SECTION D: EROSION AND SEDIMENT CONTROL PLANS

FOR BIDDING PURPOSES ONLY

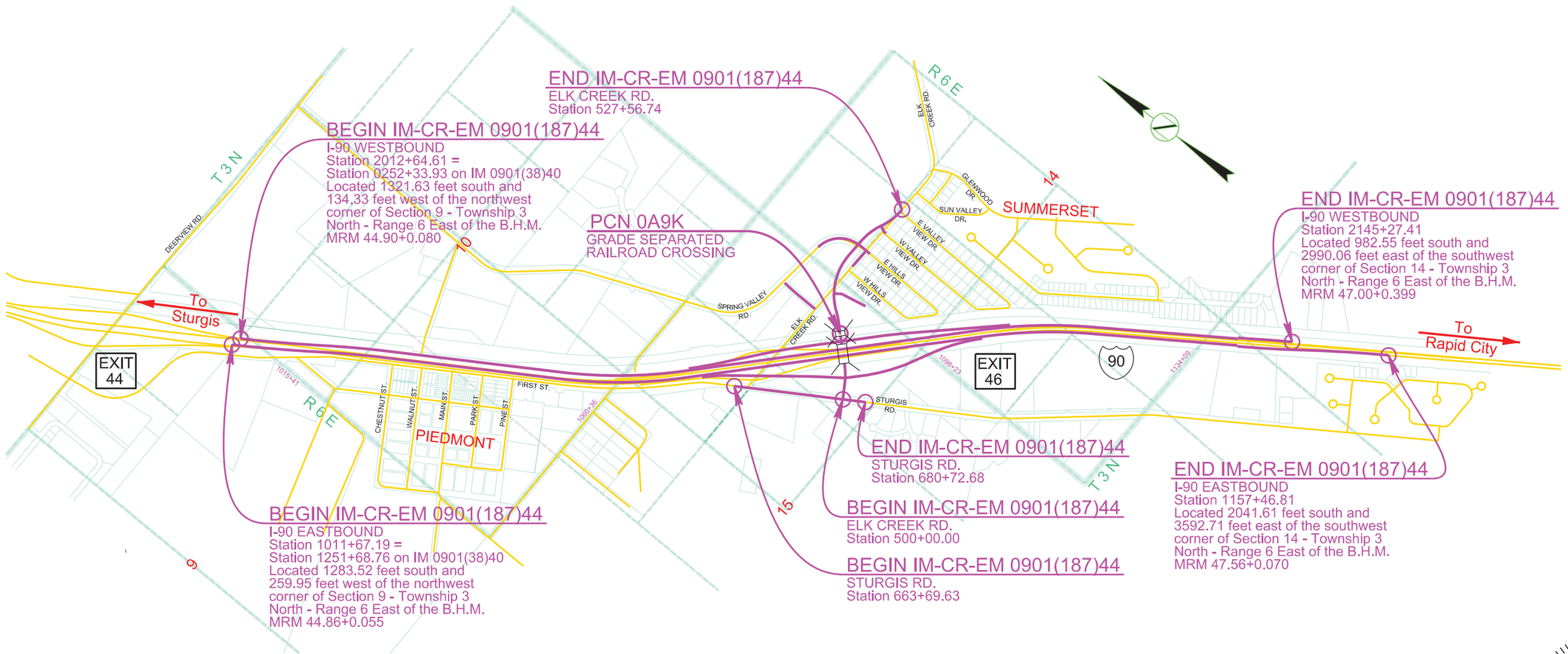
FELSBURG HOLT & ULLEVIG	STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
		IM-CR-EM 0901(187)44	D1	D48

Plotting Date: 3/6/2026

Rev: 9/8/2025 BRC
Rev: 3/6/2026 MRM

Plot Scale - 1:1400

INDEX OF SHEETS



LICENSED PROFESSIONAL ENGINEER
REG. NO.
12833
JENNICA M
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SOUTH DAKOTA
3-6-2026

Plotted From - Marcus.Martinez

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FOR BIDDING PURPOSES ONLY

FELSBURG HOLT & ULLEVIG	STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
		IM-CR-EM 0901(187)44	D2	D48

Plotting Date: 1/7/2026 Rev: 9/25/2025 BRC
Rev: 1/7/2026 BRC

Plot Scale - 1:200

Section D - Erosion Control

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
110E1690	Remove Sediment	57.0	CuYd
110E1693	Remove Erosion Control Wattle	5,058	Ft
110E1695	Remove Sediment Filter Bag	2,280	Ft
110E1700	Remove Silt Fence	3,586	Ft
230E0010	Placing Topsoil	57,724	CuYd
230E0020	Contractor Furnished Topsoil	1,135	CuYd
730E0100	Cover Crop Seeding	20.0	Bu
730E0200	Type A Permanent Seed Mixture	1,242	Lb
730E0210	Type F Permanent Seed Mixture	468	Lb
731E0200	Fertilizing	60.00	Ton
732E0100	Mulching	88.0	Ton
734E0044	Soil Stabilizer	87.0	Acre
734E0101	Type 1 Erosion Control Blanket	80,121	SqYd
734E0103	Type 3 Erosion Control Blanket	686	SqYd
734E0132	Type 2 Turf Reinforcement Mat	325.0	SqYd
734E0133	Type 3 Turf Reinforcement Mat	3,775.0	SqYd
734E0140	Erosion Bale	500	Each
734E0154	12" Diameter Erosion Control Wattle	22,405	Ft
734E0165	Remove and Reset Erosion Control Wattle	5,058	Ft
734E0180	Sediment Filter Bag	2,280	Ft
734E0325	Surface Roughening	22.8	Acre
734E0510	Shaping for Erosion Control Blanket	23,982	Ft
734E0602	Low Flow Silt Fence	14,658	Ft
734E0604	High Flow Silt Fence	2,760	Ft
734E0610	Mucking Silt Fence	996	CuYd
734E0620	Repair Silt Fence	3,586	Ft
734E0845	Sediment Control at Inlet with Frame and Grate	36	Each
734E0847	Sediment Control at Type S Reinforced Concrete Drop Inlet	16	Ft
734E5000	Dewatering	100	Hour
734E5010	Sweeping	730	Hour
900E1320	Construction Entrance	8	Each
900E5147	Articulated Concrete Mattress	1,232.0	SqYd

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PLACING TOPSOIL

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

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

	Station	to	Station	Topsoil (CuYd)
I-90 EB L&R	1011+67	to	1157+47	26,515
I-90 WB L	2012+65	to	2145+27	11,195
Elk Creek Rd	508+28	to	527+57	2,632
Sturgis Rd	665+28	to	681+97	6,032
			Subtotal:	46,374
			Option Borrow Pit No. 1	9,950
			Option Borrow Pit No. 2	1,400
			Subtotal:	11,350
			Total:	57,724

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 4 inches of topsoil on roadway inslopes 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, litter, 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.

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

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

FERTILIZING

The Contractor will apply an all-natural slow release fertilizer prior to seeding or placing sod. The all-natural fertilizer will have a minimum guaranteed analysis of 4-4-4 and be USDA Certified BioBased. It should provide a minimum of 4% (N) nitrogen with a minimum water insoluble nitrogen (WIN) fraction of 2.07%, a minimum of 4% (P2O5) available phosphate, a minimum of 4% (K2O) soluble potash, and a maximum carbon to nitrogen ratio (C:N ratio) of 5:1. The all-natural fertilizer will be free of weed-seed and pathogens accomplished through thermophilic composting, and not mechanical or chemical sterilization, to assure presence of beneficial soil microbiology. The

fertilizer will have a near neutral pH, a low salt index, a low biological oxygen demand, contain organic humic and fulvic acids, and have high aerobic organism counts. The fertilizer will also be stable, free of bad odors, and be unattractive as a food source for animals. It should also be in a granular form that is easily spread.

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

The Fertilizer provided will be from the approved product list. The approved product list may be viewed at the following internet site:
http://apps.sd.gov/HC60ApprovedProducts/main.aspx

A commercial fertilizer with a minimum guaranteed analysis of 11-52-0 or an approved alternate fertilizer will 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 will be 3 pounds per 1,000 square feet.

PERMANENT SEEDING

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

Type 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 F Permanent Seed Mixture will consist of the following:

Grass Species	Variety	Pure Live Seed (PLS) (Pounds/Acre)
Western Wheatgrass	Arriba, Flintlock, Rodan, Rosana, Walsh	7
Green Needlegrass	Lodorm, AC Mallard Ecovar	4
Sideoats Grama	Butte, Pierre	3
Blue Grama	Bad River	2
Oats or Spring Wheat: April through May; Winter Wheat: August through November		10
	Total:	26

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.

SURFACE ROUGHENING

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

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Plotting Date: 9/30/2025 Rev: 9/30/2025 BRC

TABLE OF SURFACE ROUGHENING

Station	to	Station	Location	Area (Acre)
1074+58 51' R	to	1084+00 81'-193' R	I-90 EB Backslope	1.1
1074+47 75'-101' R	to	1084+00 218'-251' R	I-90 EB Embankment	0.7
1074+39 126'-167' R	to	1084+00 266'-396' R	I-90 EB Backslope	1.9
1071+81 73' R	to	1073+91 to 1073+68 105'-124' R	I-90 EB Backslope	0.1
1074+28 to 1074+32 125'-166' R	to	1076+31 to 1076+18 150'-208' R	I-90 EB Backslope	0.1
1084+00 81'-193' R	to	1088+01 264' R	I-90 EB Backslope	1.9
1084+00 218'-251' R	to	1087+98 298'328' R	I-90 EB Embankment	0.3
1084+00 266'-396' R to 1087+98 298'R	to	1087+80 477' R	I-90 EB Backslope	1.3
1090+03 70' R to 1089+48 277' R	to	1099+00 31' R to 1099+00 140' R	I-90 EB Backslope	3.4
2100+08 93'-134' L	to	2104+57 66'-110' L	I-90 WB Embankment	0.5
2105+18 63' L to 2105+40 114' L	to	2106+65 55'-113' L	I-90 WB Embankment	0.2
1099+00 73'-140' L	to	1101+25 79' L	I-90 EB Backslope	0.1
1103+82 94' R to 1103+84 112' R	to	1114+00 91' R to 1114+00 126' R	I-90 EB Backslope	1.0
1114+00 91'-126' R	to	1119+06 87' R	I-90 EB Backslope	1.2
502+93 27' L to 502+82 65' L	to	504+29 27' L to 504+55 126' L	Elk Creek Rd Embankmt	0.2
502+88 62' R to 502+86 79' R	to	504+13 32' R to 503+98 97' R	Elk Creek Rd Embankmt	0.1
504+29 27' L to 504+55 126' L	to	504+96 28' L to 504+97 120' L	Elk Creek Rd Embankmt	0.2
504+13 32' R to 503+98 97' R	to	504+96 33' R to 504+94 120' R	Elk Creek Rd Embankmt	0.2
508+65 52' L to 508+65 30' L to	to	510+18 135' L to 510+14 27' L	Elk Creek Rd Embankmt	0.4
508+65 32' R to 508+65 152' R to	to	510+12 32' R to 510+09 143' R	Elk Creek Rd Embankmt	0.4
510+14 27'-136' L to 516+18 27'-100' L		513+14 33' R to 512+03 132' R	Elk Creek Rd Embankmt	0.6
513+41 33' R to 514+43 119' R		510+12 32'-143' R to 516+54 32'-91' R	Elk Creek Rd Embankmt	0.4
516+18 27'-90' L	to	519+93 40'-66' L	Elk Creek Rd Embankmt	0.5
516+54 32'-92' R	to	520+12 32'-52' R	Elk Creek Rd Embankmt	0.4
520+60 20'-43' L	to	521+85 21'-38' L	Elk Creek Rd Embankmt	0.1
520+88 56'-114' L	to	521+86 53'-96' L	Elk Creek Rd Embankmt	0.2
520+95 21'-36' R	to	521+84 21'-39' R	Elk Creek Rd Embankmt	0.1
522+00 21'-39' L	to	527+63 15' L	Elk Creek Rd Embankmt	0.2
522+00 54'-101' L to 525+30 54' L	to	525+30 54' L	Elk Creek Rd Backslope	0.2
522+00 21'-39' R to 523+76 19' R	to	523+76 19' R to 524+32 49' R	Elk Creek Rd Embankmt	0.1
524+60 21' R to 524+32 49' R	to	526+90 15' R to 527+11 30' R	Elk Creek Rd Embankmt	0.1
519+91 243' L	to	520+62 115' L to 521+11 109' L	Elk Creek Rd Backslope	0.1
513+12 199' L to 512+57 277' L	to	513+80 240' L to 512+86 339' L	Elk Creek Rd Embankmt	0.3
513+42 31' L to 513+12 199' L	to	514+38 113' L to 513+80 240' L	Elk Creek Rd Embankmt	1.3
510+14 27'-136' L	to	516+18 27'-100' L	Elk Creek Rd Embankmt	1.3
510+12 32'-143' R	to	516+54 32'-91' R	Elk Creek Rd Embankmt	1.3
		Total		22.8

MULCHING (GRASS HAY OR STRAW) FOR TEMPORARY STABILIZATION

Grass Hay or Straw Mulch for temporary stabilization is to be used on this project at locations noted in the table and at locations determined by the Engineer during construction. Two applications of Grass Hay or Straw Mulch on areas that receive temporary Grass Hay or Straw Mulch will not be required if the Engineer determines that there is sufficient Mulch remaining at the time permanent seeding takes place.

An additional 8 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.

TABLE OF MULCHING (GRASS HAY OR STRAW) FOR TEMPORARY STABILIZATION APPLIED AT 2 TONS/ACRE

Station	L/R	Location	Quantity (Ton)
1011+67 to 1157+47	L&R	I-90 EB	46.4
2012+65 to 2145+27	L	I-90 WB	19.7
508+28 to 527+57	L&R	Elk Creek Rd	9.3
665+28 to 681+97	R	Sturgis Rd	4.8
		Additional Quantity:	8.0
		Total Quantity for Permanent Stabilization:	88

SOIL STABILIZER

An estimated quantity of 87 acres of soil stabilizer has been included in the Estimate of Quantities. The soil stabilizer will be applied on permanently seeded areas and areas deemed necessary by the Engineer.

The Contractor will apply soil stabilizer in accordance with 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 will be mixed with the soil stabilizer to be used as a tracer when the soil stabilizer is applied hydraulically. Wood fiber mulch will 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 will 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 will be paid for at the contract unit price per Acre for "Soil Stabilizer".

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

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

EROSION BALES

Erosion bales for restraining the flow of water and sediment will be placed at the locations noted in the table and at locations determined by the Engineer during construction. Refer to Standard Plate 734.02 for details.

A quantity of 500 Erosion Bales has been included in the Estimate of Quantities for temporary sediment control in highway ditch channels and as an alternative to low flow or high flow silt fence at wetland areas adjacent to the highway.

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.

An estimated 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.

An additional quantity of 12" Diameter Erosion Control Wattles has been added to the Estimate of Quantities for temporary erosion and sediment control in highway ditch channels and as an alternative to low flow or high flow silt fence at wetland areas adjacent to the highway.

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

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TABLE OF EROSION CONTROL WATTLE

Station	L/R	Dia. (Inch)	Location	Quantity (Ft)
PERIMETER CONTROL				
1011+81	36' L	12	I-90 EB	20
1009+88	159' R	12	I-90 EB	20
602+89	41' R	12	Sturgis Rd	20
603+84	33' R	12	Sturgis Rd	20
608+38	31' R	12	Sturgis Rd	20
604+03	32' R	12	Sturgis Rd	20
606+72	32' R	12	Sturgis Rd	20
608+00	32' R	12	Sturgis Rd	20
615+51	32' R	12	Sturgis Rd	20
618+10	31' R	12	Sturgis Rd	20
619+20	31' R	12	Sturgis Rd	20
623+43	17' R	12	Sturgis Rd	20
632+21	21' R	12	Sturgis Rd	20
642+21	25' R	12	Sturgis Rd	20
647+59	25' R	12	Sturgis Rd	20
2072+62	71' R	12	I-90 WB	20
1077+27	38' R	12	I-90 EB	20
1079+10	38' R	12	I-90 EB	20
1074+18	95' R	12	I-90 EB	160
1084+00	38' R	12	I-90 EB	20
1099+33	41' R	12	I-90 EB	20
1099+57	41' R	12	I-90 EB	20
2124+00	13' L	12	I-90 WB	20
2124+49	14' L	12	I-90 WB	20
1124+34	3' L	12	I-90 EB	20
1137+21	20' R	12	I-90 EB	20
1137+40	20' R	12	I-90 EB	20
1137+60	19' R	12	I-90 EB	20
2155+04	12' R	12	I-90 WB	20
1153+71	13' R	12	I-90 EB	20
520+32	159' R	12	Elk Creek Rd	20
524+10	111' R	12	Elk Creek Rd	20
667+56	58' R	12	Sturgis Rd	20
677+18	38' R	12	Sturgis Rd	20
677+35	38' R	12	Sturgis Rd	20
677+53	38' R	12	Sturgis Rd	20
678+65	45' R	12	Sturgis Rd	20
518+55	273' L	12	Elk Creek Rd	20
TEMPORARY STABILIZATION				
2017+72	54' L	12	I-90 WB	20
606+82	46' R	12	Sturgis Rd	20
623+41	38' R	12	Sturgis Rd	20
623+55	38' R	12	Sturgis Rd	20
623+68	37' R	12	Sturgis Rd	20
2031+87 to 2032+21	67' R	12	I-90 WB	30
2042+80 to 2043+24	65' L	12	I-90 WB	40
2053+12	53' L	12	I-90 WB	20
631+97	29' R	12	Sturgis Rd	30
642+21	25' R	12	Sturgis Rd	20
2054+59	43' L	12	I-90 WB	20
1054+63	38' L	12	I-90 EB	20
1074+76	125' R	12	I-90 EB	20
1074+77	119' R	12	I-90 EB	20
1078+77	66’ R	12	I-90 EB	20
1089+89	73' R	12	I-90 EB	20
1090+42	341' R	12	I-90 EB	20
1100+61	142' R	12	I-90 EB	20
1100+90	140' R	12	I-90 EB	20
1101+13	134' R	12	I-90 EB	20
1101+37	130' R	12	I-90 EB	20
1101+62	125' R	12	I-90 EB	20
1124+28	73' L	12	I-90 EB	20
1124+41	73' L	12	I-90 EB	20
2133+49	62' L	12	I-90 WB	20
2136+23	71' L	12	I-90 WB	20
1137+46	59' R	12	I-90 EB	20
1137+59	59' R	12	I-90 EB	20
1137+72	59' R	12	I-90 EB	20
1137+86	59' R	12	I-90 EB	20
520+22	77’ R	12	Elk Creek Rd	20
523+93	47' R	12	Elk Creek Rd	20
527+05	34’ R	12	Elk Creek Rd	20
527+65	31' R	12	Elk Creek Rd	20
677+25	50' R	12	Sturgis Rd	20
677+46	48' R	12	Sturgis Rd	20
677+71	53' R	12	Sturgis Rd	20
519+71	258’ L	12	Elk Creek Rd	20
511+98	140' R	12	Elk Creek Rd	20
515+61	346’ L	12	Elk Creek Rd	20
FINAL STABILIZATION				
1012+58 to 1014+45	45' to 44' L	12	I-90 EB	60
1018+77 to 1023+78	43' to 43' L	12	I-90 EB	120
2060+48 to 2064+54	79’ to 76’ L	12	I-90 WB	100
1055+97 to 1064+05	39’ to 39’ L	12	I-90 EB	80
1079+26 to 1084+00	119' to 111' R	12	I-90 EB	470
1082+06 to 1084+00	162' to 155' R	12	I-90 EB	200
1074+76 to 1075+91	148' to 165' R	12	I-90 EB	120
1075+88 to 1076+67	175' to 182' R	12	I-90 EB	80
1076+80 to 1079+59	184' to 207' R	12	I-90 EB	280
1079+61 to 1082+63	255' to 250' R	12	I-90 EB	300
1082+39 to 1084+00	328' to 316' R	12	I-90 EB	160
2069+13 to 2073+13	75' to 90' L	12	I-90 WB	100
2079+57 to 2083+57	185' to 185' L	12	I-90 WB	100
2079+32	43' L	12	I-90 WB	20
2081+26 to 2083+44	44' to 44' L	12	I-90 WB	60
1069+33 to 1075+33	42' to 42' L	12	I-90 EB	140
1080+50 to 1083+50	42' to 42' L	12	I-90 EB	80
1074+44 to 1078+23	42' to 64' R	12	I-90 EB	100
1079+44 to 1083+44	70' to 73'R-L	12	I-90 EB	100
1073+74	97' R	12	I-90 EB	20
1075+14 to 1077+10	125' to 154' R	12	I-90 EB	60
1078+07 to 1079+55	169' to 191' R	12	I-90 EB	80
1080+05 to 1084+00	199' to 258' R	12	I-90 EB	340
2084+57 to 2087+57	185' to 185' L	12	I-90 WB	80
2089+03 to 2102+03	185' to 185' L	12	I-90 WB	300
2084+27 to 2088+26	44' to 44' L	12	I-90 WB	100
2089+35 to 2098+38	44' to 52' L	12	I-90 WB	200
1084+51 to 1088+50	42' to 42' L	12	I-90 EB	100
1089+59 to 2098+41	42' to 42' L	12	I-90 EB	200
1084+44 to 1086+44	73' to 73'R-L	12	I-90 EB	60
1090+44 to 1098+33	68' to 69' R	12	I-90 EB	180
1084+00 to 1086+94	251' to 318' R	12	I-90 EB	260
1090+59	342' R	12	I-90 EB	20
1091+10 to 1093+09	339' to 326' R	12	I-90 EB	60
1095+16 to 1098+08	295' to 224' R	12	I-90 EB	80
1098+56	211' R	12	I-90 EB	20
1084+00 to 1087+32	81' to 83' R	12	I-90 EB	330
1084+00 to 1087+88	155' to 134' R	12	I-90 EB	390
1084+52 to 1087+96	199' to 193' R	12	I-90 EB	340
1087+20 to 1088+01	247' to 264' R	12	I-90 EB	90
1084+00 to 1085+16	316' to 296' R	12	I-90 EB	120
1086+46 to 1087+52	378' to 350' R	12	I-90 EB	120
1086+63 to 1087+49	408' to 390' R	12	I-90 EB	90
1086+69 to 1087+53	454' to 443' R	12	I-90 EB	90

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TABLE OF EROSION CONTROL WATTLE (CONT.)

Station	L/R	Dia. (Inch)	Location	Quantity (Ft)
FINAL STABILIZATION (CONT.)				
1090+29 to 1092+85	110' to 83' R	12	I-90 EB	810
1090+29 to 1098+43	186’ to 115’ R	12	I-90 EB	580
1098+35 to 1099+00	108’ to 81’ R	12	I-90 EB	70
1099+00 to 1100+90	96' to 84' R	12	I-90 EB	190
1110+63 to 1114+00	88' to 104' R	12	I-90 EB	400
2099+38 to 2103+38	55' to 41' L	12	I-90 WB	100
1099+62 to 1103+63	42' to 42' L	12	I-90 EB	100
1100+83 to 1102+78	65' to 43' R	12	I-90 EB	100
1099+00 to 1099+51	197' to 183' R	12	I-90 EB	40
1100+47	154' R	12	I-90 EB	20
1102+31 to 1103+29	114' to 99' R	12	I-90 EB	40
1109+06 to 1113+03	45' to 45' L	12	I-90 EB	100
1108+53 to 1113+59	74' to 83' R	12	I-90 EB	120
1114+00 to 1116+56	104' to 105' R	12	I-90 EB	70
1114+65 to 1116+54	94' to 94' R	12	I-90 EB	190
1123+09 to 1125+78	105' to 89' R	12	I-90 EB	280
1114+00 to 1115+01	45' to 45' L	12	I-90 EB	40
1123+75	42' L	12	I-90 EB	20
1123+75	42' L	12	I-90 EB	20
1125+33 to 1128+33	42' to 42' L	12	I-90 EB	80
1114+61 to 1122+68	82' to 91' R	12	I-90 EB	180
1123+25 to 1124+00	92' to 93' R	12	I-90 EB	80
1124+69 to 1125+93	92' to 79' R	12	I-90 EB	120
1126+49 to 1128+49	73' to 73' R	12	I-90 EB	60
1129+33 to 1140+42	42' to 42' L	12	I-90 EB	240
1129+49 to 1136+49	73' to 73' R	12	I-90 EB	160
1138+76	74' R	12	I-90 EB	20
1146+56	55' R	12	I-90 EB	20
1150+06 to 1152+05	42' to 35' R	12	I-90 EB	60
503+41 to 504+39	67' to 68' L	12	Elk Creek Rd	110
504+21 to 504+47	97' to 98' L	12	Elk Creek Rd	50
503+53 to 504+03	77' to 74' R	12	Elk Creek Rd	120
504+39 to 504+56	68' to 69' L	12	Elk Creek Rd	120
504+47 to 504+67	98' to 99' L	12	Elk Creek Rd	120
504+03 to 504+64	74' to 75' L	12	Elk Creek Rd	130
504+21 to 504+68	104' to 105' R	12	Elk Creek Rd	90
508+88 to 510+01	68' to 47' L	12	Elk Creek Rd	130
508+88 to 510+10	98' to 75' L	12	Elk Creek Rd	130
508+88 to 510+16	129' to 105' L	12	Elk Creek Rd	120
509+05 to 510+26	155' to 134' L	12	Elk Creek Rd	70
508+87 to 509+78	57' to 35' R	12	Elk Creek Rd	90
508+87 to 510+11	87' to 64' R	12	Elk Creek Rd	130
508+87 to 510+10	117' to 94' R	12	Elk Creek Rd	130
509+41 to 510+10	137' to 124' R	12	Elk Creek Rd	70
509+11 to 509+93	149' to 142' R	12	Elk Creek Rd	80
510+63 to 512+04	133' to 134' L	12	Elk Creek Rd	140
514+73 to 515+42	113' to 111' L	12	Elk Creek Rd	60
510+11 to 511+76	143' to 133' R	12	Elk Creek Rd	140
515+16 to 515+69	105' to 109' R	12	Elk Creek Rd	40
510+02 to 511+45	63' to 37' L	12	Elk Creek Rd	140
510+12 to 511+48	91' to 68' L	12	Elk Creek Rd	130
510+17 to 511+51	120' to 98' L	12	Elk Creek Rd	130
511+44 to 512+62	54' to 31' L	12	Elk Creek Rd	130
511+48 to 512+85	84' to 56' L	12	Elk Creek Rd	160
511+51 to 512+55	113' to 96' L	12	Elk Creek Rd	120
512+55 to 513+11	126' to 117' L	12	Elk Creek Rd	70
513+07 to 514+72	96' to 72' L	12	Elk Creek Rd	160
513+76 to 514+47	55' to 42' L	12	Elk Creek Rd	140
514+11 to 514+53	79' to 72' L	12	Elk Creek Rd	160
513+35 to 513+55	121' to 117' L	12	Elk Creek Rd	20
513+81 to 514+53	114' to 102' L	12	Elk Creek Rd	80
514+49 to 515+69	55' to 31' L	12	Elk Creek Rd	130
514+53 to 516+01	84' to 60' L	12	Elk Creek Rd	160
515+54 to 515+85	98' to 92' L	12	Elk Creek Rd	30
510+11 to 511+60	64' to 35' R	12	Elk Creek Rd	160
510+10 to 513+03	94' to 44' R	12	Elk Creek Rd	290
510+10 to 512+76	124' to 79' R	12	Elk Creek Rd	260
513+77 to 515+22	63' to 35' R	12	Elk Creek Rd	140
514+10 to 516+00	91' to 57' R	12	Elk Creek Rd	180
514+32 to 516+00	108' to 87' R	12	Elk Creek Rd	150
516+01 to 517+51	60' to 31' L	12	Elk Creek Rd	160
516+00 to 518+05	92' to 54' L	12	Elk Creek Rd	250
518+08 to 519+65	60' to 36' R	12	Elk Creek Rd	160
516+00 to 516+99	57' to 37' R	12	Elk Creek Rd	100
516+87 to 518+17	87' to 51' R	12	Elk Creek Rd	200
548+16 to 520+02	69' to 43' R	12	Elk Creek Rd	180
517+40 to 519+59	86' to 78' R	12	Elk Creek Rd	100
521+46	73' R	12	Elk Creek Rd	20
522+05 to 523+23	66' to 56' R	12	Elk Creek Rd	60
525+09 to 526+13	45' to 37' R	12	Elk Creek Rd	60
527+54	31’ R	12	Elk Creek Rd	20
668+41 to 669+41	35' to 37' R	12	Sturgis Rd	60
669+91 to 674+91	38' to 45' R	12	Sturgis Rd	220
675+41 to 676+41	46' to 48' R	12	Sturgis Rd	60
512+06 to 511+63	230’ to 271’ L	12	Elk Creek Rd	50
511+59 to 511+12	264’ to 331’ L	12	Elk Creek Rd	70
512+48 to 512+33	170’ to 211’ L	12	Elk Creek Rd	90
512+43 to 512+05	227’ to 275’ L	12	Elk Creek Rd	70
512+78 to 512+53	183’ to 243’ L	12	Elk Creek Rd	70
513+42 to 512+91	215’ to 278’ L	12	Elk Creek Rd	90
512+97 to 512+68	288’ to 311’ L	12	Elk Creek Rd	50
512+69 to 512+39	314’ to 331’ L	12	Elk Creek Rd	50
512+40 to 511+65	337’ to 371’ L	12	Elk Creek Rd	120
513+60 to 513+10	233’ to 297’ L	12	Elk Creek Rd	90
513+15 to 512+74	306’ to 343’ L	12	Elk Creek Rd	70
512+75 to 512+46	346’ to 364’ L	12	Elk Creek Rd	50
512+12 to 509+77	377’ to 540’ L	12	Elk Creek Rd	280
512+37	368’ L	12	Elk Creek Rd	20
512+52 to 512+48	99’ to 170’ L	12	Elk Creek Rd	70
512+85 to 512+78	66’ to 83’ L	12	Elk Creek Rd	120
513+76 to 513+38	55’ to 211’ L	12	Elk Creek Rd	160
514+11 to 513+56	79’ to 230’ L	12	Elk Creek Rd	160
512+76 to 512+59	79' to 123' R	12	Elk Creek Rd	50
512+48 to 511+83	115' to 220' R	12	Elk Creek Rd	120
511+71 to 511+18	211' to 271' R	12	Elk Creek Rd	70
513+77 to 513+43	63' to 150' R	12	Elk Creek Rd	90
513+54 to 513+17	154' to 191' R	12	Elk Creek Rd	50
513+29 to 512+66	194' to 248' R	12	Elk Creek Rd	70
512+78 to 512+28	252' to 286' R	12	Elk Creek Rd	50
514+10 to 513+66	91' to 176' R	12	Elk Creek Rd	90
513+77 to 513+21	179' to 236' R	12	Elk Creek Rd	70
			Additional Quantity:	2,175
			Total:	22,405

Plotting Date: 9/30/2025 Rev: 9/30/2025 BRC

LOW FLOW SILT FENCE

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

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

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

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

TABLE OF LOW FLOW SILT FENCE

Station	L/R	Location	Quantity (Ft)
PERIMETER CONTROL			
2012+64 to 2013+93	91' to 68' L	I-90 WB	136
2013+96 to 2014+62	92' to 83' L	I-90 WB	71
2014+60 to 2015+46	75' to 74' L	I-90 WB	91
2015+44 to 2016+15	79' to 76' L	I-90 WB	74
2017+67 to 2017+87	144' to 145' L	I-90 WB	30
2025+68 to 2031+52	96' to 95' L	I-90 WB	597
2031+42 to 2031+77	132' to 38' L	I-90 WB	12
2031+65 to 2031+66	97' to 86' L	I-90 WB	12
2031+66 to 2031+79	89' to 82' L	I-90 WB	16
2032+00 to 2032+08	103' to 83' L	I-90 WB	27
2032+06 to 2034+57	103' to 94' L	I-90 WB	259
2035+50 to 2039+01	88' to 93' L	I-90 WB	352
2039+01 to 2042+91	93' to 83' L	I-90 WB	392
2042+91 to 2042+90	158' to 128' L	I-90 WB	47
2042+77 to 2043+46	74' to 77' L	I-90 WB	75
2043+41 to 2043+43	128' to 86' L	I-90 WB	45
2043+39 to 2046+82	82' to 84' L	I-90 WB	345
2046+80 to 2047+24	74' to 78' L	I-90 WB	53
2047+24 to 2051+53	78' to 78' L	I-90 WB	431
2050+37 to 2050+35	127' to 83' L	I-90 WB	51
2051+46 to 2052+82	92' to 76' L	I-90 WB	139
2053+32 to 2053+99	76' to 72' L	I-90 WB	68
2053+99 to 2059+78	72' to 84' R	I-90 WB	575
1061+45 to 1069+00	59' to 63' R	I-90 EB	765
2071+25 to 2072+10	171' L to 171' R	I-90 WB	93
2075+08 to 2075+50	118' to 137' L	I-90 WB	50
2075+48 to 2077+40	144' to 156' L	I-90 WB	195
2080+06 to 2083+79	166' to 170' L	I-90 WB	377
1069+00 to 1070+59	63' to 70' L	I-90 EB	160
2083+79 to 2088+24	170' to 152' L	I-90 WB	460
2089+12 to 2098+79	152' to 169' L	I-90 WB	978
2098+79 to 2099+86	169' to 150' L	I-90 WB	120
2100+08 to 2100+49	134' to 146' L	I-90 WB	45
2100+51 to 2101+15	134' to 151' L	I-90 WB	69
2101+18 to 2101+82	130' to 152' L	I-90 WB	71
2101+91 to 2102+55	125' to 147' L	I-90 WB	71
2102+68 to 2103+10	119' to 142' L	I-90 WB	52
2103+32 to 2103+53	115' to 129' L	I-90 WB	29
2103+75 to 2108+22	120' to 97' L	I-90 WB	454
2108+21 to 2109+03	98' to 96' L	I-90 WB	178
2109+91 to 2112+16	84' to 93' L	I-90 WB	232
2112+22 to 2112+91	79' to 78' L	I-90 WB	75
2113+14 to 2113+63	106' to 77' L	I-90 WB	60
2113+83 to 2114+26	104' to 81' L	I-90 WB	53
2114+33 to 2115+71	100' to 82' L	I-90 WB	145
2115+63 to 2119+77	110' to 90' L	I-90 WB	427
2119+76 to 2120+60	88' to 73' L	I-90 WB	91
2120+07 to 2120+71	59' to 60' L	I-90 WB	66
2120+59 to 2124+22	63' to 58' L	I-90 WB	366
2123+87 to 2124+69	99' to 99' L	I-90 WB	88
2124+37 to 2124+64	50' to 52' L	I-90 WB	31
2124+41 to 2127+95	60' to 69' L	I-90 WB	356
2127+95 to 2128+31	63' to 62' L	I-90 WB	38
2128+30 to 2128+97	59' to 69' L	I-90 WB	69
2128+77 to 2128+97	47' to 51' L	I-90 WB	21
2128+97 to 2129+23	69' to 63' L	I-90 WB	26
2128+97 to 2129+18	51' to 45' L	I-90 WB	23
2129+21 to 2133+82	58' to 58' L	I-90 WB	467
2133+81 to 2135+31	61' to 59' L	I-90 WB	156
2135+31 to 2135+57	60' to 60' L	I-90 WB	29
2135+56 to 2136+43	62' to 65' L	I-90 WB	90
2135+33 to 2135+95	104' to 104' L	I-90 WB	68
2142+15 to 2142+84	81' to 77' L	I-90 WB	72
2143+02 to 2143+97	82' to 71' L	I-90 WB	95
2143+97 to 2145+64	71' to 64' L	I-90 WB	139
1145+27 to 1149+36	52' to 52' R	I-90 EB	415
1152+75 to 1153+31	42' to 17' R	I-90 EB	67
1153+84 to 1154+13	14' to 15' R	I-90 EB	31
1154+43 to 1157+00	26' to 24' R	I-90 EB	263
513+03 to 513+33	235' to 120' L	Elk Creek Rd	124
516+05 to 516+38	116' to 85' L	Elk Creek Rd	54
516+62 to 517+05	116' to 79' L	Elk Creek Rd	63
517+32 to 517+79	105' to 73' L	Elk Creek Rd	63
517+90 to 518+39	93' to 66' L	Elk Creek Rd	63
518+45 to 518+99	85' to 60' L	Elk Creek Rd	63
519+06 to 519+51	84' to 59' L	Elk Creek Rd	54
513+90 to 513+63	248’ to 295’ L	Elk Creek Rd	64
513+53 to 513+44	216’ to 328’ L	Elk Creek Rd	48
513+19 to 513+12	320’ to 362’ L	Elk Creek Rd	48
514+45 to 514+00	121’ to 119’ L	Elk Creek Rd	119
513+99 to 513+90	216’ to 248’ L	Elk Creek Rd	34
514+43 to 514+29	119' to 156' R	Elk Creek Rd	42
514+27 to 514+03	154' to 183' R	Elk Creek Rd	38
514+02 to 513+86	181' to 201' R	Elk Creek Rd	25
513+86 to 513+40	200' to 242' R	Elk Creek Rd	55
513+36 to 513+12	242' to 263' R	Elk Creek Rd	30
513+12 to 512+84	263' to 279' R	Elk Creek Rd	28
512+80 to 512+38	277' to 307' R	Elk Creek Rd	43
512+32 to 511+96	304' to 324' R	Elk Creek Rd	34
511+92 to 511+48	321' to 343' R	Elk Creek Rd	37
511+44 to 511+00	341' to 362' R	Elk Creek Rd	40
510+99 to 510+85	359' to 376' R	Elk Creek Rd	32
		Quantity from Initial Sediment Control:	13,325
		Additional Quantity:	1,333
		Total:	14,658

HIGH FLOW SILT FENCE

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

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

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

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

LICENSED PROFESSIONAL ENGINEER
REG. NO. 12833
JENNICA M HARTMAN
SOUTH DAKOTA
9/30/2025

TABLE OF HIGH FLOW SILT FENCE

Station	L/R	Location	Quantity (Ft)
611+53	27' L	Sturgis Rd	60
611+62	27' L	Sturgis Rd	60
611+62	19' L	Sturgis Rd	60
1024+48	39' R	I-90 EB	60
1025+65	44' R	I-90 EB	60
1025+84	46' R	I-90 EB	60
1027+43	52' R	I-90 EB	60
1029+48	54' R	I-90 EB	60
1039+19	58' R	I-90 EB	60
1041+25	58' R	I-90 EB	60
1046+69	59' R	I-90 EB	60
1053+87	55' R	I-90 EB	60
2053+84	11' R	I-90 WB	60
2053+84	26' R	I-90 WB	60
630+33	20' R	Sturgis Rd	60
2080+15	63' L	I-90 WB	60
2080+34	34' L	I-90 WB	60
1077+98	67' R	I-90 EB	60
1078+16	86' L	I-90 EB	60
1032+75	105' R	I-90 EB	60
1033+06	105' R	I-90 EB	60
1033+30	105' R	I-90 EB	60
1034+54	55' R	I-90 EB	60
Quantity from Initial Sediment Control at Inlets:			1,380
1017+33	43' L	I-90 EB	60
1025+40	45' L	I-90 EB	60
1027+45	46' L	I-90 EB	60
1027+44	50' R	I-90 EB	60
1039+19	42' R	I-90 EB	60
1039+19	54' R	I-90 EB	60
1041+24	42' R	I-90 EB	60
1041+24	54' R	I-90 EB	60
1046+70	42' R	I-90 EB	60
1046+70	54' R	I-90 EB	60
1049+69	43' R	I-90 EB	60
1073+47	42' L	I-90 EB	60
1077+32	141' L	I-90 EB	60
1078+51	42' L	I-90 EB	60
1078+51	127' L	I-90 EB	60
1123+98	42' L	I-90 EB	60
1125+10	42' L	I-90 EB	60
Quantity from Interim Sediment Control at Inlets:			900
Additional Quantity:			480
Total:			2,760

EROSION CONTROL BLANKET

Erosion control blanket will be installed 16 feet wide at the locations noted in the table and at locations determined by the Engineer during construction.

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

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

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

TABLE OF EROSION CONTROL BLANKET

Station	L/R	Location	Type	Quantity (SqYd)
1012+62 to 1015+02	44’ to 44’ L	Ditch Channel	1	427
1015+02 to 1024+00	44' to 43' L	Ditch Channel	1	1593
1024+00 to 1025+29	43' to 43' L	Ditch Channel	1	231
2060+48 to 2064+54	79' to 76' L	Ditch Channel	1	711
2068+02 to 2068+64	77' to 75' L	Ditch Channel	1	110
1054+63 to 1064+05	38' to 39' L	Ditch Channel	1	1664
1067+97 to 1069+00	39' to 41' L	Ditch Channel	1	183
1071+81 73’ R to 1073+91 to 1073+68 105’-124’ R		Backslope	1	237
1074+28 to 1074+32 125’-166’ R to 1076+31 to 1076+18 150’-208’ R		Backslope	1	1133
2068+80 to 2073+13	74' to 90' L	Ditch Channel	1	772
2079+57 to 2083+79	185' to 185' L	Ditch Channel	1	750
2078+38 to 2080+14	44' to 44' L	Ditch Channel	1	313
2080+50 to 2083+79	44' to 44' L	Ditch Channel	1	585
1069+00 to 1078+44	41' to 42' L	Ditch Channel	1	1678
1078+58 to 1084+00	42' to 42' L	Ditch Channel	1	964
1074+02 to 1084+00	39' to 73' R	Ditch Channel	1	1776
1072+58 to 1073+82	80' to 100' R	Ditch Channel	1	178
1074+77 to 1084+00	119’ to 258’ R	Ditch Channel	1	1668
2083+79 to 2088+31	185' to 185' L	Ditch Channel	1	804
2088+93 to 2096+93	185' to 185' L	Ditch Channel	1	800
2083+79 to 2088+26	44' to 44' L	Ditch Channel	1	798
2088+94 to 2098+79	44' to 54' L	Ditch Channel	1	1749
1084+00 to 1087+77	258’ to 341’ R	Ditch Channel	1	390
1084+00 to 1088+50	42' to 42' R	Ditch Channel	1	804
1089+18 to 1099+00	42' to 42' R	Ditch Channel	1	1746
1084+00 to 1087+32	73' to 83' R	Ditch Channel	1	612
1090+26 to 1099+00	67' to 73' R	Ditch Channel	1	1554
1090+59 to 1093+73	342' to 320' R	Ditch Channel	1	567
1094+72 to 1099+00	304' to 197' R	Ditch Channel	1	784
2098+79 to 2103+38	54' to 41' L	Ditch Channel	1	809
1099+42 to 1103+63	42' to 42' R	Ditch Channel	1	814
1099+00 to 1102+87	73' to 42' R	Ditch Channel	1	692
1099+00 to 1100+90	197' to 141' R	Ditch Channel	1	352
1101+47 to 1103+82	128' to 94' R	Ditch Channel	1	386
1108+08 to 1114+00	45' to 45' R	Ditch Channel	1	1060
1107+57 to 1114+00	71' to 83' R	Ditch Channel	1	1129
2100+08 to 2104+57	93’ to 139’ L	Embankment	1	2180
2105+18 to 2106+64	55’ to 114’ L	Embankment	1	854
1114+00 to 1123+98	45' to 42' L	Ditch Channel	1	1783
1125+17 to 1129+00	42' to 42' L	Ditch Channel	1	681
1114+00 to 1123+15	83' to 91' L	Ditch Channel	1	908
1125+93 to 1129+00	79' to 73' L	Ditch Channel	1	306
1129+00 to 1141+17	42' to 42' L	Ditch Channel	1	1217
1129+00 to 1137+14	73' to 73' R	Ditch Channel	1	814
1138+65 to 1140+64	74' to 70' R	Ditch Channel	1	195
1144+96 to 1152+05	61' to 35' R	Ditch Channel	1	720
677+21 to 676+29	313’-419’ L	Ditch Channel	1	141
678+61 to 678+59	323’-419’ R	Ditch Channel	1	98
502+93 to 502+82 27'-65' L to 504+29 to 504+55 27'-126' L		Outslope	1	938
502+88 to 502+86 62'-79' R to 504+13 to 503+98 32'-97' R		Outslope	1	611
504+29 to 504+55 27'-126' L to 504+96 to 504+97 28'-120' L		Embankment	1	667
504+13 to 503+98 32'-97' R to 504+96 to 504+94 33'-120' R		Embankment	1	833
508+65 to 508+65 30’-135’ L to 510+14 to 510+18 27’-135’ L		Embankment	1	1942
508+65 to 508+65 32’-152’ R to 510+09 to 510+12 32’-143’ R		Embankment	1	1882
520+87 to 522+00 50’-54’ L		Ditch Channel	1	212
516+84 to 520+22 90’-77’ R		Ditch Channel	1	565
520+99 to 522+00 75’-66’ R		Ditch Channel	1	164
516+00 to 519+74 27'-90' L to 519+94 66' L		Embankment	1	2113
516+00 to 520+12 32'-92' R to 520+12 52' R		Embankment	1	1533

LICENSED PROFESSIONAL ENGINEER
REG. NO. 12833
JENNICA M HARTMAN
SOUTH DAKOTA
9/30/2025

Plotting Date: 9/30/2025 Rev: 9/30/2025 BRC

TABLE OF EROSION CONTROL BLANKET (CONT.)

Station	Location	Type	Quantity (SqYd)
522+00 to 527+65 47’-28’ L	Ditch Channel	1	997
522+00 to 523+93 67’-51’ R	Ditch Channel	1	320
524+57 to 527+05 47’-34’ R	Ditch Channel	1	464
664+13 to 665+16 33’-34’ R	Ditch Channel	1	183
666+15 to 667+67 37’-38’ R	Ditch Channel	1	270
667+77 to 669+41 37’-37’ R	Ditch Channel	1	308
669+50 to 675+30 38’-48’ R	Ditch Channel	1	1031
675+51 to 676+91 48’-48’ R	Ditch Channel	1	286
675+51 to 676+91 48’-48’ R	Ditch Channel	1	286
513+12 199’ L to 512+57 277’ L to 513+80 240’ L to 512+86 339’ L	Embankment	1	1285
513+42 31’ L to 513+12 199’ L to 514+38 113’ L to 513+80 240’ L	Embankment	1	1936
510+14 27’ L to 510+18 135’ L to 516+00 32’-91’ L	Embankment	1	6521
510+12 32’-143’ R to 516+00 32’-91’ R	Embankment	1	6162
515+42 111’ L to 516+61 346’ R	Ditch Channel	1	608
		Additional Quantity:	7,284
		Total Type 1 Erosion Control Blanket:	80,121

503+22 to 504+51	59' to 124' L	Ditch Channel	3	242
503+12 to 503+98	81' to 97' R	Ditch Channel	3	174
514+38 to 515+42	113’ to 111’ L	Ditch Channel	3	208
			Additional Quantity:	62
			Total Type 3 Erosion Control Blanket:	686

SHAPING FOR EROSION CONTROL BLANKET

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

TURF REINFORCEMENT MAT

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

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

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

TABLE OF TURF REINFORCEMENT MAT

Station	L/R	Location	Width (Ft)	Type	Quantity (SqYd)
1012+62 to 1015+02	44' to 44' R	I-90 EB	16	3	427
1074+77 to 1084+00	119’ to 258’ R	I-90 EB	16	3	1668
1084+00 to 1087+77	258' to 341' R	I-90 EB	16	3	390
1123+15 to 1124+15	91' to 93' R	I-90 EB	16	3	178
1124+55 to 1125+95	93' to 79' R	I-90 EB	16	3	249
678+36 to 680+19	48’-48’ R	Sturgis Rd	16	2	325
677+21 to 676+29	313’-419’ L	Elk Creek Rd	16	3	141
678+61 to 678+59	323’-419’ R	Elk Creek Rd	16	3	98
503+22 to 504+51	59’-124’ L	Elk Creek Rd	16	3	242
503+12 to 503+98	81’-97’ R	Elk Creek Rd	16	3	174
514+38 to 515+42	113’-111’ L	Elk Creek Rd	16	3	208
		Total Type 2 Turf Reinforcement Mat:			325
		Total Type 3 Turf Reinforcement Mat:			3,775

ARTICULATED CONCRETE MATTRESS

Articulated concrete mattress will be installed at locations noted in the table and at locations determined by the Engineer during construction.

Installation of the articulated concrete mattress will be in accordance with the manufacturer’s installation instructions.

All costs for furnishing and installing the articulated concrete mattress including hauling, materials, equipment, labor, and incidentals necessary will be paid for at the contract unit price per square yard for “Articulated Concrete Mattress”.

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

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

TABLE OF ARTICULATED CONCRETE MATTRESS

Station	Location	Quantity (SqYd)
606+82 to 607+41 51’-41’ R	Sturgis Rd	107
631+65 to 631+94 22’-29’ R	Sturgis Rd	20
641+80 to 642+10 36’-37’ R	Sturgis Rd	20
1137+14 to 1137+44 73'-77' R	I-90 EB	20
1138+05 to 1138+65 76'-74' R	I-90 EB	20
502+35 to 501+92 67’-72’ L	Elk Creek Rd	20
502+51 to 502+27 72’-85’ L	Elk Creek Rd	20
502+74 to 503+09 68'-56' L	Elk Creek Rd	28
502+86 to 503+12 71’-81’ R	Elk Creek Rd	20
678+55 to 678+55 37’-68’ L	Sturgis Rd	20
513+14 to 512+18 33’-138’ L	Elk Creek Rd	150
513+42 to 514+38 31’-113’ L	Elk Creek Rd	140
519+87 to 520+16 69'-63' L	Elk Creek Rd	20
520+15 to 520+39 51'-49' R	Elk Creek Rd	17
520+57 to 520+80 74'-55' L	Elk Creek Rd	20
520+68 to 520+97 54'-49' R	Elk Creek Rd	20
520+96 to 521+15 23'-46' R	Elk Creek Rd	20
512+18 to 513+14 138’-33’ L	Elk Creek Rd	150
514+41 to 513+42 115’-31’ L	Elk Creek Rd	140
513+42 to 514+45 41’-117’ R	Elk Creek Rd	120
513+13 to 511+98 42’-134’ R	Elk Creek Rd	140
	Total:	1,232

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

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

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.

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

Station	L/R	High Flow Silt Fence Quantity (Ft)	Sediment Filter Bag Quantity (Ft)	Remove Sediment Quantity (CuYd)
611+53	27' L	60	60	0.25
611+62	27' L	60	60	0.25
611+62	19' L	60	60	0.25
1024+48	39' R	60	60	0.25
1025+65	44' R	60	60	0.25
1025+84	46' R	60	60	0.25
1027+43	52' R	60	60	0.25
1029+48	54' R	60	60	0.25
1032+75	105' R	60	60	0.25
1033+06	105' R	60	60	0.25
1033+30	105' R	60	60	0.25
1034+54	55' R	60	60	0.25
1039+19	58' R	60	60	0.25
1041+25	58' R	60	60	0.25
1046+69	59' R	60	60	0.25
1053+87	55' R	60	60	0.25
2053+84	11' R	60	60	0.25
2053+84	26' R	60	60	0.25
630+33	20' R	60	60	0.25
2080+15	63' L	60	60	0.25
2080+34	34' L	60	60	0.25
1077+98	67' R	60	60	0.25
1078+16	86' L	60	60	0.25
Quantity from Initial Sediment Control at Inlets:		1,380	1,380	5.75
1017+33	43' L	60	60	0.25
1025+40	45' L	60	60	0.25
1027+45	46' L	60	60	0.25
1027+44	50' R	60	60	0.25
1039+19	42' R	60	60	0.25
1039+19	54' R	60	60	0.25
1041+24	42' R	60	60	0.25
1041+24	54' R	60	60	0.25
1046+70	42' R	60	60	0.25
1046+70	54' R	60	60	0.25
1049+69	43' R	60	60	0.25
2077+36	56’ L	60	60	0.25
2078+60	43’ L	60	60	0.25
1123+98	42' L	60	60	0.25
1125+10	42' L	60	60	0.25
Quantity from Interim Sediment Control at Inlets:		900	900	3.75
Additional Quantity:		480	0	0
Totals:		2,760	2,280	9.50

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”.

The device will be installed in reinforced concrete drop inlets in accordance with the manufacturer’s recommendations.

Sediment collection devices will be:

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

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TABLE OF SEDIMENT CONTROL AT INLETS WITH FRAMES AND GRATES

Station	L/R	Quantity (Each)
501+91	28' L	1
502+00	33' R	1
503+01	24' L	1
503+05	42' R	1
508+87	22' L	1
508+87	22' R	1
511+43	21' L	1
511+43	21' R	1
513+81	21' L	1
513+81	21' R	1
515+00	21' L	1
516+19	21' L	1
516+20	21' R	1
516+20	21' L	1
516+20	21' R	1
517+39	22' L	1
518+58	21' L	1
518+58	21' R	1
519+58	21' L	1
520+06	21' R	1
666+06	22' L	1
666+06	22' R	1
666+08	49' R	1
667+72	22' R	1
667+72	43' R	1
668+21	22' L	1
668+70	22' R	1
668+70	44' R	1
670+78	22' L	1
670+79	22' R	1
670+79	44' R	1
673+35	30' L	1
673+36	22' R	1
675+93	22' R	1
676+45	33' R	1
678+50	22' R	1
	Total:	36

SEDIMENT CONTROL AT TYPE S REINFORCED CONCRETE DROP INLETS

The Sediment Control Device at Type S Inlets provided will be from the approved product list. The approved product list may be viewed at the following internet site:

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

TABLE OF SEDIMENT CONTROL AT TYPE S REINFORCED CONCRETE DROP INLETS

Station	L/R	Clear Opening Width (Ft)	Quantity* (Ft)
503+01	24’ L	6	8
503+05	42’ R	6	8
		Total:	16

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

DEWATERING AND SEDIMENT COLLECTING

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.

The Dewatering and Sediment Control products provided will be from the from the approved products list. The approved products list may be viewed on the Dewatering and Sediment Collection Standard Plate, or at the following internet site:

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

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.
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 will be incidental to the contract unit price per hour for “Sweeping”.

CONSTRUCTION ENTRANCE

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

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

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

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

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

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

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

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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.

CONCRETE WASHOUT

A concrete washout 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 are going to wash out at approved site constructed by the concrete supplier.

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

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

DUST CONTROL

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

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

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

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

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 trapping 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 bodies of water, 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.

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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** 130 Acres
- **5.3 (3b): Total Area to be Disturbed** 122 Acres
- **5.3 (3c): Maximum Area Disturbed at One Time** 5 Acres
- **5.3 (3d): Existing Vegetative Cover (%)**
- **5.3 (3d): Description of Vegetative Cover**
- **5.3 (3e): Soil Properties:** AASHTO Soil or USDA-NRCS Soil Series Classification B and D
- **5.3 (3f): Name of Receiving Water Body/Bodies**
- **5.3 (3g): Location of Construction Support Activity Areas**

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.	
Install inlet and culvert protection after completing storm drainage and other utility installations.	
Final grading.	
Final paving.	
Removal of protection devices.	
Reseed areas disturbed by removal activities.	

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.

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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

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CONTACT INFORMATION

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

➢ **Contractor Information**:

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

➢ **Erosion Control Supervisor**

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

➢ **SDDOT Project Engineer**

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

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

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

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

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

5.5: REQUIRED SWPPP MODIFICATIONS

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

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

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

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

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

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

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

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

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

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

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

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

EROSION AND SEDIMENT CONTROL LEGEND

SYMBOLOGY FOR BEST MANAGEMENT PRACTICES

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

BEST MANAGEMENT PRACTICES

BEST MANAGEMENT PRACTICES (BMP'S) SHOULD BE USED THROUGHOUT CONSTRUCTION. TO REMIND CONTRACTORS AND FIELD 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 ACTIVITES 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 VEGETATIONHAS REACHED 70% OF THE BACKGROUND LEVEL. SOME YELLOW BMPS WILL BE REMOVED OR REPLACED DURING CONSTRUCTION.

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

IF THE CONTRACTOR OR ENGINEER DECIDE TO USE ADDITIONAL BEST MANAGEMENT PRACTICES OR LABEL THE LOCATIONS OF THEM THEY SHOULD USE THE 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 PERMENANTLY 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 EROSTION CONTROL HAS BEEN INSTALLED.

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JENNICA M HARTMAN
SOUTH DAKOTA
9/30/2025

Plot Scale - 1:200
Plotted From - Brady.Johnson
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FELSBURG HOLT & ULLEVIG	STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
		IM-CR-EM 0901(187)44	D18	D48

FOR BIDDING PURPOSES ONLY

Plotting Date: 10/9/2025 Rev: 02/14/2025 KLT
Rev: 9/30/2025 BRC

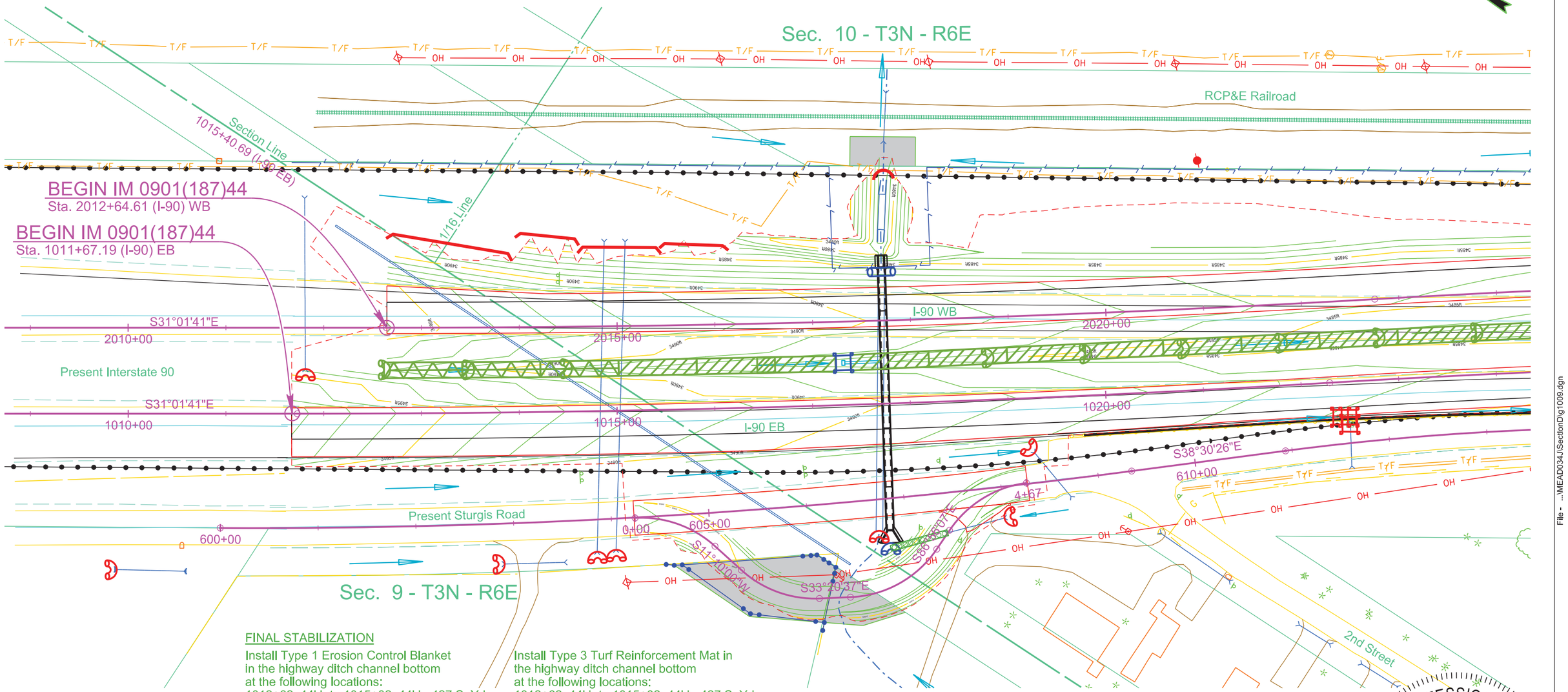
Plot Scale - 1:100

PERIMETER CONTROL

Install Low Flow Silt Fence at the following locations:
2012+64 91' L to 2013+93 68' L Perimeter control 136 Ft
2013+96 92' L to 2014+62 83' L Perimeter control 71 Ft
2014+60 75' L to 2015+46 74' L Perimeter control 91 Ft
2015+44 79' L to 2016+15 76' L Perimeter control 74 Ft
2017+67 144' L to 2017+87 145' L Perimeter control 30 Ft

Install Sediment Control at Inlets, Manholes, and Junction Boxes before the placement of surfacing at the following locations:
611+53 27' L 1 Each
611+62 27' L 1 Each
611+62 19' L 1 Each

Install 12" Diameter Erosion Control Wattles* around median drains and pipe inlets at the following locations:
1011+81 36' L 20 Ft
1009+88 159' R 20 Ft
602+89 41' R 20 Ft
603+84 33' R 20 Ft
608+38 31' R 20 Ft
604+03 32' R 20 Ft
606+72 32' R 20 Ft
608+00 32' R 20 Ft
*Remove and Reset Wattles as needed.



TEMPORARY STABILIZATION

Install 12" Diameter Erosion Control Wattles* around median drains and pipe inlets at the following locations:
2017+72 54' L 20 Ft
606+82 46' R 20 Ft
*Remove and Reset Wattles as needed.

Install Interim Sediment Control at Inlets, Manholes, and Junction Boxes before the placement of surfacing at the following locations:
1017+33-43' L 1 Each

FINAL STABILIZATION

Install Type 1 Erosion Control Blanket in the highway ditch channel bottom at the following locations:
1012+62 44' L to 1015+02 44' L 427 SqYd
1015+02 44' L to 1024+00 43' L 1593 SqYd

Install Type 3 Turf Reinforcement Mat in the highway ditch channel bottom at the following locations:
1012+62 44' L to 1015+02 44' L 427 SqYd

Install 12" Diameter Erosion Control Wattles across the highway ditch channel bottom at the following locations:
1012+58 45' L to 1014+45 44' L 20 Ft Ea. 3 @ 100' O.C.
1018+77 43' L to 1023+78 43' L 20 Ft Ea. 6 @ 100' O.C.

Install Articulated Concrete Mattress at the following locations:
606+82 51' R to 607+41 41' R ditch channel bottom 107 SqYd

Complete Seeding and Mulching. If Grass Hay or Staw Mulch was installed for temporary stabilization seed with a no-till drill.

Leave 12" Diameter Erosion Control Wattles around median drains and pipe inlets and allow to decompose while the site revegetates.

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9/30/2025

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FELSBURG HOLT & ULEVIG | STATE OF SOUTH DAKOTA | PROJECT: IM-CR-EM 0901(187)44 | SHEET: D19 | TOTAL SHEETS: D48

FOR BIDDING PURPOSES ONLY

Plotting Date: 10/9/2025

Rev: 02/14/2025 KLT
Rev: 9/30/2025 BRC

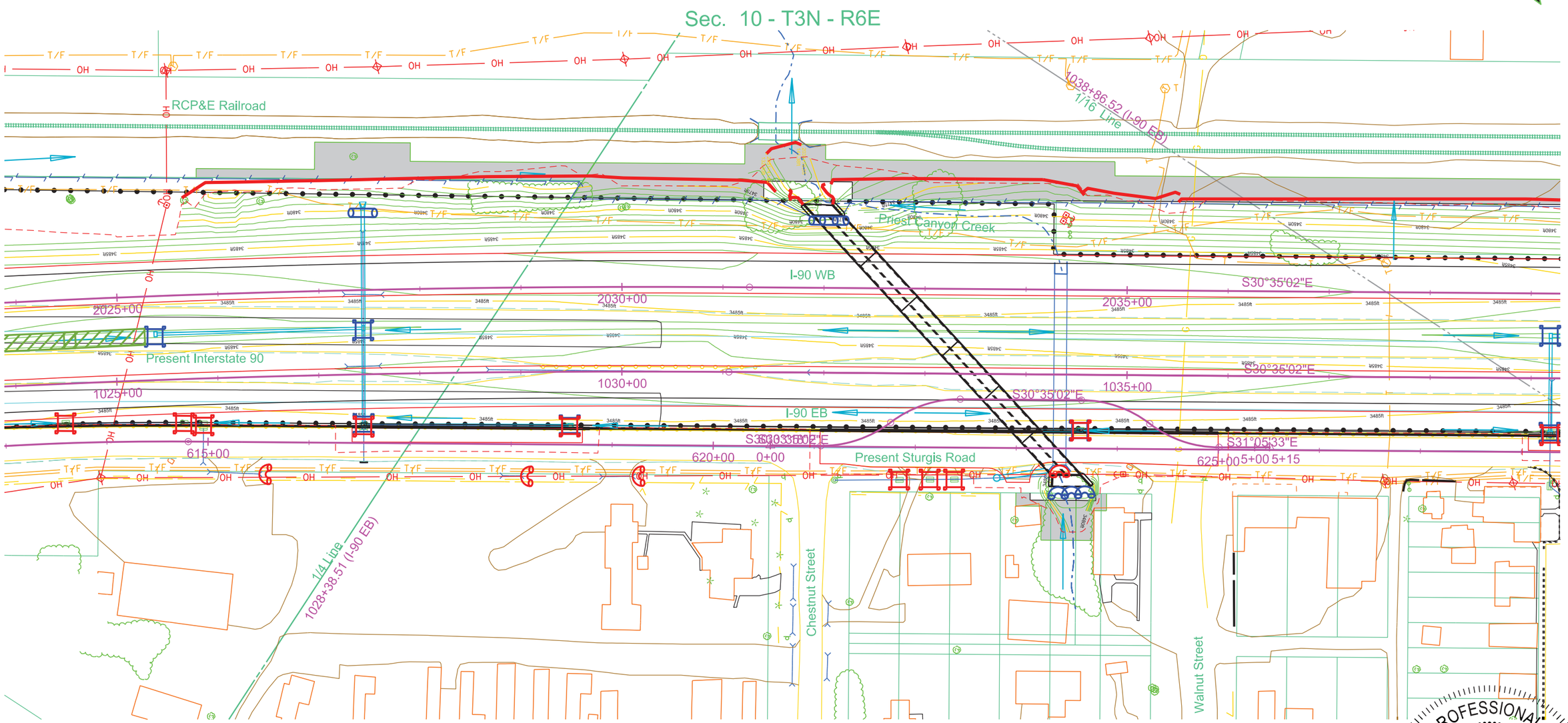
Plot Scale - 1:100

PERIMETER CONTROL

Install Low Flow Silt Fence at the following locations:
2025+68 96' L to 2031+52 95' L Perimeter control 597 Ft
2031+42 132' L to 2031+77 38' L Perimeter control 12 Ft
2031+65 97' L to 2031+66 86' L Perimeter control 12 Ft
2031+66 89' L to 2031+79 82' L Perimeter control 16 Ft
2032+00 103' L to 2032+08 83' L Perimeter control 27 Ft
2032+06 103' L to 2034+57 94' L Perimeter control 259 Ft
2035+50 88' L to 2039+01 93' L Perimeter control 352 Ft

Install Sediment Control at Inlets, Manholes, and Junction Boxes before the placement of surfacing at the following locations:
1024+48 39' R 1 Each
1025+65 44' R 1 Each
1025+84 46' R 1 Each
1027+43 52' R 1 Each
1029+48 54' R 1 Each
1032+75 105' R 1 Each
1033+06 105' R 1 Each
1033+30 105' R 1 Each
1034+54 55' R 1 Each

Install 12" Diameter Erosion Control Wattles* around median drains and pipe inlets at the following locations:
615+51 32' R 20 Ft
618+10 31' R 20 Ft
619+20 31' R 20 Ft
623+43 17' R 20 Ft
*Remove and Reset Wattles as needed.



TEMPORARY STABILIZATION

Install 12" Diameter Erosion Control Wattles* around median drains and pipe inlets at the following locations:
623+41 38' R 20 Ft
623+55 38' R 20 Ft
623+68 37' R 20 Ft
2031+87 67' R to 2032+21 67' R 30 Ft
*Remove and Reset Wattles as needed.

Install Interim Sediment Control at Inlets, Manholes, and Junction Boxes before the placement of surfacing at the following locations:
1025+40 45' L 1 Each
1027+45 46' L 1 Each
1027+44 50' R 1 Each

FINAL STABILIZATION

Install Type 1 Erosion Control Blanket in the highway ditch channel bottom at the following locations:
1024+00 43' L to 1025+29 43' L 231 SqYd

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FOR BIDDING PURPOSES ONLY

FELSBURG HOLT & ULLEVIG	STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
		IM-CR-EM 0901(187)44	D20	D48

Plotting Date: 10/9/2025

Rev: 02/14/2025 KLT
Rev: 9/30/2025 BRC

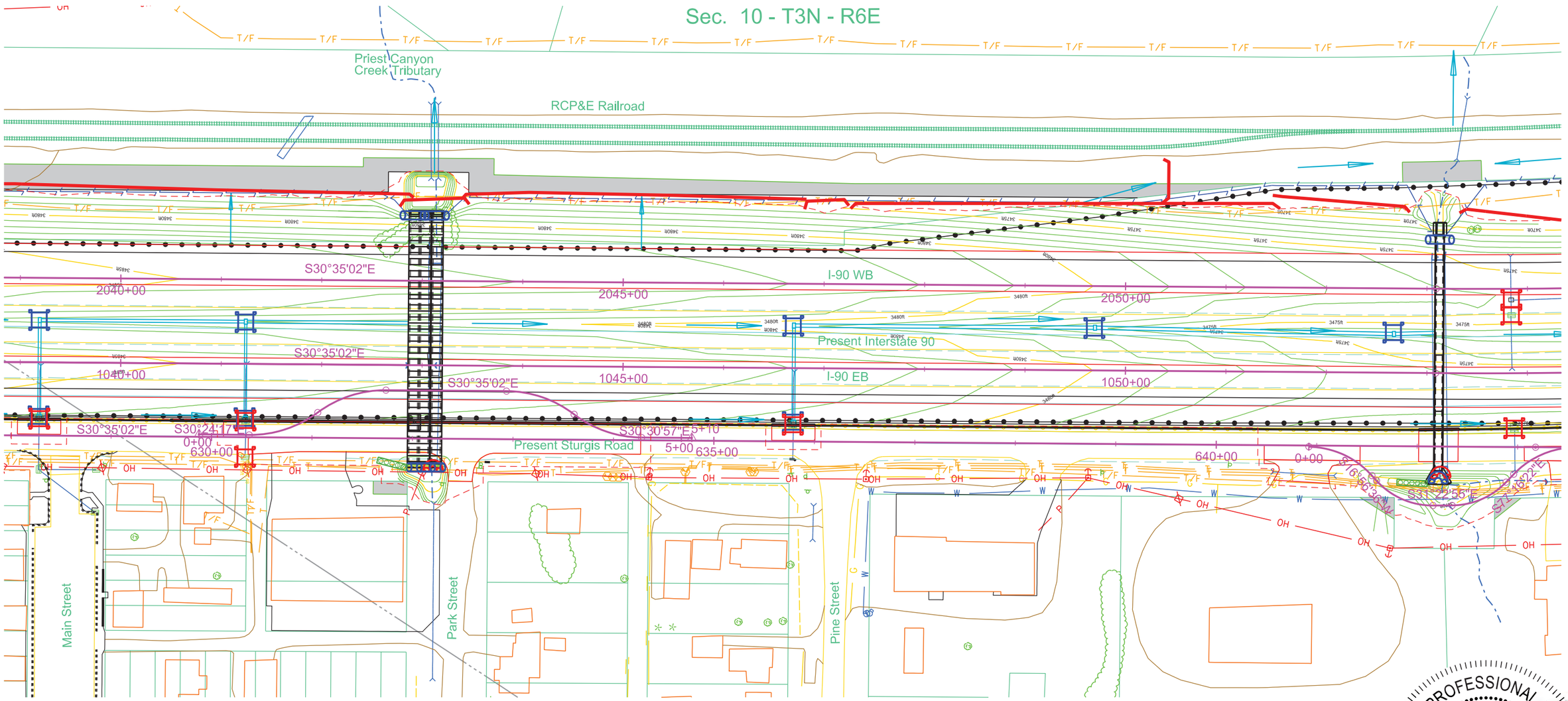
Plot Scale = 1:100

PERIMETER CONTROL

Install Low Flow Silt Fence at the following locations:
2039+01 93' L to 2042+91 83' L Perimeter control 392 Ft
2042+91 158' L to 2042+90 128' L Perimeter control 47 Ft
2042+77 74' L to 2043+46 77' L Perimeter control 75 Ft
2043+41 128' L to 2043+43 86' L Perimeter control 45 Ft
2043+39 82' L to 2046+82 84' L Perimeter control 345 Ft
2046+80 74' L to 2047+24 78' L Perimeter control 53 Ft
2047+24 78' L to 2051+53 78' L Perimeter control 431 Ft
2050+37 127' L to 2050+35 83' L Perimeter control 51 Ft
2051+46 92' L to 2052+82 76' L Perimeter control 139 Ft
2053+32 76' L to 2053+99 72' L Perimeter control 68 Ft

Install Sediment Control at Inlets, Manholes, and Junction Boxes before the placement of surfacing at the following locations:
1039+19 58' R 1 Each
1041+25 58' R 1 Each
1046+69 59' R 1 Each
1053+87 55' R 1 Each
2053+84 11' R 1 Each
2053+84 26' R 1 Each
630+33 20' R 1 Each

Install 12" Diameter Erosion Control Wattles* around median drains and pipe inlets at the following locations:
632+21 21' R 20 Ft
642+21 25' R 20 Ft
*Remove and Reset Wattles as needed.



TEMPORARY STABILIZATION

Install 12" Diameter Erosion Control Wattles* around median drains and pipe inlets at the following locations:
2042+80 65' L to 2043+24 65' L 40 Ft
2053+12 53' L 20 Ft
631+97 29' R 30 Ft
642+21 25' R 20 Ft
*Remove and Reset Wattles as needed.

Install Interim Sediment Control at Inlets, Manholes, and Junction Boxes before the placement of surfacing at the following locations:
1039+19 42' R 1 Each
1039+19 54' R 1 Each
1041+24 42' R 1 Each
1041+24 54' R 1 Each
1046+70 42' R 1 Each
1046+70 54' R 1 Each
1049+69 43' R 1 Each

FINAL STABILIZATION

Leave 12" Diameter Erosion Control Wattles around median drains and pipe inlets and allow to decompose while the site revegetates.

Install Articulated Concrete Mattress at the following locations:
631+65 22' R to 631+94 29' R ditch channel bottom 20 SqYd
641+80 36' R to 642+10 37' R ditch channel bottom 20 SqYd

LICENSED PROFESSIONAL ENGINEER
REG. NO.
12833
JENNICA M HARTMAN
SOUTH DAKOTA
9/30/2025

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FELSBURG HOLT & ULLEVIG	STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
		IM-CR-EM 0901(187)44	D21	D48

Plotting Date: 10/9/2025

Rev: 02/14/2025 KLT
Rev: 9/30/2025 BRC

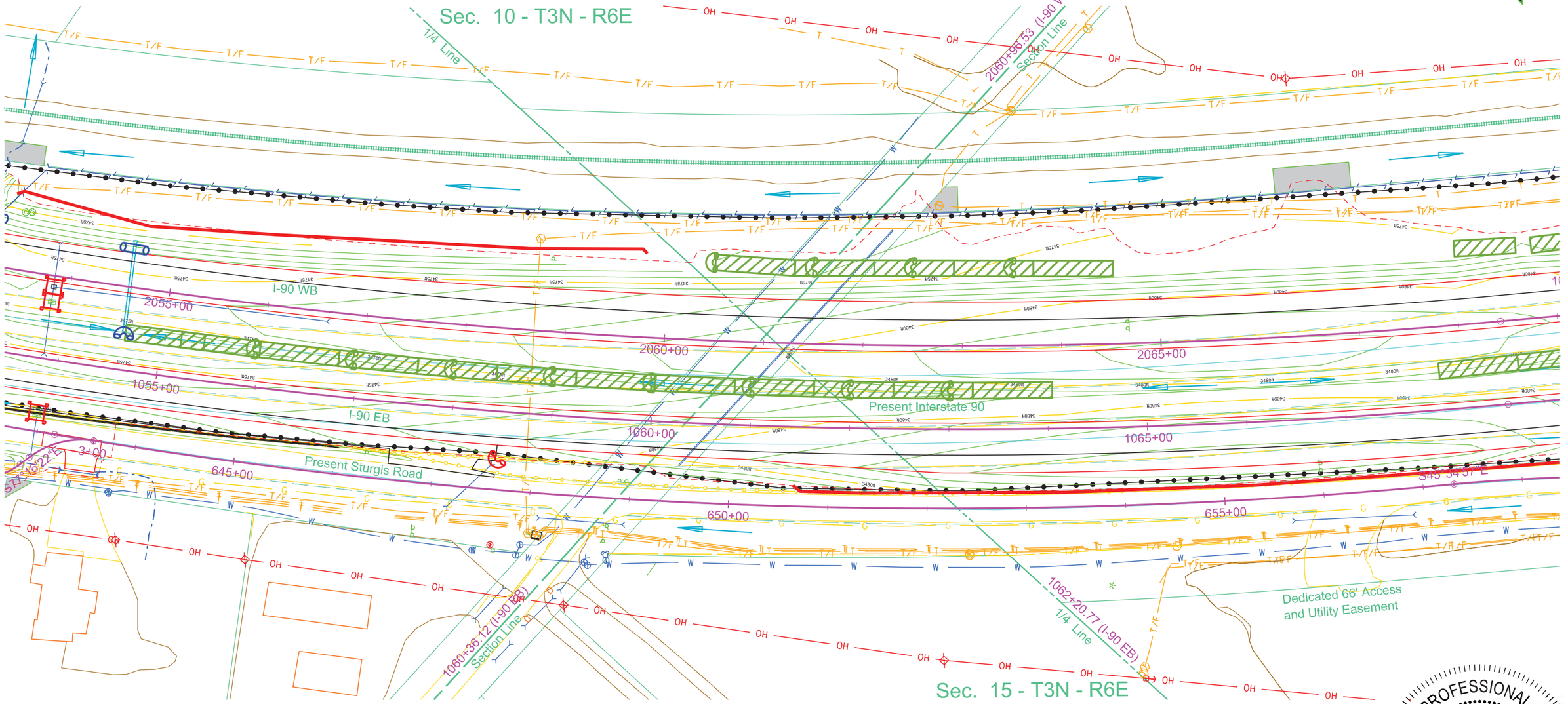
FOR BIDDING PURPOSES ONLY

Plot Scale - 1:100

PERIMETER CONTROL

Install Low Flow Silt Fence at the following locations:
2053+99 72' R to 2059+78 84' R Perimeter control 575 Ft
1061+45 59' R to 1069+00 63' R Perimeter control 765 Ft

Install 12" Diameter Erosion Control Wattles* around median drains and pipe inlets at the following locations:
647+59 25' R 20 Ft
*Remove and Reset Wattles as needed.



TEMPORARY STABILIZATION

Install 12" Diameter Erosion Control Wattles* around median drains and pipe inlets at the following locations:
2054+59 43' L 20 Ft
1054+63 38' L 20 Ft
*Remove and Reset Wattles as needed.

FINAL STABILIZATION

Install Type 1 Erosion Control Blanket in the highway ditch channel bottom at the following locations:
2060+48 79' L to 2064+54 76' L 711 SqYd
2068+02 77' L to 2068+64 75' L 110 SqYd
1054+63 38' L to 1064+05 39' L 1664 SqYd
1067+97 39' L to 1069+00 41' L 183 SqYd

Install 12" Diameter Erosion Control Wattles across the highway ditch channel bottom at the following locations:
2060+48 79' L to 2064+54 76' L 20 Ft Each 4 @ 100' O.C.
1055+97 39' L to 1064+05 39' L 20 Ft Each 8 @ 100' O.C.

Complete Seeding and Mulching. If Grass Hay or Staw Mulch was installed for temporary stabilization seed with a no-till drill.

Leave 12" Diameter Erosion Control Wattles around median drains and pipe inlets and allow to decompose while the site revegetates.

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FELSBURG HOLT & ULLEVIG	STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
		IM-CR-EM 0901(187)44	D22	D48

FOR BIDDING PURPOSES ONLY

Plotting Date: 10/9/2025

Rev: 02/14/2025 KLT
Rev: 9/30/2025 BRC

Plot Scale = 1:100

PERIMETER CONTROL

Install Low Flow Silt Fence at the following locations:
2071+25 171' L to 2072+10 171' R Perimeter control 93 Ft
2075+08 118' L to 2075+50 137' L Perimeter control 50 Ft
2075+48 144' L to 2077+40 156' L Perimeter control 195 Ft
2080+06 166' L to 2083+79 170' L Perimeter control 377 Ft
1069+00 63' L to 1070+59 70' L Perimeter control 160 Ft

Install Sediment Control at Inlets, Manholes, and Junction Boxes before the placement of surfacing at the following locations:
2080+15 63' L 1 Each
2080+34 34' L 1 Each
1077+98 67' R 1 Each
1078+16 86' L 1 Each

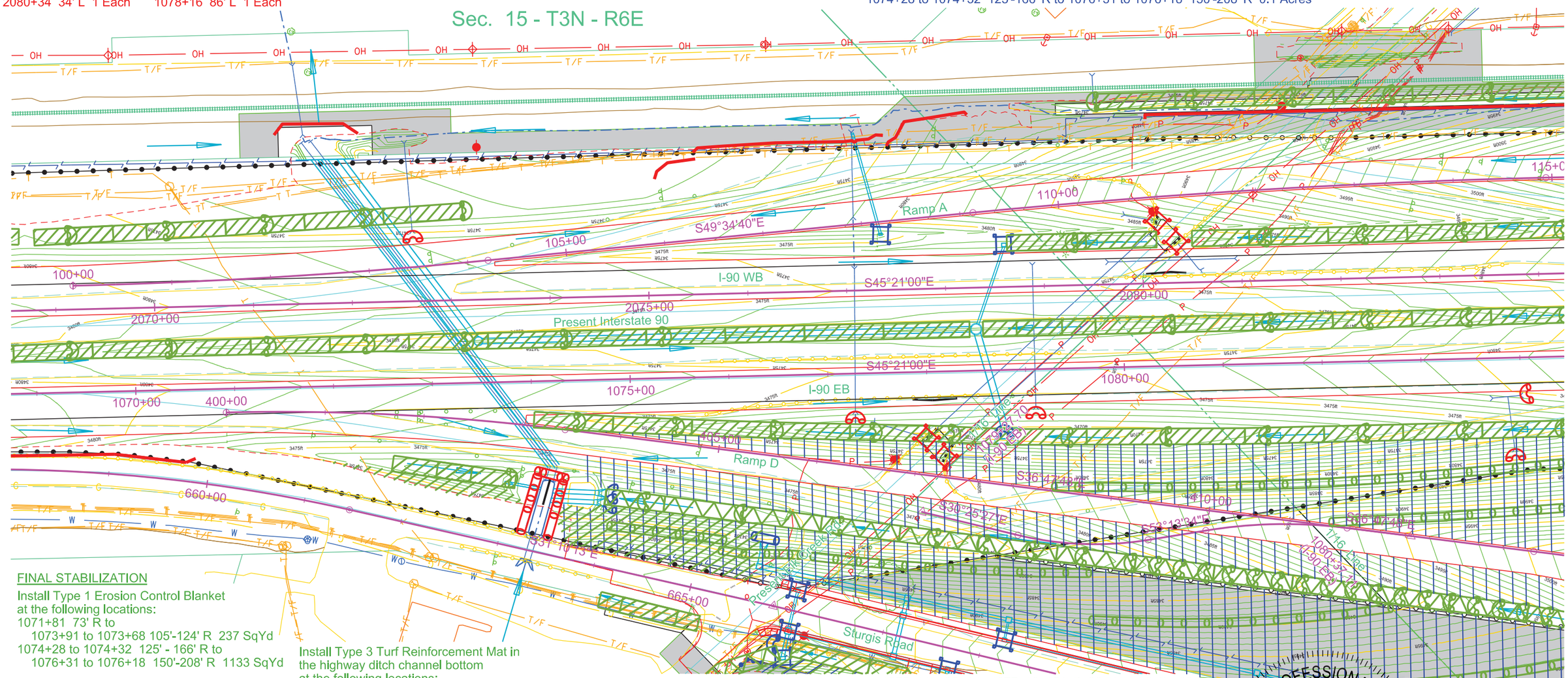
Install 12" Diameter Erosion Control Wattles* around median drains and pipe inlets at the following locations:
2072+62 71' R 20 Ft
1077+27 38' R 20 Ft
1079+10 38' R 20 Ft
1074+18 95' R 160 Ft
*Remove and Reset Wattles as needed.

TEMPORARY STABILIZATION

Install 12" Diameter Erosion Control Wattles* around median drains and pipe inlets at the following locations:
1074+77 119' R 20 Ft
1074+76 125' R 20 Ft
1078+77 66' R 20 Ft
*Remove and Reset Wattles as needed.

Install Interim Sediment Control at Inlets, Manholes, and Junction Boxes before the placement of surfacing at the following locations:
2077+36 56' L 1 Each
2078+60 43' L 1 Each

Utilize Surface Roughening at the following locations:
1074+58 51' R to 1084+00 81'-193' R Backslope 1.1 Acres
1074+47 75'-101' R to 1084+00 218'-251' R Embankment 0.7 Acres
1074+39 126'-167' R to 1084+00 266'-396' R Backslope 1.9 Acres
1071+81 73' R to 1073+91 to 1073+68 105'-124' R 0.1 Acres
1074+28 to 1074+32 125'-166' R to 1076+31 to 1076+18 150'-208' R 0.1 Acres



FINAL STABILIZATION

Install Type 1 Erosion Control Blanket at the following locations:
1071+81 73' R to
1073+91 to 1073+68 105'-124' R 237 SqYd
1074+28 to 1074+32 125' - 166' R to
1076+31 to 1076+18 150'-208' R 1133 SqYd

Install Type 1 Erosion Control Blanket in the highway ditch channel bottom at the following locations:
2068+80 74' L to 2073+13 90' L 772 SqYd
2079+57 185' L to 2083+79 185' L 750 SqYd
2078+38 44' L to 2080+14 44' L 313 SqYd
2080+50 44' L to 2083+79 44' L 585 SqYd
1069+00 41' L to 1078+44 42' L 1678 SqYd
1078+58 42' L to 1084+00 42' L 964 SqYd
1074+02 39' R to 1084+00 73' R 1776 SqYd
1072+58 80' R to 1073+82 100' R 178 SqYd
1074+77 119' R to 1084+00 258' R 1668 SqYd

Install Type 3 Turf Reinforcement Mat in the highway ditch channel bottom at the following locations:
1074+77 119' R to 1084+00 258' R 1668 SqYd

Install 12" Diameter Erosion Control Wattles on slope contour at 10 Ft vertical spacing at the following locations:
1079+26 119' R to 1084+00 111' R 470 Ft
1082+06 162' R to 1084+00 155' R 200 Ft
1074+76 148' R to 1075+91 165' R 120 Ft
1075+88 175' R to 1076+67 182' R 80 Ft
1076+80 184' R to 1079+59 207' R 280 Ft
1079+61 255' R to 1082+63 250' R 300 Ft
1082+39 328' R to 1084+00 316' R 160 Ft

Install 12" Diameter Erosion Control Wattles across the highway ditch channel bottom at the following locations:
2069+13 75' L to 2073+13 90' L 20 Ft Ea. 5 @ 100' O.C.
2079+57 185' L to 2083+57 185' L 20 Ft Ea. 5 @ 100' O.C.
2079+32 43' L 20 Ft
2081+26 44' L to 2083+44 44' L 20 Ft Ea. 3 @ 100' O.C.
1069+33 42' L to 1075+33 42' L 20 Ft Ea. 7 @ 100' O.C.
1080+50 42' L to 1083+50 42' L 20 Ft Ea. 4 @ 100' O.C.
1074+44 42' R to 1078+23 64' R 20 Ft Ea. 5 @ 100' O.C.
1079+44 70' R to 1083+44 73' L 20 Ft Ea. 5 @ 100' O.C.
1073+74 97' R 20 Ft
1075+14 125' R to 1077+10 154' R 20 Ft Ea. 3 @ 100' O.C.
1078+07 169' R to 1079+55 191' R 20 Ft Ea. 4 @ 50' O.C.
1080+05 199' R to 1084+00 258' R 20 Ft Ea. 17 @ 25' O.C.

Leave 12" Diameter Erosion Control Wattles around median drains and pipe inlets and allow to decompose while the site revegetates.

Complete Seeding and Mulching. If Grass Hay or Straw Mulch was installed for temporary stabilization seed with a no-till drill.

LICENSED PROFESSIONAL ENGINEER
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SOUTH DAKOTA
9/30/2025

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PERIMETER CONTROL

Install 12" Diameter Erosion Control Wattles* around median drains and pipe inlets at the following locations:
1084+00 38' R 20 Ft
*Remove and Reset Wattles as needed.

Install Low Flow Silt Fence at the following locations:
2083+79 170' L to 2088+24 152' L Perimeter control 460 Ft
2089+12 152' L to 2098+79 169' L Perimeter control 978 Ft

TEMPORARY STABILIZATION

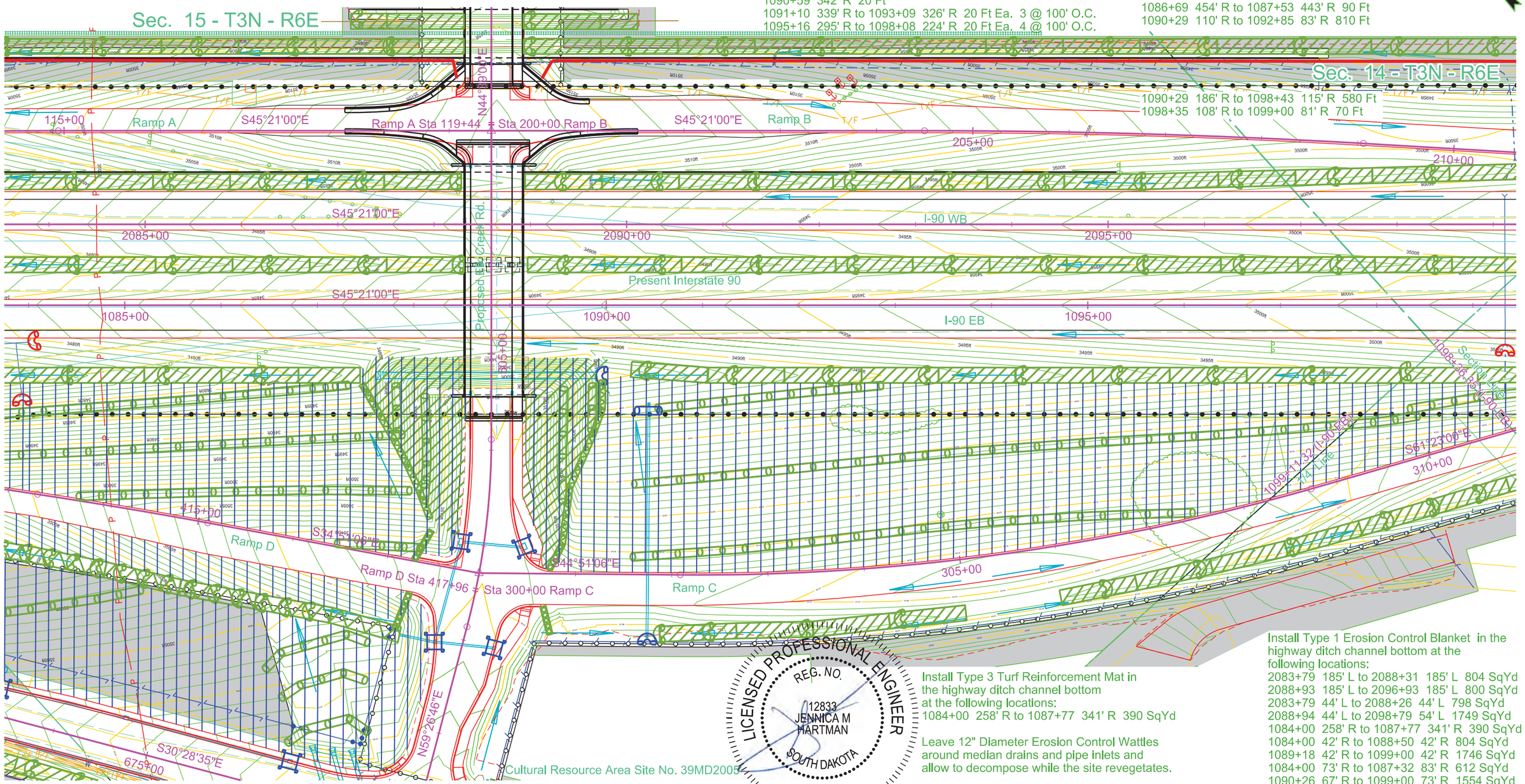
Utilize Surface Roughening at the following locations:
1084+00 81'-193' R to 1087+46 82' to 1088+01 264' R Backslope 1.9 Acres
1084+00 218'-251' R to 1087+98, 298'-328' R Embankment 0.3 Acres
1084+00 266'-396' R to 1087+98 298 to 1087+80 477' R Backslope 1.3 Acres
1090+03 70' R to 1089+48 277' to 1099+00 31' R to 1099+00 140' R Backslope 3.4 Acres

Install 12" Diameter Erosion Control Wattles* around median drains and pipe inlets at the following locations:
1089+89 73' R 20 Ft
1090+42 341' R 20 Ft
*Remove and Reset Wattles as needed.

FINAL STABILIZATION

Install 12" Diameter Erosion Control Wattles across the highway ditch channel bottom at the following locations: 1098+56 211' R 20 Ft
2084+57 185' L to 2087+57 185' L 20 Ft Ea. 4 @ 100' O.C.
2089+03 185' L to 2102+03 185' L 20 Ft Ea. 15 @ 100' O.C.
2084+27 44' L to 2088+26 44' L 20 Ft Ea. 5 @ 100' O.C.
2089+35 44' L to 2098+38 52' L 20 Ft Ea. 10 @ 100' O.C.
1084+51 42' L to 1088+50 42' L 20 Ft Ea. 5 @ 100' O.C.
1089+59 42' L to 2098+41 42' L 20 Ft Ea. 10 @ 100' O.C.
1084+44 73' R to 1086+44 73' L 20 Ft Ea. 3 @ 100' O.C.
1090+44 68' R to 1098+33 69' R 20 Ft Ea. 9 @ 100' O.C.
1084+00 251' R to 1086+94 318' R 20 Ft Ea. 13 @ 25' O.C.
1090+59 342' R 20 Ft
1091+10 339' R to 1093+09 326' R 20 Ft Ea. 3 @ 100' O.C.
1095+16 295' R to 1098+08 224' R 20 Ft Ea. 4 @ 100' O.C.

Install 12" Diameter Erosion Control Wattles on slope contour at 10 Ft vertical spacing at the following locations:
1084+00 81' R to 1087+32 83' R 330 Ft
1084+00 155' R to 1087+88 134' R 390 Ft
1084+52 199' R to 1087+96 193' R 340 Ft
1087+20 247' R to 1088+01 264' R 90 Ft
1084+00 316' R to 1085+16 296' R 120 Ft
1086+46 378' R to 1087+52 350' R 120 Ft
1086+63 408' R to 1087+49 390' R 90 Ft
1086+69 454' R to 1087+53 443' R 90 Ft
1090+29 110' R to 1092+85 83' R 810 Ft



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REG. NO. 12833
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SOUTH DAKOTA
9/30/2025

Install Type 3 Turf Reinforcement Mat in the highway ditch channel bottom at the following locations:
1084+00 258' R to 1087+77 341' R 390 SqYd

Leave 12" Diameter Erosion Control Wattles around median drains and pipe inlets and allow to decompose while the site revegetates.

Complete Seeding and Mulching. If Grass Hay or Straw Mulch was installed for temporary stabilization seed with a no-till drill.

Install Type 1 Erosion Control Blanket in the highway ditch channel bottom at the following locations:
2083+79 185' L to 2088+31 185' L 804 SqYd
2088+93 185' L to 2096+93 185' L 800 SqYd
2083+79 44' L to 2088+26 44' L 798 SqYd
2088+94 44' L to 2098+79 54' L 1749 SqYd
1084+00 258' R to 1087+77 341' R 390 SqYd
1084+00 42' R to 1088+50 42' R 804 SqYd
1089+18 42' R to 1099+00 42' R 1746 SqYd
1084+00 73' R to 1087+32 83' R 612 SqYd
1090+26 67' R to 1099+00 73' R 1554 SqYd
1090+59 342' R to 1093+73 320' R 567 SqYd
1094+72 304' R to 1099+00 197' R 784 SqYd

FELSBURG HOLT & ULLEVIG | STATE OF SOUTH DAKOTA

FOR BIDDING PURPOSES ONLY

PROJECT	SHEET	TOTAL SHEETS
IM-CR-EM 0901(187)44	D23	D48

Plotting Date: 10/9/2025
Rev: 02/14/2025 KLT
Rev: 9/30/2025 BRC

Plot Scale = 1:100

Plotted From = Brady.Johnson

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Plot Scale - 1:100

FELSBURG HOLT & ULEVIG | STATE OF SOUTH DAKOTA | PROJECT: IM-CR-EM 0901(187)44 | SHEET: D24 | TOTAL SHEETS: D48

FOR BIDDING PURPOSES ONLY

Plotting Date: 10/9/2025

Rev: 02/14/2025 KLT
Rev: 9/30/2025 BRC

PERIMETER CONTROL

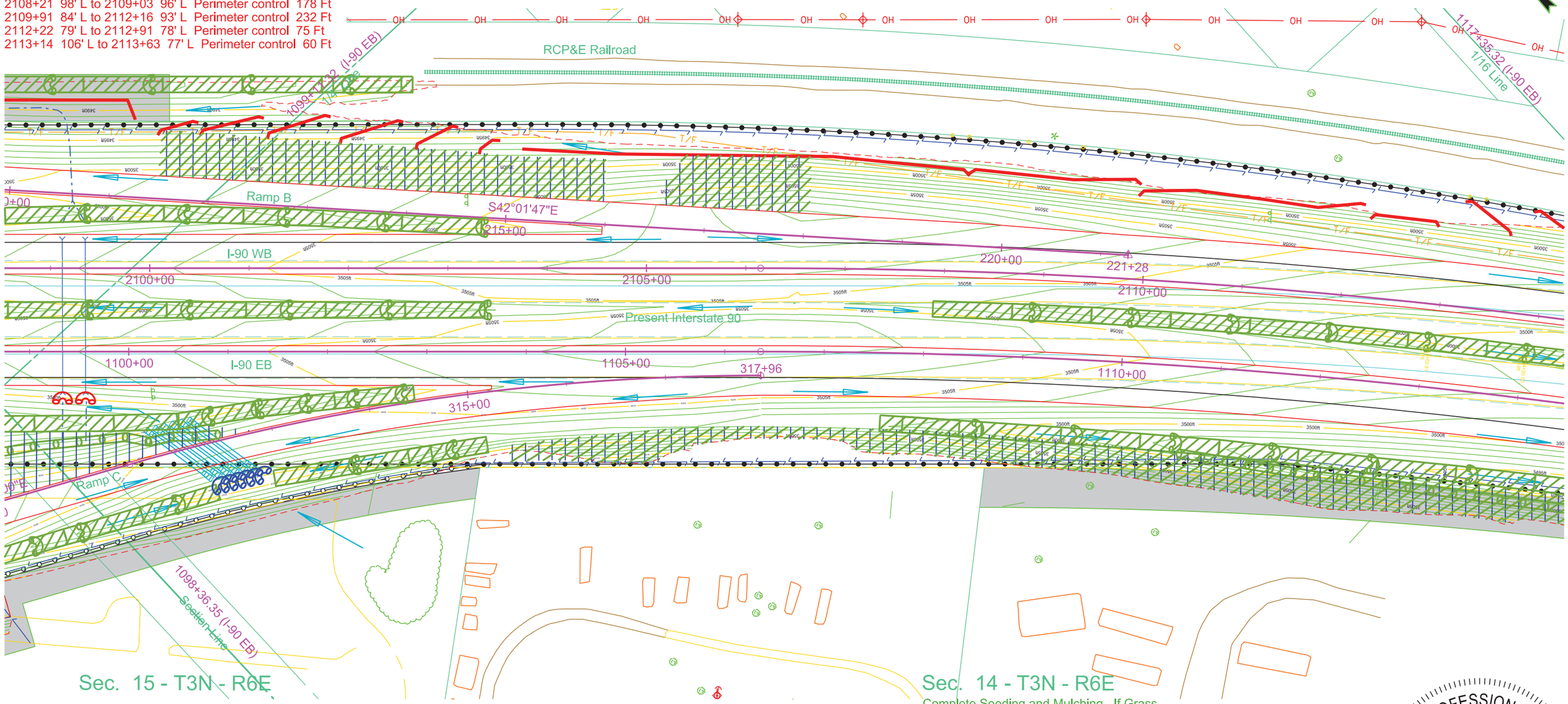
Install Low Flow Silt Fence at the following locations:
2098+79 169' L to 2099+86 150' L Perimeter control 120 Ft
2100+08 134' L to 2100+49 146' L Perimeter control 45 Ft
2100+51 134' L to 2101+15 151' L Perimeter control 69 Ft
2101+18 130' L to 2101+82 152' L Perimeter control 71 Ft
2101+91 125' L to 2102+55 147' L Perimeter control 71 Ft
2102+68 119' L to 2103+10 142' L Perimeter control 52 Ft
2103+32 115' L to 2103+53 129' L Perimeter control 29 Ft
2103+75 120' L to 2108+22 97' L Perimeter control 454 Ft
2108+21 98' L to 2109+03 96' L Perimeter control 178 Ft
2109+91 84' L to 2112+16 93' L Perimeter control 232 Ft
2112+22 79' L to 2112+91 78' L Perimeter control 75 Ft
2113+14 106' L to 2113+63 77' L Perimeter control 60 Ft

Install 12" Diameter Erosion Control Wattles* around median drains and pipe inlets at the following locations:
1099+33 41' R 20 Ft
1099+57 41' R 20 Ft
*Remove and Reset Wattles as needed.

TEMPORARY STABILIZATION

Utilize Surface Roughening at the following locations:
2100+08 93'-134' L to 2104+57 66'-110' L Embankment 0.5 Acres
2105+18 63' L to 2105+40 114' L to 2106+65 55'-113' L Embankment 0.2 Acres
1099+00 73' L to 1099+00 140' L to 1101+25 79' L Backslope 0.1 Acres
1103+82 94' R to 1103+84 112' R to 1114+00 91' R to 1114+00 126' R Backslope 1.0 Acres

Install 12" Diameter Erosion Control Wattles* around median drains and pipe inlets at the following locations:
1100+61 142' R 20 Ft
1100+90 140' R 20 Ft
1101+13 134' R 20 Ft
1101+37 130' R 20 Ft
1101+62 125' R 20 Ft
*Remove and Reset Wattles as needed.



FINAL STABILIZATION

Install Type 1 Erosion Control Blanket in the highway ditch channel bottom at the following locations:
2098+79 54' L to 2103+38 41' L 809 SqYd
1099+42 42' R to 1103+63 42' R 814 SqYd
1099+00 73' R to 1102+87 42' R 692 SqYd
1099+00 197' R to 1100+90 141' R 352 SqYd
1101+47 128' R to 1103+82 94' R 386 SqYd
1108+08 45' R to 1114+00 45' R 1060 SqYd
1107+57 71' R to 1114+00 83' R 1129 SqYd

Install 12" Diameter Erosion Control Wattles on slope contour at 10 Ft vertical spacing at the following locations:
1099+00 96' R to 1100+90 84' R 190 Ft
1110+63 88' R to 1114+00 104' R 400 Ft

Install 12" Diameter Erosion Control Wattles across the highway ditch channel bottom at the following locations:
2099+38 55' L to 2103+38 41' L 20 Ft Ea. 5 @ 100' O.C.
1099+62 42' L to 1103+63 42' L 20 Ft Ea. 5 @ 100' O.C.
1100+83 65' R to 1102+78 43' R 20 Ft Ea. 5 @ 50' O.C.
1099+00 197' R to 1099+51 183' R 20 Ft Ea. 2 @ 50' O.C.
1100+47 154' R 20 Ft
1102+31 114' R to 1103+29 99' R 20 Ft Ea. 2 @ 100' O.C.
1109+06 45' L to 1113+03 45' L 20 Ft Ea. 5 @ 100' O.C.
1108+53 74' R to 1113+59 83' R 20 Ft Ea. 6 @ 100' O.C.

Complete Seeding and Mulching. If Grass Hay or Staw Mulch was installed for temporary stabilization seed with a no-till drill.

Leave 12" Diameter Erosion Control Wattles around median drains and pipe inlets and allow to decompose while the site revegetates.

Install Type 1 Erosion Control Blanket at the following locations:
2100+08 93' L to 2104+57 139' L Embankment 2,180 SqYd
2105+18 55' L to 2106+64 114' L Embankment 854 Sq Yd

LICENSED PROFESSIONAL ENGINEER
REG. NO. 12833
JENNICA M HARTMAN
SOUTH DAKOTA
9/30/2025

Plotted From - Brady.Johnson

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FELSBURG HOLT & ULLEVIG	STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
		IM-CR-EM 0901(187)44	D25	D48

Plotting Date: 10/9/2025

Rev: 02/14/2025 KLT
Rev: 9/30/2025 BRC

FOR BIDDING PURPOSES ONLY

Plot Scale = 1:100

PERIMETER CONTROL

Install Low Flow Silt Fence at the following locations:
2113+83 104' L to 2114+26 81' L Perimeter control 53 Ft
2114+33 100' L to 2115+71 82' L Perimeter control 145 Ft
2115+63 110' L to 2119+77 90' L Perimeter control 427 Ft
2119+76 88' L to 2120+60 73' L Perimeter control 91 Ft
2120+07 59' L to 2120+71 60' L Perimeter control 66 Ft
2120+59 63' L to 2124+22 58' L Perimeter control 366 Ft
2123+87 99' L to 2124+69 99' L Perimeter control 88 Ft
2124+37 50' L to 2124+64 52' L Perimeter control 31 Ft
2124+41 60' L to 2127+95 69' L Perimeter control 356 Ft
2127+95 63' L to 2128+31 62' L Perimeter control 38 Ft
2128+30 59' L to 2128+97 69' L Perimeter control 69 Ft
2128+77 47' L to 2128+97 51' L Perimeter control 21 Ft

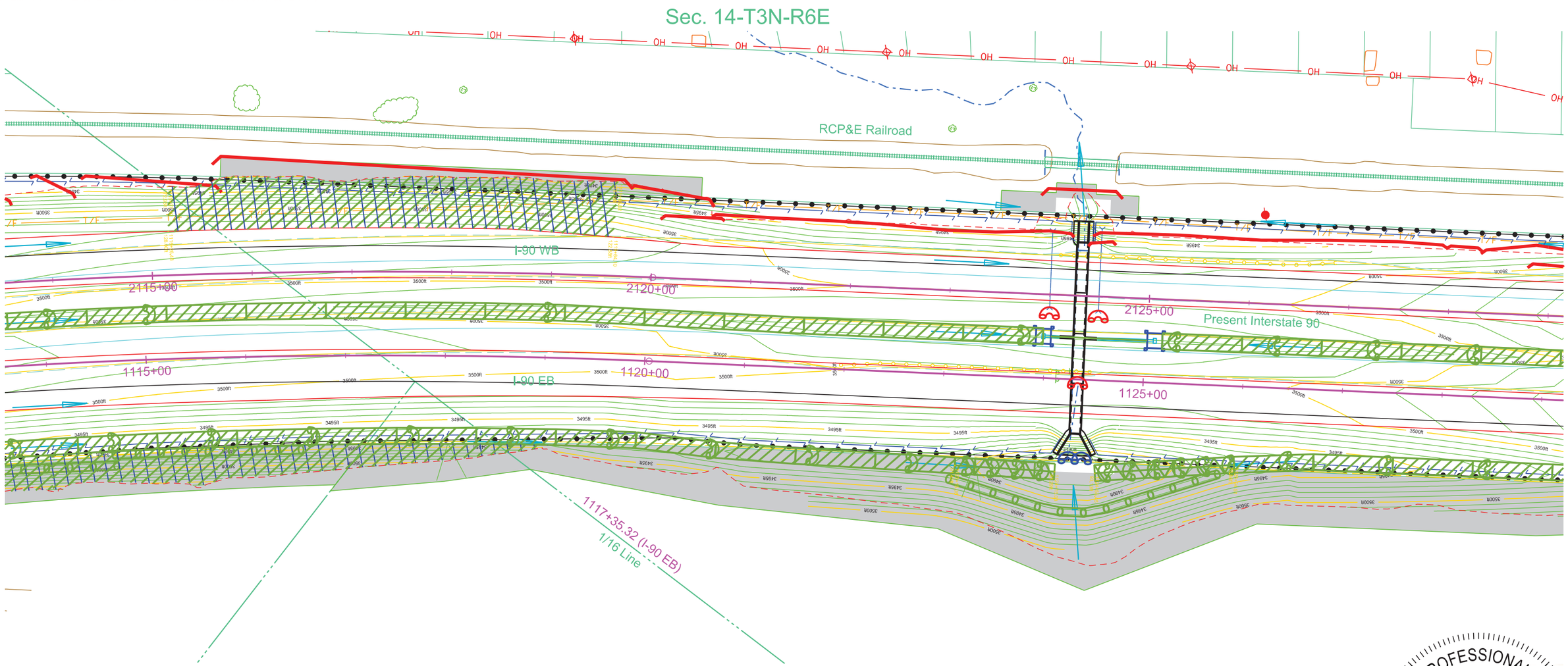
Install 12" Diameter Erosion Control Wattles* around median drains and pipe inlets at the following locations:
2124+00 13' L 20 Ft
2124+49 14' L 20 Ft
1124+34 3' L 20 Ft
*Remove and Reset Wattles as needed.

TEMPORARY STABILIZATION

Install Interim Sediment Control at Inlets, Manholes, and Junction Boxes before the placement of surfacing at the following locations:
1123+98 42' L 1 Each
1125+10 42' L 1 Each

Utilize Surface Roughening at the following locations:
1114+00 91'-126' R to 1119+06 87' R Backslope 1.2 Acres

Install 12" Diameter Erosion Control Wattles* around median drains and pipe inlets at the following locations:
1124+28 73' L 20 Ft
1124+41 73' L 20 Ft
*Remove and Reset Wattles as needed.



FINAL STABILIZATION

Install Type 1 Erosion Control Blanket in the highway ditch channel bottom at the following locations:
1114+00 45' L to 1123+98 42' L 1783 SqYd
1125+17 42' L to 1129+00 42' L 681 SqYd
1114+00 83' L to 1123+15 91' L 908 SqYd
1125+93 79' L to 1129+00 73' L 306 SqYd

Complete Seeding and Mulching. If Grass Hay or Staw Mulch was installed for temporary stabilization seed with a no-till drill.

Install Type 3 Turf Reinforcement Mat in the highway ditch channel bottom at the following locations:
1123+15 91' R to 1124+15 93' R 178 SqYd
1124+55 93' R to 1125+95 79' R 249 SqYd

Install 12" Diameter Erosion Control Wattles on slope contour at 10 Ft vertical spacing at the following locations:
1114+00 104' R to 1116+56 105' R 70 Ft
1114+65 94' R to 1116+54 94' R 190 Ft
1123+09 105' R to 1125+78 89' R 280 Ft

Install 12" Diameter Erosion Control Wattles across the highway ditch channel bottom at the following locations:
1114+00 45' L to 1115+01 45' L 20 Ft Ea. 2 @ 100' O.C.
1123+75 42' L 20 Ft
1123+75 42' L 20 Ft
1125+33 42' L to 1128+33 42' L 20 Ft Ea. 4 @ 100' O.C.
1114+61 82' R to 1122+68 91' R 20 Ft Ea. 9 @ 100' O.C.
1123+25 92' R to 1124+00 93' R 20 Ft Ea. 4 @ 25' O.C.
1124+69 92' R to 1125+93 79' R 20 Ft Ea. 6 @ 25' O.C.
1126+49 73' R to 1128+49 73' R 20 Ft Ea. 3 @ 100' O.C.

Leave 12" Diameter Erosion Control Wattles around median drains and pipe inlets and allow to decompose while the site revegetates.

Plotted From - Brady.Johnson

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FELSBURG HOLT & ULLEVIG	STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
		IM-CR-EM 0901(187)44	D26	D48

FOR BIDDING PURPOSES ONLY

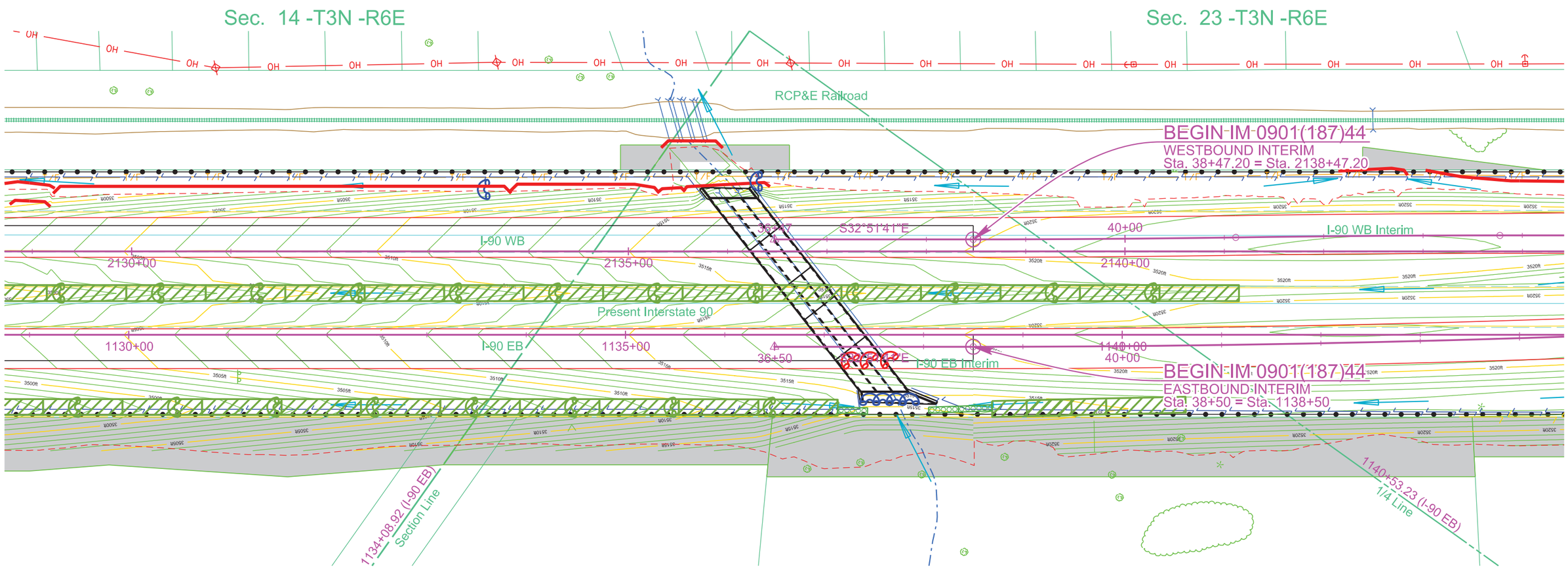
Plotting Date: 10/9/2025 Rev: 02/14/2025 KLT
Rev: 9/30/2025 BRC

Plot Scale - 1:100

PERIMETER CONTROL

Install Low Flow Silt Fence at the following locations:
2128+97 69' L to 2129+23 63' L Perimeter control 26 Ft
2128+97 51' L to 2129+18 45' L Perimeter control 23 Ft
2129+21 58' L to 2133+82 58' L Perimeter control 467 Ft
2133+81 61' L to 2135+31 59' L Perimeter control 156 Ft
2135+31 60' L to 2135+57 60' L Perimeter control 29 Ft
2135+56 62' L to 2136+43 65' L Perimeter control 90 Ft
2135+33 104' L to 2135+95 104' L Perimeter control 68 Ft
2142+15 81' L to 2142+84 77' L Perimeter control 72 Ft
2143+02 82' L to 2143+97 71' L Perimeter control 95 Ft

Install 12" Diameter Erosion Control Wattles* around median drains and pipe inlets at the following locations:
1137+21 20' R 20 Ft
1137+40 20' R 20 Ft
1137+60 19' R 20 Ft
*Remove and Reset Wattles as needed.



TEMPORARY STABILIZATION

Install 12" Diameter Erosion Control Wattles* around median drains and pipe inlets at the following locations:
2133+49 62' L 20 Ft
2136+23 71' L 20 Ft
1137+46 59' R 20 Ft
1137+59 59' R 20 Ft
1137+72 59' R 20 Ft
1137+86 59' R 20 Ft
*Remove and Reset Wattles as needed.

FINAL STABILIZATION

Install Type 1 Erosion Control Blanket in the highway ditch channel bottom at the following locations:
1129+00 42' L to 1141+17 42' L 1217 SqYd
1129+00 73' R to 1137+14 73' R 814 SqYd
1138+65 74' R to 1140+64 70' R 195 SqYd

Complete Seeding and Mulching. If Grass Hay or Staw Mulch was installed for temporary stabilization seed with a no-till drill.

Install 12" Diameter Erosion Control Wattles across the highway ditch channel bottom at the following locations:
1129+33 42' L to 1140+42 42' L 20 Ft Ea. 12 @ 100' O.C.
1129+49 73' R to 1136+49 73' R 20 Ft Ea. 8 @ 100' O.C.
1138+76 74' R 20 Ft

Leave 12" Diameter Erosion Control Wattles around median drains and pipe inlets and allow to decompose while the site revegetates.

Install Articulated Concrete Mattress at the following locations:
1137+14 73' R to 1137+44 77' R 20 SqYd
1138+05 76' R to 1138+65 74' R 20 SqYd

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9/30/2025

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FELSBURG HOLT & ULLEVIG	STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
		IM-CR-EM 0901(187)44	D27	D48

FOR BIDDING PURPOSES ONLY

Plotting Date: 10/9/2025

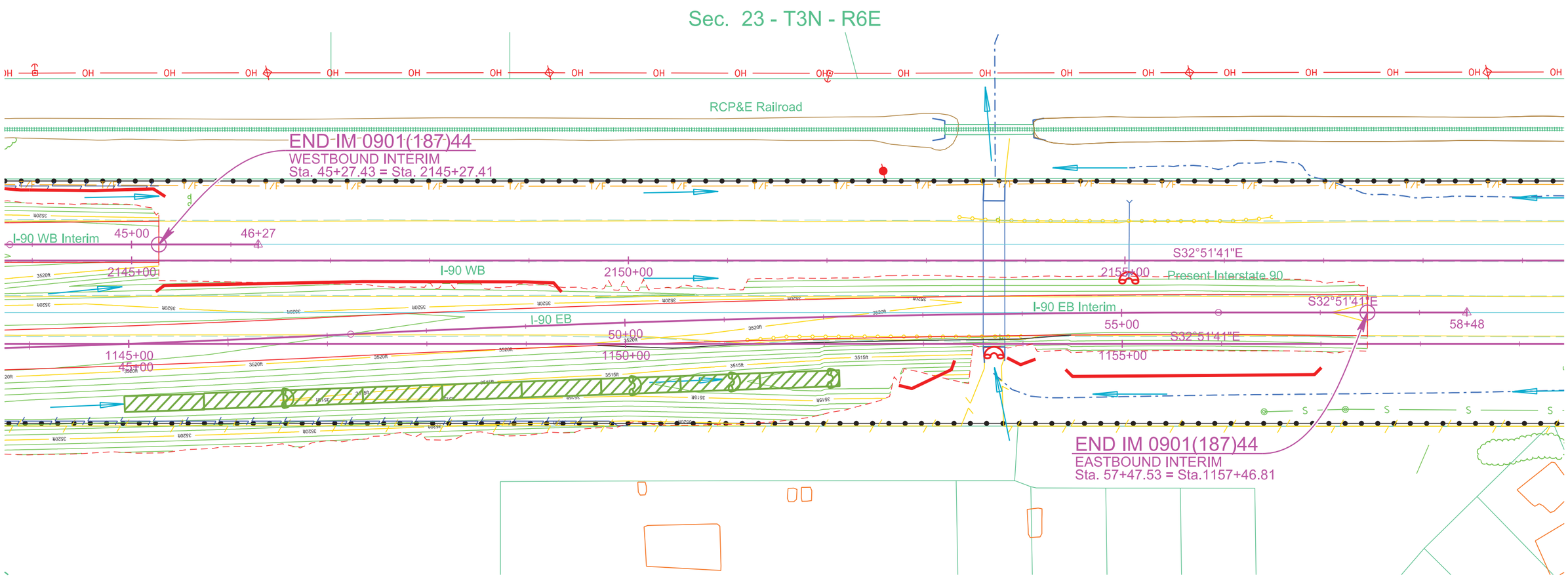
Rev: 02/14/2025 KLT
Rev: 9/30/2025 BRC

Plot Scale - 1:100

PERIMETER CONTROL

Install Low Flow Silt Fence at the following locations:
2143+97 71' L to 2145+64 64' L Perimeter control 139 Ft
1145+27 52' R to 1149+36 52' R Perimeter control 415 Ft
1152+75 42' R to 1153+31 17' R Perimeter control 67 Ft
1153+84 14' R to 1154+13 15' R Perimeter control 31 Ft
1154+43 26' R to 1157+00 24' R Perimeter control 263 Ft

Install 12" Diameter Erosion Control Wattles* around median drains and pipe inlets at the following locations:
2155+04 12' R 20 Ft
1153+71 13' R 20 Ft
*Remove and Reset Wattles as needed.



FINAL STABILIZATION

Install Type 1 Erosion Control Blanket in the highway ditch channel bottom at the following locations:
1144+96 61' R to 1152+05 35' R 720 SqYd

Complete Seeding and Mulching. If Grass Hay or Staw Mulch was installed for temporary stabilization seed with a no-till drill.

Leave 12" Diameter Erosion Control Wattles around median drains and pipe inlets and allow to decompose while the site revegetates.

Install 12" Diameter Erosion Control Wattles across the highway ditch channel bottom at the following locations:
1146+56 55' R 20 Ft
1150+06 42' R to 1152+05 35' R 20 Ft Ea. 3 @ 100' O.C.

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Plotting Date: 10/9/2025 Rev: 9/11/2025 BRC Rev: 9/30/2025 BRC

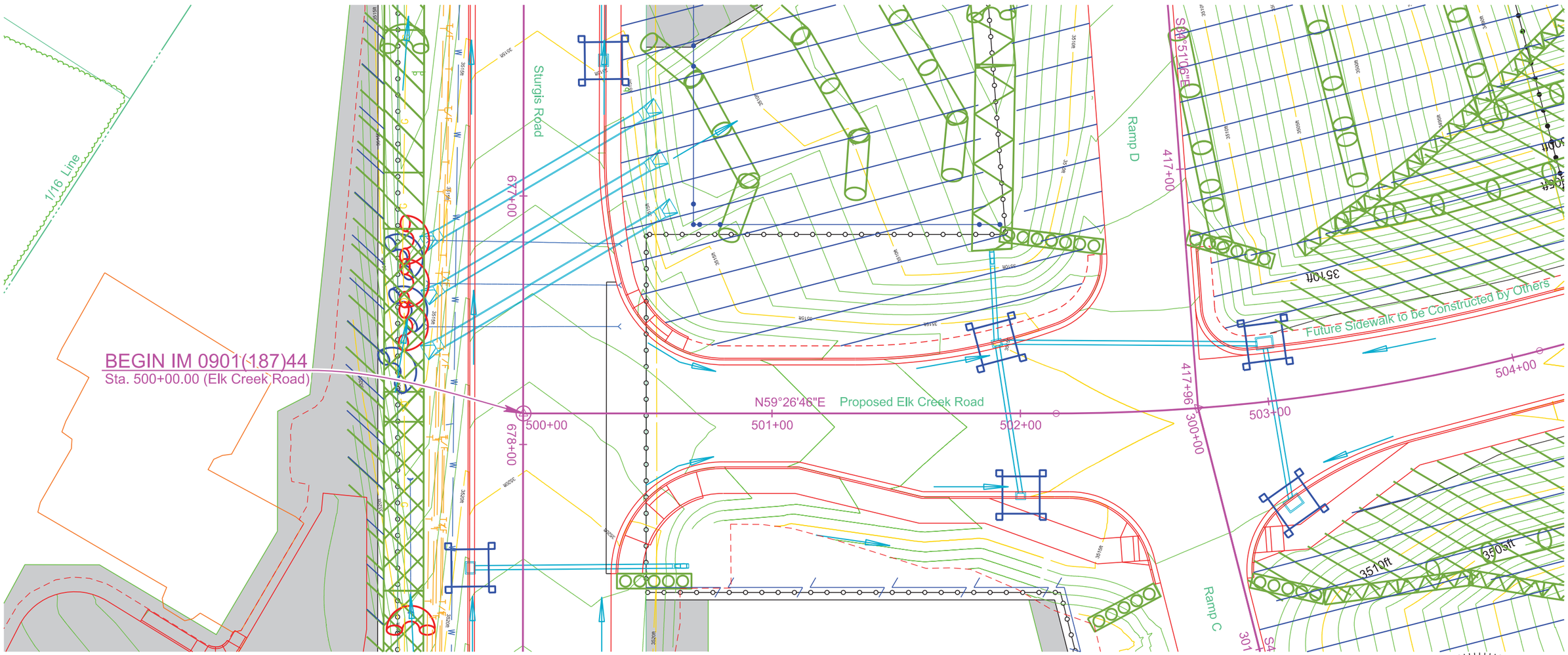
Plot Scale - 1:40

TEMPORARY STABILIZATION

Install Sediment Control at Inlets with Frames and Grates after the placement of surfacing at the following locations:
501+91 28' L 1 Each
502+00 33' R 1 Each
503+01 24' L 1 Each
503+05 42' R 1 Each

Install Sediment Control at Type S Drop Inlets after the placement of surfacing at the following locations:
503+01 24' L 6 Ft
503+05 42' R 6 Ft

Utilize Surface Roughening at the following locations:
502+93 27' L to 502+82 65' L to 504+29 27' L to 504+55 126' L Embankment 0.2 Acres
502+88 62' R to 502+86 79' R to 504+13 32' R to 503+98 97' R Embankment 0.1 Acres



FINAL STABILIZATION

Install Articulated Concrete Mattress at the following locations:
502+35 67' L to 501+92 72' L 20 SqYd
502+51 72' L to 502+27 85' L 20 SqYd
502+74 68' L to 503+09 56' L 28 SqYd
502+86 71' R to 503+12 81' R 20 SqYd
678+55 37' L to 678+55 68' L 20 Sq Yd

Install 12" Diameter Erosion Control Wattles on slope contour at 10 Ft vertical spacing at the following locations:
503+41 67' L to 504+39 68' L 110 Ft
504+21 97' L to 504+47 98' L 50 Ft
503+53 77' R to 504+03 74' R 120 Ft

Install Type 1 Erosion Control Blanket in the highway ditch channel bottom at the following locations:
677+21 313' L to 676+29 419' L 141 SqYd
678+61 323' R to 678+59 419' R 98 SqYd

Install Type 3 Turf Reinforcement Mat in the highway ditch channel bottom at the following locations:
677+21 313' L to 676+29 419' L 141 SqYd
678+61 323' R to 678+59 419' R 98 SqYd

Install Type 1 Erosion Control Blanket at the following locations:
502+93 27' L to 502+82 65' L to 504+29 27' L to 504+55 126' L Outslope 938 SqYd
502+88 62' R to 502+86 79' R to 504+13 32' R to 503+98 97' R Outslope 611 SqYd

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FELSBURG HOLT & ULLEVIG	STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
		IM-CR-EM 0901(187)44	D29	D48

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Plotting Date: 10/9/2025 Rev: 02/14/2025 KLT
Rev: 9/30/2025 BRC

Plot Scale = 1:40.0001

TEMPORARY STABILIZATION

Install Sediment Control at
Inlets with Frames and Grates
after the placement of surfacing
at the following locations:
508+87 22' L 1 Each
508+87 22' R 1 Each

Utilize Surface Roughening at the following locations:
504+29 27' L to 504+55 126' L to 504+96 28' L to 504+97 120' L Embankment 0.2 Acres
504+13 32' R to 503+98 97' R to 504+96 33' R to 504+94 120' R Embankment 0.2 Acres
508+65 52' L to 508+65 30' L to 510+18 135' L to 510+14 27' L Embankment 0.4 Acres
508+65 32' R to 508+65 152' R to 510+12 32' R to 510+09 143' R Embankment 0.4 Acres

FINAL STABILIZATION

Complete Seeding and Mulching. If Grass Hay or Staw Mulch was installed for temporary stabilization seed with a no-till drill.

Install 12" Diameter Erosion Control Wattles
on slope contour at 10 Ft vertical spacing
at the following locations:
504+39 68' L to 504+56 69' L 120 Ft
504+47 98' L to 504+67 99' L 120 Ft
504+03 74' L to 504+64 75' L 130 Ft
504+21 104' R to 504+68 105' R 90 Ft
508+88 68' L to 510+01 47' L 130 Ft
508+88 98' L to 510+10 75' L 130 Ft
508+88 129' L to 510+16 105' L 120 Ft
509+05 155' L to 510+26 134' L 70 Ft
508+87 57' R to 509+78 35' R 90 Ft
508+87 87' R to 510+11 64' R 130 Ft
508+87 117' R to 510+10 94' R 130 Ft
509+41 137' R to 510+10 124' R 70 Ft

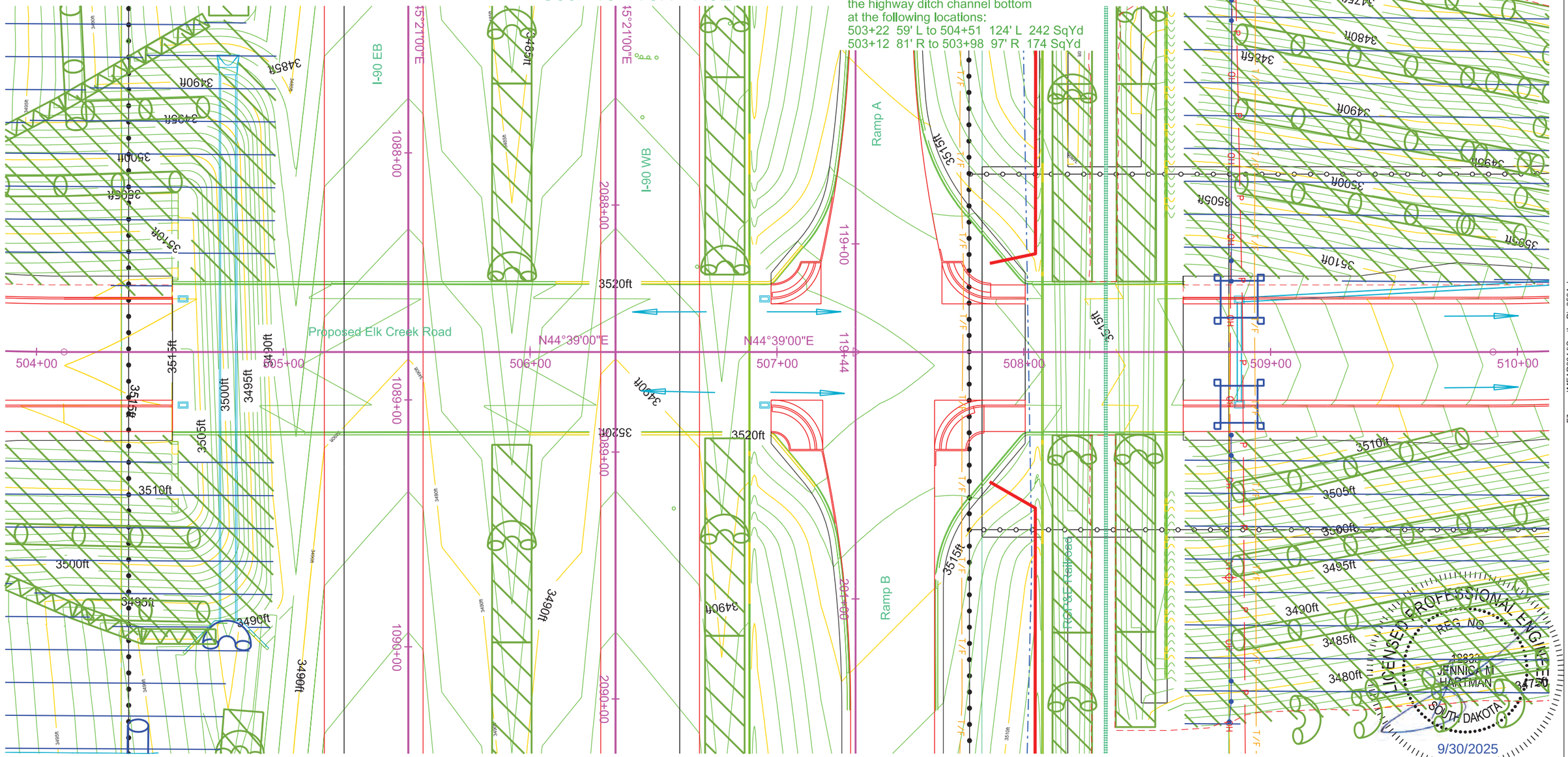
Install 12" Diameter Erosion Control Wattles
across the highway ditch channel bottom
at the following locations:
509+11 149' R to 509+93 142' R 20 Ft Each 4 @ 25' O.C.

Install Type 1 Erosion Control Blanket at the following locations:
504+29 27' L to 504+55 126' L to 504+96 28' to 504+97 120' L Embankment 667 Acres
504+13 32' R to 503+98 97' R to 504+96 33' R to 504+94 120' R Embankment 833 SqYd
508+65 52' L to 508+65 30' L to 510+18 135' L to 510+14 27' L Embankment 1942 SqYd
508+65 32' R to 508+65 152' R to 510+12 32' R to 510+09 143' R Embankment 1882 SqYd

Install Type 1 Erosion Control Blanket
in the highway ditch channel bottom
at the following locations:
503+22 59' L to 504+51 124' L 242 SqYd
503+12 81' R to 503+98 97' R 174 SqYd

Install Type 3 Turf Reinforcement Mat in
the highway ditch channel bottom
at the following locations:
503+22 59' L to 504+51 124' L 242 SqYd
503+12 81' R to 503+98 97' R 174 SqYd

Sec. 15 - T3N - R6E



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REG. NO. 12331
JENNIC M HARTMAN
SOUTH DAKOTA
9/30/2025

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Plotting Date: 10/9/2025 Rev: 02/14/2025 KLT Rev: 9/30/2025 BRC

Plot Scale = 1:40.0005

TEMPORARY STABILIZATION

Install Sediment Control at Inlets with Frames and Grates after the placement of surfacing at the following locations:
511+43 21' L 1 Each
511+43 21' R 1 Each
513+81 21' L 1 Each
513+81 21' R 1 Each
515+00 21' L 1 Each
516+19 21' L 1 Each
516+20 21' R 1 Each

Utilize Surface Roughening at the following locations:
510+14, 27'-136' L to 516+18, 27'-100' L to 513+14 33' R to 512+03 132' R Embankment 0.6 Acres
513+41 33' R to 514+43 119' R to 510+12 32'-143' R to 516+54 32'-91' R Embankment 0.4 Acres

PERIMETER CONTROL

Install Low Flow Silt Fence at the following locations:
513+03 235' L to 513+33 120' L Perimeter control 124 Ft

FINAL STABILIZATION

Install Type 1 Erosion Control Blanket at the following locations:
510+14 27' L to 510+18 135' L to 512+18 138' L to 513+14 33' L Embankment 3039 SqYd
513+42 31' L to 514+38 113' L to 516+00 27'-92' L Embankment 1928 SqYd
510+12 32'-143' L to 513+14 33' R to 512+03 132' R Embankment 3077 SqYd
513+41 33' R to 514+43 119' R to 516+00 32'-91' R Embankment 1956 SqYd

Install Type 1 Erosion Control Blanket in the highway ditch channel bottom at the following locations:
514+38 to 515+42 113' to 111' L 208 SqYd

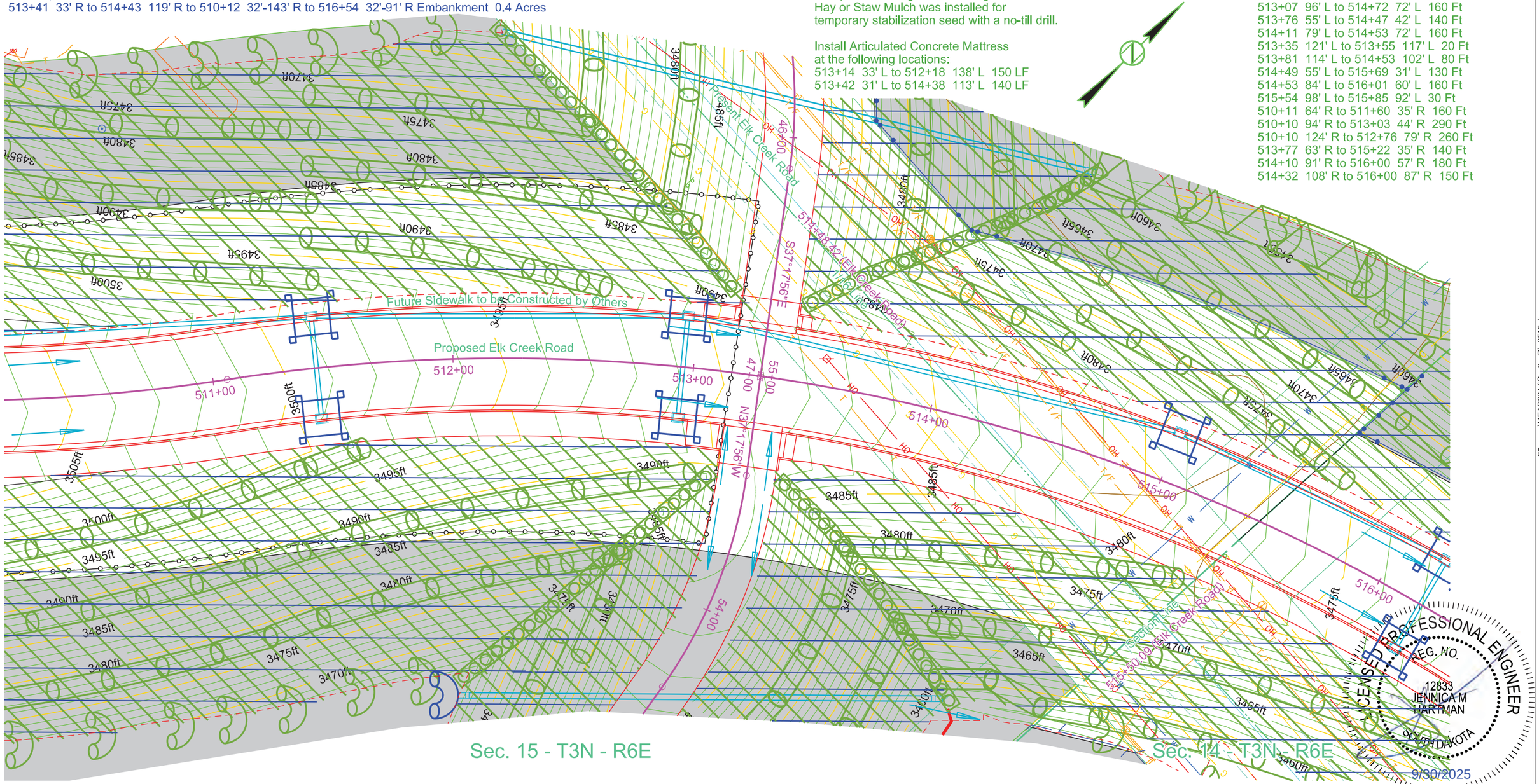
Install Type 3 Turf Reinforcement Mat in the highway ditch channel bottom at the following locations:
514+38 to 515+42 113' to 111' L 208 SqYd

Install 12" Diameter Erosion Control Wattles across the highway ditch channel bottom at the following locations:
510+63 133' L to 512+04 134' L 20 Ft Each 7 @ 25' O.C.
514+73 113' L to 515+42 111' L 20 Ft Each 3 @ 25' O.C.
510+11 143' R to 511+76 133' R 20 Ft Each 7 @ 25' O.C.
515+16 105' R to 515+69 109' R 20 Ft Each 2 @ 50' O.C.

Complete Seeding and Mulching. If Grass Hay or Staw Mulch was installed for temporary stabilization seed with a no-till drill.

Install Articulated Concrete Mattress at the following locations:
513+14 33' L to 512+18 138' L 150 LF
513+42 31' L to 514+38 113' L 140 LF

Install 12" Diameter Erosion Control Wattles on slope contour at 10 Ft vertical spacing at the following locations:
510+02 63' L to 511+45 37' L 140 Ft
510+12 91' L to 511+48 68' L 130 Ft
510+17 120' L to 511+51 98' L 130 Ft
511+44 54' L to 512+62 31' L 130 Ft
511+48 84' L to 512+85 56' L 160 Ft
511+51 113' L to 512+55 96' L 120 Ft
512+55 126' L to 513+11 117' L 70 Ft
513+07 96' L to 514+72 72' L 160 Ft
513+76 55' L to 514+47 42' L 140 Ft
514+11 79' L to 514+53 72' L 160 Ft
513+35 121' L to 513+55 117' L 20 Ft
513+81 114' L to 514+53 102' L 80 Ft
514+49 55' L to 515+69 31' L 130 Ft
514+53 84' L to 516+01 60' L 160 Ft
515+54 98' L to 515+85 92' L 30 Ft
510+11 64' R to 511+60 35' R 160 Ft
510+10 94' R to 513+03 44' R 290 Ft
510+10 124' R to 512+76 79' R 260 Ft
513+77 63' R to 515+22 35' R 140 Ft
514+10 91' R to 516+00 57' R 180 Ft
514+32 108' R to 516+00 87' R 150 Ft



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REG. NO. 12833
JENNICA M HARTMAN
SOUTH DAKOTA
9/30/2025

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FELSBURG HOLT & ULEVIG | STATE OF SOUTH DAKOTA | PROJECT: IM-CR-EM 0901(187)44 | SHEET: D31 | TOTAL SHEETS: D48

FOR BIDDING PURPOSES ONLY

Plotting Date: 10/9/2025

Rev: 02/14/2025 KLT
Rev: 9/30/2025 BRC

Plot Scale - 1:40

PERIMETER CONTROL

Install Low Flow Silt Fence at the following locations:
516+05 116' L to 516+38 85' L Perimeter control 54 Ft
516+62 116' L to 517+05 79' L Perimeter control 63 Ft
517+32 105' L to 517+79 73' L Perimeter control 63 Ft
517+90 93' L to 518+39 66' L Perimeter control 63 Ft
518+45 85' L to 518+99 60' L Perimeter control 63 Ft
519+06 84' L to 519+51 59' L Perimeter control 54 Ft

Install 12" Diameter Erosion Control Wattles* around median drains and pipe inlets at the following locations:
520+32 159' R 20 Ft
*Remove and Reset Wattles as needed.

TEMPORARY STABILIZATION

Utilize Surface Roughening at the following locations:
516+18 27'-90' L to 519+93 40'-66' L Embankment 0.5 Acres
516+54 32'-92' R to 520+12 32'-52' R Embankment 0.4 Acres
520+60 20'-43' L to 521+85 21'-38' L Embankment 0.1 Acres
520+88 56'-114' L to 521+86 53'-96' L Backslope 0.2 Acres
520+95 21'-36' R to 521+84 21'-39' R Embankment 0.1 Acres

Install 12" Diameter Erosion Control Wattles* around median drains and pipe inlets at the following locations:
520+22 77' R 20 Ft
*Remove and Reset Wattles as needed.

Install Sediment Control at Inlets with Frames and Grates after the placement of surfacing at the following locations:
516+20 21' L 1 Each
516+20 21' R 1 Each
517+39 22' L 1 Each
518+58 21' L 1 Each
518+58 21' R 1 Each
519+58 21' L 1 Each
520+06 21' R 1 Each

FINAL STABILIZATION

Install Type 1 Erosion Control Blanket in the highway ditch channel bottom at the following locations:
520+87 50' L to 522+00 54' L 212 SqYd
516+84 90' R to 520+22 77' R 565 SqYd
520+99 75' R to 522+00 66' R 164 SqYd

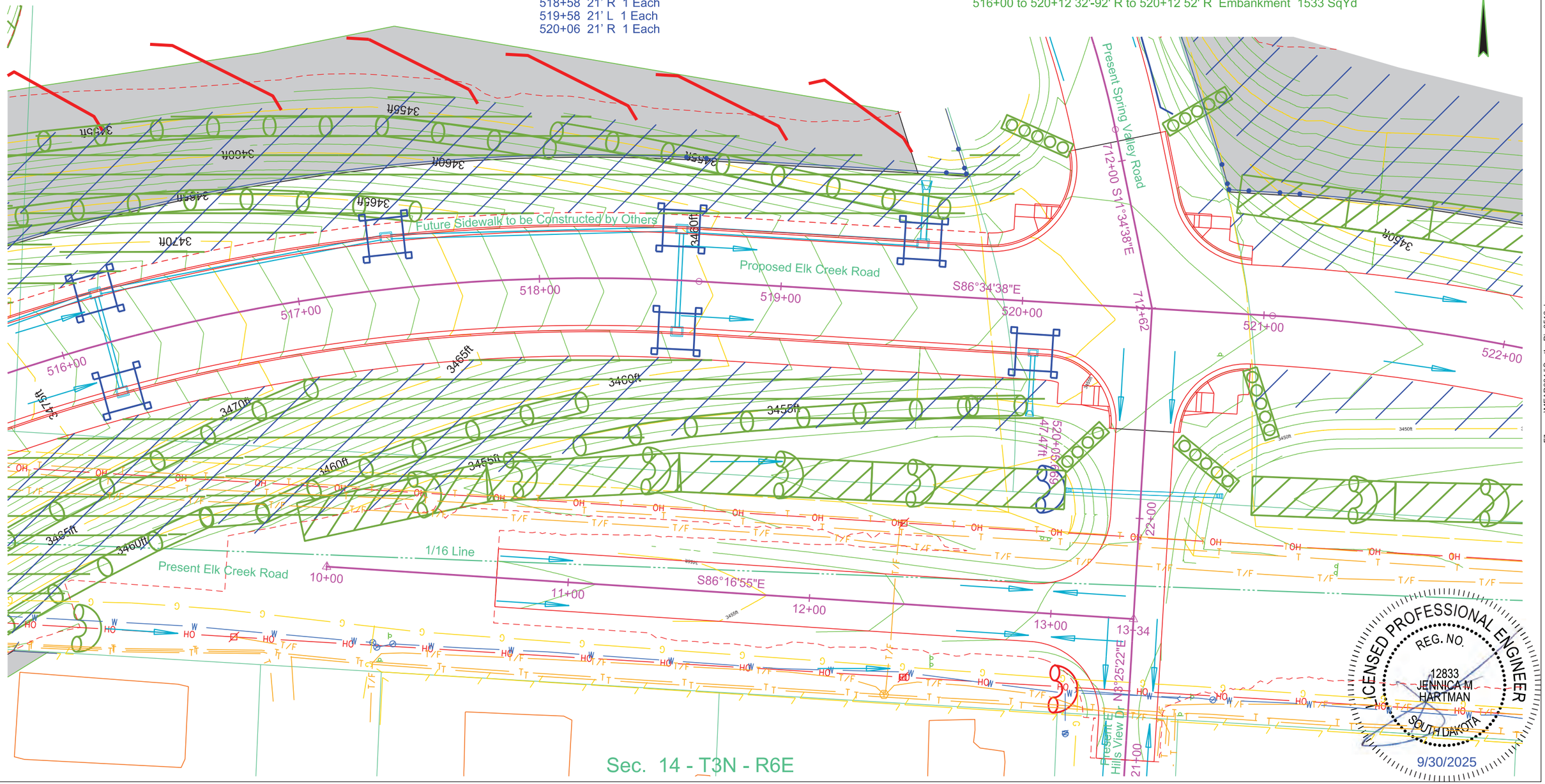
Install 12" Diameter Erosion Control Wattles across the highway ditch channel bottom at the following locations:
517+40 86' R to 519+59 78' R, 20 Ft Each 5 @ 50' O.C.
521+46 73' R 20 Ft

Install 12" Diameter Erosion Control Wattles on slope contour at 10 Ft vertical spacing at the following locations:
516+01 60' L to 517+51 31' L 160 Ft
516+00 92' L to 518+05 54' L 250 Ft
518+08 60' R to 519+65 36' R 160 Ft
516+00 57' R to 516+99 37' R 100 Ft
516+87 87' R to 518+17 51' R 200 Ft
548+16 69' R to 520+02 43' R 180 Ft

Complete Seeding and Mulching. If Grass Hay or Staw Mulch was installed for temporary stabilization seed with a no-till drill.

Install Type 1 Erosion Control Blanket at the following locations:
516+00 to 519+74 27'-90' L to 519+94 66' L Embankment 2113 SqYd
516+00 to 520+12 32'-92' R to 520+12 52' R Embankment 1533 SqYd

Install Articulated Concrete Mattress at the following locations:
519+87 69' L to 520+16-63' L 20 SqYd
520+15 51' R to 520+39-49' R 17 SqYd
520+57 74' L to 520+80-55' L 20 SqYd
520+68 54' R to 520+97-49' R 20 SqYd
520+96 23' R to 521+15-46' R 20 SqYd



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REG. NO.
12833
JENNICA M HARTMAN
SOUTH DAKOTA
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PERIMETER CONTROL

Install 12" Diameter Erosion Control Wattles* around median drains and pipe inlets at the following locations:
524+10 111' R 20 Ft
*Remove and Reset Wattles as needed.

TEMPORARY STABILIZATION

Install 12" Diameter Erosion Control Wattles* around median drains and pipe inlets at the following locations:
523+93 47' R 20 Ft
527+05 34' R 20 Ft
527+65 31' R 20 Ft
*Remove and Reset Wattles as needed.

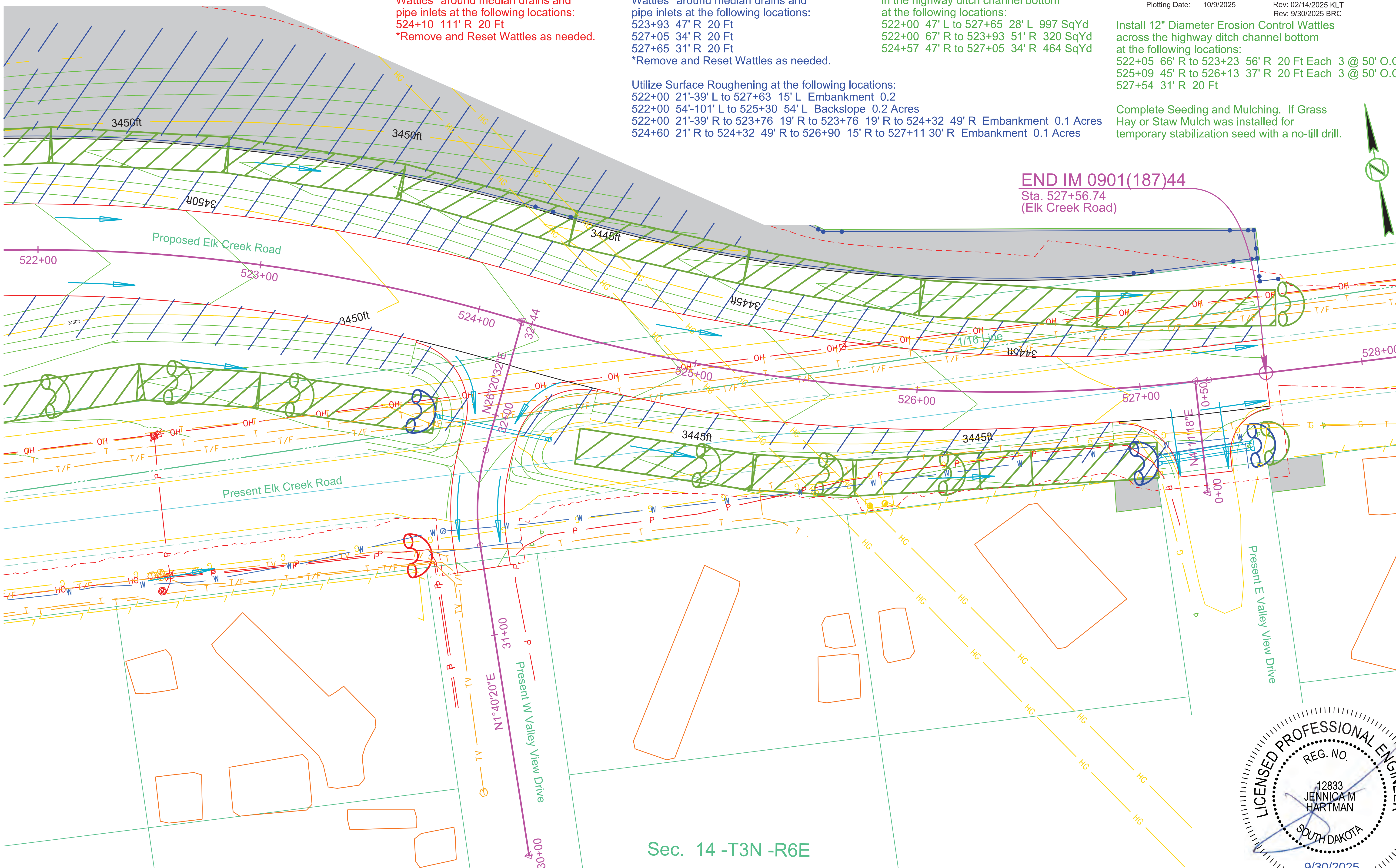
Utilize Surface Roughening at the following locations:
522+00 21'-39' L to 527+63 15' L Embankment 0.2
522+00 54'-101' L to 525+30 54' L Backslope 0.2 Acres
522+00 21'-39' R to 523+76 19' R to 523+76 19' R to 524+32 49' R Embankment 0.1 Acres
524+60 21' R to 524+32 49' R to 526+90 15' R to 527+11 30' R Embankment 0.1 Acres

FINAL STABILIZATION

Install Type 1 Erosion Control Blanket in the highway ditch channel bottom at the following locations:
522+00 47' L to 527+65 28' L 997 SqYd
522+00 67' R to 523+93 51' R 320 SqYd
524+57 47' R to 527+05 34' R 464 SqYd

Install 12" Diameter Erosion Control Wattles across the highway ditch channel bottom at the following locations:
522+05 66' R to 523+23 56' R 20 Ft Each 3 @ 50' O.C.
525+09 45' R to 526+13 37' R 20 Ft Each 3 @ 50' O.C.
527+54 31' R 20 Ft

Complete Seeding and Mulching. If Grass Hay or Staw Mulch was installed for temporary stabilization seed with a no-till drill.



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SOUTH DAKOTA
9/30/2025

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PERIMETER CONTROL

Install 12" Diameter Erosion Control Wattles* around median drains and pipe inlets at the following locations:
667+56 58' R 20 Ft
*Remove and Reset Wattles as needed.

TEMPORARY STABILIZATION

Install Sediment Control at Inlets with Frames and Grates after the placement of surfacing at the following locations:
666+06 22' L 20 Ft
666+06 22' R 20 Ft
666+08 49' R 20 Ft
667+72 22' R 20 Ft
667+72 43' R 20 Ft
668+21 22' L 20 Ft
668+70 22' R 20 Ft
668+70 44' R 20 Ft

FINAL STABILIZATION

Install 12" Diameter Erosion Control Wattles across the highway ditch channel bottom at the following locations:
668+41 35' R to 669+41 37' R 20 Ft Each 3 @ 50' O.C.

Install Type 1 Erosion Control Blanket in the highway ditch channel bottom at the following locations:
664+13 33' R to 665+16 34' R 183 SqYd
666+15 37' R to 667+67 38' R 270 SqYd
667+77 37' R to 669+41 37' R 308 SqYd

Leave 12" Diameter Erosion Control Wattles around median drains and pipe inlets and allow to decompose while the site revegetates.

Complete Seeding and Mulching. If Grass Hay or Staw Mulch was installed for temporary stabilization seed with a no-till drill.

FOR BIDDING PURPOSES ONLY

FELSBURG HOLT & ULLEVIG	STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
		IM-CR-EM 0901(187)44	D33	D48

Plotting Date: 10/9/2025
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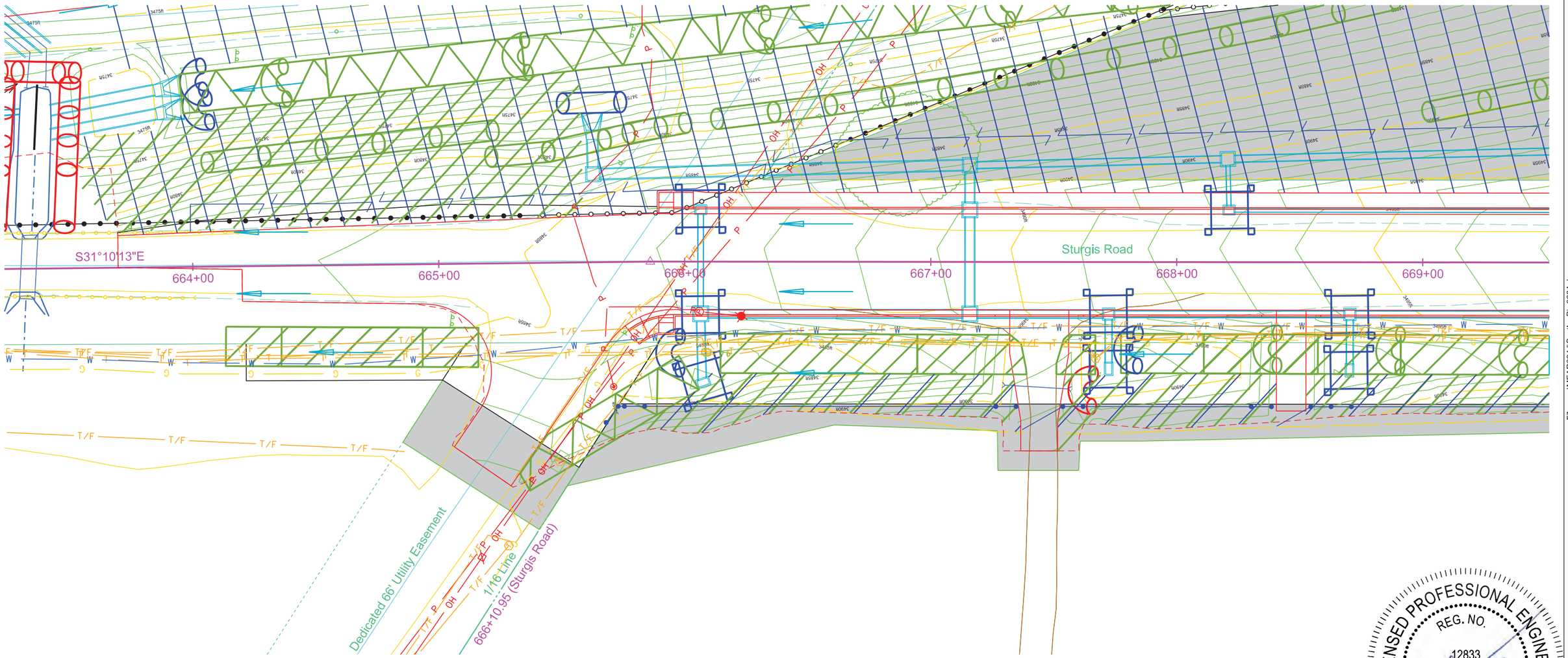
Rev: 9/30/2025 BRC

Plot Scale - 1:40

Sec. 15 -T3N -R6E



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SOUTH DAKOTA
9/30/2025

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Plotting Date: 10/9/2025

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Rev: 9/30/2025 BRC

Plot Scale = 1:40.0002

TEMPORARY STABILIZATION

Install Sediment Control at
Inlets with Frames and Grates
after the placement of surfacing
at the following locations:
670+78 22' L 1 Each
670+79 22; R 1 Each
670+79 44' R 1 Each
673+35 30' L 1 Each
673+36 22' R 1 Each

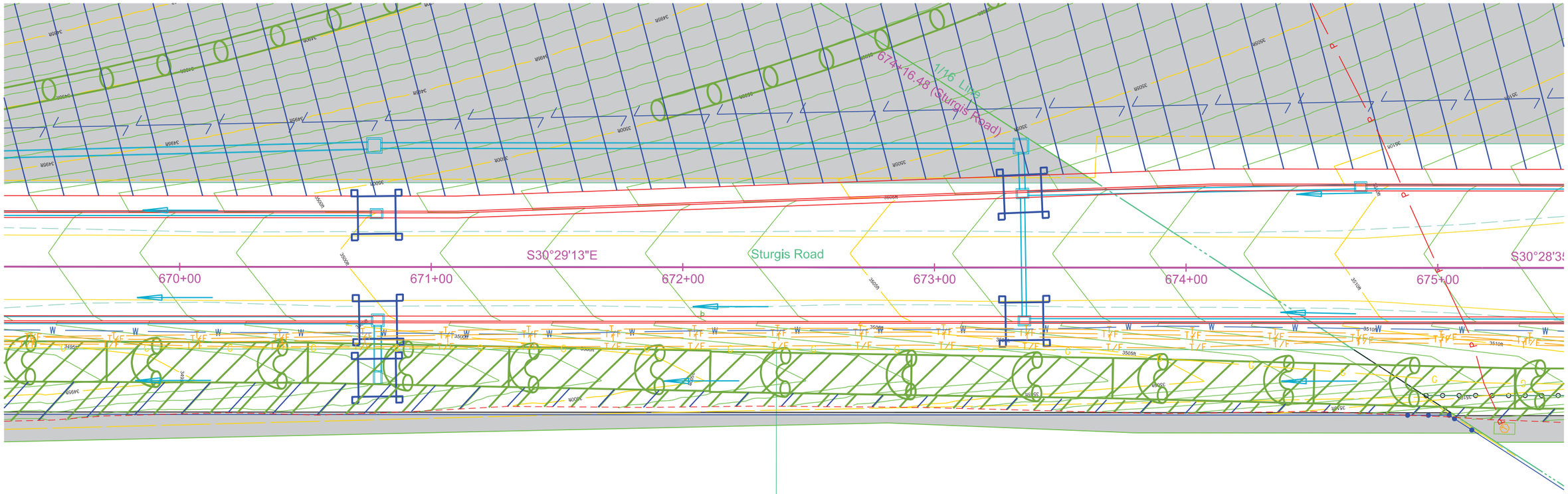
FINAL STABILIZATION

Install Type 1 Erosion Control Blanket
in the highway ditch channel bottom
at the following locations:
669+50 38' R to 675+30 48' R 1031 SqYd

Install 12" Diameter Erosion Control Wattles
across the highway ditch channel bottom
at the following locations:
669+91 38' R to 674+91 45' R 20 Ft Each 11 @ 50' O.C.

Leave 12" Diameter Erosion Control Wattles
around median drains and pipe inlets and
allow to decompose while the site revegetates.

Complete Seeding and Mulching. If Grass Hay or Staw Mulch
was installed for temporary stabilization seed with a no-till drill.



Sec. 15 -T3N -R6E

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12833
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HARTMAN
SOUTH DAKOTA
9/30/2025

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FELSBURG HOLT & ULLEVIG	STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
		IM-CR-EM 0901(187)44	D35	D48

Plotting Date: 10/9/2025 Rev: 02/14/2025 KLT
Rev: 9/30/2025 BRC

FOR BIDDING PURPOSES ONLY

PERIMETER CONTROL

Install 12" Diameter Erosion Control Wattles* around median drains and pipe inlets at the following locations:
677+18 38' R 20 Ft
677+35 38' R 20 Ft
677+53 38' R 20 Ft
678+65 45' R 20 Ft
*Remove and Reset Wattles as needed.

TEMPORARY STABILIZATION

Install 12" Diameter Erosion Control Wattles* around median drains and pipe inlets at the following locations:
677+25 50' R 20 Ft
677+46 48' R 20 Ft
677+71 53' R 20 Ft
*Remove and Reset Wattles as needed.

Install Sediment Control at Inlets with Frames and Grates after the placement of surfacing at the following locations:
675+93 22' R 1 Each
676+45 33' R 1 Each
678+50 22' R 1 Each

FINAL STABILIZATION

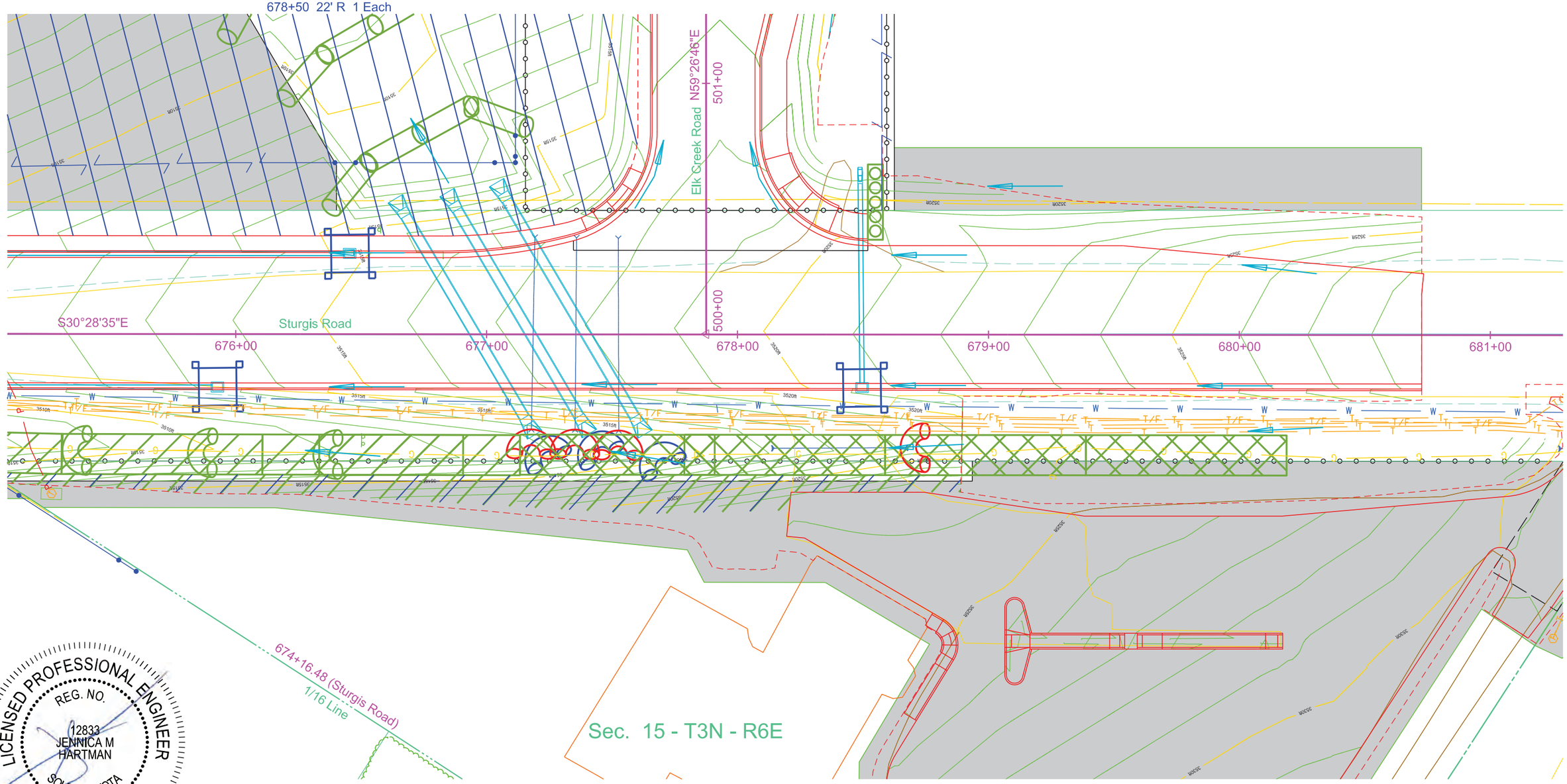
Install Type 1 Erosion Control Blanket in the highway ditch channel bottom at the following locations:
675+51 48' R to 676+91 48' R 286 SqYd
678+36 48' R to 680+19 48' R 325 SqYd

Install 12" Diameter Erosion Control Wattles across the highway ditch channel bottom at the following locations:
675+41 46' R to 676+41 48' R 20 Ft Each 3 @ 50' O.C.

Install Type 2 Turf Reinforcement Mat in the highway ditch channel bottom at the following locations:
678+36 48' R to 680+19 48' R 325 SqYd

Leave 12" Diameter Erosion Control Wattles around median drains and pipe inlets and allow to decompose while the site revegetates.

Complete Seeding and Mulching. If Grass Hay or Staw Mulch was installed for temporary stabilization seed with a no-till drill.



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PERIMETER CONTROL

Install 12" Diameter Erosion Control Wattles* around median drains and pipe inlets at the following locations:
518+55 273' L 20 Ft
*Remove and Reset Wattles as needed.

TEMPORARY STABILIZATION

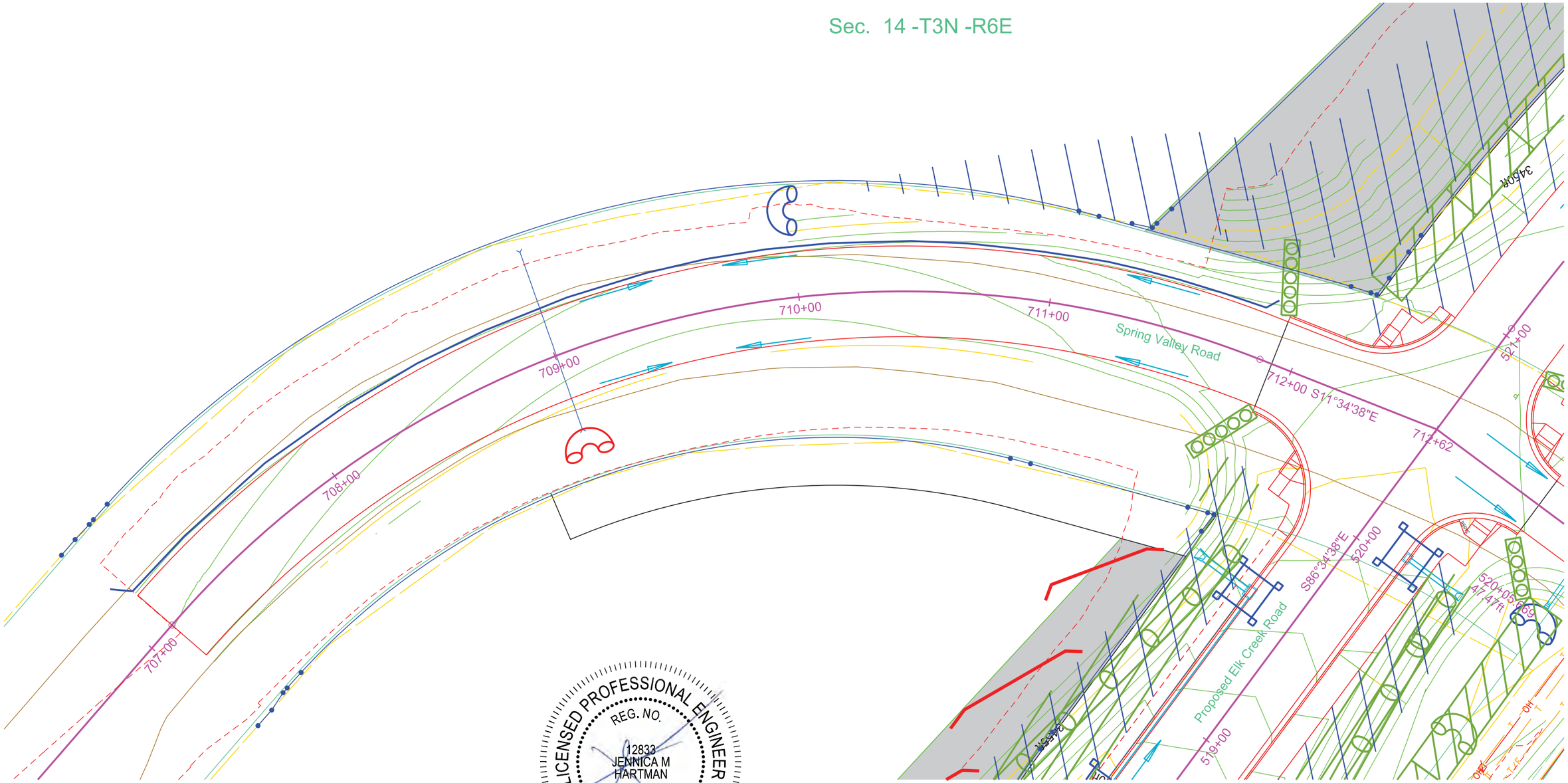
Install 12" Diameter Erosion Control Wattles across the highway ditch channel bottom at the following locations:
519+71 258' L 20 Ft

Utilize Surface Roughening at the following locations:
519+91 243' L to 520+62 115' L to 521+11 109' L Backslope 0.1 Acres

FINAL STABILIZATION

Leave 12" Diameter Erosion Control Wattles around median drains and pipe inlets and allow to decompose while the site revegetates.

Complete Seeding and Mulching. If Grass Hay or Staw Mulch was installed for temporary stabilization seed with a no-till drill.



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FELSBURG HOLT & ULLEVIG	STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
		IM-CR-EM 0901(187)44	D37	D48

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Rev: 9/30/2025 BRC

PERIMETER CONTROL

Install Low Flow Silt Fence at the following locations:
513+90 248' L to 513+63 295' L Perimeter control 64 Ft
513+53 216' L to 513+44 328' L Perimeter control 48 Ft
513+19 320' R to 513+12 362' L Perimeter control 48 Ft

FINAL STABILIZATION

Install 12" Diameter Erosion Control Wattles on slope contour at 10 Ft vertical spacing at the following locations:

512+06 230' L to 511+63 271' L 50 LF
511+59 264' L to 511+12 331' L 70 LF
512+48 170' L to 512+33 211' L 90 LF
512+43 227' L to 512+05 275' L 70 LF
512+78 183' L to 512+53 243' L 70 LF
513+42 215' L to 512+91 278' L 90 LF
512+97 288' L to 512+68 311' L 50 LF
512+69 314' L to 512+39 331' L 50 LF
512+40 337' L to 511+65 371' L 120 LF
513+60 233' L to 513+10 297' L 90 LF
513+15 306' L to 512+74 343' L 70 LF
512+75 346' L to 512+46 364' L 50 LF
512+12 377' L to 509+77 540' L 280 LF

Install 12" Diameter Erosion Control Wattles across the highway ditch channel bottom at the following locations:
512+37 368' LT 20 LF

Leave 12" Diameter Erosion Control Wattles around median drains and pipe inlets and allow to decompose while the site revegetates.

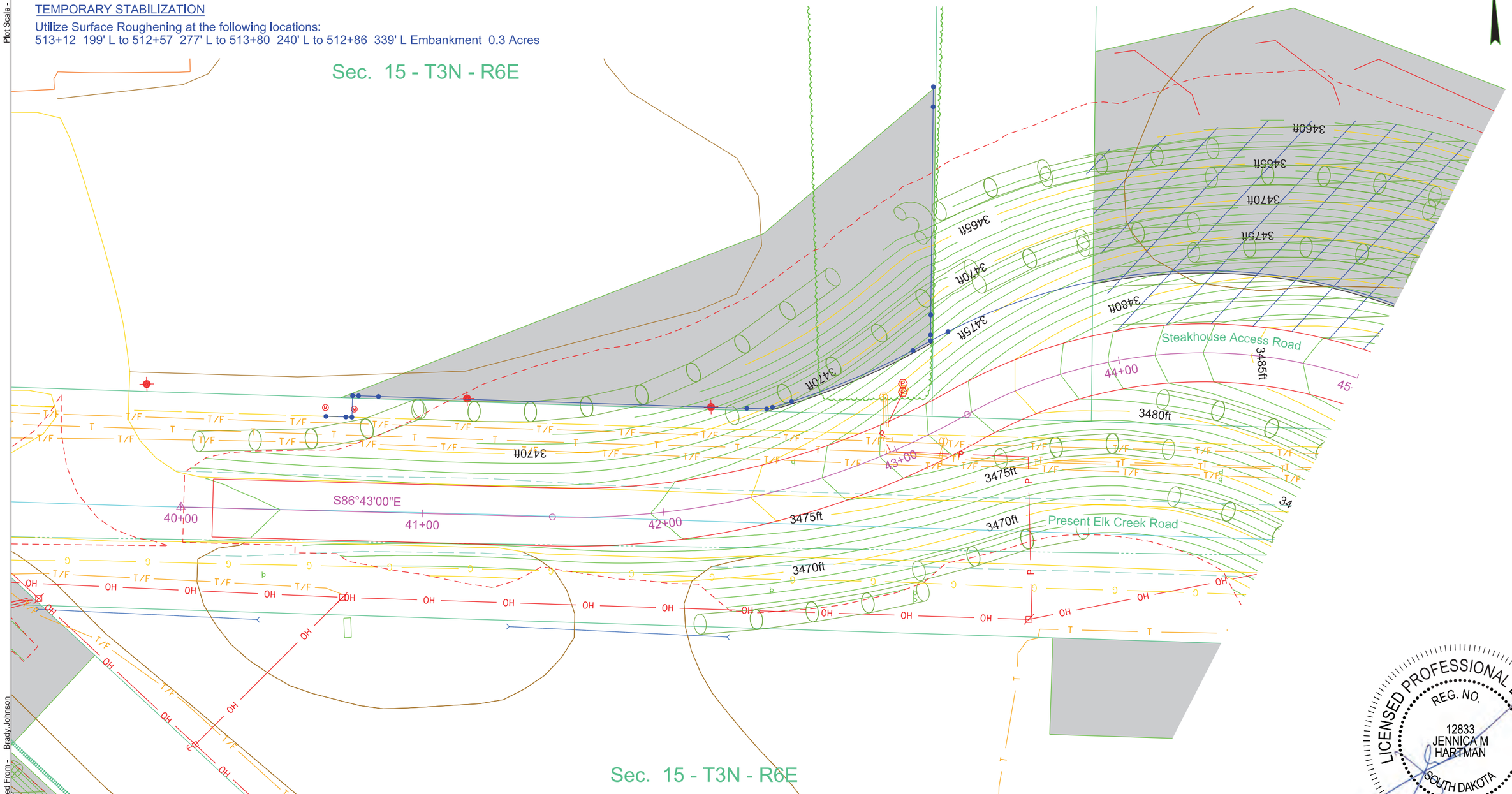
Complete Seeding and Mulching. If Grass Hay or Staw Mulch was installed for temporary stabilization seed with a no-till drill.

TEMPORARY STABILIZATION

Utilize Surface Roughening at the following locations:
513+12 199' L to 512+57 277' L to 513+80 240' L to 512+86 339' L Embankment 0.3 Acres

Install Type 1 Erosion Control Blanket at the following locations:
513+12 199' L to 512+57 277' L to 513+80 240' L to 512+86 339' L Embankment 1285 SqYd

Sec. 15 - T3N - R6E



Sec. 15 - T3N - R6E

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Plot Scale - 1:40

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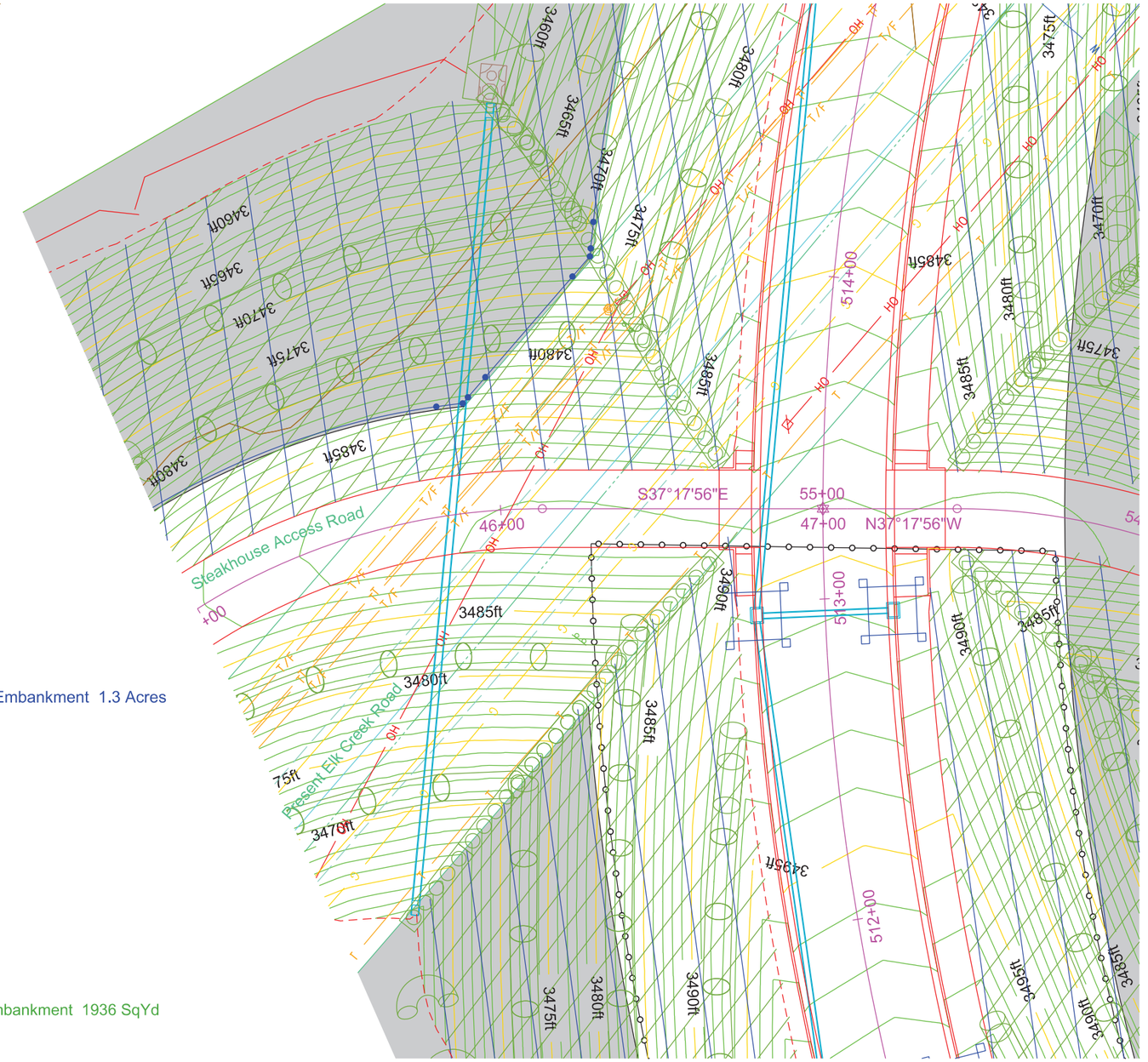
Rev: 02/14/2025 KLT
Rev: 9/30/2025 BRC

Plot Scale - 1:40



Sec. 15 - T3N - R6E

PERIMETER CONTROL

Install Low Flow Silt Fence at the following locations:
514+45 121' L to 514+00 218' L Perimeter control 119 Ft
513+99 216' R to 513+90 248' L Perimeter control 34 Ft

TEMPORARY STABILIZATION

Utilize Surface Roughening at the following locations:
513+42 31' L to 513+12 199' L to 514+38 113' L to 513+80 240' L Embankment 1.3 Acres

FINAL STABILIZATION

Install 12" Diameter Erosion Control Wattles
on slope contour at 10 Ft vertical spacing
at the following locations:
512+52 99' L to 512+48 170' L 70 LF
512+85 66' L to 512+78 83' L 120 LF
513+76 55' L to 513+38 211' L 160 LF
514+11 79' L to 513+56 230' L 160 LF

Install Articulated Concrete Mattress
at the following locations:
512+18 138' L to 513+14 33' L 150 LF
514+41 115' L to 513+42 31' L 140 LF

Install Type 1 Erosion Control Blanket at the following locations:
513+42 31' L to 513+12 199' L to 514+38 113' L to 513+80 240' L Embankment 1936 SqYd

Complete Seeding and Mulching. If Grass
Hay or Staw Mulch was installed for
temporary stabilization seed with a no-till drill.

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PERIMETER CONTROL

Install Low Flow Silt Fence at the following locations:
514+43 119' R to 514+29 156' R Perimeter control 42 Ft
514+27 154' R to 514+03 183' R Perimeter control 38 Ft
514+02 181' R to 513+86 201' R Perimeter control 25 Ft
513+86 200' R to 513+40 242' R Perimeter control 55 Ft
513+36 242' R to 513+12 263' R Perimeter control 30 Ft
513+12 263' R to 512+84 279' R Perimeter control 28 Ft
512+80 277' R to 512+38 307' R Perimeter control 43 Ft
512+32 304' R to 511+96 324' R Perimeter control 34 Ft
511+92 321' R to 511+48 343' R Perimeter control 37 Ft
511+44 341' R to 511+00 362' R Perimeter control 40 Ft
510+99 359' R to 510+85 376' R Perimeter control 32 Ft

TEMPORARY STABILIZATION

Install 12" Diameter Erosion Control Wattles* around median drains and pipe inlets at the following locations:
511+98 140' R 20 Ft
*Remove and Reset Wattles as needed.

Utilize Surface Roughening at the following locations:
510+14 27'-136' L to 516+18 27'-100' L Embankment 1.3 Acres
510+12 32'-143' R to 516+54 32'-91' R Embankment 1.3 Acres

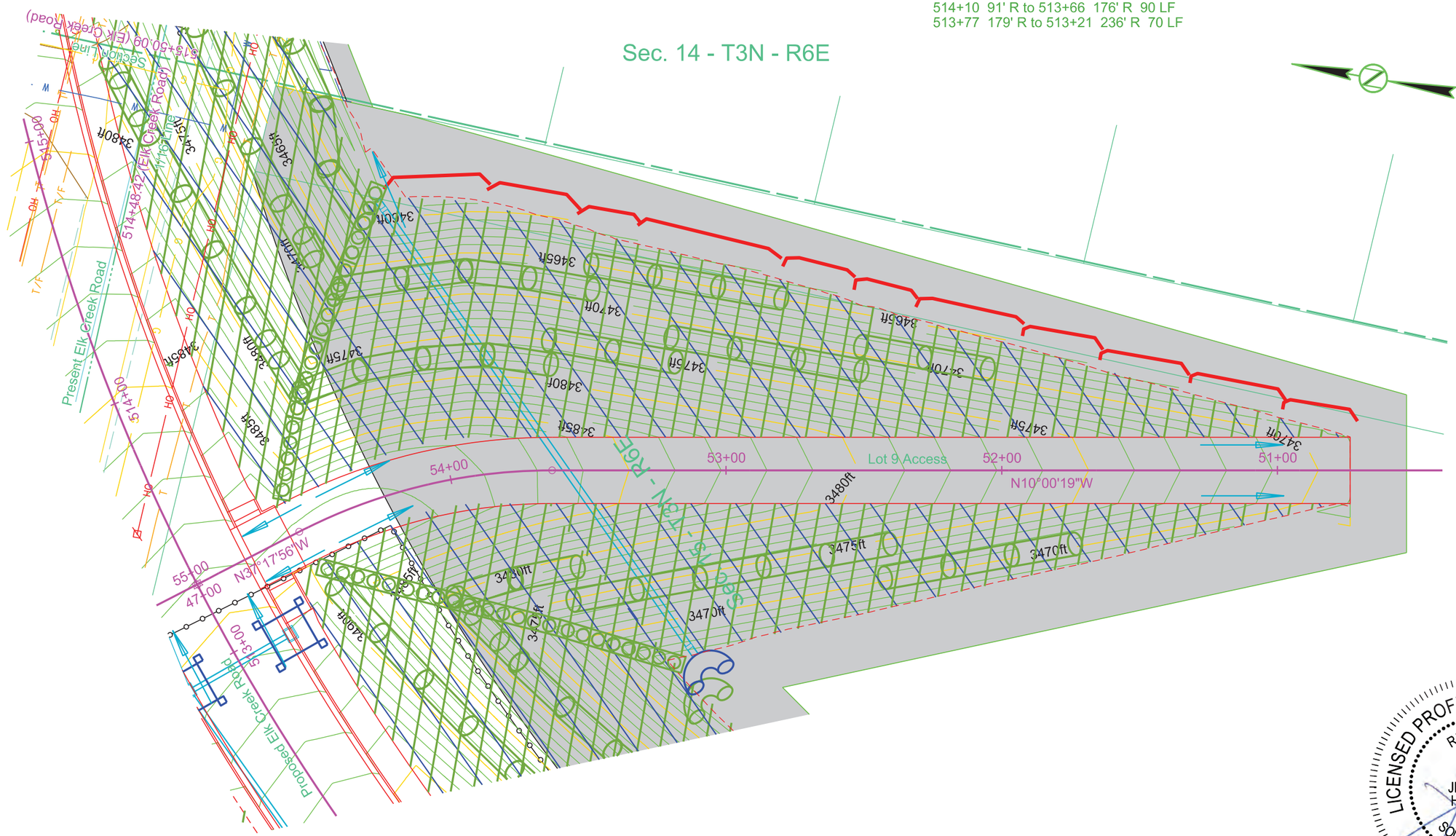
FINAL STABILIZATION

Install Type 1 Erosion Control Blanket at the following locations:
510+14 27' L to 510+18 135' L to 516+00 27'-92' L Embankment 6521 SqYd
510+12 32'-143' R to 516+00 32'-91' R Embankment 6162 SqYd

Install 12" Diameter Erosion Control Wattles on slope contour at 10 Ft vertical spacing at the following locations:
512+76 79' R to 512+59 123' R 50 LF
512+48 115' R to 511+83 220' R 120 LF
511+71 211' R to 511+18 271' R 70 LF
513+77 63' R to 513+43 150' R 90 LF
513+54 154' R to 513+17 191' R 50 LF
513+29 194' R to 512+66 248' R 70 LF
512+78 252' R to 512+28 286' R 50 LF
514+10 91' R to 513+66 176' R 90 LF
513+77 179' R to 513+21 236' R 70 LF

Complete Seeding and Mulching. If Grass Hay or Staw Mulch was installed for temporary stabilization seed with a no-till drill.

Install Articulated Concrete Mattress at the following locations:
513+42 41' R to 514+45 117' R 120 LF
513+13 42' R to 511+98 134' R 140 LF



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Rev: 9/30/2025 BRC

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Plotting Date: 10/9/2025

Rev: 02/14/2025 KLT
Rev: 9/30/2025 BRC

TEMPORARY STABILIZATION

Install 12" Diameter Erosion Control Wattles
across the highway ditch channel bottom
at the following locations:
515+61 346' L 20 Ft

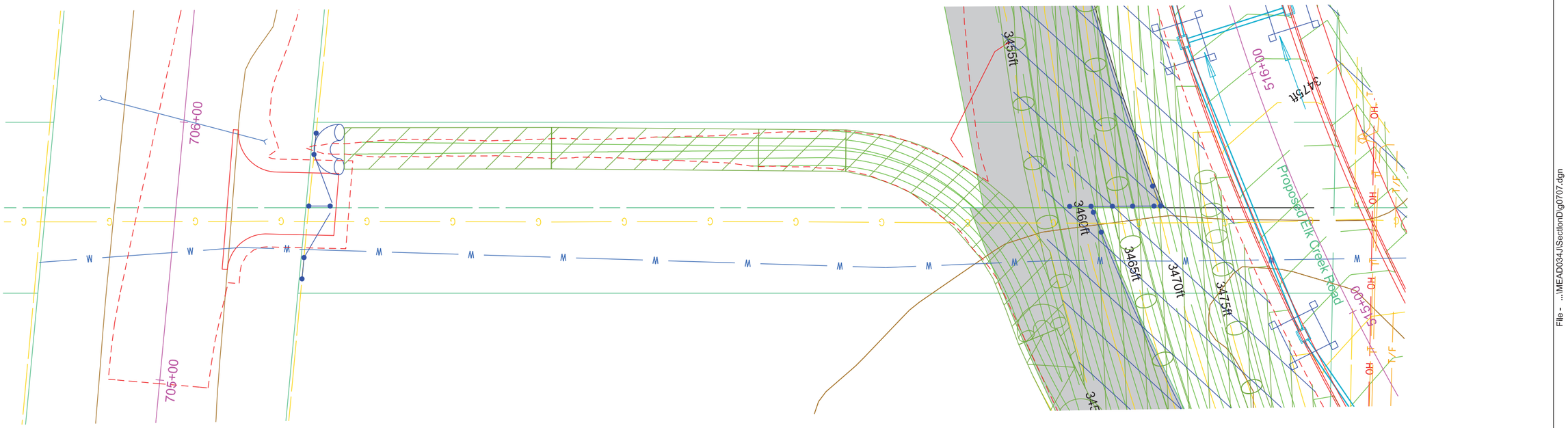
FINAL STABILIZATION

Install Type 1 Erosion Control Blanket
in the highway ditch channel bottom
at the following locations:
515+42 111' L to 516+61 346' R 608 SqYd

Leave 12" Diameter Erosion Control Wattles
around median drains and pipe inlets and
allow to decompose while the site revegetates.

Complete Seeding and Mulching. If Grass Hay or Staw Mulch
was installed for temporary stabilization seed with a no-till drill.

Sec. 14 -T3N -R6E



Sec. 15 -T3N -R6E

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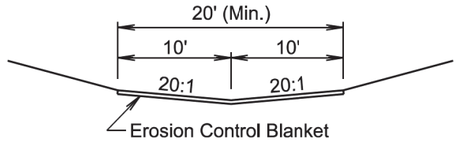
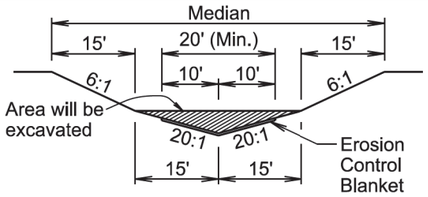
FELSBURG HOLT & ULLEVIG	STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
		IM-CR-EM 0901(187)44	D41	D48

Plotting Date: 10/9/2025 Rev: 9/11/2025 BRC Rev: 9/30/2025 BRC

Plot Scale - 1:200

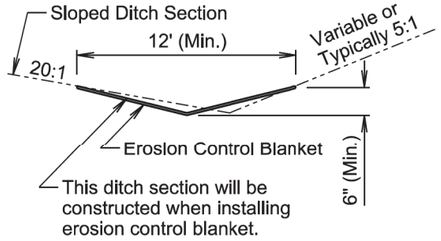


STANDARD DITCH SECTION

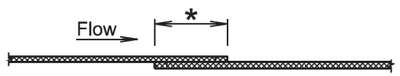


The median will be shaped to the limits shown in this detail where the erosion control blanket will be placed.

MEDIAN SECTION



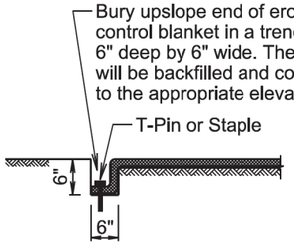
SLOPED DITCH SECTION



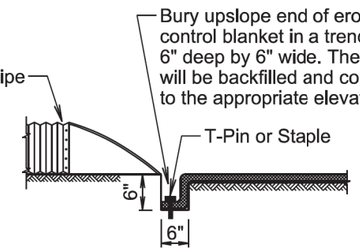
* Use a 4" (Min.) overlap wherever two widths of erosion control blanket are applied side by side.

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

OVERLAP DETAIL



TRENCH 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.

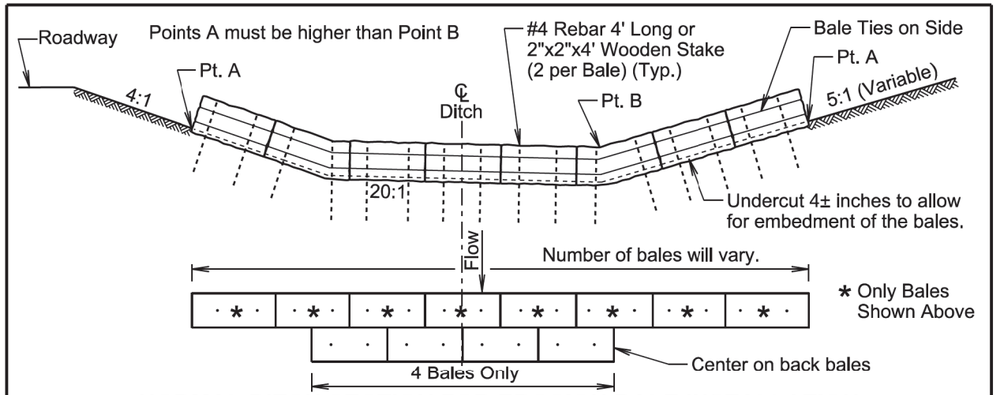
The erosion control blanket will be pinned to the ground according to the manufacturer's installation recommendations.

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

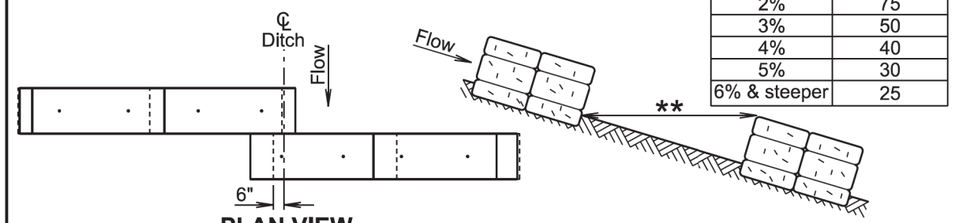
Published Date: 2026	SDDOT	EROSION CONTROL BLANKET	PLATE NUMBER 734.01
			Sheet 1 of 1



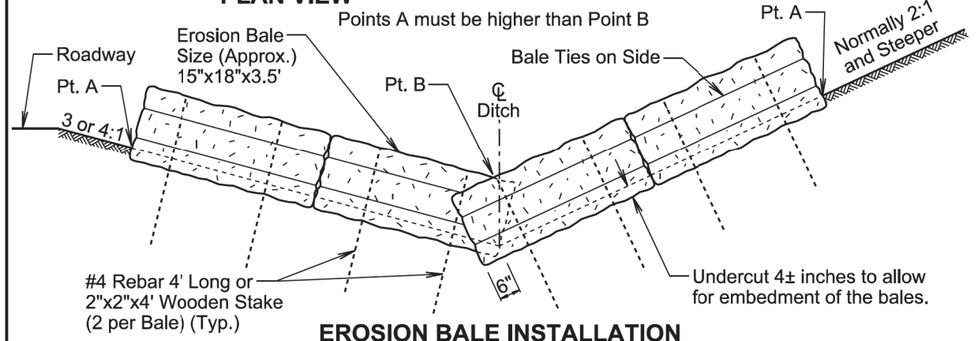
NORMAL DITCH SECTION FOR EROSION BALE INSTALLATION

** The maximum spacing between sediment barriers should be such that the toe of the upstream sediment barrier is at the same elevation as the top of the downstream sediment barrier.

Grade	Spacing (Ft.)
2%	75
3%	50
4%	40
5%	30
6% & steeper	25



PLAN VIEW



EROSION BALE INSTALLATION

(This Ditch Section and Erosion Bale Installation Typically Used in Black Hills)

GENERAL NOTES:

The erosion bale sediment barrier must be entrenched and backfilled. A trench should be excavated the width of a bale and the length of the proposed sediment barrier to a minimum depth of 4 inches. After the bales are staked with rebar or wood stakes, the excavated soil must be backfilled against the sediment barrier. The sediment barrier must be extended to such a length that the bottoms of the end bales are higher in elevation than the top of the lowest middle bale.

February 14, 2020

Published Date: 2026	SDDOT	EROSION BALES	PLATE NUMBER 734.02
			Sheet 1 of 1

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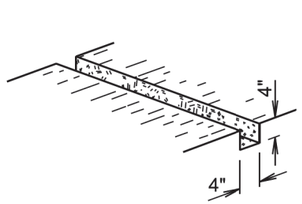
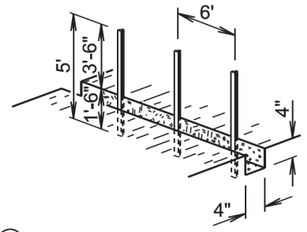
Plotting Date: 10/9/2025 Rev: 9/11/2025 BRC Rev: 9/30/2025 BRC

Plot Scale - 1:200

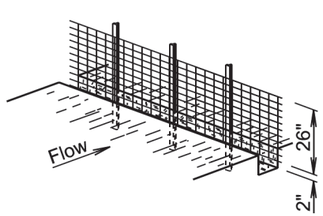
MANUAL LOW FLOW SILT FENCE INSTALLATION



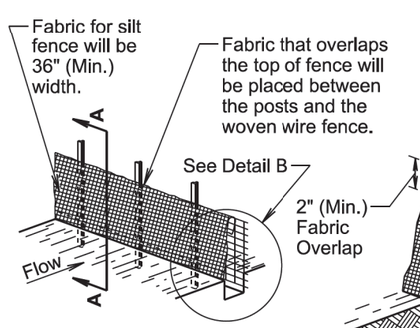
① EXCAVATE TRENCH



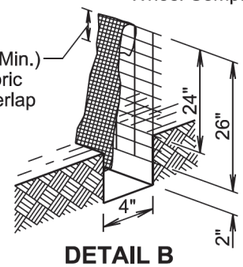
② DRIVE STEEL T FENCE POSTS



③ ATTACH 26" WOVEN WIRE FENCE TO POSTS

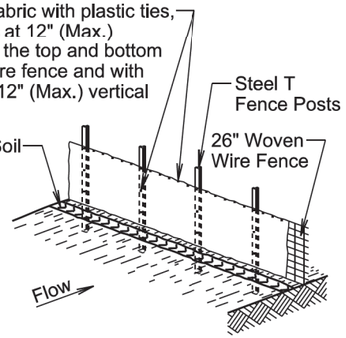


④ ATTACH SILT FENCE FABRIC

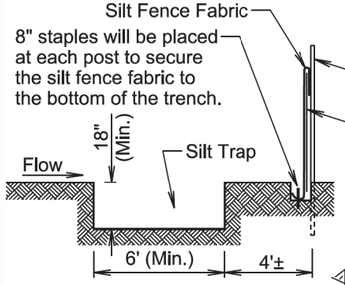


DETAIL B

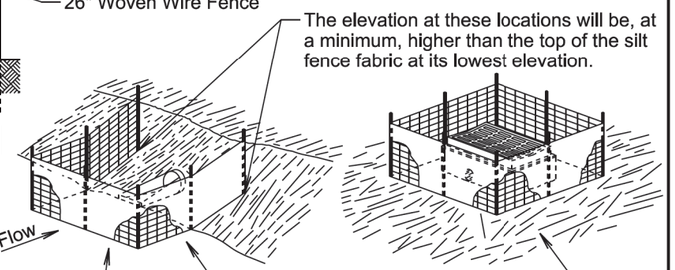
Attach the silt fence fabric with plastic ties, wire ties, or hog rings at 12" (Max.) horizontal spacing on the top and bottom wires of the woven wire fence and with plastic or wire ties at 12" (Max.) vertical spacing on the posts.



⑤ BACKFILL TRENCH AND WHEEL COMPACT SOIL



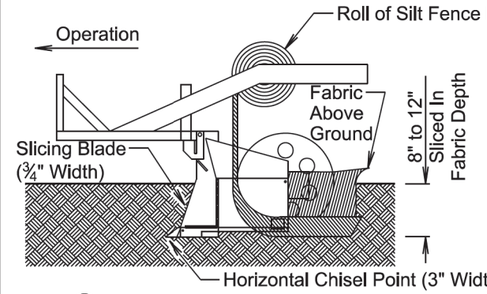
SECTION A-A



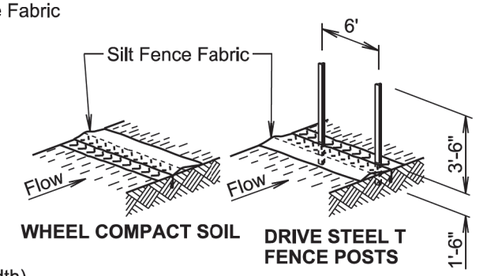
February 14, 2020

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

MACHINE SLICED LOW FLOW SILT FENCE INSTALLATION



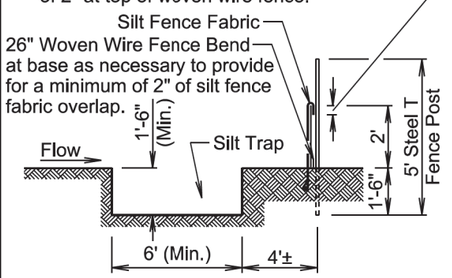
① INSTALL SILT FENCE FABRIC BY MACHINE SLICING METHOD.



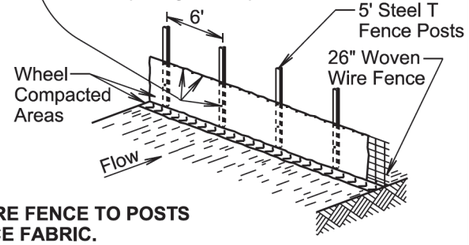
WHEEL COMPACT SOIL DRIVE STEEL T FENCE POSTS

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.

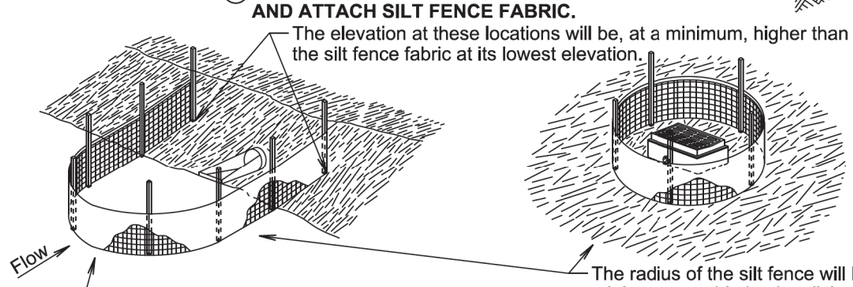


Attach the silt fence fabric with plastic ties, wire ties, or hog rings at 12" (Max.) horizontal spacing on the top and bottom wires of the woven wire fence and with plastic or wire ties at 12" (Max.) vertical spacing on the posts.



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.



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

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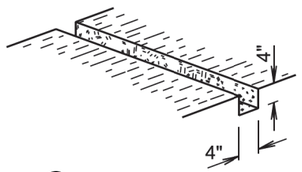
FELSBURG HOLT & ULLEVIG	STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
		IM-CR-EM 0901(187)44	D43	D48

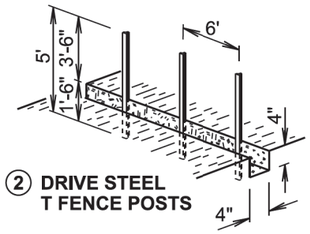
Plotting Date: 10/9/2025 Rev: 9/11/2025 BRC
Rev: 9/30/2025 BRC

Plot Scale - 1:200

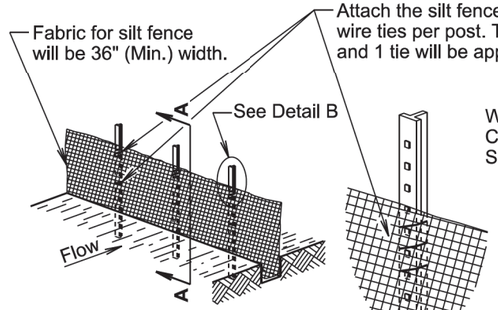
MANUAL HIGH FLOW SILT FENCE INSTALLATION



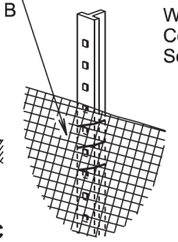
① EXCAVATE TRENCH



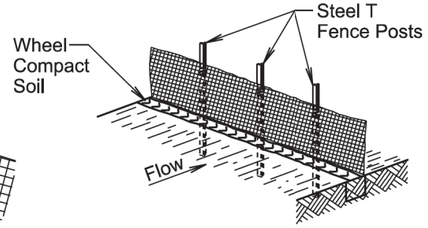
② DRIVE STEEL T FENCE POSTS



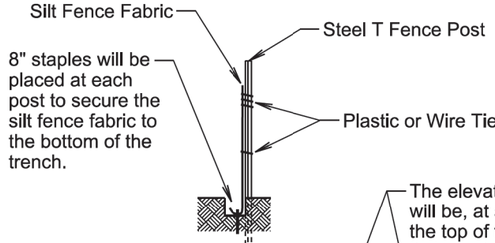
③ ATTACH SILT FENCE FABRIC



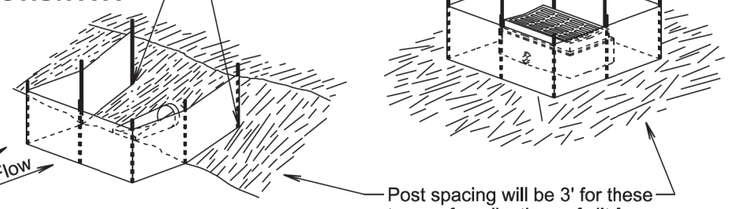
DETAIL B

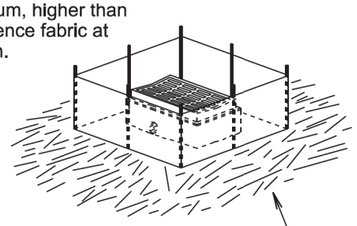


④ BACKFILL TRENCH AND WHEEL COMPACT SOIL



SECTION A-A

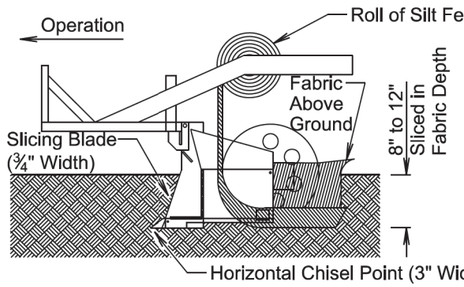




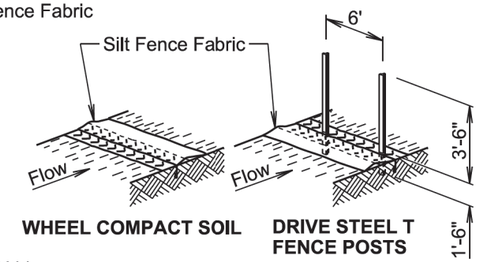
February 14, 2020

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

MACHINE SLICED HIGH FLOW SILT FENCE INSTALLATION

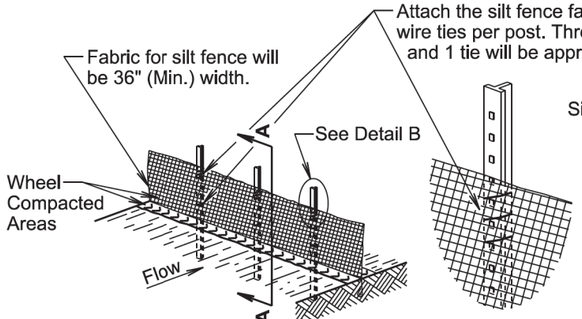


① INSTALL SILT FENCE FABRIC BY MACHINE SLICING METHOD.



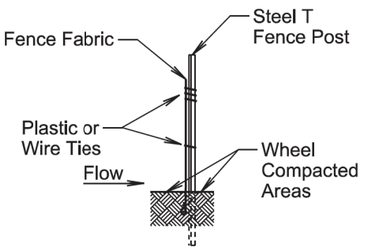
WHEEL COMPACT SOIL DRIVE STEEL T FENCE POSTS

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

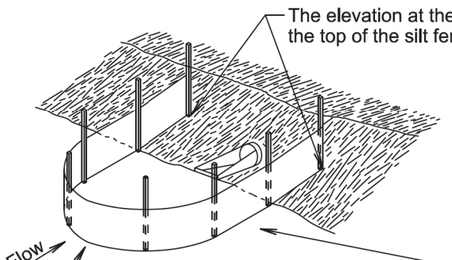


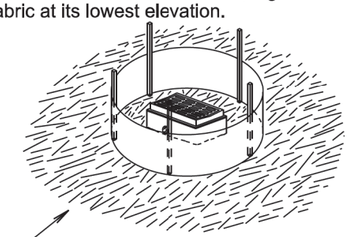
③ ATTACH SILT FENCE FABRIC

DETAIL B



SECTION A-A





GENERAL NOTE:

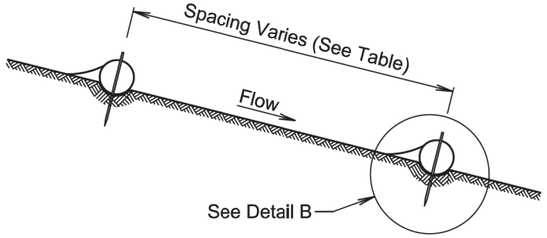
If a trench can not be dug or the silt fence fabric can not be sliced in due to the type of earthen material (such as rock), then a row of 30 to 40 pound sandbags butted end to end will be provided on top of the extra length of silt fence fabric to prevent underflow.

February 14, 2020

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

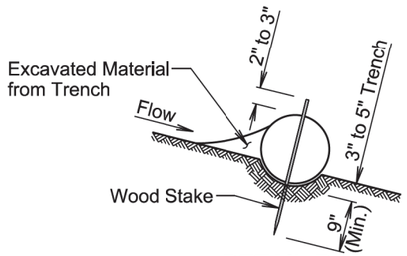
Plotted From - Brady.Johnson

File - ...\Section D Standard Plates.dgn

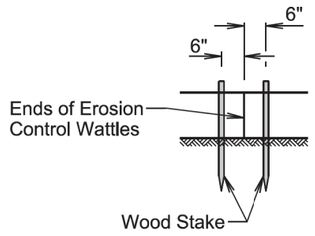


ELEVATION VIEW
(Cut or Fill Slope Installation)

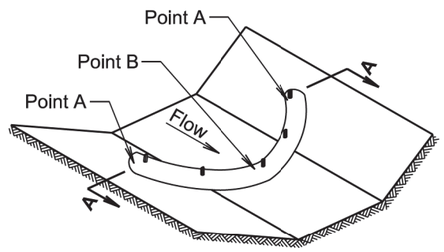
CUT OR FILL SLOPE INSTALLATION	
Slope	Spacing (Ft.)
1:1	10
2:1	20
3:1	30
4:1	40



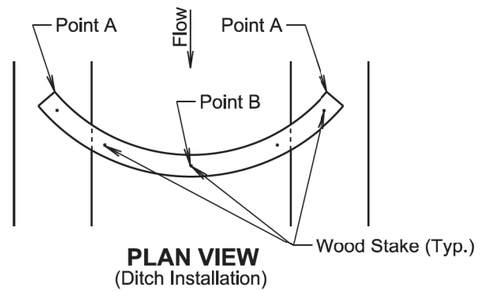
DETAIL B
(Typical of All Installations)



DETAIL C
(See General Notes)

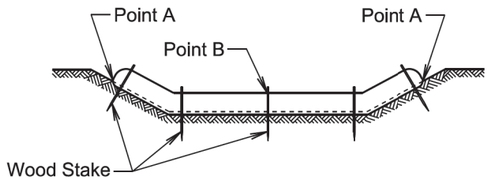


ISOMETRIC VIEW
(Ditch Installation)



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

GENERAL NOTES:

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

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

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

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

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

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

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

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

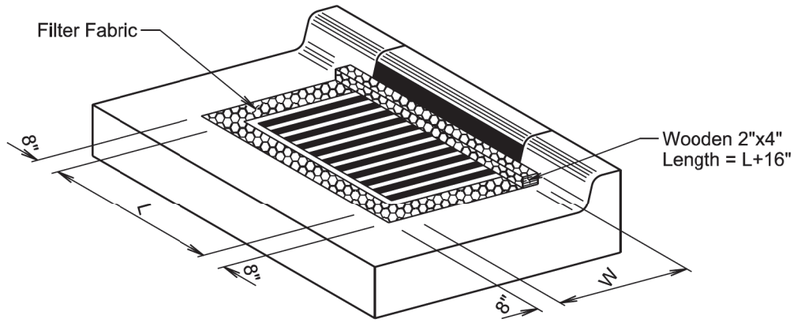
All costs for removing the erosion control wattle from the project including labor, equipment, and materials will be incidental to the contract unit price per foot for "Remove Erosion Control Wattle".

February 14, 2020

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

Plotting Date: 12/31/2025 Rev: 9/11/2025 BRC Rev: 9/30/2025 BRC

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.

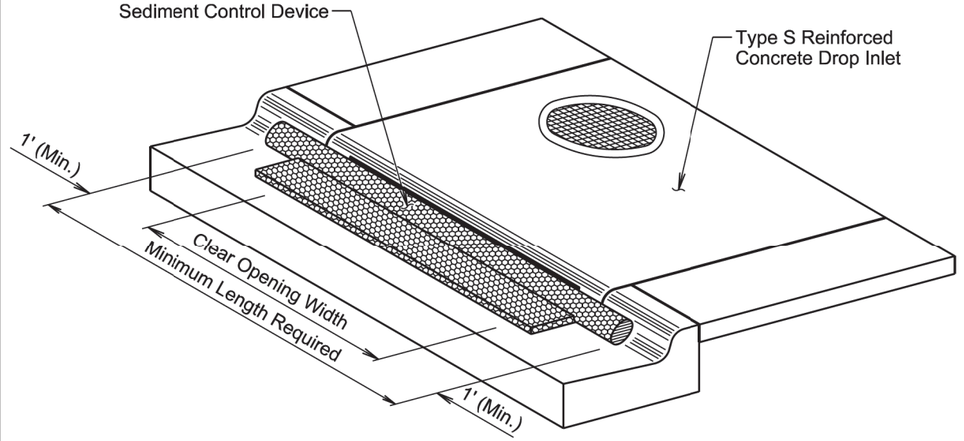
The Contractor and Engineer will inspect the sediment control device in accordance with the storm water permit. The Contractor will maintain the sediment control device by removing accumulated sediment and replacing torn filter fabric with new filter fabric.

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".

February 14, 2020

Published Date: 2026	SDDOT	SEDIMENT CONTROL AT INLETS WITH FRAMES AND GRATES	PLATE NUMBER 734.10 Sheet 1 of 1



ISOMETRIC VIEW

GENERAL NOTES:

The type of sediment control device shown is for illustrative purposes only.

The type of sediment control device used will be one of the types as specified in the plans.

The sediment control device will be placed at the drop inlets according to the manufacturer's installation instructions.

The sediment control at inlet for type S reinforced concrete drop inlet will be placed at locations stated in the plans or at locations determined by the Engineer.

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 the device, removing accumulated sediment, and resetting the device.

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.

Payment for the "Sediment Control at Type S Drop Inlet" will 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 will be incidental to the contract unit price per foot for "Sediment Control at Type S Reinforced Concrete Drop Inlet".

February 14, 2020

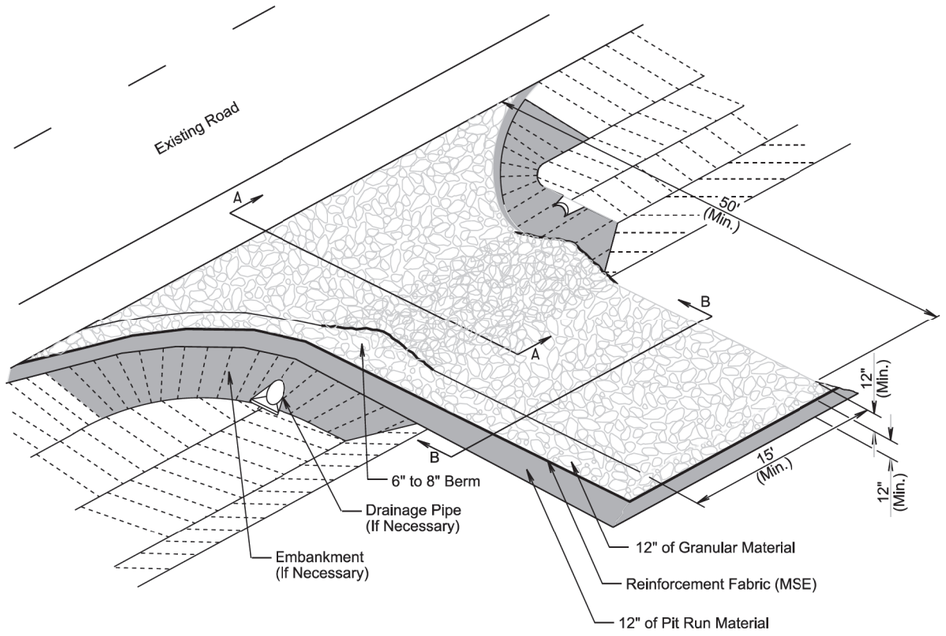
Published Date: 2026	SDDOT	SEDIMENT CONTROL AT INLETS FOR TYPE S REINFORCED CONCRETE DROP INLETS	PLATE NUMBER 734.11 Sheet 1 of 1

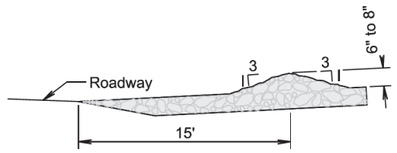
FELSBURG HOLT & ULLEVIG	STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
		IM-CR-EM 0901(187)44	D46	D48

Plotting Date: 10/9/2025
Rev: 9/11/2025 BRC
Rev: 9/30/2025 BRC

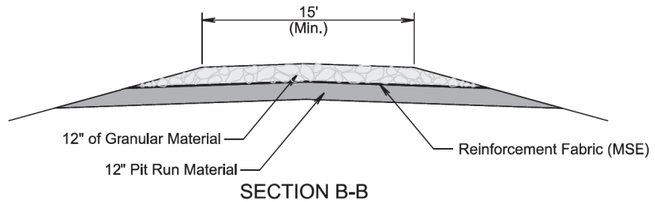
Plotting Date: 02/06/2020

SDDOT CONSTRUCTION ENTRANCE





SECTION A-A



SECTION B-B

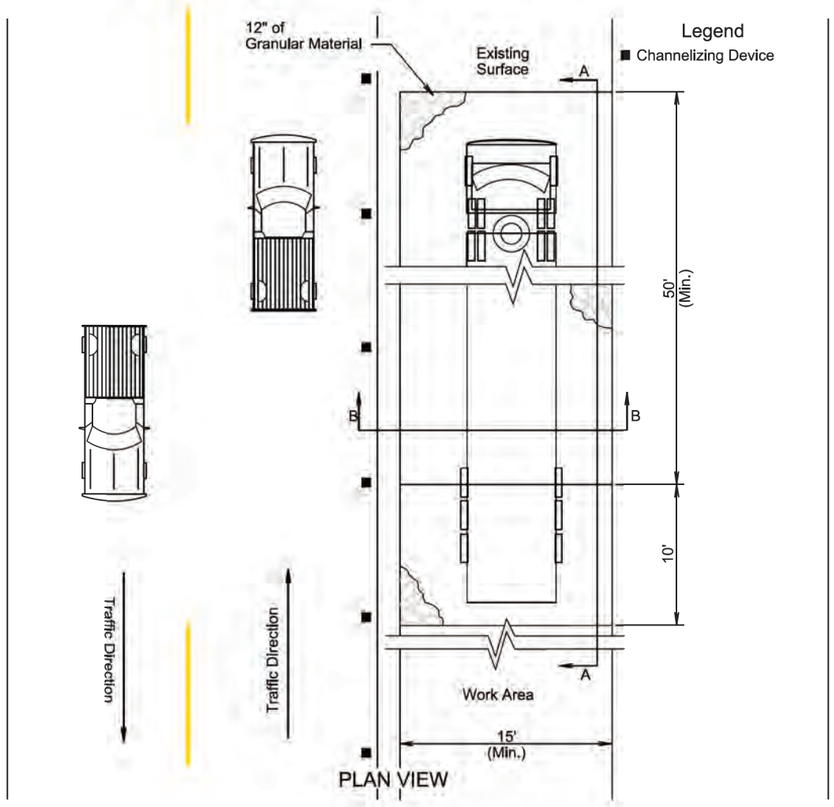
GENERAL NOTES:

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

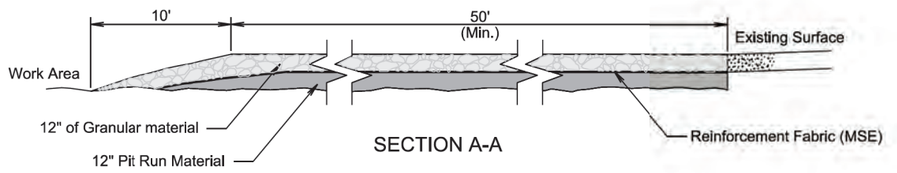
If a drainage pipe is necessary the size and type shall be determined by the Contractor to meet field conditions. All cost shall be incidental to the various contract items.

If embankment is necessary it shall be pit run material.

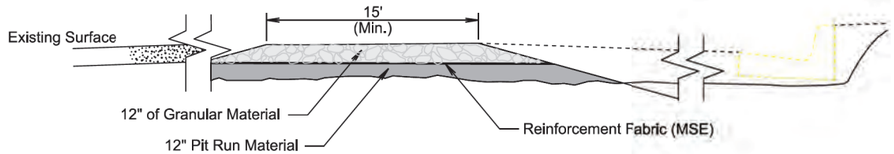
TRANSVERSE TO ROADWAY



PLAN VIEW



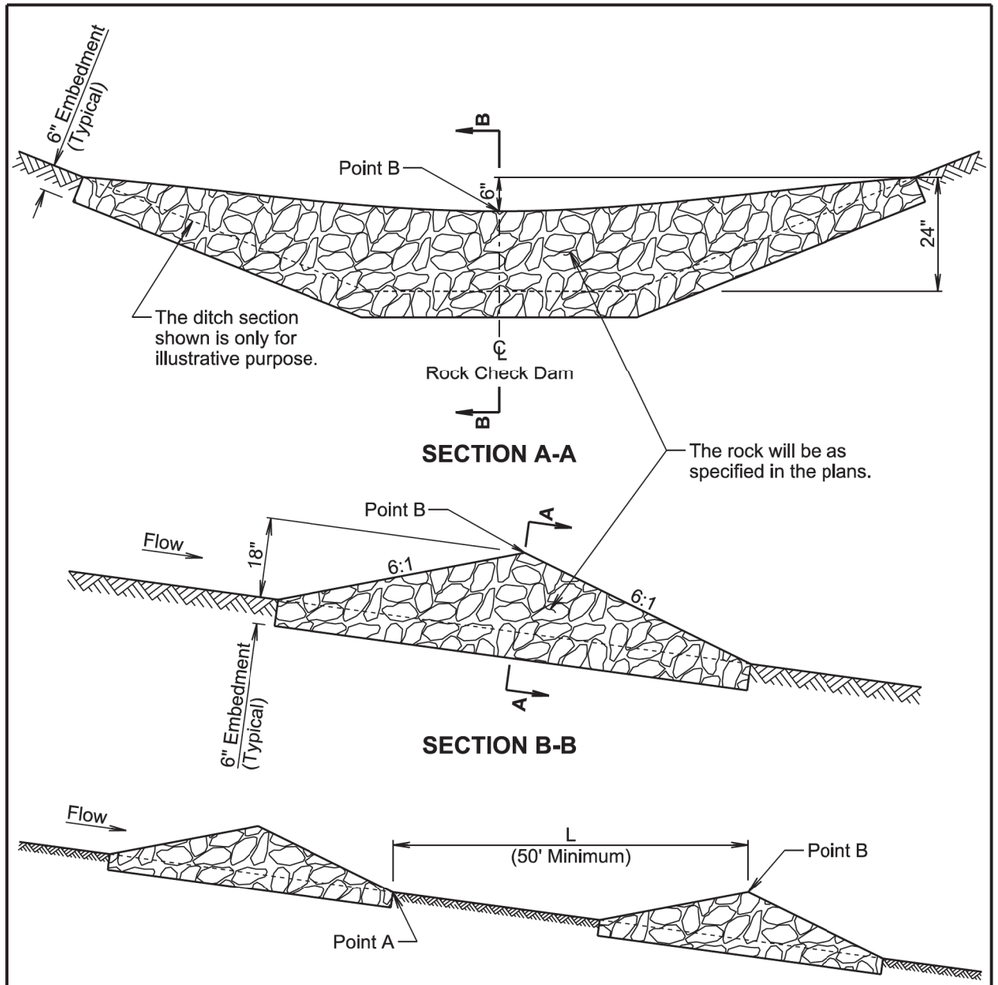
SECTION A-A



SECTION B-B

PARALLEL TO ROADWAY

Plotting Date: 10/9/2025 Rev: 9/11/2025 BRC Rev: 9/30/2025 BRC



SECTIONAL VIEW
(Section along center line of rock ckeck dams)

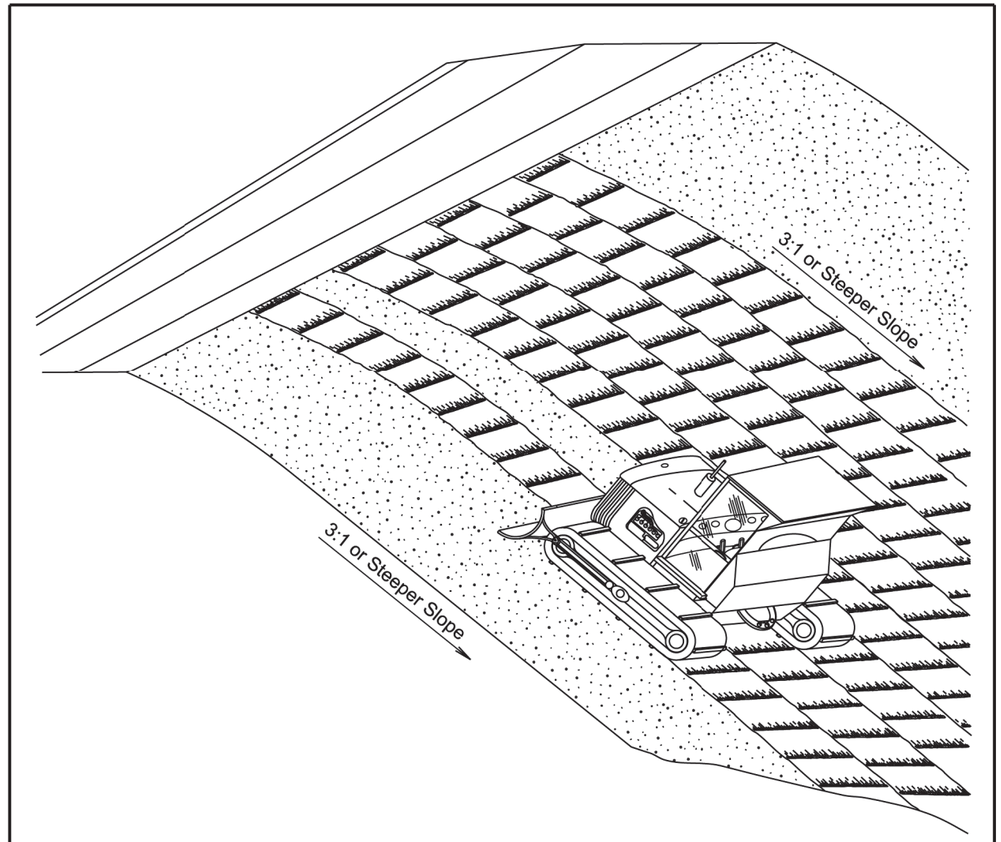
GENERAL NOTES:

The elevation of Point A and Point B will be the same. The distance L is the distance required such that Point A and Point B are at the same elevation.

All costs for constructing the rock check dam including labor, equipment, excavation, and rock will be incidental to the contract unit price per cubic yard for "Rock Check Dam".

February 14, 2020

Published Date: 2026	SDDOT	**ROCK CHECK DAM**	PLATE NUMBER 734.03 Sheet 1 of 1



GENERAL NOTES:

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

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

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

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

February 14, 2020

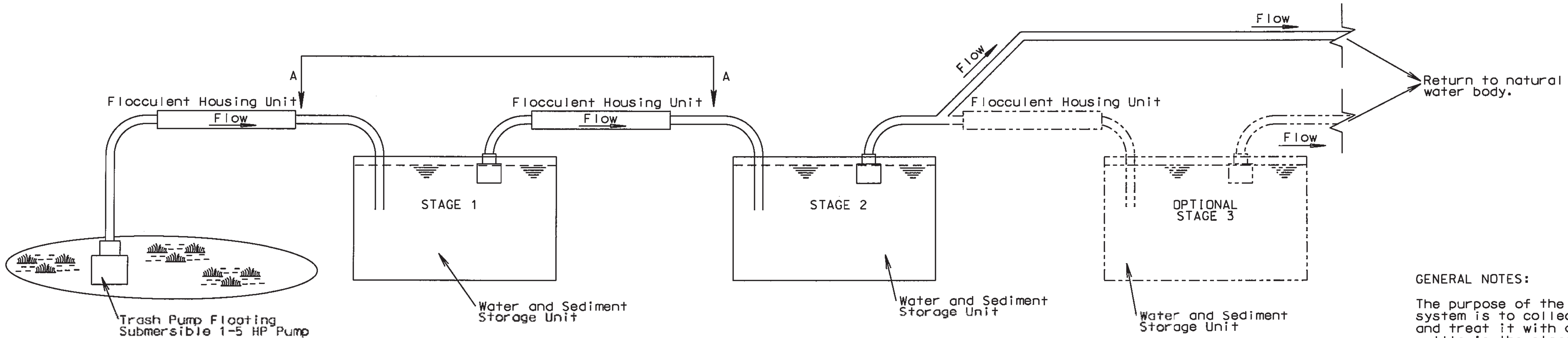
Published Date: 2026	SDDOT	**SURFACE ROUGHENING**	PLATE NUMBER 734.25 Sheet 1 of 1

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM 0902(111)62 N	D48	D48

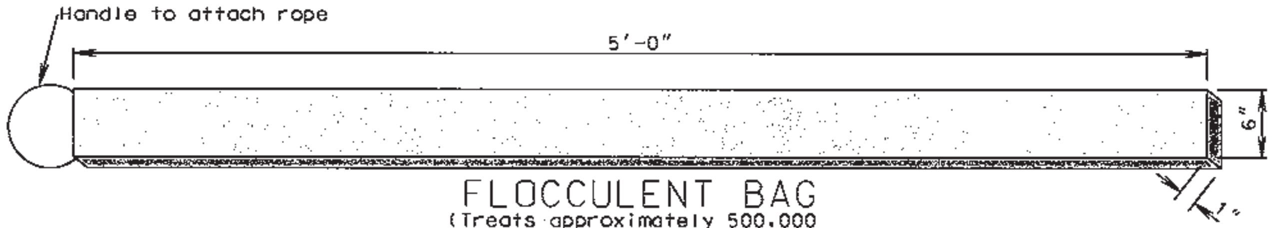
Plotting Date: 10/10/2023 Rev: 9/30/2025 BRC

FOR BIDDING PURPOSES ONLY

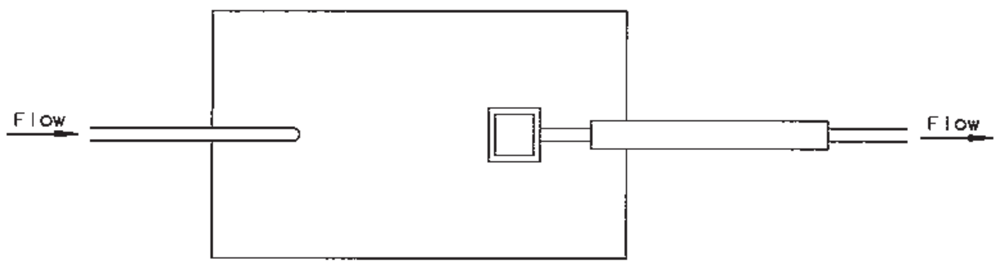
DEWATERING AND SEDIMENT COLLECTION SYSTEM



ELEVATION VIEW
CASCADE SYSTEM



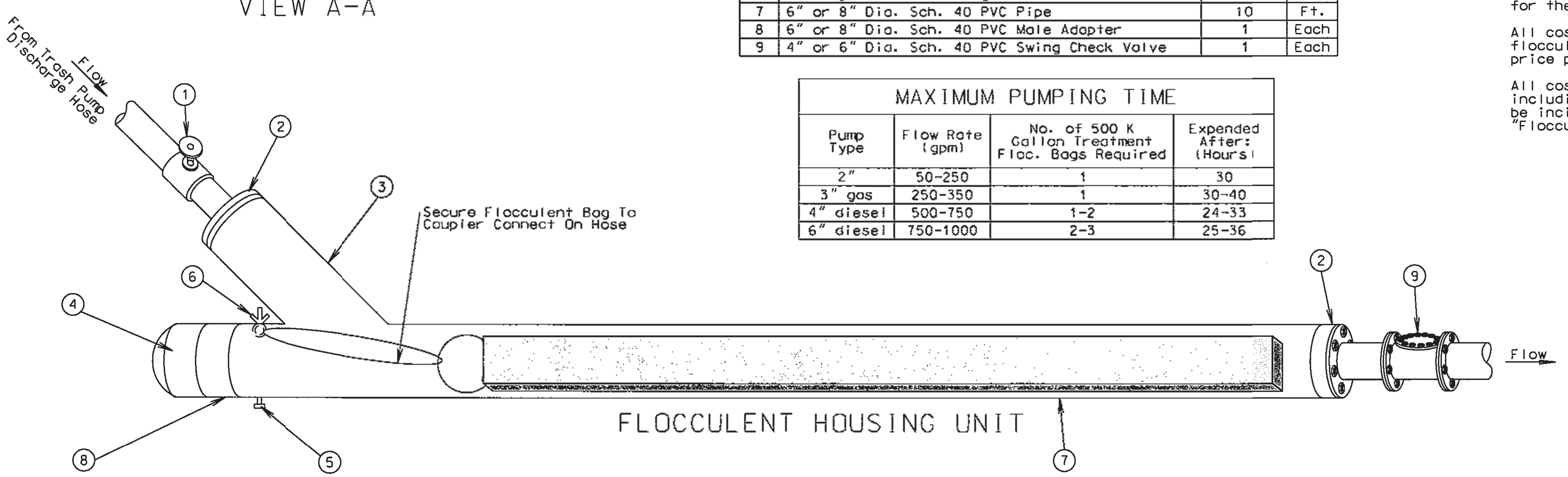
FLOCCULENT BAG
(Treats approximately 500,000 gallons of storm water)



VIEW A-A

FLOCCULENT HOUSING UNIT (Estimated Quantities) (For Information Only)			
NO.	DESCRIPTION	QUANTITY	UNIT
1	4" or 6" Dia. Sch. 40 Gate Valve	1	Each
2	4" X 6" or 6" X 8" Sch. 40 PVC Bushing	2	Each
3	6" or 8" Dia. Sch. 40 PVC "Y"	1	Each
4	6" or 8" Dia. Sch. 40 PVC Female Threaded Cap	1	Each
5	1" Dia. Sch. 80 PVC Drain Valve	1	Each
6	1/2" Eye Bolt With Wing Nut and Rubber Gromets	1	Each
7	6" or 8" Dia. Sch. 40 PVC Pipe	10	Ft.
8	6" or 8" Dia. Sch. 40 PVC Male Adapter	1	Each
9	4" or 6" Dia. Sch. 40 PVC Swing Check Valve	1	Each

MAXIMUM PUMPING TIME			
Pump Type	Flow Rate (gpm)	No. of 500 K Gallon Treatment Floc. Bags Required	Expended After: (Hours)
2"	50-250	1	30
3" gas	250-350	1	30-40
4" diesel	500-750	1-2	24-33
6" diesel	750-1000	2-3	25-36



FLOCCULENT HOUSING UNIT

GENERAL NOTES:

The purpose of the dewatering and sediment collection system is to collect turbid storm water on the project and treat it with a flocculent. The sediment would then settle in the storage units and the clear water would then be discharged into the storm sewer, lake, stream, vegetated ditch, or other Engineer approved site. Clear water for this project is defined as having a maximum of 30 mg/L of suspended solids. The clear water discharged shall have a ph between 6.1 and 8.5, with a ph of 7.0 preferred.

The drawing of the cascade system is for conceptual purposes only; however, the cascade system shall at a minimum incorporate the use of 2 flocculent housing units and 2 water and sediment storage units.

Design and construction of the water and sediment storage units are project site specific and shall be the Contractor's responsibility. A water and sediment storage unit may consist of a storage bin lined with plastic, the bed of a dump truck lined with plastic, a sediment retention basin, or other Engineer approved unit.

The 500,000 gallon treatment flocculent bag shall be a BIOSTAR ™ CH product or approved equal. Information concerning the product may be found on the Internet at the following location: http://www.biostar-ch.com

All costs for the dewatering and sediment collection system including disposing of sediment collected in the water and sediment storage units, pumping, furnishing and using the water and sediment collection units, labor, materials, and incidentals necessary for the dewatering and sediment collection system shall be incidental to the contract unit price per hour for "Dewatering". Measurement shall be based on the number of hours pumping occurs for the dewatering and sediment collection system.

All costs for furnishing the 500,000 gallon treatment flocculent bag shall be incidental to the contract unit price per each for "500 K Gallon Treatment Flocculent Bag".

All costs for furnishing the flocculent housing unit including all labor, materials, and incidentals shall be incidental to the contract unit price per each for "Flocculent Housing Unit".