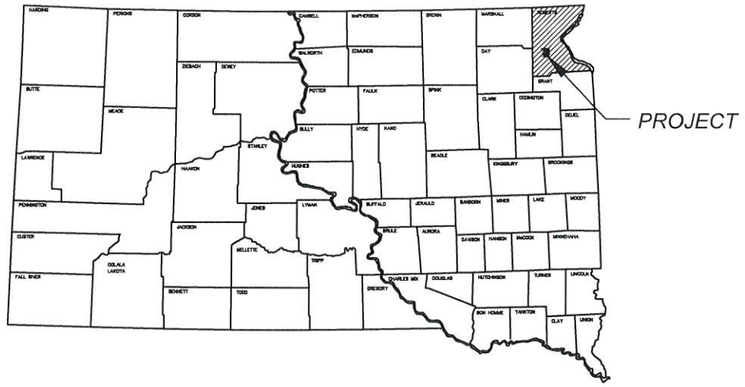


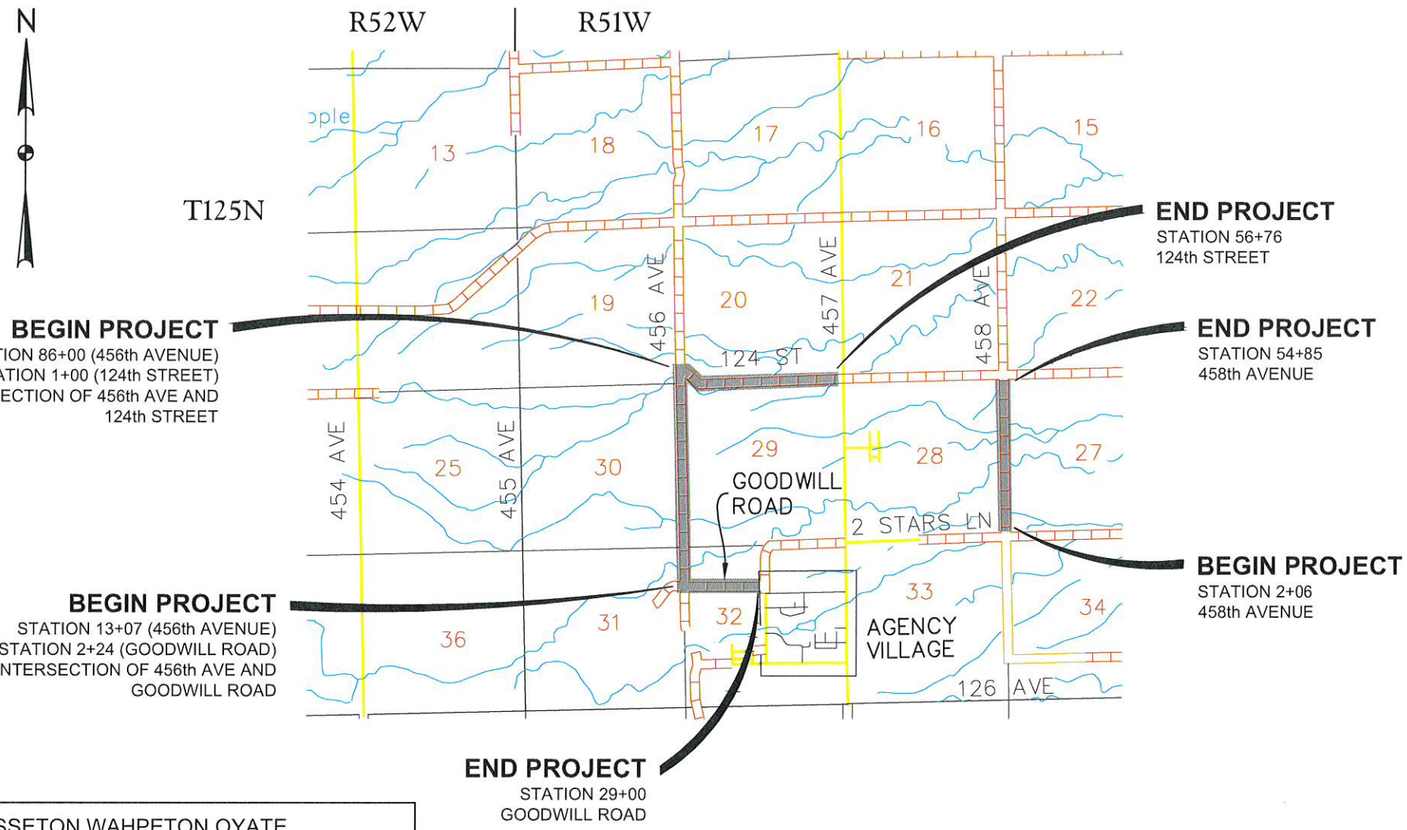
STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
SD	FEMA BRIC	1	109

SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

FEMA BRIC

PROJECT NO. 2111-01639
PCAS# - A0954580
BRIDGE DEMOLITION, REINFORCED CONCRETE BOX CULVERTS, GRADING, GRAVEL SURFACING

INDEX OF SHEETS



R/W AGREEMENTS
RIGHT-OF-WAY FOR THE ENTIRE PROJECT AS SHOWN ON PLANS HAS BEEN OBTAINED.
UTILITY AGREEMENTS
AGREEMENTS HAVE BEEN COORDINATED WITH UTILITY COMPANIES WHOSE PROPERTIES ARE INVOLVED IN THE RIGHT-OF-WAY AND CONSTRUCTION AREAS FOR THIS PROJECT.
RAILROAD
ALL AGREEMENTS HAVE BEEN OBTAINED FOR ANY RAILROAD CROSSINGS AFFECTED BY THE PROJECT.
SPECIFICATIONS
CONFORM TO SOUTH DAKOTA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES, 2015 EDITION AND REQUIRED PROVISIONS, SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS, OR AS OTHERWISE NOTED IN THESE PLANS.

CERTIFICATION

I CERTIFY THAT THE PS&E MEETS OR EXCEEDS THE DESIGN, HEALTH, AND SAFETY STANDARDS IN APPENDIX B TO SUBPART D OF 25 CFR PART 170.462. I ALSO CERTIFY THAT THE ATTACHED PLANS WERE PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF SOUTH DAKOTA.

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 12804
DARIN FALCON
5/16/24
SOUTH DAKOTA

PROFESSIONAL ENGINEER, P.E.

DATE 5/16/24 REGISTRATION NUMBER 12804

SISSETON WAHPETON OYATE
DEPARTMENT OF TRANSPORTATION

SUBMITTED FOR APPROVAL:

DIRECTOR, SISSETON WAHPETON OYATE DEPARTMENT OF TRANSPORTATION — DATE 8-22-23

PROJECT LENGTH

PROJECT	GROSS MILES	NET MILES
2111-01639	3.94	3.94
TOTAL	3.94	3.94

KLJ

Jan 18, 2023 – 8:42am – K:\Projects\Tribal\SissetonWahpetonOyate\2111-01639_FEMA-BRIC-Award\CAD\Design\Plan DWG\2111-01639_Title Sheet.dwg

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	FEMA BRIC		

ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

ESTIMATE OF QUANTITIES

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
100E0020	Clear and Grub Tree	1	Each
100E0100	Clearing	Lump Sum	LS
110E0500	Remove Pipe Culvert	137	Ft
110E0510	Remove Pipe End Section	6	Each
110E0600	Remove Fence	505	Ft
120E0010	Unclassified Excavation	7207	CuYd
230E0010	Placing Topsoil	1038	CuYd
250E0030	Incidental Work, Structure	Lump Sum	LS
260E3010	Gravel Surfacing	14879.2	Ton
421E0100	Pipe Culvert Undercut	50.6	CuYd
421E0200	Box Culvert Undercut	180.5	CuYd
450E4739	12” CMP 16 Gauge, Furnish	26.0	Ft
450E4740	12” CMP, Install	26.0	Ft
450E4789	36” CMP 16 Gauge, Furnish	42.0	Ft
450E4790	36” CMP, Install	42.0	Ft
450E4799	42” CMP 16 Gauge, Furnish	44.0	Ft
450E4800	42” CMP, Install	44.0	Ft
450E5203	12” CMP Flared End, Furnish	2	Each
450E5204	12” CMP Flared End, Install	2	Each
450E5223	36” CMP Flared End, Furnish	2	Each
450E5224	36” CMP Flared End, Install	2	Each
450E5227	42” CMP Flared End, Furnish	2	Each
450E5228	42” CMP Flared End, Install	2	Each
450E5529	30” CMP Arch 16 Gauge, Furnish	36.0	Ft
450E5530	30” CMP Arch, Install	36.0	Ft
450E5810	30” CMP Arch Flared End, Furnish	2	Each
450E5811	30” CMP Arch Flared End, Install	2	Each
560E4001	Special Precast Concrete Box Culvert, Furnish	228.0	Ft
560E4002	Special Precast Concrete Box Culvert, Install	228.0	Ft
560E4003	Special Precast Concrete Box Culvert End Section, Furnish	8	Each
560E4004	Special Precast Concrete Box Culvert End Section, Install	8	Each
620E0020	Type 2 Right-of-Way Fence	506	Ft
632E1100	1.12 Lb/Ft Flanged Channel Post	176.0	Ft
632E2510	Type 2 Object Marker Back to Back	16	Each
634E0010	Flagging	80	Hour
634E0110	Traffic Control Signs	189.0	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0275	Type 3 Barricade	8	Each
700E0210	Class B Riprap	119.8	Ton
700E0310	Class C Riprap	24.2	Ton
730E0212	Type G Permanent Seed Mixture	51	Lb
734E0103	Type 3 Erosion Control Blanket	4077.5	SqYd
734E0150	6” Diameter Erosion Control Wattle	879	Ft
831E0110	Type B Drainage Fabric	208.1	SqYd
831E0200	Woven Separator Fabric	40920.9	SqYd

SPECIFICATIONS

South Dakota DOT Standard Specifications for Roads and Bridges, 2015 Edition and Required Provisions, Supplemental Specifications, and Special Provisions as included in the Proposal.

ENVIRONMENTAL COMMITMENTS

The Sisseton Wahpeton Oyate (Tribe) is committed to protecting the environment and uses this environmental commitments list as a communication tool for the Engineer and Contractor to ensure that attention is given to avoid, minimize, and/or mitigate an environmental impact.

COMMITMENT 1: WETLANDS

All wetlands and other waters were assumed to be jurisdictional waters of the U.S. Efforts were made to avoid and minimize wetlands and other water impacts from the project. Acres of impacts, both temporary and permanent, are summarized in the following table.

Table of Impacted Wetlands

Wetland No.	Perm. Impact (Acres)	Temp. Impact (Acres)
1	0.006	0.004
2	0.028	0.026
3	0.0004	0.001
5	0.012	0.004
6	0.013	0.002
TOTAL	0.0594	0.037

OW No.	Perm. Impact (Acres)	Temp. Impact (Acres)
4	0.013	0.003
5	0.013	0.00
6	0.007	0.003
TOTAL	0.033	0.006

Action Taken/Required:

Permanent impacts identified in the Table of Impacted Wetlands will not be mitigated, as the impacts do not surpass the 0.1-acre mitigation threshold.

The Contractor will notify the Project Engineer if additional easement is needed to complete work adjacent to any wetland. The Project Engineer will obtain an appropriate course of action from the Environmental Office before proceeding with construction activities that affect any wetlands beyond the work limits and easements shown in the plans.

COMMITMENT 2: WATER SOURCE

The Contractor will not withdraw water with equipment previously used outside the State of South Dakota or previously used in aquatic invasive species waters within South Dakota without prior approval from the Tribe. All construction equipment will be thoroughly washed to prevent and control the introduction and spread of invasive species into the project vicinity.

Action Taken/Required:

The Contractor will obtain the necessary permits from the regulatory agencies, such as the South Dakota Department of Agriculture and Natural Resources (DANR) and US Army Corps of Engineers (USACE) prior to water extraction activities.

Additional information and mapping of Aquatic Invasive Species in South Dakota can be accessed at: http://sdleastwanted.com/maps/default.aspx.

COMMITMENT 3: WATER QUALITY STANDARDS

Action Taken/Required:

The Contractor is advised that the South Dakota Surface Water Quality Standards, administered by the South Dakota Department of Agriculture and Natural Resources (DANR), apply to this project. Special construction measures will be taken to ensure the above standard(s) of the surface waters are maintained and protected.

COMMITMENT 4: SURFACE WATER DISCHARGE

The DANR General Permit for Temporary Discharge is required for temporary dewatering and discharges to waters of the state. The effluent limit for total suspended solids will be 90 mg/L 30-day average. The effluent limit applies to discharges to all waters of the state except discharges to waters classified as cold water permanent fish life propagation waters according to the Administrative Rules of South Dakota (ARSD) 74:51:01:45. For discharges to waters of the state classified as cold water permanent fish life propagation waters, the effluent limit for total suspended solids will be 53 mg/L daily maximum.

The permittee has the option of completing effluent testing or implementing a pollution prevention plan for compliance with this permit. If the permittee develops a pollution prevention plan instead of total suspended solids sampling, the plan must be developed and implemented prior to discontinuing total suspended solids sampling. Refer to section 3.0 of the permit. If any pollutants are suspected of being discharged, a sample must be taken for those parameters listed in section 2.2 of the permit.

Action Taken/Required:

If construction dewatering is required, the Contractor will obtain the General Permit for Temporary Discharge Activities from the DANR Surface Water Program, 605-773-3351.
http://denr.sd.gov/des/sw/swqformsandpermits.aspx

The Contractor will provide a copy of the approved permit to the Project Engineer prior to proceeding with any dewatering activities. The approved permit must be kept on-site and as part of the project records.

Effluent monitoring, as a result of dewatering activities, will be summarized for each month and recorded on a separate Discharge Monitoring Report (DMR) and submitted to DANR monthly. Additional information can be found at http://denr.sd.gov/des/sw/WhatisaDMR.aspx

COMMITMENT 5: STORM WATER

Construction activities constitute 1-acre or more of earth disturbance and/or work in a waterway.

Action Taken/Required:

The US Environmental Protection Agency (EPA) 2017 Construction General Permit is required for this project. The Tribe is the owner of this permit and will submit the Notice of Intent (NOI) to EPA 15 days prior to project start in order to obtain coverage. Work can begin after authorization is received from the EPA. This permit provides coverage for construction and dewatering activities for this project.

The Contractor must adhere to the “Special Provision Regarding Storm Water Discharge to Waters of the United States within Indian Reservations.”

Storm Water Pollution Prevention Plan

The Storm Water Pollution Prevention Plan (SWPPP) will be developed prior to the submittal of the NOI and will be implemented for all construction activities for compliance with the permit. The SWPPP must be kept on-site and updated as site conditions change. Erosion control measures and best management practices will be implemented in accordance with the SWPPP.

Information on storm water permits and SWPPPs are available on the following websites:

DANR: http://denr.sd.gov/des/sw/stormwater.aspx

EPA: https://www.epa.gov/npdes

COMMITMENT 6: SECTION 404 PERMIT

The Tribe has obtained a Section 404 Permit from the USACE for the permanent actions associated with this project.

Action Taken/Required:

The Contractor will comply with all requirements contained in the Section 404 Permit.

The Contractor will also be responsible for obtaining a Section 404 Permit for any dredge, excavation, or fill activities associated with material sources, storage areas, waste sites, and Contractor work sites outside the plan work limits that affect wetlands, floodplains, or waters of the United States.

COMMITMENT 7: SECTION 401 WATER QUALITY CERTIFICATION

The Tribe has obtained a Clean Water Act Section 401 Water Quality Certification from the Environmental Protection Agency (EPA) regarding a US Army Corps of Engineers CWA Section 404 Permit for the actions associated with this project.

Action Taken/Required:

The Contractor will comply with all requirements contained in the Section 401 certification. A copy of the EPA CWA 401 Certification must be retained on-site.

SEQUENCE OF OPERATIONS

Contractor requests to deviate from the sequence of operations will be submitted in writing to the Engineer for review. Approval of an alternate sequence of operations will only be allowed when the proposed changes meet with the intent for traffic control and sequencing of the work. An alternate sequence will be submitted for review a minimum of one week prior to potential implementation.

- Install traffic control signing and devices
- Install erosion control measures
- Scarify and recompact existing roadway subgrade
- Install separator fabric and gravel surfacing per the typical sections
- Install proposed pipe culverts and reinforced concrete box culverts
- Final restoration
- Remove traffic control signing

Special Conditions

1. The Contractor will construct proposed surfacing improvements, including scarify and recompact subgrade, install separator fabric and gravel surfacing, along all roadways within the project limits prior to culvert installations as per the Sequence of Operations.
2. At the Contractor's option, separator fabric may be omitted from the typical section at proposed culvert crossings, to be installed once the culvert is complete and backfilled. The Contractor will ensure that the fabric is continuous throughout the project and installed per the Specifications, including requirements for fabric overlap and anchoring. No separate measurement or payment shall be made for separator fabric that is removed and replaced due to project sequencing.
3. The Contractor will maintain access for local residents at all times throughout the project. Bridge removal, box culvert removal, culvert replacements, grading and gravelling work will be sequenced such that access to residential driveways is maintained via temporary detour routes. During the full closures of 458th Avenue and 124th Street for culvert replacements, residents will be informed of the detour route with signage per standard plate 634.29. Costs to move or modify detour signage as necessary will be incidental to the lump sum contract price for, "Traffic Control, Miscellaneous".

GENERAL TRAFFIC CONTROL

Existing guide, route, informational logo, regulatory, and warning signs will be temporarily reset and/or maintained during construction. Removing, relocating, covering, salvaging, and resetting of existing traffic control devices, including delineation, will be the responsibility of the Contractor. Cost for this work will be incidental to the contract unit prices for the various items unless otherwise specified in the plans. Any delineators and signs damaged or lost will be replaced by the Contractor at no cost to the State.

All temporary traffic control sign locations will be set in the field by the Contractor and verified by the Engineer prior to installation.

All construction operations will be conducted in the general direction of traffic movement.

If there is a discrepancy between the traffic control plans, standard plates, and the MUTCD, whichever is more stringent will be used, as determined by the Engineer.

Unless otherwise stated in these plans, work will not be allowed during hours of darkness.

Fixed location signing placed more than 4 calendar days prior to the start of construction will be covered or laid down until the time of construction. The covers must be approved by the Engineer prior to installation. The cost of materials, labor, and equipment necessary to complete this work will be incidental to other contract items. No separate payment will be made.
All fixed location signs, sign posts, and breakaway bases will be removed within 7 calendar days following project substantial completion.

All haul trucks will be equipped with an additional flashing amber light that is visible from the backside of the haul truck. The costs for the flashing amber lights will be incidental to the various related contract items.

At no time will a vertical drop-off of greater than 3 inches be left overnight adjacent to the traveled way. The Contractor will utilize embankment material to ensure a 3-inch vertical drop-off is not exceeded. The slope of the embankment material will not be steeper than a 4:1 within 30 feet of the traveled way.

ITEMIZED LIST FOR TRAFFIC CONTROL SIGNS

		CONVENTIONAL ROAD			
SIGN CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
R11-2	ROAD CLOSED	2	48" x 30"	10.0	20.0
R11-3a	ROAD CLOSED __ MILES AHEAD LOCAL TRAFFIC ONLY	2	60" x 30"	12.5	25.0
W20-2	DETOUR AHEAD	2	48" x 48"	16.0	32.0
W20-3	ROAD CLOSED AHEAD	4	48" x 48"	16.0	64.0
W20-7	FLAGGER (symbol)	2	36" x 36"	9.0	18.0
M4-8	DETOUR	6	24" x 12"	2.0	12.0
M4-8a	END DETOUR	2	24" x 18"	3.0	6.0
M4-10	DETOUR ARROW (L or R)	2	48" x 18"	6.0	12.0
		CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT			189.0

FLAGGING

Operations will be conducted so that the traveling public will not have to wait longer than 15 minutes at the flagger station.

If an emergency vehicle needs to pass through the project, the Contractor will be required to expedite traffic movement. All costs associated with this will be incidental to the contract unit price per hour for "Flagging".

UTILITIES

The Contractor will contact the involved utility companies through South Dakota One Call (1-800-781-7474) prior to starting work. It will be the responsibility of the Contractor to coordinate work with the utility owners to avoid damage to existing facilities.

The Contractor will be aware that the existing utilities shown in the plans were surveyed prior to the design of this project and might have been relocated or replaced by a new utility facility prior to construction of this project, or might not require adjustment and may remain in its current location. The Contractor will contact each utility owner and confirm the status of all existing and new utility facilities. The utility contact information is provided elsewhere in the plans or bidding documents.

CONSTRUCTION STAKING

The Engineer will provide construction staking at the expense of the Owner.

The Contractor will include staking activities in the construction schedule and coordinate work with the Engineer. The Contractor will give 48-hour notification for staking. The Contractor will be responsible for all costs associated with replacing construction stakes which were unnecessarily damaged, destroyed, or removed by the contractor's operations.

TABLE OF CLEAR AND GRUB TREE (>6" DIAMETER)

Station	L/R	Quantity (Each)
458th Avenue		
27+71	R	1
	Total:	1

An estimated of quantity of 1 tree larger than 6" in diameter is included in the Estimate of Quantities, paid at the unit price per each for, "Clear and Grub Tree".

INCIDENTAL WORK, STRUCTURE

Below is a list of work items included in the contract lump sum price for "Incidental Work, Structure":

1. The Contractor will remove the existing timber bridge, bridge rail, and 4 - concrete wingwalls at station 24+37 along 124th Street.
2. The Contractor will remove the existing reinforced concrete box culvert and 4 - concrete wingwalls at station 5+11 along 458th Avenue.
3. The Contractor will remove the existing continuous concrete bridge, bridge rail, and 4 - concrete wingwalls at station 27+73 along 458th Avenue.
4. The Contractor will remove the existing reinforced concrete box culvert and 4 - concrete wingwalls at station 38+66 along 458th Avenue.

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 12804
DARIN FALCON
5/16/24
SOUTH DAKOTA

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	FEMA BRIC		

GRADING OPERATIONS

Water for Embankment is estimated at the rate of 12 gallons of water per cubic yard of Embankment. The estimated quantity of Water for Embankment is 33 MGal. No separate payment will be made for the Water for Embankment and all costs associated will be incidental to the contract unit price per cubic yard of "Unclassified Excavation".

SHRINKAGE FACTOR: Embankment +30%

TABLE OF EXCAVATION QUANTITIES BY BALANCES

Station to Station	Excavation (CuYd)	Embankment (CuYd)	Waste (CuYd)
124th Street			
1+50 to 56+76	305	643	-
Goodwill Road			
2+88 to 29+00	2649	144	*2505
456th Avenue			
13+07 to 86+00	454	466	-
458th Avenue			
2+25 to 54+85	160	1518	-
Totals:	3568	2771	*2505

*Waste excavation from Goodwill Road will be used as embankment along 124th Street, 456th Avenue, and 458th Avenue as necessary to construct the proposed typical sections.

TABLE OF UNCLASSIFIED EXCAVATION

Excavation	3568
Excavation for Deep RCBC Install	2601
Placing Topsoil	1038
Total:	7207

PROCEDURES FOR DETERMINING UNCLASSIFIED EXCAVATION QUANTITY

Plan quantity of Unclassified Excavation will be used for payment. If changes to the grading plan are ordered by the Engineer, the volume will be measured to the nearest cubic yard and the quantity adjusted.

EXCAVATION FOR REINFORCED CONCRETE BOX CULVERT INSTALLATION

Included in the quantity of "Unclassified Excavation" are 2601 cubic yards of excavation for installation of reinforced concrete box culverts.

All work necessary to excavate a trench for installation of reinforced concrete box culverts including labor, equipment, and incidentals will be incidental to the contract unit price per cubic yard for "Unclassified Excavation". Payment for excavation of reinforced concrete box culverts will be based only on plans quantity and measurement of these excavation quantities during construction will not be performed.

The excavation quantities for installation of reinforced concrete box culverts are not included with the earthwork balance quantities. The quantities computed for excavation of the reinforced concrete box culverts are based on the limits shown in the drawing below.

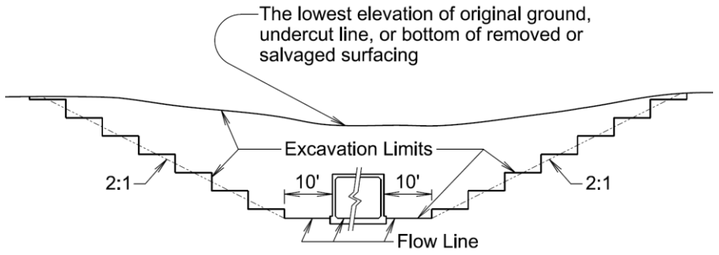


TABLE OF EXCAVATION FOR REINFORCED CONCRETE BOX CULVERT INSTALLATION

Station	Quantity (CuYd)
124th Street – 24+37	612
458th Ave – 5+11	401
458th Ave – 27+73	1097
458th Ave – 38+66	491
Total:	2601

PIPE CULVERT UNDERCUT

Pipe culvert undercut will be required for this project. The depth of undercut is an estimate and the actual depth necessary will be determined during construction. Pipes listed may or may not require undercutting and pipes not listed may require undercutting. The Engineer will determine which pipe will be undercut in accordance with Section 421 of the Specifications.

Station	Undercut Depth (Ft)	Quantity (CuYd)
456th Ave – 83+72	1.0	7.6
458th Ave – 10+82	1.0	14.3
458th Ave – 34+08	1.0	16.6
458th Ave – 52+75	1.0	12.1
Total:		50.6

The table below contains the rate for one-foot depth of pipe culvert undercut per foot of pipe length and should be used as an aid in determining the actual amount of undercut to be performed during construction. The table is derived from the drawing below and conforms to the Specifications. When calculating pipe culvert undercut, the length of pipe ends should be included in the overall pipe length.

Pipe Diameter (In)	Round Pipe Undercut Rate for 1' Depth (CuYd/Ft)	Arch Pipe Undercut Rate for 1' Depth (CuYd/Ft)
24	0.2407	0.2577
30	0.2623	0.2847
36	0.2840	0.3110
42	0.3056	0.3337
48	0.3272	0.3596
54	0.3488	0.3827
60	0.3704	0.4105
66	0.3920	---
72	0.4136	0.4630
78	0.4352	---
84	0.4568	0.5123
90	0.4784	---

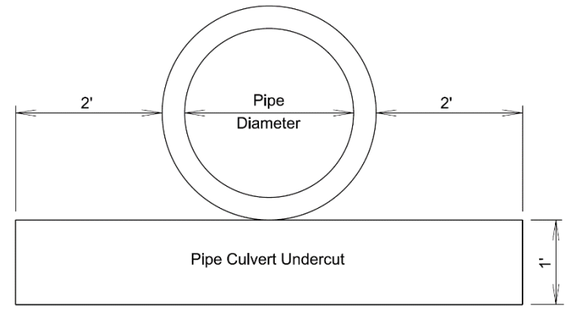


TABLE OF REMOVE PIPE CULVERT

Station	L/R	Quantity (Ft)
458th Ave – 10+82	L & R	48
458th Ave – 34+08	L & R	50
458th Ave – 52+75	L & R	39
	Total:	137

CORRUGATED METAL PIPE

Corrugated metal pipes will have 2 ⅔-inch x ½-inch corrugations for 42-inch and smaller round pipe and 48-inch and smaller arch pipe unless otherwise stated in the plans. Corrugated metal pipes will have 3-inch x 1-inch or 5-inch x 1-inch corrugations for 48-inch and larger round pipe and 54-inch and larger arch pipe unless otherwise stated in the plans.

TABLE OF CIRCULAR CMP CULVERTS

	Circular CMP			Circular CMP Flared End		
Station - Offset	12"CMP Furnish and Install (Ft)	36"CMP Furnish and Install (Ft)	42"CMP Furnish and Install (Ft)	12" CMP Flared End (Each)	36" CMP Flared End (Each)	42" CMP Flared End (Each)
456th Avenue						
83+72-30'R	26.0			2		
458th Avenue						
10+82 – L & R		42.0			2	
34+08 – L & R			44.0			2
Totals:	26.0	42.0	44.0	2	2	2

TABLE OF CMP ARCH CULVERTS

Station - Offset	30"CMP Arch Furnish and Install (Ft)	30" CMP Arch Flared End (Each)
458th Avenue		
52+75 – L & R	36.0	2
Totals:	36.0	2

TABLE OF SPECIAL PRECAST CONCRETE BOX CULVERTS

	Precast Concrete Box Culvert			Precast Concrete Box Culvert End Section		
Station - Offset	4.0'x4.0' Concrete Box Culvert Furnish and Install (Ft)	5.0'x5.0' Concrete Box Culvert Furnish and Install (Ft)	6.0'x6.0' Concrete Box Culvert Furnish and Install (Ft)	4.0'x4.0' Concrete Box Culvert End Section Furnish and Install (Each)	5.0'x5.0' Concrete Box Culvert End Section Furnish and Install (Each)	6.0'x6.0' Concrete Box Culvert End Section Furnish and Install (Each)
458th Avenue						
5+11 – L & R	50.0			2		
27+73 – L & R			70.0			2
38+66 – L & R	54.0			2		
124th Street						
24+37 – L & R		54.0			2	
Totals:	104.0	54.0	70.0	4	2	2
Total Special Precast Concrete Box Culvert:					228.0 Ft	
Total Special Precast Concrete Box Culvert End Section:					8 Each	

SUBGRADE PREPARATION AND MAINTENANCE

The subgrade will be scarified a minimum of six inches (6") and recompacted to the specifications governed by the specified density method in accordance with Section 120.3 B.3 of the Specifications and to the satisfaction of the Engineer. Scarification and recompaction will be considered incidental to the bid item "Unclassified Excavation," and no extra payment will be allowed.

The Contractor will maintain the completed compacted subgrade prior to gravel surfacing placement. Where completed subgrade areas are disturbed by subsequent construction operations or adverse weather, the Contractor will scarify the surface, reshape, and compact the material to required density prior to further construction.

WOVEN SEPARATOR FABRIC

Geotextile fabric will be installed throughout the entire roadway beneath the gravel surfacing as shown on the typical section. Payment under the contract item per square yard for, "Woven Separator Fabric" will include all labor, equipment and material to furnish and install the fabric.

Pay quantities for the geotextiles will be paid for at the contract price per square yard in place. Measurement for payment excludes the geotextile used for overlapping as well as seam overlaps.

Installation will be in accordance with the manufacturer's recommendations. Overlap shall be a minimum of two feet. The end of the roll overlaps shall be three feet minimum.

The Contractor will not drive equipment directly on top of the geotextile. Should the geotextile be torn or punctured, the damaged area shall be repaired or replaced by the Contractor at no expense to the Owner. The repair will consist of a patch of the same type of geotextile a minimum of three feet from the edge of any part of the damaged area.

The fabric will conform to the requirements for Woven Separator Fabric as per table 831 of the Specifications. The Contractor will provide a certificate of compliance verifying that the material meets the specification prior to the installation of the fabric.

GRAVEL SURFACING

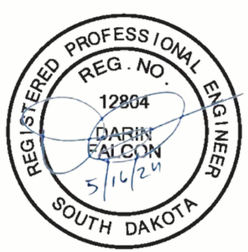
Gravel surfacing will meet the requirements of Table 1 of Section 882.2 of the Specifications.

Before placement of the gravel surfacing, the subgrade will be proof rolled in the presence of the Engineer with a loaded truck to verify compaction requirements. Any soft areas will be repaired by the Contractor.

Compaction of the gravel surfacing will be governed by the specified density method in accordance with Section 260.3 B of the Specifications and to the satisfaction of the Engineer.

TABLE OF GRAVEL SURFACING AND WOVEN SEPARATOR FABRIC

Station	L/R	Gravel Surfacing (Tons)	Woven Separator Fabric (SqYd)
Goodwill Road			
2+88 to 29+00	L&R	2,072.6	5,951.1
124th Street			
1+50 to 56+76	L&R	3,487.4	9,825.8
456th Avenue			
13+07 to 86+00	L&R	5,516.1	14,586.0
458th Avenue			
2+06 to 54+85	L&R	3,803.1	10,558.0
	Total:	14,879.2	40,920.9



PLACING TOPSOIL

The topsoil thickness will be approximately 4 inches throughout the project limits.

The estimated amount of topsoil to be placed is as follows:

Station to Station	Placing Topsoil (CuYd)
124th Street	
23+80 to 25+53 – L & R	67
Goodwill Road	
2+88 to 29+00 - L	361
2+88 to 29+00 - R	479
458th Avenue	
4+64 to 5+60 – L & R	36
27+21 to 28+20 – L & R	55
38+21 to 39+20 – L & R	40
Total:	1038

PERMANENT SEEDING

The areas to be seeded consist of all newly graded areas within the project limits.

Type G Permanent Seed Mixture will consist of the following:

Grass Species	Variety	Pure Live Seed (PLS) (Pounds/Acre)
Western Wheatgrass	Arriba, Flintlock, Rodan, Rosana, Walsh	7
Switchgrass	Dacotah, Forestburg, Nebraska 28, Pathfinder, Summer, Sunburst, Trailblazer	3
Indiangrass	Holt, Tomahawk, Chief, Nebraska 54	3
Big Bluestem	Bison, Bonilla, Champ, Sunnyview, Rountree, Bonanza	3
Oats or Spring Wheat: April through May; Winter Wheat: August through November		10
	Total:	26

FERTILIZING

Application of fertilizer will not be required on this project.

MYCORRHIZAL INOCULUM

Mycorrhizal inoculum will consist of mycorrhizal fungi spores and mycorrhizal fungi-infected root fragments in a solid carrier. The carrier may include organic materials, calcinated clay, or other materials consistent with application and good plant growth. The supplier will provide certification of the fungal species claimed and the live propagule count. The inoculum will include a minimum 25% the fungal species *Rhizophagus intraradices*. The remaining 75% may include other endomycorrhizal fungal species.

All seed will be inoculated by the seed supplier with a minimum of 100,000 live propagules of mycorrhizal fungi per acre. All costs of inoculating the seed will be incidental to the contract unit price per pound for the corresponding permanent seed mixture.

The mycorrhizal inoculum will be as shown below or an approved equal:

Product	Manufacturer
MycoApply	Mycorrhizal Applications, Inc. Grants Pass, OR Phone: 1-866-476-7800 www.mycorrhizae.com
AM 120 Multi Species Blend	Reforestation Technologies Int. Gilroy, CA Phone: 1-800-784-4769 www.reforest.com
LALRISE Prime and Max WP	Lallemand Specialties Inc. Milwaukee, WI Phone: 1-844-590-7781 www.lallemandplantcare.com

EROSION CONTROL BLANKET

Erosion control blanket will be installed at the locations noted in the table and at locations determined by the Engineer during construction.

The erosion control blanket provided will be from the approved product list. The approved product list for erosion control blanket may be viewed at the following internet site:

http://apps.sd.gov/HC60ApprovedProducts/main.aspx

TABLE OF EROSION CONTROL BLANKET

Station	L/R	Location	Quantity (SqYd)
Goodwill Road			
2+88 to 11+25	L	Ditch Bottom	744.2
2+88 to 8+81	R	Ditch Bottom	530.0
9+17 to 29+24	R	Ditch Bottom	1796.4
16+50 to 25+01	L	Ditch Bottom	756.2
26+40 to 29+20	L	Ditch Bottom	250.7
		Total Type 3 Erosion Control Blanket:	4077.5

EROSION CONTROL WATTLE

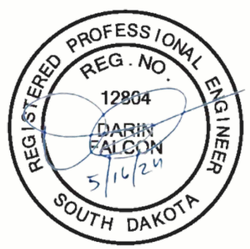
Erosion control wattles for restraining the flow of runoff and sediment will be installed at locations noted in the table and at locations determined by the Engineer during construction. Refer to Standard Plate 734.06 for details.

The Contractor will provide certification that the erosion control wattles do not contain noxious weed seeds.

Erosion control wattles will remain on the project to decompose.

The erosion control wattle provided will be from the approved product list. The approved product list for erosion control wattle may be viewed at the following internet site:

http://apps.sd.gov/HC60ApprovedProducts/main.aspx



STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	FEMA BRIC		

TABLE OF EROSION CONTROL WATTLE

Station	L/R	Diameter (Inch)	Location	Quantity (Ft)
124th Street				
23+83 to 24+22	R	6	Toe of inslope	47
23+85 to 24+31	L	6	Toe of inslope	53
24+46 to 25+32	R	6	Toe of inslope	88
24+52 to 25+55	L	6	Toe of inslope	113
458th Ave				
4+63 to 5+02	R	6	Toe of inslope	44
4+64 to 5+02	L	6	Toe of inslope	47
5+17 to 5+61	L	6	Toe of inslope	49
5+26 to 5+62	R	6	Toe of inslope	42
27+18 to 27+55	R	6	Toe of inslope	51
27+18 to 27+70	L	6	Toe of inslope	63
27+75 to 28+29	R	6	Toe of inslope	65
27+89 to 28+23	L	6	Toe of inslope	49
38+19 to 38+50	R	6	Toe of inslope	39
38+20 to 38+57	L	6	Toe of inslope	48
38+84 to 39+19	R	6	Toe of inslope	41
38+86 to 39+21	L	6	Toe of inslope	40
			Total:	879

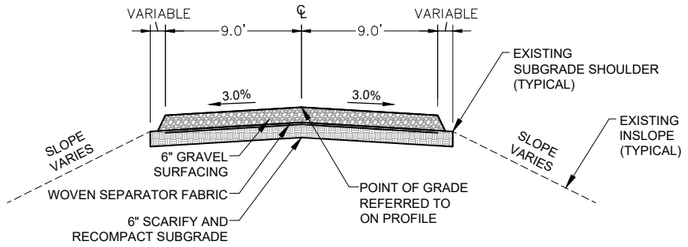
TABLE OF RIPRAP AND TYPE B DRAINAGE FABRIC

Station	L/R	Class B Riprap (Tons)	Class C Riprap (Tons)	Type B Drainage Fabric (SqYd)
124th Street				
24+37	L	22.8	-	33.1
458th Avenue				
5+11	R	15.5	-	24.3
10+82	R	-	24.2	30.4
27+73	R	37.3	-	50.0
34+08	R	14.7	-	23.4
38+66	R	15.5	-	24.3
52+75	R	14.0	-	22.6
	Totals:	119.8	24.2	208.1

TYPICAL SECTIONS

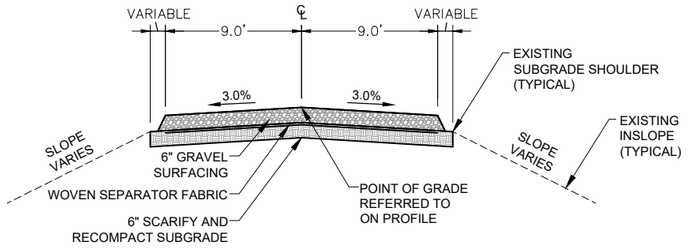
STATE	PROJECT	SHEET	TOTAL SHEETS
##	FEMA BRIC	9	109

SCALE: 1" = 10' H
1" = 5' V



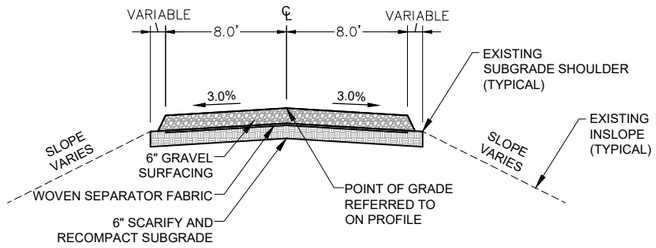
456th AVENUE

STATION 13+07.51 TO 86+00.00



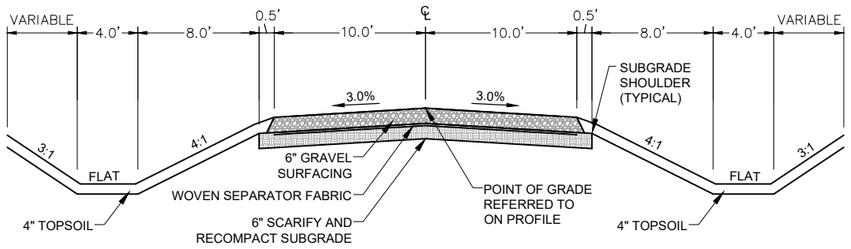
458th AVENUE

STATION 2+25.00 TO 4+85.00
STATION 5+35.00 TO 27+47.00
STATION 27+97.00 TO 38+40.00
STATION 38+90.00 TO 54+85.00



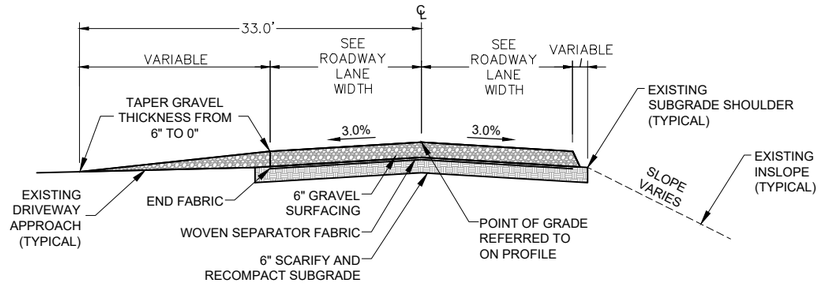
124th STREET

STATION 1+50.00 TO 24+12.00
STATION 24+62.00 TO 56+76.25

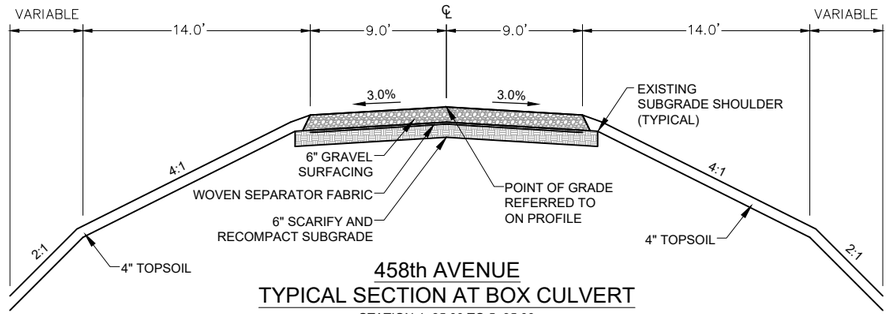


GOODWILL ROAD

STATION 2+88.00 TO 29+00.00

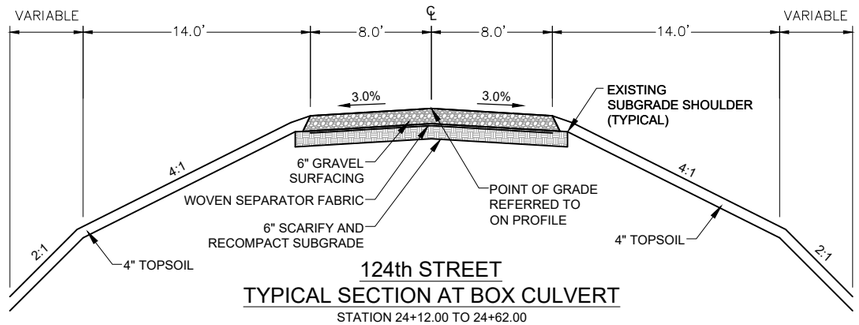


TYPICAL SECTION AT DRIVEWAY APPROACHES



458th AVENUE
TYPICAL SECTION AT BOX CULVERT

STATION 4+85.00 TO 5+35.00
STATION 27+47.00 TO 27+97.00
STATION 38+40.00 TO 38+90.00



124th STREET
TYPICAL SECTION AT BOX CULVERT

STATION 24+12.00 TO 24+62.00

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SOUTH DAKOTA

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ROBERTS COUNTY, SOUTH DAKOTA

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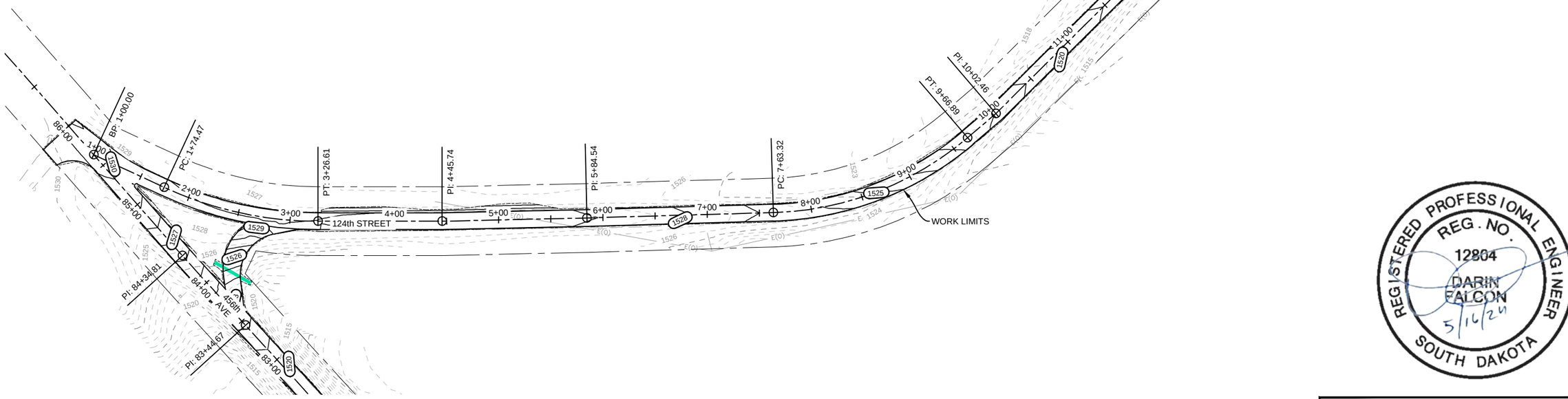
TYPICAL SECTIONS

DRWN. BY	CHK'D BY	PROJECT NO.	DATE
OML	DJF	2111-01639	11/09/2022

Nov 14, 2022 – 3:44pm – K:\Projects\Tribal\SissetonWahpetonOyate\2111-01639_FEMA-BRIC-Award\CAD\Design\Plan DWG\2111-01639_Typical Sections.dwg

EROSION AND SEDIMENT CONTROL

STATE	PROJECT	SHEET	TOTAL SHEETS
##	FEMA BRIC	10	109



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REG. NO. 12804
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5/16/24
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SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

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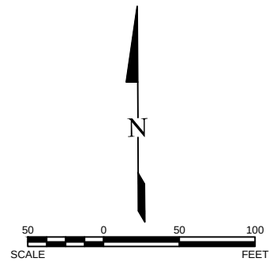
EROSION AND SEDIMENT CONTROL
124th STREET

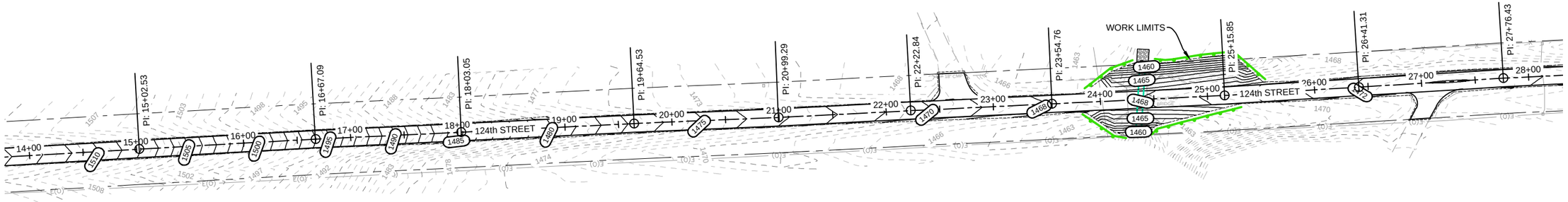
DRWN. BY	CHK'D BY	PROJECT NO.	DATE
OML	DJF	2111-01639	01/22/2024

Jan 23, 2024 – 3:48pm – K:\Projects\Tribal\SissetonWahpetonOyate\2111-01639_FEMA-BRIC-Award\CAD\Design\Plan DWG\2111-01639_Erosion Control.dwg

EROSION AND SEDIMENT CONTROL

STATE	PROJECT	SHEET	TOTAL SHEETS
##	FEMA BRIC	11	109





PERIMETER CONTROL

INSTALL 6" DIAMETER EROSION CONTROL WATTLES
AT THE TOE OF THE INSLOPE IN THE FOLLOWING LOCATIONS:

23+83-11.1'R TO 24+22-35.2'R = 47 FT
23+85-13.0'L TO 24+31-37.0'L = 53 FT
24+46-33.0'R TO 25+31-11.8'R = 88 FT
24+52-37.1'L TO 25+55-12.7'L = 113 FT

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5/16/24
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EROSION CONTROL WATTLE

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EROSION AND SEDIMENT CONTROL
124th STREET

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OML	DJF	2111-01639	01/22/2024

Jan 23, 2024 – 3:48pm – K:\Projects\Tribal\SissetonWahpetonOyate\2111-01639_FEMA-BRIC-Award\CAD\Design\Plan DWG\2111-01639_Erosion Control.dwg

EROSION AND SEDIMENT CONTROL

STATE	PROJECT	SHEET	TOTAL SHEETS
##	FEMA BRIC	12	109

N

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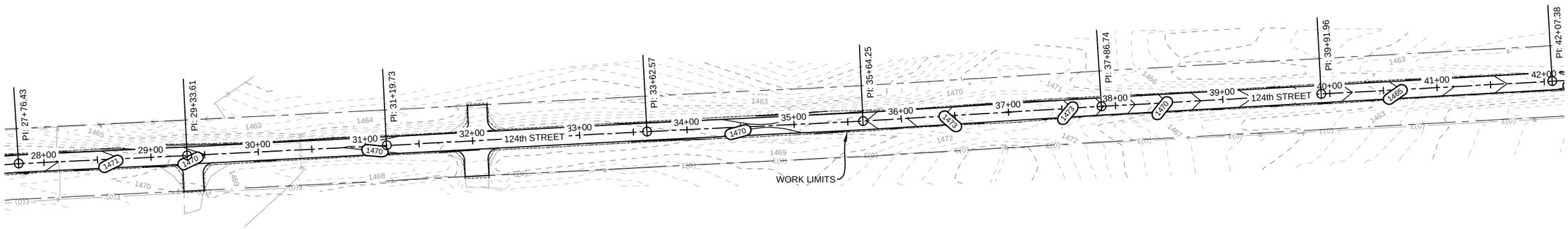
SCALE FEET



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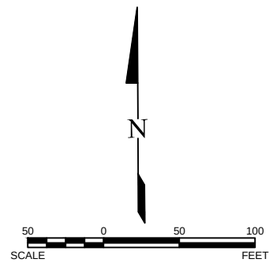
EROSION AND SEDIMENT CONTROL
124th STREET

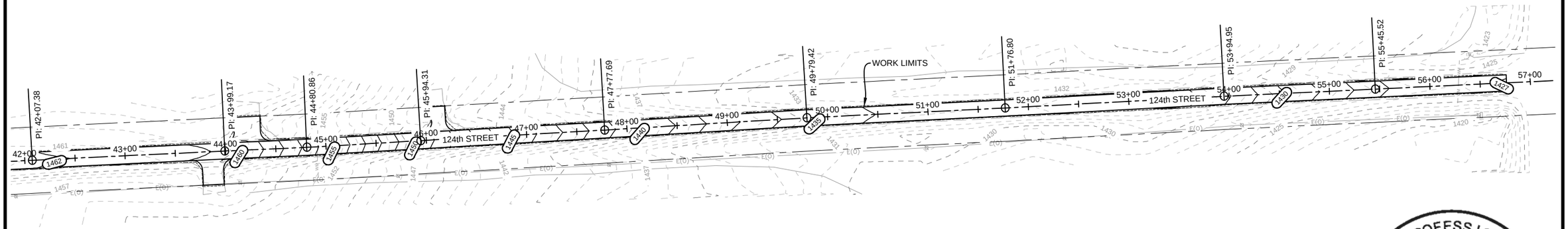
DRWN. BY	CHK'D BY	PROJECT NO.	DATE
OML	DJF	2111-01639	01/22/2024

Jan 23, 2024 – 3:48pm – K:\Projects\Tribal\SissetonWahpetonOyate\2111-01639_FEMA-BRIC-Award\CAD\Design\Plan DWG\2111-01639_Erosion Control.dwg

EROSION AND SEDIMENT CONTROL

STATE	PROJECT	SHEET	TOTAL SHEETS
##	FEMA BRIC	13	109





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FEMA BRIC
SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

EROSION AND SEDIMENT CONTROL
124th STREET

DRWN. BY	CHK'D BY	PROJECT NO.	DATE
OML	DJF	2111-01639	01/22/2024

Jan 23, 2024 – 3:49pm – K:\Projects\Tribal\SissetonWahpetonOyate\2111-01639_FEMA-BRIC-Award\CAD\Design\Plan DWG\2111-01639_Erosion Control.dwg

STATE	PROJECT	SHEET	TOTAL SHEETS
##	FEMA BRIC		

EROSION AND SEDIMENT CONTROL

N

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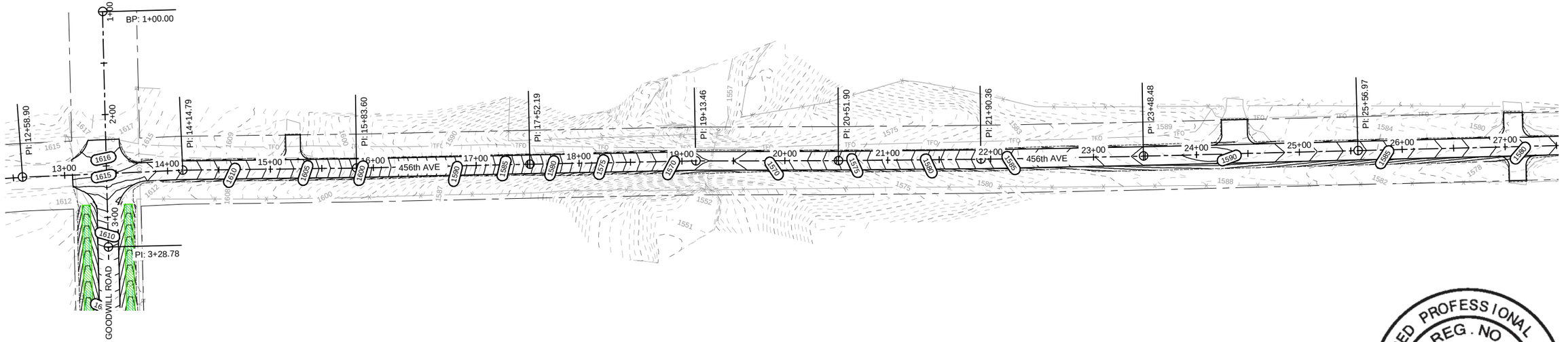
SCALE FEET



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EROSION AND SEDIMENT CONTROL
456th AVENUE

DRWN. BY	CHK'D BY	PROJECT NO.	DATE
OML	DJF	2111-01639	01/22/2024

Jan 24, 2024 – 4:04pm – K:\Projects\Tribal\SissetonWahpetonOyate\2111-01639_FEMA-BRIC-Award\CAD\Design\Plan DWG\2111-01639_Erosion Control.dwg

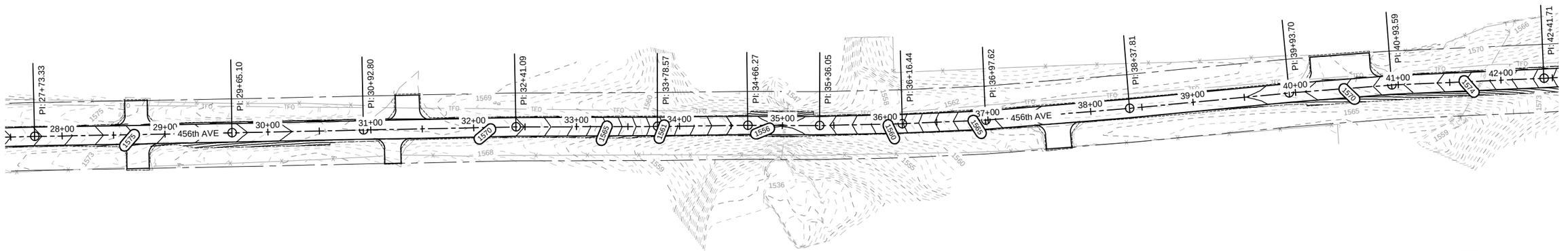
STATE	PROJECT	SHEET	TOTAL SHEETS
##	FEMA BRIC		

EROSION AND SEDIMENT CONTROL

N

50 0 50 100

SCALE FEET



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EROSION AND SEDIMENT CONTROL
456th AVENUE

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Jan 24, 2024 – 4:04pm – K:\Projects\Tribal\SissetonWahpetonOyate\2111-01639_FEMA-BRIC-Award\CAD\Design\Plan DWG\2111-01639_Erosion Control.dwg

EROSION AND SEDIMENT CONTROL

STATE	PROJECT	SHEET	TOTAL SHEETS
##	FEMA BRIC		

N

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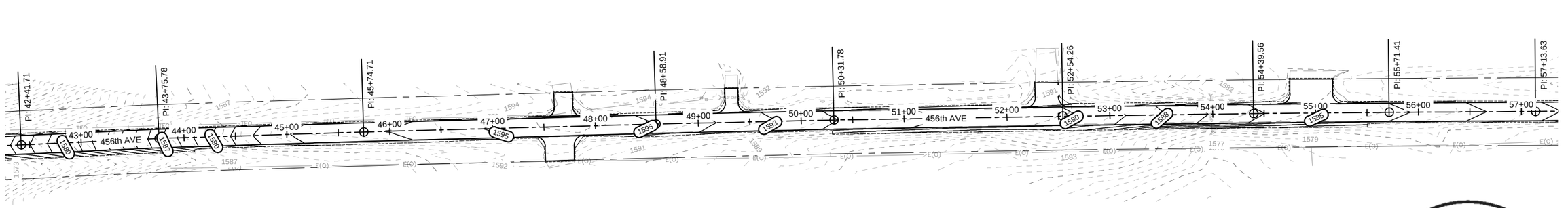
SCALE FEET



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456th AVENUE

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OML	DJF	2111-01639	01/22/2024

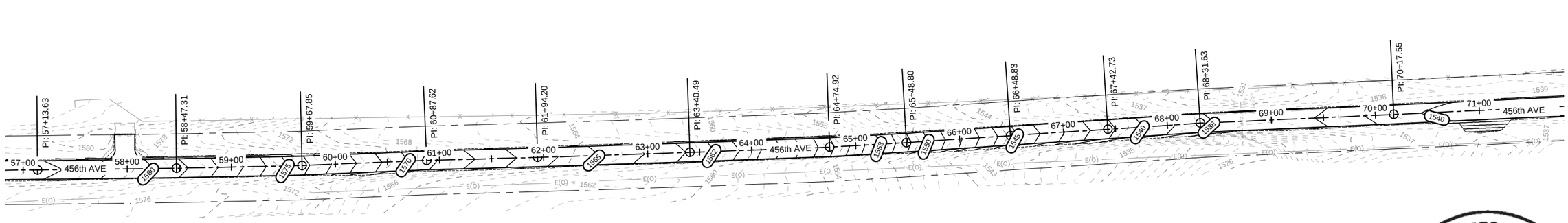
Jan 24, 2024 – 4:04pm – K:\Projects\Tribal\SissetonWahpetonOyate\2111-01639_FEMA-BRIC-Award\CAD\Design\Plan DWG\2111-01639_Erosion Control.dwg

EROSION AND SEDIMENT CONTROL

STATE	PROJECT	SHEET	TOTAL SHEETS
##	FEMA BRIC		

N

50 0 50 100
SCALE FEET



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5/16/24
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ROBERTS COUNTY, SOUTH DAKOTA

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EROSION AND SEDIMENT CONTROL
456th AVENUE

DRWN. BY	CHK'D BY	PROJECT NO.	DATE
OML	DJF	2111-01639	01/22/2024

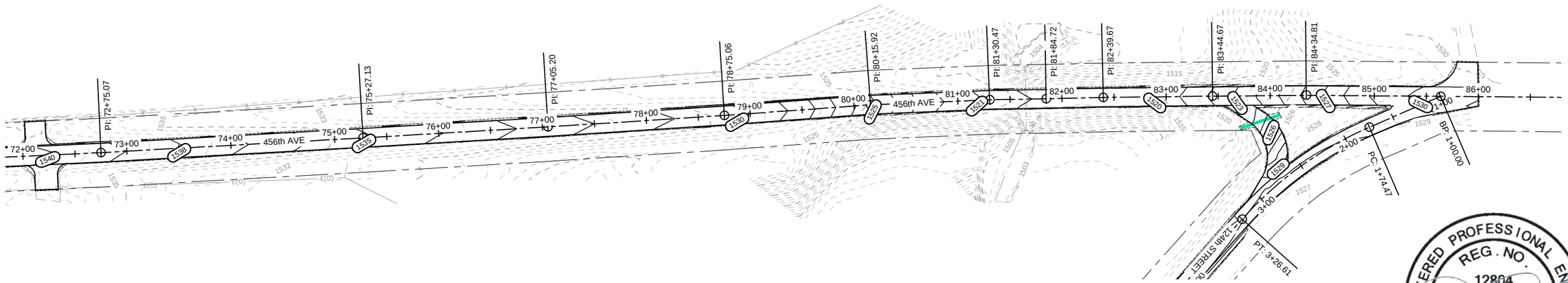
Jan 24, 2024 – 4:04pm – K:\Projects\Tribal\SissetonWahpetonOyate\2111-01639_FEMA-BRIC-Award\CAD\Design\Plan DWG\2111-01639_Erosion Control.dwg

EROSION AND SEDIMENT CONTROL

STATE	PROJECT	SHEET	TOTAL SHEETS
##	FEMA BRIC		

N

50 0 50 100
SCALE FEET



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REG. NO. 12804
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5/16/24
SOUTH DAKOTA

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FEMA BRIC
SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

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EROSION AND SEDIMENT CONTROL
456th AVENUE

DRWN. BY	CHK'D BY	PROJECT NO.	DATE
OML	DJF	2111-01639	01/22/2024

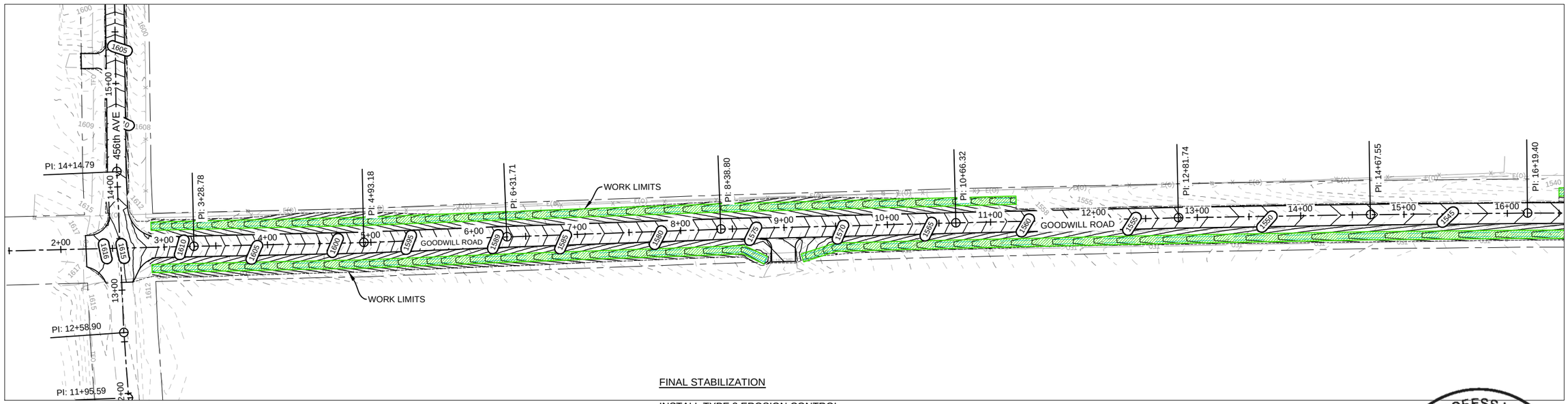
Jan 24, 2024 – 4:04pm – K:\Projects\Tribal\SissetonWahpetonOyate\2111-01639_FEMA-BRIC-Award\CAD\Design\Plan DWG\2111-01639_Erosion Control.dwg

STATE	PROJECT	SHEET	TOTAL SHEETS
##	FEMA BRIC	19	109

EROSION AND SEDIMENT CONTROL

N

50 0 50 100
SCALE FEET



FINAL STABILIZATION

INSTALL TYPE 3 EROSION CONTROL
BLANKET ALONG THE PROPOSED DITCH BOTTOM
IN THE FOLLOWING LOCATIONS:

2+88-20.5'L TO 11+25-20.5'L = 744.2 SQYD (8'W x 837'L)
2+88-20.5'R TO 8+81-31.1'R = 530.0 SQYD (8'W x 596'L)
9+17-29.9'R TO 29+24-45.1'R = 1796.4 SQYD (8'W x 2021'L)

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5/16/24
SOUTH DAKOTA

LEGEND

EROSION CONTROL BLANKET

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FEMA BRIC
SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

KLJ

EROSION AND SEDIMENT CONTROL
GOODWILL ROAD

DRWN. BY	CHK'D BY	PROJECT NO.	DATE
OML	DJF	2111-01639	01/22/2024

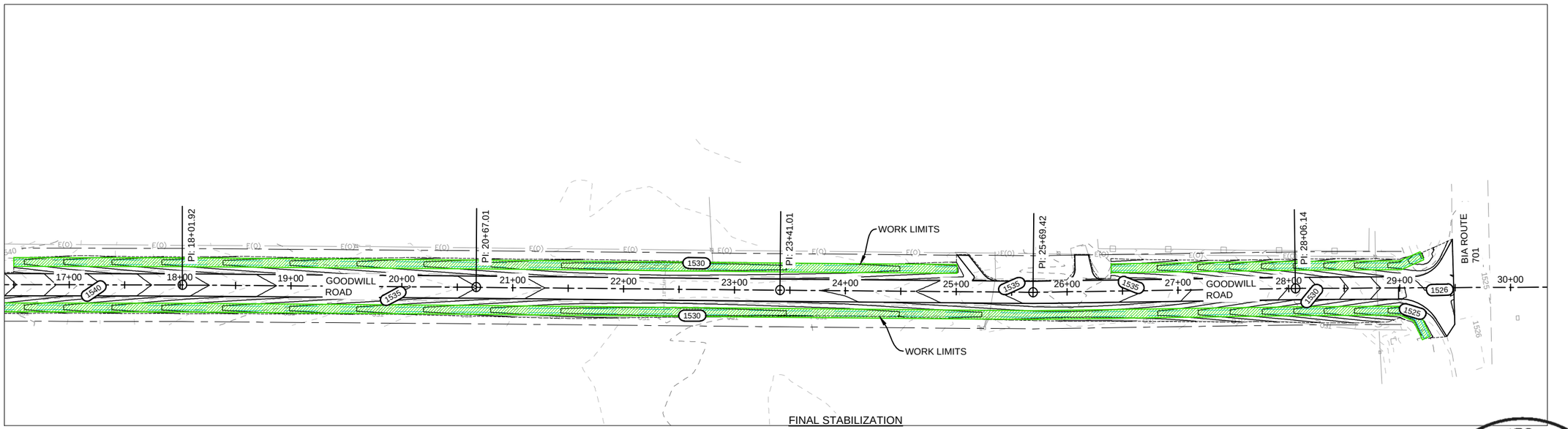
Jan 23, 2024 – 3:49pm – K:\Projects\Tribal\SissetonWahpetonOyate\2111-01639_FEMA-BRIC-Award\CAD\Design\Plan DWG\2111-01639_Erosion Control.dwg

STATE	PROJECT	SHEET	TOTAL SHEETS
##	FEMA BRIC	20	109

EROSION AND SEDIMENT CONTROL

N

50 0 50 100
SCALE FEET



FINAL STABILIZATION

INSTALL TYPE 3 EROSION CONTROL
BLANKET ALONG THE PROPOSED DITCH BOTTOM
IN THE FOLLOWING LOCATIONS:

16+50-20.5'L TO 25+01-20.5'L = 756.2 SQYD (8'W x 851'L)
26+40-20.5'L TO 29+20-28.9'L = 250.7 SQYD (8'W x 282'L)

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 12804
DARIN FALCON
5/16/24
SOUTH DAKOTA

LEGEND

EROSION CONTROL BLANKET

Revised #

FEMA BRIC
SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

KLJ

EROSION AND SEDIMENT CONTROL
GOODWILL ROAD

DRWN. BY	CHK'D BY	PROJECT NO.	DATE
OML	DJF	2111-01639	01/22/2024

Jan 23, 2024 – 3:49pm – K:\Projects\Tribal\SissetonWahpetonOyate\2111-01639_FEMA-BRIC-Award\CAD\Design\Plan DWG\2111-01639_Erosion Control.dwg

STATE	PROJECT	SHEET	TOTAL SHEETS
##	FEMA BRIC	21	109

EROSION AND SEDIMENT CONTROL

N

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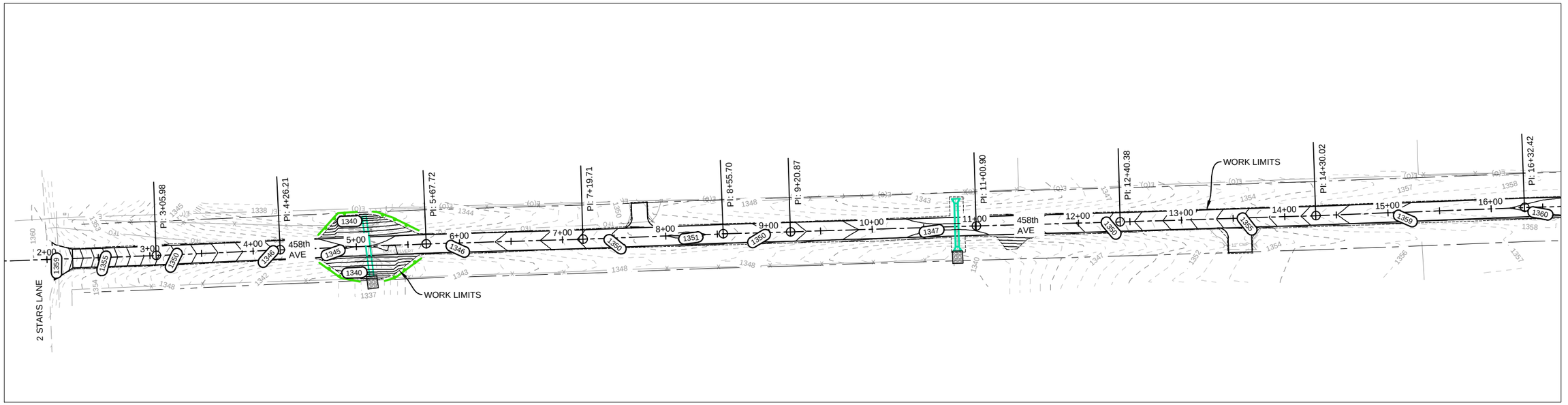
SCALE FEET



PERIMETER CONTROL

INSTALL 6" DIAMETER EROSION CONTROL WATTLES
AT THE TOE OF THE INSLOPE IN THE FOLLOWING LOCATIONS:

4+63-13.9'R TO 5+02-33.7'R = 44 FT
4+64-13.0'L TO 5+02-33.9'L = 47 FT
5+17-33.4'L TO 5+61-13.4'L = 49 FT
5+26-34.1'R TO 5+62-13.6'R = 42 FT

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 12804
DARIN FALCON
5/16/24
SOUTH DAKOTA

LEGEND
EROSION CONTROL WATTLE

Revised #

FEMA BRIC
SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

KLJ

EROSION AND SEDIMENT CONTROL
458th AVENUE

DRWN. BY	CHK'D BY	PROJECT NO.	DATE
OML	DJF	2111-01639	01/22/2024

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STATE	PROJECT	SHEET	TOTAL SHEETS
##	FEMA BRIC	22	109

EROSION AND SEDIMENT CONTROL

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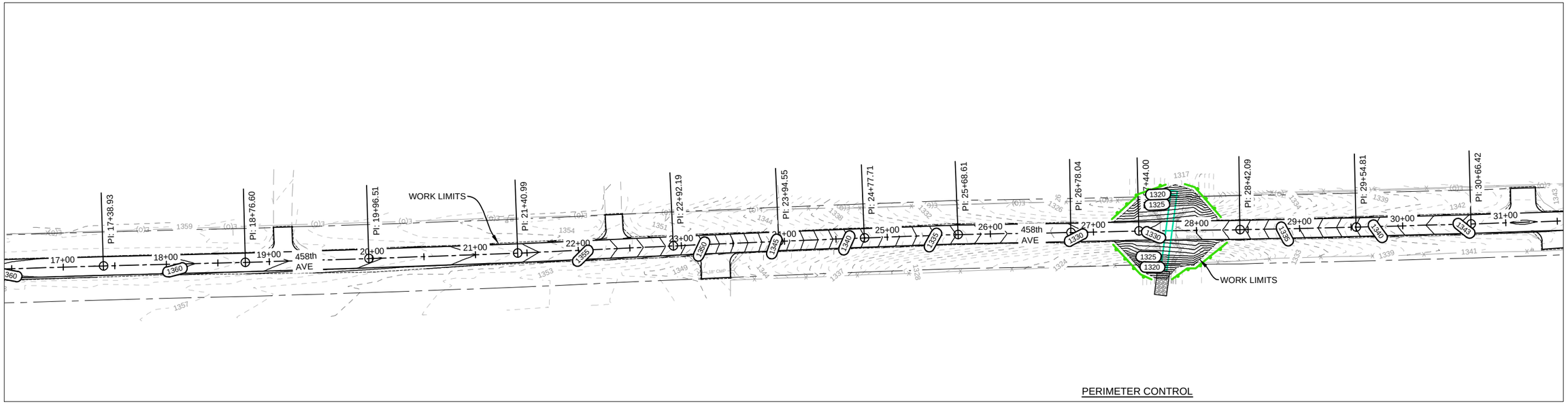

PERIMETER CONTROL

INSTALL 6" DIAMETER EROSION CONTROL WATTLES
AT THE TOE OF THE INSLOPE IN THE FOLLOWING LOCATIONS:

27+18-12.6'R TO 27+55-47.1'R = 51 FT
27+18-12.2'L TO 27+70-44.7'L = 63 FT
27+75-47.1'R TO 28+29-12.3'R = 65 FT
27+89-45.0'L TO 28+23-12.7'L = 49 FT

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 12804
DARIN FALCON
5/16/24
SOUTH DAKOTA

LEGEND

EROSION CONTROL WATTLE

Revised #

FEMA BRIC
SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

KLJ

EROSION AND SEDIMENT CONTROL
458th AVENUE

DRWN. BY	CHK'D BY	PROJECT NO.	DATE
OML	DJF	2111-01639	01/22/2024

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STATE	PROJECT	SHEET	TOTAL SHEETS
##	FEMA BRIC	23	109

EROSION AND SEDIMENT CONTROL

N

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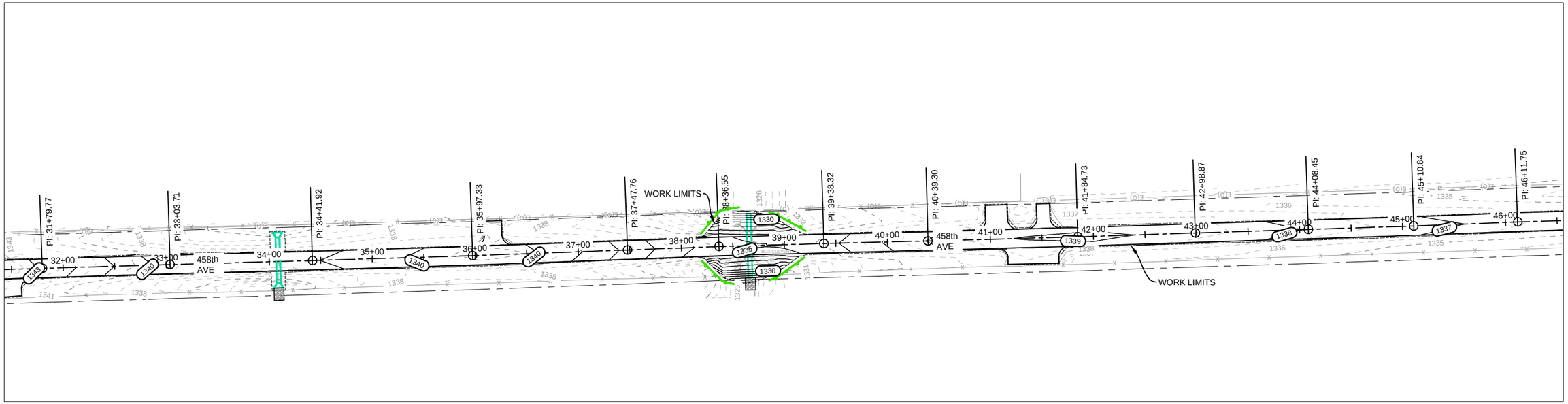

PERIMETER CONTROL

INSTALL 6" DIAMETER EROSION CONTROL WATTLES
AT THE TOE OF THE INSLOPE IN THE FOLLOWING LOCATIONS:

38+19-13.5'R TO 38+50-36.8'R = 39 FT
38+20-13.3'L TO 38+57-37.5'L = 48 FT
38+84-34.0'R TO 39+19-13.0'R = 41 FT
38+86-32.2'L TO 39+21-13.0'L = 40 FT

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 12804
DARIN FALCON
5/16/24
SOUTH DAKOTA

LEGEND

EROSION CONTROL WATTLE

Revised #

FEMA BRIC
SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

KLJ

EROSION AND SEDIMENT CONTROL
458th AVENUE

DRWN. BY	CHK'D BY	PROJECT NO.	DATE
OML	DJF	2111-01639	01/22/2024

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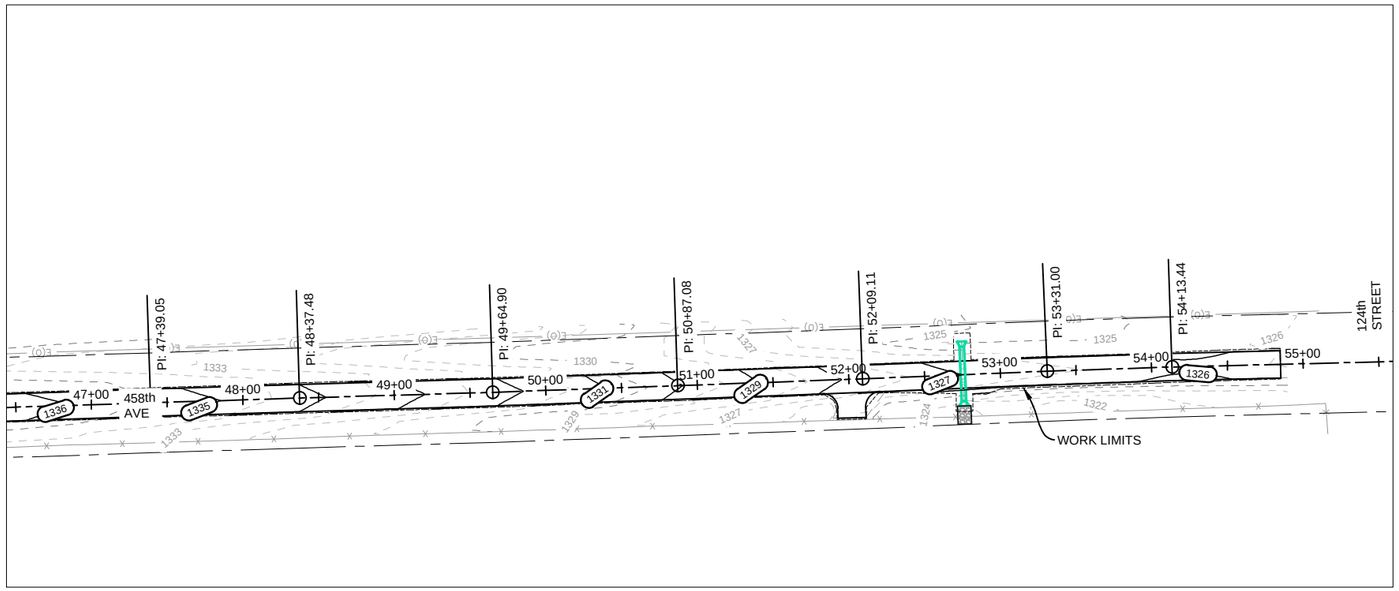
STATE	PROJECT	SHEET	TOTAL SHEETS
##	FEMA BRIC	24	109

EROSION AND SEDIMENT CONTROL



Revised #

FEMA BRIC
SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

EROSION AND SEDIMENT CONTROL
458th AVENUE

DRWN. BY	CHK'D BY	PROJECT NO.	DATE
OML	DJF	2111-01639	01/22/2024

Jan 23, 2024 – 3:49pm – K:\Projects\Tribal\SissetonWahpetonOyate\2111-01639_FEMA-BRIC-Award\CAD\Design\Plan DWG\2111-01639_Erosion Control.dwg

STORMWATER POLLUTION PREVENTION PLAN CHECKLIST
*(The numbers left of the title headings are **reference numbers** to the GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES (Stormwater Permit))*

5.3 (2): STAFF TRAINING/SWPPP IMPLEMENTATION
To promote stormwater management awareness specific for this project, the Contractor's Erosion Control Supervisor should provide correspondence of how the SWPPP will be implemented. The Contractor's Erosion Control Supervisor is responsible for providing this information at the preconstruction meeting, and subsequently completing an attendance log, which should identify site-specific implementation of the SWPPP and the names of the personnel who attended the preconstruction meeting. Documentation of the preconstruction meeting will be filed with the SWPPP documents.

5.3 (3): DESCRIPTION OF CONSTRUCTION ACTIVITIES

- **5.3 (3a): Project Limits** (See Title Sheet)
- **5.3 (3a): Project Description** (See Title Sheet)
- **5.3 (4): Site Map(s)** (See Title Sheet and Plans)
- **Major Soil Disturbing Activities** (check all that apply)
  - ☒ Clearing and grubbing
  - ☒ Excavation/borrow
  - ☒ Grading and shaping
  - ☐ Filling
  - ☐ Other (describe):
- **5.3 (3b): Total Project Area** 12.57 Acres
- **5.3 (3b): Total Area to be Disturbed** 12.57 Acres
- **5.3 (3c): Maximum Area Disturbed at One Time** 12.57 Acres
- **5.3 (3d): Existing Vegetative Cover (%)** 90
- **5.3 (3d): Description of Vegetative Cover** Native Grasses and Shrubs
- **5.3 (3e): Soil Properties:** Organic topsoil overlying virgin clays
- **5.3 (3f): Name of Receiving Water Body/Bodies** Peever Slough (approximately 6 miles east of the project site).
- **5.3 (3g): Location of Construction Support Activity Areas** Adjacent to construction site

5.3 (3h): ORDER OF CONSTRUCTION ACTIVITIES

The Contractor will enter the Estimated Start Date.

Description	Estimated Start Date
Install traffic control signing and devices	
Install erosion control measures	
Scarify and recompact existing roadway subgrades	
Install separator fabric and gravel surfacing per the typical sections	
Install proposed pipe culverts and reinforced concrete box culverts	
Final restoration and site clean-up	

5.3 (5): DESCRIPTION AND MAINTENANCE OF CONTROL MEASURES
All controls will be maintained in good working order. Necessary repairs will be initiated within 24 hours of the site inspection report. Include the technical reasoning for selecting each control. (check all that apply)

Perimeter Controls (See Detail Plan Sheets)

Description	Estimated Start Date
☒ Natural Buffers (within 50 ft of Waters of State)	
☐ Silt Fence	
☒ Erosion Control Wattles	
☐ Temporary Berm / Windrow	
☐ Floating Silt Curtain	
☐ Stabilized Construction Entrances	
☐ Entrance/Exit Equipment Tire Wash	
☐ Other:	

Structural Erosion and Sediment Controls

Description	Estimated Start Date
☐ Silt Fence	
☐ Temporary Berm/Windrow	
☒ Erosion Control Wattles	
☐ Temporary Sediment Barriers	
☐ Erosion Bales	
☐ Temporary Slope Drain	
☐ Turf Reinforcement Mat	
☒ Riprap	
☐ Gabions	
☐ Rock Check Dams	
☐ Sediment Traps/Basins	
☐ Culvert Inlet Protection	
☐ Transition Mats	
☐ Median/Area Drain Inlet Protection	
☐ Curb Inlet Protection	
☐ Interceptor Ditch	
☐ Concrete Washout Facility	
☐ Work Platform	
☐ Temporary Water Barrier	
☐ Temporary Water Crossing	
☐ Permanent Stormwater Ponds	
☐ Permanent Open Vegetated Swales	
☐ Natural Depressions to allow for Infiltration	
☐ Sequential Systems that combine several practices	
☐ Other:	

Dust Controls

Description	Estimated Start Date
☐ Tarps & Wind impervious fabrics	
☐ Watering	
☐ Stockpile location/orientation	
☐ Dust Control Chlorides	
☐ Other	

Dewatering BMPs

Description	Estimated Start Date
☐ Sediment Basins	
☐ Dewatering bags	
☐ Weir tanks	
☐ Temporary Diversion Channel	
☐ Other:	

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 12804
DARIN FALCON
5/16/24
SOUTH DAKOTA

Stabilization Practices (See Detail Plan Sheets)
(Stabilization measures will begin the following work day whenever earth disturbing activity on any portion of the site has temporarily or permanently ceased. Temporary stabilization will be completed as soon as practicable but no later than 14 days after initiating soil stabilization activities (**3.18**))

Description	Estimated Start Date
☐ Vegetation Buffer Strips	
☐ Temporary Seeding (Cover Crop Seeding)	
☒ Permanent Seeding	
☐ Sodding	
☐ Planting (Woody Vegetation for Soil Stabilization)	
☐ Mulching (Grass Hay or Straw)	
☐ Fiber Mulching (Wood Fiber Mulch)	
☐ Soil Stabilizer	
☐ Bonded Fiber Matrix	
☐ Fiber Reinforced Matrix	
☒ Erosion Control Blankets	
☐ Surface Roughening (e.g. tracking)	
☐ Other:	

Wetland Avoidance
Will construction and/or erosion and sediment controls impinge on regulated wetlands? Yes ☐ No ☒ If yes, the structural and erosion and sediment controls have been included in the total project wetland impacts and have been included in the 404 permit process with the USACE.

5.3 (6): PROCEDURES FOR INSPECTIONS

- Inspections will be conducted at least once every 7 days.
- All controls will be maintained in good working order. Necessary repairs will be initiated within 24 hours of the site inspection report.
- Silt fence will be inspected for depth of sediment and for tears to ensure the fabric is securely attached to the posts and that the posts are well anchored. Sediment buildup will be removed from the silt fence when it reaches $^1/_3$ of the height of the silt fence.
- Sediment basins and traps will be checked. Sediment will be removed when depth reaches approximately 50 percent of the structure's capacity, and at the conclusion of the construction.
- Check dams will be inspected for stability. Sediment will be removed when depth reaches ½ the height of the dam.
- All seeded areas will be checked for bare spots, washouts, and vigorous growth free of significant weed infestations.
- Inspection and maintenance reports will be prepared on form DOT 298 for each site inspection, this form will also be used to document changes to the SWPPP. A copy of the completed inspection form will be filed with the SWPPP documents.
- The Project Engineer and Contractor's Erosion Control Supervisor are responsible for inspections. Maintenance and repair activities are the responsibility of the Contractor. The Project Engineer will complete the inspection and maintenance reports and distribute copies per the distribution instructions on DOT 298.

5.3 (7): POST CONSTRUCTION STORMWATER MANAGEMENT
Stormwater management will be handled by temporary controls outlined in "DESCRIPTION AND MAINTENANCE OF CONTROL MEASURES" above, and any permanent controls needed to meet permanent stormwater management needs in the post construction period will be shown in the plans and noted as permanent.

5.3 (8): POLLUTION PREVENTION PROCEDURES

5.3 (8a): Spill Prevention and Response Procedures

➢ **Material Management**

- Housekeeping
  - Only needed products will be stored on-site by the Contractor.
  - Except for bulk materials the contractor will store all materials under cover and/or in appropriate containers.
  - Products must be stored in original containers and labeled.
  - Material mixing will be conducted in accordance with the manufacturer's recommendations.
  - When possible, all products will be completely used before properly disposing of the container off-site.
  - The manufacturer's directions for disposal of materials and containers will be followed.
  - The Contractor's site superintendent will inspect materials storage areas regularly to ensure proper use and disposal.
  - Dust generated will be controlled in an environmentally safe manner.

- Hazardous Materials
  - Products will be kept in original containers unless the container is not resealable and provide secondary containment as applicable.
  - Original labels and material safety data sheets will be retained in a safe place to relay important product information.
  - If surplus product must be disposed of, manufacturer's label directions for disposal will be followed.
  - Maintenance and repair of all equipment and vehicles involving oil changes, hydraulic system drain down, de-greasing operations, fuel tank drain down and removal, and other activities which may result in the accidental release of contaminants will be conducted on an impervious surface and under cover during wet weather to prevent the release of contaminants onto the ground.
  - Wheel wash water will be collected and allowed to settle out suspended solids prior to discharge. Wheel wash water will not be discharged directly into any stormwater system or stormwater treatment system.
  - Potential pH-modifying materials such as: bulk cement, cement kiln dust, fly ash, new concrete washings, concrete pumping, residuals from concrete saw cutting (either wet or dry), and mixer washout waters will be collected on site and managed to prevent contamination of stormwater runoff.

➢ **Spill Control Practices**
In addition to the previous housekeeping and management practices, the following practices will be followed for spill prevention and cleanup if needed.

- For all hazardous materials stored on site, the manufacturer's recommended methods for spill cleanup will be clearly posted. Site personnel will be made aware of the procedures and the locations of the information and cleanup supplies.
- Appropriate cleanup materials and equipment will be maintained by the Contractor in the materials storage area on-site. As appropriate, equipment and materials may include items such as brooms, dust pans, mops, rags, gloves, goggles, kitty litter, sand, sawdust, and plastic and metal trash containers specifically for cleanup purposes.
- All spills will be cleaned immediately after discovery and the materials disposed of properly.
- The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with a hazardous substance.
- After a spill a report will be prepared describing the spill, what caused it, and the cleanup measures taken. The spill prevention plan will be adjusted to include measures to prevent this type of spill from reoccurring, as well as clean up instructions in the event of reoccurrences.
- The Contractor's site superintendent, responsible for day-to-day operations, will be the spill prevention and cleanup coordinator.

➢ **Spill Response**
The primary objective in responding to a spill is to quickly contain the material(s) and prevent or minimize migration into stormwater runoff and conveyance systems. If the release has impacted on-site stormwater, it is critical to contain the released materials on-site and prevent their release into receiving waters. If a spill of pollutants threatens stormwater or surface water at the site, the spill response procedures outlined below must be implemented in a timely manner to prevent the release of pollutants.

- The Contractor's site superintendent will be notified immediately when a spill or the threat of a spill is observed. The superintendent will assess the situation and determine the appropriate response.
- If spills represent an imminent threat of escaping erosion and sediment controls and entering receiving waters, personnel will be directed to respond immediately to contain the release and notify the superintendent after the situation has been stabilized.
- Spill kits containing appropriate materials and equipment for spill response and cleanup will be maintained by the Contractor at the site.
- If oil sheen is observed on surface water (e.g. settling ponds, detention ponds, swales), action will be taken immediately to remove the material causing the sheen. The Contractor will use appropriate materials to contain and absorb the spill. The source of the oil sheen will also be identified and removed or repaired as necessary to prevent further releases.
- If a spill occurs the superintendent or the superintendent's designee will be responsible for completing the spill reporting form and for reporting the spill to SDDANR.
- Personnel with primary responsibility for spill response and cleanup will receive training by the Contractor's site superintendent or designee. The training must include identifying the location of the

➢ **Spill Response (continued)**

spill kits and other spill response equipment and the use of spill response materials.

- Spill response equipment will be inspected and maintained as necessary to replace any materials used in spill response activities.

5.3 (8b): WASTE MANAGEMENT PROCEDURES

➢ **Waste Disposal**

- All liquid waste materials will be collected and stored in approved sealed containers. All trash and construction debris from the site will be deposited in the approved containers. Containers will be serviced as necessary, and the trash will be hauled to an approved disposal site or licensed landfill. All onsite personnel will be instructed in the proper procedures for waste disposal and notices stating proper practices will be posted. The Contractor is responsible for ensuring waste disposal procedures are followed.

➢ **Hazardous Waste**

- All hazardous waste materials will be disposed of in a manner specified by local or state regulations or by the manufacturer. Site personnel will be instructed in these practices, and the Contractor will be responsible for seeing that these practices are followed.

➢ **Sanitary Waste**

- Portable sanitary facilities will be provided on all construction sites. Sanitary waste will be collected from the portable units which must be secured to prevent tipping and serviced in a timely manner by a licensed waste management Contractor or as required by any local regulations.
-

5.3 (9): CONSTRUCTION SITE POLLUTANTS

The following materials or substances are expected to be present on the site during the construction period. These materials will be handled as noted under the heading “POLLUTION PREVENTION PROCEDURES” (check all that apply).

➢ ☐ Concrete and Portland Cement
➢ ☐ Detergents
➢ ☐ Paints
➢ ☐ Metals
➢ ☐ Bituminous Materials
➢ ☒ Petroleum Based Products
➢ ☒ Diesel Exhaust Fluid
➢ ☐ Cleaning Solvents
➢ ☒ Wood
➢ ☐ Cure
➢ ☐ Texture
➢ ☐ Chemical Fertilizers
➢ ☐ Other:

Product Specific Practices

- **Petroleum Products**
  All on-site vehicles will be monitored for leaks and receive regular preventive maintenance to reduce the chance of leakage. Petroleum products will be stored in tightly sealed containers which are clearly labeled.

- **Fertilizers**
  Fertilizers will be applied only in the amounts specified by the SDDOT. Once applied, fertilizers will be worked into the soil to limit the exposure to stormwater. Fertilizers will be stored in an enclosed area. The contents of partially used fertilizer bags will be transferred to sealable containers to avoid spills.

- **Paints**
  All containers will be tightly sealed and stored when not required for use. The excess will be disposed of according to the manufacturer’s instructions and any applicable state and local regulations.

- **Concrete Trucks**
  Contractors will provide designated truck washout facilities on the site. These areas must be self-contained and not connected to any stormwater outlet of the site. Upon completion of construction, the area at the washout facility will be properly stabilized.

5.3 (10): NON-STORMWATER DISCHARGES

The following non-stormwater discharges are anticipated during the course of this project (check all that apply).

➢ ☐ Discharges from water line flushing.
➢ ☐ Pavement wash-water, where no spills or leaks of toxic or hazardous materials have occurred.
➢ ☒ Uncontaminated ground water associated with dewatering activities.

5.3 (11): INFEASIBILITY DOCUMENTATION

If it is determined to be infeasible to comply with any of the requirements of the Stormwater Permit, the infeasibility determination must be thoroughly documented in the SWPPP.

7.0: SPILL NOTIFICATION

In the event of a spill, the Contractor’s site superintendent will make the appropriate notification(s), consistent with the following procedures:

➢ A release or spill of a regulated substance (includes petroleum and petroleum products) must be reported to SDDANR immediately **if any one of the following** conditions exists:
  - The release or spill threatens or is able to threaten waters of the state (surface water or ground water)
  - The release or spill causes an immediate danger to human health or safety
  - The release or spill exceeds 25 gallons
  - The release or spill causes a sheen on surface water
  - The release or spill of any substance that exceeds the ground water quality standards of ARSD Chapter 74:54:01
  - The release or spill of any substance that exceeds the surface water quality standards of ARSD Chapter 74:51:01
  - The release or spill of any substance that harms or threatens to harm wildlife or aquatic life
  - The release or spill is required to be reported according to Superfund Amendments and Reauthorization Act (SARA) Title III List of Lists, Consolidated List of Chemicals Subject to Reporting Under the Emergency Planning and Community Right to Know Act, US Environmental Protection Agency.

➢ To report a release or spill, call SDDANR at 605-773-3296 during regular office hours (8 a.m. to 5 p.m. Central Standard Time). To report the release after hours, on weekends or holidays, call South Dakota Emergency Management at 605-773-3231. Reporting the release to SDDANR does not meet any obligation for reporting to other state, local, or federal agencies. Therefore, you must also contact local authorities to determine the local reporting requirements for releases. A written report of the unauthorized release of any regulated substance, including quantity discharged, and the location of the discharge will be sent to SDDANR within 14 days of the discharge.

5.4: SWPPP CERTIFICATIONS

➢ **Certification of Compliance with Federal, State, and Local Regulations**

The Storm Water Pollution Prevention Plan (SWPPP) for this project reflects the requirements of all local municipal jurisdictions for storm water management and sediment and erosion control as established by ordinance, as well as other state and federal requirements for sediment and erosion control plans, permits, notices or documentation as appropriate.

➢ **Sisseton Wahpeton Oyate - Department of Transportation**

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

_____

Authorized Signature (See the General Permit, Section 7.4 (1))

Prime Contractor

This section is to be executed by the General Contractor after the award of the contract. This section may be executed any time there is a change in the Prime Contractor of the project.

I certify under penalty of law that this document and all attachments will be revised or maintained under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

_____

Authorized Signature

CONTACT INFORMATION

The following personnel are duly authorized representatives and have signatory authority for modifications made to the SWPPP:

➢ **Contractor Information**:

- Prime Contractor Name: _____
- Contractor Contact Name: _____
- Address: _____
- _____
- City: _____State: _____Zip: _____
- Office Phone: _____Field: _____
- Cell Phone: _____Fax: _____

➢ **Erosion Control Supervisor**

- Name: _____
- Address: _____
- _____
- City: _____State: _____Zip: _____
- Office Phone: _____Field: _____
- Cell Phone: _____Fax: _____

➢ **Project Engineer**

- Name: _____
- Business Address: _____
- Job Office Location: _____
- City: _____State: _____Zip: _____
- Office Phone: _____Field: _____
- Cell Phone: _____Fax: _____

➢ **SDDANR Contact Spill Reporting**
- Business Hours Monday-Friday (605) 773-3296
- Nights and Weekends (605) 773-3231

➢ **SDDANR Contact for Hazardous Materials.**
- (605) 773-3153

➢ **National Response Center Hotline**
- (800) 424-8802.

➢ **SDDANR Stormwater Contact Information**
- SDDANR Stormwater (800) 737-8676
- Surface Water Quality Program (605) 773-3351

5.5: REQUIRED SWPPP MODIFICATIONS

➢ **5.5 (1): Conditions Requiring SWPPP Modification**

The SWPPP must be modified, including the site map(s), in response to any of the following conditions:

- When a new operator responsible for implementation of any part the SWPPP begins work on the site.
- When changes to the construction plans, sediment and erosion control measures, or any best management practices on site that are no longer accurately reflected in the SWPPP. This includes changes made in response to corrective actions triggered by inspections.
- To reflect areas on the site map where operational control has been transferred (including the date of the transfer) or has been covered under a new permit since initiating coverage under this general permit.
- If inspections by site staff, local officials, SDDANR, or U.S. EPA determine that SWPPP modifications are necessary for compliance with the Stormwater Permit.
- To reflect any revisions to applicable federal, state, or local requirements that affect the control measures implemented at the site.
- If approved by the Secretary, to reflect any changes in chemical water treatment systems or controls, including the use of a different water treatment chemical, age rates, different areas, or methods of application.

➢ **5.5 (2): Deadlines for SWPPP Modification**

Any required revisions to the SWPPP must be completed within 7 calendar days following any of the items listed above.

➢ **5.5 (3): Documentation of Modifications to the Plan**

All SWPPP modification records are required to be maintained showing the dates of when the modification occurred. The records must include the name of the person authorizing each change and a brief summary of all changes.

➢ **5.5 (4): Certification Requirements**

All modifications made to the SWPPP must be signed and certified as required in Section 7.4.

➢ **5.5 (5): Required Notice to Other Operators**

If there are multiple operators at the site, the Contractor's Erosion Control Supervisor must notify each operator that may be impacted by the change to the SWPPP within 24 hours.

When modifications as described above occur, the SWPPP will be modified to provide appropriate protection to disturbed areas, all storm water structures, and adjacent waters. The Project Engineer will modify the SWPPP using the DOT 298 form and drawings on the plan will be modified to reflect the needed changes. Copies of the DOT 298 forms and the SWPPP will be retained on site in a designated place for review throughout the course of the project. A copy of the DOT 298 form will be given to the Contractor Erosion Control Supervisor and a copy will be emailed to the SDDOT Environmental Section in accordance with the DOT 298 Form.

HORIZONTAL ALIGNMENT DATA

STATE	PROJECT	SHEET	TOTAL SHEETS
SD	FEMA BRIC	29	109

Table of Alignment Data - 124th Street CL

Type	Length	Radius	Direction	Start Station	End Station	Delta Angle	Chord length	Chord Direction	PI Station	Start Point (Easting, Northing)	End Point (Easting, Northing)	PI Point (Easting, Northing)
Line	74.469'		S23° 23' 25.86"E	1+00.00'	1+74.47'					(2715302.3016',653512.5890',0.0000')	(2715331.8655',653444.2398',0.0000')	
Curve	152.137'	350.000'		1+74.47'	3+26.61'	24.9051 (d)	150.942'	S35° 50' 35.12"E	2+51.76'	(2715331.8655',653444.2398',0.0000')	(2715420.2522',653321.8827',0.0000')	(2715362.5490',653373.3022')
Line	119.136'		S48° 17' 44.38"E	3+26.61'	4+45.74'					(2715420.2522',653321.8827',0.0000')	(2715509.1973',653242.6234',0.0000')	
Line	138.794'		S49° 36' 39.30"E	4+45.74'	5+84.54'					(2715509.1973',653242.6234',0.0000')	(2715614.9112',653152.6885',0.0000')	
Line	178.784'		S49° 56' 08.01"E	5+84.54'	7+63.32'					(2715614.9112',653152.6885',0.0000')	(2715751.7384',653037.6144',0.0000')	
Curve	203.567'	300.000'		7+63.32'	9+66.89'	38.8783 (d)	199.684'	S69° 22' 29.03"E	8+69.20'	(2715751.7384',653037.6144',0.0000')	(2715938.6231',652967.2750',0.0000')	(2715832.7685',652969.4666')
Line	35.578'		S88° 48' 50.05"E	9+66.89'	10+02.46'					(2715938.6231',652967.2750',0.0000')	(2715974.1935',652966.5385',0.0000')	
Line	176.574'		N86° 50' 55.68"E	10+02.46'	11+79.04'					(2715974.1935',652966.5385',0.0000')	(2716150.5008',652976.2450',0.0000')	
Line	160.881'		N87° 11' 26.03"E	11+79.04'	13+39.92'					(2716150.5008',652976.2450',0.0000')	(2716311.1889',652984.1305',0.0000')	
Line	162.608'		N86° 39' 16.83"E	13+39.92'	15+02.53'					(2716311.1889',652984.1305',0.0000')	(2716473.5196',652993.6192',0.0000')	
Line	164.561'		N86° 44' 05.44"E	15+02.53'	16+67.09'					(2716473.5196',652993.6192',0.0000')	(2716637.8134',653002.9921',0.0000')	
Line	135.966'		N87° 20' 19.34"E	16+67.09'	18+03.05'					(2716637.8134',653002.9921',0.0000')	(2716773.6330',653009.3053',0.0000')	
Line	161.477'		N87° 05' 11.87"E	18+03.05'	19+64.53'					(2716773.6330',653009.3053',0.0000')	(2716934.9015',653017.5125',0.0000')	
Line	134.757'		N87° 37' 09.55"E	19+64.53'	20+99.29'					(2716934.9015',653017.5125',0.0000')	(2717069.5426',653023.1102',0.0000')	
Line	123.549'		N87° 00' 51.97"E	20+99.29'	22+22.84'					(2717069.5426',653023.1102',0.0000')	(2717192.9241',653029.5451',0.0000')	
Line	131.918'		N87° 14' 46.00"E	22+22.84'	23+54.76'					(2717192.9241',653029.5451',0.0000')	(2717324.6902',653035.8833',0.0000')	
Line	161.096'		N87° 12' 05.83"E	23+54.76'	25+15.85'					(2717324.6902',653035.8833',0.0000')	(2717485.5944',653043.7482',0.0000')	
Line	125.454'		N86° 27' 05.39"E	25+15.85'	26+41.31'					(2717485.5944',653043.7482',0.0000')	(2717610.8074',653051.5130',0.0000')	
Line	135.127'		N86° 28' 10.32"E	26+41.31'	27+76.43'					(2717610.8074',653051.5130',0.0000')	(2717745.6777',653059.8340',0.0000')	
Line	157.180'		N87° 12' 51.80"E	27+76.43'	29+33.61'					(2717745.6777',653059.8340',0.0000')	(2717902.6718',653067.4728',0.0000')	
Line	186.120'		N87° 06' 56.90"E	29+33.61'	31+19.73'					(2717902.6718',653067.4728',0.0000')	(2718088.5558',653076.8379',0.0000')	
Line	242.842'		N86° 57' 26.31"E	31+19.73'	33+62.57'					(2718088.5558',653076.8379',0.0000')	(2718331.0552',653089.7279',0.0000')	
Line	201.675'		N87° 13' 52.70"E	33+62.57'	35+64.25'					(2718331.0552',653089.7279',0.0000')	(2718532.4949',653099.4696',0.0000')	
Line	222.489'		N86° 27' 35.83"E	35+64.25'	37+86.74'					(2718532.4949',653099.4696',0.0000')	(2718754.5598',653113.2075',0.0000')	
Line	205.224'		N86° 46' 52.22"E	37+86.74'	39+91.96'					(2718754.5598',653113.2075',0.0000')	(2718959.4604',653124.7308',0.0000')	
Line	215.413'		N86° 50' 50.61"E	39+91.96'	42+07.38'					(2718959.4604',653124.7308',0.0000')	(2719174.5471',653136.5775',0.0000')	
Line	191.797'		N87° 15' 16.80"E	42+07.38'	43+99.17'					(2719174.5471',653136.5775',0.0000')	(2719366.1242',653145.7640',0.0000')	
Line	81.690'		N87° 26' 50.16"E	43+99.17'	44+80.86'					(2719366.1242',653145.7640',0.0000')	(2719447.7329',653149.4024',0.0000')	
Line	113.446'		N86° 38' 24.06"E	44+80.86'	45+94.31'					(2719447.7329',653149.4024',0.0000')	(2719560.9840',653156.0513',0.0000')	
Line	183.379'		N86° 42' 23.69"E	45+94.31'	47+77.69'					(2719560.9840',653156.0513',0.0000')	(2719744.0601',653166.5863',0.0000')	
Line	201.732'		N86° 32' 34.29"E	47+77.69'	49+79.42'					(2719744.0601',653166.5863',0.0000')	(2719945.4247',653178.7511',0.0000')	
Line	197.377'		N87° 10' 08.43"E	49+79.42'	51+76.80'					(2719945.4247',653178.7511',0.0000')	(2720142.5608',653188.4996',0.0000')	
Line	218.157'		N86° 56' 57.86"E	51+76.80'	53+94.95'					(2720142.5608',653188.4996',0.0000')	(2720360.4083',653200.1094',0.0000')	
Line	150.568'		N87° 15' 57.02"E	53+94.95'	55+45.52'					(2720360.4083',653200.1094',0.0000')	(2720510.8049',653207.2918',0.0000')	
Line	230.559'		N87° 16' 52.13"E	55+45.52'	57+76.08'					(2720510.8049',653207.2918',0.0000')	(2720741.1044',653218.2284',0.0000')	

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 12804
DARIN FALCON
5/16/24
SOUTH DAKOTA

Revised #

FEMA BRIC
SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

KLJ

HORIZONTAL ALIGNMENT DATA

DRWN. BY	CHK'D BY	PROJECT NO.	DATE
OML	DJF	2111-01639	11/09/2022

Aug 26, 2022 – 4:03pm – K:\Projects\Tribal\SissetonWahpetonOyate\2111-01639_FEMA-BRIC-Award\CAD\Design\Plan DWG\2111-01639_Legend_Alignment_Control.dwg

HORIZONTAL ALIGNMENT DATA

STATE	PROJECT	SHEET	TOTAL SHEETS
SD	FEMA BRIC	30	109

Table of Alignment Data - 456th Avenue CL

Type	Length	Direction	Start Station	End Station	Start Point (Easting, Northing)	End Point (Easting, Northing)
Line	253.641'	N0° 49' 04.17"W	1+00.00'	3+53.64'	(2715585.4968',645055.6522',0.0000')	(2715581.8765',645309.2671',0.0000')
Line	114.573'	N1° 36' 37.80"W	3+53.64'	4+68.21'	(2715581.8765',645309.2671',0.0000')	(2715578.6565',645423.7948',0.0000')
Line	103.216'	N2° 13' 05.09"W	4+68.21'	5+71.43'	(2715578.6565',645423.7948',0.0000')	(2715574.6617',645526.9336',0.0000')
Line	297.039'	N2° 48' 40.38"W	5+71.43'	8+68.47'	(2715574.6617',645526.9336',0.0000')	(2715560.0933',645823.6154',0.0000')
Line	119.316'	N2° 06' 00.25"W	8+68.47'	9+87.79'	(2715560.0933',645823.6154',0.0000')	(2715555.7210',645942.8515',0.0000')
Line	118.143'	N2° 23' 02.55"W	9+87.79'	11+05.93'	(2715555.7210',645942.8515',0.0000')	(2715550.8065',646060.8925',0.0000')
Line	89.662'	N2° 27' 39.33"W	11+05.93'	11+95.59'	(2715550.8065',646060.8925',0.0000')	(2715546.9567',646150.4715',0.0000')
Line	63.309'	N4° 08' 34.15"W	11+95.59'	12+58.90'	(2715546.9567',646150.4715',0.0000')	(2715542.3830',646213.6155',0.0000')
Line	155.892'	N2° 29' 05.23"W	12+58.90'	14+14.79'	(2715542.3830',646213.6155',0.0000')	(2715535.6245',646369.3605',0.0000')
Line	168.810'	N0° 43' 32.16"W	14+14.79'	15+83.60'	(2715535.6245',646369.3605',0.0000')	(2715533.4867',646538.1566',0.0000')
Line	168.590'	N1° 16' 03.46"W	15+83.60'	17+52.19'	(2715533.4867',646538.1566',0.0000')	(2715529.7571',646706.7052',0.0000')
Line	161.272'	N1° 08' 12.62"W	17+52.19'	19+13.46'	(2715529.7571',646706.7052',0.0000')	(2715526.5574',646867.9452',0.0000')
Line	138.434'	N0° 07' 25.74"W	19+13.46'	20+51.90'	(2715526.5574',646867.9452',0.0000')	(2715526.2582',647006.3790',0.0000')
Line	138.462'	N0° 33' 15.68"W	20+51.90'	21+90.36'	(2715526.2582',647006.3790',0.0000')	(2715524.9186',647144.8341',0.0000')
Line	158.122'	N1° 05' 20.05"W	21+90.36'	23+48.48'	(2715524.9186',647144.8341',0.0000')	(2715521.9137',647302.9279',0.0000')
Line	208.485'	N1° 29' 18.98"W	23+48.48'	25+56.97'	(2715521.9137',647302.9279',0.0000')	(2715516.4976',647511.3421',0.0000')
Line	216.367'	N1° 26' 43.31"W	25+56.97'	27+73.33'	(2715516.4976',647511.3421',0.0000')	(2715511.0400',647727.6404',0.0000')
Line	191.772'	N1° 02' 41.89"W	27+73.33'	29+65.10'	(2715511.0400',647727.6404',0.0000')	(2715507.5427',647919.3802',0.0000')
Line	127.700'	N1° 14' 47.30"W	29+65.10'	30+92.80'	(2715507.5427',647919.3802',0.0000')	(2715504.7648',648047.0500',0.0000')
Line	148.286'	N1° 09' 27.66"W	30+92.80'	32+41.09'	(2715504.7648',648047.0500',0.0000')	(2715501.7688',648195.3057',0.0000')
Line	137.484'	N0° 11' 06.92"W	32+41.09'	33+78.57'	(2715501.7688',648195.3057',0.0000')	(2715501.3243',648332.7886',0.0000')
Line	87.697'	N0° 44' 10.30"W	33+78.57'	34+66.27'	(2715501.3243',648332.7886',0.0000')	(2715500.1975',648420.4783',0.0000')
Line	69.776'	N0° 15' 23.86"E	34+66.27'	35+36.05'	(2715500.1975',648420.4783',0.0000')	(2715500.5100',648490.2539',0.0000')
Line	80.393'	N1° 20' 52.11"W	35+36.05'	36+16.44'	(2715500.5100',648490.2539',0.0000')	(2715498.6191',648570.6244',0.0000')
Line	81.176'	N2° 29' 08.36"W	36+16.44'	36+97.62'	(2715498.6191',648570.6244',0.0000')	(2715495.0985',648651.7237',0.0000')
Line	140.199'	N4° 38' 08.36"W	36+97.62'	38+37.81'	(2715495.0985',648651.7237',0.0000')	(2715483.7678',648791.4638',0.0000')
Line	155.890'	N5° 31' 31.64"W	38+37.81'	39+93.70'	(2715483.7678',648791.4638',0.0000')	(2715468.7575',648946.6293',0.0000')
Line	99.889'	N4° 25' 37.59"W	39+93.70'	40+93.59'	(2715468.7575',648946.6293',0.0000')	(2715461.0470',649046.2202',0.0000')
Line	148.114'	N2° 32' 45.10"W	40+93.59'	42+41.71'	(2715461.0470',649046.2202',0.0000')	(2715454.4679',649194.1877',0.0000')
Line	134.069'	N2° 42' 44.45"W	42+41.71'	43+75.78'	(2715454.4679',649194.1877',0.0000')	(2715448.1235',649328.1066',0.0000')
Line	198.932'	N1° 47' 56.04"W	43+75.78'	45+74.71'	(2715448.1235',649328.1066',0.0000')	(2715441.8787',649526.9404',0.0000')
Line	284.202'	N1° 33' 47.35"W	45+74.71'	48+58.91'	(2715441.8787',649526.9404',0.0000')	(2715434.1261',649811.0363',0.0000')
Line	172.873'	N1° 19' 14.05"W	48+58.91'	50+31.78'	(2715434.1261',649811.0363',0.0000')	(2715430.1420',649983.8632',0.0000')
Line	222.474'	N0° 55' 42.33"W	50+31.78'	52+54.26'	(2715430.1420',649983.8632',0.0000')	(2715426.5372',650206.3078',0.0000')
Line	185.301'	N0° 49' 01.71"W	52+54.26'	54+39.56'	(2715426.5372',650206.3078',0.0000')	(2715423.8945',650391.5901',0.0000')
Line	131.853'	N0° 30' 20.88"W	54+39.56'	55+71.41'	(2715423.8945',650391.5901',0.0000')	(2715422.7306',650523.4377',0.0000')
Line	142.219'	N0° 19' 44.95"W	55+71.41'	57+13.63'	(2715422.7306',650523.4377',0.0000')	(2715421.9136',650665.6542',0.0000')
Line	133.682'	N0° 43' 40.66"W	57+13.63'	58+47.31'	(2715421.9136',650665.6542',0.0000')	(2715420.2151',650799.3249',0.0000')
Line	120.538'	N1° 15' 56.01"W	58+47.31'	59+67.85'	(2715420.2151',650799.3249',0.0000')	(2715417.5529',650919.8340',0.0000')
Line	119.769'	N2° 21' 36.67"W	59+67.85'	60+87.62'	(2715417.5529',650919.8340',0.0000')	(2715412.6206',651039.5012',0.0000')
Line	106.582'	N1° 32' 38.69"W	60+87.62'	61+94.20'	(2715412.6206',651039.5012',0.0000')	(2715409.7487',651146.0444',0.0000')
Line	146.295'	N1° 52' 37.74"W	61+94.20'	63+40.49'	(2715409.7487',651146.0444',0.0000')	(2715404.9565',651292.2614',0.0000')
Line	134.425'	N2° 10' 34.91"W	63+40.49'	64+74.92'	(2715404.9565',651292.2614',0.0000')	(2715399.8517',651426.5894',0.0000')
Line	73.884'	N3° 20' 20.16"W	64+74.92'	65+48.80'	(2715399.8517',651426.5894',0.0000')	(2715395.5485',651500.3480',0.0000')
Line	100.027'	N3° 50' 55.73"W	65+48.80'	66+48.83'	(2715395.5485',651500.3480',0.0000')	(2715388.8342',651600.1499',0.0000')
Line	93.894'	N3° 44' 08.78"W	66+48.83'	67+42.73'	(2715388.8342',651600.1499',0.0000')	(2715382.7165',651693.8446',0.0000')
Line	88.906'	N3° 49' 44.38"W	67+42.73'	68+31.63'	(2715382.7165',651693.8446',0.0000')	(2715376.7795',651782.5526',0.0000')
Line	185.915'	N2° 32' 46.06"W	68+31.63'	70+17.55'	(2715376.7795',651782.5526',0.0000')	(2715368.5204',651968.2844',0.0000')
Line	257.525'	N2° 43' 34.69"W	70+17.55'	72+75.07'	(2715368.5204',651968.2844',0.0000')	(2715356.2713',652225.5174',0.0000')
Line	252.055'	N3° 12' 59.83"W	72+75.07'	75+27.13'	(2715356.2713',652225.5174',0.0000')	(2715342.1282',652477.1753',0.0000')
Line	178.072'	N3° 24' 00.88"W	75+27.13'	77+05.20'	(2715342.1282',652477.1753',0.0000')	(2715331.5666',652654.9336',0.0000')
Line	169.857'	N3° 41' 13.27"W	77+05.20'	78+75.06'	(2715331.5666',652654.9336',0.0000')	(2715320.6438',652824.4391',0.0000')
Line	140.860'	N4° 10' 45.07"W	78+75.06'	80+15.92'	(2715320.6438',652824.4391',0.0000')	(2715310.3785',652964.9245',0.0000')
Line	114.552'	N2° 25' 58.70"W	80+15.92'	81+30.47'	(2715310.3785',652964.9245',0.0000')	(2715305.5157',653079.3732',0.0000')
Line	54.252'	N0° 56' 43.11"W	81+30.47'	81+84.72'	(2715305.5157',653079.3732',0.0000')	(2715304.6206',653133.6179',0.0000')
Line	54.956'	N1° 23' 47.19"W	81+84.72'	82+39.67'	(2715304.6206',653133.6179',0.0000')	(2715303.2813',653188.5571',0.0000')
Line	104.999'	N0° 39' 11.17"W	82+39.67'	83+44.67'	(2715303.2813',653188.5571',0.0000')	(2715302.0845',653293.5491',0.0000')
Line	90.138'	N0° 32' 12.53"W	83+44.67'	84+34.81'	(2715302.0845',653293.5491',0.0000')	(2715301.2400',653383.6830',0.0000')
Line	285.894'	N0° 28' 18.62"E	84+34.81'	87+20.71'	(2715301.2400',653383.6830',0.0000')	(2715303.5944',653669.5672',0.0000')

Table of Alignment Data - Goodwill Road CL

Type	Length	Direction	Start Station	End Station	Start Point (Easting, Northing)	End Point (Easting, Northing)
Line	228.778'	N88° 35' 55.62"E	1+00.00'	3+28.78'	(2715381.4570',646291.4614',0.0000')	(2715610.1663',646297.0558',0.0000')
Line	164.400'	N88° 45' 01.43"E	3+28.78'	4+93.18'	(2715610.1663',646297.0558',0.0000')	(2715774.5277',646300.6411',0.0000')
Line	138.532'	N87° 43' 07.24"E	4+93.18'	6+31.71'	(2715774.5277',646300.6411',0.0000')	(2715912.9498',646306.1555',0.0000')
Line	207.090'	N87° 55' 51.64"E	6+31.71'	8+38.80'	(2715912.9498',646306.1555',0.0000')	(2716119.9050',646313.6320',0.0000')
Line	227.515'	N88° 26' 29.01"E	8+38.80'	10+66.32'	(2716119.9050',646313.6320',0.0000')	(2716347.3358',646319.8203',0.0000')
Line	215.426'	N88° 43' 16.77"E	10+66.32'	12+81.74'	(2716347.3358',646319.8203',0.0000')	(2716562.7077',646324.6276',0.0000')
Line	185.805'	N89° 02' 00.65"E	12+81.74'	14+67.55'	(2716562.7077',646324.6276',0.0000')	(2716748.4865',646327.7617',0.0000')
Line	151.854'	N89° 26' 14.81"E	14+67.55'	16+19.40'	(2716748.4865',646327.7617',0.0000')	(2716900.3331',646329.2526',0.0000')
Line	182.520'	S89° 50' 52.67"E	16+19.40'	18+01.92'	(2716900.3331',646329.2526',0.0000')	(2717082.8530',646328.7683',0.0000')
Line	265.092'	S89° 33' 58.11"E	18+01.92'	20+67.01'	(2717082.8530',646328.7683',0.0000')	(2717347.9374',646326.7610',0.0000')
Line	273.996'	S89° 26' 21.38"E	20+67.01'	23+41.01'	(2717347.9374',646326.7610',0.0000')	(2717621.9207',646324.0795',0.0000')
Line	228.411'	S89° 31' 55.14"E	23+41.01'	25+69.42'	(2717621.9207',646324.0795',0.0000')	(2717850.3244',646322.2138',0.0000')
Line	236.723'	N89° 09' 09.70"E	25+69.42'	28+06.14'	(2717850.3244',646322.2138',0.0000')	(2718087.0216',646325.7144',0.0000')
Line	275.885'	N89° 42' 34.72"E	28+06.14'	30+82.03'	(2718087.0216',646325.7144',0.0000')	(2718362.9029',646327.1125',0.0000')

Revised #

FEMA BRIC
SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

HORIZONTAL ALIGNMENT DATA

DRWN. BY	CHK'D BY	PROJECT NO.	DATE
OML	DJF	2111-01639	11/09/2022

Aug 26, 2022 – 4:02pm – K:\Projects\Tribal\SissetonWahpetonOyate\2111-01639_FEMA-BRIC-Award\CAD\Design\Plan DWG\2111-01639_Legend_Alignment_Control.dwg

STATE	PROJECT	SHEET	TOTAL SHEETS
SD	FEMA BRIC	31	109

HORIZONTAL ALIGNMENT DATA

Table of Alignment Data - 458th Avenue CL

Type	Length	Direction	Start Station	End Station	Start Point (Easting, Northing)	End Point (Easting, Northing)
Line	205.984'	N2° 02' 42.59"W	1+00.00'	3+05.98'	(2726114.9628',647953.8662',0.0000')	(2726107.6118',648159.7189',0.0000')
Line	120.223'	N2° 36' 41.47"W	3+05.98'	4+26.21'	(2726107.6118',648159.7189',0.0000')	(2726102.1340',648279.8173',0.0000')
Line	141.514'	N2° 19' 30.97"W	4+26.21'	5+67.72'	(2726102.1340',648279.8173',0.0000')	(2726096.3924',648421.2148',0.0000')
Line	151.986'	N1° 45' 18.18"W	5+67.72'	7+19.71'	(2726096.3924',648421.2148',0.0000')	(2726091.7376',648573.1300',0.0000')
Line	135.995'	N2° 10' 11.21"W	7+19.71'	8+55.70'	(2726091.7376',648573.1300',0.0000')	(2726086.5887',648709.0279',0.0000')
Line	65.170'	N1° 41' 33.47"W	8+55.70'	9+20.87'	(2726086.5887',648709.0279',0.0000')	(2726084.6637',648774.1699',0.0000')
Line	180.031'	N1° 49' 18.31"W	9+20.87'	11+00.90'	(2726084.6637',648774.1699',0.0000')	(2726078.9405',648954.1099',0.0000')
Line	139.475'	N1° 33' 32.25"W	11+00.90'	12+40.38'	(2726078.9405',648954.1099',0.0000')	(2726075.1460',649093.5329',0.0000')
Line	189.643'	N1° 51' 15.95"W	12+40.38'	14+30.02'	(2726075.1460',649093.5329',0.0000')	(2726069.0091',649283.0763',0.0000')
Line	202.398'	N2° 13' 12.91"W	14+30.02'	16+32.42'	(2726069.0091',649283.0763',0.0000')	(2726061.1680',649485.3225',0.0000')
Line	106.514'	N1° 42' 42.13"W	16+32.42'	17+38.93'	(2726061.1680',649485.3225',0.0000')	(2726057.9864',649591.7889',0.0000')
Line	137.665'	N1° 28' 28.42"W	17+38.93'	18+76.60'	(2726057.9864',649591.7889',0.0000')	(2726054.4439',649729.4080',0.0000')
Line	119.915'	N1° 41' 58.36"W	18+76.60'	19+96.51'	(2726054.4439',649729.4080',0.0000')	(2726050.8874',649849.2707',0.0000')
Line	144.473'	N2° 05' 42.81"W	19+96.51'	21+40.99'	(2726050.8874',649849.2707',0.0000')	(2726045.6054',649993.6475',0.0000')
Line	151.202'	N2° 40' 26.03"W	21+40.99'	22+92.19'	(2726045.6054',649993.6475',0.0000')	(2726038.5516',650144.6853',0.0000')
Line	102.364'	N2° 26' 56.79"W	22+92.19'	23+94.55'	(2726038.5516',650144.6853',0.0000')	(2726034.1774',650246.9562',0.0000')
Line	83.155'	N2° 17' 08.87"W	23+94.55'	24+77.71'	(2726034.1774',650246.9562',0.0000')	(2726030.8608',650330.0451',0.0000')
Line	90.897'	N2° 09' 07.22"W	24+77.71'	25+68.61'	(2726030.8608',650330.0451',0.0000')	(2726027.4475',650420.8780',0.0000')
Line	109.438'	N0° 58' 15.83"W	25+68.61'	26+78.04'	(2726027.4475',650420.8780',0.0000')	(2726025.5928',650530.3005',0.0000')
Line	65.954'	N1° 16' 16.35"W	26+78.04'	27+44.00'	(2726025.5928',650530.3005',0.0000')	(2726024.1296',650596.2382',0.0000')
Line	98.093'	N0° 41' 35.05"W	27+44.00'	28+42.09'	(2726024.1296',650596.2382',0.0000')	(2726022.9431',650694.3245',0.0000')
Line	112.714'	N1° 21' 33.48"W	28+42.09'	29+54.81'	(2726022.9431',650694.3245',0.0000')	(2726020.2693',650807.0071',0.0000')
Line	111.614'	N1° 31' 55.02"W	29+54.81'	30+66.42'	(2726020.2693',650807.0071',0.0000')	(2726017.2854',650918.5809',0.0000')
Line	113.351'	N1° 56' 25.82"W	30+66.42'	31+79.77'	(2726017.2854',650918.5809',0.0000')	(2726013.4471',651031.8669',0.0000')
Line	123.936'	N1° 40' 25.20"W	31+79.77'	33+03.71'	(2726013.4471',651031.8669',0.0000')	(2726009.8273',651155.7497',0.0000')
Line	138.209'	N1° 36' 37.88"W	33+03.71'	34+41.92'	(2726009.8273',651155.7497',0.0000')	(2726005.9429',651293.9040',0.0000')
Line	155.411'	N1° 44' 48.90"W	34+41.92'	35+97.33'	(2726005.9429',651293.9040',0.0000')	(2726001.2053',651449.2426',0.0000')
Line	150.431'	N2° 07' 29.60"W	35+97.33'	37+47.76'	(2726001.2053',651449.2426',0.0000')	(2725995.6276',651599.5703',0.0000')
Line	88.794'	N2° 07' 13.25"W	37+47.76'	38+36.55'	(2725995.6276',651599.5703',0.0000')	(2725992.3424',651688.3032',0.0000')
Line	101.773'	N1° 36' 36.35"W	38+36.55'	39+38.32'	(2725992.3424',651688.3032',0.0000')	(2725989.4828',651790.0364',0.0000')
Line	100.976'	N1° 25' 06.62"W	39+38.32'	40+39.30'	(2725989.4828',651790.0364',0.0000')	(2725986.9831',651890.9814',0.0000')
Line	145.429'	N1° 35' 54.20"W	40+39.30'	41+84.73'	(2725986.9831',651890.9814',0.0000')	(2725982.9266',652036.3535',0.0000')
Line	114.142'	N1° 52' 32.50"W	41+84.73'	42+98.87'	(2725982.9266',652036.3535',0.0000')	(2725979.1906',652150.4339',0.0000')
Line	109.580'	N1° 47' 34.25"W	42+98.87'	44+08.45'	(2725979.1906',652150.4339',0.0000')	(2725975.7623',652259.9603',0.0000')
Line	102.385'	N1° 52' 53.38"W	44+08.45'	45+10.84'	(2725975.7623',652259.9603',0.0000')	(2725972.4008',652362.2896',0.0000')
Line	100.910'	N2° 10' 10.04"W	45+10.84'	46+11.75'	(2725972.4008',652362.2896',0.0000')	(2725968.5808',652463.1273',0.0000')
Line	127.309'	N1° 49' 33.80"W	46+11.75'	47+39.05'	(2725968.5808',652463.1273',0.0000')	(2725964.5241',652590.3717',0.0000')
Line	98.430'	N1° 51' 38.41"W	47+39.05'	48+37.48'	(2725964.5241',652590.3717',0.0000')	(2725961.3282',652688.7497',0.0000')
Line	127.413'	N1° 41' 53.04"W	48+37.48'	49+64.90'	(2725961.3282',652688.7497',0.0000')	(2725957.5526',652816.1066',0.0000')
Line	122.179'	N2° 01' 34.12"W	49+64.90'	50+87.08'	(2725957.5526',652816.1066',0.0000')	(2725953.2329',652938.2094',0.0000')
Line	122.031'	N2° 08' 12.21"W	50+87.08'	52+09.11'	(2725953.2329',652938.2094',0.0000')	(2725948.6830',653060.1560',0.0000')
Line	121.891'	N2° 23' 31.36"W	52+09.11'	53+31.00'	(2725948.6830',653060.1560',0.0000')	(2725943.5957',653181.9406',0.0000')
Line	82.444'	N1° 55' 52.27"W	53+31.00'	54+13.44'	(2725943.5957',653181.9406',0.0000')	(2725940.8174',653264.3382',0.0000')
Line	174.404'	N1° 25' 19.02"W	54+13.44'	55+87.85'	(2725940.8174',653264.3382',0.0000')	(2725936.4895',653438.6886',0.0000')

Revised #

FEMA BRIC
SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

HORIZONTAL ALIGNMENT DATA

DRWN. BY	CHK'D BY	PROJECT NO.	DATE
OML	DJF	2111-01639	11/09/2022

CONTROL DATA

STATE	PROJECT	SHEET	TOTAL SHEETS
SD	FEMA BRIC	32	109

Horizontal and Vertical Control Data

SYMBOL	POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
△	10	5/8" Rebar	643755.390	2717280.809	1559.660
△	11	5/8" Rebar	643600.219	2717080.546	1572.930

Coordinate System

Name: United States/State Plane 1983
Zone: South Dakota North 4001
Datum: NAD 1983 (2011)
Global reference datum: NAD83 (2011)
Global reference epoch: 2010
Geoid: GEOID12A (Conus)
Vertical datum: NAVD 88
Units: US Survey Foot
Scale Factor: 1.000000000

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 12804
DARIN FALCON
5/16/24
SOUTH DAKOTA

Revised #

FEMA BRIC
SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

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CONTROL DATA

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STATE	PROJECT	SHEET	TOTAL SHEETS
SD	FEMA BRIC	33	109

LEGEND

EXISTING	ITEM	PROPOSED
	FIRE HYDRANT	
	GATE VALVE	
	CURB STOP	
	YARD HYDRANT	
	BEND	
	TEE	
	CROSS	
	REDUCER	
	COUPLER	
	VERTICAL BEND	
W	WATER MANHOLE	W
	SPRINKLER HEAD	
W	WATER METER	
	CATHODIC TEST STATION	TS
	TRACER WIRE ACCESS BOX	TW
S	SANITARY MANHOLE	S
FM	SANITARY FORCEMAIN MANHOLE	FM
	SANITARY MANHOLE W. VALVE	
CL	CLEANOUT	CL
ST	STORM SEWER MANHOLE	ST
	CURB INLET	
	CATCH BASIN	
	POWER POLE	
	GUY WIRE	
	LIGHT POLE	
	ELECTRICAL PEDESTAL	
E	ELECTRICAL METER	
J	ELECTRICAL JUNCTION (PULL BOX)	
	ELECTRICAL BOX	
	ELECTRICAL OUTLET/PLUG-IN	
E	ELECTRICAL MANHOLE	E
T	TELEPHONE MANHOLE	T
	TELEPHONE PEDESTAL	
	CABLE TV PEDESTAL	
	FIBER OPTIC PEDESTAL	
G	GAS METER	
G	GAS MANHOLE	G
	FUEL DISPENSER	
	UTILITY MARKER	
	GAS VENT PIPE	
	TREES CONIFEROUS/ DECIDUOUS	
	BUSH/SHRUB	
	SIGN	
	CONTROL POINT	
	BENCHMARK	
	PIPE CAP	
M	MAIL BOX	
	PROPERTY PIN	

LEGEND

EXISTING	ITEM	PROPOSED
	ASPHALT EDGE	
	BUILDING CANOPY	
TV	CABLE TV - UNDERGROUND	TV
	CENTERLINE	
	CONSTRUCTION LIMITS	
E(O)	ELECTRICAL - OVERHEAD	E(O)
E	ELECTRICAL - UNDERGROUND	E
X X	FENCE - BARBED WIRE	X X
	FENCE - CHAINLINK	
	FENCE - PLASTIC, VINYL	
	FENCE - WOOD	
	FENCE - WOVEN WIRE	
FO	FIBER - UNDERGROUND	FO
G G	GAS - UNDERGROUND	G
	GRAVEL EDGE	
FM	SANITARY SEWER FORCE MAIN	FM
S	SANITARY SEWER SERVICE LINE	
S	SANITARY SEWER (LESS THAN 24")	
S	SANITARY SEWER (24" OR MORE)	
	STORM SEWER EDGEDRAIN	
ST	STORM SEWER (LESS THAN 24")	
ST	STORM SEWER (24" OR MORE)	
T(O)	TELEPHONE - OVERHEAD	T(O)
T	TELEPHONE - UNDERGROUND	T
W	WATER SERVICE LINE	
W	WATER MAIN	W

AC	ASPHALT CEMENT
AGGR	AGGREGATE
AHD	AHEAD
APPROX	APPROXIMATE OR APPROXIMATELY
ARV	AIR RELEASE VALVE
ASPH	ASPHALT
BIT	BITUMINOUS
BK	BACK
BM	BENCH MARK
BLDG	BUILDING
C&G	CURB & GUTTER
CI	CAST IRON
CMES	CORRUGATED METAL END SECTION
CMP	CORRUGATED METAL PIPE
CP	CONTROL POINT
CPP	CORRUGATED PLASTIC PIPE
CONST	CONSTRUCTION
CONC	CONCRETE
CPLG	COUPLING
CS	CURB STOP
CY	CUBIC YARD
D	DEGREE OF CURVATURE
DB	DITCH BLOCK
DEFL	DEFLECTION
DG	DITCH GRADE
EA	EACH
EL	ELEVATION
ELEC	ELECTRIC
EMB	EMBANKMENT
EQ	EQUATION
ES	END SECTION
ESMT	EASEMENT
EX	EXISTING
EXC	EXCAVATION
FES	FLARED END SECTION
FF	FINISHED FLOOR
FG	FINISHED GRADE
GR	GRAVEL
HDPE	HIGH DENSITY POLYETHYLENE PIPE
HORZ	HORIZONTAL
HP	HIGH POINT
HYD	HYDRANT
INST	INSTALL
INV	INVERT
JB	JUNCTION BOX
L	LENGTH
LF	LINEAR OR LINEAL FEET
LONG	LONGITUDINAL
LP	LOW POINT OR LIGHT POLE
LS	LUMP SUM
LT	LEFT
MAX	MAXIMUM
ME	MATCH EXISTING
MH	MANHOLE
MIN	MINIMUM
PVC	POLYVINYL CHLORIDE PIPE
P & P	PLAN & PROFILE
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVE
PI	POINT OF INTERSECTION
PIV	POST INDICATOR VALVE
POC	POINT ON CURVE
POT	POINT ON TANGENT
PP	POWER POLE
PRC	POINT OF REVERSE CURVATURE
PRV	PRESSURE REDUCING VALVE
PT	POINT OF TANGENCY
PVI	POINT OF VERTICAL INTERSECTION
R	RADIUS
RCES	REINFORCED CONCRETE END SECTION
RCP	REINFORCED CONCRETE PIPE
RDWY	ROADWAY
RR	RAILROAD
RT	RIGHT
R/W ROW	RIGHT-OF-WAY
SALV	SALVAGE
SAN	SANITARY
SE	SUPERELEVATION
SEC	SECTION
SF	SQUARE FEET
SHLDR	SHOULDER
SSD	STOPPING SIGHT DISTANCE
SEC LINE	SECTION LINE
SPEC	SPECIFICATION
STA	STATION
STD	STANDARD
STRUCT	STRUCTURE
SURV	SURVEY
SW	SIDEWALK
SY	SQUARE YARD
T	TANGENT
TA	TOP OF ASPHALT
TBC	TOP BACK OF CURB
TC	TOP OF CONCRETE
TEL	TELEPHONE
TEMP	TEMPORARY
THEOR	THEORETICAL
TP	TOP OF PAVEMENT
TR	TRAFFIC
VC	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
WM	WATER MAIN
WV	WATER VALVE
XSEC	CROSS SECTION

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 12804
DARIN FALCON
5/16/24
SOUTH DAKOTA

Revised #

FEMA BRIC
SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

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LEGEND
AND ABBREVIATIONS

DRWN. BY	CHK'D BY	PROJECT NO.	DATE
OML	DJF	2111-01639	11/09/2022

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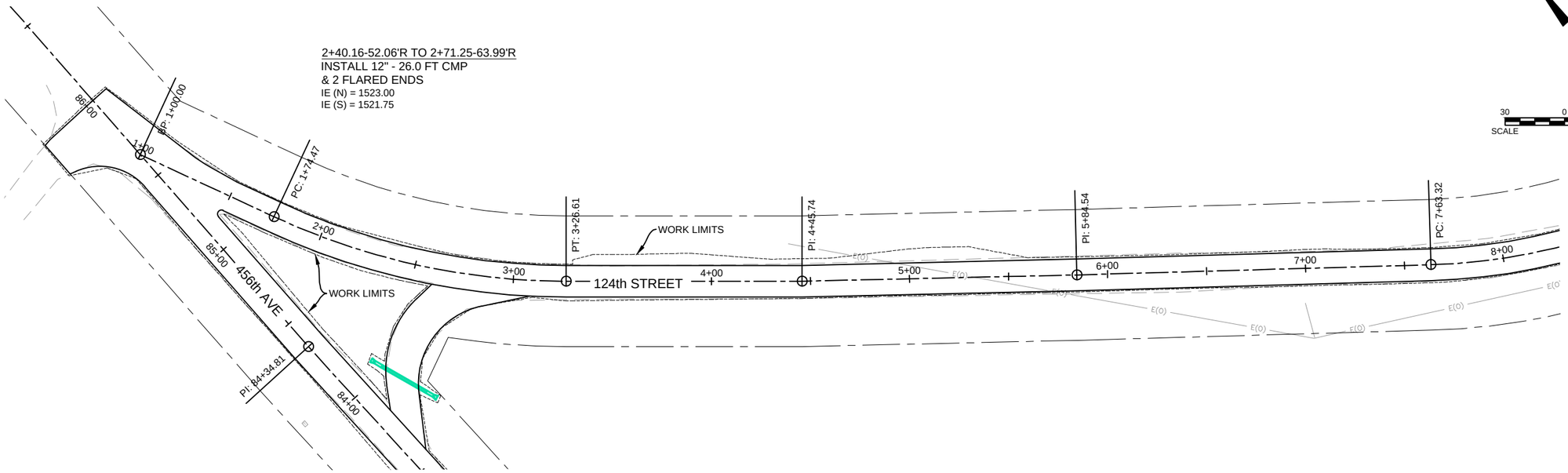
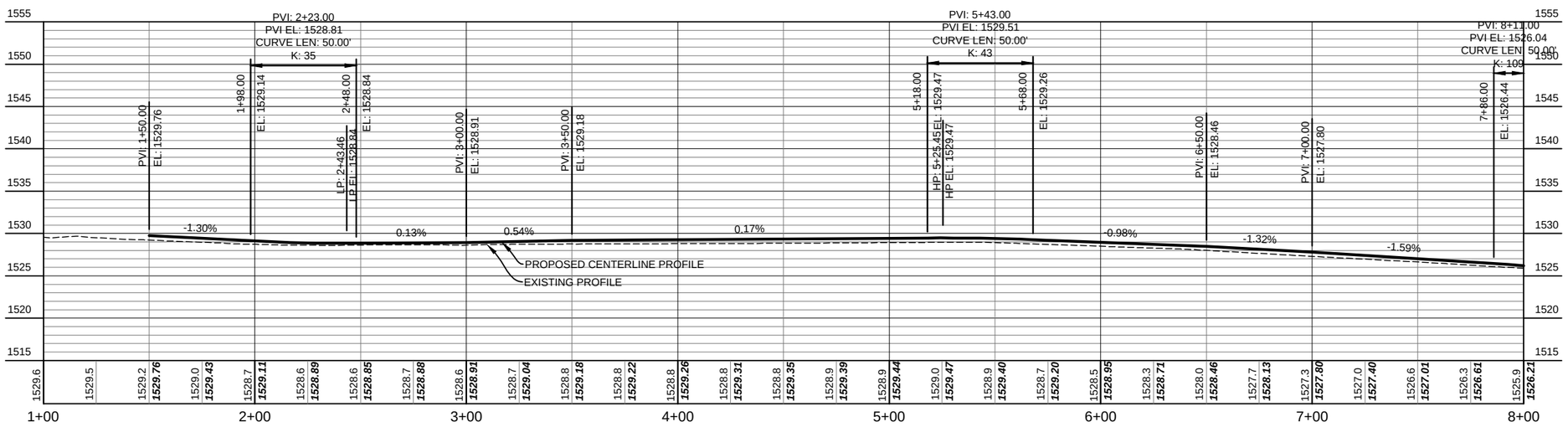
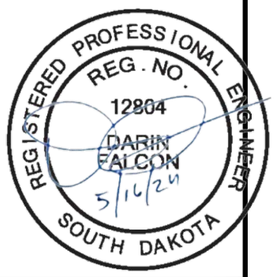
STATE	PROJECT	SHEET	TOTAL SHEETS
##	FEMA BRIC	34	109

PLAN AND PROFILE







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FEMA BRIC
SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

PLAN AND PROFILE
124th STREET

DRWN. BY	CHK'D BY	PROJECT NO.	DATE
OML	DJF	2111-01639	01/22/2024

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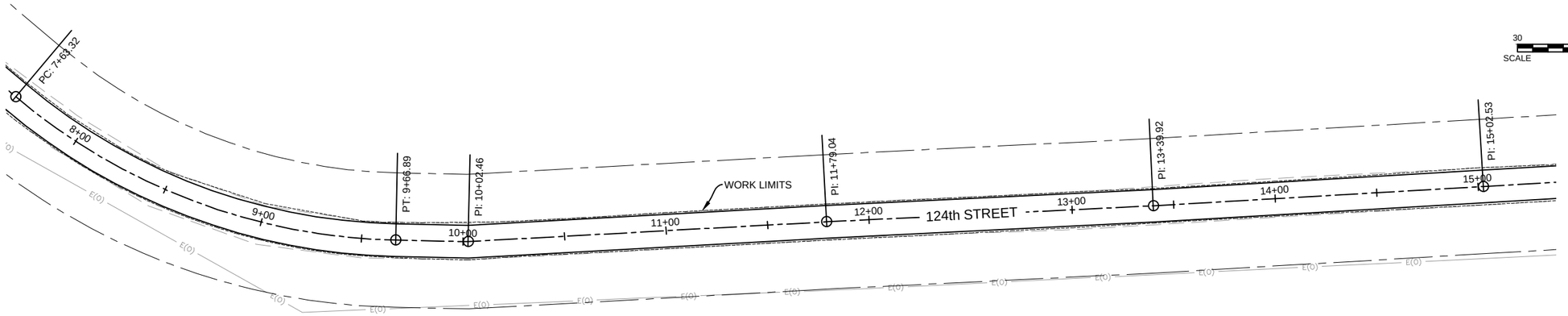
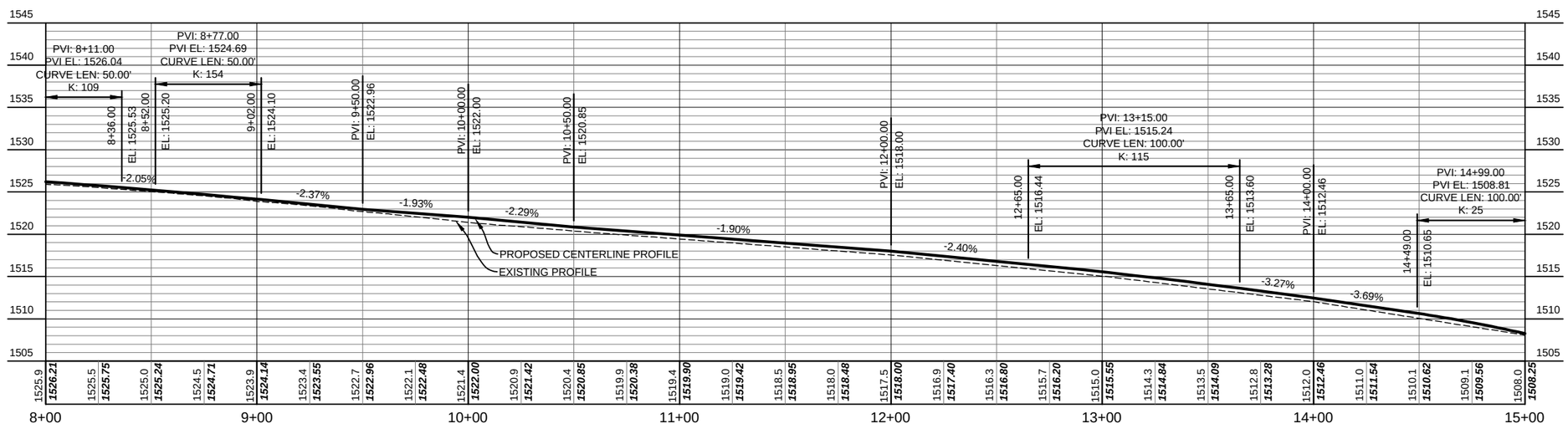
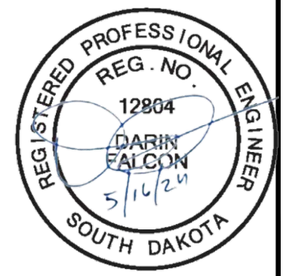
STATE	PROJECT	SHEET	TOTAL SHEETS
##	FEMA BRIC	35	109

PLAN AND PROFILE







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FEMA BRIC

SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

PLAN AND PROFILE
124th STREET

DRWN. BY	CHK'D BY	PROJECT NO.	DATE
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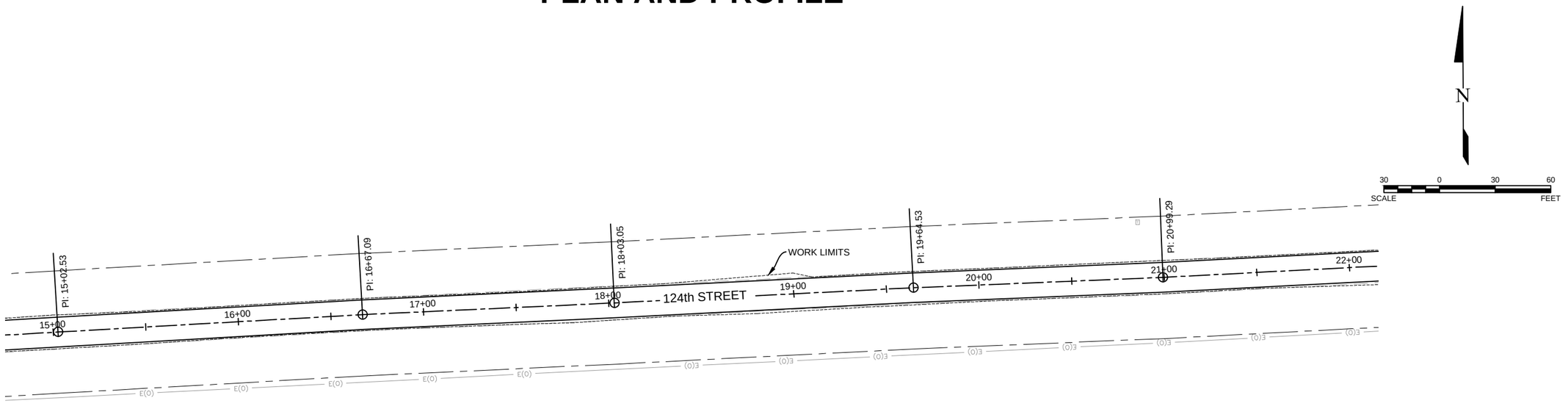
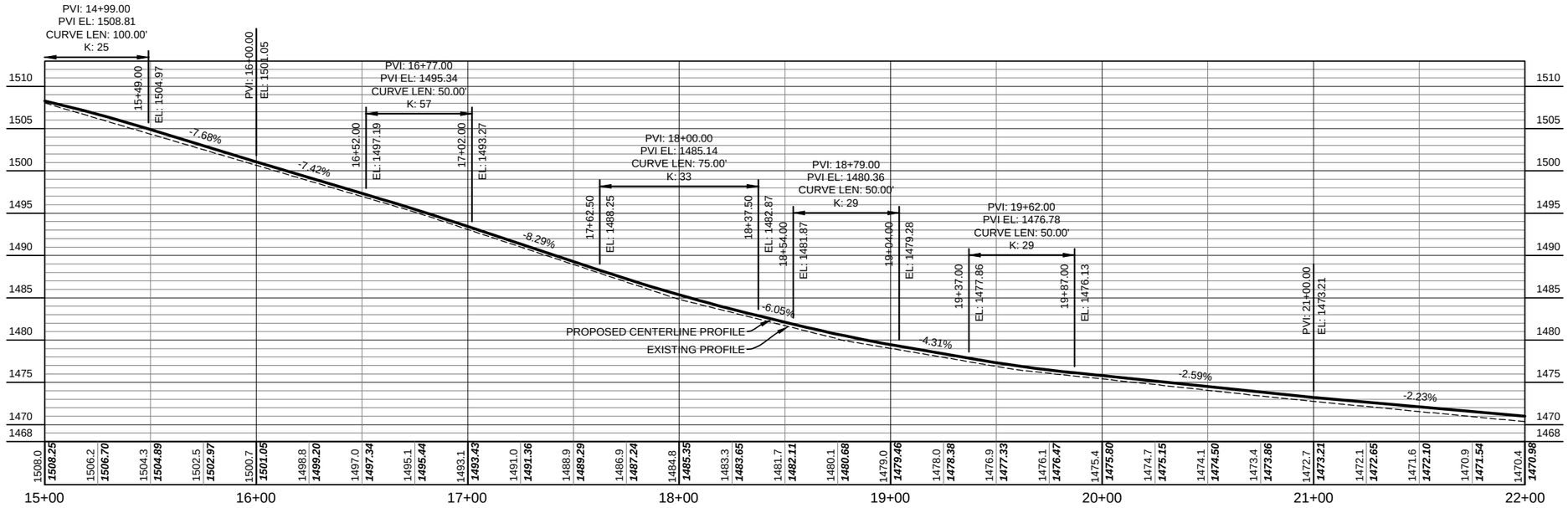
PLAN AND PROFILE

STATE	PROJECT	SHEET	TOTAL SHEETS
##	FEMA BRIC	36	109





REGISTERED PROFESSIONAL ENGINEER
REG. NO. 12804
DARIN FALCON
5/16/24
SOUTH DAKOTA

Revised #

FEMA BRIC
SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

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PLAN AND PROFILE
124th STREET

DRWN. BY	CHK'D BY	PROJECT NO.	DATE
OML	DJF	2111-01639	01/22/2024

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STATE	PROJECT	SHEET	TOTAL SHEETS
##	FEMA BRIC	37	109

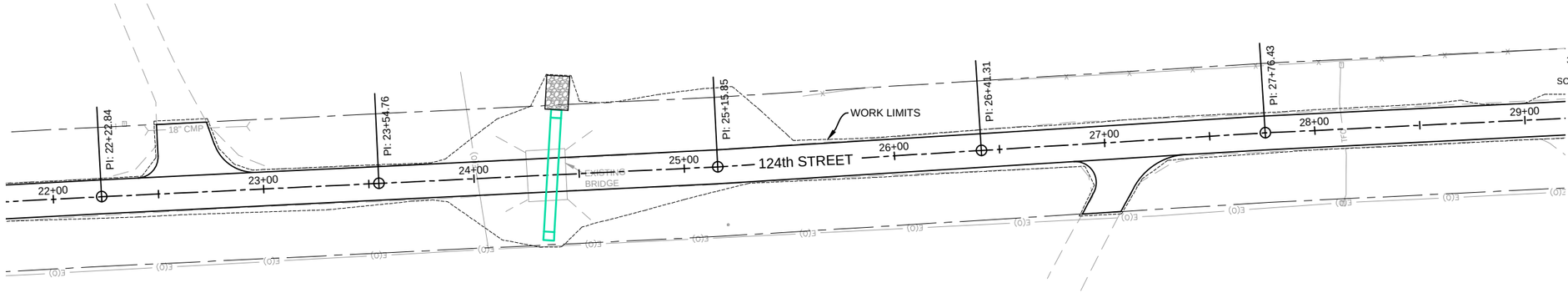
PLAN AND PROFILE

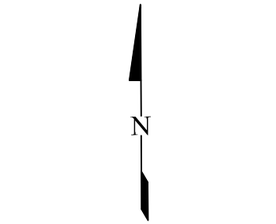
24+37 - L & R
REMOVE EXISTING TIMBER BRIDGE,
BRIDGE RAIL, AND CONCRETE WINGWALLS (4 EACH)
(INCIDENTAL WORK - STRUCTURE)

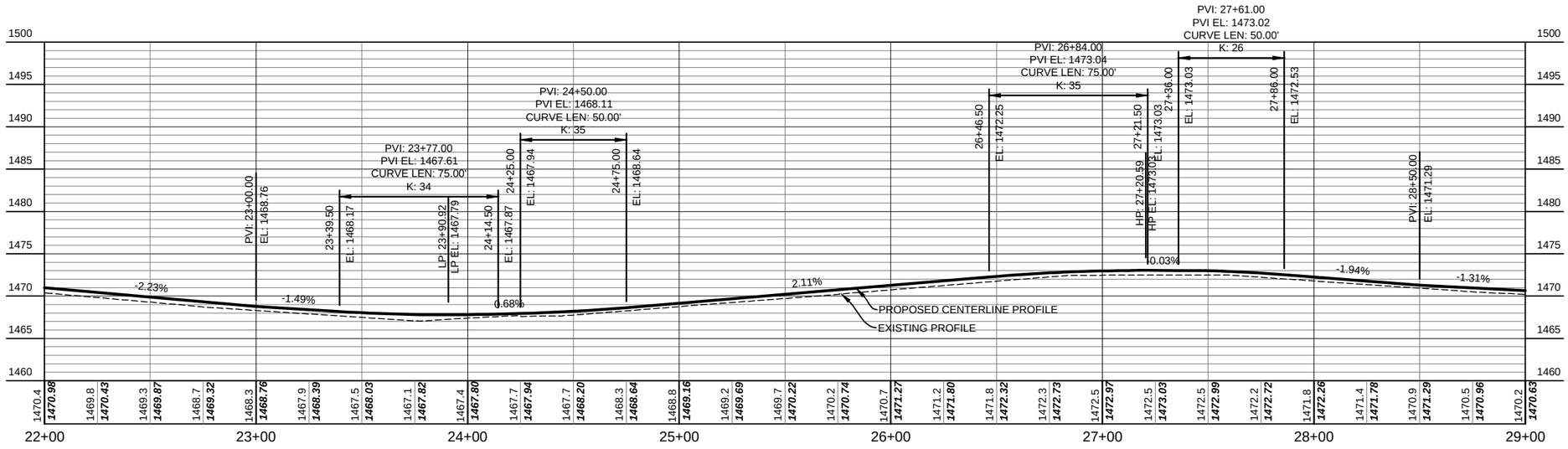
24+37 - L & R
INSTALL 54.0 FT - 5.0'x5.0' REINFORCED CONCRETE BOX CULVERT
& 2 END SECTIONS
S EW: 6 L.H.F.

NOTE: SEE PIPE SECTION SHEETS FOR CULVERT INVERT AND OFFSET DATA.

24+37 - 31'L to 47'L
INSTALL CLASS B RIPRAP (22.8 TONS)
AND TYPE B DRAINAGE FABRIC (33.1 SQYD)
DIMENSIONS
11.0'W x 16.0'L x 2.25'D







Revised #

FEMA BRIC
SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

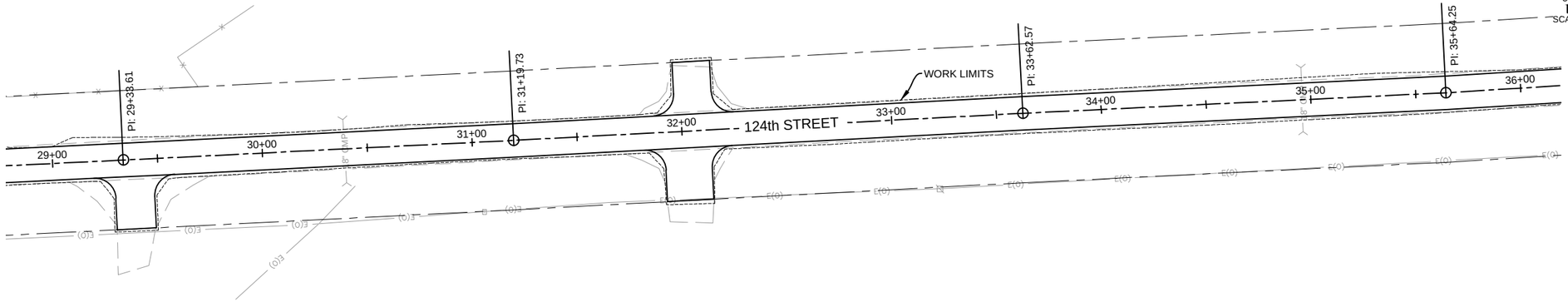
PLAN AND PROFILE
124th STREET

DRWN. BY	CHK'D BY	PROJECT NO.	DATE
OML	DJF	2111-01639	01/22/2024

Jan 23, 2024 – 9:03am – K:\Projects\Tribal\SissetonWahpetonOyate\2111-01639_FEMA-BRIC-Award\CAD\Design\Plan DWG\2111-01639_Plan and Profile.dwg

STATE	PROJECT	SHEET	TOTAL SHEETS
##	FEMA BRIC	38	109

PLAN AND PROFILE



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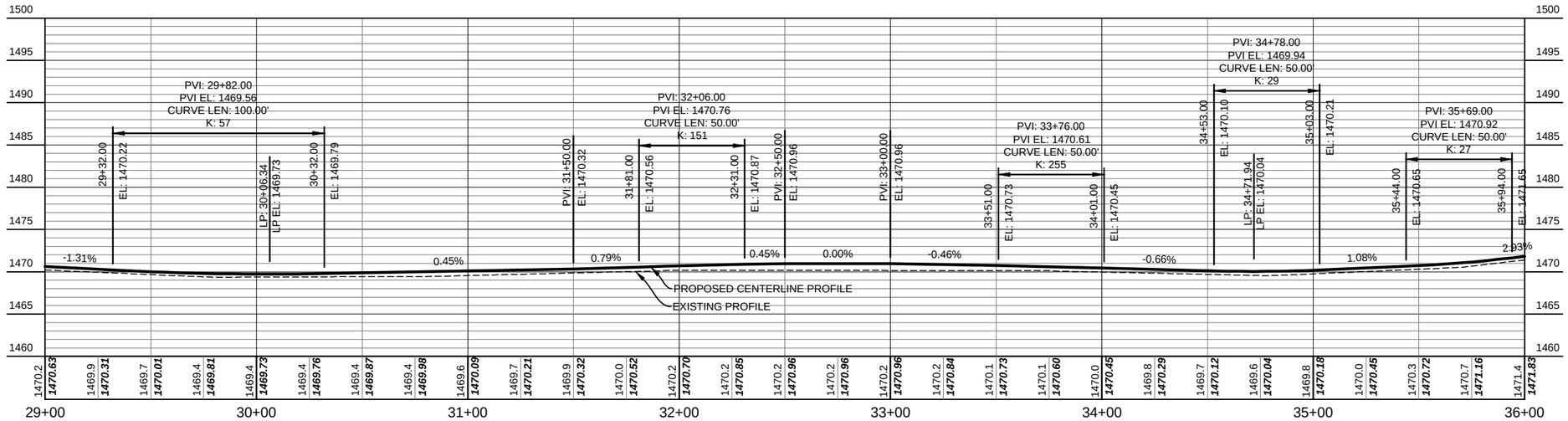

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 12804
DARIN FALCON
5/16/24
SOUTH DAKOTA

Revised #

FEMA BRIC
SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

PLAN AND PROFILE
124th STREET

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STATE	PROJECT	SHEET	TOTAL SHEETS
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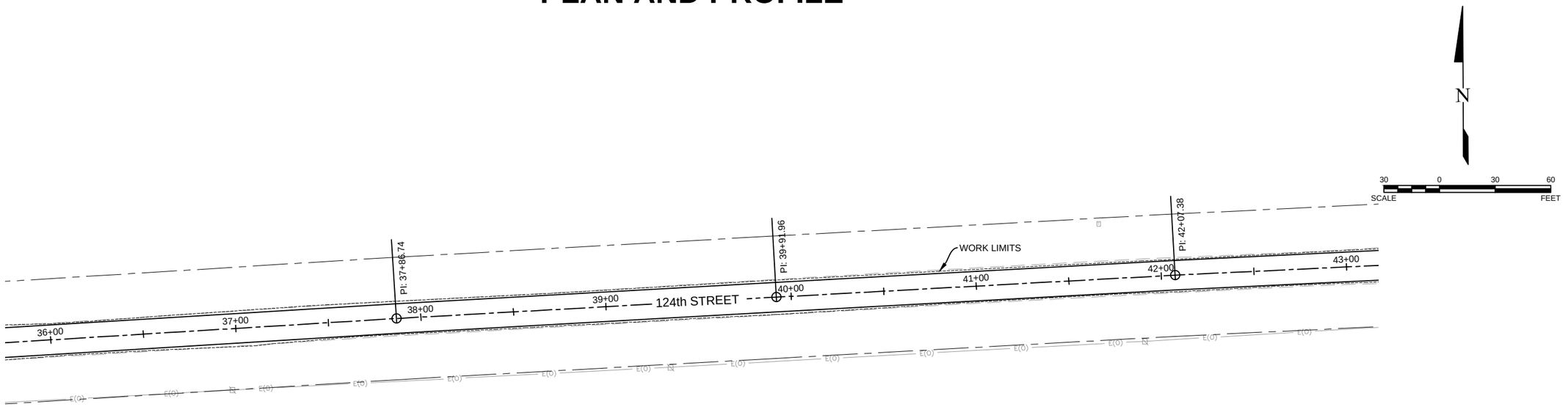
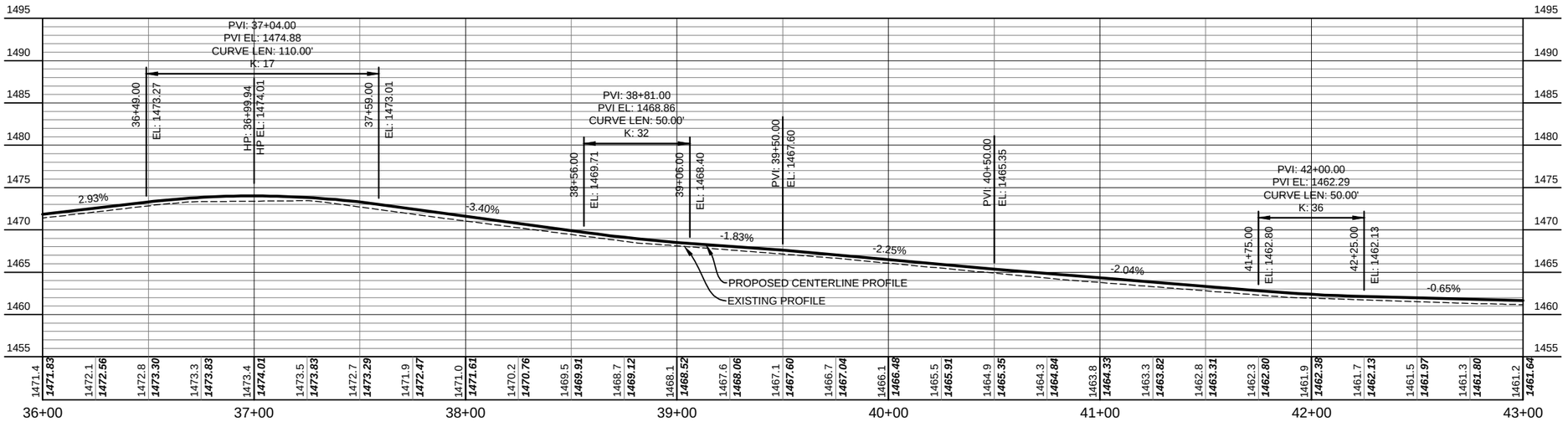
PLAN AND PROFILE





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REG. NO. 12804
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5/16/24
SOUTH DAKOTA

Revised #

FEMA BRIC
SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

PLAN AND PROFILE
124th STREET

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PLAN AND PROFILE

STATE	PROJECT	SHEET	TOTAL SHEETS
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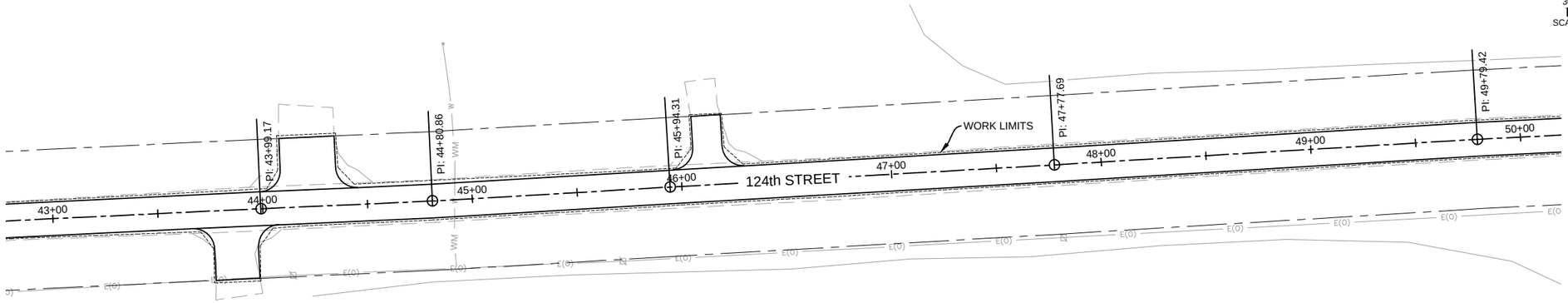

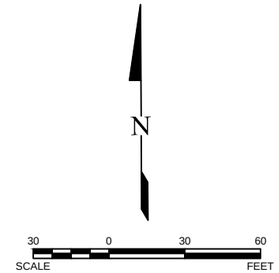

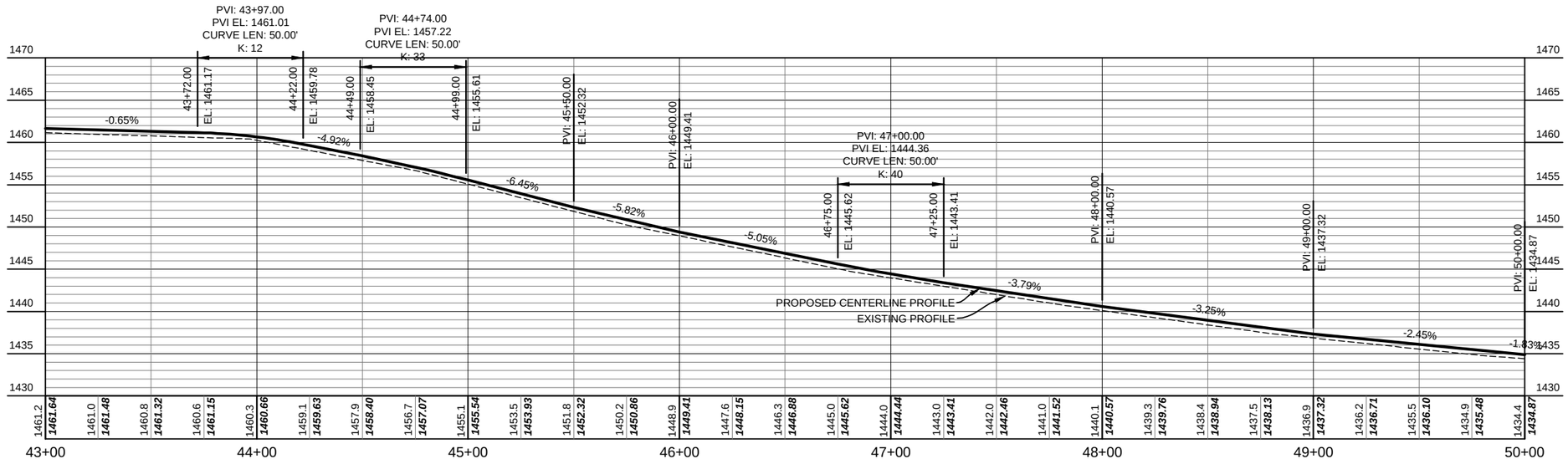

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FEMA BRIC
SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

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124th STREET

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STATE	PROJECT	SHEET	TOTAL SHEETS
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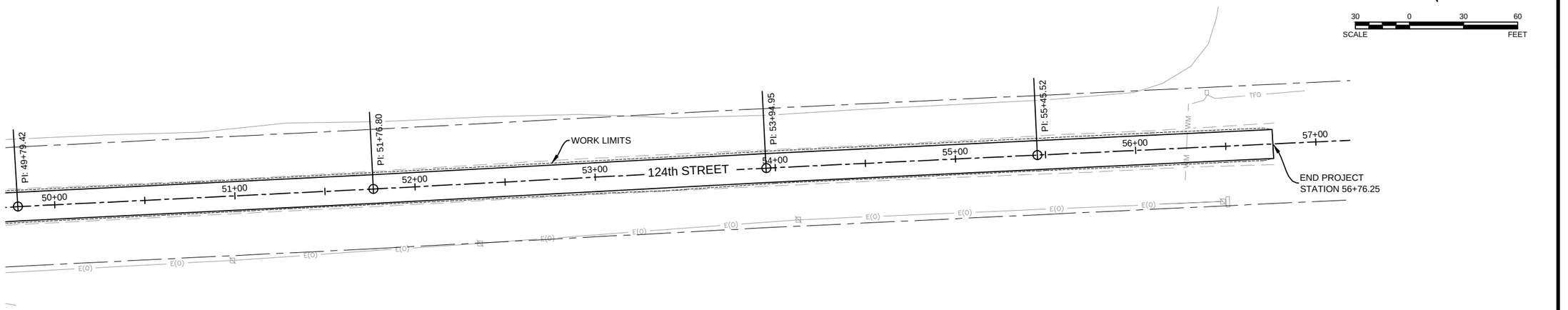
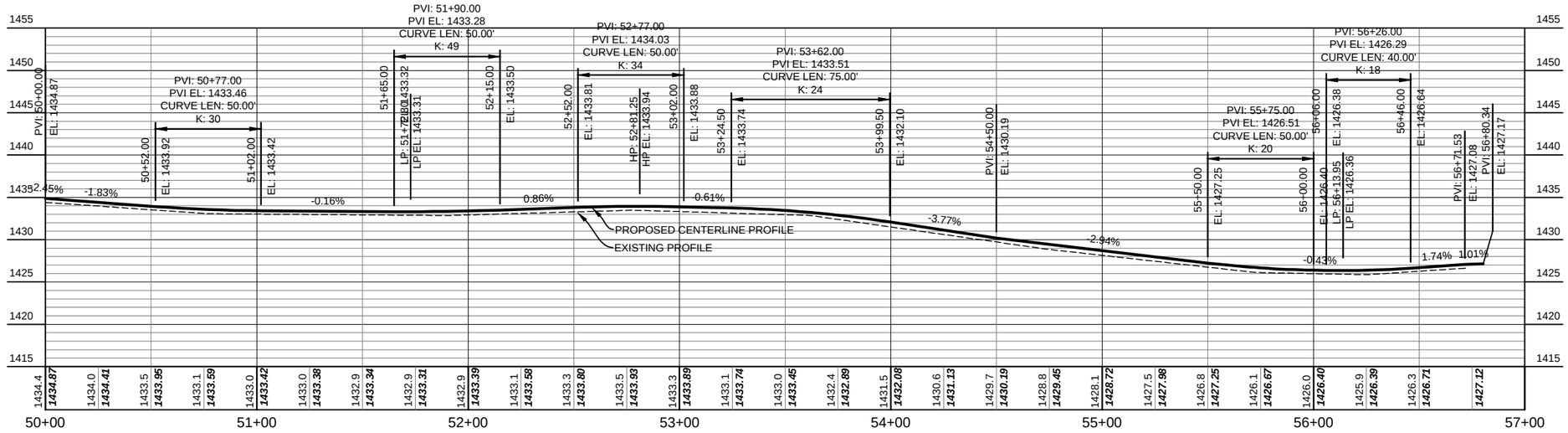
PLAN AND PROFILE





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REG. NO. 12804
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5/16/24
SOUTH DAKOTA

Revised #

FEMA BRIC
SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

PLAN AND PROFILE
124th STREET

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STATE	PROJECT	SHEET	TOTAL SHEETS
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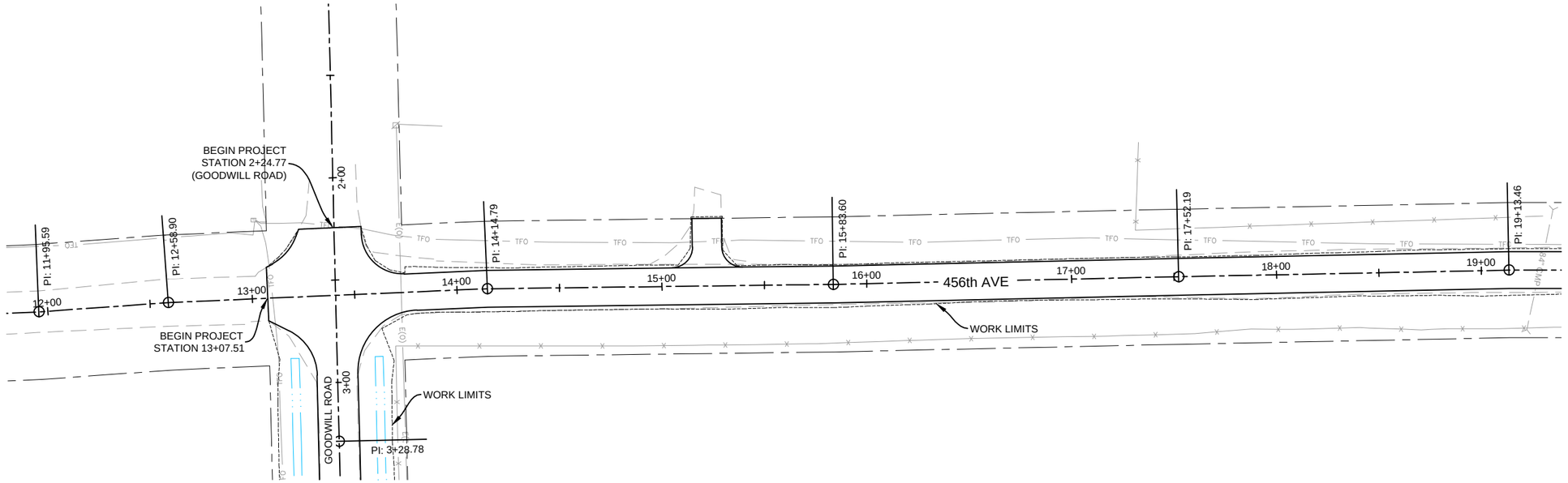
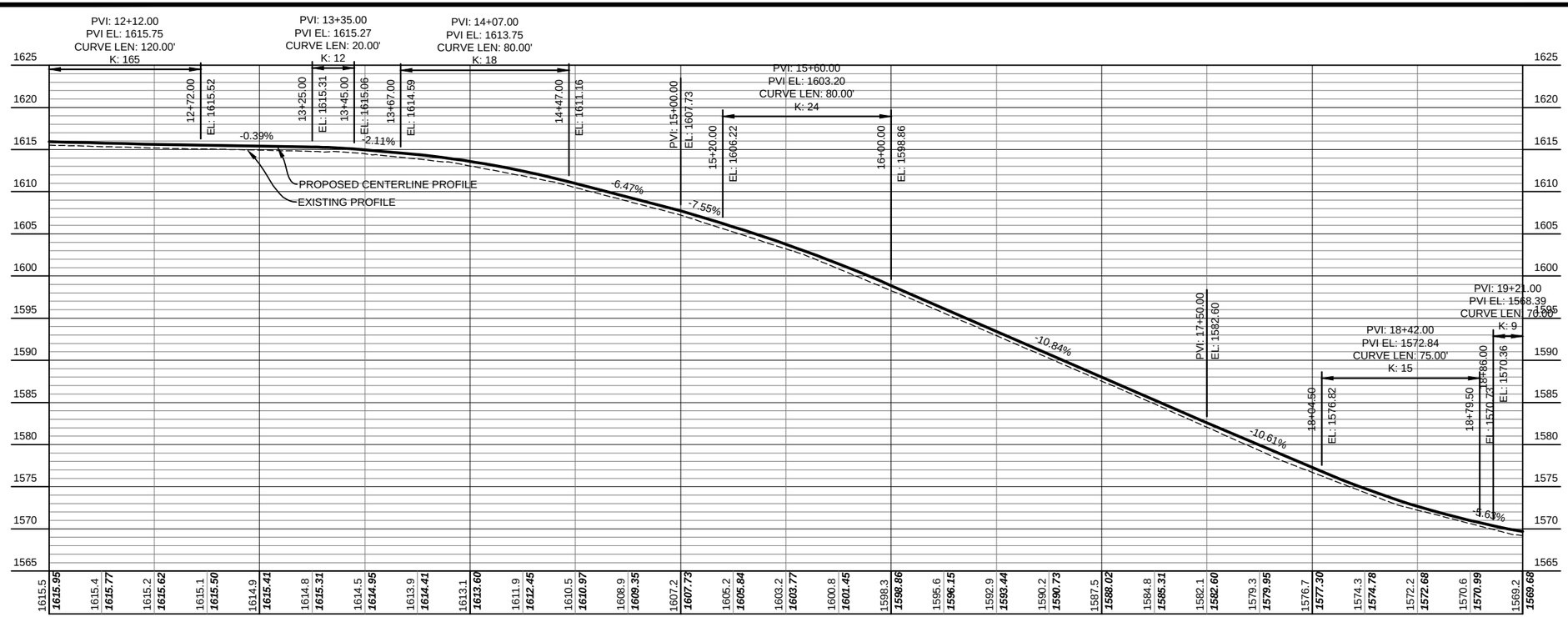
PLAN AND PROFILE





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FEMA BRIC
SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

PLAN AND PROFILE
456th AVENUE

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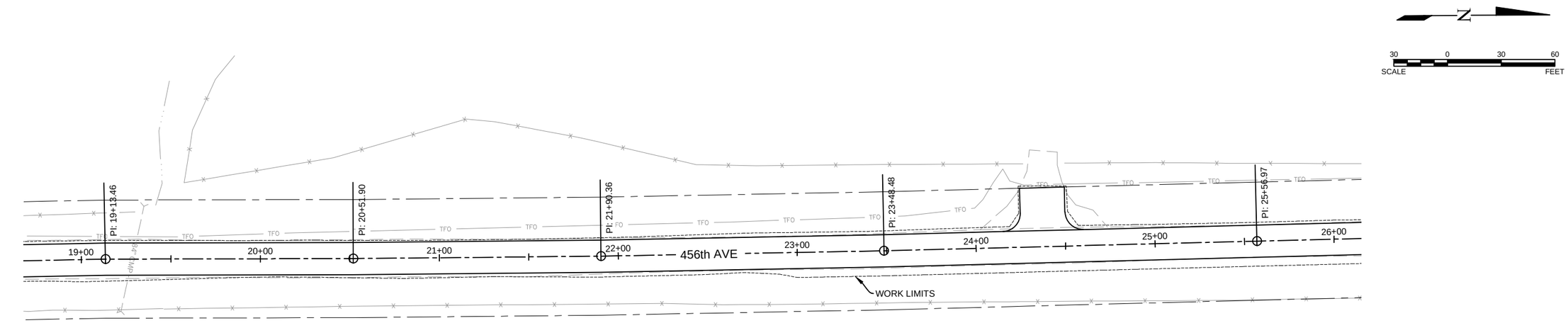
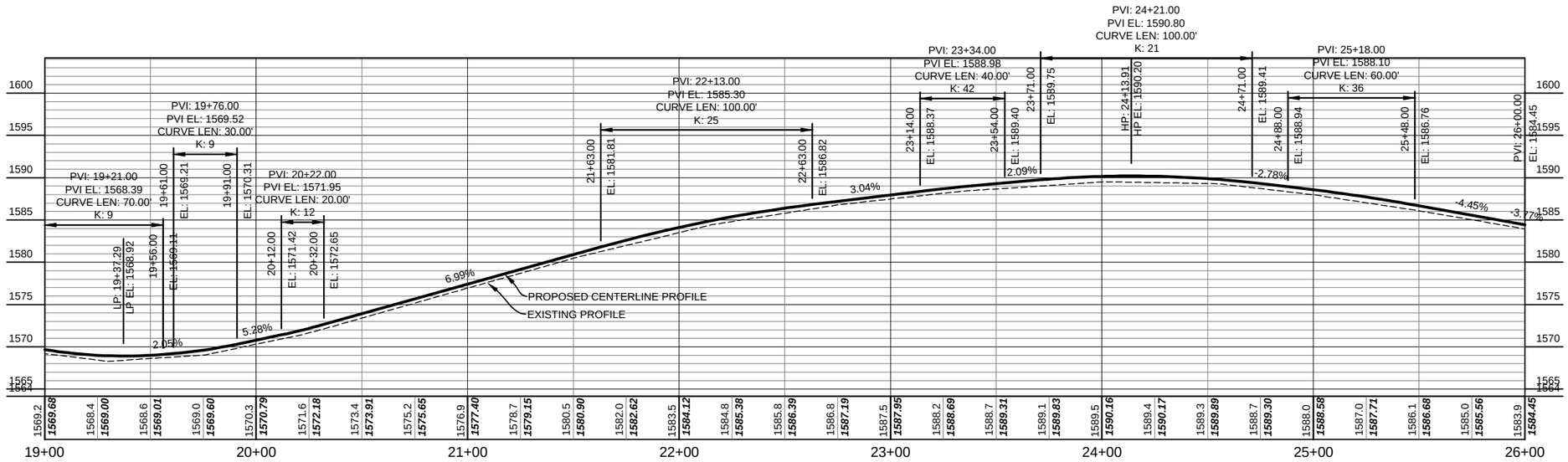
PLAN AND PROFILE

STATE	PROJECT	SHEET	TOTAL SHEETS
##	FEMA BRIC		





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ROBERTS COUNTY, SOUTH DAKOTA

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456th AVENUE

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PLAN AND PROFILE

STATE	PROJECT	SHEET	TOTAL SHEETS
##	FEMA BRIC		

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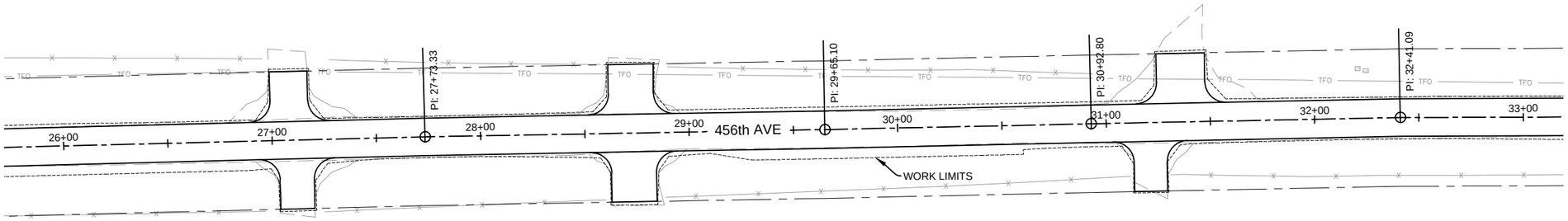
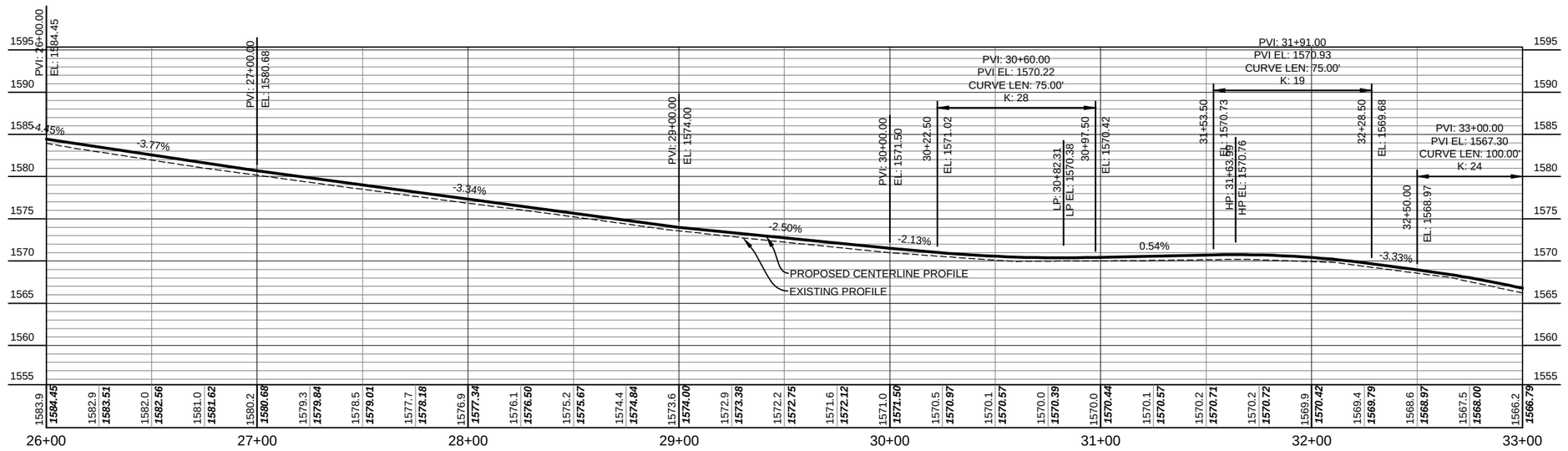
SCALE FEET





REGISTERED PROFESSIONAL ENGINEER
REG. NO.
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DARIN
FALCON
5/16/24
SOUTH DAKOTA

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FEMA BRIC
SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

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456th AVENUE

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STATE	PROJECT	SHEET	TOTAL SHEETS
##	FEMA BRIC		

PLAN AND PROFILE

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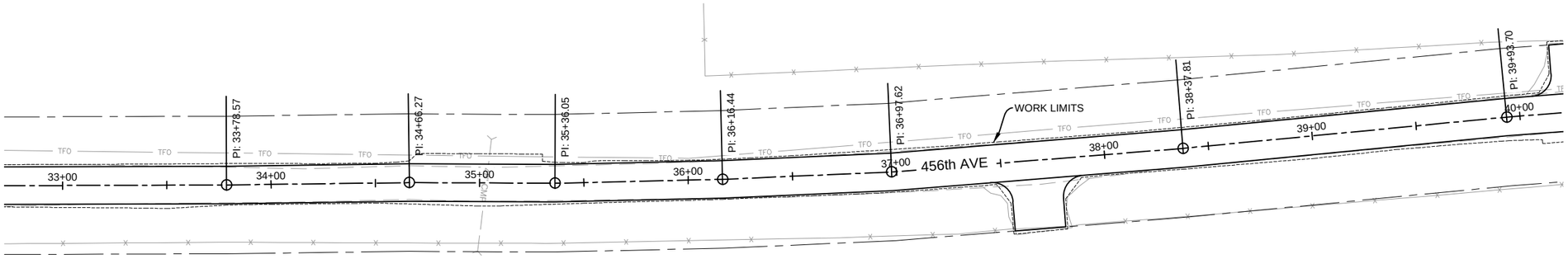

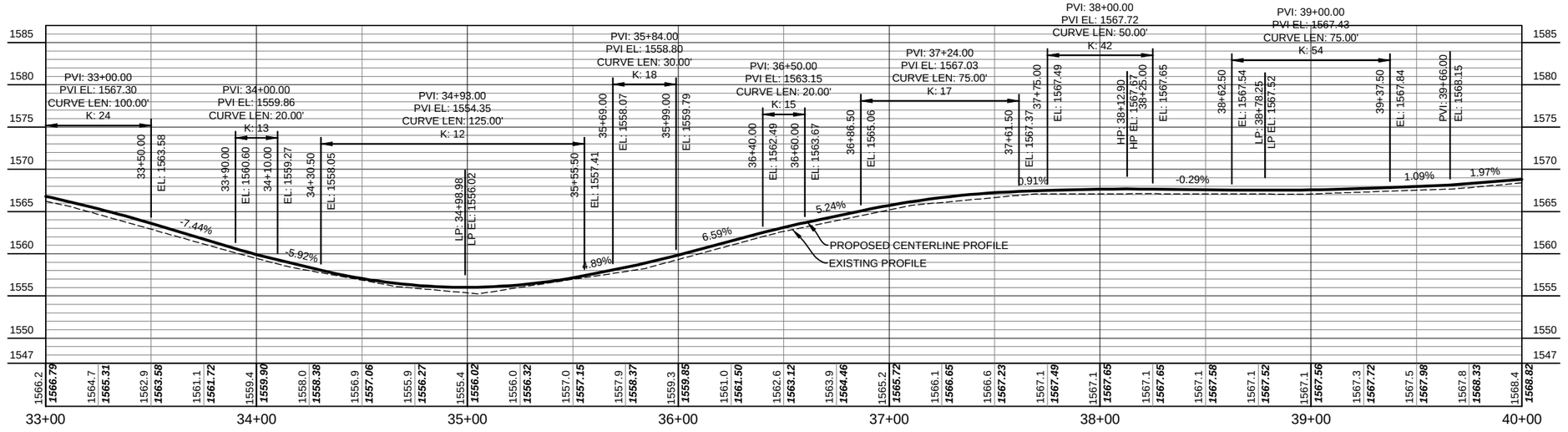

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ROBERTS COUNTY, SOUTH DAKOTA

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PLAN AND PROFILE

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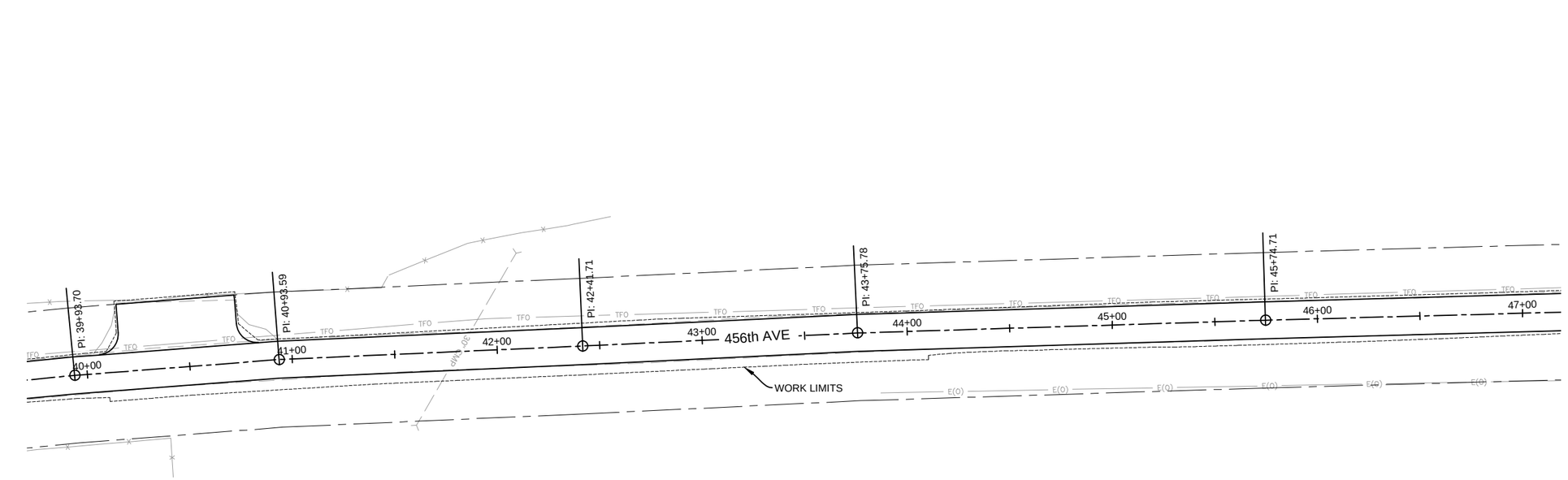

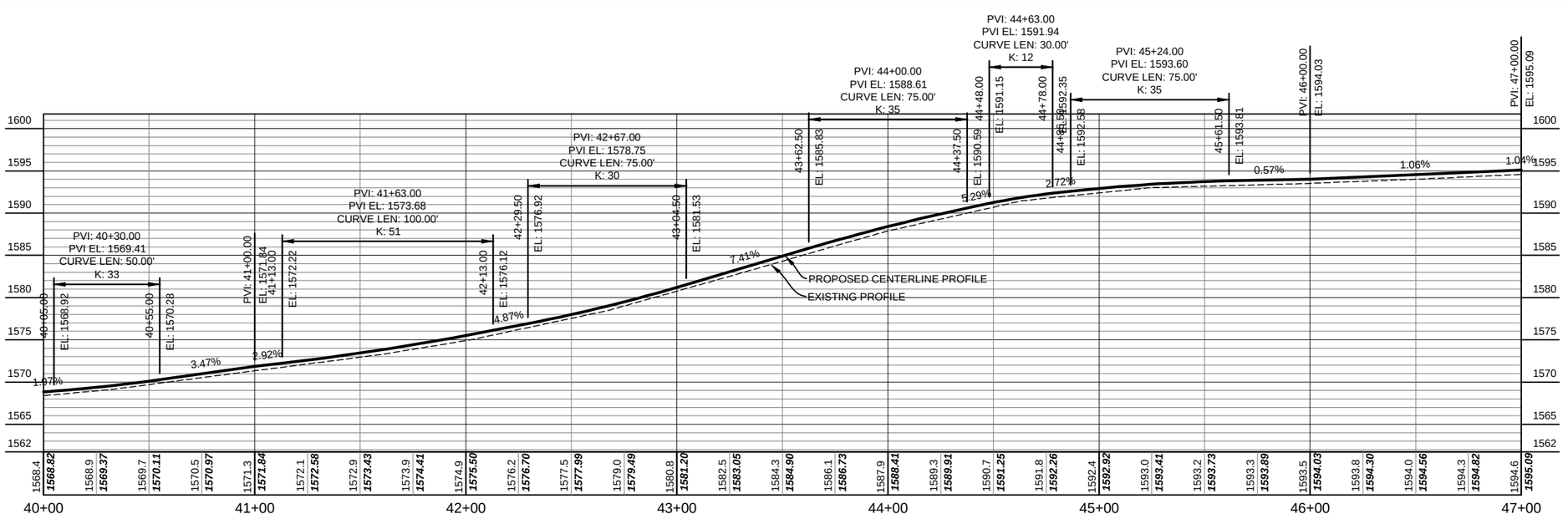

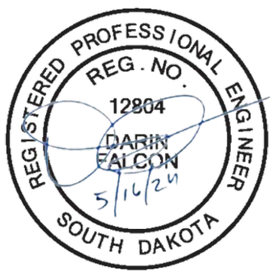

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FEMA BRIC
SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

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PLAN AND PROFILE
456th AVENUE

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PLAN AND PROFILE

STATE	PROJECT	SHEET	TOTAL SHEETS
##	FEMA BRIC		

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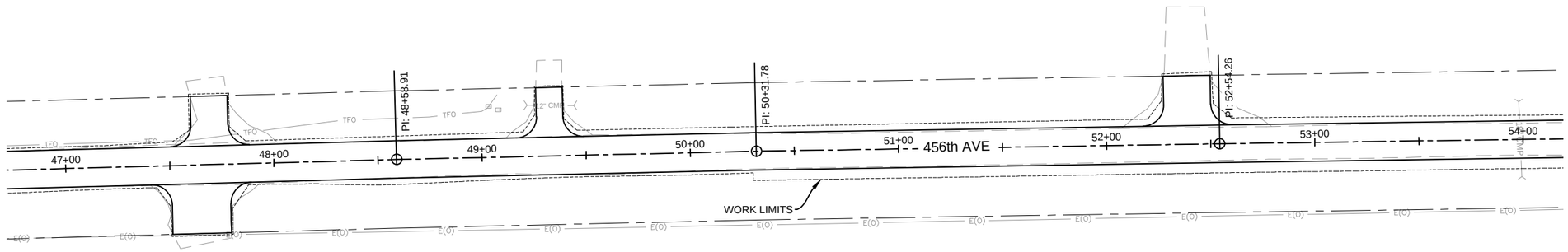
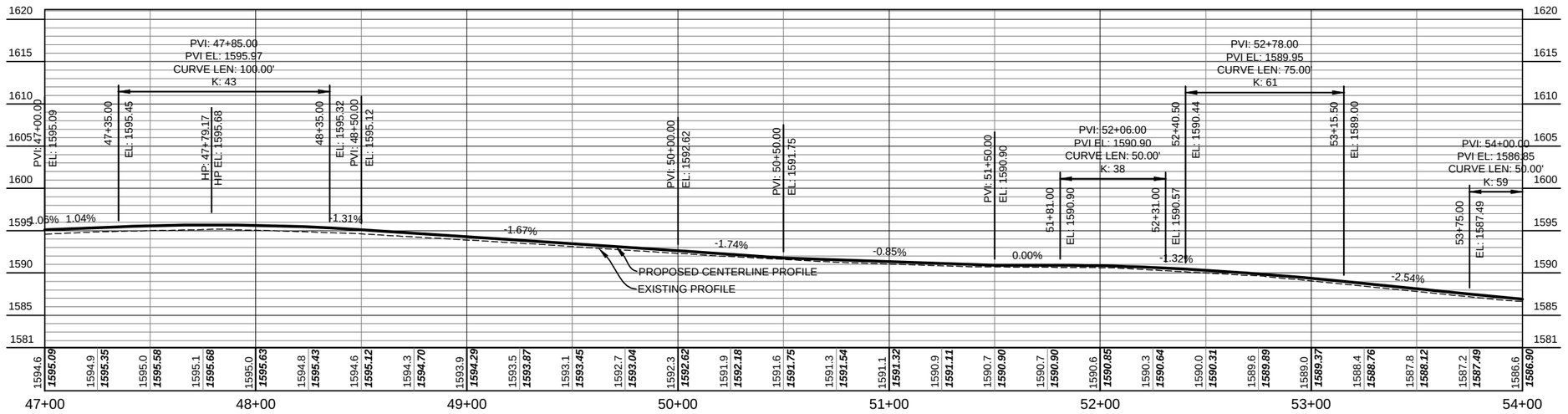
SCALE FEET





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5/16/24
SOUTH DAKOTA

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STATE	PROJECT	SHEET	TOTAL SHEETS
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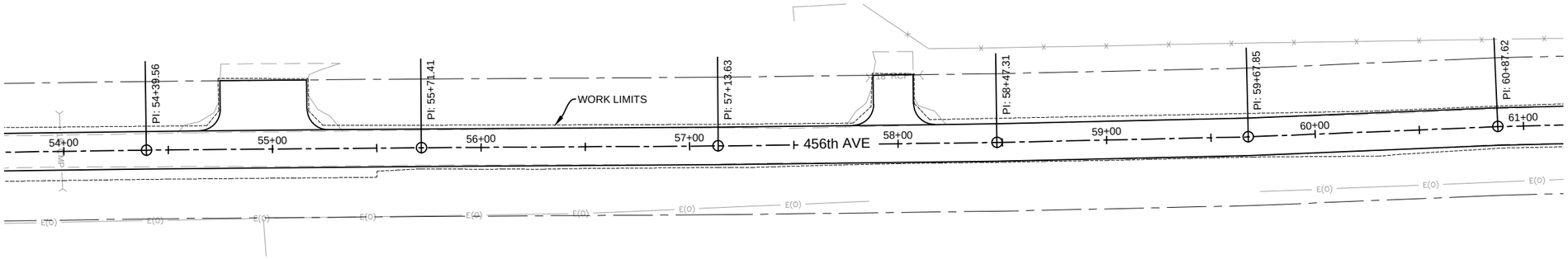
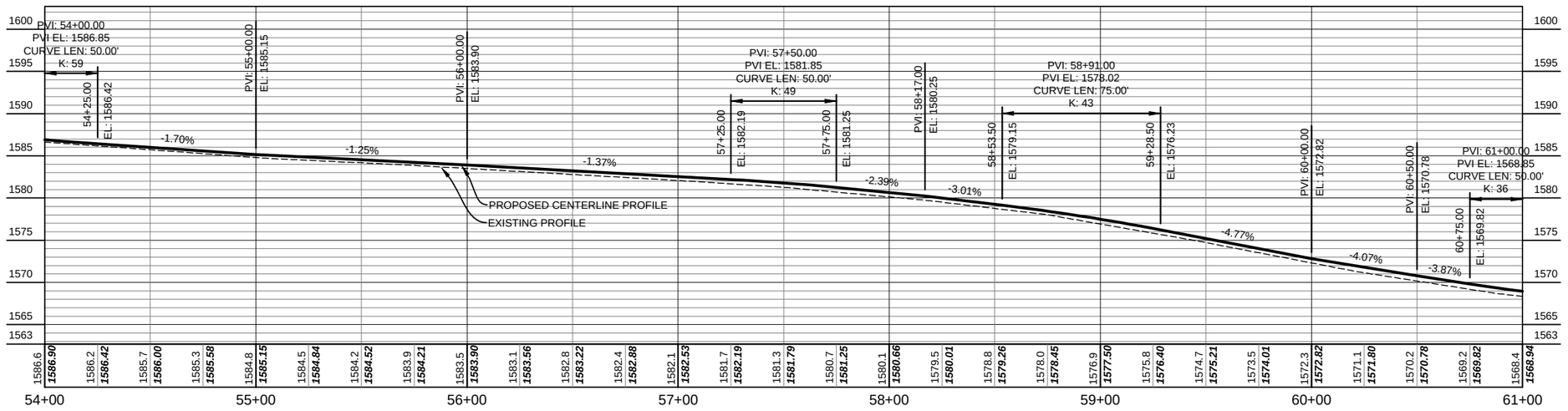
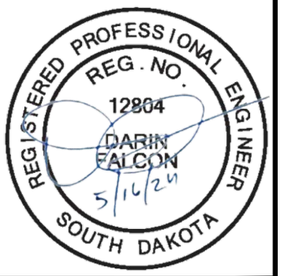
SCALE FEET







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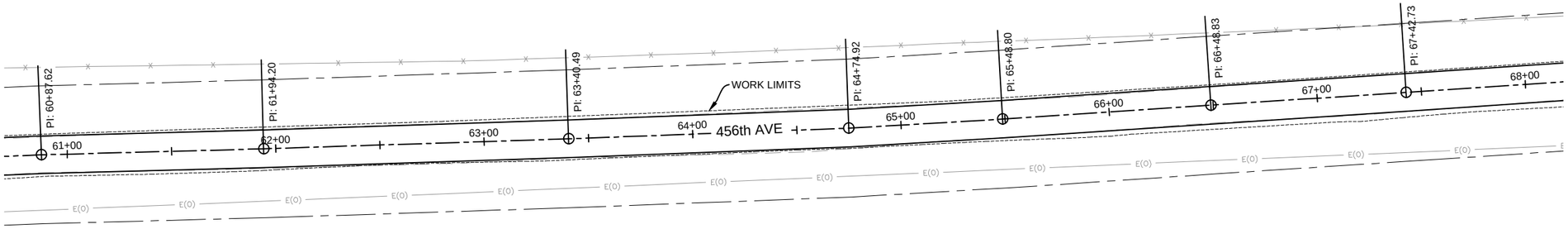
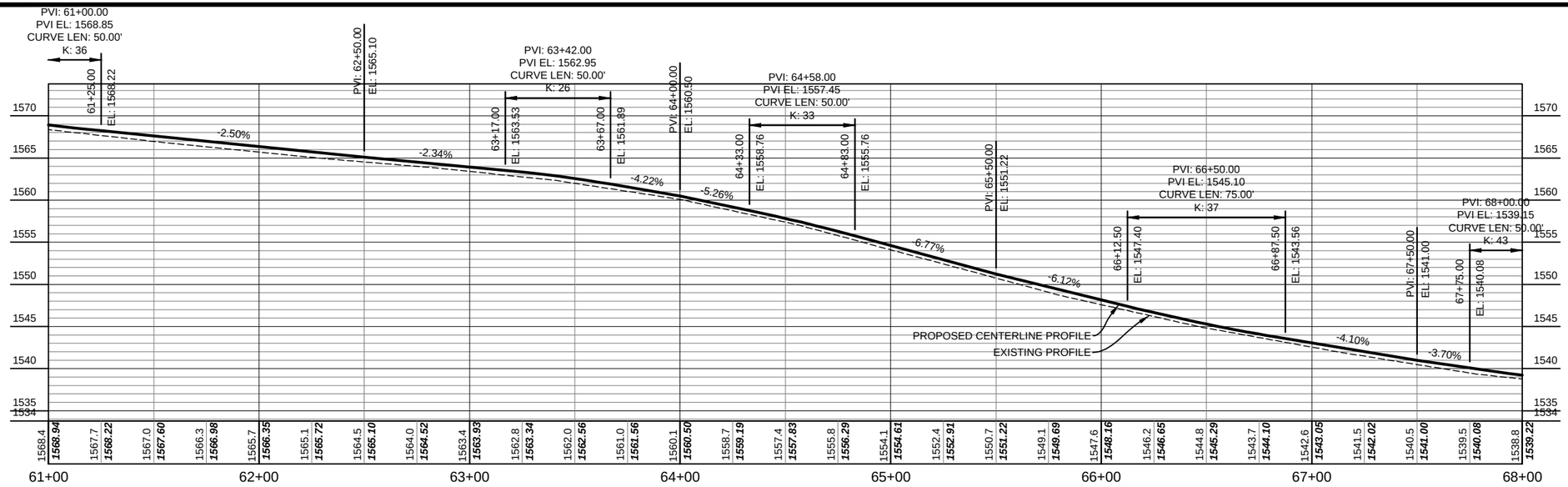
SCALE FEET





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SOUTH DAKOTA

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##	FEMA BRIC		

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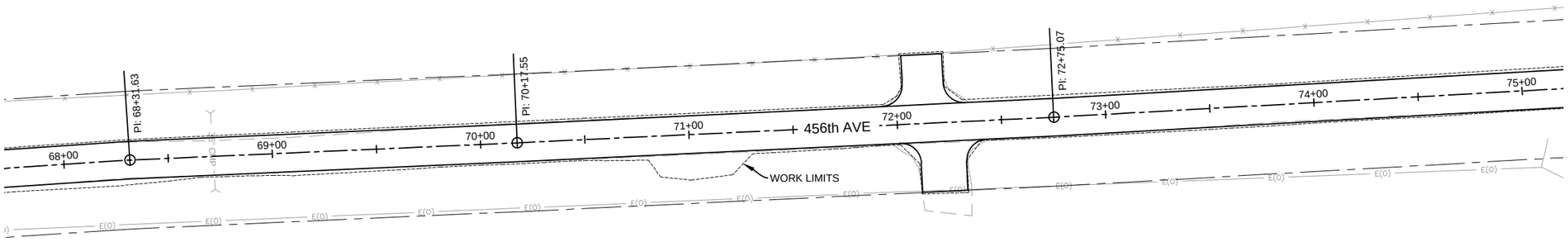
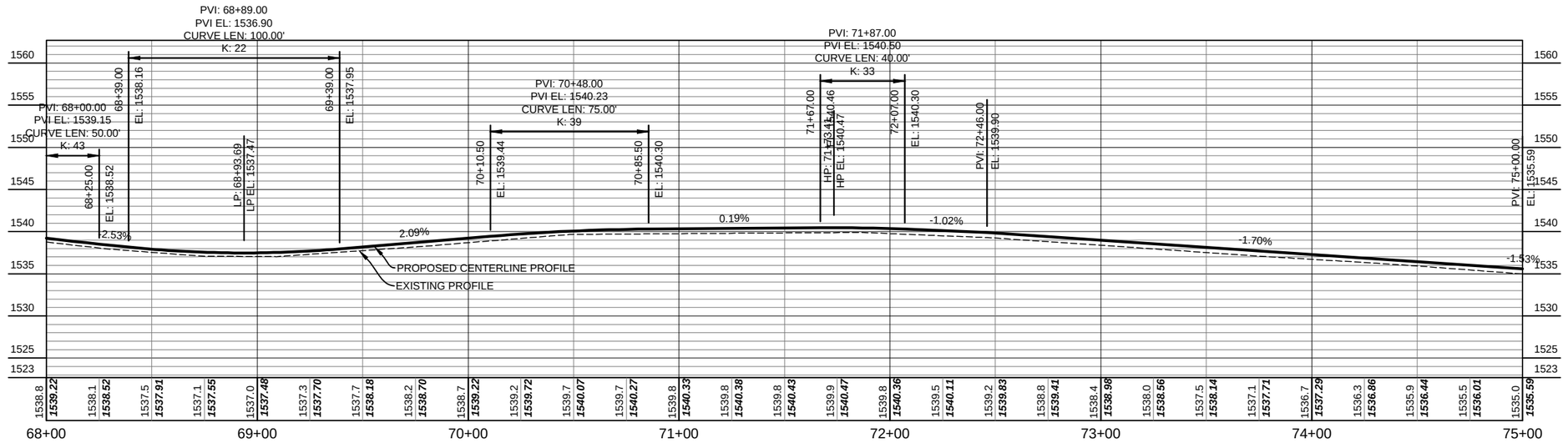
SCALE FEET





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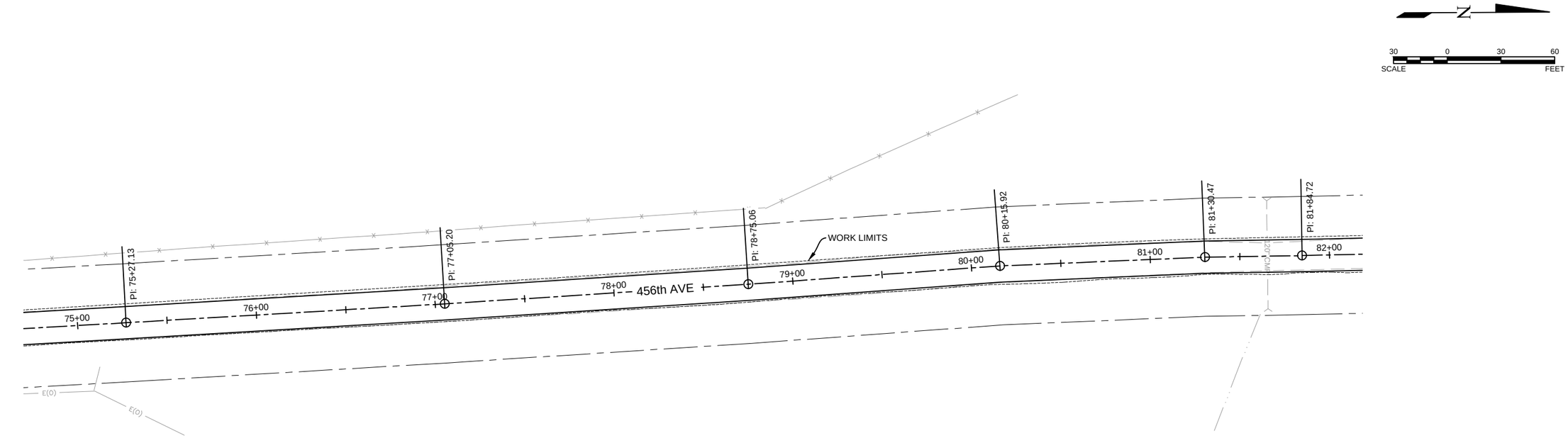

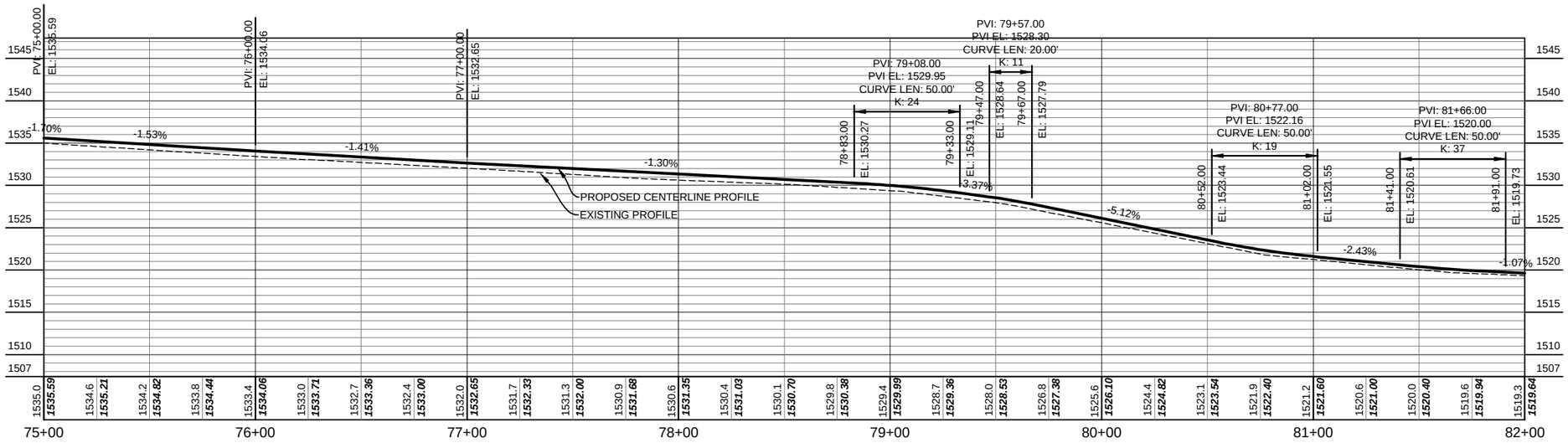

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PLAN AND PROFILE

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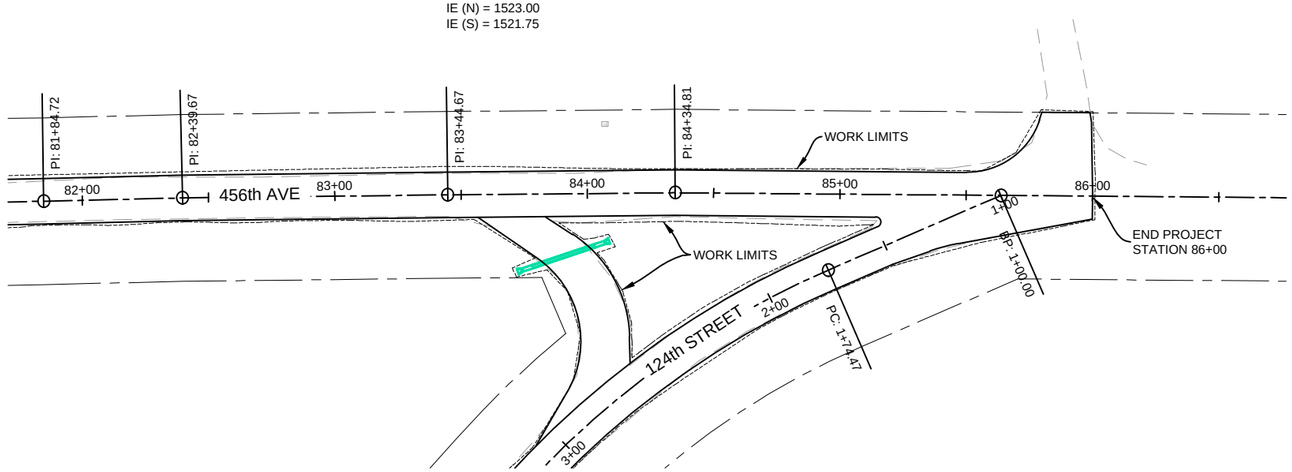
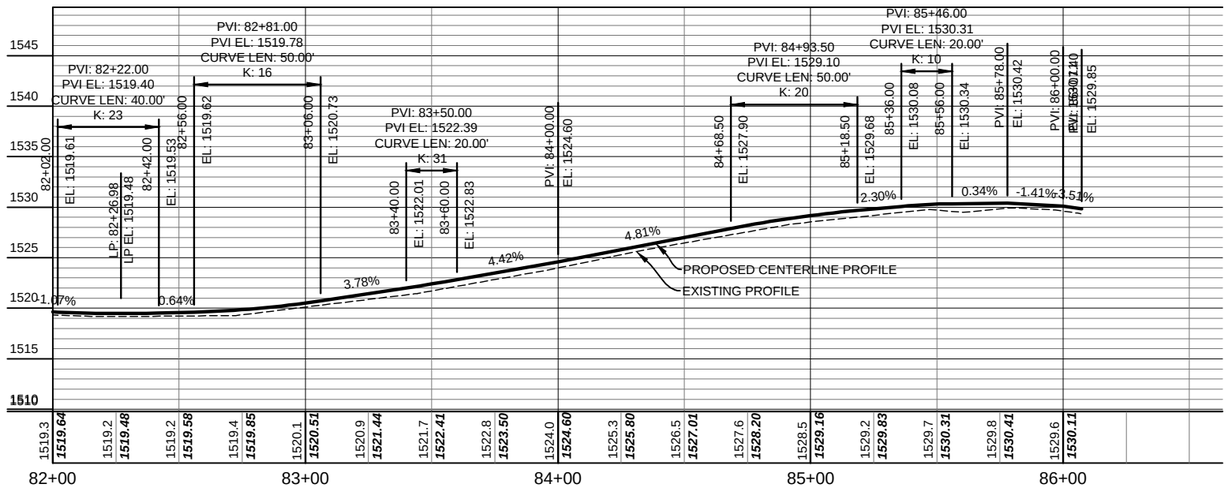
##	FEMA BRIC		

N

30 0 30 60
SCALE FEET

83+72.18 - 30.61'R TO 84+08.47 - 18.86'R
INSTALL 12" - 26.0 FT CMP
& 2 FLARED ENDS
IE (N) = 1523.00
IE (S) = 1521.75





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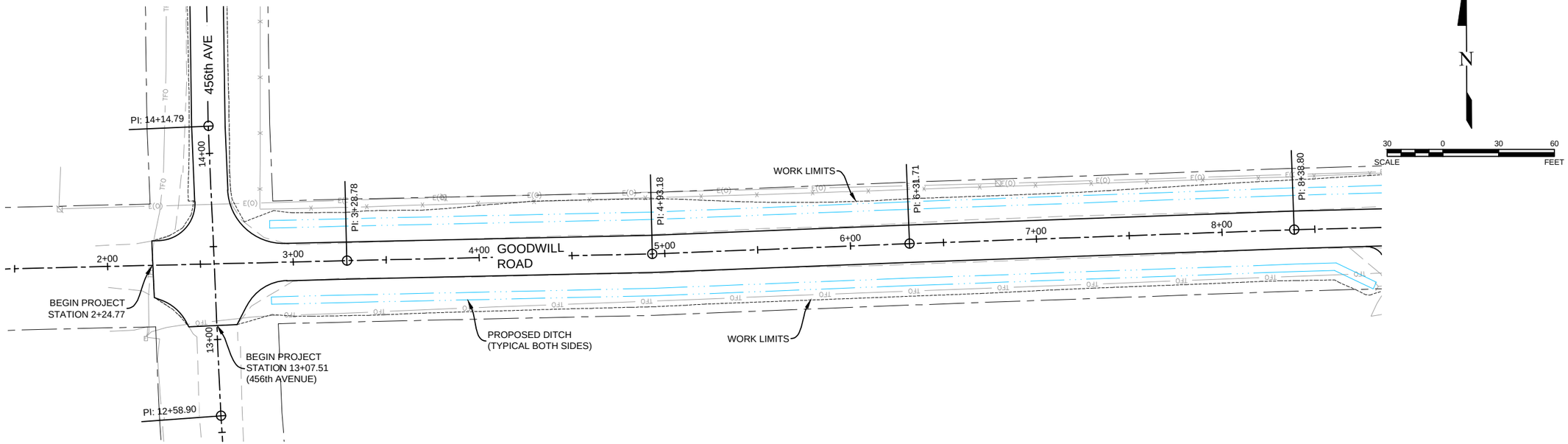
PLAN AND PROFILE
456th AVENUE

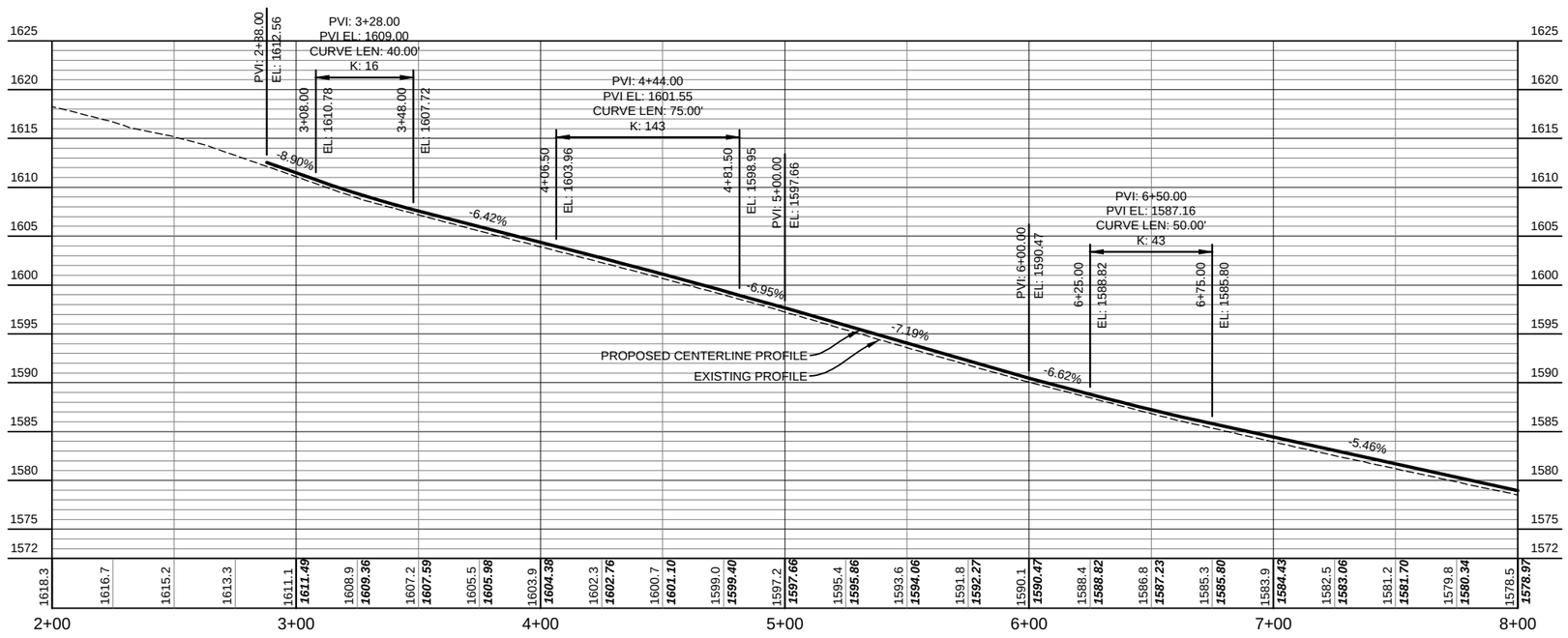
DRWN. BY	CHK'D BY	PROJECT NO.	DATE
OML	DJF	2111-01639	01/22/2024

Jan 25, 2024 – 8:34am – K:\Projects\Tribal\SissetonWahpetonOyate\2111-01639_FEMA-BRIC-Award\CAD\Design\Plan DWG\2111-01639_Plan and Profile.dwg

STATE	PROJECT	SHEET	TOTAL SHEETS
##	FEMA BRIC	53	109

PLAN AND PROFILE





REGISTERED PROFESSIONAL ENGINEER
REG. NO. 12804
DARIN FALCON
5/16/24
SOUTH DAKOTA

Revised #

FEMA BRIC
SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

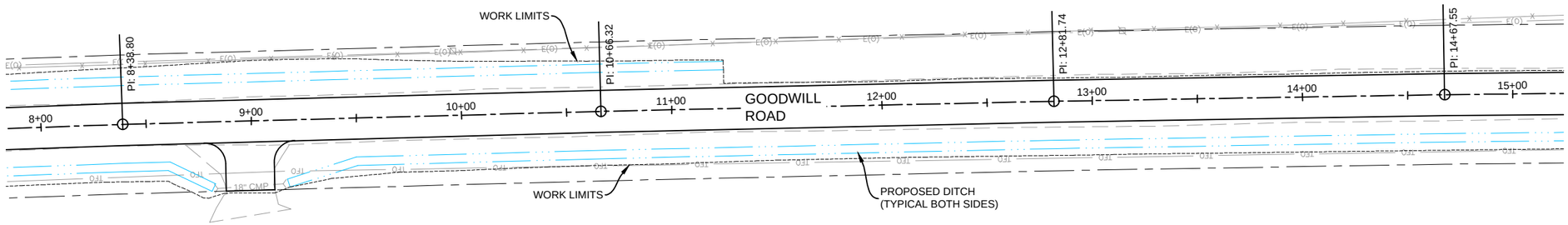
PLAN AND PROFILE
GOODWILL ROAD

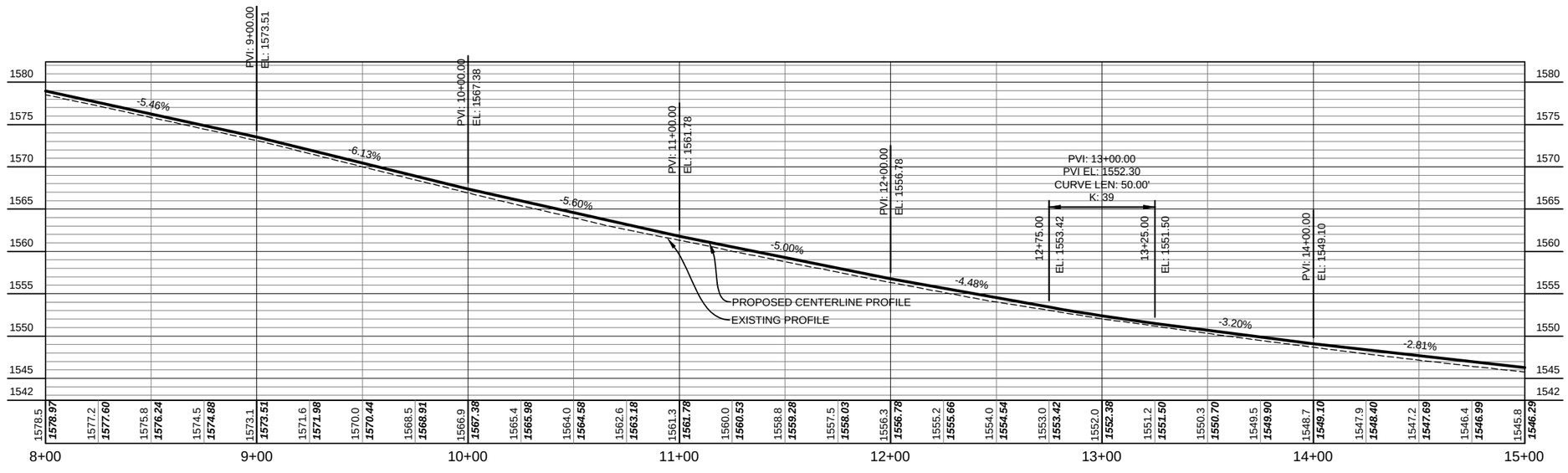
DRWN. BY	CHK'D BY	PROJECT NO.	DATE
OML	DJF	2111-01639	01/22/2024

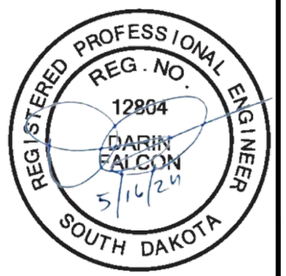
Jan 23, 2024 – 9:04am – K:\Projects\Tribal\SissetonWahpetonOyate\2111-01639_FEMA-BRIC-Award\CAD\Design\Plan DWG\2111-01639_Plan and Profile.dwg

PLAN AND PROFILE

STATE	PROJECT	SHEET	TOTAL SHEETS
##	FEMA BRIC	54	109







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SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

PLAN AND PROFILE
GOODWILL ROAD

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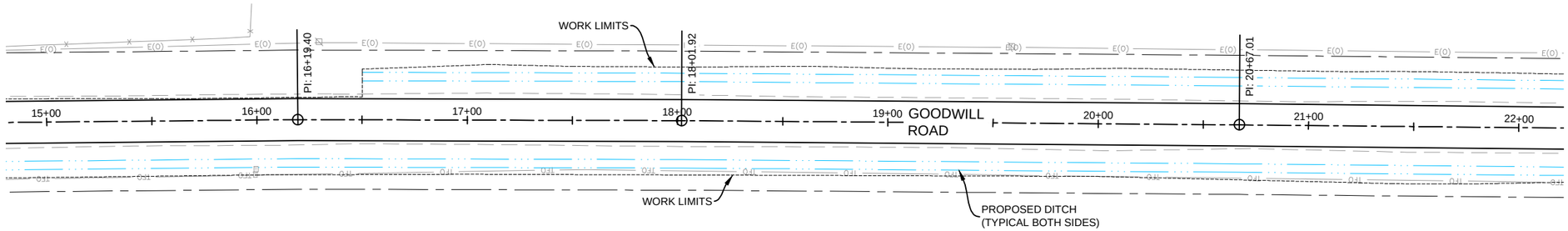
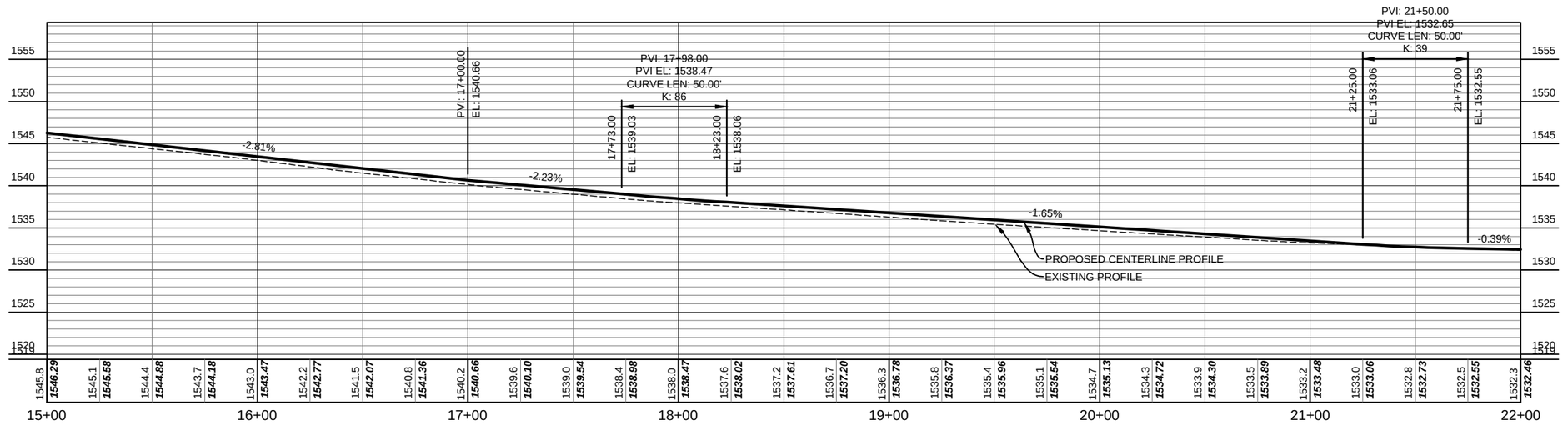
STATE	PROJECT	SHEET	TOTAL SHEETS
##	FEMA BRIC	55	109

PLAN AND PROFILE





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FEMA BRIC

SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

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PLAN AND PROFILE
GOODWILL ROAD

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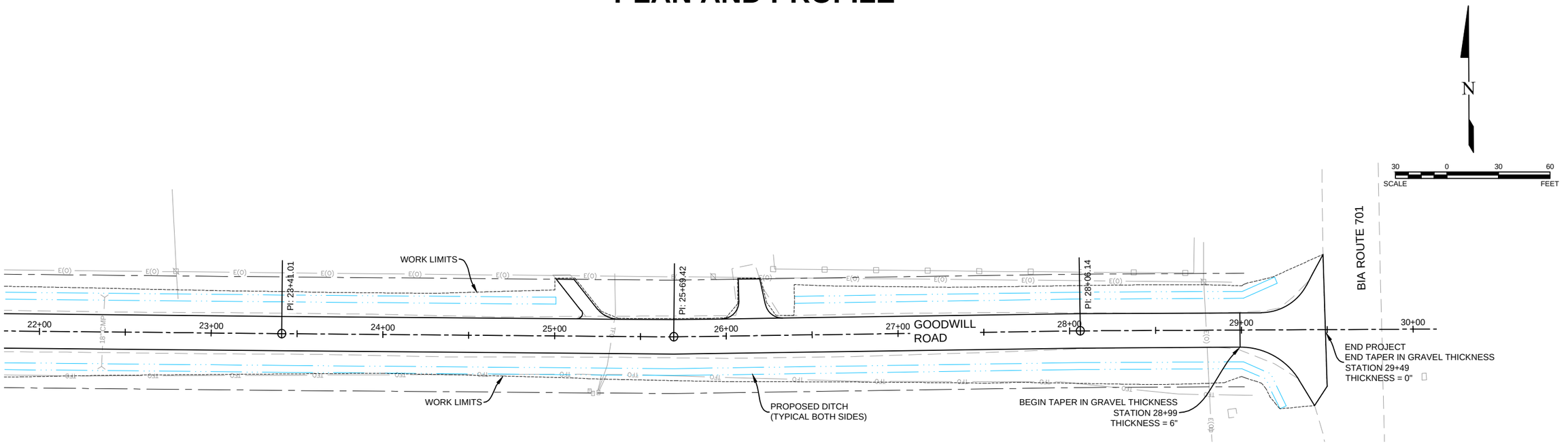
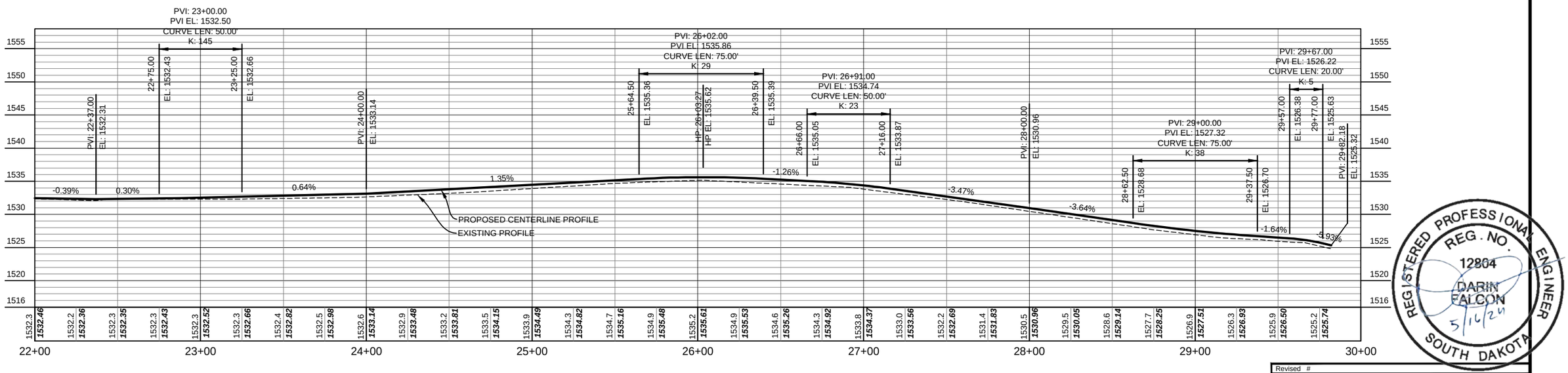
PLAN AND PROFILE

STATE	PROJECT	SHEET	TOTAL SHEETS
##	FEMA BRIC	56	109





REGISTERED PROFESSIONAL ENGINEER
REG. NO. 12804
DARIN FALCON
5/16/24
SOUTH DAKOTA

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FEMA BRIC
SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

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PLAN AND PROFILE
GOODWILL ROAD

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STATE	PROJECT	SHEET	TOTAL SHEETS
##	FEMA BRIC	57	109

PLAN AND PROFILE

4+65 TO 5+33 - L
REMOVE 72 FT ROW FENCE

4+74 TO 5+47 - R
REMOVE 73 FT ROW FENCE

4+65 TO 5+33 - L
INSTALL 72 FT
TYPE 2 ROW FENCE

4+74 TO 5+47 - R
INSTALL 73 FT
TYPE 2 ROW FENCE

5+11 - L & R
REMOVE 25 FT - REINFORCED CONCRETE BOX CULVERT
AND CONCRETE WINGWALLS (4 EACH)
(INCIDENTAL WORK - STRUCTURE)

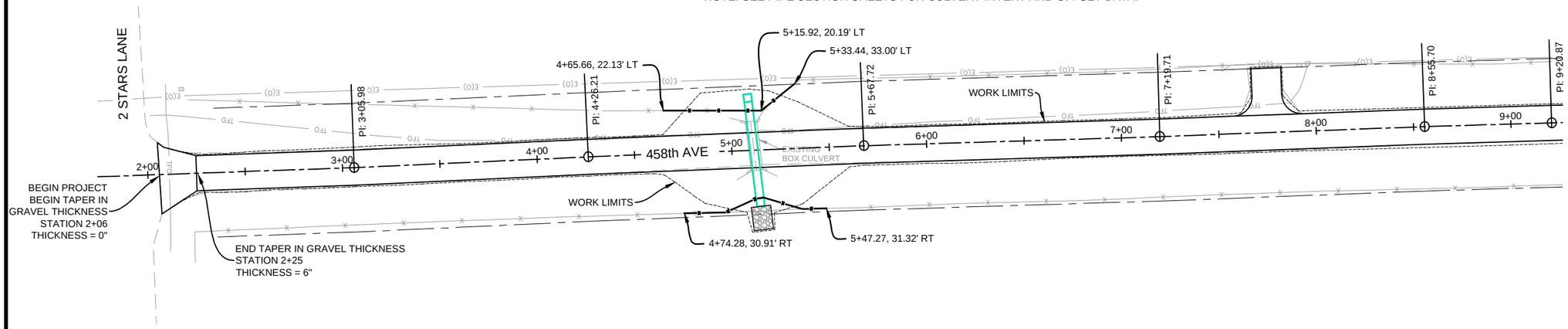
5+11 - L & R
INSTALL 50.0 FT - 4.0'x4.0' REINFORCED CONCRETE BOX CULVERT
& 2 END SECTIONS
S EW: 5 R.H.F.

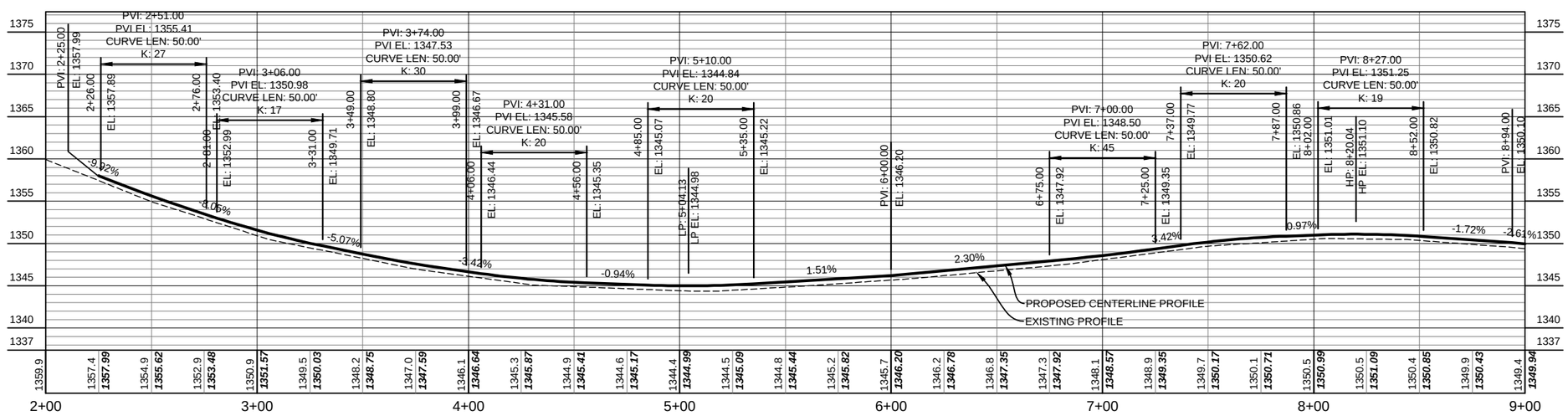
NOTE: SEE PIPE SECTION SHEETS FOR CULVERT INVERT AND OFFSET DATA.

5+11 - 29'R to 41'R
INSTALL CLASS B RIPRAP (15.5 TONS)
AND TYPE B DRAINAGE FABRIC (24.3 SQYD)
DIMENSIONS
10.0'W x 12.0'L x 2.25'D

N

30 0 30 60
SCALE FEET





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SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

PLAN AND PROFILE
458th AVENUE

DRWN. BY	CHK'D BY	PROJECT NO.	DATE
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STATE	PROJECT	SHEET	TOTAL SHEETS
##	FEMA BRIC	58	109

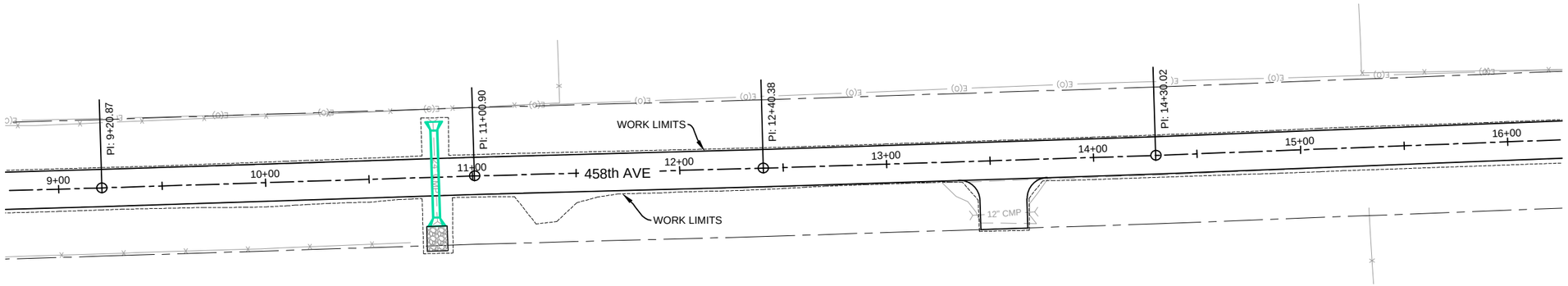
PLAN AND PROFILE

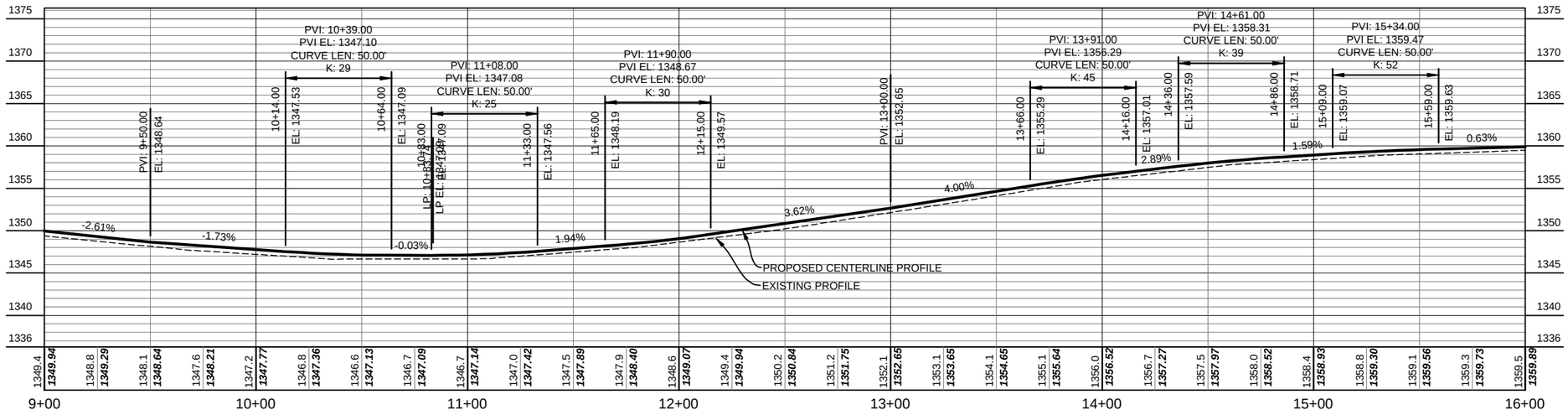
10+82 - L & R
REMOVE 24" - 48 FT CMP

10+82 - L & R
INSTALL 36" - 42.0 FT CMP
& 2 FLARED ENDS

NOTE: SEE PIPE SECTION SHEETS FOR CULVERT INVERT AND OFFSET DATA.

10+82 - 24'R to 36'R
INSTALL CLASS C RIPRAP (24.2 TONS)
AND TYPE B DRAINAGE FABRIC (30.4 SQYD)
DIMENSIONS
10.0'W x 12.0'L x 3.5'D





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FEMA BRIC
SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

PLAN AND PROFILE
458th AVENUE

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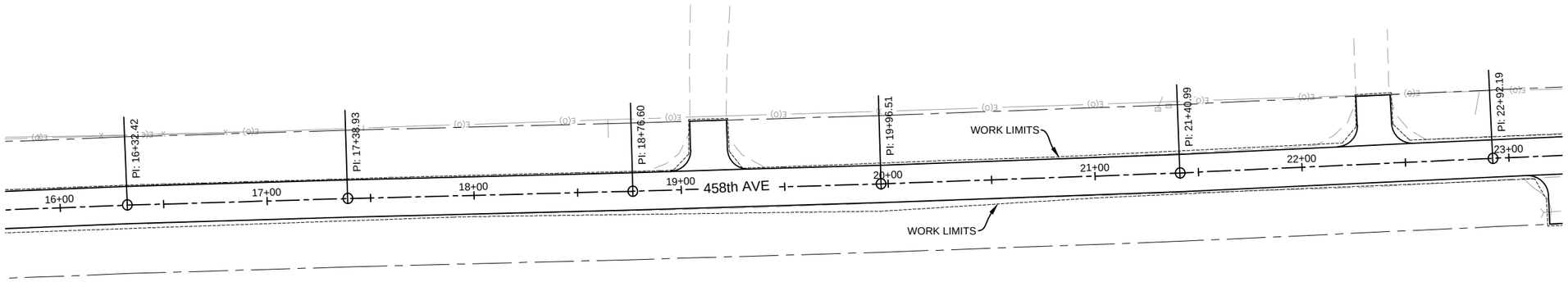
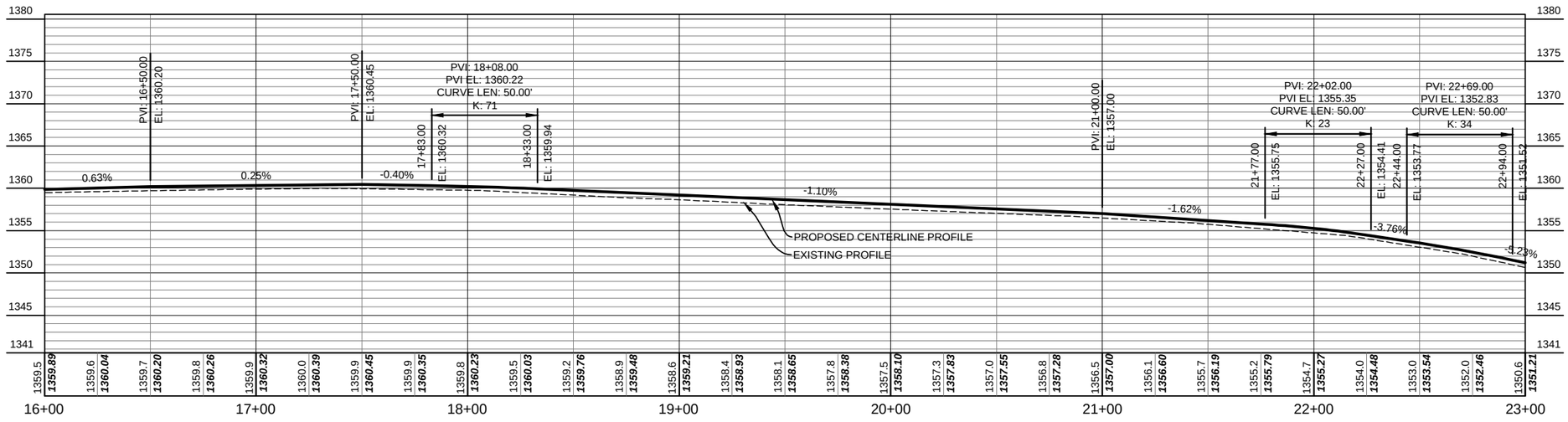
PLAN AND PROFILE

STATE	PROJECT	SHEET	TOTAL SHEETS
##	FEMA BRIC	59	109

N

30 0 30 60
SCALE FEET





REGISTERED PROFESSIONAL ENGINEER
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FALCON
5/16/24
SOUTH DAKOTA

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FEMA BRIC
SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

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PLAN AND PROFILE
458th AVENUE

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STATE	PROJECT	SHEET	TOTAL SHEETS
##	FEMA BRIC		

PLAN AND PROFILE

27+34 TO 28+12 - L
REMOVE 79 FT ROW FENCE

27+30 TO 28+10 - R
REMOVE 79 FT ROW FENCE

27+34 TO 28+12 - L
INSTALL 79 FT
TYPE 2 ROW FENCE

27+30 TO 28+10 - R
INSTALL 79 FT
TYPE 2 ROW FENCE

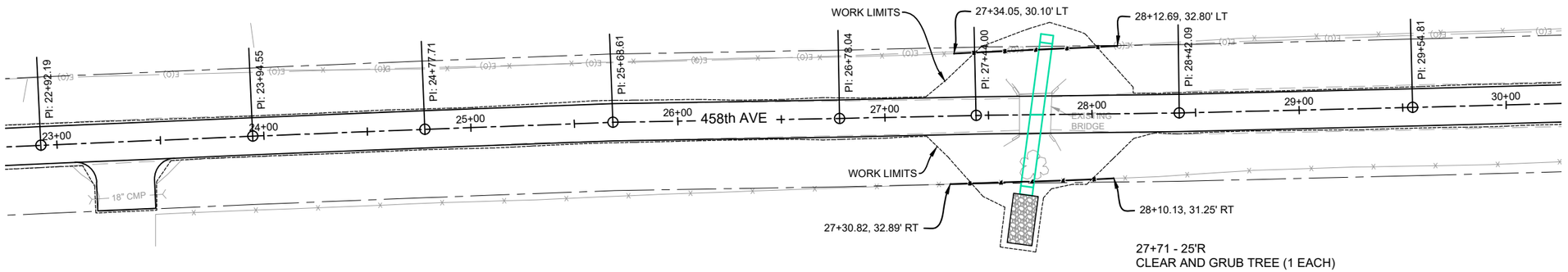
27+73 - L & R
REMOVE EXISTING CONTINUOUS CONCRETE BRIDGE, BRIDGE RAIL, AND CONCRETE WINGWALLS (4 EACH) (INCIDENTAL WORK - STRUCTURE)

27+73 - L & R
INSTALL 70.0 FT - 6.0'x6.0' REINFORCED CONCRETE BOX CULVERT & 2 END SECTIONS
SKEW: 8° L.H.F.

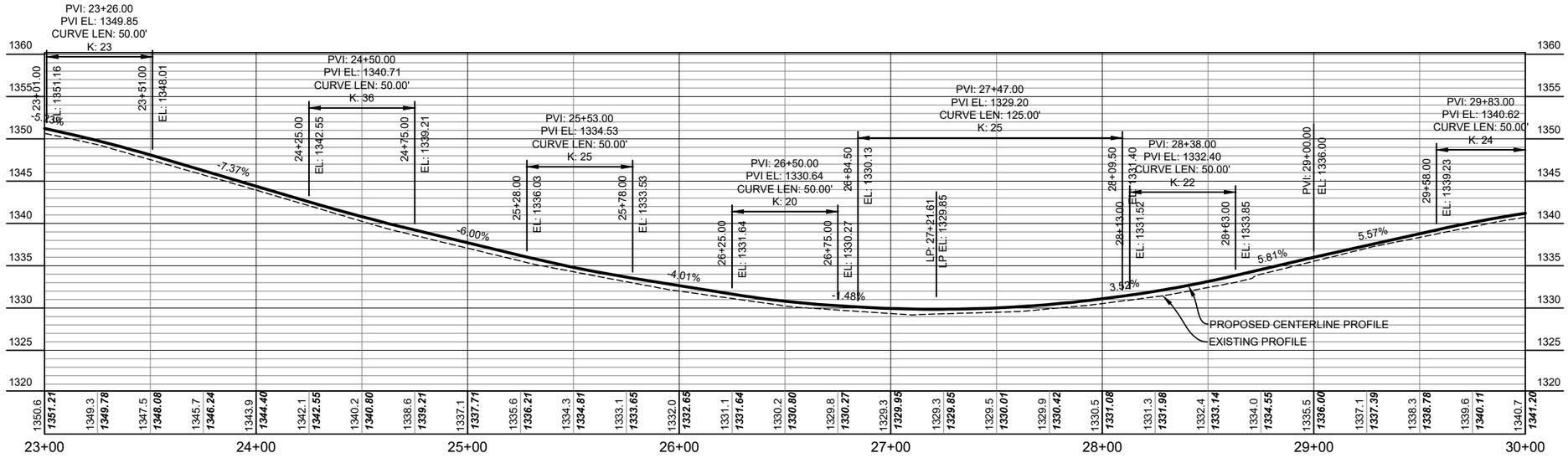
NOTE: SEE PIPE SECTION SHEETS FOR CULVERT INVERT AND OFFSET DATA.

27+73 - 39'R to 62'R
INSTALL CLASS B RIPRAP (37.3 TONS) AND TYPE B DRAINAGE FABRIC (50.0 SQYD)
DIMENSIONS
12.0'W x 24.0'L x 2.25'D

30 0 30 60
SCALE FEET



27+71 - 25'R
CLEAR AND GRUB TREE (1 EACH)



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5/16/24
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SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

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PLAN AND PROFILE
458th AVENUE

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STATE	PROJECT	SHEET	TOTAL SHEETS
##	FEMA BRIC	61	109

PLAN AND PROFILE

33+94 TO 34+23 - R
REMOVE 30 FT ROW FENCE

33+94 TO 34+23 - R
INSTALL 30 FT
TYPE 2 ROW FENCE

34+08 - L & R
REMOVE 30" - 50 FT CMP

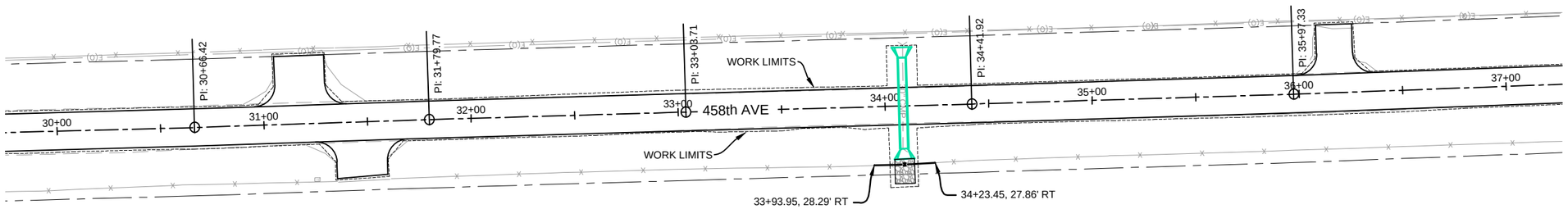
34+08 - L & R
INSTALL 42" - 44.0 FT CMP
& 2 FLARED ENDS

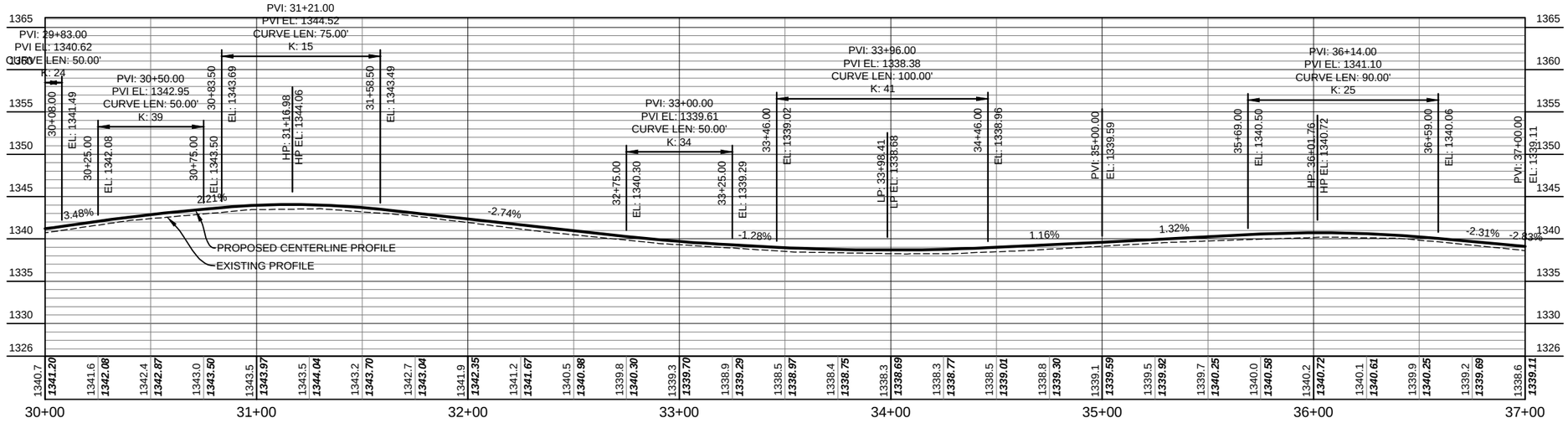
NOTE: SEE PIPE SECTION SHEETS FOR CULVERT INVERT AND OFFSET DATA.

34+08 - 26'R to 38'R
INSTALL CLASS B RIPRAP (14.7 TONS)
AND TYPE B DRAINAGE FABRIC (23.4 SQYD)
DIMENSIONS
9.5'W x 12.0'L x 2.25'D

N

30 0 30 60
SCALE FEET





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5/16/24
SOUTH DAKOTA

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FEMA BRIC
SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

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PLAN AND PROFILE
458th AVENUE

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STATE	PROJECT	SHEET	TOTAL SHEETS
##	FEMA BRIC	62	109

PLAN AND PROFILE

38+26 TO 38+98 - L
REMOVE 72 FT ROW FENCE

38+26 TO 38+98 - L
INSTALL 72 FT
TYPE 2 ROW FENCE

38+28 TO 38+99 - R
REMOVE 71 FT ROW FENCE

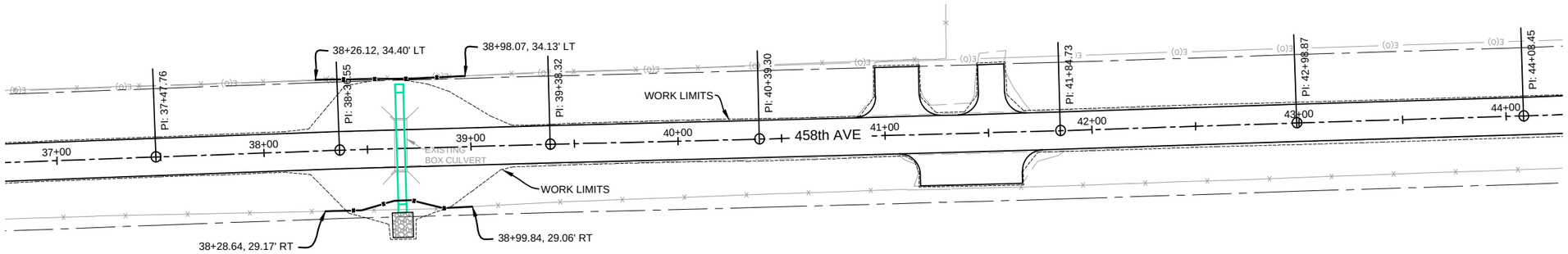
38+28 TO 38+99 - R
INSTALL 72 FT
TYPE 2 ROW FENCE

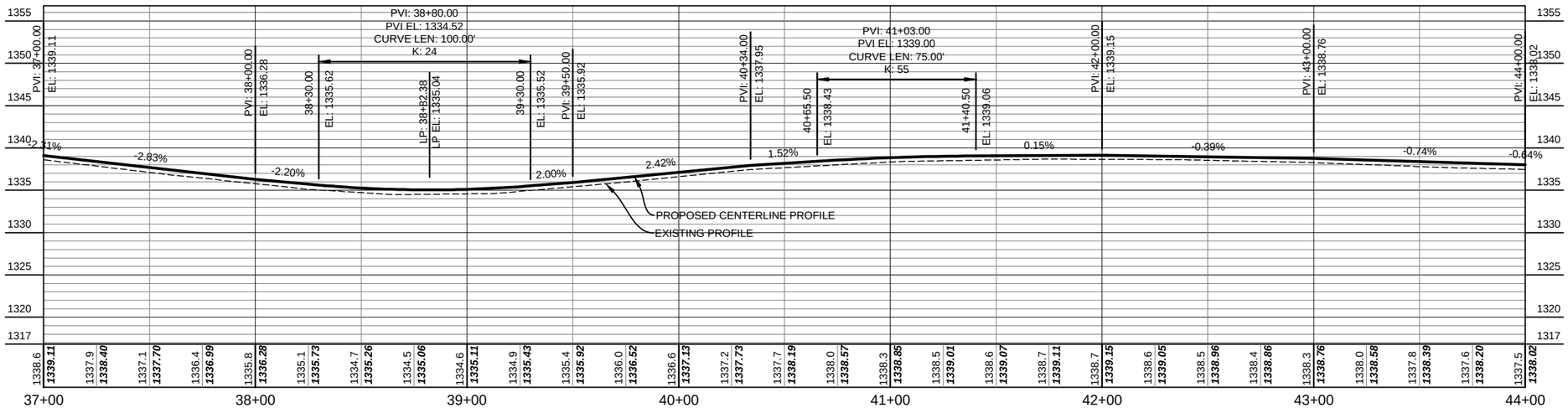
38+66 - L & R
REMOVE 25 FT - REINFORCED CONCRETE BOX CULVERT
AND CONCRETE WINGWALLS (4 EACH)
(INCIDENTAL WORK - STRUCTURE)

38+66 - L & R
INSTALL 54.0 FT - 4.0'x4.0' REINFORCED CONCRETE BOX CULVERT
& 2 END SECTIONS
SKEW: NONE

NOTE: SEE PIPE SECTION SHEETS FOR CULVERT INVERT AND OFFSET DATA.

38+66 - 31'R to 43'R
INSTALL CLASS B RIPRAP (15.5 TONS)
AND TYPE B DRAINAGE FABRIC (24.3 SQYD)
DIMENSIONS
10.0'W x 12.0'L x 2.25'D





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SISSETON WAHPETON OYATE
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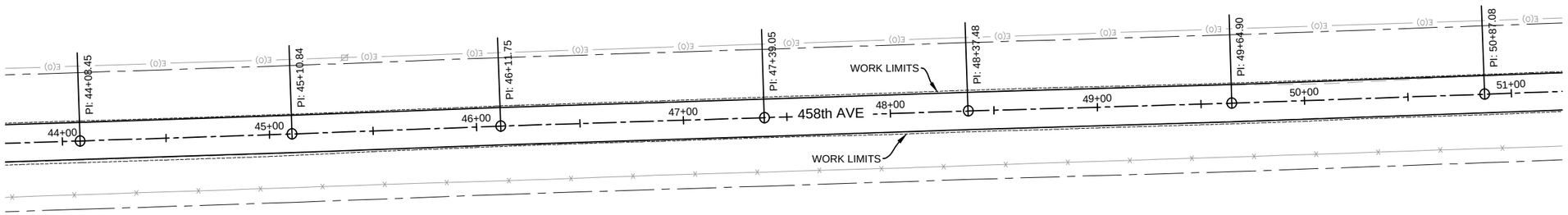
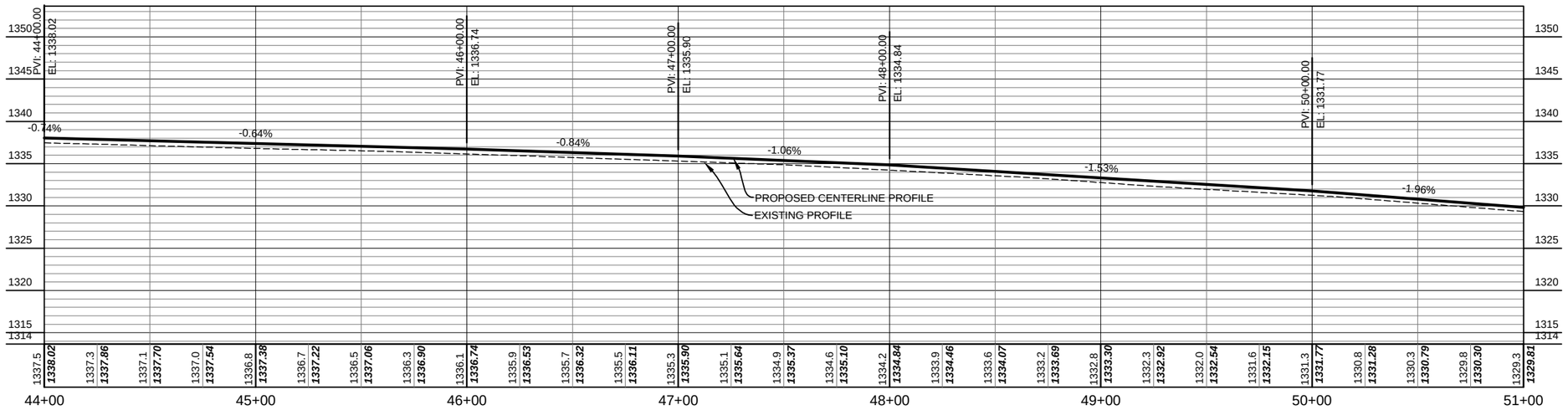
PLAN AND PROFILE

STATE	PROJECT	SHEET	TOTAL SHEETS
##	FEMA BRIC	63	109

N

30 0 30 60
SCALE FEET





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STATE	PROJECT	SHEET	TOTAL SHEETS
##	FEMA BRIC	64	109

PLAN AND PROFILE

52+75 - L & R
REMOVE 12" - 39 FT CMP

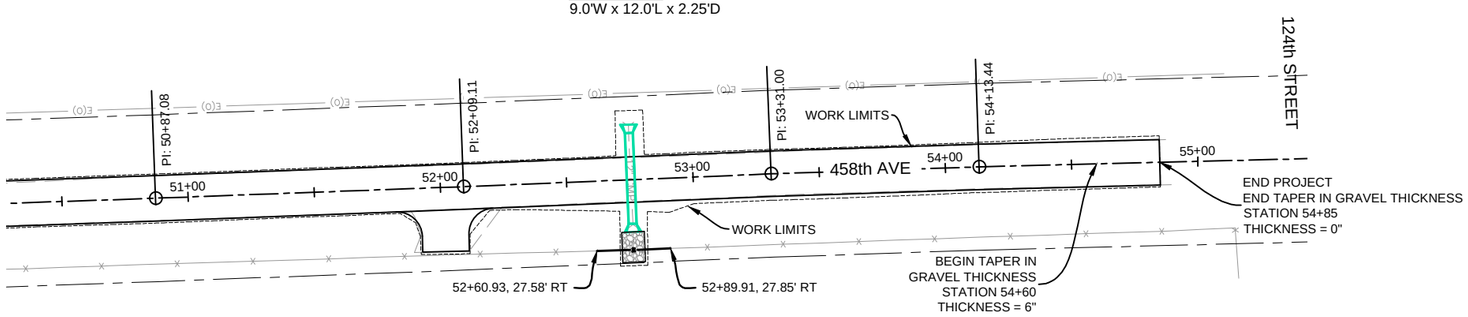
52+61 TO 52+90 - R
REMOVE 29 FT ROW FENCE

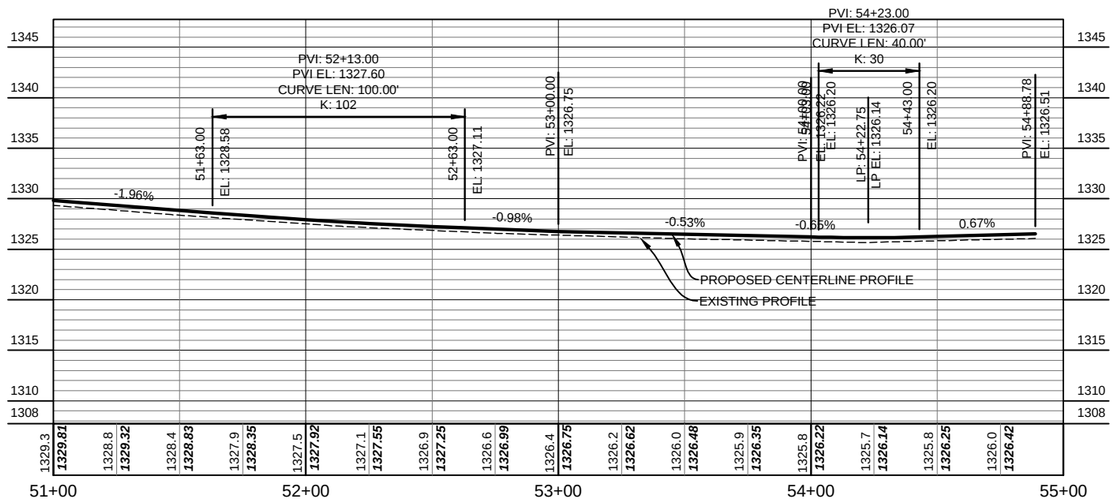
52+61 TO 52+90 - R
INSTALL 29 FT
TYPE 2 ROW FENCE

52+75 - L & R
INSTALL 30" - 36.0 FT CMP ARCH
& 2 FLARED ENDS

NOTE: SEE PIPE SECTION SHEETS FOR CULVERT INVERT AND OFFSET DATA.

52+75 - 21'R to 33'R
INSTALL CLASS B RIPRAP (14.0 TONS)
AND TYPE B DRAINAGE FABRIC (22.6 SQYD)
DIMENSIONS
9.0'W x 12.0'L x 2.25'D





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FEMA BRIC
SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

PLAN AND PROFILE
458th AVENUE

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Published Date: 2024

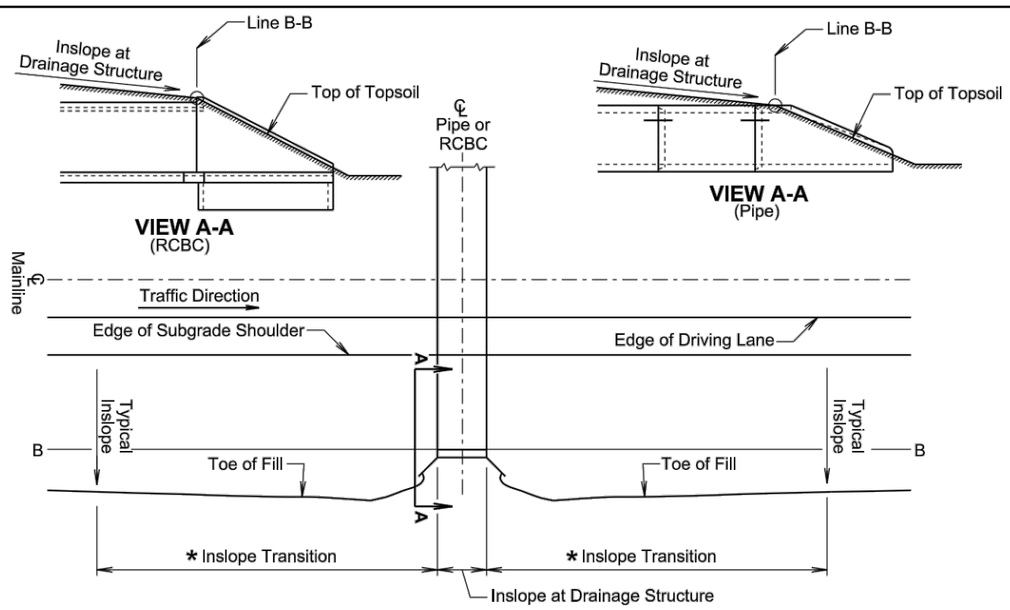
SDDOT

INSLOPE TRANSITIONS AT PIPE CULVERTS OR REINFORCED CONCRETE BOX CULVERTS

PLATE NUMBER 120.05

Sheet 1 of 2

September 14, 2018



TYPE 1 INSLOPE TRANSITION

GENERAL NOTES:

This Type 1 Inslope Transition is used when the specified inslope at the drainage structure is flatter than the typical inslope and the inslope at the drainage structure is between a 4:1 slope and 6:1 slope.

Line B-B represents the clear zone line, the location where soil intercepts the parapet on an RCBC, the location where the soil intercepts the top of the pipe adjacent to the opening of the pipe end section, or may represent a change in slope.

* Transition from the typical inslope to the inslope at the drainage structure. Within the clear zone (area from edge of subgrade shoulder to line B-B) use 100' length for each 1:1 slope change. Example: transition from a 4:1 to a 6:1 would require a 200' length transition. The typical inslope outside of the clear zone will be transitioned gradually to the slope necessary adjacent to the RCBC wing wall or pipe culvert end section within the transition length necessary for the transition within the clear zone.

Published Date: 2024

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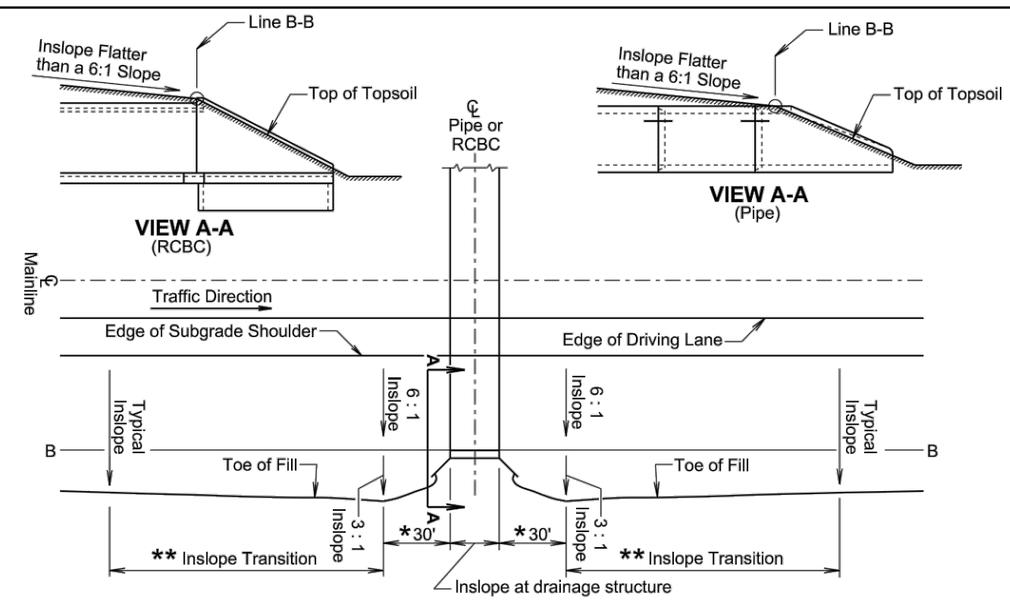
INSLOPE TRANSITIONS AT PIPE CULVERTS OR REINFORCED CONCRETE BOX CULVERTS

PLATE NUMBER 120.05

Sheet 2 of 2

September 14, 2018



TYPE 2 INSLOPE TRANSITION

GENERAL NOTES:

This Type 2 Inslope Transition is used when the specified inslope at the pipe or RCBC is flatter than a 6:1 slope.

Line B-B represents the clear zone line, the location where soil intercepts the parapet on an RCBC, the location where the soil intercepts the top of the pipe adjacent to the opening of the pipe end section, or may represent a change in slope.

* Transition from Inslope at drainage structure to a 6 : 1 inslope and 3:1 inslope.

** Transition from typical inslope to the inslopes adjacent to the drainage structure. Within the clear zone (area from edge of subgrade shoulder to line B-B) use 100' length for each 1:1 slope change. Example: transition from a 4:1 to a 6:1 would require a 200' length transition. The typical inslope outside of the clear zone will be transitioned to a 3:1 inslope within the transition length necessary for the transition within the clear zone.

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STANDARD PLATES

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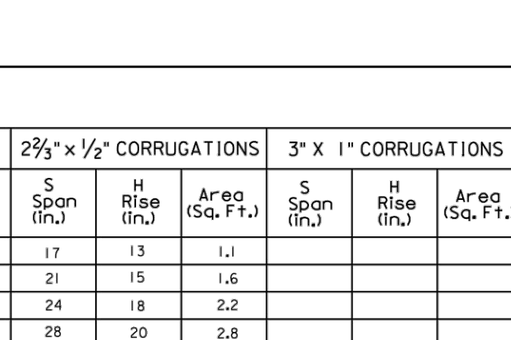
STATE	PROJECT	SHEET	TOTAL SHEETS
SD	FEMA BRIC	65	109

STATE	PROJECT	SHEET	TOTAL SHEETS
SD	FEMA BRIC	66	109

* Dia. (in.)	2⅔" x ½" CORRUGATIONS S Span (in.)	H Rise (in.)	Area (Sq. Ft.)	3" X 1" CORRUGATIONS S Span (in.)	H Rise (in.)	Area (Sq. Ft.)
15	17	13	1.1			
18	21	15	1.6			
21	24	18	2.2			
24	28	20	2.8			
30	35	24	4.4			
36	42	29	6.4	40	31	7.0
42	49	33	8.7	46	36	9.4
48	57	38	11.4	53	41	12.3
54	64	43	14.3	60	46	15.6
60	71	47	17.6	66	51	19.3
66	77	52	21.3	73	55	23.2
72	83	57	25.3	81	59	27.4
78				87	63	32.1
84				95	67	37.0
90				103	71	42.4
96				112	75	48.0
102				117	79	54.2
108				128	83	60.8
114				137	87	67.4
120				142	91	74.5

* Equivalent diameter of circular C.M.P.

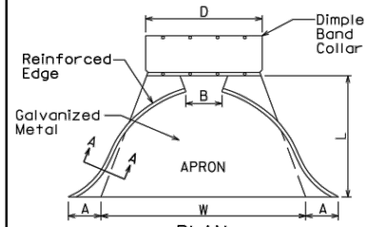


GENERAL NOTE:
All dimensions measured from inside crest.

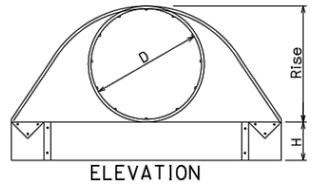
March 31, 2000

Published Date: 2024	SDDOT	CORRUGATED METAL PIPE ARCH CULVERT	PLATE NUMBER 450.30
			Sheet 1 of 1

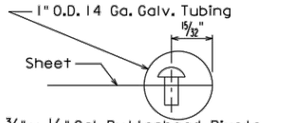
Alternate Type Connector Sections may be used with approval of the Engineer.



PLAN

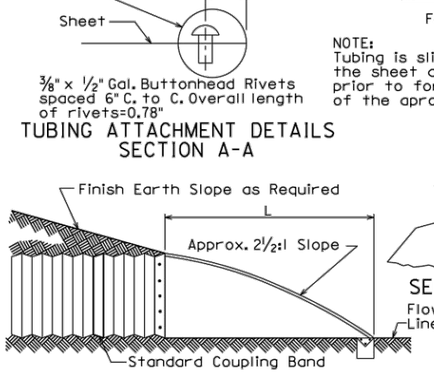


ELEVATION



⅜" x ½" Gal. Buttonhead Rivets spaced 6" C. to C. Overall length of rivets=0.78"

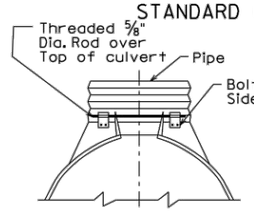
TUBING ATTACHMENT DETAILS
SECTION A-A



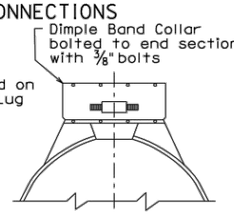
TYPICAL CROSS-SECTION

Dia. D (in.)	Ga.	DIMENSIONS (in.) A	B	H	L	W	Approx. Slope	Body
12	16	6	6	6	21	24	2½:1	1 Pc.
15	16	7	8	6	26	30	2½:1	1 Pc.
18	16	8	10	6	31	36	2½:1	1 Pc.
21	16	9	12	6	36	42	2½:1	1 Pc.
24	16	10	13	6	41	48	2½:1	1 Pc.
30	14	12	16	8	46	60	2½:1	1 Pc.
36	14	14	19	9	51	72	2½:1	2 Pc.
42	12	16	22	11	60	84	2½:1	2 Pc.
48	12	18	27	12	69	90	2¼:1	2 Pc.
54	12	18	30	12	78	102	2:1	3 Pc.
60	12	18	33	12	84	114	1¾:1	3 Pc.
66	12	18	36	12	87	120	1½:1	3 Pc.
72	12	18	39	12	87	126	1⅓:1	3 Pc.
78	12	18	42	12	87	132	1¼:1	3 Pc.
84	12	18	45	12	87	138	1⅛:1	3 Pc.

STANDARD CONNECTIONS

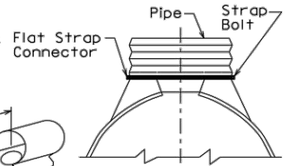


For 30" through 84"

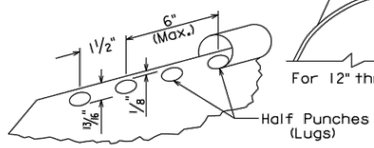


Alternate for all sizes

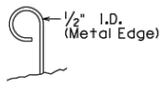
NOTE:
Tubing is slipped over the sheet and rivets or lugs prior to forming operations of the apron.



For 12" through 24" only



SECTION A-A (alternate)



SECTION A-A (alternate)

GENERAL NOTES:

All 3 pc. bodies shall have 12 Ga. sides and 10 Ga. center panels. Width of center panels shall be greater than 20% of the pipe periphery. Multiple panel bodies to have lap seams tightly joined by ⅜" Dia. galvanized rivets or bolts.

For 60" through 84" sizes, reinforced edges shall be supplemented with galvanized stiffener angles. The angles will be 2" x 2" x ¼" for 60" through 72" diameters and 2½" x 2½" x¼" for 78" and 84" diameters. The angles shall be attached by ⅜" diameter galvanized nuts and bolts.

Rivets and Bolts shall be ⅜" Dia. Min. for 10 Ga. and 12 Ga. sheet, and 5/16" Dia. Min. for 14 Ga. and 16 Ga. sheets. Tighten nuts with torque wrench to 25 lbs. torque.

March 31, 2000

Published Date: 2024	SDDOT	C.M.P. FLARED ENDS	PLATE NUMBER 450.35
			Sheet 1 of 1

Revised #

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ROBERTS COUNTY, SOUTH DAKOTA

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STANDARD PLATES

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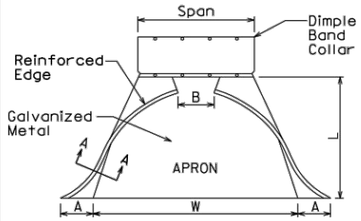
OML	DJF	2111-01639	01/22/2024

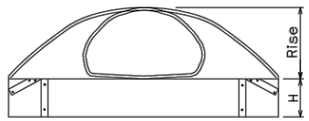
Jan 23, 2024 – 4:51pm – K:\Projects\Tribal\SissetonWahpetonOyate\2111-01639_FEMA-BRIC-Award\CAD\Design\Plan DWG\2111-01639_Standard Plates.dwg

STATE	PROJECT	SHEET	TOTAL SHEETS
SD	FEMA BRIC	67	109

Alternate Type Connector Sections may be used with approval of the Engineer.



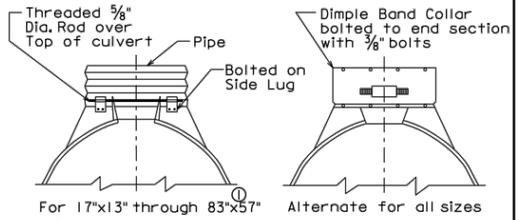
PLAN



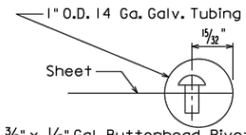
ELEVATION

Span x Rise (in.)x(in.)	Equiv. Dia. (in.)	Ga.	APPROX. DIMENSIONS (in.) A	B	H	L	W	Approx. Slope	Body
17x13	15	16	7	9	6	19	30	2½:1	1 Pc.
21x15	18	16	7	10	6	23	36	2½:1	1 Pc.
24x18	21	16	8	12	6	28	42	2½:1	1 Pc.
28x20	24	16	9	14	6	32	48	2½:1	1 Pc.
35x24	30	14	10	16	6	39	60	2½:1	1 Pc.
42x29	36	14	12	18	8	46	75	2½:1	1 Pc.
49x33	42	12	13	21	9	53	85	2½:1	2 Pc.
57x38	48	12	16	26	12	63	90	2½:1	2 Pc.
64x43	54	12	18	30	12	70	102	2¼:1	2 Pc.
71x47	60	12	18	33	12	77	114	2¼:1	3 Pc.
77x52	66	12	18	36	12	77	126	2:1	3 Pc.
83x57	72	12	18	39	12	77	133	2:1	3 Pc.

STANDARD CONNECTIONS



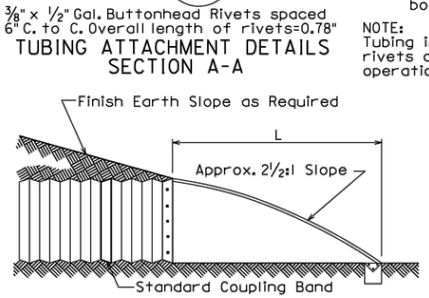
① For 17" through 28" span pipe-arches a flat strap connector may be used in place of the rod connection. Strap connector shall be 1" wide, 12 ga. strap with standard 6" long x ½" dia. bond bolt and nut.



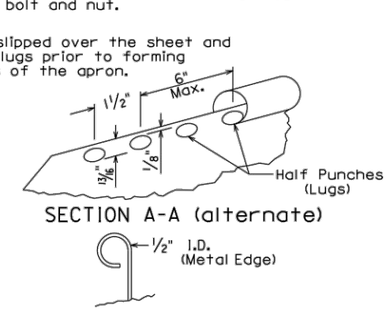
⅜" x ½" Gal. Buttonhead Rivets spaced 6" C. to C. Overall length of rivets=0.78"

TUBING ATTACHMENT DETAILS
SECTION A-A

NOTE:
Tubing is slipped over the sheet and rivets or lugs prior to forming operations of the apron.



TYPICAL CROSS-SECTION



SECTION A-A (alternate)

SECTION A-A (alternate)

GENERAL NOTES:

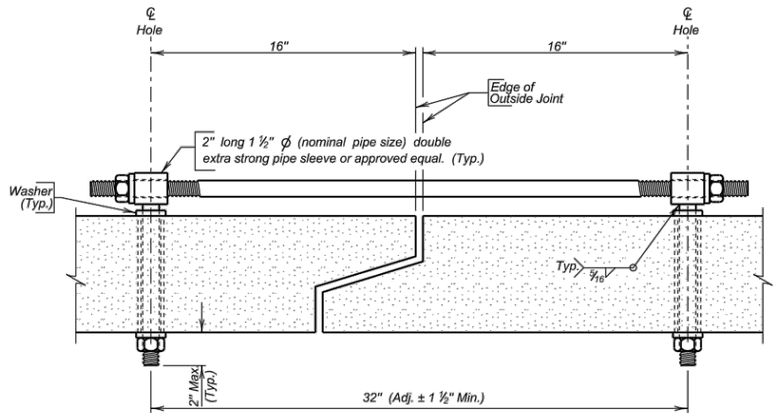
All 3 pc. bodies shall have 12 Ga. sides and 10 Ga. center panels. Width of center panels shall be greater than 20% of the pipe periphery. Multiple panel bodies shall have lap seams tightly joined by ⅜" Dia. galvanized rivets or bolts.

For 77" x 52" and 83" x 57" sizes, reinforced edges shall be supplemented with galvanized stiffener angles. The angles will be 2" x 2" x ¼" for both the 77" x 52" size and the 83" x 57" size. The angles shall be attached by ⅜" Dia. galvanized nuts and bolts.

Rivets and Bolts shall be ⅜" Dia. Min. for 10 Ga. and 12 Ga. sheet, and 5/16" Dia. Min. for 14 Ga. and 16 Ga. sheets. Tighten nuts with torque wrench to 25 lbs. torque.

March 31, 2000

Published Date: 2024	SDDOT	C.M.P. ARCH FLARED ENDS	PLATE NUMBER 450.36
			Sheet 1 of 1



TIE BOLT ASSEMBLY

GENERAL NOTES:

1. *All holes for tie bolts shall be cast-in-place, 16 inches from outside edge of joint. Cast in inserts or sleeves, if used, shall be made of a corrosion resistant material.*
2. *Ties shall be 1 inch Ø and conform to the requirements of ASTM A36, ASTM A307, or ASTM F1554, Gr. 36. Nuts shall be heavy hex in conformance with ASTM A563. Washers shall conform to ASTM F436, Type 1. The welded pipe sleeve shall conform to ASTM A53, Grade B.*
3. *Welding and weld inspection shall be in conformance with AWS/ANSI D1.1 - (Current Year) Structural Welding Code - Steel.*
4. *Tie Bolt Assembly shall be galvanized in accordance with ASTM A153 or ASTM F2329 as applicable.*
5. *Tie Bolt Assembly details may vary from that shown, but alternate tie bolt assemblies are subject to testing to demonstrate equal strength. Submit details, through proper channels, to the Office of Bridge Design for approval.*
6. *All costs for furnishing and installing the precast box culvert tie bolt assembly shall be incidental to the contract unit price per Foot for "Precast Concrete Box Culvert, Furnish".*

March 21, 2016

Published Date: 2024	SDDOT	PRECAST BOX CULVERT TIE BOLT ASSEMBLY DETAILS	PLATE NUMBER 560.01
			Sheet 1 of 1

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STANDARD PLATES

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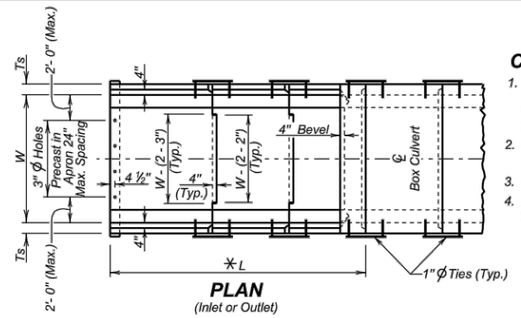
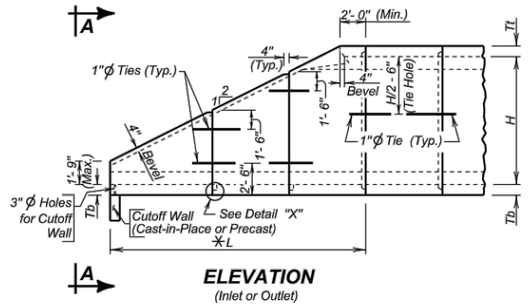
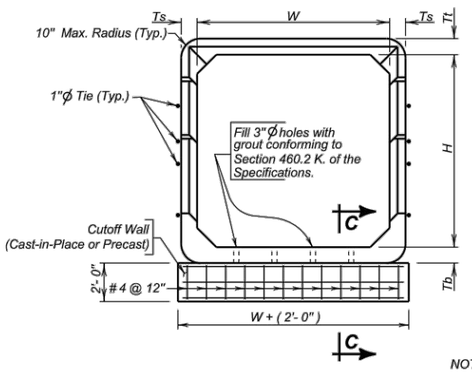
STATE	PROJECT	SHEET	TOTAL SHEETS
SD	FEMA BRIC	68	109



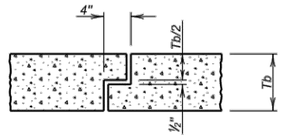
PLAN
(Inlet or Outlet)



ELEVATION
(Inlet or Outlet)

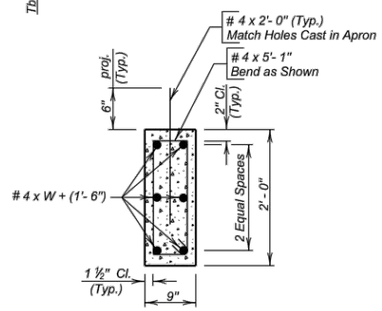


VIEW A - A



DETAIL "X"

NOTE: Joint details may vary from that shown, according to the manufacturer's design. Submit details with shop plans for approval.



SEC. C - C

LEGEND

W = Width of Opening
H = Height of Opening
Tt = Thickness of Top Slab
Tb = Thickness of Bottom Slab
Ts = Thickness of Side Wall
L = Length of End Section

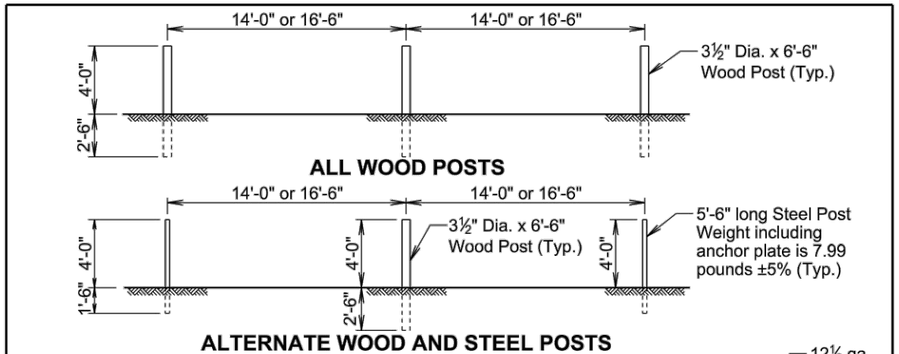
NOTES:
See GENERAL DRAWING for W and H dimensions.
Tt, Tb, L, and Ts dimensions shall be furnished by the Contractor.
✳ Length and number of units may vary from that shown.

CUTOFF WALL

1. All costs associated with furnishing and installing the Cutoff Wall, whether precast or cast-in-place, shall be incidental to the contract unit price per each for "Precast Box Culvert End Section, Furnish".
2. Concrete for cast-in-place cutoff wall shall be Class M6 concrete in accordance with Section 462 of the Specifications.
3. All reinforcing steel shall conform to ASTM A615 Grade 60.
4. Alternate details will be allowed, subject to the approval of the Bridge Construction Engineer.

June 26, 2015

Published Date: 2024	SDDOT	PRECAST SINGLE BOX CULVERT SLOPED END SECTION DETAILS WITH 2'-0" CUTOFF WALL	PLATE NUMBER 560.10
			Sheet 1 of 1



TYPE OF FENCE		LINE POST SPACING	BARBED WIRE		WOVEN WIRE
TYPE	DESCRIPTION		WIRE GAGE	NUMBER AND SHAPE OF BARBS	STYLE OR DESIGN NO.
1	3 Barbed Wires	16'-6"	12½	2 Point Round	—
2	4 Barbed Wires	16'-6"	12½	2 Point Round	—
3	5 Barbed Wires	16'-6"	12½	2 Point Round	—
4	26" Woven Wire with 2 Barbed Wires	14'-0"	12½	2 Point Round	726-6-12½
5	26" Woven Wire with 4 Barbed Wires	14'-0"	12½	2 wires with 2 Pt. Rd. 2 wires with 4 Pt. Rd.	726-6-12½
6	32" Woven Wire with 3 Barbed Wires	14'-0"	12½	2 wires with 2 Pt. Rd. 1 wire with 4 Pt. Rd.	832-6-12½

GENERAL NOTES:

Fence types designated on the plans that are followed by the letter S will have smooth (barbless) wires.

When type 5S or 6S is designated the bottom wire may be barbed, smooth, or left off.

All degrees of curvature stated for fence are at centerline of roadway.

June 26, 2019

Published Date: 2024	SDDOT	RIGHT-OF-WAY FENCE	PLATE NUMBER 620.01
			Sheet 1 of 1

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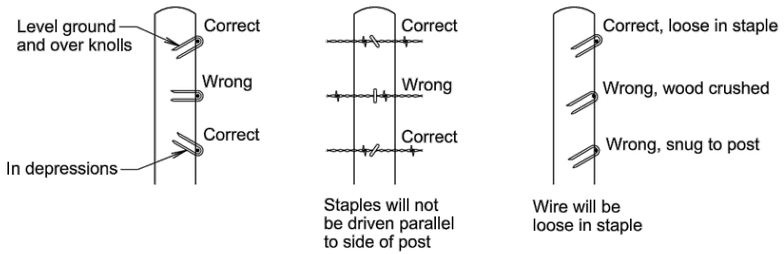
STATE	PROJECT	SHEET	TOTAL SHEETS
SD	FEMA BRIC	69	109



STAPLE INSTALLATION

GENERAL NOTES:

The Right-of-Way fence will consist of barbed wire or a combination of woven wire and barbed wire. The barbed wire and/or woven wire will be fastened to all wood posts or fastened to alternating wood and steel posts. Only wood posts will be used for brace panels. Gates will be of the type designated in the plans or as otherwise directed by the Engineer. Fence will be constructed conforming to the details on the standard plates and in the plans unless otherwise directed by the Engineer.

Right-of-Way fence on Interstate Projects will be constructed one foot within the Interstate Right-of-Way lines except at bridge openings, cattle passes, and as otherwise directed by the Engineer.

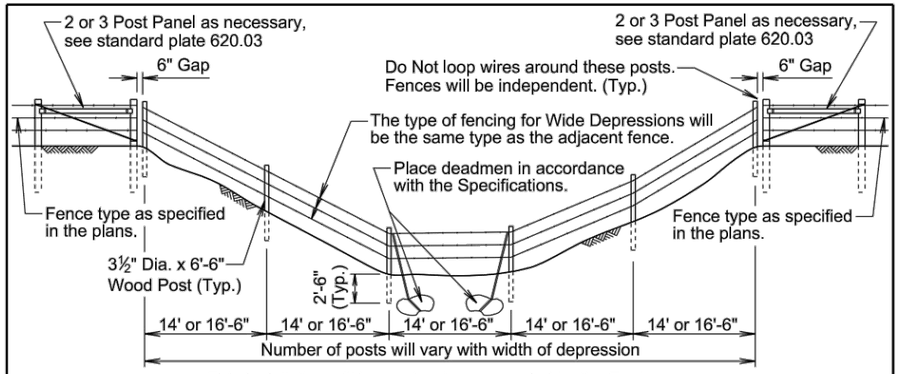
Right-of-Way fence other than on Interstate Projects will be constructed within one foot of the Right-of-Way on the Landowner's side except at bridge openings, cattle passes, and as otherwise directed by the Engineer.

Barbs will be fabricated from zinc coated 14 ga. wire. Two point barbs will be wrapped twice around one main strand at four-inch spacings and the four point barbs will be interlocked and wrapped around both main strands at five-inch spacings.

The gages of wire and wood post lengths and sizes are the minimum acceptable unless otherwise specified in the plans. The tolerances for steel posts will be as stated in AASHTO M281. Woven wire will conform to design and specifications of ASTM A116 and barbed wire will conform to ASTM A121.

June 26, 2019

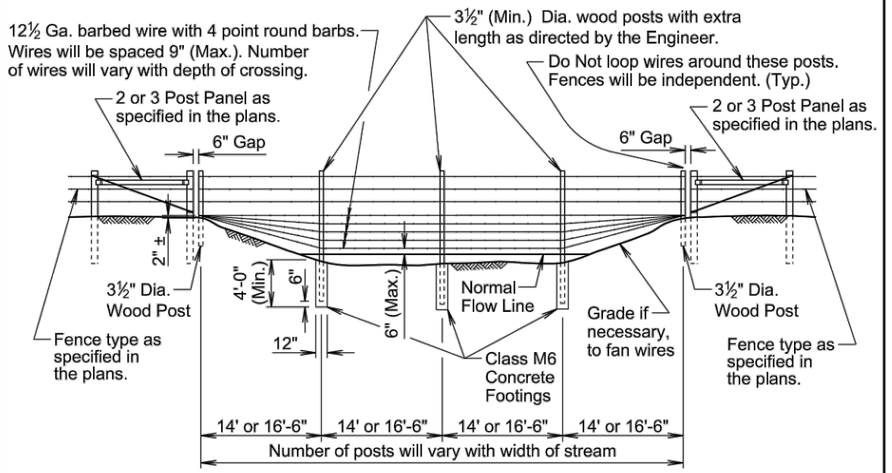
Published Date: 2024	SDDOT	STAPLE INSTALLATION AND GENERAL RIGHT-OF-WAY FENCE NOTES	PLATE NUMBER 620.02 Sheet 1 of 1



This installation will be made when requested by the Engineer.

FENCING AT WIDE DEPRESSION

(Subject to Flooding)



This installation will be made only when stated in the plans.

FENCING AT STREAM CROSSING

GENERAL NOTES:

There will be no extra payment for the additional work and materials required to construct the fencing at the wide depression(s) and/or the fencing at the stream crossing(s). The deadmen will be paid for in accordance with 620.5 A of the Specifications.

Measurement and payment for the fencing at the wide depression(s) and/or the fencing at the stream crossing(s) will be at the contract unit price per foot for the corresponding Right-of-Way fence contract item.

June 26, 2019

Published Date: 2024	SDDOT	FENCING AT WIDE DEPRESSION(S) AND STREAM CROSSING(S)	PLATE NUMBER 620.10 Sheet 1 of 1

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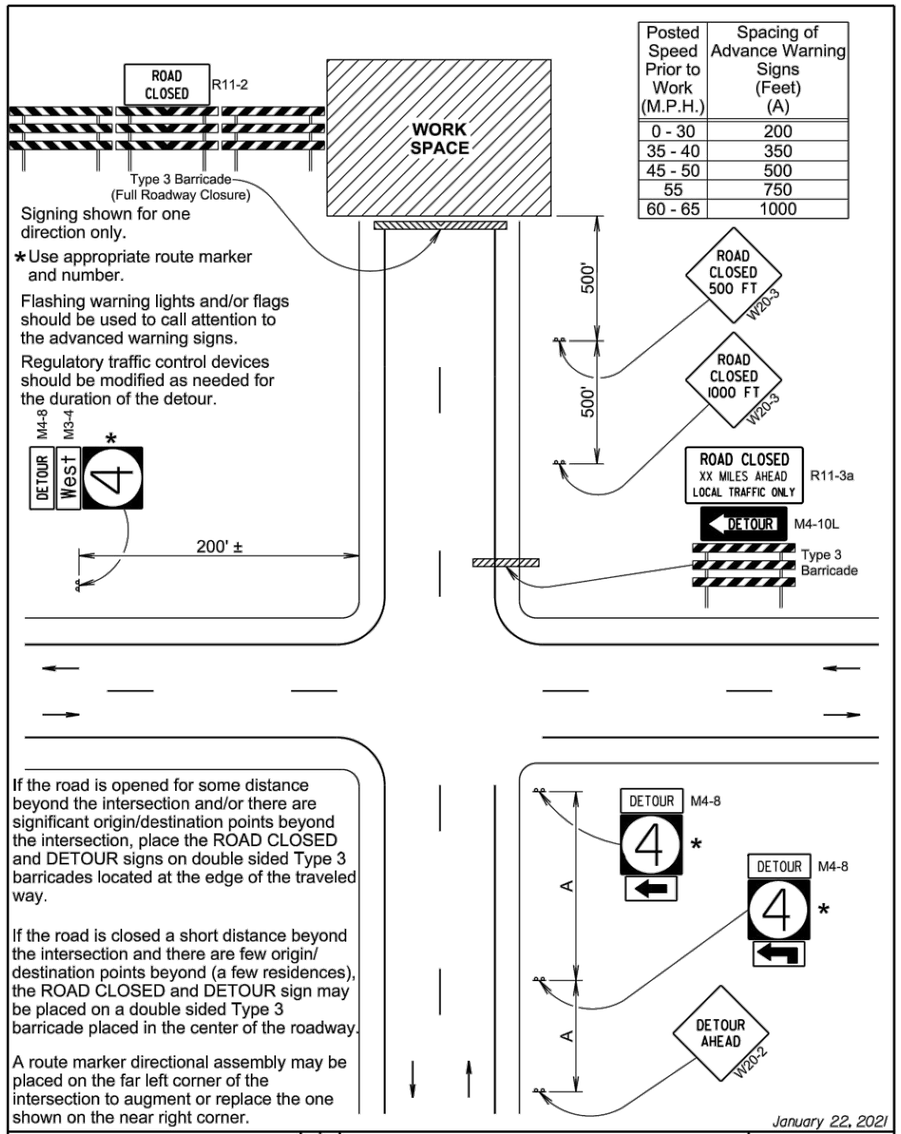
DRWN. BY	CHK'D BY	PROJECT NO.	DATE
OML	DJF	2111-01639	01/22/2024



Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)
0 - 30	200
35 - 40	350
45 - 50	500
55	750
60 - 65	1000

January 22, 2021

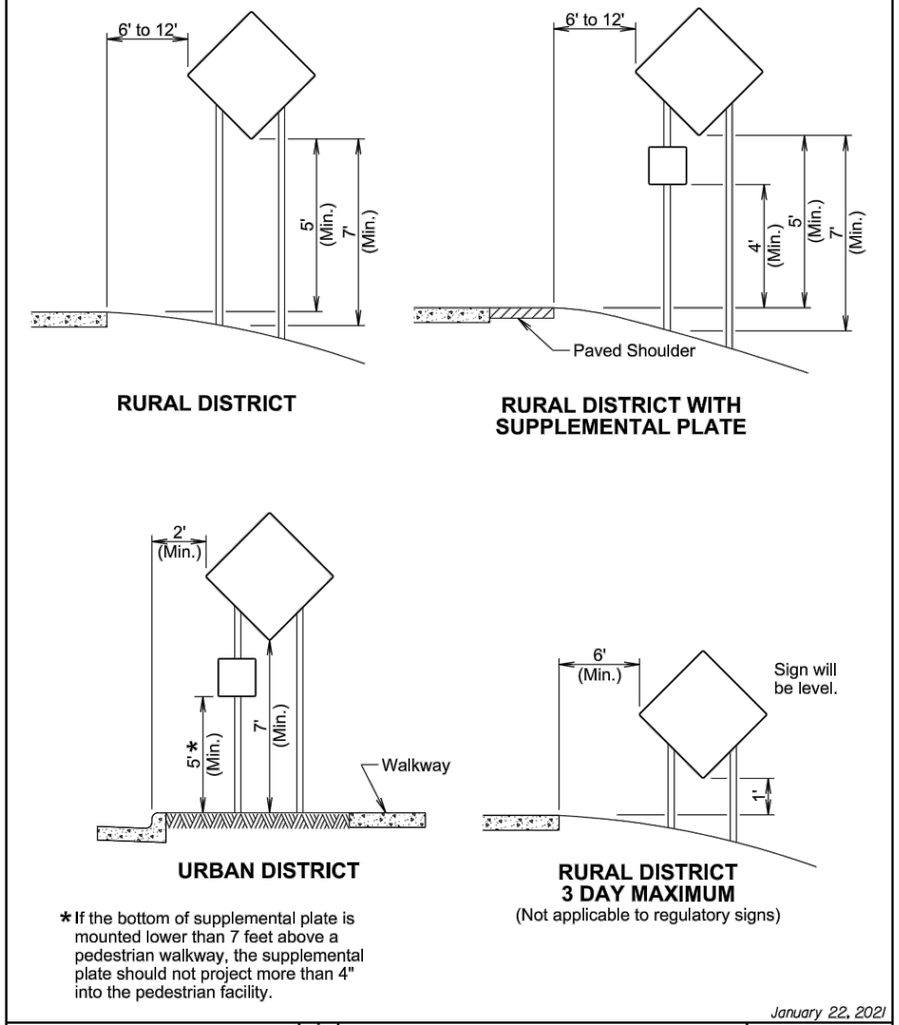
Published Date: 2024

SDDOT

ROAD CLOSED WITH OFF-SITE DETOUR

PLATE NUMBER 634.29

Sheet 1 of 1



* If the bottom of supplemental plate is mounted lower than 7 feet above a pedestrian walkway, the supplemental plate should not project more than 4" into the pedestrian facility.

January 22, 2021

Published Date: 2024

SDDOT

CRASHWORTHY SIGN SUPPORTS (Typical Construction Signing)

PLATE NUMBER 634.85

Sheet 1 of 1

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ROBERTS COUNTY, SOUTH DAKOTA

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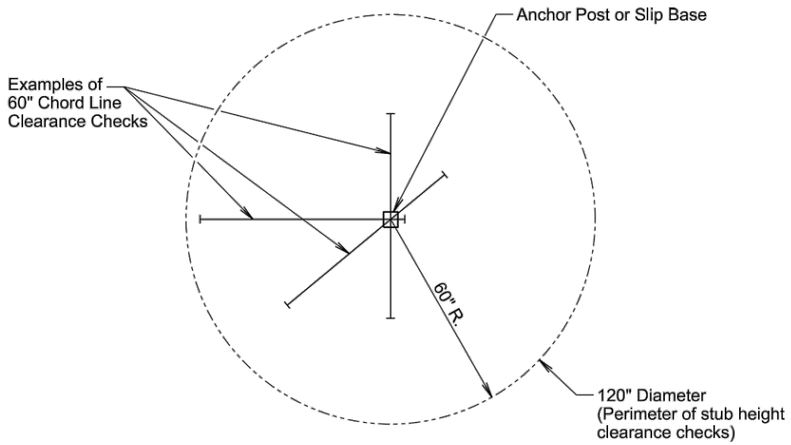
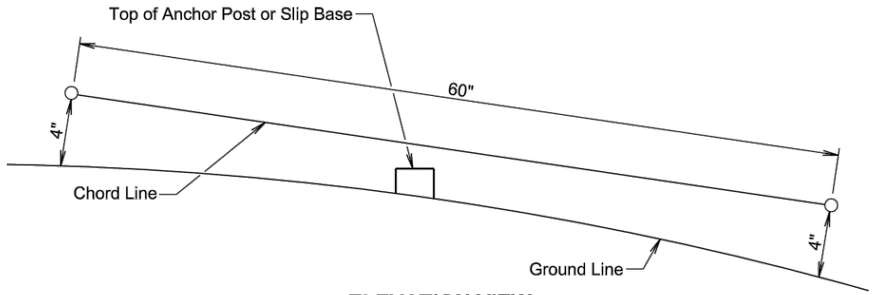
STANDARD PLATES

DRWN. BY	CHK'D BY	PROJECT NO.	DATE
OML	DJF	2111-01639	01/22/2024

STATE	PROJECT	SHEET	TOTAL SHEETS
SD	FEMA BRIC	71	109



PLAN VIEW
(Examples of stub height clearance checks)



ELEVATION VIEW

GENERAL NOTES:

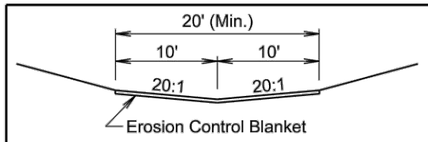
The top of anchor posts and slip bases WILL NOT extend above a 60" chord line within a 120" diameter circle around the post with ends 4" above the ground.

At locations where there is curb and gutter adjacent to the breakaway sign support, the stub height will be a maximum of 4" above the ground line at the localized area adjacent to the breakaway support stub.

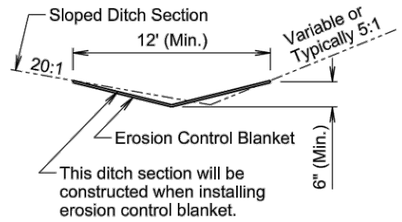
The 4" stub height clearance is not necessary for U-channel lap splices where the support is designed to yield (bend) at the base.

January 22, 2021

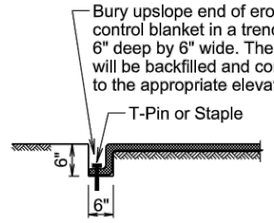
Published Date: 2024	SDDOT	**BREAKAWAY SUPPORT STUB CLEARANCE**	PLATE NUMBER 634.99 Sheet 1 of 1



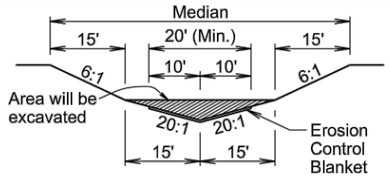
STANDARD DITCH SECTION



SLOPED DITCH SECTION

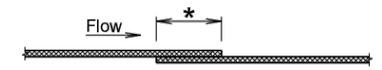


TRENCH DETAIL



The median will be shaped to the limits shown in this detail where the erosion control blanket will be placed.

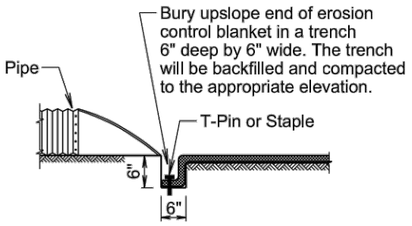
MEDIAN SECTION



* Use a 4" (Min.) overlap wherever two widths of erosion control blanket are applied side by side.

* Use a 6" (Min.) overlap wherever one roll of erosion control blanket ends and another begins.

OVERLAP DETAIL



PIPE END DETAIL

GENERAL NOTES:

Prior to placement of the erosion control blanket, the areas will be properly prepared, shaped, seeded, and fertilized.

Erosion control blanket will be unrolled in the direction of the flow of water when placed in ditches and on slopes. The upslope end of the erosion control blanket will be buried in a trench 6" wide by 6" deep. There will be at least a 6" overlap wherever one roll of erosion control blanket ends and another begins, with the upslope erosion control blanket placed on top of the downslope erosion control blanket.

The erosion control blanket will be pinned to the ground according to the manufacturer's installation recommendations.

After the placement of the erosion control blanket, the Contractor will fine grade along all edges of the blanket to maintain a uniform slope adjacent to the blanket and level any low spots which might prevent uniform and unrestricted flow of side drainage directly onto the erosion control blanket.

All ditch sections will be shaped when installing the erosion control blanket. All costs for shaping the ditches will be incidental to the contract unit price per foot for "Shaping for Erosion Control Blanket".

February 14, 2020

Published Date: 2024	SDDOT	**EROSION CONTROL BLANKET**	PLATE NUMBER 734.01 Sheet 1 of 1

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ROBERTS COUNTY, SOUTH DAKOTA

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STANDARD PLATES

DRWN. BY	CHK'D BY	PROJECT NO.	DATE
OML	DJF	2111-01639	01/22/2024

Jan 23, 2024 – 4:51pm – K:\Projects\Tribal\SissetonWahpetonOyate\2111-01639_FEMA-BRIC-Award\CAD\Design\Plan DWG\2111-01639_Standard Plates.dwg

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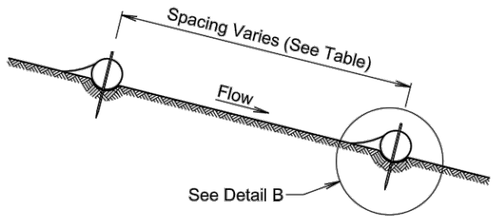
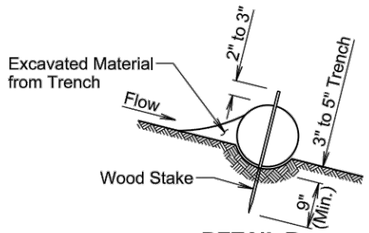
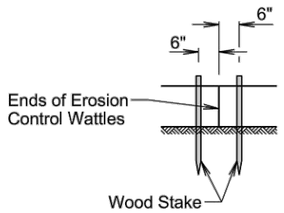


ELEVATION VIEW
(Cut or Fill Slope Installation)

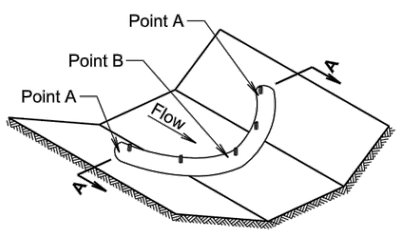
CUT OR FILL SLOPE INSTALLATION	
Slope	Spacing (Ft.)
1:1	10
2:1	20
3:1	30
4:1	40



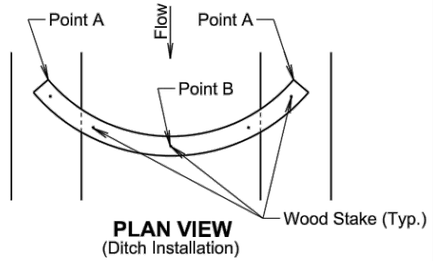
DETAIL B
(Typical of All Installations)



DETAIL C
(See General Notes)

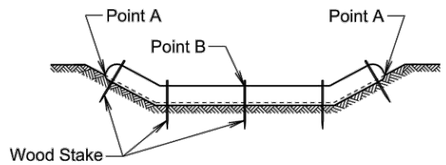


ISOMETRIC VIEW
(Ditch Installation)



PLAN VIEW
(Ditch Installation)

DITCH INSTALLATION	
Grade	Spacing (Ft.)
2%	150
3%	100
4%	75
5%	50



SECTION A-A

February 14, 2020

Published Date: 2024	SDDOT	EROSION CONTROL WATTLE	PLATE NUMBER 734.06
			Sheet 1 of 2

GENERAL NOTES:

At cut or fill slope installations, wattles will be installed along the contour and perpendicular to the water flow.

At ditch installations, point A must be higher than point B to ensure that water flows over the wattle and not around the ends.

The Contractor will dig a 3" to 5" trench, install the wattle tightly in the trench so that daylight can not be seen under the wattle, and then compact the soil excavated from the trench against the wattle on the uphill side. See Detail B.

The stakes will be 1"x2" or 2"x2" wood stakes, however, other types of stakes such as rebar may be used only if approved by the Engineer. The stakes will be placed 6" from the ends of the wattles and the spacing of the stakes along the wattles will be 3' to 4'.

Where installing running lengths of wattles, the Contractor will butt the second wattle tightly against the first and will not overlap the ends. See Detail C.

The Contractor and Engineer will inspect the erosion control wattles in accordance with the storm water permit. The Contractor will remove, dispose, or reshape the accumulated sediment when necessary as determined by the Engineer.

Sediment removal, disposal, or necessary shaping will be as directed by the Engineer. All costs for removing accumulated sediment, disposal of sediment, and necessary shaping will be incidental to the contract unit price per cubic yard for "Remove Sediment".

All costs for furnishing and installing the erosion control wattles including labor, equipment, and materials will be incidental to the contract unit price per foot for the corresponding erosion control wattle contract item.

All costs for removing the erosion control wattle from the project including labor, equipment, and materials will be incidental to the contract unit price per foot for "Remove Erosion Control Wattle".

February 14, 2020

Published Date: 2024	SDDOT	EROSION CONTROL WATTLE	PLATE NUMBER 734.06
			Sheet 2 of 2

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STANDARD PLATES

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CROSS SECTIONS

STATE	PROJECT	SHEET	TOTAL SHEETS
SD	FEMA BRIC	73	109

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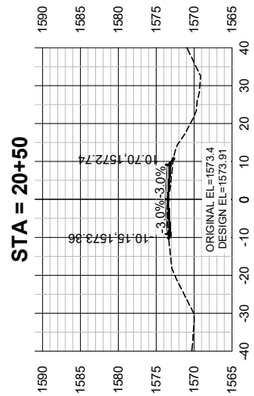
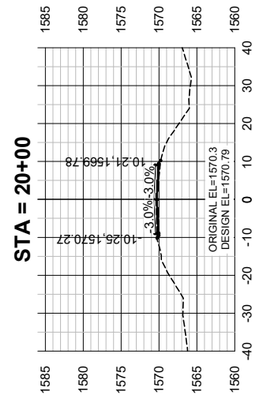
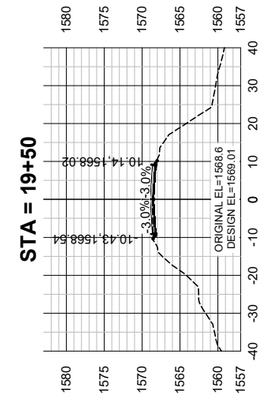
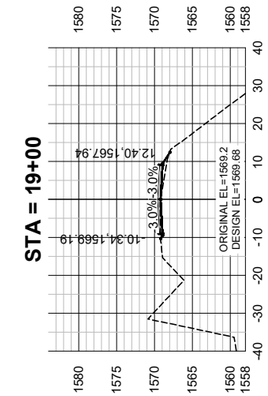
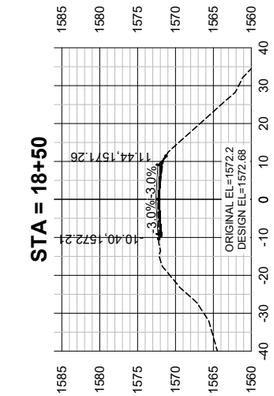
1" = 20' V

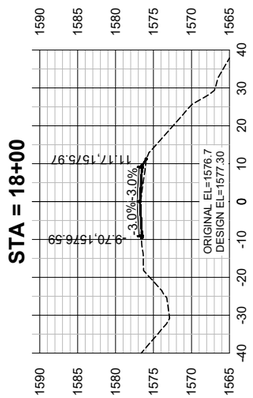


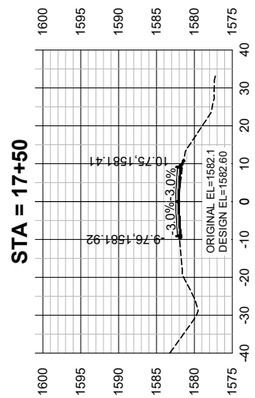


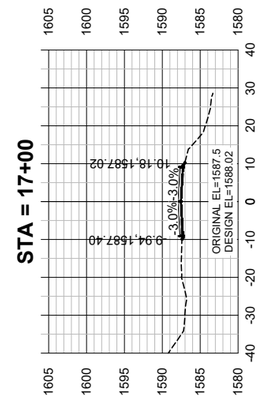


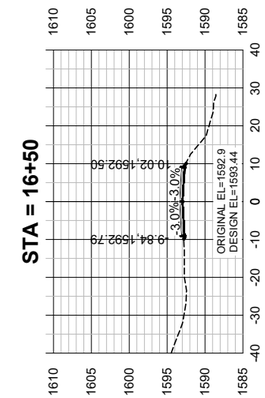


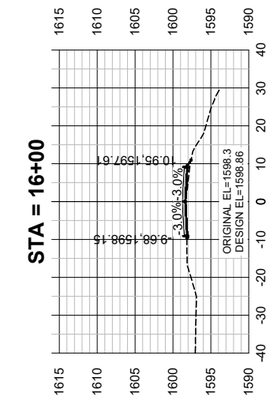


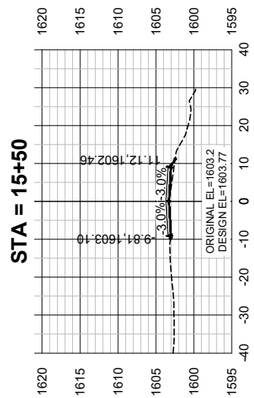


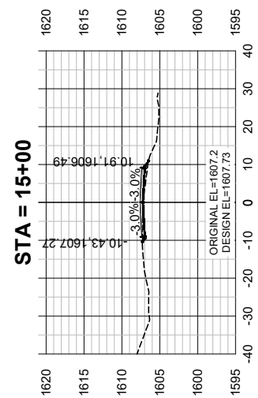


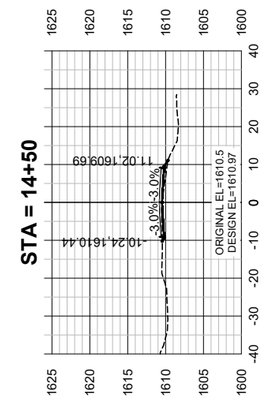


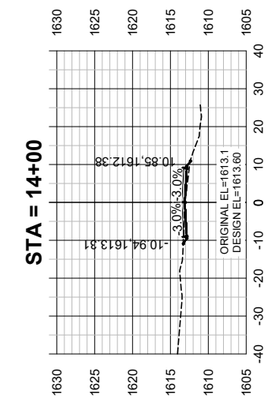


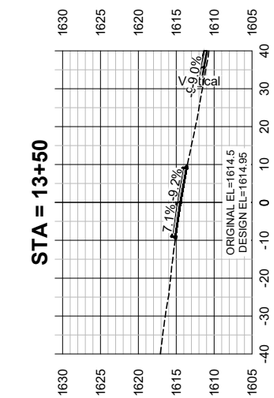












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SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

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CROSS SECTIONS
456th AVENUE

DRWN. BY	CHK'D BY	PROJECT NO.	DATE
OML	DJF	2111-01639	11/09/2022

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CROSS SECTIONS

STATE	PROJECT	SHEET	TOTAL SHEETS
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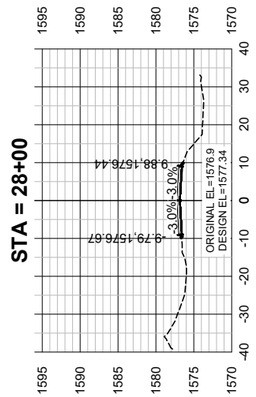
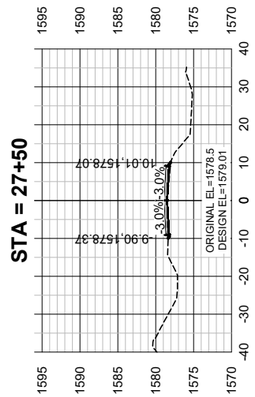
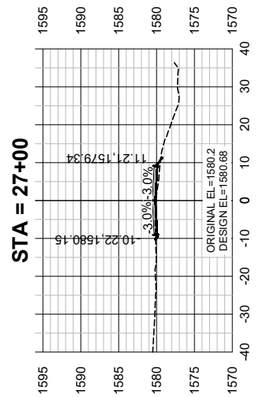
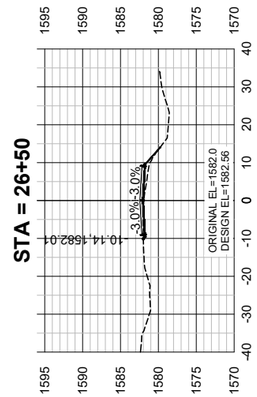
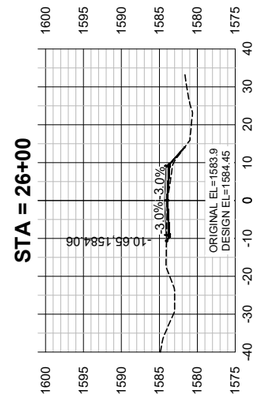
1" = 20' V

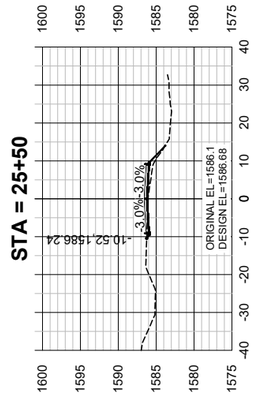


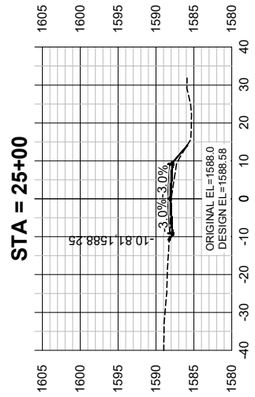


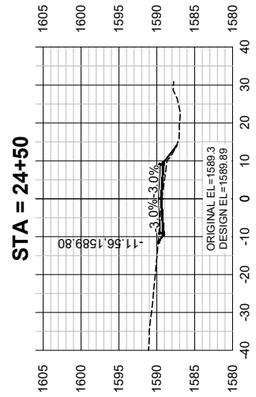


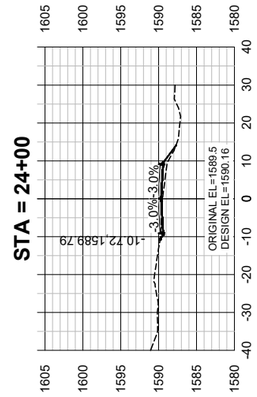


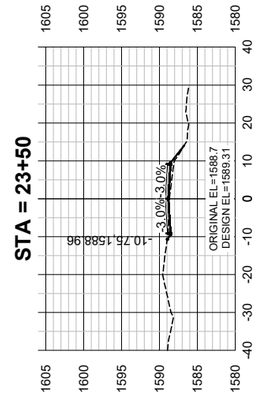


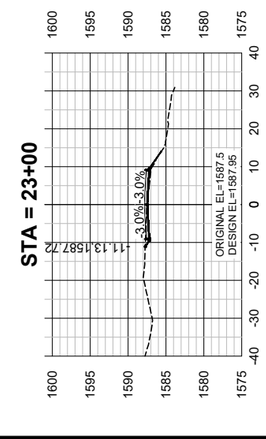


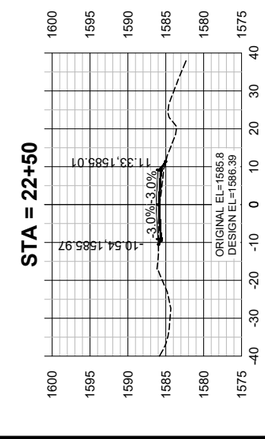


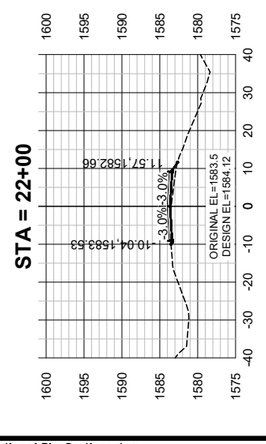


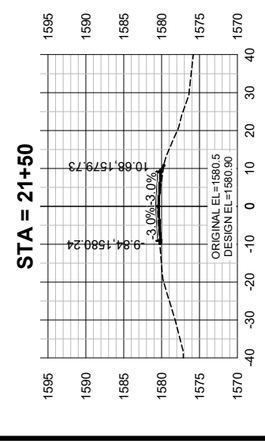


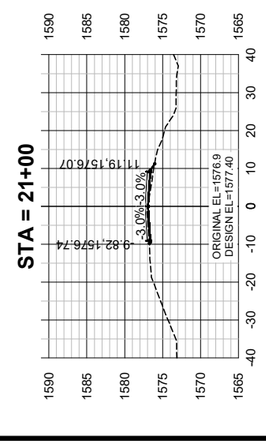












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SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

CROSS SECTIONS
456th AVENUE

DRWN. BY	CHK'D BY	PROJECT NO.	DATE
OML	DJF	2111-01639	11/09/2022

Aug 19, 2022 – 2:17pm – K:\Projects\Tribal\SissetonWahpetonOyate\2111-01639_FEMA-BRIC-Award\CAD\Design\Plan DWG\2111-01639_CrossSections&PipeSections.dwg

CROSS SECTIONS

STATE	PROJECT	SHEET	TOTAL SHEETS
SD	FEMA BRIC	75	109

SCALE: 1" = 40' H
1" = 20' V

Revised #

FEMA BRIC
SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

CROSS SECTIONS
456th AVENUE

DRWN. BY	CHK'D BY	PROJECT NO.	DATE
OML	DJF	2111-01639	11/09/2022

Aug 19, 2022 – 2:17pm – K:\Projects\Tribal\SissetonWahpetonOyate\2111-01639_FEMA-BRIC-Award\CAD\Design\Plan DWG\2111-01639_CrossSections&PipeSections.dwg

CROSS SECTIONS

STATE	PROJECT	SHEET	TOTAL SHEETS
SD	FEMA BRIC	76	109

SCALE: 1" = 40' H
1" = 20' V

Revised #

FEMA BRIC
SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

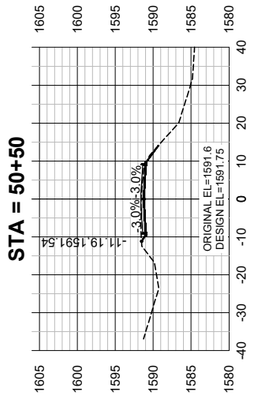
CROSS SECTIONS
456th AVENUE

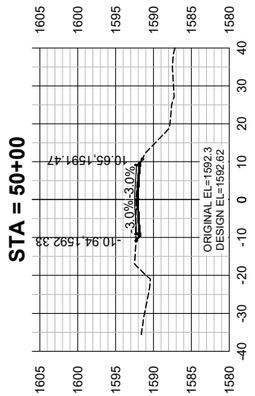
DRWN. BY	CHK'D BY	PROJECT NO.	DATE
OML	DJF	2111-01639	11/09/2022

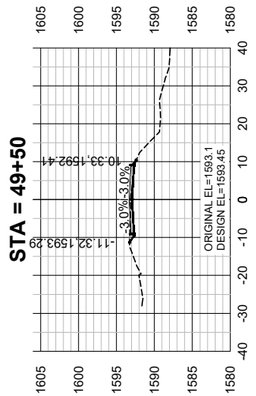
CROSS SECTIONS

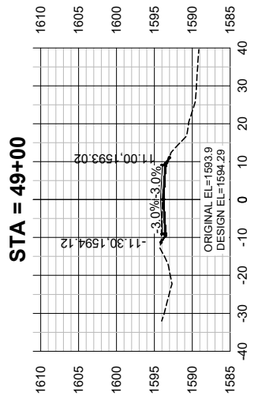
STATE	PROJECT	SHEET	TOTAL SHEETS
SD	FEMA BRIC	77	109

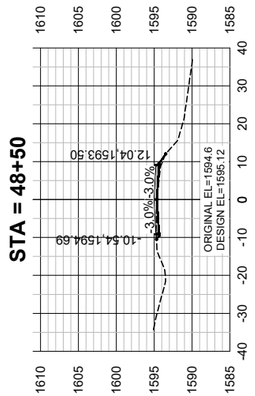
SCALE: 1" = 40' H
1" = 20' V

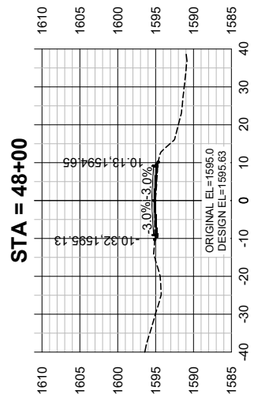


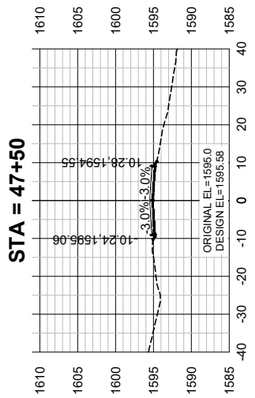


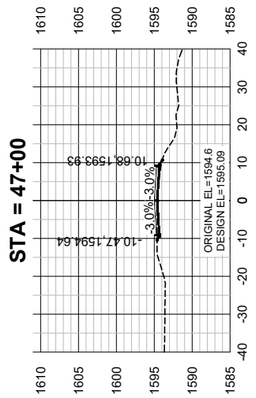


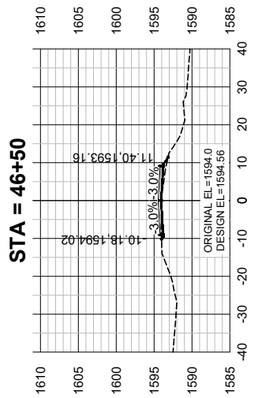


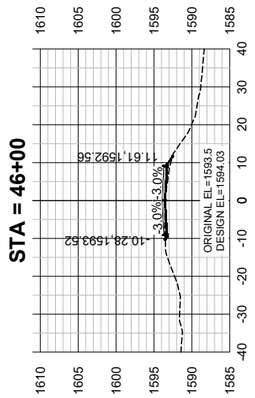


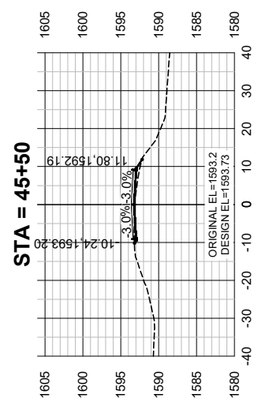


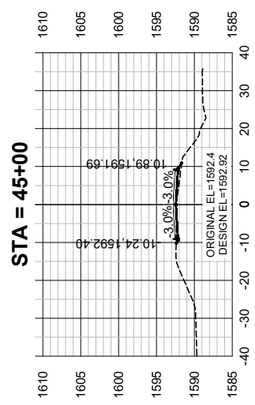


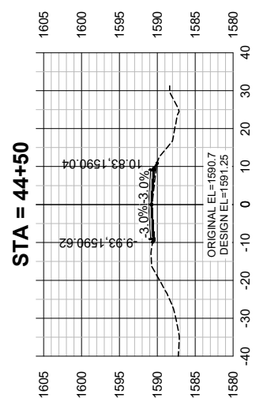


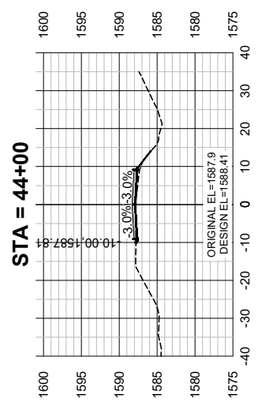


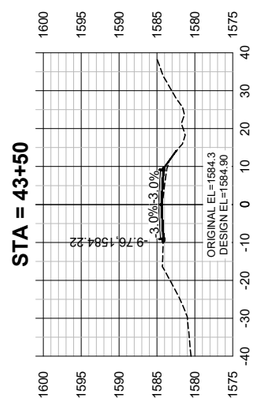












Revised #

FEMA BRIC
SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

CROSS SECTIONS
456th AVENUE

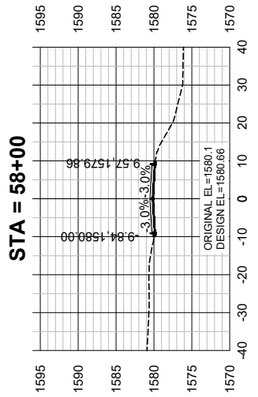
DRWN. BY	CHK'D BY	PROJECT NO.	DATE
OML	DJF	2111-01639	11/09/2022

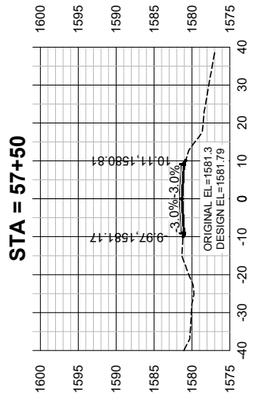
Aug 19, 2022 – 2:18pm – K:\Projects\Tribal\SissetonWahpetonOyate\2111-01639_FEMA-BRIC-Award\CAD\Design\Plan DWG\2111-01639_CrossSections&PipeSections.dwg

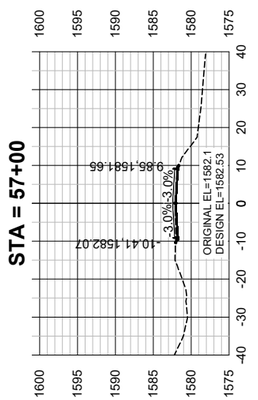
CROSS SECTIONS

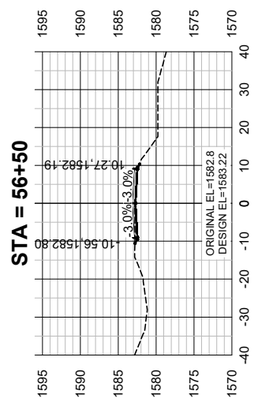
STATE	PROJECT	SHEET	TOTAL SHEETS
SD	FEMA BRIC	78	109

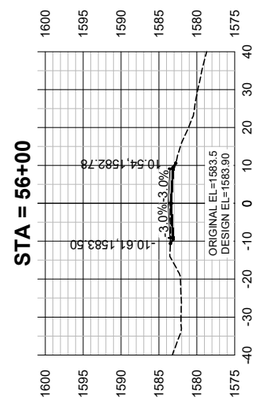
SCALE: 1" = 40' H
1" = 20' V

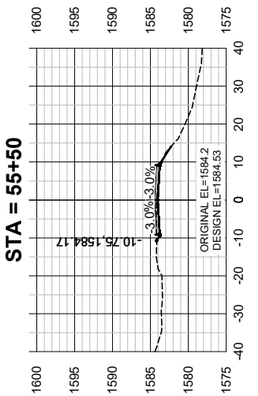


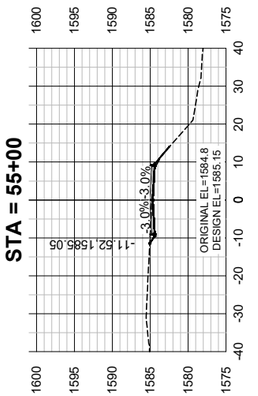


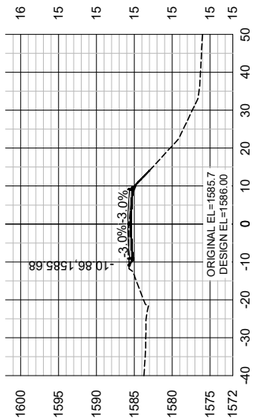


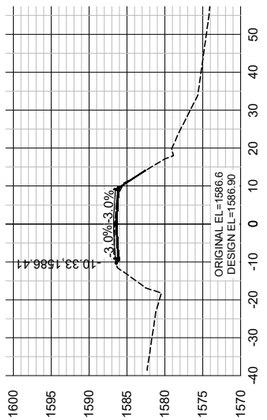


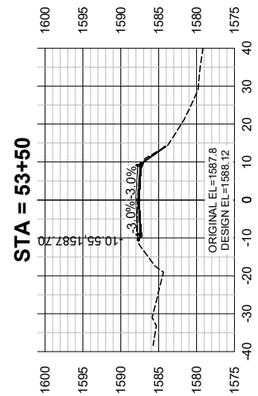


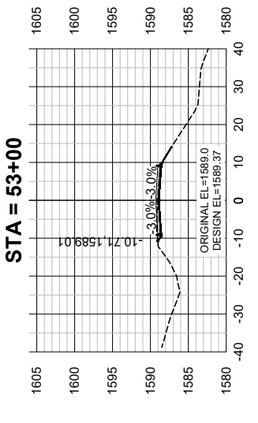


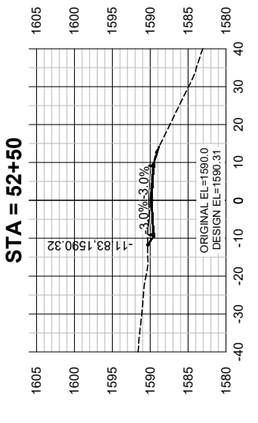


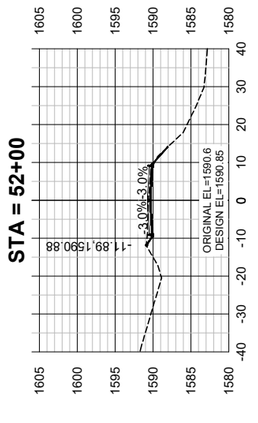


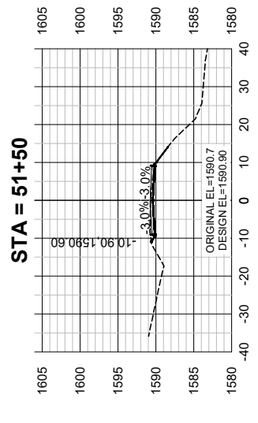


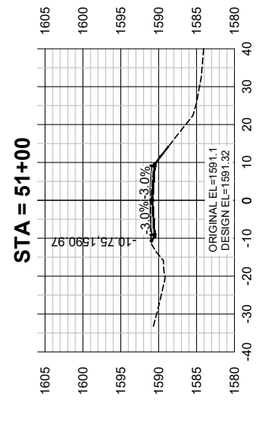












Revised #

FEMA BRIC
SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

CROSS SECTIONS
456th AVENUE

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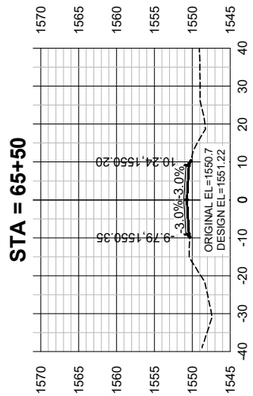
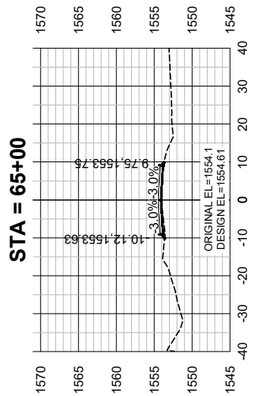
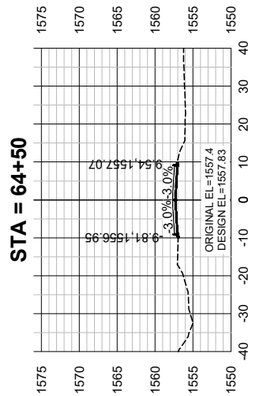
CROSS SECTIONS

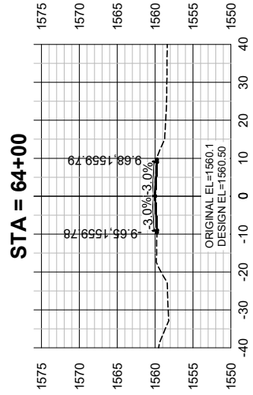
STATE	PROJECT	SHEET	TOTAL SHEETS
SD	FEMA BRIC	79	109

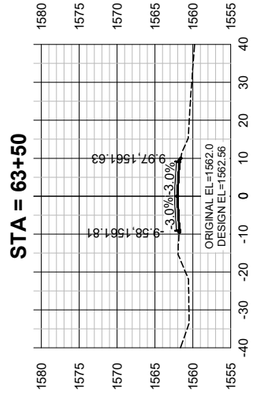
SCALE: 1" = 40' H
1" = 20' V

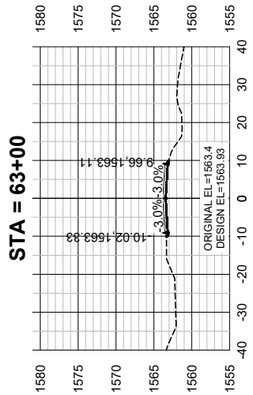


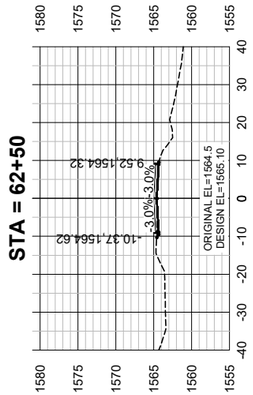


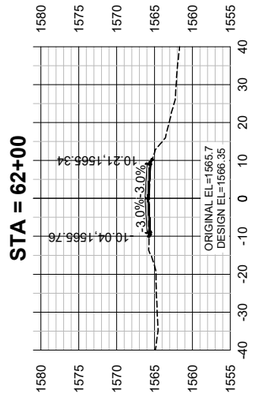


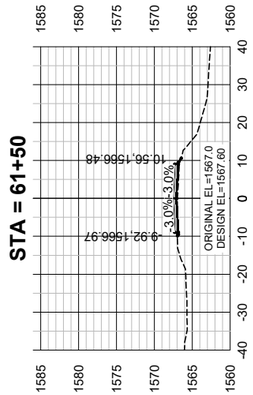


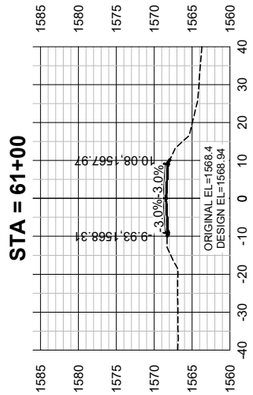


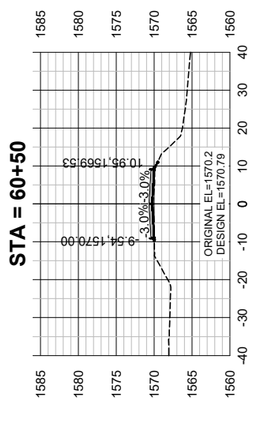


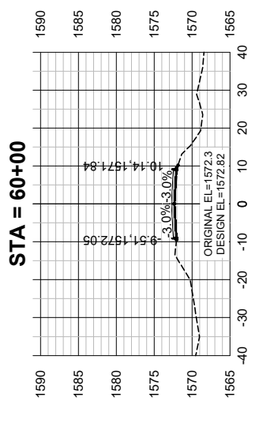


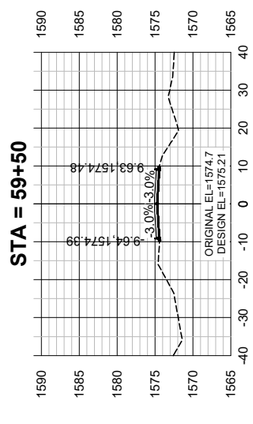


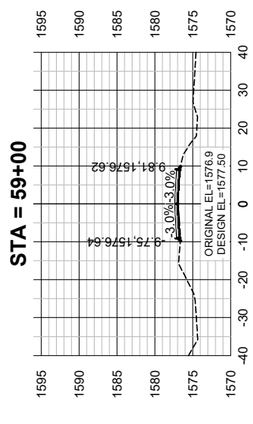


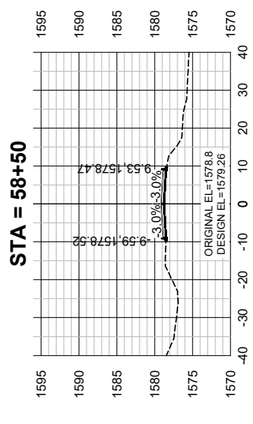












Revised #

FEMA BRIC
SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

CROSS SECTIONS
456th AVENUE

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OML	DJF	2111-01639	11/09/2022

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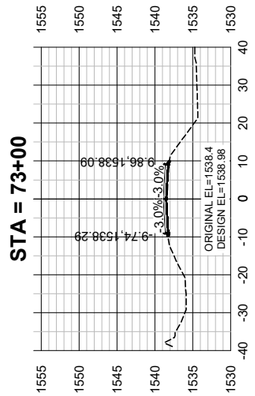
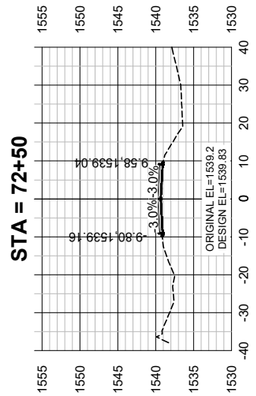
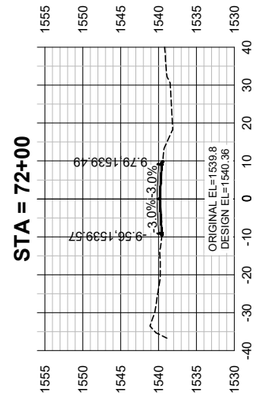
CROSS SECTIONS

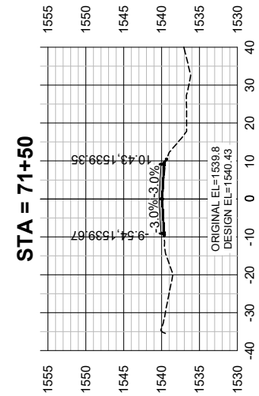
STATE	PROJECT	SHEET	TOTAL SHEETS
SD	FEMA BRIC	80	109

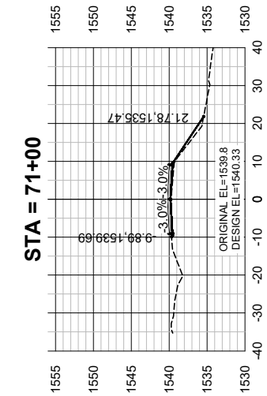
SCALE: 1" = 40' H
1" = 20' V

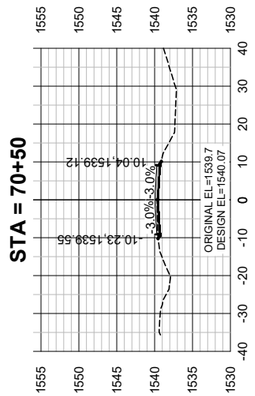


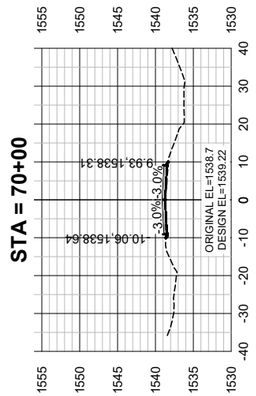


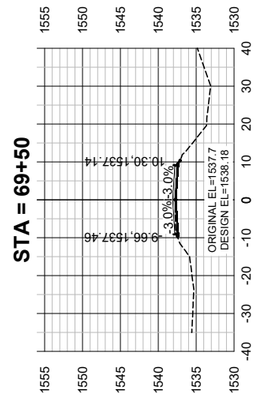


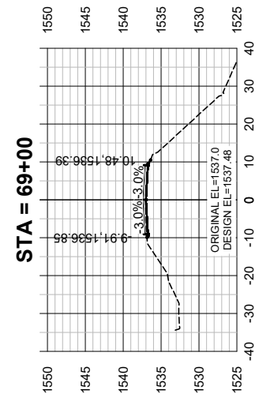


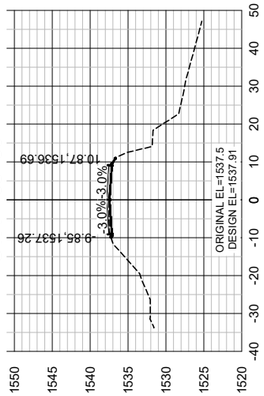


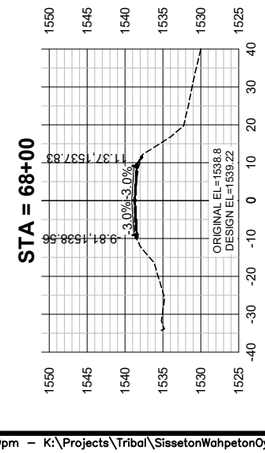


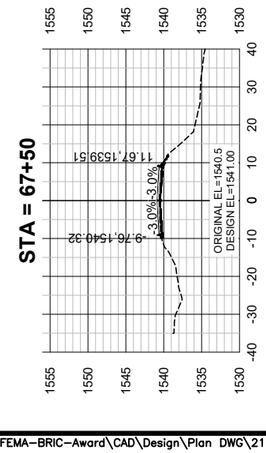


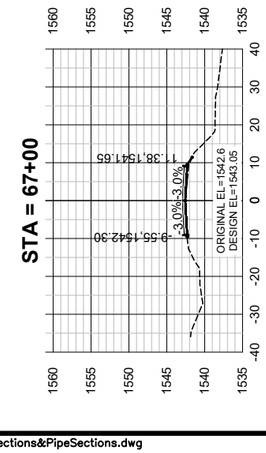


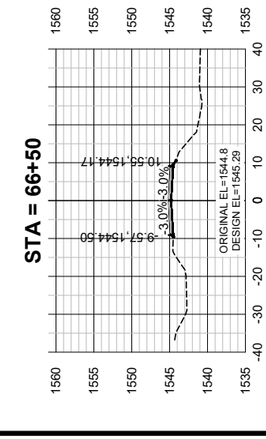


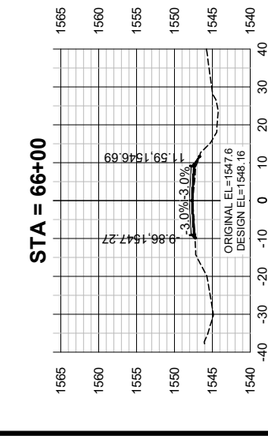












Revised #

FEMA BRIC
SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

CROSS SECTIONS
456th AVENUE

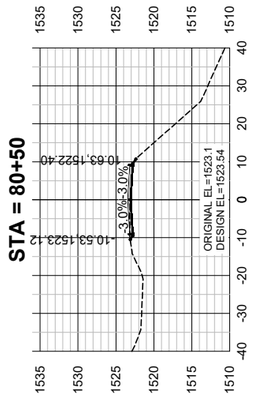
DRWN. BY	CHK'D BY	PROJECT NO.	DATE
OML	DJF	2111-01639	11/09/2022

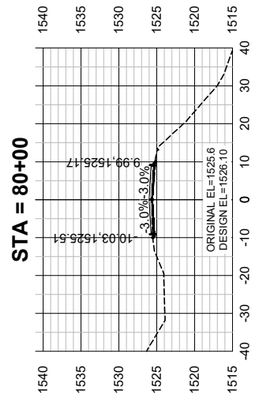
Aug 19, 2022 – 2:19pm – K:\Projects\Tribal\SissetonWahpetonOyate\2111-01639_FEMA-BRIC-Award\CAD\Design\Plan DWG\2111-01639_CrossSections&PipeSections.dwg

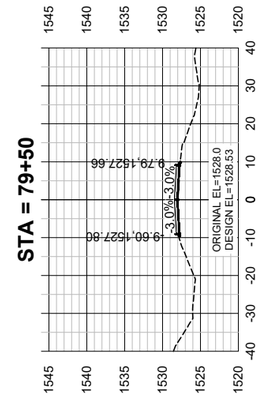
CROSS SECTIONS

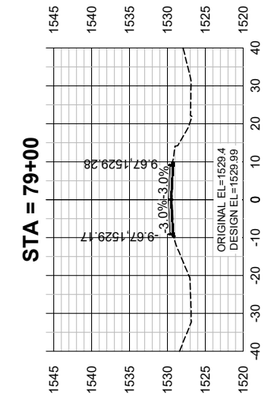
STATE	PROJECT	SHEET	TOTAL SHEETS
SD	FEMA BRIC	81	109

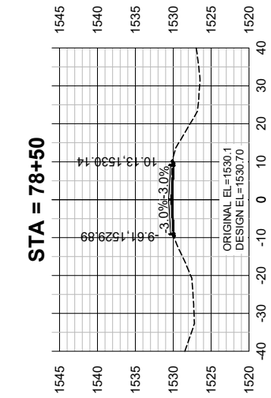
SCALE: 1" = 40' H
1" = 20' V

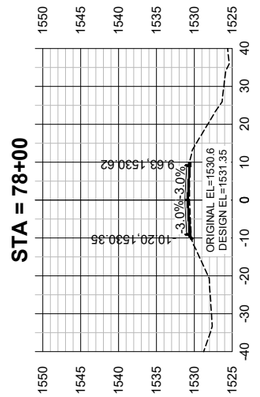


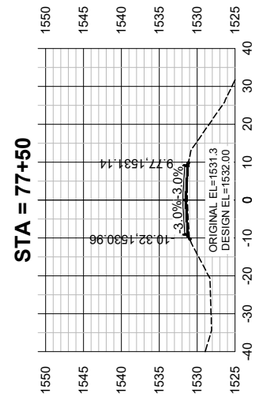


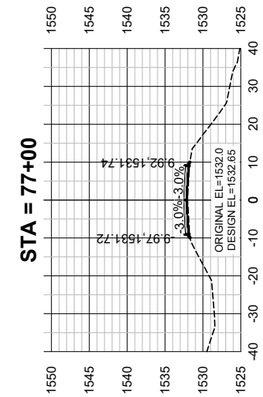


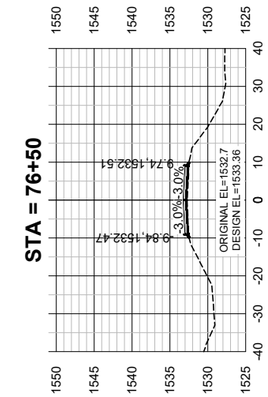


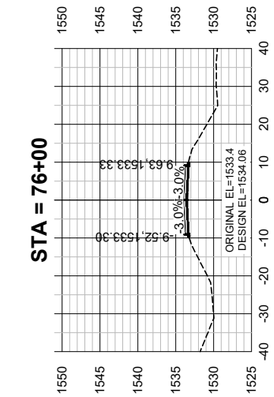


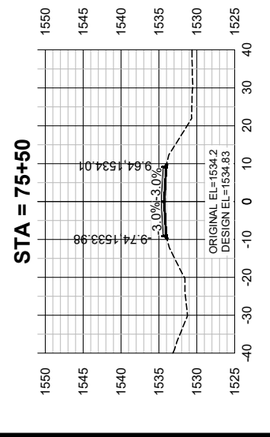


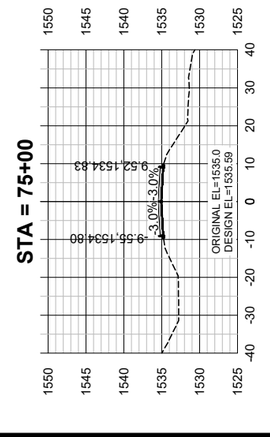


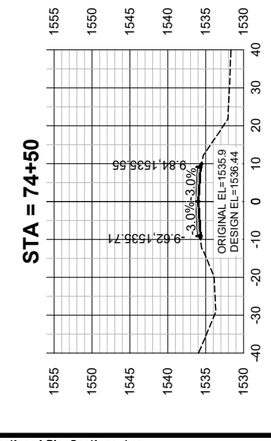


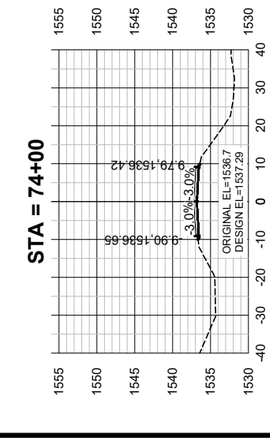


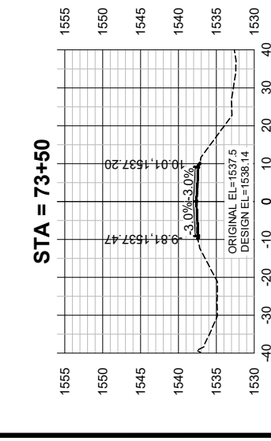












Revised #

FEMA BRIC
SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

CROSS SECTIONS
456th AVENUE

DRWN. BY	CHK'D BY	PROJECT NO.	DATE
OML	DJF	2111-01639	11/09/2022

Aug 19, 2022 – 2:20pm – K:\Projects\Tribal\SissetonWahpetonOyate\2111-01639_FEMA-BRIC-Award\CAD\Design\Plan DWG\2111-01639_CrossSections&PipeSections.dwg

CROSS SECTIONS

STATE	PROJECT	SHEET	TOTAL SHEETS
SD	FEMA BRIC	82	109

SCALE: 1" = 40' H
1" = 20' V

Revised #

FEMA BRIC
SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

CROSS SECTIONS
456th AVENUE

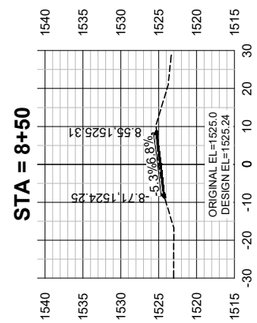
DRWN. BY	CHK'D BY	PROJECT NO.	DATE
OML	DJF	2111-01639	11/09/2022

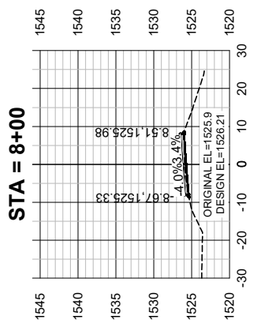
Aug 19, 2022 – 2:20pm – K:\Projects\Tribal\SissetonWahpetonOyate\2111-01639_FEMA-BRIC-Award\CAD\Design\Plan DWG\2111-01639_CrossSections&PipeSections.dwg

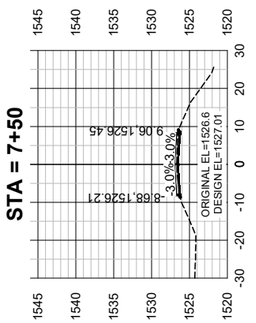
CROSS SECTIONS

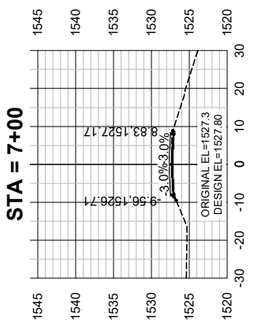
STATE	PROJECT	SHEET	TOTAL SHEETS
SD	FEMA BRIC	83	109

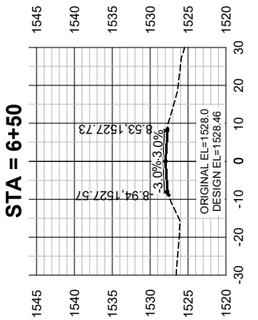
SCALE: 1" = 40' H
1" = 20' V

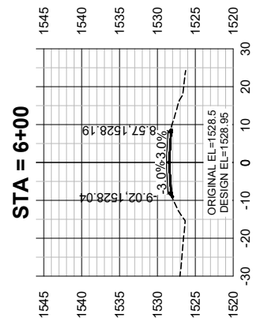


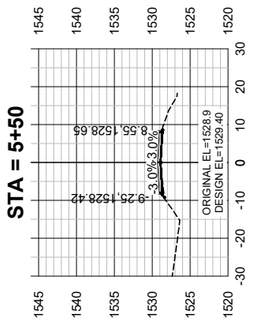


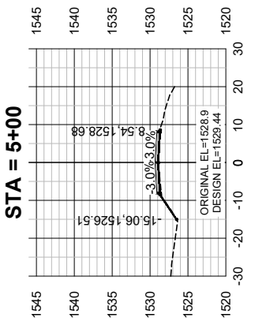


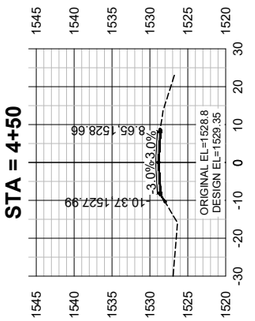


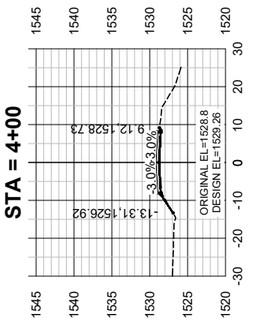


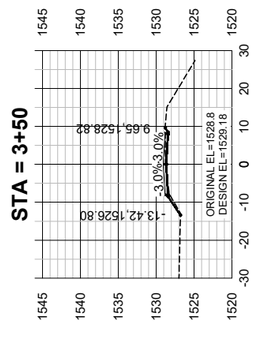


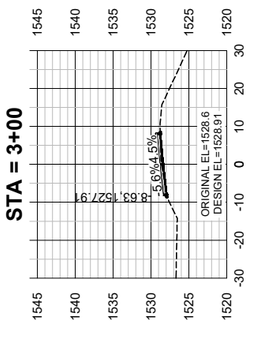


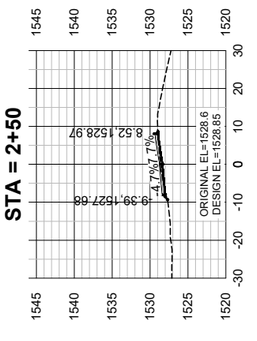


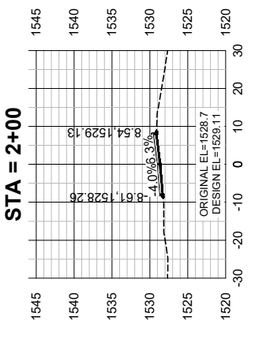


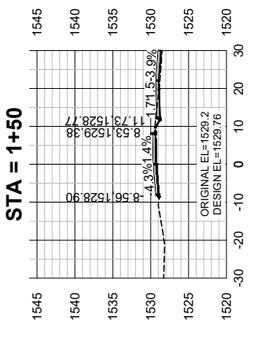












Revised #

FEMA BRIC
SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

CROSS SECTIONS
124th STREET

DRWN. BY	CHK'D BY	PROJECT NO.	DATE
OML	DJF	2111-01639	11/09/2022

Aug 19, 2022 – 2:20pm – K:\Projects\Tribal\SissetonWahpetonOyate\2111-01639_FEMA-BRIC-Award\CAD\Design\Plan DWG\2111-01639_CrossSections&PipeSections.dwg

CROSS SECTIONS

STATE	PROJECT	SHEET	TOTAL SHEETS
SD	FEMA BRIC	84	109

SCALE: 1" = 40' H
1" = 20' V

Revised #

FEMA BRIC
SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

CROSS SECTIONS
124th STREET

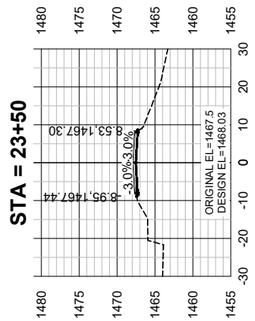
DRWN. BY	CHK'D BY	PROJECT NO.	DATE
OML	DJF	2111-01639	11/09/2022

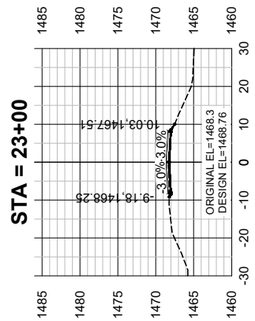
Aug 19, 2022 – 2:21pm – K:\Projects\Tribal\SissetonWahpetonOyate\2111-01639_FEMA-BRIC-Award\CAD\Design\Plan DWG\2111-01639_CrossSections&PipeSections.dwg

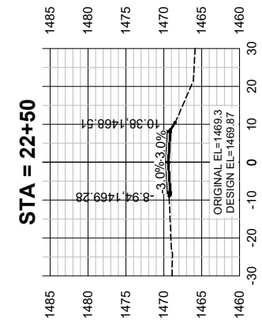
CROSS SECTIONS

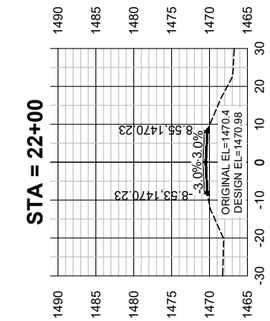
STATE	PROJECT	SHEET	TOTAL SHEETS
SD	FEMA BRIC	85	109

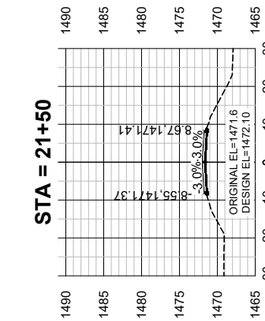
SCALE: 1" = 40' H
1" = 20' V

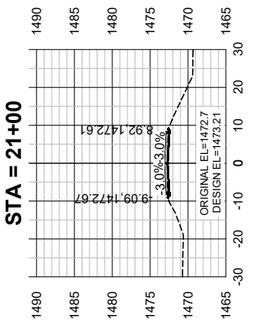


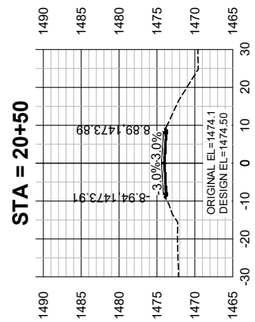


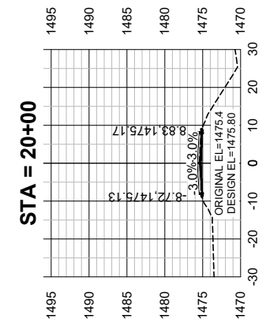


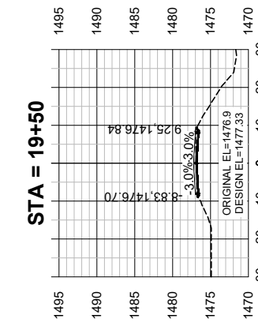


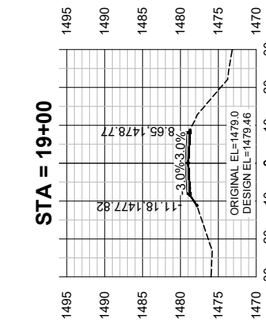


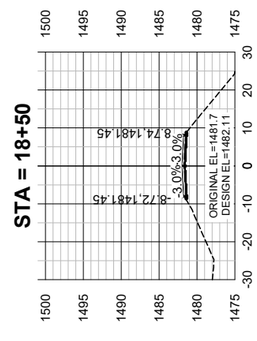


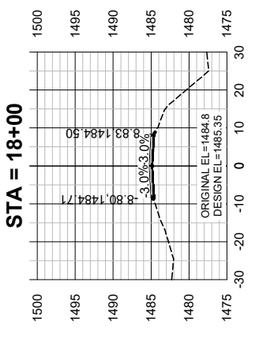


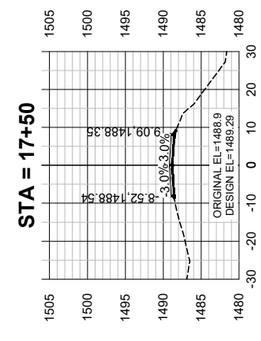


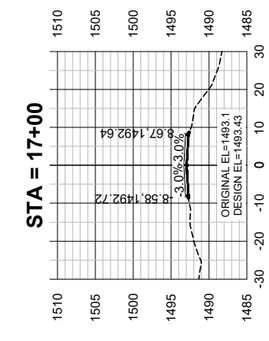


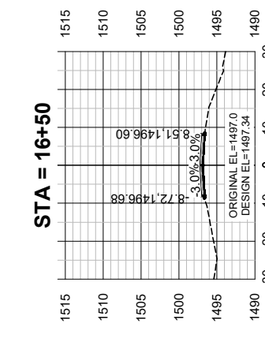












Revised #

FEMA BRIC
SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

CROSS SECTIONS
124th STREET

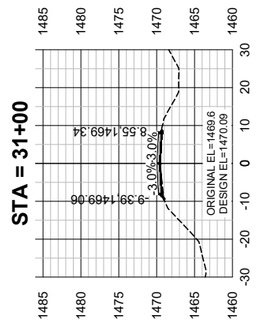
DRWN. BY	CHK'D BY	PROJECT NO.	DATE
OML	DJF	2111-01639	11/09/2022

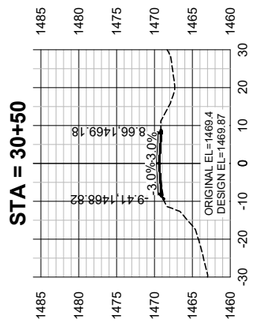
Aug 19, 2022 – 2:21pm – K:\Projects\Tribal\SissetonWahpetonOyate\2111-01639_FEMA-BRIC-Award\CAD\Design\Plan DWG\2111-01639_CrossSections&PipeSections.dwg

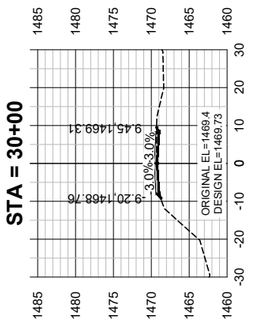
CROSS SECTIONS

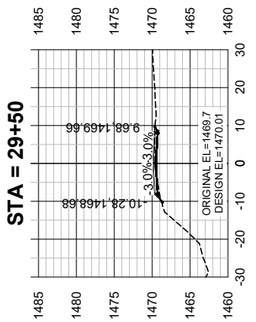
STATE	PROJECT	SHEET	TOTAL SHEETS
SD	FEMA BRIC	86	109

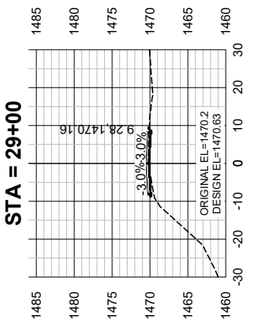
SCALE: 1" = 40' H
1" = 20' V

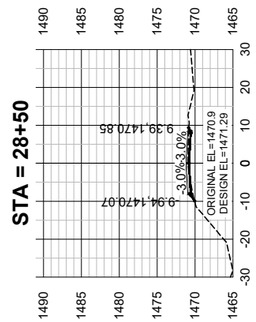


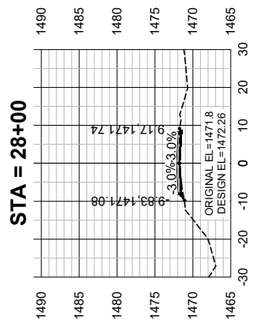


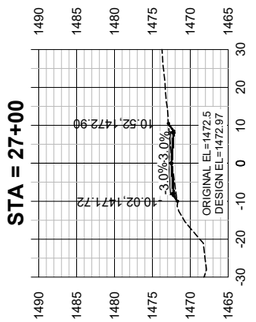


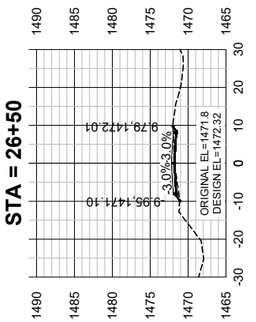


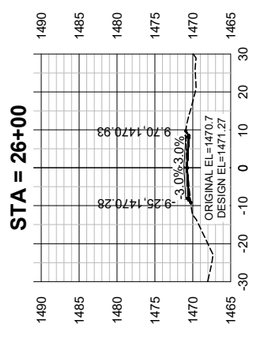


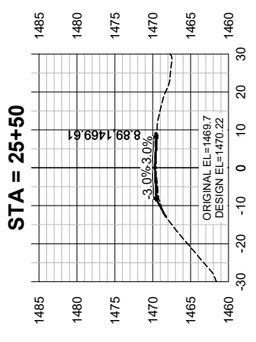


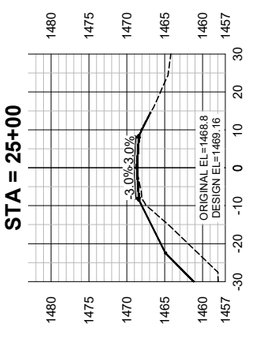


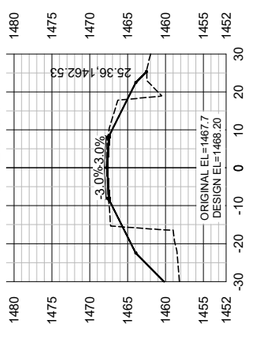


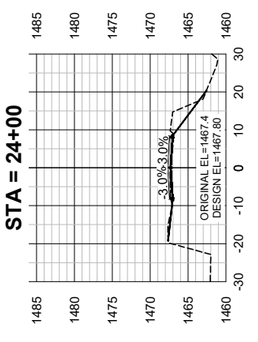












Revised #

FEMA BRIC
SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

CROSS SECTIONS
124th STREET

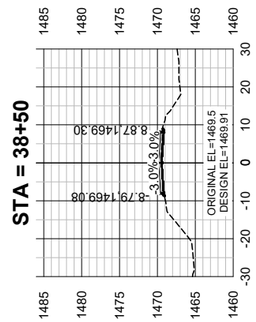
DRWN. BY	CHK'D BY	PROJECT NO.	DATE
OML	DJF	2111-01639	11/09/2022

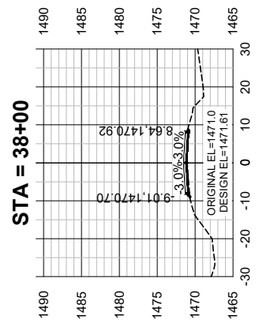
Aug 19, 2022 – 2:21pm – K:\Projects\Tribal\SissetonWahpetonOyate\2111-01639_FEMA-BRIC-Award\CAD\Design\Plan DWG\2111-01639_CrossSections&PipeSections.dwg

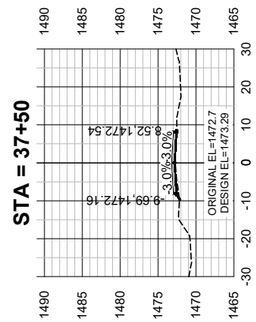
CROSS SECTIONS

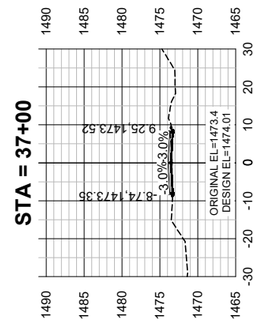
STATE	PROJECT	SHEET	TOTAL SHEETS
SD	FEMA BRIC	87	109

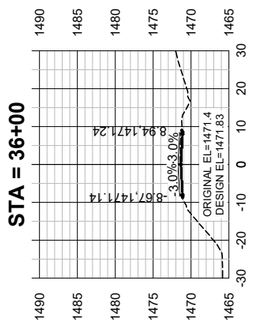
SCALE: 1" = 40' H
1" = 20' V

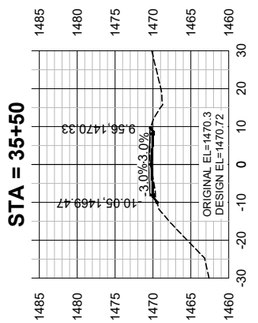


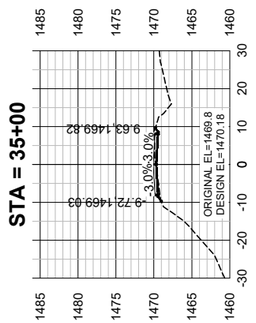


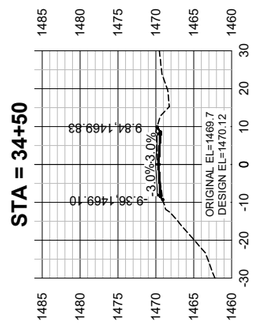


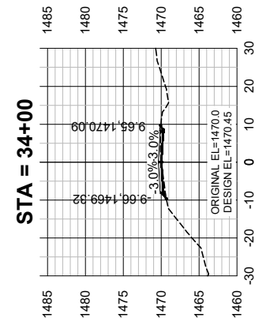


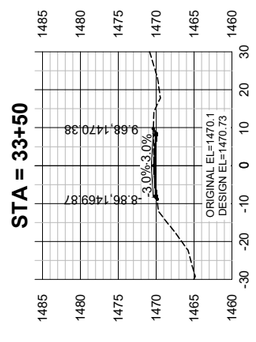


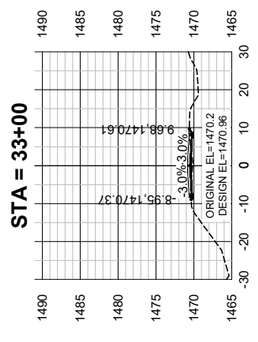


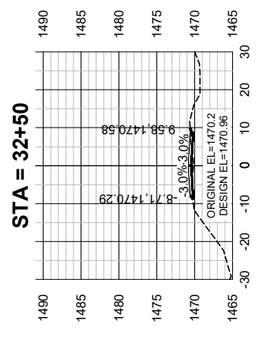


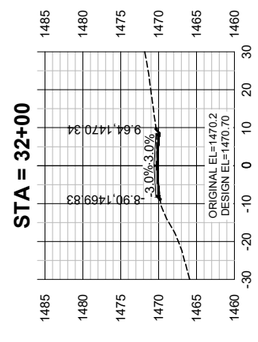


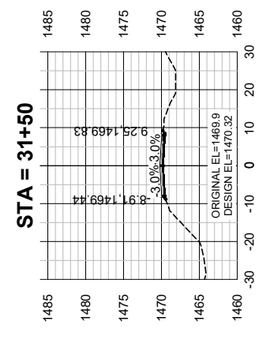












Revised #

FEMA BRIC
SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

CROSS SECTIONS
124th STREET

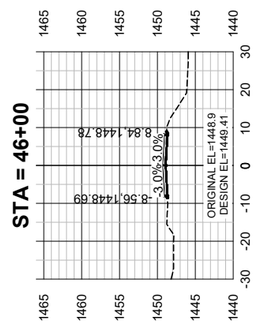
DRWN. BY	CHK'D BY	PROJECT NO.	DATE
OML	DJF	2111-01639	11/09/2022

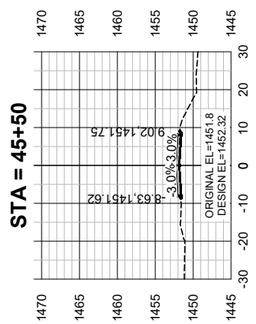
Aug 19, 2022 – 2:22pm – K:\Projects\Tribal\SissetonWahpetonOyate\2111-01639_FEMA-BRIC-Award\CAD\Design\Plan DWG\2111-01639_CrossSections&PipeSections.dwg

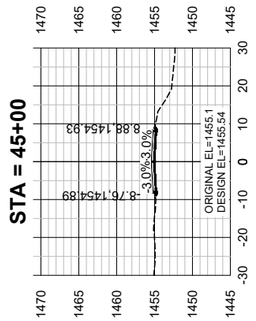
CROSS SECTIONS

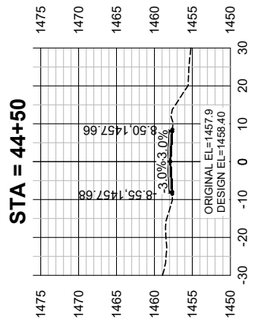
STATE	PROJECT	SHEET	TOTAL SHEETS
SD	FEMA BRIC	88	109

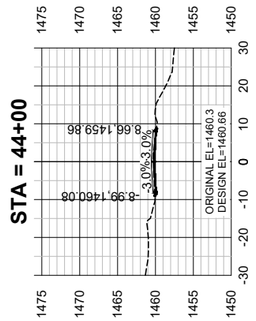
SCALE: 1" = 40' H
1" = 20' V

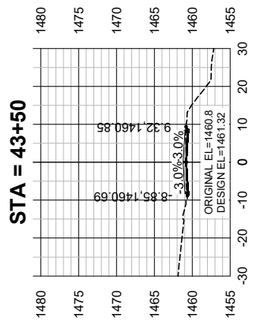


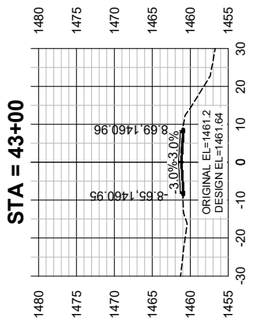


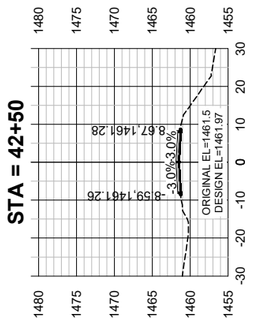


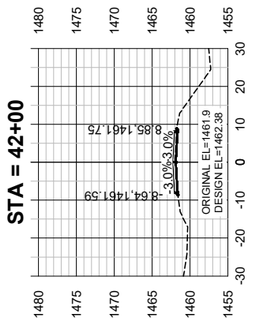


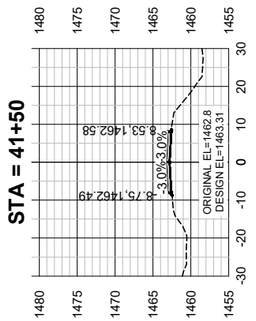


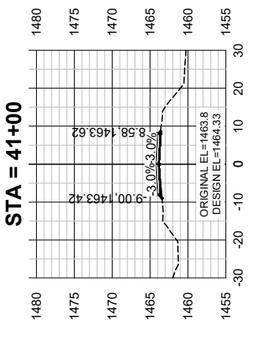


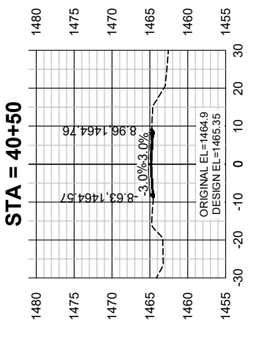


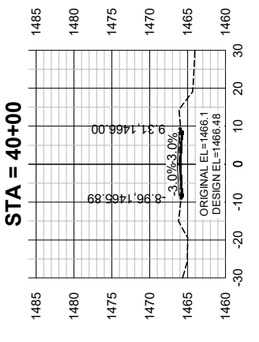


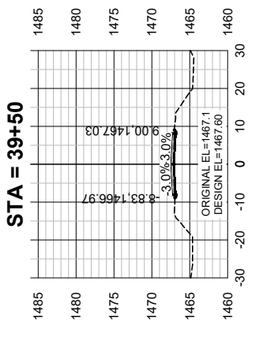


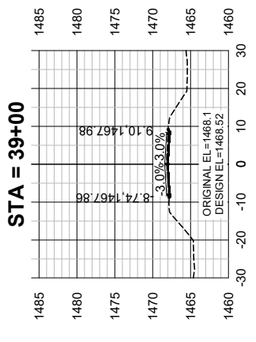












Revised #

FEMA BRIC
SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

CROSS SECTIONS
124th STREET

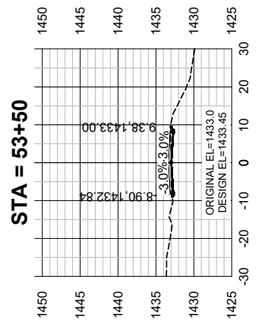
DRWN. BY	CHK'D BY	PROJECT NO.	DATE
OML	DJF	2111-01639	11/09/2022

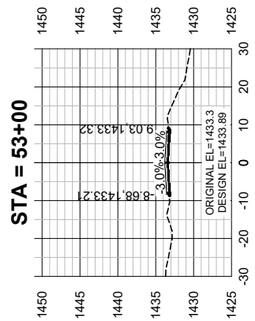
Aug 19, 2022 – 2:22pm – K:\Projects\Tribal\SissetonWahpetonOyate\2111-01639_FEMA-BRIC-Award\CAD\Design\Plan DWG\2111-01639_CrossSections&PipeSections.dwg

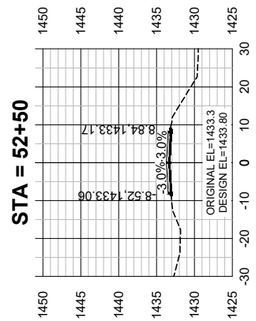
CROSS SECTIONS

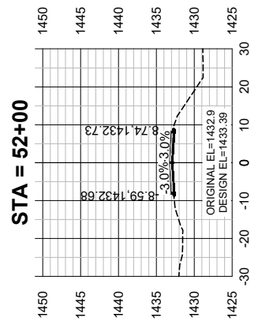
STATE	PROJECT	SHEET	TOTAL SHEETS
SD	FEMA BRIC	89	109

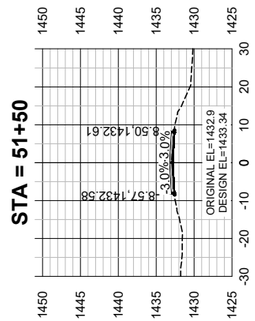
SCALE: 1" = 40' H
1" = 20' V

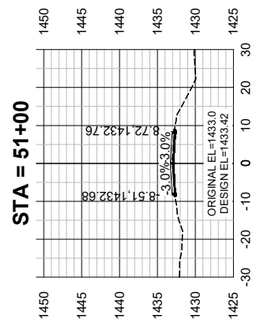


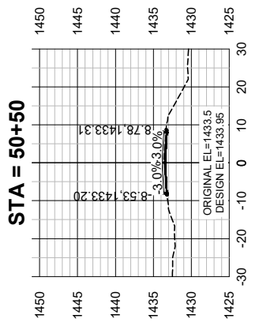


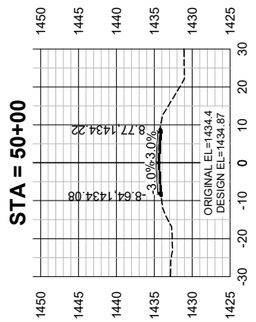


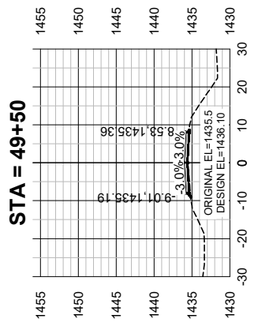


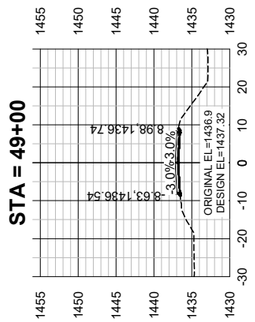


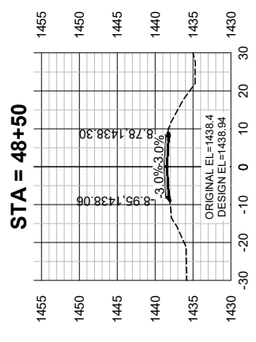


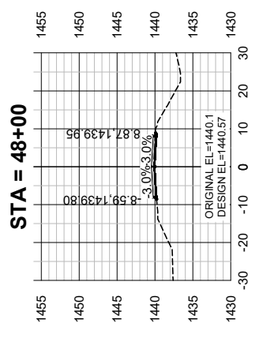


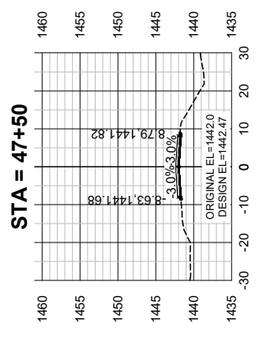


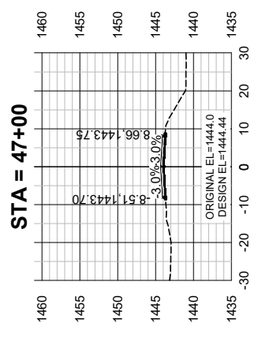


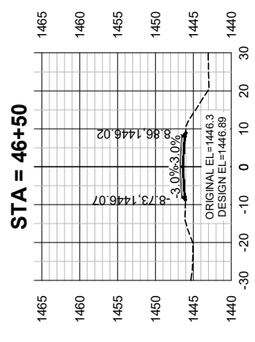












Revised #

FEMA BRIC
SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

CROSS SECTIONS
124th STREET

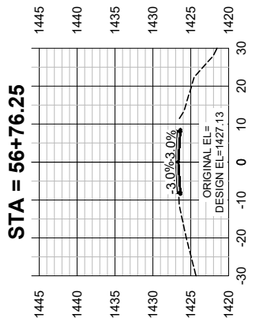
DRWN. BY	CHK'D BY	PROJECT NO.	DATE
OML	DJF	2111-01639	11/09/2022

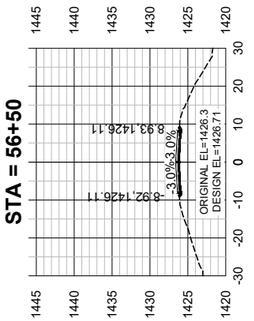
Aug 19, 2022 – 2:23pm – K:\Projects\Tribal\SissetonWahpetonOyate\2111-01639_FEMA-BRIC-Award\CAD\Design\Plan DWG\2111-01639_CrossSections&PipeSections.dwg

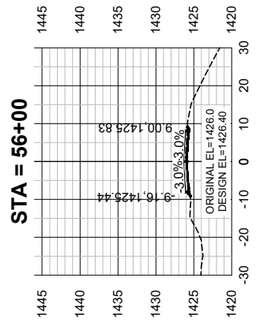
CROSS SECTIONS

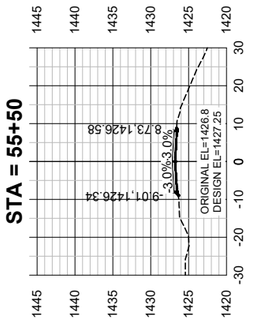
STATE	PROJECT	SHEET	TOTAL SHEETS
SD	FEMA BRIC	90	109

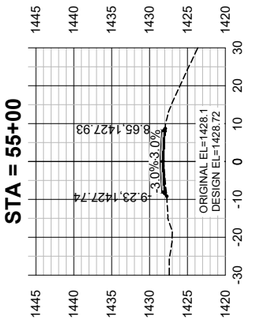
SCALE: 1" = 40' H
1" = 20' V

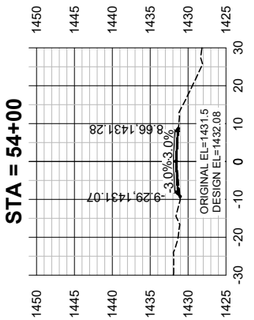












Revised #

FEMA BRIC
SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

CROSS SECTIONS
124th STREET

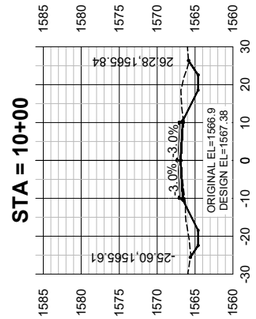
DRWN. BY	CHK'D BY	PROJECT NO.	DATE
OML	DJF	2111-01639	11/09/2022

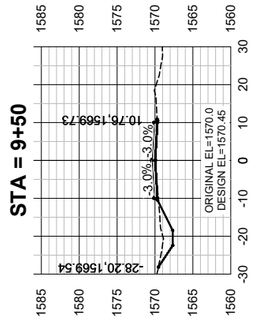
Aug 19, 2022 – 2:23pm – K:\Projects\Tribal\SissetonWahpetonOyate\2111-01639_FEMA-BRIC-Award\CAD\Design\Plan DWG\2111-01639_CrossSections&PipeSections.dwg

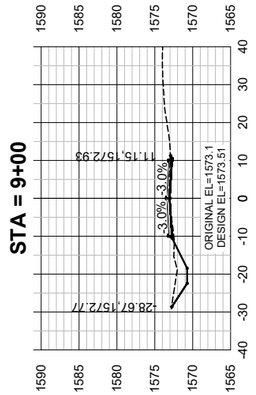
CROSS SECTIONS

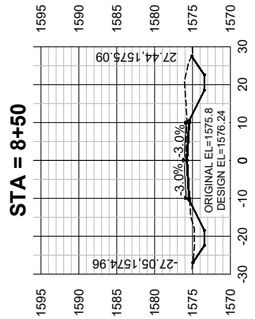
STATE	PROJECT	SHEET	TOTAL SHEETS
SD	FEMA BRIC	91	109

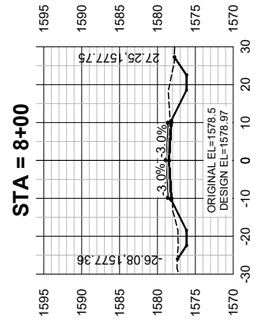
SCALE: 1" = 40' H
1" = 20' V

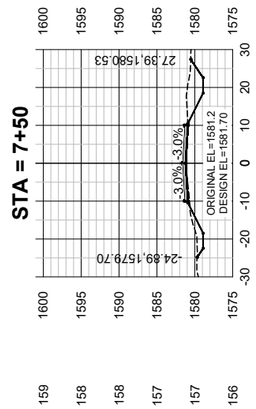


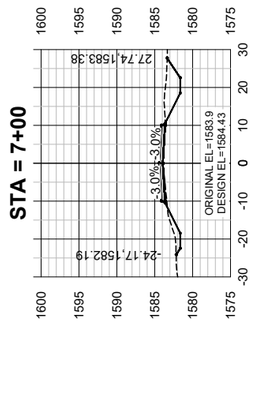


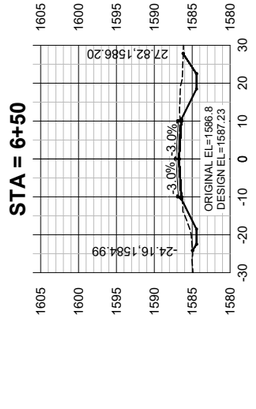


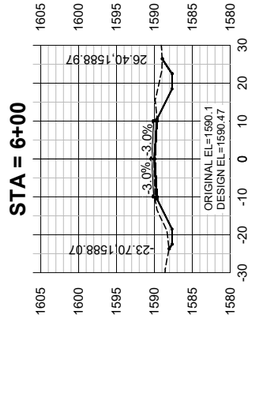


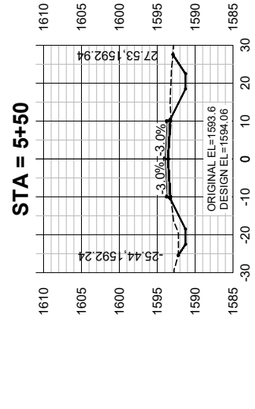


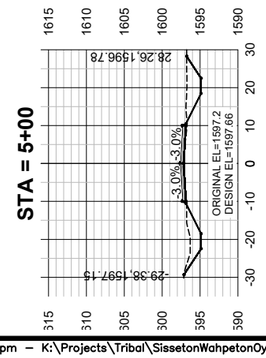


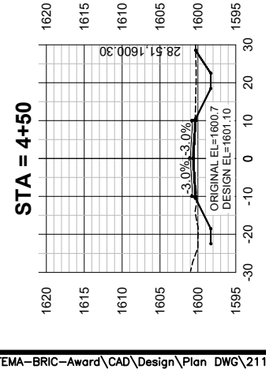


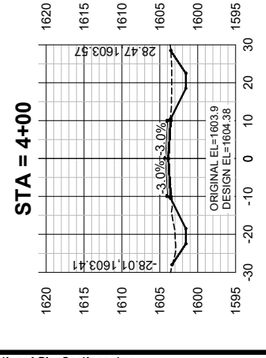


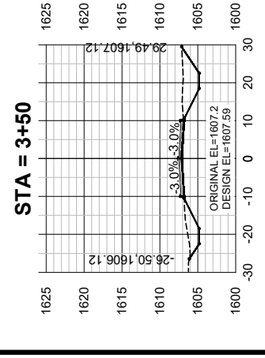


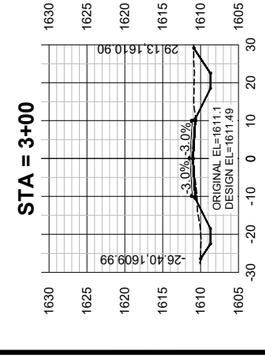












Revised #

FEMA BRIC
SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

CROSS SECTIONS
GOODWILL ROAD

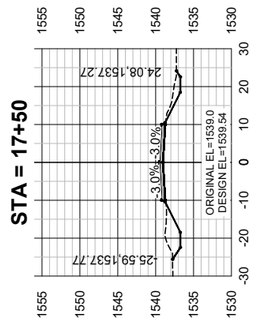
DRWN. BY	CHK'D BY	PROJECT NO.	DATE
OML	DJF	2111-01639	11/09/2022

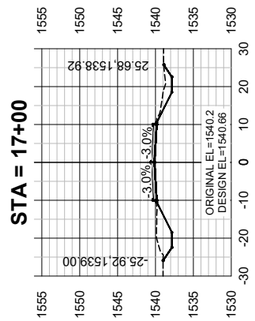
Aug 19, 2022 – 2:23pm – K:\Projects\Tribal\SissetonWahpetonOyate\2111-01639_FEMA-BRIC-Award\CAD\Design\Plan DWG\2111-01639_CrossSections&PipeSections.dwg

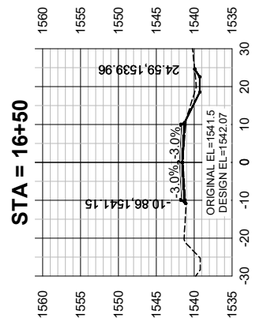
CROSS SECTIONS

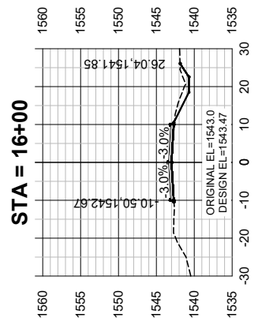
STATE	PROJECT	SHEET	TOTAL SHEETS
SD	FEMA BRIC	92	109

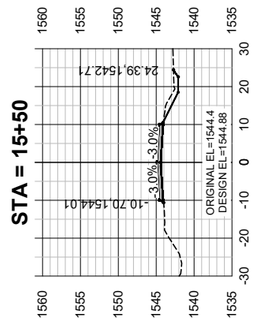
SCALE: 1" = 40' H
1" = 20' V

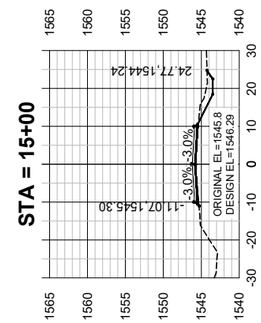


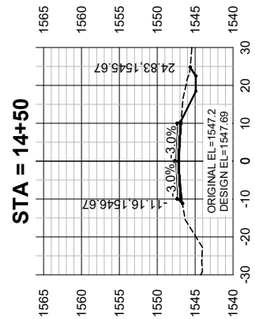


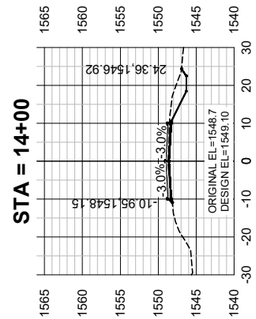


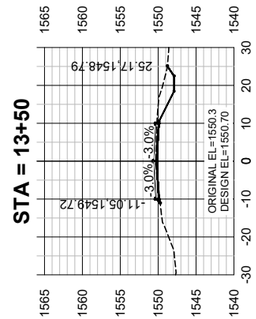


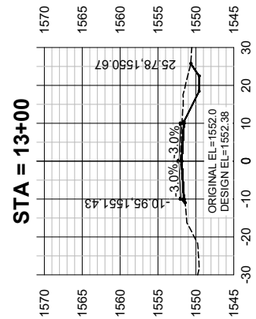


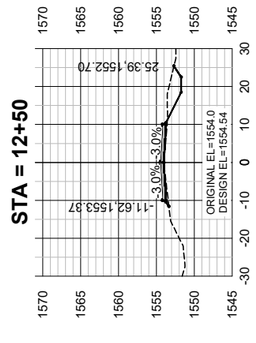


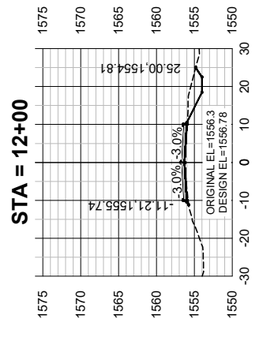


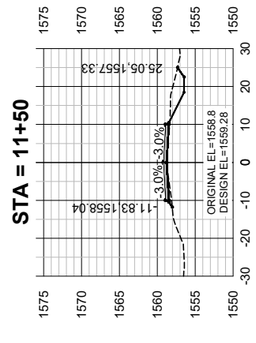


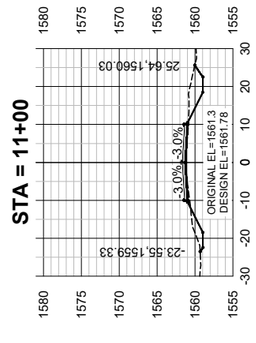


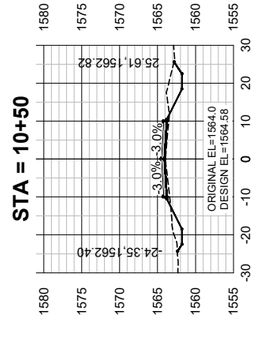












Revised #

FEMA BRIC
SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

CROSS SECTIONS
GOODWILL ROAD

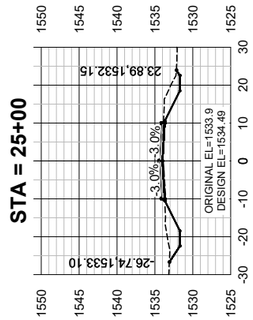
DRWN. BY	CHK'D BY	PROJECT NO.	DATE
OML	DJF	2111-01639	11/09/2022

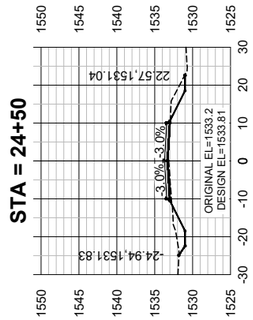
Aug 19, 2022 – 2:24pm – K:\Projects\Tribal\SissetonWahpetonOyate\2111-01639_FEMA-BRIC-Award\CAD\Design\Plan DWG\2111-01639_CrossSections&PipeSections.dwg

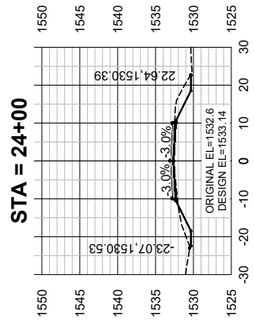
CROSS SECTIONS

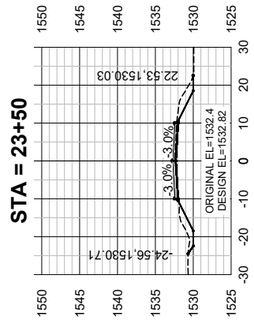
STATE	PROJECT	SHEET	TOTAL SHEETS
SD	FEMA BRIC	93	109

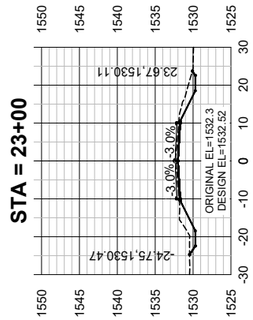
SCALE: 1" = 40' H
1" = 20' V

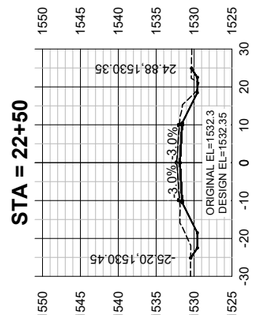


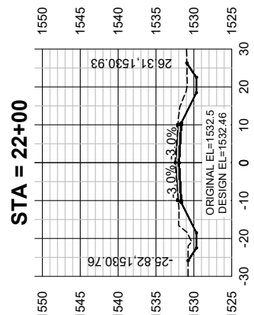


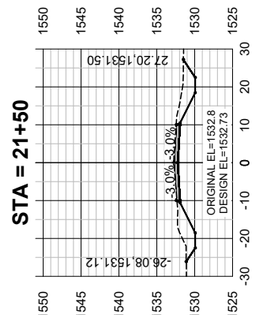


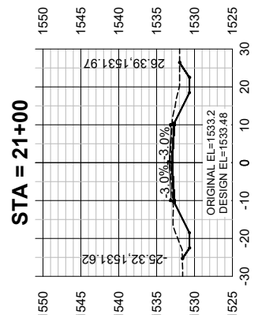


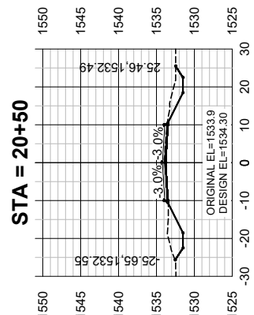


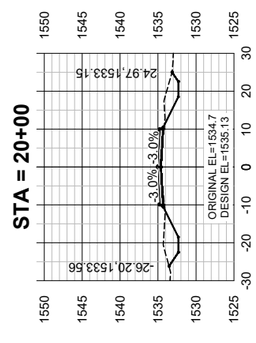


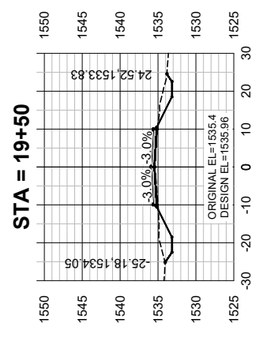


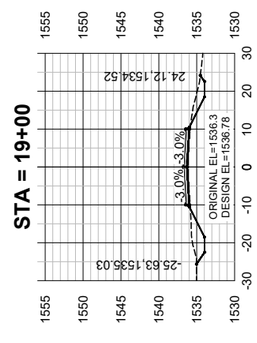


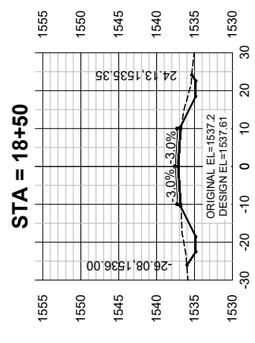


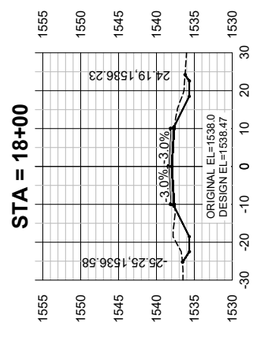












Revised #

FEMA BRIC
SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

CROSS SECTIONS
GOODWILL ROAD

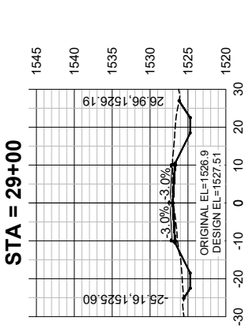
DRWN. BY	CHK'D BY	PROJECT NO.	DATE
OML	DJF	2111-01639	11/09/2022

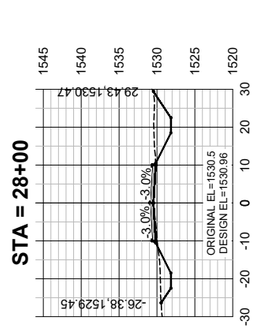
Aug 19, 2022 – 2:24pm – K:\Projects\Tribal\SissetonWahpetonOyate\2111-01639_FEMA-BRIC-Award\CAD\Design\Plan DWG\2111-01639_CrossSections&PipeSections.dwg

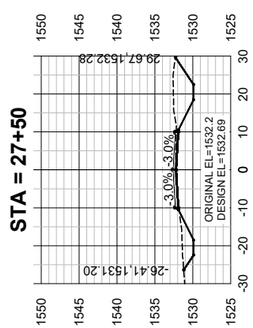
CROSS SECTIONS

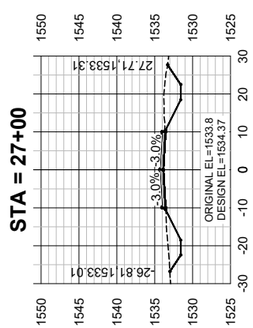
STATE	PROJECT	SHEET	TOTAL SHEETS
SD	FEMA BRIC	94	109

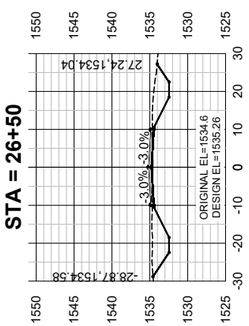
SCALE: 1" = 40' H
1" = 20' V

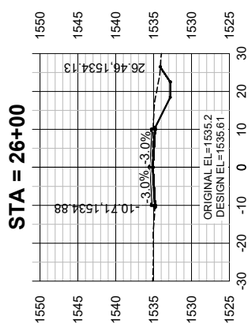


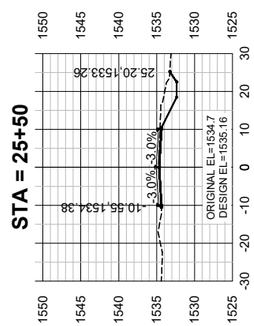












Revised #

FEMA BRIC
SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

CROSS SECTIONS
GOODWILL ROAD

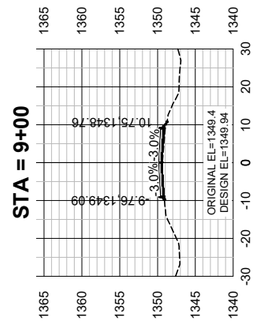
DRWN. BY	CHK'D BY	PROJECT NO.	DATE
OML	DJF	2111-01639	11/09/2022

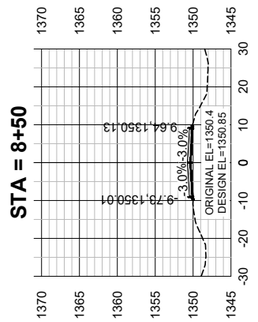
Aug 19, 2022 – 2:24pm – K:\Projects\Tribal\SissetonWahpetonOyate\2111-01639_FEMA-BRIC-Award\CAD\Design\Plan DWG\2111-01639_CrossSections&PipeSections.dwg

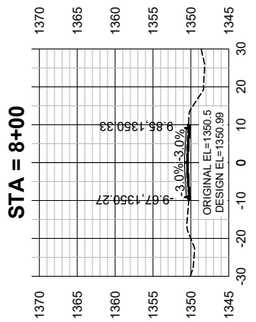
CROSS SECTIONS

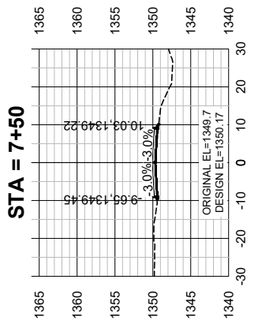
STATE	PROJECT	SHEET	TOTAL SHEETS
SD	FEMA BRIC	95	109

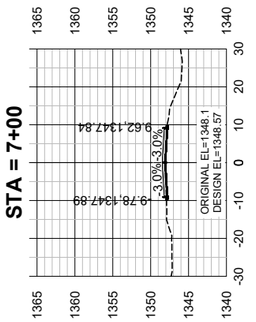
SCALE: 1" = 40' H
1" = 20' V

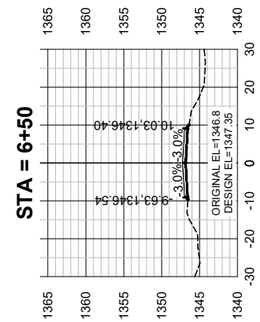


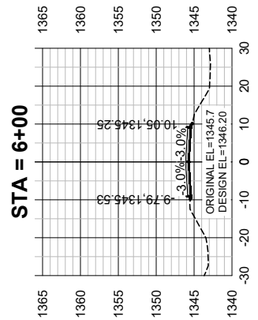


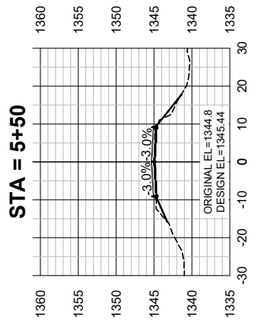


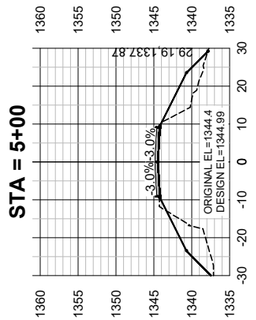


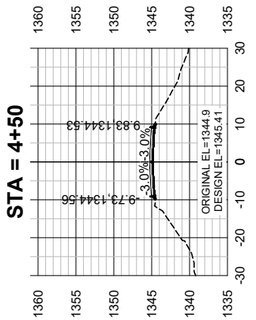


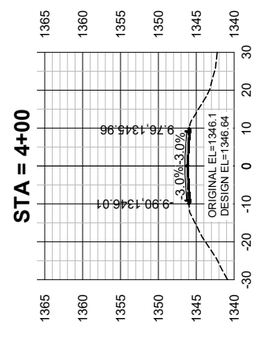


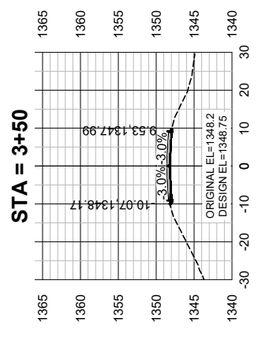


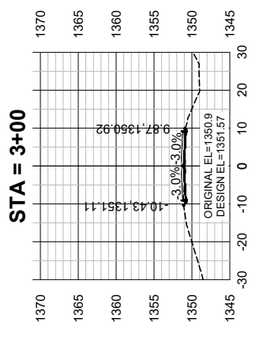


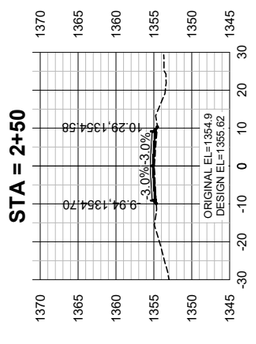


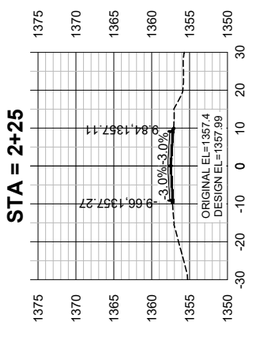












Revised #

FEMA BRIC
SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

CROSS SECTIONS
458th AVENUE

DRWN. BY	CHK'D BY	PROJECT NO.	DATE
OML	DJF	2111-01639	11/09/2022

Aug 19, 2022 – 2:25pm – K:\Projects\Tribal\SissetonWahpetonOyate\2111-01639_FEMA-BRIC-Award\CAD\Design\Plan DWG\2111-01639_CrossSections&PipeSections.dwg

CROSS SECTIONS

STATE	PROJECT	SHEET	TOTAL SHEETS
SD	FEMA BRIC	96	109

SCALE: 1" = 40' H
1" = 20' V

Revised #

FEMA BRIC
SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

CROSS SECTIONS
458th AVENUE

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OML	DJF	2111-01639	11/09/2022

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CROSS SECTIONS

STATE	PROJECT	SHEET	TOTAL SHEETS
SD	FEMA BRIC	97	109

SCALE: 1" = 40' H
1" = 20' V

Revised #

FEMA BRIC
SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

CROSS SECTIONS
458th AVENUE

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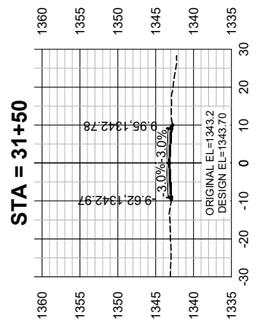
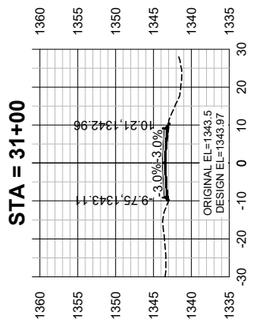
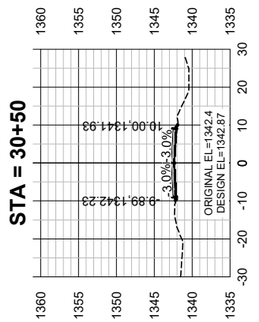
CROSS SECTIONS

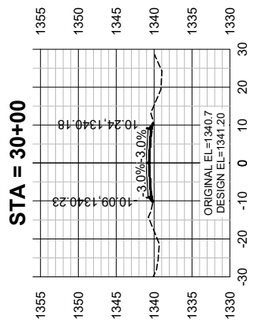
STATE	PROJECT	SHEET	TOTAL SHEETS
SD	FEMA BRIC	98	109

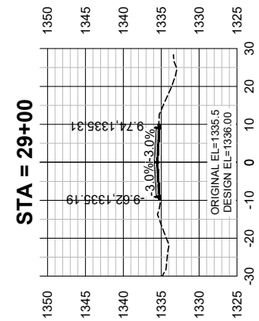
SCALE: 1" = 40' H
1" = 20' V

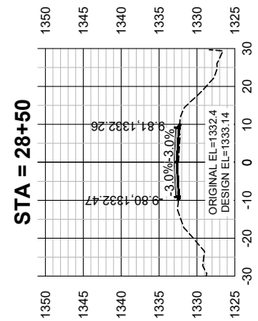


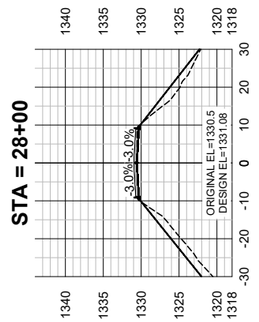


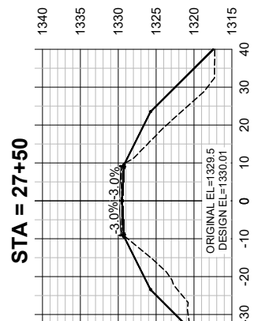


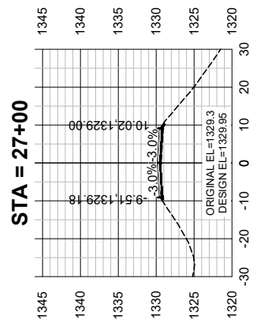


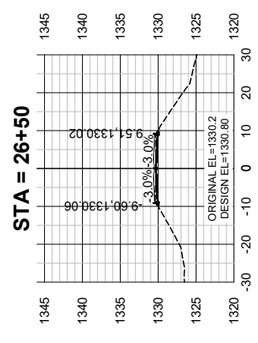


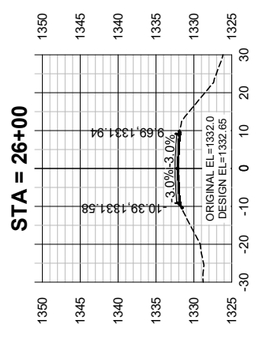


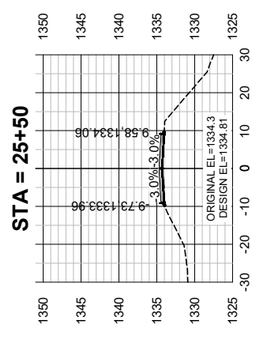


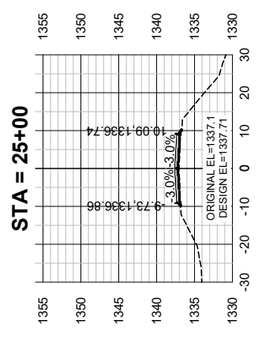


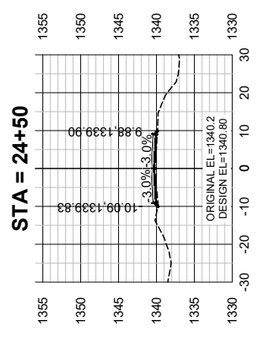












Revised #

FEMA BRIC
SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

CROSS SECTIONS
458th AVENUE

DRWN. BY	CHK'D BY	PROJECT NO.	DATE
OML	DJF	2111-01639	11/09/2022

Aug 19, 2022 – 2:26pm – K:\Projects\Tribal\SissetonWahpetonOyate\2111-01639_FEMA-BRIC-Award\CAD\Design\Plan DWG\2111-01639_CrossSections&PipeSections.dwg

CROSS SECTIONS

STATE	PROJECT	SHEET	TOTAL SHEETS
SD	FEMA BRIC	99	109

SCALE: 1" = 40' H
1" = 20' V

Revised #

FEMA BRIC
SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

CROSS SECTIONS
458th AVENUE

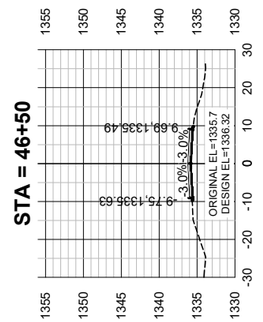
DRWN. BY	CHK'D BY	PROJECT NO.	DATE
OML	DJF	2111-01639	11/09/2022

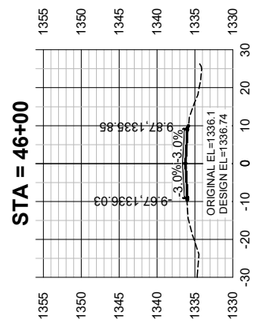
Aug 19, 2022 – 2:26pm – K:\Projects\Tribal\SissetonWahpetonOyate\2111-01639_FEMA-BRIC-Award\CAD\Design\Plan DWG\2111-01639_CrossSections&PipeSections.dwg

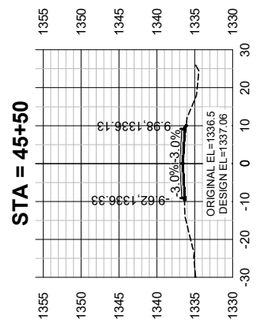
CROSS SECTIONS

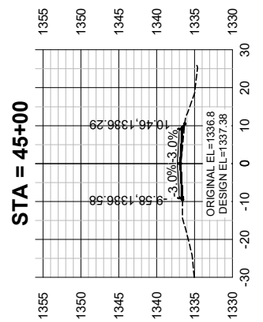
STATE	PROJECT	SHEET	TOTAL SHEETS
SD	FEMA BRIC	100	109

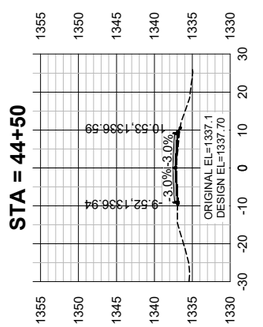
SCALE: 1" = 40' H
1" = 20' V

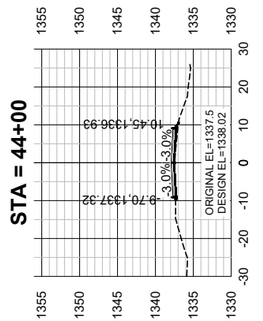


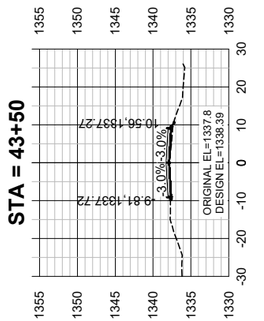


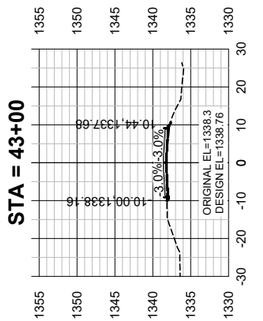


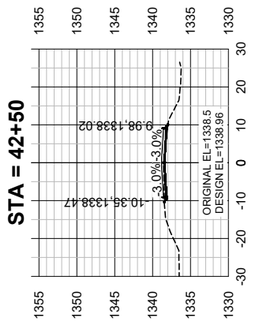


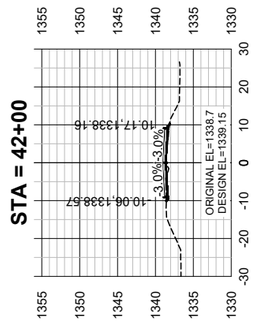


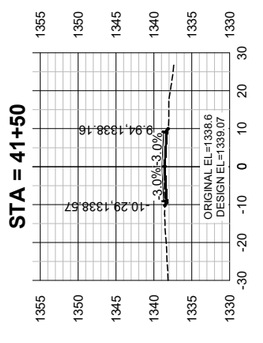


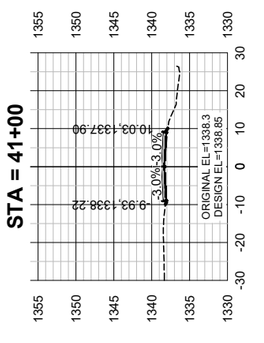


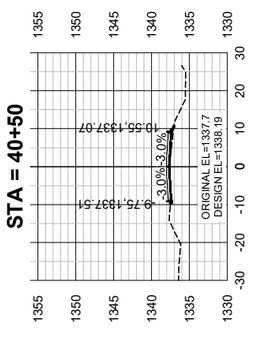


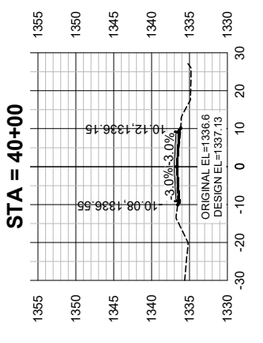


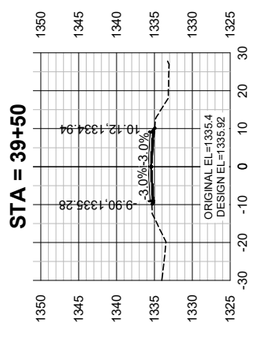












Revised #

FEMA BRIC
SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

CROSS SECTIONS
458th AVENUE

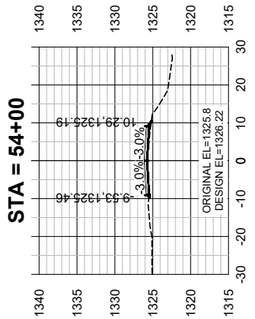
DRWN. BY	CHK'D BY	PROJECT NO.	DATE
OML	DJF	2111-01639	11/09/2022

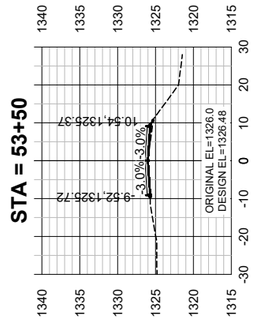
Aug 19, 2022 – 2:27pm – K:\Projects\Tribal\SissetonWahpetonOyate\2111-01639_FEMA-BRIC-Award\CAD\Design\Plan DWG\2111-01639_CrossSections&PipeSections.dwg

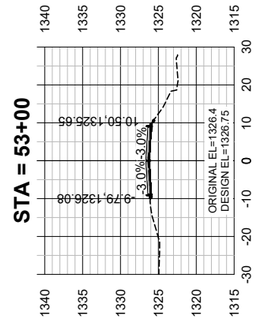
CROSS SECTIONS

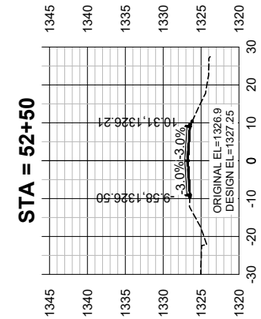
STATE	PROJECT	SHEET	TOTAL SHEETS
SD	FEMA BRIC	101	109

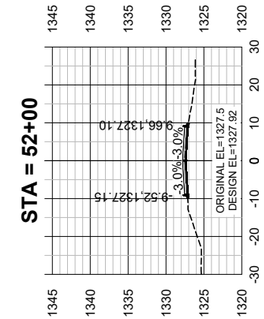
SCALE: 1" = 40' H
1" = 20' V

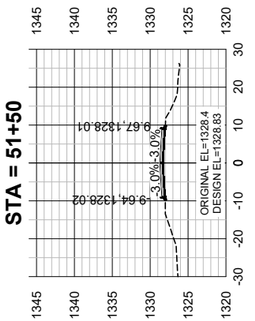


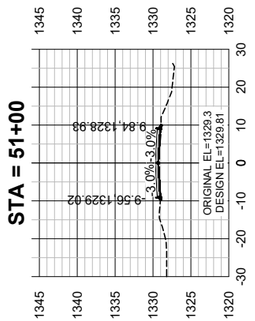


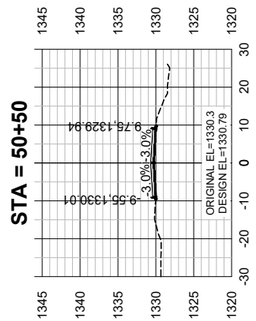


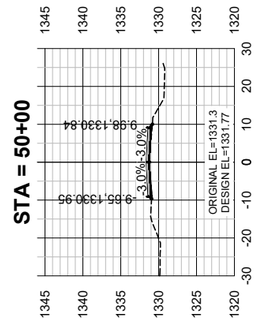


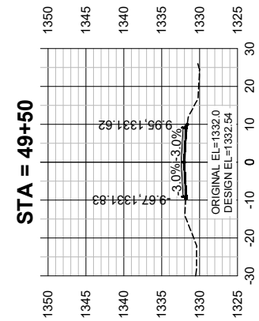


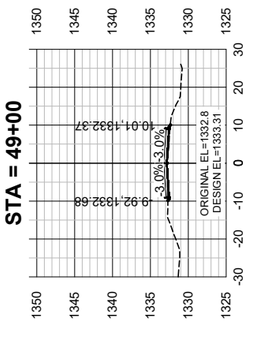


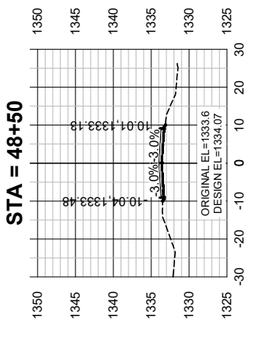


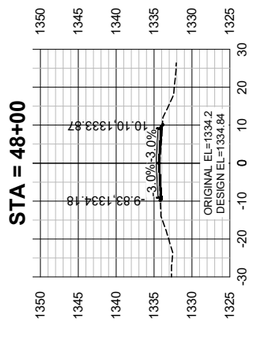


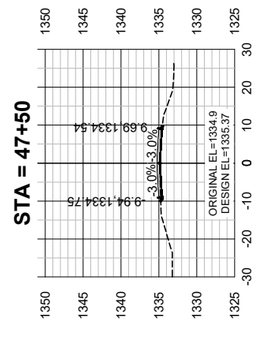


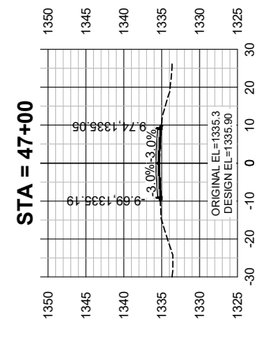












Revised #

FEMA BRIC
SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

CROSS SECTIONS
458th AVENUE

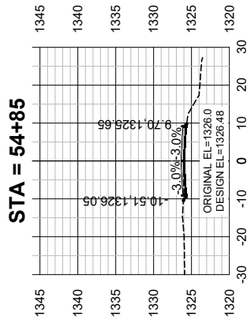
DRWN. BY	CHK'D BY	PROJECT NO.	DATE
OML	DJF	2111-01639	11/09/2022

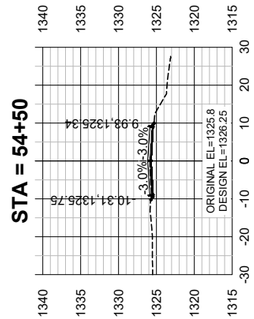
Aug 19, 2022 – 2:27pm – K:\Projects\Tribal\SissetonWahpetonOyate\2111-01639_FEMA-BRIC-Award\CAD\Design\Plan DWG\2111-01639_CrossSections&PipeSections.dwg

CROSS SECTIONS

STATE	PROJECT	SHEET	TOTAL SHEETS
SD	FEMA BRIC	102	109

SCALE: 1" = 40' H
1" = 20' V





Revised #

FEMA BRIC
SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

CROSS SECTIONS
458th AVENUE

DRWN. BY	CHK'D BY	PROJECT NO.	DATE
OML	DJF	2111-01639	11/09/2022

Aug 19, 2022 – 2:27pm – K:\Projects\Tribal\SissetonWahpetonOyate\2111-01639_FEMA-BRIC-Award\CAD\Design\Plan DWG\2111-01639_CrossSections&PipeSections.dwg

STATE	PROJECT	SHEET	TOTAL SHEETS
SD	FEMA BRIC	103	109

PIPE SECTIONS
458th AVENUE

SCALE: 1" = 20' H
1" = 10' V

GENERAL NOTES

DESIGN SHALL BE IN ACCORDANCE WITH SECTION 560 OF THE SPECIFICATIONS WITH THE FOLLOWING CRITERIA:

1. BOX CULVERT AND BOX CULVERT END SECTION DESIGN SHALL CONFORM TO THE CURRENT AASHTO LRFD BRIDGE DESIGN SPECIFICATION.

2. DESIGN LIVE LOAD: HL-93. NO CONSTRUCTION LOADING IN EXCESS OF LEGAL LOAD IS ANTICIPATED. IF CONSTRUCTION LOADING IN EXCESS OF LEGAL LOAD IS ANTICIPATED BY THE CONTRACTOR, THE CONTRACTOR SHALL SUBMIT A PROPOSAL INCLUDING A DESIGN ANALYSIS FOR THE ANTICIPATED CONSTRUCTION LOADING TO THE ENGINEER FOR APPROVAL. UPON APPROVAL, THE CONSTRUCTION LOAD SHALL NOT BE APPLIED UNTIL THE DEPTH OF FILL OVER THE BOX CULVERT AS REQUIRED BY ANALYSIS HAS BEEN PLACED. AT A MINIMUM, 4 FEET OF FILL SHALL BE PLACED OVER THE THE BOX CULVERT PRIOR TO APPLYING THE CONSTRUCTION LOAD. ALL COSTS ASSOCIATED WITH ACCOMMODATING ANY CONSTRUCTION LOADS SHALL BE BORNE BY THE CONTRACTOR.

3. THE DESIGN OF THE BARREL SECTIONS SHALL BE BASED ON A MINIMUM FILL HEIGHT OF 2 FEET AND INCLUDE ALL SUBSEQUENT FILL HEIGHTS UP TO AND INCLUDING THE MAXIMUM FILL HEIGHT OF 5 FEET OVER THE BOX CULVERT.

4. MINIMUM INSIDE CORNER FILLET SHALL BE 6 INCHES.

5. MINIMUM PRECAST BARREL SECTION LENGTH SHALL BE 4 FEET.

6. LIFT HOLES SHALL BE PLUGGED WITH AN APPROVED NONSHRINKABLE GROUT.

7. THE FABRICATOR SHALL IMPRINT ON THE STRUCTURE THE DATE OF CONSTRUCTION AS SPECIFIED AND DETAILED ON STANDARD PLATE NO. 460.02.

8. INSTALLATION OF THE PRECAST SECTIONS SHALL BE IN ACCORDANCE WITH THE FINAL APPROVED SHOP PLANS.

9. CARE SHALL BE TAKEN WHEN PLACING SECTIONS. SECTIONS SHALL BE ONLY MOVED USING THE LIFT HOLES BY APPROVED EQUIPMENT.

10. DEWATERING WILL BE REQUIRED FOR CONSTRUCTION OF THE BOX CULVERT.

DESIGN MIX OF CONCRETE

1. MIX SHALL BE AS PER FABRICATOR'S DESIGN, HOWEVER MINIMUM COMPRESSIVE STRENGTH SHALL NOT BE LESS THAN 4500 PSI AT 28 DAYS.

2. TYPE II CEMENT IS REQUIRED.

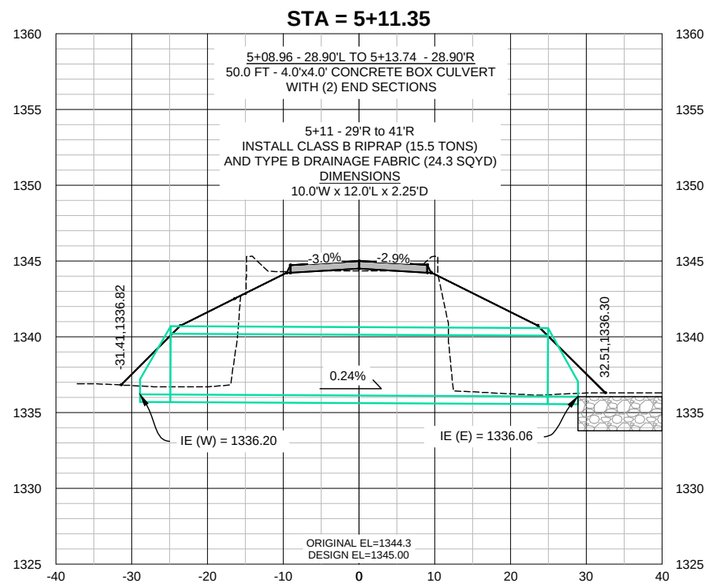
SHOP PLANS

THE FABRICATOR SHALL SUBMIT SHOPS PLANS IN ACCORDANCE WITH THE SPECIFICATIONS TO:

KLJ

4585 COLEMAN ST.,

BISMARCK, ND 58503



REGISTERED PROFESSIONAL ENGINEER
REG. NO. 12804
DARIN FALCON
5/16/24
SOUTH DAKOTA

Revised #

FEMA BRIC
SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

KLJ

PIPE SECTIONS

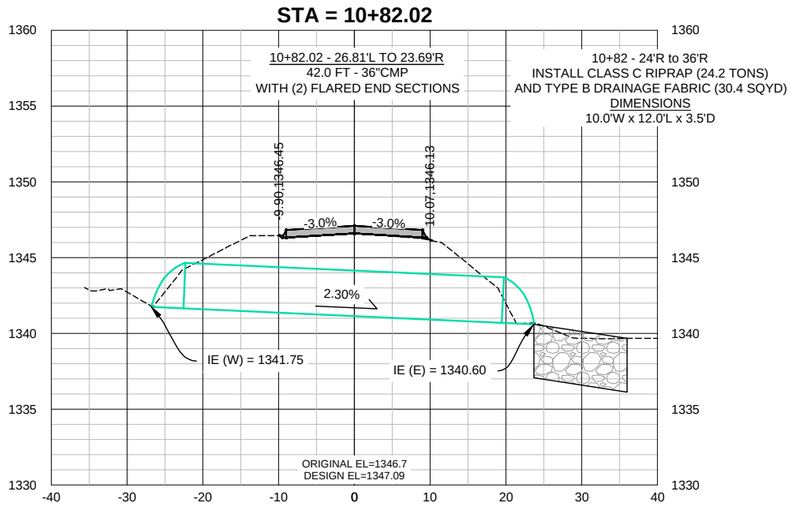
DRWN. BY	CHK'D BY	PROJECT NO.	DATE
OML	DJF	2111-01639	01/22/2024

Jan 22, 2024 – 1:47pm – K:\Projects\Tribal\SissetonWahpetonOyate\2111-01639_FEMA-BRIC-Award\CAD\Design\Plan DWG\2111-01639_CrossSections&PipeSections.dwg

STATE	PROJECT	SHEET	TOTAL SHEETS
SD	FEMA BRIC	104	109

PIPE SECTIONS
458th AVENUE

SCALE: 1" = 20' H
1" = 10' V



REGISTERED PROFESSIONAL ENGINEER
REG. NO. 12804
DARIN FALCON
5/16/24
SOUTH DAKOTA

Revised #

FEMA BRIC
SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

PIPE SECTIONS

DRWN. BY	CHK'D BY	PROJECT NO.	DATE
OML	DJF	2111-01639	01/22/2024

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STATE	PROJECT	SHEET	TOTAL SHEETS
SD	FEMA BRIC	105	109

PIPE SECTIONS
458th AVENUE

SCALE: 1" = 20' H
1" = 10' V

GENERAL NOTES

DESIGN SHALL BE IN ACCORDANCE WITH SECTION 560 OF THE SPECIFICATIONS WITH THE FOLLOWING CRITERIA:

1. BOX CULVERT AND BOX CULVERT END SECTION DESIGN SHALL CONFORM TO THE CURRENT AASHTO LRFD BRIDGE DESIGN SPECIFICATION.

2. DESIGN LIVE LOAD: HL-93. NO CONSTRUCTION LOADING IN EXCESS OF LEGAL LOAD IS ANTICIPATED. IF CONSTRUCTION LOADING IN EXCESS OF LEGAL LOAD IS ANTICIPATED BY THE CONTRACTOR, THE CONTRACTOR SHALL SUBMIT A PROPOSAL INCLUDING A DESIGN ANALYSIS FOR THE ANTICIPATED CONSTRUCTION LOADING TO THE ENGINEER FOR APPROVAL. UPON APPROVAL, THE CONSTRUCTION LOAD SHALL NOT BE APPLIED UNTIL THE DEPTH OF FILL OVER THE BOX CULVERT AS REQUIRED BY ANALYSIS HAS BEEN PLACED. AT A MINIMUM, 4 FEET OF FILL SHALL BE PLACED OVER THE THE BOX CULVERT PRIOR TO APPLYING THE CONSTRUCTION LOAD. ALL COSTS ASSOCIATED WITH ACCOMMODATING ANY CONSTRUCTION LOADS SHALL BE BORNE BY THE CONTRACTOR.

3. THE DESIGN OF THE BARREL SECTIONS SHALL BE BASED ON A MINIMUM FILL HEIGHT OF 2 FEET AND INCLUDE ALL SUBSEQUENT FILL HEIGHTS UP TO AND INCLUDING THE MAXIMUM FILL HEIGHT OF 9 FEET OVER THE BOX CULVERT.

4. MINIMUM INSIDE CORNER FILLET SHALL BE 6 INCHES.

5. MINIMUM PRECAST BARREL SECTION LENGTH SHALL BE 4 FEET.

6. LIFT HOLES SHALL BE PLUGGED WITH AN APPROVED NONSHRINKABLE GROUT.

7. THE FABRICATOR SHALL IMPRINT ON THE STRUCTURE THE DATE OF CONSTRUCTION AS SPECIFIED AND DETAILED ON STANDARD PLATE NO. 460.02.

8. INSTALLATION OF THE PRECAST SECTIONS SHALL BE IN ACCORDANCE WITH THE FINAL APPROVED SHOP PLANS.

9. CARE SHALL BE TAKEN WHEN PLACING SECTIONS. SECTIONS SHALL BE ONLY MOVED USING THE LIFT HOLES BY APPROVED EQUIPMENT.

10. DEWATERING WILL BE REQUIRED FOR CONSTRUCTION OF THE BOX CULVERT.

DESIGN MIX OF CONCRETE

1. MIX SHALL BE AS PER FABRICATOR'S DESIGN, HOWEVER MINIMUM COMPRESSIVE STRENGTH SHALL NOT BE LESS THAN 4500 PSI AT 28 DAYS.

2. TYPE II CEMENT IS REQUIRED.

SHOP PLANS

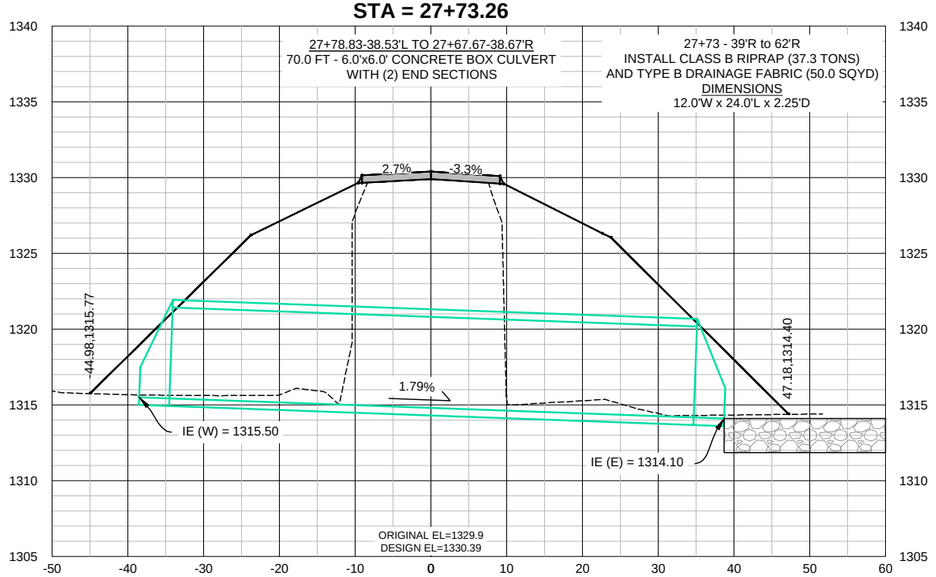
THE FABRICATOR SHALL SUBMIT SHOPS PLANS IN ACCORDANCE WITH THE SPECIFICATIONS TO:

KLJ

4585 COLEMAN ST.,

BISMARCK, ND 58503

STA = 27+73.26



REGISTERED PROFESSIONAL ENGINEER
REG. NO. 12804
DARIN FALCON
5/16/24
SOUTH DAKOTA

Revised #

FEMA BRIC
SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

PIPE SECTIONS

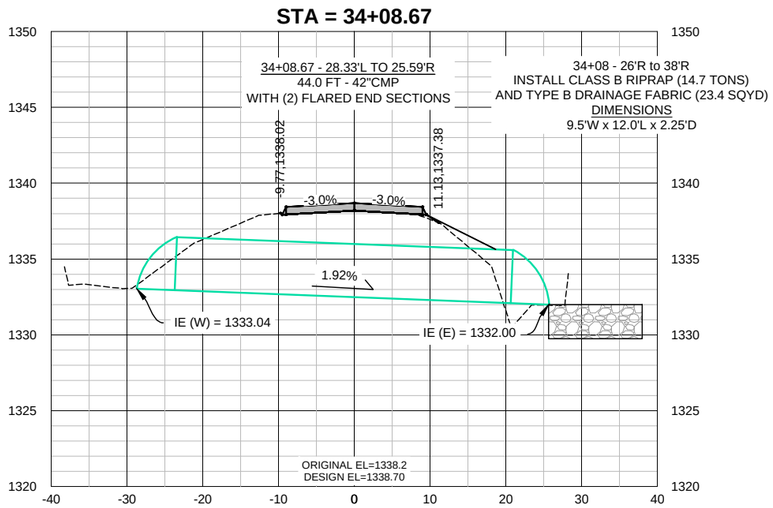
DRWN. BY	CHK'D BY	PROJECT NO.	DATE
OML	DJF	2111-01639	01/22/2024

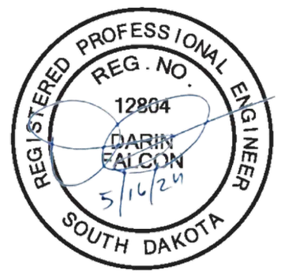
Jan 22, 2024 – 1:47pm – K:\Projects\Tribal\SissetonWahpetonOyate\2111-01639_FEMA-BRIC-Award\CAD\Design\Plan DWG\2111-01639_CrossSections&PipeSections.dwg

STATE	PROJECT	SHEET	TOTAL SHEETS
SD	FEMA BRIC	106	109

PIPE SECTIONS
458th AVENUE

SCALE: 1" = 20' H
1" = 10' V





Revised #

FEMA BRIC
SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

PIPE SECTIONS

DRWN. BY	CHK'D BY	PROJECT NO.	DATE
OML	DJF	2111-01639	01/22/2024

Jan 22, 2024 – 1:47pm – K:\Projects\Tribal\SissetonWahpetonOyate\2111-01639_FEMA-BRIC-Award\CAD\Design\Plan DWG\2111-01639_CrossSections&PipeSections.dwg

PIPE SECTIONS
458th AVENUE

STATE	PROJECT	SHEET	TOTAL SHEETS
SD	FEMA BRIC	107	109

SCALE: 1" = 20' H
1" = 10' V

GENERAL NOTES

DESIGN SHALL BE IN ACCORDANCE WITH SECTION 560 OF THE SPECIFICATIONS WITH THE FOLLOWING CRITERIA:

1. BOX CULVERT AND BOX CULVERT END SECTION DESIGN SHALL CONFORM TO THE CURRENT AASHTO LRFD BRIDGE DESIGN SPECIFICATION.

2. DESIGN LIVE LOAD: HL-93. NO CONSTRUCTION LOADING IN EXCESS OF LEGAL LOAD IS ANTICIPATED. IF CONSTRUCTION LOADING IN EXCESS OF LEGAL LOAD IS ANTICIPATED BY THE CONTRACTOR, THE CONTRACTOR SHALL SUBMIT A PROPOSAL INCLUDING A DESIGN ANALYSIS FOR THE ANTICIPATED CONSTRUCTION LOADING TO THE ENGINEER FOR APPROVAL. UPON APPROVAL, THE CONSTRUCTION LOAD SHALL NOT BE APPLIED UNTIL THE DEPTH OF FILL OVER THE BOX CULVERT AS REQUIRED BY ANALYSIS HAS BEEN PLACED. AT A MINIMUM, 4 FEET OF FILL SHALL BE PLACED OVER THE THE BOX CULVERT PRIOR TO APPLYING THE CONSTRUCTION LOAD. ALL COSTS ASSOCIATED WITH ACCOMMODATING ANY CONSTRUCTION LOADS SHALL BE BORNE BY THE CONTRACTOR.

3. THE DESIGN OF THE BARREL SECTIONS SHALL BE BASED ON A MINIMUM FILL HEIGHT OF 2 FEET AND INCLUDE ALL SUBSEQUENT FILL HEIGHTS UP TO AND INCLUDING THE MAXIMUM FILL HEIGHT OF 5 FEET OVER THE BOX CULVERT.

4. MINIMUM INSIDE CORNER FILLET SHALL BE 6 INCHES.

5. MINIMUM PRECAST BARREL SECTION LENGTH SHALL BE 4 FEET.

6. LIFT HOLES SHALL BE PLUGGED WITH AN APPROVED NONSHRINKABLE GROUT.

7. THE FABRICATOR SHALL IMPRINT ON THE STRUCTURE THE DATE OF CONSTRUCTION AS SPECIFIED AND DETAILED ON STANDARD PLATE NO. 460.02.

8. INSTALLATION OF THE PRECAST SECTIONS SHALL BE IN ACCORDANCE WITH THE FINAL APPROVED SHOP PLANS.

9. CARE SHALL BE TAKEN WHEN PLACING SECTIONS. SECTIONS SHALL BE ONLY MOVED USING THE LIFT HOLES BY APPROVED EQUIPMENT.

10. DEWATERING WILL BE REQUIRED FOR CONSTRUCTION OF THE BOX CULVERT.

DESIGN MIX OF CONCRETE

1. MIX SHALL BE AS PER FABRICATOR'S DESIGN, HOWEVER MINIMUM COMPRESSIVE STRENGTH SHALL NOT BE LESS THAN 4500 PSI AT 28 DAYS.

2. TYPE II CEMENT IS REQUIRED.

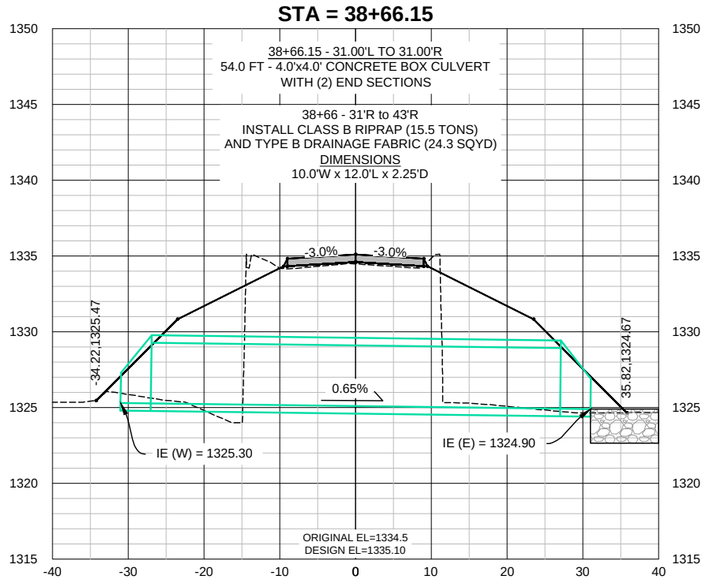
SHOP PLANS

THE FABRICATOR SHALL SUBMIT SHOPS PLANS IN ACCORDANCE WITH THE SPECIFICATIONS TO:

KLJ

4585 COLEMAN ST.,

BISMARCK, ND 58503



Revised #

FEMA BRIC
SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

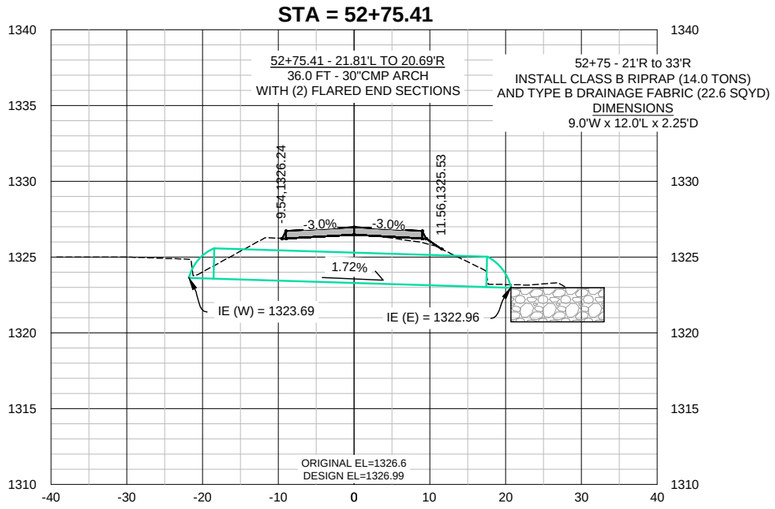
PIPE SECTIONS

DRWN. BY	CHK'D BY	PROJECT NO.	DATE
OML	DJF	2111-01639	01/22/2024

STATE	PROJECT	SHEET	TOTAL SHEETS
SD	FEMA BRIC	108	109

PIPE SECTIONS
458th AVENUE

SCALE: 1" = 20' H
1" = 10' V



REGISTERED PROFESSIONAL ENGINEER
REG. NO.
12804
DARIN
FALCON
5/16/24
SOUTH DAKOTA

Revised #

FEMA BRIC
SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

PIPE SECTIONS

DRWN. BY	CHK'D BY	PROJECT NO.	DATE
OML	DJF	2111-01639	01/22/2024

Jan 22, 2024 – 1:47pm – K:\Projects\Tribal\SissetonWahpetonOyate\2111-01639_FEMA-BRIC-Award\CAD\Design\Plan DWG\2111-01639_CrossSections&PipeSections.dwg

PIPE SECTIONS
124th STREET

STATE	PROJECT	SHEET	TOTAL SHEETS
SD	FEMA BRIC	109	109

SCALE: 1" = 20' H
1" = 10' V

GENERAL NOTES

DESIGN SHALL BE IN ACCORDANCE WITH SECTION 560 OF THE SPECIFICATIONS WITH THE FOLLOWING CRITERIA:

1. BOX CULVERT AND BOX CULVERT END SECTION DESIGN SHALL CONFORM TO THE CURRENT AASHTO LRFD BRIDGE DESIGN SPECIFICATION.

2. DESIGN LIVE LOAD: HL-93. NO CONSTRUCTION LOADING IN EXCESS OF LEGAL LOAD IS ANTICIPATED. IF CONSTRUCTION LOADING IN EXCESS OF LEGAL LOAD IS ANTICIPATED BY THE CONTRACTOR, THE CONTRACTOR SHALL SUBMIT A PROPOSAL INCLUDING A DESIGN ANALYSIS FOR THE ANTICIPATED CONSTRUCTION LOADING TO THE ENGINEER FOR APPROVAL. UPON APPROVAL, THE CONSTRUCTION LOAD SHALL NOT BE APPLIED UNTIL THE DEPTH OF FILL OVER THE BOX CULVERT AS REQUIRED BY ANALYSIS HAS BEEN PLACED. AT A MINIMUM, 4 FEET OF FILL SHALL BE PLACED OVER THE THE BOX CULVERT PRIOR TO APPLYING THE CONSTRUCTION LOAD. ALL COSTS ASSOCIATED WITH ACCOMMODATING ANY CONSTRUCTION LOADS SHALL BE BORNE BY THE CONTRACTOR.

3. THE DESIGN OF THE BARREL SECTIONS SHALL BE BASED ON A MINIMUM FILL HEIGHT OF 2 FEET AND INCLUDE ALL SUBSEQUENT FILL HEIGHTS UP TO AND INCLUDING THE MAXIMUM FILL HEIGHT OF 5 FEET OVER THE BOX CULVERT.

4. MINIMUM INSIDE CORNER FILLET SHALL BE 6 INCHES.

5. MINIMUM PRECAST BARREL SECTION LENGTH SHALL BE 4 FEET.

6. LIFT HOLES SHALL BE PLUGGED WITH AN APPROVED NONSHRINKABLE GROUT.

7. THE FABRICATOR SHALL IMPRINT ON THE STRUCTURE THE DATE OF CONSTRUCTION AS SPECIFIED AND DETAILED ON STANDARD PLATE NO. 460.02.

8. INSTALLATION OF THE PRECAST SECTIONS SHALL BE IN ACCORDANCE WITH THE FINAL APPROVED SHOP PLANS.

9. CARE SHALL BE TAKEN WHEN PLACING SECTIONS. SECTIONS SHALL BE ONLY MOVED USING THE LIFT HOLES BY APPROVED EQUIPMENT.

10. DEWATERING WILL BE REQUIRED FOR CONSTRUCTION OF THE BOX CULVERT.

DESIGN MIX OF CONCRETE

1. MIX SHALL BE AS PER FABRICATOR'S DESIGN, HOWEVER MINIMUM COMPRESSIVE STRENGTH SHALL NOT BE LESS THAN 4500 PSI AT 28 DAYS.

2. TYPE II CEMENT IS REQUIRED.

SHOP PLANS

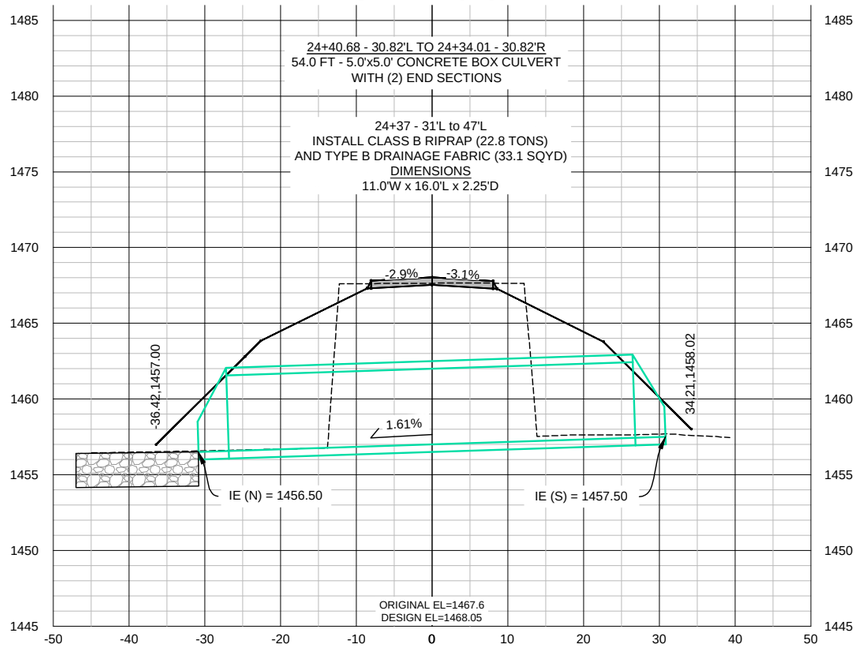
THE FABRICATOR SHALL SUBMIT SHOPS PLANS IN ACCORDANCE WITH THE SPECIFICATIONS TO:

KLJ

4585 COLEMAN ST.,

BISMARCK, ND 58503

STA = 24+37.35



Revised #

FEMA BRIC
SISSETON WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

PIPE SECTIONS

DRWN. BY	CHK'D BY	PROJECT NO.	DATE
OML	DJF	2111-01639	01/22/2024

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