



Department of Transportation

Office of Project Development

700 E Broadway Avenue

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January 14, 2016

ADDENDUM NO. 1

**RE: Item #5, January 20, 2016 Letting - P 014A(13)11, PCN 03RV, Lawrence County
- Asphalt Concrete Resurfacing, Guardrail, and Pipe Repair**

TO WHOM IT MAY CONCERN:

The following addenda to the plans shall be inserted and made a part of your proposal for the referenced project.

SPECIAL PROVISIONS: NO CHANGE

BID ITEM FILE: *Bidders must log in to retrieve the addendum bid item file that must be loaded into the SDEBS to incorporate the revisions listed here.*

Bid Item was added:

Bid Item 633E5100 "Grooving for Durable Pavement Marking, 4"

PLANS: Please destroy sheets 2 and 11 and replace with the enclosed sheets, dated 1/14/16. Sheet 11A was added.

Sheet 2: Bid Item 633E5100 "Grooving for Durable Pavement Marking, 4"" was added.

Sheet 11: GROOVING PAVEMENT FOR PAVEMENT MARKING CENTERLINE note was added.

Sheet 11A: Table placement was adjusted. Grooving for Durable Pavement Marking, 4" was added to the table.

Sincerely,

Sam Weisgram
Engineering Supervisor

SW/cj

CC: Todd Seaman, Rapid City Region Engineer
Mike Carlson, Rapid City Area Engineer

ESTIMATE OF QUANTITIES

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
009E3320	Checker	Lump Sum	LS
110E0022	Remove Thrie Beam Bridge Rail for Reset	250.0	Ft
110E0340	Remove Asphalt Concrete Curb	898	Ft
110E0500	Remove Pipe Culvert	10	Ft
110E1700	Remove Silt Fence	37	Ft
110E4380	Salvage W Beam Guardrail Tangent End Terminal	9	Each
110E5020	Salvage Traffic Sign	79	Each
110E6200	Remove Double Thrie Beam Guardrail for Reset	100.0	Ft
110E6220	Remove Double W Beam Guardrail for Reset	25.0	Ft
110E6230	Remove W Beam Guardrail for Reset	2,700.0	Ft
110E6240	Remove W Beam to Thrie Beam Guardrail Transition for Reset	8	Each
110E6270	Remove W Beam Guardrail Flared End Terminal for Reset	2	Each
110E6280	Remove W Beam Guardrail Tangent End Terminal for Reset	1	Each
110E6300	Remove Rubrail for Reset	25.0	Ft
120E0010	Unclassified Excavation	311	CuYd
120E0100	Unclassified Excavation, Digouts	612	CuYd
120E0600	Contractor Furnished Borrow Excavation	58	CuYd
230E0100	Remove and Replace Topsoil	Lump Sum	LS
260E1010	Base Course	1,957.0	Ton
320E0008	PG 64-34 Asphalt Binder	948.6	Ton
320E1080	Class S Asphalt Concrete	16,429.8	Ton
320E1200	Asphalt Concrete Composite	4,250.8	Ton
320E3100	Stabilizing Additive for Asphalt Concrete	47.9	Ton
330E0100	SS-1h or CSS-1h Asphalt for Tack	96.2	Ton
332E0010	Cold Milling Asphalt Concrete	1,874	SqYd
450E4769	24" CMP 16 Gauge, Furnish	6	Ft
450E4770	24" CMP, Install	6	Ft
450E5215	24" CMP Flared End, Furnish	1	Each
450E5216	24" CMP Flared End, Install	1	Each
470E0460	Reset Thrie Beam Bridge Rail	250.0	Ft
600E0200	Type II Field Laboratory	1	Each
630E1010	Straight Class A W Beam Guardrail with Wood Posts	112.5	Ft
630E2015	W Beam Guardrail Flared End Terminal	9	Each
630E2110	Beam Guardrail Post and Block	960	Each
630E5130	Reset Double Thrie Beam Rail	100.0	Ft
630E5160	Reset W Beam Rail	2,700.0	Ft
630E5170	Reset Double W Beam Rail	25.0	Ft
630E5190	Reset W Beam to Thrie Beam Guardrail Transition	8	Each
630E5207	Reset W Beam Guardrail Flared End Terminal	2	Each
630E5208	Reset W Beam Guardrail Tangent End Terminal	1	Each
630E5220	Reset Rubrail	25.0	Ft
632E1320	2.0"x2.0" Perforated Tube Post	384.0	Ft

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
632E2220	Guardrail Delineator	92	Each
632E2510	Type 2 Object Marker Back to Back	144	Each
632E3203	Flat Aluminum Sign, Nonremovable Copy High Intensity	60.5	SqFt
632E3205	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity	356.0	SqFt
632E3520	Remove, Salvage, Relocate, and Reset Traffic Sign	86	Each
633E0010	Cold Applied Plastic Pavement Marking, 4"	4,738	Ft
633E0030	Cold Applied Plastic Pavement Marking, 24"	658	Ft
633E0035	Cold Applied Plastic Pavement Marking, Area	160	SqFt
633E0040	Cold Applied Plastic Pavement Marking, Arrow	6	Each
633E1200	Waterborne Pavement Marking Paint with High Grade Polymer, White	675	Gal
633E1205	Waterborne Pavement Marking Paint with High Grade Polymer, Yellow	675	Gal
633E5000	Grooving for Cold Applied Plastic Pavement Marking, 4"	4,738	Ft
633E5015	Grooving for Cold Applied Plastic Pavement Marking, 24"	658	Ft
633E5020	Grooving for Cold Applied Plastic Pavement Marking, Area	160	SqFt
633E5025	Grooving for Cold Applied Plastic Pavement Marking, Arrow	6	Each
633E5100	Grooving for Durable Pavement Marking, 4"	128,202	Ft
634E0010	Flagging	2,000.0	Hour
634E0020	Pilot Car	500.0	Hour
634E0110	Traffic Control Signs	578	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0630	Temporary Pavement Marking	12.0	Mile
634E0640	Temporary Pavement Marking	1,000	Ft
634E0806	Groove 4" Wide Rumble Strip	836	Ft
634E1215	Contractor Furnished Portable Changeable Message Sign	2	Each
650E4360	Type D46 Concrete Curb and Gutter	898	Ft
720E1015	Bank and Channel Protection Gabion	9.0	CuYd
734E0010	Erosion Control	Lump Sum	LS
734E0154	12" Diameter Erosion Control Wattle	24	Ft
734E0602	Low Flow Silt Fence	37	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

An Environmental Commitment is a measure that SDDOT commits to implement in order to avoid, minimize, and/or mitigate a real or potential environmental impact. Environmental commitments to various agencies and the public have been made to secure approval of this project. An agency mentioned below with permitting authority can influence a project if perceived 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. The environmental commitments associated with this project are as follows:

COMMITMENT B: FEDERALLY THREATENED, ENDANGERED, AND PROTECTED SPECIES

COMMITMENT B2: WHOOPING CRANE

The Whooping Crane is a spring and fall migratory bird in South Dakota that is about 5 feet tall and typically stops on wetlands, rivers, and agricultural lands along their migration route. An adult Whooping Crane is white with a red crown and a long, dark, pointed bill. Immature Whooping Cranes are cinnamon brown. While in flight, their long necks are kept straight and their long dark legs trail behind. Adult Whooping Cranes' black wing tips are visible during flight.

Action Taken/Required:

Harassment or other measures to cause the Whooping Crane to leave the site is a violation of the Endangered Species Act. If a Whooping Crane is sighted roosting in the vicinity of the project, borrow pit, or staging site associated with the project, cease construction activities in the affected area until the Whooping Crane departs and contact the Project Engineer. The Project Engineer will contact the Environmental Office so that the sighting can be reported to USFWS.

COMMITMENT B4: BALD EAGLE

Bald eagles are known to occur in this area.

Action Taken/Required:

If a nest is observed within one mile of the project site, notify the Project Engineer immediately so that he/she can consult with the Environmental Office for an appropriate course of action.

COMMITMENT C: WATER SOURCE

The Contractor shall not withdraw water with equipment previously used outside the State of South Dakota without prior approval from the SDDOT Environmental Office. Thoroughly wash all construction equipment before entering South Dakota to reduce the risk of invasive species introduction into the project vicinity.

ITEMIZED LIST FOR TRAFFIC CONTROL DEVICES

SIGN CODE	SIGN DESCRIPTION	CONVENTIONAL ROAD			
		NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
W3-4	BE PREPARED TO STOP	4	48" x 48"	16	64
W7-3aP	NEXT ___ MILES (plaque)	3	36" x 30"	8	24
W8-1	BUMP	4	48" x 48"	16	64
W8-6	TRUCK CROSSING	2	48" x 48"	16	32
W8-11	UNEVEN LANES	2	48" x 48"	16	32
W8-15	GROOVED PAVEMENT	2	48" x 48"	16	32
W8-15P	MOTORCYCLE (plaque)	2	24" x 18"	3	6
W13-1P	ADVISORY SPEED (plaque)	4	30" x 30"	6	24
W20-1	ROAD WORK AHEAD	8	48" x 48"	16	128
W20-4	ONE LANE ROAD AHEAD	2	48" x 48"	16	32
W20-7	FLAGGER (symbol)	5	48" x 48"	16	80
W21-5	SHOULDER WORK	2	48" x 48"	16	32
OM1-3	TYPE I OBJECT MARKER	4	18" x 18"	2	8
G20-1	ROAD WORK NEXT ___ MILES	2	36" x 18"	5	10
G20-2	END ROAD WORK	2	36" x 18"	5	10
CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT					578

COLD APPLIED PLASTIC PAVEMENT MARKING

The Contractor shall apply the Cold Applied Plastic Pavement Marking material as per manufacturer's instructions.

Cold applied plastic pavement markings shall be placed into recessed grooves on the surface.

GROOVE PAVEMENT FOR PAVEMENT MARKING

The grooving shall be completed within the following tolerance:

Depth of Groove: 100 mils, tolerance of + 10 mils.

Existing grooves that do not meet the 100 mil depth requirement shall be re-grooved. In areas where the existing groove depth meets the 100 mil depth requirements and portions of the existing markings are still in place, the existing markings shall be removed. All costs for materials, labor, and equipment necessary to remove the existing markings shall be incidental to the contract unit price per foot for Grooving for Cold Applied Plastic Marking, 4"; Grooving for Cold Applied Plastic Marking, 24", per each for Grooving for Cold Applied Plastic Marking, Arrow, and per square foot for Grooving for Cold Applied Plastic Pavement Marking, Area.

Markings that fall outside of the groove shall be removed (at least 90%) using additional methods approved by the Engineer. All costs for materials, labor, and equipment necessary to remove the existing markings shall be incidental to the contract unit price per foot for Grooving for Cold Applied Plastic Marking, 4"; Grooving for Cold Applied Plastic Marking, 24", per each for Grooving for Cold Applied Plastic Marking, Arrow, and per square foot for Grooving for Cold Applied Plastic Pavement Marking, Area.

The Contractor shall dispose of grooving residue in accordance with Federal, State and Local regulations. No payment will be made for disposal of residue. Disposal of residue shall be incidental to the associated Grooving Pavement bid item.

The Contractor shall establish a positive means for the removal of the grinding and/or grooving residue. Residue from dry grooving shall be vacuumed. Solid residue shall be removed from the pavement surfaces before being blown by traffic action or wind. Residue from wet grooving shall not be permitted to flow across lanes being used by public traffic or into gutter or drainage facilities. Residue, whether in solid or slurry form, shall be disposed of in a manner that will prevent it from reaching any waterway in a concentrated state. All costs for removal of grinding and/or grooving residue shall be included in the contract unit price per foot for Grooving for Cold Applied Plastic Pavement Marking.

WATERBORNE PAVEMENT MARKING PAINT WITH HIGH GRADE POLYMER

All materials shall be applied as per manufacturer's recommendations.

This material shall consist of a durable high build, low VOC, fast drying, waterborne traffic paint with 100% acrylic polymer (DOW DT-400 or DOW HD-21A or equivalent) and with reflective media adhered to the paint. The reflective media shall consist of glass beads as well as bonded core reflective elements.

The bonded core reflective elements shall contain either clear or yellow tinted microcrystalline ceramic beads bonded to the outer surface. All microcrystalline ceramic beads bonded to reflective elements shall have a minimum index of refraction of 1.8 when tested using the liquid oil immersion method.

The Department will take retroreflectivity readings on the pavement marking lines no sooner than 3 days and no later than 30 days after the completion of all line applications required for an individual highway route using a portable retroreflectometer conforming to 30-meter geometry. Retroreflectivity readings will be taken on a test location with cleaning being limited to light hand brooming.

Pavement markings not conforming to the Retroreflectivity requirements shall be removed and replaced. If replacement of markings cannot be applied within the same year, the contractor shall schedule subject work to be completed no later than June 15th in the following year. Upon replacement, the retroreflectivity testing process will be done again requiring new readings.

The Department will randomly select one test location per mile of each edge line including ramps and one test location per mile of centerline (solid and/or skip line will be considered as one centerline). Three retroreflectivity readings will be taken at each test location. The three readings will be averaged and become the reading for that test location.

Initial Readings (within 3 - 30 days of the line application):

<u>Pavement Marking Color</u>	<u>Minimum Value</u>
White	350 mcd/m ² /lux
Yellow	275 mcd/m ² /lux

All pavement markings not conforming to the requirements provided in these plans will be considered deficient and may be required to be removed. Additional retroreflectivity readings will be taken by the Department to determine the limits of removal. The removal shall be accomplished using suitable sand blasting or grinding equipment unless the Engineer authorizes other means. The removal process shall remove at least 90% of the deficient line, with no excessive scarring of the existing pavement. The removal width shall be one inch wider all around the nominal width of the pavement marking to be removed. Removal and replacement of the pavement markings shall be at Contractor's expense, with no cost incurred by the State.

RATES OF MATERIALS WATERBORNE PAVEMENT MARKING PAINT WITH HIGH GRADE POLYMER

Solid 4" Line = 27.8 Gals/Mile
Glass Beads – 5.3 Lbs/Gal
Composite Reflective Elements – 2.1 Lbs/Gal

All cost for materials, labor, and equipment necessary to furnish and install the pavement markings shall be incidental to the contract unit price per gallon for Waterborne Pavement Marking Paint with High Grade Polymer, White or Yellow.

GROOVE PAVEMENT MARKING FOR PAVEMENT PAINT- CENTERLINE

The Contractor shall establish a positive means for the removal of the grinding and or grooving residue. Solid residue shall be removed from the pavement surfaces before being blown by traffic action or wind. Residue shall not be permitted to flow across lanes being used by public traffic or into gutter or drainage facilities. Residue, whether in solid or slurry form, shall be disposed of in a manner that will prevent it from reaching any waterway in a concentrated state.

Unless otherwise specified in the plans, the Contractor shall groove the surface for pavement markings as specified below and as per manufacturers instructions.

The grooving shall be completed within the following tolerances for Pavement Marking Paint with High Grade Polymer.

Depth of Groove: 70 mils +/- 5 mils
Width of 4" Groove: 5" to 6" with tolerance of +/- 1/4"
Tapers at Begin/End Lines: 6" to 9"

The equipment shall be capable of the following:

- Grooving the total width of the groove in one pass or uniform depths with multiple passes.
- Grooving without causing damage to the pavement joints or joint sealant material.
- Provide uniform alignment and depth.
- Moving continuously to permit a mobile traffic work operation.

The bottom of the groove shall be uniform and free of loose material. The groove shall be flat and if a uniform depth for the entire width of the groove. Grooving near bridge decks shall start and stop a sufficient distance from the expansion joint so no damage occurs in these areas.

Revised 1/14/2016 GD S

Table of Pavement Marking Items

	Cold Applied Plastic Pavement Marking, 4"	Cold Applied Plastic Pavement Marking, 24"	Cold Applied Plastic Pavement Marking, Area	Cold Applied Plastic Pavement Marking, Arrow	Grooving for Cold Applied Plastic Pavement Marking, 4"	Grooving for Cold Applied Plastic Pavement Marking, 24"	Grooving for Cold Applied Plastic Pavement Marking, Area	Grooving for Cold Applied Plastic Pavement Marking, Arrow	Grooving for Durable Pavement Makking, 4"	Waterborne Pavement Marking Paint with High Grade Polymer, White	Waterborne Pavement Marking Paint with High Grade Polymer, Yellow
	Ft	Ft	SqFt	Each	Ft	Ft	SqFt	Each	Ft	Gallon	Gallon
Total	4738	658	160	6	4738	658	160	6	128202	675	675