## SECTION D: EROSION AND SEDIMENT CONTROLPPLANSIV

 STATE OF SOUTH DAKOTA
 PROJECT
 SHEET
 TOTAL SHEETS

 D1
 D32

ng Date: 5-22-2025

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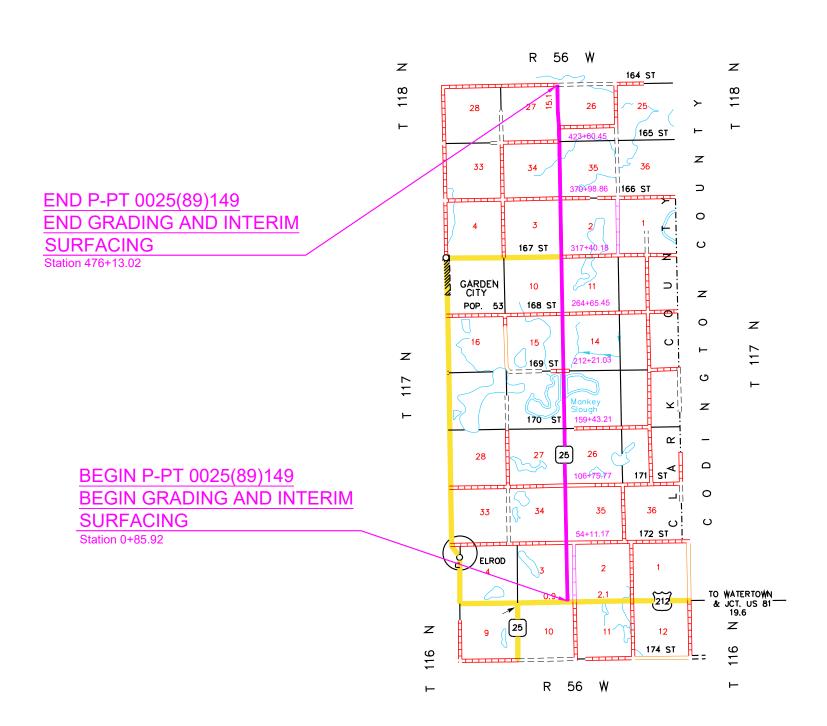
#### INDEX OF SHEETS

D1 General Layout with Index

D2-D9 General Notes

D10-D27 Erosion Control Plan Sheets

D28-D32 Standard Plates







#### **SECTION D ESTIMATE OF QUANTITIES**

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
110E1690	Remove Sediment	7.5	CuYd
110E1700	Remove Silt Fence	3,142	Ft
230E0010	Placing Topsoil	55,337	CuYd
730E0100	Cover Crop Seeding	50.0	Bu
730E0212	Type G Permanent Seed Mixture	2,439	Lb
731E0200	Fertilizing	70.40	Ton
732E0100	Mulching	250.0	Ton
734E0103	Type 3 Erosion Control Blanket	3,815	SqYd
734E0154	12" Diameter Erosion Control Wattle	3,250	Ft
734E0165	Remove and Reset Erosion Control Wattle	813	Ft
734E0325	Surface Roughening	4.1	Acre
734E0510	Shaping for Erosion Control Blanket	2,146	Ft
734E0602	Low Flow Silt Fence	8,328	Ft
734E0604	High Flow Silt Fence	3,922	Ft
734E0610	Mucking Silt Fence	873	CuYd
734E0620	Repair Silt Fence	3,142	Ft
734E0630	Floating Silt Curtain	9,350	Ft
734E0635	Remove and Reset Floating Silt Curtain	2,338	Ft
900E1320	Construction Entrance	2	Each

#### PLACING TOPSOIL

The thickness will be approximately 4 inches within the right-of-way and 6 inches on temporary easements. The topsoil thickness for the option borrow pits will be as stated on the option borrow pit sheets.

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

		Topsoil
Station to	Station	(CuYd)
0+86 (BEGIN)	30+00	2,775
30+00	60+00	3,630
60+00	90+00	4,167
90+00	120+00	3,115
120+00	150+00	3,279
150+00	180+00	2,809
180+00	210+00	476
210+00	240+00	5,725
240+00	270+00	5,119
270+00	300+00	3,567
300+00	330+00	4,716
330+00	360+00	2,886
360+00	390+00	3,226
390+00	420+00	4,038
420+00	450+00	3,056
450+00	476+14 (END)	2,054
6+50 (BEGIN)	21+00 (END) (xr317)	699
	Total:	55,337

#### 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 provided will be from the approved product list. The approved product list may be viewed at the following internet site:

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

#### **FERTILIZING**

The Contractor will apply an all-natural slow release fertilizer prior to seeding or placing sod. The all-natural fertilizer will have a minimum guaranteed analysis of 4-4-4 and be USDA Certified BioBased. It should provide a minimum of 4% (N) nitrogen with a minimum water insoluble nitrogen (WIN) fraction of 2.07%, a minimum of 4% (P2O5) available phosphate, a minimum of 4% (K2O) soluble potash, and a maximum carbon to nitrogen ratio (C:N ratio) of 5:1. The all-natural fertilizer will be free of weed-seed and pathogens accomplished through thermophilic composting, and not mechanical or chemical sterilization, to assure presence of beneficial soil microbiology. The fertilizer will have a near neutral pH, a low salt index, a low biological oxygen demand, contain organic humic and fulvic acids, and have high aerobic organism counts. The fertilizer will also be stable, free of bad odors, and be unattractive as a food source for animals. It should also be in a granular form that is easily spread.

The fertilizer will be applied at a rate of 1,500 pounds per acre in accordance with the manufacturer's recommended method of application.

The Fertilizer provided will be from the approved product list. The approved product list may be viewed at the following internet site:

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

#### **COVER CROP SEEDING**

Cover crop seeding may be used on this project as a temporary erosion control measure. The actual limits and use of cover crop seeding will be determined by the Engineer during construction.

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#### PERMANENT SEEDING

The areas to be seeded consist of all newly graded areas within the project limits except for the top of roadways and temporary easements under cultivation.

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
	Dacotah, Forestburg,	3
Switchgrass	Nebraska 28, Pathfinder, Summer, Sunburst, Trailblazer	
Indiangrass	Holt, Tomahawk, Chief, Nebraska 54	3
Big Bluestem	Bison, Bonilla, Champ, Sunnyview, Rountree, Bonanza	3
Oats or Spring Wheat: April through May;		10
Winter Wheat: August through November		
	Total:	26

#### **SURFACE ROUGHENING**

Surface roughening will be done after topsoil placement and before permanent seeding, fertilizing, and mulching applications. Refer to Standard Plate 734.25 for details.

#### **TABLE OF SURFACE ROUGHENING**

		Area
Station	Location	(Acre)
212+25 to 216+00 L	Inslope	0.1
212+25 to 216+00 R	Inslope	0.1
244+50 to 253+00 L	Inslope	0.45
244+00 to 252+75 R	Inslope	0.7
291+25 to 298+25 L	Inslope	0.35
291+25 to 299+00 R	Inslope	0.5
313+00 to 317+00 L	Inslope	0.2
313+00 to 317+00 R	Inslope	0.4
318+00 to 320+00 L	Inslope	0.1
404+50 to 410+50 L	Inslope	0.4
404+50 to 410+50 R	Inslope	0.4
	Additional Quantity:	0.4
	Total·	4 1

## MULCHING (GRASS HAY OR STRAW) FOR TEMPORARY STABILIZATION

A quantity of 250 tons of Grass Hay or Straw Mulch has been added to the Estimate of Quantities for temporary erosion control on areas determined by the Engineer during construction.

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If the Contractor uses a no-till drill, mulch may be applied prior to seeding and the mulch can then be punched into the soil by the no-till drill. If the Contractor uses this process, the no-till drill seeding will be completed immediately following the mulch application and the mulch will be punched into the soil at a 3-inch depth.

#### **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

#### TABLE OF EROSION CONTROL WATTLE

Station		Location	Diameter (Inch)	Quantity (Ft)
28+00	L	Ditch Bottom	12	50
29+50	L	Ditch Bottom	12	50
31+00	L	Ditch Bottom	12	50
82+50	R	Ditch Bottom	12	50
84+00	R	Ditch Bottom	12	50
85+50	R	Ditch Bottom	12	50
213+50	L	Ditch Bottom	12	50
214+50	L	Ditch Bottom	12	50
224+00	L	Ditch Bottom	12	50
225+50	L	Ditch Bottom	12	50
227+00	L	Ditch Bottom	12	50
222+00	R	Ditch Bottom	12	50
223+00	R	Ditch Bottom	12	50
224+00	R	Ditch Bottom	12	50
225+00	R	Ditch Bottom	12	50
226+00	R	Ditch Bottom	12	50
227+00	R	Ditch Bottom	12	50
239+00	R	Ditch Bottom	12	50
240+00	R	Ditch Bottom	12	50
241+00	R	Ditch Bottom	12	50
242+00	R	Ditch Bottom	12	50
243+00	R	Ditch Bottom	12	50
240+00	L	Ditch Bottom	12	50

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#### **LOW FLOW SILT FENCE**

The low flow silt fence fabric provided will be from the approved product list. The approved product list for low flow silt fence may be viewed at the following internet site:

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

Low flow silt fence will be placed at the locations noted in the table and at locations that will minimize siltation of adjacent streams, lakes, dams, or drainage areas as determined by the Engineer during construction. Refer to Standard Plate 734.04 for details.

An additional quantity of Low Flow Silt Fence has been added to the Estimate of Quantities for temporary sediment control.

#### TABLE OF LOW FLOW SILT FENCE

Station	Location	Quantity (Ft)
50+50 to 53+75 L	Perimeter	299
88+00 to 91+00 L	Perimeter	301
97+00 to 105+00 L	Perimeter	753
118+00 to 121+00 L	Perimeter	285
182+00 to 184+00 L	Perimeter	200
214+50 to 218+75 R	Perimeter	440
244+00 to 251+25 R	Perimeter	740
253+00 to 256+00 L	Perimeter	286
278+50 to 283+00 L	Perimeter	440
283+00 to 290+00 R	Perimeter	710
294+00 to 300+50 R	Perimeter	638
342+00 to 348+00 R	Perimeter	570
375+00 to 380+00 R	Perimeter	466
391+00 to 397+00 R	Perimeter	595
406+00 to 409+75 L	Perimeter	348
406+00 to 409+00 R	Perimeter	289
417+00 to 422+00 L	Perimeter	478
	Additional Quantity:	490

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Total:

#### **HIGH FLOW SILT FENCE**

The high flow silt fence fabric provided will be from the approved product list. The approved product list for high flow silt fence may be viewed at the following internet site:

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

High flow silt fence will be placed at the locations noted in the table and at locations that will minimize siltation of adjacent streams, lakes, dams, or drainage areas as determined by the Engineer during construction. Refer to Standard Plate 734.05 for details.

An additional quantity of high flow silt fence has been added to the Estimate of Quantities for temporary sediment control.

#### TABLE OF HIGH FLOW SILT FENCE

Station	Location	Quantity (Ft)
1+05 R	Across ditch at Inlet end of pipe (30 Ft each side)	60
8+76-49' R	Inlet End of Pipe	18
8+77-49' L	Inlet End of Pipe	18
19+26 L/R	Inlet and Outlet ends of pipe (100 Ft each end)	200
42+48 L/R	Inlet and Outlet ends of pipe (60 Ft each end)	120
45+50-53' L	Inlet End of Pipe	18
45+50-52' R	Inlet End of Pipe	18
51+42 L/R	Inlet and Outlet ends of pipe (100 Ft each end)	200
54+11-49' R	Inlet End of Pipe	18
54+11-49' R	Inlet End of Pipe	18
58+53 R	Inlet End of Pipe	18
70+50 R	Inlet End of Pipe	18
80+36-56' L	Inlet End of Pipe	18
81+68 L/R	Inlet and Outlet ends of pipe (60 Ft each end)	120
103+49 R	Across ditch at Inlet end of pipe (30 Ft each side)	60
110+49 L	Inlet End of Pipe	18
119+88 R	Inlet End of Pipe	18
133+47-49' L	Inlet End of Pipe	18
133+47-49' R	Inlet End of Pipe	18
158+20 L/R	Inlet and Outlet ends of pipe (100 Ft each end)	200
159+43-49' L	Inlet End of Pipe	18
170+45 L	Inlet End of Pipe	18
177+45 R	Across ditch at Inlet end of pipe (30 Ft each side)	60
186+16-49' R	Inlet End of Pipe	18
202+01 L/R	Inlet and Outlet ends of pipe (100 Ft each end)	200
212+21-155' L	Inlet End of Pipe	18
212+21-79' R	Inlet End of Pipe	18
221+50 L	Across ditch at Inlet end of pipe (30 Ft each side)	60
229+41 L	Inlet End of Pipe	18
230+44-45' R	Inlet End of Pipe	18
238+41-49' L	Inlet End of Pipe	18
238+41-49' R	Inlet End of Pipe	18
243+62 L	Inlet End of Pipe	18
247+81 L	Inlet End of Pipe	18
251+36 L	Inlet End of Pipe	18

253+00-62' R	Inlet End of Pipe	FOR E
257+36 R	Across ditch at Inlet end of pipe (30 Ft each side)	60
265+36 R	Across ditch at Inlet end of pipe (30 Ft each side)	60
278+32 R	Inlet End of Pipe	18
285+32 L/R	Inlet and Outlet ends of pipe (60 Ft each end)	120
291+05-59' L	Inlet End of Pipe	18
291+05-65' R	Inlet End of Pipe	18
296+33 L	Inlet End of Pipe	18
311+31 L	Inlet End of Pipe	18
316+25 L	Across ditch at Inlet end of pipe (30 Ft each side)	60
319+00 L	Across ditch at Inlet end of pipe (30 Ft each side)	60
335+00-46' R	Inlet End of Pipe	18
342+21 L/R	Inlet and Outlet ends of pipe (100 Ft each end)	200
358+68 R	Inlet End of Pipe	18
360+56-68' L	Inlet End of Pipe	18
378+31 L	Across ditch at Inlet end of pipe (30 Ft each side)	60
384+76 L/R	Inlet and Outlet ends of pipe (100 Ft each end)	200
395+27 L	Inlet End of Pipe	18
407+06 L/R	Inlet and Outlet ends of pipe (100 Ft each end)	200
423+62-49' L	Across ditch at Inlet end of pipe (30 Ft each side)	60
423+62-49' R	Inlet End of Pipe	18
424+84 L	Across ditch at Inlet end of pipe (30 Ft each side)	60
436+40-49' L	Across ditch at Inlet end of pipe (30 Ft each side)	60
436+40-49' R	Inlet End of Pipe	18
441+00-47' L	Inlet End of Pipe	18
448+23 L/R	Across ditch at Inlet end of pipe (60 Ft each end)	120
456+27 L/R	Inlet and Outlet ends of pipe (100 Ft each end)	200
463+06-49' L	Inlet End of Pipe	18
475+70 L	Across ditch at Inlet end of pipe (30 Ft each side)	60
	Additional Quantity:	360

Total:

3922

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Floating silt curtains will be installed at locations noted in the table and at locations determined by the Engineer during construction.

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The Contractor will determine the water depth and other waterway characteristics such as stream flow velocity and seek technical advice from the manufacturer before ordering the floating silt curtain so that the floating silt curtain installed is the correct type for the individual sites.

The Contractor will install the floating silt curtain in accordance with the manufacturer's installation instructions or as directed by the Engineer.

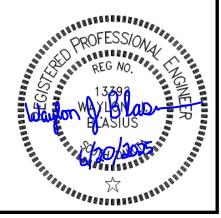
The Contractor will maintain the floating silt curtains for the duration of the project to ensure continuous protection of the waterway.

The Floating Silt Curtain provided will be from the approved product list. The approved product list may be viewed at the following internet site:

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

#### **TABLE OF FLOATING SILT CURTAIN**

Station	Location		Quantity (Ft)
147+00 to 161+00 R	Protect Lake		1400
149+00 to 159+00 L	Protect Lake		1000
184+00 to 212+00 L	Protect Lake		2800
186+50 to 211+50 R	Protect Lake		2500
318+00 to 326+00 R	Protect Lake		800
15+50 to 21+00 L (xr317)	Protect Lake		550
18+00 to 21+00 R (xr317)	Protect Lake	_	300
_		Total:	9350



#### **EROSION CONTROL BLANKET**

Erosion control blanket will be installed 16 feet wide 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

An additional quantity of Type 3 Erosion Control Blanket has been added to the Estimate of Quantities for temporary erosion control.

#### TABLE OF EROSION CONTROL BLANKET

			Quantity
Station	Location	Type	(SqYd)
213+00 to 214+50 R	Ditch	3	270
214+75 to 220+75 L	Ditch	3	1080
222+00 to 224+00 L	Ditch	3	360
294+50 to 295+50 L	Ditch	3	180
296+50 to 297+50 L	Ditch	3	180
311+50 to 315+50 L	Ditch	3	720
404+50 to 405+50 R	Ditch	3	180
408+75 to 410+50 R	Ditch	3	315
409+50 to 410+50 L	Ditch	3	180
	Additional Quantity:	3	350

Total Type 3 Erosion Control Blanket: 3815

#### SHAPING FOR EROSION CONTROL BLANKET

The ditches will be shaped for the erosion control blanket as specified on Standard Plate 734.01.

#### **CONSTRUCTION ENTRANCE**

The Contractor will install a Construction Entrance at locations where there is a potential for mud tracking and sediment flow from the construction site and work area onto a paved public roadway.

It is the Contractor's option to use the SDDOT Construction Entrance (See SDDOT Construction Entrance notes and details), a product from the list provided in these notes, or other products or processes as approved by the Engineer during construction.

If the Contractor elects to use one of the products listed in the table, then the Contractor will install the construction entrance product in accordance with the manufacturer's installation instructions or as directed by the Engineer.

The Contractor will maintain the construction entrance such that mud tracking and sediment flow will not enter the roadway or adjacent drainage areas. The construction entrance will be routinely inspected, and the Contractor will repair or replace material as deemed necessary by the Engineer.

All costs for furnishing, installing, maintaining, and removal of the construction BIDDING PURPOSES ONL entrance including equipment, labor, materials, and incidentals will be included in the contract unit price per each for "Construction Entrance".

The Construction Entrance provided will be from the approved product list. The approved product list may be viewed at the following internet site:

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

#### SDDOT CONSTRUCTION ENTRANCE

If the SDDOT Construction Entrance is utilized, then the Contractor will install the SDDOT Construction Entrance in accordance with these notes and the detail drawings.

Pit run material will be obtained from a granular source and will conform to the following gradation:

Sieve Size	Percent Passing
6"	100%
#4	0-60%
#200	0-20%

The pit run material will be compacted to the satisfaction of the Engineer.

The aggregate for the granular material will conform to the following gradation requirements:

Sieve Size	Percent Passing
3"	100%
2 ½"	90-100%
1 ½"	25-60%
3/4"	0-10%
1/2"	0-5%

The granular material will be placed in 6" maximum lifts.

It is anticipated that the granular material will need to be periodically removed and replaced as it becomes inundated with mud and sediment.

The Reinforcement Fabric (MSE) will be in conformance with Section 831 of the Specifications. The Reinforcement Fabric (MSE) will be on the Approved Products List for this material or will be certified by the supplier to meet this specification prior to installation.

The Reinforcement Fabric (MSE) should be kept as taut as possible prior to placing.

Equipment will not be allowed on the Reinforcement Fabric (MSE) until the first lift of granular material is in place.

All seams in the Reinforcement Fabric (MSE) will be overlapped at least 2' and shingled.

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#### **DUST CONTROL**

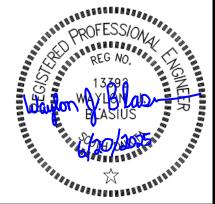
The application and maintenance of Dust Control products are to be utilized on exposed soil surfaces to provide temporary stabilization and prevent or minimize the creation or movement of fugitive dust generated during construction.

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Dust Control will be used at locations determined by the Engineer during construction.

The Dust Control products provided will be from the approved products list. The approved products list may be viewed at the following internet site:

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



#### STORMWATER POLLUTION PREVENTION PLAN CHECKLIST

(The numbers left of the title headings are **reference numbers** to the <u>GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED</u> 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 224 Acres
- > 5.3 (3b): Total Area to be Disturbed 127 Acres
- > 5.3 (3c): Maximum Area Disturbed at One Time25.4 Acres
- > 5.3 (3d): Existing Vegetative Cover (%) 85%
- > 5.3 (3d): Description of Vegetative CoverTypical Eastern SD native and introduced roadside vegetation
- > 5.3 (3e): Soil Properties: AASHTO Soil or USDA-NRCS Soil Series Classification Loams. silty clay loams
- > 5.3 (3f): Name of Receiving Water Body/Bodies Mankey Slough
- > 5.3 (3g): Location of Construction Support Activity Areas

#### 5.3 (3h): ORDER OF CONSTRUCTION ACTIVITIES

> Special sequencing requirements (See Section C). The Contractor will enter the Estimated Start Date.

Description	Estimated Start Date
Install stabilized construction entrance(s).	
Install perimeter protection where runoff may exit site.	
Install perimeter protection around stockpiles.	
Install channel and ditch bottom protection.	
Clearing and grubbing.	
Remove and stockpile topsoil.	
Stabilize disturbed areas.	
Install utilities, storm sewers, curb and gutter.	
Install inlet and culvert protection after completing storm drainage and other utility installations.	
Final grading.	
Final paving.	
Removal of protection devices.	
Reseed areas disturbed by removal activities.	

### REVISED 09-09-2025 WJB 5.3 (5): DESCRIPTION AND MAINTENANCE OF CONTROL MEASURES R BIDDING PURPOSES ONL

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**

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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:	

#### **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 I fyes, 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 SDDOT Project Engineer and Contractor's Erosion Control Supervisor are responsible for inspections. Maintenance and repair activities are the responsibility of the Contractor. The SDDOT 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 R BIDDING PURPOSES ONLY DAKOTA 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.

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- 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 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 Cemen
	☐ Detergents
$\triangleright$	□ Paints
	□ Petroleum Based Products
	□ Diesel Exhaust Fluid
	☐ Cleaning Solvents
	☐ Wood
	☐ Cure
$\triangleright$	☐ Texture
	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.
$\triangleright$	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.

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

7.0: SPILL NOTIFICATION

- 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.

#### > South Dakota 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.

IN pain (

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	

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

#### > Contractor Information:

**CONTACT INFORMATION** 

•	Prime Contractor Name:		
•	Contractor Contact Name: _		<del></del>
•	Address:		_
			<del></del>
	City:		 Zip:
		State:	

#### **Erosion Control Supervisor**

<ul><li>Name:</li></ul>		<del></del>
Address:		
•		
• City:	State:	Zip:

#### > SDDOT Project Engineer

•	Name:	····	
•	Business Address:		
•	Job Office Location:		
•	City:	State:	Zip:
•	Office Phone:	Field:	

Fax: \_\_\_\_

Office Phone: Field: \_\_\_\_\_

Cell Phone: Fax:

#### > SDDANR Contact Spill Reporting

Cell Phone:

- 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
- 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.

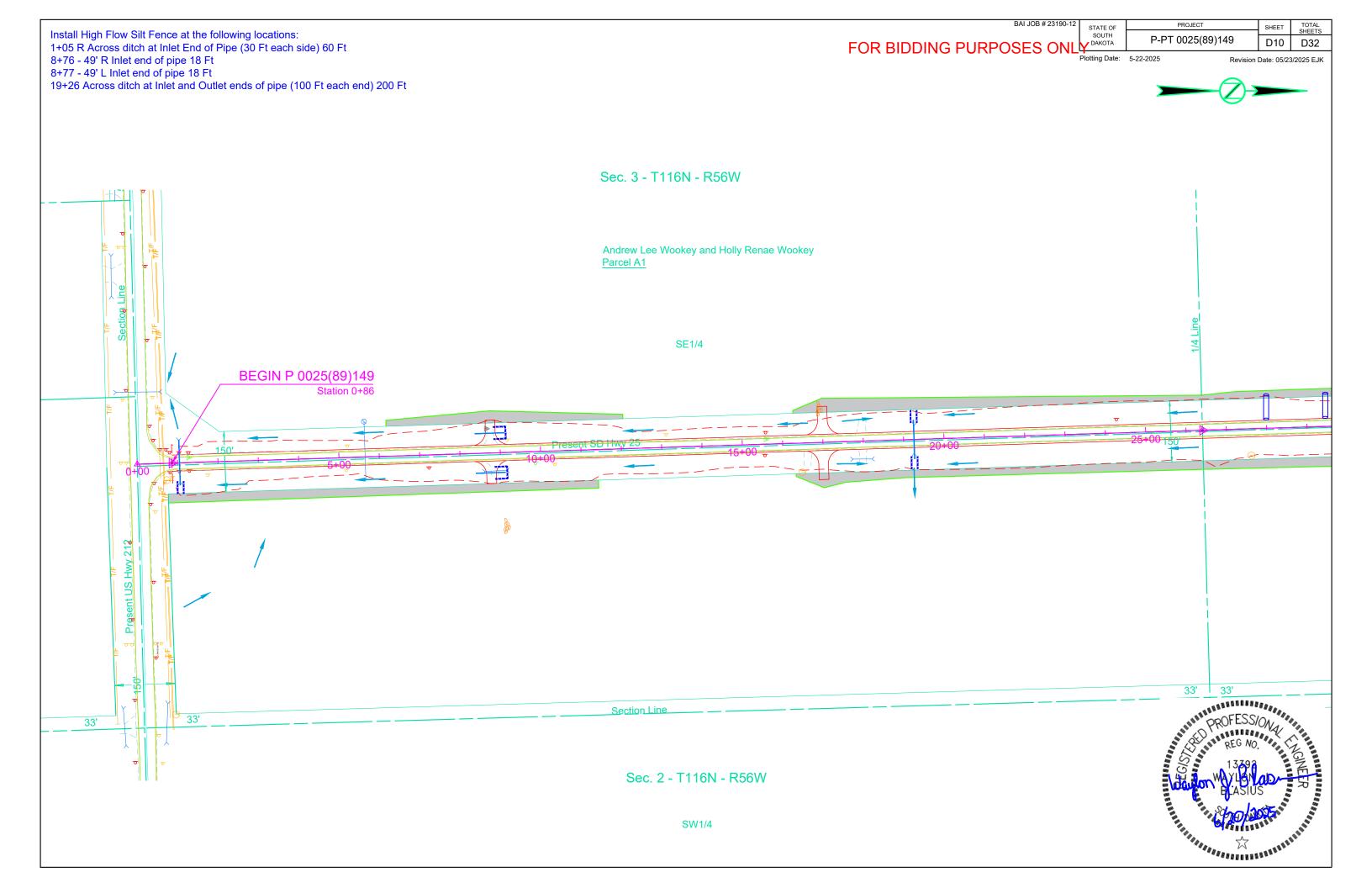
#### > 5.5 (4): Certification Requirements

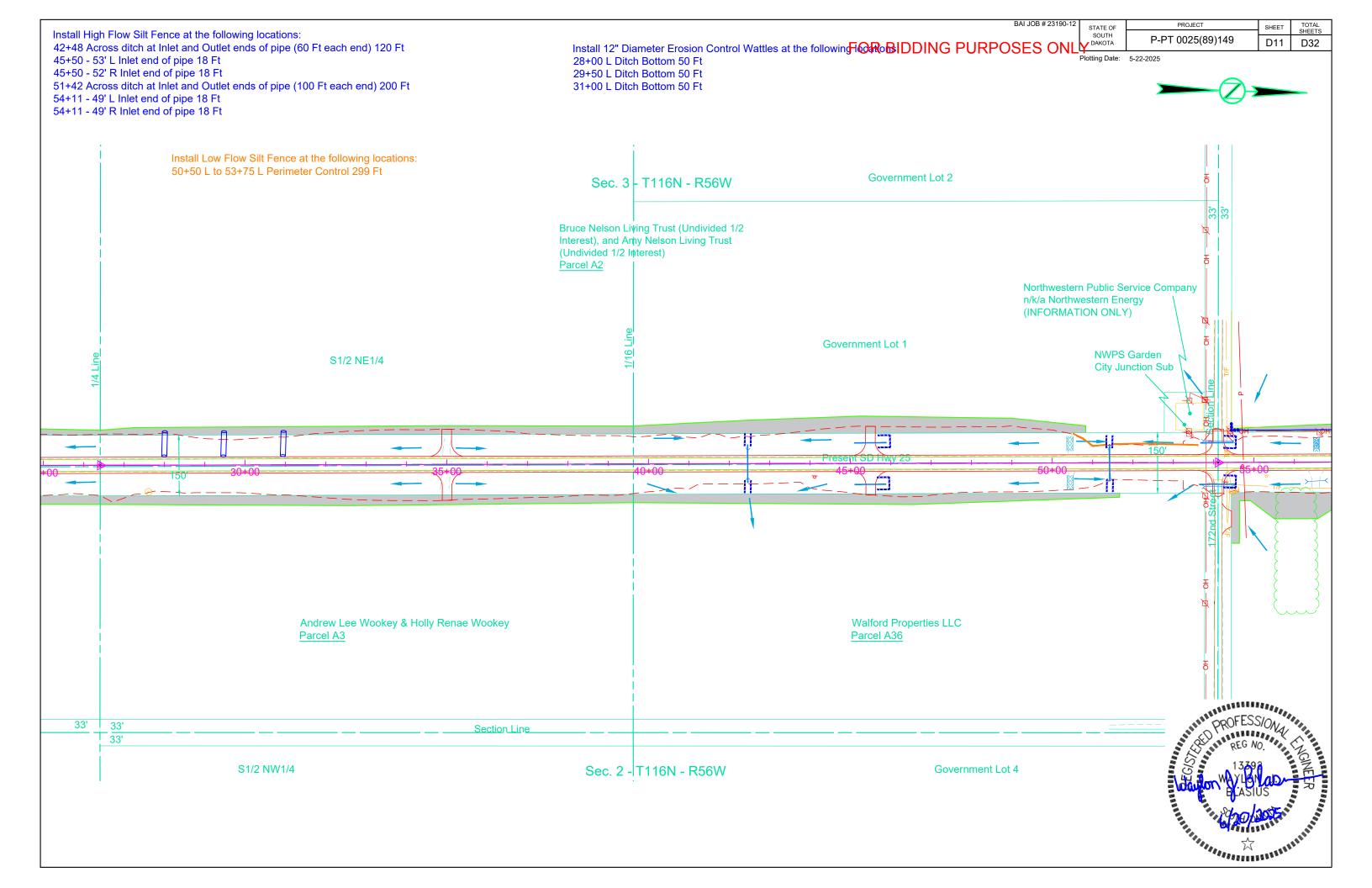
All modifications made to the SWPPP must be signed and certified as required in Section 7.4.

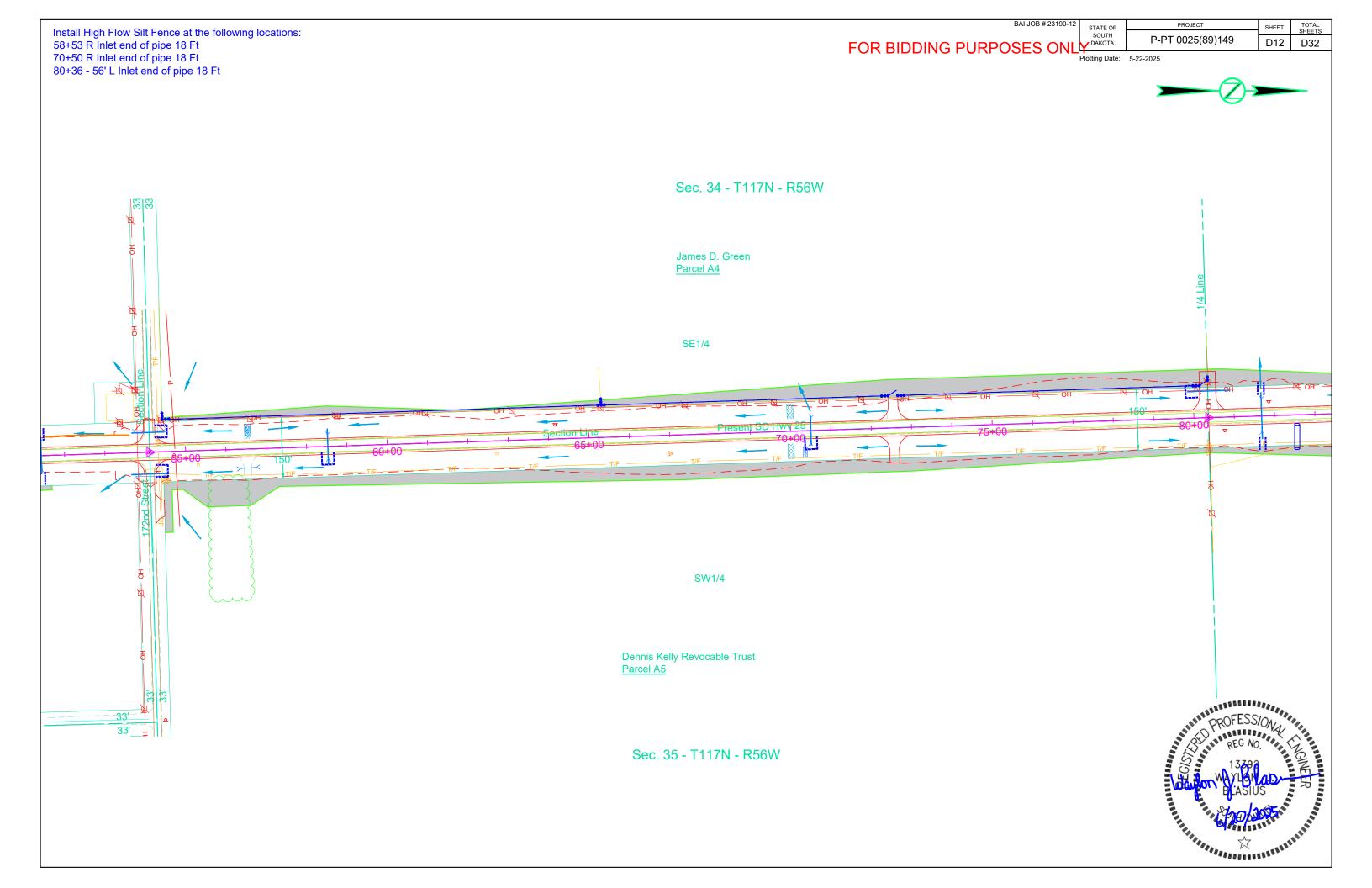
#### > 5.5 (5): Required Notice to Other Operators

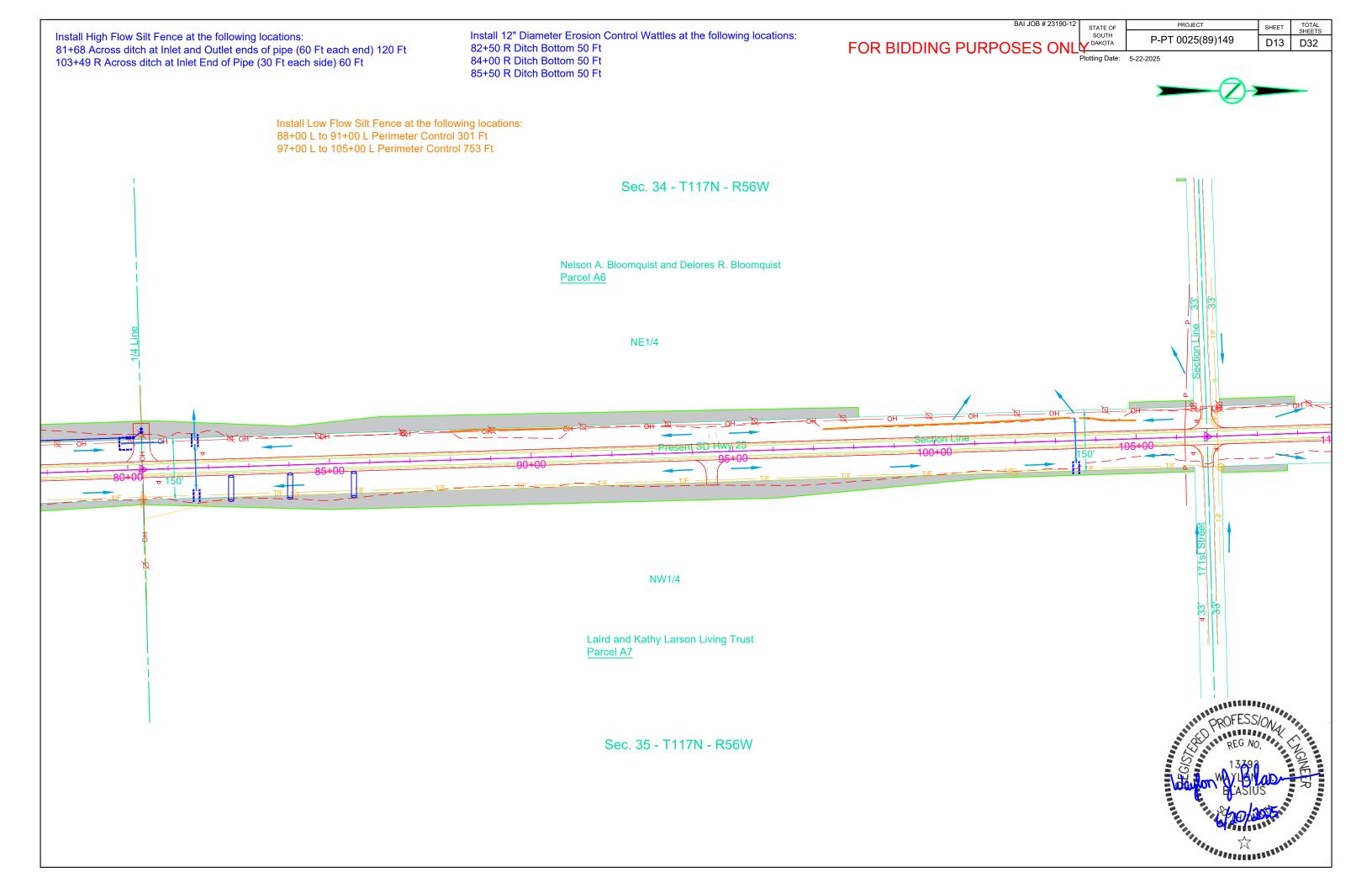
If there are multiple operators at the site, the Contractor's Erosion Control Supervisor must notify each operator that may be impacted by the change to the SWPPP within 24 hours.

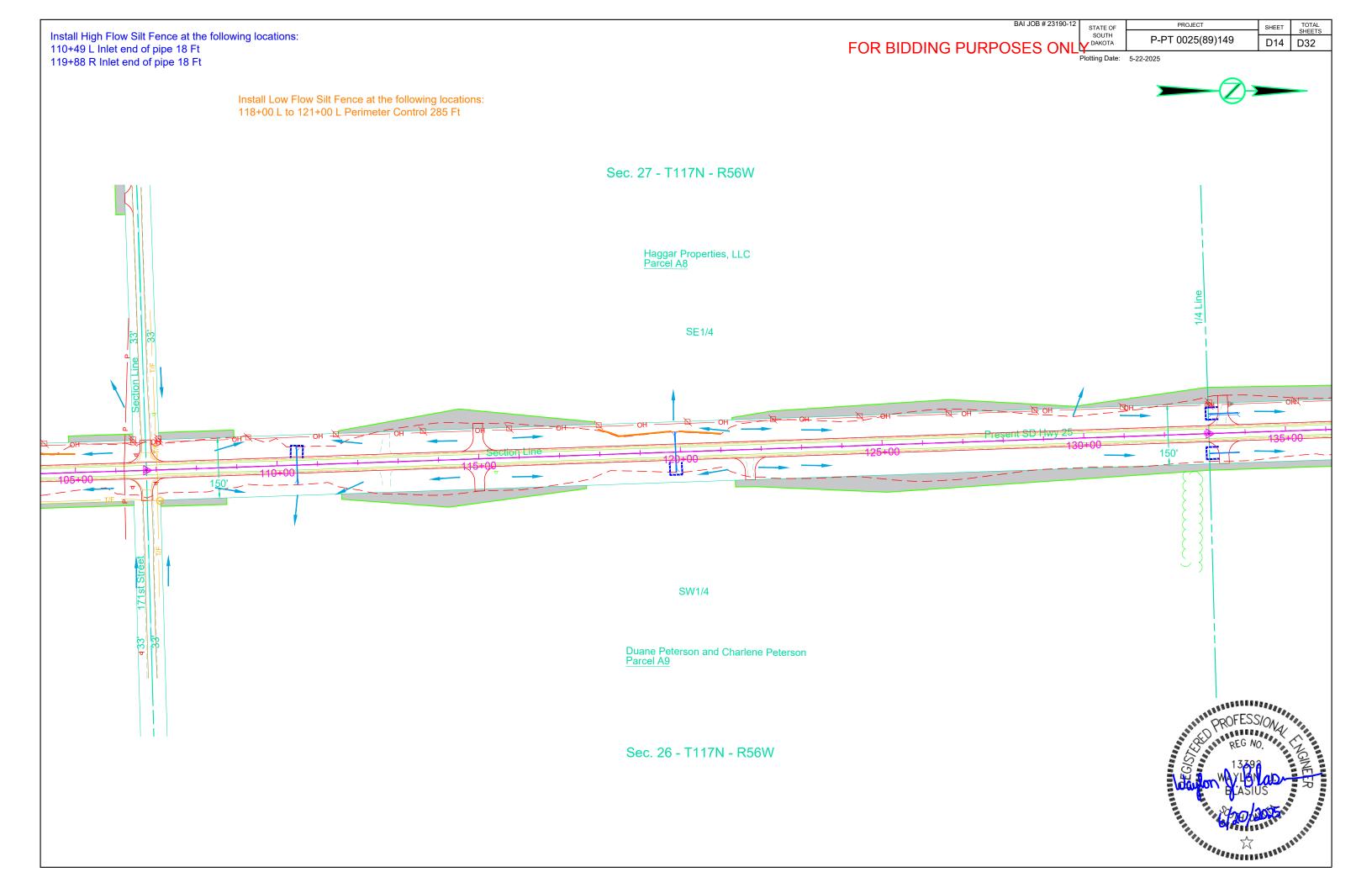
When modifications as described above occur, the SWPPP will be modified to provide appropriate protection to disturbed areas, all storm water structures, and adjacent waters. The SDDOT Project Engineer will modify the SWPPP using the DOT 298 form and drawings on the plan will be modified to reflect the 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.

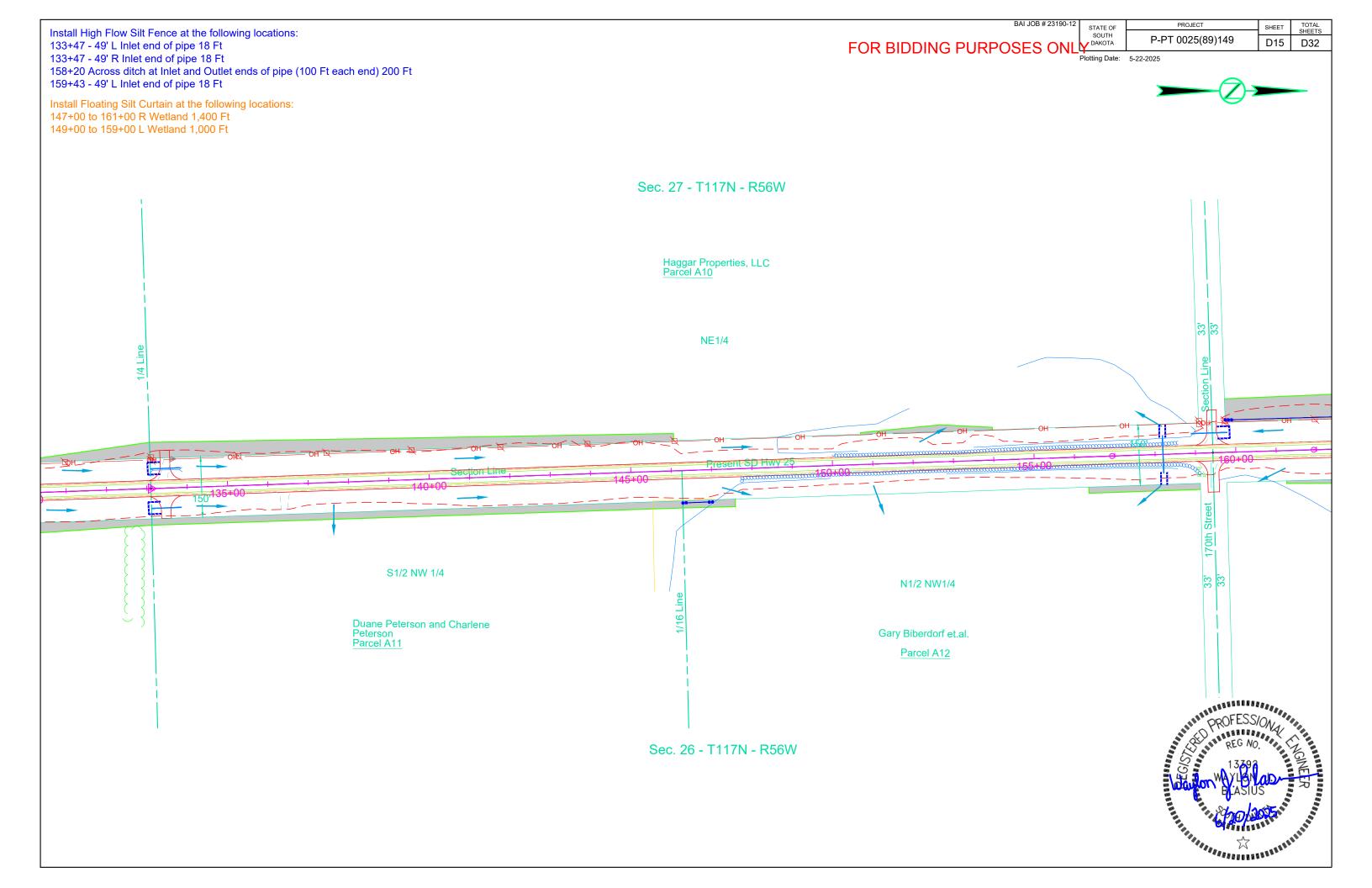


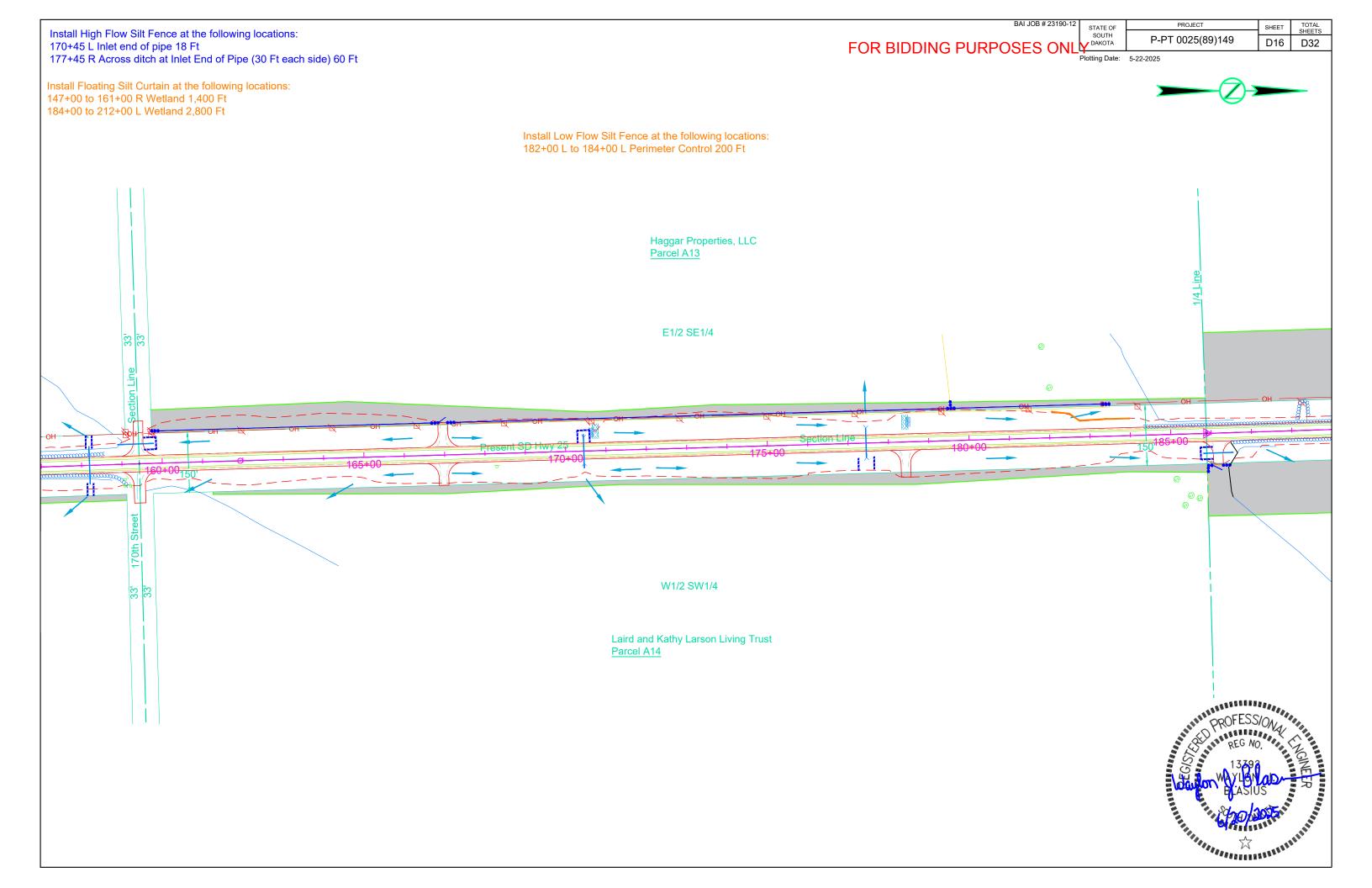


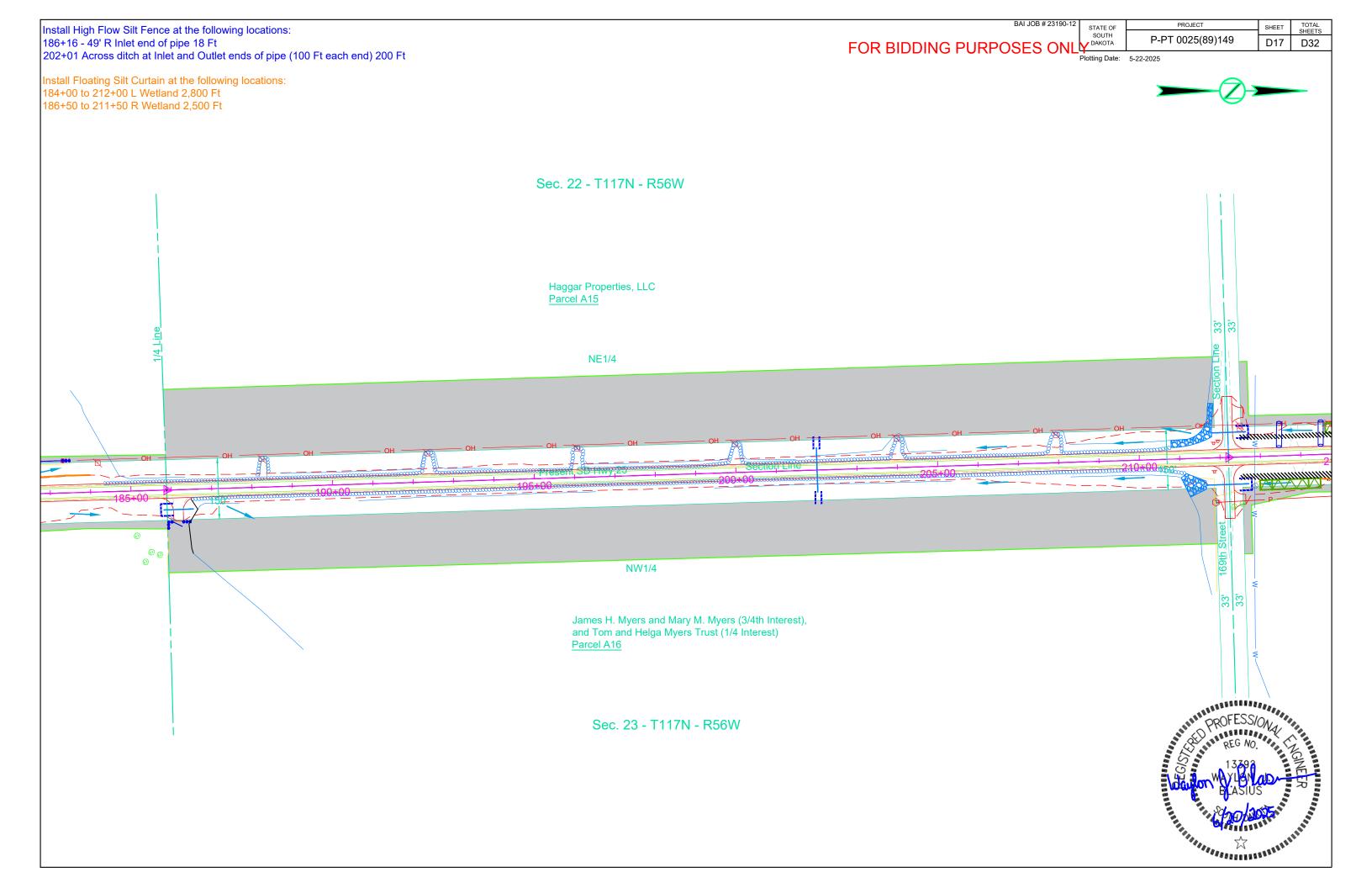


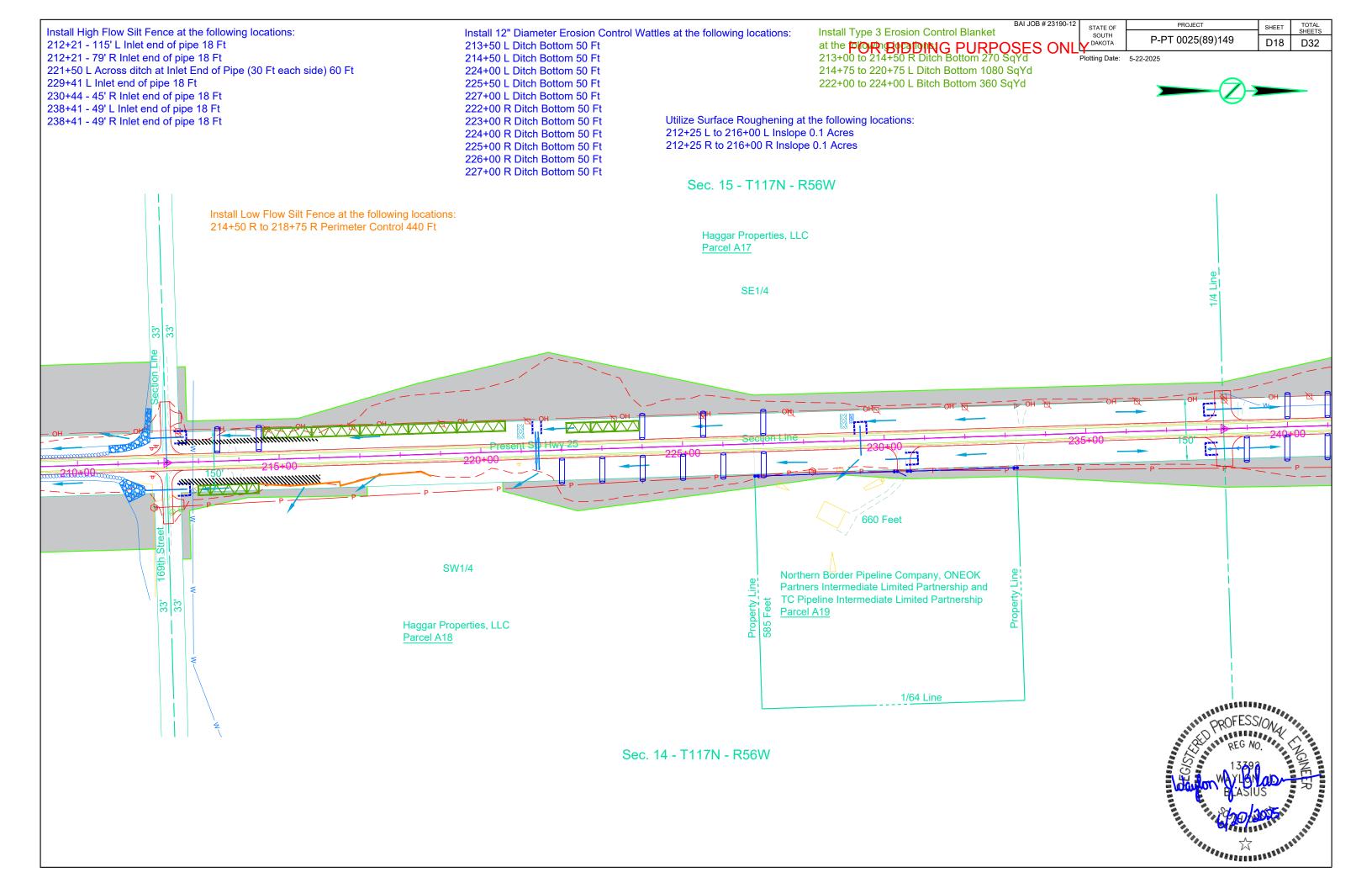


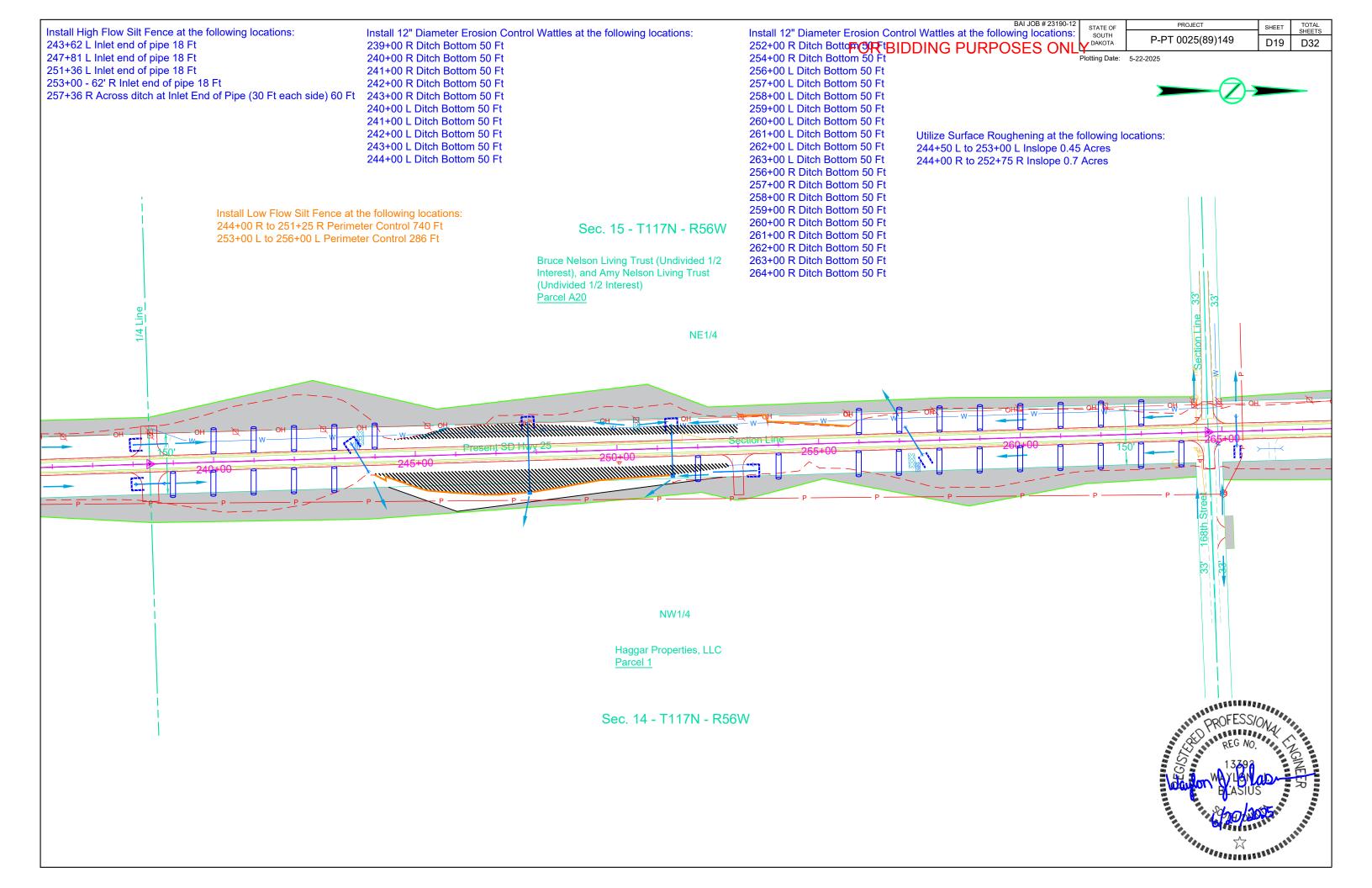


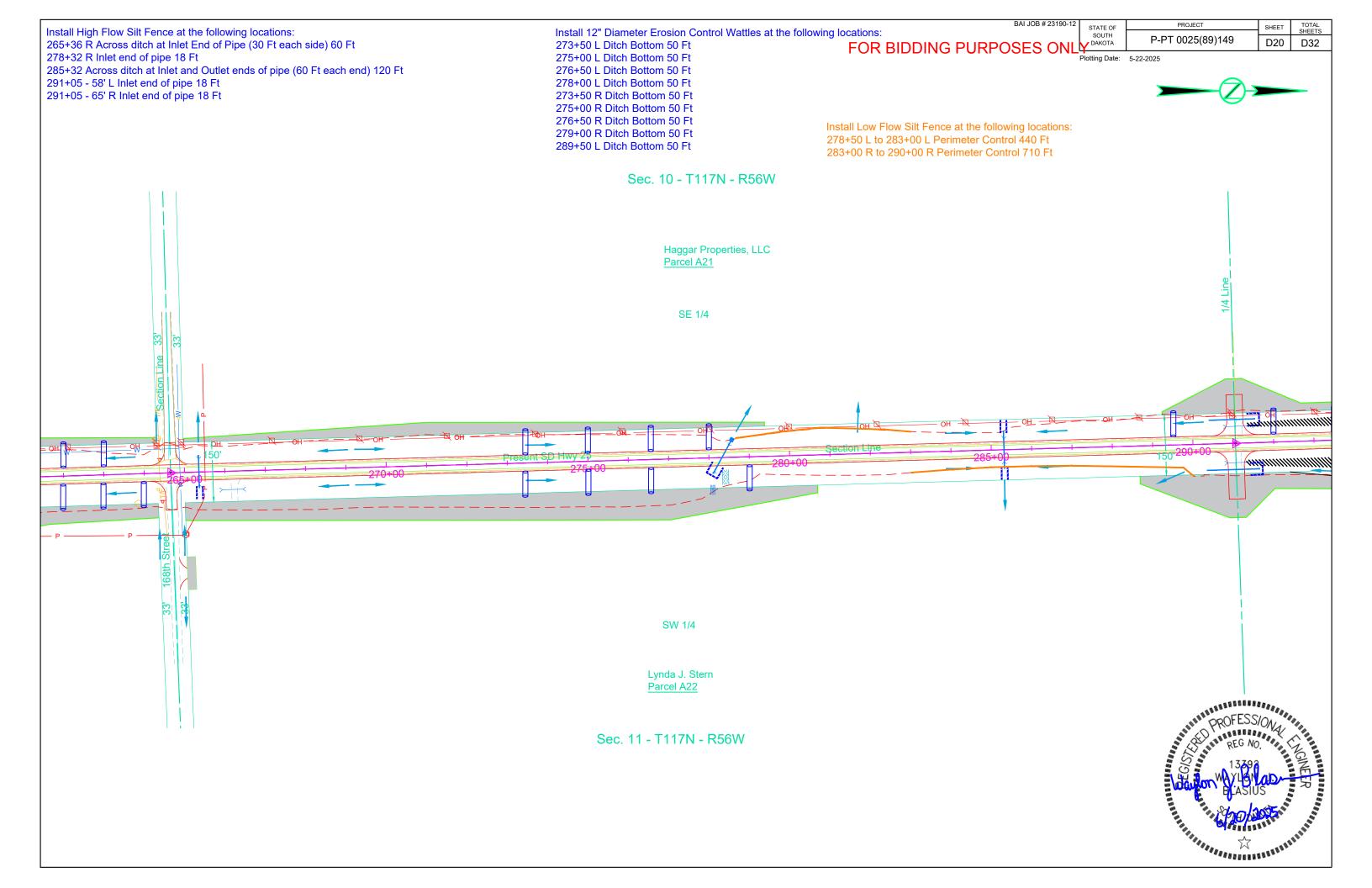


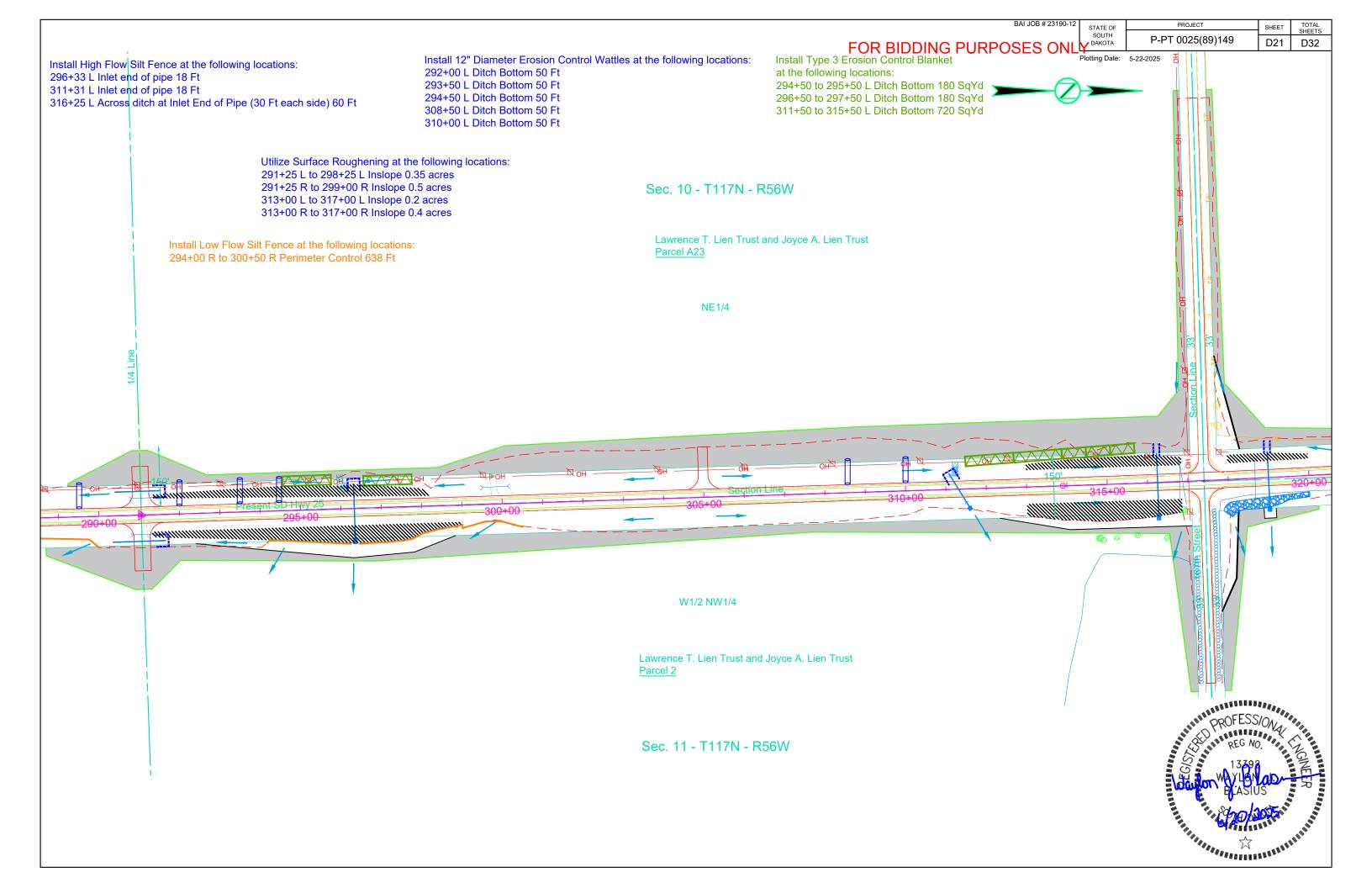


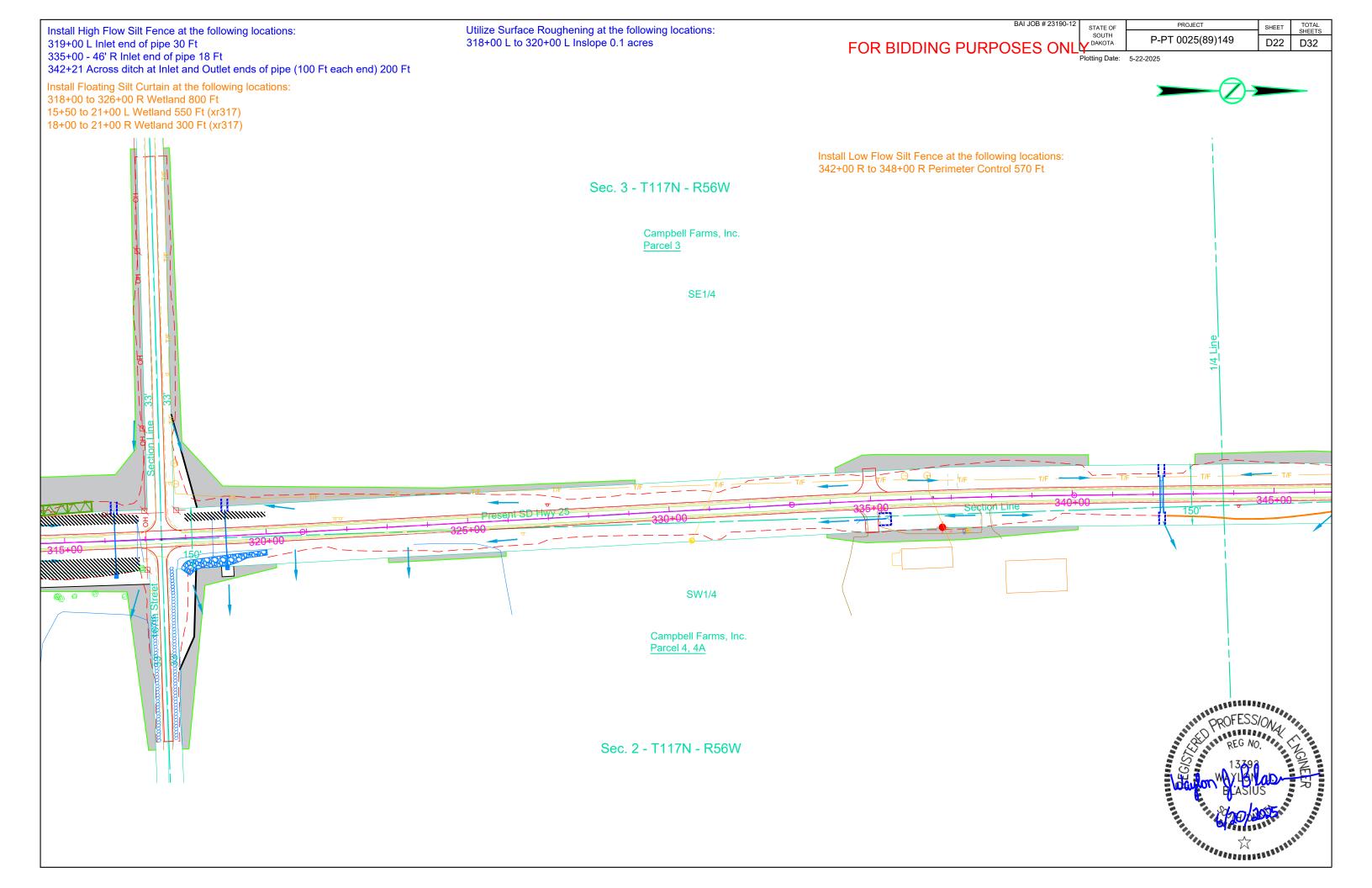


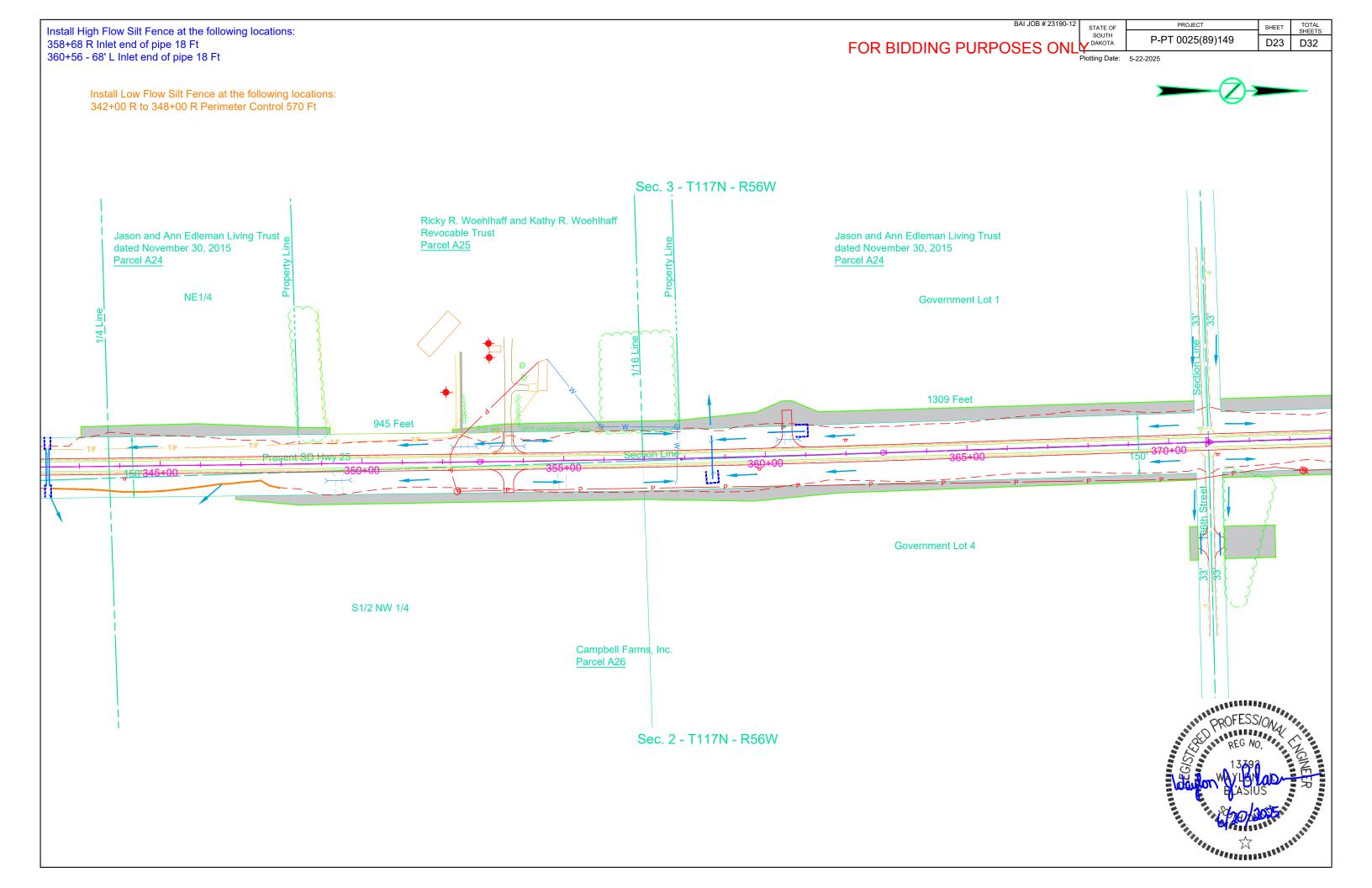


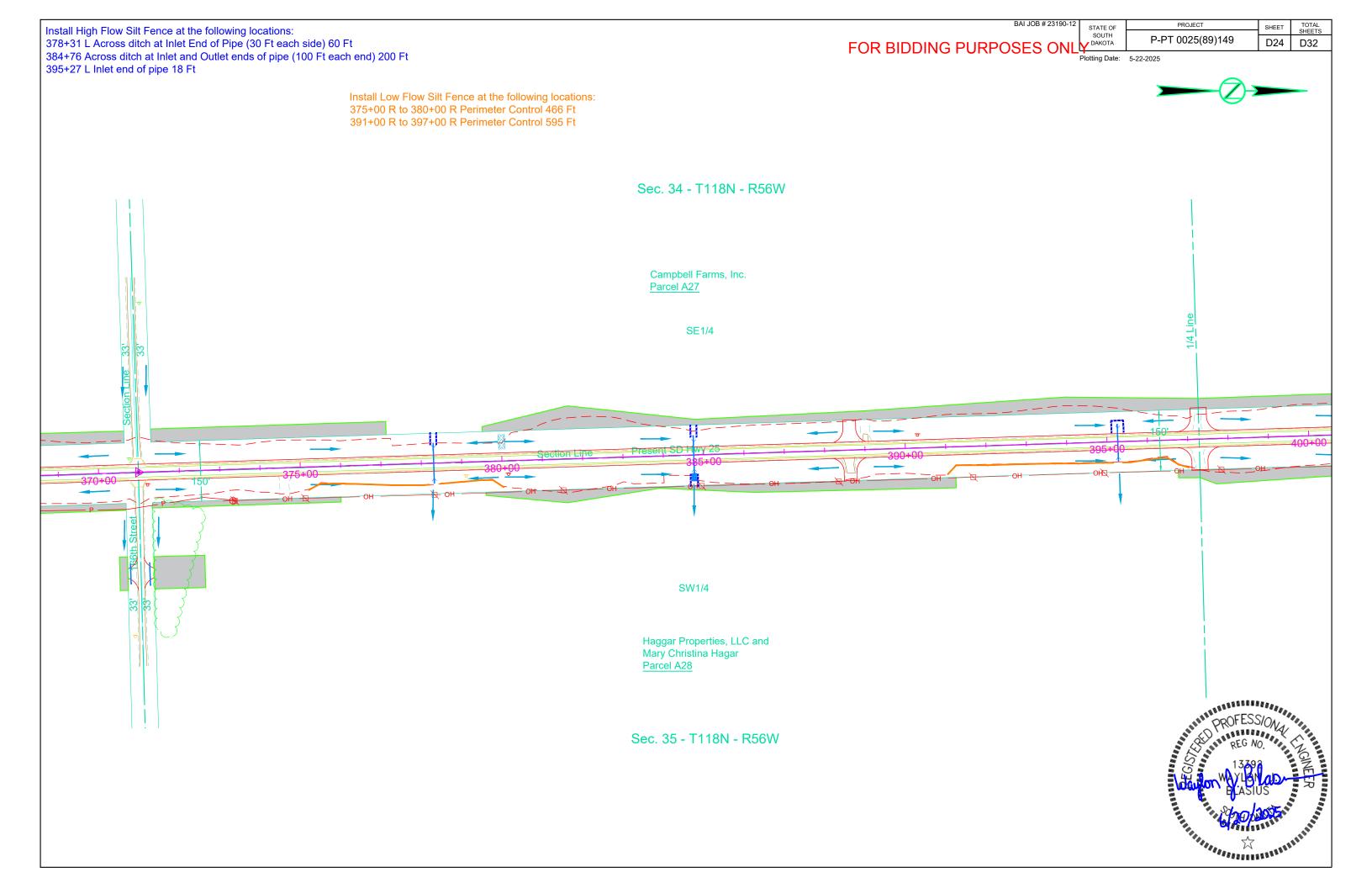


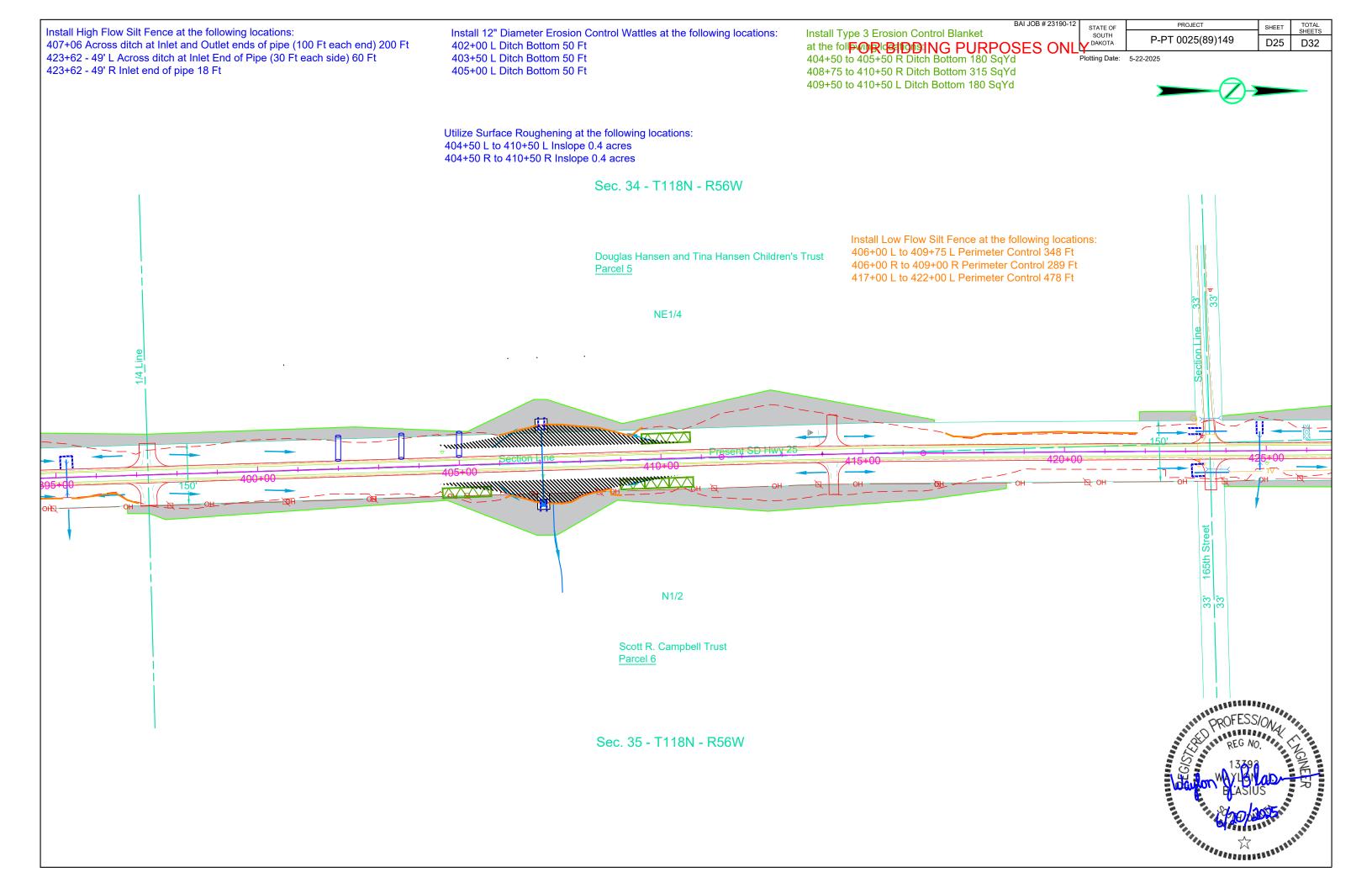


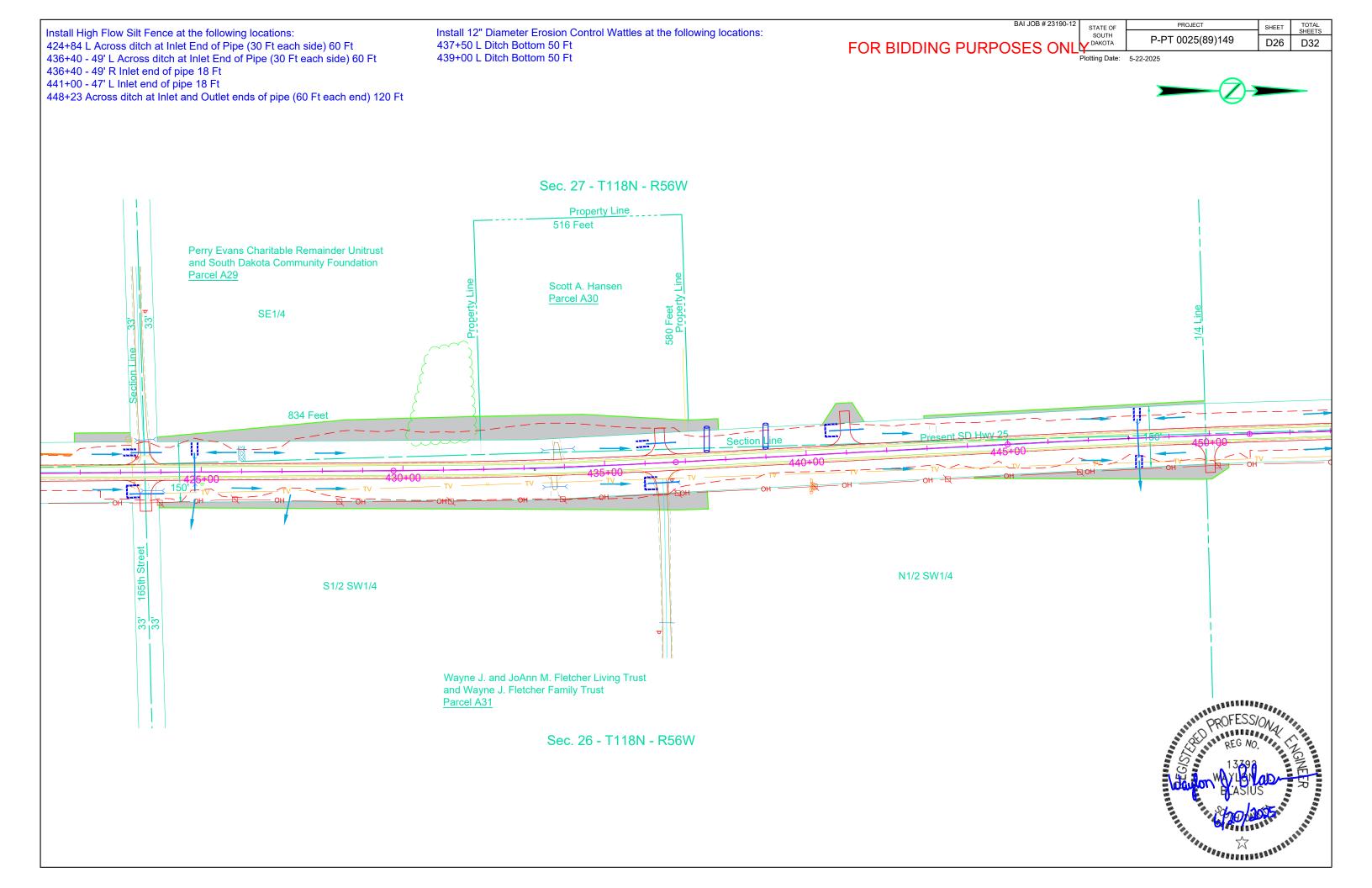


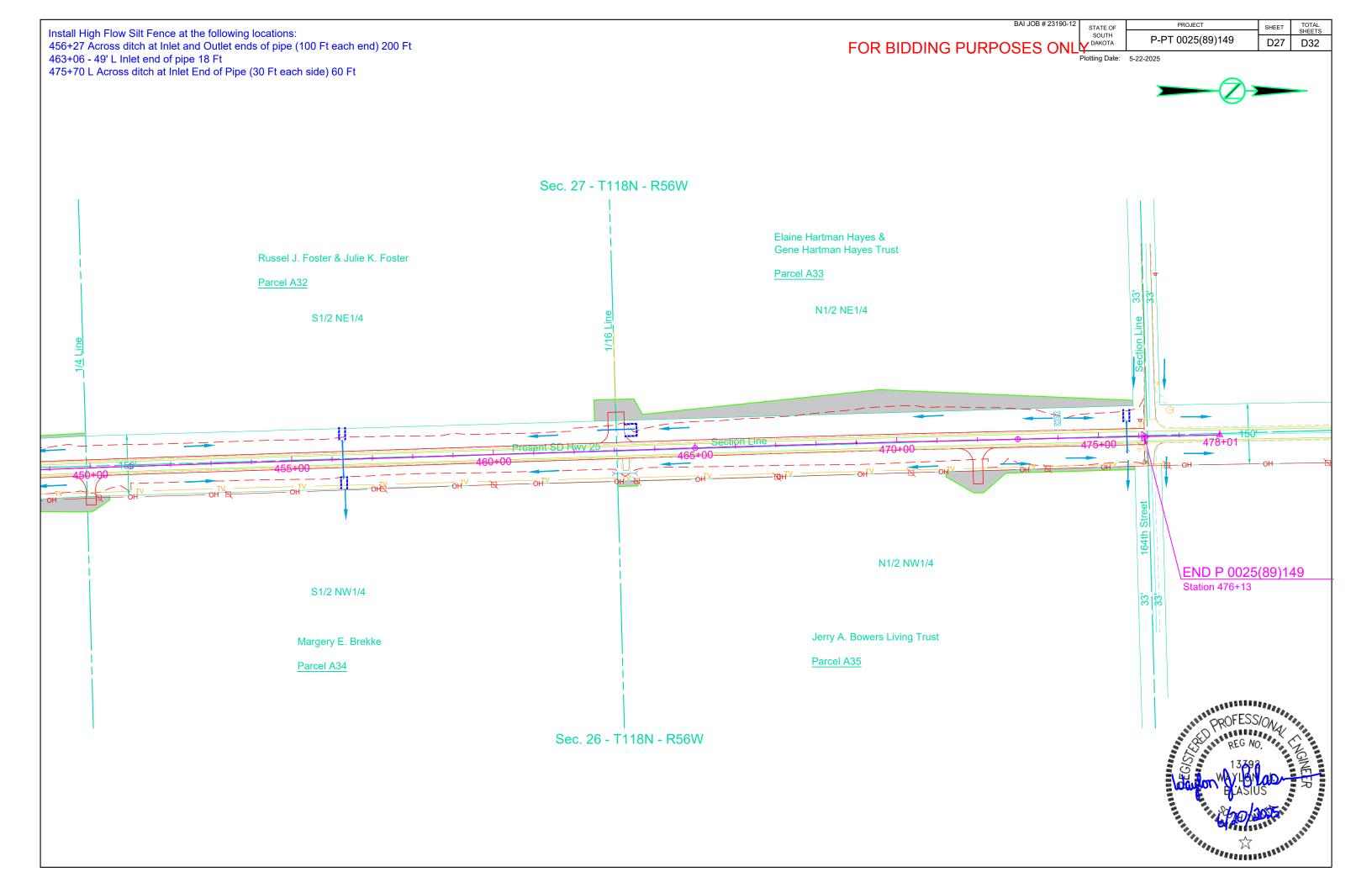


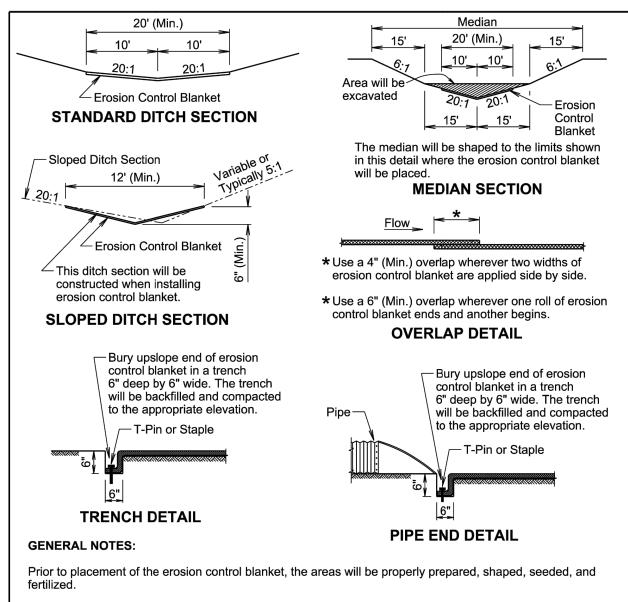












Erosion control blanket will be unrolled in the direction of the flow of water when placed in ditches and on slopes. The upslope end of the erosion control blanket will be buried in a trench 6" wide by 6" deep. There will be at least a 6" overlap wherever one roll of erosion control blanket ends and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

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	D	EROSION CONTROL BLANKET	734.01
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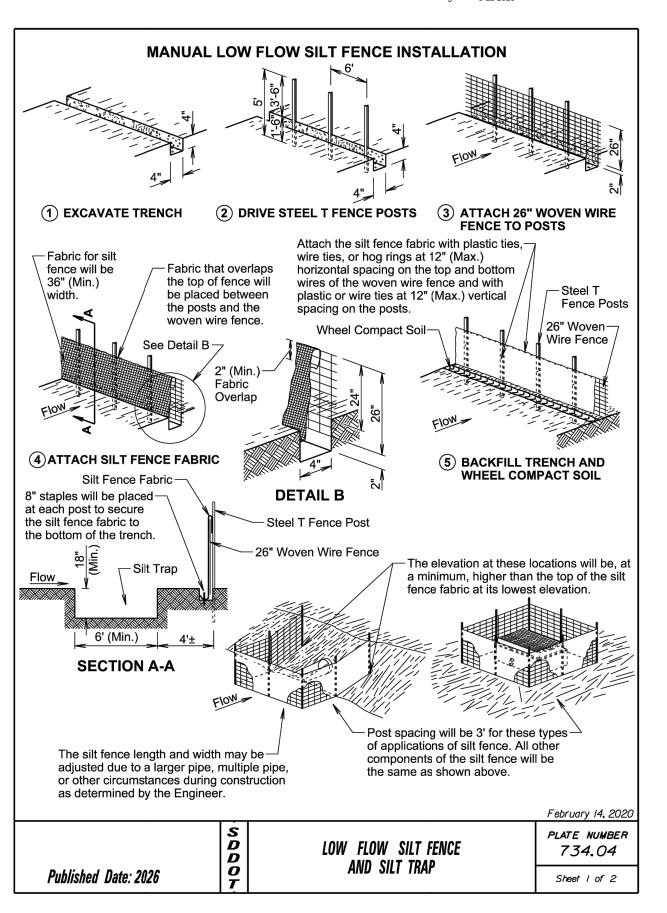
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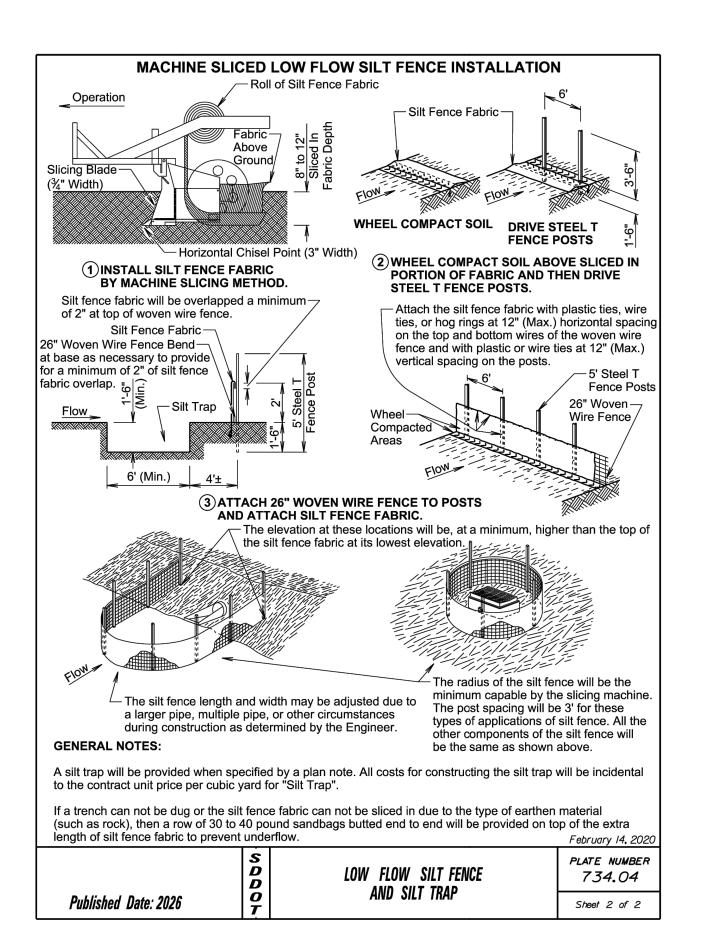
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Plotting Date: 5-22-2025





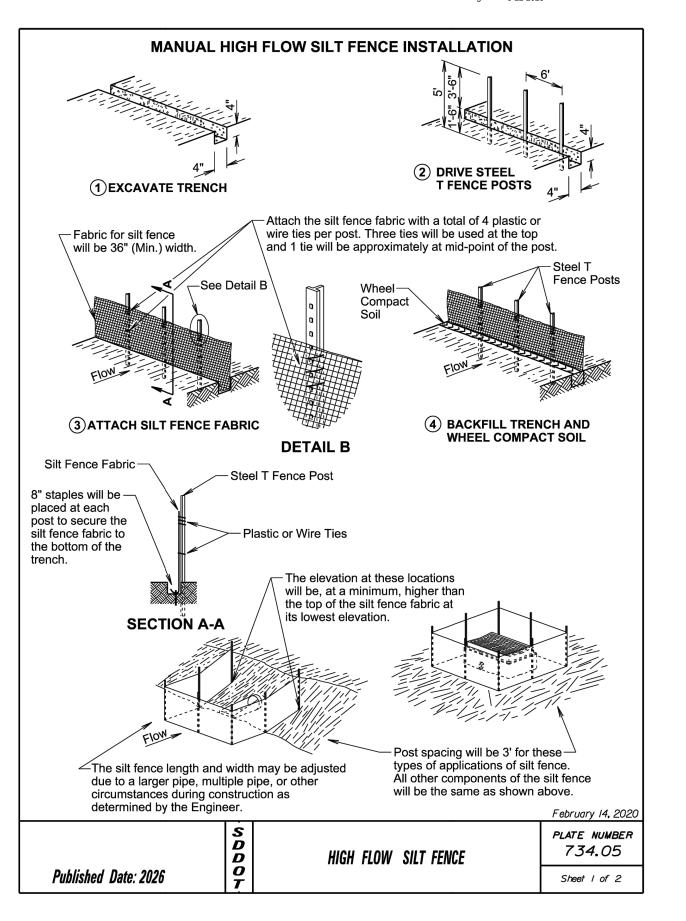
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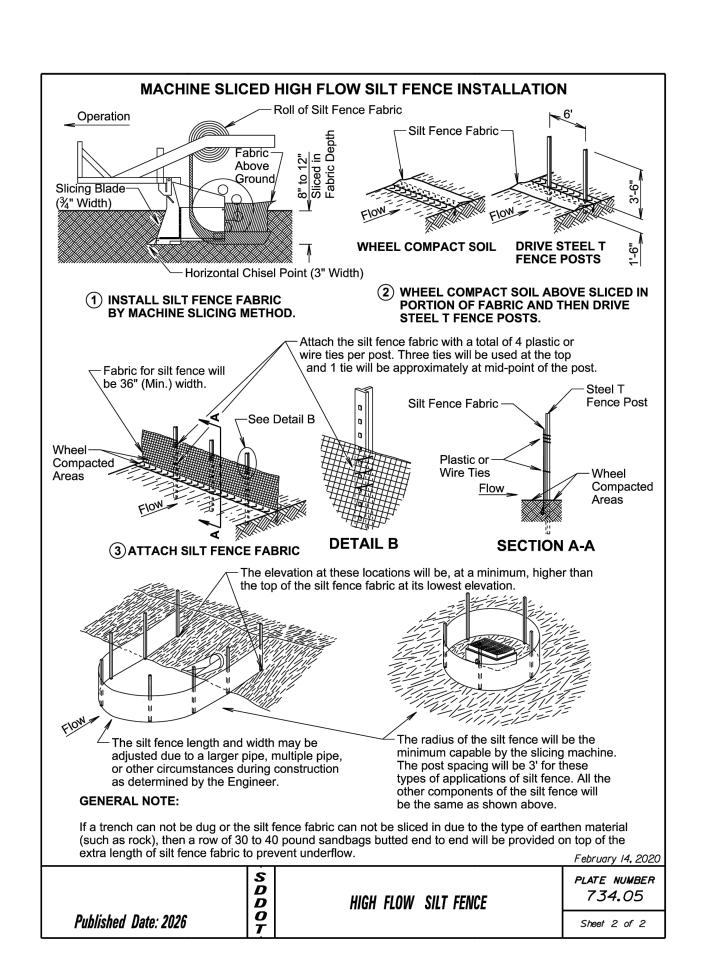
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Plotting Date: 5-22-2025





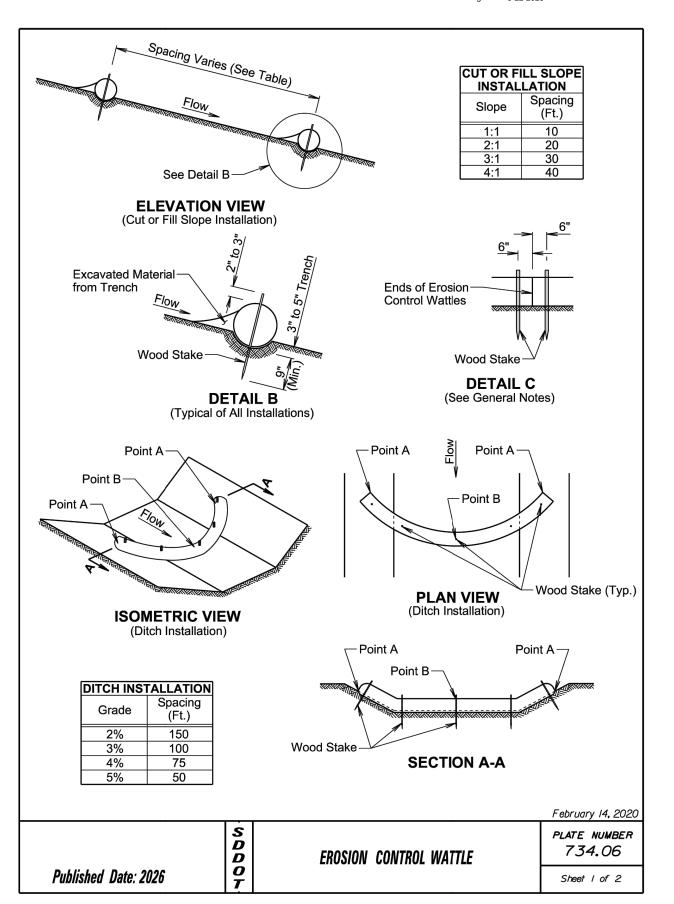
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Plotting Date: 5-22-2025



#### **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".

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EROSION CONTROL WATTLE

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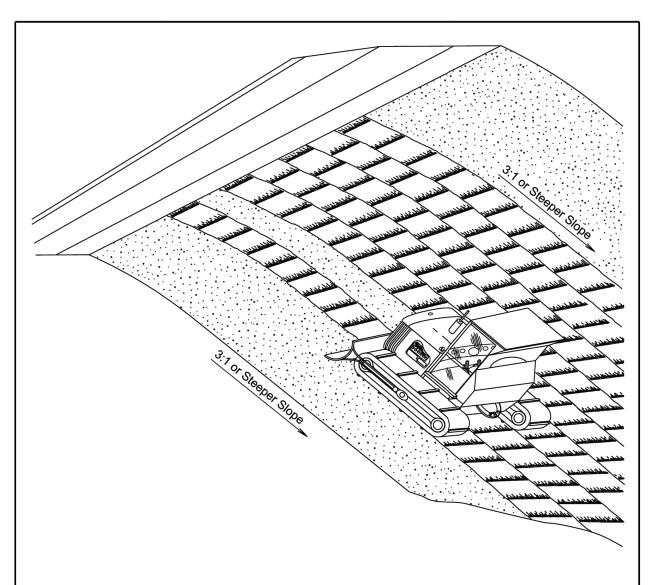
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P-PT 0025(89)149

SHEET TOTAL SHEETS

D31 D32

Plotting Date: 5-22-2025



#### **GENERAL NOTES:**

Where practical, surface roughening will be done on slopes 3:1 and steeper and on slopes deemed necessary by the Engineer.

The equipment used for surface roughening will be equipped with tracks that are capable of creating ridges in the soil that are perpendicular to the slope. The final condition of the surface roughening will be approved by the Engineer.

Measurement for surface roughening will be to the nearest tenth of an acre.

All costs associated with surface roughening including labor, equipment, and materials will be incidental to the contract unit price per acre for "Surface Roughening".

February 14, 2020

	S D D	SURFACE ROUGHENING	PLATE NUMBER 734.25
Published Date: 2026			Sheet I of I

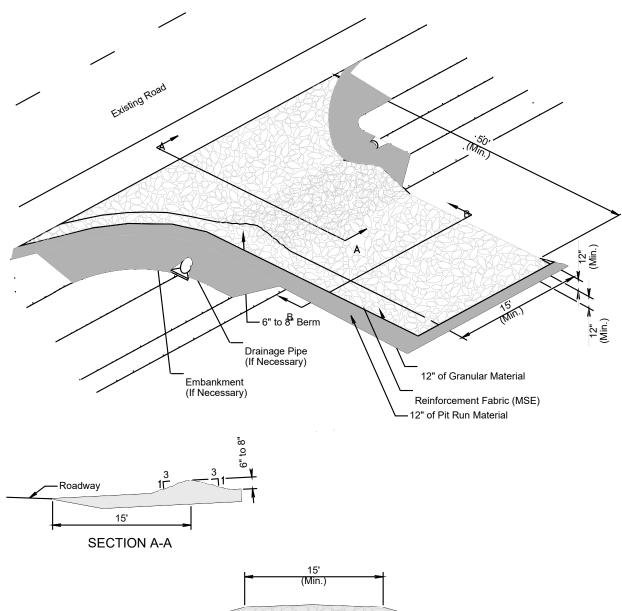
STATE OF SOUTH DAKOTA

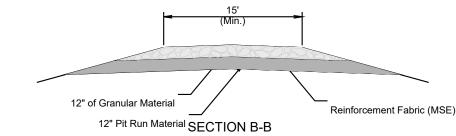
Plotting Date: 5-22-2025

PROJECT P-PT 0025(89)149

TOTAL SHEETS D32 D32

**SDDOT CONSTRUCTION ENTRANCE** 



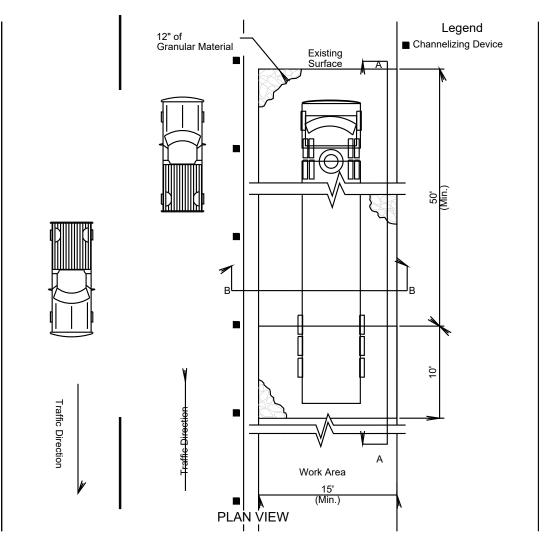


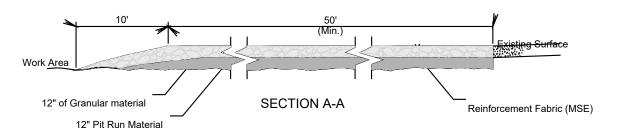
#### **GENERAL NOTES:**

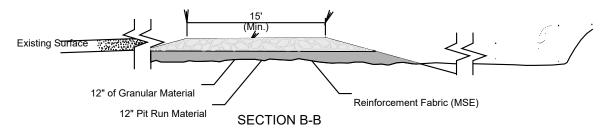
If the grade of the entrance slopes down to the roadway, a berm of extra rock shall be used to prevent sediment or mud from being deposited on the roadway.

If a drainage pipe is necessary the size and type shall be determined by the Contractor to meet field conditions. All cost shall be incidental to the various contract items. If embankment is necessary it shall be pit run material.

TRANSVERSE TO ROADWAY







PARALLEL TO ROADWAY