

# SECTION D: EROSION AND SEDIMENT CONTROL PLANS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 1806(23)186	D1	D18

Plotting Date: 9/19/2023

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Plot Scale: 1:194,118  
Plotted From: ienbrassfield

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Revised 4/25/24 EJW

**SECTION D ESTIMATE OF QUANTITIES**

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
110E1690	Remove Sediment	2.3	CuYd
230E0010	Placing Topsoil	26,936	CuYd
730E0100	Cover Crop Seeding	30.0	Bu
730E0210	Type F Permanent Seed Mixture	1,843	Lb
732E0100	Mulching	152.6	Ton
734E0102	Type 2 Erosion Control Blanket	14,342	SqYd
734E0132	Type 2 Turf Reinforcement Mat	200.0	SqYd
734E0154	12" Diameter Erosion Control Wattle	985	Ft
734E0165	Remove and Reset Erosion Control Wattle	246	Ft
734E0510	Shaping for Erosion Control Blanket	1,265	Ft
734E0604	High Flow Silt Fence	2,224	Ft
734E0610	Mucking Silt Fence	124	CuYd
734E0620	Repair Silt Fence	446	Ft

**PLACING TOPSOIL**

The thickness will be approximately 3 inches within the right-of-way and 6 inches on temporary easements.

Payment for Placing Topsoil will be plans quantity at the contract unit price per cubic yard for "Placing Topsoil".

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

MRM	Location to MRM	Topsoil (CuYd)
Grading at Pipe Ends		15
192.00+0.256	192.00+0.284	37
193.00+0.326	193.00+0.414	115
193.00+0.523	193.00+0.588	85
Inslope Modification (Sections 6-9) (Less Heave Repair Locations Above)		26684
Subtotal:		26936

**MULCHING (GRASS HAY OR STRAW)**

An additional 10 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.

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.

**MYCORRHIZAL INOCULUM**

All seed will be inoculated by the seed supplier with a minimum of 20,000 live propagules of mycorrhizal fungi per 1,000 square feet. All costs of inoculating the seed will be incidental to the contract lump sum price for "Seeding".

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 <a href="http://www.mycorrhizae.com">www.mycorrhizae.com</a>
AM 120 Multi Species Blend	Reforestation Technologies Int. Gilroy, CA Phone: 1-800-784-4769 <a href="http://www.reforest.com">www.reforest.com</a>
LALRISE Prime and Max WP	Lallemand Specialties Inc. Milwaukee, WI Phone: 1-844-590-7781 <a href="http://www.lallemandplantcare.com">www.lallemandplantcare.com</a>

**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.

Lawn and turf seed, such as the Type F Permanent Seed Mixture, will be tested within 12 months prior to planting, exclusive of the calendar month in which the test was completed.

Type F 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
Green Needlegrass	Lodorm, AC Mallard Ecovar	4
Sideoats Grama	Butte, Pierre	3
Blue Grama	Bad River	2
Oats or Spring Wheat: April through May; Winter Wheat: August through November		10
Total:		26

**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)
d -0+16 to 0+04 L	Just outside work limits across drainage ditch	12	20
d 36+88 to d 37+09 R	Just outside work limits at outlet of pipe	12	20
e 76+22 to e 76+59 R	Just inside easement at outlet of pipe	12	40
e 83+66 to e 84+01 L	Just inside ROW at outlet of pipe	12	40
f 227+78 to f 228+08 L	Just inside easement at outlet of pipe	12	40
Sections 6-9 Inslope Modification	Near Waterways as directed by Engineer	12	800
	Additional Quantity:	12	25
Total:			985



**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)
6+78 to 6+90 L	Across ditch at inlet end of pipe	58
14+91 L	Across ditch at inlet end of pipe	74
24+43 L	Across ditch at inlet end of pipe	82
26+21 to 26+84 R	Across ditch channel bottom	146
d 33+35 R to d 33+70 R	Across channel bottom	62
d 33+88 L to d 35+24 L	Just inside ROW	130
d 34+36 R	Across ditch channel bottom	42
d 90+74 to d 95+65 L	Just inside ROW	652
d 91+95 R	Across ditch channel bottom	48
d 93+42 R	Across ditch channel bottom	48
d 95+55 R	Across ditch channel bottom	48
d 100+35 to d 103+65 L	Just inside ROW	359
d 102+62 R	Across ditch channel bottom	48
d 103+92 to d 105+02 L	Just inside ROW	129
d 104+30 R	Across ditch channel bottom	48
	Additional Quantity:	250
	<b>Total:</b>	<b>2224</b>

**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>

An additional quantity of Type 2 Erosion Control Blanket has been added to the Estimate of Quantities for temporary erosion control.

**TABLE OF EROSION CONTROL BLANKET**

Station	Location	Type	Quantity (SqYd)
1+68 to 2+03 L	Highway ditch channel bottom	2	304
3+83 to 4+26 L	Highway ditch channel bottom	2	336
6+23 to 6+58 L	Highway ditch channel bottom	2	268
8+76 to 9+03 L	Highway ditch channel bottom	2	212
11+81 to 12+19 L	Highway ditch channel bottom	2	245
14+54 to 14+87 L	Highway ditch channel bottom	2	213
17+72 to 18+06 L	Highway ditch channel bottom	2	203
20+69 to 21+01 L	Highway ditch channel bottom	2	173
22+41 to 22+72 L	Highway ditch channel bottom	2	180
23+65 to 24+02 L	Highway ditch channel bottom	2	196
d -0+20 to d 1+24 R	On inslope at pipe inlet	2	400
d -0+21 to d 0+11 L	On inslope at pipe outlet	2	74
d 33+48 to d 35+85 L	Highway ditch channel bottom	2	933
d 34+07 to d 35+85 R	Highway ditch channel bottom	2	693
d 36+85 to d 37+10 L	On inslope at pipe inlet	2	70
d 36+86 to 37+10 R	On inslope at pipe outlet	2	59
d 90+19 to d 95+54 R	Highway ditch channel bottom	2	2430
d 90+19 to d 95+54 L	Highway ditch channel bottom	2	2233
d 100+35 to d 104+70 R	Highway ditch channel bottom	2	1669
d 100+35 to d 103+60 L	Highway ditch channel bottom	2	1463
d 103+91 to d104+70 L	Highway ditch channel bottom	2	227
e 76+20 to e 76+57 R	Inslope/ backslope at pipe outlet	2	136
e 76+10 to e 76+45 L	Inslope/ backslope at pipe inlet	2	130
e 76+91 to e 77+25 R	Inslope/ backslope at pipe outlet	2	192
e 76+92 to e 77+27 L	Inslope/ backslope at pipe inlet	2	208
e 83+67 to e 84+02 R	Inslope/ backslope at pipe outlet	2	151
e 83+68 to 84+02 L	Inslope/ backslope at pipe inlet	2	122
f 227+07 to f 227+64 R	Around pipe inlet	2	206
f 227+56 to f 228+12 L	Around pipe outlet	2	196
	Additional Quantity:	2	400
	<b>Total Type 2 Erosion Control Blanket:</b>		<b>14342</b>

**SHAPING FOR EROSION CONTROL BLANKET**

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

**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.

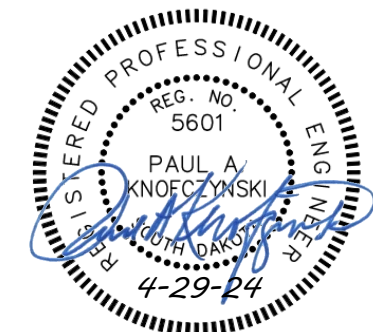
**TURF REINFORCEMENT MAT**

Turf Reinforcement Mat will be installed at locations determined by the Engineer during construction. The Contractor will use a turf reinforcement mat from the approved products list. The approved product list for turf reinforcement mat may be viewed at the following internet site:

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

The plans include 200 SqYd of Type 2 Reinforcement Mat for locations that have significant erosion, as determined by the Engineer. No change in unit price will be made for changes to the quantity of turf reinforcement mat installed on the project.

Turf Reinforcement Mat will be installed in accordance with the manufacturer's installation instructions.



**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 22.2 Acres
- 5.3 (3b): Total Area to be Disturbed 22.2
- 5.3 (3c): Maximum Area Disturbed at One Time .4 Acres
- 5.3 (3d): Existing Vegetative Cover (%) 50
- 5.3 (3d): Description of Vegetative Cover Field Grass
- 5.3 (3e): Soil Properties: AASHTO Soil or USDA-NRCS Soil Series Classification
- 5.3 (3f): Name of Receiving Water Body/Bodies Missouri River
- 5.3 (3g): Location of Construction Support Activity Areas On Site

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

- Special sequencing requirements (see sheet).
- 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 channel and ditch bottom protection.	
Clearing and grubbing.	
Remove and stockpile topsoil.	
Install perimeter protection around stockpiles.	
Install utilities, storm sewers, curb and gutter.	
Install inlet and culvert protection after completing storm drainage and other utility installations.	
Final grading.	
Final paving.	
Stabilize disturbed areas.	
Removal of protection devices.	
Reseed areas disturbed by removal activities.	

**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
<input type="checkbox"/> Natural Buffers (within 50 ft of Waters of State)	
<input checked="" type="checkbox"/> Silt Fence	
<input checked="" type="checkbox"/> Erosion Control Wattles	
<input type="checkbox"/> Temporary Berm / Windrow	
<input type="checkbox"/> Floating Silt Curtain	
<input type="checkbox"/> Stabilized Construction Entrances	
<input type="checkbox"/> Entrance/Exit Equipment Tire Wash	
<input type="checkbox"/> Other:	

**Structural Erosion and Sediment Controls**

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

**Dust Controls**

Description	Estimated Start Date
<input type="checkbox"/> Tarps & Wind impervious fabrics	
<input type="checkbox"/> Watering	
<input type="checkbox"/> Stockpile location/orientation	
<input type="checkbox"/> Dust Control Chlorides	
<input type="checkbox"/> Other	

**Dewatering BMPs**

Description	Estimated Start Date
<input type="checkbox"/> Sediment Basins	
<input type="checkbox"/> Dewatering bags	
<input type="checkbox"/> Weir tanks	
<input type="checkbox"/> Temporary Diversion Channel	
<input type="checkbox"/> Other:	

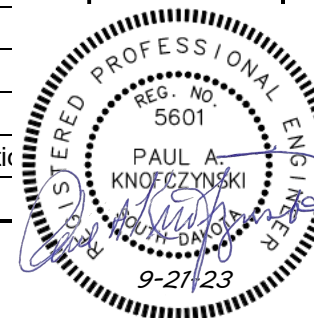
**Stabilization Practices (See Detail Plan Sheets)**

(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
<input type="checkbox"/> Vegetation Buffer Strips	
<input type="checkbox"/> Temporary Seeding (Cover Crop Seeding)	
<input checked="" type="checkbox"/> Permanent Seeding	
<input type="checkbox"/> Sodding	
<input type="checkbox"/> Planting (Woody Vegetation for Soil Stabilization)	
<input type="checkbox"/> Mulching (Grass Hay or Straw)	
<input type="checkbox"/> Fiber Mulching (Wood Fiber Mulch)	
<input type="checkbox"/> Soil Stabilizer	
<input type="checkbox"/> Bonded Fiber Matrix	
<input type="checkbox"/> Fiber Reinforced Matrix	
<input checked="" type="checkbox"/> Erosion Control Blankets	
<input type="checkbox"/> Surface Roughening (e.g. tracking)	
<input type="checkbox"/> 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 1/2 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 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 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.

➤ **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.



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: \_\_\_\_\_

➤ **SDDOT 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 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 AND SEDIMENT CONTROL LEGEND

## SYMBOLGY FOR BEST MANAGEMENT PRACTICES

-  STORM WATER DISCHARGE POINT
-  LOW FLOW SILT FENCE
-  HIGH FLOW SILT FENCE
-  SILT TRAP
-  SEDIMENT CONTROL AT INLET WHEN SURFACING IS IN PLACE
-  TEMPORARY SEDIMENT BARRIER
-  TEMPORARY WATER BARRIER
-  FLOATING SILT CURTAIN
-  SEDIMENT FILTER BAGS
-  TRIANGULAR SILT BARRIERS
-  EROSION CONTROL WATTLES
-  EROSION BALES
-  SURFACE ROUGHENING
-  SOIL STABILIZER / TEMPORARY MULCH / DUST CONTROL
-  CUT INTERCEPTOR DITCH
-  TEMPORARY SLOPE DRAIN
-  SEDIMENT CONTROL AT INLET BEFORE PLACEMENT OF SURFACING
-  HYDRAULIC STRAW MULCH / FIBER MULCHING / BONDED FIBER MATRIX / FIBER REINFORCED MATRIX
-  ROCK CHECK DAM
-  SODDING
-  TYPE 1 EROSION CONTROL BLANKET
-  TYPE 2 EROSION CONTROL BLANKET
-  TYPE 3 EROSION CONTROL BLANKET
-  TYPE 4 EROSION CONTROL BLANKET
-  TYPE 1 TURF REINFORCEMENT MAT
-  TYPE 2 TURF REINFORCEMENT MAT
-  TYPE 3 TURF REINFORCEMENT MAT
-  SYNTHETIC CHANNEL PROTECTION
-  TOPSOIL STOCKPILES
-  BORROW AREAS
-  STABILIZED CONSTRUCTION ENTRANCES
-  CONCRETE WASHOUTS
-  VEGETATED BUFFER STRIPS
-  ASPHALT PLANT SITE
-  CONCRETE PLANT SITE
-  ON-SITE CONSTRUCTION MATERIAL STORAGE AREAS
-  SPILL KIT
-  WORK PLATFORM
-  PORTABLE TOILET
-  VEHICLE AND EQUIPMENT PARKING, FUELING, AND MAINTENANCE AREAS
-  DUMPSTER OR OTHER TRASH AND DEBRIS CONTAINERS

## BEST MANAGEMENT PRACTICES

BEST MANAGEMENT PRACTICES (BMP'S) SHOULD BE USED THROUGHOUT CONSTRUCTION. TO REMIND CONTRACTORS AND FIELD PERSONNELL THAT BMP'S FOR WATER QUALITY SHOULD BE UTILIZED THROUGHOUT THE CONSTRUCTION PROCESS. THE SYMBOLGY IS COLORED AS FOLLOWS:

RED BMPS ARE TO BE INSTALLED BEFORE EARTH MOVING ACTIVITIES COMMENCE. RED BMPS ARE USED FOR PERIMETER CONTROL. THEY PREVENT SEDIMENT FROM LEAVING THE SITE OR ENTERING FROM ANOTHER SITE. THEY MAY ALSO DETER WATER AWAY FROM OR AROUND THE SITE. THEY MAY BE LEFT IN PLACE AND MAINTAINED FOR THE REMAINDER OF CONSTRUCTION OR UNTIL VEGETATION HAS REACHED 70% OF THE BACKGROUND LEVEL.

BLUE BMPS ARE TO BE INSTALLED DURING CONSTRUCTION. BLUE BMPS ARE USED FOR TEMPORARY STABILIZATION. THEY PREVENT EROSION DURING CONSTRUCTION. THEY MAY ALSO BE SEDIMENT CONTROLS UTILIZED AFTER DRAIN PIPES AND STORM SEWERS ARE IN PLACE. THEY MAY BE LEFT IN PLACE AND MAINTAINED FOR THE REMAINDER OF CONSTRUCTION OR UNTIL VEGETATION HAS REACHED 70% OF THE BACKGROUND LEVEL. SOME YELLOW BMPS WILL BE REMOVED OR REPLACED DURING CONSTRUCTION.

GREEN BMPS ARE TO BE INSTALLED WHEN GRADING IS COMPLETE. GREEN BMPS ARE USED FOR FINAL STABILIZATION. THEY ARE PERMANENT EROSION CONTROL MEASURES THAT ARE NOT REMOVED.

IF THE CONTRACTOR OR ENGINEER DECIDE TO USE ADDITIONAL BEST MANAGEMENT PRACTICES OR LABEL THE LOCATIONS OF THEM THEY SHOULD USE THE SYMBOLGY SHOWN. OTHER BEST MANAGEMENT PRACTICES FOR WHICH THERE IS NO SYMBOLGY INCLUDE:

PERMANENT SEEDING IS DONE BEFORE THE APPLICATION OF ALL TYPES OF MULCHING AND HYDRAULICALLY APPLIED SOIL MULCHES AND MATRICES. PERMANENT GRASS HAY/ STRAW MULCH IS NOT SHOWN ON PLAN SHEETS. BUT IT CAN BE ASSUMED THAT ALL AREAS THAT ARE NOT ROADWAYS ON RURAL PROJECTS WILL BE SEEDED THEN MULCHED. AREAS WHERE AN ALTERNATE TO GRASS HAY /STRAW MULCH IS USED WILL BE SHOWN WITH THE APPROPRIATE SYMBOLGY.

SEDIMENT BASINS UTILIZED DURING CONSTRUCTION WILL BE SHOWN ON PLAN SHEETS AND IN SECTION X.

GEOTEXTILE FABRIC USUALLY SUPPLEMENTS OTHER BMPS, BUT IT MAY BE USED TO TEMPORARILY COVER AREAS FOR EROSION PROTECTION UNTIL IT IS PERMANENTLY INSTALLED.

STREET SWEEPING SHOULD BE DONE AS NEEDED TO KEEP SEDIMENT ON ROADWAYS FROM LEAVING THE SITE.

DEWATERING AND SEDIMENT COLLECTING IS SHOWN ON A DETAIL SHEET WHEN IT IS NEEDED. DEWATERING WITHOUT SEDIMENT COLLECTING DOES NOT HAVE A DETAIL, JUST A DETAILED NOTE. SEDIMENT LADEN WATER SHOULD NEVER BE PUMPED OFF THE SITE.

GABIONS AND RIP RAP AT PIPE AND CULVERT OUTLETS ARE DETAILED IN SECTION B.

## PROJECT PHASING

PROJECT PHASING MAY BE ONE OF THE MOST IMPORTANT BMPS. DURING PHASING REMEMBER THE FOLLOWING:

- ALWAYS INSTALL PERIMETER CONTROLS BEFORE BEGINING EARTH MOVING ACTIVITIES.
- DO NOT DISTURB MORE AREA THAN WHAT IS NEEDED TO COMPLETE EACH PHASE OF CONSTRUCTION.
- IF POSSIBLE CONSTRUCT SEDIMENT BASINS AND STABILIZE THEM BEFORE BEGINNING ROADWAY GRADING.
- TEMPORARILY STABILIZE AREAS THAT WILL NOT BE TOUCHED WITHIN 14 DAYS.
- PERMANENTLY STABILIZE AREAS WHEN GRADING IN THAT AREA IS COMPLETE. PERMANENT STABILIZATION CAN BE COMPLETED IN PHASES AND DOES NOT HAVE TO WAIT UNTIL THE WHOLE ROADWAY HAS BEEN CONSTRUCTED.

CONTINUALLY MAINTAIN ALL SEDIMENT CONTROLS AND MONITOR AREAS WHERE EROSION CONTROL HAS BEEN INSTALLED.

Plot Scale - 1:100

Plotted From - evanwolf

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# EROSION AND SEDIMENT CONTROL PLAN



STATE OF SOUTH DAKOTA

PROJECT  
P 1806(23)186

SHEET  
D9

TOTAL SHEETS  
D18

Plotting Date: 9/19/2023

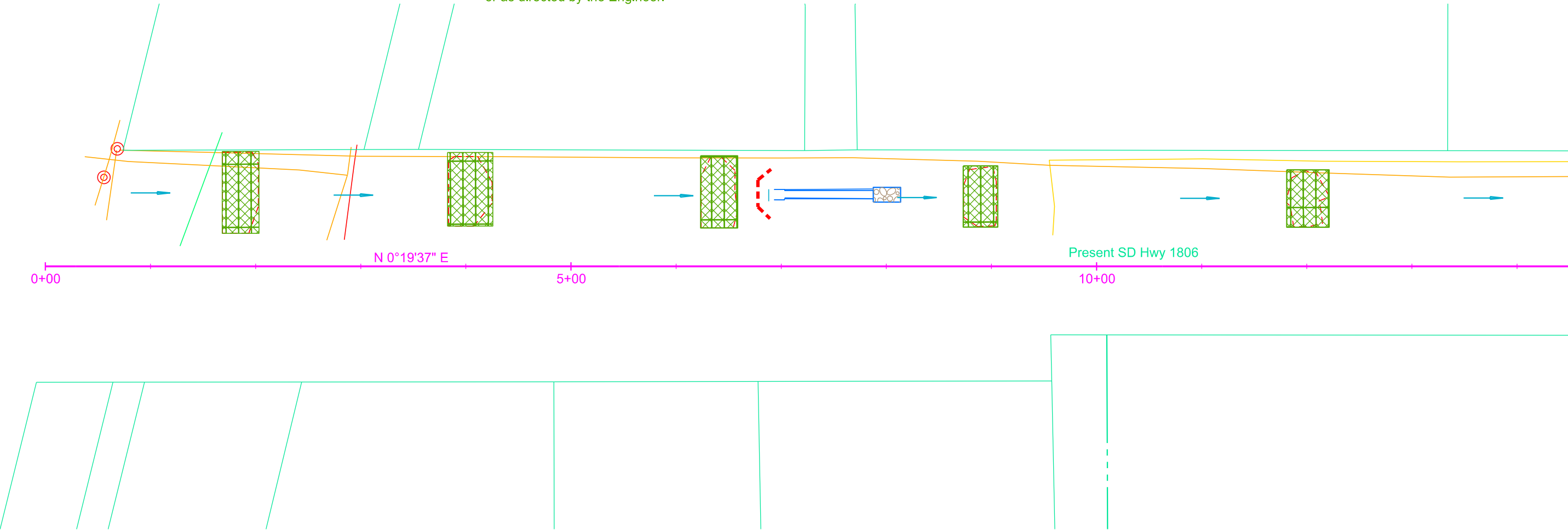
**PERIMETER CONTROL**

Install High Flow Silt Fence at the following locations:  
6+78 L to 6+90 L Across ditch at inlet end of pipe 58 Ft

**FINAL STABILIZATION**

Install Type 2 Erosion Control Blanket in the highway ditch channel bottom at the following locations:  
1+68 L to 2+03 L 304 SqYd  
3+83 L to 4+26 L 336 SqYd  
6+23 L to 6+58 L 268 SqYd  
8+76 L to 9+03 L 212 SqYd  
11+81 L to 12+19 L 245 SqYd

Seed disturbed areas as needed as soon as work is completed or as directed by the Engineer.



Plot Scale - 1:100

Plotted From - jenbrassfield

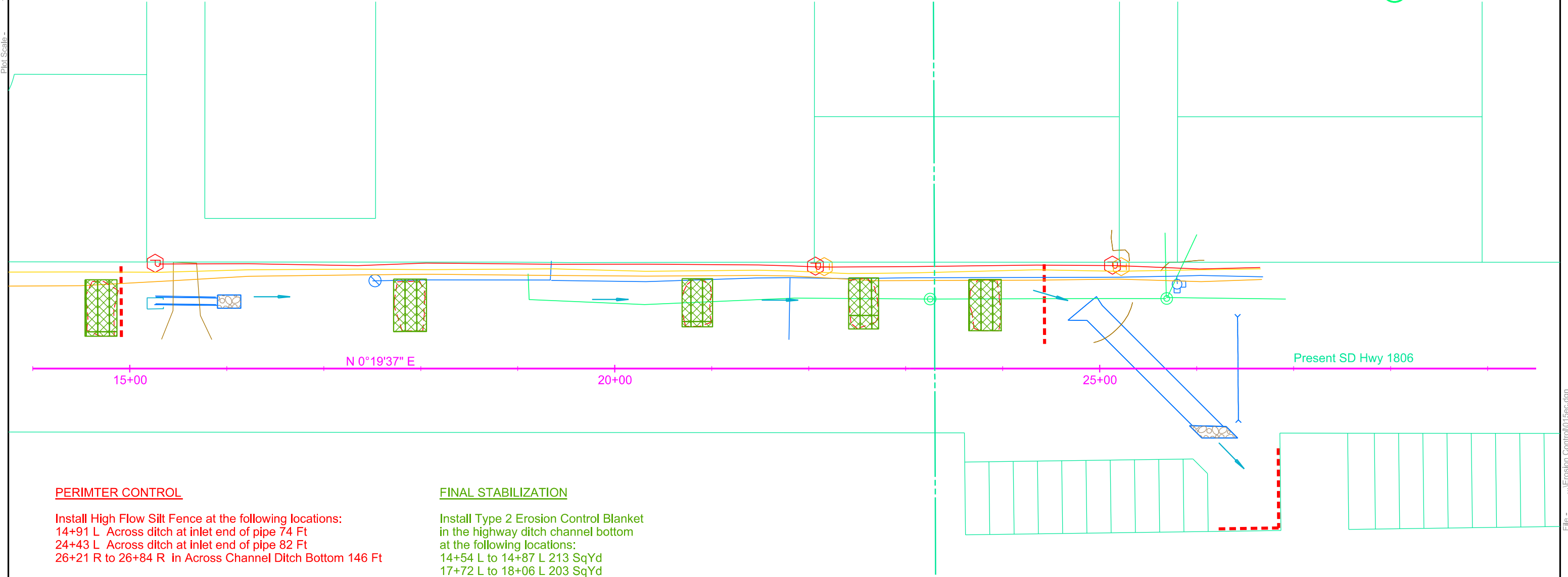
File - ...Erosion Control\001rec.dgn

# EROSION AND SEDIMENT CONTROL PLAN

<b>KLJ</b>	STATE OF SOUTH DAKOTA	PROJECT <b>P 1806(23)186</b>	SHEET <b>D10</b>	TOTAL SHEETS <b>D18</b>
	Plotting Date: 9/19/2023			



Plot Scale - 1:100



**PERIMTER CONTROL**

Install High Flow Silt Fence at the following locations:  
 14+91 L Across ditch at inlet end of pipe 74 Ft  
 24+43 L Across ditch at inlet end of pipe 82 Ft  
 26+21 R to 26+84 R in Across Channel Ditch Bottom 146 Ft

**FINAL STABILIZATION**

Install Type 2 Erosion Control Blanket in the highway ditch channel bottom at the following locations:  
 14+54 L to 14+87 L 213 SqYd  
 17+72 L to 18+06 L 203 SqYd  
 20+69 L to 21+01 L 173 SqYd  
 22+41 L to 22+72 L 180 SqYd  
 23+65 L to 24+02 L 196 SqYd

Seed disturbed areas as needed as soon as work is completed or as directed by the Engineer.



Plotted From - jembrassfield

File - ...Erosion Control015ec.dgn

# EROSION AND SEDIMENT CONTROL PLAN

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 1806(23)186	D11	D18

Plotting Date: 9/19/2023

**PERIMETER CONTROL**

Install 12" Diameter Erosion Control  
Wattles at the following locations:  
d -0+16 to d 0+04 L just outside work limits &  
across drainage ditch 20 Ft

**FINAL STABILIZATION**

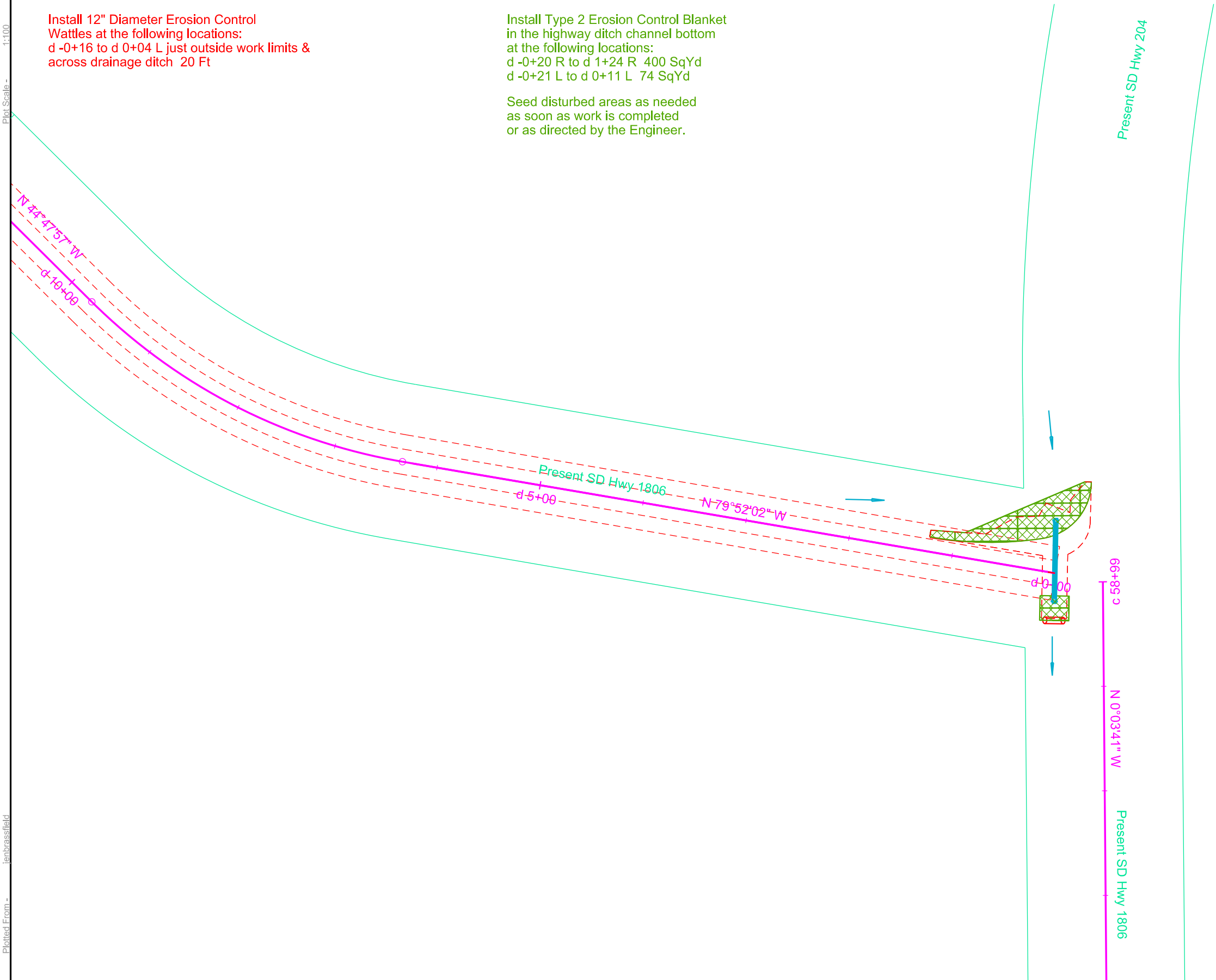
Install Type 2 Erosion Control Blanket  
in the highway ditch channel bottom  
at the following locations:  
d -0+20 R to d 1+24 R 400 SqYd  
d -0+21 L to d 0+11 L 74 SqYd  
  
Seed disturbed areas as needed  
as soon as work is completed  
or as directed by the Engineer.

MRM 191.00+0.614  
d 0+00



Plot Scale - 1:100

Plotted From - jenbrassfield





STATE OF SOUTH DAKOTA

PROJECT  
P 1806(23)186

SHEET  
D12

TOTAL SHEETS  
D18

MRM 192.00+0.313  
d 36+98

MRM 192.00+.513  
d 47+55

Present SD Hwy 1806

d 50+00

d 45+00

d 40+00

PERIMETER CONTROL

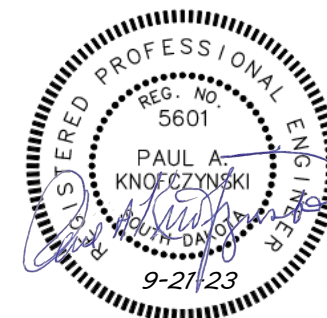
Install High Flow Silt Fence at the following locations:  
d 33+35 R to d 33+70 R Across ditch channel bottom 62 Ft  
d 33+88 L to d 35+24 L Just inside ROW 130 Ft  
d 34+36 R Across ditch channel bottom 42 Ft

Install 12" Diameter Erosion Control  
Wattles at the following locations:  
d 36+88 to d 37+09 R just outside work limits  
from outlet of pipe 20 Ft

FINAL STABILIZATION

Install Type 2 Erosion Control Blanket at the following locations:  
d 33+48 L to d 35+85 L In ditch channel bottom 933 SqYd  
d 34+07 R to d 35+85 R In ditch channel bottom 693 SqYd  
d 36+85 L to d 37+10 L on inslope at pipe inlet 70 SqYd  
d 36+86 R to 37+10 R on inslope at pipe outlet 59 SqYd

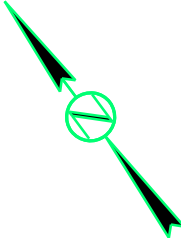
Seed disturbed areas as needed  
as soon as work is completed  
or as directed by the Engineer.



# EROSION AND SEDIMENT CONTROL PLAN

	STATE OF SOUTH DAKOTA	PROJECT P 1806(23)186	SHEET D13	TOTAL SHEETS D18
	Plotting Date: 9/19/2023			

MRM 193.00+0.311  
Sta. d 89+92



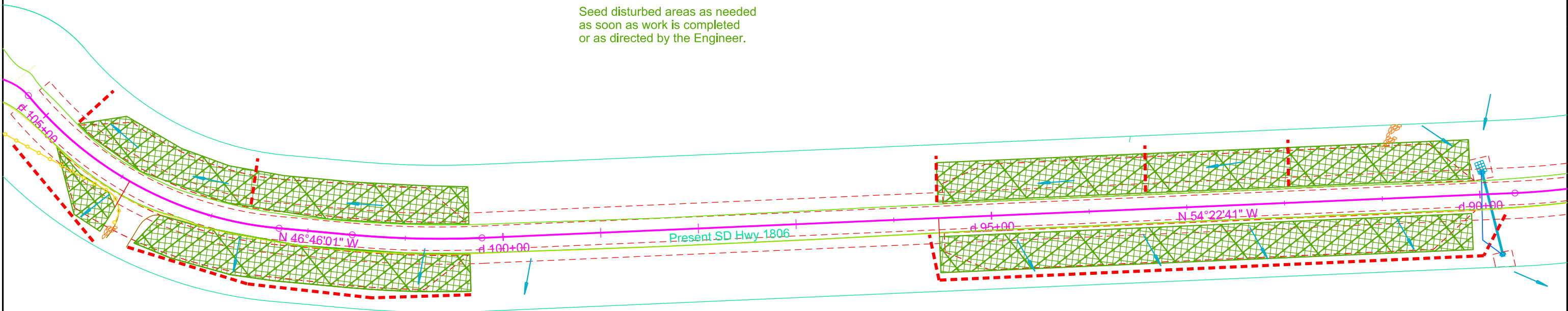
**PERIMETER CONTROL**

Install High Flow Silt Fence at the following locations:  
 d 90+74 L to d 95+65 Just inside ROW 652 Ft  
 d 91+95 R Across ditch channel bottom 48 Ft  
 d 93+42 R Across ditch channel bottom 48 Ft  
 d 95+55 R Across ditch channel bottom 48 Ft  
 d 100+35 L to d 103+65 L Just inside ROW 359 Ft  
 d 102+62 R Across ditch channel bottom 48 Ft  
 d 103+92 L to d 105+02 L Just inside ROW 129 Ft  
 d 104+30 R Across ditch channel bottom 48 Ft

**FINAL STABILIZATION**

Install Type 2 Erosion Control Blanket in the highway ditch channel bottom at the following locations:  
 d 90+19 R to d 95+54 R 2430 SqYd  
 d 90+19 L to d 95+54 L 2233 SqYd  
 d 100+35 R to d 104+70 R 1669 SqYd  
 d 100+35 L to d 103+60 L 1463 SqYd  
 d 103+91 L to d 104+70 L 227 SqYd

Seed disturbed areas as needed as soon as work is completed or as directed by the Engineer.



Plot Scale - 1:100

Plotted From - jembrassfield

File - ...Erosion Control\07sec.dgn

# EROSION AND SEDIMENT CONTROL PLAN

KLJ	STATE OF SOUTH DAKOTA	PROJECT P 1806(23)186	SHEET D14	TOTAL SHEETS D18
	Plotting Date: 9/19/2023			

**PERIMETER CONTROL**

Install 12" Diameter Erosion Control  
Wattles at the following locations:  
e 76+22 to e 76+59 R just inside easement  
at outlet of pipe 40 Ft  
e 83+66 to e 84+01 L just inside ROW  
at outlet of pipe 40 Ft

**FINAL STABILIZATION**

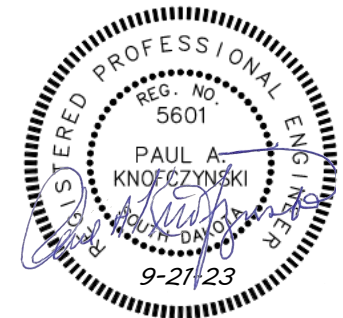
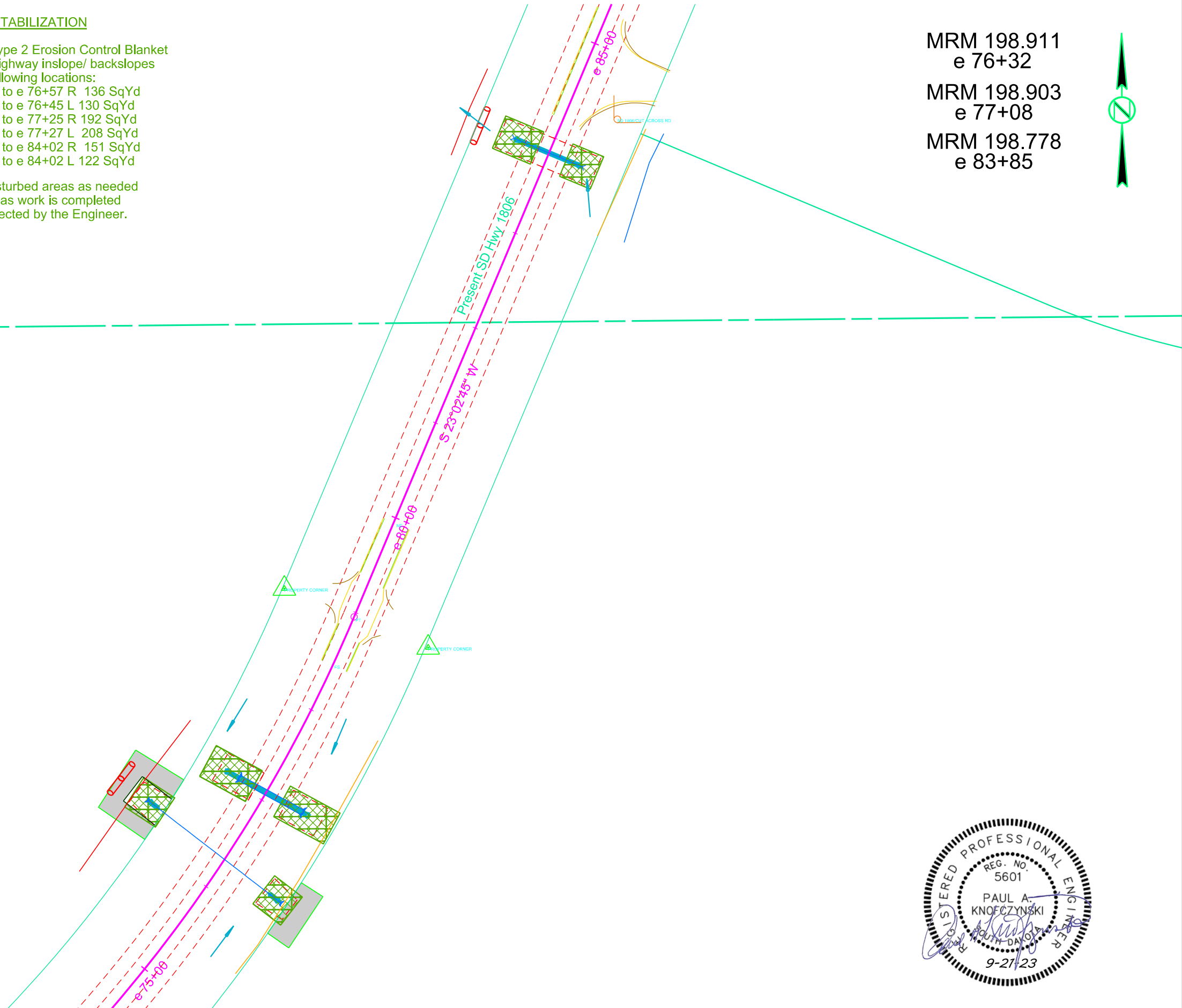
Install Type 2 Erosion Control Blanket  
on the highway inslope/ backslopes  
at the following locations:  
e 76+20 to e 76+57 R 136 SqYd  
e 76+10 to e 76+45 L 130 SqYd  
e 76+91 to e 77+25 R 192 SqYd  
e 76+92 to e 77+27 L 208 SqYd  
e 83+67 to e 84+02 R 151 SqYd  
e 83+68 to e 84+02 L 122 SqYd

Seed disturbed areas as needed  
as soon as work is completed  
or as directed by the Engineer.

MRM 198.911  
e 76+32

MRM 198.903  
e 77+08

MRM 198.778  
e 83+85



Plot Scale - 1:100

Plotted From - jbrbrassfield

File - ...Erosion Controlled07sec.dgn

# EROSION AND SEDIMENT CONTROL PLAN

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 1806(23)186	D15	D18

Plotting Date: 9/19/2023

**PERIMETER CONTROL**

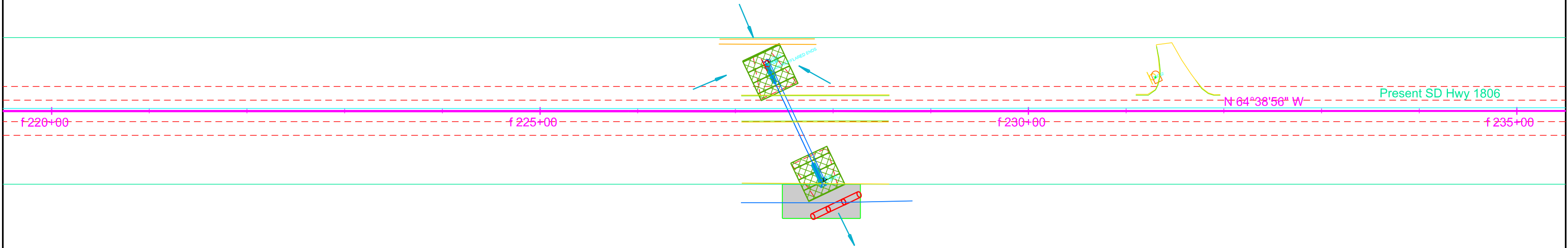
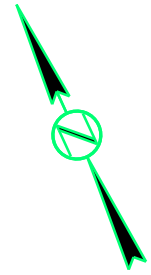
Install 12" Diameter Erosion Control  
Wattles at the following locations:  
f 227+78 to f 228+08 L just inside easement  
at outlet of pipe 40 Ft

**FINAL STABILIZATION**

Install Type 2 Erosion Control Blanket  
around the pipe inlet and outlet  
at the following locations:  
f 227+07 to f 227+64 R 206 SqYd  
f 227+56 to f 228+12 L 196 SqYd

Seed disturbed areas as needed  
as soon as work is completed  
or as directed by the Engineer.

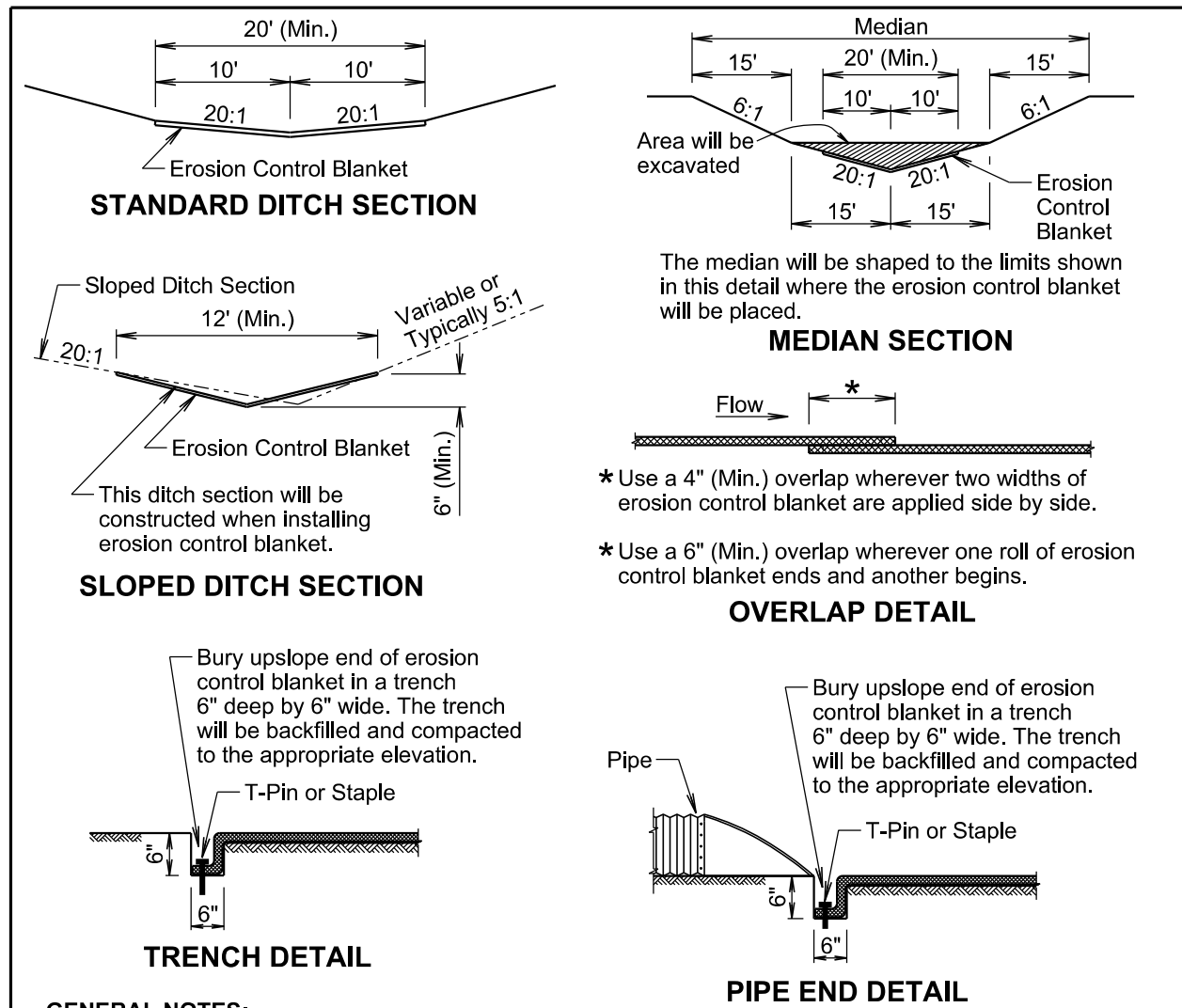
MRM 207.00+0.904  
f 227+54



Plot Scale - 1:100

Plotted From - jbrbrassfield

File - ...Erosion Control\220ec.dgn



**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.

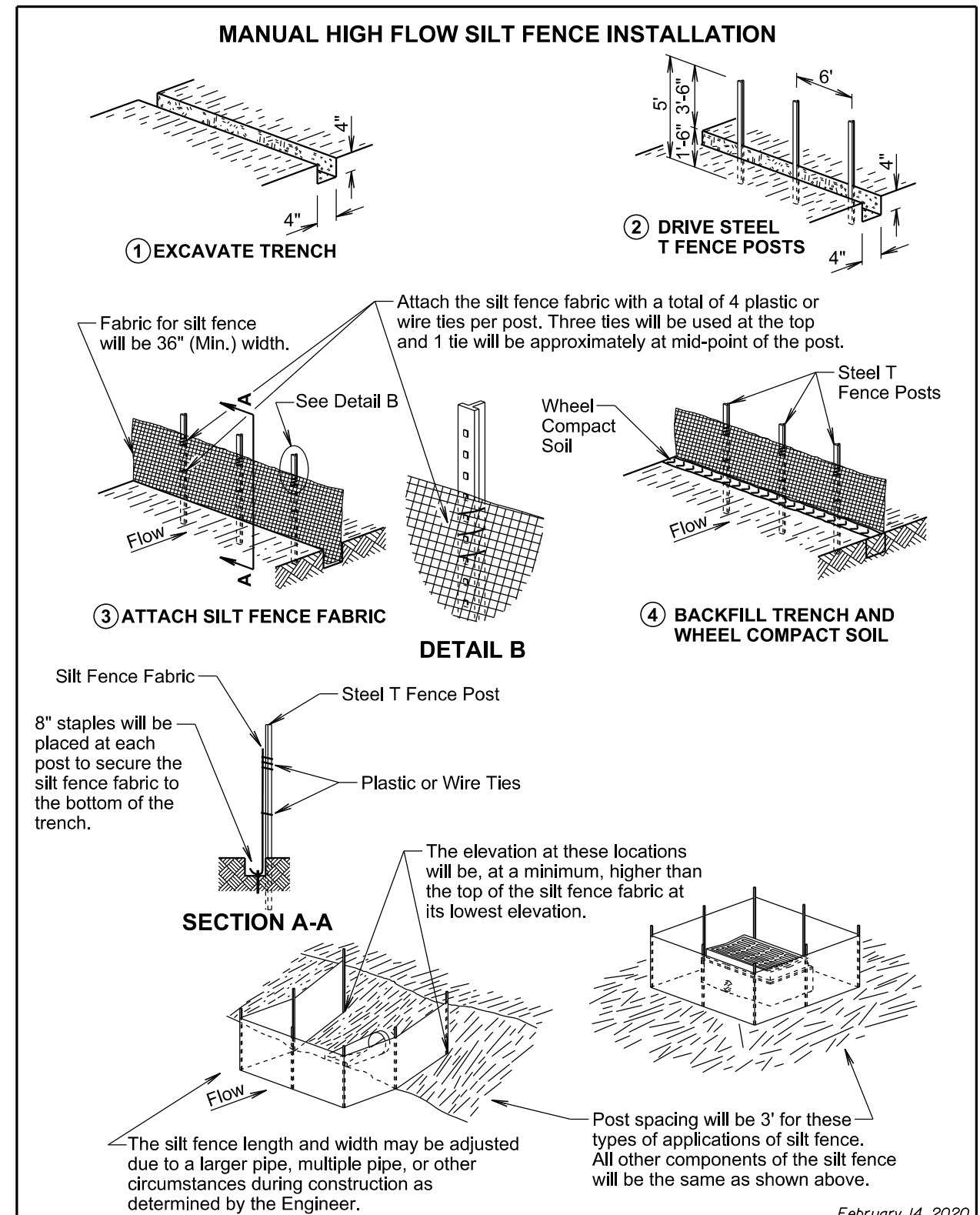
The erosion control blanket will be pinned to the ground according to the manufacturer's installation recommendations.

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	S D D O T	EROSION CONTROL BLANKET	PLATE NUMBER 734.01
			Sheet 1 of 1

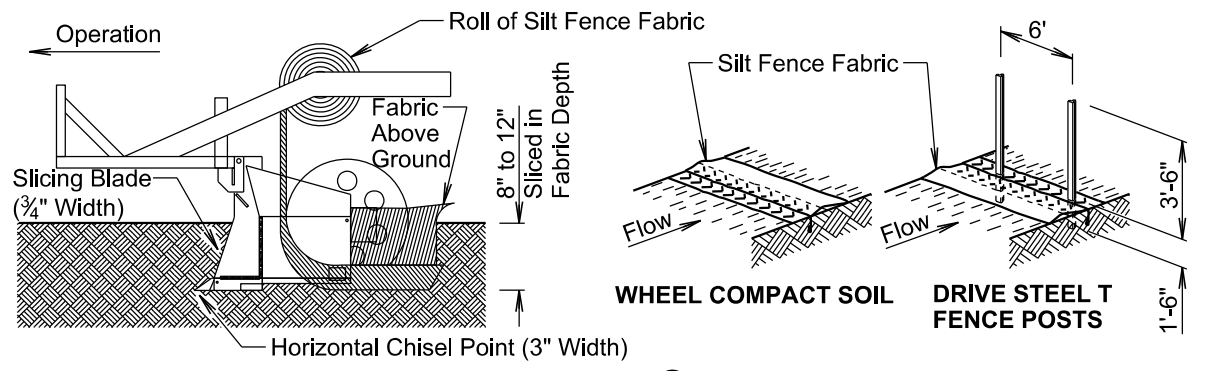


February 14, 2020

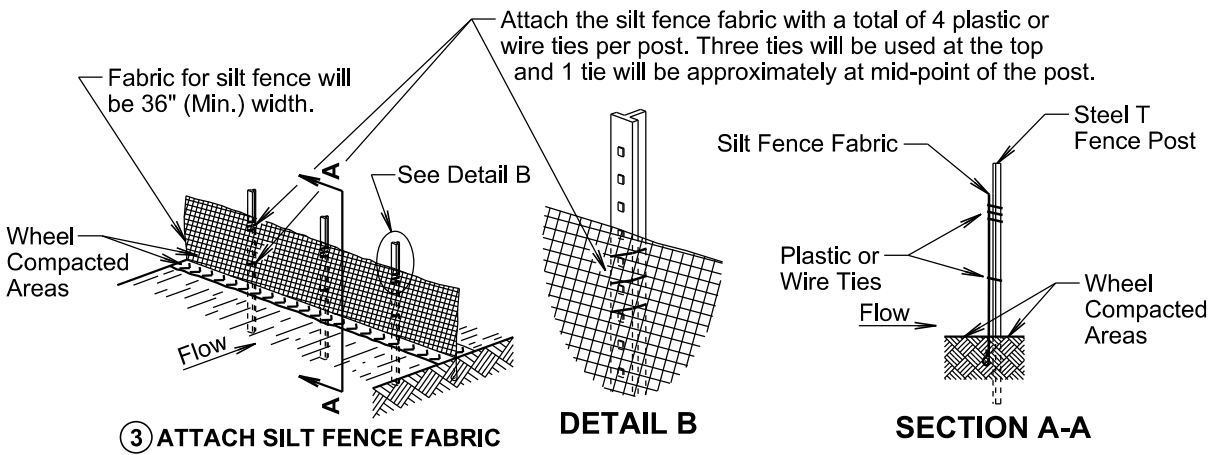
Published Date: 2024	S D D O T	HIGH FLOW SILT FENCE	PLATE NUMBER 734.05
			Sheet 1 of 2



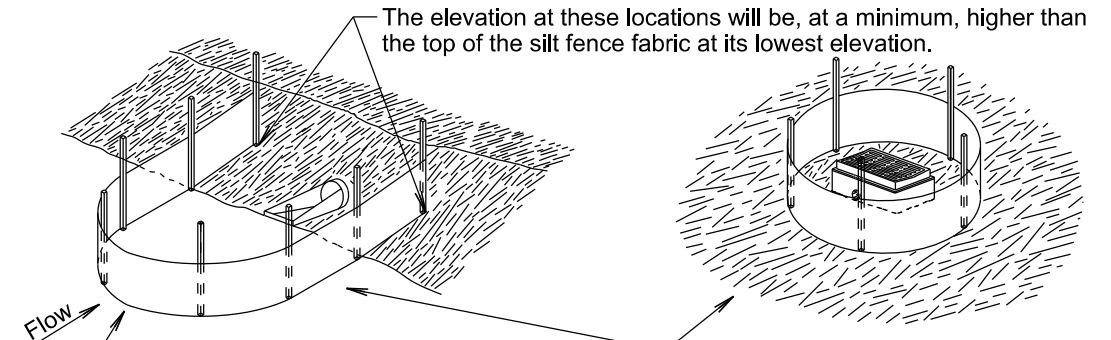
### MACHINE SLICED HIGH FLOW SILT FENCE INSTALLATION



- 1 INSTALL SILT FENCE FABRIC BY MACHINE SLICING METHOD.
- 2 WHEEL COMPACT SOIL ABOVE SLICED IN PORTION OF FABRIC AND THEN DRIVE STEEL T FENCE POSTS.



- 3 ATTACH SILT FENCE FABRIC



The elevation at these locations will be, at a minimum, higher than the top of the silt fence fabric at its lowest elevation.

The silt fence length and width may be adjusted due to a larger pipe, multiple pipe, or other circumstances during construction as determined by the Engineer.

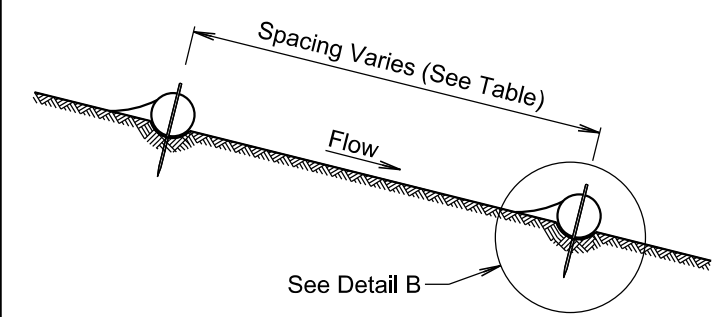
The radius of the silt fence will be the minimum capable by the slicing machine. The post spacing will be 3' for these types of applications of silt fence. All the other components of the silt fence will be the same as shown above.

**GENERAL NOTE:**

If a trench can not be dug or the silt fence fabric can not be sliced in due to the type of earthen material (such as rock), then a row of 30 to 40 pound sandbags butted end to end will be provided on top of the extra length of silt fence fabric to prevent underflow.

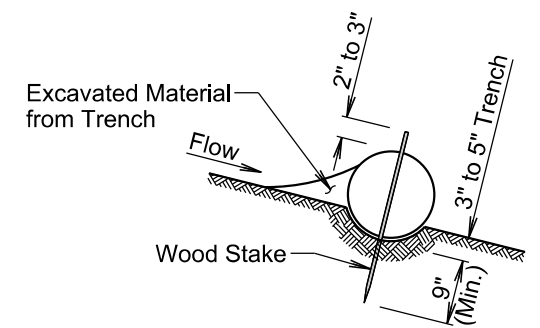
February 14, 2020

<b>S D D O T</b>	<b>HIGH FLOW SILT FENCE</b>	PLATE NUMBER <b>734.05</b>
	Published Date: 2024	Sheet 2 of 2

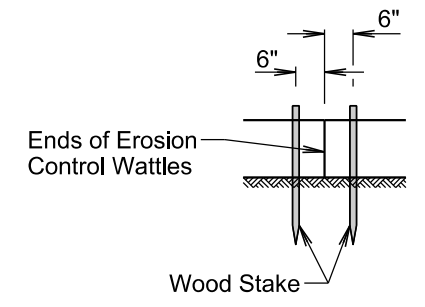


**ELEVATION VIEW**  
(Cut or Fill Slope Installation)

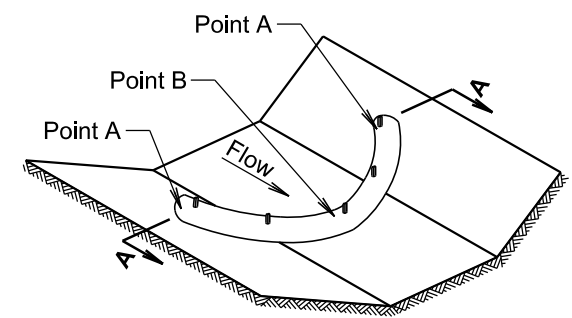
Slope	Spacing (Ft.)
1:1	10
2:1	20
3:1	30
4:1	40



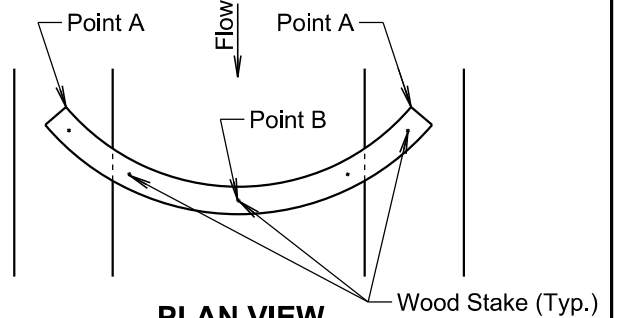
**DETAIL B**  
(Typical of All Installations)



**DETAIL C**  
(See General Notes)

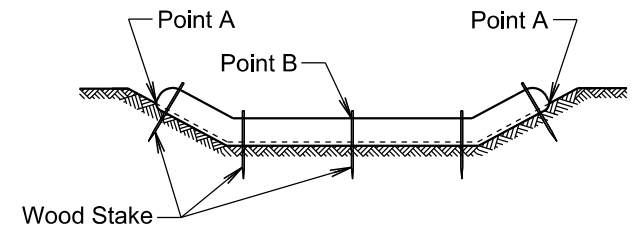


**ISOMETRIC VIEW**  
(Ditch Installation)



**PLAN VIEW**  
(Ditch Installation)

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



**SECTION A-A**

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**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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