

November 18, 2024

ADDENDUM NO. 2

RE: Item #8, November 20, 2024 Letting - P 0079(90)203, PCN 06RR, Harding County - Cold Milling, Asphalt Concrete Resurfacing, Pipe Work

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 450E2008 "18" RCP Flared End, Furnish"
Bid Item 450E2009 "18" RCP Flared End, Install"
Bid Item 450E5211 "18" CMP Flared End, Furnish"
Bid Item 450E5212 "18" CMP Flared End, Install"
Bid Item 450E9628 "36" Cured in Place Arch Pipe"

Quantities for Bid Items were changed:

Bid Item 110E0510 "Remove Pipe End Section" changed from 22 to 23 Each
Bid Item 110E7510 "Remove Pipe End Section for Reset" changed from 23 to 19 Each
Bid Item 450E2200 "24" RCP Sloped End, Furnish" changed from 6 to 7 Each
Bid Item 450E2201 "24" RCP Sloped End, Install" changed from 6 to 7 Each
Bid Item 450E8900 "Cleanout Pipe Culvert" changed from 4 to 3 Each
Bid Item 450E8910 "Cleanout for Culvert Treatment" changed from 6 to 7 Each
Bid Item 450E9001 "Reset Pipe End Section" changed from 23 to 19 Each
Bid Item 720E1010 "PVC Coated Bank and Channel Protection Gabion" changed from 36 to 40 CuYd
Bid Item 734E0154 "12" Diameter Erosion Control Wattle" changed from 520 to 500 Ft
Bid Item 831E0110 "Type B Drainage Fabric" changed from 506 to 516 SqYd

Bid Items were removed:

Bid Item 450E2304 "18" RCP Safety End, Furnish"
Bid Item 450E2307 "18" RCP Safety End, Install"

PLANS: Please destroy sheets 2, 4, 9, 10, 11, 28, 32, 72, and 73 and replace with the enclosed sheets, dated 11/12/24 and 11/17/24.

Sheet 2: Bid Items were added:

Bid Item 450E2008 "18" RCP Flared End, Furnish"
Bid Item 450E2009 "18" RCP Flared End, Install"
Bid Item 450E5211 "18" CMP Flared End, Furnish"
Bid Item 450E5212 "18" CMP Flared End, Install"
Bid Item 450E9628 "36" Cured in Place Arch Pipe"

Quantities for Bid Items were changed:

Bid Item 110E0510 "Remove Pipe End Section" changed from 22 to 23 Each
Bid Item 110E7510 "Remove Pipe End Section for Reset" changed from 23 to 19 Each
Bid Item 450E2200 "24" RCP Sloped End, Furnish" changed from 6 to 7 Each
Bid Item 450E2201 "24" RCP Sloped End, Install" changed from 6 to 7 Each
Bid Item 450E8900 "Cleanout Pipe Culvert" changed from 4 to 3 Each
Bid Item 450E8910 "Cleanout for Culvert Treatment" changed from 6 to 7 Each
Bid Item 450E9001 "Reset Pipe End Section" changed from 23 to 19 Each
Bid Item 720E1010 "PVC Coated Bank and Channel Protection Gabion" changed from 36 to 40 CuYd
Bid Item 734E0154 "12" Diameter Erosion Control Wattle" changed from 520 to 500 Ft
Bid Item 831E0110 "Type B Drainage Fabric" changed from 506 to 516 SqYd

Bid Items were removed:

Bid Item 450E2304 "18" RCP Safety End, Furnish"
Bid Item 450E2307 "18" RCP Safety End, Install"

Sheet 4: SHOULDER CLEARING note was revised.

Sheets 9 - 11: TABLE OF PIPE WORK QUANTITIES was revised.

Sheets 28 & 72: Pipe notes at MRM 209+0.446 were revised.

Sheets 28 & 73: Pipe notes at MRM 206+0.577 were revised.

Sincerely,

Sam Weisgram
Engineering Supervisor

SW/cj

CC: Todd Seaman, Rapid City Region Engineer
John Matthesen, Belle Fourche Area Engineer

ESTIMATE OF QUANTITIES

Revised 11/17/24 GDS

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
009E3320	Checker	Lump Sum	LS
100E0020	Clear and Grub Tree	1	Each
110E0510	Remove Pipe End Section	23	Each
110E0600	Remove Fence	210	Ft
110E0730	Remove Beam Guardrail	1,925.0	Ft
110E0800	Remove W Beam Guardrail End Terminal	16	Each
110E0810	Remove Rubrail	65.6	Ft
110E1010	Remove Asphalt Concrete Pavement	1,142.4	SqYd
110E5451	Salvage Riprap	75.0	Ton
110E7500	Remove Pipe for Reset	24	Ft
110E7510	Remove Pipe End Section for Reset	19	Each
120E0100	Unclassified Excavation, Digouts	762	CuYd
120E0600	Contractor Furnished Borrow	190	CuYd
120E6200	Water for Granular Material	30.5	MGal
210E0100	Shoulder Clearing	30.5	Mile
230E0100	Remove and Replace Topsoil	Lump Sum	LS
250E0020	Incidental Work, Grading	Lump Sum	LS
260E1010	Base Course	2,011.2	Ton
260E1050	Base Course, Salvaged Asphalt Mix	1,523.0	Ton
320E1200	Asphalt Concrete Composite	500.9	Ton
320E1800	Asphalt Concrete Blade Laid	2,284.5	Ton
320E7008	Grind 8" Rumble Strip or Stripe in Asphalt Concrete	30.5	Mile
320E7040	Grind 6" Transverse Rumble Strip in Asphalt Concrete	442.0	Ft
330E0100	SS-1h or CSS-1h Asphalt for Tack	162.1	Ton
330E0210	SS-1h or CSS-1h Asphalt for Flush Seal	51.8	Ton
330E2000	Sand for Flush Seal	785.8	Ton
332E0010	Cold Milling Asphalt Concrete	227,936	SqYd
450E0122	18" RCP Class 2, Furnish	28	Ft
450E0130	18" RCP, Install	28	Ft
450E0142	24" RCP Class 2, Furnish	32	Ft
450E0150	24" RCP, Install	32	Ft
450E0162	30" RCP Class 2, Furnish	32	Ft
450E0170	30" RCP, Install	32	Ft
450E0202	48" RCP Class 2, Furnish	12	Ft
450E0210	48" RCP, Install	12	Ft
450E2008	18" RCP Flared End, Furnish	8	Each
450E2009	18" RCP Flared End, Install	8	Each
450E2032	42" RCP Flared End, Furnish	3	Each
450E2033	42" RCP Flared End, Install	3	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

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
450E2061	84" RCP Flared End, Install	2	Each
450E2200	24" RCP Sloped End, Furnish	7	Each
450E2201	24" RCP Sloped End, Install	7	Each
450E2204	30" RCP Sloped End, Furnish	2	Each
450E2205	30" RCP Sloped End, Install	2	Each
450E2208	36" RCP Sloped End, Furnish	1	Each
450E2209	36" RCP Sloped End, Install	1	Each
450E3032	36" RCP Arch Class 2, Furnish	12	Ft
450E3040	36" RCP Arch, Install	12	Ft
450E5211	18" CMP Flared End, Furnish	4	Each
450E5212	18" CMP Flared End, Install	4	Each
* 450E8900	Cleanout Pipe Culvert	3	Each
450E8910	Cleanout for Culvert Treatment	7	Each
450E9000	Reset Pipe	24	Ft
450E9001	Reset Pipe End Section	19	Each
450E9524	24" Cured in Place Pipe	192	Ft
450E9530	42" Cured in Place Pipe	115	Ft
450E9536	60" Cured in Place Pipe	90	Ft
450E9628	36" Cured in Place Arch Pipe	48	Ft
450E9636	60" Cured in Place Arch Pipe	112	Ft
600E0300	Type III Field Laboratory	1	Each
620E0020	Type 2 Right-of-Way Fence	210	Ft
620E0510	Type 1 Temporary Fence	420	Ft
620E1020	2 Post Panel	4	Each
630E0500	Type 1 MGS	400.0	Ft
630E1010	Straight Class A W Beam Guardrail with Wood Posts	212.5	Ft
630E1050	Straight Class B W Beam Guardrail with Wood Posts	100.0	Ft
630E1150	Straight Double Class B W Beam Guardrail with Wood Posts	100.0	Ft
630E1505	Type 2A Guardrail Transition	8	Each
630E2005	W Beam Guardrail to MGS Transition	8	Each
630E2018	MGS MASH Tangent End Terminal	16	Each
630E2300	Rubrail	65.6	Ft
633E1200	High Build Waterborne Pavement Marking Paint, White	686	Gal
633E1205	High Build Waterborne Pavement Marking Paint, Yellow	532	Gal
634E0010	Flagging	2,000.0	Hour
634E0020	Pilot Car	1,000.0	Hour
634E0110	Traffic Control Signs	1,396.1	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0630	Temporary Pavement Marking	60.9	Mile
700E0310	Class C Riprap	249.0	Ton
700E2010	Place Riprap	75.0	Ton
720E1010	PVC Coated Bank and Channel Protection Gabion	40.0	CuYd
734E0010	Erosion Control	Lump Sum	LS

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
734E0154	12" Diameter Erosion Control Wattle	500	Ft
831E0110	Type B Drainage Fabric	516	SqYd
831E0300	Reinforcement Fabric (MSE)	517	SqYd
900E0010	Refurbish Single Mailbox	5	Each
900E0012	Refurbish Double Mailbox	1	Each

* - Denotes Non-Participating

Alternate A

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
320E0005	PG 58-34 Asphalt Binder	1,276.1	Ton
320E1202	CLASS Q2R HOT MIXED ASPHALT CONCRETE	28,093.3	Ton
320E4000	Hydrated Lime	279.5	Ton

Alternate B

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
320E0005	PG 58-34 Asphalt Binder	1,061.6	Ton
320E1202	CLASS Q2R HOT MIXED ASPHALT CONCRETE	28,752.3	Ton
320E4000	Hydrated Lime	279.5	Ton

SPECIFICATIONS

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

ENVIRONMENTAL COMMITMENTS

The SDDOT is committed to protecting the environment and uses Environmental Commitments as a communication tool for the Engineer and Contractor to ensure that attention is given to avoid, minimize, and/or mitigate an environmental impact. Environmental commitments to various agencies and the public have been made to secure approval of this project. An agency with permitting authority can delay a project if identified environmental impacts have not been adequately addressed. Unless otherwise designated, the Contractor's primary contact regarding matters associated with these commitments will be the Project Engineer. During construction, the Project Engineer will verify that the Contractor has met Environmental Commitment requirements. These environmental commitments are not subject to change without prior written approval from the SDDOT Environmental Office.

Additional guidance on SDDOT's Environmental Commitments can be accessed through the Environmental Procedures Manual found at: <https://dot.sd.gov/media/documents/EnvironmentalProceduresManual.pdf>

For questions regarding change orders in the field that may have an effect on an Environmental Commitment, the Project Engineer will contact the Environmental Engineer at 605-773-3180 or 605-773-4336 to determine whether an environmental analysis and/or resource agency coordination is necessary.

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

TYPE III FIELD LABORATORY

Substitution of a cellular telephone for the hard-wired touch-tone telephone is not allowed, as state personnel need the ability to download information over direct phone lines. The phone is intended for state personnel usage only. Contractor personnel are prohibited from using this phone unless pre-approved by the Project Engineer. Reimbursement will not be made for fees associated with the purchase, installation, disconnection, monthly line charges, and incidentals involved in the installation, maintenance, and disconnection of the phone (including attachments). These items will be incidental to the contract unit price per each for Type III Field Laboratory

UTILITIES

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

If utilities are identified near the improvement area through the SD One Call Process as required by South Dakota Codified Law 49-7A and Administrative Rule Article 20:25, the Contractor will contact the Engineer to determine modifications that will be necessary to avoid utility impacts.

The Contractor will be aware that the existing utilities shown in the plans were surveyed prior to the design of this project and might have been relocated or replaced by a new utility facility prior to construction of this project, might be relocated or replaced by a new utility facility during the construction of this project, or might not require adjustment and may remain in its current location. The Contractor will contact each utility owner and confirm the status of all existing and new utility facilities. The utility contact information is provided elsewhere in the plans or bidding documents.

SHOULDER CLEARING

Prior to shoulder paving, the shoulders will be bladed and brimmed of all vegetation and loose/accumulated material to the satisfaction of the Engineer. Shoulder Clearing will not be measured for payment, and all costs associated with Shoulder Clearing will be incidental to the various contract items.

Vegetation and accumulated material adjacent to the existing surface edge will be removed to the satisfaction of the Engineer prior to placement of shoulder surfacing. Any remaining windrow of accumulated material will be re-spread evenly on the in-slope adjacent to the asphalt shoulder to the satisfaction of the Engineer prior to the application of the flush seal.

All clumps of dirt and vegetation will be eliminated to produce a smooth and uniform in-slope.

CHECKING SPREAD RATES

The Contractor will be responsible for checking the 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.

CONTRACTOR FURNISHED BORROW

The Contractor will provide a suitable site for Contractor furnished borrow material. The Contractor is responsible for obtaining all required permits and clearances for the borrow site. The borrow material will be approved by the Engineer. The plans quantity for Contractor Furnished Borrow Excavation as shown in the Estimate of Quantities will be the basis of payment for this item.

Restoration of the Contractor furnished borrow excavation site will be the responsibility of the Contractor.

COLD MILLING ASPHALT CONCRETE

The Los Angeles Abrasion Loss value on the aggregate used for the in-place asphalt concrete was 25. This value was obtained from testing during construction of the in-place asphalt concrete.

Cold milling asphalt concrete will be done according to the typical section(s). In areas where maintenance patches have raised and/or widened the road, additional asphalt concrete will be milled to provide a uniform typical section from centerline to the edge of the finished shoulder. These areas also include farm, residential, field entrances and intersecting roads. Milling will be daylighted to the outside edge of the roadway. Any additional costs associated with this additional cold milling will be incidental to the contract unit price per square yard for Cold Milling Asphalt Concrete.

Cold milling asphalt is estimated to produce 11600.5 tons of cold milled asphalt concrete material. An estimated 1523 tons of cold milled asphalt concrete material will be used on this project as Base Course, Salvaged Asphalt Mix outside the asphalt sluff to prevent a drop off. An estimated 5367.4 tons for Alternate A and 5536.6 tons for Alternate B of cold milled asphalt concrete material will be used on this project as RAP in the Class Q2R Hot Mixed Asphalt Concrete mixture. The Contractor is responsible to assure enough asphalt concrete salvage is available for the Class Q2R Hot Mixed Asphalt Concrete.

The remainder of the salvaged asphalt concrete material will become the property of the Contractor for disposal.

RAP achieved for project use and/or other uses is based on the dimensions given in the typical section(s). Field conditions will vary from that given in the typical section(s). Therefore, the Contractor may be required to adjust the mill depth, as necessary, to provide the quantity of RAP specified by the plans, if approved by the Engineer.

CLASS Q2R HOT MIXED ASPHALT CONCRETE

Mineral Aggregate:

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

Virgin mineral aggregate for Class Q2R Hot Mixed Asphalt Concrete-Alternate A will conform to the requirements of Class Q2.

Virgin mineral aggregate for Class Q2R Hot Mixed Asphalt Concrete-Alternate B will consist of a minimum of 80 percent crushed limestone ledge rock and will conform to the requirements of Class Q2.

The Class Q2R Hot Mixed Asphalt Concrete will include 20 percent RAP in the mixture. RAP will be obtained from the material produced by cold milling on this project.

Mix Design Criteria – Alternate B:

Gyratory Controlled QC/QA Mix Design requirements for the Class Q2R Hot Mixed Asphalt Concrete will conform to the requirements of Class Q2 except as modified by the following:

Voids in Mineral Aggregate (VMA):

	Minimum VMA (%):
Class Q2R	13.0

Pay Factor Attributes – Alternate B:

Air Voids:

	Air Voids (%):
Class Q2R	3.5 ± 1.0

All remaining requirements for Class Q2 will apply.



Revised 11/17/24 GDS

Table of Pipe Work Quantities

MRM	Disp	Type	Shape	Pipe Size (In)	Pipe Width/Dia. (In)	Pipe Height (In)	Number of Pipe Culverts	Tube Lengths (Ft)	Materials	Notes	Remove Pipe End Section (Each)	Remove Pipe End Section for Reset (Each)	Reset Pipe End Section (Each)	Remove Pipe for Reset (Each)	Reset Pipe (Ft)
203.75 + 0.021		Pipe	Round	18	18	18		68	Metal	Replace (LT & RT) end section. Install Gabions(RT)	2				
204 + 0.414		Pipe	Round	24	24	24		110	Concrete	Replace (LT) end section.	1				
204 + 0.963		Pipe	Round	18	18	18		86	Concrete	Replace (LT) end section.	1				
205 + 0.288		Pipe	Round	24	24	24		96	Concrete	Remove and reset end sections, Install Gabion baskets (RT).		2	2		
205 + 0.801		Pipe	Round	24	24	24			Concrete	Remove and Reset End Section - Rt		1	1		
206 + 0.092		Pipe	Round	96	96	96	2	160	Metal						
206 + 0.158		CP		48	48	72			Concrete	Inslope cavity at old CP ends, need to be backfilled. (LT & RT)					
206 + 0.281		Pipe	Round	18	18	18		68	Concrete	Replace end sections (LT & RT).	2				
206 + 0.577		Pipe	Round	42	42	42		114	Concrete	CIPP					
207 + 0.307		Pipe	Round	24	24	24		78	Concrete	Reset (RT) end section, Install Gabions (RT), 6'x8'x2' scour.		1	1		
207 + 0.942		Pipe	Arch		73	45	2	56	Concrete	CIPP					
208 + 0.069		Pipe	Round	18	18	18		52	Concrete	Replace end sections (LT & RT). Repair erosion control (RT)	2				
208 + 0.199		Pipe	Round	18	18	18		82	Concrete	Replace end sections (LT & RT).	2				
208 + 0.596		Pipe	Round	24	24	24		64	Concrete	Replace end sections	2				
208 + 0.850		Pipe	Round	60	60	60		90	Concrete	CIPP					
209 + 0.018		Pipe	Round	24	24	24		80	Concrete	CIPP. Replace end sections.	2				
209 + 0.169		Pipe	Round	24	24	24		108	Concrete	CIPP. Remove and reset RT end section plus first joint.		1	1	8	8
209 + 0.312		Pipe	Round	18	18	18		44	Concrete	Replace LT end section. Remove and reset RT end section	1	1	1		
209 + 0.446		Pipe	Round	42	42	42		86	Concrete	Replace end sections (LT & RT). Install Gabion baskets. (9'x 9'x2') scour.	2				
209 + 0.727		Pipe	Round	30	30	30			Concrete	Remove and reset end sections. Install Gabions RT (9'x 9'x1') scour.		2	2		
209 + 0.957		Pipe	Round	48	48	48		120	Concrete	Remove and reset RT end section, Shape to drain.		1	1		
210 + 0.281		Pipe	Round	24	24	24		96	Concrete	Remove and reset LT end section.		1	1		
211 + 0.292		Pipe	Round	36	36	36		124	Concrete	Replace RT end section,	1				
212 + 0.251		Pipe	Round	60	60	60		242	Concrete	Repair piping, remove tree (LT)					
212 + 0.946		Pipe	Round	30	30	30		30	Concrete	Extend (LT) 6 - 8'.		1	1		
213 + 0.182		Pipe	Round	42	42	42		108	Concrete	Replace RT end section, Add additional Riprap	1				
213 + 0.742		Pipe	Round	30	30	30		36	Concrete	Replace end sections. Extend culvert 6-8' per side.	2				
215 + 0.071		Pipe	Round	18	18	18		80	Concrete	Remove and reset RT end section. Install gabion baskets. (6'x8'x2') scour		1	1		
215 + 0.258		Pipe	Round	24	24	24			Concrete	Remove and reset RT end section. Install gabion baskets. (9'x9'x2') scour		1	1		
216 + 0.270		Pipe	Round	24	24	24		46	Concrete	Replace RT end section, Remove and reset LT end section, Extend LT culvert 6-8'.	2				
216 + 0.467		Pipe	Arch	30	30	30		34	Concrete	Remove and reset end sections. Extend culvert 6-8' per side.		2	2		
217 + 0.068		Pipe	Round	84	84	84		150	Concrete	Install end sections LT & RT.					
217.65 + 0.062		Pipe	Round	18	18	18			Metal	Install end sections LT & RT.					
217.65 + 0.213		Pipe	Arch	36	36	36		36	Concrete	Remove and reset end sections. Extend culvert 6-8' per side. CIPP		2	2		
219 + 0.046		Pipe	Round	48	48	48		88	Concrete	Extend pipe both sides 6' each. 2 sections seperated on RT. Fix riprap.		2	2	16	16
Total											23	19	19	24	24



Revised 11/17/24 GDS

Table of Pipe Work Quantities (Continued)

MRM	Disp	18" CMP Flared End, Furnish (Each)	18" CMP Flared End, Install (Each)	18" RCP Class 2, Furnish (Ft)	18" RCP, Install (Ft)	24" RCP Class 2, Furnish (Ft)	24" RCP, Install (Ft)	30" RCP Class 2, Furnish (Ft)	30" RCP, Install (Ft)	36" RCP Arch Class 2, Furnish (Ft)	36" RCP Arch, Install (Ft)	48" RCP Class 2, Furnish (Ft)	48" RCP, Install (Ft)	18" RCP Flared End, Furnish (Each)	18" RCP Flared End, Install (Each)	24" RCP Sloped End, Furnish (Each)	24" RCP Sloped End, Install (Each)	30" RCP Sloped End, Furnish (Each)	30" RCP Sloped End, Install (Each)	36" RCP Sloped End, Furnish (Each)	36" RCP Sloped End, Install (Each)	42" RCP Flared End, Furnish (Each)	42" RCP Flared End, Install (Each)
203.8	+ 0.021	2	2																				
204	+ 0.414					4	4									1	1						
204	+ 0.963			4	4									1	1								
205	+ 0.288																						
205	+ 0.801																						
206	+ 0.092																						
206	+ 0.158																						
206	+ 0.281			8	8									2	2								
206	+ 0.577																						
207	+ 0.307																						
207	+ 0.942																						
208	+ 0.069			8	8									2	2								
208	+ 0.199			8	8									2	2								
208	+ 0.596					8	8									2	2						
208	+ 0.850																						
209	+ 0.018					4	4									2	2						
209	+ 0.169																						
209	+ 0.312													1	1								
209	+ 0.446																					2	2
209	+ 0.727																						
209	+ 0.957																						
210	+ 0.281																						
211	+ 0.292																			1	1		
212	+ 0.251																						
212	+ 0.946							6	6														
213	+ 0.182																					1	1
213	+ 0.742							14	14									2	2				
215	+ 0.071																						
215	+ 0.258																						
216	+ 0.270					16	16									2	2						
216	+ 0.467							12	12														
217	+ 0.068																						
217.65	+ 0.062	2	2																				
217.65	+ 0.213									12	12												
219	+ 0.046											12	12										
Total		4	4	28	28	32	32	32	32	12	12	12	12	8	8	7	7	2	2	1	1	3	3



Revised 11/17/24 G

Table of Pipe Work Quantities (Continued)

MRM	Disp	60" RCP Flared End, Furnish (Each)	60" RCP Flared End, Install (Each)	84" RCP Flared End, Furnish (Each)	84" RCP Flared End, Install (Each)	H (Ft)	24" Cured in Place Pipe (Ft)	42" Cured in Place Pipe (Ft)	36" Cured in Place Arch Pipe (Ft)	60" Cured in Place Pipe (Ft)	60" Cured in Place Arch Pipe (Ft)	PVC Coated Bank and Channel Protection Gabion (CuYd)	Salvage Riprap (Ton)	Class C Riprap (Ton)	Place Riprap (Ton)	Type B Drainage Fabric (SqYd)	Cleanout Pipe Culvert (Each)	Cleanout for Culvert Treatment (Each)	Contractor Furnished Borrow Excavation (CuYd)	12" Diameter Erosion Control Wattle (Ft)	
203.75 + 0.021												4.5				15					
204 + 0.414																					20
204 + 0.963																					20
205 + 0.288												4.5				15					
205 + 0.801																					
206 + 0.092														154		172					20
206 + 0.158																					20
206 + 0.281																					20
206 + 0.577						14		115										1			
207 + 0.307												4.5				15					20
207 + 0.942						8					112							2			20
208 + 0.069													30	30	30	78					
208 + 0.199																					20
208 + 0.596																					20
208 + 0.850						12.5				90								1			20
209 + 0.018						8	84											1			20
209 + 0.169						8	108											1			20
209 + 0.312																					20
209 + 0.446												10				29					
209 + 0.727												6				19					
209 + 0.957																					20
210 + 0.281																					20
211 + 0.292																					20
212 + 0.251		2	2																40		20
212 + 0.946																			40		20
213 + 0.182														20		32					
213 + 0.742																			20		20
215 + 0.071												4.5				15	1				
215 + 0.258												6				19					
216 + 0.270																			30		20
216 + 0.467																	1		20		20
217 + 0.068				2	2																20
217.65 + 0.062																	1				20
217.65 + 0.213						5			48									1			20
219 + 0.046													45	45	45	107			40		20
Total		2	2	2	2		192	115	48	90	112	40	75	249	75	516	3	7	190	500	

b 443+96 - L
MRM 209+0.446 - R
Remove 42" RCP End Section

b 443+96 - R
MRM 209+0.446 - L
Remove 42" RCP End Section

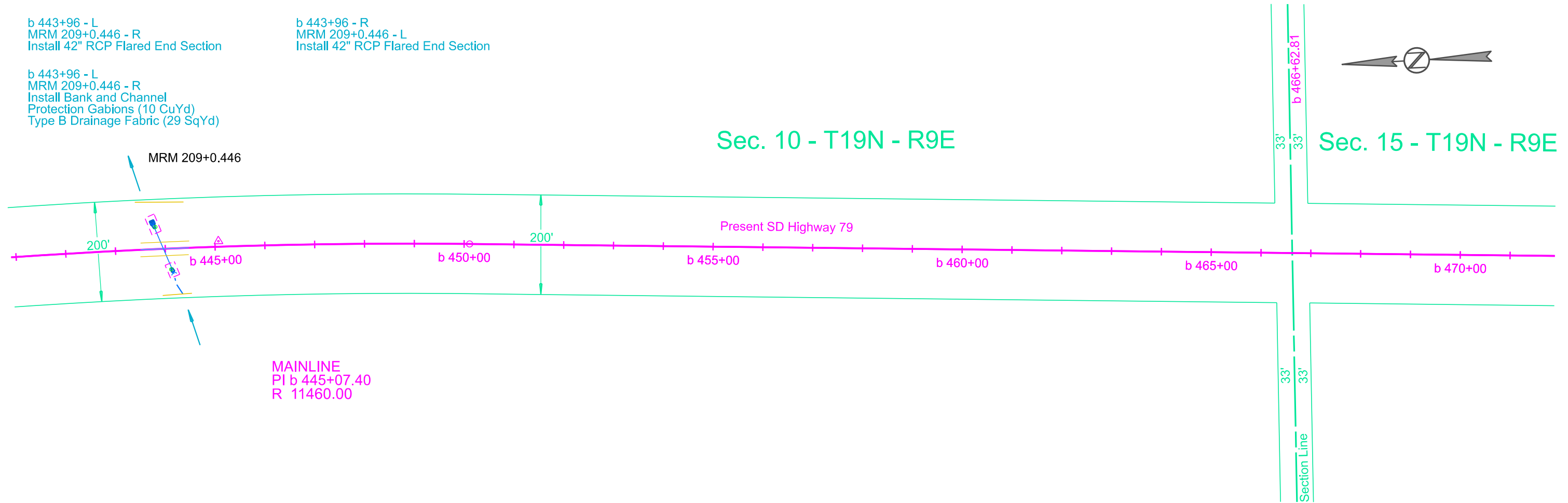
b 443+96 - L
MRM 209+0.446 - R
Install 42" RCP Flared End Section

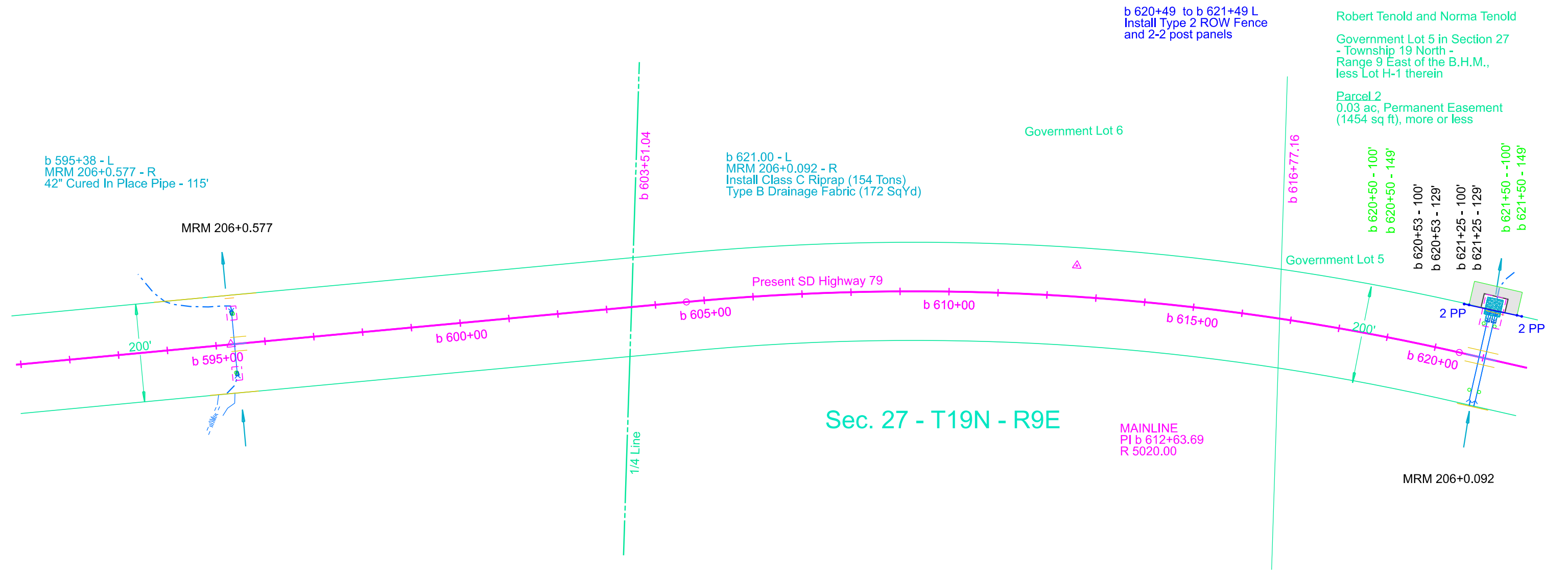
b 443+96 - R
MRM 209+0.446 - L
Install 42" RCP Flared End Section

b 443+96 - L
MRM 209+0.446 - R
Install Bank and Channel
Protection Gabions (10 CuYd)
Type B Drainage Fabric (29 SqYd)

Sec. 10 - T19N - R9E

Sec. 15 - T19N - R9E





b 595+38 - L
MRM 206+0.577 - R
42" Cured In Place Pipe - 115'

MRM 206+0.577

b 621.00 - L
MRM 206+0.092 - R
Install Class C Riprap (154 Tons)
Type B Drainage Fabric (172 SqYd)

b 620+49 to b 621+49 L
Install Type 2 ROW Fence
and 2-2 post panels

Robert Tenold and Norma Tenold
Government Lot 5 in Section 27
- Township 19 North -
Range 9 East of the B.H.M.,
less Lot H-1 therein

Parcel 2
0.03 ac, Permanent Easement
(1454 sq ft), more or less

b 620+50 - 100'
b 620+50 - 149'
b 620+53 - 100'
b 620+53 - 129'
b 621+25 - 100'
b 621+25 - 129'
b 621+50 - 100'
b 621+50 - 149'

Sec. 27 - T19N - R9E

MAINLINE
PI b 612+63.69
R 5020.00

MRM 206+0.092

Parcel 2
b 620+49 to b 621+49 L
Temporary Easement Containing
0.08 ac, more or less

