

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH0016(84)67	D1	D22
PLOTTING DATE: 07-29-16			

SECTION D - EROSION AND SEDIMENT CONTROL PLANS

INDEX OF SHEETS

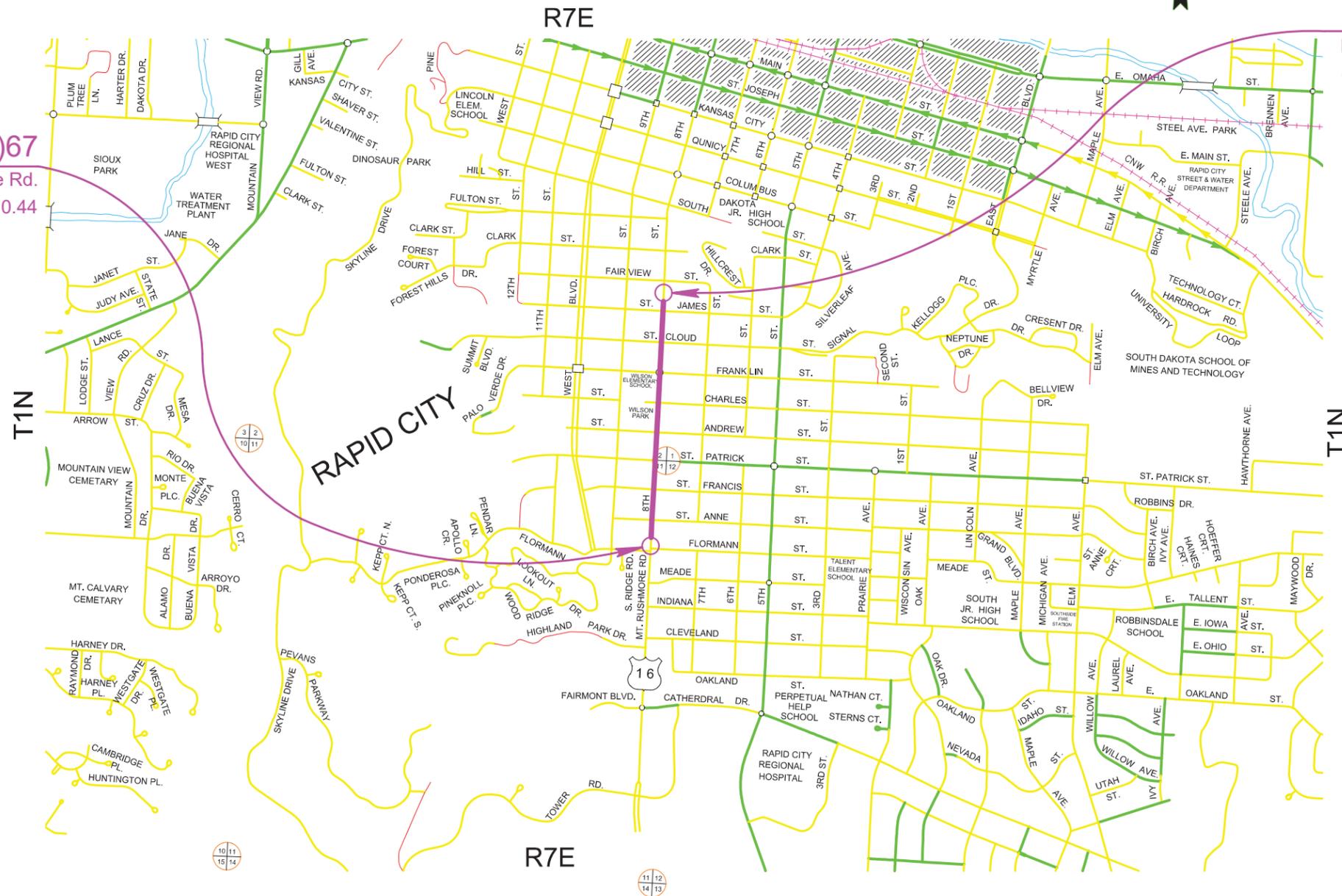
- D1: General Layout with Index
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END NH 0016(84)67

Mt. Rushmore Rd.
Station 66+91.79

BEGIN NH 0016(84)67
Mt. Rushmore Rd.
Station 34+10.44



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SECTION D ESTIMATE OF QUANTITIES

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
110E1690	Remove Sediment	38.0	CuYd
110E1693	Remove Erosion Control Wattle	75	Ft
110E1695	Remove Sediment Filter Bag	1,119	Ft
110E1697	Remove Triangular Silt Barrier	309	Ft
110E1700	Remove Silt Fence	796	Ft
120E6300	Water for Vegetation	50.0	MGal
230E0020	Contractor Furnished Topsoil	372	CuYd
731E0100	Fertilizing	70	Lb
733E0100	Sodding	2,603	SqYd
734E0042	Soil Stabilizer	700.0	SqYd
734E0154	12" Diameter Erosion Control Wattle	300	Ft
734E0165	Remove and Reset Erosion Control Wattle	75	Ft
734E0180	Sediment Filter Bag	4,416	Ft
734E0425	Triangular Silt Barrier	1,235	Ft
734E0604	High Flow Silt Fence	3,184	Ft
734E0610	Mucking Silt Fence	221	CuYd
734E0620	Repair Silt Fence	796	Ft
734E0845	Sediment Control at Inlet with Frame and Grate	138	Each
734E0847	Sediment Control at Type S Reinforced Concrete Drop Inlet	109	Ft
734E3100	Portable Sediment Containment System	1	Each
734E5000	Dewatering	100	Hour
734E5010	Sweeping	250	Hour
900E1320	Construction Entrance	8	Each

MODIFICATIONS TO THE EROSION AND SEDIMENT CONTROL PLAN TO PREVENT FLOODING AND PROPERTY DAMAGE

The contractor shall provide to the Engineer the name and phone number of an individual who shall be available 24/7 for the emergency management of erosion and sediment control devices. Additionally, the contractor shall have personnel on site during rain events to adjust, modify or remove erosion or sediment control devices to prevent flooding within the right of way or private property. In the event that any device is modified or removed the Engineer shall be immediately notified to discuss and implement any erosion and sediment control alternatives.

PLACING CONTRACTOR FURNISHED TOPSOIL

The Contractor will be required to furnish and place 4 inches of topsoil within the right-of-way and 6 inches of topsoil on temporary easements.

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

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

TABLE OF CONTRACTOR FURNISHED TOPSOIL

Station		to	Station		Topsoil (CuYd)
36+80	L		37+04	L	2.7
37+46	L		37+71	L	10.5
37+57	R		37+73	R	15.7
37+73	R		39+18	R	17.7
40+61	L		40+69	L	10.8
40+74	L		40+83	L	11.5
41+47	R		44+00	R	23.1
43+40	L		44+50	L	17.8
44+47	L		44+51	L	0.3
44+55	R		44+61	R	11.3
45+01	L		45+12	L	17.0
45+16	L		45+21	L	3.4
47+56	L		47+92	L	2.4
47+95	R		48+14	R	15.2
47+95	R		48+12	R	5.7
47+97	L		48+16	L	22.6
48+47	R		48+63	R	3.0
48+70	L		50+02	L	20.7
48+70	L		51+72	L	53.3
51+62	R		51+94	R	32.2
51+76	R		51+94	R	5.0
54+11	R		55+56	R	3.2
55+57	L		55+74	L	5.6
56+01	R		56+25	R	6.0
56+08	L		56+25	L	8.1
56+23	R		56+64	R	4.6
56+26	L		56+69	L	3.1
56+68	R		57+10	R	1.7
57+20	R		57+46	R	0.7
57+50	R		57+73	R	0.6
57+89	R		58+45	R	2.1
58+49	R		59+32	R	3.6
59+37	R		59+54	R	9.6
59+37	L		59+55	L	3.2
59+41	L		59+56	L	2.4
59+88	R		60+04	R	7.0
60+09	R		60+40	R	5.6
61+87	R		61+94	R	0.2
62+41	L		63+12	L	2.8

Total: 372.0

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MYCORRHIZAL INOCULUM

REV 08-17-16 ARK

Mycorrhizal inoculum shall 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 shall provide certification of the fungal species claimed and the live propagule count. The inoculum shall include the following fungal species:

<i>Glomus intraradices</i>	25%
<i>Glomus aggregatu</i>	25%
<i>Glomus mosseae</i>	25%
<i>Glomus etunicatum</i>	25%

Prior to placing sod, apply a minimum of 25,000 live propagules of inoculum per 1,000 square feet on bare soil. All costs of inoculating for the sod shall be incidental to the contract unit price per square yard for "Sodding".

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

Product	Manufacturer
MycoApply	Mycorrhizal Applications, Inc. Grants Pass, OR Phone: 1-866-476-7800 http://www.mycorrhizae.com/

FERTILIZING

A commercial fertilizer with a minimum guaranteed analysis of 11-52-0 or an approved alternate fertilizer shall be applied to areas designated for sodding immediately before the sod is placed and incorporated into the soil to a depth of 2". The application rate of fertilizer shall be 3 pounds per 1000 square feet.

SODDING

Sod shall be placed behind curb and gutter sections in residential areas at locations specified in the plans and at locations determined by the Engineer during construction.

An estimated 18 Gallons of water per square yard of sod was used to compute the quantity for the bid item "Water for Vegetation". All costs involved for watering the sod shall be incidental to the contract unit price per MGal for "Water for Vegetation".



SOIL STABILIZER

An estimated quantity of 700 square yards of soil stabilizer has been included in the Estimate of Quantities. The soil stabilizer shall be applied on permanently seeded areas, temporarily graded areas, and areas deemed necessary by the Engineer.

The Contractor shall apply soil stabilizer according to the manufacturer's application instructions and at the rate specified in the list of approved soil stabilizers.

Wood fiber mulch that contains a green dye shall be mixed with the soil stabilizer to be used as a tracer when the soil stabilizer is applied hydraulically. Wood fiber mulch shall be added at a rate of 300 pounds per acre to all of the approved soil stabilizers listed in the table except for the Pam-12 Plus product. The wood fiber mulch shall be a 100% wood fiber product and does not need to contain a tackifier.

All costs for furnishing and applying the soil stabilizer including wood fiber mulch, hauling, materials, equipment, labor, and incidentals necessary shall be paid for at the contract unit price per square yard for "Soil Stabilizer".

The soil stabilizer shall be from the list below or an approved equal:

<u>Product</u>	<u>Manufacturer</u>
StarTak 600 Applied at a rate of 150 Lb/Acre	Chemstar Products Company Minneapolis, MN Phone: 1-800-328-5037 www.chemstar.com
Pam-12 Plus Applied at a rate of: <u>Slope</u> None to 4:1 1000 Lb/Acre 4:1 to 3:1 1000 to 2000 Lb/Acre 3:1 to 2:1 2000 to 3000 Lb/Acre M-Binder Applied at a rate of 150 Lb/Acre	ENCAP, LLC Green Bay, WI Phone: 1-877-405-5050 http://professional.encap.net/
FiberRX Applied at a rate of: <u>Slope</u> None to 4:1 50 Lb/Acre 3:1 60 Lb/Acre 2:1 70 Lb/Acre 1:1 or steeper 80 Lb/Acre	Ecology Controls Carpinteria, CA Phone: 1-805-684-0436 www.ssseeds.com
EnviroPam Applied at a rate of 9 Lb/Acre	Hydrostraw, LLC Manteno, IL Phone: 1-800-545-1755 http://hydrostraw.com/
HydraTack, Tack Plus, Tack-P, or Tack-P Plus Applied at a rate of 30 Lb/Acre	Innovative Turf Solutions, LLC Cincinnati, OH Phone: 1-513-317-8311 www.innovativeturfsolutions.com
	Innovative Turf Solutions, LLC Cincinnati, OH Phone: 1-513-317-8311 www.innovativeturfsolutions.com

FI-1045 Hydrobond or
FI-1046 Hydrobond
Applied at a rate of 15 Lb/Acre

HF5000 Tack
Applied at a rate of 60 Lb/Acre

R-Tack
Applied at a rate of 150 Lb/Acre

SpecTack
Applied at a rate of:
Slope
None 30 to 80 Lb/Acre
4:1 50 to 100 Lb/Acre
3:1 80 to 120 Lb/Acre
2:1 100 to 170 Lb/Acre

Super Tack
Applied at a rate of 60 Lb/Acre

EarthGuard SFM
Applied at a rate of 60 LB/Acre
(approx. 6 Gallons/Acre)

EROSION CONTROL WATTLE

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

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

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

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

JRM Chemical, Inc.
Cleveland, OH
Phone: 1-216-475-8488
www.soilmoist.com

Rantec Corporation
Ranchester, WY
Phone: 1-307-655-9565
www.ranteccorp.com

Terra Novo Inc.
Bakersfield, CA
Phone: 1-661-747-5956
www.terranovo.com

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TRIANGULAR SILT BARRIER

Triangular silt barriers for restraining the flow of water and sediment shall be placed at the locations noted in the Table of Triangular Silt Barrier and at locations determined by the Engineer during construction. Triangular silt barriers shown in the plans shall be installed only on those portions of Mount Rushmore Road/US Hwy 16 closed to the public.

Triangular silt barriers shall be removed when vegetation is established or paving is complete. Some or all of the triangular silt barriers may be left on the project until vegetation is established.

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

All costs for furnishing and installing the triangular silt barrier including labor, equipment, and materials shall be incidental to the contract unit price per foot for "Triangular Silt Barrier".

All costs for removing the triangular silt barrier from the project including labor, equipment, and materials shall be incidental to the contract unit price per foot for "Remove Triangular Silt Barrier".

The triangular silt barrier provided shall be from the list shown below or an approved equal:

<u>Product</u>	<u>Manufacturer</u>
Triangular Silt Dike	Triangular Silt Dike Co., Inc. Midwest City, OK Phone: 1-800-290-8473 www.tri-silt-dike.com
GeoRidge or GeoRidge Bio	Nilex Centennial, CO Phone: 1-303-766-2000 www.nilex.com
Ditch Guard	ERTEC Environmental Systems LLC Alameda, CA Phone: 1-866-521-0724 www.ertecsystems.com

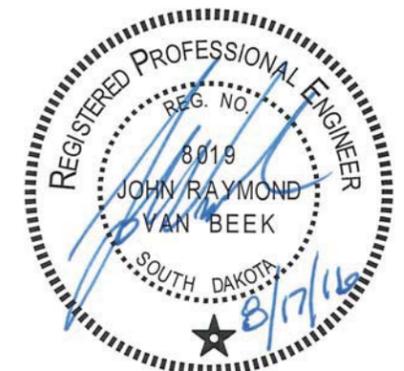


TABLE OF TRIANGULAR SILT BARRIER

Station	L/R	Quantity (Ft)
34+05	L-R	59
36+73	L-R	59
37+93	L-R	59
40+47	L-R	59
41+78	L-R	59
44+27	L-R	61
45+46	L-R	62
47+76	L-R	67
48+92	L-R	67
51+55	L-R	69
52+64	L-R	67
55+34	L-R	77
56+71	L-R	69
59+12	L-R	67
60+40	L-R	67
62+87	L-R	67

Additional Quantity: 200

Total: 1235

SEDIMENT FILTER BAG

The sediment filter bag shall be the Snake Bag from Sacramento Bag Manufacturing Company or an approved equal.

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

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

Sediment filter bags shall be filled with clean aggregate 2" minus or smaller.

Sediment Filter Bag

Manufacturer

Sacramento Bag Manufacturing Co.
Sacramento, CA
Phone: 1-800-287-2247
www.sacbag.com



TABLE OF SEDIMENT FILTER BAG

Station	L/R	Sediment Filter Bag Quantity (Ft)
37+23	R	5
37+27	R	5
37+55	R	5
37+59	R	5
40+97	R	5
40+99	R	5
41+28	R	5
41+29	R	5
44+65	R	5
44+66	R	5
44+97	R	5
44+98	R	5

Total: 60

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

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

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

- A space of at least 1' shall be provided between the silt fence installation and the inlet. This space shall be filled completely with a 2" depth of aggregate, 2" minus or smaller.
- The top elevation of the silt fence shall be such that a 12" horizontal flap of silt fence will remain at the bottom.
- The base of the silt fence shall 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 shall be placed on the 12" flap around the perimeter of the silt fence installation. The sediment filter bags shall overlap 6" at the ends and be placed tightly together.

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

All costs for furnishing, installing, and removing the 2" depth of aggregate shall be incidental to other erosion and sediment control bid items.

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

The removed sediment shall 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 shall 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

Station	L/R	High Flow Silt Fence Quantity (Ft)	Sediment Filter Bag Quantity (Ft)	Remove Sediment Quantity (CuYd)
34+03	L	26	32	0.25
35+14	L	26	32	0.25
35+14	R	22	32	0.25
36+84	L	26	32	0.25
36+84	R	22	32	0.25
37+04	L	22	32	0.25
37+05	L	22	32	0.25
37+07	L	22	32	0.25
37+12	L	22	32	0.25
37+42	L	22	32	0.25
37+47	L	26	32	0.25
37+81	L	26	32	0.25
38+68	L	26	32	0.25
38+68	R	22	32	0.25
40+58	L	22	32	0.25
40+58	L	22	32	0.25
40+84	L	22	32	0.25
40+84	L	22	32	0.25
40+84	L	26	32	0.25
40+85	L	26	32	0.25
41+21	L	22	32	0.25
41+22	L	22	32	0.25
41+23	L	22	32	0.25
41+23	L	22	32	0.25
41+23	L	26	32	0.25
41+24	L	26	32	0.25
41+32	R	26	32	0.25

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

Station	L/R	High Flow Silt Fence Quantity (Ft)	Sediment Filter Bag Quantity (Ft)	Remove Sediment Quantity (CuYd)
41+41	L	22	32	0.25
41+54	L	22	32	0.25
41+54	L	26	32	0.25
41+55	R	22	32	0.25
41+68	L	26	32	0.25
42+62	L	26	32	0.25
44+34	L	26	32	0.25
44+62	L	22	32	0.25
44+62	L	22	32	0.25
45+02	L	22	32	0.25
45+03	L	22	32	0.25
47+82	L	22	32	0.25
47+83	L	22	32	0.25
47+83	R	22	32	0.25
47+85	L	22	32	0.25
48+15	R	22	32	0.25
48+16	L	22	32	0.25
48+17	L	22	32	0.25
48+47	R	22	32	0.25
48+47	R	22	32	0.25
48+47	R	22	32	0.25
48+47	L	22	32	0.25
48+47	L	22	32	0.25
48+74	L	26	32	0.25
48+74	R	22	32	0.25
49+62	L	26	32	0.25
49+62	R	22	32	0.25
50+83	R	22	32	0.25
51+61	L	22	32	0.25
51+61	L	22	32	0.25
51+61	R	22	32	0.25
51+61	L	22	32	0.25
51+63	R	22	32	0.25
51+65	L	22	32	0.25
51+67	R	22	32	0.25
51+68	L	26	32	0.25
51+78	L	22	32	0.25
51+95	R	22	32	0.25
51+95	R	22	32	0.25
51+96	L	22	32	0.25

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

Station	L/R	High Flow Silt Fence Quantity (Ft)	Sediment Filter Bag Quantity (Ft)	Remove Sediment Quantity (CuYd)
52+26	L	22	32	0.25
52+26	L	22	32	0.25
52+26	L	26	32	0.25
52+26	R	22	32	0.25
52+26	R	22	32	0.25
52+26	R	22	32	0.25
52+26	R	22	32	0.25
52+57	L	26	32	0.25
52+57	R	22	32	0.25
53+55	L	26	32	0.25
53+55	R	22	32	0.25
54+06	L	22	32	0.25
54+21	L	26	32	0.25
54+29	R	22	32	0.25
54+94	L	26	32	0.25
55+41	L	22	32	0.25
55+41	L	22	32	0.25
55+41	R	22	32	0.25
55+42	L	22	32	0.25
55+45	R	22	32	0.25
55+45	L	22	32	0.25
55+48	R	22	32	0.25
55+75	R	22	32	0.25
55+75	R	22	32	0.25
55+75	L	22	32	0.25
55+75	L	22	32	0.25
55+76	L	22	32	0.25
55+76	R	22	32	0.25
56+06	R	22	32	0.25
56+06	R	22	32	0.25
56+07	L	22	32	0.25
56+07	L	22	32	0.25
56+07	L	22	32	0.25
56+07	R	22	32	0.25
56+35	L	26	32	0.25
58+13	L	26	32	0.25
58+13	R	22	32	0.25
58+67	R	22	32	0.25
59+21	L	26	32	0.25
59+21	L	22	32	0.25
59+21	L	22	32	0.25

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

Station	L/R	High Flow Silt Fence Quantity (Ft)	Sediment Filter Bag Quantity (Ft)	Remove Sediment Quantity (CuYd)
59+21	R	26	32	0.25
59+25	L	22	32	0.25
59+29	L	22	32	0.25
59+55	R	22	32	0.25
59+56	L	22	32	0.25
59+56	L	22	32	0.25
59+56	R	22	32	0.25
59+87	L	22	32	0.25
59+87	L	22	32	0.25
59+87	R	22	32	0.25
60+18	L	26	32	0.25
60+18	R	26	32	0.25
61+32	R	22	32	0.25
61+32	L	26	32	0.25
61+84	R	22	32	0.25
62+02	L	26	32	0.25
62+42	R	22	32	0.25
62+99	L	26	32	0.25
62+99	L	22	32	0.25
62+99	L	22	32	0.25
63+01	R	26	32	0.25
63+97	L	26	32	0.25
63+97	R	26	32	0.25
65+15	L	26	32	0.25
65+15	R	22	32	0.25
65+99	L	26	32	0.25
65+99	R	22	32	0.25
66+84	L	22	32	0.25
	L	22	32	0.25
	R	22	32	0.25

Totals: 3184 4416 34.5



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 shall be installed prior to working in the vicinity of the drop inlets.

The Contractor shall be responsible for maintaining and repairing the sediment control devices for the duration of the project for which sediment control measures are required. Maintenance shall 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 shall be incidental to the contract unit price per each for “Sediment Control at Inlet with Frame and Grate”.

Sediment collection devices shall be:

A commercial made sediment collection device from the “Sediment Control at Inlet with Frame and Grate” list or an approved equal. The device shall be installed in reinforced concrete drop inlets according to the manufacturer’s recommendations.

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	Dandy Products Inc. Dublin, 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 Waubay, SD Phone: 1-605-520-0555 www.skyviewconst.com
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

Sediment Catchers

Shaun Jensen
Brookings, SD
Phone: 1-605-690-4950

Grate FX, Slammer, or VertPro

Enviroscape ECM, Ltd.
Oakwood, OH
Phone: 1-419-594-3210
www.strawblanket.com

BX Inlet Sediment Boxes

BX Civil and Construction
Dell Rapids, SD
Phone: 1-605-428-5483
bx-cc.com

TABLE OF SEDIMENT CONTROL AT INLETS WITH FRAMES AND GRATES

Station	L/R	Quantity (Each)
34+03	L	1
35+14	L	1
35+14	R	1
36+84	L	1
36+84	R	1
37+04	L	1
37+05	L	1
37+07	L	1
37+12	L	1
37+42	L	1
37+47	L	1
37+81	L	1
38+68	L	1
38+68	R	1
40+58	L	1
40+58	L	1
40+84	L	1
40+84	L	1
40+84	L	1
40+85	L	1
41+21	L	1
41+22	L	1
41+23	L	1
41+23	L	1
41+23	L	1
41+24	L	1
41+32	R	1
41+41	L	1
41+54	L	1
41+54	L	1
41+55	R	1

FOR BIDDING PURPOSES ONLY

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

Station	L/R	Quantity (Each)
41+68	L	1
42+62	L	1
44+34	L	1
44+62	L	1
44+62	L	1
45+02	L	1
45+03	L	1
47+82	L	1
47+83	L	1
47+83	R	1
47+85	L	1
48+15	R	1
48+16	L	1
48+17	L	1
48+47	R	1
48+47	R	1
48+47	R	1
48+47	L	1
48+47	L	1
48+74	L	1
48+74	R	1
49+62	L	1
49+62	R	1
50+83	R	1
51+61	L	1
51+61	L	1
51+61	L	1
51+61	R	1
51+63	R	1
51+65	L	1
51+67	R	1
51+68	L	1
51+78	L	1
51+95	R	1
51+95	R	1
51+96	L	1
52+26	R	1
52+26	R	1



TABLE OF SEDIMENT CONTROL AT INLETS WITH FRAMES AND GRATES (CONTINUED)

Station	L/R	Quantity (Each)
52+26	R	1
52+57	L	1
52+57	R	1
53+55	L	1
53+55	R	1
54+06	L	1
54+21	L	1
54+29	R	1
54+94	L	1
55+41	L	1
55+41	L	1
55+41	R	1
55+42	L	1
55+45	R	1
55+45	L	1
55+48	R	1
55+75	R	1
55+75	R	1
55+75	L	1
55+75	L	1
55+76	L	1
55+76	R	1
56+06	R	1
56+06	R	1
56+07	L	1
56+07	L	1
56+07	R	1
56+35	L	1
58+13	L	1
58+13	R	1
58+67	R	1
59+21	L	1
59+21	L	1
59+21	L	1
59+21	R	1
59+25	L	1
59+29	L	1
59+55	R	1
59+56	L	1
59+56	L	1
59+56	L	1
59+56	R	1
59+87	L	1

TABLE OF SEDIMENT CONTROL AT INLETS WITH FRAMES AND GRATES (CONTINUED)

Station	L/R	Quantity (Each)
59+87	L	1
59+87	R	1
60+18	L	1
60+18	R	1
61+32	R	1
61+32	L	1
61+84	R	1
62+02	L	1
62+42	R	1
62+99	L	1
63+01	R	1
63+97	L	1
63+97	R	1
65+15	L	1
65+15	R	1
65+99	L	1
65+99	R	1
66+84	L	1
66+84	L	1
66+84	R	1
Total:		138

SEDIMENT CONTROL AT TYPE S REINFORCED CONCRETE DROP INLETS

The sediment control device provided shall be from the list shown below. Refer to Standard Plate 734.11 for details.

Product	Manufacturer
Dandy Curb	Dandy Products Inc. Dublin, OH Phone: 1-800-591-2284 www.dandyproducts.com
Gutterbuddy	ACF Environmental Richmond, VA Phone: 1-800-448-3636 www.acfenvironmental.com
SS-300	Silt-Saver, Inc. Conyers, GA Phone: 1-888-382-7458 www.siltsaver.com



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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH0016(84)67	D7	D22

Curb Inlet Guard

ECTEC Environmental Systems LLC
Alameda, CA
Phone: 1-866-521-0724
www.ertecsystems.com

TABLE OF SEDIMENT CONTROL AT TYPE S REINFORCED CONCRETE DROP INLETS

Station	L/R	Clear Opening Width (Ft)	Quantity* (Ft)
36+83	L	9	11
40+60	R	10	12
40+60	L	10	12
40+64	L	9	11
41+35	R	10	12
41+37	R	9	11
41+43	L	9	11
47+83	R	9	11
52+27	L	5	7
59+24	R	9	11

Total: 109

* Quantity shown is the minimum length required and shall be the basis of payment.

PORTABLE SEDIMENT CONTAINMENT SYSTEM

Sediment-laden water pumped from the construction site shall be treated with a Wimco Portable Sediment Containment System or approved equal before being discharged. This system must remain on the site and available for use at all times during construction.

All costs for furnishing, installing, labor, maintaining, consumables, relocating, storing, and removing the portable sediment containment system shall be paid for under the bid item "Portable Sediment Containment System".

The Contractor has the option to treat sediment laden water trapped within the project limits with the Portable Sediment Containment System as specified in these plans, or the Contractor may elect to transport sediment laden water off the project.

If the Contractor elects to transport sediment laden water off the project, no additional payment for loading, transporting, and labor costs will be made. Water transported off the project limits shall not be disposed of in an area where it can enter a waterway. The disposal site must be approved by the Engineer.

A quantity of 100 hours of Dewatering is intended to be used to establish a unit price of Dewatering for bidding purposes only and shall be used for rainfall events greater than 1/2" in 24 hours only. Dewatering costs incurred as a result of rainfall events less than 1/2" in 24 hours shall be incidental to the project.

STREET SWEEPING

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

The Contractor shall use a pickup broom having integral self-contained storage to clean the roadway. The pickup broom used shall 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.
2. Following pavement grooving operations and prior to the application of the pavement marking tape.
3. When sawing operations are underway in the inside driving lanes, the outside driving lanes and gutter may need to be swept to control dust.

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

CONSTRUCTION ENTRANCE

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

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

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

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

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

The following table is a list of known construction entrance products available for use:

<u>Product</u>	<u>Manufacturer</u>
Grizzly Rumble Grate (10' width and 24' length required)	Trackout Control, LLC Tempe, AZ Phone: 1-800-761-0056 www.trackoutcontrol.com
Rumble Grid (12' width and 24' length including combination of grids and ramps required)	Pro-Tec Equipment, Inc. Charlotte, MI Phone: 1-800-292-1225 www.pro-tecequipment.com

SDDOT CONSTRUCTION ENTRANCE

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

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

<u>Sieve Size</u>	<u>Percent Passing</u>
6"	100%
#4	0-60%
#200	0-20%

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

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

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

The granular material shall 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 MSE geotextile shall conform to Section 831 of the Specifications. The MSE geotextile shall be on the Approved Products List for this material or will be certified by the supplier to meet this specification prior to installation.

The MSE geotextile should be kept as taut as possible prior to placing.

Equipment shall not be allowed on the MSE geotextile until the first lift of granular material is in place.

All seams in the MSE geotextile shall be overlapped at least 2' and shingled.

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STORM WATER POLLUTION PREVENTION PLAN CHECKLIST

(The numbers right of the title headings are reference numbers to the GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES)

❖ **SITE DESCRIPTION (4.2 1)**

- **Project Limits: See Title Sheet (4.2 1.b)**
- **Project Description: See Title Sheet (4.2 1.a.)**
- **Site Map(s): See Title Sheet and Plans (4.2 1.f. (1)-(6))**
- **Major Soil Disturbing Activities** (check all that apply)
 - Clearing and grubbing
 - Excavation/borrow
 - Grading and shaping
 - Filling
 - Cutting and filling
 - Other (describe):
- **Total Project Area: 9 Acres (4.2 1.b.)**
- **Total Area To Be Disturbed: 9 Acres (4.2 1.b.)**
- **Existing Vegetative Cover (%) 5**
- **Soil Properties: A-6, A-7-6**
- **Classification: Silty Clay, Clay (4.2 1. d.)**
- **Name of Receiving Water Body/Bodies: Rapid Creek (4.2 1.e.)**

❖ **ORDER OF CONSTRUCTION ACTIVITIES (4.2 1.c.)**

(Stabilization measures shall be initiated as soon as possible, but in no case later than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased. Initiation of final or temporary stabilization may exceed the 14-day limit if earth disturbing activities will be resumed within 21 days.)

- **Install stabilized construction entrance(s).**
- **Install perimeter protection where runoff sheets from the site.**
- **Clearing and grubbing.**
- **Remove and store topsoil.**
- **Stabilize disturbed areas.**
- **Install utilities, storm sewers, curb and gutter.**
- **Install inlet and culvert protection after completing storm drainage and other utility installations.**
- **Complete final grading.**
- **Complete final paving and sealing of concrete.**
- **Complete traffic control installation and protection devices.**
- **Sod or landscape areas disturbed by removal activities.**

❖ **EROSION AND SEDIMENT CONTROLS (4.2 2.a.(1)(a)-(f))**

(Check all that apply)

- **Stabilization Practices (See Detail Plan Sheets)**
 - Temporary Seeding (Cover Crop Seeding)
 - Permanent Seeding
 - Sodding
 - Planting (Woody Vegetation for Soil Stabilization)
 - Mulching (Grass Hay or Straw)
 - Hydraulic Mulch (Wood Fiber Mulch)
 - Soil Stabilizer
 - Bonded Fiber Matrix
 - Erosion Control Blankets or Mats
 - Vegetation Buffer Strips
 - Roughened Surface (e.g. tracking)
 - Dust Control
 - Other:

➤ **Structural Temporary Erosion and Sediment Controls**

- Silt Fence
- Floating Silt Curtain
- Straw Bale Check
- Temporary Berm
- Temporary Slope Drain
- Straw Wattles or Rolls
- Turf Reinforcement Mat
- Rip Rap
- Gabions
- Rock Check Dams
- Sediment Traps/Basins
- Inlet Protection
- Outlet Protection
- Surface Inlet Protection (Area Drain)
- Curb Inlet Protection
- Stabilized Construction Entrances
- Entrance/Exit Equipment Tire Wash
- Interceptor Ditch
- Concrete Washout Area
- Temporary Diversion Channel
- Work Platform
- Temporary Water Barrier
- Temporary Water Crossing
- Other: Triangular Silt Barrier

➤ **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.

➤ **Storm Water Management (4.2 2.b., (1) and (2))**

Storm water management will be handled by temporary controls outlined in "EROSION AND SEDIMENT CONTROLS" above, and any permanent controls needed to meet permanent storm water management needs in the post construction period. Permanent controls will be shown on the plans and noted as permanent.

➤ **Other Storm Water Controls (4.2 2.c., (1) and (2))**

▪ **Waste Disposal**

All liquid waste materials will be collected and stored in sealed metal containers approved by the project engineer. 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 in the field office. The general contractor's representative responsible for the conduct of work on the site will be responsible for seeing 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 individual designated as the contractor's on-site representative 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 in a timely manner by a licensed waste management contractor or as required by any local regulations.

❖ **Maintenance and Inspection (4.2 3. and 4.2 4.)**

➤ **Maintenance and Inspection Practices**

- Inspections will be conducted at least one time per week and after a storm event of 0.50 inches or greater.
- 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 in order 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 site superintendent are responsible for inspections. Maintenance, 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.

❖ **Non-Storm Water Discharges (3.0)**

The following non-storm water 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.

❖ **Materials Inventory (4.2. 2.c.(2))**

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 headings "EROSION AND SEDIMENT CONTROLS" and "SPILL PREVENTION" (check all that apply).

- Concrete and Portland Cement
- Detergents
- Paints
- Metals
- Bituminous Materials
- Petroleum Based Products
- Cleaning Solvents
- Wood
- Cure
- Texture
- Chemical Fertilizers
- Other:



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❖ **Spill Prevention (4.2 2.c.(2))**

➤ **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 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.
- Vegetation areas not essential to the construction project will be preserved and maintained as noted on the plans.

▪ Hazardous Materials

- Products will be kept in original containers unless the container is not resealable.
- 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 storm water system or storm water 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 storm water runoff.

➤ **Product Specific Practices (6.8)**

▪ 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 storm water. 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 areas on the site. These areas must be self contained and not connected to any storm water outlet of the site. Upon completion of construction washout areas will be properly stabilized.

➤ **Spill Control Practices (4.2 2 c.(2))**

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 clean up 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 clean up 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. The contractor is responsible for ensuring that the site superintendent has had appropriate training for hazardous materials handling, spill management, and cleanup.

➤ **Spill Response (4.2 2 c.(2))**

The primary objective in responding to a spill is to quickly contain the material(s) and prevent or minimize migration into storm water runoff and conveyance systems. If the release has impacted on-site storm water, it is critical to contain the released materials on-site and prevent their release into receiving waters. If a spill of pollutants threatens storm water 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 SD DENR.
- Personnel with primary responsibility for spill response and clean up 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.

❖ **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 DENR immediately **if any one of the following** conditions exists:
 - The discharge threatens or is in a position to threaten the waters of the state (surface water or ground water).
 - The discharge causes an immediate danger to human health or safety.
 - The discharge exceeds 25 gallons.
 - The discharge causes a sheen on surface water.
 - The discharge of any substance that exceeds the ground water quality standards of ARSD (Administrative Rules of South Dakota) chapter 74:51:01.
 - The discharge of any substance that exceeds the surface water quality standards of ARSD chapter 74:51:01.
 - The discharge of any substance that harms or threatens to harm wildlife or aquatic life.
 - The discharge of crude oil in field activities under SDCL (South Dakota Codified Laws) chapter 45-9 is greater than 1 barrel (42 gallons).

To report a release or spill, call DENR at 605-773-3296 during regular office hours (8 a.m. to 5 p.m. Central time). To report the release after hours, on weekends or holidays, call State Radio Communications at 605-773-3231. Reporting the release to DENR does not meet any obligation for reporting to other state, local, or federal agencies. Therefore, the responsible person must also contact local authorities to determine the local reporting requirements for releases. DENR recommends that spills also be reported to the National Response Center at (800) 424-8802.



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❖ **Construction Changes (4.4)**

When changes are made to the construction project that will require alterations in the temporary erosion controls of the site, the Storm Water Pollution Prevention Plan (SWPPP) will be amended to provide appropriate protection to disturbed areas, all storm water structures, and adjacent waters. The SDDOT Project Engineer will modify the SWPPP plan (DOT 298) and drawings to reflect the needed changes. Copies of changes will be routed per DOT 298. Copies of forms and the SWPPP will be retained in a designated place for review over the course of the project.

❖ **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.

Tom Leibel

Authorized Signature (See the General Permit, Section 6.7.1.C.)

➤ **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**

➤ **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: _____

➤ **SD DENR Contact Spill Reporting**

- Business Hours Monday-Friday (605) 773-3296
- Nights and Weekends (605) 773-3231

➤ **SD DENR Contact for Hazardous Materials.**

- (605) 773-3153

➤ **National Response Center Hotline**

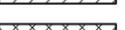
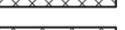
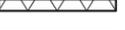
- (800) 424-8802.



EROSION AND SEDIMENT CONTROL LEGEND

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH0016(84)67	D12	D22
PLOT DATE: 07-29-16			

-  STORM WATER DISCHARGE POINT
-  LOW FLOW SILT FENCE
-  HIGH FLOW SILT FENCE
-  SILT TRAP
-  SEDIMENT CONTROL AT EXISTING 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 EXISTING INLET BEFORE PLACEMENT OF SURFACING
-  HYDRAULIC STRAW MULCH / FIBER MULCHING / BONDED FIBER MATRIX / FIBER REINFORCED MATRIX
-  ROCK CHECK DAM
-  SODDING
-  PERMANENT SEEDING
-  LANDSCAPING (SEE INSTALLATION NOTES)
-  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



EROSION AND SEDIMENT CONTROL NOTES

ALL STATION AND OFFSET INFORMATION IN THE EROSION AND SEDIMENT CONTROL PLANS IS REFERENCED TO THE MAINLINE ALIGNMENT.

TRIANGULAR SILT BARRIERS SHOWN IN RED SHALL BE INSTALLED ONLY ON THOSE PORTIONS OF MOUNT RUSHMORE ROAD CLOSED TO THE PUBLIC.

BEST MANAGEMENT PRACTICES

BEST MANAGEMENT PRACTICES (BMP'S) SHOULD BE USED THROUGHOUT CONSTRUCTION. TO REMIND CONTRACTORS AND FIELD PERSONNEL THAT BMP'S FOR WATER QUALITY SHOULD BE UTILIZED THROUGHOUT THE CONSTRUCTION PROCESS. THE SYMBOLOGY 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.

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 SYMBOLOGY SHOWN. OTHER BEST MANAGEMENT PRACTICES FOR WHICH THERE IS NO SYMBOLOGY INCLUDE:

PERMANENT SEEDING IS DONE BEFORE THE APPLICATION OF ALL TYPES OF MULCHING AND HYDRAULICALLY APPLIED SOIL MULCHES AND MATRIXS. 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 SYMBOLOGY.

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 BEGINNING 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.

EROSION AND SEDIMENT CONTROL PLAN FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT NH0016(84)67	SHEET D13	TOTAL SHEETS D22
PLOTTING DATE: 07-29-16			

Perimeter Control

Install Sediment Control at Inlet with Frame and Grate at The Following Locations:

34+03.3-29.2' LT

Install Sediment Control at Type S Reinforced Concrete Drop Inlets at the following locations:

36+82.6-28.0' LT

Install Triangular Silt Barriers at the following locations:

34+05.3-29.5' Lt to
34+06.0-29.9' Rt 59.4'
36+73.0-30.1' Lt to
36+73.7-29.5' Rt 59.0'

Temporary Stabilization

Install Sediment Control at Inlet with Frame and Grate at The Following Locations:

35+14.1-29.2' LT
35+14.1-29.2' RT
36+83.8-29.2' LT
36+83.8-29.2' RT

Install Interim Sediment Control at Inlets at the following locations:

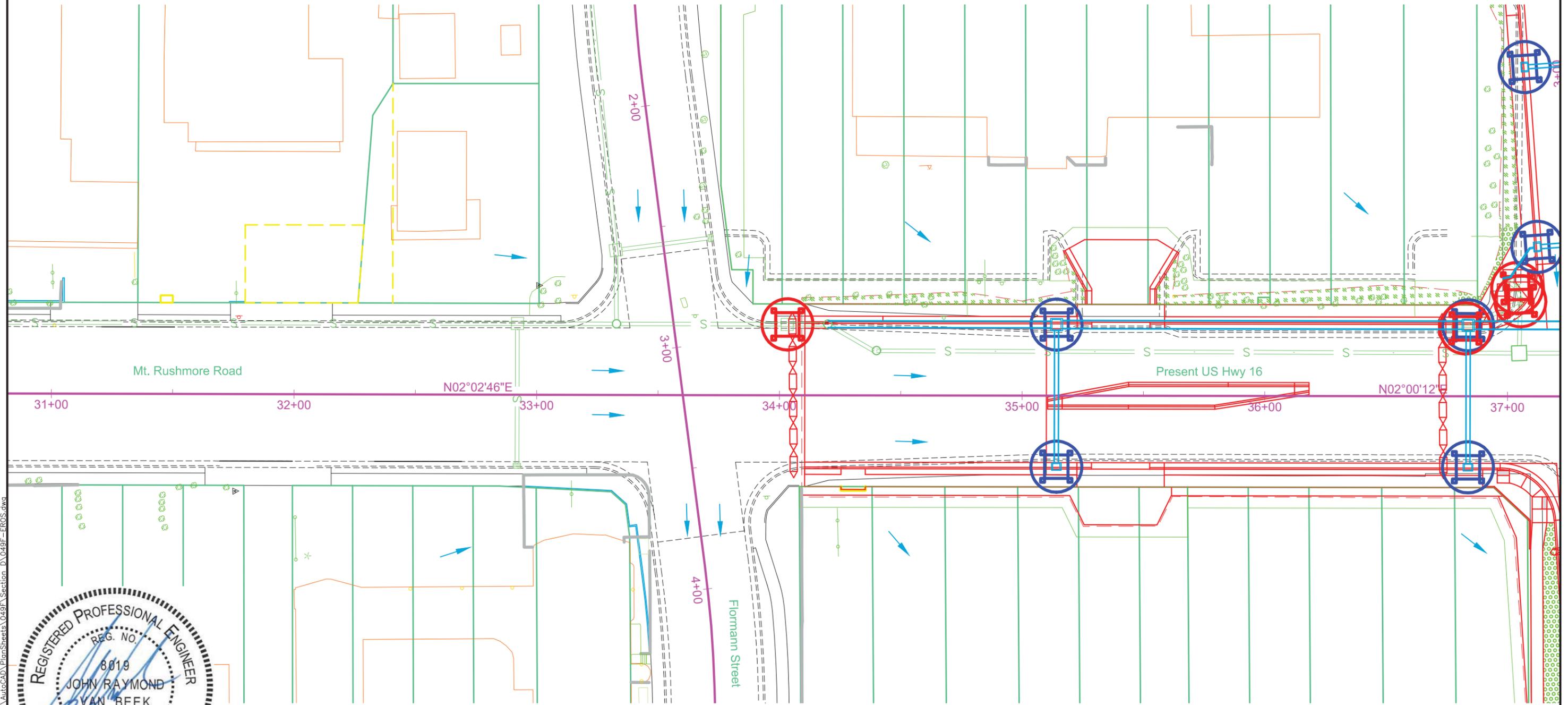
35+14.1-29.2' LT
35+14.1-29.2' RT
36+83.8-29.2' LT
36+83.8-29.2' RT

Final Stabilization

Install sodding as soon as possible and water as directed by the Engineer.

Remove and reset landscaping at the following locations (Incidental Work, Grading):

34+09 L to 35+26 L
35+55 R to 36+80 L
36+97 L to 37+06 L



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Perimeter Control
Install Sediment Control at Inlet with Frame and Grate at The Following Locations:

- 37+03.9-44.6' LT
- 37+05.3-39.2' LT
- 40+58.4-37.0' LT
- 41+20.9-40.3' LT
- 41+23.0-45.1' LT
- 41+31.5-39.3' RT
- 41+40.8-39.6' LT

Install Sediment Filter Bags at the following locations:

- 37+22.7-63.3' RT
- 37+27.2-121.1' RT
- 37+54.5-62.8' RT
- 37+59.0-119.2' RT
- 40+96.7-73.3' RT
- 40+99.2-124.7' RT
- 41+28.1-59.4' RT
- 41+29.4-86.9' RT

Temporary Stabilization

Install Interim Sediment Control at Inlets at the following locations:

- 37+06.9-135.3' LT
- 37+12.2-61.4' LT
- 37+42.1-137.8' LT
- 37+47.4-64.0' LT
- 37+80.5-29.2' LT
- 38+68.2-29.2' LT
- 38+68.2-29.2' RT
- 40+58.2-38.5' LT
- 40+84.0-85.1' LT
- 40+84.1-110.3' LT
- 40+84.2-150.5' LT
- 40+85.0-59.9' LT
- 41+22.4-150.4' LT
- 41+22.6-120.8' LT
- 41+22.8-80.8' LT
- 41+24.0-59.7' LT
- 41+22.8-80.8' LT
- 41+24.0-59.7' LT
- 41+53.6-29.2' LT
- 41+53.7-40.9' LT
- 41+55.0-29.2' RT
- 41+67.6-29.2' LT
- 42+62.3-29.2' LT

Install Sediment Control at Inlet with Frame and Grate at The Following Locations:

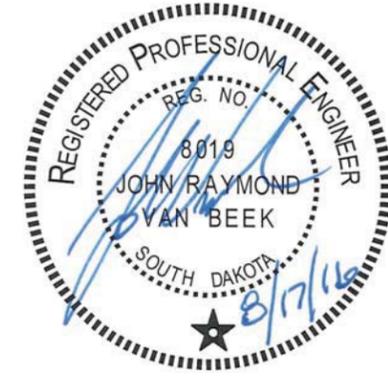
- 37+06.9-135.3' LT
- 37+12.2-61.4' LT
- 37+42.1-137.8' LT
- 37+47.4-64.0' LT
- 37+80.5-29.2' LT
- 38+68.2-29.2' RT
- 40+58.2-38.5' LT
- 40+84.0-85.1' LT
- 40+84.1-110.3' LT
- 40+84.2-150.5' LT
- 40+85.0-59.9' LT
- 41+22.4-150.4' LT
- 41+22.6-120.8' LT
- 41+22.8-80.8' LT
- 41+24.0-59.7' LT
- 41+22.8-80.8' LT
- 41+24.0-59.7' LT
- 41+53.6-29.2' LT
- 41+53.7-40.9' LT
- 41+55.0-29.2' RT
- 41+67.6-29.2' LT
- 42+62.3-29.2' LT

Final Stabilization

Install sodding as soon as possible and water as directed by the Engineer.

Remove and reset landscaping at the following locations (Incidental Work, Grading):

- 37+54 L to 37+71 L (Remove only- do not reset)
- 39+01 L to 39+39 L
- 41+24 L to 41+33 L
- 41+31 L to 41+41 L
- 42+59 L to 42+74 L
- St Anne Street
- 2+81 R to 3+62 R
- St Francis Street
- 2+82 L to 3+22 L
- 3+46 L to 3+84 L
- 4+80 L to 5+57 L



Install Triangular Silt Barriers at the following locations:

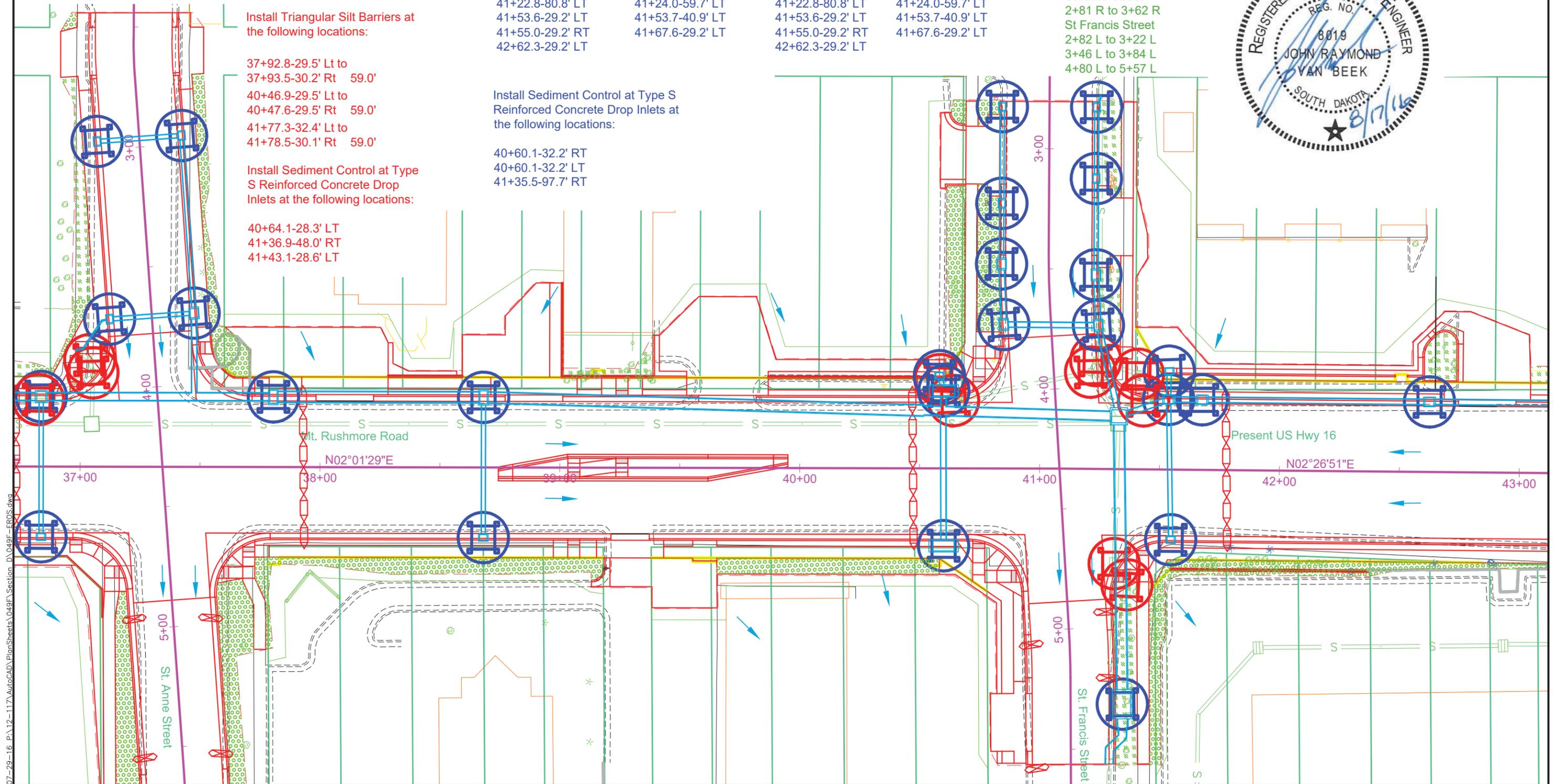
- 37+92.8-29.5' Lt to 37+93.5-30.2' Rt 59.0'
- 40+46.9-29.5' Lt to 40+47.6-29.5' Rt 59.0'
- 41+77.3-32.4' Lt to 41+78.5-30.1' Rt 59.0'

Install Sediment Control at Type S Reinforced Concrete Drop Inlets at the following locations:

- 40+64.1-28.3' LT
- 41+36.9-48.0' RT
- 41+43.1-28.6' LT

Install Sediment Control at Type S Reinforced Concrete Drop Inlets at the following locations:

- 40+60.1-32.2' RT
- 40+60.1-32.2' LT
- 41+35.5-97.7' RT



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Perimeter Control
Install Sediment Control at Inlet with Frame and Grate at The Following Locations:

47+81.8-34.1' LT
47+85.3-34.1' LT

Install Sediment Control at Type S Reinforced Concrete Drop Inlets at the following locations:

47+83.2-35.8' RT

Install Triangular Silt Barriers at the following locations:

44+26.3-32.1' Lt to
44+27.6-30.3' Rt 61.0'
45+46.0-30.9' Lt to
45+46.0-31.5' Rt 62.0'
47+75.7-32.4' Lt to
47+75.8-33.5' Rt 67.0'
48+91.9-33.5' Lt to
48+92.6-33.5' Rt 67.0'

EROSION AND SEDIMENT CONTROL PLAN

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT NH0016(84)67	SHEET D15	TOTAL SHEETS D22
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Temporary Stabilization

Install Interim Sediment Control at Inlets at the following locations:

44+33.7-29.2' LT
44+61.9-92.0' LT
44+62.0-56.2' LT
45+02.3-56.0' LT
45+02.9-91.7' LT
47+82.8-33.2' LT
47+82.8-33.2' RT
48+15.0-62.9' RT
48+16.4-63.6' LT
48+17.3-140.3' LT
48+46.9-63.2' RT
48+46.9-81.1' RT
48+46.9-99.0' RT
48+47.0-140.0' LT
48+47.2-63.4' LT
48+74.1-33.2' LT
48+74.1-33.2' RT

Install Sediment Control at Inlet with Frame and Grate at The Following Locations:

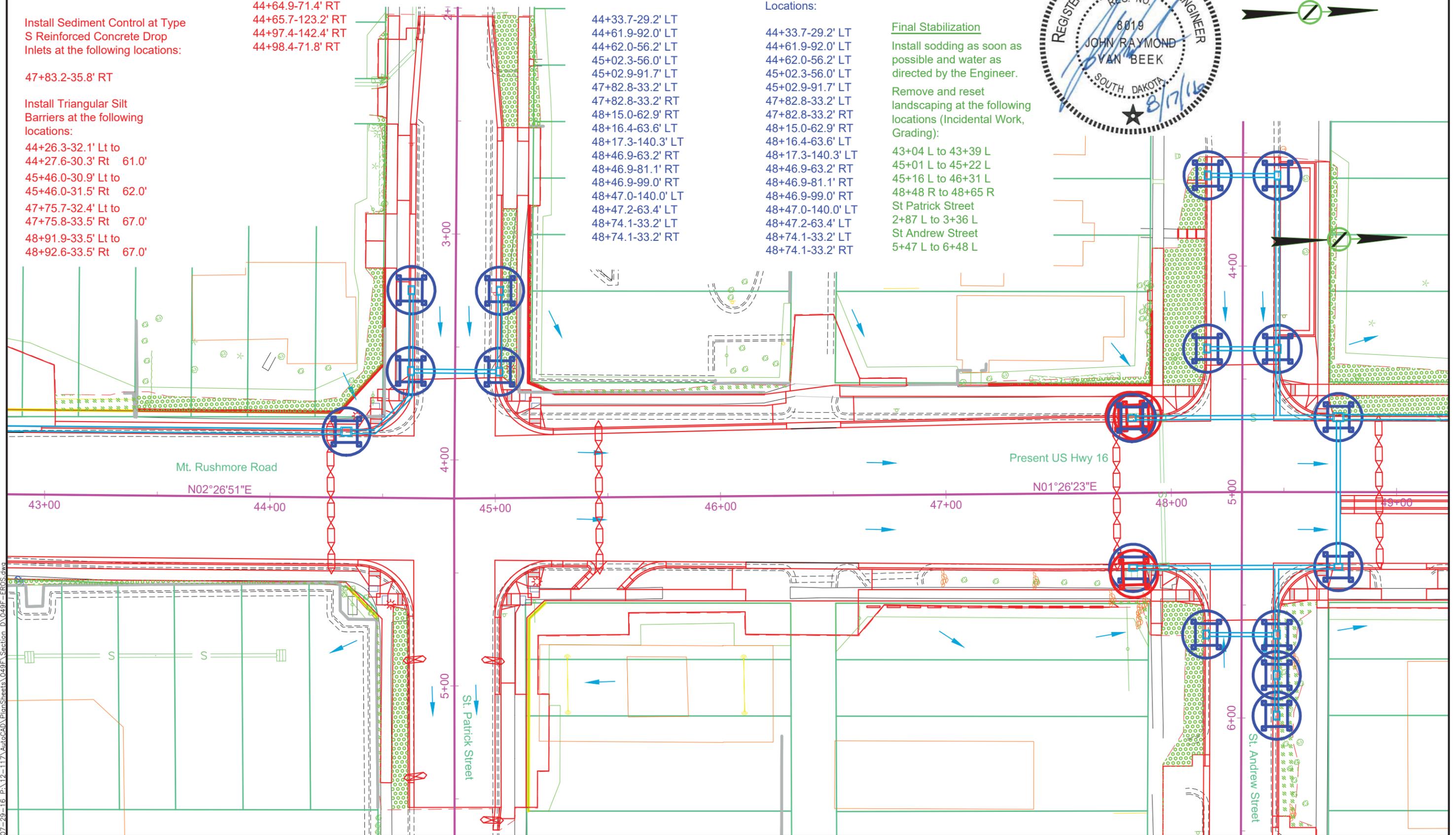
44+33.7-29.2' LT
44+61.9-92.0' LT
44+62.0-56.2' LT
45+02.3-56.0' LT
45+02.9-91.7' LT
47+82.8-33.2' LT
47+82.8-33.2' RT
48+15.0-62.9' RT
48+16.4-63.6' LT
48+17.3-140.3' LT
48+46.9-63.2' RT
48+46.9-81.1' RT
48+46.9-99.0' RT
48+47.0-140.0' LT
48+47.2-63.4' LT
48+74.1-33.2' LT
48+74.1-33.2' RT

Final Stabilization

Install sodding as soon as possible and water as directed by the Engineer.

Remove and reset landscaping at the following locations (Incidental Work, Grading):

43+04 L to 43+39 L
45+01 L to 45+22 L
45+16 L to 46+31 L
48+48 R to 48+65 R
St Patrick Street
2+87 L to 3+36 L
St Andrew Street
5+47 L to 6+48 L



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EROSION AND SEDIMENT CONTROL PLAN

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT NH0016(84)67	SHEET D16	TOTAL SHEETS D22
PLOTTING DATE: 07-29-16			

Perimeter Control
Install Sediment Control at Inlet with Frame and Grate at the following locations:

- 51+61.4-33.5' LT
- 51+63.4-33.8' RT
- 51+64.9-33.6' LT
- 51+67.0-33.8' RT
- 51+95.2-51.0' RT
- 51+95.7-58.8' LT
- 52+26.2-51.8' RT
- 52+26.4-56.2' LT

Install Triangular Silt Barriers at the following locations:

- 51+54.9-35.4' Lt to 51+55.6-33.5' Rt 69.0'
- 52+64.1-33.5' Lt to 52+64.8-33.5' Rt 67.0'

Temporary Stabilization
Install Interim Sediment Control at Inlets the following locations:

- | | |
|------------------|-------------------|
| 49+61.8-33.2' LT | 49+61.8-33.2' RT |
| 50+82.7-33.2' RT | 51+60.6-3.2' LT |
| 51+60.6-7.8' LT | 51+60.6-33.2' RT |
| 51+68.1-33.2' LT | 51+78.4-95.2' LT |
| 51+94.8-58.0' RT | 52+26.1-119.1' LT |
| 52+26.1-59.5' LT | 52+26.2-107.5' RT |
| 52+26.2-58.0' RT | 52+56.7-33.2' RT |
| 52+56.7-33.2' LT | 53+55.4-33.2' RT |
| 53+55.4-33.2' LT | 54+28.9-33.2' RT |
| 54+05.5-66.3' LT | 54+94.4-33.2' LT |

Install Sediment Control at Type S Reinforced Concrete Drop Inlets at the following locations:

- 52+27.1-76.1' LT

Install Sediment Control at Inlet with Frame and Grate at the following locations:

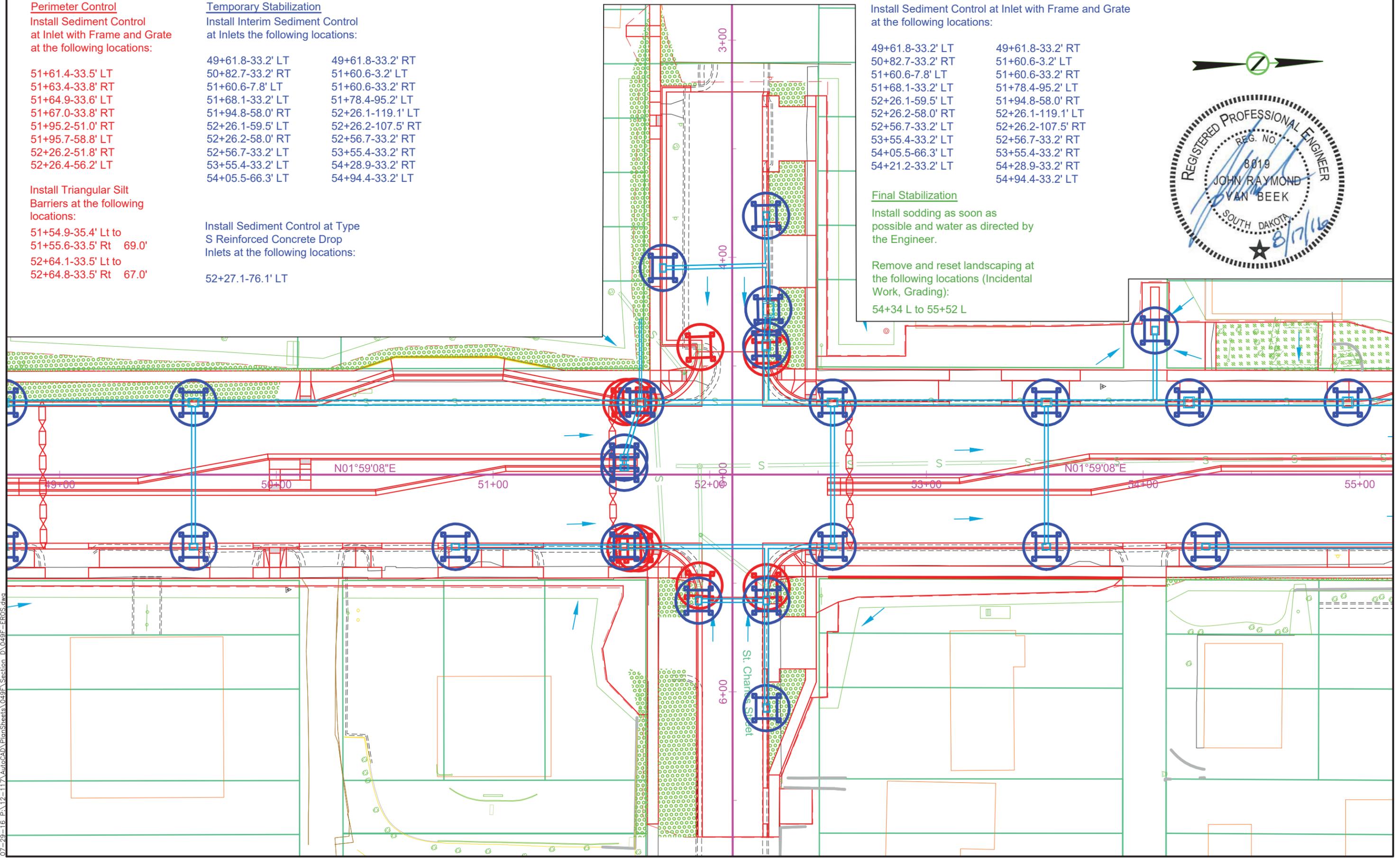
- | | |
|------------------|-------------------|
| 49+61.8-33.2' LT | 49+61.8-33.2' RT |
| 50+82.7-33.2' RT | 51+60.6-3.2' LT |
| 51+60.6-7.8' LT | 51+60.6-33.2' RT |
| 51+68.1-33.2' LT | 51+78.4-95.2' LT |
| 52+26.1-59.5' LT | 51+94.8-58.0' RT |
| 52+26.2-58.0' RT | 52+26.1-119.1' LT |
| 52+56.7-33.2' LT | 52+26.2-107.5' RT |
| 53+55.4-33.2' LT | 52+56.7-33.2' RT |
| 54+05.5-66.3' LT | 53+55.4-33.2' RT |
| 54+21.2-33.2' LT | 54+28.9-33.2' RT |
| | 54+94.4-33.2' LT |

Final Stabilization

Install sodding as soon as possible and water as directed by the Engineer.

Remove and reset landscaping at the following locations (Incidental Work, Grading):

- 54+34 L to 55+52 L



EROSION AND SEDIMENT CONTROL PLAN

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT NH0016(84)67	SHEET D17	TOTAL SHEETS D22
PLOTTING DATE: 07-29-16			

Perimeter Control

Install Sediment Control at Type S Reinforced Concrete Drop Inlets at the following locations:

59+23.7-37.2' RT

Install Triangular Silt Barriers at the following locations:

55+34.4-43.0' Lt to
55+35.1-33.5' Rt 77.0'
56+71.2-33.5' Lt to
56+71.9-35.1' Rt 69.0'
59+12.3-33.5' Lt to
59+12.8-33.5' Rt 67.0'
60+40.3-33.5' Lt to
60+41.1-33.5' Rt 67.0'

Install Sediment Control at Inlet with Frame and Grate at the following locations:

55+41.7-33.6' LT
55+44.5-33.9' RT
55+45.3-33.6' LT
55+48.0-33.9' RT
55+75.5-52.6' RT
55+75.6-52.1' LT
56+06.8-52.4' LT
56+06.8-55.8' RT
59+25.2-32.8' LT
59+28.8-32.7' LT
59+55.6-51.3' RT
59+55.7-55.1' LT

Temporary Stabilization

Install Interim Sediment Control at Inlets the following locations:

55+40.6-3.2' LT
55+40.6-33.2' RT
55+75.0-60.6' RT
55+75.4-104.2' LT
56+06.0-87.6' RT
56+07.0-104.1' LT
58+13.2-33.2' RT
58+67.2-33.2' RT
59+21.1-7.8' LT
59+21.1-33.2' RT
59+56.2-92.9' LT
59+86.8-58.5' LT
59+86.9-66.7' RT
60+17.9-33.2' LT

55+40.6-7.8' LT
55+74.9-96.0' RT
55+75.3-58.5' LT
56+06.0-96.1' RT
56+07.0-97.3' LT
56+34.5-33.2' LT
58+13.2-33.2' RT
59+21.1-3.2' LT
59+21.1-33.2' LT
59+55.2-88.1' RT
59+56.3-104.7' LT
59+86.9-92.8' LT
60+17.9-33.2' RT

Install Sediment Control at Inlet with Frame and Grate at the following locations:

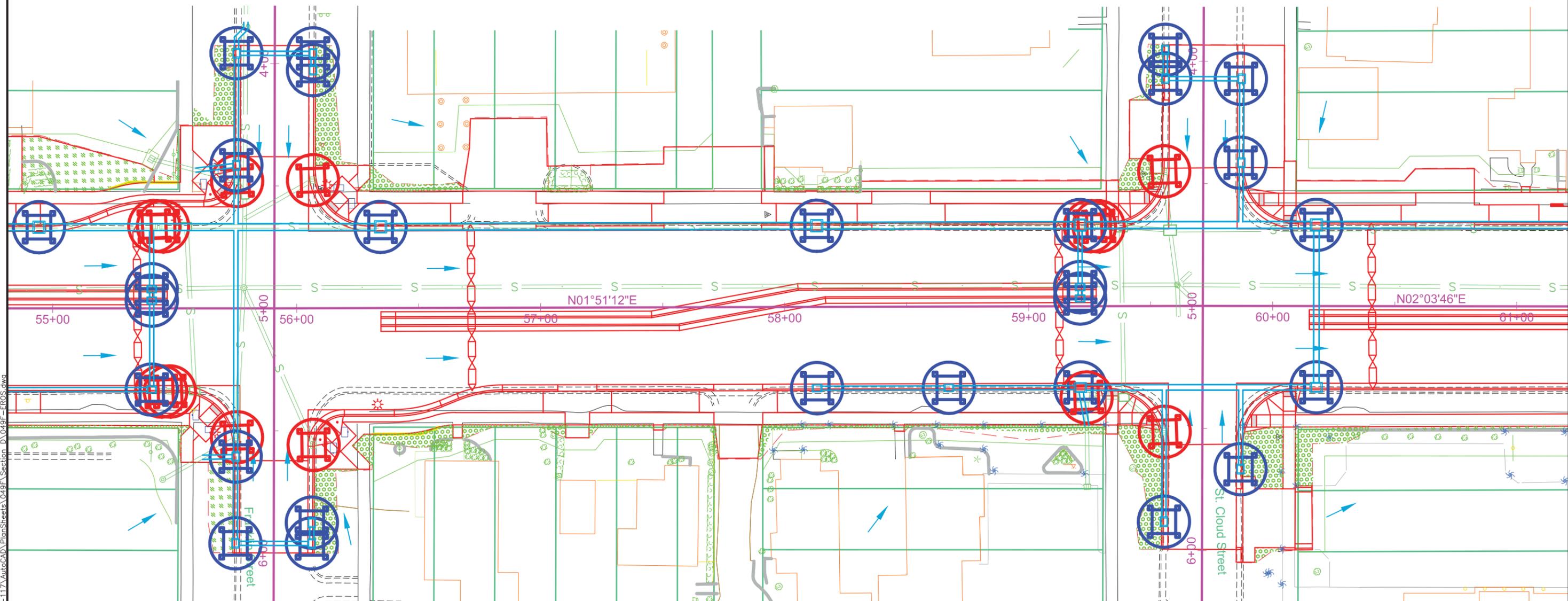
55+40.6-3.2' LT
55+40.6-33.2' RT
55+75.0-60.6' RT
55+75.4-104.2' LT
56+06.0-87.6' RT
56+07.0-104.1' LT
58+13.2-33.2' RT
58+67.2-33.2' RT
59+21.1-7.8' LT
59+21.1-33.2' RT
59+56.2-92.9' LT
59+86.8-58.5' LT
59+86.9-66.7' RT
60+17.9-33.2' LT

Final Stabilization

Install sodding as soon as possible and water as directed by the Engineer.

Remove and reset landscaping at the following locations (Incidental Work, Grading):

55+64 R to 55+74 R
57+96 L to 58+32 L
Franklin Street
5+63 R to 6+00 R



EROSION AND SEDIMENT CONTROL PLAN FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT NH0016(84)67	SHEET D18	TOTAL SHEETS D22
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Perimeter Control
Install Sediment Control at Inlet with Frame and Grate at the following locations:

- 63+96.9-33.2' LT
- 63+96.9-33.2' RT
- 65+14.5-33.2' LT
- 65+14.5-33.2' RT
- 65+99.3-33.2' LT
- 65+99.3-33.2' RT
- 66+83.8-7.8' LT
- 66+83.8-3.2' LT
- 66+83.8-33.2' RT

Install Triangular Silt Barriers at the following locations:
62+86.9-33.5' LT to 62+87.7-33.6' RT 67.0'

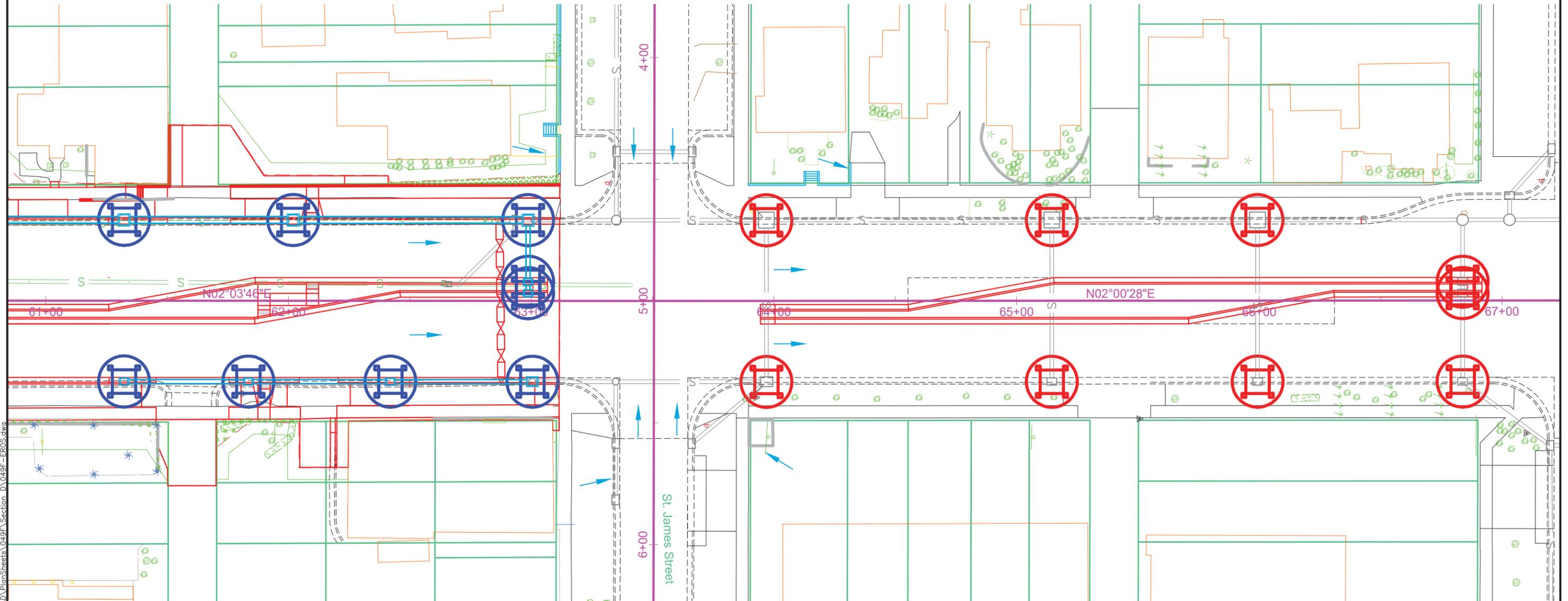
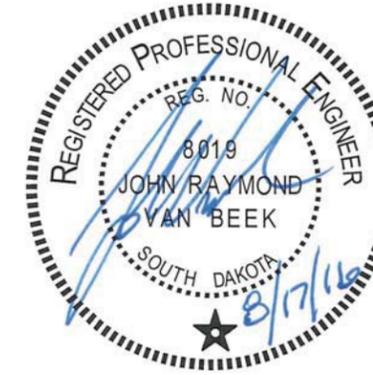
Temporary Stabilization
Install Interim Sediment Control at Inlets the following locations:

- 61+32.2-33.2' RT
- 61+32.3-33.2' LT
- 61+83.5-33.2' RT
- 62+01.9-33.2' LT
- 62+42.0-33.2' RT
- 62+98.7-3.2' LT
- 62+98.7-7.8' LT
- 62+98.7-33.2' LT
- 63+00.5-33.2' RT

Install Sediment Control at Inlet with Frame and Grate at the following locations:

- 61+32.2-33.2' RT
- 61+32.3-33.2' LT
- 61+83.5-33.2' RT
- 62+01.9-33.2' LT
- 62+42.0-33.2' RT
- 62+98.7-3.2' LT
- 62+98.7-7.8' LT
- 62+98.7-33.2' LT
- 63+00.5-33.2' RT

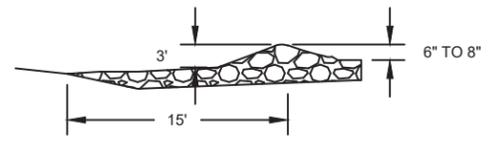
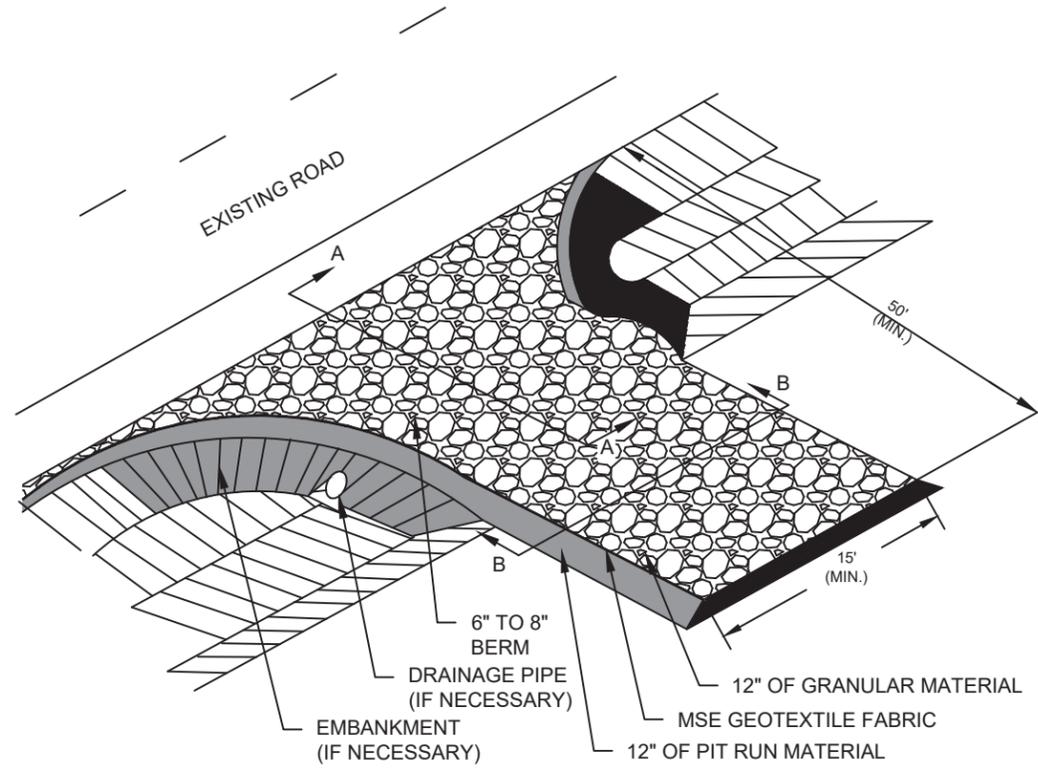
Final Stabilization
Install sodding as soon as possible and water as directed by the Engineer.
Remove and reset landscaping at the following locations (Incidental Work, Grading):
61+70 L to 62+05 L



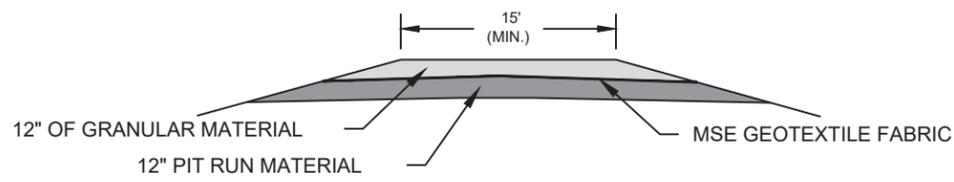
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STATE OF SOUTH DAKOTA	PROJECT NH0016(84)67	SHEET D19	TOTAL SHEETS D22
PLOT DATE: 07-29-16			

CONSTRUCTION ENTRANCE



SECTION A-A



SECTION B-B

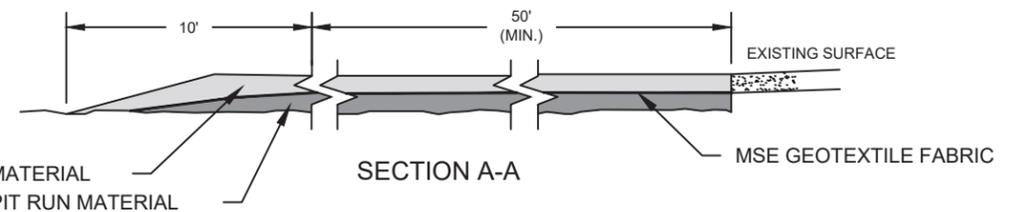
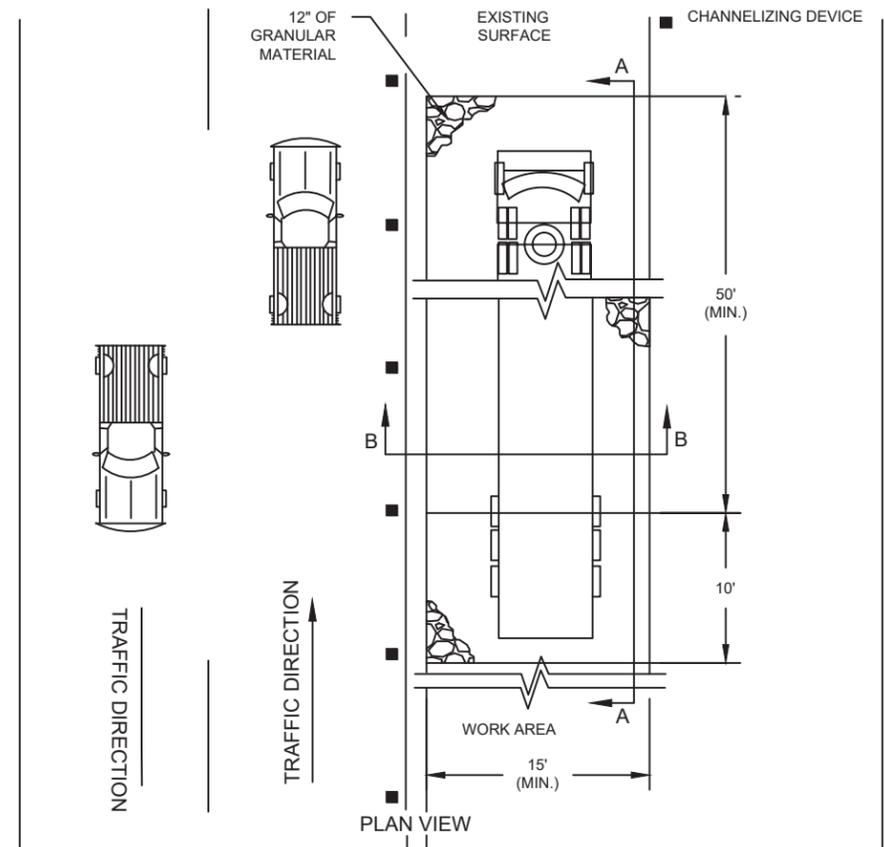


GENERAL NOTES:

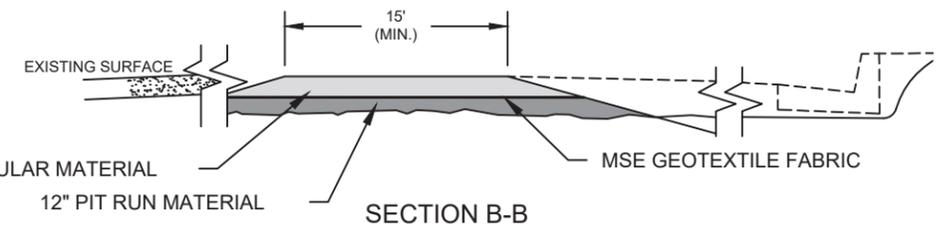
- IF THE GRADE OF THE ENTRANCE SLOPES DOWN TO THE ROADWAY, A BERM OF EXTRA ROCK SHALL BE USED TO PREVENT SEDIMENT OR MUD FORM BEING DEPOSITED ON THE ROADWAY. (SEE SECTION A-A).
- IF A DRAINAGE PIPE IS NECESSARY, THE SIZE AND TYPE SHALL BE DETERMINED BY THE CONTRACTOR TO MEET FIELD CONDITIONS. ALL COST SHALL BE INCIDENTAL TO THE VARIOUS BID ITEMS.
- IF EMBANKMENT IS NECESSARY IT SHALL BE PIT RUN MATERIAL.

TRANSVERSE TO ROADWAY

LEGEND



SECTION A-A

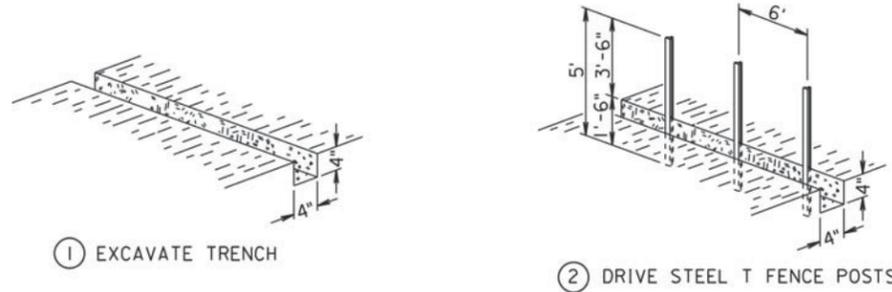


SECTION B-B

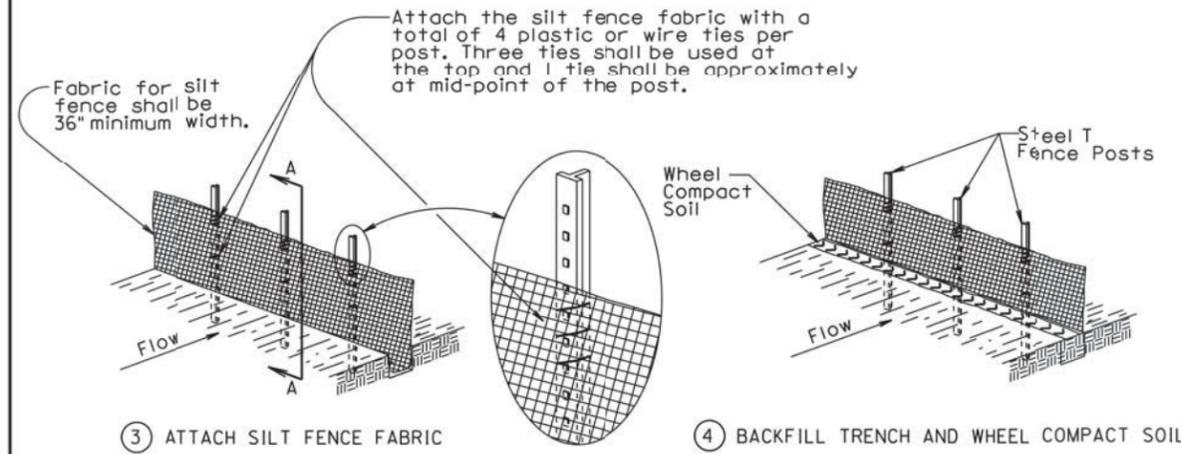
PARALLEL TO ROADWAY

07-29-16 P:\12-117\AutoCAD\PlanStreets\049F-EROS-SPECIAL-DETAILS.dwg

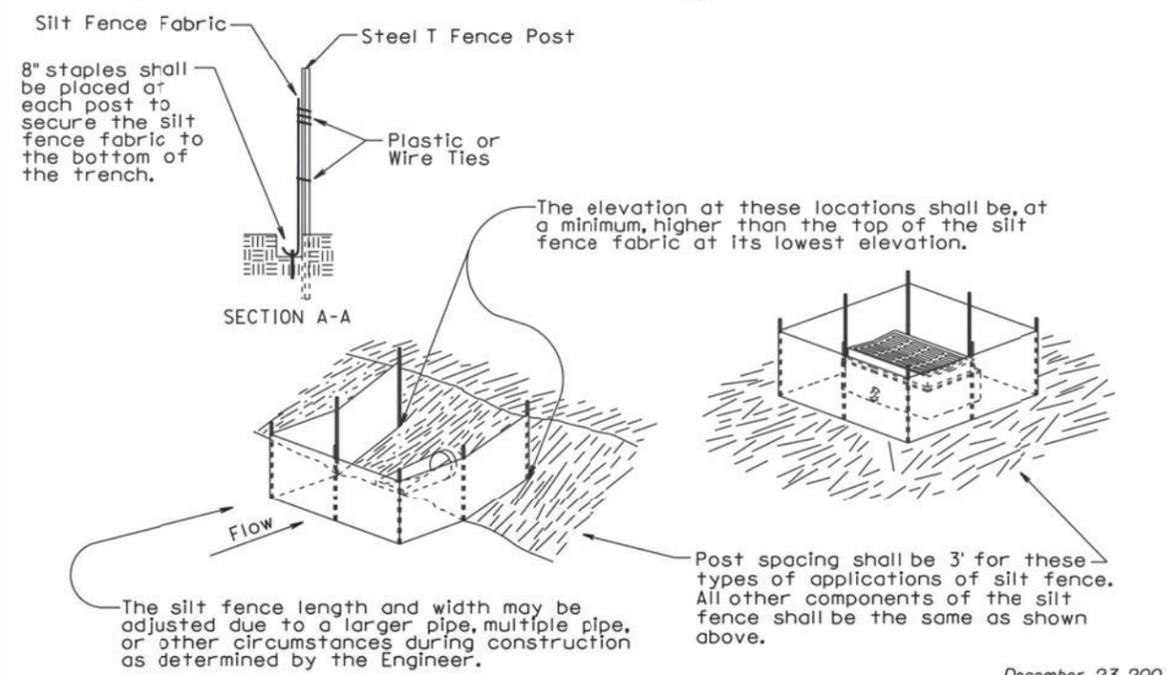
MANUAL HIGH FLOW SILT FENCE INSTALLATION



- EXCAVATE TRENCH
- DRIVE STEEL T FENCE POSTS



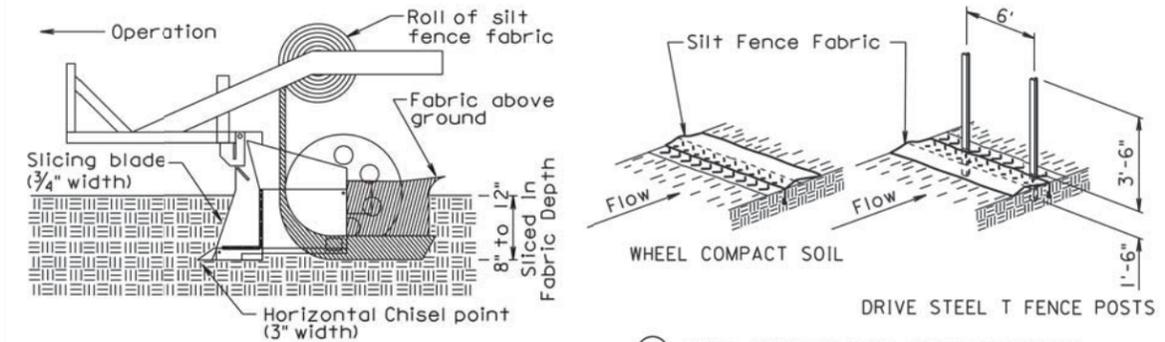
- ATTACH SILT FENCE FABRIC
- BACKFILL TRENCH AND WHEEL COMPACT SOIL



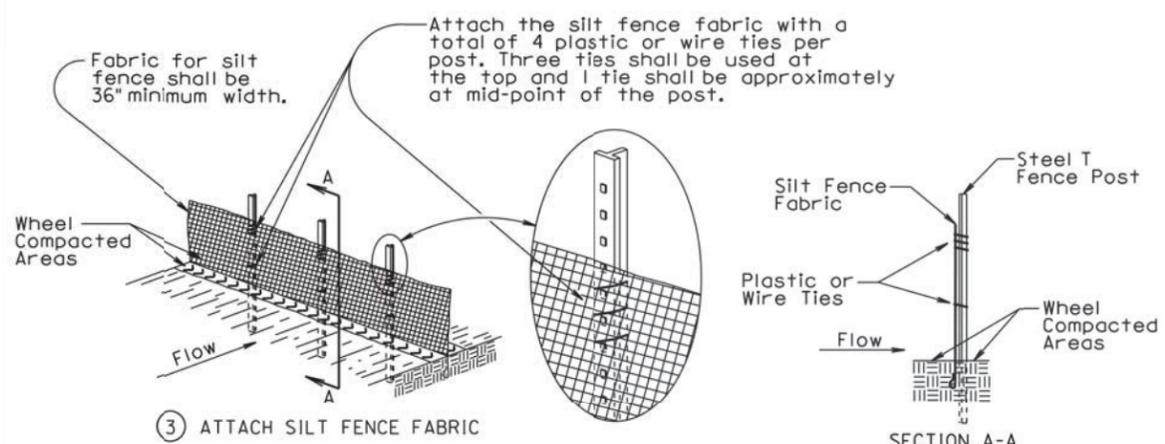
December 23, 2003

Published Date: 2nd Qtr. 2016	S D D O T	HIGH FLOW SILT FENCE	PLATE NUMBER 734.05
			Sheet 1 of 2

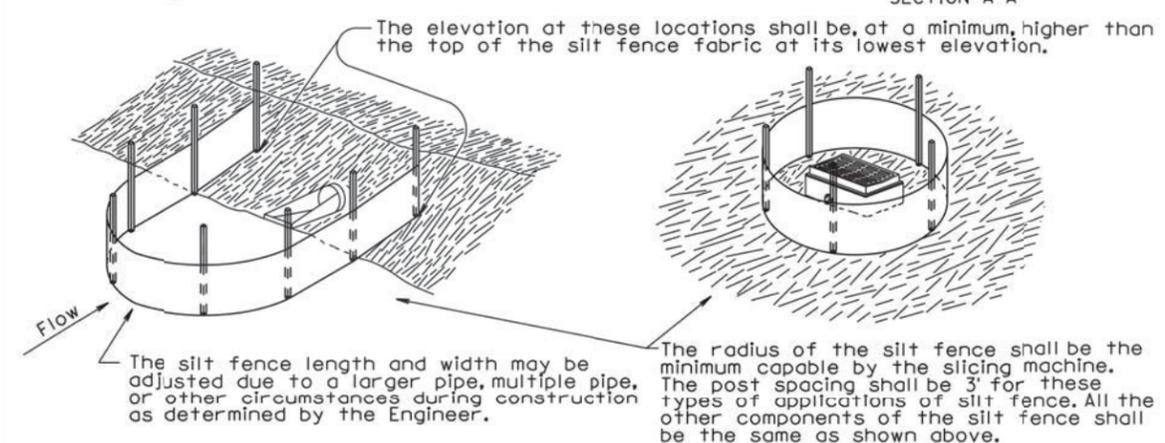
MACHINE SLICED HIGH FLOW SILT FENCE INSTALLATION



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



- ATTACH SILT FENCE FABRIC



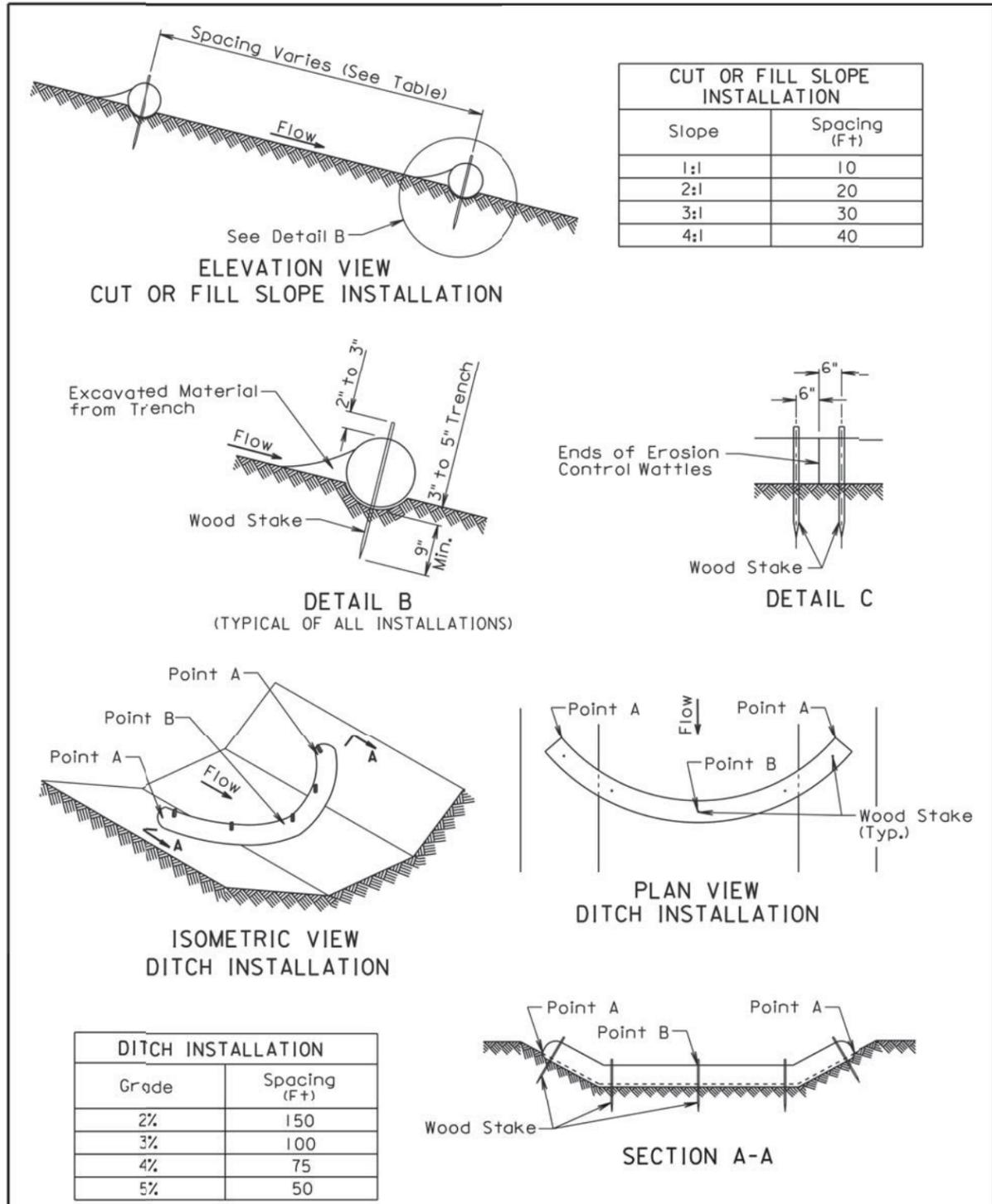
GENERAL NOTE:

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 shall be provided on top of the extra length of silt fence fabric to prevent underflow.

December 23, 2003

Published Date: 2nd Qtr. 2016	S D D O T	HIGH FLOW SILT FENCE	PLATE NUMBER 734.05
			Sheet 2 of 2

07-29-16 P: 12-117 AutoCAD: PlanSheets_049F.Section D_049F-EROS-STANDARD_DETAILS.dwg



December 23, 2004

Published Date: 2nd Qtr. 2016	S D D O T	EROSION CONTROL WATTLE	PLATE NUMBER 734.06
			Sheet 1 of 2

GENERAL NOTES:

At cut or fill slope installations, wattles shall 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 shall 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 shall 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 shall be placed 6" from the ends of the wattles and the spacing of the stakes along the wattles shall be 3' to 4'.

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

The Contractor and Engineer shall inspect the erosion control wattles once every week and within 24 hours after every rainfall event greater than 1/2". The Contractor shall remove, dispose, or reshape the accumulated sediment when necessary as determined by the Engineer.

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

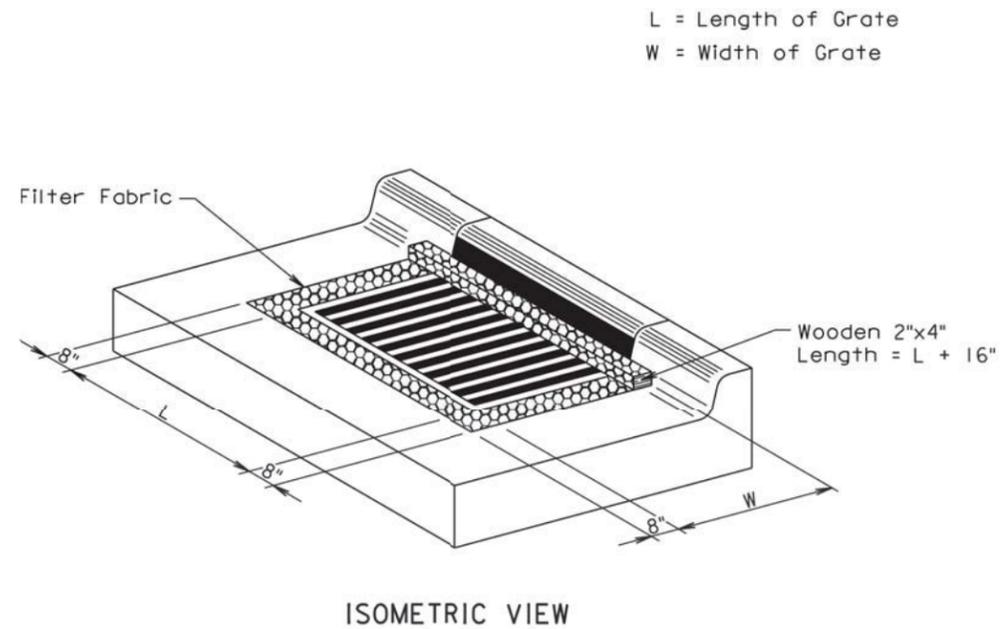
All costs for furnishing and installing the erosion control wattles including labor, equipment, and materials shall be incidental to the contract unit price per foot for the corresponding erosion control wattle bid item.

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

December 23, 2004

Published Date: 2nd Qtr. 2016	S D D O T	EROSION CONTROL WATTLE	PLATE NUMBER 734.06
			Sheet 2 of 2

07-29-16 P: 12-117 AutoCAD: PlanSheets: 049F: Section: D: 049F-EROS-STANDARD-DETAILS.dwg

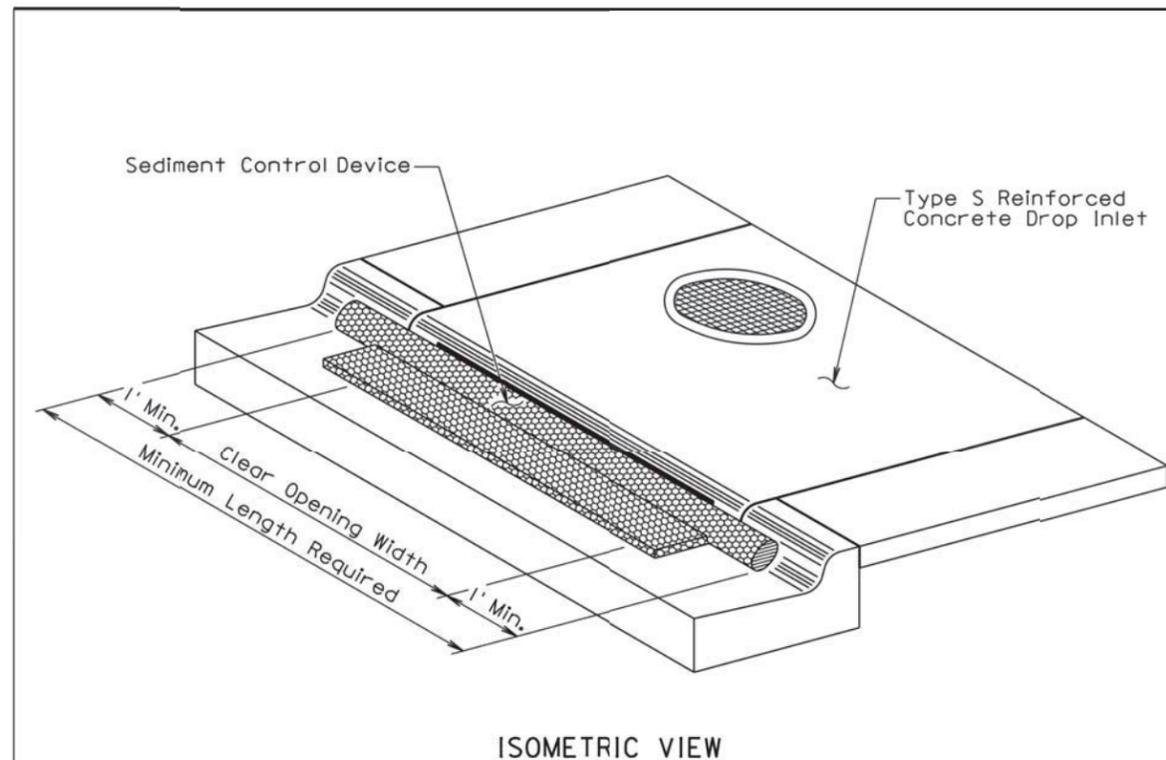


GENERAL NOTES:

- The grate and curb and gutter shown are for illustrative purposes only.
- The sediment control at inlet with frame and grate shall be placed at locations stated in the plans or at locations determined by the Engineer.
- The filter fabric shall be the type specified in the plans.
- The filter fabric shall be placed in the inlet opening prior to placing the grate. Approximately 18 inches of excess filter fabric shall be wrapped around the 2"x4" and stapled securely to the 2"x4" after the grate has been placed.
- The Contractor shall inspect and maintain the sediment control device once every week and within 24 hours after every rainfall event. The Contractor shall maintain the sediment control device by removing accumulated sediment and replacing torn filter fabric with new filter fabric.
- The removed sediment shall 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 shall be incidental to the contract unit price per each for "Sediment Control at Inlet with Frame and Grate".

September 14, 2005

Published Date: 2nd Qtr. 2016	S D D O T	SEDIMENT CONTROL AT INLETS WITH FRAMES AND GRATES	PLATE NUMBER 734.10
			Sheet 1 of 1



GENERAL NOTES:

- The type of sediment control device shown is for illustrative purposes only.
- The type of sediment control device used shall be one of the types as specified in the plans.
- The sediment control device shall be placed at the drop inlets according to the manufacturers' installation instructions.
- The sediment control at inlet for type S reinforced concrete drop inlet shall be placed at locations stated in the plans or at locations determined by the Engineer.
- The Contractor shall inspect and maintain the sediment control device once every week and within 24 hours after every rainfall event. The Contractor shall maintain the sediment control device by removing the device, removing accumulated sediment, and resetting the device.
- The removed sediment shall 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.
- Payment for the "Sediment Control at Type S Drop Inlet" shall be based on the minimum length required at the drop inlets. Some of the sediment control devices specified in the plans will have to be longer due to available length.
- All costs for furnishing, installing, inspecting, maintaining, removing, and resetting the sediment control device at the drop inlet including labor, equipment, and materials shall be incidental to the contract unit price per foot for "Sediment Control at Type S Reinforced Concrete Drop Inlet".

September 14, 2005

Published Date: 2nd Qtr. 2016	S D D O T	SEDIMENT CONTROL AT INLETS FOR TYPE S REINFORCED CONCRETE DROP INLETS	PLATE NUMBER 734.11
			Sheet 1 of 1