

165.14 FEET NONE 165.14 FEET

STATE OF	PROJECT	SHEET	TOTAL SHEETS
DAKOTA	I190S-452	1	18
Plotting Date:	05-12-2020		

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0.0313 MILES NONE 0.0313 MILES



ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

BID ITEM	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
009E3290	Structure Staking	1	Each
009E3300	Three Man Survey Crew	10.0	Hour
110E1140	Remove Concrete Sidewalk	75.6	SqYd
230E0100	Remove and Replace Topsoil	Lump Sum	LS
634E0010	Flagging	100.0	Hour
634E0110	Traffic Control Signs	173.6	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0275	Type 3 Barricade	2	Each
634E0600	4" Temporary Pavement Marking Tape Type I	130	Ft
634E2000	Longitudinal Pedestrian Barricade	11	Each
651E0040	4" Concrete Sidewalk	680	SqFt
734E0010	Erosion Control	Lump Sum	LS
734E0103	Type 3 Erosion Control Blanket	1127	SqYd
734E0170	Temporary Sediment Barrier	321	Ft
734E0845	Sediment Control at Inlet with Frame and Grate	5	Each
734E5010	Sweeping	10	Hour
900E1080	Orange Plastic Safety Fence	62	Ft
900E2030	Miscellaneous Work	1	Site

SPECIFICATIONS

Standard Specifications for Roads and Bridges, 2015 Edition and Required Provisions, Supplemental Specifications, and Special Provisions as included in the Proposal.

ENVIRONMENTAL COMMITMENTS

The SDDOT is committed to protecting the environment and uses Section A Environmental Commitments as a communication tool for the Engineer and Contractor to ensure that attention is given to avoid, minimize, and/or mitigate an environmental impact. Environmental commitments to various agencies and the public have been made to secure approval of this project. An agency with permitting authority can delay a project if identified environmental impacts have not been adequately addressed. Unless otherwise designated, the Contractor's primary contact regarding matters associated with these commitments will be the Project Engineer. These environmental commitments are not subject to change without prior written approval from the SDDOT Environmental Office.

Additional guidance on SDDOT's Environmental Commitments can be accessed through the Environmental Procedures Manual found at: http://www.sddot.com/resources/Manuals/EnvironProcManual.pdf

For questions regarding change orders in the field that may have an effect on an Environmental Commitment, the Project Engineer will contact the Environmental Office at 605-773-3098 or 605-773-4336 to determine whether an environmental analysis and/or resource agency coordination is necessary.

COMMITMENT E: STORM WATER

Construction activities constitute less than 1 acre of disturbance.

Action Taken/Required:

At a minimum and regardless of project size, appropriate erosion and sediment control measures must be installed to control the discharge of pollutants from the construction site.

COMMITMENT H: WASTE DISPOSAL SITE

The Contractor will furnish a site(s) for the disposal of construction and/or demolition debris generated by this project.

Action Taken/Required:

Construction and/or demolition debris may not be disposed of within the Public ROW.

The waste disposal site(s) will be managed and reclaimed in accordance with the following from the General Permit for Construction/Demolition Debris Disposal Under the South Dakota Waste Management Program issued by the Department of Environment and Natural Resources.

The waste disposal site(s) will not be located in a wetland, within 200 feet of surface water, or in an area that adversely affects wildlife, recreation, aesthetic value of an area, or any threatened or endangered species, as approved by the Environmental Office and the Project Engineer.

If the waste disposal site(s) is located such that it is within view of any ROW, the following additional requirements will apply:

1. Construction and/or demolition debris consisting of concrete, asphalt concrete, or other similar materials will be buried in a trench completely separate from wood debris. The final cover over the construction and/or demolition debris will consist of a minimum of 1 foot of soil capable of supporting vegetation. Waste disposal sites provided outside of the Public ROW will be seeded in accordance with Natural Resources Conservation Service recommendations. The seeding recommendations may be obtained through the appropriate County NRCS Office. The Contractor will control the access to waste disposal sites not within the Public ROW with fences, gates, and placement of a sign or signs at the entrance to the site stating "No Dumping Allowed".

2. Concrete and asphalt concrete debris may be stockpiled within view of the ROW for a period of time not to exceed the duration of the project. Prior to project completion, the waste will be removed from view of the ROW or buried and the waste disposal site reclaimed as noted above.

The above requirements will not apply to waste disposal sites that are covered by an individual solid waste permit as specified in SDCL 34A-6-58, SDCL 34A-6-1.13, and ARSD 74:27:10:06.

Failure to comply with the requirements stated above may result in civil penalties in accordance with South Dakota Solid Waste Law, SDCL 34A-6-1.31.

All costs associated with furnishing waste disposal site(s), disposing of waste, maintaining control of access (fence, gates, and signs), and reclamation of the waste disposal site(s) will be incidental to the various contract items.

COMMITMENT I: HISTORICAL PRESERVATION OFFICE CLEARANCES

State Historical Preservation Office (SHPO or THPO) concurrence has not been obtained for this project.

Action Taken/Required:

All earth disturbing activities not designated within the plans require a cultural resource review prior to scheduling the pre-construction meeting. This work includes, but is not limited to: Contractor furnished material sources, material processing sites, stockpile sites, storage areas, plant sites, and waste areas.

The Contractor will arrange and pay for a record search and when necessary, a cultural resource survey. The Contractor has the option to contact the state Archaeological Research Center (ARC) at 605-394-1936 or another qualified archaeologist, to obtain either a records search or a cultural resources survey. A record search might be sufficient for review if the site was previously surveyed; however, a cultural resources survey may need to be conducted by a qualified archaeologist.

The Contractor will provide ARC with the following: a topographical map or aerial view of which the site is clearly outlined, site dimensions, project number, and PCN. If applicable, provide evidence that the site has been previously disturbed by farming, mining, or construction activities with a landowner statement that artifacts have not been found on the site.

The Contractor will submit the cultural resources survey report to SDDOT Environmental Office, 700 East Broadway Avenue, Pierre, SD 57501-2586. SDDOT will submit the information to the appropriate SHPO/THPO. Allow **30 Days** from the date this information is submitted to the Environmental Engineer for SHPO/THPO review.

In the event of an inadvertent discovery of human remains, funerary objects, or if evidence of cultural resources is identified during project construction activities, then such activities will immediately cease and the Project Engineer will be immediately notified. The Project Engineer will contact the SDDOT Environmental Office to determine an appropriate course of action.

The Contractor is responsible for obtaining any additional permits and clearances for Contractor furnished material sources, material processing sites, stockpile sites, storage areas, plant sites, and waste areas that affect wetlands, threatened and endangered species, or waterways. The Contractor will not utilize a site known or suspected of having contaminated soil or water. The Contractor will provide the required permits and clearances to the Project Engineer at the preconstruction meeting.

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SCOPE OF WORK

Work on this project involves removing and installing a new Gravity Large Concrete Block Retaining Wall ("Wall J"). After the wall is installed, the slope will be stabilized using typical erosion control methods as shown in the plans.

UTILITIES

The Contractor will be aware that the existing utilities shown in the plans were surveyed prior to the design of this project and might have been relocated or replaced by a new utility facility prior to construction of this project, might be relocated or replaced by a new utility facility during the construction of this project, or might not require adjustment and may remain in its current location. The Contractor will contact each utility owner and confirm the status of all existing and new utility facilities. The utility contact information is provided below.

Black Hills Corporation has a 69 kV OH transmission line within the project limits. The Contractor will be required to protect and work around the existing OH power pole at Station 210+01-33' LT while relocating Wall J.

Utility Contact Information:

Black Hills Corporation

7001 Mount Rushmore Road Rapid City, SD 57702 Marvin Geersen – 605-721-2232 (Transmission)

TABLE OF CONSTRUCTION STAKING

(See Special Provision for Contractor Staking)

Roadway and Description	Begin Station	End Station	Structure Staking Quantity (Each)
Wall "J"	211+59 R	211+94 R	1
		Totals:	1

SIDEWALK

A quantity of sidewalk removal and installation has been included in the quantities to account for the replacement of any sidewalk panels that are damaged during the construction of the wall, as necessary and as directed by the Engineer.

TABLE OF SIDEWALK REMOVAL

			Quantity
Station to	Station	L/R	(SqYd)
209+ 94	211+30	L _	75.6
		Total:	75.6

TABLE OF 4" CONCRETE SIDEWALK

Station	to	Station	L/R	Quantity (SqFt)
209+ 94		211+30	L	680.0
			Total:	680.0

REMOVE AND REPLACE TOPSOIL

Topsoil will be salvaged and stockpiled prior to work on the gravity large concrete block retaining wall. Limits of this work, depth of salvage, and stockpile location will be directed by the Engineer. Following completion of construction, topsoil will be spread evenly over the disturbed areas. The thickness will be approximately 4 inches.

The estimated amount of topsoil to be removed and replaced is 162 CuYd.

All costs associated with removing and replacing the topsoil will be incidental to the contract lump sum price for "Remove and Replace Topsoil".

EROSION CONTROL

The estimated area requiring erosion control is 13,140 square feet. All costs for the erosion control work for furnishing, placing, and maintaining erosion control including equipment, labor, seeding, fertilizing, and mulching will be incidental to the contract lump sum price for "Erosion Control".

The limits of erosion control work will be determined by the Engineer during construction.

Mycorrhizal Innoculum

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 the following fungal species:

- 25% Glomus intraradices
- 25% Glomus aggregatum or deserticola
- 25% Glomus mosseae
- 25% Glomus etunicatum

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 lump sum price for "Erosion Control".

Produ MycoA

AM 120 Multi Si

Permanent Seeding

The areas to be seeded consist of all newly graded areas and disturbed areas within the project limits.

Type F Permanent Seed Mixture will consist of the following:

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Grass Specie
Western Wheatgr
Green Needlegras
Sideoats Grama
Blue Grama
Oats or Spring W
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April through May Winter Wheat: Au through Novembe

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

<u>uct</u>	<u>Manufacturer</u>
pply	Mycorrhizal Applications, Inc. Grants Pass, OR Phone: 1-866-476-7800 www.mycorrhizae.com
pecies Blend	Reforestation Technologies Int. Gilroy, CA Phone: 1-800-784-4769 <u>www.reforest.com</u>

es	Variety	Pure Live Seed (PLS) (Pounds/Acre)
rass	Arriba, Flintlock, Rodan, Rosana, Walsh	7
SS	Lodorm, AC Mallard Ecovar	4
	Butte, Pierre	3
	Bad River	2
'heat: /; ugust er		10
	Total:	26



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 all-natural slow release fertilizer will be as shown below or an approved equal:

Product	Manufacturer
Sustane	Sustane Corporate Headquarters Cannon Falls, Minnesota Phone: 1-800-352-9245 www.sustane.com
Perfect Blend	Perfect Blend, LLC Bellevue, WA Phone: 1-866-456-8890 <u>www.perfect-blend.com</u>



Hydraulic Straw Mulch

Hydraulic straw mulch will be applied to the areas noted in the table. Hydraulic straw mulch will not be placed in channels. Hydraulic straw mulch will be applied after seeding. Areas designated for hydraulic straw mulch application do not require a grass hay or straw mulch application. The application rate is 3,000 pounds per acre.

All costs for furnishing and applying the hydraulic straw mulch including the manufacturer recommended soil stabilizer or tackifier, hauling, materials, equipment, labor, and incidentals necessary will be incidental to the contract lump sum price for "Erosion Control".

The hydraulic straw mulch will be from the list below or an approved equal:

<u>Product</u>			<u>Manuf</u>	<u>acturer</u>	
HydroStraw, HydroStraw Fiber Plus, HydroStraw Guar Plus, or HydroStraw BFM			HydroStraw, Manteno, IL Phone: 1-800 <u>hydrostraw.co</u>	LLC 1-545-1755 om	
HydroGold			Verdyol Riverton, Mar Phone: 1-866 <u>www.bioticea</u>	nitoba Canada -280-7327 <u>rth.com</u>	
TABLE OF	F HYDF	RAULIC ST	RAW MULCH		
Station 209+94	to	Station 211+61	L/R L	Quantity (Lb) 179	
			Total:	179	

EROSION CONTROL BLANKET

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

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

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

TABLE OF EROSION CONTROL BLANKET

						Quantity
Station to	Station	L/R		Location	Туре	(SqYd)
209+71	211+75	L	Slope		3	1,127

Total Type 3 Erosion Control Blanket: 1,127

TEMPORARY SEDIMENT BARRIER

Temporary sediment barriers will be installed at locations noted in the table and at locations determined by the Engineer during construction.

Installation of the temporary sediment barrier will be in accordance with the manufacturer's installation instructions. It is the Contractor's responsibility to select product(s) best suited as perimeter control, slope interrupters, and ditch checks based on site conditions.

All costs for furnishing, installing, and maintaining the temporary sediment barrier including hauling, materials, equipment, labor, and incidentals necessary will be paid for at the contract unit price per foot for "Temporary Sediment Barrier".

The temporary see equal:

Product

ProWattle Perimeter G

Compost Filter 9" and 12

SedimentST Or SediMax-FR Filtra

> Silt Sock 8" and 12

Terra-Tub

Hi-Flo and Maxx Fence

Silt Shield

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The temporary sediment barriers will be from the list below or an approved

Manufacturer

e uard	ERTEC Environmental Systems LLC Alameda, CA Phone: 1-866-521-0724 www.ertecsystems.com
r Sock 2"	Dioten Engineering, Inc. Rapid City, SD Phone: 1-605-430-7213 <u>www.dioten.com/</u>
ГОР	North American Green
ation Rolls	Poseyville, in Phone: 1-800-772-2040 www.tensarnagreen.com
< 2"	Aspen Ridge Lawn and Landscaping, LLC Rapid City, SD Phone: 1-605-415-0695 <u>www.siltsocksd.com</u>
es	Profile Products LLC Buffalo Grove, IL Phone: 1-800-366-1180 www.profileproducts.com
k-Flo Silt	Flo-Water, LLC West Des Moines, IA Phone: 1-515-577-6763 www.flo-water.net
d	SiltShield, LLC Sterling Heights, MI Phone: 1-586-731-5577

www.siltshield.com

TABLE OF TEMPORARY SEDIMENT BARRIER

Station	L/R	Location	Quantity (Ft)
209+72 to 211+57	L	Slope	321
		Tota	ıl: 321

SEDIMENT CONTROL AT INLETS WITH FRAMES AND GRATES

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

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

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

Sediment collection devices will be:

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

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

TABLE OF SEDIMENT CONTROL AT INLETS WITH FRAMES AND GRATES

Station	L/R	Quantity (Each)
208+83	L	1
208+94	L	1
209+05	L	1
211+69	L	2
	Total:	5

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SOUTH DAKOTA	I190S-452	5	18
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SEQUENCE OF OPERATIONS

The Contractor will submit a sequence of operations for approval two weeks prior to the preconstruction meeting. Approval of an alternate sequence of operations will only be allowed when the proposed changes meet with the Department's intent for traffic control and sequencing of the work. An alternate sequence will be submitted for review a minimum of one week prior to potential implementation.

GENERAL TRAFFIC CONTROL

Existing guide, route, informational logo, regulatory, and warning signs will be temporarily reset and maintained during construction. Removing, relocating, covering, salvaging, and resetting of existing traffic control devices, including delineation, will be the responsibility of the Contractor. Cost for this work will be incidental to the contract unit prices for the various items unless otherwise specified in the plans. Any delineators and signs damaged or lost will be replaced by the Contractor at no cost to the State.

All temporary traffic control sign locations will be set in the field by the Contractor and verified by the Engineer prior to installation.

All construction operations will be conducted in the general direction of traffic movement.

If there is a discrepancy between the traffic control plans, standard plates, and the MUTCD, whichever is more stringent will be used, as determined by the Engineer.

Unless otherwise stated in these plans, work will not be allowed during hours of darkness.

Traffic Control Signs, as shown in the Estimate of Quantities, are estimates. Contractor's operation may require adjustments in quantities, either more or less. Payment will be for those signs actually ordered by the Engineer and used.

Fixed location signing placed more than 4 calendar days prior to the start of construction will be covered or laid down until the time of construction. The covers must be approved by the Engineer prior to installation. The cost of materials, labor, and equipment necessary to complete this work will be incidental to other contract items. No separate payment will be made.

All fixed location signs, sign posts, and breakaway bases will be removed within 7 calendar days following pavement marking.

PRESS RELEASE ANNOUNCEMENTS

The SDDOT will prepare a press release to be released 5 days prior to any phase change or any other major change that affects traffic flow. The SDDOT will be responsible to keep law enforcement, emergency services, and the traveling public notified of changes in project access. The Contractor will provide the Engineer with pertinent information 7 days prior to any phase change or any other major change that affects traffic flow.

LONGITUDINAL PEDESTRIAN BARRICADE

Longitudinal pedestrian barricades should not be used to provide positive protection for pedestrians.

To prevent any tripping hazard to pedestrians, ballast will be located behind or internal to the device.

When longitudinal pedestrian barricades are combined in a series, the maximum gap between devices that do not interlock will be one inch. Joints between devices that do interlock will be closed and flush to prevent canes or small wheels from being trapped and to facilitate safe hand trailing. When used as a sidewalk closure mechanism, longitudinal pedestrian barricade must run the entire width of the sidewalk. Longitudinal pedestrian barricade should provide a color contrasting pattern. Black should not be used to color any base on a device. The devices should comply with the general color and stripe pattern requirements of Section 6F.68 of the MUTCD.

Longitudinal pedestrian barricade will have continuous bottom and top surfaces. The top surface will be smooth to allow safe hand trailing. Both upper and lower surfaces will share a common vertical plane.

All costs will be incidental to the contract unit price per foot for "Longitudinal Pedestrian Barricade".

PEDESTRIAN CHANNELIZING DEVICE DETAILS



- 1. Barricade rail supports may not extend into the pedestrian walkway more than 4 inches from the face of the barricade.
- 2. The top edge of the bottom portion will be a minimum of 8 inches above the walkway.
- 3. Devices will not block water drainage from the walkway. A gap height or opening from the walkway surface up to a maximum of 2 inches in height is allowed for drainage purposes.
- 4. The top edge of the longitudinal pedestrian barricade is to be used as a guiderail to provide visual and tactile guidance to pedestrians along a designated route. The top surface should have a minimum width of 0.5 inches to allow the hand to feel the surface. The surface should be smooth and free of any sharp or abrasive elements to allow safe hand trailing.
- 5. Longitudinal pedestrian barrier used to provide positive protection from traffic to pedestrians should be crashworthy.

TEMPORARY PAVEMENT MARKING TAPE TYPE I

See traffic control sheet for marking requirements.

Temporary pavement marking tape type I quantity is calculated as follows:

Stopbar - 96' White 2' skips - 18' Yellow 2' skips - 16' TOTAL - 130'

All costs to furnish, install, maintain (including replacement as required by the Engineer at no added cost to the Department), and remove the temporary

pavement marking tape type will be included in the contract price per foot for Temporary Pavement Marking Tape Type I.

ORANGE PLASTIC SAFETY FENCE

The Contractor will furnish and install 4 ft. high orange plastic safety fence with posts at a minimum spacing of 10 ft. on the project to protect open excavations and drop offs. The safety fence must always be maintained in a taut condition.

The Contractor will maintain and make repairs to the fence until directed to remove it by the Engineer.

All costs associated with furnishing and installing posts and orange plastic safety fence, maintaining, repairing, removing and replacing the orange plastic safety fence and posts will be paid for at the contract unit price per foot for Orange Plastic Safety Fence.

		CONVENTIONAL ROAD			
SIGN CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
R1-1	STOP	2	30"	5.2	10.4
R4-7c	(Narrow) KEEP RIGHT (symbol)	3	18" x 30"	3.8	11.4
R9-9	SIDEWALK CLOSED	2	24" x 12"	2.0	4.0
W1-3	REVERSE TURN (L or R)	1	48" x 48"	16.0	16.0
W13-1P	ADVISORY SPEED (plaque)	1	30" x 30"	6.3	6.3
W20-1	ROAD WORK AHEAD	5	48" x 48"	16.0	80.0
W20-7	FLAGGER (symbol)	2	48" x 48"	16.0	32.0
G20-2	END ROAD WORK	3	36" x 18"	4.5	13.5
	-	CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT 173.0			173.6

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ITEMIZED LIST FOR TRAFFIC CONTROL SIGNS



	EROSION AN	ND SEDIN	IENT	CONTROL	LEGEND	STATE OF SOUTH	PROJECT	SHEET	TOTAL SHEETS
SYMBOLOG	Y FOR BEST MANAGEMENT PRACTICES		17. Anna 18. A			DAKOTA	05 12 2020	8	
-	STORM WATER DISCHARGE POINT					Flotting Date.	03-12-2020		
	LOW FLOW SILT FENCE	DECT							
	HIGH FLOW SILT FENCE	BESI	MANAGEN	VIENT PRACTICES					
M	SILT TRAP	BEST N		PRACTICES (BMP'S) SHOULD	BE USED THROUGHOUT CONST	RUCTION. 1	O REMIND CONTRACTO	ORS	
Ц	SEDIMENT CONTROL AT INLET WHEN SURFACING IS IN PLACE	PROCE	ESS, THE SYMB	BOLOGY IS COLORED AS FOL	LOWS:				
	TEMPORARY SEDIMENT BARRIER			RE TO BE INSTALLED BEFOR	RE EARTH MOVING ACTIVITES OF	MMENCE E			
00000	TEMPORARY WATER BARRIER		FOR PERIME	TER CONTROL. THEY PREVE	ENT SEDIMENT FROM LEAVING T	HE SITE OR	ENTERING FROM ANOT	HER	
~~~	FLOATING SILT CURTAIN		MAINTAINED	FOR THE REMAINDER OF C	ONSTRUCTION OR UNTIL VEGET	E. THEY MA	Y BE LEFT IN PLACE AN REACHED 70% OF THE	D	
8	SEDIMENT FILTER BAGS		BACKGROUN	ND LEVEL.					
Ø	TRIANGULAR SILT BARRIERS		BLUE BMPS	ARE TO BE INSTALLED DURI	NG CONSTRUCTION. BLUE BMPS	ARE USED	FOR TEMPORARY		
	EROSION CONTROL WATTLES		STABILIZATI	ON. THEY PREVENT EROSIC	N DURING CONSTRUCTION. THE		BE SEDIMENT CONTRO	OLS	
	EROSION BALES		MAINTAINED	FOR THE REMAINDER OF C	ONSTRUCTION OR UNTIL VEGET	ATIONHAS R	EACHED 70% OF THE		
1///	SURFACE ROUGHENING		BACKGROUN	ND LEVEL. SOME YELLOW BI	MPS WILL BE REMOVED OR REPI	LACED DURI	NG CONSTRUCTION.		
XXX	SOIL STABILIZER / TEMPORARY MULCH / DUST CONTROL		GREEN BMP	S ARE TO BE INSTALLED WH	EN GRADING IS COMPLETE. GRE	EN BMPS A	RE USED FOR FINAL		
			STABILIZATI	ON. THEY ARE PERMANENT	ERUSION CONTROL MEASURES	THATAREN	IOT REMOVED.		
		IF THE	CONTRACTOR		ISE ADDITIONAL BEST MANAGEN	IENT PRACT	ICES OR LABEL		
$\bigcirc$		THE LC	CATIONS OF T	THEM THEY SHOULD USE TH	E SYMBOLOGY SHOWN. OTHER	BEST MANA	GEMENT		
$\sim$	BONDED FIBER MATRIX / FIBER REINFORCED MATRIX	PRACT	ICES FOR WHI	CH THERE IS NO STMBOLOG	Y INCLUDE:				
223	ROCK CHECK DAM	PERMA	NENT SEEDING	G IS DONE BEFORE THE APP IES AND MATRIXS. PERMAN	LICATION OF ALL TYPES OF MUL ENT GRASS HAY/ STRAW MULCH	CHING AND	HYDRAULICALLY WN ON PLAN		
$\psi^{\psi}\psi^{\psi}\psi^{\psi}\psi^{\psi}\psi^{\psi}$	SODDING	SHEET	S, BUT IT CAN	BE ASSUMED THAT ALL ARE	AS THAT ARE NOT ROADWAYS C	N RURAL PF	ROJECTS WILL BE		
V//////	TYPE 1 EROSION CONTROL BLANKET	SHOW	N WITH THE AP	PROPRIATE SYMBOLOGY.	ERNATE TO GRASS HAT /STRAM		JSED WILL BE		
××××××	TYPE 2 EROSION CONTROL BLANKET	SEDIM	ENT BASINS UT	TILIZED DURING CONSTRUCT	TION WILL BE SHOWN ON PLAN S	HEETS AND	IN SECTION X.		
	TYPE 3 EROSION CONTROL BLANKET	GEOTE		USUALLY SUPPLEMENTS OT	HER BMPS BUT IT MAY BE USED		RARILY COVER AREAS		
	TYPE 4 EROSION CONTROL BLANKET	FOR EF	ROSION PROTE	ECTION UNTIL IT IS PERMENA	NTLY INSTALLED.				
	TYPE 1 TURF REINFORCEMENT MAT	STREE	T SWEEPING S	HOULD BE DONE AS NEEDE	D TO KEEP SEDIMENT ON ROAD	WAYS FROM	LEAVING THE SITE.		
	TYPE 2 TURF REINFORCEMENT MAT	DEWAT	FERING AND SE	EDIMENT COLLECTING IS SH	OWN ON A DETAIL SHEET WHEN	IT IS NEEDE	D. DEWATERING		
	TYPE 3 TURF REINFORCEMENT MAT	WITHO	UT SEDIMENT	COLLECTING DOES NOT HAN	/E A DETAIL, JUST A DETAILED N	OTE. SEDIM	IENT LADEN WATER		
00000	SYNTHETIC CHANNEL PROTECTION	3000							
TS	TOPSOIL STOCKPILES	GABIO	NS AND RIP RA	AP AT PIPE AND CULVERT OU	TLETS ARE DETAILED IN SECTIO	N B.			
В	BORROW AREAS								
(CE)	STABILIZED CONSTRUCTION ENTRANCES	PRO	JECT PHAS	SING					
(cw)	CONCRETE WASHOUTS	PROJE	CT PHASING M	AY BE ONE OF THE MOST IM	PORTANT BMPS. DURING PHAS	ING REMEM	BER THE FOLLOWING:		
BS	VEGETATED BUFFER STRIPS								
Ä	ASPHALT PLANT SITE		ALWAYS INS	TALL PERIMETER CONTROL	S BEFORE BEGINNING EARTH M	OVING ACTIV	/ITIES.		
ä				TURB MORE AREA THAN WH	AT IS NEEDED TO COMPLETE FA	CH PHASE C	E CONSTRUCTION		
S.								-	
	ON-SITE CONSTRUCTION MATERIAL STORAGE AREAS		IF POSSIBLE	CONSTRUCT SEDIMENT BA	SINS AND STABILIZE THEM BEFU	RE BEGINNI	NG RUADWAY GRADING	۵.	
SK	SPILL KIT		TEMPORARI	LY STABILIZE AREAS THAT W	/ILL NOT BE TOUCHED WITHIN 14	4 DAYS.			
(WP	WORK PLATFORM		PERMANENT	TLY STABILIZE AREAS WHEN	GRADING IN THAT AREA IS COM	PLETE, PER			
(TP)	PORTABLE TOILET		ROADWAY H	AS BEEN CONSTRUCTED.	THASES AND DUES NUT HAVE IC				
$(\lor)$	VEHICLE AND EQUIPMENT PARKING, FUELING, AND MAINTENANCE AREAS		CONTINUALL	LY MAINTAIN ALL SEDIMENT	CONTROLS AND MONITOR AREA	S WHERE EF	ROSTION CONTROL		
D	DUMPSTER OR OTHER TRASH AND DEBRIS CONTAINERS		HAS BEEN IN	NSTALLED.					
									- 1 - 1 - 1

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# HORIZONTAL ALIGNMENT DATA

# North Street

Туре	Station			Northing	Easting
POB	200+00.00			653412.22	1205161.21
		TL = 1068.61	S 88°09′24″ E		
PC	210+68.61			653377.85	1206229.26
PI	211+14.16	R = 510.00	DELTA=10°12'25" Left	653376.38	1206274.79
PT	211+59.46			653383.01	1206319.85
		TL = 672.45	N 81°38′11″ E		
PC	218+31.92			653480.82	1206985.15
PI	219+46.83	R = 510.00	DELTA=25°23'43" Right	653497.54	1207098.84
PT	220+57.96			653463.88	1207208.71
		TL = 0.00	S 72°58′07″ E		
PC	220+57.96			653463.88	1207208.71
PI	222+25.74	R = 510.00	DELTA=36°25'11" Left	653414.74	1207369.13
PT	223+82.14			653470.43	1207527.39
		TL = 146.68	N 70°36′42″ E		
PC	225+28.82			653519.13	1207665.75
PI	226+72.33	R = 550.00	DELTA=29°14′53″ Right	653566.77	1207801.13
PT	228+09.58			653542.19	1207942.52
		TL = 337.02	S 80°08′24″ E		
POE	231+46.60			653484.48	1208274.56

The coordinates shown on this sheet are based on the South Dakota State Plane Coordinate System. South Zone (NAD 83/96) Epoch 2002.00 Geoi

		STATE OF	PROJECT	SHEET	TOTAL SHEETS
		DAKOTA	I190S-452	10	18
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# **CONTROL DATA**

Point #	Station / Offset (Alignment)	Description	Northing	Easting	Elevation
CP01	212+19.20-1759.28' R (North Street)	REBAR	651651.13	1206634.85	3236.23
CP06	208+22.47-1942.56' R (North Street)	COTTON GIN SPINDLE	651444.21	1205920.77	3240.85

STATE OF	PROJECT	SHEET	TOTAL
SOUTH DAKOTA	I190S-452	11	18



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Anchor Antenna Approach Assumed Corner **Azimuth Marker BBQ Grill/ Fireplace Bearing Tree** Bench Mark Box Culvert Bridge 62633 Brush Buildings Bulk Tank Cattle Guard Cemetery Centerline Cistern **Clothes Line** Commercial Sign Double Face Commercial Sign One Post Commercial Sign Overhead Commercial Sign Two Post Concrete Symbol **Control Point** Creek Edge - - - -Curb/Gutter ...... Curb ..... Dam Grade/Dike/Levee Deck Edge **Ditch Block** Doorway Threshold **Drainage Profile** -----**Drop Inlet** Edge Of Asphalt Edge Of Concrete Edge Of Gravel Edge Of Other Edge Of Shoulder Electric Transformer/Power Junction Box Fence Barbwire Fence Chainlink Fence Electric Fence Miscellaneous Fence Rock Fence Snow Fence Wood Fence Woven Fire Hydrant Flag Pole Flower Bed 7777 Gas Valve Or Meter Gas Pump Island 0 Grain Bin Guardrail Guide Sign One Post Guide Sign Two Post Gutter 22222 Guy Pole Haystack

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Hedge Highway ROW Marker Interstate Close Gate Iron Pin Irrigation Ditch Lake Edge Lawn Sprinkler Mailbox Manhole Electric Manhole Gas Manhole Miscellaneous Manhole Sanitary Sewer Manhole Storm Sewer Manhole Telephone Manhole Water Merry-Go-Round Microwave Radio Tower Miscellaneous Line Miscellaneous Property Corner Miscellaneous Post Overhang Or Encroachment Overhead Utility Line Parking Meter Pedestrian Push Button Pole Pipe With End Section Pipe With Headwall Pipe Without End Section Playground Slide Playground Swing Power And Light Pole Power And Telephone Pole Power Meter Power Pole Power Pole And Transformer Power Tower Structure Propane Tank Property Pipe Property Pipe With Cap **Property Stone** Public Telephone Railroad Crossing Signal Railroad Milepost Marker Railroad Profile Railroad ROW Marker Railroad Signs Railroad Switch Railroad Track Railroad Trestle Rebar Rebar With Cap **Reference Mark Regulatory Sign One Post** Regulatory Sign Two Post **Retaining Wall** Riprap **River Edge Rock And Wire Baskets** Rockpiles Satellite Dish

Septic Tank	Ψ
Shrub Tree	0
Sidewalk	
Sign Face	
Sign Post	0
Slough Or Marsh	aliku — aliku
Spring	Ø
Stream Gauge	ø
Street Marker	<u> </u>
Subsurface Utility Exploration Test Hole	•
Telephone Fiber Optics	- T/F -
Telephone Junction Box	(T)
Telephone Pole	ø
Television Cable .lct Box	1
Television Tower	*
Test Wells/Bore Holes	
Traffic Signal	24
Trach Barrol	~
Troo Bolt	~~~~
Tree Coniference	4
Tree Conileious	6
Tree Deciduous	9
Triangulation Station	
Indegracy and Electric Line	
Underground Electric Line	
Underground Gas Line	
Underground Righ Pressure Gas Line	- ng -
Underground Sanitary Sewer	
Underground Storm Sewer	= 5 =
Underground Tank	=
Underground Telephone Line	
Underground Television Cable	- IV -
Underground water Line	— vv —
Warning Sign One Post	Þ
Warning Sign Two Post	F
Water Fountain	1
Water Hydrant	0
Water Meter	•
Water Tower	
Water Valve	0
Water Well	$\odot$
Weir Rock	~
Windmill	٥
Wingwall	
Witness Corner	<b>@</b>

	STATE OF	PROJEC	T	SHEET	TOTAL SHEETS
	SOUTH DAKOTA	I190S-4	152	12	18
	Plotting Date:	05-12-2020			
State and Nativ	onallino				
County Line					
Section Line					
Quarter Line					
Sixteenth Line					
Property Line					
Construction L	ine				
ROW Line					
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Control of Acce	ess	•	• • • • •	-•	
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Proposed ROV	N Dianana N				
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Remove Conci	rete Paven	nent	1///		
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Remove Conci	rete Sidew	ак			
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Remove Conc	rete Curb a	and/or Gutter	_		
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with 1 5% slop	Clear Spac	ie in the second s			
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GENERAL NOTES:

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

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

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

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

Where installing running lengths of wattles, the Contractor will but 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, 202
	S D D	EROSION CONTROL WATTLE	PLATE NUMBER 734.06
Published Date: 2nd Qtr. 2020	0 T		Sheet 2 of 2



GENERAL NOTES:

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

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

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

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

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

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

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

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Published Date: 2nd Qtr. 2020		WITH

STATE OF	PROJECT	SHEET	TOTAL
SOUTH DAKOTA	I190S-452	18	18
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February 14, 2020

MENT CONTROL AT INLETS H FRAMES AND GRATES PLATE NUMBER 734.10