DEPARTMENT OF TRANSPORTATION

Planning & Engineering
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January 31, 2025

ADDENDUM NO. 1

RE: Item #3, February 5, 2025 Letting - NH 0014(242)363, PCN 079E, Kingsbury County - Rubblize PCC Pavement, Asphalt Concrete Surfacing, Pipe Work, Approach Slabs, Polymer Chip Seal, Weigh-in Motion, Modify Intersection

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

SDEBS BID PROPOSAL: *The electronic bid proposal for this contract has been revised to include the changes associated with this addendum. Bidders must log in to the SDEBS to retrieve and incorporate these changes into their bid.*

Quantities for Bid Items were changed:
Bid Item 260E1010 "Base Course" changed from 7,687.4 to 13,267.4 Ton
Bid Item 320E0008 "PG 64-34 Asphalt Binder" changed from 7,230.6 to 7,162.3 Ton
Bid Item 320E1003 "Class Q3 Hot Mixed Asphalt Concrete" changed 125,801.7 to 124,611.7 Ton
Bid Item 320E1200 "Asphalt Concrete Composite" changed from 1,075.0 to 2,265.0 Ton
Bid Item 320E4000 "Hydrated Lime" changed from 1,233.8 to 1,221.9 Ton
Bid Item 330E0100 "SS-1h or CSS-1h Asphalt for Tack" changed from 202.5 to 202.0 Ton

PLANS: Please destroy sheets 2, 13, 14, 31, 32, and 78-80 and replace with the enclosed sheets, dated 1/31/25.

Sheet 2: **Quantities for Bid Items were changed:**
Bid Item 260E1010 "Base Course" changed from 7,687.4 to 13,267.4 Ton
Bid Item 320E0008 "PG 64-34 Asphalt Binder" changed from 7,230.6 to 7,162.3 Ton
Bid Item 320E1003 "Class Q3 Hot Mixed Asphalt Concrete" changed 125,801.7 to 124,611.7 Ton
Bid Item 320E1200 "Asphalt Concrete Composite" changed from 1,075.0 to 2,265.0 Ton
Bid Item 320E4000 "Hydrated Lime" changed from 1,233.8 to 1,221.9 Ton
Bid Item 330E0100 "SS-1h or CSS-1h Asphalt for Tack" changed from 202.5 to 202.0 Ton

Sheet 13: TABLE OF ADDITIONAL QUANTITIES was revised.

Sheet 14: SUMMARY OF ASPHALT CONCRETE and TABLE OF MATERIAL QUANTITIES were revised.

Sheet 31: ORDINARY ROADWAY SHAPING and SHOULDER PREPERATION notes were revised, ORDINARY ROADWAY SHAPING TABLE was revised, and CLEANOUT PIPE CULVERT note was added.

Sheet 32: ASPHALT CONTRETE COMPOSITE note was revised.

Sheet 78: TRANSITION DETAILS FOR BEGIN/END EXCEPTION were revised. *Asphalt Concrete Composite is shown for bottom lifts.*

Sheets 79-80: TRANSITION DETAILS FOR BRIDGE ENDS were revised. *Asphalt Concrete Composite is shown for bottom lifts.*

Sincerely,

Sam Weisgram
Engineering Supervisor

SW/cj

CC: Mark Peterson, Aberdeen Region Engineer
Brad Letcher, Huron Area Engineer

ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0014(242)363	2	133

Revised 01/31/25 MW

Non-section Quantities

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
009E3500	Weigh-In-Motion System	1	Each
110E0600	Remove Fence	150	Ft
110E0730	Remove Beam Guardrail	530.0	Ft
110E1100	Remove Concrete Pavement	10,686.7	SqYd
110E1690	Remove Sediment	1.2	CuYd
110E1693	Remove Erosion Control Wattle	125	Ft
110E1700	Remove Silt Fence	125	Ft
110E7510	Remove Pipe End Section for Reset	8	Each
120E0010	Unclassified Excavation	10,977	CuYd
120E0100	Unclassified Excavation, Digouts	991	CuYd
120E0600	Contractor Furnished Borrow Excavation	2,409	CuYd
120E1000	Muck Excavation	28	CuYd
120E2000	Undercutting	5,396	CuYd
120E6200	Water for Granular Material	82.6	MGal
210E1000	Shoulder Preparation	33.595	Mile
210E2000	Shoulder Shaping	2.000	Mile
210E3020	Ordinary Roadway Shaping	18,523.7	SqYd
230E0010	Placing Topsoil	650	CuYd
230E0100	Remove and Replace Topsoil	Lump Sum	LS
260E1010	Base Course	13,267.4	Ton
260E1030	Base Course, Salvaged	2,608.6	Ton
260E2030	Gravel Cushion, Salvaged	2,817.6	Ton
270E0110	Salvage and Stockpile Granular Material	5,426.2	Ton
320E0008	PG 64-34 Asphalt Binder	7,162.3	Ton
320E1003	Class Q3 Hot Mixed Asphalt Concrete	124,611.7	Ton
320E1200	Asphalt Concrete Composite	2,265.0	Ton
320E4000	Hydrated Lime	1,221.9	Ton
320E5000	Saw and Seal Joint in Asphalt Concrete	2,240	Ft
330E0010	MC-70 Asphalt for Prime	216.3	Ton
330E0100	SS-1h or CSS-1h Asphalt for Tack	202.0	Ton
330E0210	SS-1h or CSS-1h Asphalt for Flush Seal	108.2	Ton
330E1000	Blotting Sand for Prime	10.0	Ton
330E2000	Sand for Flush Seal	1,032.9	Ton
332E0010	Cold Milling Asphalt Concrete	4,433	SqYd
380E0080	9.5" Nonreinforced PCC Pavement	7,715.6	SqYd
380E0090	10" Nonreinforced PCC Pavement	373.3	SqYd
380E6000	Dowel Bar	3,096	Each
380E6500	Planing PCC Pavement	3,612.0	SqYd
380E6510	Grinding PCC Pavement	2,720.0	SqYd
394E0100	Rubblize PCC Pavement	338,443.1	SqYd
430E0700	Precast Concrete Headwall for Drain	416	Each
450E0142	24" RCP Class 2, Furnish	12	Ft

Non-section Quantities

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
450E0150	24" RCP, Install	12	Ft
450E0202	48" RCP Class 2, Furnish	36	Ft
450E0210	48" RCP, Install	36	Ft
* 450E8900	Cleanout Pipe Culvert	30	Each
450E9001	Reset Pipe End Section	8	Each
600E0300	Type III Field Laboratory	1	Each
620E0020	Type 2 Right-of-Way Fence	150	Ft
620E0520	Type 2 Temporary Fence	150	Ft
620E1020	2 Post Panel	2	Each
630E0500	Type 1 MGS	275.0	Ft
630E1501	Type 1 Retrofit Guardrail Transition	4	Each
630E2017	MGS MASH Flared End Terminal	4	Each
632E2220	Guardrail Delineator	16	Each
633E0030	Cold Applied Plastic Pavement Marking, 24"	136	Ft
633E0040	Cold Applied Plastic Pavement Marking, Arrow	5	Each
633E0055	Cold Applied Plastic Pavement Marking, Railroad Crossing	2	Each
633E1200	High Build Waterborne Pavement Marking Paint, White	909	Gal
633E1205	High Build Waterborne Pavement Marking Paint, Yellow	221	Gal
633E1240	High Build Waterborne Pavement Marking Paint, 8" White	600	Ft
633E5015	Grooving for Cold Applied Plastic Pavement Marking, 24"	136	Ft
633E5025	Grooving for Cold Applied Plastic Pavement Marking, Arrow	5	Each
633E5040	Grooving for Cold Applied Plastic Pavement Marking, Railroad Crossing	2	Each
634E0010	Flagging	1,150.0	Hour
634E0020	Pilot Car	540.0	Hour
634E0110	Traffic Control Signs	1,417.5	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0600	4" Temporary Pavement Marking Tape Type I	19,364	Ft
634E0630	Temporary Pavement Marking	59.8	Mile
634E0900	Portable Temporary Traffic Control Signal	4	Unit
680E0010	Edge Drain	206,552	Ft
680E0015	Edge Drain Outlet	416	Each
730E0100	Cover Crop Seeding	2.0	Bu
730E0212	Type G Permanent Seed Mixture	42	Lb
731E0100	Fertilizing	2,421	Lb
732E0100	Mulching	3.6	Ton
734E0154	12" Diameter Erosion Control Wattle	500	Ft
734E0602	Low Flow Silt Fence	500	Ft
734E0610	Mucking Silt Fence	35	CuYd
734E0620	Repair Silt Fence	125	Ft
734E0630	Floating Silt Curtain	200	Ft
900E0010	Refurbish Single Mailbox	13	Each
900E0012	Refurbish Double Mailbox	3	Each

Non-section Quantities

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
900E1980	Storage Unit	1	Each
900E2030	Miscellaneous Work	1	Site
998E0100	Railroad Protective Insurance	Lump Sum	LS

*** - Denotes Non-Participating**

Structure No. 39-177-117 Quantities

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E3310	Bridge Elevation Survey	Lump Sum	LS
110E0010	Remove Concrete Bridge Approach Slab	263.3	SqYd
120E3120	Bridge Berm Repair	2	Each
120E7000	Select Granular Backfill	12.2	Ton
410E2600	Membrane Sealant Expansion Joint	45.9	Ft
430E0300	Granular Bridge End Backfill	14.8	CuYd
460E0150	Concrete Approach Slab for Bridge	243.2	SqYd
460E0160	Concrete Approach Sleeper Slab for Bridge	45.8	SqYd
464E0100	Controlled Density Fill	1.9	CuYd
480E0504	No. 4 Rebar Splice	32	Each
480E0505	No. 5 Rebar Splice	32	Each
480E0506	No. 6 Rebar Splice	52	Each
491E0005	Two Coat Bridge Deck Polymer Chip Seal	466.0	SqYd
491E0110	Abrasive Blasting of Bridge Deck	466.0	SqYd
491E0120	Bridge Deck Grinding	466.0	SqYd
491E0130	Concrete Removal, Class A	4.0	SqYd
491E0140	Concrete Removal, Class B	4.0	SqYd
491E0172	Concrete Patching Material, Bridge Deck	37.6	CuFt
700E0210	Class B Riprap	41.8	Ton
831E0110	Type B Drainage Fabric	88	SqYd
831E1030	Perforated Geocell	348	SqFt

SPECIFICATIONS

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

TABLE OF ADDITIONAL QUANTITIES

Revised 01/31/25 MW

LOCATIONS:	REMOVE CONCRETE PAVEMENT SQYD	UNCLASSIFIED EXCAVATION CUYD	BASE COURSE TON	BASE COURSE SALVAGED TON	ASPHALT CONCRETE COMPOSITE TON	CLASS Q3 HOT MIXED ASPHALT CONCRETE TON	PG 64-34 ASPHALT BINDER TON	HYDRATED LIME TON	Virgin Aggregate N.A.B.I. TON	COLD MILLING ASPHALT CONCRETE SQYD	GRAVEL CUSHION SALVAGED TON	9.5" NON-REINFORCED PCC PAVEMENT SQYD	10" NON-REINFORCED PCC PAVEMENT SQYD	GRINDING PCC PAVEMENT SQYD	PLANING PCC PAVEMENT SQYD
Begin Project at Sta. 1+90.00 (Cold Mill and Surfacing as detailed elsewhere in these plans)	-	-	-		-	200	11.5	2.0	186.5	1556	-	-	-	-	-
End Project at Sta. g3+50.00 (Pavement removal and Surfacing as detailed elsewhere in these plans) (Unclassified Excavation for Shoulder Removal) (Base Course for Shoulders)	966.7	129	230		350	-	-	-	-	-	-	-	-	-	-
Section 3 Shoulder Lift: Transition area from 5' to 11', Both Shoulders (Sta. f 266+60.00 to Sta. f 270+50.00) & (Sta. f 280+90.00 to Sta. f 284+80.00) (Base Course and Base Course Salvaged values are for all of Section 3) (Class Q3 Hot Mixed Asphalt Concrete with Specified Density Compaction)	-	-	1251.4	2608.6	-	255	14.6	2.6	237.8	-	-	-	-	-	-
Section 3 Mainline Lifts: Entire Width Transition to 52' (Sta. f 266+60.00 to Sta. f 270+50.00) & (Sta. f 280+90.00 to Sta. f 284+80.00) (Class Q3 Hot Mixed Asphalt Concrete with Specified Density Compaction)	-	-	-	-	-	1050	60.3	10.5	979.2	-	-	-	-	-	-
Section 4 Weigh-In-Motion Site (Planing PCC and Surfacing as detailed elsewhere in these plans)	6066.7	-	-		-	575	33.0	5.8	536.2	-	2817.6	7715.6	373.3	2720	3556
Transition at Beginning of Approach Slab (Sta. e149+26.71) (Pavement Removal and Surfacing as detailed elsewhere in these plans) (Unclassified Excavation for Shoulder Removal & Face of Sleeper Slab) (Base Course for Shoulders)	900.0	129	237		332	-	-	-	-	-	-	-	-	-	-
Transition at End of Approach Slab (Sta. e 150+73.29) (Pavement Removal and Surfacing as detailed elsewhere in these plans) (Unclassified Excavation for Shoulder Removal & Face of Sleeper Slab) (Base Course for Shoulders)	900.0	129	237		332	-	-	-	-	-	-	-	-	-	-
Transition at Beginning of Exception (Sta.d 293+22.10) (Pavement removal and Surfacing as detailed elsewhere in these plans) (Unclassified Excavation for Shoulder Removal)(Base Course for Shoulders)	933.3	124	263		360	-	-	-	-	-	-	-	-	-	-
Transition at End of Exception (Sta.e 9+50.00) (Pavement removal and Surfacing as detailed elsewhere in these plans) (Unclassified Excavation for Shoulder Removal) (Base Course for Shoulders)	920.0	123	220		330	-	-	-	-	-	-	-	-	-	-
Railroad crossing (Sta. 23+20.00) (Cold Mill inplace AC both sides) (Exact locations and limits to Cold Mill will determined by the Engineer)	-	-	-		-	-	-	-	-	2275	-	-	-	-	-
Guardrail (Str. No. 39-177-117) (See table of Guardrail Material Quantities)	-	70	392		65	-	-	-	-	-	-	-	-	-	-
Intersecting RoadsFarm / Unimproved Section Line Roads /Residential, Commercial, Farm, and Field Entrances (See table of Intersections and Entrances) (Cold Mill and Planing as detailed elsewhere in these plans)	-	-	2575		-	1236	71.0	12.4	1152.7	602	-	-	-	-	56
TOTALS	**10686.7**	**704**	**5405.4**	**2608.6**	**1769**	**3316**	**190.4**	**33.2**	**3092.5**	**4433**	**2817.6**	**7715.6**	**373.3**	**2720**	**3612**

Included in the Estimate of Quantities are 6.0 tons of Asphalt for Tack SS-1H or CSS-1H for the intersecting roads, transitions, and other areas throughout the project.

Included in the Estimate of Quantities are 1.2 tons of SS-1H or CSS-1H Asphalt for Flush Seal and 12 tons of Sand for Flush Seal for the pavement at the project limits and transitions.

Included in the Estimate of Quantities are 2.1 tons of MC-70 Asphalt for Prime for Section 3 Transitions and other areas throughout the project.

Application will be at the rate shown on the plans or as directed by the Engineer.

The above quantities are included in the Estimate of Quantities.

TABLE OF PROJECT STATIONING

SECTION	STATION	TO	STATION	LENGTH (Ft)	GROSS SECTION LENGTH (Ft)	GROSS SECTION LENGTH (Miles)	NET SECTION LENGTH (Ft)	NET SECTION LENGTH (Miles)
1 & 2	1+90.00	to	34+54.24	3264.24	107796.62	20.416	102841.93	19.478
	a 34+23.39	to	a 93+32.24	5908.85				
	b 93+28.57	to	b 299+00.00	20571.43				
	b 317+20.00	to	b 389+65.26	7245.26				
	b 389+85.91	to	b 454+79.08	6493.17				
	c 0+00.00	to	c 147+71.06	14771.06				
	d 147+69.35	to	d 267+14.85	11945.50				
	d 267+16.15	to	d 293+22.10	2605.95				
	d 293+22.10	to	d 331+80.21	3858.11				
	e 0+00.00	to	e 9+50.00	950.00				
	e 9+50.00	to	e 53+26.78	4376.78				
	e 53+83.81	to	e 185+72.92	13189.11				
	f 185+60.53	to	f 266+60.00	8099.47				
	f 284+80.00	to	f 326+47.69	4167.69				
	g +0.00	to	g 3+50.00	350.00				
3	f 266+60.00	to	f 284+80.00	1820.00	1820.00	0.345	1820.00	0.345
4	b 299+00.00	to	b 317+20.00	1820.00	1820.00	0.345	1820.00	0.345
				TOTAL:	**111436.62**	**21.105**	**106481.93**	**20.167**

Exception

The net length above for Section 1 & 2 was computed by taking the gross lengh minus the exception shown and the bridge and approach slab length at Str. No. 39-177-117.

SUMMARY OF ASPHALT CONCRETE

LOCATIONS:	Class Q3 Hot Mixed Asphalt Concrete with Specified Density Compaction TONS	Class Q3 Hot Mixed Asphalt Concrete without Specified Density Compaction TONS	Asphalt Concrete Composite without Specified Density Compaction TONS
Section 1 & 2, 1.5" Top Mainline Lift: (24' Mainline with Specified Density) (8' Shoulders and 0.75' Sluff without Specified Density)	23082.3	16126.2	-
Section 1 & 2, 3" Bottom Mainline Lift: (24' Mainline with Specified Density) (2' Shoulders and 1' Sluff without Specified Density)	46164.6	9599.9	487
Section 1 & 2, 3" Shoulder Lift: (6.75' Shoulders and 1.25' Sluff without Specified Density)	-	24308.1	-
Section 3, 1.5" Top Mainline Lift: (52' Mainline and Sluff with Specified Density)	512.6	-	-
Section 3, 3.0" Bottom Mainline Lift: (53.5' Mainline and Sluff with Specified Density)	1064.8	-	9
Section 3, 2.5" Shoulder Widening Lift: (13' Shoulder and Sluff with Specified Density)	437.2	-	-
Table of Additional Quantities	1305.0	2011.0	1769.0
TOTAL	**72566.5**	**52045.2**	**2265.0**

TABLE OF MATERIAL QUANTITIES

	UNCLASSIFIED EXCAVATION, DIGOUTS	BASE COURSE FOR DIGOUTS	ASPHALT CONCRETE COMPOSITE	BASE COURSE	BASE COURSE SALVAGED	GRAVEL CUSHION SALVAGED	CLASS Q3 HOT MIXED ASPHALT CONCRETE	HYDRATED LIME	PG 64-34 ASPHALT BINDER	VIRG. AGGR. (NABI.)	CLASS Q3 HOT MIXED ASPHALT CONCRETE	PG 64-34 ASPHALT BINDER	HYDRATED LIME	VIRG. AGGR. (NABI.)	MC-70 ASPH. FOR PRIME	BLOTTING SAND FOR PRIME	SS-1h/ CSS-1h ASPH. FOR TACK	SS-1h/ CSS-1h ASPH. FOR FLUSH SEAL	SAND FOR FLUSH SEAL
							<----------Shoulders---------->				<----------Main Line---------->								
SECTION	CuYd	Ton	Ton	Ton	Ton	Ton	Ton	Ton	Ton	Ton	Ton	Ton	Ton	Ton	Ton	Ton	Ton	Ton	Ton
1 & 2 (Top Lift)	-	-	-	-	-	-	-	-	-	-	39208.5	2259.4	389.6	36559.5	-	-	122.4	105.6	1005.6
1 & 2 (Bottom Lift)	974	1948	487	-	-	-	24308.1	233.7	1402.4	22672.0	55764.5	3194.3	545.4	52024.8	198.7	-	60.4	-	-
3 (Top Lift) (Quantiites shown for Sta. f 270+50.00 to Sta. f 280+90.00) (See table of Additional quantities for Transitions)	-	-	-	-	-	-	-	-	-	-	512.6	29.4	5.1	478.1	-	-	1.6	1.4	15.3
3 (Bottom Lift) (Quantiites shown for Sta. f 270+50.00 to Sta. f 280+90.00) (See table of Additional quantities for Transitions)	17	34	9	-	-	-	437.2	4.4	25.2	407.7	1064.8	61.2	10.5	993.1	4.4	-	1.6	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sub totals	991	1982	496	-	-	-	24745.3	238.1	1427.6	23079.7	96550.4	5544.3	950.6	90055.5	203.1	-	186.0	107.0	1020.9
Additional Quantities	-	-	1769	11285.4	2608.6	2817.6	-	-	-	-	3316.0	190.4	33.2	3092.5	13.2	10.0	16.0	1.2	12.0
Totals	**991**	**1982**	**2265**	**11285.4**	**2608.6**	**2817.6**	**24745.3**	**238.1**	**1427.6**	**23079.7**	**99866.4**	**5734.7**	**983.8**	**93147.9**	**216.3**	**10.0**	**202.0**	**108.2**	**1032.9**

CULVERT EXTENSIONS

Prior to beginning culvert extension operations it may be necessary to dewater the work area. The area around the pipe inlet and outlets will be blocked with sandbags wrapped in 6 mil polyethylene sheeting and dewatered. All costs associated with sandbagging and dewatering will be incidental to the contract unit prices for the various pipe contract items. The pipe will be installed in dry bedding.

The Contractor is encouraged to thoroughly investigate the culvert extension sites prior to bidding. Prior to working on the sites that are inundated with water, a complete dewatering plan will be submitted for approval to the Engineer. No separate payment for dewatering will be made.

For pipe extensions that are outside the new surfaced shoulder as shown in the typical sections, acceptance tests in the lower one-half and upper one-half of pipe 48" or less in diameter may be performed by visual inspection to the satisfaction of the Engineer. All other MSTR pipe density testing requirements will apply.

Additional excavation may be required to ensure positive drainage into and out of extended culverts. Excavated material will be incorporated into the embankment slope.

In place pipe markers in the work areas will be removed and reset as determined by the Engineer. All costs associated with the removal and resetting of pipe markers will be incidental to the various contract items.

CLEANOUT PIPE CULVERT

Material in existing pipe culvert will be cleaned out by water flushing or other approved methods.

Material removed from the pipe culvert will become property of the Contractor for disposal.

The Contractor will implement appropriate sediment control measures prior to water flushing to prevent discharges from the project boundaries.

The pipe culvert will be cleaned to the satisfaction of the Engineer.

All costs to dewater, clean pipe, and dispose of removed materials will be incidental to the contract unit price per each for "Cleanout Pipe Culvert".

SHOULDER PREPARATION

Prior to edge drain installation, it is anticipated that the Contractor will be required to add approximately 150 tons of Base Course per mile to each existing shoulder of Section 1 to meet the cross slope and inslope requirements shown in the typical sections. The Contractor will scarify, rework, shape, and blend the upper 4 inches of existing granular material with the Base Course material. The blended granular material will be shaped and compacted with 4% moisture or as directed by the Engineer, to the typical sections, and in accordance with Section 260.3 D.

Included in the table of material quantities is 5040 tons of Base Course for shoulder preparation.

Asphalt concrete surfaced shoulders will remain in place. Surface preparation will only be required on the granular shoulders.

All costs associated with blending, scarifying, reworking, shaping, and compacting the granular material and Base Course will be incidental to the contract unit price per mile for "Shoulder Preparation".

SHOULDER PREPARATION TABLE

Beginning Station	Ending Station	Shoulder Rt/Lt/Both	Shoulder Preparation (Ft)	Shoulder Preparation (Miles)
1+90.00	11+90.00	Both	2,000.00	
a 35+45.00	b 299+00.00	Both	52,717.34	
b 317+20.00	b 347+81.00	Right	3,061.00	
b 317+20.00	b 349+81.00	Left	3,261.00	
b 349+81.00	b 369+05.00	Both	3,848.00	
b 389+25.00	d 267+55.00	Both	66,577.68	
e 12+26.00	e 28+25.00	Both	3,198.00	
e 55+55.00	e 146+56.71	Both	18,203.42	
f 186+31.00	f 266+60.00	Both	16,058.00	
f 284+80.00	g 0+60.00	Both	8,455.38	
Totals:			177,379.82	33.595

SHOULDER SHAPING

Granular shoulders that have previously been shaped and compacted by Shoulder Preparation but have been disturbed by traffic during construction will be scarified, reshaped, reworked and compacted in accordance with Section 260.3.C to the shape of the typical sections prior to asphalt concrete placement on the shoulder. The locations that require Shoulder Shaping will be determined by the Engineer.

After Shoulder Shaping is completed, the asphalt concrete will be placed as specified on the shoulders.

Included in the Estimate of Quantities is 1 mile of Shoulder Shaping for each shoulder for a total of 2 miles of Shoulder Shaping.

Included in the Estimate of Quantities are 11.1 tons of MC-70 Asphalt for Prime placed at a rate of 0.30 gal/sqyd for Shoulder Shaping.

Included in the Estimate of Quantities are 6.3 MGal of Water for Granular Material per mile for compaction of granular material associated with Shoulder Shaping.

Care will be taken not to damage edge drains or edge drain outlets during the Shoulder Shaping and shoulder surfacing operations. Damage to the edge drains, edge drain outlets, or the geotextile fabric will be repaired or replaced at the Contractor's expense, to the satisfaction of the Engineer.

Shoulder Shaping will be paid for at the contract unit price per mile. Payment will be full compensation for scarifying, reworking, shaping, compacting, equipment, labor, and incidentals necessary to satisfactorily complete the work.

ORDINARY ROADWAY SHAPING

Ordinary Roadway Shaping will be performed in accordance with the Standard Specifications.

Included in the Estimate of Quantities are 18,523.7 SqYd of Ordinary Roadway Shaping and 70.0 Mgal of Water for Granular Material for the WIM site, other location where the surfacing will be removed, and in areas designated by the Engineer.

It is anticipated that more base course will be needed at sites 2-6 than will be removed and replaced at these areas. Included in the table of material quantities is 840 tons of Base Course for ordinary roadway shaping at sites 2-6.

ORDINARY ROADWAY SHAPING TABLE

Site	Beginning Station	Ending Station	Width (Ft)	ORDINARY ROADWAY SHAPING (SqYd)
1	b 299+00.00	b 317+20.00	52	10,515.6
2	d 290+42.10	d 293+22.10	52	1,617.8
3	e 9+50.00	e 12+26.00	52	1,594.7
4	e 146+56.71	e 149+26.71	52	1,560.0
5	e 150+73.29	e 153+43.29	52	1,560.0
6	g 0+60.00	g 3+50.00	52	1,675.6
	Totals:			18,523.7

UNCLASSIFIED EXCAVATION, DIGOUTS

The locations and extent of digout areas will be determined in the field by the Engineer. The backfilling material for the digouts will be Asphalt Concrete Composite and Base Course. The depth of asphalt will match the in-place surfacing thickness.

Included in the Estimate of Quantities are 50 cubic yards of Unclassified Excavation, Digouts per mile for the removal of rubblized concrete, shoulder asphalt, and unstable material for Sections 1-3.

Included in the Estimate of Quantities are 100 tons of Base Course and 25 tons of Asphalt Concrete Composite per mile for backfill of Unclassified Excavation, Digouts.

The digouts will be extended through the shoulder and backfilled with granular material that will daylight to the inslope to allow water to escape the subsurface.

FLEXIBLE PAVEMENT SMOOTHNESS PROVISION

All sections, not excluded by the Special Provision for Flexible Smoothness will be evaluated as two opportunities.

ASPHALT CONCRETE COMPOSITE

Section 324 will apply except that Class Q3 Hot Mixed Asphalt Concrete as specified elsewhere in the plans may be used as Asphalt Concrete Composite and the asphalt binder used will be PG 58-34 or PG 64-34.

Plans specified locations for Asphalt Concrete Composite will be paid for at the contract unit price per ton for “Asphalt Concrete Composite” regardless of the class of asphalt concrete used at such locations.

At the full depth replacement areas, Asphalt Concrete Composite will include MC-70 Asphalt for Prime placed at the rate of 0.30 gallons per square yard. The Asphalt for Prime will be applied to the Base Course, Salvaged or Base Course for the full width of the bottom layer of Asphalt Concrete Composite plus one foot additional on the outside shoulder.

EDGE DRAINS AND OUTLET INSTALLATION

The Contractor will construct Edge Drains and Outlets in accordance with the Special Provision and Typical Section for Edge Drains. The Edge Drains and Outlets will be installed prior to the Rubblizing operations.

Headwalls will be cleared of topsoil, straw, or other debris after seeding operations have been completed. The as-built headwall locations will be recorded and submitted to the Engineer. Each headwall location will be identified by GPS coordinates and Station and Offset. The headwall locations will be cataloged in the Huron Area Office and Drain Asset Management Inventory for reference in post construction maintenance.

Repair of any damage to edge drain, drainage fabric and edge drain outlets will be paid for by the Contractor.

See the following table for quantity and location of Edge Drains and Outlets.

NEW EDGE DRAIN AND OUTLET INSTALLATION TABLE

Beginning Station	Ending Station	Shoulder Rt/Lt/Both	2.5' Deep Edge Drain (Ft)	Edge Drain Outlets & Headwall (Each)
1+90.00	b 299+00.00	Outside Both	59,489.04	120
b 317+20.00	d 290+42.10	Outside Both	85,561.88	172
e 12+26.00	e 146+56.71	Outside Both	26,747.36	54
e 153+43.29	g 0+60.00	Outside Both	34,753.58	70
Totals:			206,551.86	416

RUBBLIZATION OF PCC PAVEMENT

Rubblize the PCC Pavement in accordance with the Standard Specifications. The pavement will be swept clean of all loose debris and all existing asphalt patches/overlay removed prior to rubblizing. Following rubblization, traffic will need to be kept off the surface until the 3” asphalt concrete overlay is placed.

Costs associated with sweeping and cleaning of all loose debris will be incidental to the contract unit price per square yard for “Rubblize PCC Pavement”.

Cost for removal of asphalt patches or overlays will be paid for at the contract unit price per square yard for “Cold Milling Asphalt Concrete”.

TABLE OF RUBBLIZE P.C.C. PAVEMENT

Location	PCCP Depth (Inches)	Area (Sq.Yds.)
US14		
Sta. 1+90.00 to Sta. b 299+00.00	9	99,148.4
Sta. b 317+20.00 to Sta. d 290+42.10	9	142,603.1
Sta. e 12+26.00 to Sta. e 146+56.71	8	44,769.0
Sta. e 153+43.29 to Sta. g 0+60.00	8	51,922.63
TOTAL =		338,443.13

SALVAGE AND STOCKPILE GRANULAR MATERIAL

An estimated 5426.2 tons (2871 Cubic Yards) of granular material will be salvaged from the existing highway according to the in-place surfacing typical sections and stockpiled at a site furnished by the Contractor and satisfactory to the Engineer. (Section 3 contains 1994.0 tons and Section 4 contains 3432.2 tons)

Salvaged material will be processed to meet the requirements of Section 884.2 D.8 prior to stockpiling. The Contractor will ensure that no vegetation, topsoil, subgrade, or other foreign material is incorporated into the salvaged granular material.

The quantity of salvaged granular material may vary from the plans.

The quantity of salvageable material is estimated from the in-place surfacing typical sections. This estimated quantity was included in the unclassified excavation quantities.

GRAVEL CUSHION, SALVAGED

The Gravel Cushion, Salvaged will be obtained from the stockpile site(s) provided by the Contractor from the salvaged material produced on this project and may be used without further gradation testing.

All other requirements for Gravel Cushion, Salvaged will apply.

BASE COURSE, SALVAGED

The Base Course, Salvaged will be obtained from the stockpile site(s) provided by the Contractor from the salvaged material produced on this project and may be used without further gradation testing.

All other requirements for Base Course, Salvaged will apply.

RECYCLED CONCRETE AGGREGATE (RCA)

Portland cement concrete pavement (RCA) removed from the mainline within the project limits may be crushed and reused as granular material provided it meets the requirements for the granular material it is replacing.

All in-place rebar will be separated and removed from the RCA.

There is an estimated **4092.8** tons of PCC Pavement on this project that can be crushed and reused. This quantity is based on a unit weight of 118 lbs. per cubic foot for the recycled concrete aggregate.

The Contractor will dispose of the material (including existing rebar) not utilized on the project at a site approved by the Engineer.

Payment for the recycled concrete aggregate will be at the contract unit price per ton for the granular material that it is replacing.

COLD MILLING ASPHALT CONCRETE

The cold milled material obtained from the project will become the property of the Contractor. Gradation testing of cold milled material not utilized on the project will not be required, unless deemed necessary by the Engineer.

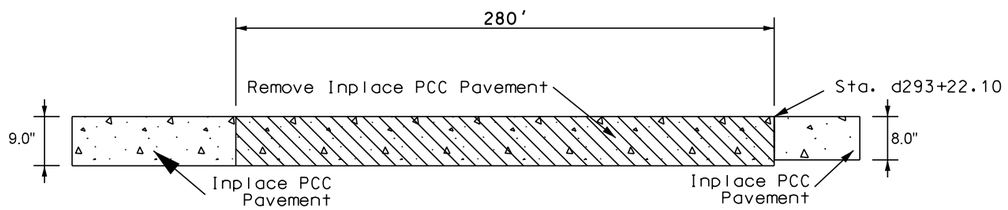
Cold milled material which remains on the project will meet the requirements of Section 884.2 B.

The placement of cold milled material will not be allowed on field approaches.

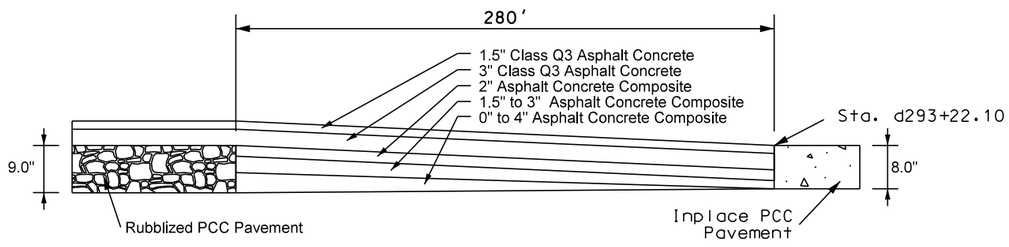
TRANSITION DETAILS FOR BEGIN/END EXCEPTION

Begin Exception

Full Depth Pavement Removal



Full Depth Pavement Replacement

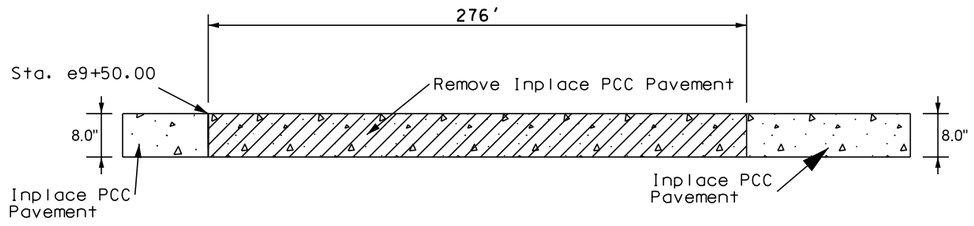


End of transitions should start and stop at a joint in the PCC Pavement.
Transition lengths may vary from what is shown above due to these joint locations.

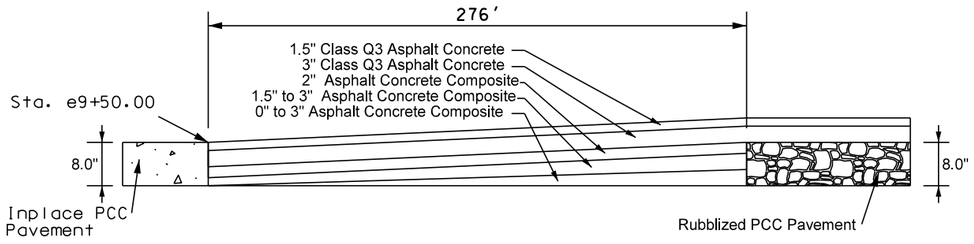
Not to Scale

End Exception

Full Depth Pavement Removal



Full Depth Pavement Replacement



End of transitions should start and stop at a joint in the PCC Pavement.
Transition lengths may vary from what is shown above due to these joint locations.

PLOT SCALE - 1:33600

PLOT NAME - 4

FILE - ...\079E_COLD_MILLING.DGN

PLOTTED FROM - TRAB12222

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0014(242)363	79	133
Plotting Date: 01/31/2025			

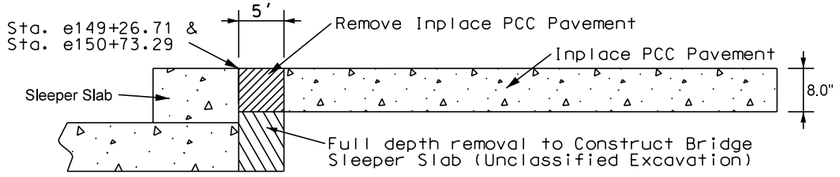
Revised 01/31/25 MW

TRANSITION DETAILS FOR BRIDGE ENDS

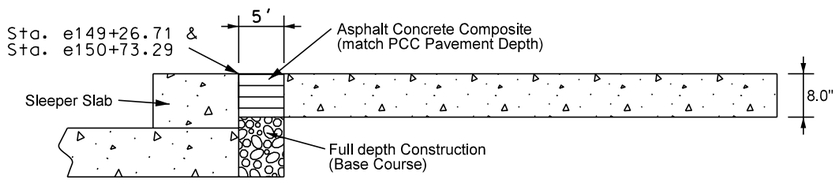
Structure No. 39-177-117

Begin/End Structure (Sleeper Slab Installation)

Full Depth Pavement Removal



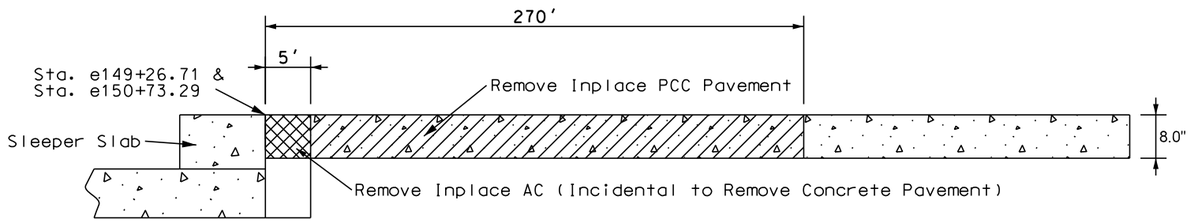
Full Depth Pavement Replacement



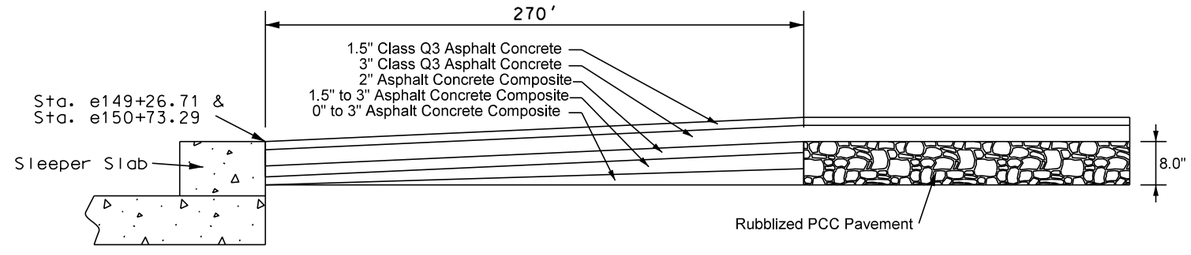
Not to Scale

Begin/End Structure (Asphalt Pavement Installation)

Full Depth Pavement Removal



Full Depth Pavement Replacement



End of transition should stop at a joint in the PCC Pavement.

Cost for Removal of inplace Asphalt Concrete will be incidental to the contract unit price per square yard for Remove Concrete Pavement.

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH 0014(242)363	80	133

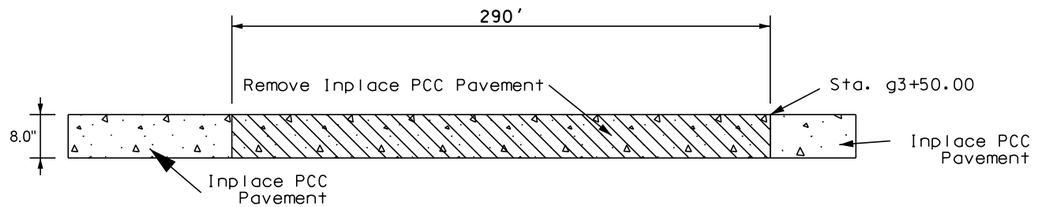
Plotting Date: 01/31/2025

Revised 01/31/25 MW

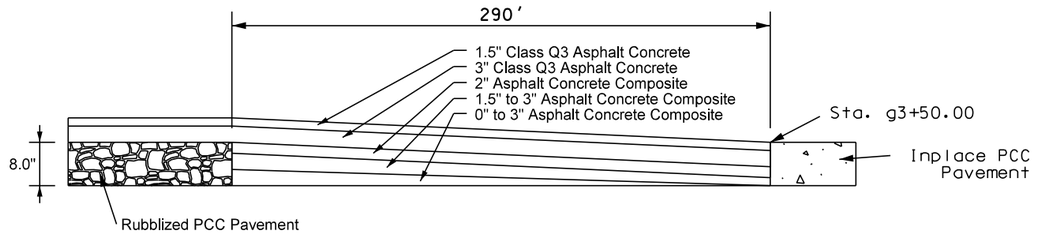
TRANSITION DETAILS FOR END OF PROJECT

End of Project

Full Depth
Pavement Removal



Full Depth
Pavement Replacement



Ends of transition should start and stop at a joint in the PCC Pavement.
Transition length may vary from what is shown above due to these joint locations.

Not to Scale