FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 6542(04)	D1	D20

Plotting Date: 04-04-2025

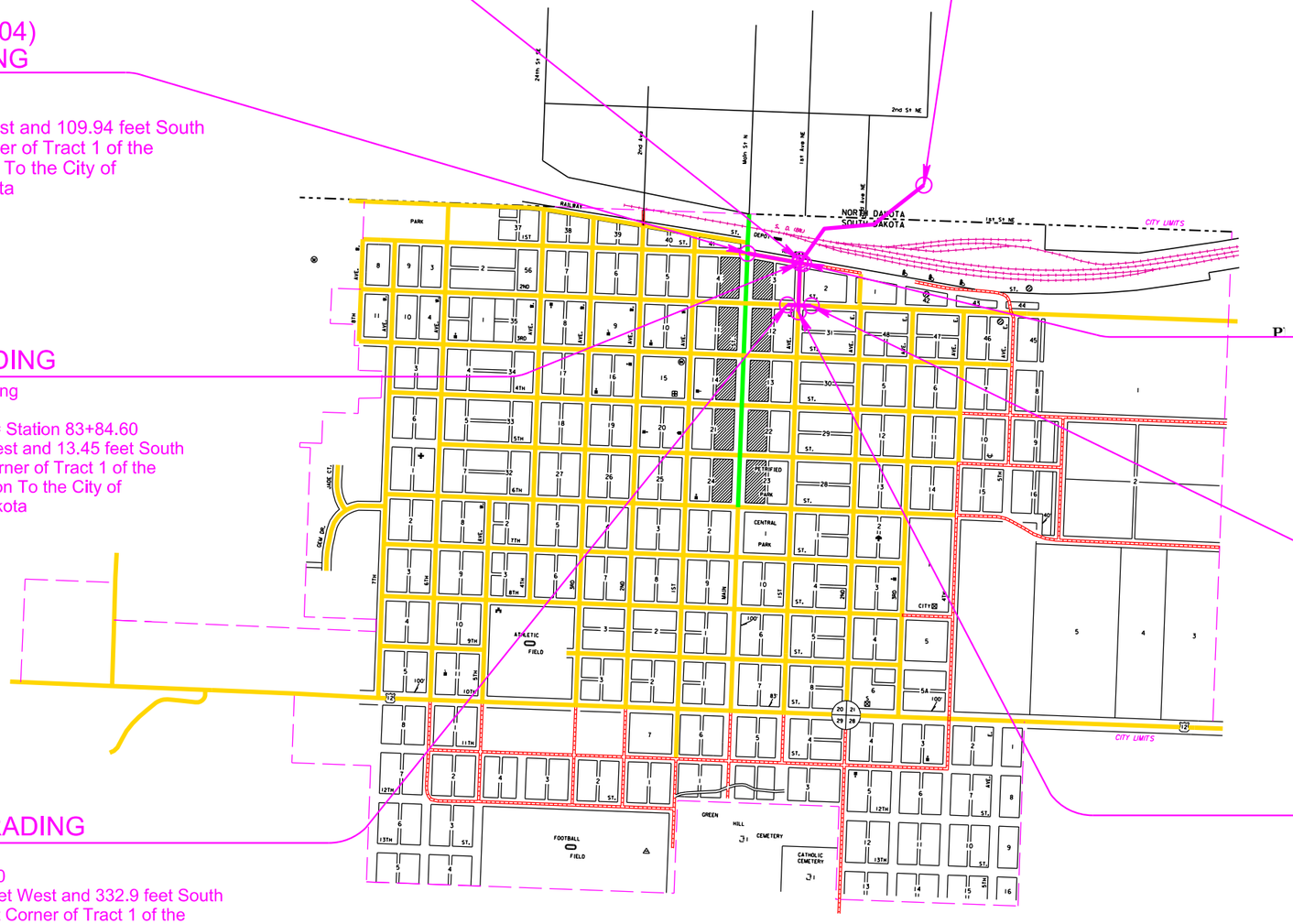
SECTION D: EROSION AND SEDIMENT CONTROL PLANS

INDEX OF SHEETS

END GRADING
1st Avenue East
Station 104+00.00
located 80.5 feet West and 64.52 feet North
of the Southeast Corner of Tract 1 of the
CHS Second Addition To the City of
Lemmon, South Dakota

END GRADING
Storm Sewer Crossing
Station 207+20.49
located 79.3 feet East and 90.95 feet North
of the Northeast Corner of Section 20 -
Township 23 North - Range 16 East of
the B.H.M.

BEGIN P 6542(04)
BEGIN GRADING
1st Street East
Station 80+00.00
located 53.58 feet West and 109.94 feet South
of the Northwest Corner of Tract 1 of the
CHS Second Addition To the City of
Lemmon, South Dakota



BEGIN GRADING
Storm Sewer Crossing
Station 200+00.00
Station 200+00.00 = Station 83+84.60
located 82.9 feet West and 13.45 feet South
of the Southeast Corner of Tract 1 of the
CHS Second Addition To the City of
Lemmon, South Dakota

END P 6542(04)
END GRADING
1st Street East
Station 84+82.00
located 13.6 feet East and 29.57 feet South
of the Southeast Corner of Tract 1 of the
CHS Second Addition To the City of
Lemmon, South Dakota

END GRADING
2nd Street East
Station 45+00.00
located 23.1 feet East and 338.8 feet South
of the Southeast Corner of Tract 1 of the
CHS Second Addition To the City of
Lemmon, South Dakota

BEGIN GRADING
2nd Street East
Station 43+00.00
located 173.8 feet West and 332.9 feet South
of the Southeast Corner of Tract 1 of the
CHS Second Addition To the City of
Lemmon, South Dakota

BEGIN GRADING
1st Avenue East
Station 99+00.00
located 93.8 feet West and 435.5 feet South
of the Southeast Corner of Tract 1 of the
CHS Second Addition To the City of
Lemmon, South Dakota

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REG. NO. 10974
Craig M. Mizera
SOUTH DAKOTA
05/29/2025

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August 20, 2025

HDR

Plotted From - CBOBZIEN

File - ...\Section D\Title Sheet

Revised 06/18/2025

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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 6542(04)	D2	D20

SECTION D ESTIMATE OF QUANTITIES

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
110E1690	Remove Sediment	5.0	CuYd
110E1693	Remove Erosion Control Wattle	300	Ft
110E1695	Remove Sediment Filter Bag	840	Ft
110E1700	Remove Silt Fence	630	Ft
120E6000	Water for Dust Control	55.0	MGal
120E6300	Water for Vegetation	152.0	MGal
230E0010	Placing Topsoil	222	CuYd
230E0020	Contractor Furnished Topsoil	41	CuYd
700E0210	Class B Riprap	41.0	Ton
730E0100	Cover Crop Seeding	2.0	Bu
730E0200	Type A Permanent Seed Mixture	50	Lb
730E0206	Type D Permanent Seed Mixture	100	Lb
731E0100	Fertilizing	532	Lb
732E0100	Mulching	3.0	Ton
732E0250	Fiber Mulching	527	Lb
734E0154	12" Diameter Erosion Control Wattle	1,214	Ft
734E0165	Remove and Reset Erosion Control Wattle	304	Ft
734E0180	Sediment Filter Bag	840	Ft
734E0604	High Flow Silt Fence	630	Ft
734E0610	Mucking Silt Fence	20	CuYd
734E0620	Repair Silt Fence	158	Ft
734E0845	Sediment Control at Inlet with Frame and Grate	29	Each
734E5010	Sweeping	20	Hour
831E0100	Type A Drainage Fabric	36	SqYd
900E1310	Concrete Washout Facility	1	Each
900E1320	Construction Entrance	2	Each

PLACING TOPSOIL

The thickness will be approximately 4 inches within the right-of-way or Type A Seeding Areas and 6 inches on temporary easements or Type D seeding areas as indicated in the plans.

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

TABLE OF TOPSOIL PLACEMENT

Station to Station		Offset	Strip and Salvage TopSoil* (CY)	Contractor Furnished Topsoil (CY)	Quantity (CY)
43+25	44+63	Lt/Rt	7	26	33
80+36	80+67	Lt	3	1	4
82+10	83+65	Rt	12	5	17
100+00	103+00	Rt	13	6	19
202+00	207+31	Lt/Rt	187	0	187
Field Determined				3	3
		Total:	222	41	263

*Cost to Strip and Salvage Topsoil to be included in unclassified excavation

DUST CONTROL

Dust control materials will be applied to the site as determined in the field by the Engineer and Owner. This item must follow the SDDOT Standard Specs, Sections 205.

All costs for the dust control will be included in the contract unit price for "Water for Dust Control".

TABLE OF WATER FOR DUST CONTROL

Location	Area (SqYd)	Application Rate (Gal/SqYd)	# of Applications	Quantity (Mgal)
Site	9081	2	3	55
			Total:	55

CONTRACTOR FURNISHED TOPSOIL

It is anticipated that a larger volume of topsoil will be needed for the new grade than can be salvaged from the existing grade. The Contractor will be required to furnish and place topsoil as indicated in previous notes and areas as determined by the Engineer during construction.

Contractor furnished topsoil will be free from stones, coarse gravel, or similar objects larger than 3/4 inch in diameter. Brush, stumps, roots, wood, objectionable weeds, liter, or any other material which may be harmful to plant growth will not be allowed. Organic material will be decomposed.

All costs to furnish and place the Contractor furnished topsoil will be incidental to the contract unit price per cubic yard for "Contractor Furnished Topsoil".

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.

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 unit price per pound for the corresponding permanent seed mixture.

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

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

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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% (P_2O_5) available phosphate, a minimum of 4% (K_2O) 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 all-natural slow release fertilizer will be as shown below or an approved equal:

Product	Manufacturer
Sustane	Sustane Corporate Headquarters Cannon Falls, Minnesota Phone: 1-800-352-9245 www.sustane.com
Perfect Blend	Perfect Blend, LLC Bellevue, WA Phone: 1-866-456-8890 www.perfect-blend.com
Nature Safe	Nature Safe Fertilizers Irving, TX Phone: 1-605-759-5622 www.naturesafe.com

A commercial fertilizer used in Areas for Seed Type D with a minimum guaranteed analysis of 13-13-13, 18-46-0, 11-52-0, or an approved alternate fertilizer sold for use as a lawn starter fertilizer will be applied to all areas designated for permanent seeding. The application rate of fertilizer will be 150 pounds per acre.

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 D Permanent Seed Mixture, will be tested within 12 months prior to planting, exclusive of the calendar month in which the test was completed.

Type A 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
Canada Wildrye	Mandan	2
	Total:	18

Type D Permanent Seed Mixture will consist of the following:

Grass Species	Variety	Pure Live Seed (PLS) (Pounds/1000 SqFt)
Kentucky Bluegrass	Avalanche, Appalachian, Wildhorse, Blue Bonnet, Action	1.4
Perennial Ryegrass	Turf Type Varieties	1.4
Creeping Red Fescue	Epic, Boreal, Chantilly	1.4
Chewings Fescue	Ambrose, K2, Zodiac, Shadow III	1.4
Alkali Grass	Fults, Fults II, Quill, Salty	1.4
	Total:	7

See Quantities in Table.

WATER FOR VEGETATION

Water for vegetation consists of applying water to seeded areas to enhance germination and/or root growth. When watering, use the following guidelines:

Immediately after seeding:

- Keep the topsoil moist but not excessively wet until the seed has germinated.
- Water a minimum of 3 days a week for 2 weeks preferably watering 2 or 3 times a day in small quantities.
- Use fine spray and low pressure to avoid topsoil wash and to prevent uncovering buried seeds.

After emergence:

- Topsoil will be kept thoroughly moistened by sprinkling, as necessary, for 6 weeks. After the 6-week period, an inspection will be made to determine if grass is established enough to suspend watering. Continue watering until grass has been thoroughly established.
- Never apply water at a rate faster than the topsoil can absorb.
- Water during early morning hours or early evening hours.
- Do not water when rain is forecasted for the area.
- If rainfall occurs, suspend watering according to rainfall amount.

An estimated 50 Gallons of water per square yard of seeding area was used to compute the quantity for the bid item "Water for Vegetation".

All costs for furnishing and applying the water including hauling, materials, equipment, labor, and incidentals necessary will be paid for at the contract unit price per MGal for "Water for Vegetation".

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.

See Quantities in Table.

MULCHING (GRASS HAY OR STRAW)

An additional 3 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.

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FIBER MULCHING

Fiber mulch will be applied in a separate operation following permanent seeding.

An additional 2% by weight of tackifier will be added to the fiber mulch product selected from the approved product list. If the product selected has guar gum tackifier included, then the additional 2% of tackifier will be guar gum. If the product selected has synthetic tackifier included, then the additional 2% of tackifier will be synthetic.

Fiber mulch will be applied at the rate of 2,000 pounds per acre.

The Contractor will allow the fiber mulch to cure a minimum of 18 hours prior to watering or any storm event to ensure proper cohesion between the soil and fiber particles.

All costs for the additional tackifier added to the fiber mulch including labor, equipment, and materials will be incidental to the contract unit price per pound for “Fiber Mulching”.

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

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

TABLE OF RIPRAP AND DRAINAGE FABRIC

TABLE OF RIPRAP OUTLET PROTECTION

ID	AREA (Sf)	Depth (Ft)	Quantity (Ton)	Rip Rap Class	Type A Drainage Fabric (SY)
FES#1	322	2	41	B	36

* RipRap is estimated at 1.7 Ton/CY

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.

A portion of Erosion control wattles will remain on the project to decompose.

A Portion of Erosion control wattles will remain on the project until vegetation has been established and then they will be removed in accordance with the Engineer.

An estimated shown in the table quantity of erosion control wattles will remain on the project until vegetation has been established. It is estimated that some of the 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

TABLE OF 12” DIAMETER EROSION CONTROL WATTLES

Station to Station		Offset	Quantity (LF)	Remove Quantity (LF)
44+00	44+63	LT	50	50
100+00	103+00	Rt	250	250
202+00	207+31	Lt	455	-
202+00	207+31	Rt	347	-
207+00	207+31	Lt/Rt	112	-
		Total:	1214	300

REMOVE AND RESET EROSION CONTROL WATTLE

An estimated quantity of **304** or 25% of install quantity to remove and reset Erosion Control Wattles has been added to the Estimate of Quantities.

MUCKING SILT FENCE

An estimated quantity to Muck Silt Fence has been added to the Estimate of Quantities. See Estimate of Quantities.

REPAIR SILT FENCE

An estimated quantity to Repair Silt Fence has been added to the Estimate of Quantities. See Estimate of Quantities.

INTERIM SEDIMENT CONTROL AT INLETS, MANHOLES, AND JUNCTION BOXES AFTER SURFACING REMOVAL AND BEFORE PLACEMENT OF SURFACING

Refer to Standard Plate 734.05 for details of installation of high flow silt fence at drop inlets, manholes, and junction boxes.

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

In addition, the Contractor will do the following for this installation:

- A space of at least 1’ will be provided between the silt fence installation and the inlet. This space will be filled completely with a 2” depth of aggregate, 2” minus or smaller.
- The top elevation of the silt fence will be such that a 12” horizontal flap of silt fence will remain at the bottom.
- The base of the silt fence will conform to the natural ground profile but does not need to be trenched in at the bottom.
- The extra 12” of the silt fence material may be cut so that the material will lay flat upon the subgrade.
- Sediment filter bags will be placed on the 12” flap around the perimeter of the silt fence installation. The sediment filter bags will overlap 6” at the ends and be placed tightly together.
- The sediment filter bags will be filled with clean aggregate 2” minus or smaller.

The Sediment Filter Bag will be as shown below or an approved equal:

Product	Manufacturer
Snake Bag	Sacramento Bag Manufacturing Co. Sacramento, CA Phone: 1-800-287-2247 www.sacbag.com
Rock Log	SRW Products Princeton, MN Phone: 1-763-260-7822 www.srwproducts.com

All costs for furnishing and installing the sediment filter bags will be incidental to the contract unit price per foot for “Sediment Filter Bag.”

All costs for removing the sediment filter bags will be incidental to the contract unit price per foot for “Remove Sediment Filter Bag”.

Payment for high flow silt fence will be as stated in Section 734.5 of the Specifications.

All costs for furnishing, installing, and removing the 2” depth of aggregate will be incidental to other erosion and sediment control contract items.

INTERIM SEDIMENT CONTROL AT INLETS, MANHOLES, AND JUNCTION BOXES AFTER SURFACING REMOVAL AND BEFORE PLACEMENT OF SURFACING CONTINUED

All costs for removing and disposing of sediment collected by the sediment control device will be incidental to the contract unit price per cubic yard for "Remove Sediment".

The removed sediment will be placed at a location away from the drop inlet where the sediment will not be washed back into the drop inlet or other storm sewer system.

The Contractor and Engineer will inspect and maintain the sediment control device once every week and within 24 hours after every rainfall event greater than 1/2".

TABLE OF INTERIM SEDIMENT CONTROL AT INLETS, MANHOLES, AND JUNCTION BOXES AFTER SURFACING REMOVAL AND BEFORE PLACEMENT OF SURFACING

TABLE OF INTERIM SEDIMENT CONTROL AT INLETS, MANHOLES, AND JUNCTION BOXES AFTER SURFACING REMOVAL AND BEFORE PLACEMENT OF SURFACING

ID	Station	Offset	High Flow Silt Fence Quantity (Ft)	Sediment Filter Bag Quantity (Ft)	Removal of Sediment Filter Bag Quantity (Ft)
DI#9	43+37	L	18	24	24
DI#10	43+40	R	18	24	24
EDI#8	43+61	R	18	24	24
MH#11	43+74	R	18	24	24
EDI#7	44+08	R	18	24	24
DI#11A	44+42	L	18	24	24
DI#11B	44+46	L	18	24	24
DI#12	44+42	R	18	24	24
EDI#2	83+49	L	18	24	24
EDI#3	83+51	R	18	24	24
EJB#3	83+75	L	18	24	24
EDI#1	84+32	R	18	24	24
DI#6	81+23	L	18	24	24
MH#7	81+26	L	18	24	24
DI#7	81+23	R	18	24	24
DI#5	82+45	L	18	24	24
MH#6	82+48	L	18	24	24
MH#5	83+33	L	18	24	24
DI#3	83+48	L	18	24	24
DI#4	83+48	R	18	24	24
MH#4	83+76	L	18	24	24
MH#3	83+93	L	18	24	24
DI#1	84+29	L	36	48	48
DI#2	84+31	R	18	24	24
EJB#5	100+09.9	L	18	24	24
EDI#6	100+23.3	L	18	24	24
EDI#5	100+29.7	R	18	24	24
MH#8	102+95	L	18	24	24
MH#9	100+72	L	36	48	48
DI#8	100+72	R	18	24	24
MH#10	100+10	L	18	24	24
MH#1	205+05		18	24	24
MH#2	203+21		18	24	24
		Total:	630	840	840

SEDIMENT CONTROL AT INLETS WITH FRAMES AND GRATES

This type of sediment control device should be used where there is pavement in the vicinity of the drop inlets and storm water or sediment could possibly enter the frame and grate. Sediment Control at Inlet with Frame and Grate will be installed prior to working in the vicinity of the drop inlets.

The Contractor will be responsible for maintaining and repairing the sediment control devices for the duration of the project for which sediment control measures are required. Maintenance will be scheduled to prevent storm water from backing up into the driving lane.

"Sediment Control at Inlet with Frame and Grate" will be paid for one time at each location, regardless of the number of times the sediment control devices are installed, inspected, cleaned, removed, repaired, or replaced. All costs associated with furnishing, installing, inspecting, maintaining, cleaning, sediment removal, and repairing Sediment Control at Inlet with Frame and Grate will be incidental to the contract unit price per each for "Sediment Control at Inlet with Frame and Grate".

Sediment collection devices will be:

A commercial made sediment collection device from the "Sediment Control at Inlet with Frame and Grate" list or an approved equal. The device will be installed in reinforced concrete drop inlets in accordance with the manufacturer's recommendations.

A sediment control device as shown on Standard Plate 734.10. Filter fabric used for constructing the sediment control at inlets with frames and grates will be the same type of fabric that is used in high flow silt fence from the approved product list. The approved product list may be viewed at the following internet site:

http://sddot.com/business/certification/products/Default.aspx

FOR BIDDING PURPOSES ONLY [redacted]

SEDIMENT CONTROL AT INLETS WITH FRAMES AND GRATES CONTINUED

Sediment Control at Inlet with Frame and Grate Approved List:

Product	Manufacturer
InfraSafe Debris Collection Device with filter sock	Royal Environmental Systems, Inc. Stacy, MN Phone: 1-800-817-3240 www.royalenterprises.net
Dandy Curb Sack and Dandy Curb Bag for curb inlets. Dandy Bag, Dandy Sack, and Dandy Pop for median drains.	Dandy Products Inc. Powell, OH Phone: 1-800-591-2284 www.dandyproducts.com
Silt Trapper	Storm Water Solutions Lakeville, MN Phone: 1-952-461-4376 www.silttrapper.com
DIP Basket	Skyview Construction Co., LLC Summit, SD Phone: 1-605-520-0555
FLEXSTORM Inlet Filters	Inlet and Pipe Protection, Inc. Naperville, IL Phone: 1-866-287-8655 www.inletfilters.com
GR-8 Guard or Combo Guard	ERTEC Environmental Systems LLC Alameda, CA Phone: 1-866-521-0724 www.ertecsystems.com
BX Inlet Sediment Boxes	BX Civil and Construction Dell Rapids, SD Phone: 1-605-428-5483 http://www.bx-cc.com
EZ-Flo and EZ-Catch	Flo-Water, LLC West Des Moines, IA Phone: 1-515-577-6763 www.flo-water.net

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Revised 06/18/2025

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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
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TABLE OF SEDIMENT CONTROL AT INLETS WITH FRAMES AND GRATES

TABLE OF SEDIMENT CONTROL AT INLETS WITH FRAMES AND GRATES			
ID	Station	Offset	Quantity (Each)
DI#9	43+37	L	1
DI#10	43+40	R	1
EDI#8	43+61	R	1
MH#11	43+74	R	1
EDI#7	44+08	Rt	1
DI#11A	44+42	L	1
DI#11B	44+46	L	1
DI#12	44+42	R	1
EJB#2	203+21	Lt	1
EJB#4	80+50	Lt	1
EDI#4	80+39	Rt	1
EDI#2	83+49	Lt	1
EDI#3	83+51	Rt	1
EDI#1	84+32	Rt	1
DI#6	81+23	Lt	1
DI#7	81+23	Rt	1
DI#5	82+45	Lt	1
DI#3	83+48	Lt	1
DI#4	83+49	Rt	1
DI#1	84+29	Lt	2
DI#2	84+31	Rt	1
EJB#5	100+10	Lt	1
EDI#6	100+23	Lt	1
EDI#5	100+30	Rt	1
MH#9	100+72	Lt	2
DI#8	100+72	Rt	1
DI#9	100+55	Rt	1
		Total:	29

DEWATERING AND SEDIMENT COLLECTING

Dewatering and Sediment Collection is expected to be necessary on this project due to underground construction of storm sewers and other underground utilities. Dewatering and Sediment Collection is expected to be needed at 83+81 L.

The Contactor has the option to treat sediment laden water trapped within the project limits or the Contractor may elect to transport sediment laden water off the project. Refer to the OPTIONS FOR DEWATERING AND SEDIMENT COLLECTING detail sheet for more information.

Water transported off the project limits will not be disposed of in an area where it can enter a waterway. The disposal site must be approved by the Engineer.

Separate payment will not be made for any Dewatering and Sediment Collection efforts. All costs involved with necessary Dewatering and Sediment Collection efforts will be incidental to other contract items

STREET SWEEPING

Vehicle tracking of sediment from the construction site will be minimized. Street sweeping will be used if erosion and sediment control best management practices are not adequate to prevent sediment from being tracked onto the street.

The Contractor will use a pickup broom having integral self-contained storage to clean the roadway. The pickup broom used will be a minimum of 6 feet wide and have working gutter brooms.

At a minimum, sweeping will be required:
1. Prior to opening any segment or roadway to traffic.

All costs for cleaning the roadway with a pickup broom will be incidental to the contract unit price per hour for “Sweeping”.

TABLE OF SWEEPING	
Location	Quantity (Hour)
Field Determined	20
Total:	20

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%
¾”	0-10%
½”	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.

The following information is estimated for site conditions and is incidental to the contract unit price for “Construction Entrance”

TABLE OF STABILIZED CONSTRUCTION ENTRANCE			
Station	# of Entrances	Granular Material (Ton)	Reinforcement Fabric MSE (SqYd)
Field Determined	2	55	82
	Total:	110	164

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CONCRETE WASHOUT AREA

A concrete washout area will be installed on the project site at a location approved by the Engineer if concrete trucks deliver concrete to the site. No washout area is necessary if all concrete trucks will wash out at approved site constructed by the concrete supplier.

VEGETATED BUFFER STRIPS

Vegetated Buffer Strips are sections of existing undisturbed vegetation adjacent to disturbed areas and are meant to convey sheet flow runoff from disturbed areas, resulting in the removal of sediment and other pollutants as the runoff passes through vegetation and infiltration occurs.

Vegetated Buffer Strips should be utilized along existing floodplains, wetlands, channels, and other natural waters, whenever possible. They are also useful at any areas where runoff may leave the site. Vegetated Buffer Strips should be a minimum of 15' wide and perpendicular to flow. Vegetated Buffer Strips will be installed at locations determined by the Engineer during construction.

Separate payment will not be made for Vegetated Buffer Strips.

TABLE OF SEED, FERTILIZER, MULCH AND WATER

Station to Station		Offset	Area	Seed (Lb)		Cover Crop (Bu)	Fertilizer (Lb)		Hay/Straw Mulch (Ton)	Fiber Mulch (Lb)	Water for Veg. (MGal)
			(SqFt)	Mix A	Mix D		Mix A	Mix D	Mix A	Mix D	
43+25	43+50	Lt	251		2			1		12	2
43+27	43+60	Rt	320		3			1		15	2
44+07	44+16	Rt	203		2			1		10	2
44+16	44+63	Lt	999		7			3		46	6
80+36	80+67	Lt	212		2			1		10	2
82+10	83+65	Rt	1660		12			4		77	10
100+23	101+58	Lt	2015		15			5		93	12
101+75	102+80	Lt	1584		12			4		73	9
100+22	101+53	Rt	2031		15			5		94	12
101+67	102+53	Rt	1466		11			4		68	9
102+65	102+95	Rt	617		5			2		29	4
202+50	203+80	Lt/Rt	4929	3			170		1		28
203+20	206+05	Lt/Rt	4986	3			172		1		28
203+21	206+06	Lt/Rt	4594	2			159		1		26
Field Determined:				42	14	2					
		Total	23882	50	100	2	501	31	3	527	152
	Grand Total:		23882	50	100	2	532		3	527	152

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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** 2.12 Acres
- **5.3 (3b): Total Area to be Disturbed** 1.86 Acres
- **5.3 (3c): Maximum Area Disturbed at One Time** 0.95 Acres
- **5.3 (3d): Existing Vegetative Cover (%)** 90
- **5.3 (3d): Description of Vegetative Cover** Native and turf grass
- **5.3 (3e): Soil Properties:** USDA-NRCS Soil Series Classification Gr
- **5.3 (3f): Name of Receiving Water Body/Bodies** Plum Creek (ND)
- **5.3 (3g): Location of Construction Support Activity Areas**

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

Structural Erosion and Sediment Controls

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

Dust Controls

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

Dewatering BMPs

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

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

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

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

5.3 (6): PROCEDURES FOR INSPECTIONS

- Inspections will be conducted at least once every 7 days.
- All controls will be maintained in good working order. Necessary repairs will be initiated within 24 hours of the site inspection report.
- Silt fence will be inspected for depth of sediment and for tears to ensure the fabric is securely attached to the posts and that the posts are well anchored. Sediment buildup will be removed from the silt fence when it reaches 1/3 of the height of the silt fence.
- Sediment basins and traps will be checked. Sediment will be removed when depth reaches approximately 50 percent of the structure's capacity, and at the conclusion of the construction.
- Check dams will be inspected for stability. Sediment will be removed when depth reaches ½ the height of the dam.
- All seeded areas will be checked for bare spots, washouts, and vigorous growth free of significant weed infestations.
- Inspection and maintenance reports will be prepared on form DOT 298 for each site inspection, this form will also be used to document changes to the SWPPP. A copy of the completed inspection form will be filed with the SWPPP documents.
- The 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.

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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.

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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.

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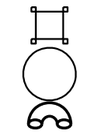
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 6542(04)	D12	D20

Plotting Date: 04-18-2025

Erosion and Sediment Control Legend

SYMBOLOGY FOR BEST MANAGEMENT PRACTICES

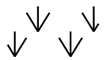


SEDIMENT CONTROL AT INLET, JUNCTION BOX, OR MANHOLE BEFORE PLACEMENT OF SURFACING

SEDIMENT CONTROL AT INLET WHEN SURFACING IS IN PLACE

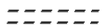
EROSION CONTROL WATTLES IN DITCHES

EROSION CONTROL WATTLES ON SLOPES AND PROJECT BOUNDARIES



SEEDED AREAS - TYPE A

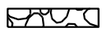
SEEDED AREAS - TYPE D



EXISTING DRAINAGE STRUCTURE / PIPE TO REMAIN

PROPOSED DRAINAGE STRUCTURE / PIPE

SURFACE FLOW DIRECTION



EXISTING LANDSCAPE AREA

PROPOSED SANITARY SEWER PIPE

PROPOSED ROADWAY

WORK LIMITS

BEST MANAGEMENT PRACTICES

Best Management Practices (BMPs) are split into three categories and are to be used throughout construction.

INITIAL PHASE
BMPs shown on the Erosion and Sediment Control Plan Sheets and discribed below are to be installed in the Initial Phase prior to earth disturbing activities like inlet protection on existing inlets, may remain in place, be removed, or be replaced depending on the fate of the inlet it is protecting. Most BMPs installed during this phase should remain in place until water is diverted or until Final Phase BMPs are installed.

INTERMEDIATE PHASE
BMPs from the Erosion and Sediment Control Plan Sheets and described below in cooridnation with the Contractors phasing requirements to be installed during the Intermediate Phase to do one of the following:
--Dewater and/or collect sediment and debris from storm water
--Temporarily stabilize soil to reduce the need for excessive sediment capture
Sediment control BMPs should remain in place until Final Stabilization is acheived unless they are replaced by another BMP.

FINAL PHASE
BMPs from the Erosion and Sediment Control Plan Sheets and described below in cooridnation with the Contractors phasing requirements to be installed during theare to be installed in the Final Phase to do one of the following:
--Achieve final stabilization through permanent erosion control.
--Capture sediment during final stabilization. BMPs used to capture sediment, such as inlet protection, should be removed once the vegetation reaches 75% of the background level. Other BMPs, like erosion control wattles, can be left to decompose.

BMPs without symbology are listed below. Notes and details are shown in the plans if it has been determined the BMP is needed. In the event notes and details are needed for a particular BMP, contact the Road Design Office. If additional BMPs are required other than what is included in the plans, be sure to indicate they were added by updating the Storm Water Pollution Prevention Plan (SWPPP) / Section D.

Dewatering and Sediment Collecting--Water that needs to be removed for construction to progress can either be pumped into the sanitary sewer (with the City's permission), onto a long flat vegetated area, or through a filtration system as detailed in the plans.

Street Sweeping--Used to prevent sediment from tracking or blowing off the site.

Cover Crop--Typically seeded on all topsoil stockpiles and disturbed areas where grading is complete but permanent seeding cannot be done within 14 days due to seasonal limitations. Usually followed with Grass Hay/Straw Mulching.

Permanent Seeding--Done on all disturbed areas that are not going to be paved, graveled, or sodded. Permanent seeding can be done after mulching has been applied using a no-till drill.

Fiber Mulching or Bonded Fiber Matrix--Usually follows Permanent Seeding. Mulching is done on all disturbed areas not covered with pavement, sodding, erosion control blanket, fiber mulching, bonded fiber matrix, or fiber reinforced matrix. It is not shown on the plan sheets unless it is put down as a temporary BMP.

Sediment Basins--If required, are usually added to the plans if space is available on the construction site. It is preferred that they be installed prior to earth moving activities when possible. The Engineer determines whether or not a sediment basin will remain on the site or be removed after construction done.

Recommendations for maintaining a manageable site that meets the requirements of the Storm Water Permit are listed below.

Do not disturb more area than is needed to complete each phase of construction.

Complete work near wet or sensitive areas of the project during the winter or dry seasons.

Areas that have been temporarily or permanently stabilized with cover crop or permanent seeding and the appropriate mulch, blanket, or matrix are no longer considered disturbed--so stabilize as soon as possible.

Plotted From - CBOBZIEN

File - ...\D12_Erosion_Control_Legend.dgn

FOR BIDDING PURPOSES ONLY

Erosion and Sediment Control Plan

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 6542(04)	D13	D20

Plotting Date: 04-04-2025

Existing ROW/Property Lines
Limits of Construction
R.O.W. Acquired
Temporary Construction Easement

SCALE IN FEET
0 20 40

Install Sediment Control at Inlets with Frames and Grates after the placement of surfacing at the following locations: See Table in Notes Section

Install Interim Sediment Control at Inlets, Manholes, and Junction Boxes before the placement of surfacing at the following locations: See Table in Notes Section.

CHS 2ND ADDITION

CHS INC
Parcel 1

TRACT 1

RR
Parcel 2

DO NOT DISTURB LANDSCAPING

EJB#4 DI#6 MH#7 DI#5 DI#3 MH#4 MH#3 DI#1 EDI#4 MH#6 MH#5 EJB#3 DI#7 DI#4 DI#2 EDI#3

80+00 81+00 82+00 83+00 84+00 84+82 104+00 105+00 102+00

1st Street 1st Avenue East Main Street

CITY OF LEMMON Parcel 10
LOT 16 LOT 15 CITY OF LEMMON
BLAIR L JOHNSON TRUST FBO LOT 14
BLAIR L JOHNSON TRUST FBO LOT 13
LOT 12 BLAIR L JOHNSON TRUST FBO
LOT 11 BLAIR L JOHNSON TRUST FBO

LOT 1
SHARI SMITH Parcel 12
LEMMON ORIGINAL
BLOCK 3 LOT 2
SHARI SMITH

LEMMON ORIGINAL
DAKOTA PROPANE GAS LOT 6
DAKOTA PROPANE GAS Parcel 13 BLOCK 2
DAKOTA PROPANE GAS LOT 4
Parcel 14 HARVEST STATES COOPERATIVES LOT 3

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 10974
Craig M. Mizera
SOUTH DAKOTA
05/29/2025

Plotted From - CBOBZIEN

File - ...\1st Street - Sta. 80+00 to 84+82

FOR BIDDING PURPOSES ONLY

Erosion and Sediment Control Plan

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 6542(04)	D14	D20

Plotting Date: 04-04-2025

LEGEND

- Existing ROW/Property Lines
- Limits of Construction
- R.O.W. Acquired
- Temporary Construction Easement

SCALE IN FEET
0 20 40

Install Sediment Control at Inlets with Frames and Grates after the placement of surfacing at the following locations: See Table in Notes Section

Install Interim Sediment Control at Inlets, Manholes, and Junction Boxes before the placement of surfacing at the following locations: See Table in Notes Section.

Install 12" Diameter Erosion Control Wattles at the following locations: See Table in Notes Section

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 10974
Craig M. Mizera
SOUTH DAKOTA
05/29/2025

Plotted From - CBOBZIEN

File - ...\1st Avenue East - Sta. 100+00 to 104+00

FOR BIDDING PURPOSES ONLY

Erosion and Sediment Control Plan

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 6542(04)	D15	D20

Plotting Date: 04-04-2025

LEGEND

- Existing ROW/Property Lines
- Limits of Construction
- R.O.W. Acquired
- Temporary Construction Easement

SCALE IN FEET
0 20 40

AVOIDANCE AREA
DO NOT DISTURB
ESS1

RR
Parcel 2

Install Sediment Control at Inlets with Frames and Grates after the placement of surfacing at the following locations:
See Table in Notes Section

Install Interim Sediment Control at Inlets, Manholes, and Junction Boxes before the placement of surfacing at the following locations:
See Table in Notes Section.

Install 12" Diameter Erosion Control Wattles at the following locations:
See Table in Notes Section

RR
Parcel 2

RR
Parcel 2

RR

Sec 20 - T23N - R16W

Sec 21 - T2

BLOCK 12A LOT 1

BLOCK 12

TOM MUNYON
Parcel 3A

14th Street

MON ORIGINAL

Parcel 14

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 10974
Craig M. Mizera
SOUTH DAKOTA
05/29/2025

Plotted From - CBOBZIEN

File - ...\Bore pipe under railroad

FOR BIDDING PURPOSES ONLY

Erosion and Sediment Control Plan

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 6542(04)	D16	D20

Plotting Date: 04-04-2025

LEGEND

- Existing ROW/Property Lines
- Limits of Construction
- R.O.W. Acquired
- Temporary Construction Easement

RIP RAP
EROSION PROTECTION
INSTALL - 41 TONS - CLASS B

Install 12" Diameter Erosion Control Wattles
at the following locations:
See Table in Notes Section

TOM MUNYON
Parcel 3A

ANNE CHRISTMAN
Parcel 4A

RR
Parcel 2

BLOCK 12A LOT 16
BLOCK 12A LOT 15
BLOCK 12A LOT 14
BLOCK 12A LOT 13
BLOCK 12A LOT 12
BLOCK 12A LOT 11
BLOCK 12A LOT 10
BLOCK 12A LOT 9
BLOCK 12A LOT 8
BLOCK 12A LOT 7
BLOCK 12A LOT 6
BLOCK 12A LOT 5
BLOCK 12A LOT 4

EST TOWNSITE
NY'S ADDITION

100' Drainage Easement

T23N - R16W

Sec 21 - T23N - R16W

OH

501

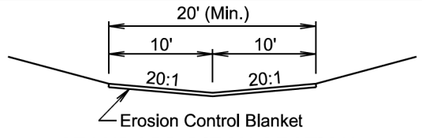
SCALE IN FEET
0 20 40

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 10974
Craig M. Mizera
SOUTH DAKOTA
05/29/2025

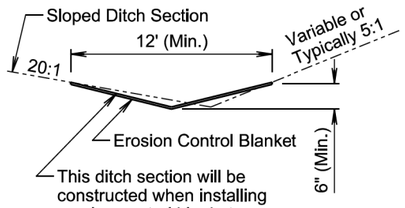
Plotted From - CBOBZIEN

File - ...\Section D\Outlet North of RR

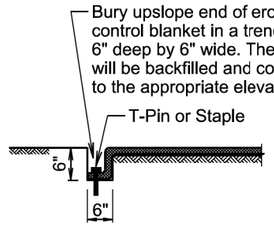
Standard Plates



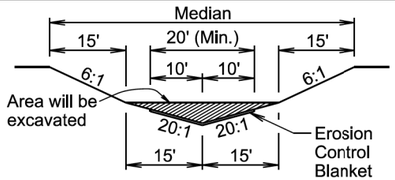
STANDARD DITCH SECTION



SLOPED DITCH SECTION

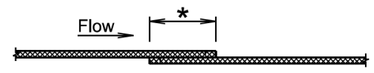


TRENCH DETAIL



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

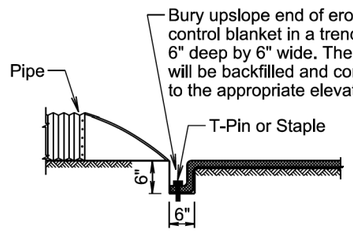
MEDIAN SECTION



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

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

OVERLAP DETAIL



PIPE END DETAIL

GENERAL NOTES:

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

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

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

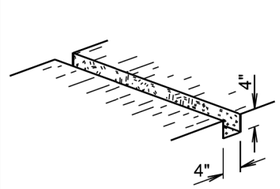
After the placement of the erosion control blanket, the Contractor will fine grade along all edges of the blanket to maintain a uniform slope adjacent to the blanket and level any low spots which might prevent uniform and unrestricted flow of side drainage directly onto the erosion control blanket.

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

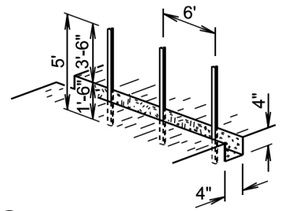
February 14, 2020

Published Date: 2026	SDDOT	EROSION CONTROL BLANKET	PLATE NUMBER 734.01
			Sheet 1 of 1

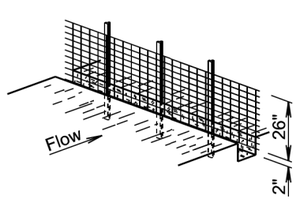
MANUAL LOW FLOW SILT FENCE INSTALLATION



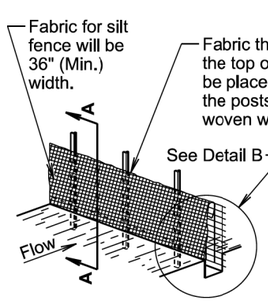
① **EXCAVATE TRENCH**



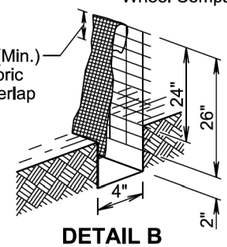
② **DRIVE STEEL T FENCE POSTS**



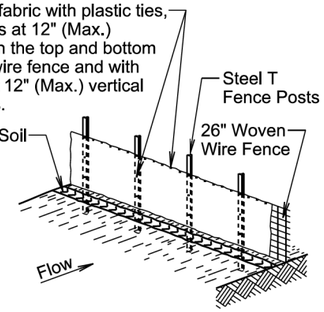
③ **ATTACH 26" WOVEN WIRE FENCE TO POSTS**



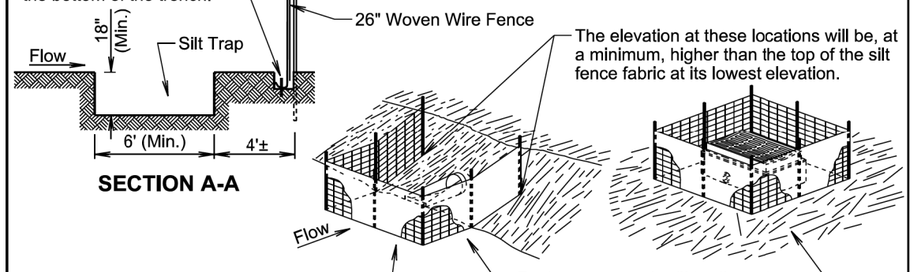
④ **ATTACH SILT FENCE FABRIC**



DETAIL B



⑤ **BACKFILL TRENCH AND WHEEL COMPACT SOIL**



SECTION A-A

February 14, 2020

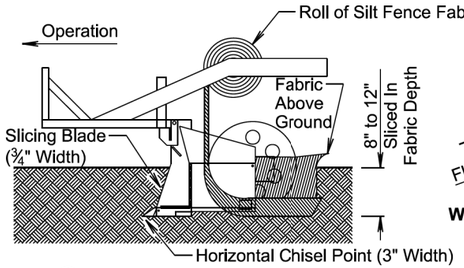
Published Date: 2026	SDDOT	LOW FLOW SILT FENCE AND SILT TRAP	PLATE NUMBER 734.04
			Sheet 1 of 2

Standard Plates

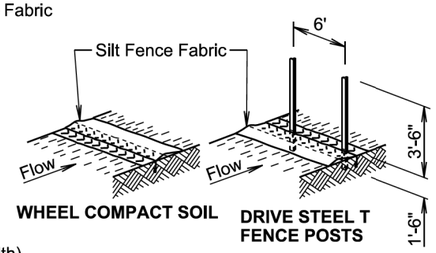
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 6542(04)	D18	D20

Plotting Date: 06-18-2025

MACHINE SLICED LOW FLOW SILT FENCE INSTALLATION

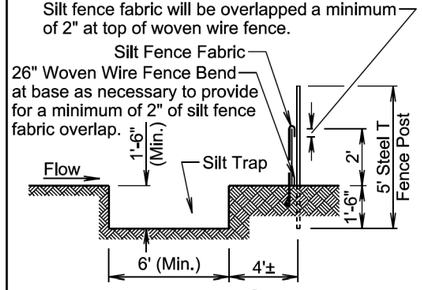


(1) INSTALL SILT FENCE FABRIC BY MACHINE SLICING METHOD.

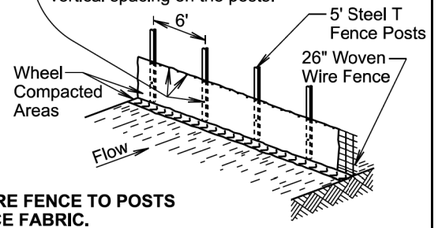


(2) WHEEL COMPACT SOIL ABOVE SLICED IN PORTION OF FABRIC AND THEN DRIVE STEEL T FENCE POSTS.

Silt fence fabric will be overlapped a minimum of 2" at top of woven wire fence.

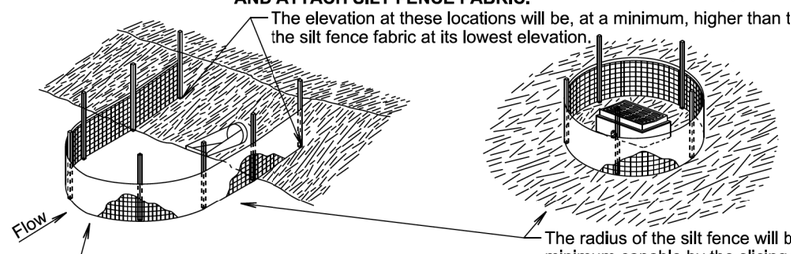


Attach the silt fence fabric with plastic ties, wire ties, or hog rings at 12" (Max.) horizontal spacing on the top and bottom wires of the woven wire fence and with plastic or wire ties at 12" (Max.) vertical spacing on the posts.



(3) ATTACH 26" WOVEN WIRE FENCE TO POSTS AND 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 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.

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.

GENERAL NOTES:

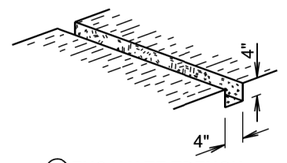
A silt trap will be provided when specified by a plan note. All costs for constructing the silt trap will be incidental to the contract unit price per cubic yard for "Silt Trap".

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.

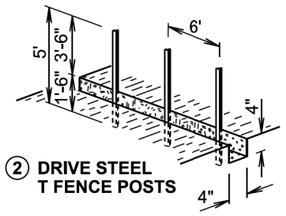
February 14, 2020

Published Date: 2026	SDDOT	LOW FLOW SILT FENCE AND SILT TRAP	PLATE NUMBER 734.04
			Sheet 2 of 2

MANUAL HIGH FLOW SILT FENCE INSTALLATION



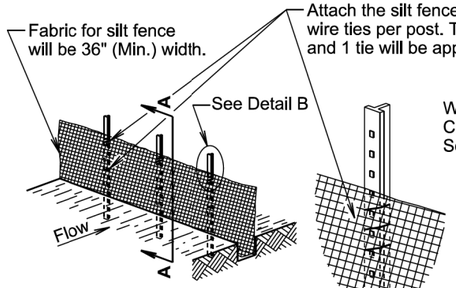
(1) EXCAVATE TRENCH



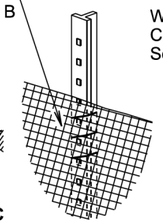
(2) DRIVE STEEL T FENCE POSTS

Fabric for silt fence will be 36" (Min.) width.

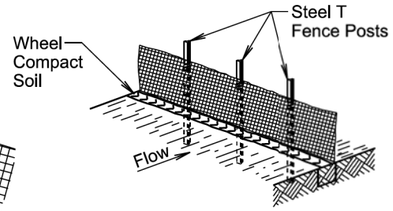
Attach the silt fence fabric with a total of 4 plastic or wire ties per post. Three ties will be used at the top and 1 tie will be approximately at mid-point of the post.



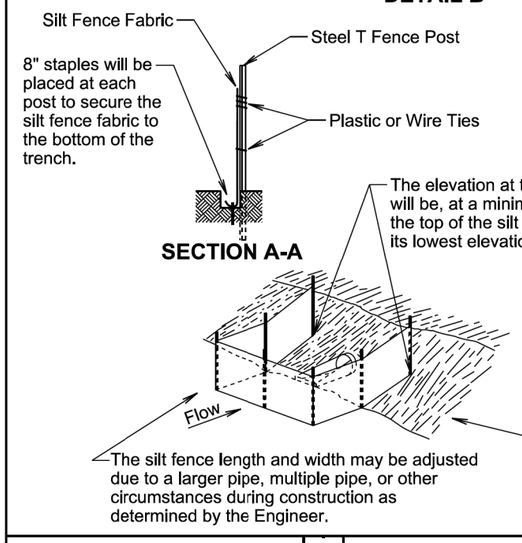
(3) ATTACH SILT FENCE FABRIC



DETAIL B



(4) BACKFILL TRENCH AND WHEEL COMPACT SOIL



February 14, 2020

Published Date: 2026	SDDOT	HIGH FLOW SILT FENCE	PLATE NUMBER 734.05
			Sheet 1 of 2

Plotted From - CBOBZIEN

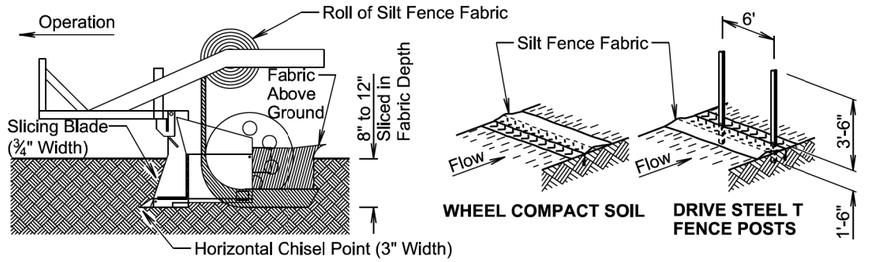
File - ...\D18_Standard_Plates.dgn

Standard Plates

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 6542(04)	D19	D20

Plotting Date: 06-18-2025

MACHINE SLICED HIGH FLOW SILT FENCE INSTALLATION

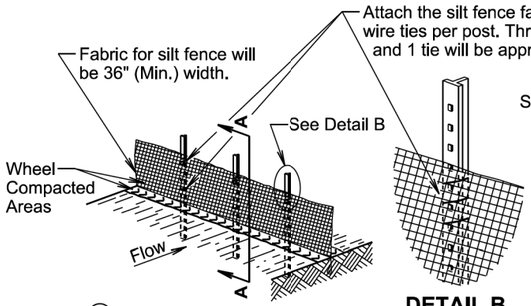


WHEEL COMPACT SOIL

DRIVE STEEL T FENCE POSTS

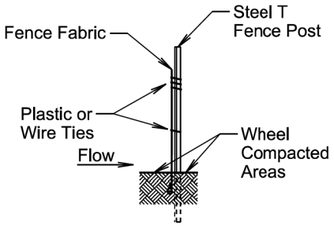
① **INSTALL SILT FENCE FABRIC BY MACHINE SLICING METHOD.**

② **WHEEL COMPACT SOIL ABOVE SLICED IN PORTION OF FABRIC AND THEN DRIVE STEEL T FENCE POSTS.**

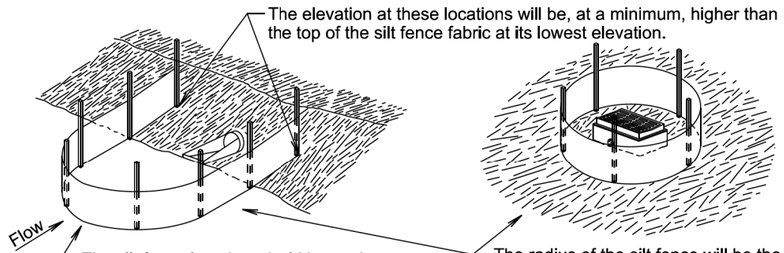


③ **ATTACH SILT FENCE FABRIC**

DETAIL B



SECTION A-A

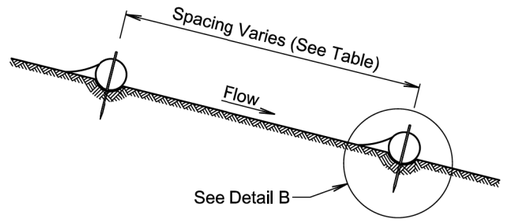


GENERAL NOTE:

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.

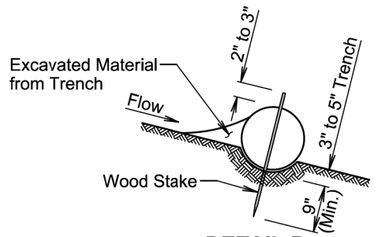
February 14, 2020

Published Date: 2026	SDDOT	HIGH FLOW SILT FENCE	PLATE NUMBER 734.05
			Sheet 2 of 2

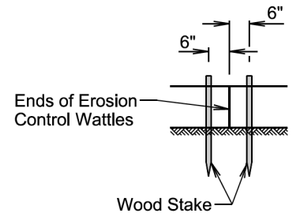


ELEVATION VIEW
(Cut or Fill Slope Installation)

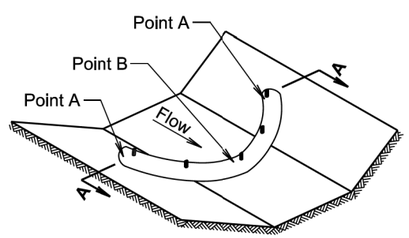
CUT OR FILL SLOPE INSTALLATION	
Slope	Spacing (Ft.)
1:1	10
2:1	20
3:1	30
4:1	40



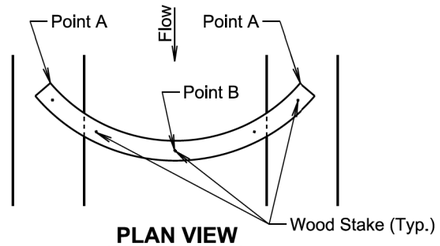
DETAIL B
(Typical of All Installations)



DETAIL C
(See General Notes)

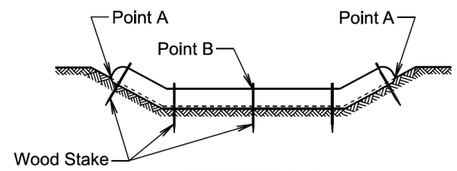


ISOMETRIC VIEW
(Ditch Installation)



PLAN VIEW
(Ditch Installation)

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



SECTION A-A

February 14, 2020

Published Date: 2026	SDDOT	EROSION CONTROL WATTLE	PLATE NUMBER 734.06
			Sheet 1 of 2

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Standard Plates

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 6542(04)	D20	D20

Revised: 06-18-2025

Plotting Date: 06-18-2025

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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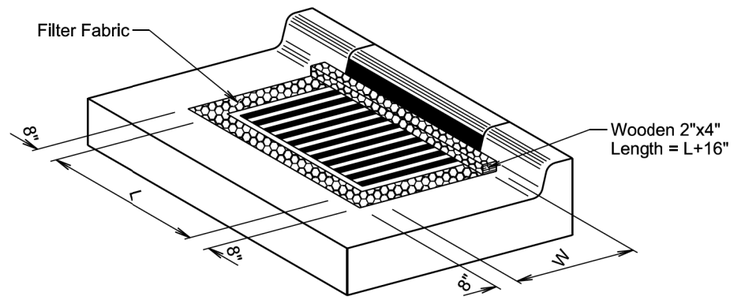
L = Length of Grate
W = Width of Grate



ISOMETRIC VIEW

GENERAL NOTES:

The grate and curb and gutter shown are for illustrative purposes only.

The sediment control at inlet with frame and grate will be placed at locations stated in the plans or at locations determined by the Engineer.

The filter fabric will be the type specified in the plans.

The filter fabric will be placed in the inlet opening prior to placing the grate. Approximately 18 inches of excess filter fabric will be wrapped around the 2"x4" and stapled securely to the 2"x4" after the grate has been placed.

The Contractor and Engineer will inspect the sediment control device in accordance with the storm water permit. The Contractor will maintain the sediment control device by removing accumulated sediment and replacing torn filter fabric with new filter fabric.

The removed sediment will be placed at a location away from the drop inlet where the sediment will not be washed back into the drop inlet or other storm sewer system.

All costs for furnishing, installing, inspecting, maintaining, removing, and replacing the sediment control device at the inlet including labor, equipment, and materials will be incidental to the contract unit price per each for "Sediment Control at Inlet with Frame and Grate".

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Published Date: 2026	SDDOT	SEDIMENT CONTROL AT INLETS WITH FRAMES AND GRATES	PLATE NUMBER 734.10
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