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April 11, 2024

**ADDENDUM NO. 2**

**RE: Item #2, April 17, 2024 Letting - IM-NH-P 0012(290), PCN 07D8, Grant, Roberts County -  
Bridge Deck Polymer Chip Seal, Approach Slabs, Bridge Rail**

**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 628E1110 "Movable F Shape Concrete Barrier, End Section"

**Quantities for Bid Items were changed:**

Bid Item 634E0700 "Traffic Control Movable Concrete Barrier" changed from 124 to 122 Each

**PLANS:** Please destroy sheets 2, 5, 9, and 23 and replace with the enclosed sheets, dated 4-11-24.

**Sheet 2:** Bid Item 628E1110 "Movable F Shape Concrete Barrier, End Section" was added and quantities for Bid Item 634E0700 "Traffic Control Movable Concrete Barrier" changed from 124 to 122 Each.

**Sheet 5:** TABLE OF QUANTITIES – FOR INFORMATION ONLY was revised.

**Sheet 9:** TRAFFIC CONTROL MOVABLE CONCRETE BARRIERS note and table was revised.

**Sheet 23:** Standard Plate 628.02 was removed, and Standard Plate 628.11 was added.

Sincerely,

Sam Weisgram  
Engineering Supervisor

SW/cj

CC: Mark Peterson, Aberdeen Region Engineer  
Matt Brey, Watertown Area Engineer

# ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM-NH-P 0012(290)	2	156

Rev. 4-11-24 SLS

## GENERAL QUANTITIES

## GENERAL QUANTITIES (Cont)

## Str. No. 55-115-220

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
110E0400	Remove Drop Inlet	8	Each
110E0700	Remove 3 Cable Guardrail	543	Ft
110E0730	Remove Beam Guardrail	1,262.5	Ft
110E0740	Remove 3 Cable Guardrail Anchor Assembly	4	Each
110E1010	Remove Asphalt Concrete Pavement	1,212.6	SqYd
110E1100	Remove Concrete Pavement	736.3	SqYd
110E1690	Remove Sediment	1.0	CuYd
120E0600	Contractor Furnished Borrow Excavation	215	CuYd
250E0020	Incidental Work, Grading	Lump Sum	LS
260E1010	Base Course	355.0	Ton
320E1200	Asphalt Concrete Composite	770.0	Ton
332E0010	Cold Milling Asphalt Concrete	4,473	SqYd
380E0090	10" Nonreinforced PCC Pavement	737.6	SqYd
380E6000	Dowel Bar	168	Each
380E6110	Insert Steel Bar in PCC Pavement	48	Each
410E2600	Membrane Sealant Expansion Joint	83.8	Ft
450E0102	12" RCP Class 2, Furnish	68	Ft
450E0110	12" RCP, Install	68	Ft
450E4739	12" CMP 16 Gauge, Furnish	6	Ft
450E4740	12" CMP, Install	6	Ft
450E4759	18" CMP 16 Gauge, Furnish	2	Ft
450E4760	18" CMP, Install	2	Ft
450E5000	12" CMP Elbow, Furnish	2	Each
450E5001	12" CMP Elbow, Install	2	Each
462E0100	Class M6 Concrete	6.5	CuYd
480E0100	Reinforcing Steel	1,297	Lb
* 628E1110	Movable F Shape Concrete Barrier, End Section	2	Each
630E0500	Type 1 MGS	975.0	Ft
630E1500	Type 1 Guardrail Transition	4	Each
630E1501	Type 1 Retrofit Guardrail Transition	6	Each
630E2018	MGS MASH Tangent End Terminal	10	Each
632E2220	Guardrail Delineator	48	Each
633E0030	Cold Applied Plastic Pavement Marking, 24"	12	Ft
633E1220	High Build Waterborne Pavement Marking Paint, 4" White	6,640	Ft
633E1222	High Build Waterborne Pavement Marking Paint, 4" Yellow	5,082	Ft
633E5015	Grooving for Cold Applied Plastic Pavement Marking, 24"	12	Ft
634E0010	Flagging	55.0	Hour
634E0110	Traffic Control Signs	914.5	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0275	Type 3 Barricade	20	Each
634E0420	Type C Advance Warning Arrow Board	1	Each
634E0525	Linear Delineation System Panel, Barrier Mounted	122	Each

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
634E0600	4" Temporary Pavement Marking Tape Type I	11,870	Ft
634E0700	Traffic Control Movable Concrete Barrier	122	Each
634E0750	Temporary Concrete Barrier End Protection	1	Each
634E0755	Remove and Reset Temporary Concrete Barrier End Protection	1	Each
634E0760	Temporary Concrete Barrier End Protection Module Set or Repair Kit	1	Each
634E0900	Portable Temporary Traffic Control Signal	8	Unit
634E1002	Detour and Restriction Signing	549.3	SqFt
634E2015	Temporary Pedestrian Access Route	Lump Sum	LS
634E2025	Longitudinal Pedestrian Barrier	720	Ft
651E0040	4" Concrete Sidewalk	65	SqFt
670E0200	Type A Frame and Grate	8	Each
670E5400	Precast Drop Inlet Collar	8	Each
734E0010	Erosion Control	Lump Sum	LS
734E0154	12" Diameter Erosion Control Wattle	300	Ft
998E0100	Railroad Protective Insurance	Lump Sum	LS

\* - Denotes Non-Participating

## Str. No. 26-373-023

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E3310	Bridge Elevation Survey	Lump Sum	LS
110E0010	Remove Concrete Bridge Approach Slab	187.4	SqYd
110E0020	Remove Bridge Railing	213	Ft
110E1140	Remove Concrete Sidewalk	9.0	SqYd
120E0010	Unclassified Excavation	24	CuYd
410E0030	Structural Steel, Miscellaneous	Lump Sum	LS
410E2600	Membrane Sealant Expansion Joint	73.4	Ft
430E0300	Granular Bridge End Backfill	30.0	CuYd
460E0010	Class A45 Concrete, Bridge Barrier	8.3	CuYd
460E0150	Concrete Approach Slab for Bridge	164.0	SqYd
460E0160	Concrete Approach Sleeper Slab for Bridge	27.4	SqYd
460E0300	Breakout Structural Concrete	0.3	CuYd
470E0120	Steel Pedestrian Railing on Sidewalk	213.3	Ft
480E0200	Epoxy Coated Reinforcing Steel	1,300	Lb
480E0504	No. 4 Rebar Splice	28	Each
480E0505	No. 5 Rebar Splice	32	Each
480E0506	No. 6 Rebar Splice	44	Each
491E0005	Two Coat Bridge Deck Polymer Chip Seal	772.6	SqYd
491E0110	Abrasive Blasting of Bridge Deck	772.6	SqYd
491E0120	Bridge Deck Grinding	772.6	SqYd
491E0130	Concrete Removal, Class A	8.0	SqYd
491E0140	Concrete Removal, Class B	8.0	SqYd
491E0172	Concrete Patching Material, Bridge Deck	90.0	CuFt
621E0300	Chain Link Fence for Bridge Sidewalk	213	Ft
651E0160	6" Reinforced Concrete Sidewalk	251	SqFt
900E8900	Anchor Bolt Coring	12.0	Ft

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E3310	Bridge Elevation Survey	Lump Sum	LS
110E0010	Remove Concrete Bridge Approach Slab	170.0	SqYd
120E0010	Unclassified Excavation	46	CuYd
410E2600	Membrane Sealant Expansion Joint	75.8	Ft
430E0200	Bridge End Embankment	2	CuYd
430E0300	Granular Bridge End Backfill	57.6	CuYd
430E0510	Approach Slab Underdrain Excavation	2.8	CuYd
430E0700	Precast Concrete Headwall for Drain	4	Each
460E0070	Class A45 Concrete, Bridge Repair	5.4	CuYd
460E0150	Concrete Approach Slab for Bridge	170.0	SqYd
460E0160	Concrete Approach Sleeper Slab for Bridge	37.8	SqYd
460E0300	Breakout Structural Concrete	5.0	CuYd
480E0200	Epoxy Coated Reinforcing Steel	920	Lb
480E0504	No. 4 Rebar Splice	28	Each
480E0505	No. 5 Rebar Splice	32	Each
480E0506	No. 6 Rebar Splice	46	Each
480E5000	Galvanic Anode	40	Each
491E0005	Two Coat Bridge Deck Polymer Chip Seal	1,164.0	SqYd
491E0110	Abrasive Blasting of Bridge Deck	1,164.0	SqYd
491E0120	Bridge Deck Grinding	1,164.0	SqYd
491E0130	Concrete Removal, Class A	8.0	SqYd
491E0140	Concrete Removal, Class B	8.0	SqYd
491E0172	Concrete Patching Material, Bridge Deck	90.0	CuFt
680E0040	4" Underdrain Pipe	120	Ft
680E2500	Porous Backfill	5.4	Ton

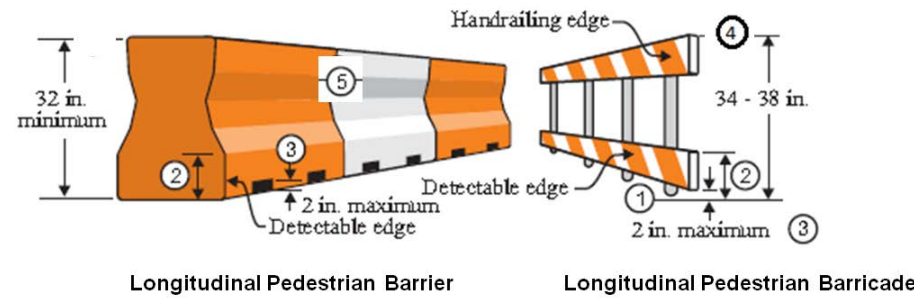
**TABLE OF QUANTITIES - FOR INFORMATION ONLY**

BID ITEM DESCRIPTION	UNIT	PROJECT, STRUCTURE NUMBER, ROUTE & MRM				Total Quantity
		IM-P 0012(250), PCN 07D8				
		26-373-023	55-115-220	55-115-270	55-132-190	
		SD 109	I-29	I-29 SBL	SD 10	
		153.56	229.03	224.02	363.63	
Mobilization	LS	Lump Sum	Lump Sum	Lump Sum	Lump Sum	Lump Sum
Bridge Elevation Survey	LS	Lump Sum	Lump Sum	Lump Sum	Lump Sum	Lump Sum
Remove Concrete Bridge Approach Slab	SqYd	187.4	170	234.8	278.2	870.4
Remove Bridge Railing	Ft	213	-	-	-	213
Remove Drop Inlet	Each	-	4	2	2	8
Remove 3 Cable Guardrail	Ft	-	-	543	-	543
Remove Beam Guardrail	Ft	-	425.0	162.5	675.0	1262.5
Remove 3 Cable Guardrail Anchor Assembly	Each	-	-	4	-	4
Remove Asphalt Concrete Pavement	SqYd	-	237.1	668.8	306.7	1212.6
Remove Concrete Pavement	SqYd	-	-	736.3	-	736.3
Remove Sediment	CuYd	-	-	-	1.0	1.0
Remove Concrete Sidewalk	SqYd	9.0	-	-	-	9.0
Unclassified Excavation	CuYd	24	46	58	42	170.0
Contractor Furnished Borrow Excavation	CuYd	-	110	35	70	215
Incidental Work, Grading	LS	Lump Sum	Lump Sum	Lump Sum	Lump Sum	Lump Sum
Base Course	Ton	10.0	130.0	115.0	100.0	355.0
Asphalt Concrete Composite	Ton	70.0	260.0	150.0	290.0	770.0
Cold Milling Asphalt Concrete	SqYd	556	1931	-	1986	4473
10" Nonreinforced PCC Pavement	SqYd	-	-	737.6	-	737.6
Dowel Bar	Each	-	-	168	-	168
Insert Steel Bar in PCC Pavement	Each	-	-	48	-	48
Structural Steel, Miscellaneous	LS	Lump Sum	-	-	-	Lump Sum
Membrane Sealant Expansion Joint	Ft	73.4	75.8	167.6	83.8	400.6
Bridge End Embankment	CuYd	-	2	-	-	2
Granular Bridge End Backfill	CuYd	30.0	57.6	70.7	52.8	211.1
Approach Slab Underdrain Excavation	CuYd	-	2.8	3.1	-	5.9
Precast Concrete Headwall for Drain	Each	-	4	2	-	6
12" RCP, Class 2, Furnish	Ft	-	68	-	-	68
12" RCP, Install	Ft	-	68	-	-	68
12" CMP 16 Gauge, Furnish	Ft	-	-	-	6	6
12" CMP, Install	Ft	-	-	-	6	6
18" CMP 16 Gauge, Furnish	Ft	-	-	2	-	2
18" CMP, Install	Ft	-	-	2	-	2
12" CMP Elbow, Furnish	Each	-	2	-	-	2
12" CMP Elbow, Install	Each	-	2	-	-	2
Class M6 Concrete	CuYd	-	3.5	1.3	1.7	6.5
Reinforcing Steel	Lb	-	677	286	334	1297
Moveable F Shape Concrete Barrier, End Section	Each	-	1	-	1	2
Class A45 Concrete, Bridge Barrier	CuYd	8.3	-	-	-	8.3
Class A45 Concrete, Bridge Repair	CuYd	-	5.4	-	-	5.4
Concrete Approach Slab for Bridge	SqYd	164.0	170.0	190.6	257.2	781.8
Concrete Approach Sleeper Slab for Bridge	SqYd	27.4	37.8	67.5	41.8	174.5
Breakout Structural Concrete	CuYd	0.3	5.0	-	-	5.3
Install Dowel in Concrete	Each	-	-	-	52	52
Steel Pedestrian Railing for Sidewalk	Ft	213.3	-	-	-	213.3
Epoxy Coated Reinforcing Steel	Lb	1300	920	-	-	2220
No. 4 Rebar Splice	Each	28	28	28	36	120
No. 5 Rebar Splice	Each	32	32	48	32	144
No. 6 Rebar Splice	Each	44	46	44	58	192

**TABLE OF QUANTITIES - FOR INFORMATION ONLY (Continued)**

BID ITEM DESCRIPTION	UNIT	PROJECT, STRUCTURE NUMBER, ROUTE & MRM				Total Quantity
		IM-P 0012(250), PCN 07D8				
		26-373-023	55-115-220	55-115-270	55-132-190	
		SD 109	I-29	I-29 SBL	SD 10	
		153.56	229.03	224.02	363.63	
Galvanic Anode	Each	-	40	-	-	40
Two Coat Bridge Deck Polymer Chip Seal	SqYd	772.6	1164.0	-	-	1936.6
Abrasive Blasting of Bridge Deck	SqYd	772.6	1164.0	-	-	1936.6
Bridge Deck Grinding	SqYd	772.6	1164.0	-	-	1936.6
Concrete Removal, Class A	SqYd	8.0	8.0	-	-	16.0
Concrete Removal, Class B	SqYd	8.0	8.0	-	-	16.0
Concrete Patching Material, Bridge Deck	CuFt	90.0	90.0	-	-	180.0
Chain Link Fence for Bridge Sidewalk	Ft	213	-	-	-	213
Type 1 MGS	Ft	-	150.0	575.0	250.0	975.0
Type 1 Guardrail Transition	Each	-	4	-	-	4
Type 1 Retrofit Guardrail Transition	Each	-	-	2	4	6
MGS Mash Tangent End Terminal	Each	-	4	2	4	10
Guardrail Delineator	Each	-	16	16	16	48
Cold Applied Plastic Pavement Marking, 24"	Ft	12	-	-	-	12
High Build Waterborne Pavement Marking Paint, 4" White	Ft	900	2126	1526	2088	6640
High Build Waterborne Pavement Marking Paint, 4" Yellow	Ft	900	2410	1261	511	5082
Grooving for Cold Applied Plastic Pavement Marking, 24"	Ft	12	-	-	-	12
Flagging	Hour	25	10	10	10	55
Traffic Control Signs	SqFt	338.5	165.0	246.0	165.0	914.5
Traffic Control Miscellaneous	LS	Lump Sum	Lump Sum	Lump Sum	Lump Sum	Lump Sum
Type 3 Barricade	Each	14	2	2	2	20
Type C Advance Warning Arrow Panel	Each	-	-	1	-	1
Linear Delineation System Panel, Barrier Mounted	Each	-	45	42	35	122
4" Temporary Pavement Marking Tape, Type I	Ft	1388	3888	3600	2994	11870
Traffic Control Moveable Concrete Barrier	Each	-	45	42	35	122
Temporary Concrete Barrier End Protection	Each	-	-	1	-	1
Remove and Reset Temporary Concrete Barrier End Protection	Each	-	-	1	-	1
Temporary Concrete Barrier End Protection Module Set or Repair Kit	Each	-	-	1	-	1
Portable Temporary Traffic Control Signal	Unit	4	2	-	2	8
Detour and Restriction Signing	SqFt	365.3	184.0	-	-	549.3
Temporary Pedestrian Access Route	LS	Lump Sum	-	-	-	Lump Sum
Longitudinal Pedestrian Barrier	Ft	720	-	-	-	720
4" Concrete Sidewalk	SqFt	65	-	-	-	65
6" Reinforced Concrete Sidewalk	SqFt	251	-	-	-	251
Type A Frame and Grate	Each	-	4	2	2	8
Precast Drop Inlet Collar	Each	-	4	2	2	8
4" Underdrain Pipe	Ft	-	120	105	-	225
Porous Backfill	Ton	-	5.4	5.9	-	11.3
Erosion Control	LS	-	Lump Sum	Lump Sum	Lump Sum	Lump Sum
12" Diameter Erosion Control Wattle	Ft	-	-	-	300	300
Anchor Bolt Coring	Ft	12.0	-	-	-	12.0
Railroad Protective Insurance	LS	Lump Sum	-	-	-	Lump Sum

**PEDESTRIAN CHANNELIZING DEVICE DETAILS**



1. Barricade rail supports may not extend into the pedestrian walkway more than 4 inches from the face of the barricade.
2. The top edge of the bottom portion will be a minimum of 8 inches above the walkway.
3. Devices will not block water drainage from the walkway. A gap height or opening from the walkway surface up to a maximum of 2 inches in height is allowed for drainage purposes.
4. The top edge of the longitudinal pedestrian barricade is to be used as a guiderail to provide visual and tactile guidance to pedestrians along a designated route. The top surface should have a minimum width of 0.5 inches to allow the hand to feel the surface. The surface should be smooth and free of any sharp or abrasive elements to allow safe hand trailing.
5. Longitudinal pedestrian barrier used to provide positive protection from traffic to pedestrians should be crashworthy.

**TRAFFIC CONTROL MOVABLE CONCRETE BARRIERS**

Interior moveable concrete barriers will be provided by the State and are available for pickup from the SDDOT Summit Maintenance Yard located along US 12 west of I-29 Exit 207 and the Watertown Area Office located at 5000 9<sup>th</sup> Ave SE. The barriers will be hauled back to the location from which they were obtained. There are 14 interior units available at the Summit location. The remainder of the interior units will be obtained from the Watertown location.

New concrete barrier sloped end units will need to be provided by the Contractor and will become the property of the SDDOT upon project completion. The new concrete barrier sloped end units will be constructed as per Standard Plate 628.11. New concrete barrier sloped ends will be hauled to the Watertown Area Office upon completion of the project.

Barrier requirements are as follows:

Structure No.	Moveable Concrete Barrier Interior Unit (Each)	Moveable Concrete Barrier Sloped End Unit (Each)
55-115-220 (I-29 @ MRM 229.03)	45	1
55-115-270 (I-29 SBL @ MRM 224.02)	42	
55-132-190 (SD10)	35	1

Barriers to be adjusted or moved will be disconnected from adjacent barriers to minimize damage to connecting pins. Pins damaged by the Contractor will be replaced at no cost to the Department.

Concrete barrier sections will be placed as depicted in the plans to comply with clear zone requirements and as required by the Engineer. The barriers will be pinned and bolted together as directed by the Engineer.

All costs associated with picking the barriers up from the SDDOT Maintenance Yard, transporting, setting, connecting, and hauling them back to the SDDOT Maintenance Yard will be incidental to the contract unit price per each for TRAFFIC CONTROL MOVABLE CONCRETE BARRIER.

After the initial placement, the concrete barriers may need to be adjusted. Adjustment of the barriers, where they do not need to be loaded on a truck for transport, will be incidental to the contract unit price per each for Traffic Control Movable Concrete Barrier. All costs associated with removing, loading, unloading, and resetting of the barriers at a new site, will be incidental to the contract unit price per each for Remove and Reset Traffic Control Movable Concrete Barrier. No additional payment will be made for barriers that are not immediately reset at a new location on the project and stored on-site until they are either reset on the project or returned to the SDDOT as indicated in these plans.

**TEMPORARY CONCRETE BARRIER END PROTECTION**

Crash attenuators meeting the requirements of NCHRP 350 or MASH TL-3 will be furnished and installed by the Contractor. Attachment of the attenuators to the concrete barriers will be by approved methods.

All costs associated with furnishing, transporting, initial setup, connecting, maintaining, and removing the crash attenuators will be incidental to the contract unit price per each for Temporary Concrete Barrier End Protection.

All costs associated with moving and resetting crash attenuators to accommodate traffic flows after initial set-up will be paid for at the contract unit price per each for Remove & Reset Temporary Concrete Barrier End Protection. All costs associated with removing from initial placement and resetting at a new location will be incidental to the contract unit price per each. No additional payment will be made for crash attenuators that are not immediately reset at a new location on the project and stored on-site until they are either reset or removed from the project as determined by the Engineer. No additional payment will be made for minor adjustments.

The Contractor will have replacement hardware available so that in the event the crash attenuator is hit and made unusable, the crash attenuator can be made functional within 24 hours. The cost of replacement will be incidental to the contract unit price per each for Temporary Concrete Barrier Module Set or Repair Kit. No payment will be made for the Temporary Concrete Barrier Module Set or Repair Kit if no repairs are necessary. Upon completion of the project, crash attenuators will remain the property of the Contractor.

**BARRIER MOUNTED LINEAR DELINEATION SYSTEM PANELS**

A linear delineation system (LDS) panel will be attached to each barrier section. The color will be the same as the nearest pavement marking, white along outside edgelines or yellow for the left side on one way traffic sections. The LDS will be 34 inches long and 6 inches in height and be constructed of aluminum formed into a shape to provide retroreflective properties across a wide range of angles. It will be sheeted with sheeting meeting the requirements of ASTM D4956 Type XI. The panels will be evenly spaced, with the top of the panel 4 inches below the top of the barrier. Installation will be as per the manufacturer's recommendations. This will allow for easy removal for replacement of damaged panels or to replace with an alternate color. The Contractor will furnish and install one panel along each side of the barrier if any panels are missing from the barriers. Replacement of damaged linear delineation system panels will be furnished and replaced by the Contractor. All costs associated with furnishing, installing, and replacing, if needed, will be incidental to the contract unit price per each for Linear Delineation System Panel, Barrier Mounted.

All LDS panels will remain attached to the barrier sections and will become the property of the State of South Dakota upon completion of the project.

The Contractor will verify the number of LDS panels that will need to be installed or replaced on the Traffic Control Movable Concrete Barriers. The contract amount of LDS panels is an estimate and the full contract amount may not be needed.

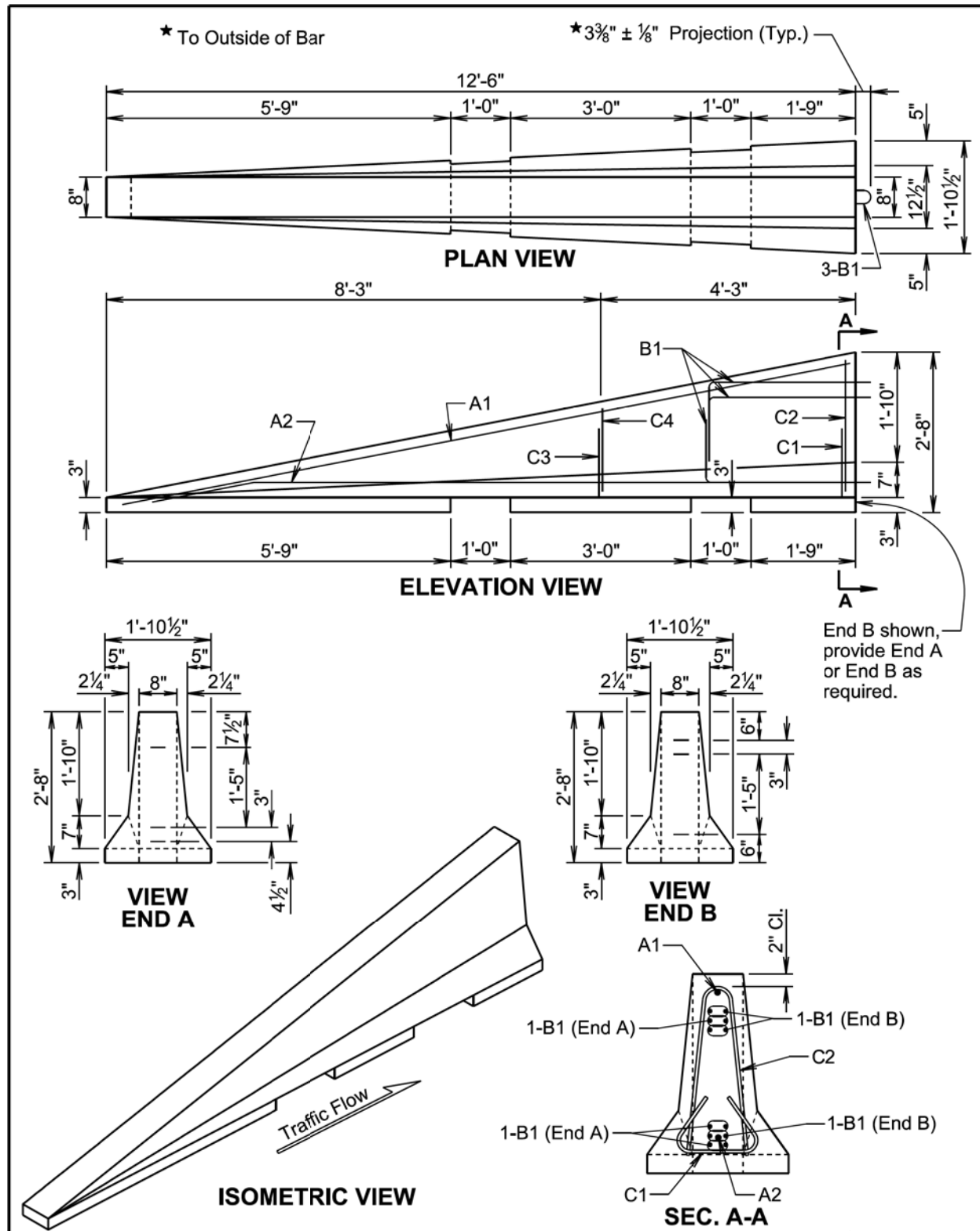
Maintaining the linear delineation system, including moving LDS panels from one side of the barrier to the other side of the barrier to match the applicable color of the nearest pavement marking will be incidental to the contract lump sum price for Traffic Control, Miscellaneous.

**PROTECTION OF BRIDGE JOINTS**

It may be necessary to use special methods and equipment to remove/place material as close as practical to structure appurtenances. Also, the Contractor will mask all expansion joints prior to any removal/placement of material near the joints. The joints will be protected throughout completion of the work. Once the masking has been removed any loose material contained within the joint will be cleaned from the joint. Any damage to the expansion joints along with any existing structure appurtenances will be repaired by the Contractor to the satisfaction of the Engineer at no cost to the Department. All costs related to this work will be incidental to various contract items.

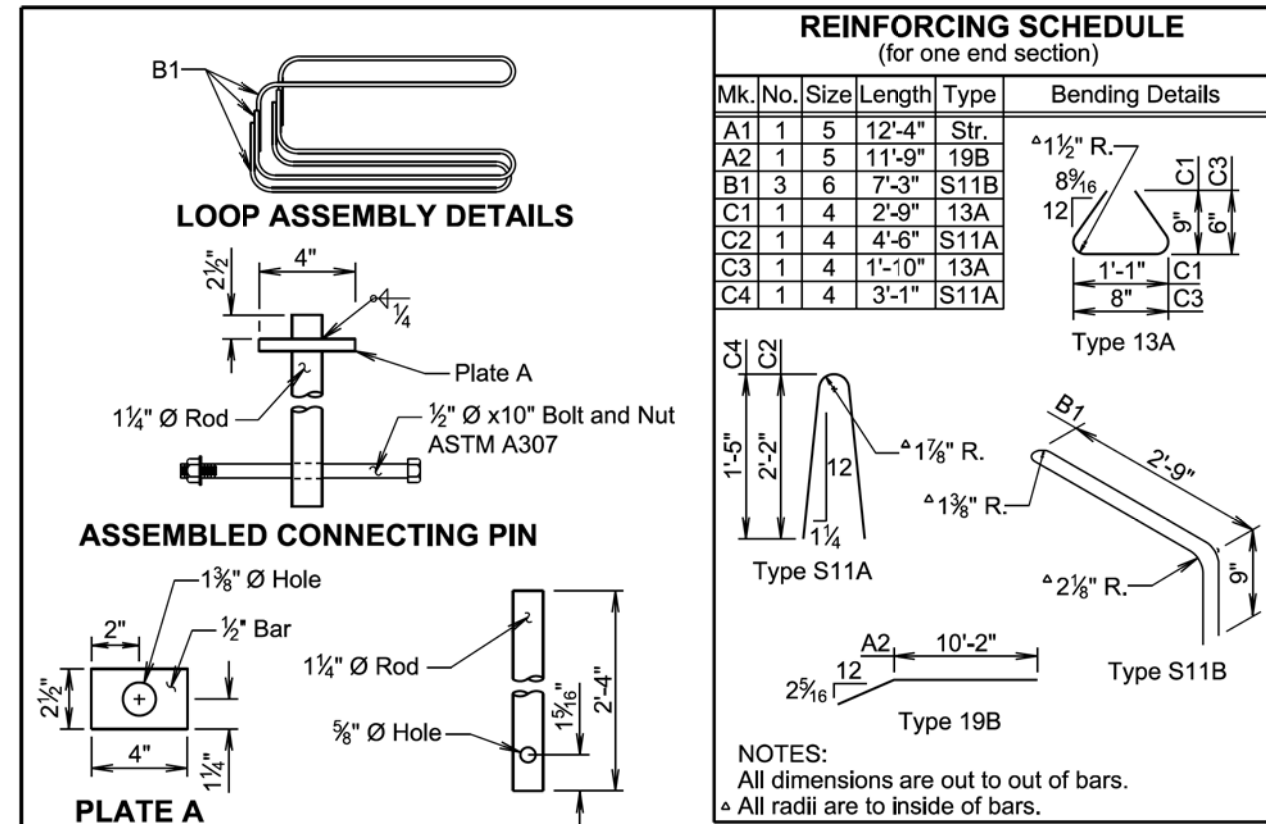
**EXISTING PCC PAVEMENT**

The existing concrete is 10" Plain Jointed PCC Pavement. The aggregate in the existing Plain Jointed PCC Pavement is Crushed Ledge Rock.



September 14, 2018

Published Date: 2024	S D D O T	MOVABLE F SHAPE CONCRETE BARRIERS (END SECTION)	PLATE NUMBER 628.11
			Sheet 1 of 2



**GENERAL NOTES:**

- Concrete will be Class M6 in accordance with Section 462 of the Specifications. Type I, II, or III cement will be used.
- All reinforcing steel will conform to ASTM A615, Grade 60, except B1 bars. The B1 loop bars will be 3/4 inch smooth steel bars with a minimum yield of 60 ksi and conform to ASTM A706 or A709. The loops will be installed within 1/8 inch of the plan dimensions.
- Steel for pins will conform to ASTM A36.
- Galvanize the connecting pin assembly after fabrication in accordance with ASTM A123. Paint exposed portions of the loop assembly B1 bars with a zinc rich galvanizing paint.
- All exposed edges will be chamfered 3/4 inch.
- Use 2 inch clear cover on all reinforcing steel EXCEPT as shown.
- Each movable concrete barrier end section is detailed to provide End "A" to End "B" connection by insertion of a pin through loops formed by reinforcing bars "B1".
- All costs for materials, labor, equipment, and incidentals necessary for furnishing the complete movable concrete barrier end section including one connecting pin assembly will be incidental to the contract unit price per each for "Movable F Shape Concrete Barrier, End Section".
- For informational purposes only, each movable concrete barrier end section contains 0.6 Cu. Yds. of concrete and 66 Lbs. of reinforcing steel.

September 14, 2018

Published Date: 2024	S D D O T	MOVABLE F SHAPE CONCRETE BARRIERS (END SECTION)	PLATE NUMBER 628.11
			Sheet 2 of 2