

SD DOT
Distance Distance

Non

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ESTIMATE OF QUANTITIES

BID ITEM	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
110E0300	Remove Concrete Curb and/or Gutter	53	Ft
110E1010	Remove Asphalt Concrete Pavement	70.7	SqYd
110E1690	Remove Sediment	0.3	CuYd
110E1693	Remove Erosion Control Wattle	60	Ft
110E1695	Remove Sediment Filter Bag	25	Ft
110E7700	Remove Drop Inlet Frame and Grate Assembly for Reset	1	Each
120E0010	Unclassified Excavation	32	CuYd
250E0010	Incidental Work	Lump Sum	LS
260E1010	Base Course	22.3	Ton
320E1200	Asphalt Concrete Composite	23.9	Ton
634E0110	Traffic Control Signs	114.2	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0275	Type 3 Barricade	1	Each
634E0310	Temporary Flexible Vertical Markers (Tabs)	430	Ft
634E0420	Type C Advance Warning Arrow Board	1	Each
634E2000	Longitudinal Pedestrian Barricade	16	Ft
650E0060	Type B66 Concrete Curb and Gutter	53	Ft
670E6000	Adjust Drop Inlet	1	Each
670E7000	Reset Drop Inlet Frame and Grate Assembly	1	Each
734E0010	Erosion Control	Lump Sum	LS
734E0154	12" Diameter Erosion Control Wattle	60	Ft
734E0180	Sediment Filter Bag	25	Ft
734E0604	High Flow Silt Fence	24	Ft
734E0855	Interim Sediment Control at Inlet	1	Each
900E1080	Orange Plastic Safety Fence	80	Ft

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 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. During construction, the Project Engineer will verify that the Contractor has met Environmental Commitment requirements. 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: https://dot.sd.gov/media/documents/EnvironmentalProceduresManual.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 Engineer at 605-773-3180 or 605-773-4336 to determine whether an environmental analysis and/or resource agency coordination is necessary.

Once construction is complete, the Project Engineer will review all environmental commitments for the project and document their completion.

COMMITMENT D: WATER QUALITY STANDARDS

COMMITMENT D1: SURFACE WATER QUALITY

Rapid Creek is classified as a cold water permanent fishery with a total suspended solids standard of less than 30 mg/L 30-day average, less than 53 mg/L daily maximum.

Action Taken/Required:

The Contractor is advised that the South Dakota Surface Water Quality Standards, administered by the South Dakota Department of Agriculture and Natural Resources (DANR), apply to this project. Special construction measures will be taken to ensure the above standard(s) of the surface waters are maintained and protected.

COMMITMENT D2: SURFACE WATER DISCHARGE

The DANR General Permit for Temporary Discharge is required for temporary dewatering and discharges to waters of the state. The effluent limit for total suspended solids will be 90 mg/L 30-day average. The effluent limit applies to discharges to all waters of the state except discharges to waters classified as cold water permanent fish life propagation waters according to the ARSD 74:51:01:45. For discharges to waters of the state classified as cold water permanent fish life propagation waters, the effluent limit for total suspended solids will be 53 mg/L daily maximum.

The permittee has the option of completing effluent testing or implementing a pollution prevention plan for compliance with this permit. If the permittee develops a pollution prevention plan instead of total suspended solids sampling, the plan must be developed and implemented prior to discontinuing total suspended solids sampling. Refer to Section 4.0 of the permit. If any pollutants are suspected of being discharged, a sample must be taken for those parameters listed in Section 3.4 of the permit.

Refer to Commitment D1: Surface Water Quality for stream classification.

Action Taken/Required:

If construction dewatering is required and this project is not required to be covered under a General Permit for Stormwater Discharges Associated with Construction Activities, the Contractor will obtain the General Permit for Temporary Discharge Activities from the DANR Surface Water Program, 605-773-3351.

https://danr.sd.gov/OfficeOfWater/SurfaceWaterQuality/docs/DANR Tempora rvDischargeNOI2018Fillable.pdf

The Contractor will provide a copy of the approved permit or the submitted dewatering information to the Project Engineer prior to proceeding with any dewatering activities. The approved permit or submitted dewatering information must be kept on-site and as part of the project records.

Effluent monitoring, as a result of dewatering activities, will be summarized for each month and recorded on a separate Discharge Monitoring Report (DMR) and submitted to DANR monthly. Additional information can be found at:

ing.aspx

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.

	STATE OF	PROJECT	SHEET	TOTAL
SOUTH DAKOTA	231-452	Non	2/15	

https://danr.sd.gov/OfficeOfWater/SurfaceWaterQuality/swdpermitting/Ereport

COMMITMENT G: DEWATERING AND SEDIMENT COLLECTION

The purpose of a dewatering and sediment collection system is to collect turbid stormwater on the project, treat it with flocculants as needed, and capture the sediment that falls out of suspension before the water is discharged into "Waters of the US" or "Waters of the State". Refer to Commitment D1: Surface Water Quality for stream classification.

Action Taken/Required:

The Contractor will meet the terms of the Temporary Discharge Permit and the Storm Water Permit for Construction Activities.

The Contractor will create a Pollution Prevention Plan (PPP) for dewatering and sediment collection if the Contractor chooses to discharge the water into "Waters of the US" or "Waters of the State". Refer to the detail sheet OPTIONS FOR DEWATERING AND SEDIMENT COLLECTION in the plans. The PPP must be kept on-site and updated as site conditions change.

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 Agriculture 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:

Construction and/or demolition debris consisting of concrete, asphalt 1. concrete, or other similar materials will be buried in a trench 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".

Concrete and asphalt concrete debris may be stockpiled within view of 2. the ROW for a period 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: HISTORIC PRESERVATION OFFICE CLEARANCES

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 in 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 within 100 feet of the inadvertent discovery will immediately cease and the Project Engineer will be immediately notified. The Project Engineer will contact the SDDOT Environmental Office, who will contact the appropriate SHPO/THPO within 48 hours of the discovery 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.

	STATE OF	PROJECT	SHEET	TOTAL
SOUTH DAKOTA	231-452	Non	3/15	

State Historic Preservation Office (SHPO or THPO) concurrence has not been

COMMITMENT K: RAPID CITY AREA AIR QUALITY CONTROL ZONE

Administrative Rule of South Dakota (ARSD) 74:36:18:03 states that "no state facility or state contractor may engage in any construction activity or continuous operation activity within the Rapid City air quality control zone which may cause fugitive emissions of particulate to be released into the ambient air without first obtaining a permit issued by the board or the secretary."

Construction activity is defined as any temporary activity which involves the removal or alteration of the natural or pre-existing cover of one acre or more of land. One acre of surface area is based on a cumulative area of disturbance to be completed for the entire project. Construction activity will include, but not be limited to, stripping of topsoil, drilling, blasting, excavation, dredging, ditching, grading, street maintenance and repair, or earth moving. It also includes stockpiles, access roads, and disposal areas. An off-site disposal area of excess material will require an additional permit.

Action Taken/Required:

To be considered eligible for authorization to conduct a construction activity under the terms and conditions of this permit, the owner operator must submit a Notice of Intent (NOI) form. The form must be submitted to the address below at least seven business days prior to the anticipated date of beginning the construction activity.

South Dakota Department of Agriculture and Natural Resources Air Quality Program, 523 East Capitol, Joe Foss Building, Pierre, SD 57501-3181, Phone: 605-773-3151.

The permit requires the Contractor to use reasonably available technology to control fugitive dust emissions. The Contractor is required to use control measures for track out, paved areas, unpaved roads, unpaved parking lots, disturbed areas, and for material handling and storage. The control measures that the Contractor is required to use are listed in the permit.

The Rapid City Air Quality Permit will need to be renewed annually by the Contractor until construction activities are completed.

The online form found at: can be <https://danr.sd.gov/Environment/AirQuality/PermitForms/Forms/NOIConstruc tion%2021.docx >

UTILITIES

The Contractor will contact the involved utility companies through South Dakota One Call (1-800-781-7474) prior to starting work. It will be the responsibility of the Contractor to coordinate work with the utility owners to avoid damage to existing facilities.

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 elsewhere in the plans or bidding documents.

UNCLASSIFIED EXCAVATION

Unclassified Excavation is provided on the project for removing and stockpiling granular and subgrade material to perform pipe repair work. The estimate of quantities provides 32 cubic yards of Unclassified Excavation for performing this work, approximately 10'x17'x5'. The material will be placed back at no additional cost to the Department.

Plans quantity will be the basis of payment for the Unclassified Excavation quantity. If changes are made in the field during construction, measurements will be taken and the quantity will be adjusted accordingly.

All costs to remove and dispose of asphalt concrete pavement, including full depth saw cutting of the asphalt concrete pavement, will be incidental to the contract unit price per square yard to Remove Asphalt Concrete Pavement.

INCIDENTAL WORK

A concrete collar will be poured around the existing 18" RCP storm sewer connection. The two existing pipes are approximately 33 feet north of the PCC pavement joint and in line with the area drain located 50 feet behind the curb and gutter.

Connections to the existing pipes will be made by placing a 2' wide by 6" thick M6 concrete collar around the outside of the connection. The concrete collar will be reinforced with 6x6 W2.9 x W2.9 wire mesh.

All costs for removing the existing concrete collar and constructing the new concrete collar, including materials and labor, will be incidental to the lump sum Incidental Work bid item.

After repair, the excavated area will be backfilled with soils removed and stockpiled from the area or other suitable material as approved by the Engineer. The cost for suitable material, if required, will be incidental to the bid item for lump sum Incidental Work. Compaction of the backfill material will be to the satisfaction of the Engineer. Backfilling the work area will be incidental to the lump sum Incidental Work bid item.

After the work area has been backfilled to the top of the subgrade, a 12" depth of salvaged base course and 6" (2-3" lifts) depth of asphalt concrete composite will be placed as a patch matching the existing asphalt concrete. Placement of salvaged base course will be incidental to the bid item for lump sum Incidental Work. The bid item "Base Course" is included in the plans if it is determined additional quantity is needed in the repair area. If the Engineer determines that Base Course is not required, the bid item "Base Course" will be eliminated.

The cost for asphalt concrete composite installed over the pipe repair area will be paid for at the contract unit price per ton for Asphalt Concrete Composite.

WATER FOR COMPACTION

The cost of water for compaction of the granular material and embankment will be incidental to the various other contract items. A minimum of 4% moisture will be required at the time of compaction unless otherwise directed by the Engineer.

ASPHALT CONCRETE COMPOSITE

Asphalt for tack SS-1h or CSS-1h will be applied prior to each lift of Asphalt Concrete Composite. Asphalt for tack will be applied at a rate of 0.09 gallons per square yard on existing pavement or milled asphalt concrete surfaces and at a rate of 0.06 gallons per square vard on primed base course or new asphalt concrete pavement. The Asphalt for tack will be applied for the full width of the bottom layer of Asphalt Concrete Composite.

ADJUSTMENT OF DROP INLET

Under this item the elevations of the existing cast iron frame and grate assemblies on the existing drop inlet are to be flush with the top of the finished pavement. The location of the drop inlet is shown in the table below.

In performing this work, the Contractor will break down the drop inlet walls so none of the wall intersects with the paving equipment during placement of the curb and gutter. Following the paving the drop inlet walls will be built up with Class M6 Concrete and the frames seated at the elevation for the grates to be flush with the top of the finished pavement. Existing frames or grates which are broken or cracked through carelessness of the Contractor's forces will be replaced with new frames and/or grates at the Contractor's expense. This work will be paid for at the contract unit price per each for Adjust Drop Inlet. Payment will be full compensation for furnishing all materials, labor, equipment, and incidentals necessary to complete the work.

Location: 8' North of PCC Pavement, East side of Sturgis Rd

	STATE OF	PROJECT	SHEET	TOTAL
SOUTH DAKOTA	231-452	Non	4/15	

TABLE OF QUANTITIES

	Unclassified Excavation	Remove Asphalt Concrete Pavement	Remove Concrete Curb and Gutter	Type B66 Concrete Curb and Gutter	Base Course	Asphalt Concrete Composite	Remove Drop Inlet Frame and Grate Assembly for Reset	Reset Drop Inlet Frame and Grate Assembly
Location	CuYd	SqYd	Ft	Each	Ton	Ton	Each	Each
NB Outside Driving								
Lane from Concrete	32	70.7	53	53	22.3	23.9	1	1
Pavement North 53'								
Total:	32	70.7	53	53	22.3	23.9	1	1

ORANGE PLASTIC SAFETY FENCE

The Contractor will install orange plastic safety fence, as directed by the Engineer, to prevent accidental or unauthorized entry into the project area.

The Contractor will maintain and make repairs to the fence until it is removed or as directed by the Engineer.

Barricades.

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

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".

INVENTORY OF TRAFFIC CONTROL SIGNS ITEMIZED LIST FOR TRAFFIC CONTROL SIGNS

		С	ONVENTION	ial road	
SIGN CODE	SIGN DESCRIPTION	NUM BER	SIGN SIZE	SQFT PER SIGN	SQFT
R9-9	SIDEWALK CLOSED	2	24" x 12"	2.0	4.0
R9-11	SIDEWALK CLOSED AHEAD with ARROW (L or R)	1	24" x 18"	3.0	3.0
W4-2	LEFT or RIGHT LANE ENDS (symbol)	1	48" x 48"	16.0	16.0
W20-1	ROAD WORK AHEAD	4	48" x 48"	16.0	64.0
W20-5	LEFT or RIGHT LANE CLOSED AHEAD	1	48" x 48"	16.0	16.0
G20-2	END ROAD WORK	2	36" x 18"	4.5	9.0
M6-2	DIRECTION ARROW - 45° Single Head (L or R)	1	21" x 15"	2.2	2.2
		CON TRAFFI	/ENTIONAL	ROAD _ SIGNS	114.2

SEQUENCE OF OPERATIONS

The Contractor will submit a sequence of operations for approval two weeks prior to the preconstruction meeting. If changes to the sequence of operations are proposed during the project, these must be submitted for review a minimum of one week prior to potential implementation. Approval for changes to the 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.

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.

Portable sign supports will not be located on sidewalks, bicycle facilities, or other areas designated for pedestrian or bicycle traffic.

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.

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.

PEDESTRIAN CHANNELIZING DEVICE DETAILS



Longitudinal Pedestrian Barrier

Longitudinal Pedestrian Barricade

- 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.

PEDESTRIAN TRAFFIC DURING CONSTRUCTION

The project area will be closed to pedestrian traffic during construction. The Contractor will protect all work areas from pedestrian usage during construction for the safety of pedestrians with the appropriate signage and longitudinal pedestrian barricades. Payment for signage and barricades will be paid according to each respective contract item. Payment for all other work and associated materials will be incidental to the contract lump sum price for "Traffic Control. Miscellaneous".

STATE OF	PROJECT	SHEET	TOTAL
SOUTH DAKOTA	231-452	Non	5/15

Orange Plastic Safety Fence will not be used as a substitute for Pedestrian

EROSION CONTROL

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.

Mycorrihizal 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 will be as shown below or an approved equal:

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

Fertilizing

A commercial fertilizer with a minimum guaranteed analysis of 13-13-13, 18-46-0, 11-52-0, or an approved alternate fertilizer sold for use as a lawn starter fertilizer will be applied to all areas designated for permanent seeding.

The application rate of fertilizer will be 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.

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;		10
Winter Wheat: August through November		
	Total:	26

Fiber Mulching

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

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

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

All costs for the additional tackifier added to the fiber mulch including labor, equipment, and materials will be incidental to the contract lump sum price for "Erosion Control".

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

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

EROSION CONTROL WATTLE

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

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

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

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

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

TABLE OF EROSION CONTROL WATTLE

Loc Perimete

	STATE OF	PROJECT	SHEET	TOTAL SHEETS
DAKOTA	231-452	Non	6/15	

cation	Diameter (Inch)	Quantity (Ft)
er Control	12	60
	Total:	60

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

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

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

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

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

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

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

Product	Manufacturer
Snake Bag	Sacramento Bag Manufacturing Co. Sacramento, CA Phone: 1-800-287-2247 <u>www.sacbag.com</u>

Rock Log SRW Products Princeton, MN Phone: 1-763-260-7822 www.srwproducts.com

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

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

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

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

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, ANDJUNCTION BOXES AFTER SURFACING REMOVAL AND BEFOREPLACEMENT OF SURFACING

	High Flow	Sediment	Remove
	Silt Fence	Filter Bag	Sediment
	Quantity	Quantity	Quantity
Location	(Ft)	(Ft)	(CuYd)
8' North of PCC Pavement, Rt	24	25	0.3
Totals:	24	25	0.3

STATE OF	PROJECT	SHEET	TOTAL
SOUTH DAKOTA	231-452	Non	

LEGEND

Anchor Antenna Approach Assumed Corner Azimuth Marker BBQ Grill/ Fireplace Bearing Tree Bench Mark Box Culvert Bridge Brush Buildings Bulk Tank Cattle Guard Cemetery Centerline Cistern Clothes Line Control Point Commercial Sign Double Face Commercial Sign One Post Commercial Sign Overhead Commercial Sign Two Post Concrete Symbol 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 Elec. Trans./Power Jct. Box Fence Barbwire Fence Chainlink Fence Electric Fence Misc. Fence Rock Fence Snow Fence Wood Fence Woven Fire Hydrant Flag Pole Flower Bed Gas Valve Or Meter Gas Pump Island Grain Bin Guardrail Guide Sign One Post Guide Sign Two Post Gutter Guy Pole Haystack

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Hedge	62223
Highway ROW Marker	
Interestate Class Cate	7-2
	N -
Iron Pin	\odot
Irrigation Ditch	
Lake Edge	
	•
Malibox	
Manhole Electric	0
Manhole Gas	0
Manhole Misc	0
Manhole Sanitary Sewer	
Manhole Sanitary Sewer	•
Mannole Storm Sewer	Ø
Manhole Telephone	0
Manhole Water	0
Merry-Go-Round	*
Microwaye Radio Tower	· · · · · · · · · · · · · · · · · · ·
	4
MISC. LINE	
Misc. Property Corner	4
Misc. Post	0
Overhang Or Encroachment	
Overhead Utility Line	— OH —
	0
Parking Meter	
Pedestrian Push Button Pole	0
Pipe With End Section	→ — →
Pipe With Headwall	— ——
Pipe Without End Section	
	~
Playground Slide	
Playground Swing	⊁ + к
Power And Light Pole	+
Power And Telephone Pole	<u> </u>
Power Meter	í li
Power Dele	ц Ц
	<u>بحر</u>
Power Pole And Transformer	- <u></u> - <u></u> -
Power Tower Structure	∆
Propane Tank	
Property Pipe	\odot
Property Pipe With Can	Ĩ
Property Pipe With Cap	Sec. 1
Property Stone	PS
Public Telephone	র
Railroad Crossing Signal	-\$4
Railroad Milepost Marker	
Railroad Profile	
Rainoad Fronic	_
Railfoad R.O.W. Marker	
Railroad Signs	Þ
Railroad Switch	Ľ
Railroad Track	
Railroad Trestle	
Pobar	A
Rebar With Cap	
Reference Mark	A
Regulatory Sign One Post	þ
Regulatory Sign Two Post	Ę
Retaining Wall	Ч
Diaron	
ripiap	aaab
River Edge	
Rock And Wire Baskets	
Rockpiles	0 a Bar
Satellite Dish	4
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Septic Tank	P
Shrub Tree	¢
Sidewalk	
Sign Face	
Sign Post	•
Slough Or Marsh	<u>nillia — — nillia</u> <u>nillia =</u>
Spring	Ø
Stream Gauge	ø
Street Marker	_
Subsurface Utility Exploration Test Hole	
Telephone Fiber Optics	— T/F —
Telephone Junction Box	
Telephone Pole	Ø
Television Cable Jct Box	0
Television Tower	夲
Test Wells/Bore Holes	
Traffic Signal	‡
Trash Barrel	Ō
Tree Belt	\sim
Tree Coniferous	*
Tree Deciduous	0
Tree Stumps	٨
Triangulation Station	Δ
Underground Electric Line	— P —
Underground Gas Line	— G —
Underground High Pressure Gas Line	— HG —
Underground Sanitary Sewer	— s —
Underground Storm Sewer	= s =
Underground Tank	
Underground Telephone Line	— т —
Underground Television Cable	— ти —
Underground Water Line	— w —
Warning Sign One Post	þ
Warning Sign Two Post	þ
Water Fountain	l
Water Hydrant	O
Water Meter	00
Water Tower	
Water Valve	0
Water Well	\odot
Weir Rock	
Windmill	8
Wingwall	
Witness Corner	©

SD 💋	PROJECT	SECTION	SHEET
DOT	231-452	Non	8/15

State and National Line
County Line
Section Line
Quarter Line
Sixteenth Line
Property Line
Construction Line
ROW Line
New ROW Line
Cut and Fill Limits
Control of Access
New Control of Access
Proposed ROW
(After Property Disposal)

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0 0 0 0	0 0 0
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Drainage Arrow

Remove Concrete Pavement

Remove Concrete Driveway Pavement

Remove Asphalt Concrete Pavement

Remove Concrete Sidewalk

Remove Concrete Median Pavement

Remove Concrete Curb and/or Gutter

Detectable Warning Pedestrian Push Button Pole and 30" x 48" Clear Space with 1.5% slope

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Remove for Reset & Reset Type B Drop Inlet Frame and Grate Assembly

Remove Asphalt Concrete Pavement (12' x 53') Remove Curb and Gutter (53 Ft)

Unclassified Excavation (10' x 17' x 5')

Install Concrete Collar (Incidental Work)

Install Type B66 Curb and Gutter (53 Ft)



	SD 🗾	F	PROJECT	SECTION	SHEET
')	DOT	23	31-452	Non	9/15
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12+00			13+00	D	
OH U/L	M HO	Just Jymnastics Entrance	HØ/	HO	



Remove AC Pavement

Unclassified Excavation

Traffic Control Plan

See also Standard Plate 634.60





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Published Date: 2024	S D D O T	TYPE B CO
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SDDOT
Plotting Date:

PROJECT

SECTION SHEET

Non

12/15

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The stated radii on the plans and cross sections refer to this line and it will also be the basis for horizontal linear foot measurement and payment.

 $-\frac{1}{4}$ " to $\frac{1}{2}$ " Radius (Typ.)

JRB AND GUTTER							
	Cu. Yd.	Lin. Ft.					
es)	Per	Per					
	Lin. Ft.	Cu. Yd.					
3	0.057	17.7					
3	0.065	15.4					
3	0.073	13.7					
3	0.077	13.0					
3	0.081	12.3					
5	0.085	11.7					
3	0.090	11.2					
3	0.094	10.7					
6	0.098	10.2					
6	0.102	9.8					
6	0.106	9.4					

January 22, 2023

NCRETE CURB AND GUTTER

PLATE NUMBER 650.01 Sheet I of I









SD DOT	
Plotting Date:	

PROJECT





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Published Date: 2024

SD DOT	
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		F	Plotting Date:	03/01/2024		
GENERAL NOTES:						
At cut or fill slope installations, watt	les will	be installed along the contour an	d perper	dicular to t	the water flow.	
At ditch installations, point A must t around the ends.	be high	er than point B to ensure that wat	er flows	over the w	attle and not	
The Contractor will dig a 3" to 5" tre under the wattle, and then compact See Detail B.	ench, in t the sc	nstall the wattle tightly in the trencl il excavated from the trench again	h so that nst the w	daylight ca attle on the	an not be seen e uphill side.	
The stakes will be 1"x2" or 2"x2" we only if approved by the Engineer. T of the stakes along the wattles will	ood sta he stal be 3' to	akes, however, other types of stak kes will be placed 6" from the end o 4'.	es such s of the v	as rebar m vattles and	ay be used I the spacing	
Where installing running lengths of and will not overlap the ends. See I	wattles Detail (s, the Contractor will butt the seco C.	ond wattle	e tightly ag	ainst the first	
The Contractor and Engineer will in permit. The Contractor will remove, determined by the Engineer.	ispect i dispos	the erosion control wattles in acco se, or reshape the accumulated se	ordance v ediment	with the sto when nece	orm water ssary as	
Sediment removal, disposal, or nec removing accumulated sediment, d contract unit price per cubic yard fo	essary isposa r "Rem	v shaping will be as directed by the I of sediment, and necessary shap nove Sediment".	e Engine ping will	er. All cost be incident	s for al to the	
All costs for furnishing and installing be incidental to the contract unit pri	g the e ce per	rosion control wattles including lal foot for the corresponding erosior	bor, equi n control	pment, and wattle con	d materials will tract item.	
All costs for removing the erosion c be incidental to the contract unit pri	ontrol ce per	wattle from the project including la foot for "Remove Erosion Control	abor, equ Wattle".	ipment, ar	nd materials wil	C .
					February 14, 2	020
		FRASIAN CANTRAL W	WATTIF		PLATE NUMBL	ER
Published Date: 2024	õ				Sheet 2 of 3	2