	RAD
9364	134228.17	2100323.73	6807+67.55	24.00	ASP
9365	134201.68	2100313.83	6807+41.09	14.00	ASP

Legend

- Iron Pin Reference Monument
- Alignment Monument
- Iron Pin R/W Monument
- Temporary R/W / Staking Point
- Found R/W Monument or Property Corner
- Found R/W Marker

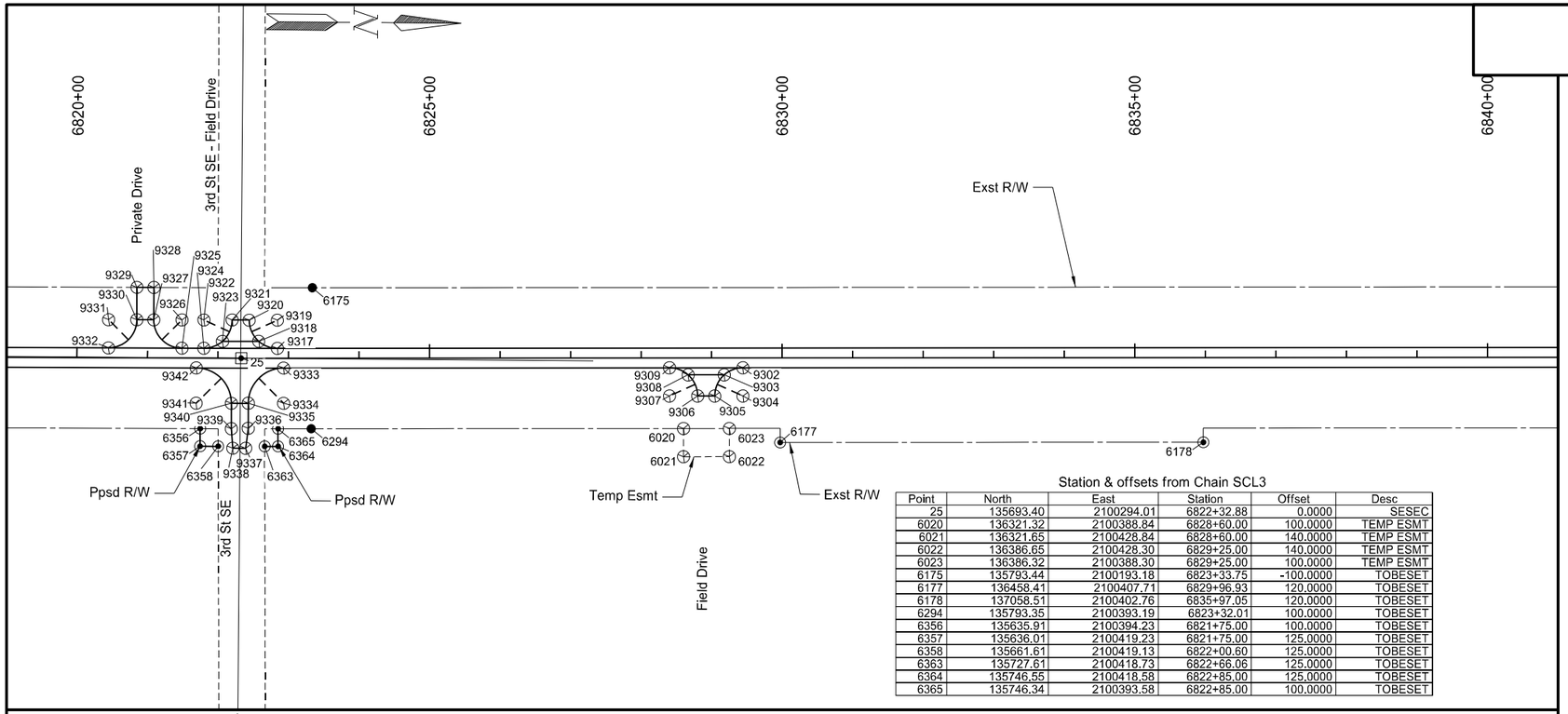
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Survey Data Layout

ND 3
Tuttle N to W Jct 200

6780+00 to 6820+00
Wells County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	82	23

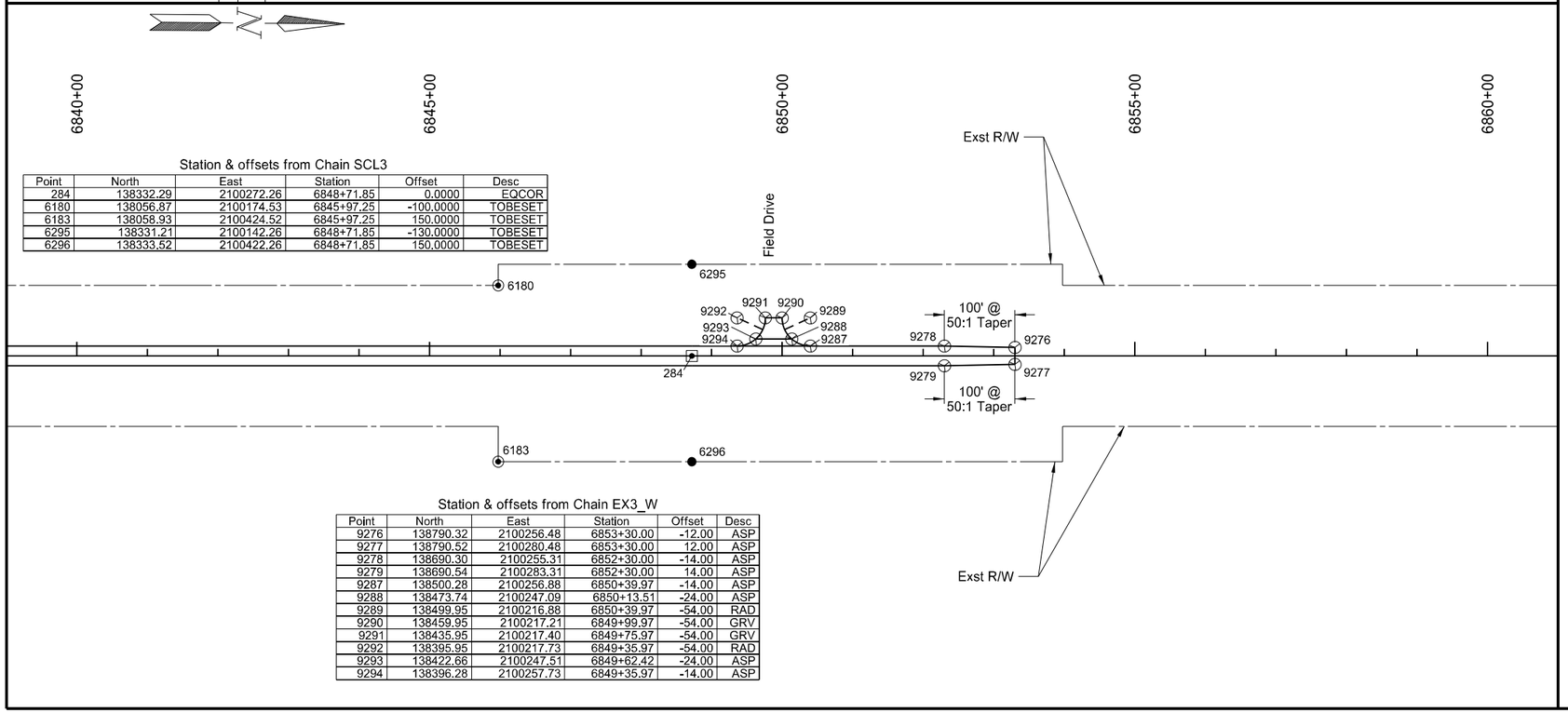


Station & offsets from Chain SCL3

Point	North	East	Station	Offset	Desc
25	135693.40	2100294.01	6822+32.88	0.0000	SESEC
6020	136321.32	2100388.84	6828+60.00	100.0000	TEMP ESMT
6021	136321.65	2100428.84	6828+60.00	140.0000	TEMP ESMT
6022	136386.65	2100428.30	6829+25.00	140.0000	TEMP ESMT
6023	136386.32	2100388.30	6829+25.00	100.0000	TEMP ESMT
6175	135793.44	2100193.18	6823+33.75	-100.0000	TOBESET
6177	136458.41	2100407.71	6829+96.93	120.0000	TOBESET
6178	137058.51	2100402.76	6835+97.05	120.0000	TOBESET
6294	135793.35	2100393.19	6823+32.01	100.0000	TOBESET
6356	135635.91	2100394.23	6821+75.00	100.0000	TOBESET
6357	135636.01	2100419.23	6821+75.00	125.0000	TOBESET
6358	135661.61	2100419.13	6822+00.60	125.0000	TOBESET
6363	135727.61	2100418.73	6822+66.06	125.0000	TOBESET
6364	135746.55	2100418.58	6822+85.00	125.0000	TOBESET
6365	135746.34	2100393.58	6822+85.00	100.0000	TOBESET

Station & offsets from Chain EX3_W

Point	North	East	Station	Offset	Desc
9302	136404.78	2100302.15	6829+44.17	14.00	ASP
9303	136378.41	2100312.36	6829+17.71	24.00	ASP
9304	136405.11	2100342.15	6829+44.17	54.00	RAD
9305	136365.11	2100342.48	6829+04.17	54.00	GRV
9306	136341.12	2100342.67	6828+80.17	54.00	GRV
9307	136301.12	2100343.00	6828+40.17	54.00	RAD
9308	136327.33	2100312.79	6828+66.63	24.00	ASP
9309	136300.79	2100303.00	6828+40.17	14.00	ASP
9317	135744.47	2100279.59	6822+84.06	-14.00	ASP
9318	135717.93	2100269.81	6822+57.61	-24.00	ASP
9319	135744.14	2100239.59	6822+84.06	-54.00	RAD
9320	135704.14	2100239.92	6822+44.06	-54.00	GRV
9321	135680.14	2100239.89	6822+19.83	-54.17	GRV
9322	135640.14	2100240.22	6821+79.83	-54.00	RAD
9323	135666.58	2100270.23	6822+06.15	-23.88	ASP
9324	135640.30	2100280.22	6821+79.83	-14.00	ASP
9325	135609.12	2100280.34	6821+48.65	-14.00	ASP
9326	135608.96	2100240.34	6821+48.65	-54.00	RAD
9327	135568.96	2100240.49	6821+08.65	-54.00	ASP
9328	135568.78	2100194.49	6821+08.65	-100.00	GRV
9329	135544.78	2100194.59	6820+84.65	-100.00	GRV
9330	135544.96	2100240.59	6820+84.65	-54.00	ASP
9331	135504.96	2100240.74	6820+44.65	-54.00	RAD
9332	135505.12	2100280.74	6820+44.65	-14.00	ASP
9333	135753.49	2100307.51	6822+92.85	14.00	ASP
9334	135753.90	2100357.51	6822+92.85	64.00	RAD
9335	135703.90	2100357.71	6822+42.85	63.78	ASP
9336	135704.04	2100393.29	6822+42.70	99.37	GRV
9337	135700.63	2100421.60	6822+39.05	127.65	GRV
9338	135682.39	2100421.67	6822+21.37	127.62	GRV
9339	135680.04	2100394.02	6822+19.13	99.96	GRV
9340	135679.90	2100358.06	6822+19.13	64.00	ASP
9341	135629.90	2100358.26	6821+69.13	64.00	RAD
9342	135629.71	2100308.26	6821+69.13	14.00	ASP



Station & offsets from Chain SCL3

Point	North	East	Station	Offset	Desc
284	138332.29	2100272.26	6848+71.85	0.0000	EQCOR
6180	138056.87	2100174.53	6845+97.25	-100.0000	TOBESET
6183	138058.93	2100424.52	6845+97.25	150.0000	TOBESET
6295	138331.21	2100142.26	6848+71.85	-130.0000	TOBESET
6296	138333.52	2100422.26	6848+71.85	150.0000	TOBESET

Station & offsets from Chain EX3_W

Point	North	East	Station	Offset	Desc
9276	138790.32	2100256.48	6853+30.00	-12.00	ASP
9277	138790.52	2100280.48	6853+30.00	12.00	ASP
9278	138690.30	2100255.31	6852+30.00	-14.00	ASP
9279	138690.54	2100283.31	6852+30.00	14.00	ASP
9287	138500.28	2100256.88	6850+39.97	-14.00	ASP
9288	138473.74	2100247.09	6850+13.51	-24.00	ASP
9289	138499.95	2100216.88	6850+39.97	-54.00	RAD
9290	138459.95	2100217.21	6849+99.97	-54.00	GRV
9291	138435.95	2100217.40	6849+75.97	-54.00	GRV
9292	138395.95	2100217.73	6849+35.97	-54.00	RAD
9293	138422.66	2100247.51	6849+62.42	-24.00	ASP
9294	138396.28	2100257.73	6849+35.97	-14.00	ASP

Legend

- Iron Pin Reference Monument
- Alignment Monument
- Iron Pin R/W Monument
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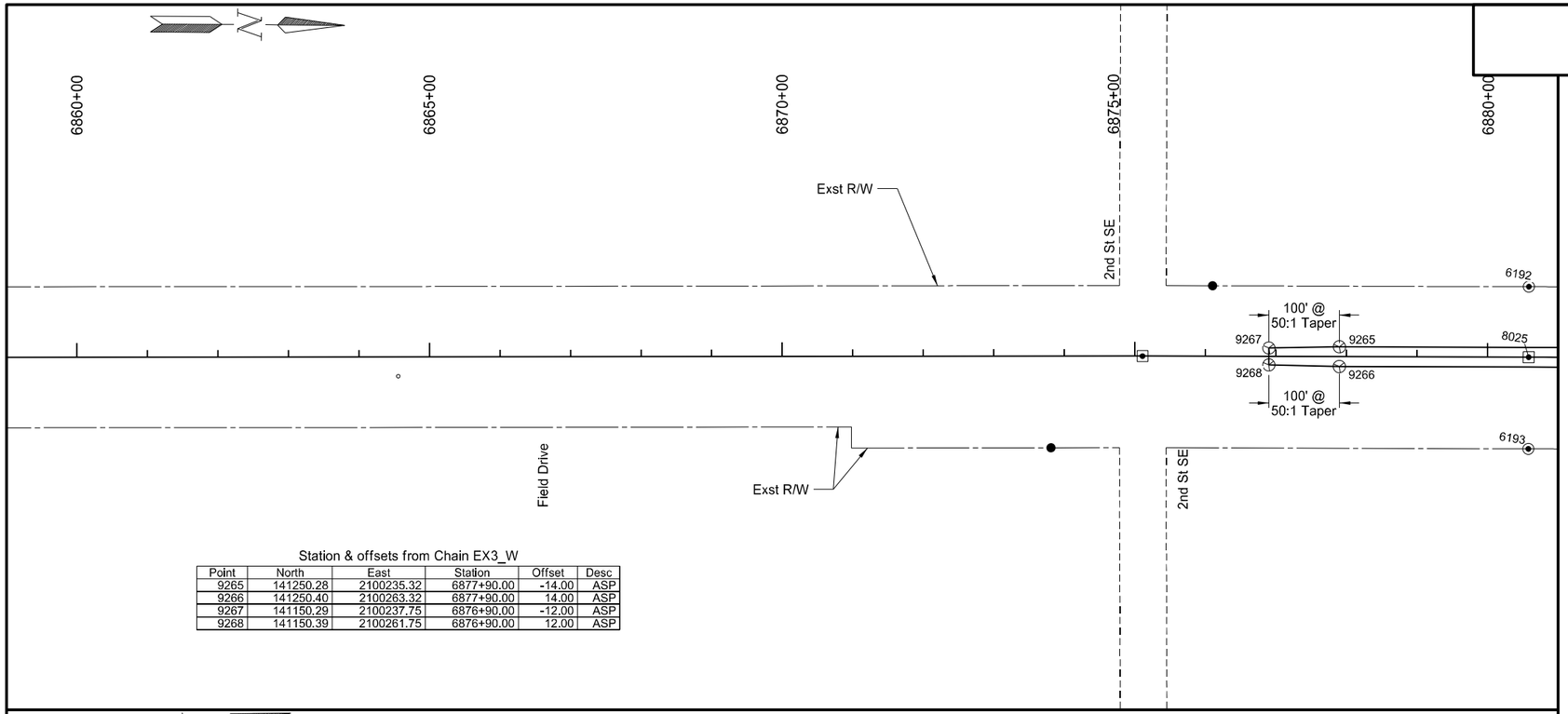
REGISTERED PROFESSIONAL ENGINEER
KORY M. KLEINKNECHT
PE-27748
DATE 12/15/2021
NORTH DAKOTA

Survey Data Layout

ND 3
Tuttle N to W Jct 200

6820+00 to 6860+00
Wells County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	82	24

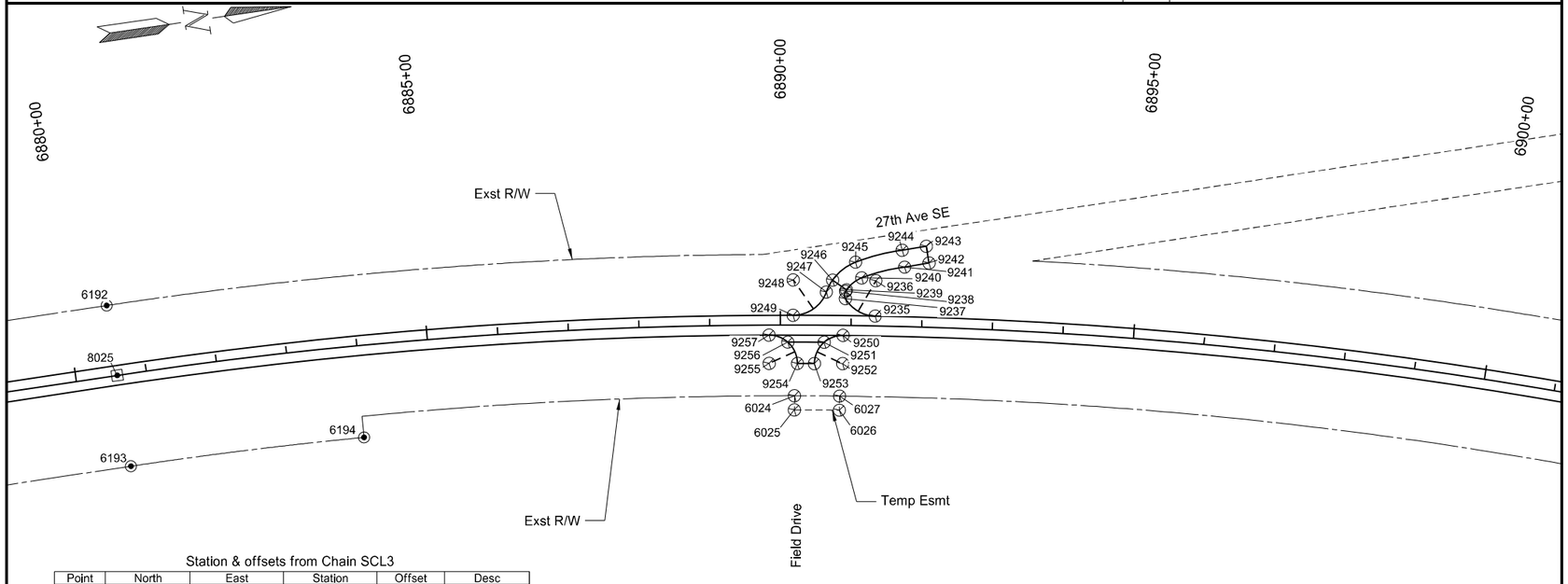


Station & offsets from Chain EX3_W

Point	North	East	Station	Offset	Desc
9265	141250.28	2100235.32	6877+90.00	-14.00	ASP
9266	141250.40	2100263.32	6877+90.00	14.00	ASP
9267	141150.29	2100237.75	6876+90.00	-12.00	ASP
9268	141150.39	2100261.75	6876+90.00	12.00	ASP

Station & offsets from Chain EX3_W

Point	North	East	Station	Offset	Desc
9235	142591.82	2100320.44	6891+33.92	-14.00	ASP
9236	142600.02	2100271.12	6891+33.92	-64.00	RAD
9237	142553.73	2100290.02	6890+91.60	-37.91	ASP
9238	142555.41	2100279.70	6890+91.65	-48.36	ASP
9239	142557.01	2100277.94	6890+92.94	-50.35	ASP
9240	142580.84	2100264.32	6891+14.10	-67.59	GRV
9241	142643.11	2100257.83	6891+73.73	-84.30	GRV
9242	142678.15	2100257.21	6892+07.67	-90.96	GRV
9243	142677.73	2100233.21	6892+03.12	-114.52	GRV
9244	142643.15	2100233.82	6891+69.74	-107.96	GRV
9245	142575.38	2100240.95	6891+05.08	-89.78	GRV
9246	142539.64	2100261.38	6890+73.37	-64.00	ASP
9247	142528.43	2100276.79	6890+64.74	-47.04	ASP
9248	142484.46	2100252.99	6890+18.11	-64.00	RAD
9249	142477.16	2100302.45	6890+18.11	-14.00	ASP
9250	142542.82	2100340.84	6890+88.83	14.00	ASP
9251	142515.05	2100346.61	6890+62.21	24.00	ASP
9252	142536.54	2100380.35	6890+88.83	54.00	RAD
9253	142496.99	2100374.39	6890+48.48	54.20	GRV
9254	142473.25	2100370.82	6890+24.28	54.20	GRV
9255	142433.70	2100364.87	6889+83.94	54.00	RAD
9256	142464.17	2100338.95	6890+10.56	24.00	ASP
9257	142439.33	2100325.27	6889+83.94	14.00	ASP



Station & offsets from Chain SCL3

Point	North	East	Station	Offset	Desc
6024	142462.36	2100415.51	6890+20.00	100.00	TEMP ESMT
6025	142459.43	2100435.29	6890+20.00	120.00	TEMP ESMT
6026	142522.47	2100444.94	6890+85.00	120.00	TEMP ESMT
6027	142525.60	2100425.19	6890+85.00	100.00	TEMP ESMT
6192	141518.33	2100148.18	6880+58.42	-100.00	TOBESET
6193	141519.31	2100378.18	6880+58.42	130.00	TOBESET
6194	141851.55	2100385.62	6883+97.71	130.00	TOBESET
8025	141518.76	2100248.18	6880+58.42	0.00	PC

Legend

- Iron Pin Reference Monument
- Alignment Monument
- Iron Pin R/W Monument
- Temporary R/W / Staking Point
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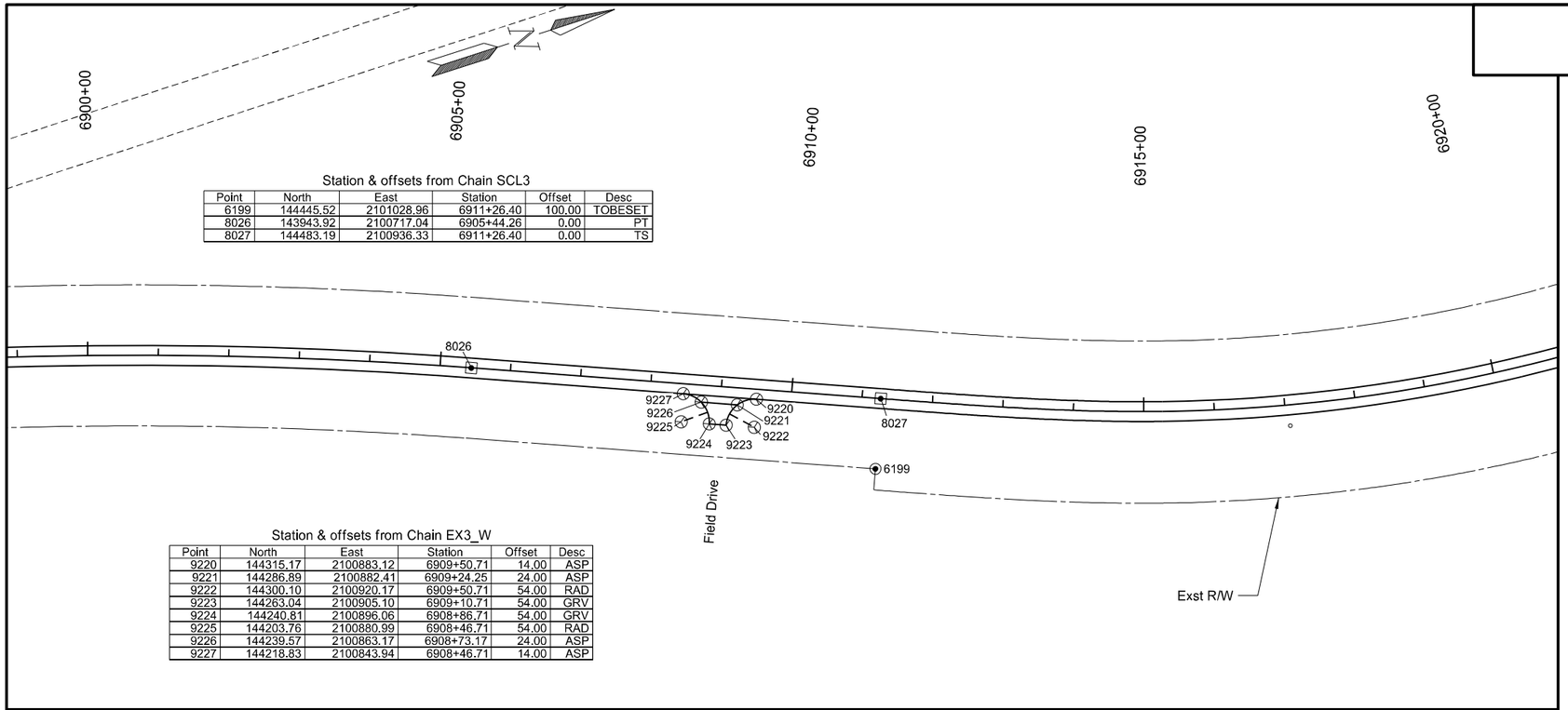
REGISTERED PROFESSIONAL ENGINEER
KORY M. KLEINKNECHT
PE-27748
DATE 12/15/2021
NORTH DAKOTA

Survey Data Layout

ND 3
Tuttle N to W Jct 200

6860+00 to 6900+00
Wells County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	82	25

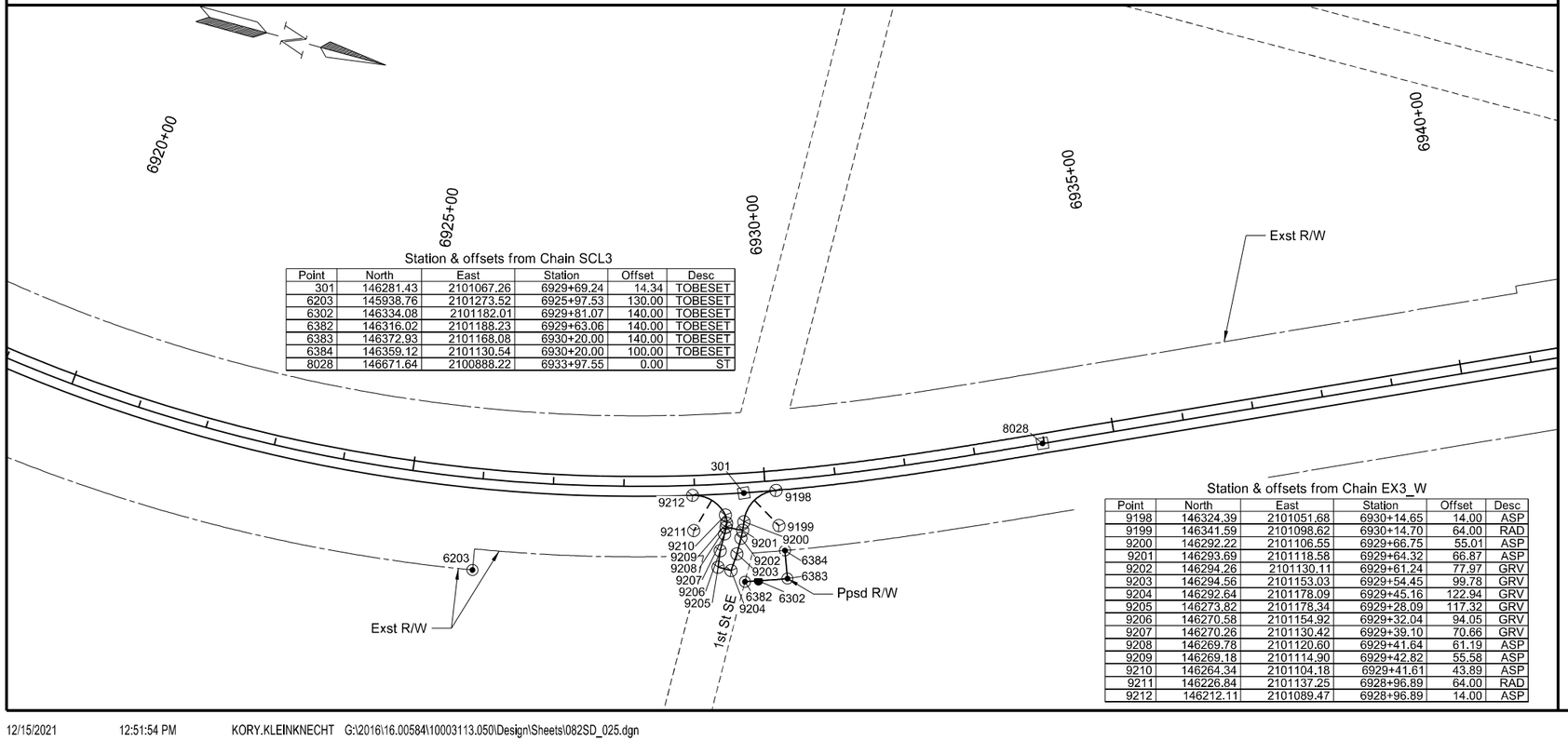


Station & offsets from Chain SCL3

Point	North	East	Station	Offset	Desc
6199	144445.52	2101028.96	6911+26.40	100.00	TOBESET
8026	143943.92	2100717.04	6905+44.26	0.00	PT
8027	144483.19	2100936.33	6911+26.40	0.00	TS

Station & offsets from Chain EX3_W

Point	North	East	Station	Offset	Desc
9220	144315.17	2100883.12	6909+50.71	14.00	ASP
9221	144286.89	2100882.41	6909+24.25	24.00	ASP
9222	144300.10	2100920.17	6909+50.71	54.00	RAD
9223	144263.04	2100905.10	6909+10.71	54.00	GRV
9224	144240.81	2100896.06	6908+86.71	54.00	GRV
9225	144203.76	2100880.99	6908+46.71	54.00	RAD
9226	144239.57	2100863.17	6908+73.17	24.00	ASP
9227	144218.83	2100843.94	6908+46.71	14.00	ASP



Station & offsets from Chain SCL3

Point	North	East	Station	Offset	Desc
301	146281.43	2101067.26	6929+69.24	14.34	TOBESET
6203	145938.76	2101273.52	6925+97.53	130.00	TOBESET
6302	146334.08	2101182.01	6929+81.07	140.00	TOBESET
6382	146316.02	2101188.23	6929+63.06	140.00	TOBESET
6383	146372.93	2101168.08	6930+20.00	140.00	TOBESET
6384	146359.12	2101130.54	6930+20.00	100.00	TOBESET
8028	146671.64	2100888.22	6933+97.55	0.00	ST

Station & offsets from Chain EX3_W

Point	North	East	Station	Offset	Desc
9198	146324.39	2101051.68	6930+14.65	14.00	ASP
9199	146341.59	2101098.62	6930+14.70	64.00	RAD
9200	146292.22	2101106.55	6929+66.75	55.01	ASP
9201	146293.69	2101118.58	6929+64.32	66.87	ASP
9202	146294.26	2101130.11	6929+61.24	77.97	GRV
9203	146294.56	2101153.03	6929+54.45	99.78	GRV
9204	146292.64	2101178.09	6929+45.16	122.94	GRV
9205	146273.82	2101178.34	6929+28.09	117.32	GRV
9206	146270.58	2101154.92	6929+32.04	94.05	GRV
9207	146270.26	2101130.42	6929+39.10	70.66	GRV
9208	146269.78	2101120.60	6929+41.64	61.19	ASP
9209	146269.18	2101114.90	6929+42.82	55.58	ASP
9210	146264.34	2101104.18	6929+41.61	43.89	ASP
9211	146226.84	2101137.25	6928+96.89	64.00	RAD
9212	146212.11	2101089.47	6928+96.89	14.00	ASP

Legend

- Iron Pin Reference Monument
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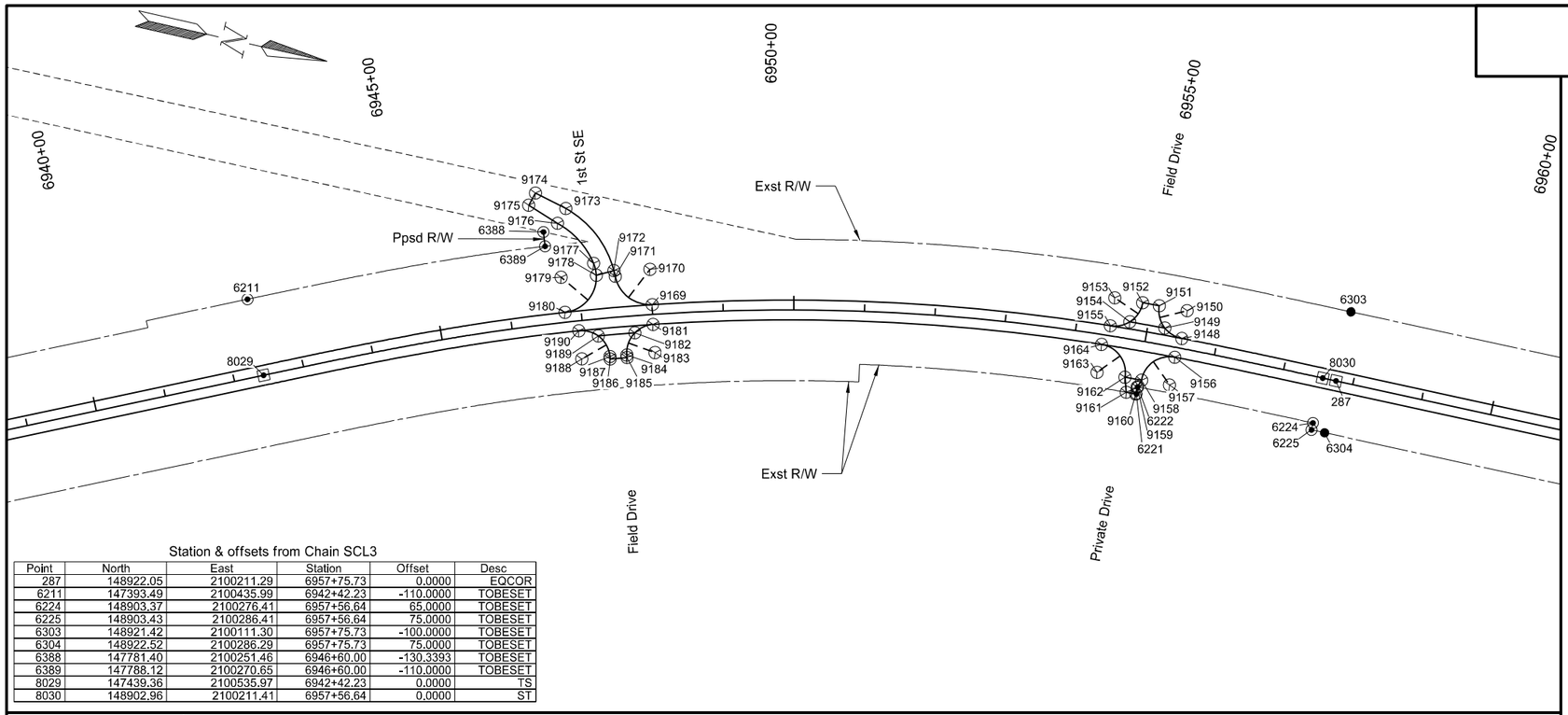
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Survey Data Layout

ND 3
Tuttle N to W Jct 200

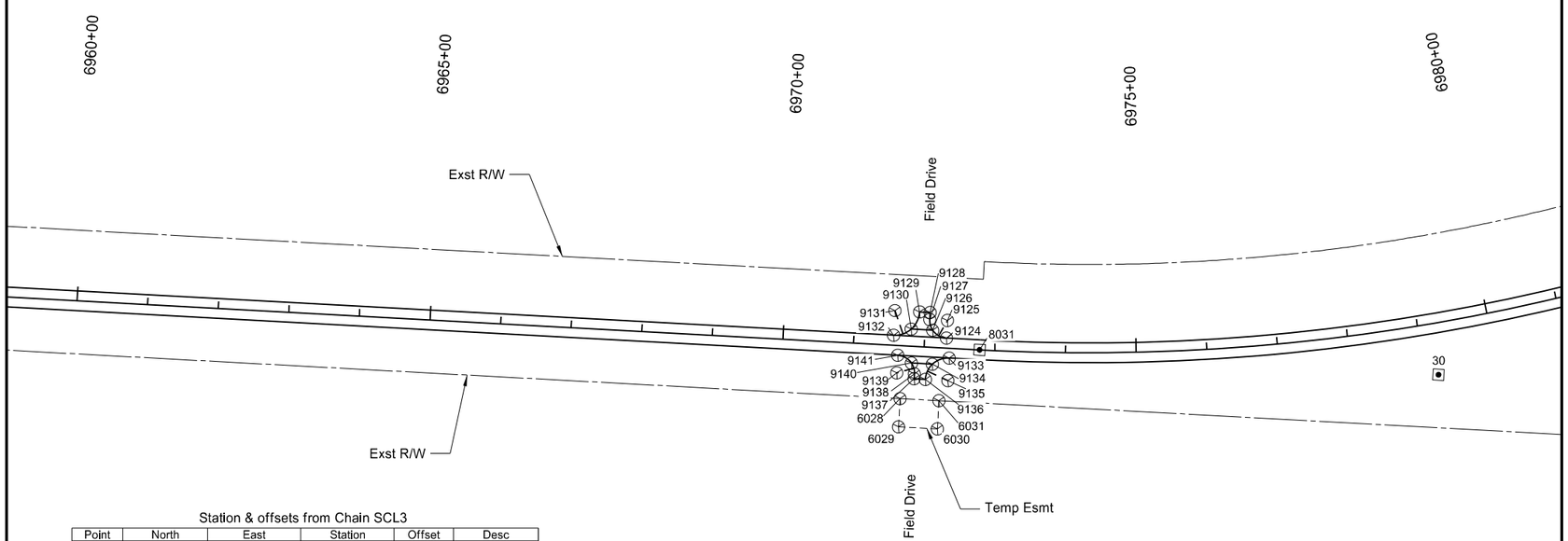
6900+00 to 6940+00
Wells County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	82	26



Station & offsets from Chain SCL3

Point	North	East	Station	Offset	Desc
287	148922.05	2100211.29	6957+75.73	0.0000	EOCOR
6211	147393.49	2100435.99	6942+42.23	-110.0000	TOBESET
6224	148903.37	2100276.41	6957+56.64	65.0000	TOBESET
6225	148903.43	2100286.41	6957+56.64	75.0000	TOBESET
6303	148921.42	2100111.30	6957+75.73	-100.0000	TOBESET
6304	148922.52	2100286.29	6957+75.73	75.0000	TOBESET
6388	147781.40	2100251.46	6946+60.00	-130.3393	TOBESET
6389	147788.12	2100270.65	6946+60.00	-110.0000	TOBESET
8029	147439.36	2100535.97	6942+42.23	0.0000	TS
8030	148902.96	2100211.41	6957+56.64	0.0000	ST



Station & offsets from Chain SCL3

Point	North	East	Station	Offset	Desc
30	151074.84	2100197.78	6979+17.75	72.82	PI
6028	150316.76	2100277.54	6971+70.00	75.00	TEMP ESMT
6029	150317.01	2100317.54	6971+70.00	115.00	TEMP ESMT
6030	150372.01	2100317.19	6972+25.00	115.00	TEMP ESMT
6031	150371.75	2100277.19	6972+25.00	75.00	TEMP ESMT
8031	150424.82	2100201.86	6972+78.54	0.00	PC

Station & offsets from Chain EX3_W

Point	North	East	Station	Offset	Desc
9124	150377.02	2100188.16	6972+30.83	-14.00	ASP
9125	150376.87	2100163.16	6972+30.83	-39.00	RAD
9126	150356.96	2100178.29	6972+10.83	-24.00	ASP
9127	150351.87	2100163.32	6972+05.83	-39.00	GRV
9128	150351.80	2100153.32	6972+05.83	-49.00	GRV
9129	150336.93	2100153.41	6971+90.96	-49.00	GRV
9130	150326.59	2100178.48	6971+80.45	-24.00	ASP
9131	150301.93	2100153.63	6971+55.96	-49.00	RAD
9132	150302.15	2100188.63	6971+55.96	-14.00	ASP
9133	150382.54	2100216.13	6972+36.17	14.00	ASP
9134	150359.37	2100226.27	6972+12.93	24.00	ASP
9135	150382.74	2100248.12	6972+36.17	46.00	RAD
9136	150350.75	2100248.33	6972+04.17	46.00	GRV
9137	150334.87	2100248.43	6971+88.30	46.00	GRV
9138	150334.83	2100241.43	6971+88.30	39.00	GRV
9139	150309.83	2100241.58	6971+63.30	39.00	RAD
9140	150329.73	2100226.46	6971+83.30	24.00	ASP
9141	150309.67	2100216.58	6971+63.30	14.00	ASP
9148	148696.00	2100200.43	6955+50.09	-14.00	ASP
9149	148669.35	2100191.34	6955+23.91	-24.00	ASP
9150	148694.77	2100160.45	6955+50.10	-54.00	RAD
9151	148654.81	2100162.24	6955+10.67	-53.65	GRV
9152	148630.83	2100163.37	6954+87.04	-53.60	GRV
9153	148590.87	2100165.17	6954+47.76	-54.00	RAD
9154	148619.01	2100193.61	6954+73.86	-24.00	ASP
9155	148593.36	2100205.09	6954+47.77	-14.00	ASP
9156	148692.07	2100228.56	6955+45.28	14.00	ASP
9157	148693.37	2100268.54	6955+45.28	54.00	RAD
9158	148653.41	2100270.47	6955+04.69	54.43	ASP
9159	148649.58	2100281.22	6955+00.31	65.00	GRV
9160	148649.51	2100291.24	6954+99.78	75.00	GRV
9161	148635.93	2100291.87	6954+85.87	75.00	GRV
9162	148629.44	2100271.60	6954+80.28	54.43	ASP
9163	148589.48	2100273.47	6954+39.53	54.00	RAD
9164	148586.90	2100233.56	6954+39.53	14.00	ASP
9169	147954.20	2100317.90	6948+00.52	-14.00	ASP
9170	147940.02	2100269.95	6948+00.52	-64.00	RAD
9171	147894.35	2100290.32	6947+51.93	-57.85	ASP
9172	147890.76	2100282.86	6947+50.77	-66.04	ASP
9173	147805.02	2100212.01	6946+93.46	-159.97	GRV
9174	147758.35	2100200.17	6946+55.49	-186.36	GRV
9175	147752.76	2100219.05	6946+44.59	-170.43	GRV
9176	147798.20	2100235.02	6946+80.29	-140.38	GRV
9177	147860.34	2100279.09	6947+23.63	-78.90	GRV
9178	147867.90	2100294.70	6947+25.94	-61.72	ASP
9179	147819.80	2100308.36	6946+77.07	-64.00	RAD
9180	147836.04	2100355.65	6946+77.07	-14.00	ASP
9181	147961.49	2100344.94	6947+99.83	14.00	ASP
9182	147938.86	2100362.20	6947+73.00	24.00	ASP
9183	147972.84	2100383.30	6947+99.83	54.00	RAD
9184	147934.71	2100395.36	6947+59.06	54.46	GRV
9185	147935.77	2100398.73	6947+59.07	57.99	GRV
9186	147912.89	2100405.97	6947+34.58	57.99	GRV
9187	147911.82	2100402.60	6947+34.59	54.46	GRV
9188	147873.69	2100414.67	6946+93.82	54.00	RAD
9189	147889.36	2100377.86	6947+20.65	24.00	ASP
9190	147860.92	2100376.76	6946+93.82	14.00	ASP

Legend

- Iron Pin Reference Monument
- Alignment Monument
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- Temporary R/W / Staking Point
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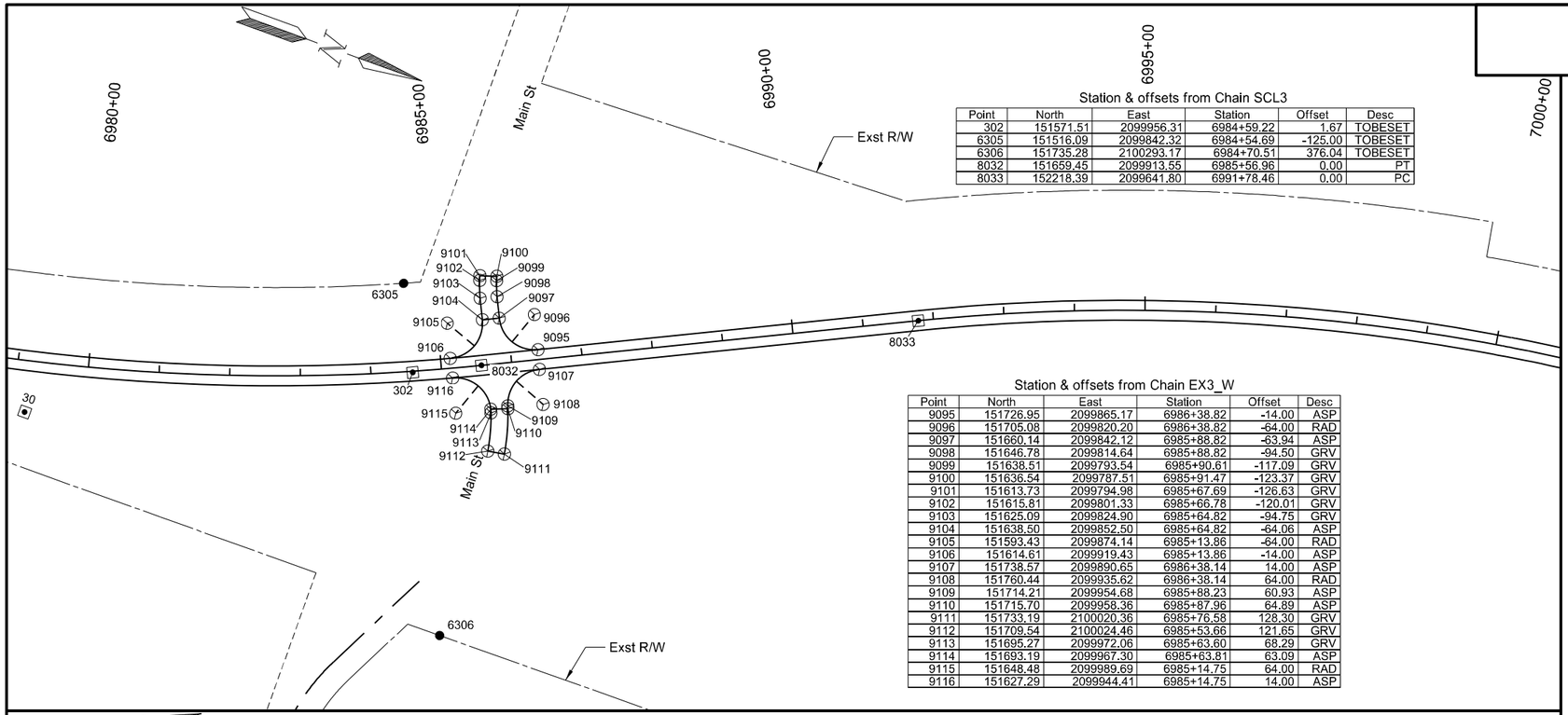
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 12/15/2021
NORTH DAKOTA

Survey Data Layout

ND 3
Tuttle N to W Jct 200

6940+00 to 6980+00
Wells County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	82	27

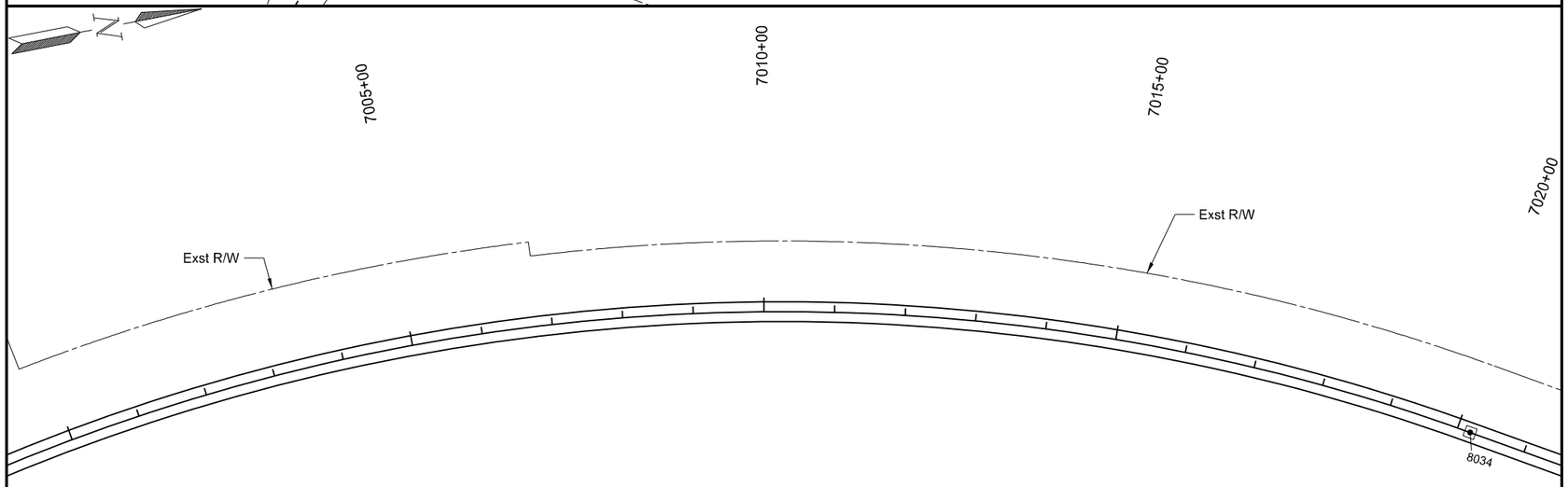


Station & offsets from Chain SCL3

Point	North	East	Station	Offset	Desc
302	151571.51	2099956.31	6984+59.22	1.67	TOBESET
6305	151516.09	2099842.32	6984+54.69	-125.00	TOBESET
6306	151735.28	2100293.17	6984+70.51	376.04	TOBESET
8032	151659.45	2099913.55	6985+56.96	0.00	PT
8033	152218.39	2099641.80	6991+78.46	0.00	PC

Station & offsets from Chain EX3_W

Point	North	East	Station	Offset	Desc
9095	151726.95	2099865.17	6986+38.82	-14.00	ASP
9096	151705.08	2099820.20	6986+38.82	-64.00	RAD
9097	151660.14	2099842.12	6985+88.82	-63.94	ASP
9098	151646.78	2099814.64	6985+88.82	-94.50	GRV
9099	151638.51	2099793.54	6985+90.61	-117.09	GRV
9100	151636.54	2099787.51	6985+91.47	-123.37	GRV
9101	151613.73	2099794.98	6985+67.69	-126.63	GRV
9102	151615.81	2099801.33	6985+66.78	-120.01	GRV
9103	151625.09	2099824.90	6985+64.82	-94.75	GRV
9104	151638.50	2099852.50	6985+64.82	-64.06	ASP
9105	151593.43	2099874.14	6985+13.86	-64.00	RAD
9106	151614.61	2099919.43	6985+13.86	-14.00	ASP
9107	151738.57	2099890.65	6986+38.14	14.00	ASP
9108	151760.44	2099935.62	6986+38.14	64.00	RAD
9109	151714.21	2099954.68	6985+88.23	60.93	ASP
9110	151715.70	2099958.36	6985+87.96	64.89	ASP
9111	151733.19	2100020.36	6985+76.58	128.30	GRV
9112	151709.54	2100024.46	6985+53.66	121.65	GRV
9113	151695.27	2099972.06	6985+63.60	68.29	GRV
9114	151693.19	2099967.30	6985+63.81	63.09	ASP
9115	151648.48	2099989.69	6985+14.75	64.00	RAD
9116	151627.29	2099944.41	6985+14.75	14.00	ASP



Legend

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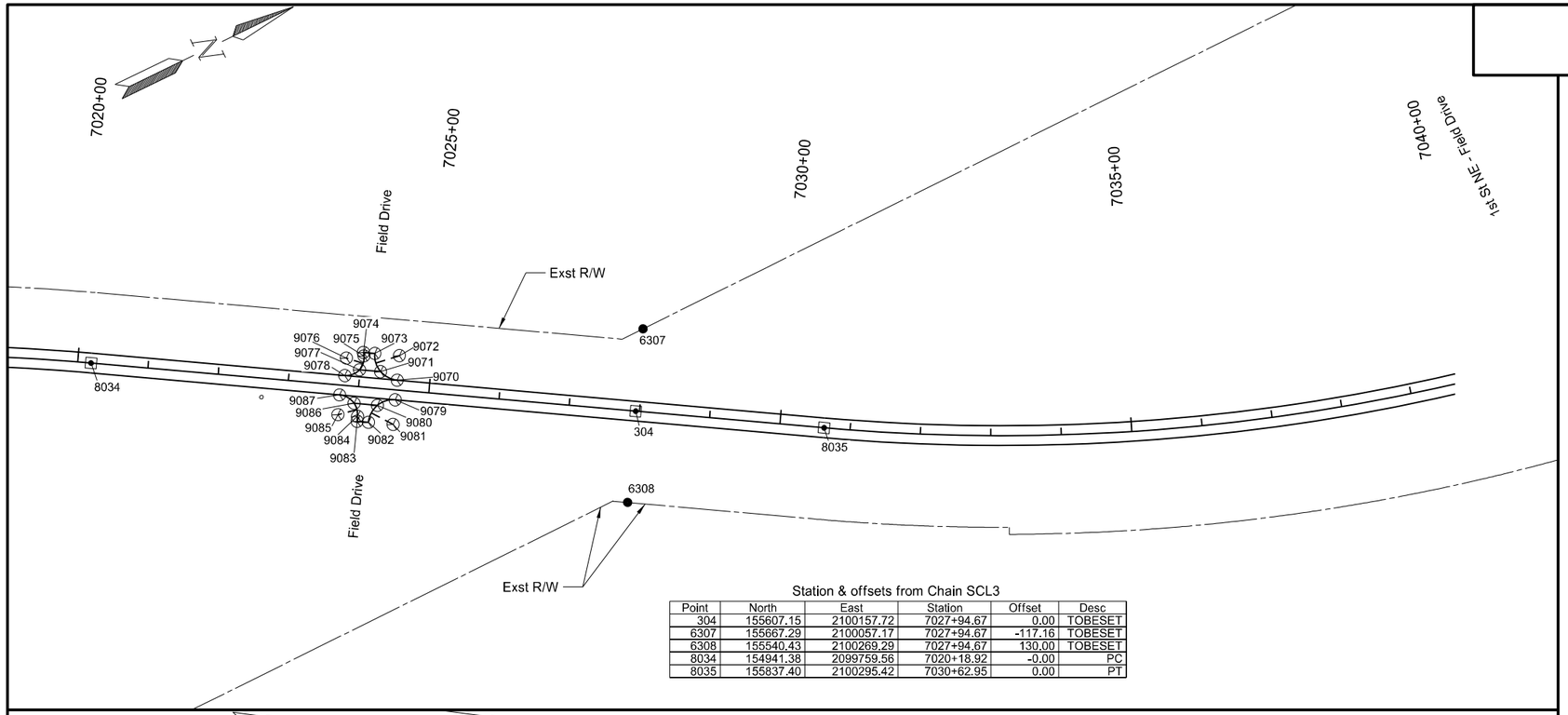
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 12/15/2021
NORTH DAKOTA

Survey Data Layout

ND 3
Tuttle N to W Jct 200

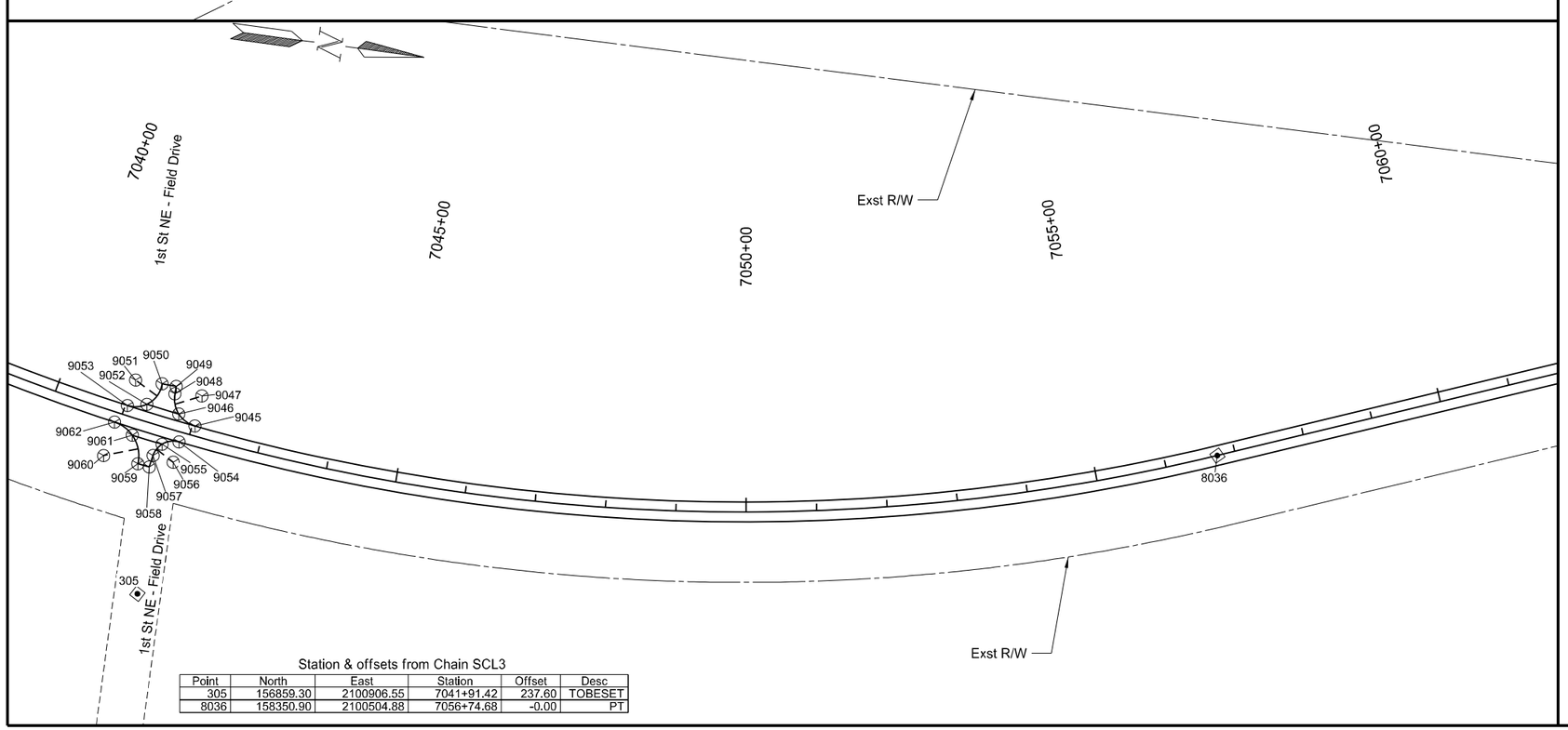
6980+00 to 7020+00
Wells County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	82	28



Station & offsets from Chain SCL3

Point	North	East	Station	Offset	Desc
304	155607.15	2100157.72	7027+94.67	0.00	TOBESET
6307	155667.29	2100057.17	7027+94.67	-117.16	TOBESET
6308	155540.43	2100269.29	7027+94.67	130.00	TOBESET
8034	154941.38	2099759.56	7020+18.92	-0.00	PC
8035	155837.40	2100295.42	7030+62.95	0.00	PT



Station & offsets from Chain SCL3

Point	North	East	Station	Offset	Desc
305	156859.30	2100906.55	7041+91.42	237.60	TOBESET
8036	158350.90	2100504.88	7056+74.68	-0.00	PT

Station & offsets from Chain EX3_W

Point	North	East	Station	Offset	Desc
9045	156907.86	2100659.35	7042+03.80	-14.00	ASP
9046	156882.95	2100645.60	7041+76.98	-24.00	ASP
9047	156911.91	2100615.83	7042+01.65	-57.66	RAD
9048	156873.52	2100617.85	7041+63.27	-50.00	GRV
9049	156874.02	2100607.34	7041+62.11	-60.46	GRV
9050	156853.67	2100606.37	7041+41.43	-58.20	GRV
9051	156815.67	2100606.16	7041+03.21	-52.00	RAD
9052	156836.21	2100638.13	7041+29.24	-24.00	ASP
9053	156809.02	2100643.58	7041+03.21	-14.00	ASP
9054	156888.60	2100684.86	7041+88.38	14.00	ASP
9055	156865.11	2100691.43	7041+66.28	24.00	ASP
9056	156884.23	2100714.54	7041+88.38	44.00	RAD
9057	156854.76	2100708.95	7041+58.85	42.91	GRV
9058	156851.57	2100725.77	7041+58.33	60.02	GRV
9059	156834.93	2100723.54	7041+41.89	60.46	GRV
9060	156785.18	2100718.54	7040+93.07	64.00	RAD
9061	156821.66	2100684.35	7041+22.62	24.00	ASP
9062	156794.10	2100669.34	7040+93.07	14.00	ASP
9070	155321.74	2099970.72	7024+53.74	-14.00	ASP
9071	155305.85	2099949.57	7024+29.24	-24.00	ASP
9072	155339.70	2099940.68	7024+53.74	-49.00	RAD
9073	155309.66	2099922.72	7024+18.74	-49.00	GRV
9074	155295.81	2099914.44	7024+02.60	-49.00	GRV
9075	155294.22	2099919.09	7024+03.63	-44.19	GRV
9076	155270.57	2099910.99	7023+79.17	-39.00	RAD
9077	155280.04	2099934.13	7023+99.17	-24.00	ASP
9078	155257.74	2099932.45	7023+79.17	-14.00	ASP
9079	155307.06	2099994.57	7024+53.39	14.00	ASP
9080	155280.91	2099990.58	7024+28.89	24.00	ASP
9081	155289.10	2100024.61	7024+53.39	49.00	RAD
9082	155259.06	2100006.64	7024+18.39	49.00	GRV
9083	155245.17	2099998.34	7024+02.20	49.00	GRV
9084	155248.77	2099992.33	7024+02.20	42.00	GRV
9085	155224.73	2099977.96	7023+74.20	42.00	RAD
9086	155252.38	2099973.52	7023+95.65	24.00	ASP
9087	155239.11	2099953.93	7023+74.20	14.00	ASP

Legend

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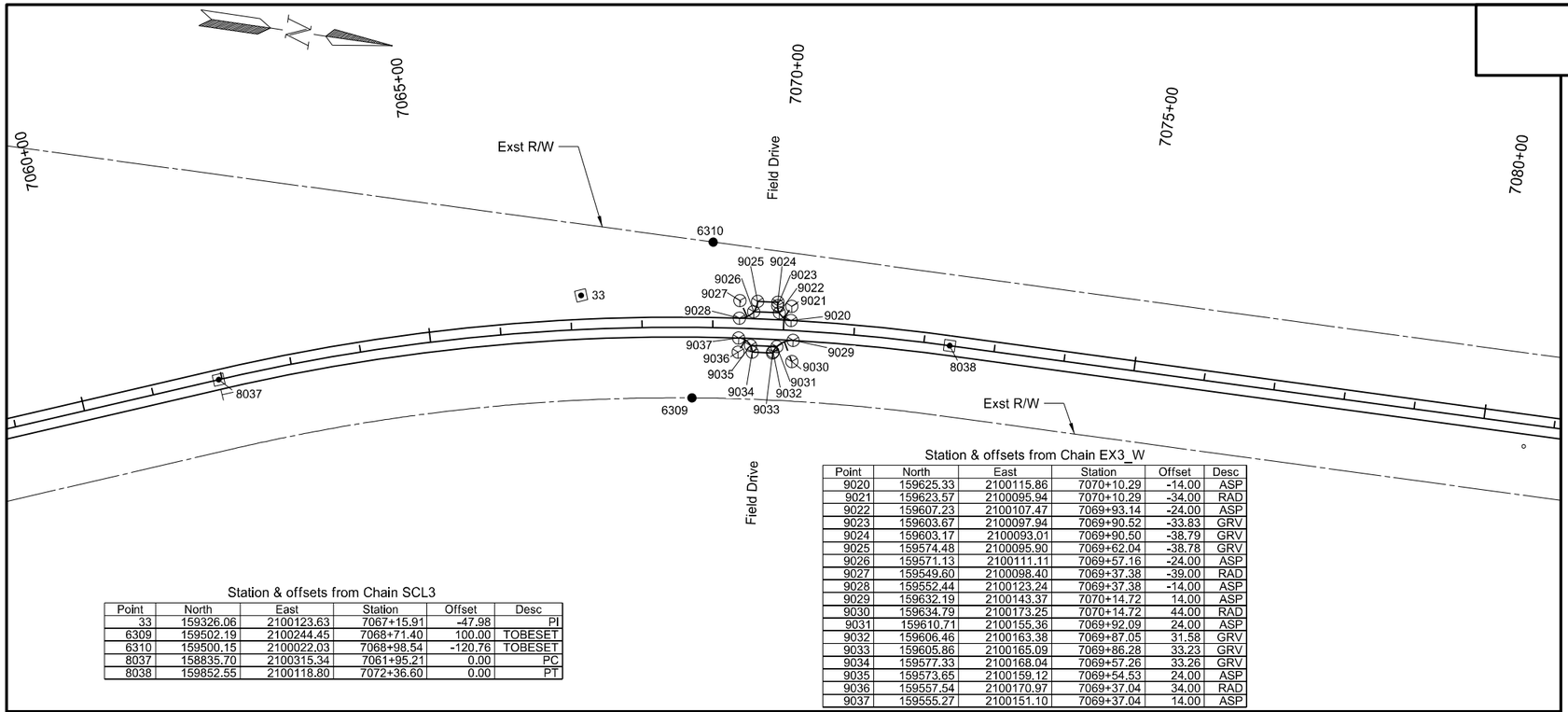
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 12/15/2021
NORTH DAKOTA

Survey Data Layout

ND 3
Tuttle N to W Jct 200

7020+00 to 7060+00
Wells County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	82	29

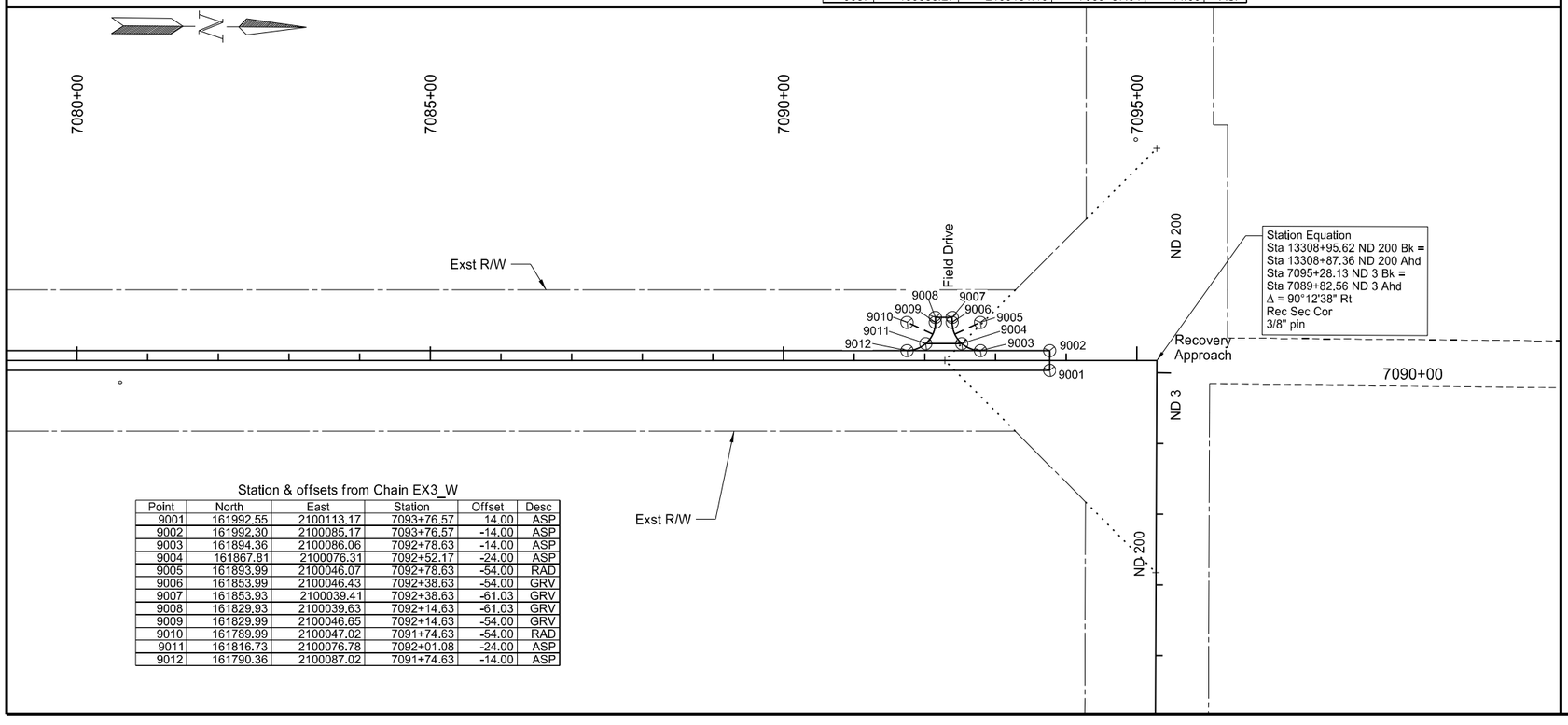


Station & offsets from Chain SCL3

Point	North	East	Station	Offset	Desc
33	159326.06	2100123.63	7067+15.91	-47.98	PI
6309	159502.19	2100244.45	7068+71.40	100.00	TOBESET
6310	159500.15	2100022.03	7068+98.54	-120.76	TOBESET
8037	158835.70	2100315.34	7061+95.21	0.00	PC
8038	159852.55	2100118.80	7072+36.60	0.00	PT

Station & offsets from Chain EX3_W

Point	North	East	Station	Offset	Desc
9020	159625.33	2100115.86	7070+10.29	-14.00	ASP
9021	159623.57	2100095.94	7070+10.29	-34.00	RAD
9022	159607.23	2100107.47	7069+93.14	-24.00	ASP
9023	159603.67	2100097.94	7069+90.52	-33.83	GRV
9024	159603.17	2100093.01	7069+90.50	-38.79	GRV
9025	159574.48	2100095.90	7069+62.04	-38.78	GRV
9026	159571.13	2100111.11	7069+57.16	-24.00	ASP
9027	159549.60	2100098.40	7069+37.38	-39.00	RAD
9028	159552.44	2100123.24	7069+37.38	-14.00	ASP
9029	159632.19	2100143.37	7070+14.72	14.00	ASP
9030	159634.79	2100173.25	7070+14.72	44.00	RAD
9031	159610.71	2100155.36	7069+92.09	24.00	ASP
9032	159606.46	2100163.38	7069+87.05	31.58	GRV
9033	159605.86	2100165.09	7069+86.28	33.23	GRV
9034	159577.33	2100168.04	7069+57.26	33.26	GRV
9035	159573.65	2100159.12	7069+54.53	24.00	ASP
9036	159557.54	2100170.97	7069+37.04	34.00	RAD
9037	159555.27	2100151.10	7069+37.04	14.00	ASP



Station & offsets from Chain EX3_W

Point	North	East	Station	Offset	Desc
9001	161992.55	2100113.17	7093+76.57	14.00	ASP
9002	161992.30	2100085.17	7093+76.57	-14.00	ASP
9003	161894.36	2100086.06	7092+78.63	-14.00	ASP
9004	161867.81	2100076.31	7092+52.17	-24.00	ASP
9005	161893.99	2100046.07	7092+78.63	-54.00	RAD
9006	161853.99	2100046.43	7092+38.63	-54.00	GRV
9007	161853.93	2100039.41	7092+38.63	-61.03	GRV
9008	161829.93	2100039.63	7092+14.63	-61.03	GRV
9009	161829.99	2100046.65	7092+14.63	-54.00	GRV
9010	161789.99	2100047.02	7091+74.63	-54.00	RAD
9011	161816.73	2100076.78	7092+01.08	-24.00	ASP
9012	161790.36	2100087.02	7091+74.63	-14.00	ASP

Legend

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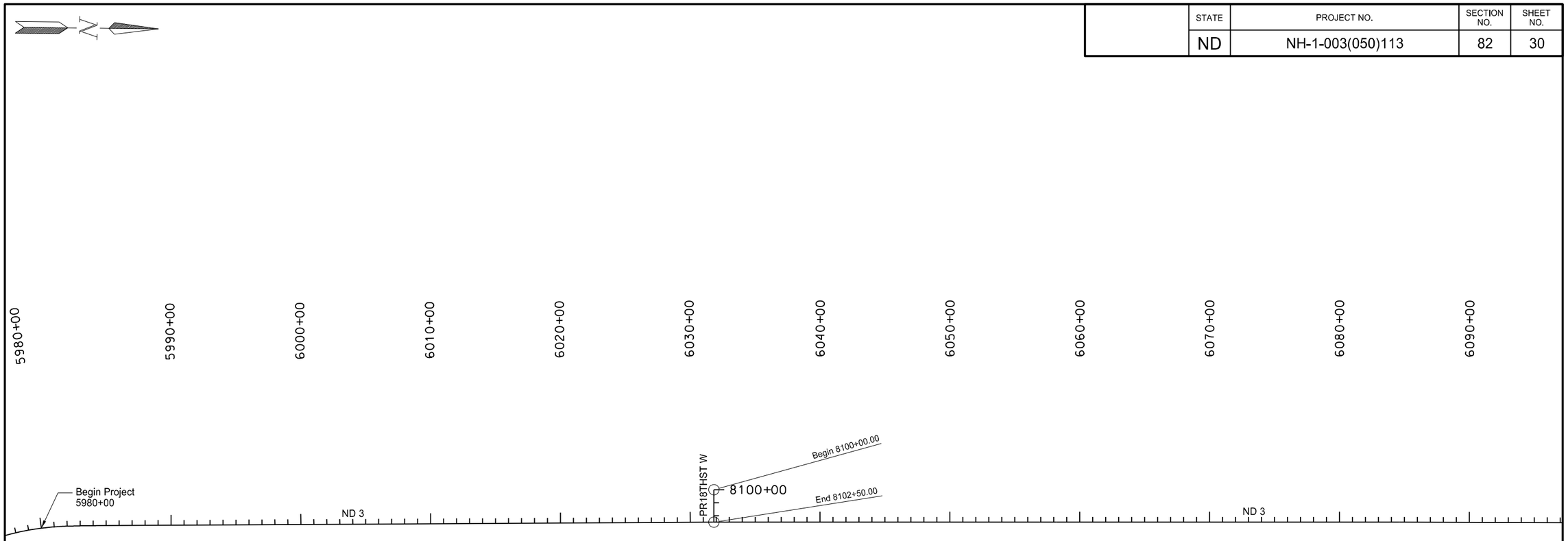
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Survey Data Layout

ND 3
Tuttle N to W Jct 200

7060+00 to 7093+76.57
Wells County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	82	30



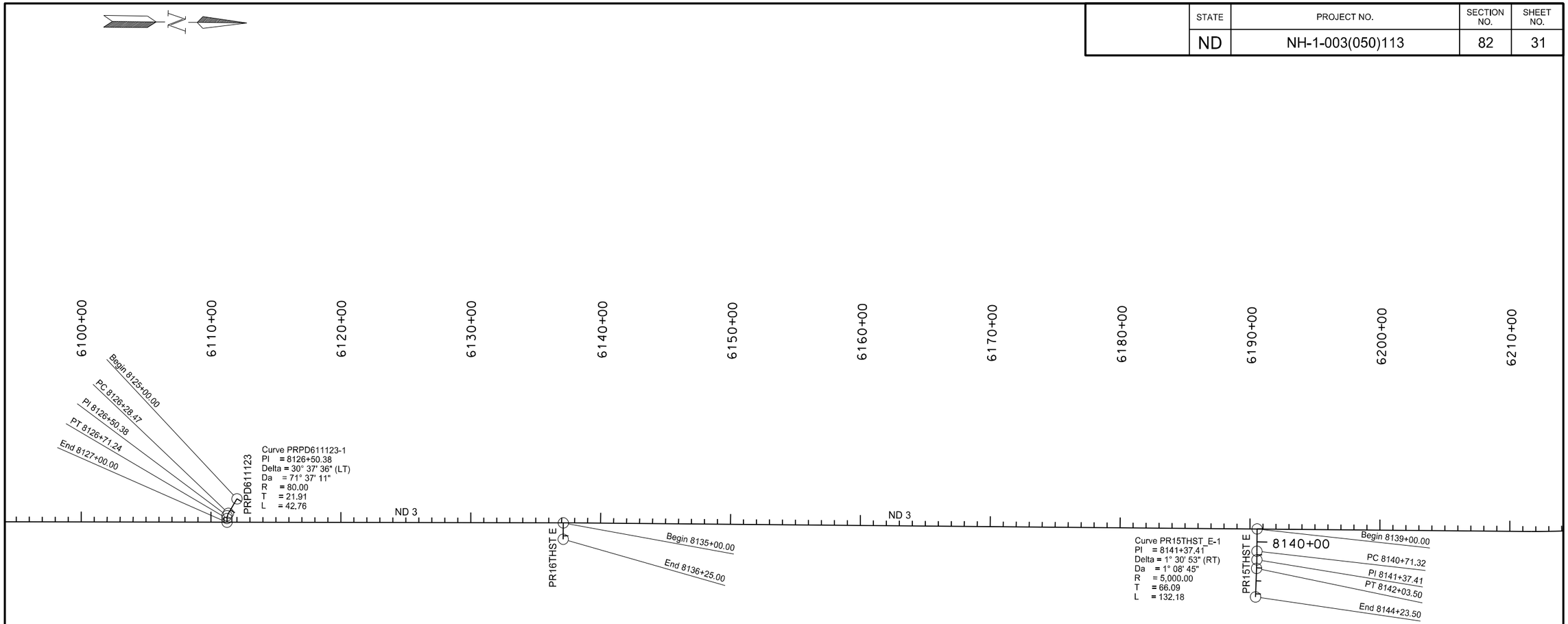
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL
KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Alignments

ND 3
Tuttle N to W Jct 200

5980+00 to 6095+00
Kidder County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	82	31



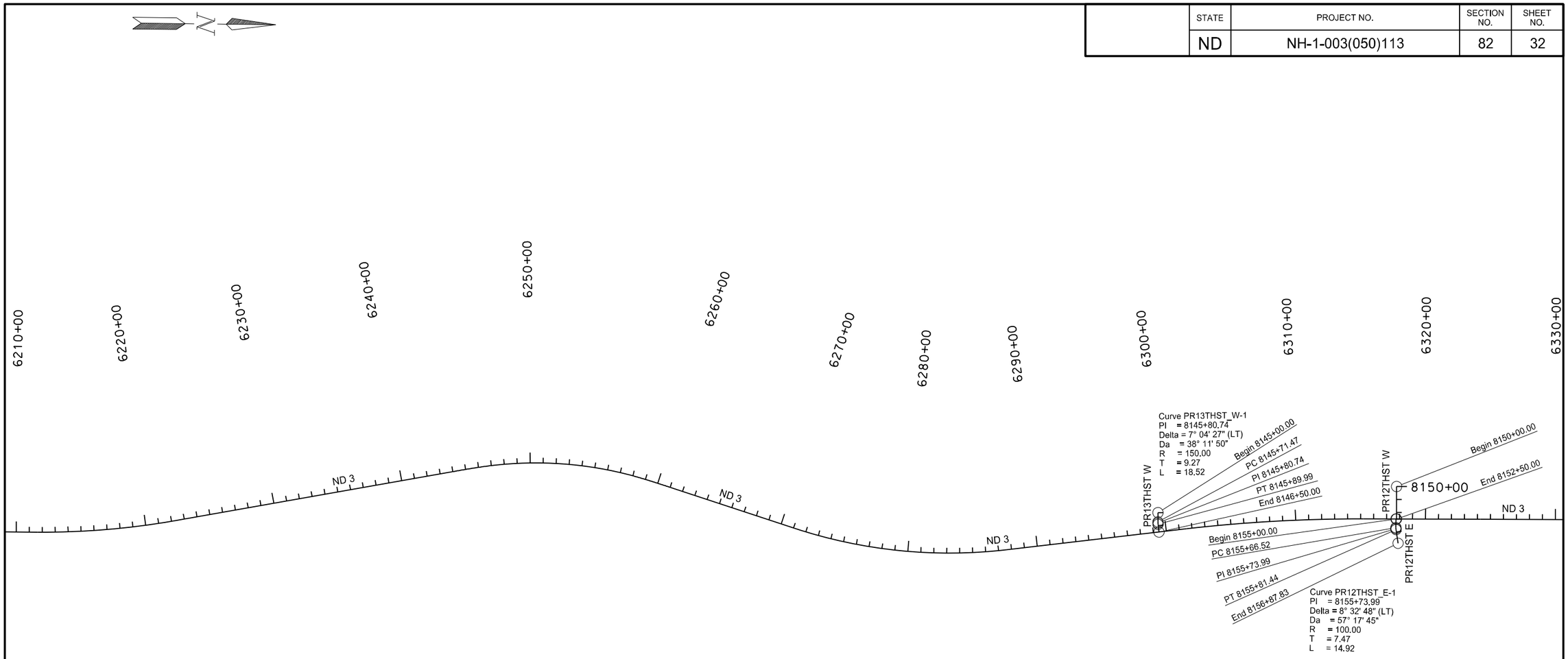
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27748
DATE 12/15/2021
NORTH DAKOTA

Alignments

ND 3
Tuttle N to W Jct 200

6095+00 to 6120+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	82	32



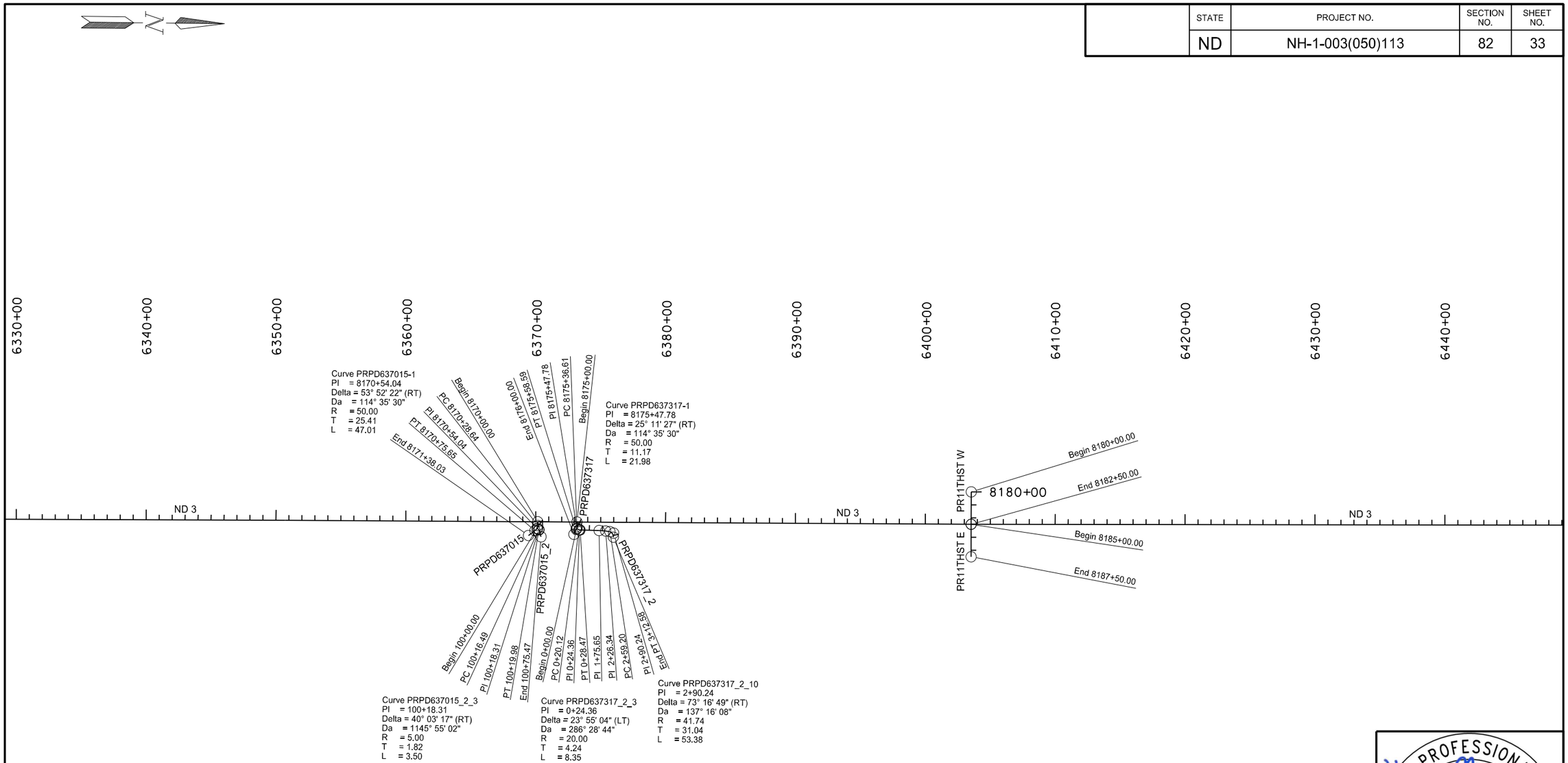
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Alignments

ND 3
Tuttle N to W Jct 200

6120+00 to 6330+00
Kidder County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	82	33



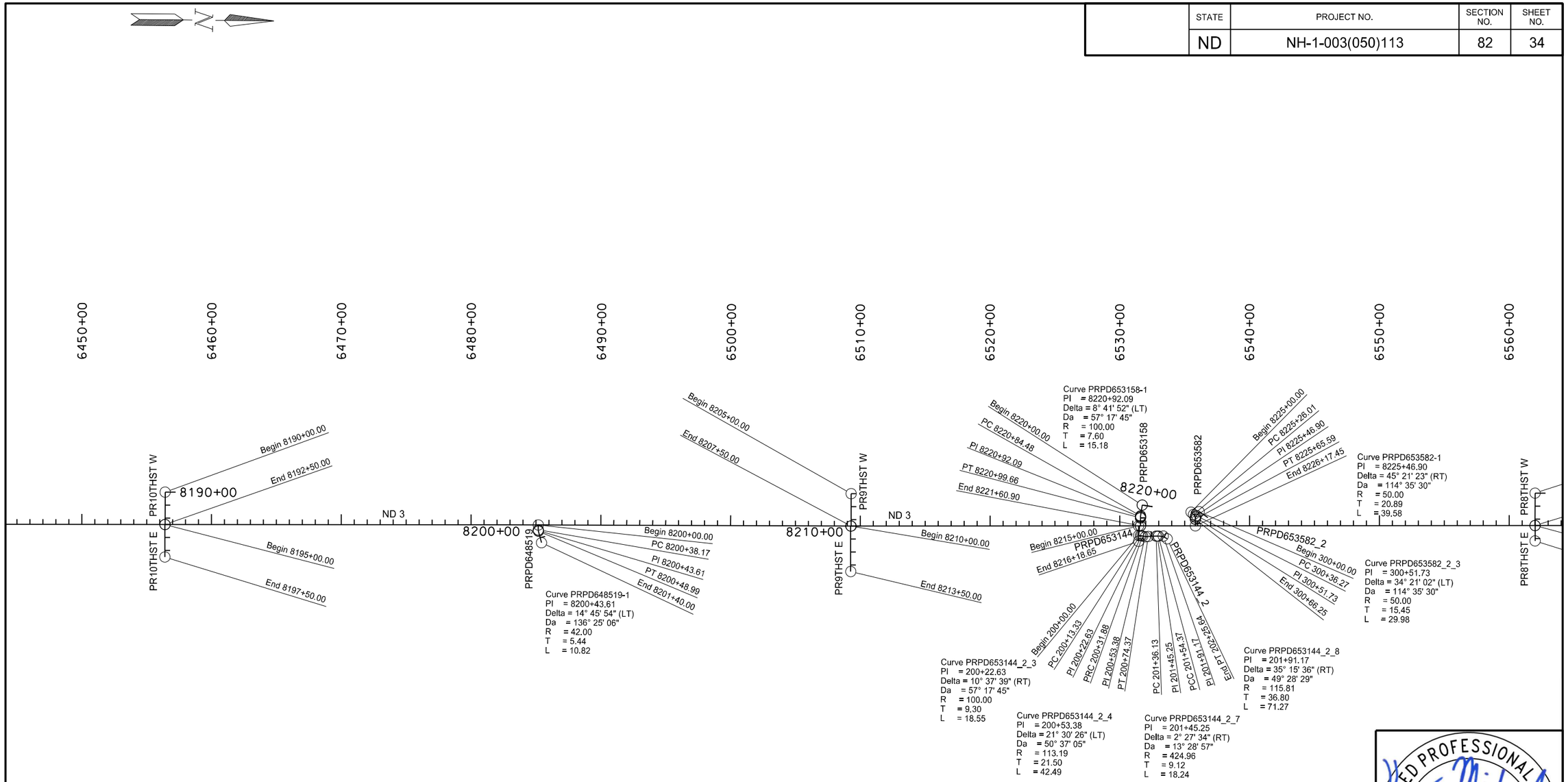
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KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Alignments

ND 3
Tuttle N to W Jct 200

6330+00 to 6445+00
Kidder County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	82	34



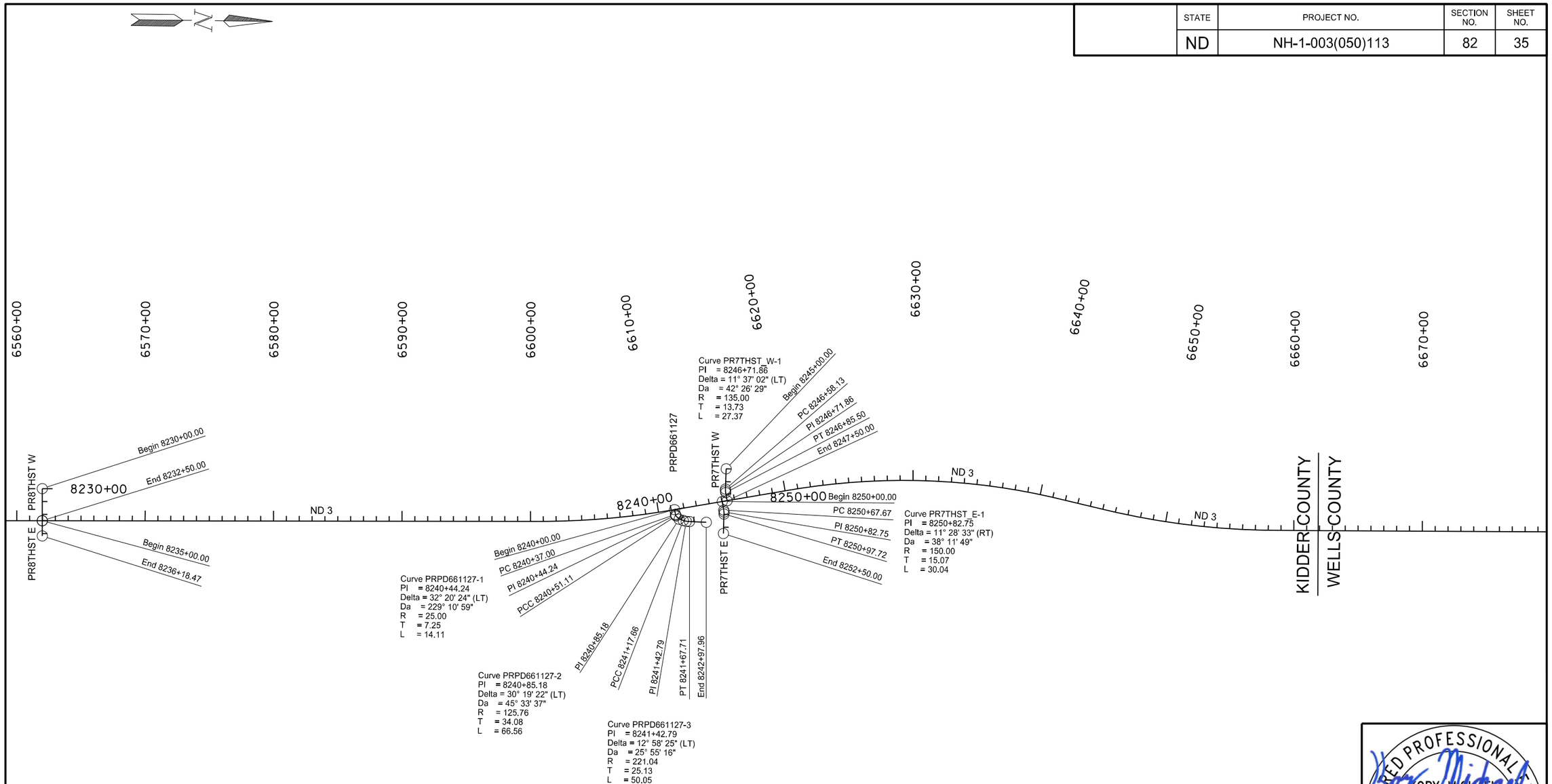
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PE-27746
DATE 12/15/2021
NORTH DAKOTA

Alignments

ND 3
Tuttle N to W Jct 200

6445+00 to 6560+00
Kidder County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	82	35



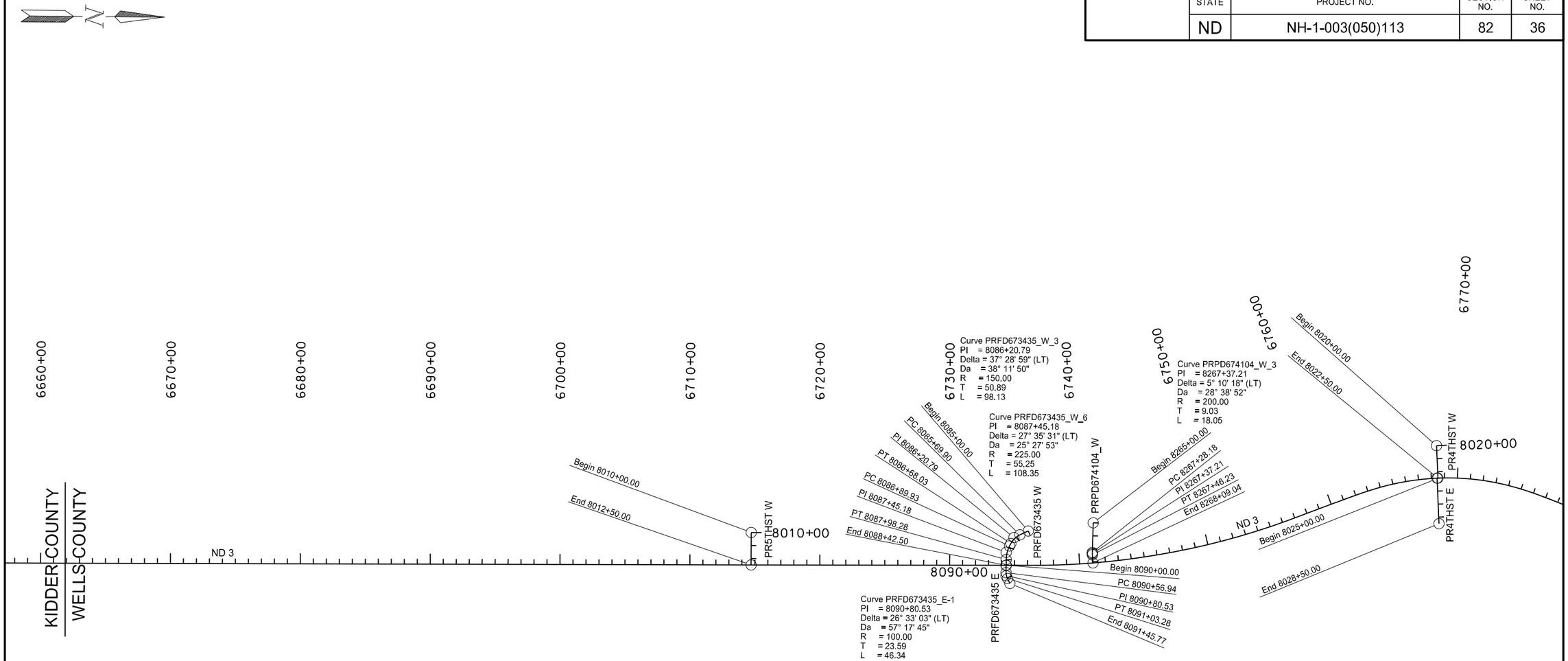
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27748
DATE 12/15/2021
NORTH DAKOTA

Alignments

ND 3
Tuttle N to W Jct 200

6560+00 to 6661+89.5
Kidder County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	82	36



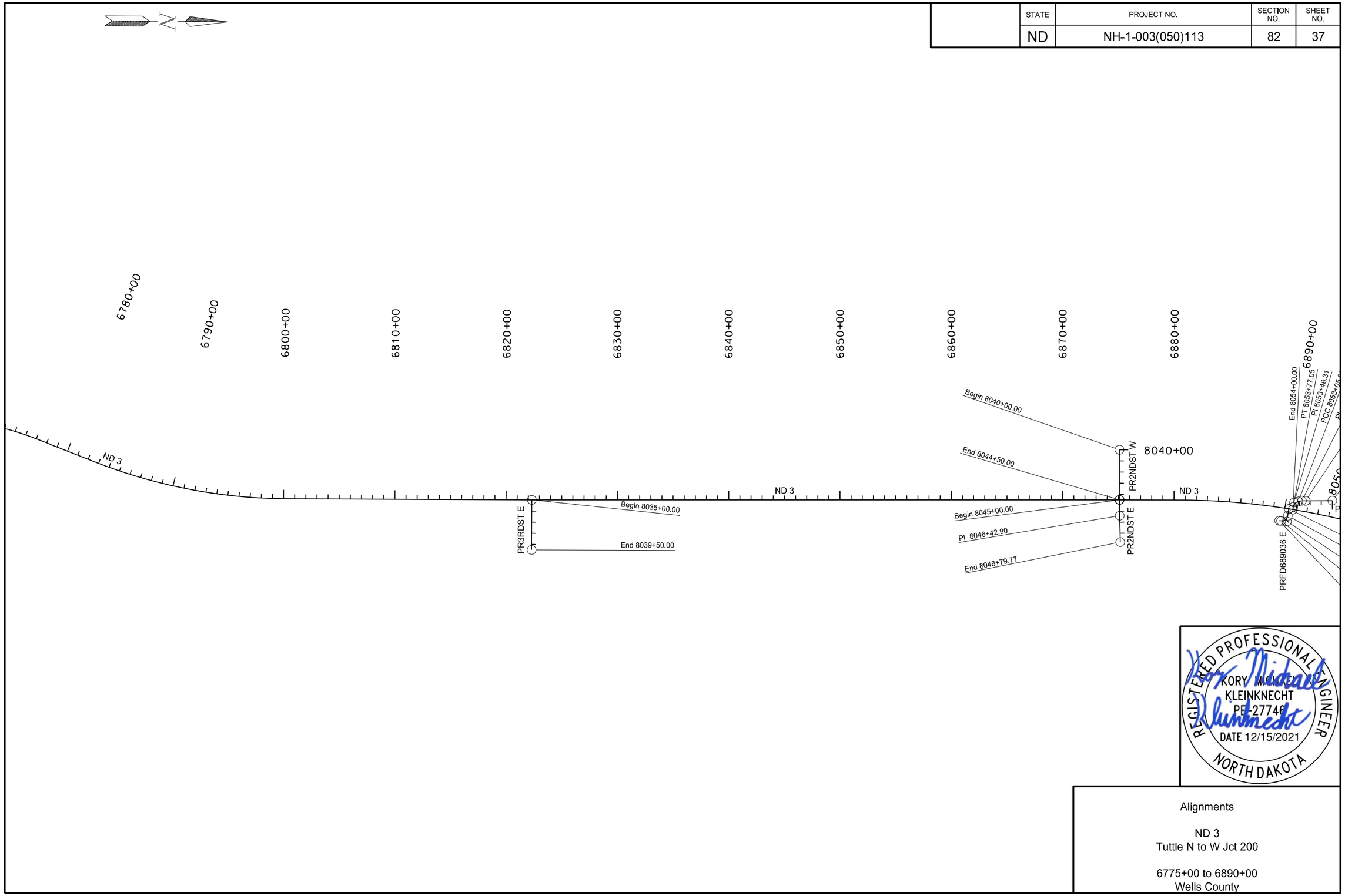
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Alignments

ND 3
Tuttle N to W Jct 200

6661+89.5 to 6775+00
Wells County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	82	37



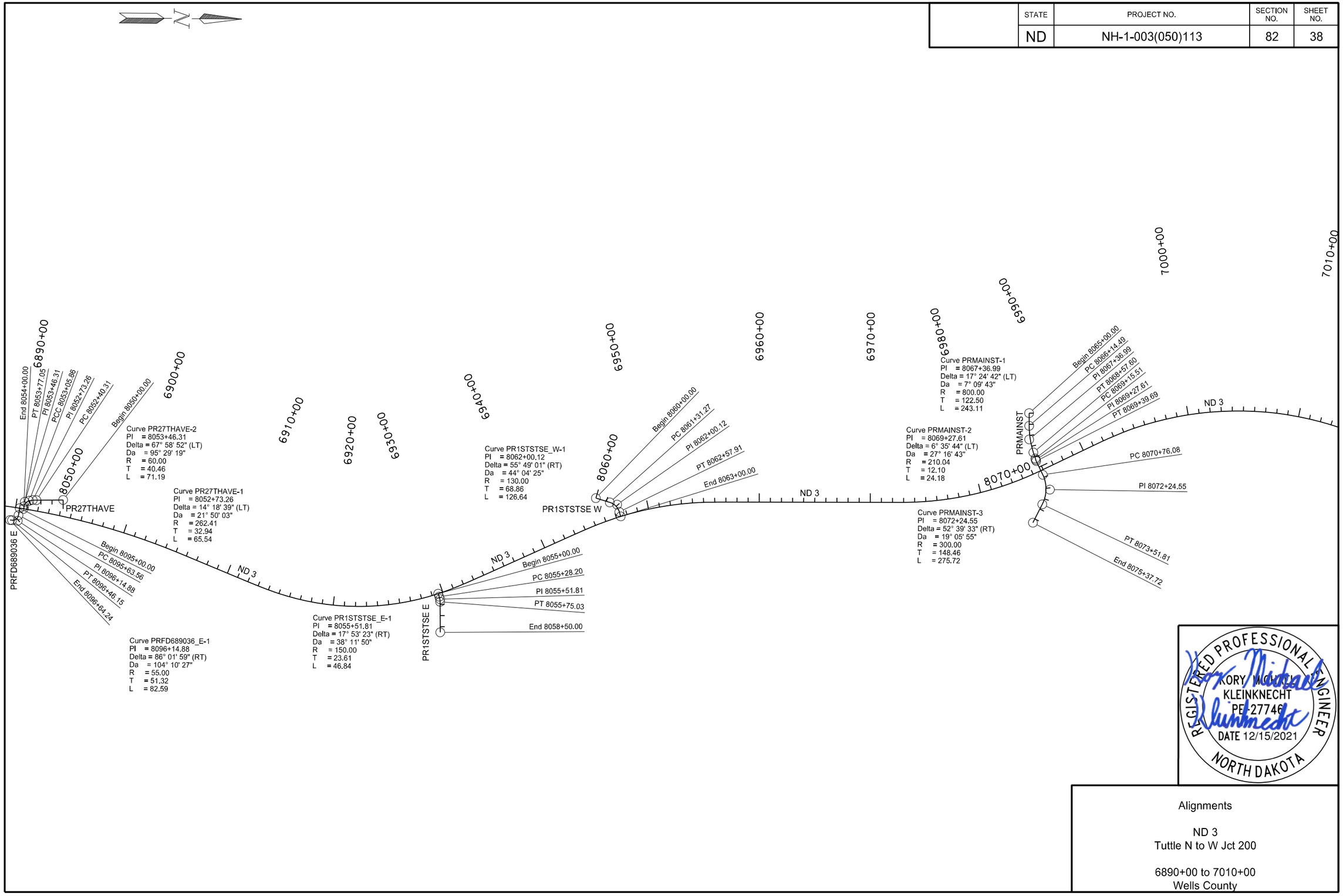
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Alignments

ND 3
Tuttle N to W Jct 200

6775+00 to 6890+00
Wells County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	82	38



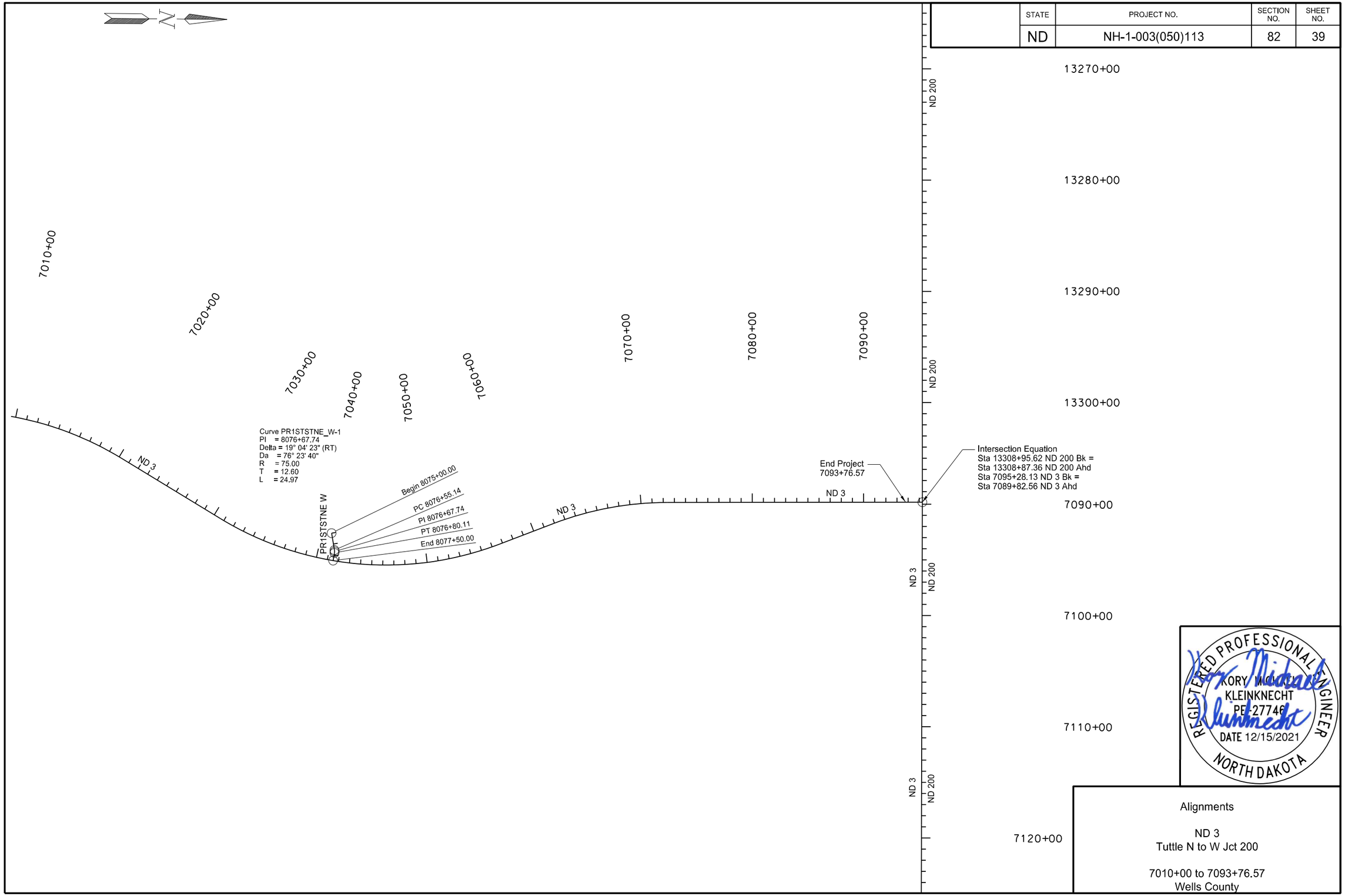
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Alignments

ND 3
Tuttle N to W Jct 200

6890+00 to 7010+00
Wells County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	82	39



REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 12/15/2021
NORTH DAKOTA

Alignments

ND 3
Tuttle N to W Jct 200

7010+00 to 7093+76.57
Wells County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	100	1

SIGN NUMBER	SIGN SIZE	DESCRIPTION	AMOUNT REQUIRED	UNITS PER AMOUNT	UNITS SUB TOTAL
E5-1-48	48"x48"	EXIT GORE		35	
G20-1-60	**60"x24"**	**ROAD WORK NEXT __ MILES**	**1**	**28**	**28**
G20-1b-60	**60"x24"**	**NO WORK IN PROGRESS (Sign and installation only)**	**3**	**18**	**54**
G20-2-48	**48"x24"**	**END ROAD WORK**	**3**	**26**	**78**
G20-4-36	**36"x18"**	**PILOT CAR FOLLOW ME (Mounted to back of pilot car)**	**1**	**18**	**18**
G20-10-108	**108"x48"**	**CONTRACTOR SIGN**	**2**	**70**	**140**
G20-50a-72	**72"x36"**	**ROAD WORK NEXT __ MILES RT & LT ARROWS**	**10**	**43**	**430**
G20-52a-72	**72"x24"**	**ROAD WORK NEXT __ MILES RT or LT ARROW**	**4**	**36**	**144**
G20-55-96	**96"x48"**	**SPEED LIMIT ENFORCED - MINIMUM FEE $80 WHEN WORKERS PRESENT**	**3**	**59**	**177**
I2-5-96	**96"x48"**	**YOUR HIGHWAY DOLLARS AT WORK FUNDED BY XX**	**2**	**59**	**118**
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 (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)		7	
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	
R1-1a-18	**18"x18"**	**STOP and SLOW PADDLE Back to Back**	**6**	**5**	**30**
R1-2-60	60"x60"	YIELD		29	
R2-1-36	**36"x48"**	**SPEED LIMIT __ (Portable only)**	**12**	**30**	**360**
R2-1-48	**48"x60"**	**SPEED LIMIT __**	**5**	**39**	**195**
R2-1aP-24	**24"x18"**	**MINIMUM FEE $80 (Mounted on Speed Limit post)**	**8**	**10**	**80**
R3-2-48	48"x48"	NO LEFT TURN		35	
R4-1-48	**48"x60"**	**DO NOT PASS**	**2**	**39**	**78**
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	
W1-3-48	48"x48"	REVERSE TURN RIGHT or LEFT		35	
W1-4-48	48"x48"	REVERSE CURVE RIGHT or LEFT		35	
W1-4b-48	48"x48"	TWO LANE REVERSE CURVE RIGHT or LEFT		35	
W1-6-48	**48"x24"**	**ONE DIRECTION LARGE ARROW**	**2**	**26**	**52**
W3-1-48	48"x48"	STOP AHEAD		35	
W3-3-48	48"x48"	SIGNAL AHEAD		35	
W3-4-48	**48"x48"**	**BE PREPARED TO STOP**	**6**	**35**	**210**
W3-5-48	**48"x48"**	**SPEED REDUCTION AHEAD**	**8**	**35**	**280**
W4-2-48	48"x48"	LANE ENDS RIGHT or LEFT		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		35	
W8-1-48	**48"x48"**	**BUMP**	**4**	**35**	**140**
W8-3-48	48"x48"	PAVEMENT ENDS		35	
W8-7-48	48"x48"	LOOSE GRAVEL		35	
W8-11-48	**48"x48"**	**UNEVEN LANES**	**2**	**35**	**70**
W8-12-48	**48"x48"**	**NO CENTER LINE**	**2**	**35**	**70**
W8-17-48	**48"x48"**	**SHOULDER DROP-OFF SYMBOL**	**2**	**35**	**70**
W8-53-48	48"x48"	TRUCKS ENTERING HIGHWAY		35	
W8-54-48	**48"x48"**	**TRUCKS ENTERING AHEAD or __ FT or _ MILE**	**2**	**35**	**70**
W8-55-48	**48"x48"**	**TRUCKS CROSSING AHEAD or __ FT or _ MILE**	**2**	**35**	**70**
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		35	
W13-1P-30	30"x30"	__ MPH ADVISORY SPEED PLAQUE (Mounted on warning sign post)		14	
W14-3-64	64"x48"	NO PASSING ZONE		28	
W16-2P-30	30"x24"	__ FEET PLAQUE (Mounted on warning sign post)		10	
W20-1-48	**48"x48"**	**ROAD WORK AHEAD or _FT or _ MILE**	**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**	**2**	**35**	**70**
W20-5-48	48"x48"	RIGHT or CENTER or LEFT LANE CLOSED AHEAD or __ FT or _ MILE		35	
W20-7-48	**48"x48"**	**FLAGGER**	**6**	**35**	**210**
W20-8-18	18"x18"	STOP - SLOW PADDLE Back to Back		5	
W20-52P-54	**54"x12"**	**NEXT __ MILES (Mounted on warning sign post)**	**2**	**12**	**24**
W21-1-48	48"x48"	WORKERS		35	
W21-2-48	**48"x48"**	**FRESH OIL**	**2**	**35**	**70**
W21-3-48	48"x48"	ROAD MACHINERY AHEAD or __ FT or _ MILE		35	

SIGN NUMBER	SIGN SIZE	DESCRIPTION	AMOUNT REQUIRED	UNITS PER AMOUNT	UNITS SUB TOTAL
W21-5-48	**48"x48"**	**SHOULDER WORK**	**2**	**35**	**70**
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	
W21-6-48	48"x48"	SURVEY CREW		35	
W21-50-48	48"x48"	BRIDGE PAINTING AHEAD or __ FT		35	
W21-51-48	**48"x48"**	**MATERIAL ON ROADWAY**	**1**	**35**	**35**
W21-52-48	**48"x48"**	**PAVEMENT BREAKS**	**2**	**35**	**70**
W21-53-48	**48"x48"**	**RUMBLE STRIPS AHEAD**	**4**	**35**	**140**
W22-8-48	48"x48"	FRESH OIL LOOSE ROCK		35	
	18"x18"	**ORANGE BLANK SIGN**	**10**	**12**	**120**

SPECIAL SIGNS

SPEC & CODE

704-1000	**TRAFFIC CONTROL SIGNS**	**TOTAL UNITS**	**4051**

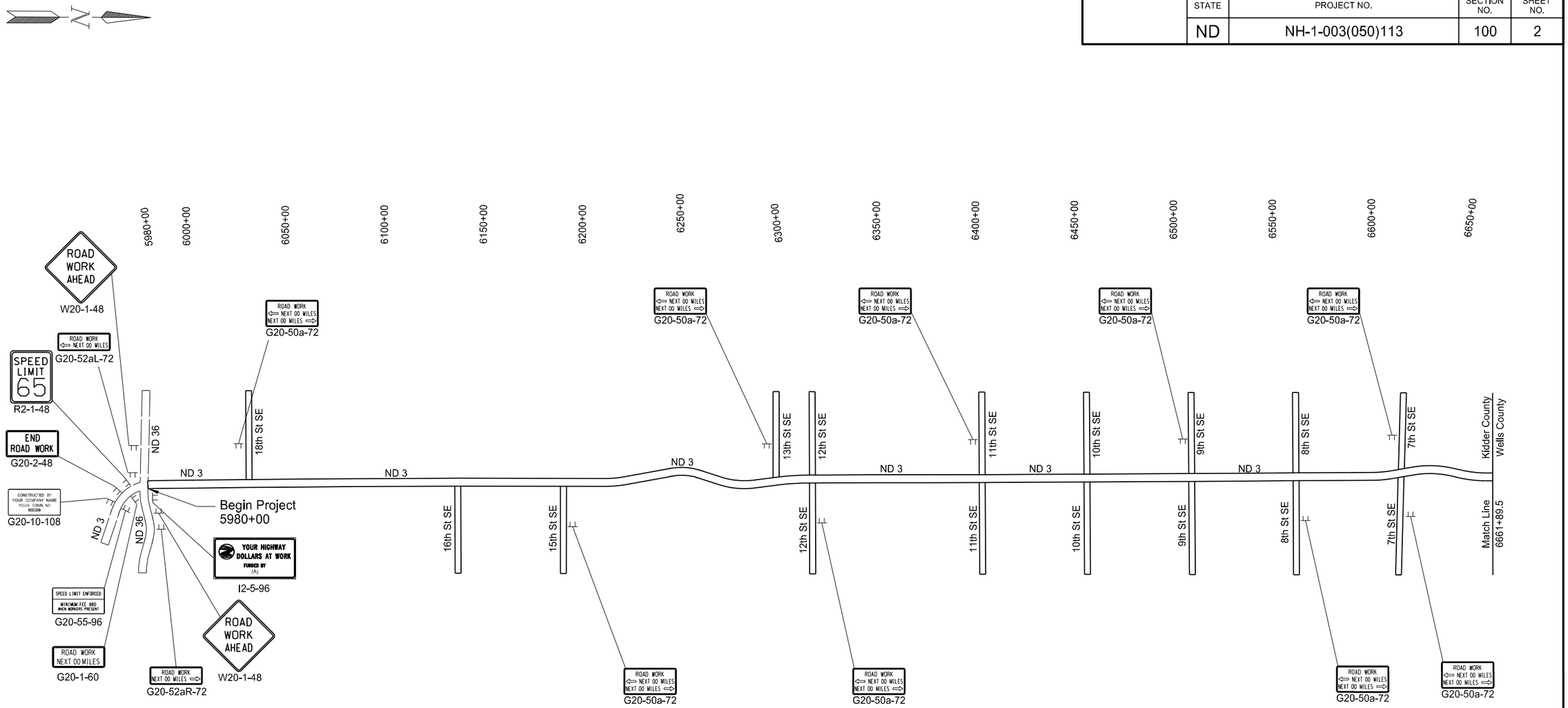
SPEC & CODE	DESCRIPTION	UNIT	QUANTITY
704-0100	**FLAGGING**	**MHR**	**4000**
704-1048	**PORTABLE RUMBLE STRIPS**	**EACH**	**4**
704-1050	TYPE I BARRICADES	EACH	
704-1052	**TYPE III BARRICADES**	**EACH**	**20**
704-1060	**DELINEATOR DRUMS**	**EACH**	**107**
704-1065	TRAFFIC CONES	EACH	
704-1067	**TUBULAR MARKERS**	**EACH**	**396**
704-1070	DELINEATOR	EACH	
704-1072	FLEXIBLE DELINEATORS	EACH	
704-1080	**STACKABLE VERTICAL PANELS**	**EACH**	**20**
704-1081	VERTICAL PANELS - BACK TO BACK	EACH	
704-1085	SEQUENCING ARROW PANEL - TYPE A	EACH	
704-1086	SEQUENCING ARROW PANEL - TYPE B	EACH	
704-1087	SEQUENCING ARROW PANEL - TYPE C	EACH	
704-1185	**PILOT CAR**	**HR**	**2000**
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**	**262864**

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/

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 03/24/2022
NORTH DAKOTA

Traffic Control Devices List
ND 3
Tuttle N to W Jct 200

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	100	2



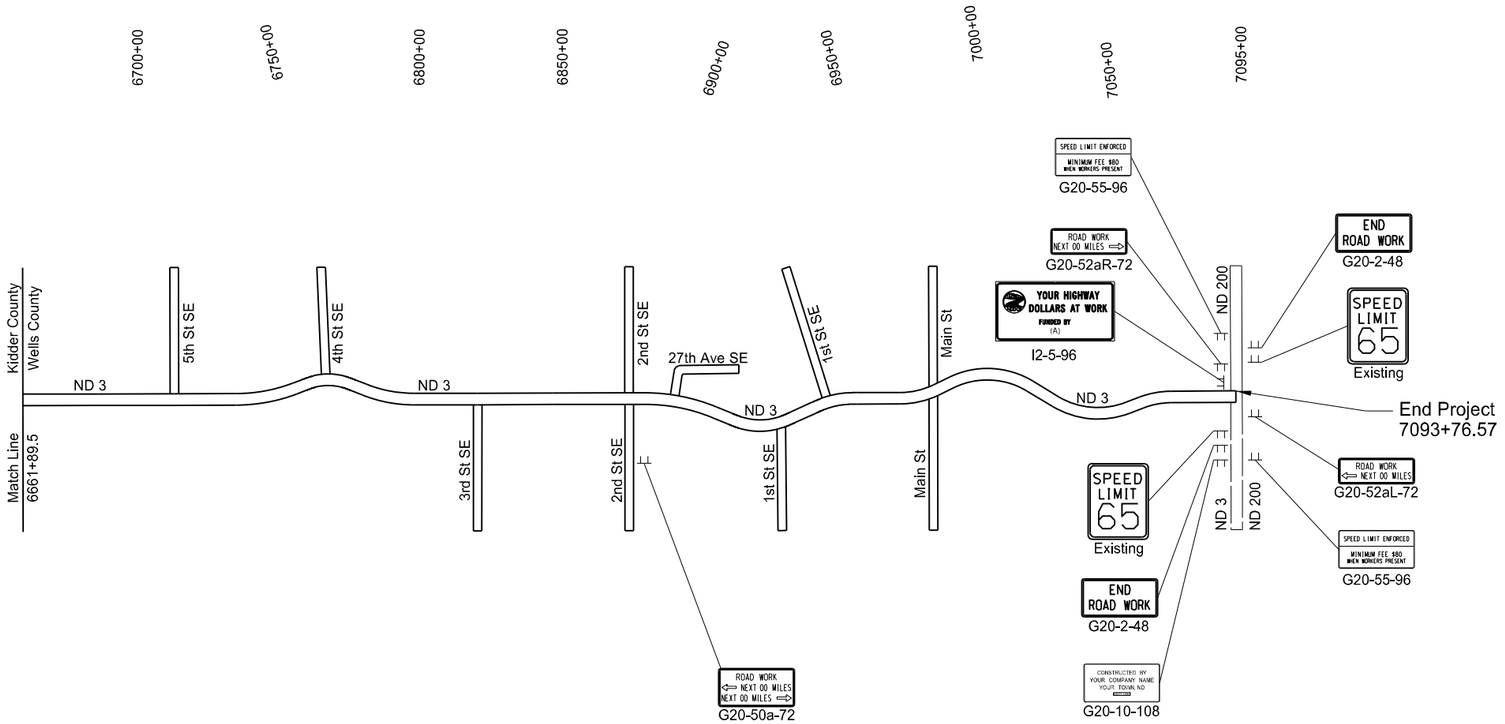
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 03/24/2022
NORTH DAKOTA

Work Zone Traffic Control

ND 3
Tuttle N to W Jct 200

5980+00 to 6661+89.5
Kidder County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	100	3



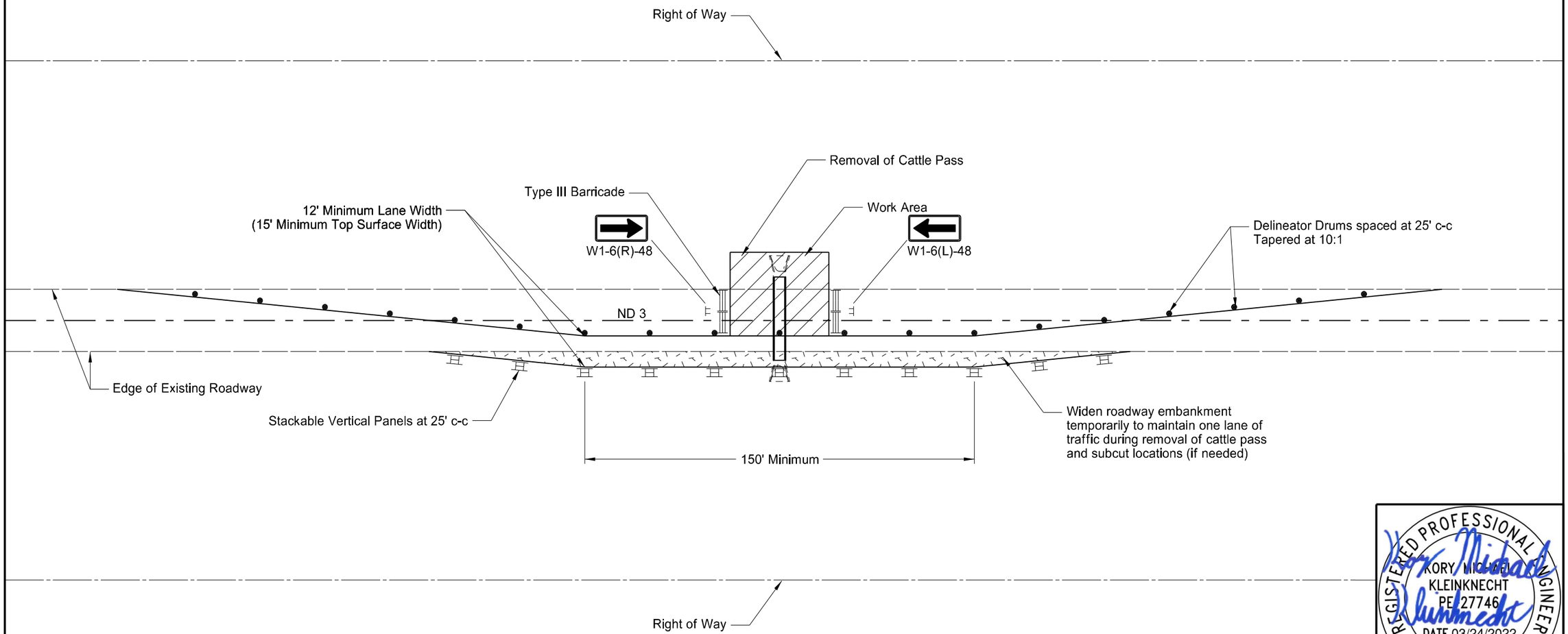
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 03/24/2022
NORTH DAKOTA

Work Zone Traffic Control

ND 3
Tuttle N to W Jct 200

6661+89.5 to 7093+76.57
Wells County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	100	4



REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
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NORTH DAKOTA

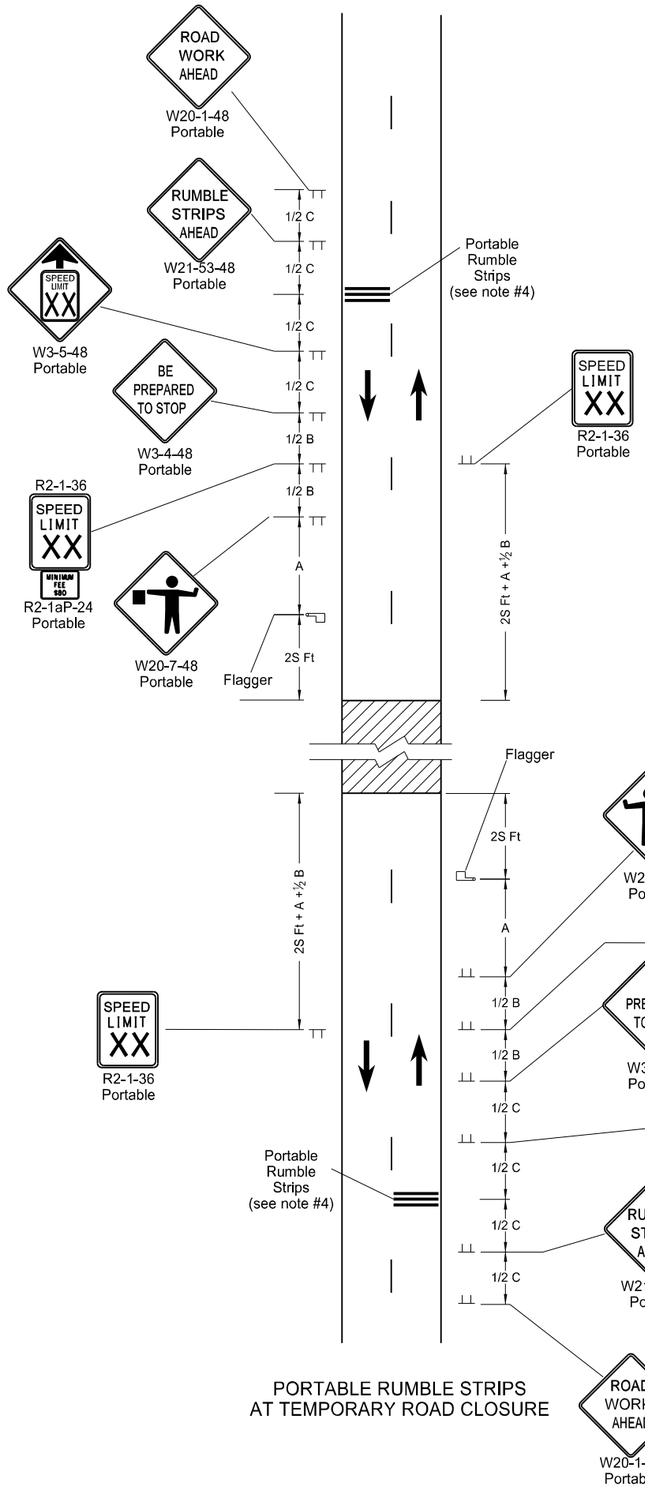
Notes:
1. During non working hours, provide a 28' minimum top surface width and 4:1 inslopes to maintain two way traffic or continue flagging operations

Work Zone Traffic Control

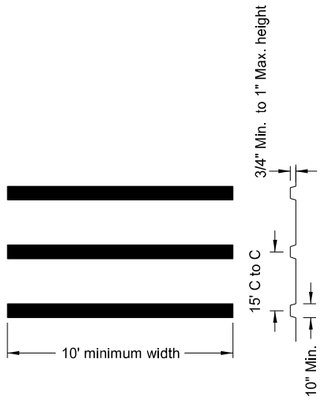
ND 3
Tuttle N to W Jct 200

Temporary Widening for
Removal of Cattle Pass / Subcut

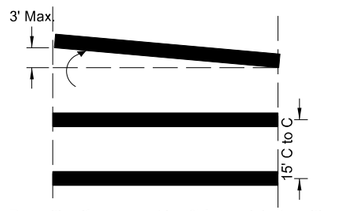
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	100	5



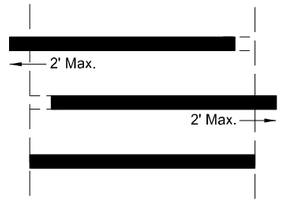
PORTABLE RUMBLE STRIPS AT TEMPORARY ROAD CLOSURE



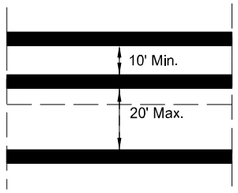
PORTABLE RUMBLE STRIPS ARRAY DETAIL



Reposition if movement is >3' from original position.
Skewing



Reposition if movement is >2' from original position.
Lateral



Reposition if distance between strips is <10' or >20'.
Perpendicular to Travel with or against traffic

PORTABLE RUMBLE STRIPS ARRAY TYPES OF MOVEMENT AND MAXIMUM ALLOWANCES

Notes:
1. Number of devices were calculated using 40 mph. Speed determined in the field based on location and conditions.
2. Re-establish the speed limit. Determine the exact speed limit in the field, dependent on location and conditions.
3. Sign R2-1aP-24 is not required when pilot car operation is used.
4. Rumble strips are not used on a non paved surface or in a pre-construction speed zone of 25 mph or less.

ADVANCE WARNING SIGN SPACING			
Road Type	Distance Between Signs Min. (ft)		
	A	B	C
Urban - Low Speed (30 mph or less)	150	150	150
Urban - Low Speed (over 30 to 40 mph)	280	280	280
Urban - High Speed (over 40 mph to 50 mph)	360	360	360
Rural - High Speed (over 50 mph to 65 mph)	720	720	720

KEY
- Work area
- Flagger
- Sign

S = Numerical value of speed limit or 85th percentile.

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Two-Lane Portable Rumble Strips

ND 3
Tuttle N to W Jct 200

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
N.D.	NH-1-003(050)113	110	1

Station / 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	Vert Clear-ance FT	Support Size	Max Post Len LF	Sleeve Length 1st LF	2nd LF	3rd LF	4th LF	Sleeve Size	Anchor EA	Anchor LF	Anchor Size	Reset Sign Panel EA	Reset Sign Support EA	Break-Away EA	Comments
5983+03 Lt		405	12.4		12.0				5.0	2.5 x 2.5 12 ga	13.5	3.7				2.25 x 2.25 12 ga	1	4	3 x 3 7 ga	1		1	
5985+11 Rt		9		5.0	11.9				5.0	2.25 x 2.25 12 ga	15.0						1	4	2.5 x 2.5 12 ga				
5987+03 Lt	SN 1		24.5		11.6	12.5			5.0	2.5 x 2.5 12 ga	13.2	3.6	4.5			2.25 x 2.25 12 ga	2	4	3 x 3 7 ga			2	
5989+03 Lt		19		6.3	12.2				5.0	2.5 x 2.5 12 ga	14.6						1	4	3 x 3 7 ga				
5991+03 Lt		391	6.2		12.2				5.0	2.25 x 2.25 12 ga	12.7						1	4	2.5 x 2.5 12 ga				
5996+27 Lt		19		6.3	12.2				5.0	2.5 x 2.5 12 ga	14.6						1	4	3 x 3 7 ga				
6031+38 Lt	S.A. 2E			5.2	10.8				5.0	2.5 x 2.5 12 ga	13.3						1	4	3 x 3 7 ga	1			
6032+09 Lt		30			9.5				5.0	2 x 2 12 ga	13.6						1	4	2.25 x 2.25 12 ga	1			
6190+99 Rt	S.A. 2E			5.2	10.7				5.0	2.25 x 2.25 12 ga	10.8						1	4	2.5 x 2.5 12 ga	1			
6203+21 Rt		19		6.3	12.2				5.0	2.5 x 2.5 12 ga	14.6						1	4	3 x 3 7 ga				
6230+69 Lt		19		6.3	12.2				5.0	2.5 x 2.5 12 ga	14.6						1	4	3 x 3 7 ga				
6235+44 Rt		19		6.3	12.2				5.0	2.5 x 2.5 12 ga	14.6						1	4	3 x 3 7 ga				
6262+56 Rt		19		6.3	12.2				5.0	2.5 x 2.5 12 ga	14.6						1	4	3 x 3 7 ga				
6269+51 Lt		19		6.3	12.2				5.0	2.5 x 2.5 12 ga	14.6						1	4	3 x 3 7 ga				
6296+15 Lt		19		6.3	12.2				5.0	2.5 x 2.5 12 ga	14.6						1	4	3 x 3 7 ga				
6298+99 Lt	S.A. 2E			5.2	10.7				5.0	2.25 x 2.25 12 ga	10.8						1	4	2.5 x 2.5 12 ga	1			
6318+17 Rt	S.A. 2E				10.8				5.0	2.5 x 2.5 12 ga	13.3						1	4	3 x 3 7 ga	1			
6403+09 Lt	S.A. 2E			5.2	10.8				5.0	2.5 x 2.5 12 ga	13.3						1	4	3 x 3 7 ga	1			
6456+85 Rt	S.A. 2E			5.2	10.8				5.0	2.5 x 2.5 12 ga	13.3						1	4	3 x 3 7 ga	1			
6562+44 Rt	S.A. 2E			5.2	10.8				5.0	2.5 x 2.5 12 ga	13.3						1	4	3 x 3 7 ga	1			
6592+13 Rt		19		6.3	12.2				5.0	2.5 x 2.5 12 ga	14.6						1	4	3 x 3 7 ga				
6612+04 Rt		19		6.3	12.2				5.0	2.5 x 2.5 12 ga	14.6						1	4	3 x 3 7 ga				
6614+98 Lt		1		5.2	9.4				5.0	2 x 2 12 ga	10.5						1	4	2.25 x 2.25 12 ga				
6615+48 Rt	S.A. 2E			5.2	10.8				5.0	2.5 x 2.5 12 ga	13.3						1	4	3 x 3 7 ga	1			
6619+40 Lt		19		6.3	12.0				5.0	2.5 x 2.5 12 ga	14.6						1	4	3 x 3 7 ga				
6661+07 Lt	SN 2	36	8.8		11.2				5.0	2.5 x 2.5 10 ga	12.8						1	4	3 x 3 7 ga			1	
6663+01 Rt	SN 3	36	8.8		11.2				5.0	2.5 x 2.5 10 ga	12.8						1	4	3 x 3 7 ga			1	
6667+01 Lt		19		6.3	12.2				5.0	2.5 x 2.5 12 ga	14.6						1	4	3 x 3 7 ga				
6706+96 Rt	SN 4		30.0		10.6	11.5	12.4	13.1	5.0	2.5 x 2.5 10 ga	14.4						4	4	3 x 3 7 ga			4	
6714+27 Lt	S.A. 2E			5.2	10.8				5.0	2.5 x 2.5 12 ga	13.3						1	4	3 x 3 7 ga	1			
6714+96 Lt		20		9.0	12.8				5.0	2.25 x 2.25 12 ga	14.1	4.0				2 x 2 12 ga	1	4	3 x 3 7 ga			1	
6721+93 Lt	SN 5		30.0		10.9	11.9			5.0	2.5 x 2.5 10 ga	12.8	3.2	4.1			2.19 x 2.19 10 ga	2	4	3 x 3 7 ga			2	
6727+92 Rt		19		6.3	12.2				5.0	2.5 x 2.5 12 ga	14.6						1	4	3 x 3 7 ga				
6748+57 Lt		20		9.0	12.4				5.0	2.5 x 2.5 10 ga	12.9						1	4	3 x 3 7 ga			1	

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 03/18/2022
NORTH DAKOTA

Sign Summary
Perforated Tube

ND 3
Tuttle N to W Jct 200

12/8/21 3:58:57PM

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
N.D.	NH-1-003(050)113	110	2

Station / 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	Vert Clear-ance FT	Support Size	Max Post Len LF	Sleeve Length 1st LF	2nd LF	3rd LF	4th LF	Sleeve Size	Anchor EA	Anchor LF	Anchor Size	Reset Sign Panel EA	Reset Sign Support EA	Break-Away EA	Comments
6808+82 Lt		19		6.3	12.2				5.0	2.5 x 2.5 12 ga	14.6						1	4	3 x 3 7 ga				
6822+03 Rt		20		9.0	11.0				5.0	2.5 x 2.5 10 ga	12.9						1	4	3 x 3 7 ga			1	
6822+75 Rt	S.A. 2E			5.2	10.8				5.0	2.5 x 2.5 12 ga	13.3						1	4	3 x 3 7 ga	1			
6932+76 Rt		19		6.3	12.2				5.0	2.5 x 2.5 12 ga	14.6						1	4	3 x 3 7 ga				
6942+62 Lt		19		6.3	12.0				5.0	2.5 x 2.5 12 ga	14.6						1	4	3 x 3 7 ga				
6946+95 Lt	S.A. 2E			5.2	10.8				5.0	2.5 x 2.5 12 ga	13.3						1	4	3 x 3 7 ga	1			
6964+20 Rt		19		6.3	12.2				5.0	2.5 x 2.5 12 ga	14.6						1	4	3 x 3 7 ga				
6966+05 Lt		19		6.3	12.2				5.0	2.5 x 2.5 12 ga	14.6						1	4	3 x 3 7 ga				
6972+47 Rt		20		9.0	11.6				5.0	2.5 x 2.5 10 ga	12.9						1	4	3 x 3 7 ga			1	
6985+32 Lt	S.A. 4E			5.2	10.6				5.0	2.5 x 2.5 12 ga	11.4						1	4	3 x 3 7 ga	1			
6986+20 Rt		1			9.4				5.0	2 x 2 12 ga	10.5						1	4	2.25 x 2.25 12 ga	1			
6994+07 Lt		19		6.3	12.1				5.0	2.5 x 2.5 12 ga	14.6						1	4	3 x 3 7 ga				
7000+28 Rt		19		6.3	10.9				5.0	2.25 x 2.25 12 ga	11.6						1	4	2.5 x 2.5 12 ga				
7022+12 Rt		19		6.3	12.1				5.0	2.5 x 2.5 12 ga	14.6						1	4	3 x 3 7 ga				
7028+69 Lt		19		6.3	11.5				5.0	2.5 x 2.5 12 ga	14.6						1	4	3 x 3 7 ga				
7078+56 Rt		19		6.3	12.2				5.0	2.5 x 2.5 12 ga	14.6						1	4	3 x 3 7 ga				
7079+49 Lt		19		6.3	12.2				5.0	2.5 x 2.5 12 ga	14.6						1	4	3 x 3 7 ga				
7083+17 Rt		392	7.2		12.3				5.0	2.5 x 2.5 12 ga	13.9						1	4	3 x 3 7 ga				
7088+56 Lt		9		5.0	11.5				5.0	2.25 x 2.25 12 ga	15.0						1	4	2.5 x 2.5 12 ga				
7090+17 Lt		406	13.4		10.0				5.0	2.5 x 2.5 12 ga	12.6	2.1				2.25 x 2.25 12 ga	1	4	3 x 3 7 ga			1	
7090+56 Lt		9			11.5				5.0	2.25 x 2.25 12 ga	15.0						1	4	2.5 x 2.5 12 ga	1			
7091+21 Rt	SN 6		24.5		11.6	12.6			5.0	2.5 x 2.5 12 ga	13.2	3.6	4.6			2.25 x 2.25 12 ga	2	4	3 x 3 7 ga			2	
7092+56 Rt		9			9.4				5.0	2 x 2 12 ga	11.5						1	4	2.25 x 2.25 12 ga	1			
7092+56 Lt		371	6.0		9.8				5.0	2 x 2 12 ga	10.0						1	4	2.25 x 2.25 12 ga				
7094+56 Rt	S.A. 5E			13.3	11.4				5.0	2.5 x 2.5 10 ga	13.0	2.6				2.19 x 2.19 10 ga	1	4	3 x 3 7 ga	1		1	
7094+56 Lt		2			9.1				5.0	2.25 x 2.25 12 ga	9.6						1	4	2.5 x 2.5 12 ga	1			
Sub Total			171.8	272.9		**Total**	757.5										**Total**	264.0		19	0	19	
Grand Total			**171.8**	**272.9**		**Total**	**757.5**										**Total**	**264**	**0**	**19**	**0**	**19**	

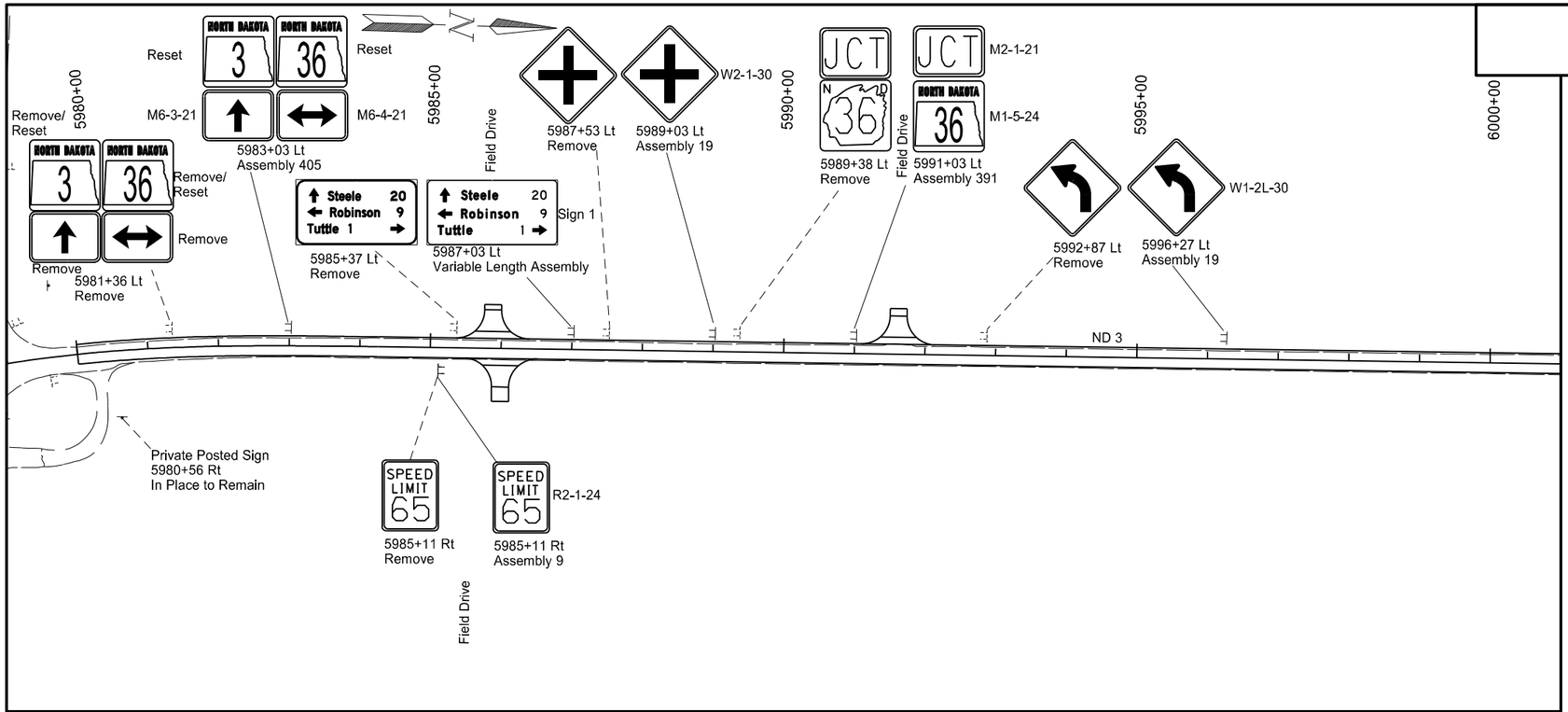
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 03/18/2022
NORTH DAKOTA

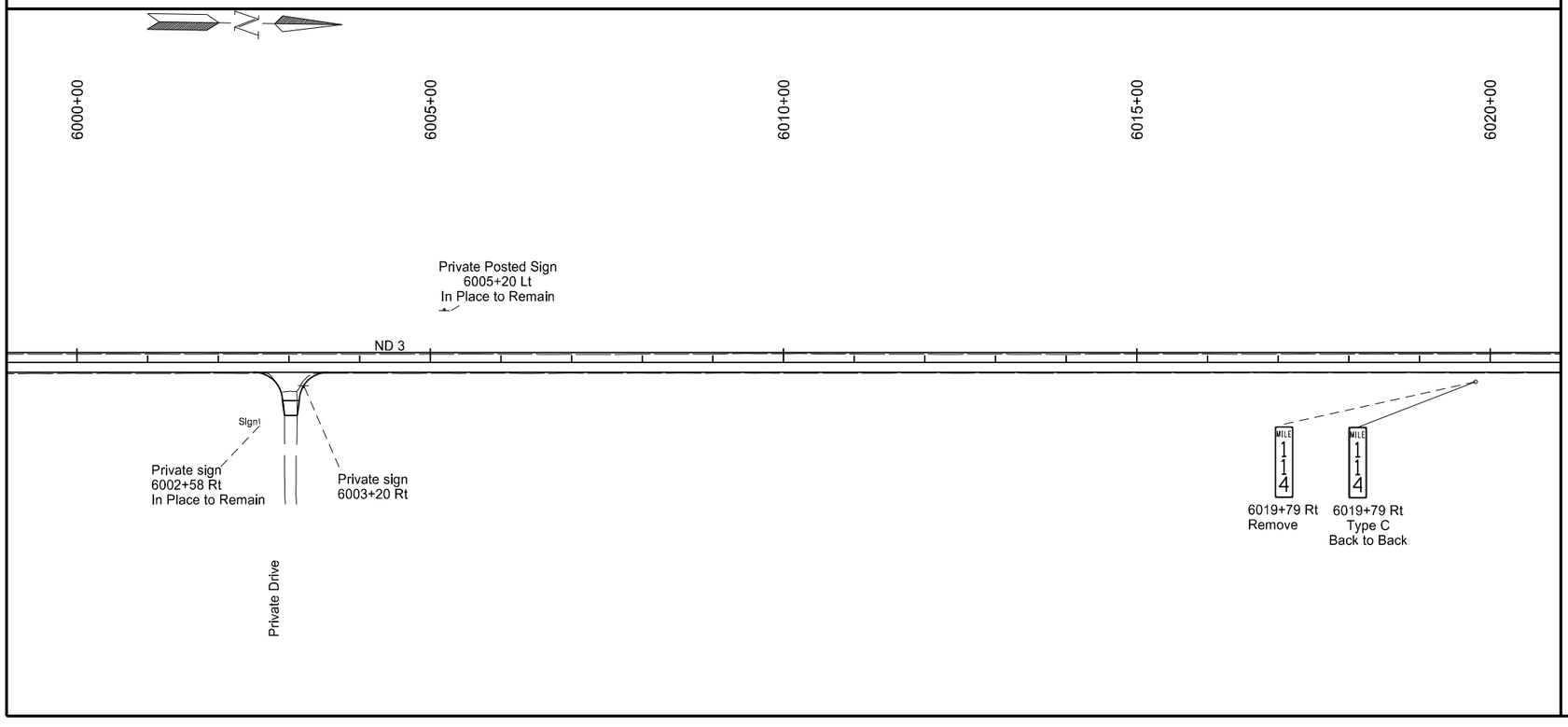
Sign Summary
Perforated Tube

ND 3
Tuttle N to W Jct 200

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	110	3

SPEC	CODE	BID ITEM	QTY	UNIT
754	0563	REFERENCE MARKER - TYPE C		
		6019+79 Rt	1	EA





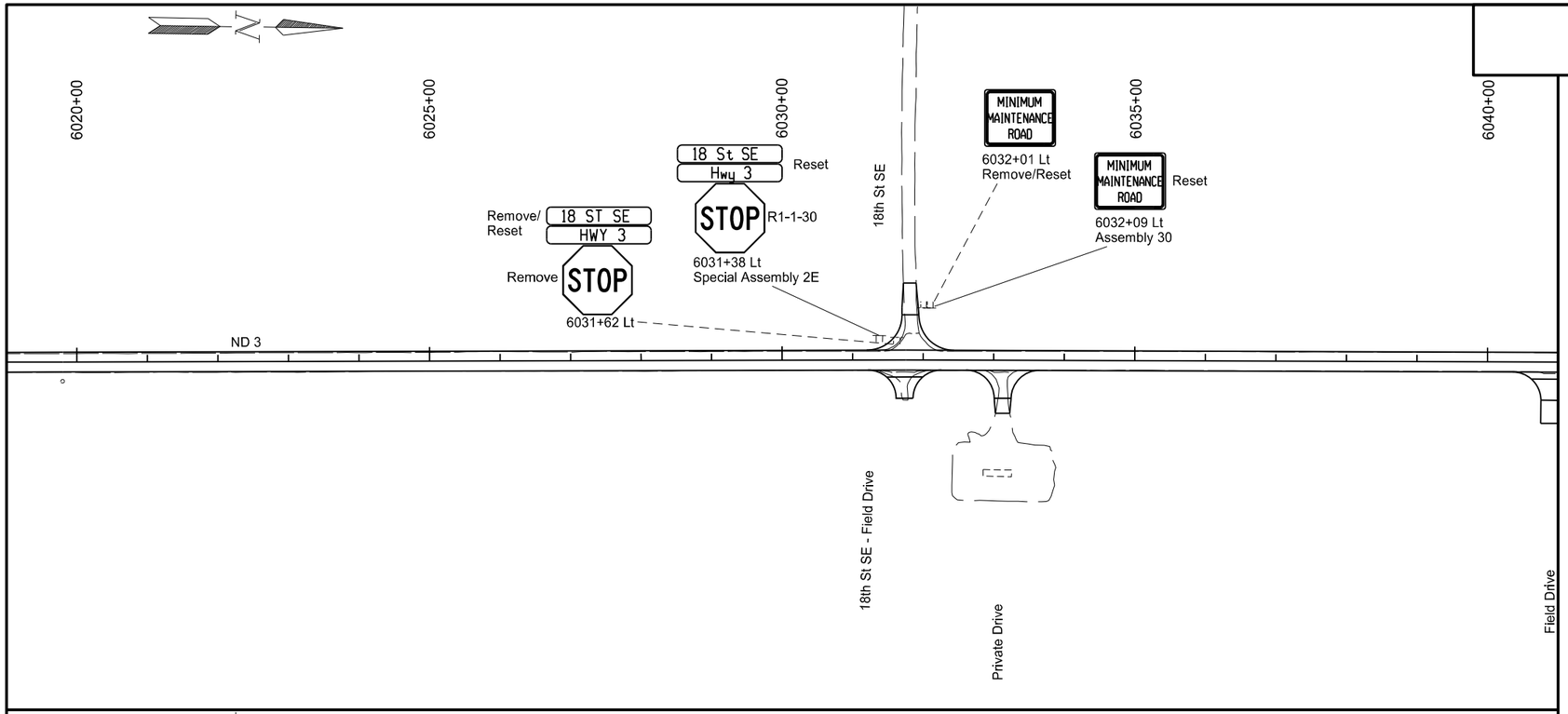
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 03/18/2022
NORTH DAKOTA

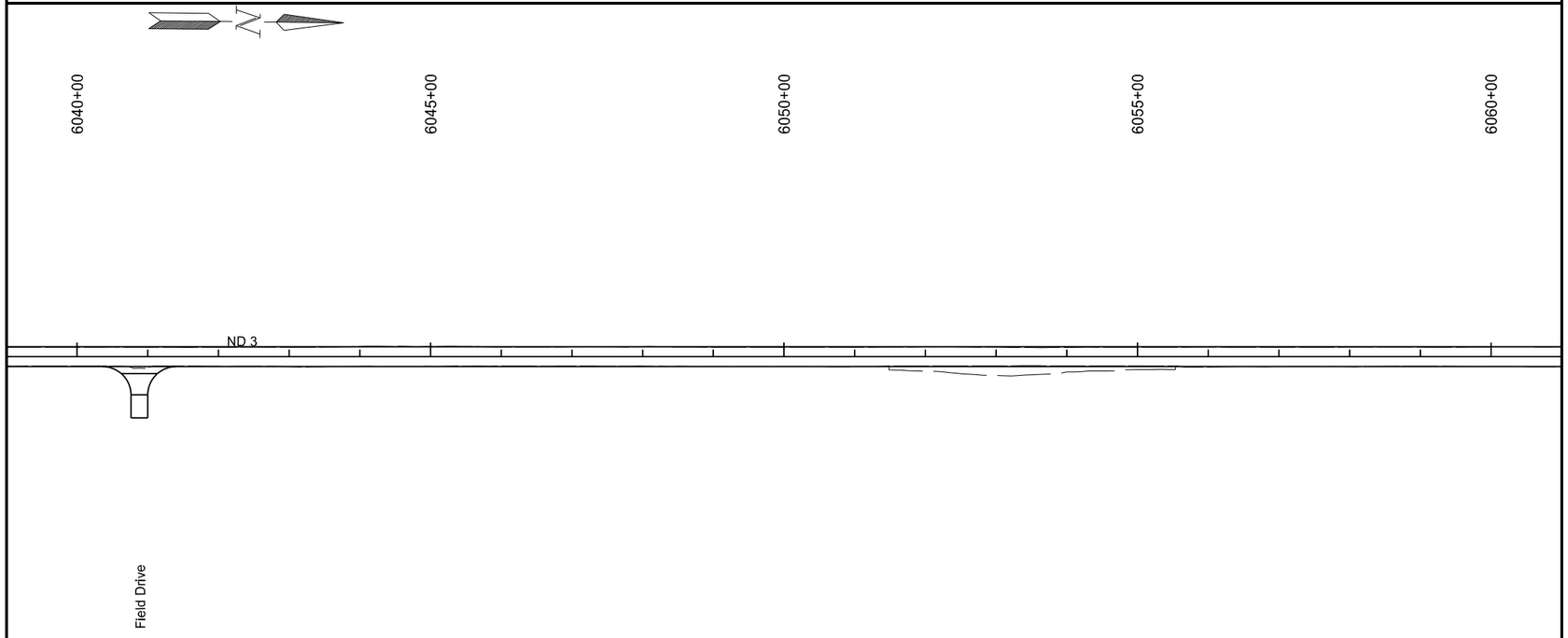
Signing Layout

ND 3
Tuttle N to W Jct 200

5900+65 to 6020+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	110	4





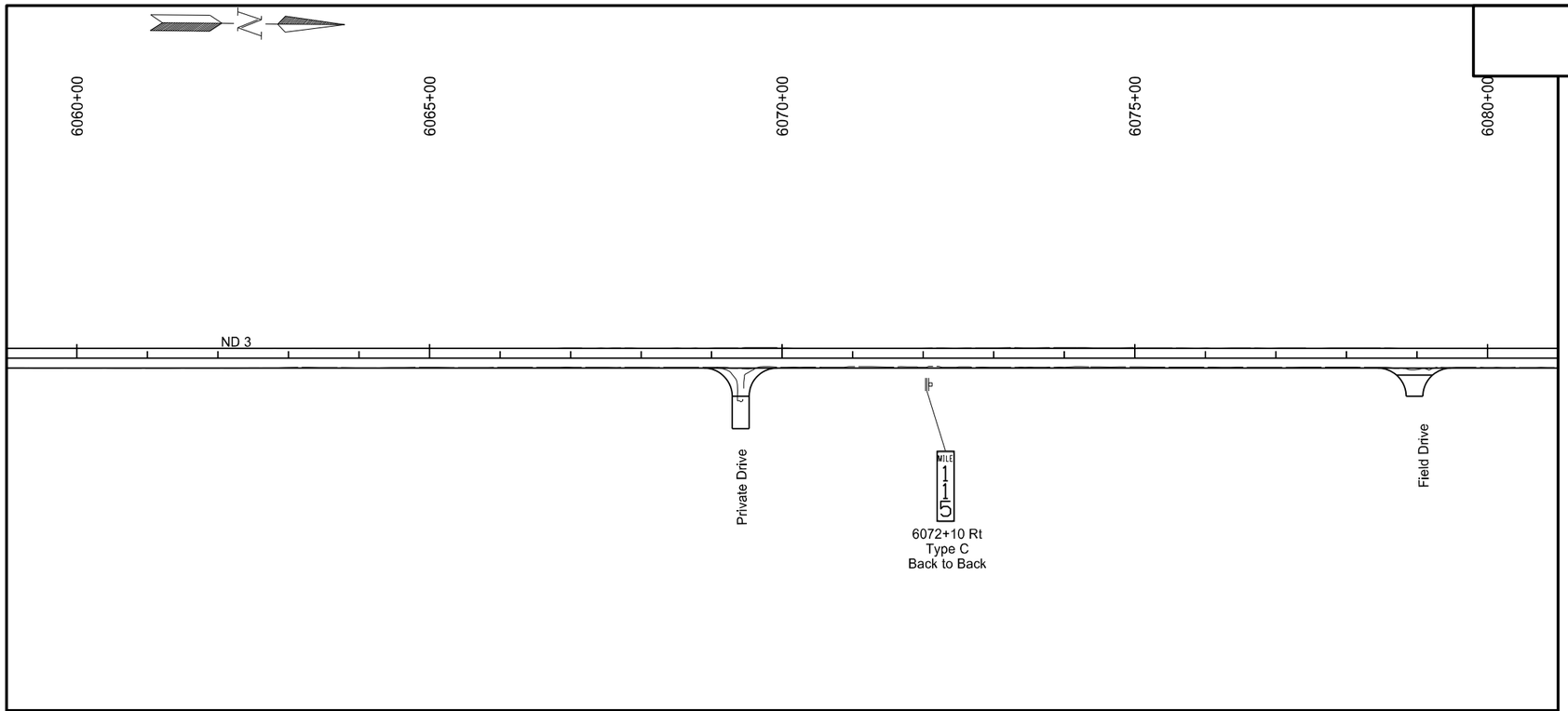
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 03/18/2022
NORTH DAKOTA

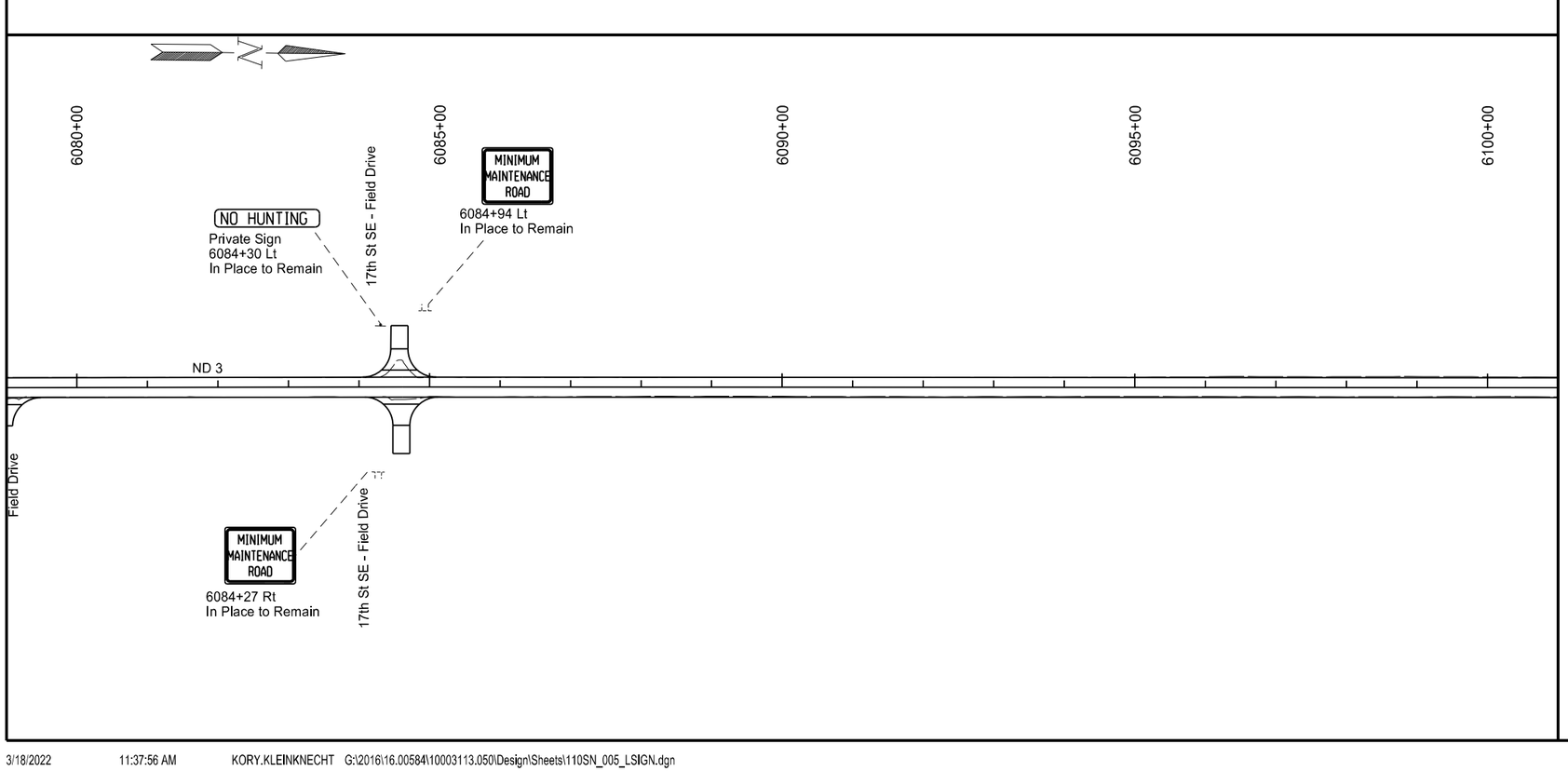
Signing Layout

ND 3
Tuttle N to W Jct 200

6020+00 to 6060+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	110	5





SPEC	CODE	BID ITEM	QTY	UNIT
754	0563	REFERENCE MARKER - TYPE C		
		6072+10 Rt	1	EA

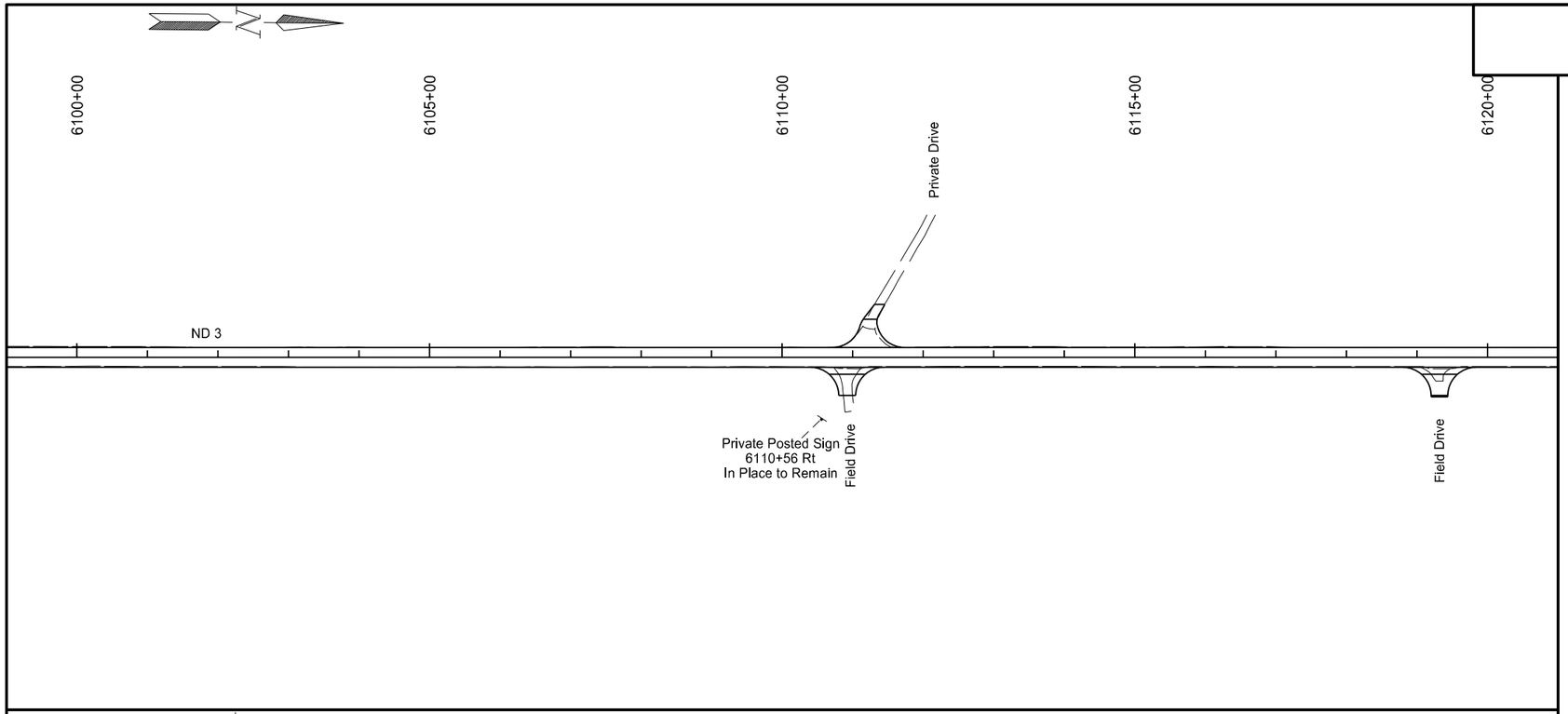
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 03/18/2022
NORTH DAKOTA

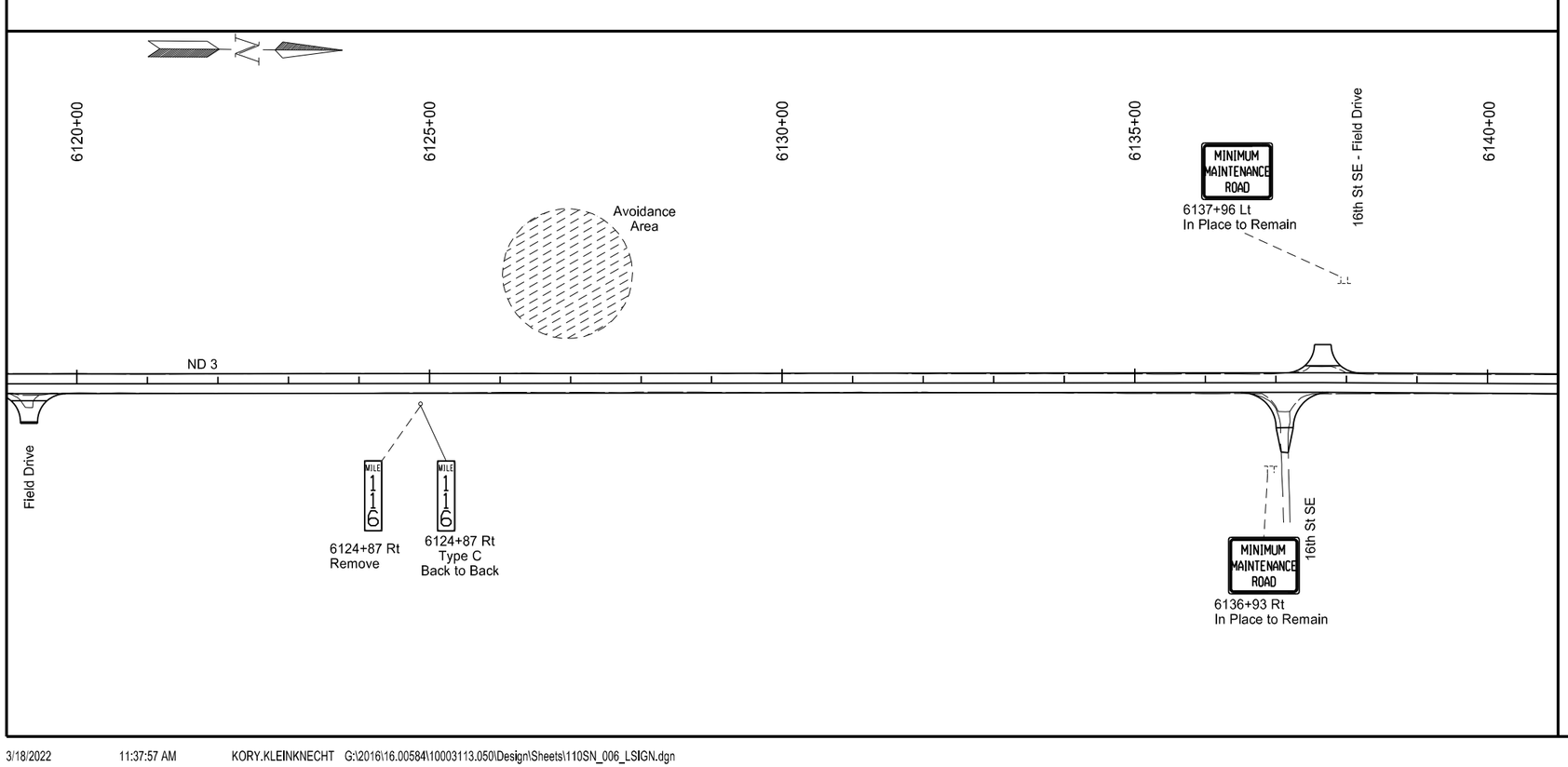
Signing Layout

ND 3
Tuttle N to W Jct 200

6060+00 to 6100+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	110	6





SPEC	CODE	BID ITEM	QTY	UNIT
754	0563	REFERENCE MARKER - TYPE C		
		6124+87 Rt	1	EA

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 03/18/2022
NORTH DAKOTA

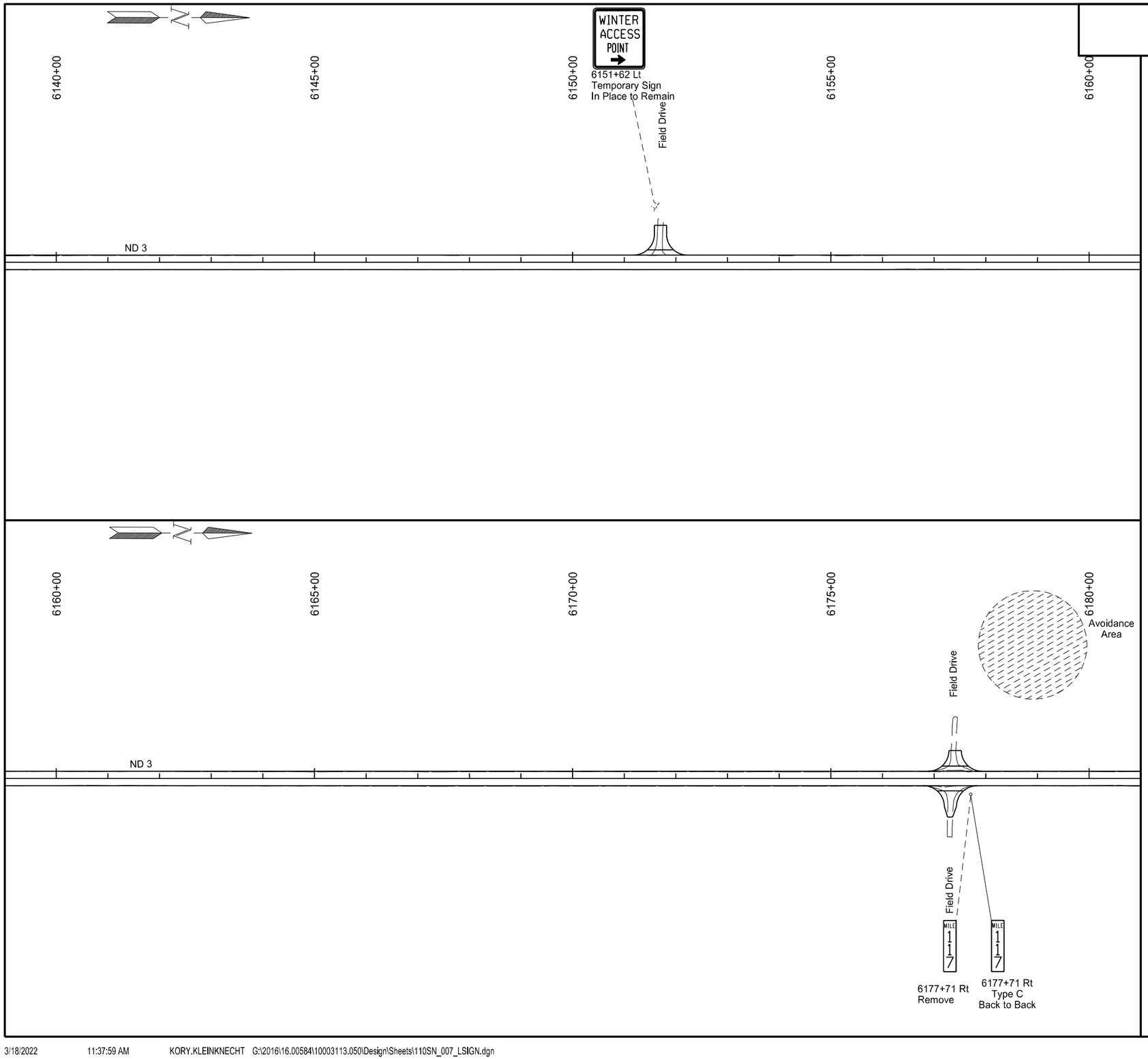
Signing Layout

ND 3
Tuttle N to W Jct 200

6100+00 to 6140+00
Kidder County

3/18/2022 11:37:57 AM KORY.KLEINKNECHT G:\2016\16.00584\10003113.050\Design\Sheets\110SN_006_LSIGN.dgn

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	110	7



SPEC	CODE	BID ITEM	QTY	UNIT
754	0563	REFERENCE MARKER - TYPE C		
		6177+71 Rt	1	EA

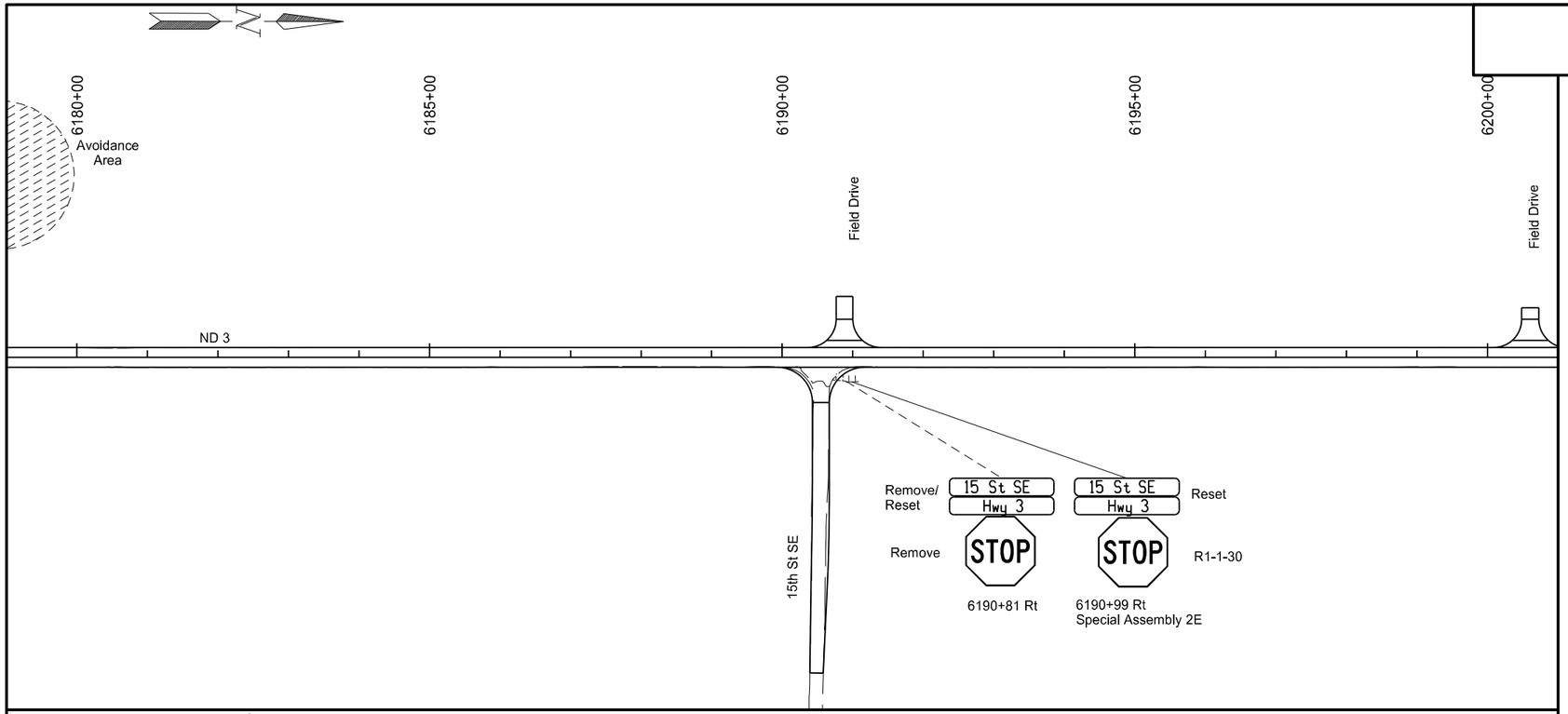
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 03/18/2022
NORTH DAKOTA

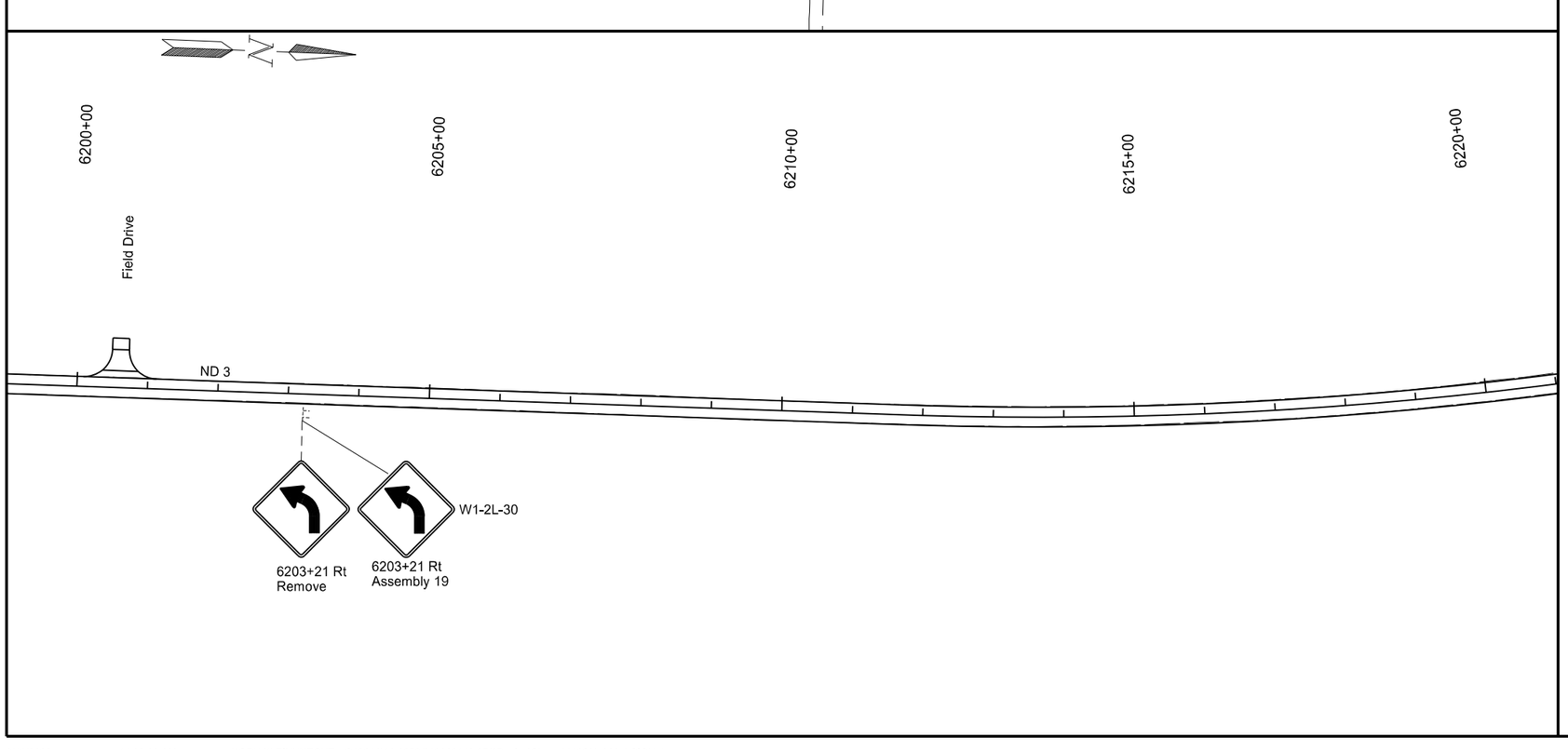
Signing Layout

ND 3
Tuttle N to W Jct 200

6140+00 to 6180+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	110	8





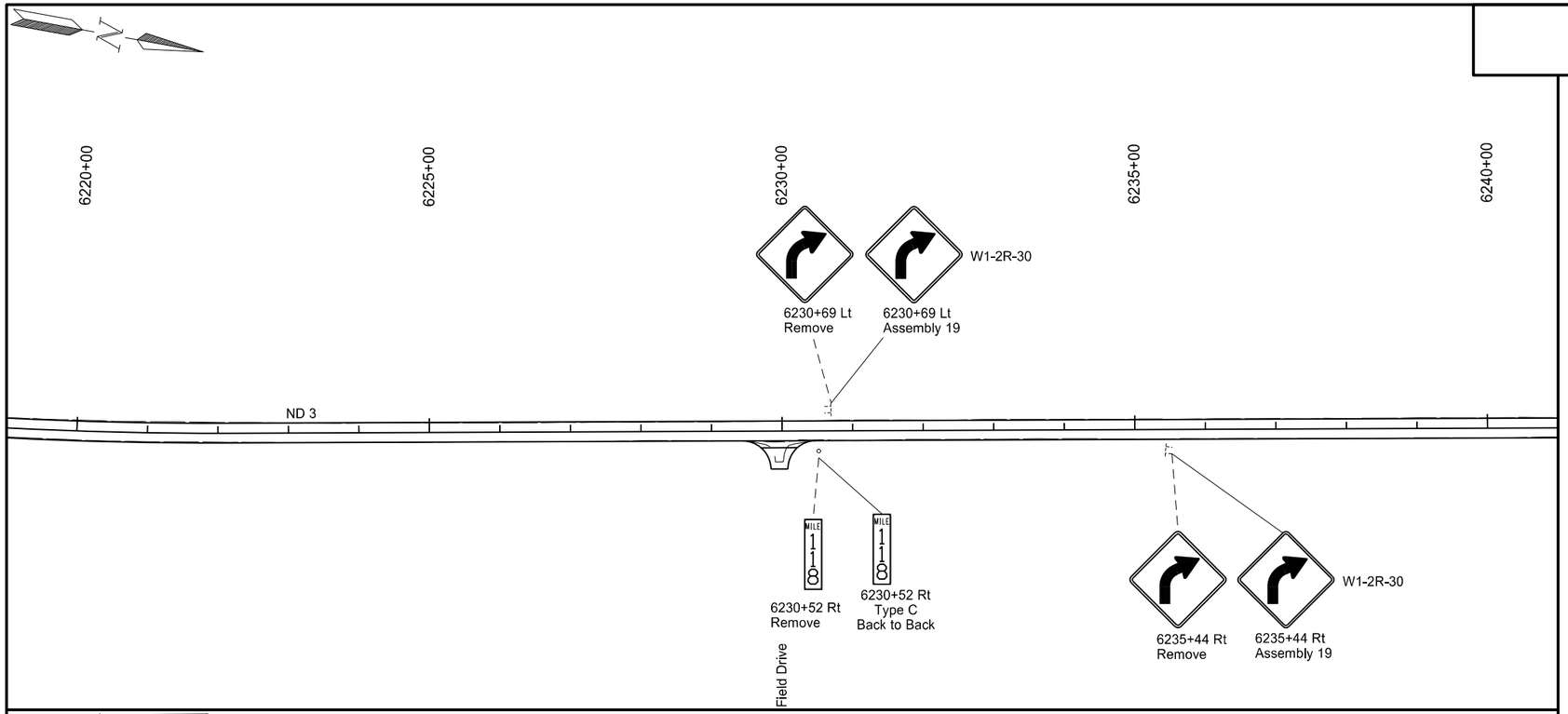
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 03/18/2022
NORTH DAKOTA

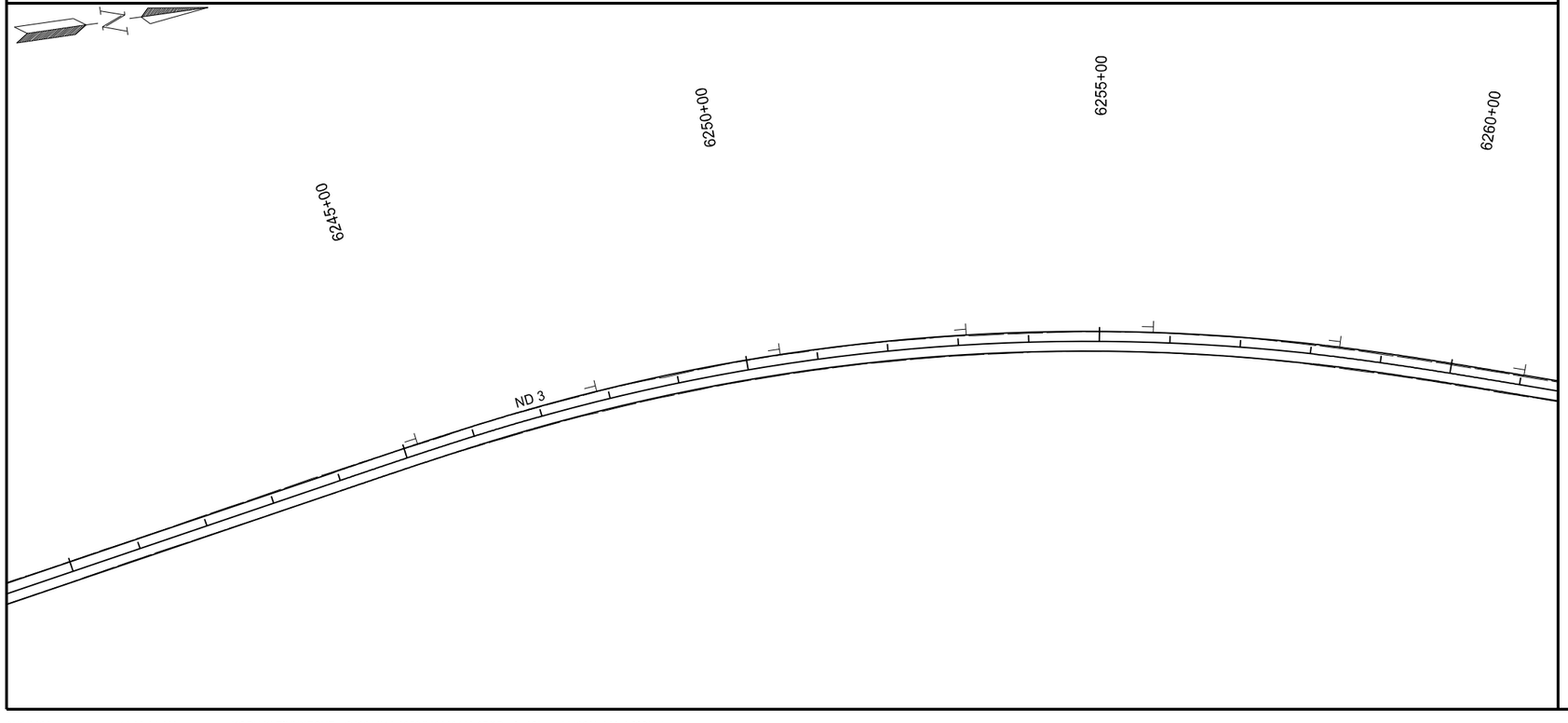
Signing Layout

ND 3
Tuttle N to W Jct 200

6180+00 to 6220+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	110	9





SPEC	CODE	BID ITEM	QTY	UNIT
754	0150	DELINEATORS - TYPE A		
		6245+20 Lt	1	EA
		6247+84 Lt	1	EA
		6250+48 Lt	1	EA
		6253+12 Lt	1	EA
		6255+76 Lt	1	EA
		6258+40 Lt	1	EA
754	0563	REFERENCE MARKER - TYPE C		
		6230+52 Rt	1	EA

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL
KLEINKNECHT
PE 27746
DATE 03/18/2022
NORTH DAKOTA

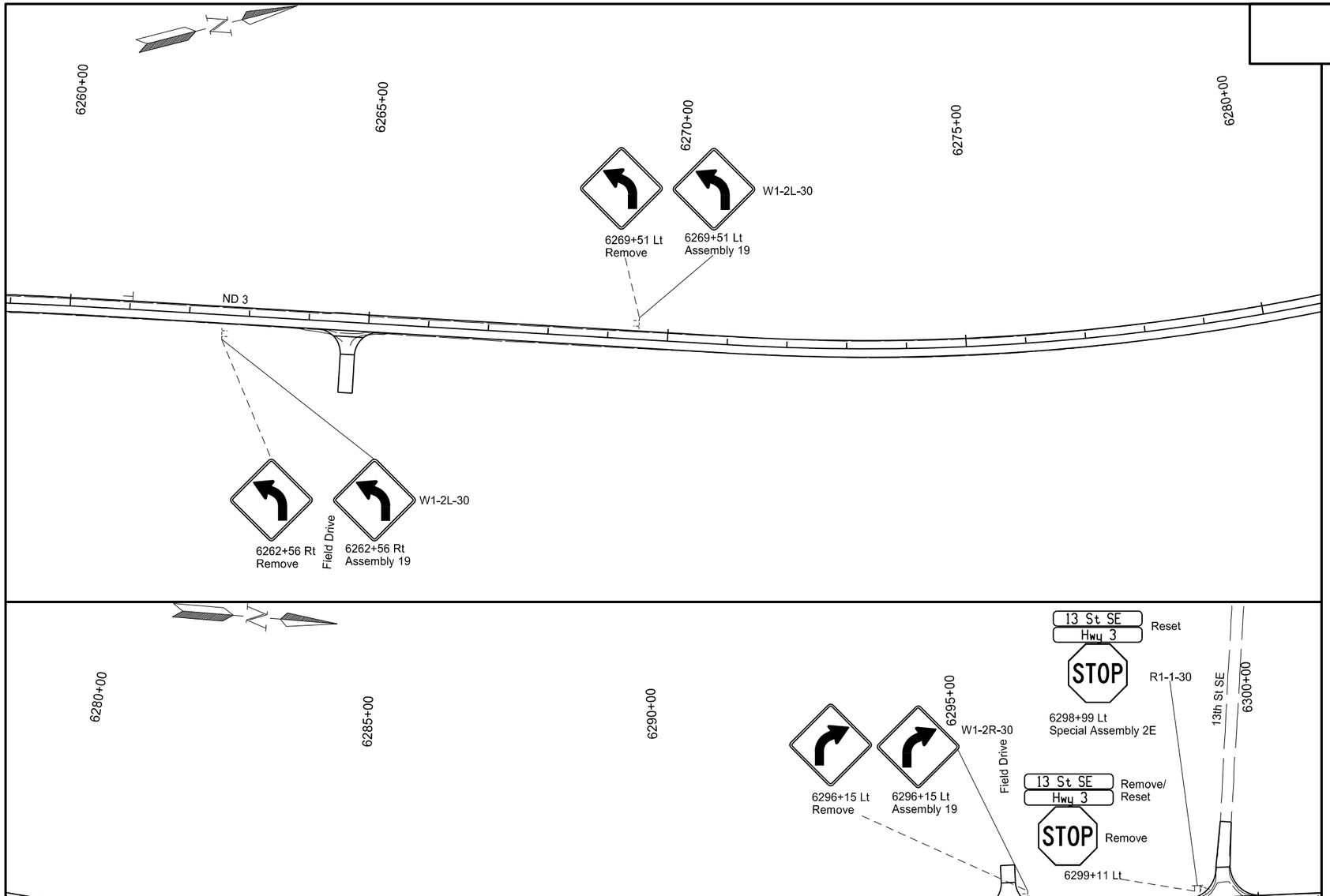
Signing Layout

ND 3
Tuttle N to W Jct 200

6220+00 to 6260+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	110	10

SPEC	CODE	BID ITEM	QTY	UNIT
754	0150	DELINEATORS - TYPE A		
		6261+04 Lt	1	EA
754	0563	REFERENCE MARKER - TYPE C		
		6283+41 Rt	1	EA



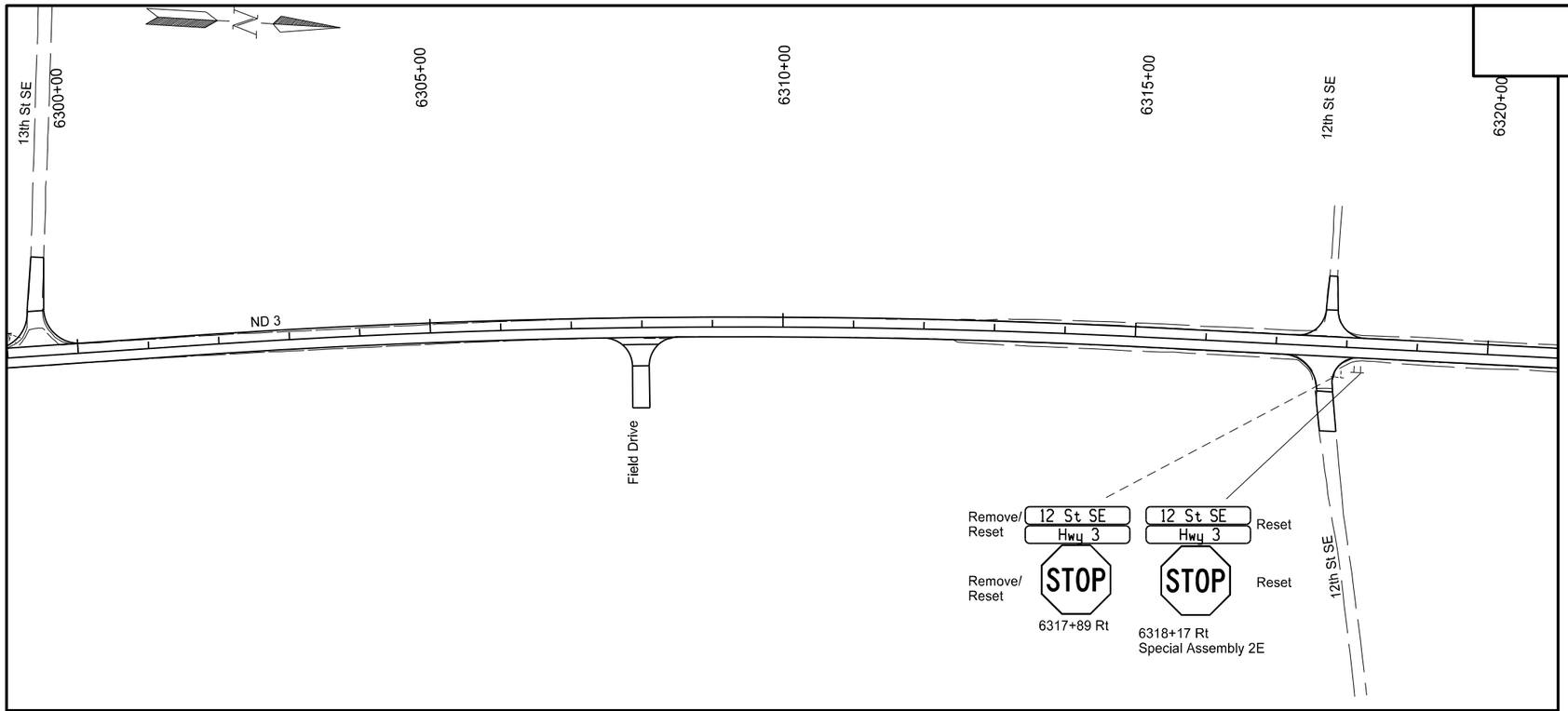
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 03/18/2022
NORTH DAKOTA

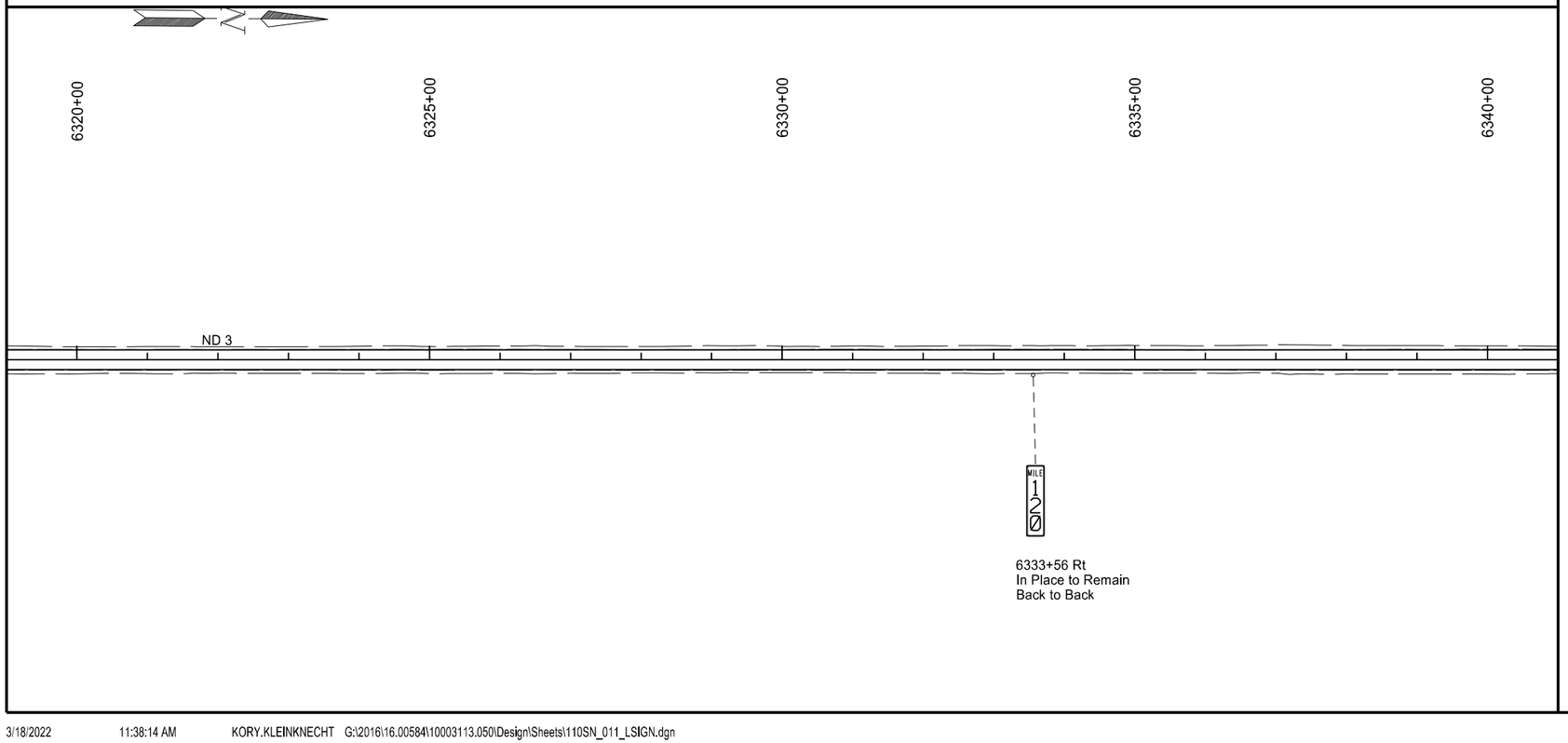
Signing Layout

ND 3
Tuttle N to W Jct 200

6260+00 to 6300+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	110	11





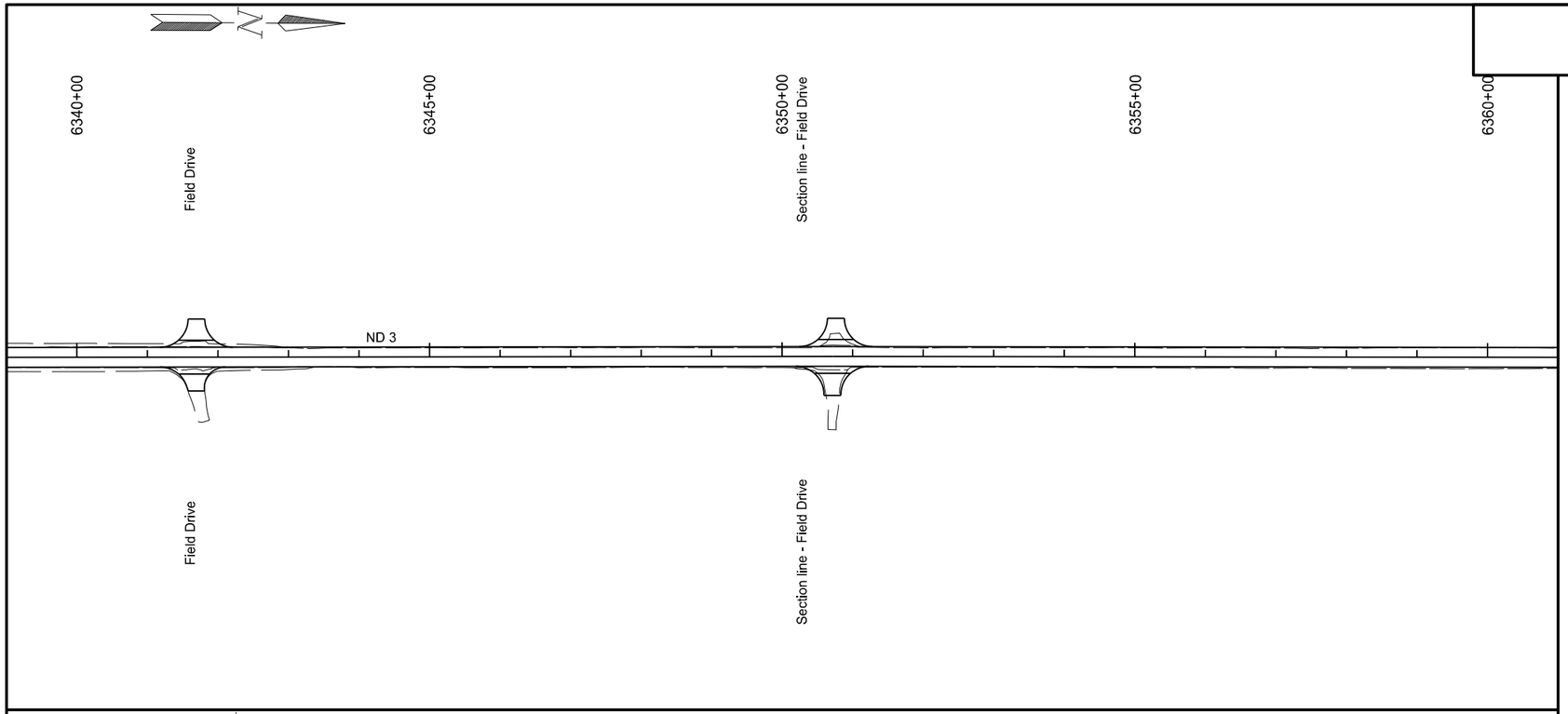
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL
KLEINKNECHT
PE-27746
DATE 03/18/2022
NORTH DAKOTA

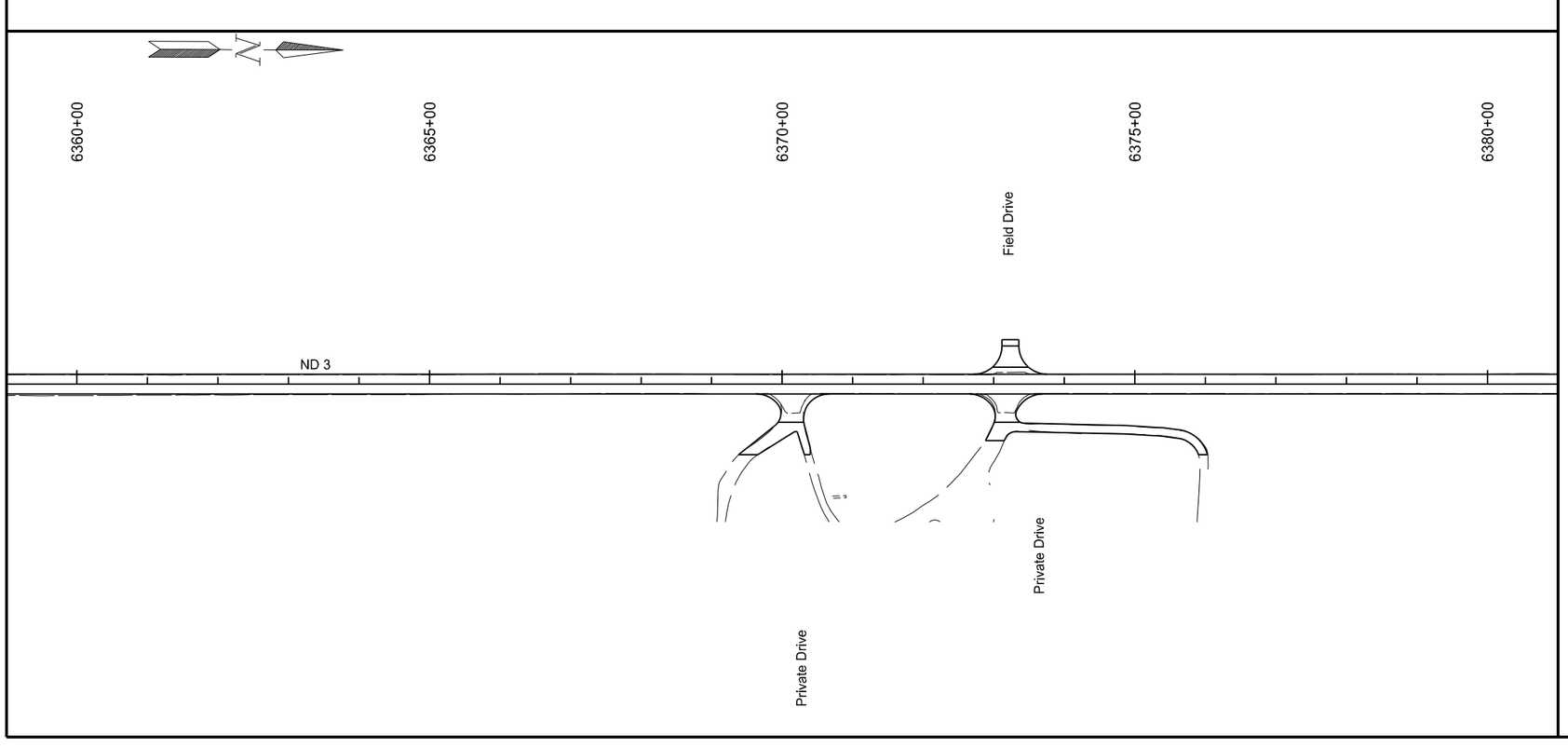
Signing Layout

ND 3
Tuttle N to W Jct 200

6300+00 to 6340+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	110	12





REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 03/18/2022
NORTH DAKOTA

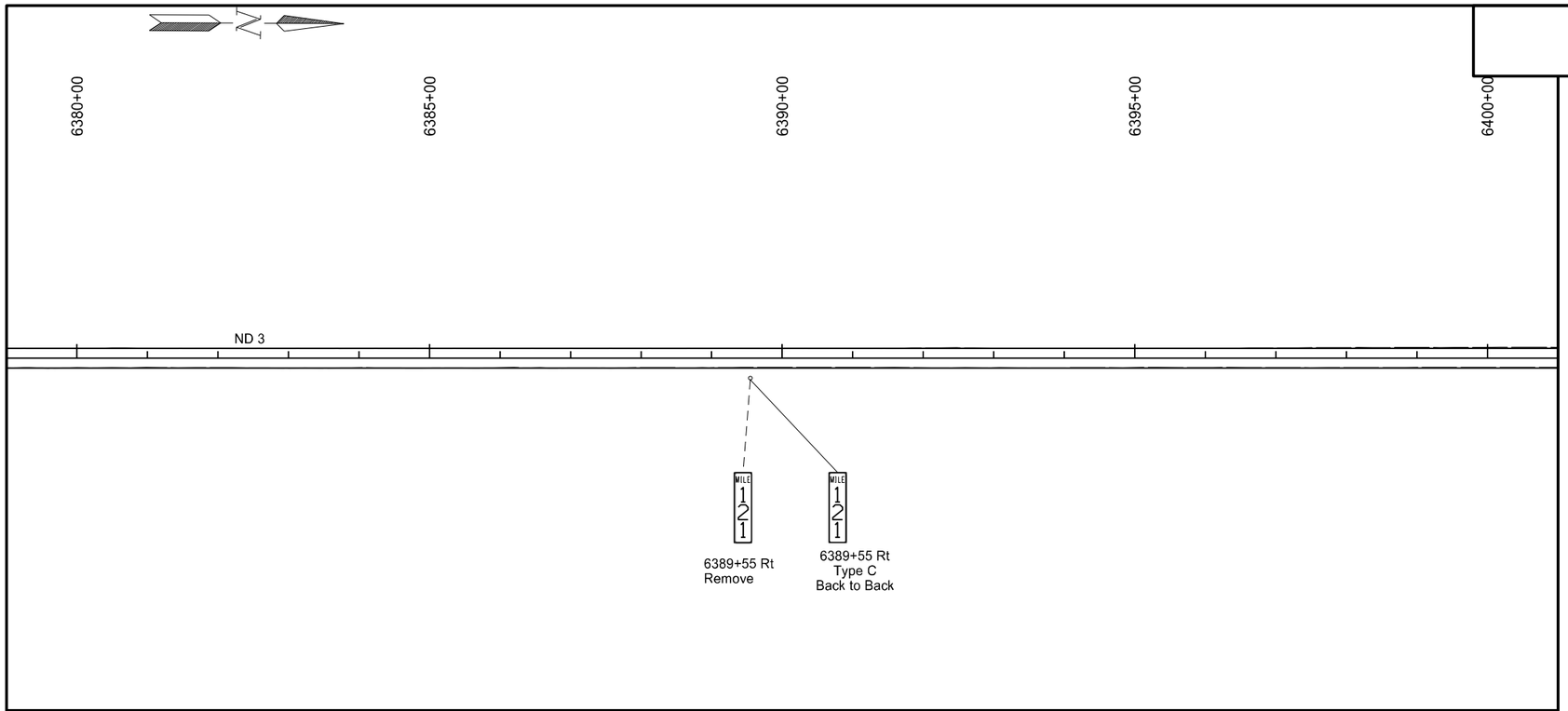
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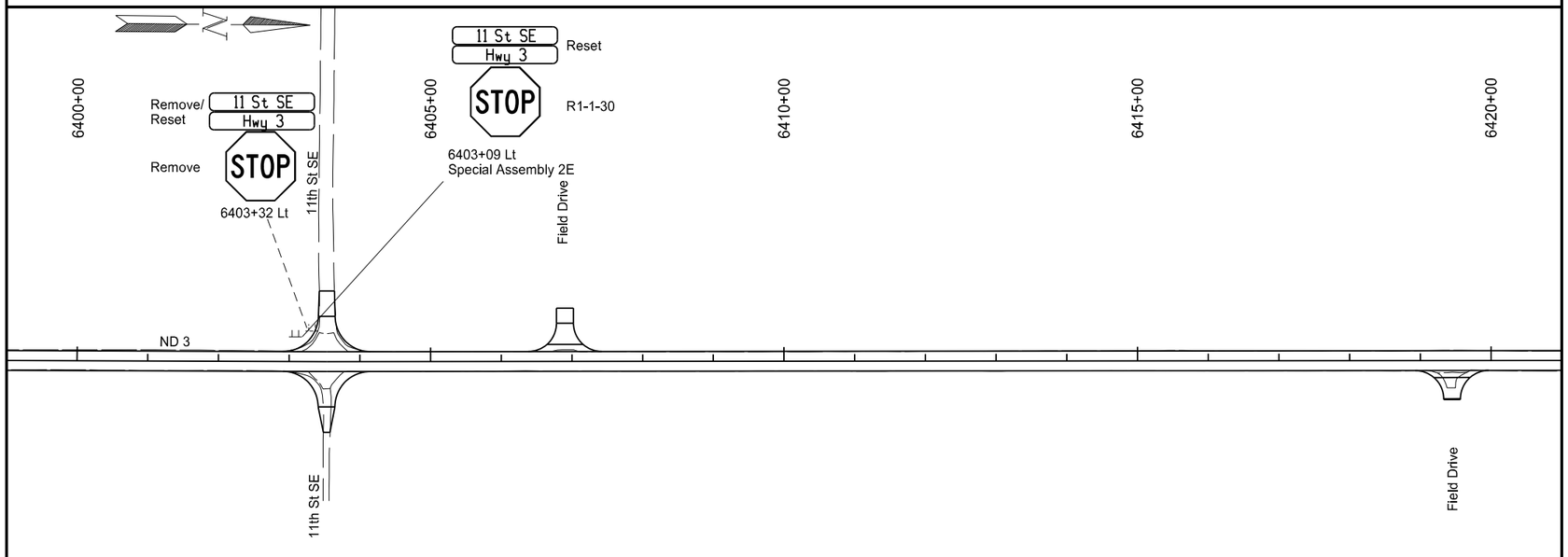
ND 3
Tuttle N to W Jct 200

6340+00 to 6380+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	110	13

SPEC	CODE	BID ITEM	QTY	UNIT
754	0563	REFERENCE MARKER - TYPE C		
		6389+55 Rt	1	EA





REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 03/18/2022
NORTH DAKOTA

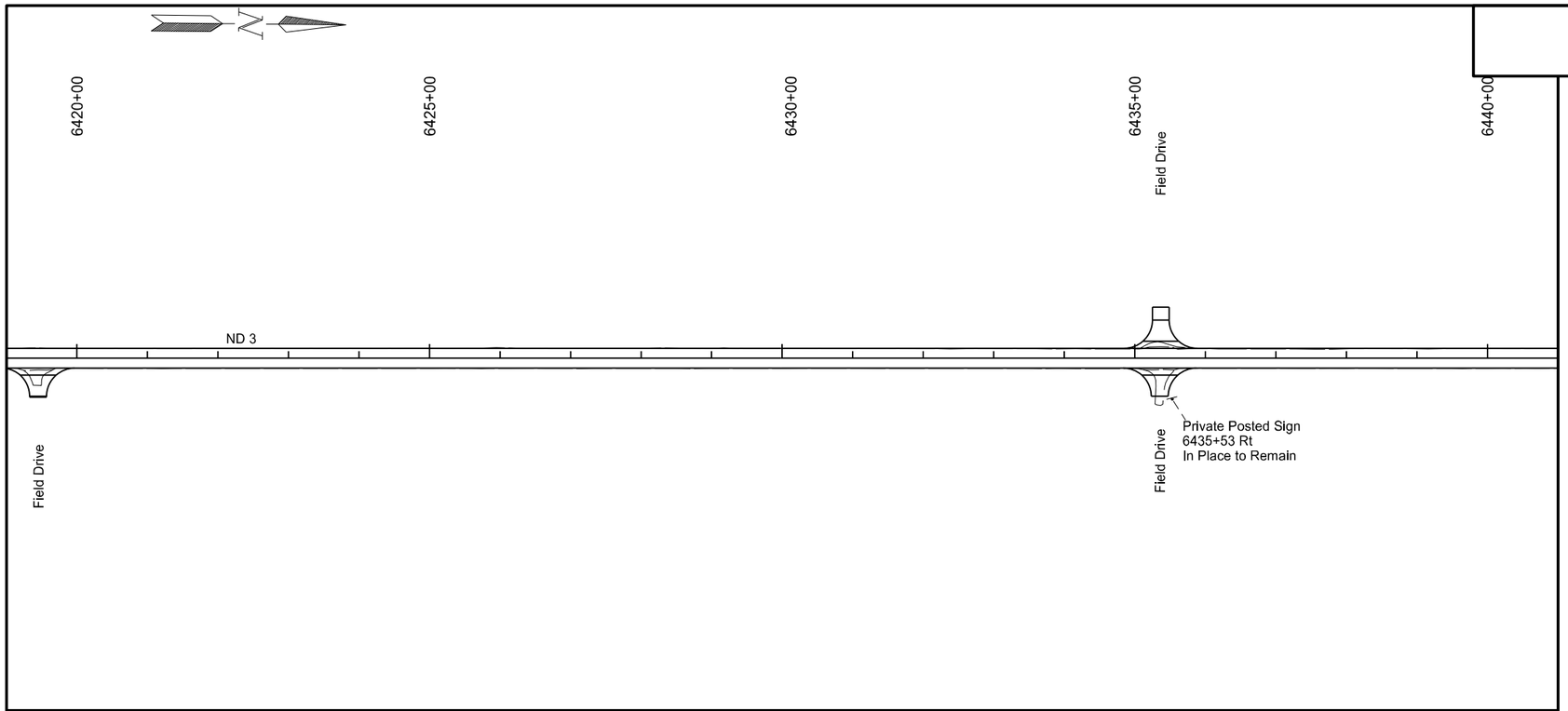
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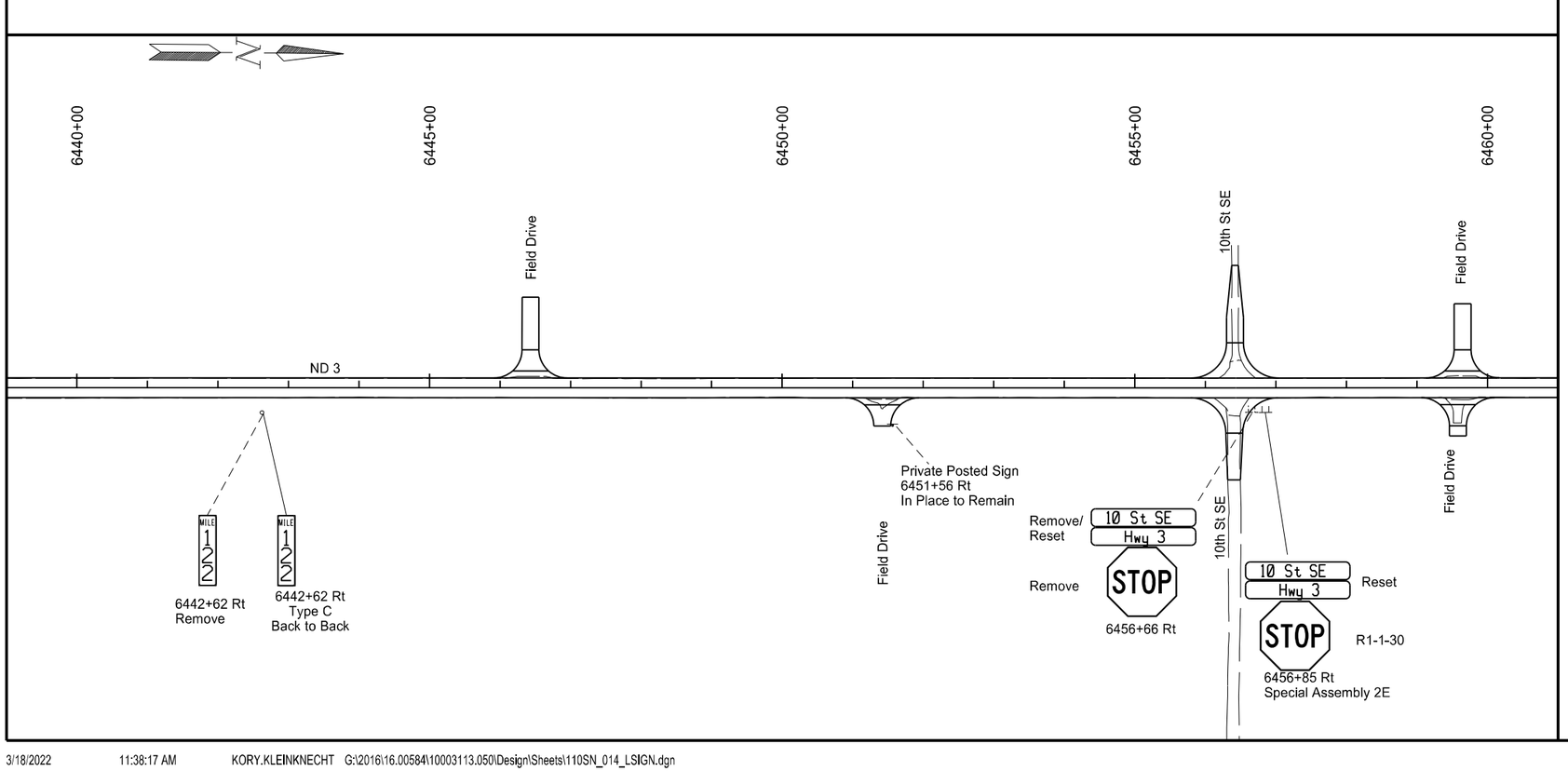
ND 3
Tuttle N to W Jct 200

6380+00 to 6420+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	110	14

SPEC	CODE	BID ITEM	QTY	UNIT
754	0563	REFERENCE MARKER - TYPE C		
		6442+62 Rt	1	EA





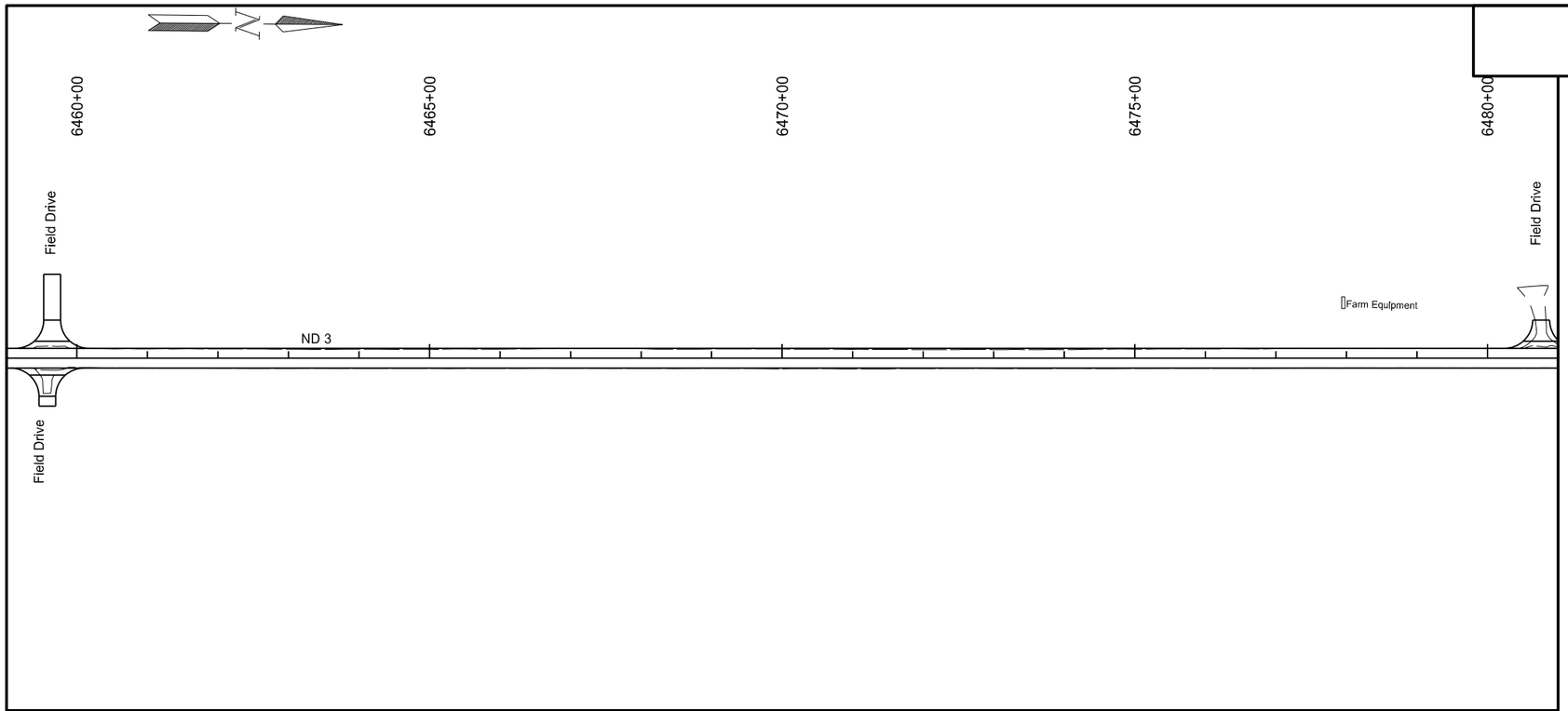
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL
KLEINKNECHT
PE 27746
DATE 03/18/2022
NORTH DAKOTA

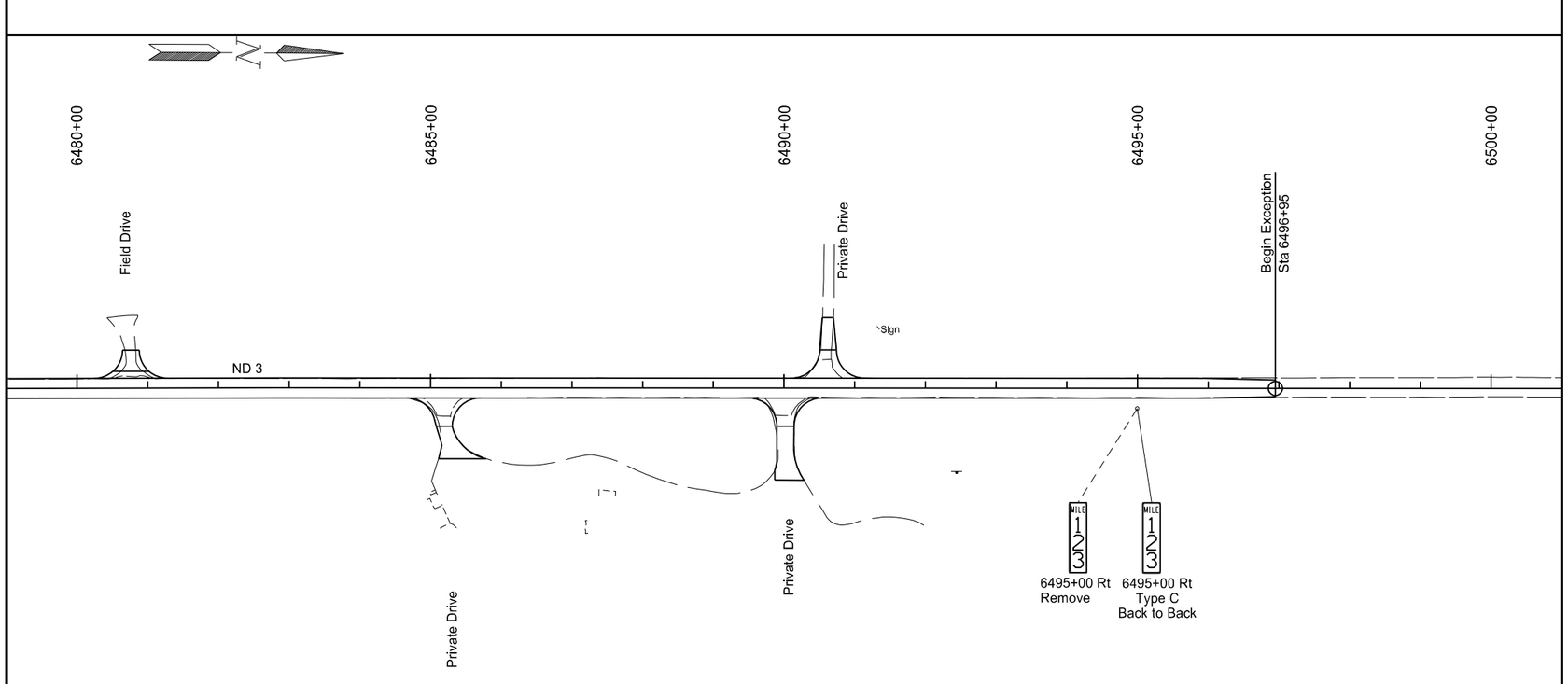
Signing Layout

ND 3
Tuttle N to W Jct 200

6420+00 to 6460+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	110	15





SPEC	CODE	BID ITEM	QTY	UNIT
754	0563	REFERENCE MARKER - TYPE C		
		6495+00 Rt	1	EA

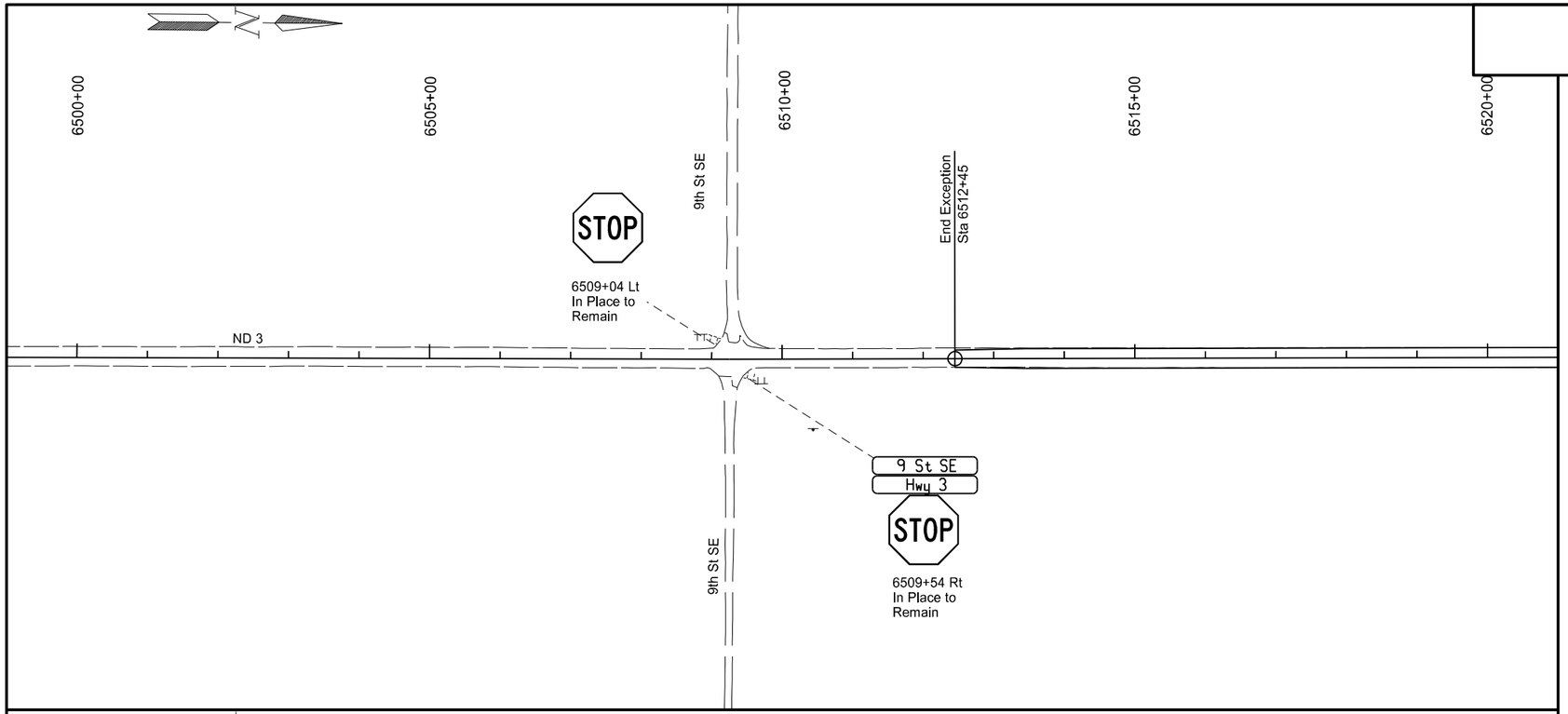
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL
KLEINKNECHT
PE 27746
DATE 03/18/2022
NORTH DAKOTA

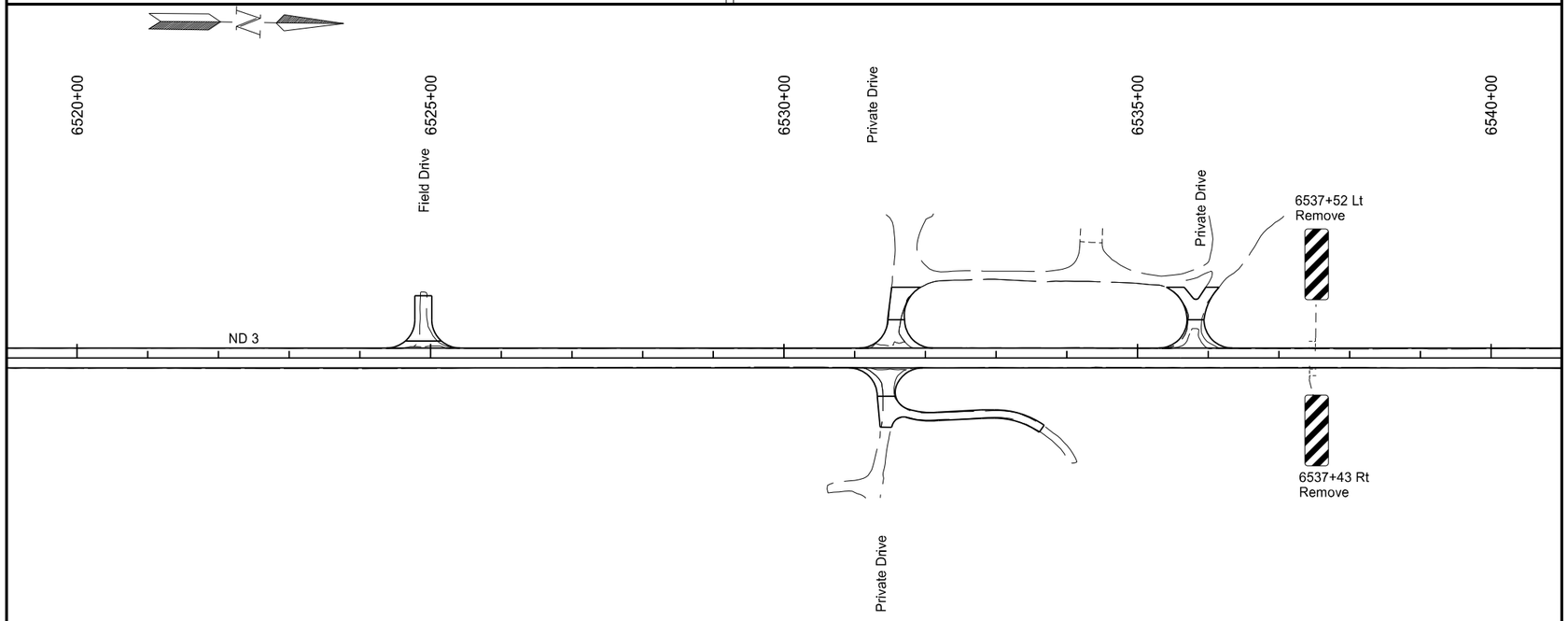
Signing Layout

ND 3
Tuttle N to W Jct 200

6460+00 to 6500+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	110	16





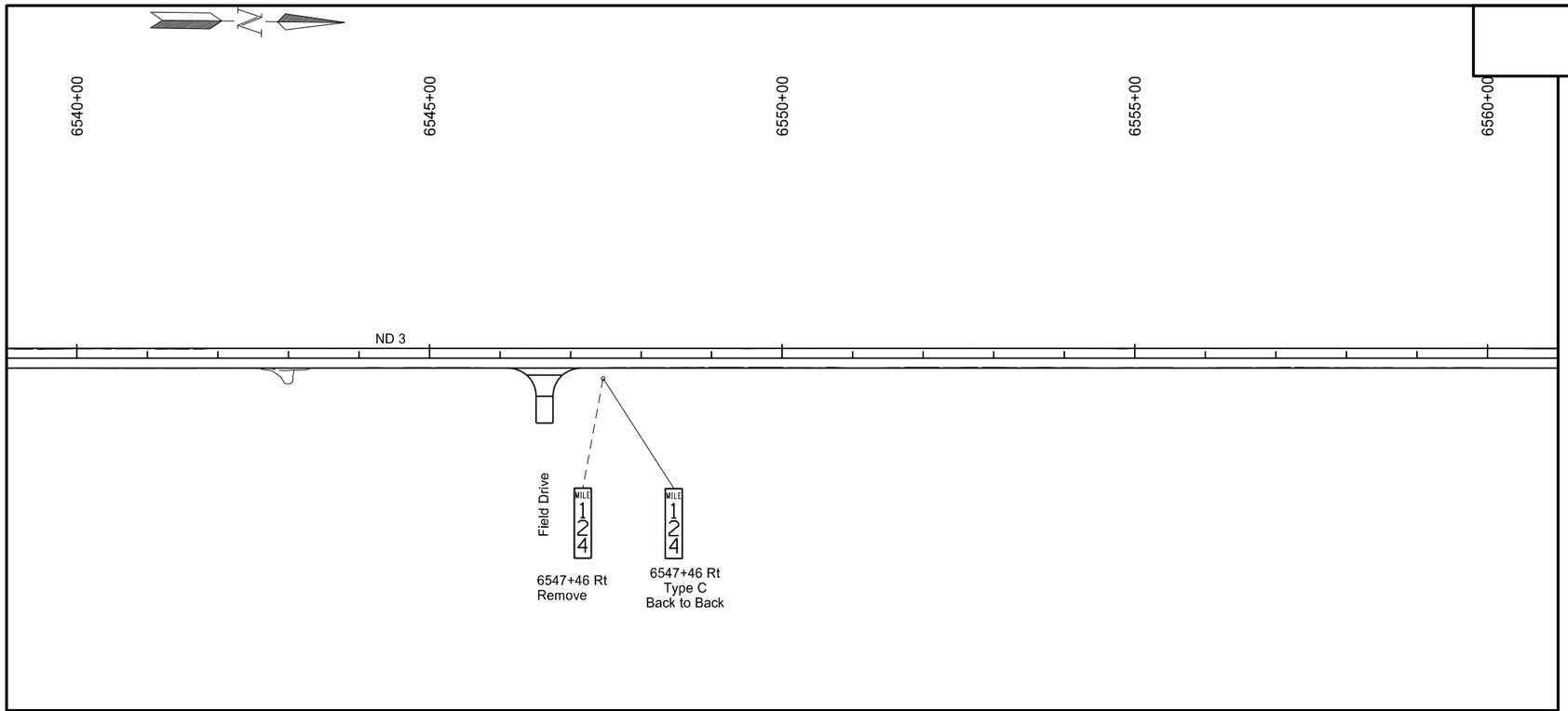
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 03/18/2022
NORTH DAKOTA

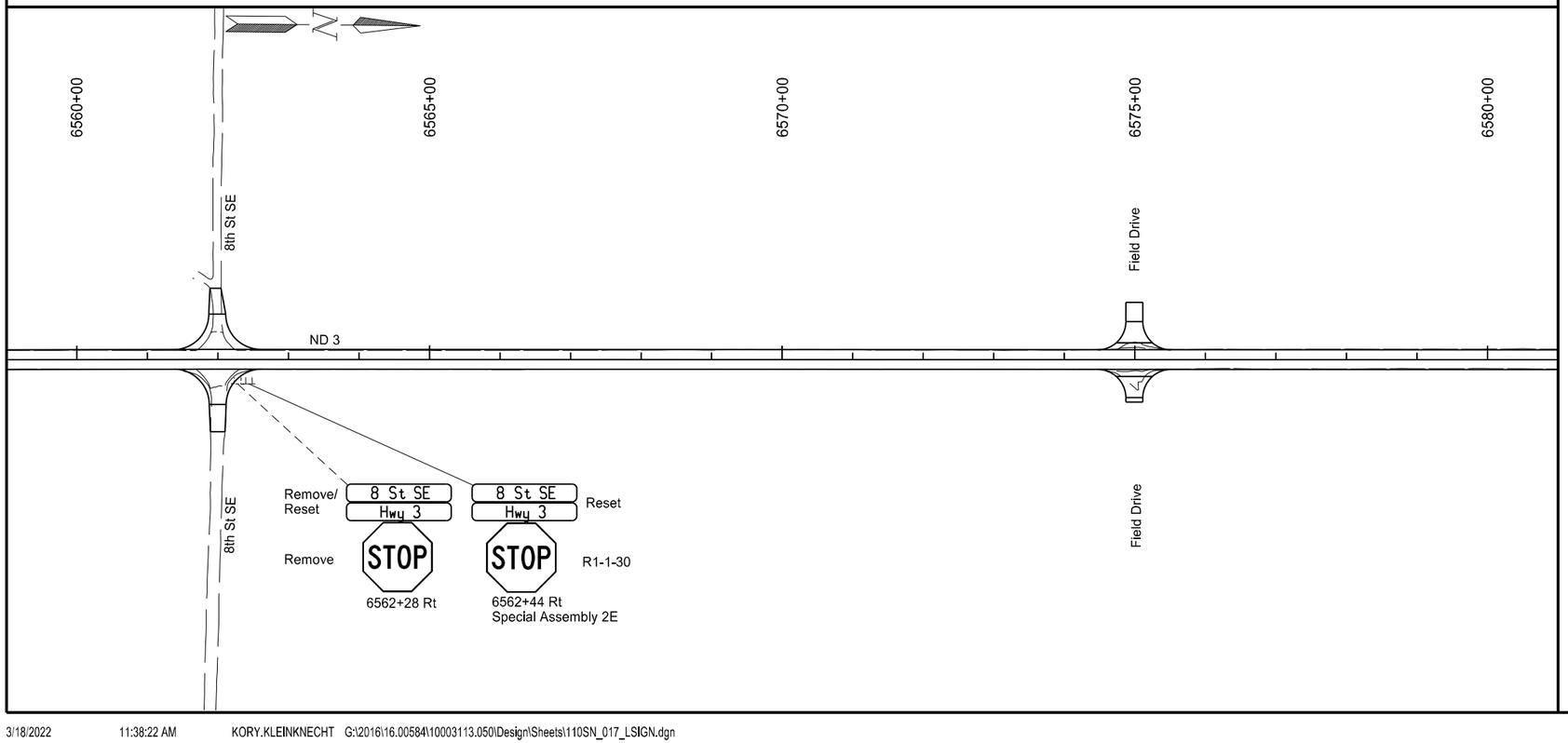
Signing Layout

ND 3
Tuttle N to W Jct 200

6500+00 to 6540+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	110	17





SPEC	CODE	BID ITEM	QTY	UNIT
754	0563	REFERENCE MARKER - TYPE C		
		6547+46 Rt	1	EA

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 03/18/2022
NORTH DAKOTA

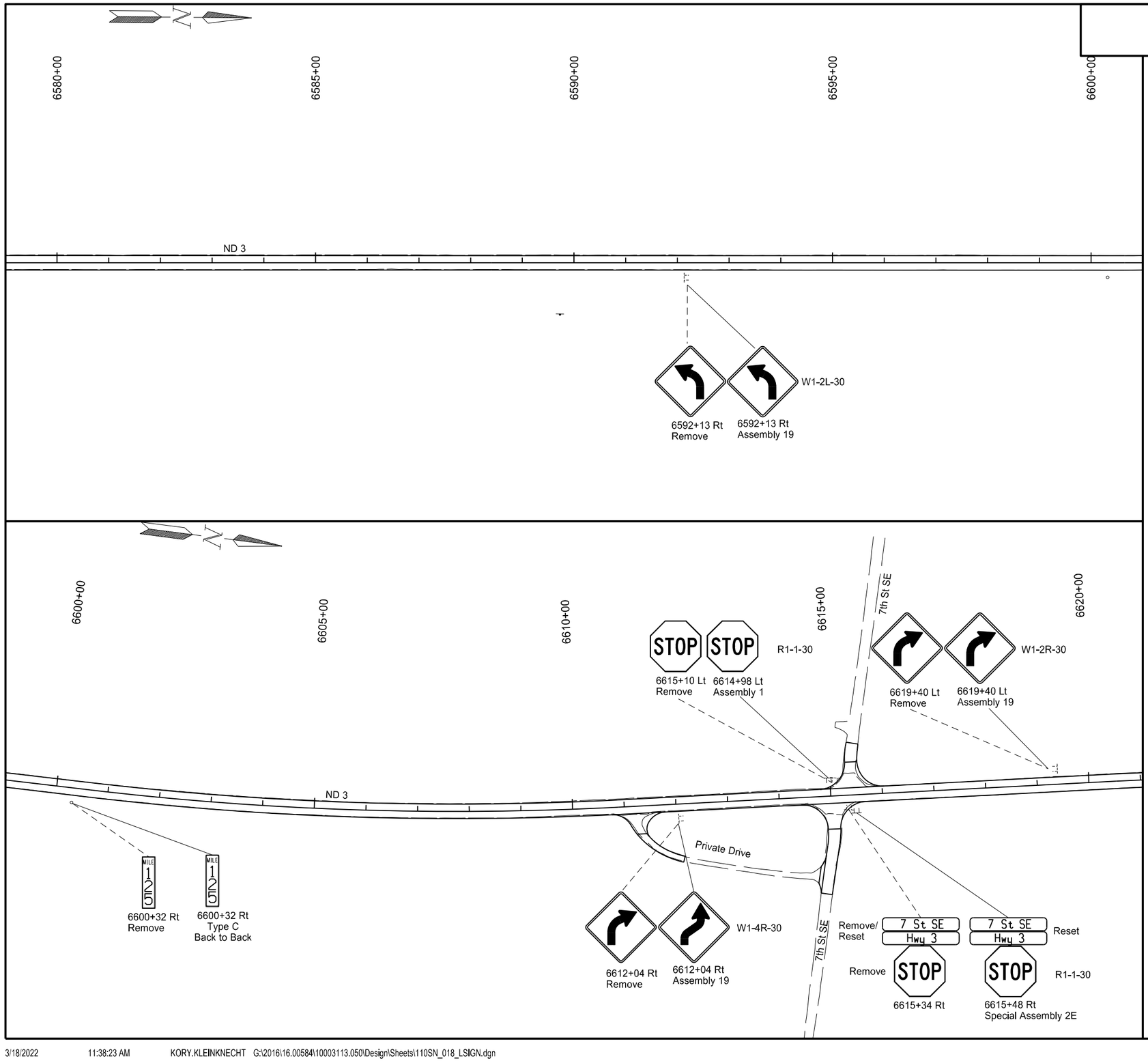
Signing Layout

ND 3
Tuttle N to W Jct 200

6540+00 to 6580+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	110	18

SPEC	CODE	BID ITEM	QTY	UNIT
754	0563	REFERENCE MARKER - TYPE C		
		6600+32 Rt	1	EA



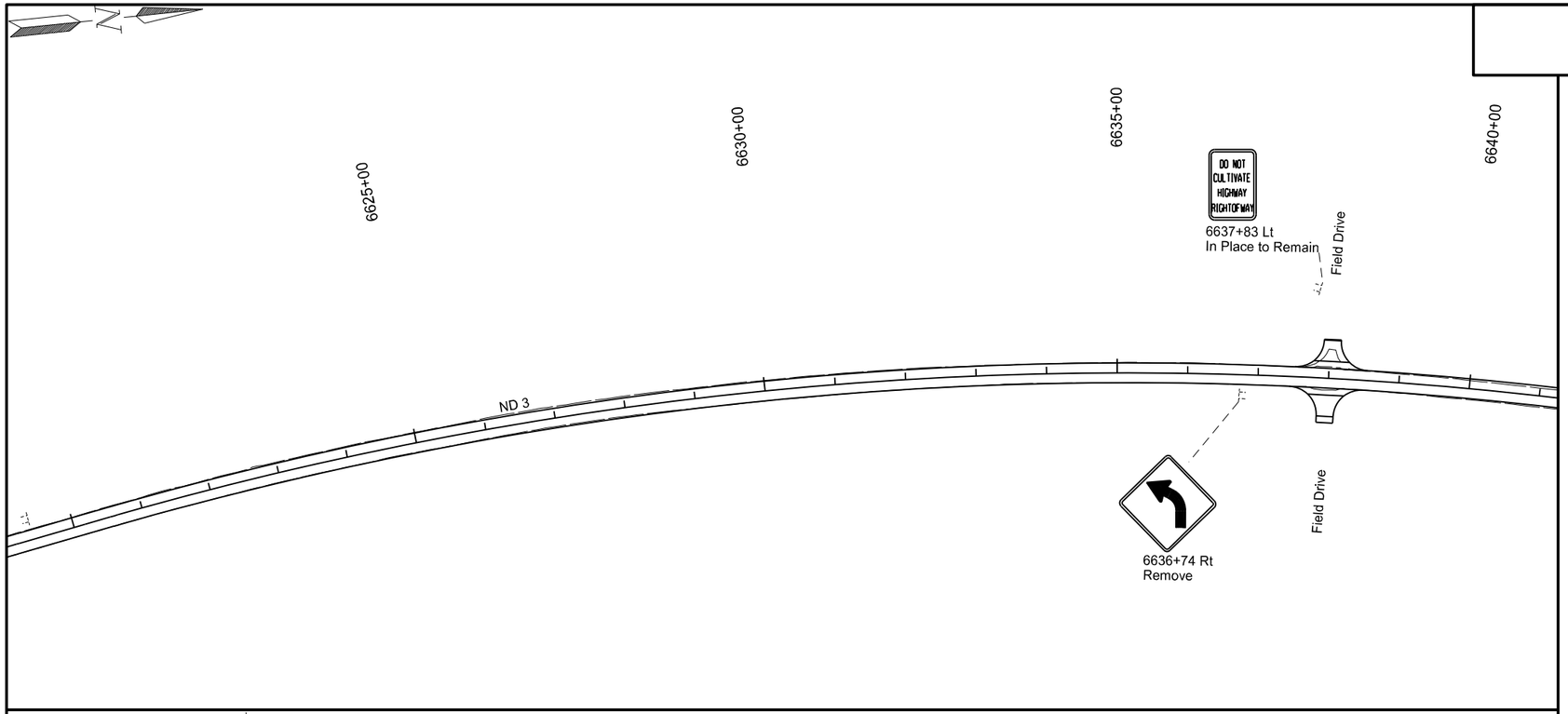
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 03/18/2022
NORTH DAKOTA

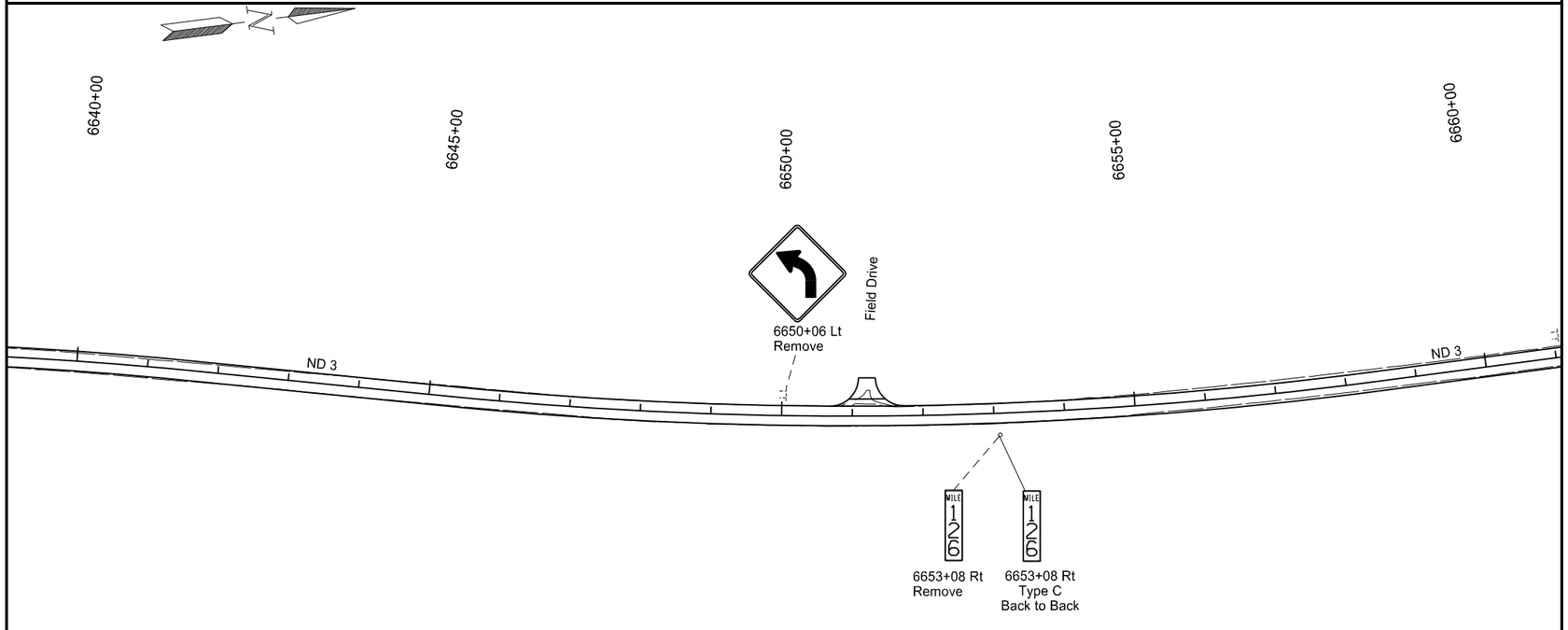
Signing Layout

ND 3
Tuttle N to W Jct 200

6580+00 to 6620+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	110	19





SPEC	CODE	BID ITEM	QTY	UNIT
754	0563	REFERENCE MARKER - TYPE C		
		6653+08 Rt	1	EA

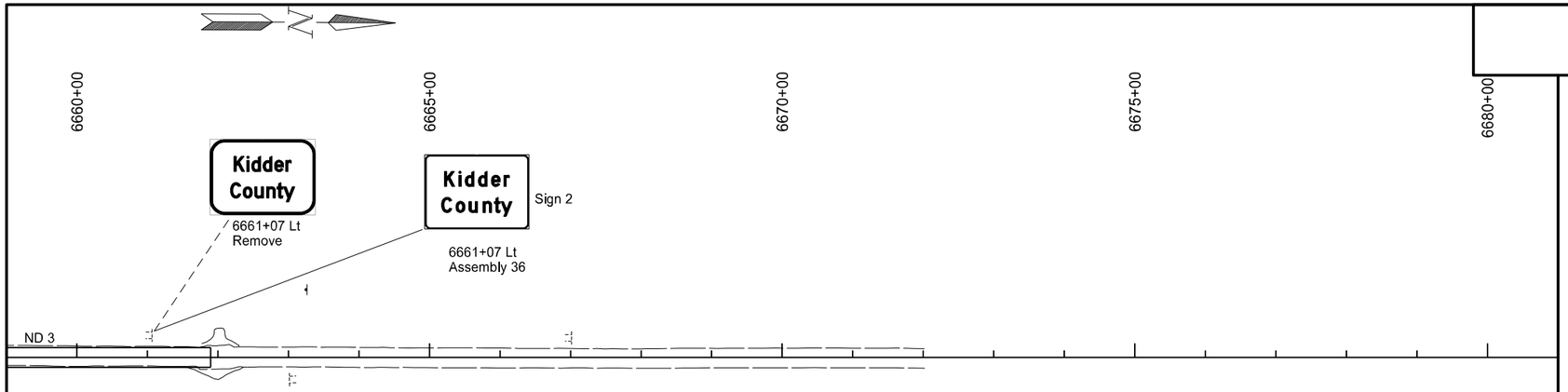
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 03/18/2022
NORTH DAKOTA

Signing Layout

ND 3
Tuttle N to W Jct 200

6620+00 to 6660+00
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	110	20



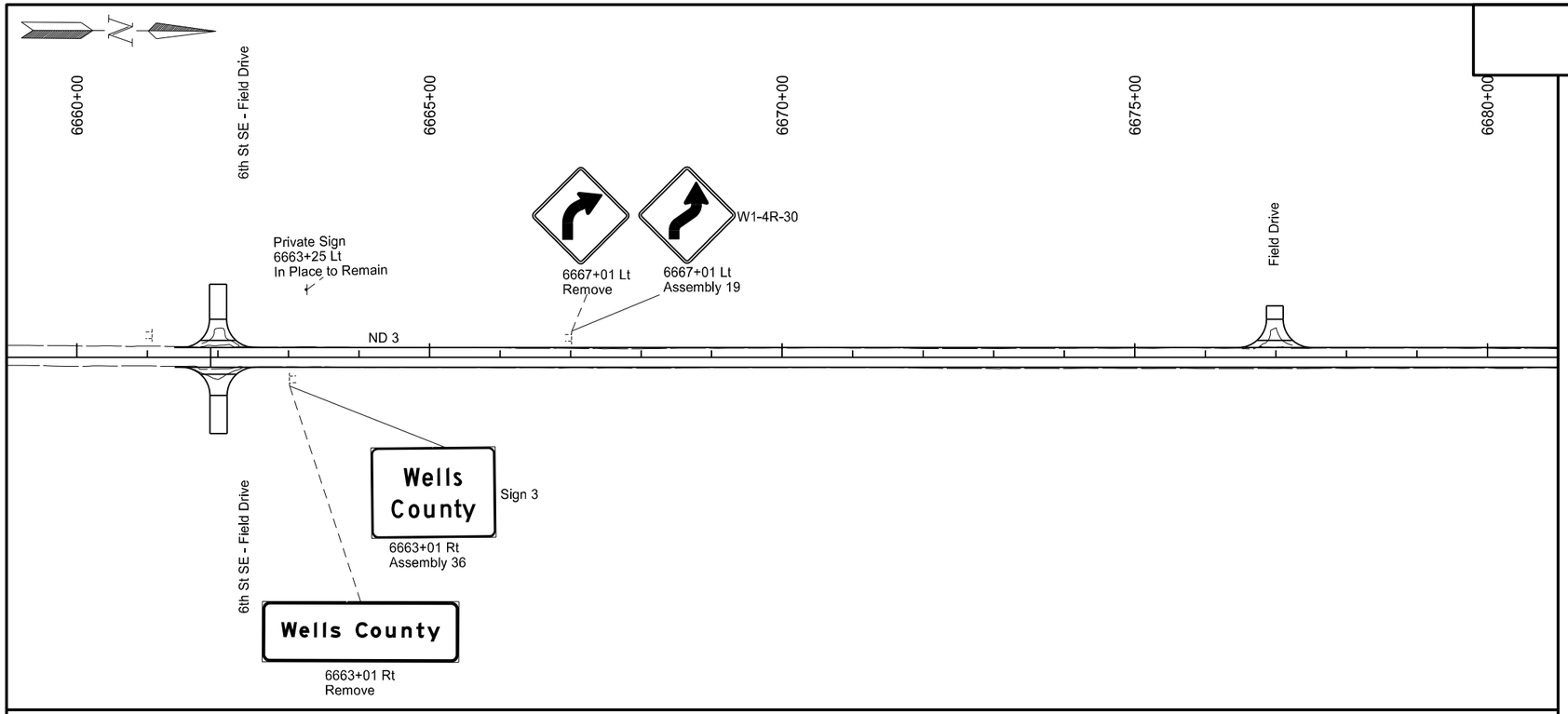
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 03/18/2022
NORTH DAKOTA

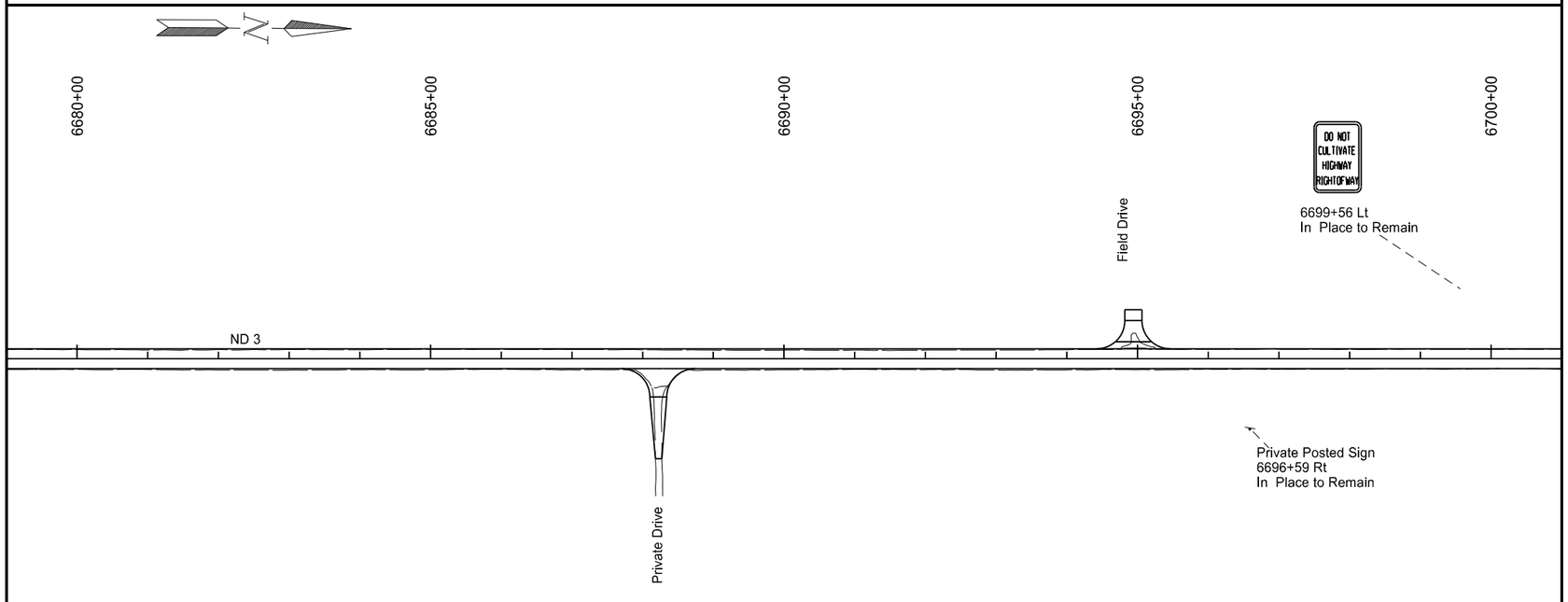
Signing Layout

ND 3
Tuttle N to W Jct 200

6660+00 to 6661+89.5
Kidder County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	110	21





REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL
KLEINKNECHT
PE 27746
DATE 03/18/2022
NORTH DAKOTA

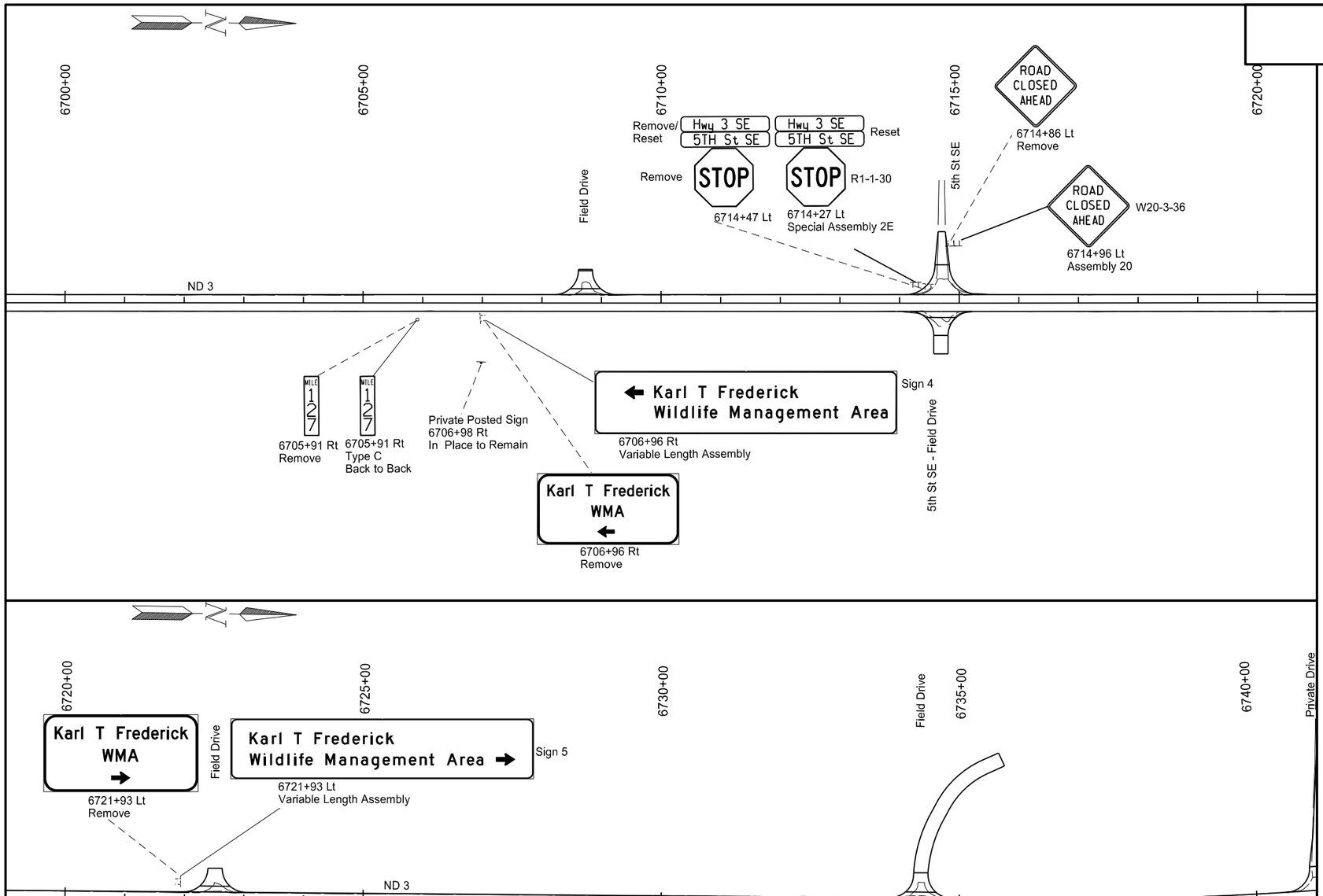
Signing Layout

ND 3
Tuttle N to W Jct 200

6661+89.5 to 6700+00
Wells County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	110	22

SPEC	CODE	BID ITEM	QTY	UNIT
754	0563	REFERENCE MARKER - TYPE C		
		6705+91 Rt	1	EA



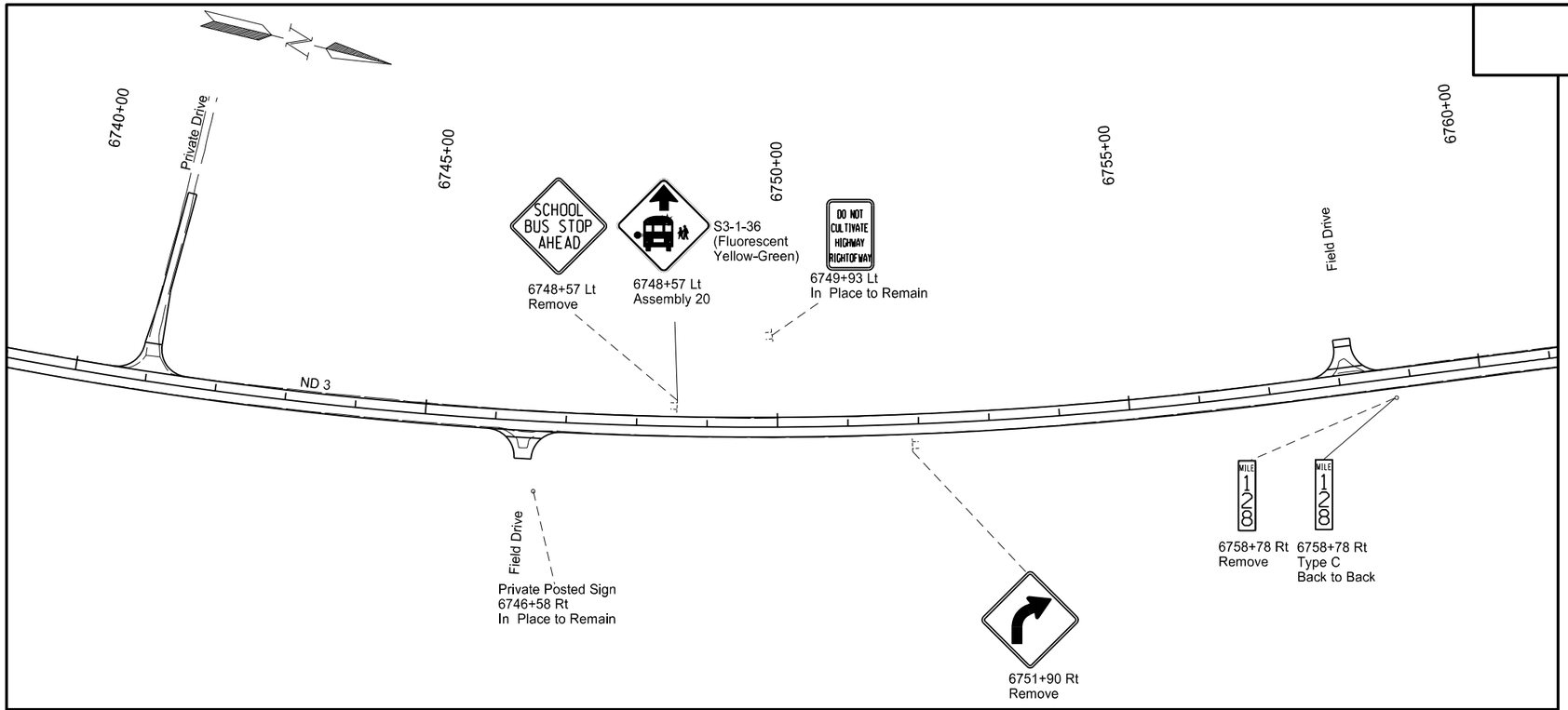
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 03/18/2022
NORTH DAKOTA

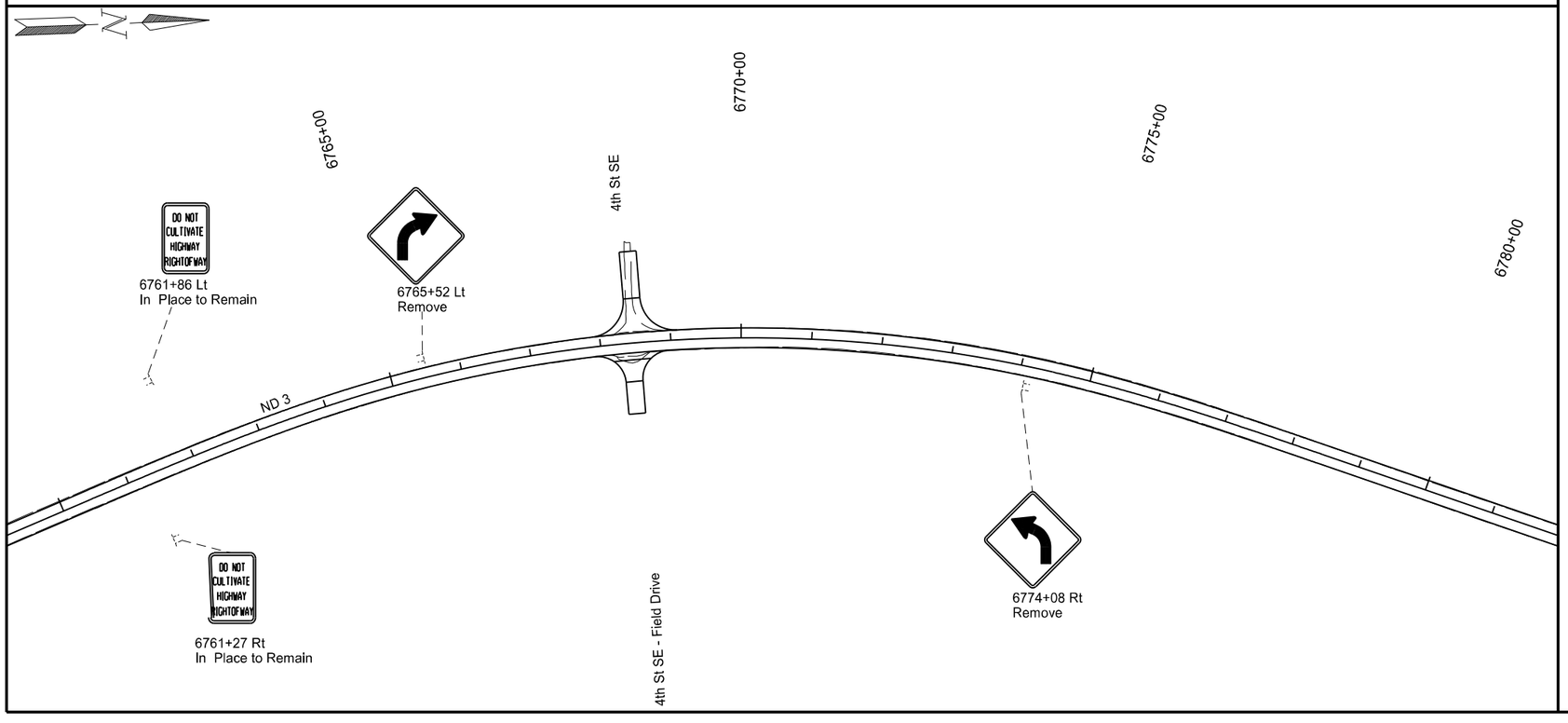
Signing Layout

ND 3
Tuttle N to W Jct 200

6700+00 to 6740+00
Wells County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	110	23





SPEC	CODE	BID ITEM	QTY	UNIT
754	0563	REFERENCE MARKER - TYPE C		
		6758+78 Rt	1	EA

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 03/18/2022
NORTH DAKOTA

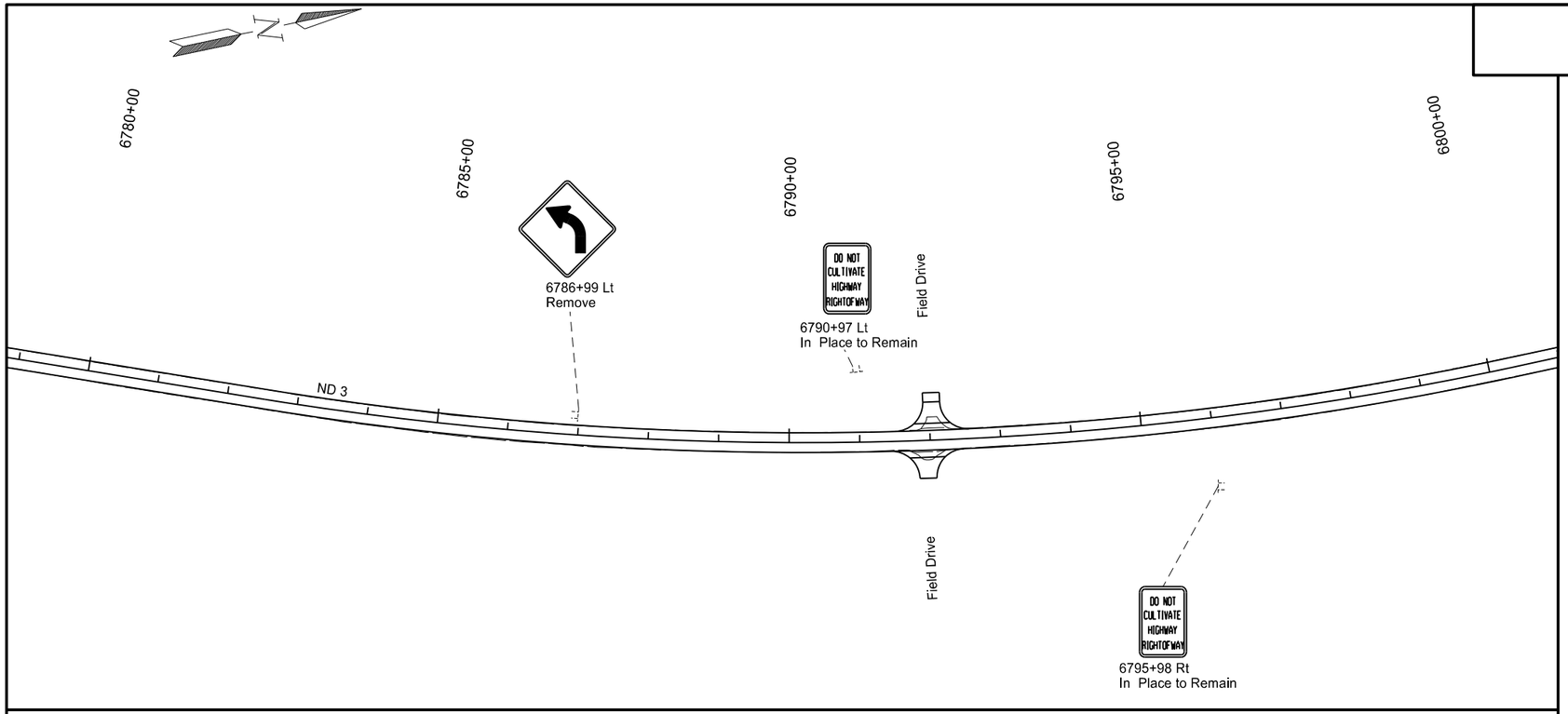
Signing Layout

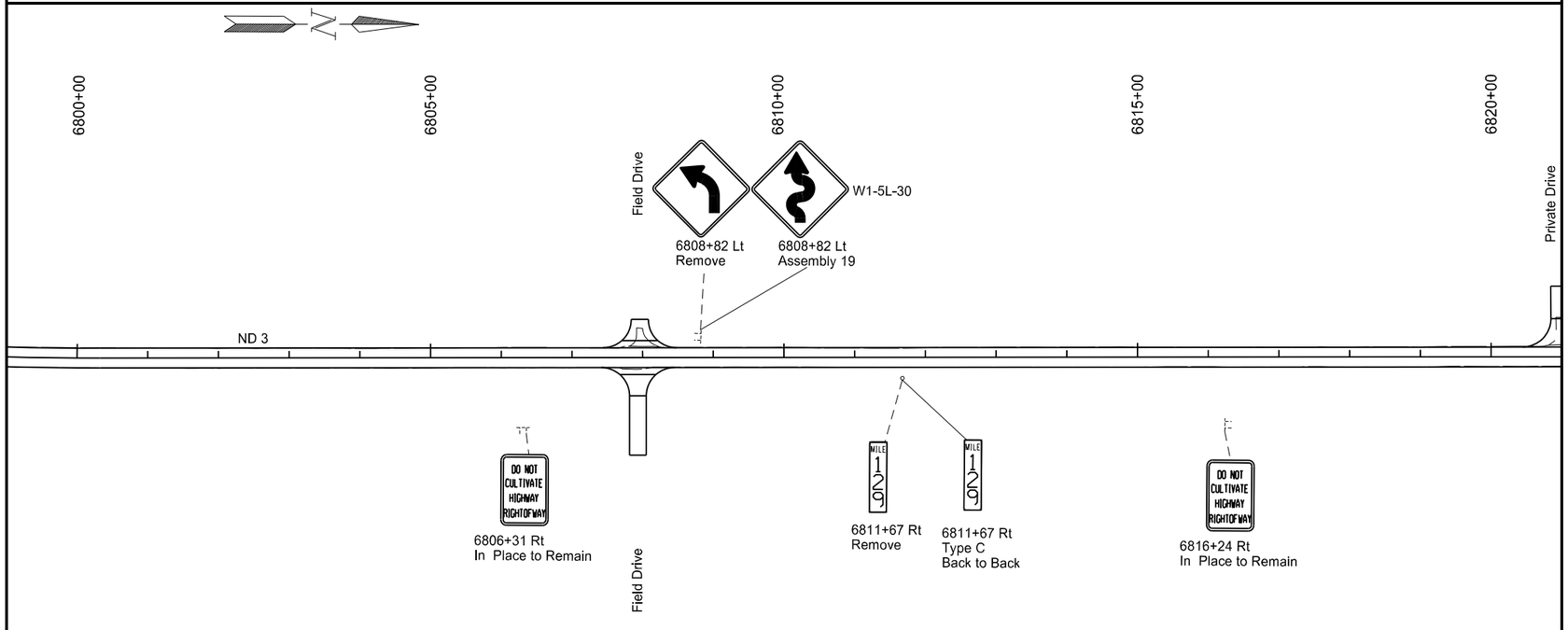
ND 3
Tuttle N to W Jct 200

6740+00 to 6780+00
Wells County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	110	24

SPEC	CODE	BID ITEM	QTY	UNIT
754	0563	REFERENCE MARKER - TYPE C		
		6811+67 Rt	1	EA





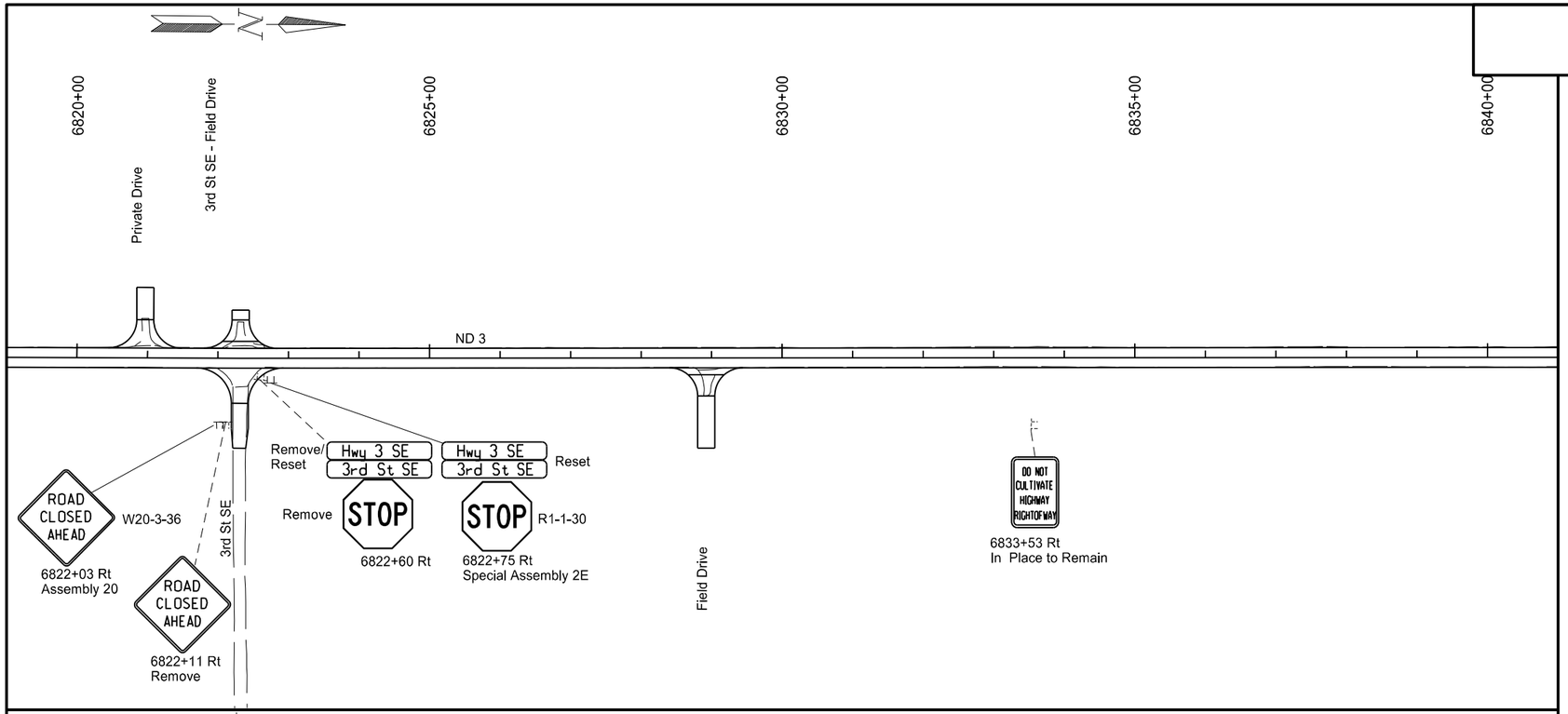
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 03/18/2022
NORTH DAKOTA

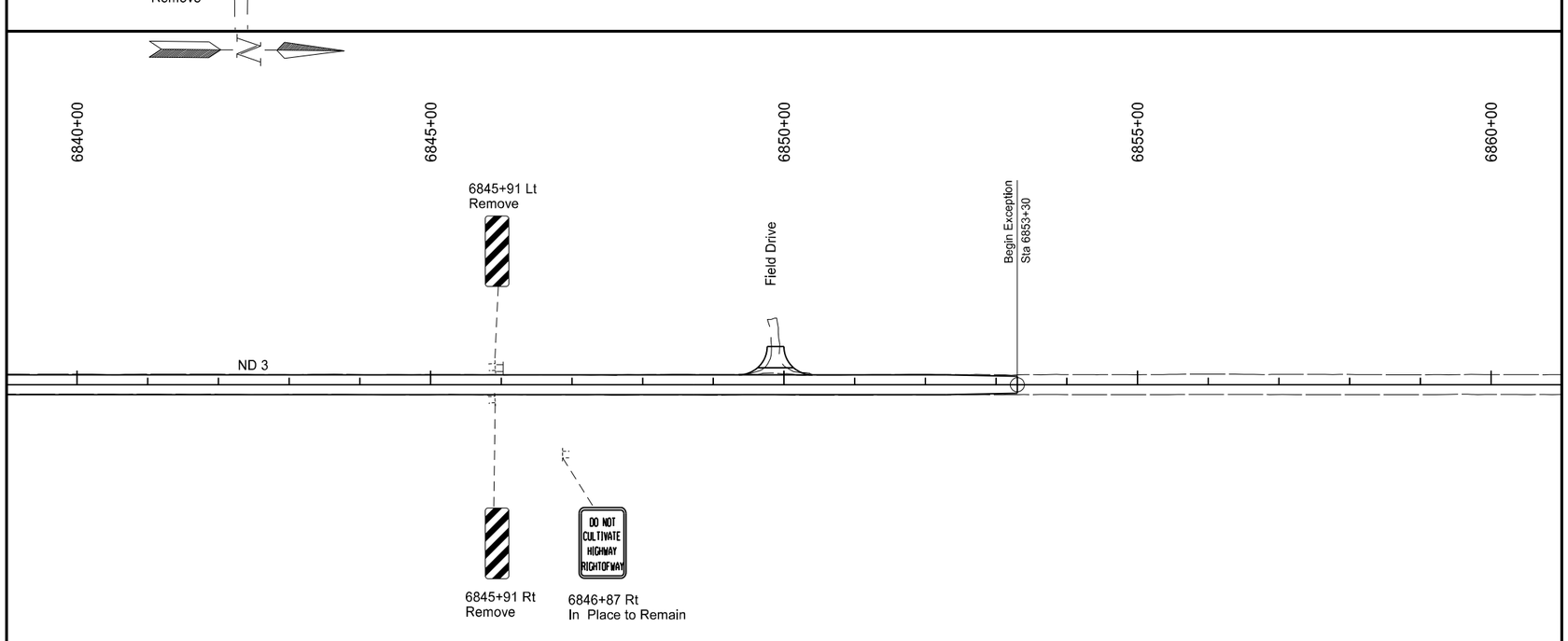
Signing Layout

ND 3
Tuttle N to W Jct 200

6780+00 to 6820+00
Wells County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	110	25





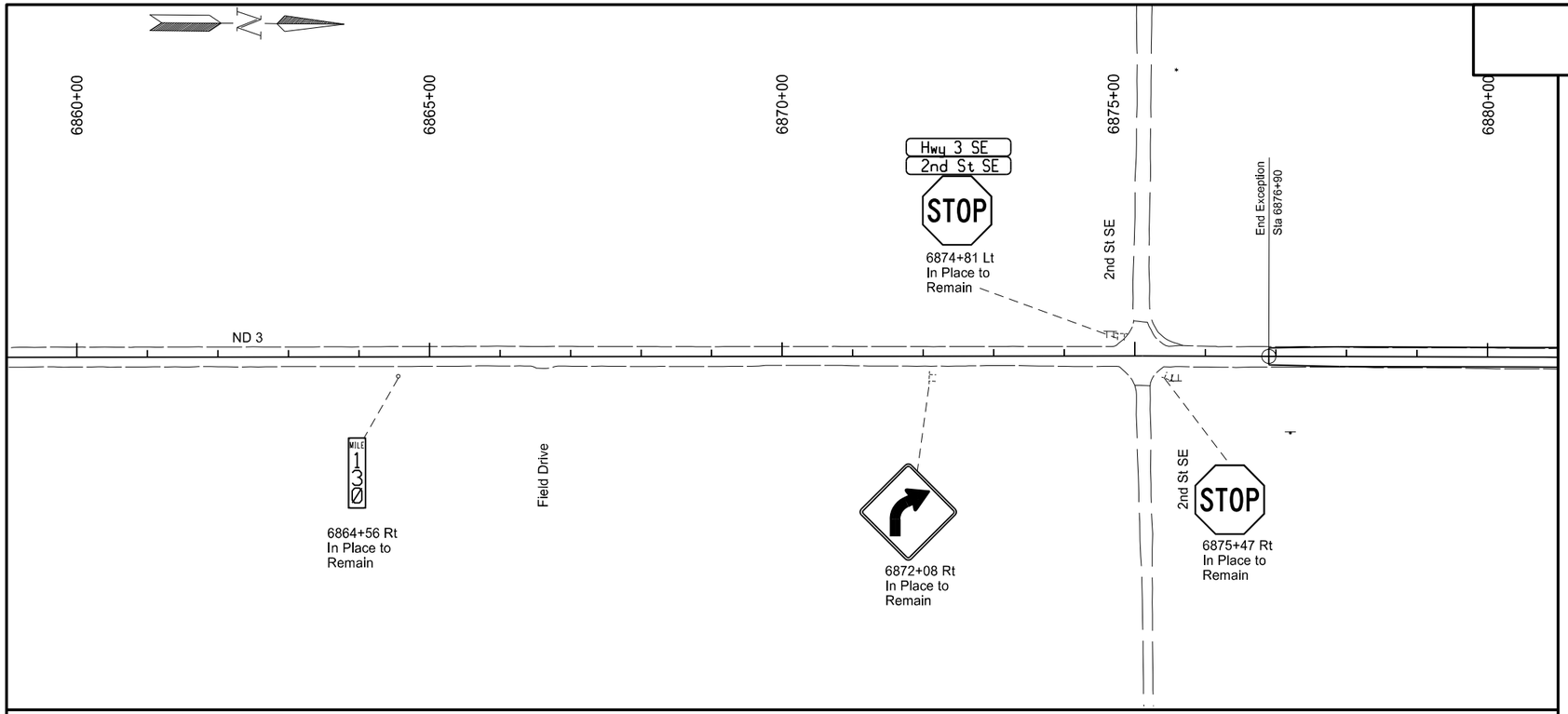
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 03/18/2022
NORTH DAKOTA

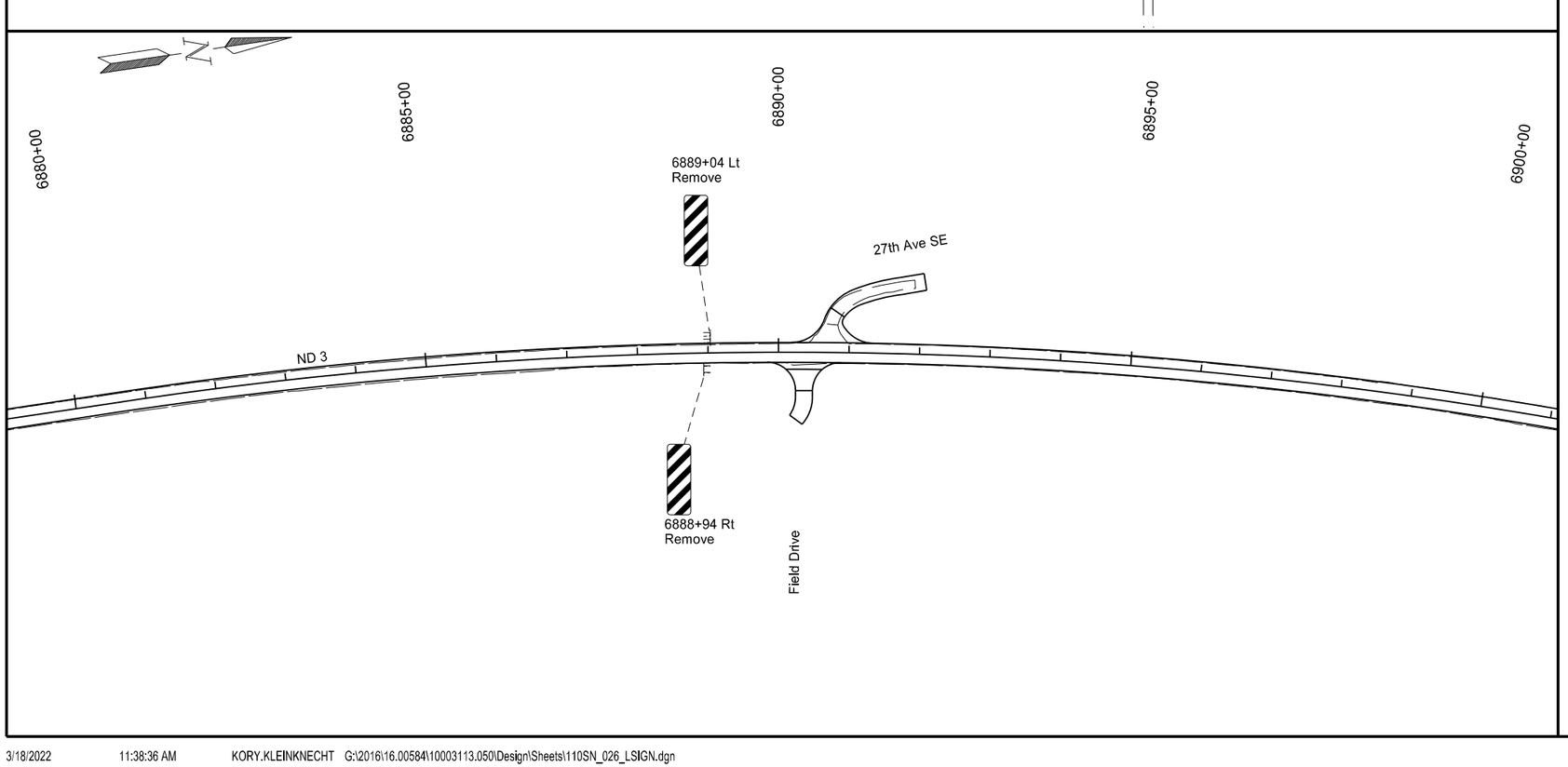
Signing Layout

ND 3
Tuttle N to W Jct 200

6820+00 to 6860+00
Wells County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	110	26





REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL
KLEINKNECHT
PE 27746
DATE 03/18/2022
NORTH DAKOTA

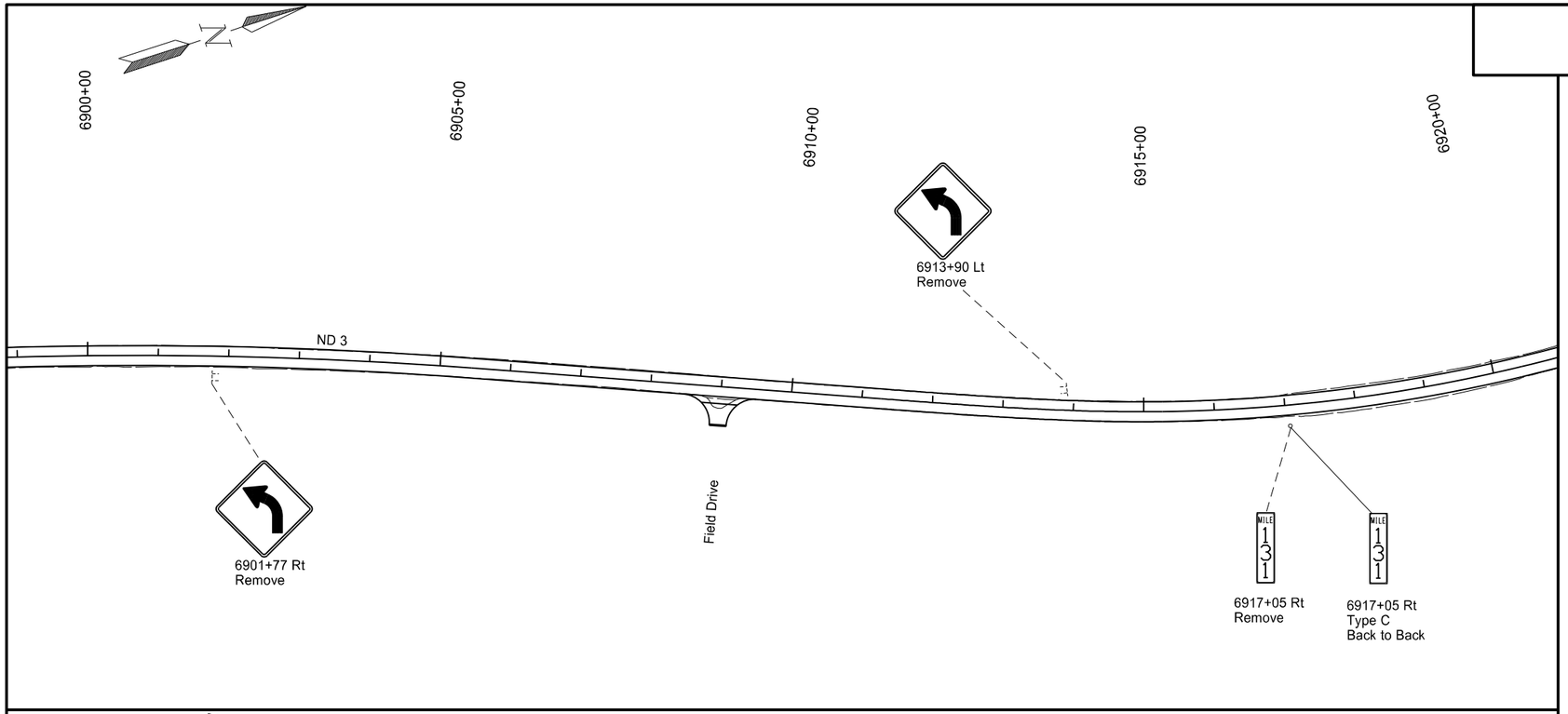
Signing Layout

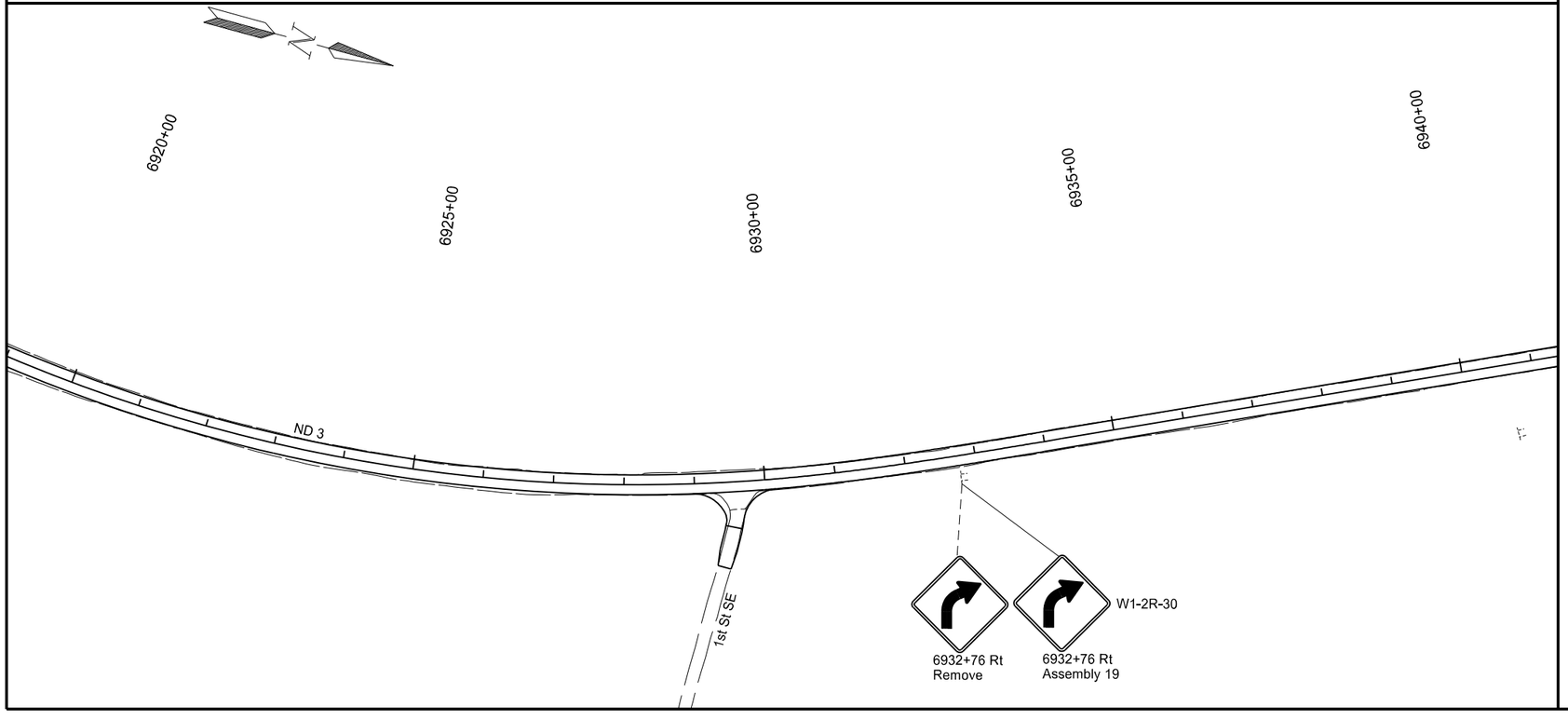
ND 3
Tuttle N to W Jct 200

6860+00 to 6900+00
Wells County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	110	27

SPEC	CODE	BID ITEM	QTY	UNIT
754	0563	REFERENCE MARKER - TYPE C		
		6917+05 Rt	1	EA





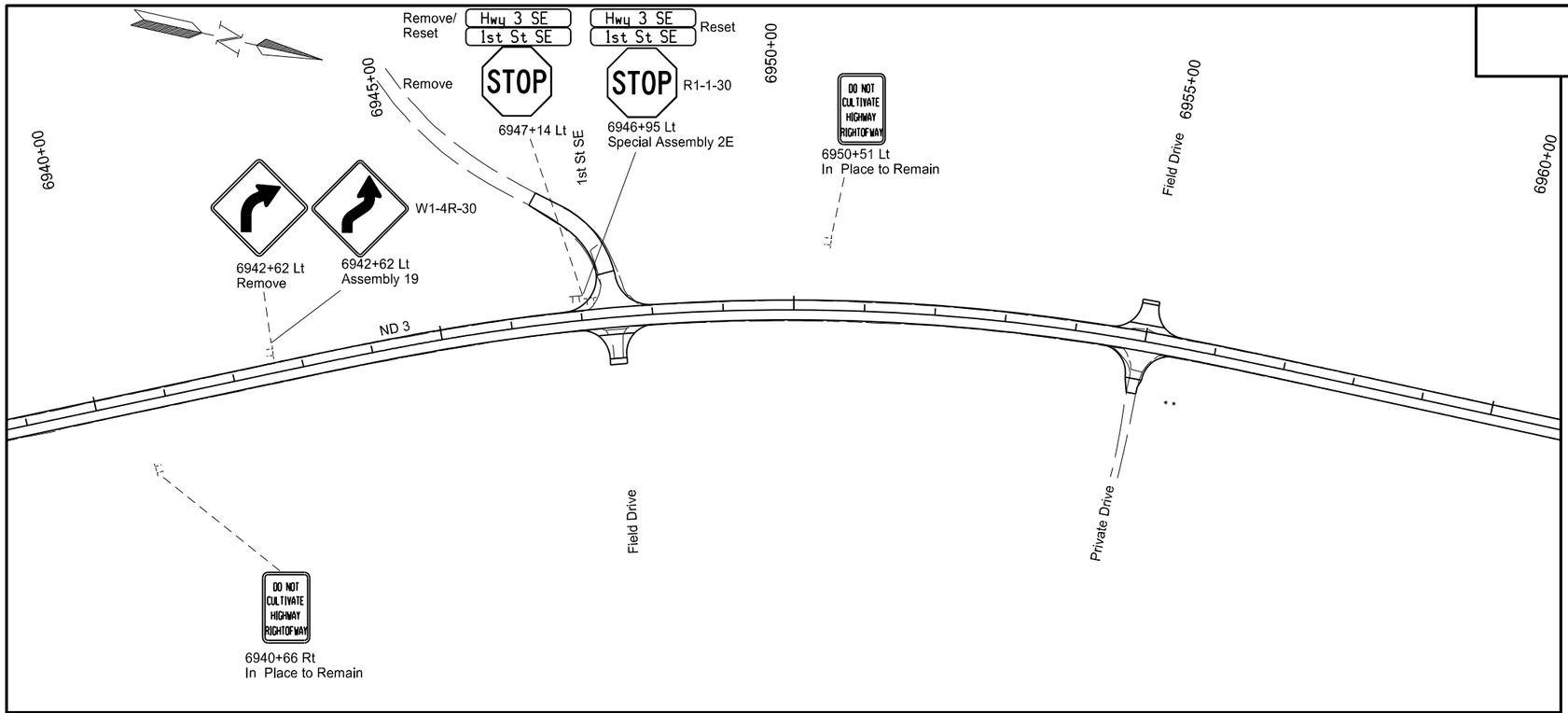
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 03/18/2022
NORTH DAKOTA

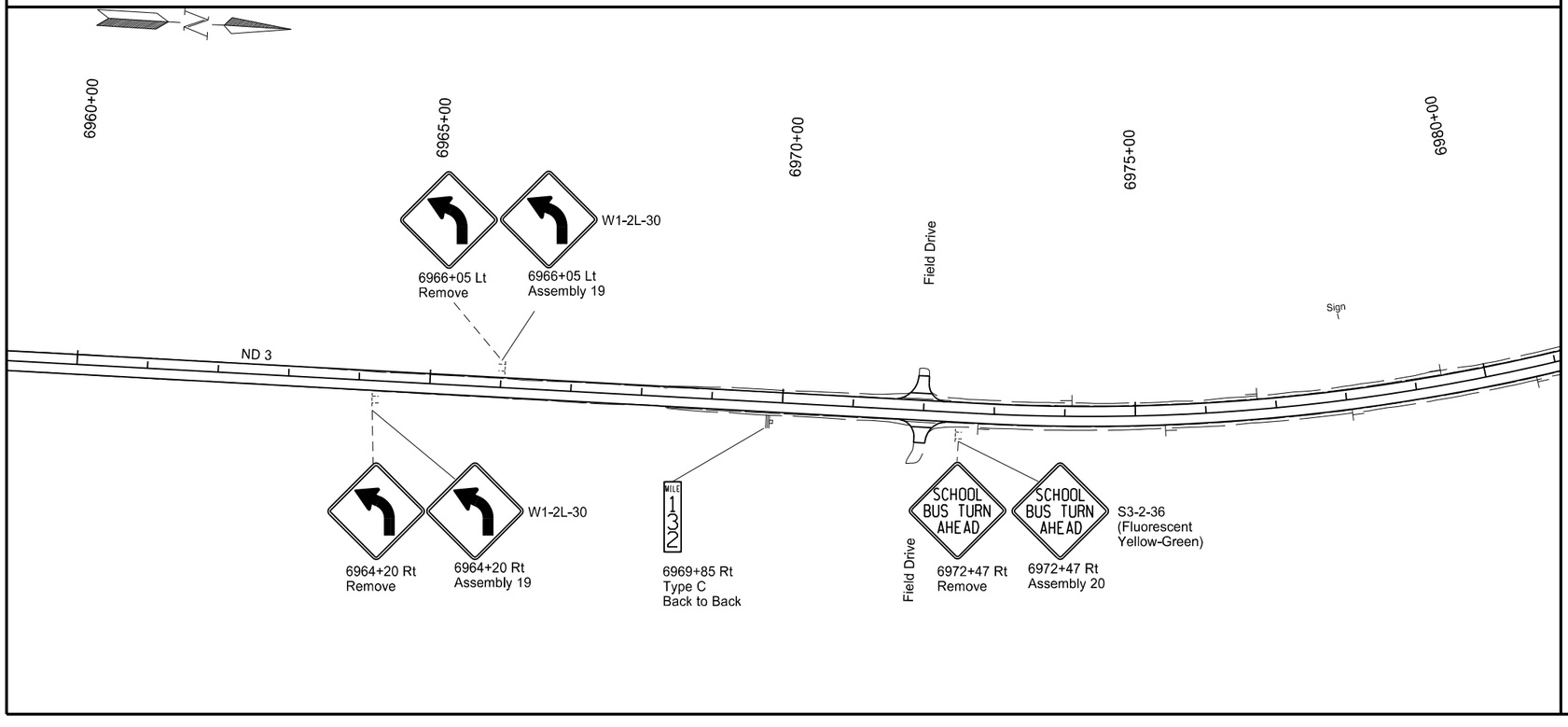
Signing Layout

ND 3
Tuttle N to W Jct 200

6900+00 to 6940+00
Wells County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	110	28





SPEC	CODE	BID ITEM	QTY	UNIT
754	0150	DELINEATORS - TYPE A		
		6972+78 Rt	1	EA
		6974+10 Lt	1	EA
		6975+42 Rt	1	EA
		6976+74 Lt	1	EA
		6978+06 Rt	1	EA
		6979+38 Lt	1	EA
754	0563	REFERENCE MARKER - TYPE C		
		6969+85 Rt	1	EA

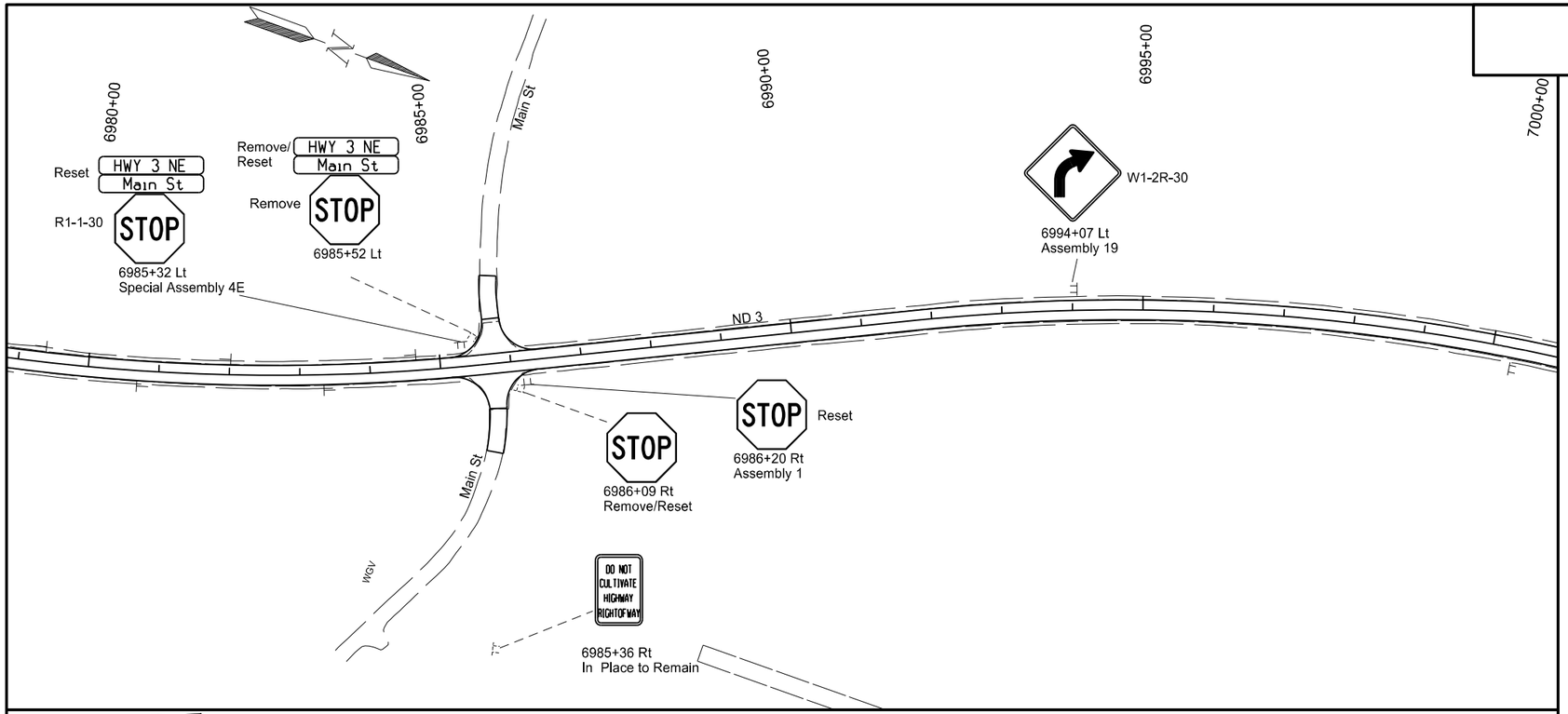
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE-27746
DATE 03/18/2022
NORTH DAKOTA

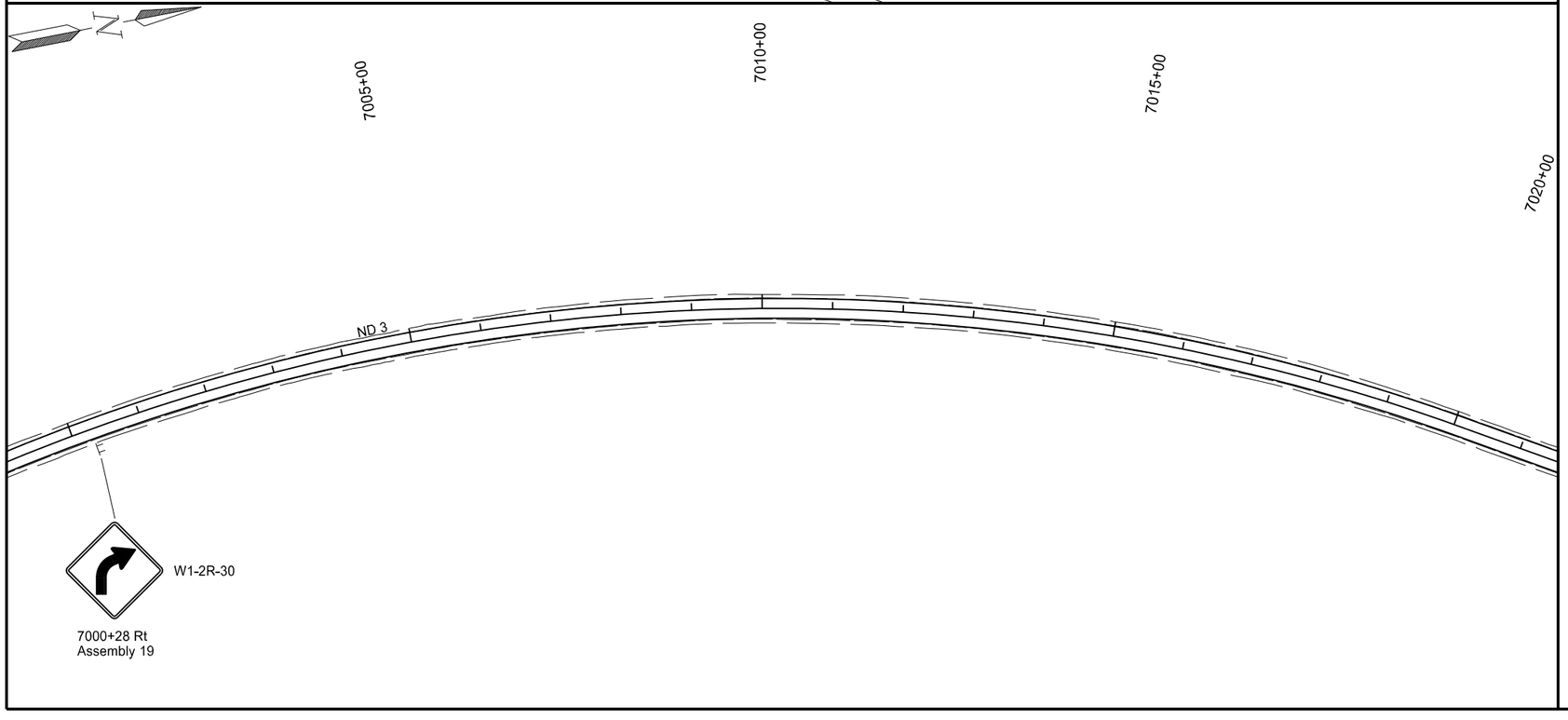
Signing Layout

ND 3
Tuttle N to W Jct 200

6940+00 to 6980+00
Wells County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	110	29





SPEC	CODE	BID ITEM	QTY	UNIT
754	0150	DELINEATORS - TYPE A		
		6980+70 Rt	1	EA
		6982+02 Lt	1	EA
		6983+34 Rt	1	EA
		6984+66 Lt	1	EA

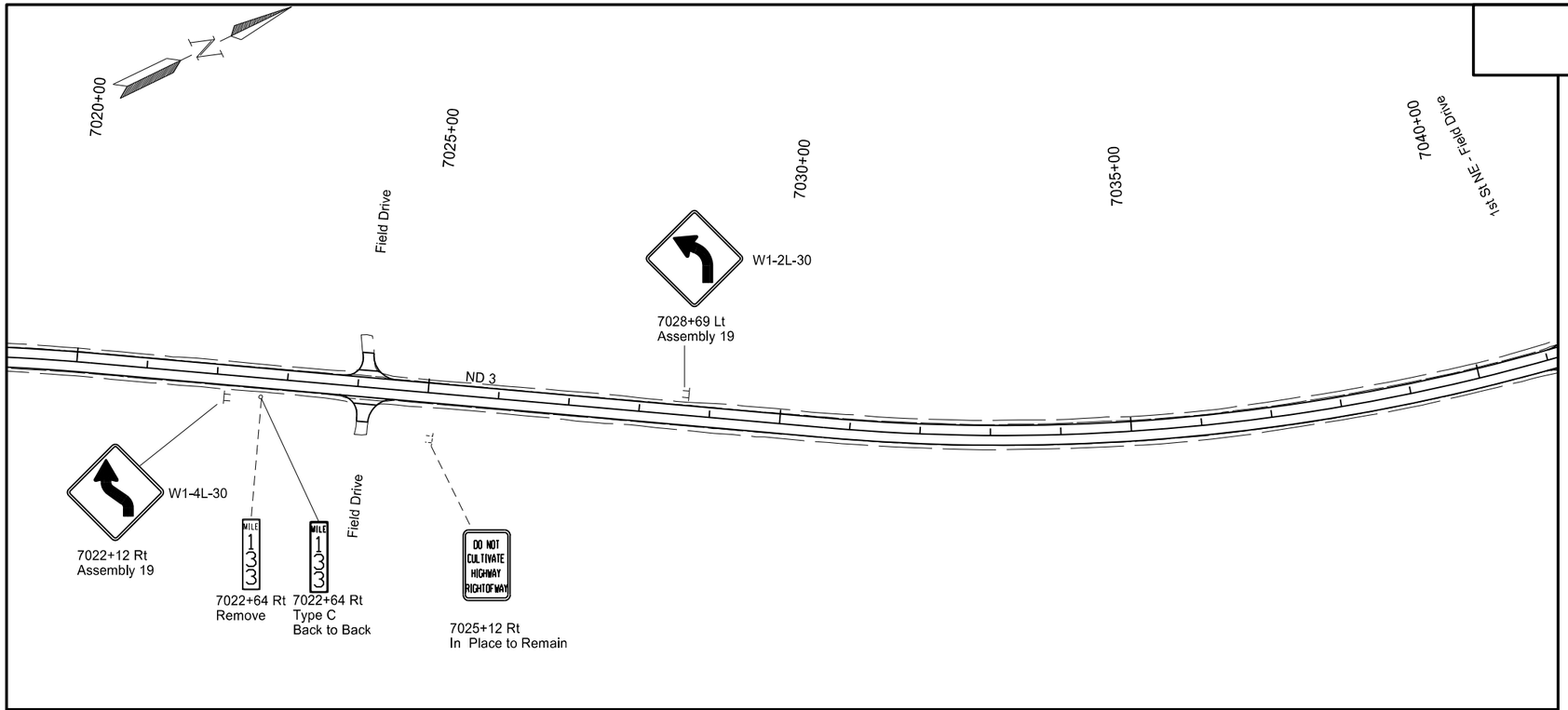
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 03/18/2022
NORTH DAKOTA

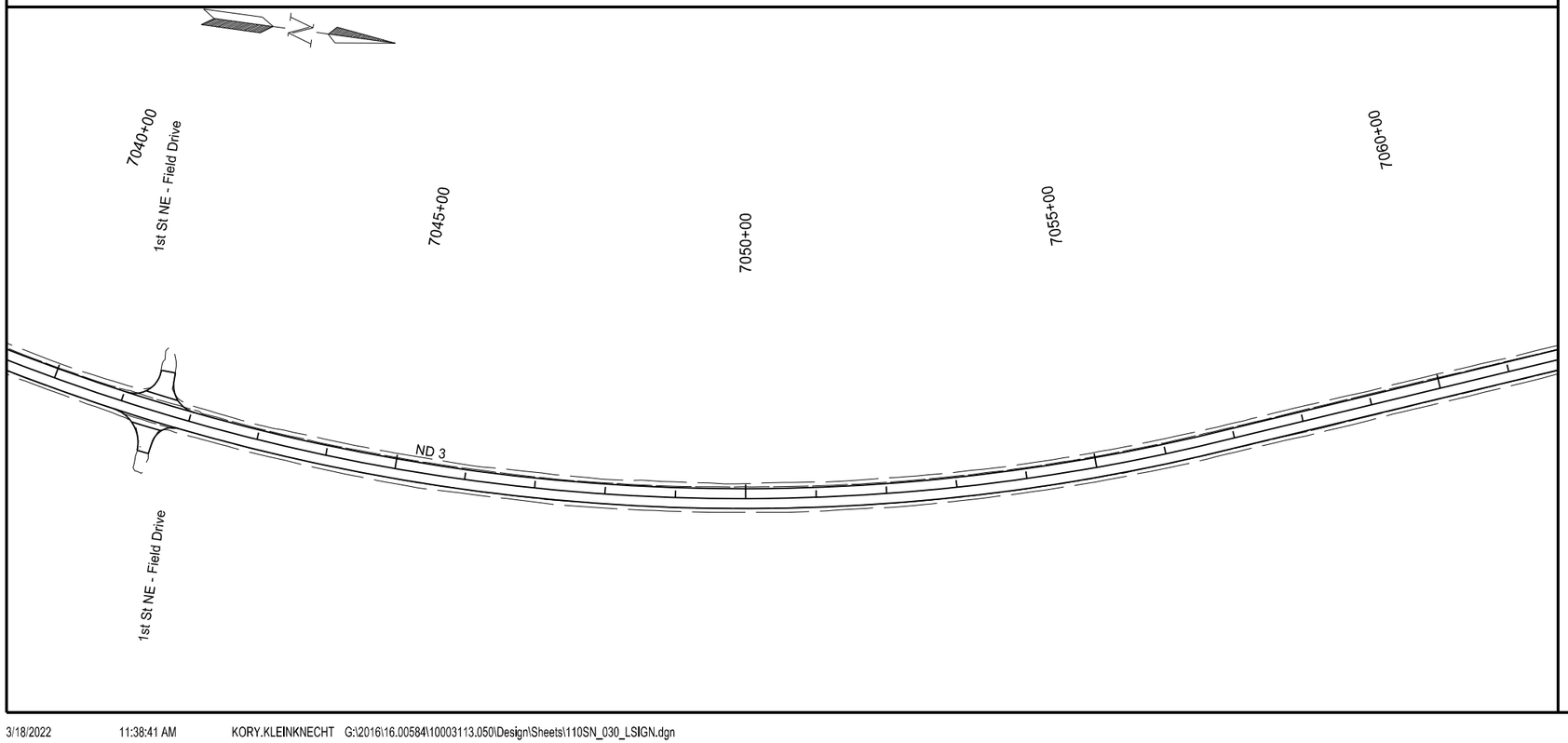
Signing Layout

ND 3
Tuttle N to W Jct 200

6980+00 to 7020+00
Wells County

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	110	30





SPEC	CODE	BID ITEM	QTY	UNIT
754	0563	REFERENCE MARKER - TYPE C		
		7022+64 Rt	1	EA

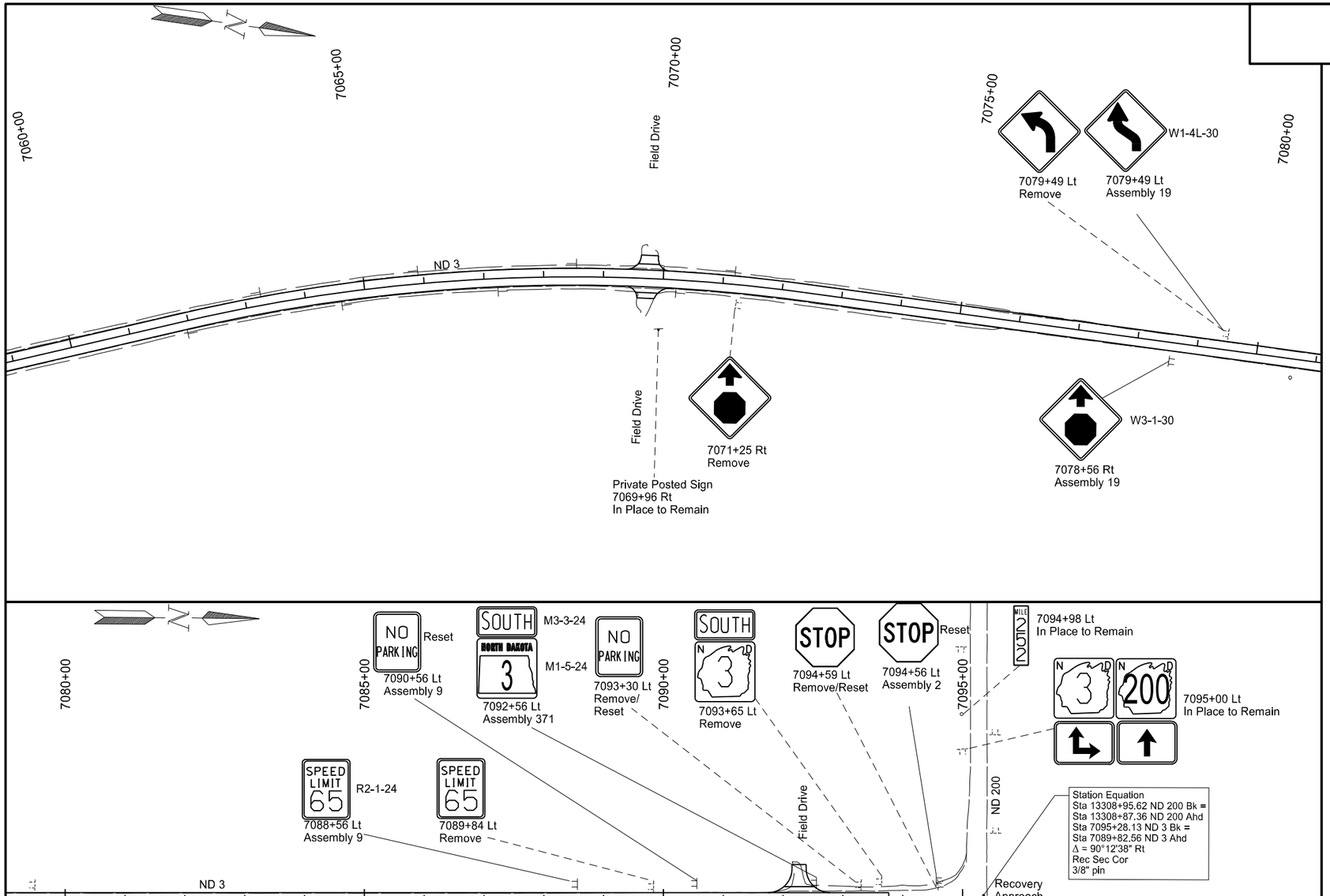
REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 03/18/2022
NORTH DAKOTA

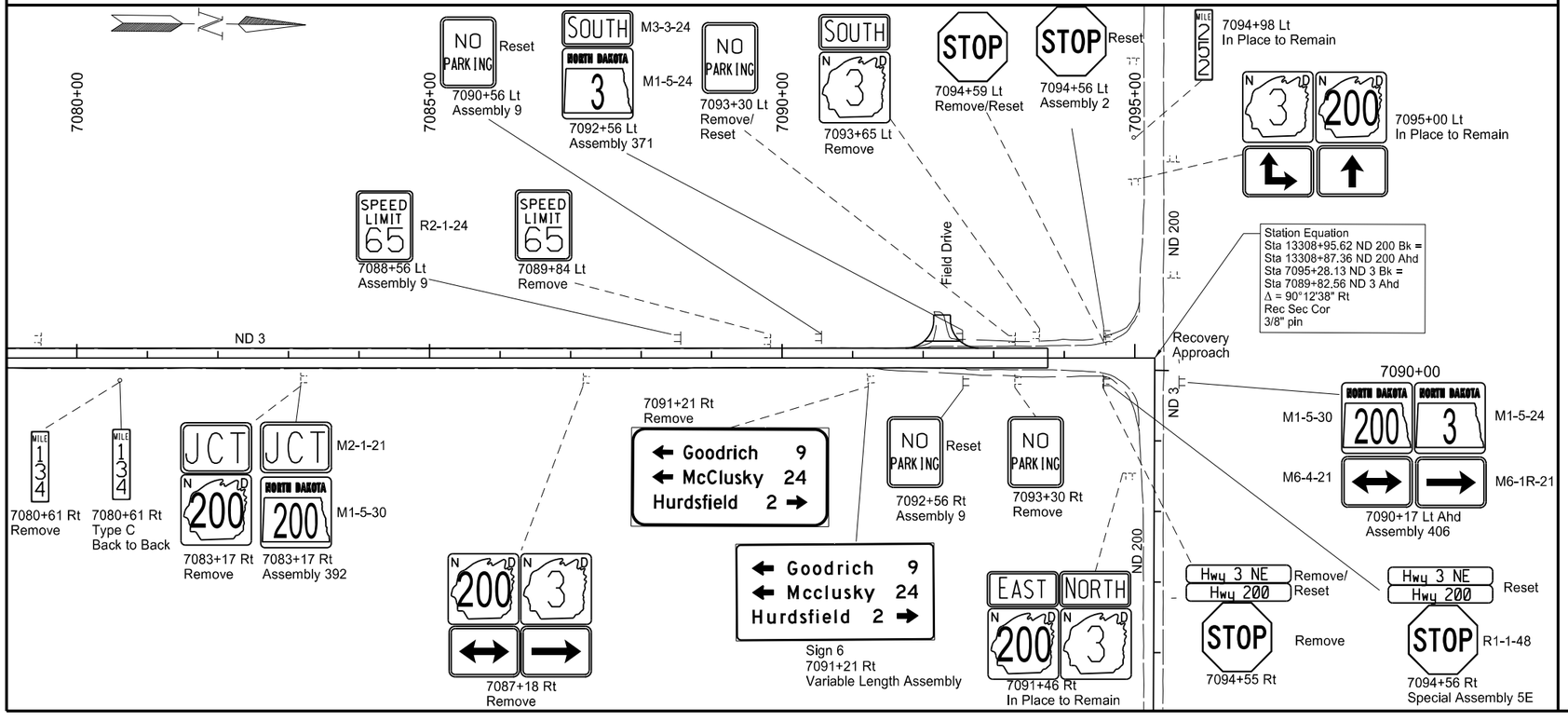
Signing Layout

ND 3
Tuttle N to W Jct 200

7020+00 to 7060+00
Wells County

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	110	31





SPEC	CODE	BID ITEM	QTY	UNIT
754	0150	DELINEATORS - TYPE A		
		7061+95 Rt	1	EA
		7063+27 Lt	1	EA
		7064+59 Rt	1	EA
		7065+91 Lt	1	EA
		7067+23 Rt	1	EA
		7068+55 Lt	1	EA
		7070+22 Rt	1	EA
		7071+19 Lt	1	EA
754	0563	REFERENCE MARKER - TYPE C		
		7080+61 Rt	1	EA

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 03/18/2022
NORTH DAKOTA

Signing Layout

ND 3
Tuttle N to W Jct 200

7060+00 to 7093+76.57
Wells County

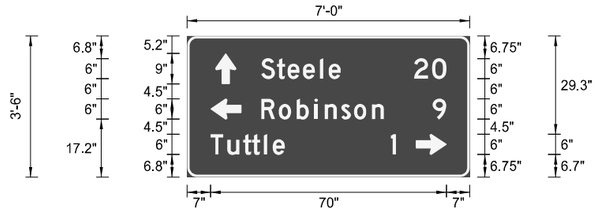
STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	110	32

SIGN NUMBER	Sign 1
WIDTH X HEIGHT	7'-0" x 3'-6"
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	ANGLE
ND_6IN_TYPE D	8.5	27.7	6	9	0
ND_6IN_TYPE D	7	17.3	6	9	90
ND_6IN_TYPE D	68	6.8	6	9	270

STATION(S): 5987+03 LT

AREA: 24.5 Sq.Ft.



Dimensions are in inches.tenths

Letter locations are panel edge to lower left corner

PANEL STYLE: ND_Conv_Destination.ssl

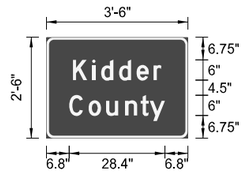
LETTER POSITION (X)																			LENGTH	SIZE	SERIES
S	t	e	e	l	e														23.6	6/4.5	D 2000
22	26.7	29.8	34.4	39.4	42.1																
2	0																		9.5	6	D 2000
67.5	72.7																				
R	o	b	i	n	s	o	n												36.5	6/4.5	D 2000
22	27.2	32.6	37.9	40.9	45.8	49.6	54.9														
9																			4.1	6	D 2000
72.9																					
T	u	t	t	l	e														22	6/4.5	D 2000
7	12	16.7	19.3	22.8	25.5																
1																			1.5	6	D 2000
60.5																					

SIGN NUMBER	Sign 2
WIDTH X HEIGHT	3'-6" x 2'-6"
BORDER WIDTH	0.75" (inset 0")
CORNER RADIUS	2.25"
MOUNTING	Ground
BACKGROUND	TYPE: IV Reflective
	COLOR: Green
LEGEND/BORDER	TYPE: IV Reflective
	COLOR: White

SYMBOL	X	Y	WID	HT	ANGLE

STATION(S): 6661+07 LT

AREA: 8.8 Sq.Ft.



Dimensions are in inches.tenths

Letter locations are panel edge to lower left corner

PANEL STYLE: ND_Conv_Boundary.ssl

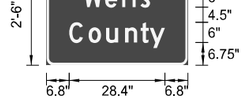
LETTER POSITION (X)																			LENGTH	SIZE	SERIES
K	i	d	d	e	r														26.3	6/4.5	D 2000
7.9	13.6	16.3	21.6	26.8	31.9																
C	o	u	n	t	y														28.4	6/4.5	D 2000
6.8	12.5	17.8	23.4	28	30.7																

SIGN NUMBER	Sign 3
WIDTH X HEIGHT	3'-6" x 2'-6"
BORDER WIDTH	0.75" (inset 0")
CORNER RADIUS	2.25"
MOUNTING	Ground
BACKGROUND	TYPE: IV Reflective
	COLOR: Green
LEGEND/BORDER	TYPE: IV Reflective
	COLOR: White

SYMBOL	X	Y	WID	HT	ANGLE

STATION(S): 6663+01 RT

AREA: 8.8 Sq.Ft.



Dimensions are in inches.tenths

Letter locations are panel edge to lower left corner

PANEL STYLE: ND_Conv_Boundary.ssl

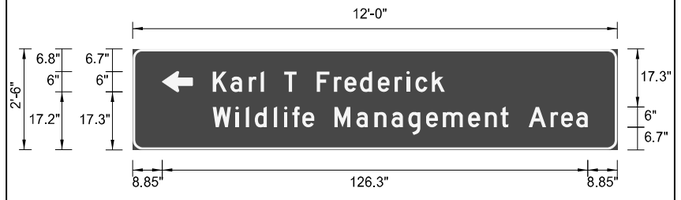
LETTER POSITION (X)																			LENGTH	SIZE	SERIES
W	e	l	l	s															19.6	6/4.5	D 2000
11.2	17.5	22.5	25.6	28																	
C	o	u	n	t	y														28.4	6/4.5	D 2000
6.8	12.5	17.8	23.4	28	30.7																

SIGN NUMBER	Sign 4
WIDTH X HEIGHT	12'-0" x 2'-6"
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	ANGLE
ND_6IN_TYPE D	8.8	17.2	6	9	90

STATION(S): 6706+96 RT

AREA: 30.0 Sq.Ft.



Dimensions are in inches.tenths

Letter locations are panel edge to lower left corner

PANEL STYLE: ND_Conv_Destination.ssl

LETTER POSITION (X)																			LENGTH	SIZE	SERIES
K	a	r	l		T		F	r	e	d	e	r	i	c	k				68.9	6/4.5	D 2000
23.8	29.1	34.5	38.1	39	45	48.7	54.7	59.8	62.9	67.5	72.8	77.8	81.4	84	88.9						
W	i	l	d	l	i	f	e		M	a	n	a	g	e	m	e	n	t	111.3	6/4.5	D 2000
23.8	30.6	33.6	36.3	42	45	47.4	50.4	54	60	66.4	71.9	76.9	81.9	87.1	92.2	99.7	104.7	109.3			
	A	r	e	a																6/4.5	D 2000
111.7	117.7	124.1	127.3	131.7																	

REGISTERED PROFESSIONAL ENGINEER
KORY MICHAEL KLEINKNECHT
PE 27746
DATE 03/18/2022
NORTH DAKOTA

Signing Details

ND 3
Tuttle N to W Jct 200

Perforated Tube Details
SIgn 1 to Sign 4

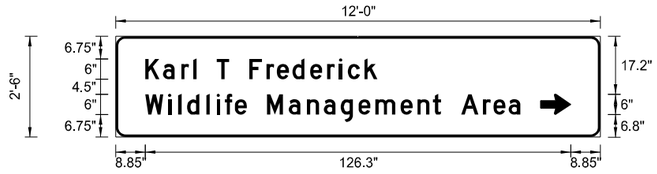
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	110	33

SIGN NUMBER	Sign 5
WIDTH X HEIGHT	12'-0" x 2'-6"
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	ANGLE
ND_6IN_TYPE D	126.2	6.8	6	9	270

STATION(S):
6721+93 LT

AREA: 30.0 Sq.Ft.



Dimensions are in inches.tenths

Letter locations are panel edge to lower left corner

PANEL STYLE: ND_Conv_Destination.ssl

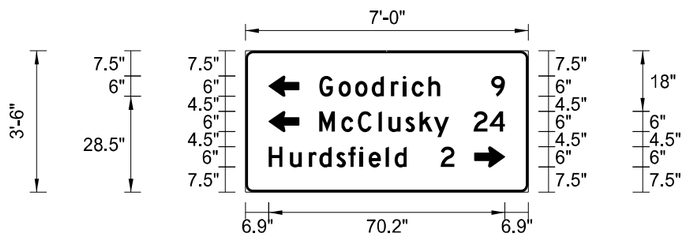
LETTER POSITION (X)																																LENGTH	SIZE	SERIES
K	a	r	l		T		F	r	e	d	e	r	i	c	k																		68.9	6/4.5	D 2000
8.8	14.1	19.5	23	24	30	33.7	39.7	44.8	47.9	52.5	57.8	62.8	66.3	69	73.9																			
W	i	l	d	l	i	f	e		M	a	n	a	g	e	m	e	n	t		A	r	e	a										111.3	6/4.5	D 2000
8.8	15.5	18.6	21.2	26.9	30	32.4	35.4	39	45	51.4	56.9	61.9	66.9	72.1	77.1	84.7	89.7	94.3	96.7	102.7	109.1	112.2	116.7											

SIGN NUMBER	Sign 6
WIDTH X HEIGHT	7'-0" x 3'-6"
BORDER WIDTH	0.75" (inset 0")
CORNER RADIUS	2.25"
MOUNTING	Ground
BACKGROUND	TYPE: IV Reflective
	COLOR: Green
LEGEND/BORDER	TYPE: IV Reflective
	COLOR: White

SYMBOL	X	Y	WID	HT	ANGLE
ND_6IN_TYPE D	6.9	28.5	6	9	90
ND_6IN_TYPE D	6.9	18	6	9	90
ND_6IN_TYPE D	68.1	7.5	6	9	270

STATION(S):
7091+21 RT

AREA: 24.5 Sq.Ft.



Dimensions are in inches.tenths

Letter locations are panel edge to lower left corner

PANEL STYLE: ND_Conv_Destination.ssl

LETTER POSITION (X)																																LENGTH	SIZE	SERIES
G	o	o	d	r	i	c	h																									35.9	6/4.5	D 2000
21.9	27.7	32.6	37.5	43.2	46.8	49.4	54.3																											
9																																4.1	6	D 2000
73																																		
M	c	C	l	u	s	k	y																									38.6	6/4.5	D 2000
21.9	28.5	33.4	39.6	42.5	47.5	51.7	56																											
2	4																															9.3	6	D 2000
67.8	72.6																																	
H	u	r	d	s	f	i	e	l	d																							41	6/4.5	D 2000
6.9	13.2	18.8	22	27	30.6	34	36.6	41.7	44.3																									
2																																4.1	6	D 2000
58																																		



Signing Details

ND 3
Tuttle N to W Jct 200

Perforated Tube Details
Sign 5 to Sign 6

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	180	1

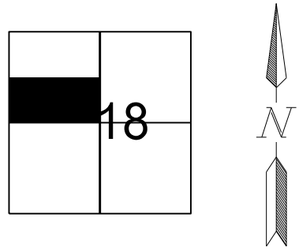
NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

TEST HOLE PLAT

Location: S1/2NW14 18-142-73 County: Kidder

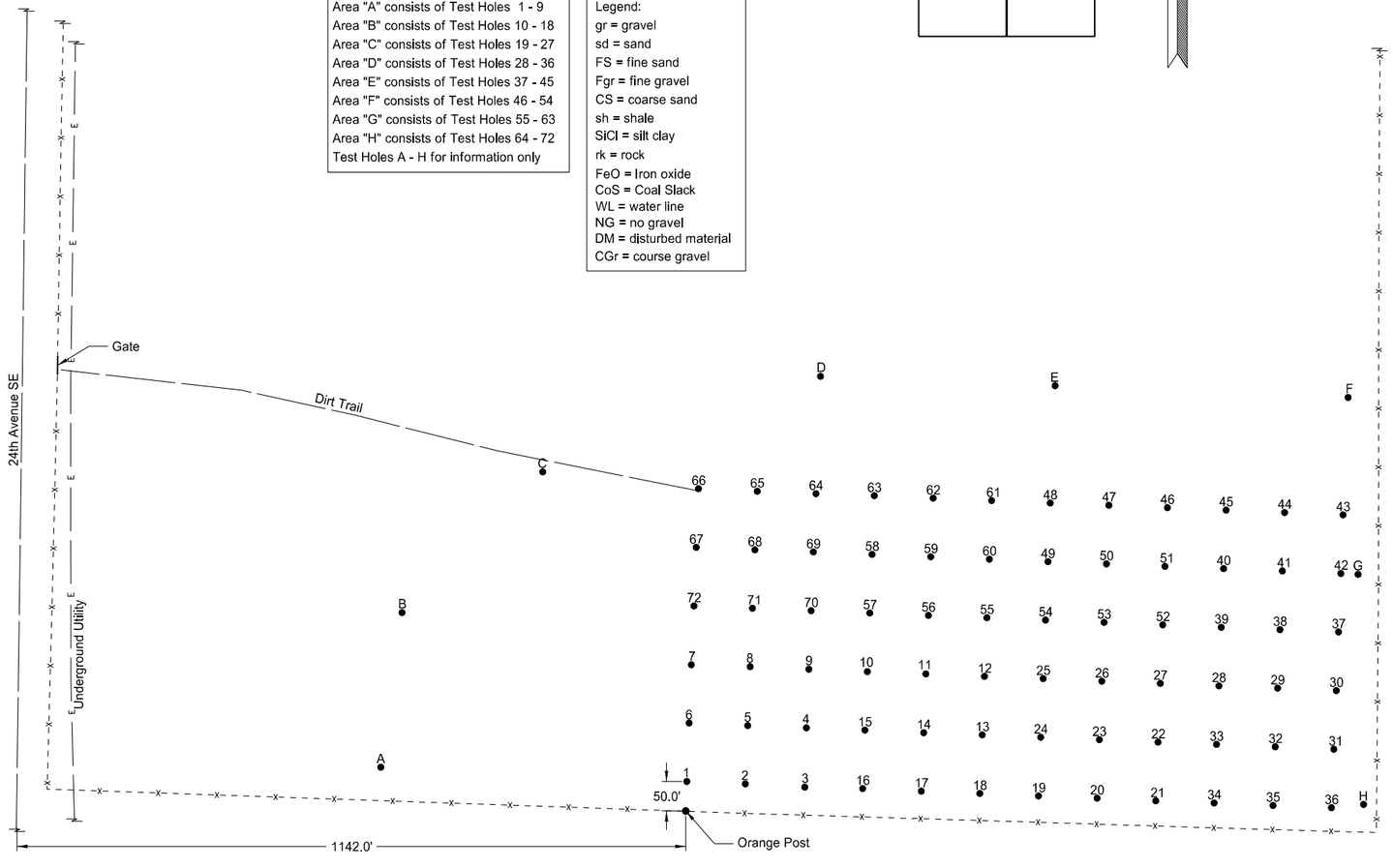
Ownership: Darwin and Diane Witt

LOCATION OF PIT IN SECTION



Area "A" consists of Test Holes 1 - 9
Area "B" consists of Test Holes 10 - 18
Area "C" consists of Test Holes 19 - 27
Area "D" consists of Test Holes 28 - 36
Area "E" consists of Test Holes 37 - 45
Area "F" consists of Test Holes 46 - 54
Area "G" consists of Test Holes 55 - 63
Area "H" consists of Test Holes 64 - 72
Test Holes A - H for information only

Legend:
gr = gravel
sd = sand
FS = fine sand
Fgr = fine gravel
CS = coarse sand
sh = shale
SiCl = silt clay
rk = rock
FeO = Iron oxide
CoS = Coal Slack
WL = water line
NG = no gravel
DM = disturbed material
CGr = course gravel



Scale 1"=250'

7/18/2018 3:23:00 PM jaswank H:\jswank\Swank_Hoesel\Microstation\Range 70-79\1814207301 Witt.dgn

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	180	2

PIT LOGGING BY TEST HOLES

Test Hole No.	Depth of Stripping (Ft)	Depth of Material (Ft)	% Retained on 1½" Screen	% Retained on ¾" Screen	% Retained on 3/8" Screen	% Retained on #4 Screen	Bottom of Test Hole
1	1.5	2.5 Fgr	1	12	25	37	SiCl
		1.0 FS					
		4.0 gr					
2	2.0	1.0 Fgr	1	14	28	41	+cave
		2.0 gr					
		8.0 Fgr					
3	1.5	4.0 fgr	1	7	16	25	SiCl
		0.5 gr					
		1.0 Fgr					
		1.0 FS					
		5.0 gr					
4	2.0	2.0 Fgr	0	13	25	35	SiCl
		2.0 gr					
		1.5 Fgr					
		2.0 sd					
		2.5 Fgr					
5	0.5	1.5 gr	0	6	19	28	SiCl
		3.0 Fgr					
		1.0 FS					
		1.0 Fgr					
		2.5 gr					
6	3.0	1.0 sd	0	12	28	42	SiCl
		1.0 Fgr					
		1.0 gr					
		2.0 Fgr					
		1.0 gr					
7	5.0	2.0 Fgr	0	2	6	11	SiCl
		2.0 sd					
		1.0 gr					
8	1.0	3.0 Fgr	0	6	17	29	SiCl
		3.0 sd					
		3.0 Fgr					
9	4.0	2.0 gr	0	9	18	28	SiCl
		1.0 Fgr					
		2.0 gr					
		1.0 FS					
		1.0 Fgr					
		1.0 gr					
10	0.5	5.5 Fgr	0	7	19	33	SiCl
		2.5 sd					
		3.5 Fgr					
		1.0 SiCl Fgr					
11	2.5	0.5 Fgr	2	15	26	37	SiCl
		2.0 gr					
		3.0 Cgr					
		1.0 gr					
		3.0 Fgr					
		2.0 gr					
		3.0 Fgr					

PIT LOGGING BY TEST HOLES

Test Hole No.	Depth of Stripping (Ft)	Depth of Material (Ft)	% Retained on 1½" Screen	% Retained on ¾" Screen	% Retained on 3/8" Screen	% Retained on #4 Screen	Bottom of Test Hole
12	1.0	2.0 Fgr	1	11	27	39	+cave
		2.0 Cgr					
		8.5 Fgr					
		0.5 sd					
		1.0 Fgr					
13	0.5	3.5 gr	2	10	22	33	+gr
		3.0 Cgr					
		4.0 Fgr					
		4.0 gr					
		1.5 Fgr					
		2.5 FS					
		1.0 Fgr					
14	1.0	2.5 Fgr	0	11	24	35	SiCl
		0.5 sd					
		1.0 Fgr					
		2.0 gr					
		1.0 Fgr					
		0.5 sd					
		1.0 FS					
		1.0 CS					
		6.0 Fgr					
		1.0 FS					
		0.5 Fgr					
15	0.5	4.5 gr	0	12	21	33	SiCl
		2.0 Fgr					
		2.0 sd					
		3.0 gr					
		1.0 Fgr					
16	1.0	2.0 Fgr	2	9	17	26	SiCl
		1.0 gr					
		1.0 Fgr					
		1.0 gr					
		2.0 sd					
17	0.5	2.5 Fgr	0	4	13	22	+gr
		2.0 sd					
		1.5 Fgr					
		0.5 sd					
		0.5 sd CoS					
		2.0 sd					
		1.0 gr CoS					
		4.5 Fgr					
		1.0 FS					
		4.0 Fgr					
18	1.0	3.0 Fgr	1	9	20	31	+cave
		6.0 gr					
		2.0 Fgr					
		1.0 gr CoS					
		1.0 Fgr					

PIT LOGGING BY TEST HOLES

Test Hole No.	Depth of Stripping (Ft)	Depth of Material (Ft)	% Retained on 1½" Screen	% Retained on ¾" Screen	% Retained on 3/8" Screen	% Retained on #4 Screen	Bottom of Test Hole
19	3.0	1.0 sd	0	10	28	40	+cave
		2.0 Fgr					
		3.0 gr					
		1.5 Fgr					
		0.5 sd CoS					
		1.0 gr CoS					
20	3.0	2.0 Fgr	0	10	21	33	+cave
		2.0 gr					
		2.0 Fgr					
		3.0 gr					
		1.0 FS					
		1.5 Fgr					
		0.5 FS					
		1.0 Fgr					
21	0.5	3.5 Fgr	0	6	17	26	WL
		2.0 gr					
		1.0 Fgr					
		1.0 sd					
		1.0 Fgr					
		3.5 sd					
		0.5 FS					
		1.0 sd					
		0.5 FS					
		1.0 sd					
		0.5 sd SiCl					
		1.5 Fgr					
		1.0 FgrSiCl					
		0.5 sd					
		0.5 sd sh					
		1.0 Fgr					
22	4.0	2.0 Fgr	0	10	21	34	+cave
		2.0 gr					
		1.0 Cgr					
		5.0 gr					
		1.0 Fgr					
		2.0 FS					
23	1.5	3.5 Fgr	1	12	29	44	+cave
		0.5 gr CoS					
		0.5 Fgr					
		1.0 gr					
		4.0 Fgr					
		1.0 gr					
		1.0 Fgr					
24	2.0	2.0 Fgr	0	8	20	31	+cave
		2.0 gr					
		3.0 Fgr					
		1.0 sd					
		4.0 gr					
		1.0 Fgr					
		1.0 gr					
25	2.0	7.5 gr	1	23	44	57	+cave

PIT LOGGING BY TEST HOLES

Test Hole No.	Depth of Stripping (Ft)	Depth of Material (Ft)	% Retained on 1½" Screen	% Retained on ¾" Screen	% Retained on 3/8" Screen	% Retained on #4 Screen	
26	1.0	2.0 Fgr	1	4	12	20	+gr
		3.5 gr					
		2.5 FS					
		1.0 Fgr					
		1.0 FS					
		0.5 FgrSiCl					
		4.5 Fgr					
		4.0 FS					
27	3.0	6.0 Fgr	0	12	26	39	+cave
		1.0 gr					
		3.0 Fgr					
		0.5 sd sh					
		1.5 Fgr					
28	4.0	9.0 gr	2	14	32	46	+cave
29	2.0	10.0 gr	4	30	47	60	+cave
30	2.5	12.5 gr	1	9	26	42	+cave
31	1.5	2.0 Fgr	1	13	24	35	+cave
		0.5 sd					
		3.0 Fgr					
		1.0 gr					
		5.0 Fgr					
		1.0 gr CoS					
		2.0 sd					
32	3.0	2.0 gr	2	16	31	44	+cave
		1.0 Fgr					
		2.0 gr					
		1.0 Cgr					
		5.0 gr					
		1.0 Fgr					
		1.0 FS					
		1.0 Fgr					
33	1.0	9.0 Fgr	0	13	25	37	+cave
		1.0 CS					
		2.0 sd					
		1.0 Fgr					
34	2.0	3.0 Fgr	1	15	28	41	+cave
		8.0 gr					
		2.0 Fgr					

RANGE 73 **TWP** 142 **SEC** 18

COUNTY Kidder Oct-16

PROSPECTED BY Rogstad/Usher

INSPECTED & APPROVED Jeffrey Swank Dec-16

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-1-003(050)113	180	3

PIT LOGGING BY TEST HOLES

Test Hole No.	Depth of Stripping (Ft)	Depth of Material (Ft)	% Retained on 1½" Screen	% Retained on ¾" Screen	% Retained on 3/8" Screen	% Retained on #4 Screen	Bottom of Test Hole
35	2.0	1.0 Fgr	0	13	25	37	SiCl
		2.0 gr					
		7.0 Fgr					
		1.0 CS					
		1.0 Fgr					
		2.0 sd					
		1.0 FS					
		1.0 sd					
		1.0 Fgr					
36	1.0	4.0 Cgr	3	15	29	41	+cave
		2.0 gr					
		1.0 Cgr					
		3.0 gr					
		1.0 Fgr					
		1.0 gr					
		1.0 Fgr					
		1.0 FS					
		1.0 Fgr					
37	4.0	2.0 gr	3	20	38	54	+cave
		9.0 Fgr					
38	1.0	4.0 gr	1	14	26	46	+cave
		2.0 Fgr					
		5.0 gr					
39	3.0	3.5 Fgr	1	15	35	50	+cave
		0.5 sd					
		3.0 Fgr					
		1.5 gr					
		1.5 Fgr					
		1.0 gr					
40	2.0	5.0 gr	0	13	25	38	+cave
		1.0 CS					
		4.0 gr					
41	2.5	1.5 Fgr	2	20	37	51	+cave
		3.0 gr					
		1.0 Fgr					
		1.0 sd					
		1.0 Fgr					
		1.0 CS					
		2.0 Fgr					
		1.0 gr					
42	2.0	11.5 gr	1	11	27	44	+cave
		1.5 Fgr					
43	2.0	3.0 Fgr	0	10	22	33	+cave
		2.0 gr					
		0.5 Fgr					
		0.5 sd CoS					
		1.5 sd					
		3.5 Fgr					

PIT LOGGING BY TEST HOLES

Test Hole No.	Depth of Stripping (Ft)	Depth of Material (Ft)	% Retained on 1½" Screen	% Retained on ¾" Screen	% Retained on 3/8" Screen	% Retained on #4 Screen	Bottom of Test Hole
44	1.0	1.0 Fgr	1	14	31	46	+cave
		5.0 gr					
		3.0 Cgr					
		3.0 gr					
45	2.5	4.0 Fgr	1	16	33	47	+cave
		2.5 gr					
		1.0 Fgr					
		2.0 gr					
		1.0 Fgr					
		1.0 sd					
		1.0 FS					
		1.0 sd					
		1.0 FS					
		1.0 Fgr					
46	2.5	1.5 gr	1	13	28	44	+cave
		4.0 Fgr					
		6.0 gr					
		2.0 FS					
47	0.5	2.5 gr	0	10	23	35	+cave
		2.0 Fgr					
		1.0 FS					
		5.5 Fgr					
		0.5 FS					
		1.0 sd					
		1.0 FS					
		1.0 sd					
		1.0 FgrSiCl					
		2.0 Fgr					
50	1.5	2.5 Fgr	1	9	23	39	+cave
		11.0 gr					
		1.0 Fgr					

PIT LOGGING BY TEST HOLES

Test Hole No.	Depth of Stripping (Ft)	Depth of Material (Ft)	% Retained on 1½" Screen	% Retained on ¾" Screen	% Retained on 3/8" Screen	% Retained on #4 Screen	Bottom of Test Hole
51	1.0	4.0 Fgr	1	11	29	44	+cave
		1.0 CS					
		2.0 Fgr					
		3.0 gr					
		1.0 gr CoS					
		1.5 Fgr					
		0.5 FS					
		0.5 Fgr					
52	1.5	2.5 gr	2	14	29	44	+cave
		2.0 Fgr					
		8.0 gr					
53	2.0	3.0 fgr	0	7	17	29	WL
		2.5 gr					
		2.5 Fgr					
		1.0 sd CoS					
		1.0 Fgr					
		0.5 FS					
		1.0 sd					
		1.5 FS					
		2.0 sd					
54	0.5	7.5 gr	3	21	36	55	+cave
		5.0 gr					
55	1.5	1.5 Fgr	0	20	33	45	SiCl
		2.0 gr					
		1.5 Fgr					
		0.5 sd					
		6.0 Fgr					
		2.0 gr					
		1.0 Fgr					
		1.0 sd					
56	3.0	3.0 Fgr	0	9	18	28	SiCl
		3.0 gr					
		2.0 FS					
		1.0 gr					
		4.0 Fgr					
57	1.5	2.5 Fgr	0	11	22	33	SiCl
		1.0 gr					
		2.0 Fgr					
		1.0 sd					
		2.0 FS					
		2.0 Fgr					

PIT LOGGING BY TEST HOLES

Test Hole No.	Depth of Stripping (Ft)	Depth of Material (Ft)	% Retained on 1½" Screen	% Retained on ¾" Screen	% Retained on 3/8" Screen	% Retained on #4 Screen	Bottom of Test Hole
58	2.0	7.0 Fgr	1	18	32	44	WL
		1.5 gr					
		1.5 sd					
		1.0 Fgr					
59	1.0	7.0 gr	0	11	23	35	SiCl
		2.0 FS					
		3.0 Fgr					
60	1.0	4.0 Fgr	2	16	38	53	SiCl
		1.0 gr					
		1.0 Fgr					
		4.0 gr					
		1.0 CS					
		3.0 Fgr					
61	1.5	7.5 gr	3	18	32	43	SiCl
		2.0 FS					
		1.5 gr					
		0.5 FS					
		3.0 gr					
62	2.0	1.0 Fgr	0	12	25	36	WL
		1.0 gr					
		1.0 Fgr					
		1.0 gr					
		1.0 Fgr					
		0.5 gr CoS					
		0.5 FS					
		3.0 Fgr					
63	2.0	7.0 gr	1	13	25	38	WL
		3.0 sd					
64	3.5	2.5 Fgr	1	16	30	46	SiCl
		2.0 gr					
		3.5 Fgr					
		0.5 gr CoS					
65	3.5	2.5 gr	0	18	35	45	WL
		2.0 Cgr					
66	3.0	5.0 Fgr	0	6	18	35	SiCl
67	1.0	7.0 gr	0	10	28	42	WL

RANGE 73 **TWP** 142 **SEC** 18

COUNTY Kidder Oct-16

PROSPECTED BY Rogstad/Usher

INSPECTED & APPROVED Jeffrey Swank Dec-16

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	**NH-1-003(050)113**	**180**	**4**

PIT LOGGING BY TEST HOLES

Test Hole No.	Depth of Stripping (Ft)	Depth of Material (Ft)	% Retained on 1½" Screen	% Retained on ¾" Screen	% Retained on 3/8" Screen	% Retained on #4 Screen	Bottom of Test Hole
68	2.0	1.0 gr	4	16	30	46	WL
		1.0 sd					
		5.0 Fgr					
69	4.0	2.0 Fgr	0	14	27	41	SiCl
		4.0 gr					
		2.0 Fgr					
		1.5 gr					
70	4.5	1.5 Fgr	0	13	28	41	SiCl
		0.5 sd					
		4.0 Fgr					
		1.5 sd					
71	5.0	5.0 gr	0	18	35	49	WL
72	2.0	3.0 Fgr	0	9	23	36	WL
		1.0 CS					
		1.5 Fgr					

PIT LOGGING BY TEST HOLES

Test Hole No.	Depth of Stripping (Ft)	Depth of Material (Ft)	% Retained on 1½" Screen	% Retained on ¾" Screen	% Retained on 3/8" Screen	% Retained on #4 Screen	Bottom of Test Hole
A	0.5	4.5 gr	0	11	23	36	SiCl
		1.5 Fgr					
		1.0 sd					
		0.5 Fgr					
B	0.5	2.5 gr	3	18	33	45	SiCl
		0.5 Fgr					
		0.5 sd					
		1.0 gr					
		1.0 Fgr					
		1.0 gr					
C	1.0	3.5 Fgr	1	11	25	38	WL
		4.5 gr					
D	0.5	7.5 gr	0	15	33	49	SiCl
E	2.0	4.0 Fgr	4	20	36	49	+cave
		1.0 gr					
		8.0 Fgr					
F	1.0	10.0 gr	2	16	30	42	+cave
		1.0 Fgr					
		1.0 FS					
G	1.0	4.0 Fgr	0	15	32	45	+cave
		3.0 gr					
		5.0 Fgr					
		0.5 CS					
		0.5 gr CoS					
H	0.5	1.5 Fgr	2	14	31	43	+cave
		10.0 gr					
		1.0 gr CoS					
		1.0 Fgr sh					
		1.0 FS					
		(Holes A-H are for informational purposes					
		only and are not included in pit quantities)					

PIT LOGGING BY TEST HOLES

Test Hole No.	Depth of Stripping (Ft)	Depth of Material (Ft)	% Retained on 1½" Screen	% Retained on ¾" Screen	% Retained on 3/8" Screen	% Retained on #4 Screen	Bottom of Test Hole

PIT LOGGING BY TEST HOLES

Test Hole No.	Depth of Stripping (Ft)	Depth of Material (Ft)	% Retained on 1½" Screen	% Retained on ¾" Screen	% Retained on 3/8" Screen	% Retained on #4 Screen	Bottom of Test Hole

RANGE 73 **TWP** 142 **SEC** 18

COUNTY Kidder Oct-16

PROSPECTED BY Rogstad/Usher

INSPECTED & APPROVED Jeffrey Swank Dec-16

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	NH-1-003(050)113	180	5

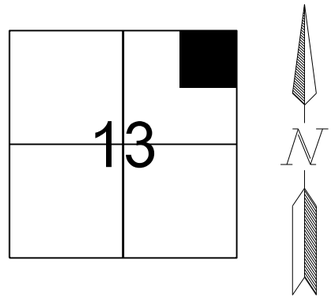
NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

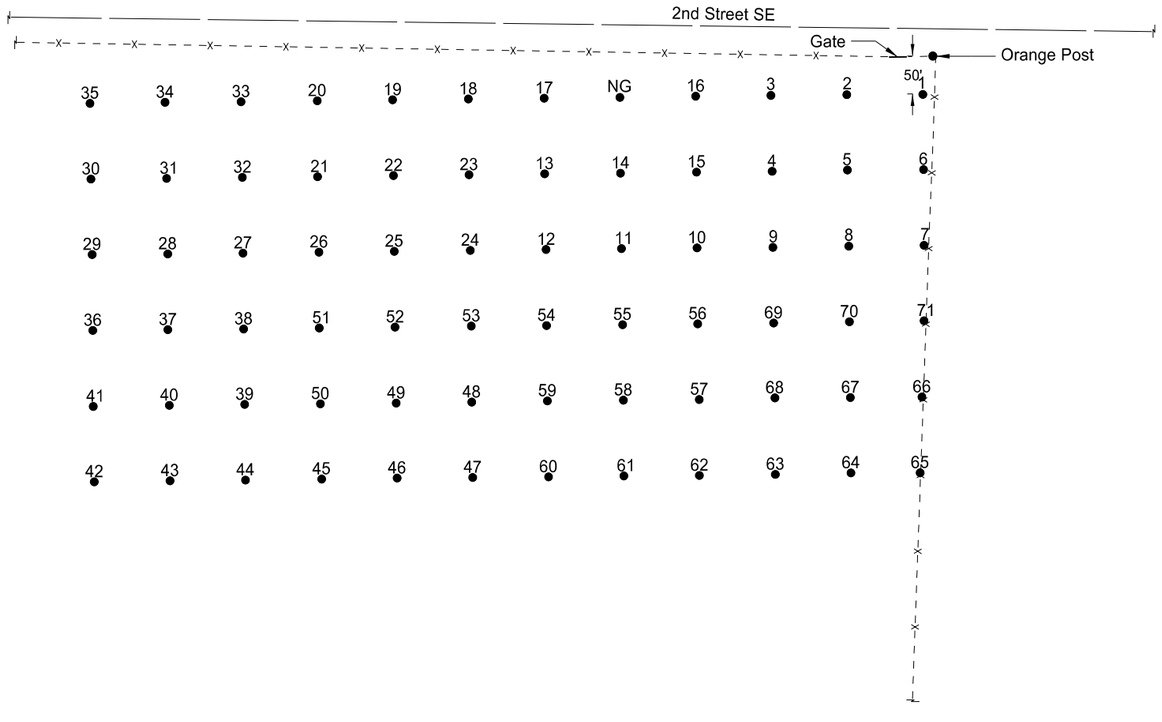
TEST HOLE PLAT

Location: NE1/4NE1/4 13-145-74 County: Sheridan

Ownership: Betty Mertz, John Mertz and Terry Mertz

LOCATION OF PIT IN SECTION





Area "A" consists of Test Holes 1 - 9
Area "B" consists of Test Holes 10 - 17
Area "C" consists of Test Holes 18 - 26
Area "D" consists of Test Holes 27 - 35
Area "E" consists of Test Holes 36 - 44
Area "F" consists of Test Holes 45 - 53
Area "G" consists of Test Holes 54 - 62
Area "H" consists of Test Holes 63 - 71

Legend:
gr = gravel
sd = sand
FS = fine sand
Fgr = fine gravel
CS = coarse sand
sh = shale
SiCl = silt clay
rk = rock
FeO = Iron oxide
CoS = Coal Slack
WL = water line
NG = no gravel
DM = disturbed material
CGr = course gravel

Scale 1"=200'

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	**NH-1-003(050)113**	**180**	**6**

PIT LOGGING BY TEST HOLES

Test Hole No.	Depth of Stripping (Ft)	Depth of Material (Ft)	% Retained on 1½" Screen	% Retained on ¾" Screen	% Retained on 3/8" Screen	% Retained on #4 Screen	Bottom of Test Hole
1	2.0	2.0 gr SiCl	0	8	19	30	SiCl
		1.0 sd SiCl					
2	1.0	11.0 Fgr	2	9	20	31	+gr
		1.0 FgrSiCl					
		1.0 Fgr					
		2.0 FgrSiCl					
		1.0 gr SiCl					
		2.0 gr					
		1.0 gr SiCl					
3	0.5	10.5 Fgr	0	3	8	14	+gr
		2.0 gr SiCl					
		7.0 gr					
4	1.0	5.0 FgrSiCl	0	0	6	11	+gr
		1.0 Fgr					
		1.0 FgrSiCl					
		10.0 Fgr					
		2.0 FgrSiCl					
5	1.0	3.0 gr	0	2	8	18	SiCl
		2.0 Fgr					
		3.0 gr					
		2.0 Fgr					
		2.0 gr SiCl					
		1.0 Fgr					
6	1.0	1.0 FgrSiCl	0	3	10	20	SiCl
		6.0 Fgr					
		3.0 FgrSiCl					
		2.5 Fgr					
		1.5 FgrSiCl					
7	0.5	1.5 gr	0	0	5	11	SiCl
8	0.5	2.5 gr	0	5	13	22	+gr
		1.0 Fgr					
		1.0 gr					
		2.0 FgrSiCl					
		2.0 Fgr					
		2.0 FgrSiCl					
		5.0 Fgr					
		1.0 gr CoS					
		3.0 Fgr					
9	0.5	2.5 gr	0	13	24	34	+cave
		2.0 FS					
		2.0 Fgr					
		2.0 gr					
		1.0 gr CoS					
		1.0 gr					
		4.0 CGr					
10	0.5	2.5 gr	0	6	15	27	SiCl
		2.0 Fgr					
		1.0 gr					
		5.0 Fgr					

PIT LOGGING BY TEST HOLES

Test Hole No.	Depth of Stripping (Ft)	Depth of Material (Ft)	% Retained on 1½" Screen	% Retained on ¾" Screen	% Retained on 3/8" Screen	% Retained on #4 Screen	Bottom of Test Hole
11	2.0	5.0 gr	0	10	20	30	+gr
		1.0 Fgr					
		4.0 gr					
		1.0 Fgr					
		1.0 gr					
		1.0 Fgr					
		2.0 FgrSiCl					
		3.0 Fgr					
12	2.0	1.0 gr	0	3	15	28	+gr
		10.0 Fgr					
		1.0 gr					
		1.0 FgrSiCl					
		5.0 Fgr					
13	0.5	5.5 Fgr	1	6	14	24	SiCl
		9.0 gr					
		3.0 Fgr					
14	2.0	3.0 Fgr	0	8	22	36	SiCl
		2.0 gr					
15	1.0	3.0 Fgr	0	1	4	7	SiCl
		3.0 sd sh					
		2.0 gr					
16	0.5	9.5 Fgr	0	4	11	19	SiCl
		2.0 gr					
17	1.0	3.0 Fgr	2	23	36	48	rk
		5.0 gr					
18	1.0	11.0 Fgr	0	3	8	17	SiCl
		1.0 gr					
19	1.5	11.5 Fgr	0	5	9	17	SiCl
20	0.5	19.5 Fgr	0	1	7	15	+gr
21	2.0	2.0 gr	0	10	19	27	+gr
		2.0 Fgr					
		3.0 gr					
		1.0 Fgr					
		2.0 gr					
		5.0 Fgr					
		1.0 sd sh					
		1.0 Fgr					
		1.0 sd					
22	1.5	12.5 Fgr	0	3	9	18	SiCl
23	2.0	8.5 Fgr	0	2	8	15	SiCl
		0.5 sd					
		2.5 Fgr					
24	1.0	6.0 gr	3	11	22	34	+gr
		1.0 Fgr					
		6.0 gr					
		2.0 CGr					
		4.0 gr					

PIT LOGGING BY TEST HOLES

Test Hole No.	Depth of Stripping (Ft)	Depth of Material (Ft)	% Retained on 1½" Screen	% Retained on ¾" Screen	% Retained on 3/8" Screen	% Retained on #4 Screen	Bottom of Test Hole
25	0.5	5.5 Fgr	2	12	23	34	+gr
		2.0 gr					
		1.0 Fgr					
		2.0 gr					
		3.0 Fgr					
		3.0 gr					
		3.0 Fgr					
26	0.5	7.5 gr	0	11	19	30	+gr
		2.0 Fgr					
		2.0 gr					
		2.0 Fgr					
		1.0 gr					
		5.0 Fgr					
27	0.5	6.5 gr	4	17	29	40	+gr
		5.0 Fgr					
		1.0 gr					
		2.0 Fgr					
		1.5 Fgr sh					
		3.5 CGr					
28	0.5	4.5 Fgr	4	14	25	34	rk
		1.0 gr					
		6.0 Fgr					
		3.5 gr					
29	2.0	11.0 Fgr	1	11	18	27	rk
		2.0 Fgr sh					
		2.5 CGr					
30	2.0	9.0 Fgr	0	3	10	18	SiCl
		1.0 sd sh					
31	2.0	14.0 Fgr	0	2	9	17	SiCl
32	2.0	11.0 Fgr	0	4	12	21	SiCl
		1.0 sd					
		4.5 Fgr					
33	0.5	11.5 Fgr	0	0	3	10	SiCl
		1.0 Fgr sh					
		6.0 Fgr					
34	3.0	5.0 Fgr	0	2	6	12	+gr
		1.0 sd					
		3.0 Fgr					
		1.0 CS					
		3.0 Fgr					
		1.0 sd					
		3.0 Fgr					
35	2.0	10.0 Fgr	0	1	4	9	SiCl
36	2.0	12.0 Fgr	1	11	19	27	+gr
		1.0 FgrSiCl					
		2.0 sd sh					
		1.0 sd					
		2.0 gr					

PIT LOGGING BY TEST HOLES

Test Hole No.	Depth of Stripping (Ft)	Depth of Material (Ft)	% Retained on 1½" Screen	% Retained on ¾" Screen	% Retained on 3/8" Screen	% Retained on #4 Screen	
37	1.0	5.0 gr	1	15	25	36	rk
		4.0 Fgr					
		1.0 gr					
		2.0 Fgr					
		4.0 gr					
38	1.0	7.0 gr	0	9	19	28	SiCl
		4.0 Fgr					
		1.0 gr					
		4.0 Fgr					
		1.5 sd sh					
39	0.5	9.5 gr	1	8	18	27	+gr
		3.0 Fgr					
		2.0 gr					
		5.0 Fgr					
40	1.5	3.5 Fgr	0	5	13	22	+gr
		2.0 gr					
		10.0 Fgr					
		3.0 sd					
41	1.5	2.5 gr	0	4	13	21	+gr
		1.0 Fgr					
		2.0 gr					
		6.0 Fgr					
		2.0 Fgr sh					
		1.0 Fgr					
		1.0 Fgr sh					
		0.5 Fgr					
		1.5 Fgr sh					
		2.0 sd					
43	1.0	4.0 Fgr	2	6	14	23	+gr
		3.0 gr					
		12.0 Fgr					

RANGE 74 **TWP** 145 **SEC** NE 1/4 13

COUNTY Sheridan May-17

PROSPECTED BY Rogstad/Usher

INSPECTED & APPROVED Jeffrey Swank Jun-17

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	**NH-1-003(050)113**	**180**	**7**

PIT LOGGING BY TEST HOLES

Test Hole No.	Depth of Stripping (Ft)	Depth of Material (Ft)	% Retained on 1½" Screen	% Retained on ¾" Screen	% Retained on 3/8" Screen	% Retained on #4 Screen	Bottom of Test Hole
44	1.0	6.0 gr	0	8	19	29	+gr
		2.0 Fgr					
		2.0 gr					
		2.0 Fgr					
		2.0 gr					
		5.0 Fgr					
45	0.5	4.5 Fgr	0	10	20	31	+gr
		1.0 gr					
		8.0 Fgr					
		1.0 gr					
		5.0 Fgr					
46	1.0	8.0 gr	1	11	22	33	+gr
		1.0 Fgr					
		5.0 gr					
		5.0 Fgr					
47	0.5	2.5 Fgr	1	16	25	36	+gr
		5.0 gr					
		1.0 Fgr					
		1.0 gr					
		7.0 Fgr					
		1.0 gr					
		1.0 Fgr					
		1.0 gr					
48	0.5	13.5 gr	1	12	23	35	+gr
		2.0 Fgr					
		1.0 gr					
		2.0 Fgr					
		1.0 gr					
49	0.5	2.5 gr	1	13	23	34	+gr
		1.0 Fgr					
		2.0 gr					
		5.0 Fgr					
		1.0 gr					
		4.0 Fgr					
		2.0 gr					
		2.0 Fgr					
50	0.5	7.5 gr	1	8	20	31	+gr
		1.0 Fgr					
		4.0 gr					
		7.0 Fgr					
51	0.5	5.5 gr	3	16	26	36	+gr
		2.0 Fgr					
		3.0 gr					
		2.0 Fgr					
		2.0 gr					
		5.0 Fgr					

PIT LOGGING BY TEST HOLES

Test Hole No.	Depth of Stripping (Ft)	Depth of Material (Ft)	% Retained on 1½" Screen	% Retained on ¾" Screen	% Retained on 3/8" Screen	% Retained on #4 Screen	Bottom of Test Hole
52	0.5	10.5 gr	1	9	22	34	+gr
		2.0 Fgr					
		1.0 gr					
		1.0 Fgr					
		2.5 gr					
		2.5 Fgr					
53	1.0	6.0 gr	2	11	25	37	+gr
		1.0 Fgr					
		5.0 gr					
		3.0 Fgr					
		4.0 gr					
54	1.0	2.0 Fgr	3	15	26	37	+gr
		4.0 gr					
		1.0 Fgr					
		9.0 gr					
		1.0 Fgr					
		2.0 gr					
55	0.5	19.5 gr	2	14	27	39	+gr
56	0.5	8.5 gr	3	14	27	39	+gr
		1.0 Fgr					
		3.0 gr					
		1.5 Fgr					
		0.5 gr					
		2.0 Fgr					
		3.0 gr					
57	0.5	19.5 gr	2	13	25	37	+gr
58	0.5	2.5 gr	2	12	25	36	+gr
		1.0 Fgr					
		3.0 gr					
		2.0 Fgr					
		2.5 gr					
		3.5 gr					
59	0.5	13.5 gr	0	14	27	39	+cave
60	0.5	5.5 gr	2	10	25	39	rk
		2.0 Fgr					
		3.0 gr					
61	2.0	18.0 gr	1	12	26	38	+gr
62	0.5	5.5 gr	2	14	26	37	+gr
		2.0 Fgr					
		3.5 gr					
		0.5 Fgr					
		3.0 gr					
		1.0 Fgr					
		4.0 gr					
63	3.0	17.0 gr	2	10	22	35	+gr

PIT LOGGING BY TEST HOLES

Test Hole No.	Depth of Stripping (Ft)	Depth of Material (Ft)	% Retained on 1½" Screen	% Retained on ¾" Screen	% Retained on 3/8" Screen	% Retained on #4 Screen	Bottom of Test Hole
64	0.5	4.5 gr	2	16	26	38	+gr
		1.0 Fgr					
		8.0 gr					
		2.0 Fgr					
		1.0 gr					
		2.0 Fgr					
		1.0 gr					
65	0.5	9.5 gr	0	10	21	34	+gr
		1.0 Fgr					
		2.0 gr					
		2.0 Fgr					
		2.0 gr					
		1.0 FgrSiCl					
		2.0 Fgr					
66	0.5	3.5 gr	0	3	12	23	+gr
		2.0 Fgr					
		2.0 gr					
		1.0 Fgr					
		9.5 FgrSiCl					
		1.5 sd sh					
67	0.5	5.5 gr	0	13	23	35	+gr
		1.0 Fgr					
		13.0 gr					
68	1.0	13.0 gr	3	13	30	39	+gr
		1.0 Fgr					
		5.0 gr					
69	1.0	7.0 gr	3	14	28	42	+gr
		1.0 Fgr					
		11.0 gr					
70	0.5	2.5 CGr	2	11	22	33	SiCl
		5.0 gr					
		2.0 Fgr					
		2.0 FgrSiCl					
		1.0 Fgr					
		2.0 Fgr					
		1.0 Fgr					
71	0.5	3.5 gr	0	5	13	23	SiCl
		1.0 Fgr					
		1.0 FgrSiCl					
		1.0 Fgr					

PIT LOGGING BY TEST HOLES

Test Hole No.	Depth of Stripping (Ft)	Depth of Material (Ft)	% Retained on 1½" Screen	% Retained on ¾" Screen	% Retained on 3/8" Screen	% Retained on #4 Screen	Bottom of Test Hole

RANGE 74 **TWP** 145 **SEC** NE 1/4 13

COUNTY Sheridan May-17

PROSPECTED BY Rogstad/Usher

INSPECTED & APPROVED Jeffrey Swank Jun-17