

STORM WATER PERMIT

None Required

STATE OF	PROJECT	SHEET	TOTAL SHEETS
SOUTH DAKOTA	000N-351	1	15
Plotting Date:	03/16/2022		

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ESTIMATE OF QUANTITIES

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
009E3220	Reestablish Right-of-Way and Property Corner	53	Each
009E3225	Reestablish Public Land Survey System Corner	2	Each
620E0020	Type 2 Right-of-Way Fence	11,408	Ft
620E1020	2 Post Panel	22	Each
620E1030	3 Post Panel	14	Each
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
900E1095	8' Snow Fence	3,590	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 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: <u>https://dot.sd.gov/media/documents/EnvironmentalProceduresManual.pdf</u>

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 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 shall 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-61.31.

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

The SDDOT has obtained concurrence with the State Historical Preservation Office (SHPO or THPO) for all work included within the project limits and all department designated sources and designated option material sources, stockpile sites, storage areas, and waste sites provided within the plans.

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.

SHPO/THPO review does not relieve the Contractor of the responsibility 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.

SNOW FENCE

Access to the snow fence sites will be made thru existing field entrance gates or by temporarily removing and resetting the right of way fence. The Contractor will keep livestock out of the highway right-of-way. Upon completion of the work, the Contractor will restore the fence to the original condition. This work will be incidental to the contract unit price bid per foot for snow fence.

The Contractor will minimize damage to the existing vegetation. Work will not be allowed when the ground is wet and unstable. The Contractor will restore the land to the condition prior to construction at the Contractor's expense.

The SDDOT Area Office will obtain the permission from the private landowners prior to starting the work. The Contractor will provide the State a 2 week notice prior to beginning work.

TABLE OF SNOW FENCE QUANTITIES

Hwy	MRM to	MRM		8' Snow Fence
				(Ft.)
SD 1806	649+29	655+97	Rt	742
SD 1806	658+08	670+49	Rt	1315
SD 1806	674+41	678+63	Rt	422
SD 1806	685+80	691+68	Rt	589
SD 1806	693+96	699+48	Rt	522
			Total	3590

STATE OF	PROJECT	SHEET	TOTAL SHEETS
SOUTH DAKOTA	000N-351	2	15

BRACE PANELS FOR ROW FENCE

The E-Z Brace or an approved equal may be utilized as an alternate horizontal brace in the brace panels if approved by the Engineer. The E-Z Brace will be attached to each wood post utilizing two 5/16" x 3" lag screws. Holes of appropriate diameter, based on wood post condition, will be drilled before placement of lag screws. The following are contacts regarding the E-Z Brace:

Roger Papka E-Z Brace 1160 Karen St. Watertown, SD 57201 605-881-6142

Dennis Mack E-Z Brace 108 18th St. NE Watertown, SD 57201 605-881-4990

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.

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.

The Contractor will notify businesses/homeowners a minimum of two weeks prior to construction to inform them of upcoming construction and again a minimum of 48 hours prior to any blocked access to make appropriate arrangements.

TRAFFIC CONTROL, MISCELLANEOUS

All costs for traffic control, including signs, will be incidental to the contract lump sum price for "Traffic Control, Miscellaneous".

PUBLIC LANDS SURVEY SYSTEM, RIGHT OF WAY, AND PROPERTY

The Contractor will have a Land Surveyor, licensed in the State of South Dakota, to set, reestablish or verify public land survey system (PLSS) corners, right of way (ROW) corners, and property corners as directed by the appropriate SDDOT Region Land Surveyor. It is estimated that 2 PLSS corners and 53 ROW and property corners will be set, reestablished, or verified for this project. The Contractor's Land Surveyor, under the direction of the Region Land Surveyor, will set, reestablish, or verify all corner monuments after surfacing and fencing operations are completed in accordance with the PUBLIC LANDS SURVEY SYSTEM CORNERS section and the RIGHT OF WAY AND PROPERTY CORNERS section in Chapter 8 of the SDDOT Survey Manual.

< https://dot.sd.gov/doing-business/engineering/design-services/surveyors >

Set Corner Plans and Set Corner Report will be made available upon award of the contract through the Pierre Region Office.

All costs associated with furnishing and installing PLSS caps, rebar, and all other materials associated with setting, reestablishing, or verifying PLSS, ROW corners, and property corners in accordance with the SDDOT Survey Manual will be incidental to the contract unit price per each for "Reestablish Public Land Survey System Corner" and/or "Reestablish Right-of-Way and Property Corner".

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SOUTH DAKOTA	000N-351	3	15

CONTROL DATA

POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
GRD_112	REBAR/YELLOW CAP	675559.619	2061329.988	1793.090
Auto0000	REBAR/YELLOW CAP	675559.602	2061329.924	1793.206
HUB_1	2X2 HUB/TACK	687678.903	2061468.963	1817.220

The coordinates shown on this sheet are based on the South Dakota State Plane Coordinate System. South Zone (NAD 83/2011); epoch 2010.00 Geoid 12A; SF = 0.99988913 The elevations shown on this sheet are based on NAVD 88.

STATE OF	PROJECT	SHEET	TOTAL SHEETS
SOUTH DAKOTA	000N-351	4	15

HORIZONTAL ALIGNMENT DATA

/pe / Station		Northing	Easting	Type / Station		Northing	Easting
9 648+48.92		688695.842	2063123.008	PI 662+50.86		688025.068	2061907.566
	TL: 72.48	S 75°05'40" W			TL: 27.15	S 46°21'03" W	
649+21.40		688677.198	2063052.966	PI 662+78.01		688006.331	2061887.924
	TL: 23.31	S 72°28'34" W			TL: 235.01	S 44°15'36" W	
649+44.71		688670.180	2063030.740	PI 665+13.02		687838.023	2061723.909
	TL: 22.71	S 72°53'51" W	20000001110	11000 10102	TL: 13.41	S 44°00'10" W	20011201000
649+67.42		688663.501	2063009.033	PI 665+26.42	TE. 10.41	687828.380	2061714.596
0+0+0+0+0+2	TL: 61.96	S 72°12'58" W	2000003.000	11000+20.42	TL: 125.37	S 43°36'44" W	2001714.000
650+29.38	TL. 01.90	688644.577	2062950.035	PI 666+51.79	TL. 123.37		2061628.119
000+29.00			2002950.055			687737.609	
	TL: 66.19	S 70°20'47" W	000007.000	PI 668+03.56		687627.946	2061523.202
650+95.57	T I 04.40	688622.314	2062887.698		IL: 118.57	S 42°33'45" W	
	TL: 91.16	S 68°45'06" W		PI 669+22.13		687540.617	2061443.004
51+86.73		688589.277	2062802.736		TL: 79.47	S 43°20'10" W	
	TL: 57.04	S 68°12'57" W		PI 670+01.59		687482.818	2061388.468
652+43.76		688568.110	2062749.772		TL: 313.39	S 43°10'47" W	
	TL: 19.51	S 67°01'23" W		PI 673+14.98		687254.291	2061174.019
652+63.27		688560.495	2062731.812		TL: 48.07	S 42°58'42" W	
	TL: 61.49	S 66°12'01" W		PI 673+63.05		687219.126	2061141.252
653+24.76		688535.682	2062675.553		TL: 1.39	S 41°30'13" W	2001111202
00.24.70	TL: 78.62	S 64°14'42" W	2002010.000	PI 673+64.44	TE: 1.00	687218.084	2061140.330
54+03.38	12.70.02	688501.519	2062604.742	11073104.44	TI · 724.06	S 43°29'50" W	2001140.000
004+00.00	TL 407 00		2002004.742		TL. 724.00		2060644 046
	TL: 137.20	S 63°03'59" W	0000400 400	PI 680+88.50	TI 404.04	686692.847	2060641.946
655+40.58		688439.372	2062482.422		TL: 161.24	S 43°08'42" W	
	TL: 70.57	S 60°02'34" W		PI 682+49.74		686575.202	2060531.682
656+11.15		688404.133	2062421.281		TL: 59.84	S 43°29'32" W	
	TL: 86.66	S 59°02'58" W		PI 683+09.58		686531.788	2060490.495
656+97.81		688359.566	2062346.964		TL: 148.84	S 43°10'55" W	
	TL: 70.00	S 57°50'53" W		PI 684+58.42		686423.255	2060388.640
657+67.81		688322.316	2062287.702		TL: 136.23	S 43°20'40" W	
	TL: 56.82	S 55°22'33" W		PI 685+94.65		686324.183	2060295.134
658+24.62	12. 00.02	688290.034	2062240.949	11000101100	TI · 54 57	S 42°57'26" W	2000200.101
50,24.02	TL: 74.86	S 54°54'32" W	2002240.040	PI 686+49.22	12.04.07	686284.245	2060257.947
250,00 40	TL. 74.00		2062179.696	F1000+49.22	TL: 160.03	S 43°18'03" W	2000237.947
658+99.48	TL 00 70	688246.999	2002179.090		TL. 100.03		0000440400
	TL: 68.78	S 53°58'34" W		PI 688+09.25		686167.783	2060148.196
659+68.26		688206.546	2062124.066		IL: 144.09	S 43°11'26" W	
	TL: 45.20	S 52°00'04" W		PI 689+53.34		686062.730	2060049.577
60+13.47		688178.717	2062088.445		TL: 260.40	S 43°12'37" W	
	TL: 84.75	S 51°23'58" W		PI 692+13.74		685872.936	2059871.285
60+98.22		688125.842	2062022.211		TL: 254.43	S 43°20'13" W	
	TL: 41.05	S 49°23'53" W		PI 694+68.17		685687.885	2059696.676
61+39.27		688099.126	2061991.043		TL: 13.61	S 43°25'29" W	
	TL: 33.93	S 48°59'29" W	2001001010	PI 694+81.78	12. 10.01	685678.002	2059687.322
S61+73 20	12.00.00	688076.863	2061965.440		TL: 216.47	S 43°14'50" W	2000001.022
61+73.20	TI. 77 07		2001900.440		IL. 210.47		2050520 044
	TL: 77.67	S 48°10'22" W		PI 696+98.24	T I T O OO	685520.328	2059539.011
					TL: 72.20	S 43°35'35" W	

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 STATE OF	PROJECT	SHEET	TOTAL SHEETS
SOUTH DAKOTA	000N-351	5	1155

HORIZONTAL ALIGNMENT DATA

Type / Station		Northing	Easting
PI 697+70.44		685468.039	2059489.229
	TL: 7.65	S 42°51'59" W	
PI 697+78.09		685462.429	2059484.022
	TL: 219.53	S 43°24'16" W	
PI 699+97.62		685302.935	2059333.172
	TL: 141.27	S 43°12'00" W	
PI 701+38.89		685199.955	2059236.467
	TL: 62.61	S 42°28'50" W	
PI 702+01.50		685153.781	2059194.185
	TL: 132.19	S 41°07'14" W	
PI 703+33.69		685054.202	2059107.254
	TL: 11.86	S 41°22'38" W	
PI 703+45.55		685045.301	2059099.413
	TL: 14.52	S 37°23'35" W	
PI 703+60.07		685033.766	2059090.596
	TL: 29.66	S 35°12'47" W	
PI 703+89.73		685009.534	2059073.494

The coordinates shown on this sheet are based on the South Dakota State Plane Coordinate System. South Zone (NAD 83/2011); epoch 2010.00; Geoid 12A; SF = 0.99988913

	STATE OF	PROJECT	SHEET	TOTAL SHEETS
SOUTH	SOUTH DAKOTA	000N-351	6	1155
		·		







	HAR	WARE FOR ONE 16 FOOT PANEL
NOTE	QUANTITY	DESCRIPTION
A	6	$^{5}\!\prime_{8}{}''$ Ø x 6 $''$ machine bolt w/1 flat washer and 1 nylon insert locknut
A	15	${}^{5}\!\prime_8{}''$ Ø x 5 $''$ machine bolt w/2 flat washers and 1 nylon insert locknut
B	1 Ib.	10D ring shank or screw shank nails
©	* ∕4 b.	8D common nails
O	6	$\angle 2'' \times 1^{1}_{2'} \times 1^{1}_{4'} \times 0' - 3''$ anchor angle
O	6	#6 x 5'-0" rebar

* 1/21b. if Slope Brace is used

NOTE: All machine bolts used to assemble the fence shall be continuously threaded to allow for tightening at a future date

NOTE: All machine bolts and nuts fastenned against any wood products shall require the use of a washer.

LUMBER FOR ONE 16 FOOT PANEL				
NOTE	QUANTITY	SIZE	DESCRIPTION	
1	3	2" × 6" × 5'-0"	SILL	
2	3	2" × 8" × 7'-0"	LONG BRACE	
3	3	2″×6″×4′-0″	SHORT BRACE	
4	3	2″×6″×8′-0″	FRONT VERTICAL	
5	3	2″×6″×4′-0″	KNEE BRACE	
6	1	1″ × 6″ × 16′-0″	CROSS BRACE	
\bigcirc	6	1″×6″×16′-0″	SLAT	
8	1	1″×6″×16′-0″	SLOPE BRACE	







© ANCHOR DETAIL

● ANCHOR ANGLE

STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
SOUTH DAKOTA		10	15

NOTE: Slope Brace ⑧ shall be used only when ground slope is 5:1 or steeper

NOTE: All materials shall be treated in accordance with Section 950 of the Standard Specifications and shall meet applicable AWPA Standards.

Typical Plan View for Snow Fence Installation



STATE OF	PROJECT	SHEET	TOTAL SHEETS
SOUTH DAKOTA		11	15
Plotting Date:	12/14/2021		





Published Date: 2nd Qtr. 2022	S D D O T	STAPLE INS Right–
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	STATE OF	PROJECT	SHEET	TOTAL
	SOUTH DAKOTA	000N-351	12	SHEETS
	Plotting Date:	04/19/2022		
Correct Wrong Correct III not parallel post	Wro	ect, loose in staple ng, wood crushed ong, snug to post		
combination of w Il wood posts or panels. Gates wi ence will be cons herwise directed	fastened to alte ill be of the type structed conforr I by the Enginee	ernating wood e designated ning to the		
therwise directed	d by the Engine within one foot	er. of the Right-of-Way		
-	ill be wrapped t	wice around one		
the minimum acc l be as stated in / d barbed wire will	AASHTO M281	. Woven wire will		
		June 26, 201	9	











