

April 23, 2026

ADDENDUM NO. 1

RE: Item #3, May 6, 2026 Letting - NH-PT 0018(222)311, NH 0281(122)0, P 0043(26)0, PCN 067V, 06D1, 06D8, Gregory County - Cold Milling, Asphalt Concrete Resurfacing, Pipe Work and Intersection Improvements

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.*

Bid Items were added:

Bid Item 009E3320 "Checker"

Bid Item 464E0100 "Controlled Density Fill"

Quantities for Bid Items were changed:

Bid Item 450E8910 "Cleanout for Culvert Treatment" changed from 1 to 3 Each

PLANS: Please destroy sheets 5, 6, 7, 8, 40, 51, 52 & 61 and replace with the enclosed sheets, dated 4/17/26 & 4/22/26.

Sheet 5: PCN 067V

Bid Items were added:

Bid Item 009E3320 "Checker"

Bid Item 464E0100 "Controlled Density Fill"

Quantities for Bid Items were changed:

Bid Item 450E8910 "Cleanout for Culvert Treatment" changed from 1 to 3 Each

Sheet 6: PCN 06D1

Bid Items were added:

Bid Item 009E3320 "Checker"

Sheet 7: PCN 06D8

Bid Items were added:

Bid Item 009E3320 "Checker"

Sheet 8: Bid Item placement was adjusted.

Sheet 40: Table of Pipe Repairs – 067V was revised.

Sheet 51: DITCH RESTORATION notes were moved from Sheet 51.

Sheet 52: CONTROLLED DENSITY FILL FOR PIPE note was added. Note placement was adjusted.

Sheet 61: CHECKING SPREAD RATES note was added.

Sincerely,

Sam Weisgram
Engineering Supervisor

SW/gp

CC: Travis Dressen, Mitchell Region Engineer
Jay Peppel, Mitchell Area Engineer

ESTIMATE OF QUANTITIES

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-PT 0018(222)311, NH 0281(122)0 & P 0043(26)0	5	267

Rev. 4-22-26 GAW

NH-PT 0018(222)311 – PCN 067V

NH-PT 0018(222)311 – PCN 067V (CONTINUED)

NH-PT 0018(222)311 – PCN 067V (CONTINUED)

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
009E3220	Reestablish Right-of-Way and Property Corner	61	Each
009E3225	Reestablish Public Land Survey System Corner	6	Each
009E3230	Grade Staking	1.953	Mile
009E3245	Final Cross Section Survey	1.953	Mile
009E3250	Miscellaneous Staking	1.953	Mile
009E3280	Slope Staking	1.953	Mile
009E3301	Engineer Directed Surveying/Staking	40.0	Hour
009E3320	Checker	Lump Sum	LS
009E4200	Construction Schedule, Category II	Lump Sum	LS
100E0100	Clearing	Lump Sum	LS
110E0130	Remove Traffic Sign	54	Each
110E0600	Remove Fence	22,708	Ft
110E1010	Remove Asphalt Concrete Pavement	1,331.0	SqYd
110E1050	Remove Asphalt Concrete Approach Pavement	1,379.4	SqYd
110E1510	Remove Luminaire Pole	2	Each
110E1540	Remove Luminaire Pole Footing	2	Each
110E1690	Remove Sediment	1.2	CuYd
110E1700	Remove Silt Fence	80	Ft
110E7150	Remove Sign for Reset	2	Each
110E7152	Remove Delineator for Reset	31	Each
110E7500	Remove Pipe for Reset	110	Ft
110E7510	Remove Pipe End Section for Reset	12	Each
120E0010	Unclassified Excavation	166,725	CuYd
120E0100	Unclassified Excavation, Dugouts	504	CuYd
120E0500	Option Borrow Excavation	74,641	CuYd
120E1000	Muck Excavation	9,741	CuYd
120E2000	Undercutting	22,890	CuYd
120E4100	Reprofiling Ditch	4.6	Sta
120E6100	Water for Embankment	2,090.0	MGal
120E6200	Water for Granular Material	444.0	MGal
210E1005	Surface Preparation	0.500	Mile
230E0010	Placing Topsoil	31,246	CuYd
230E0020	Contractor Furnished Topsoil	50	CuYd
240E0010	Obliterate Old Road	22	Sta
250E0020	Incidental Work, Grading	Lump Sum	LS
260E1010	Base Course	2,445.0	Ton
260E1030	Base Course, Salvaged	41,088.0	Ton
260E2010	Gravel Cushion	2,034.0	Ton
260E3500	Temporary Gravel Surfacing	100.0	Ton
* 260E6000	Granular Material, Furnish	4,550.0	Ton
260E6010	Granular Material	100.0	Ton
270E0042	Salvage Asphalt Mix and Granular Base Material	48,879.0	Ton

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
* 270E0200	Blend, Haul, and Stockpile Granular Material	19,612.0	Ton
270E0220	Blend and Stockpile Granular Material	40,514.0	Ton
320E0032	PG 58H-34 Asphalt Binder	1,666.6	Ton
320E1200	Asphalt Concrete Composite	420.0	Ton
320E1203	CLASS Q3R HOT MIXED ASPHALT CONCRETE	33,650.0	Ton
320E1800	Asphalt Concrete Blade Laid	1,217.0	Ton
320E4000	Hydrated Lime	345.0	Ton
320E7008	Grind 8" Rumble Strip or Stripe in Asphalt Concrete	15.6	Mile
320E7012	Grind 12" Rumble Strip or Stripe in Asphalt Concrete	4.5	Mile
330E0010	MC-70 Asphalt for Prime	83.7	Ton
330E0100	SS-1h or CSS-1h Asphalt for Tack	119.1	Ton
330E0210	SS-1h or CSS-1h Asphalt for Flush Seal	6.9	Ton
330E0300	SS-1h or CSS-1h Asphalt for Fog Seal	11.6	Ton
330E1000	Blotting Sand for Prime	228.8	Ton
330E2000	Sand for Flush Seal	37.2	Ton
330E3000	Sand for Fog Seal	3.0	Ton
332E0010	Cold Milling Asphalt Concrete	163,409	SqYd
360E0020	AE150S Asphalt for Surface Treatment	82.0	Ton
360E1050	Type 3 Cover Aggregate	1,103.2	Ton
421E0100	Pipe Culvert Undercut	81	CuYd
450E0123	18" RCP Class 3, Furnish	20	Ft
450E0130	18" RCP, Install	20	Ft
450E0143	24" RCP Class 3, Furnish	206	Ft
450E0150	24" RCP, Install	206	Ft
450E0163	30" RCP Class 3, Furnish	430	Ft
450E0170	30" RCP, Install	430	Ft
450E0193	42" RCP Class 3, Furnish	112	Ft
450E0200	42" RCP, Install	112	Ft
450E0203	48" RCP Class 3, Furnish	108	Ft
450E0210	48" RCP, Install	108	Ft
450E2008	18" RCP Flared End, Furnish	6	Each
450E2009	18" RCP Flared End, Install	6	Each
450E2016	24" RCP Flared End, Furnish	1	Each
450E2017	24" RCP Flared End, Install	1	Each
450E2032	42" RCP Flared End, Furnish	2	Each
450E2033	42" RCP Flared End, Install	2	Each
450E2036	48" RCP Flared End, Furnish	2	Each
450E2037	48" RCP Flared End, Install	2	Each
450E2044	60" RCP Flared End, Furnish	2	Each
450E2045	60" RCP Flared End, Install	2	Each
450E2060	84" RCP Flared End, Furnish	2	Each
450E2061	84" RCP Flared End, Install	2	Each
450E2200	24" RCP Sloped End, Furnish	6	Each

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
450E2201	24" RCP Sloped End, Install	6	Each
450E2204	30" RCP Sloped End, Furnish	12	Each
450E2205	30" RCP Sloped End, Install	12	Each
450E3023	30" RCP Arch Class 3, Furnish	104	Ft
450E3030	30" RCP Arch, Install	104	Ft
450E4604	30" RCP Arch Sloped End, Furnish	2	Each
450E4605	30" RCP Arch Sloped End, Install	2	Each
450E4699	Tie Bolts for RCP	102	Each
450E4759	18" CMP 16 Gauge, Furnish	130	Ft
450E4760	18" CMP, Install	130	Ft
450E4769	24" CMP 16 Gauge, Furnish	374	Ft
450E4770	24" CMP, Install	374	Ft
450E5239	60" CMP Flared End, Furnish	2	Each
450E5240	60" CMP Flared End, Install	2	Each
450E5306	18" CMP Sloped End, Furnish	4	Each
450E5307	18" CMP Sloped End, Install	4	Each
450E5406	18" CMP Safety End, Furnish	2	Each
450E5407	18" CMP Safety End, Install	2	Each
450E5410	24" CMP Safety End, Furnish	10	Each
450E5411	24" CMP Safety End, Install	10	Each
450E7660	60" Steel Pipe, Furnish	188	Ft
450E8300	Culvert Joint Cleaning	983.5	Ft
450E8305	Repair Culvert Joint	983.5	Ft
* 450E8900	Cleanout Pipe Culvert	1	Each
450E8910	Cleanout for Culvert Treatment	3	Each
450E9000	Reset Pipe	110	Ft
450E9001	Reset Pipe End Section	11	Each
450E9236	Slipline 60" Pipe	122	Ft
450E9240	Slipline 72" Pipe	102	Ft
450E9244	Slipline 84" Pipe	186	Ft
451E5160	Bore and Jack 60" Pipe	188	Ft
451E7300	Repair Drain Tile	10	Ft
462E0250	Cellular Grout	139.6	CuYd
464E0100	Controlled Density Fill	7.1	CuYd
600E0300	Type III Field Laboratory	1	Each
620E0020	Type 2 Right-of-Way Fence	21,237	Ft
620E0510	Type 1 Temporary Fence	12,385	Ft
620E0520	Type 2 Temporary Fence	3,500	Ft
620E1020	2 Post Panel	70	Each
620E1030	3 Post Panel	36	Each
632E1320	2.0"x2.0" Perforated Tube Post	415.5	Ft
632E1340	2.5"x2.5" Perforated Tube Post	347.0	Ft
632E2022	4"x4" White Delineator Back to Back with 1.12 Lb/Ft Post	40	Each

ESTIMATE OF QUANTITIES (CONTINUED)

NH-PT 0018(222)311 – PCN 067V (CONTINUED)

NH-PT 0018(222)311 – PCN 067V (CONTINUED)

NH 0281(122)0 – PCN 06D1

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
632E2100	Reset Delineator	31	Each
632E2510	Type 2 Object Marker Back to Back	22	Each
632E3203	Flat Aluminum Sign, Nonremovable Copy High Intensity	455.8	SqFt
632E3205	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity	50.8	SqFt
632E3500	Reset Sign	2	Each
633E0040	Cold Applied Plastic Pavement Marking, Arrow	12	Each
633E1200	High Build Waterborne Pavement Marking Paint, White	134	Gal
633E1205	High Build Waterborne Pavement Marking Paint, Yellow	103	Gal
633E1260	High Build Waterborne Pavement Marking Paint, 24" White	100	Ft
633E1262	High Build Waterborne Pavement Marking Paint, 24" Yellow	309	Ft
633E5025	Grooving for Cold Applied Plastic Pavement Marking, Arrow	12	Each
634E0010	Flagging	6,000.0	Hour
634E0020	Pilot Car	2,500.0	Hour
634E0110	Traffic Control Signs	831.2	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0135	Traffic Control Supervisor	Lump Sum	LS
634E0275	Type 3 Barricade	10	Each
634E0340	Temporary Raised Pavement Markers	2.0	Mile
634E0380	Tubular Marker	500	Each
634E0420	Type C Advance Warning Arrow Board	1	Each
634E0630	Temporary Pavement Marking	21.0	Mile
635E0045	Breakaway Base Luminaire Pole with Arm, 45' Mounting Height	6	Each
635E3700	Roadway Luminaire, LED with Photoelectric Cell	6	Each
635E4010	1 Section Vehicle Signal Head	2	Each
635E5020	2' Diameter Footing	48.0	Ft
635E5301	Type 1 Electrical Junction Box	4	Each
635E5400	Electrical Service Cabinet	2	Each
635E8120	2" Rigid Conduit, Schedule 40	680	Ft
635E8215	1.5" Rigid Conduit, Schedule 80	135	Ft
635E8220	2" Rigid Conduit, Schedule 80	235	Ft
635E9018	1/C #8 AWG Copper Wire	2,850	Ft
635E9020	1/C #10 AWG Copper Wire	1,510	Ft
635E9710	2/C #10 AWG Copper Pole and Bracket Cable	360	Ft
700E0210	Class B Riprap	280.2	Ton
700E0310	Class C Riprap	165.1	Ton
700E0410	Class D Riprap	318.5	Ton
730E0100	Cover Crop Seeding	51.6	Bu
730E0210	Type F Permanent Seed Mixture	838	Lb
731E0200	Fertilizing	2.50	Ton
732E0100	Mulching	16.8	Ton
734E0044	Soil Stabilizer	5.0	Acre
734E0103	Type 3 Erosion Control Blanket	3,750	SqYd

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
734E0154	12" Diameter Erosion Control Wattle	650	Ft
734E0165	Remove and Reset Erosion Control Wattle	125	Ft
734E0325	Surface Roughening	5.0	Acre
734E0602	Low Flow Silt Fence	2,000	Ft
734E0604	High Flow Silt Fence	544	Ft
734E0610	Mucking Silt Fence	22	CuYd
734E0620	Repair Silt Fence	80	Ft
831E0110	Type B Drainage Fabric	924	SqYd
900E0010	Refurbish Single Mailbox	6	Each
900E0012	Refurbish Double Mailbox	1	Each
900E0900	Curb Stop	2	Each
900E1320	Construction Entrance	2	Each
900E1980	Storage Unit	1	Each

* - Denotes Non-Participating

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
009E3220	Reestablish Right-of-Way and Property Corner	14	Each
009E3225	Reestablish Public Land Survey System Corner	2	Each
009E3230	Grade Staking	0.692	Mile
009E3245	Final Cross Section Survey	0.692	Mile
009E3250	Miscellaneous Staking	0.692	Mile
009E3280	Slope Staking	0.692	Mile
009E3290	Structure Staking	1	Each
009E3320	Checker	Lump Sum	LS
009E4200	Construction Schedule, Category II	Lump Sum	LS
100E0100	Clearing	Lump Sum	LS
110E0130	Remove Traffic Sign	20	Each
110E0600	Remove Fence	8,477	Ft
110E1690	Remove Sediment	1.0	CuYd
110E1700	Remove Silt Fence	52	Ft
110E7040	Remove Gate for Reset	2	Each
120E0010	Unclassified Excavation	30,315	CuYd
120E0100	Unclassified Excavation, Diggouts	35	CuYd
120E0500	Option Borrow Excavation	41,598	CuYd
120E1000	Muck Excavation	514	CuYd
120E2000	Undercutting	2,405	CuYd
120E6100	Water for Embankment	508.0	MGal
120E6200	Water for Granular Material	118.0	MGal
210E1005	Surface Preparation	0.200	Mile
230E0010	Placing Topsoil	12,747	CuYd
230E0020	Contractor Furnished Topsoil	50	CuYd
240E0010	Obliterate Old Road	27	Sta
250E0020	Incidental Work, Grading	Lump Sum	LS
260E1010	Base Course	69.0	Ton
260E1030	Base Course, Salvaged	12,296.0	Ton
260E3500	Temporary Gravel Surfacing	100.0	Ton
270E0042	Salvage Asphalt Mix and Granular Base Material	13,149.0	Ton
270E0220	Blend and Stockpile Granular Material	12,000.0	Ton
320E0032	PG 58H-34 Asphalt Binder	199.4	Ton
320E1203	CLASS Q3R HOT MIXED ASPHALT CONCRETE	4,285.0	Ton
320E4000	Hydrated Lime	42.4	Ton
320E7012	Grind 12" Rumble Strip or Stripe in Asphalt Concrete	1.4	Mile
320E7035	Grind Sinusoidal Transverse Rumble Strip in Asphalt Concrete	392.0	SqFt
330E0010	MC-70 Asphalt for Prime	24.9	Ton
330E0100	SS-1h or CSS-1h Asphalt for Tack	8.7	Ton
330E0210	SS-1h or CSS-1h Asphalt for Flush Seal	0.6	Ton
330E0300	SS-1h or CSS-1h Asphalt for Fog Seal	3.3	Ton

ESTIMATE OF QUANTITIES (CONTINUED)

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-PT 0018(222)311, NH 0281(122)0 & P 0043(26)0	7	267

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NH 0281(122)0 – PCN 06D1 (CONTINUED)

NH 0281(122)0 – PCN 06D1 (CONTINUED)

P 0043(26)0 – PCN 06D8

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
330E1000	Blotting Sand for Prime	62.0	Ton
330E2000	Sand for Flush Seal	0.3	Ton
330E3000	Sand for Fog Seal	1.0	Ton
332E0010	Cold Milling Asphalt Concrete	134	SqYd
360E0020	AE150S Asphalt for Surface Treatment	23.9	Ton
360E1050	Type 3 Cover Aggregate	322.0	Ton
450E0143	24" RCP Class 3, Furnish	80	Ft
450E0150	24" RCP, Install	80	Ft
450E2200	24" RCP Sloped End, Furnish	2	Each
450E2201	24" RCP Sloped End, Install	2	Each
450E4759	18" CMP 16 Gauge, Furnish	182	Ft
450E4760	18" CMP, Install	182	Ft
450E4769	24" CMP 16 Gauge, Furnish	152	Ft
450E4770	24" CMP, Install	152	Ft
450E5406	18" CMP Safety End, Furnish	4	Each
450E5407	18" CMP Safety End, Install	4	Each
450E5410	24" CMP Safety End, Furnish	4	Each
450E5411	24" CMP Safety End, Install	4	Each
620E0020	Type 2 Right-of-Way Fence	10,297	Ft
620E0510	Type 1 Temporary Fence	6,480	Ft
620E1020	2 Post Panel	26	Each
620E1030	3 Post Panel	12	Each
620E2100	Reset Gate	2	Each
632E1320	2.0"x2.0" Perforated Tube Post	60.5	Ft
632E1340	2.5"x2.5" Perforated Tube Post	175.0	Ft
632E2022	4"x4" White Delineator Back to Back with 1.12 Lb/Ft Post	14	Each
632E2510	Type 2 Object Marker Back to Back	6	Each
632E3203	Flat Aluminum Sign, Nonremovable Copy High Intensity	224.6	SqFt
634E0010	Flagging	1,250.0	Hour
634E0020	Pilot Car	500.0	Hour
634E0110	Traffic Control Signs	243.7	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0135	Traffic Control Supervisor	Lump Sum	LS
634E0275	Type 3 Barricade	4	Each
634E0340	Temporary Raised Pavement Markers	0.5	Mile
634E0380	Tubular Marker	100	Each
634E0420	Type C Advance Warning Arrow Board	1	Each
634E0630	Temporary Pavement Marking	1.6	Mile
730E0100	Cover Crop Seeding	91.8	Bu
730E0210	Type F Permanent Seed Mixture	218	Lb
731E0200	Fertilizing	4.20	Ton
734E0044	Soil Stabilizer	2.5	Acre
734E0103	Type 3 Erosion Control Blanket	970	SqYd

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
734E0154	12" Diameter Erosion Control Wattle	300	Ft
734E0165	Remove and Reset Erosion Control Wattle	100	Ft
734E0604	High Flow Silt Fence	390	Ft
734E0610	Mucking Silt Fence	15	CuYd
734E0620	Repair Silt Fence	52	Ft
900E1320	Construction Entrance	1	Each

STR. NO. 27-410-349 (PCN 06D1)

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
420E0200	Structure Excavation, Box Culvert	74	CuYd
421E0200	Box Culvert Undercut	228	CuYd
560E2162	2-12'x4' Precast Concrete Box Culvert, Furnish	82.0	Ft
560E2163	2-12'x4' Precast Concrete Box Culvert, Install	82.0	Ft
560E3162	2-12'x4' Precast Concrete Box Culvert End Section, Furnish	2	Each
560E3163	2-12'x4' Precast Concrete Box Culvert End Section, Install	2	Each
700E0310	Class C Riprap	75.9	Ton
831E0110	Type B Drainage Fabric	86	SqYd
831E0300	Reinforcement Fabric (MSE)	327	SqYd

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
009E3220	Reestablish Right-of-Way and Property Corner	7	Each
009E3230	Grade Staking	0.533	Mile
009E3245	Final Cross Section Survey	0.533	Mile
009E3250	Miscellaneous Staking	0.533	Mile
009E3280	Slope Staking	0.533	Mile
009E3320	Checker	Lump Sum	LS
009E4200	Construction Schedule, Category II	Lump Sum	LS
100E0100	Clearing	Lump Sum	LS
110E0130	Remove Traffic Sign	14	Each
110E0600	Remove Fence	3,581	Ft
110E1010	Remove Asphalt Concrete Pavement	30.0	SqYd
110E1700	Remove Silt Fence	48	Ft
120E0010	Unclassified Excavation	20,565	CuYd
120E0100	Unclassified Excavation, Digouts	46	CuYd
120E2000	Undercutting	3,696	CuYd
120E6100	Water for Embankment	113.0	MGal
120E6200	Water for Granular Material	87.0	MGal
210E1005	Surface Preparation	0.100	Mile
230E0010	Placing Topsoil	4,737	CuYd
230E0020	Contractor Furnished Topsoil	50	CuYd
240E0010	Obliterate Old Road	26	Sta
250E0020	Incidental Work, Grading	Lump Sum	LS
260E1010	Base Course	92.0	Ton
260E1030	Base Course, Salvaged	9,130.0	Ton
260E3500	Temporary Gravel Surfacing	100.0	Ton
* 260E6000	Granular Material, Furnish	239.0	Ton
270E0042	Salvage Asphalt Mix and Granular Base Material	10,998.0	Ton
* 270E0200	Blend, Haul, and Stockpile Granular Material	478.0	Ton
270E0220	Blend and Stockpile Granular Material	10,000.0	Ton
320E0032	PG 58H-34 Asphalt Binder	196.3	Ton
320E1200	Asphalt Concrete Composite	10.0	Ton
320E1203	CLASS Q3R HOT MIXED ASPHALT CONCRETE	4,110.0	Ton
320E1800	Asphalt Concrete Blade Laid	61.0	Ton
320E4000	Hydrated Lime	41.3	Ton
320E7008	Grind 8" Rumble Strip or Stripe in Asphalt Concrete	0.8	Mile
320E7012	Grind 12" Rumble Strip or Stripe in Asphalt Concrete	1.1	Mile
320E7040	Grind 6" Transverse Rumble Strip in Asphalt Concrete	374.0	Ft
330E0010	MC-70 Asphalt for Prime	18.9	Ton
330E0100	SS-1h or CSS-1h Asphalt for Tack	10.8	Ton
330E0210	SS-1h or CSS-1h Asphalt for Flush Seal	0.5	Ton
330E0300	SS-1h or CSS-1h Asphalt for Fog Seal	2.6	Ton
330E1000	Blotting Sand for Prime	47.0	Ton

ESTIMATE OF QUANTITIES (CONTINUED)

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-PT 0018(222)311, NH 0281(122)0 & P 0043(26)0	8	267

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P 0043(26)0 – PCN 06D8 (CONTINUED)

P 0043(26)0 – PCN 06D8 (CONTINUED)

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
330E2000	Sand for Flush Seal	0.2	Ton
330E3000	Sand for Fog Seal	1.0	Ton
332E0010	Cold Milling Asphalt Concrete	7,526	SqYd
360E0020	AE150S Asphalt for Surface Treatment	18.4	Ton
360E1050	Type 3 Cover Aggregate	247.0	Ton
450E0143	24" RCP Class 3, Furnish	104	Ft
450E0150	24" RCP, Install	104	Ft
450E0163	30" RCP Class 3, Furnish	74	Ft
450E0170	30" RCP, Install	74	Ft
450E2200	24" RCP Sloped End, Furnish	2	Each
450E2201	24" RCP Sloped End, Install	2	Each
450E2204	30" RCP Sloped End, Furnish	2	Each
450E2205	30" RCP Sloped End, Install	2	Each
450E4759	18" CMP 16 Gauge, Furnish	82	Ft
450E4760	18" CMP, Install	82	Ft
450E4769	24" CMP 16 Gauge, Furnish	86	Ft
450E4770	24" CMP, Install	86	Ft
450E5406	18" CMP Safety End, Furnish	2	Each
450E5407	18" CMP Safety End, Install	2	Each
450E5410	24" CMP Safety End, Furnish	2	Each
450E5411	24" CMP Safety End, Install	2	Each
620E0020	Type 2 Right-of-Way Fence	4,744	Ft
620E0510	Type 1 Temporary Fence	3,684	Ft
620E1020	2 Post Panel	11	Each
620E1030	3 Post Panel	6	Each
632E1320	2.0"x2.0" Perforated Tube Post	26.0	Ft
632E1340	2.5"x2.5" Perforated Tube Post	75.0	Ft
632E2022	4"x4" White Delineator Back to Back with 1.12 Lb/Ft Post	11	Each
632E2510	Type 2 Object Marker Back to Back	4	Each
632E3203	Flat Aluminum Sign, Nonremovable Copy High Intensity	58.9	SqFt
634E0010	Flagging	1,250.0	Hour
634E0020	Pilot Car	500.0	Hour
634E0110	Traffic Control Signs	243.7	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0135	Traffic Control Supervisor	Lump Sum	LS
634E0275	Type 3 Barricade	4	Each
634E0340	Temporary Raised Pavement Markers	0.7	Mile
634E0380	Tubular Marker	100	Each
634E0420	Type C Advance Warning Arrow Board	1	Each
634E0630	Temporary Pavement Marking	2.1	Mile
730E0100	Cover Crop Seeding	116.4	Bu
730E0210	Type F Permanent Seed Mixture	148	Lb
731E0200	Fertilizing	2.90	Ton

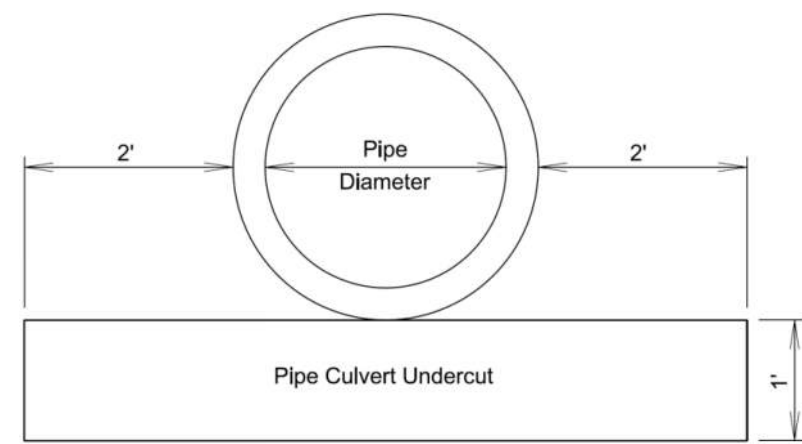
BID ITEM NUMBER	ITEM	QUANTITY	UNIT
734E0044	Soil Stabilizer	2.5	Acre
734E0604	High Flow Silt Fence	214	Ft
734E0610	Mucking Silt Fence	13	CuYd
734E0620	Repair Silt Fence	48	Ft
900E1320	Construction Entrance	1	Each

* - Denotes Non-Participating

PIPE CULVERT UNDERCUT (Cont.)

Storm sewer and approach pipes do not require undercutting unless specified otherwise in these plans.

Pipe Diameter (In)	Round Pipe Undercut Rate for 1' Depth (CuYd/Ft)	Arch Pipe Undercut Rate for 1' Depth (CuYd/Ft)
24	0.2407	0.2577
30	0.2623	0.2847
36	0.2840	0.3110
42	0.3056	0.3337
48	0.3272	0.3596
54	0.3488	0.3827
60	0.3704	0.4105
66	0.3920	---
72	0.4136	0.4630
78	0.4352	---
84	0.4568	0.5123
90	0.4784	---



INCIDENTAL WORK, GRADING

Station	L/R	Remarks
US18 West (067V)		
13+17	54' R	Take Out 18" – 60' CMP & 2 End Sections
27+51		Take Out 24" – 68' RCP & 2 End Sections
36+13	67' R	Take Out 18" - 51' CMP & 2 End Sections
38+14		Take Out 24" – 92' RCP & 2 End Sections
39+67	50' L	Take Out 18" – 70' CMP & 2 End Sections
41+10	292' R	Take Out 18" – 29' CMP & 2 End Sections
43+29	193' R	Take Out 18" – 131' CMP & 2 End Sections
44+09	310' R	Take Out 18" – 64' RCP & 2 End Sections
48+08	14' L	Take Out 18" – 53' CMP & 2 End Sections
57+13	50' L	Take Out 18" – 53' CMP & 2 End Sections
SD43 (06D8)		
37+72	447' L	Take out 66" – 70' RCP Arch & 2 End Sections

US18 East (067V)

4+84		Take Out 18" – 68' RCP & 2 End Sections
18+30		Take Out 4' x 6' – 76' Cattle Pass & 2 Ends
30+60		Take Out 30" – 58' RCP & 2 End Sections
30+50	84' R	Take Out 18" – 50' RCP & 2 End Sections

XR23 (303rd St – 067V)

10+00	140' L	Take Out 24" – 83' CMP & 2 End Sections
20+02		Take out 18" – 35' CMP & 2 End Sections

US281 (06D1)

3+73	54' R	Take Out 18" – 66' RCP & 2 End Sections
5+25		Take Out Twin 36" – 170' RCP & 4 End Sections
16+83	662' R	Take Out 54" – 188' RCP & 2 End Sections
18+68	804' R	Take Out 18" – 65' RCP & 2 End Sections
21+70	1170' R	Take Out 24" – 92'
27+13	1636' R	Take Out 18" – 62' CMP & 2 End Sections

XR30

10+35	465' L	Take Out 12" – 34' CMP & 2 End Sections
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Intermediate US18 (067V)

82+42	L&R	Take Out 2 End Sections
127+48		Take Out 18" RCP & 2 End Sections
162+37	L&R	Take Out 2 End Sections
195+00		Take Out 18" – 56' RCP & 2 End Sections
210+00		Take Out 18" – 56' RCP & 2 End Sections

TABLE OF ASPHALT CONCRETE APPROACH PAVEMENT REMOVAL

Station (067V – US18)	L/R	Quantity (SqYd)
US18 West		
25+00	R	946.7
US18E		
25+30	L	179.7
26+20	R	253.0
Total:		1379.4

DRAIN TILE

There are no known drain tiles within the project limits. However, due to the lack of good records, the Contractor may encounter other drain tile that were not located.

The Contractor will repair any damaged drain tile to the extent that the functionality of the drainage system is retained after the project. Where replacement is necessary, the existing drain tile will be replaced with the appropriate diameter of corrugated polyethylene drainage tubing. The corrugated polyethylene drainage tubing will be in conformance with Section 990 of the Specifications.

A quantity of 10 feet of "Repair Drain Tile" is included in the estimate of quantities for use where it is determined to be needed. All costs associated with the repair and or replacement of the drainage tile will be incidental to the contract unit price per foot for "Repair Drain Tile". The quantity will be adjusted or eliminated by construction change order, depending on field conditions.

CORRUGATED METAL PIPE

Corrugated metal pipes will have 2 3/8-inch x 1/2-inch corrugations for 42-inch and smaller round pipe and 48-inch and smaller arch pipe unless otherwise stated in the plans. Corrugated metal pipes will have 3-inch x 1-inch or 5-inch x 1-inch corrugations for 48-inch and larger round pipe and 54-inch and larger arch pipe unless otherwise stated in the plans.

The gauge of the corrugated metal elbows and ends will match the thickest gauge of corrugated metal pipe it is connected to.

PIPE FOR APPROACHES AND INTERSECTING ROADS

Class 2 reinforced concrete pipe, high density polyethylene pipe, polypropylene pipe (will be in conformance with AASHTO M330), or steel reinforced polyethylene pipe may be substituted for corrugated metal pipe at approaches and intersecting roads at no additional cost to the State.

If corrugated metal pipes are provided, the pipes will be as specified in the CORRUGATED METAL PIPE note.

If high density polyethylene pipe, polypropylene pipe (will be in conformance with AASHTO M330), or steel reinforced polyethylene pipe are provided, then the end sections will be metal, be compatible, and conform to the type of end section as shown in the plans.

PIPE FOR DOWNSPOUTS

The substitution of Class 2 reinforced concrete pipe, high density polyethylene pipe, polypropylene pipe, or steel reinforced polyethylene pipe for corrugated metal downspout pipes is not allowed.

DITCH RESTORATION

The ditches will be excavated for approximately 50 feet in each direction (or as directed by the Engineer) from the new/reset pipe ends to obtain proper water flow through the pipe. The excavated material may be used as fill material for flattening slopes on approaches, culvert work, etc. as approved by the Engineer



BORE AND JACK STEEL PIPE

The Contractor will install steel pipe at station 162+55 (Intermediate US18) by boring and jacking the pipe through the existing highway embankment. The pipe will be installed by boring and jacking methods as specified herein unless an alternate plan is submitted in writing and approved by the Engineer.

As shown on the appropriate pipe cross section, some excavation of the existing roadway embankment is anticipated in order to reduce the length of the bore and jack pipe installation.

Steel pipe for boring and jacking will meet or exceed the requirements of ASTM A53 Grade B, ASTM A139 Grade B or ASTM A252 Grade 2. Hydrostatic testing will not be required for this application. The pipe will be required to have the minimum wall thickness as shown in the following table:

Pipe Diameter	Wall Thickness
48" & below	1/2"
54"	5/8"
60"	5/8"
66"	3/4"
72"	3/4"

The exterior of the steel pipe will be coated with a fusion bonded epoxy coating and an abrasion resistant overcoat or a two-component coal tar epoxy. The coal tar will meet the requirements of Sherwin-Williams Targuard, Tnemec Hi-Build Tneme-Tar, or an approved equal. Applications of the coatings will be in conformance with the manufacturer's recommendations.

The pipe joints will be welded by a certified welder in accordance with Section 410.3 D of the Specifications. After the welding has been completed, the exposed area will be coated with 3M Scotchkote Liquid Epoxy 328 or a two-component coal tar epoxy meeting the requirements of Sherwin-Williams Targuard, Tnemec Hi-Build Tneme-Tar, or an approved equal.

The jacking pit will be constructed of sufficient size to accommodate equipment and workmen. The pit walls will be sloped or shored to comply with all applicable State and Federal regulations. The Contractor will be responsible for the design of the pit floor and jacking thrust restraint wall to carry the cyclic loads and thrust applied by the Contractor's operation. Water will not be allowed to accumulate in the jacking pit. All components of the jacking pit will be removed after installation of the pipe unless otherwise allowed by the Engineer.

The pipe will be pushed into position from a jacking pit with hydraulic jacks while simultaneously excavating at the forward end of the pipe. Each pipe section will be jacked from the jacking pit as the excavation at the boring head progresses so that the excavation is supported by the boring head or the pipe at all points.

BORE AND JACK STEEL PIPE (Cont.)

Jacking thrust will be applied to the pipe by means of a yoke or frame designed to distribute the thrust uniformly around the pipe joint. The thrust will be applied to the pipe joint only in the location and only to the maximum force recommended by the pipe manufacturer. The pipe will be jacked into place without visible damage to the pipe or joint.

The boring head excavation will be circular with a maximum diameter equal to the outside diameter of the jacking pipe plus 1 inch. The Contractor will

take whatever corrective action is necessary to prevent running, flowing, or squeezing ground conditions at the cutting face from causing large voids or significant loss of soil that may cause surface settlement.

The Contractor will control the alignment and grade of the pipe installation to meet the following tolerances:

1. Maximum horizontal deviation from plan shown alignment will be less than 0.15% of pipe length from the downstream end of pipe to the point of measurement.
2. Maximum vertical deviation from plan shown alignment will be less than 0.075% of pipe length from the downstream end of pipe to the point of measurement.

All material excavated by the boring head for the pipe installation will be disposed of by the Contractor. The excavated material from the boring pit will be used as backfill for the pit and compacted into place to the satisfaction of the Engineer.

Steel casing will be installed horizontally through 188' +/- of embankment. The pipe will be installed through an approximate 35' vertical depth of silt clay fill material. The parent formation from which the embankment material was excavated includes windblown sand and silt as well as thin beds of claystone, siltstone, and sandstone. Large boulders are not anticipated to be encountered within the bore and jack envelope.

Installation of CMP ends on the steel pipe will require the placement of a minimum of 2 welded stops at each pipe end to prevent the end from slipping off the steel pipe. The location and size will be determined in the field by the Engineer and installed by a certified welder. Stops will be coated with a coal tar epoxy. All costs, including labor and materials for the installation of the stops will be incidental to the contract unit price per foot for the corresponding steel pipe furnish contract item. Alternative methods of attachment may be allowed with the approval of the Engineer.

Payment for furnishing the pipe will be incidental to the contract unit price per foot for the corresponding steel pipe furnish contract item.

All costs involved with boring and jacking the pipe including labor, equipment, welding, materials, disposal of waste material, constructing and backfilling the jacking pit, and excavating and backfilling the roadway embankment will be incidental to the contract unit price per foot for the corresponding bore and jack pipe contract item.

STEEL PIPE

Steel pipe will meet the same requirements, including pipe specifications, welding and coal tar epoxy coating as the steel pipe used in the bore and jack installation.

PIPE COVER

The earthen subgrade cover for some pipe installations is less than one foot. The Contractor will take the necessary precautions to ensure the structural properties of the pipes are not damaged after installation and prior to the placement of final surfacing. Any additional costs for preventing damage to these pipes will be incidental to the contract unit price per foot for the corresponding pipe installation contract item.

CONTROLLED DENSITY FILL FOR PIPE

Controlled density fill will be in conformance with Section 464 of the Specifications. The controlled density fill will be placed between the pipes from the base of pipe elevation to the haunch of the pipes and extend to the end of the end section.

Station(067V)	Quantity (SqYd)
443+00	7.10
	7.10

MAINLINE CROSS PIPE REPLACEMENT

Pipe culverts in non-regrading portions of the project will be installed in accordance with the following notes and as shown on the Pipe Installation Detail.

This work will be completed prior to beginning cold milling on the project.

After the existing pipe has been removed, the new pipe culvert will be undercut to a minimum depth of 1 foot. The depth of undercut is an estimate and the actual depth necessary will be determined during construction. The Engineer will determine how much undercut will be done in accordance with Section 421 of the specifications but will not reduce the undercut to less than 1 foot in depth.

Select fill material for backfilling the undercut area will conform to the gradation requirements of Base Course in Section 882. If groundwater is encountered during construction, the select fill material for backfilling the undercut area and Class B Bedding will conform to the gradation requirements of Section 421.2 A. until backfill placement is above the groundwater level. The Engineer will process a CCO to provide for compensation to the Contractor for the added cost of the changed material. All other requirements of Section 421 will apply.

Pipe culverts will be bedded in accordance with Section 450.3 F.2, Class B Bedding with the following exceptions. The excavated area will extend 2 feet from the outermost diameter on both sides of the pipe with the back of the excavated area being sloped 2:1 upward to the top of the roadway surface. Select fill material for Class B Bedding will conform to the gradation requirements of Base Course in Section 882.

After the minimum testing requirements of M.S.T.R Section 4.1.F.3.a.1 (SDDOT Materials Manual) have been met, the minimum density testing requirements will be one test per zone. Each zone from the top of the pipe to the top of the subgrade will be 2 feet in depth. Moisture testing will remain as per M.S.T.R.



CLASS Q3R HOT MIXED ASPHALT CONCRETE

Mineral Aggregate:

Asphalt concrete aggregate will consist of reclaimed asphalt pavement (RAP) and virgin aggregate.

Virgin mineral aggregate for Class Q3R Hot Mixed Asphalt Concrete will conform to the requirements of Class Q3.

The Class Q3R Hot Mixed Asphalt Concrete will include 20% percent RAP in the mixture. RAP will be obtained from the material produced by cold milling.

Mix Design Criteria:

Gyratory Controlled QC/QA Mix Design requirements for the Class Q3R Hot Mixed Asphalt Concrete will conform to the requirements of Class Q3 except as modified by the following:

Gyratory Compactive Effort:

	N _{initial}	N _{design}	N _{maximum}
Class Q3R	6	50	75

All remaining requirements for Class Q3 will apply.

PERFORMANCE GRADED ASPHALT BINDER

Performance Graded Asphalt Binder will conform to Section 890, AASHTO M 332, and the Combined State Binder Group Method of Acceptance for Asphalt Binders, available from the Department's Bituminous Engineer.

ADDITIONAL QUANTITIES

Included in the Estimate of Quantities are 100 tons of Class Q3R Hot Mixed Asphalt Concrete, 4.7 tons of PG 58H-34 Asphalt Binder and 1.0 tons of Hydrated Lime per mile for spot leveling, strengthening and repair of the existing surface throughout the project.

Included in the Estimate of Quantities are 2.12 tons of SS-1h or CSS-1h Asphalt for Tack for surface repair and leveling areas throughout the project. (Rate = 0.09 gallon per square yard).

EDGE LINE RUMBLE STRIPS AND STRIPES

INSTALLATION:

Edgeline rumble strips and stripes will be constructed according to Standard Plates 320.20 (Sections: 4 & 6) & 320.24 (Sections: 1, 2, 3 & 5).

Rumble strips and stripes will be completed prior to application of the flush seal and permanent pavement marking.

Rumble strips and stripes will be installed in rural areas with posted speeds greater than 50 mph and are not required in urban areas. The rumble strips and stripes will begin at the location of the Speed Limit 65 sign as traffic is departing the built up area of a community, unless otherwise specified in the plans. The Engineer will provide the exact start and stop locations.

ROADWAY CLEANING:

The Contractor will be required to remove loose material from the driving surface and/or asphalt shoulders of the roadway. Loose material may be broomed to the edge of shoulders. It will be the Contractor's responsibility to ensure the loose material does not enter any vegetated areas or waterways.

Cost for this work will be incidental to the contract unit price per mile for Grind 8" and 12" Rumble Strip or Stripe in Asphalt Concrete.

REFURBISH SINGLE AND DOUBLE MAILBOXES

Existing mailboxes will be removed, turnouts constructed, and mailboxes reset on new posts with the necessary support hardware for single or double mailbox assemblies. The local Postmaster will determine the recommended mounting height. The Contractor will coordinate with the Engineer on the proper postal representative to contact.

If large mailboxes are located at double mailbox installations, a single post may need to be used for each mailbox.

STATION	CLASS Q3R HOT MIXED ASPHALT CONCRETE	REFURBISH SINGLE MAILBOX	REFURBISH DOUBLE MAILBOX
	TONS	EACH	EACH
NH-PT 0018(222)311 - 067V			
12+80 Lt	2	1	-
121+80 (2 nd) Rt	4	1	1
138+60 (2 nd) Rt	4	1	-
243+10 (2 nd) Rt	4	1	-
304+50 (2 nd) Rt	4	1	-
348+50 (2 nd) Rt	4	1	-
TOTALS:	22	6	1

The Contractor will be responsible for maintaining a temporary mailbox assembly until the refurbished mailbox assembly is complete in place.

Cost for removing existing mailboxes, providing temporary mailbox assemblies, and resetting mailboxes with new posts and necessary support hardware will be incidental to the contract unit price per each for Refurbish Single Mailbox or Refurbish Double Mailbox.

CHECKING SPREAD RATES

The Contractor will be responsible for checking the Base Course, Base Course, Salvaged, Gravel Cushion and Asphalt Concrete spread rates and taking the weigh delivery tickets as the surfacing material arrives on the project and is placed onto the roadway.

The Contractor will compute the required spread rates for each typical surfacing section and create a spread chart prior to the start of material delivery and placement. The Engineer will review and check the Contractor's calculations and spread charts. The station to station spread will be written on each ticket as the surfacing material is delivered to the roadway.

At the end of each day's shift, the Contractor will verify the following:

- All tickets are present and accounted for,
- The quantity summary for each item is calculated,
- The amount of material wasted if any,
- Each day's ticket summary is marked with the corresponding 'computed by',
- The ticket summary is initialed and certified that the delivered and placed quantity is correct.

All daily tickets and the summary by item will be given to the Engineer no later than the following morning.

If the checker is not properly and accurately performing the required duties, the Contractor will correct the problem or replace the checker with an individual capable of performing the duties to the satisfaction of the Engineer. Failure to do so will result in suspension of the work.

The Department will perform depth checks. The Contractor will be responsible for placement of material to the correct depth unless otherwise directed by the Engineer. If the placed material is not within a tolerance of ±1/2 inch of the plan shown depth, the Contractor will correct the problem at no additional cost to the Department. Excess material above the tolerance will not be paid for. Achieving the correct depth may require picking up and moving material or other action as required by the Engineer. All costs for providing the Contractor furnished checker and performing all related duties will be incidental to the contract lump sum price for the "Checker". No allowances will be made to the contract lump sum price for Checker due to authorized quantity variations unless the quantities for the material being checked vary above or below the estimated quantities by more than 25 percent. Payment for the Checker will then be increased or decreased by the same proportion as the placed material quantity bears to the estimated material quantity.