

STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM 0020(239)	1	27

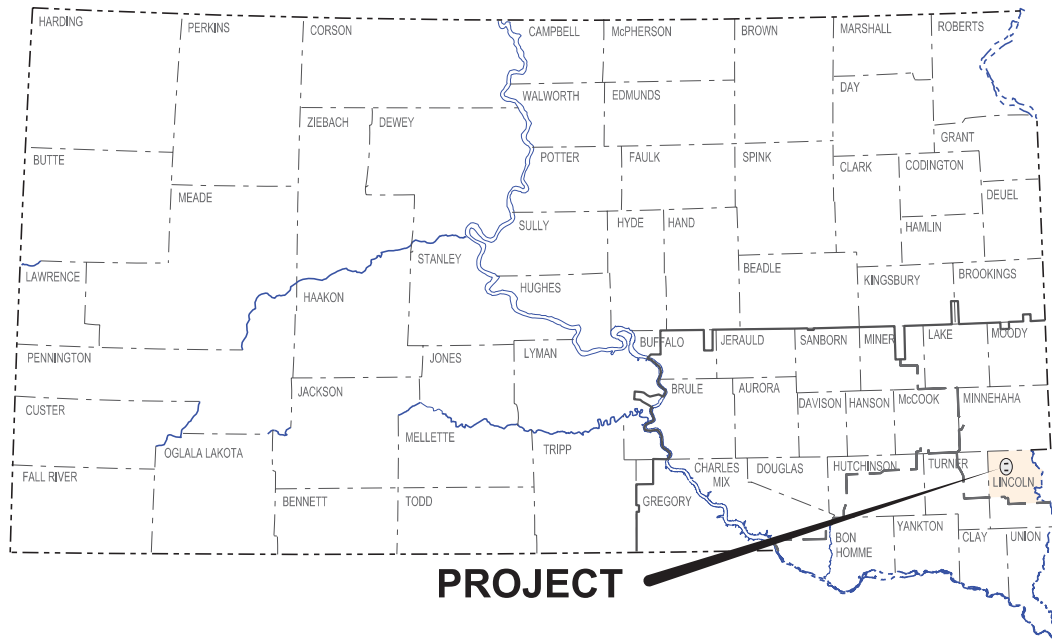
Plotting Date: 03/18/2026

PLANS FOR PROPOSED
PROJECT IM 0020(239)
278TH ST & 281ST ST
OVER INTERSTATE 29
LINCOLN COUNTY

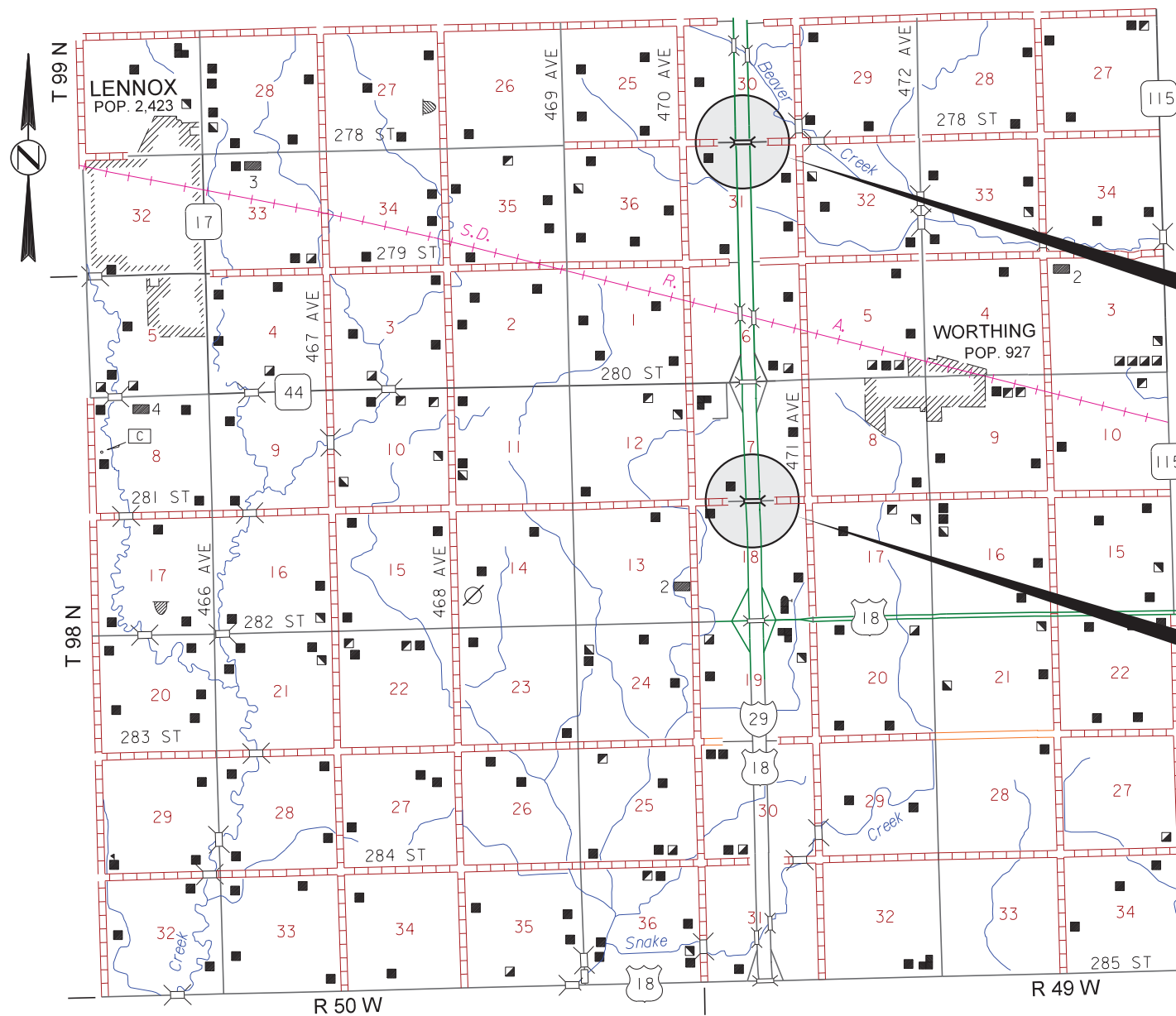
COLD MILLING, ASPHALT CONCRETE RESURFACING
OF BRIDGE DECKS & APPROACHES,
PAVEMENT MARKING & RESETTING GUARDRAIL
PCN 0952

INDEX OF SHEETS

Sheet 1	Layout Map & Index of Sheets
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Sheets 15 - 19	Bridge Work at Str. No. 42-065-130
Sheets 20 - 27	Original Construction Plans (Guardrail)



PROJECT



STR. NO. 42-065-100
8+73 to 11+27
Continuous Concrete Bridge
254'-0"=0.048 Mile
MRM 66.34

OVER I29 AT 278 ST
I29 MRM 66.34
W Crossroad = 680'
E Crossroad = 575'

STR. NO. 42-065-130
8+73 to 11+27
Continuous Concrete Bridge
254'-0"=0.048 Mile
MRM 63.34

OVER I29 AT 281 ST
I29 MRM 63.34
W Crossroad = 680'
E Crossroad = 575'

Crossroad ADT
NA

STORM WATER PERMIT
(None required)

LENGTH		
Gross Length:	3,018'	0.572 Mile
Bridge Length:	508'	0.048 Mile
Net Length:	2,510'	0.524 Mile

3

May 13, 2026

PLOT SCALE - 1"=7000'

PLOTTED FROM - TRMLINT15

FILE - ... \APRJ2026\LINCO952\TTL0952-1.DGN

ESTIMATE OF QUANTITIES & ENVIRONMENTAL COMMITMENTS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM 0020(239)	2	27

PCN 0952

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
009E4100	Construction Schedule, Category I	Lump Sum	LS
110E6410	Remove Type 1 MGS for Reset	100.0	Ft
110E6505	Remove Type 2A Guardrail Transition for Reset	8	Each
110E6619	Remove MGS MASH Tangent End Terminal for Reset	8	Each
320E1200	Asphalt Concrete Composite	784.0	Ton
332E0010	Cold Milling Asphalt Concrete	7,250	SqYd
630E5010	Reset Type 1 MGS	100.0	Ft
630E5204	Reset MGS MASH Tangent End Terminal	8	Each
630E5305	Reset Type 2A Guardrail Transition	8	Each
633E1222	High Build Waterborne Pavement Marking Paint, 4" Yellow	6,036	Ft
633E1240	High Build Waterborne Pavement Marking Paint, 8" White	6,036	Ft
634E0110	Traffic Control Signs	346.0	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0275	Type 3 Barricade	16	Each
634E1215	Contractor Furnished Portable Changeable Message Sign	4	Each

STR. NO. 42-065-100

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
320E2701	Asphalt Concrete Bridge Deck Overlay	677.4	SqYd
332E0010	Cold Milling Asphalt Concrete	677	SqYd
491E0172	Concrete Patching Material, Bridge Deck	1.0	CuFt

STR. NO. 42-065-130

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
320E2701	Asphalt Concrete Bridge Deck Overlay	677.4	SqYd
332E0010	Cold Milling Asphalt Concrete	677	SqYd
491E0172	Concrete Patching Material, Bridge Deck	1.0	CuFt

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/doing-business/environmental/about-environmental/>

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.

COMMITMENT B: FEDERALLY THREATENED, ENDANGERED, AND PROTECTED SPECIES

COMMITMENT B2: WHOOPING CRANE

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

Action Taken/Required:

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

COMMITMENT C: WATER SOURCE

If a Contractor needs access to state waters for extraction, the Contractor must obtain a water right, through the application of a Temporary Permit to Use Public Waters before work begins.

The Contractor will not withdraw water with equipment previously used outside the State of South Dakota or previously used in aquatic invasive species (AIS) positive waters within South Dakota without prior approval from the SDDOT Environmental Office. To prevent and control the introduction and spread of invasive species into the project vicinity, all equipment will be power washed with hot water (≥140 °F) and completely dried for a minimum of 7 days prior to subsequent use. South Dakota administrative rule 41:10:04:02 forbids the possession and transport of AIS; therefore, all attached dirt, mud, debris and vegetation must be removed and all compartments and tanks capable of holding standing water must be drained. This includes, but is not limited to, all equipment, pumps, lines, hoses and holding tanks.

The Contractor will not withdraw water directly from streams of the James, Big Sioux, and Vermillion watersheds without prior approval from the SDDOT Environmental Office.

Action Taken/Required:

The Contractor will obtain the necessary permits from the regulatory agencies such as the South Dakota Department of Agriculture and Natural Resources (SDDANR) and the United States Army Corps of Engineers (USACE) prior to water extraction activities.

Temporary permit to use public waters for highway construction purposes application can be found on the SDDANR website:
<https://danr.sd.gov/OfficeOfWater/WaterRights/PermitForms/default.aspx>

Additional information and mapping of water sources impacted by Aquatic Invasive Species in South Dakota can be accessed at:
<https://sdleastwanted.sd.gov/maps/default.aspx>

South Dakota Administrative Rule 41:10:04 Aquatic Invasive Species:
<https://sdlegislature.gov/rules/DisplayRule.aspx?Rule=41:10:04>

COMMITMENT E: STORM WATER

Construction activities constitute less than 1 acre of disturbance.

Action Taken/Required:

At a minimum and regardless of project size, appropriate erosion and sediment control measures must be installed to control the discharge of pollutants from the construction site.

ENVIRONMENTAL COMMITMENTS (CONTINUED) & PLAN NOTES

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM 0020(239)	3	27

COMMITMENT H: WASTE DISPOSAL SITE

The Contractor will furnish a site(s) for the disposal of construction and/or demolition debris generated by this project.

Action Taken/Required:

Construction and/or demolition debris may not be disposed of within the Public ROW.

The waste disposal site(s) will be managed and reclaimed in accordance with the following from the General Permit for Construction/Demolition Debris Disposal Under the South Dakota Waste Management Program issued by the Department of Agriculture and Natural Resources.

The waste disposal site(s) will not be located in a wetland, within 200 feet of surface water, or in an area that adversely affects wildlife, recreation, aesthetic value of an area, or any threatened or endangered species, as approved by the Environmental Office and the Project Engineer.

If the waste disposal site(s) is located such that it is within view of any ROW, the following additional requirements will apply:

1. Construction and/or demolition debris consisting of concrete, asphalt concrete, or other similar materials will be buried in a trench separate from wood debris. The final cover over the construction and/or demolition debris will consist of a minimum of 1 foot of soil capable of supporting vegetation. Waste disposal sites provided outside of the Public ROW will be seeded in accordance with Natural Resources Conservation Service recommendations. The seeding recommendations may be obtained through the appropriate County NRCS Office. The Contractor will control the access to waste disposal sites not within the Public ROW with fences, gates, and placement of a sign or signs at the entrance to the site stating, No Dumping Allowed.
2. Concrete and asphalt concrete debris may be stockpiled within view of the ROW for a period not to exceed the duration of the project. Prior to project completion, the waste will be removed from view of the ROW or buried, and the waste disposal site reclaimed as noted above.

The above requirements will not apply to waste disposal sites that are covered by an individual solid waste permit as specified in SDCL 34A-6-58, SDCL 34A-6-1.13, and ARSD 74:27:10:06.

Failure to comply with the requirements stated above may result in civil penalties in accordance with South Dakota Solid Waste Law, SDCL 34A-6-1.31.

Cost associated with furnishing waste disposal site(s), disposing of waste, maintaining control of access (fence, gates and signs), and reclamation of the waste disposal site(s) will be incidental to the various contract items.

COMMITMENT I: HISTORIC PRESERVATION OFFICE CLEARANCES

The SDDOT has obtained concurrence with the State Historic Preservation Office (SHPO) for all work included within the project limits and all department designated sources and designated option material sources, stockpile sites, storage areas, and waste sites provided within the plans.

Action Taken/Required:

All earth disturbing activities not designated within the plans require a cultural resource review prior to scheduling the pre-construction meeting. This work includes but is not limited to: Contractor furnished material sources, material processing sites, stockpile sites, storage areas, plant sites, and waste areas.

The Contractor will arrange and pay for a record search and when necessary, a cultural resource survey. The Contractor has the option to contact the state Archaeological Research Center (ARC) at 605-394-1936 or another qualified archaeologist, to obtain either a records search or a cultural resources survey. A record search might be sufficient for review if the site was previously surveyed; however, a cultural resources survey may need to be conducted by a qualified archaeologist.

The Contractor will provide ARC with the following: a topographical map or aerial view in which the site is clearly outlined, site dimensions, project number, and PCN. If applicable, provide evidence that the site has been previously disturbed by farming, mining, or construction activities with a landowner statement that artifacts have not been found on the site.

The Contractor will submit the cultural resources survey report to SDDOT Environmental Office, 700 East Broadway Avenue, Pierre, SD 57501-2586. SDDOT will submit the information to the appropriate SHPO/THPO. Allow 30 Days from the date this information is submitted to the Environmental Engineer for SHPO/THPO review.

In the event of an inadvertent discovery of human remains, funerary objects, or if evidence of cultural resources is identified during project construction activities, then such activities within 150 feet of the inadvertent discovery will immediately cease and the Project Engineer will be immediately notified. The Project Engineer will contact the SDDOT Environmental Office, who will contact the appropriate SHPO/THPO within 48 hours of the discovery to determine an appropriate course of action.

SHPO review does not relieve the Contractor of the responsibility for obtaining any additional permits and clearances for Contractor furnished material sources, material processing sites, stockpile sites, storage areas, plant sites, and waste areas that affect wetlands, threatened and endangered species, or waterways. The Contractor will not utilize a site known or suspected of having contaminated soil or water. The Contractor will provide the required permits and clearances to the Project Engineer at the preconstruction meeting.

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.

SURFACING THICKNESS DIMENSIONS

At those locations where material must be placed to achieve a required elevation, the depth/quantity may be varied to achieve the required elevation.

COORDINATION BETWEEN CONTRACTORS

A separate contract for Project IM-P 0022(103) - PCN 09X5 will be awarded to another Contractor for concrete pavement repair on I29S from MRM 61.00 to MRM 71.00 and on I29N from MRM 64.00 to MRM 71.00.

The Contractor will schedule work so as not to interfere with or hinder the progress of the work performed by other Contractors on the concrete pavement repair project.

COLD MILLING ASPHALT CONCRETE

Cold milling will be done according to the typical sections. Milling in Section 1 will be daylighted to the outside edge of the roadway.

Milled material will become the property of the Contractor for disposal.

The requirement for a traveling stringline will be waived.

ASPHALT CONCRETE COMPOSITE

Asphalt for tack SS-1h or CSS-1h will be applied prior to each lift of Asphalt Concrete Composite. Asphalt for tack will be applied at a rate of 0.09 gallon per square yard. The Asphalt for tack will be applied for the full width of the bottom layer of Asphalt Concrete Composite plus one-half foot additional on the outside shoulder.

The mineral aggregate for the asphalt concrete composite will conform to Section 321 – Class E, Type 2. The asphalt binder used in the mixture will be PG 58-34 or PG 64-34.

TYPICAL COLD MILLING & RESURFACING SECTIONS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM 0020(239)	4	27

Plotting Date: 03/18/2026

SECTION 1

Approaches to Str. No. 42-065-100

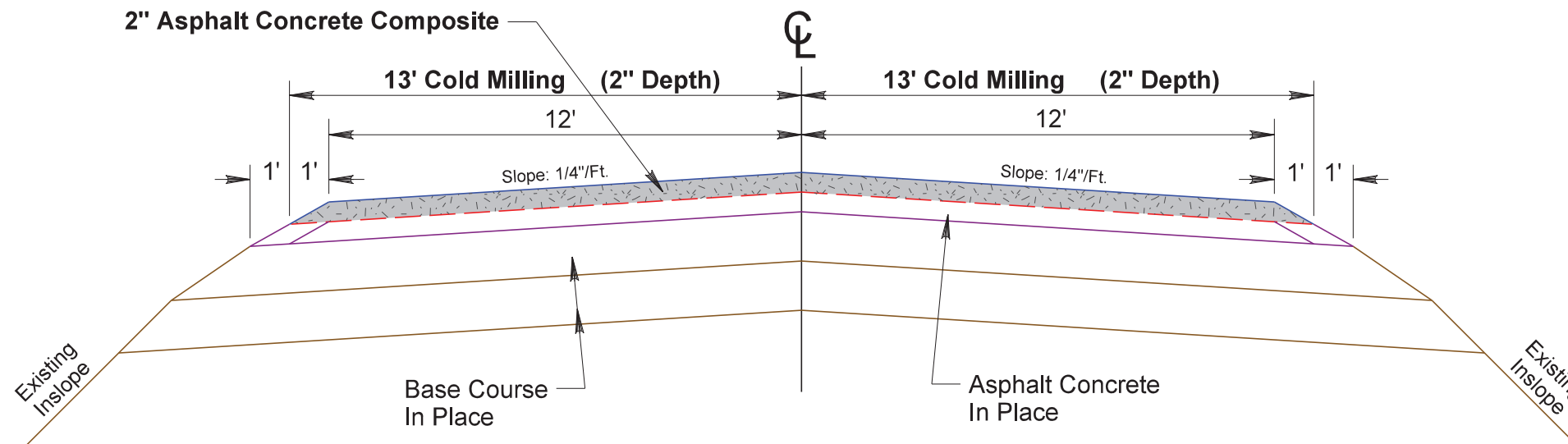
495' Length from 1+93 L (680' West of Begin Bridge) to 6+88 L
365' Length from 13+37 L to 17+02 L (575' East of End Bridge)

470' Length from 1+93 R (680' West of Begin Bridge) to 6+63 R
390' Length from 13+12 R to 17+02 R (575' East of End Bridge)

Approaches to Str. No. 42-065-130

495' Length from 1+93 L (680' West of Begin Bridge) to 6+88 L
390' Length from 13+12 L to 17+02 L (575' East of End Bridge)

470' Length from 1+93 R (680' West of Begin Bridge) to 6+63 R
365' Length from 13+37 R to 17+02 R (575' East of End Bridge)



* The Contractor will be required to remove the in place guardrail (consisting of rail, end terminals & blocks). Guardrail posts will remain in place. Removed items will be reset after completion of the surfacing placement.

Guardrail delineation attached to guardrail blocks will be reset in the same location and facing the same direction from which it was removed.

Cost for this work will be included in the contract unit prices for the various items for removing and resetting guardrail items.

Handwork will be required to place and compact the outside 1'± of asphalt concrete near the in place guardrail posts. However, no asphalt concrete will be placed directly against any of the in place posts.

Cost for this work will be incidental to the contract unit price per ton for Asphalt Concrete Composite.

SECTION 2

Approaches to Str. No. 42-065-100 (between guardrail surfacing)

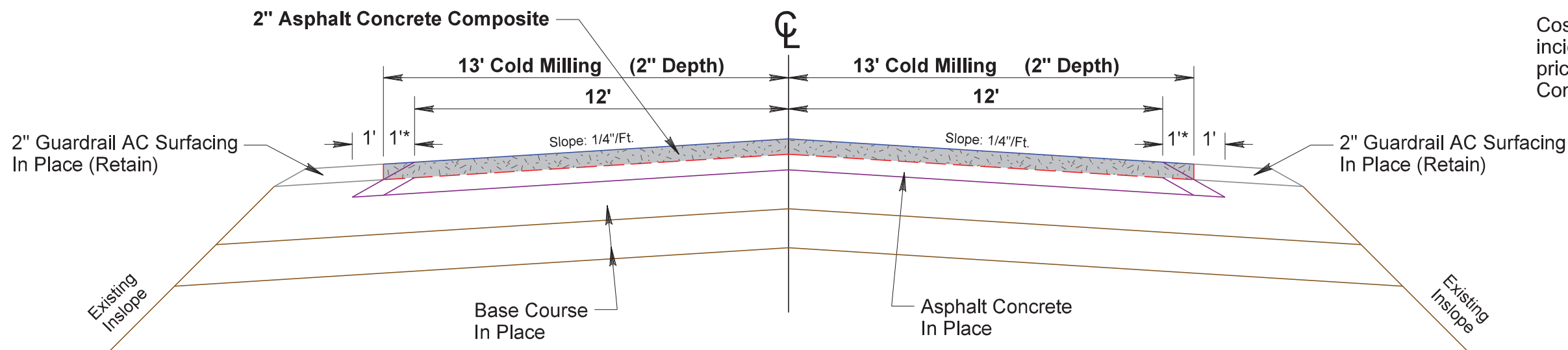
185' Length from 6+88 L to 8+73 L (Begin Bridge)
210' Length from 11+27 L (End Bridge) to 13+37 L

210' Length from 6+63 R to 8+73 R (Begin Bridge)
185' Length from 11+27 R (End Bridge) to 13+12 R

Approaches to Str. No. 42-065-130 (between guardrail surfacing)

185' Length from 6+88 L to 8+73 L (Begin Bridge)
185' Length from 11+27 L (End Bridge) to 13+12 L

210' Length from 6+63 R to 8+73 R (Begin Bridge)
210' Length from 11+27 R (End Bridge) to 13+37 R



PLOT SCALE - 1:4

PLOTTED FROM - TRMLINT15

PLOT NAME - 2

FILE - ... \APR\2026\INC0952\TSEC0952.DGN

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM 0020(239)	5	27

REV. 03-20-26, JMP

SEQUENCE OF OPERATIONS

The Contractor will submit a sequence of operations for approval two weeks prior to the preconstruction meeting. If changes to the sequence of operations are proposed during the project, these must be submitted for review a minimum of one week prior to potential implementation. Approval for changes to the sequence of operations will only be allowed when the proposed changes meet with the Department's intent for traffic control and sequencing of the work.

The Contractor will be allowed to work on both 278th Street and 281st Street bridges simultaneously.

GENERAL TRAFFIC CONTROL

Existing guide, route, informational logo, regulatory, and warning signs will be temporarily reset and maintained during construction. Removing, relocating, covering, salvaging, and resetting of existing traffic control devices, including delineation, will be the responsibility of the Contractor. Cost for this work will be incidental to the contract unit prices for the various items unless otherwise specified in the plans. Any delineators and signs damaged or lost will be replaced by the Contractor at no cost to the State.

All temporary traffic control sign locations will be set in the field by the Contractor and verified by the Engineer prior to installation.

If there is a discrepancy between the traffic control plans, standard plates, and the MUTCD, whichever is more stringent will be used, as determined by the Engineer.

Unless otherwise stated in these plans, work will not be allowed during hours of darkness.

All haul trucks will be equipped with an additional flashing amber light that is visible from the backside of the haul truck. Cost for the flashing amber lights will be incidental to the various related contract items.

The Contractor will notify businesses/homeowners a minimum of two weeks prior to construction to inform them of upcoming construction and again a minimum of 48 hours prior to any blocked access to make appropriate arrangements.

PAVEMENT MARKING PAINT

Pavement marking quantities are based on replacing pavement marking on the two bridge decks over I29 and on the replaced approach pavement sections on either side of the bridges.

The Contractor will be required to repaint the centerline (including No Passing Zones where applicable) and both edge lines. The Contractor will be required to document and be able to relocate for replacement before obliterating the existing marking. Cost for duplicating existing marking locations will be incidental to the contract unit prices for various contract items.

HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT

All material will be applied as per manufacturer's recommendations.

High build waterborne pavement marking paint will conform to Section 980.1 B.

Reflective media will consist of glass beads. Reflective media will require a Certificate of Compliance for Certification for each source and lot. Acceptance sampling will not be required.

RATES OF MATERIALS FOR HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT

High Build Waterborne Pavement Marking Paint, Yellow:

Solid 4" line = 22.5 Gals/Mile

Dashed 4" line = 6.2 Gal/Mile

Glass Beads = 8 Lbs/Gal.

High Build Waterborne Pavement Marking Paint, White:

Solid 8" line = 45 Gals/Mile

Glass Beads = 8 Lbs/Gal.

Cost for material, labor, and equipment necessary to furnish and install the pavement marking will be incidental to the contract unit price for the respective High Build Waterborne Pavement Marking Paint items.

CONTRACTOR FURNISHED PORTABLE CHANGEABLE MESSAGE SIGN

One week prior to starting work affecting the traveling public, portable changeable message signs (PCMS) will be installed at locations detailed in the plans to notify drivers of the upcoming construction. The Contractor will program the portable changeable message signs with the following message:

ROAD WORK

STARTS

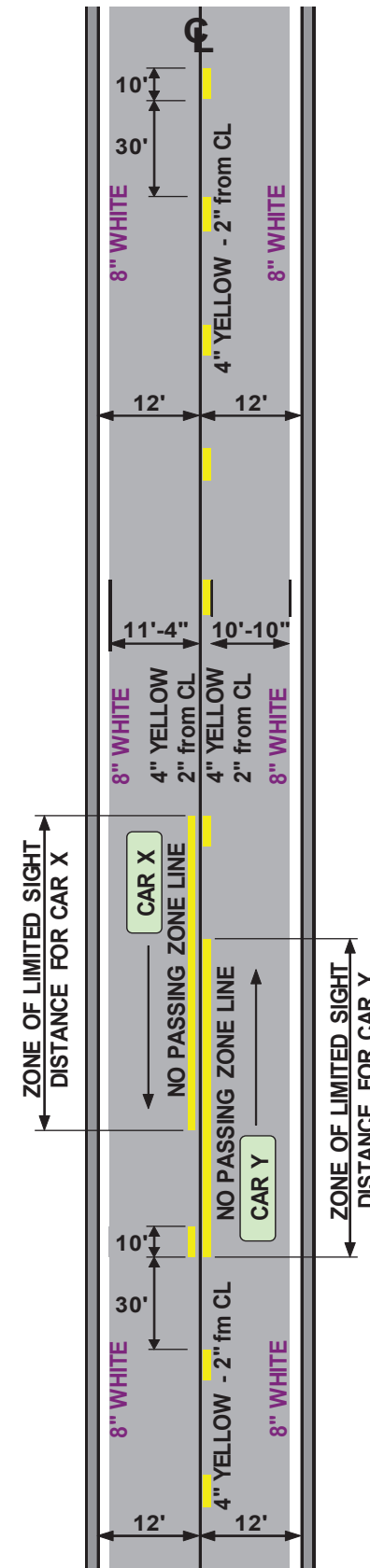
(Date)

When work begins that will affect traffic patterns, the Contractor will re-program the PCMS with the messages as detailed in the plans.

ITEMIZED LIST FOR TRAFFIC CONTROL SIGNS

SIGN CODE	SIGN DESCRIPTION	CONVENTIONAL ROAD			
		NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
R11-2	ROAD CLOSED	4	48" x 30"	10.0	40.0
R11-3a	ROAD CLOSED 1/2 MILES AHEAD LOCAL TRAFFIC ONLY	4	60" x 30"	12.5	50.0
W8-11	UNEVEN LANES	4	48" x 48"	16.0	64.0
W21-2	FRESH OIL	4	48" x 48"	16.0	64.0
W20-3	ROAD CLOSED 1000 FT	4	48" x 48"	16.0	64.0
W20-3	ROAD CLOSED 500 FT	4	48" x 48"	16.0	64.0
CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT					346.0

TWO LANE ROADWAY



PAVEMENT MARKING

Typical pavement marking as shown on this sheet will be applied throughout the entire length of two lane roadway.

Traffic Control will be incidental to the cost of application. The striper and advance or trailing warning vehicle will be equipped with flashing amber lights and advance warning arrow board.

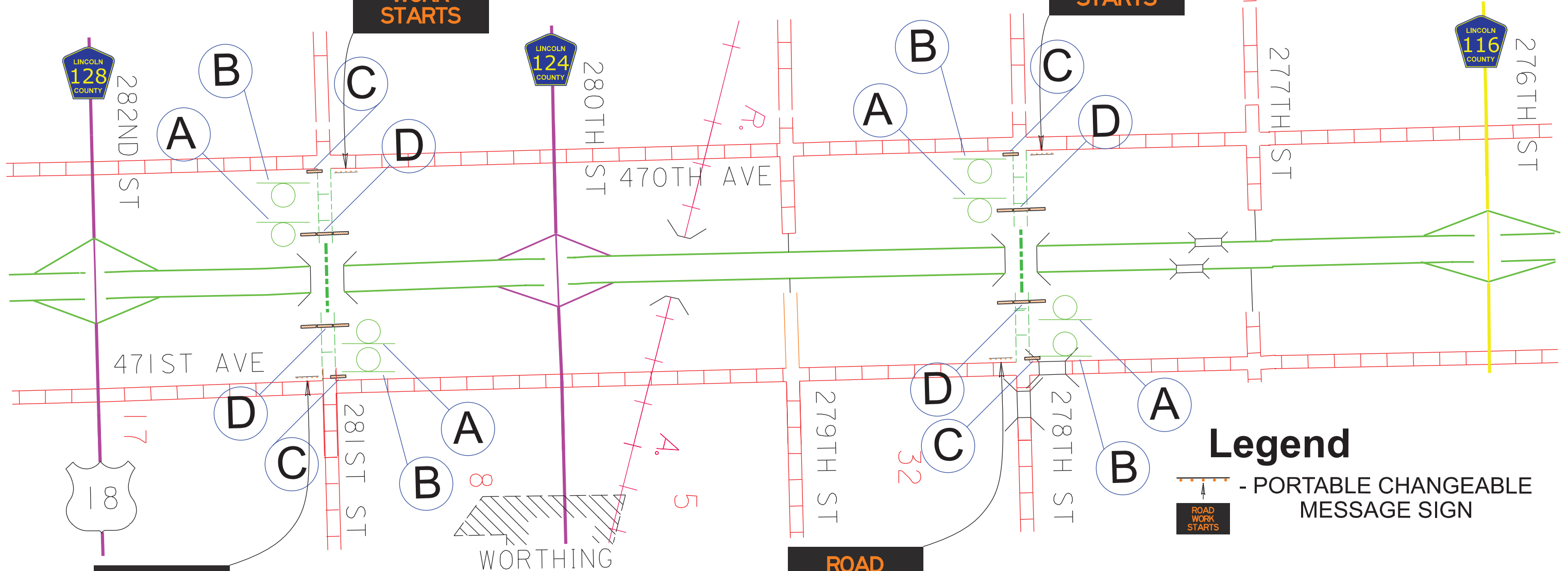
ESTIMATED QUANTITIES		
HIGH BUILD	4"	8"
WHITE	-	6036'
YELLOW	6036'	-

All pavement marking dimensions are based on 12' driving lanes.

281ST ST AND 278TH ST CLOSURE DETAIL

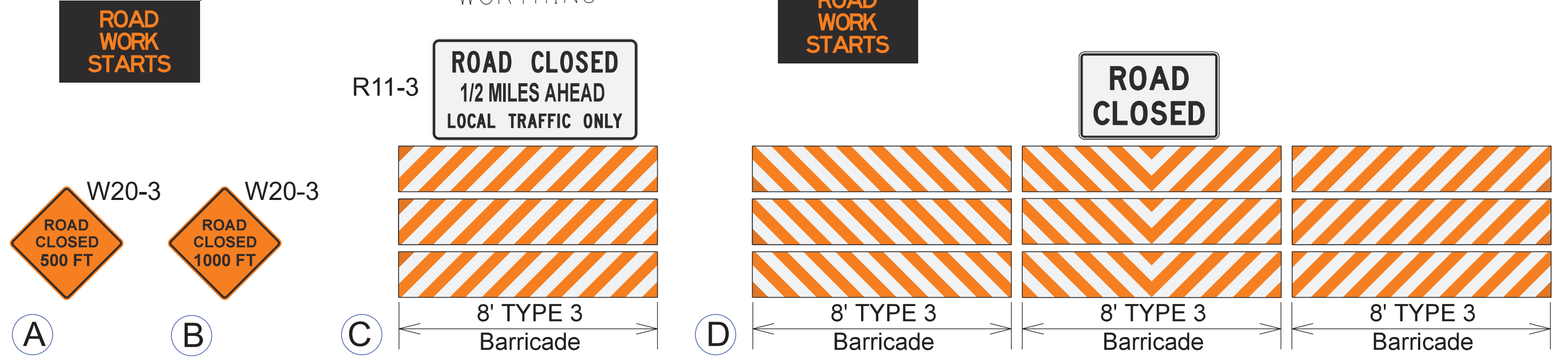
STATE OF SOUTH DAKOTA	PROJECT IM 0020(239)	SHEET 7	TOTAL SHEETS 27
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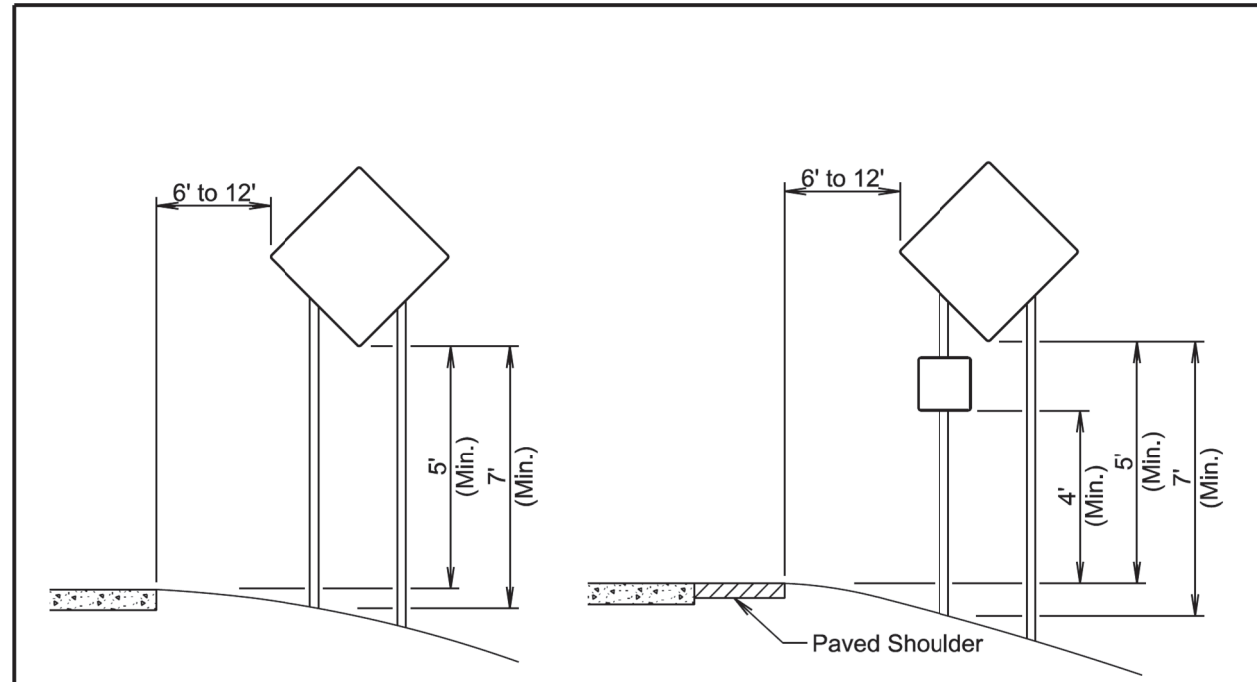
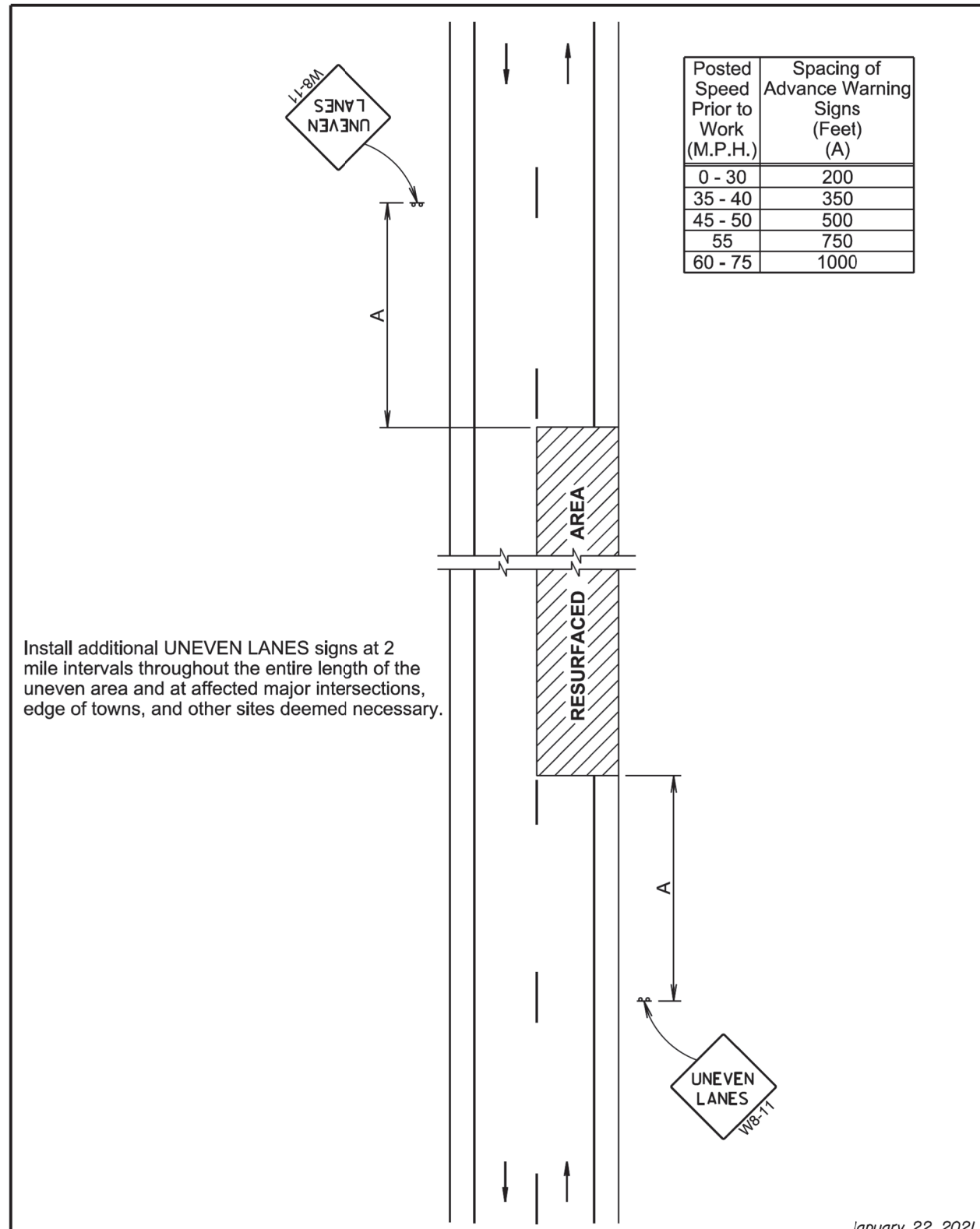
Plotting Date: 3/12/2026



Legend

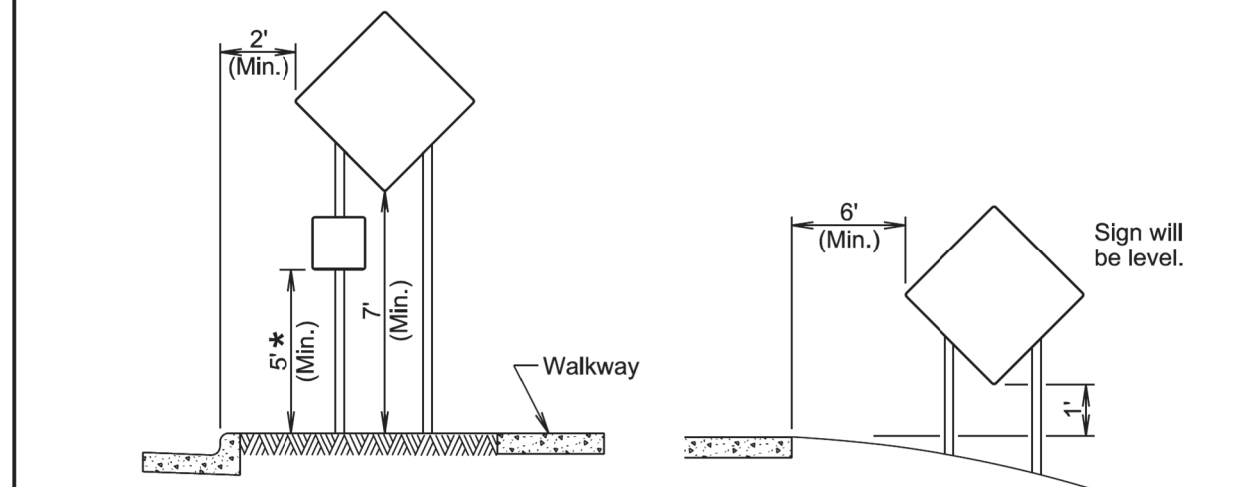
- PORTABLE CHANGEABLE MESSAGE SIGN
- ROAD WORK STARTS





RURAL DISTRICT

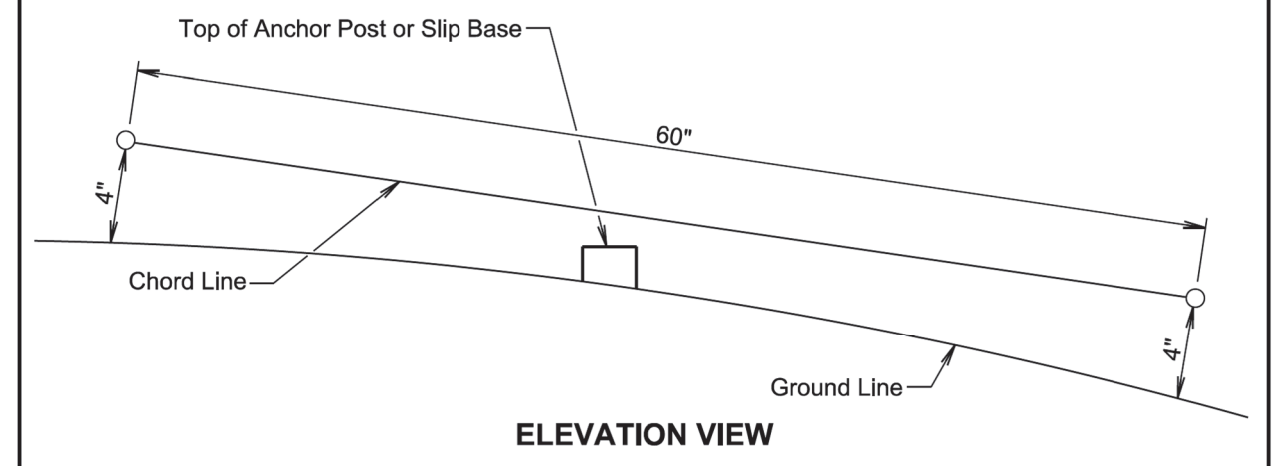
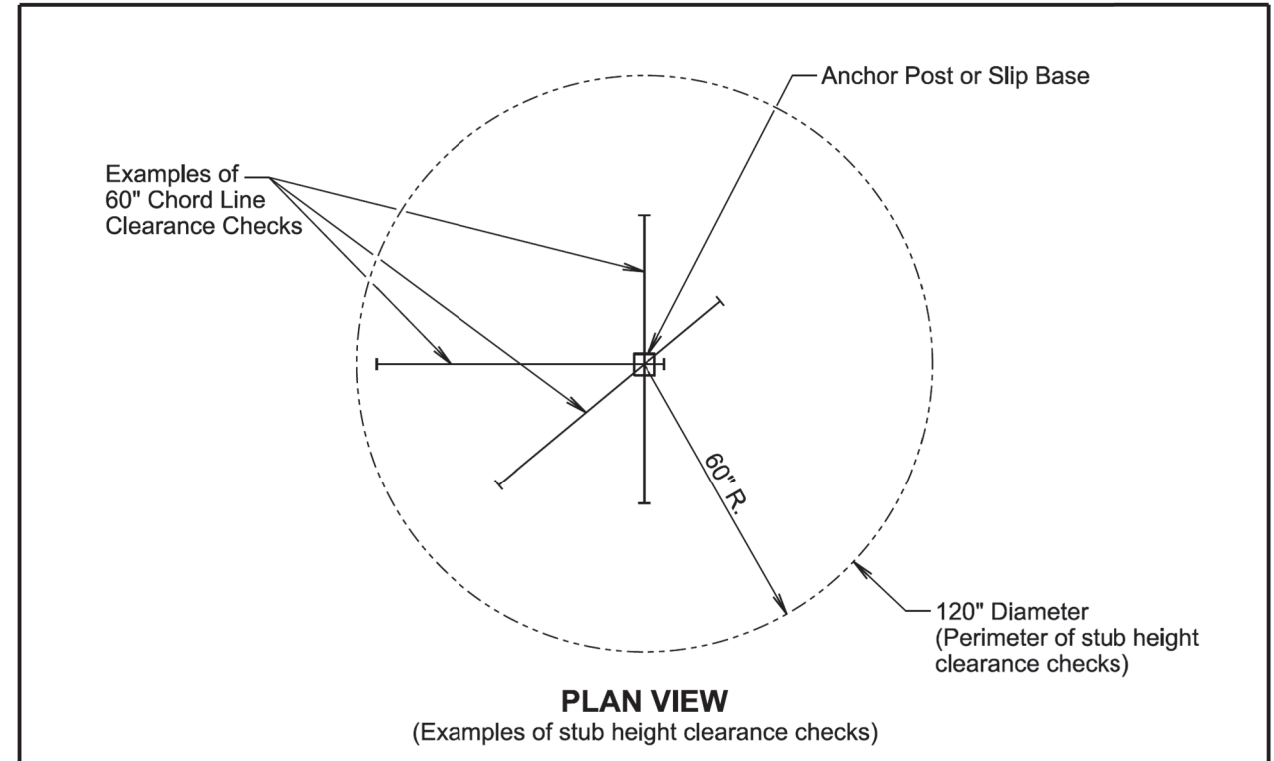
RURAL DISTRICT WITH SUPPLEMENTAL PLATE



URBAN DISTRICT

RURAL DISTRICT 3 DAY MAXIMUM
(Not applicable to regulatory signs)

* If the bottom of supplemental plate is mounted lower than 7 feet above a pedestrian walkway, the supplemental plate should not project more than 4" into the pedestrian facility.



GENERAL NOTES:

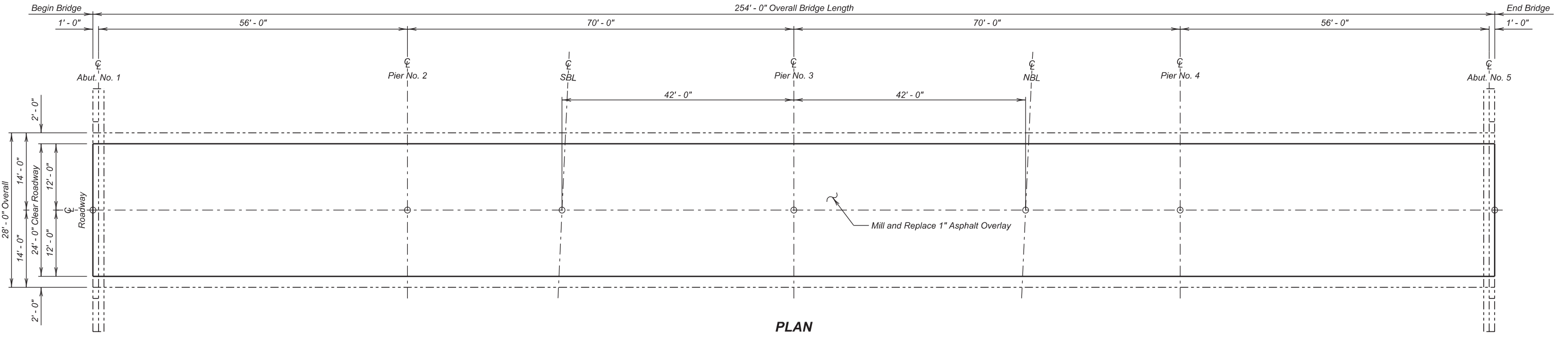
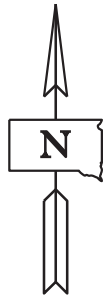
The top of anchor posts and slip bases WILL NOT extend above a 60" chord line within a 120" diameter circle around the post with ends 4" above the ground.

At locations where there is curb and gutter adjacent to the breakaway sign support, the stub height will be a maximum of 4" above the ground line at the localized area adjacent to the breakaway support stub.

The 4" stub height clearance is not necessary for U-channel lap splices where the support is designed to yield (bend) at the base.

January 22, 2021

<i>Published Date: 2026</i>	S D O T	BREAKAWAY SUPPORT STUB CLEARANCE	PLATE NUMBER 634.99
			Sheet 1 of 1



PLAN

ESTIMATED QUANTITIES		
ITEM	UNIT	QUANTITY
Asphalt Concrete Bridge Deck Overlay	SqYd	677.4
Cold Milling Asphalt	SqYd	677
Concrete Patching Material, Bridge Deck	CuFt	1.0

LAYOUT FOR UPGRADE
 FOR
 254' - 0" CONTINUOUS CONCRETE BRIDGE
 24' - 0" ROADWAY 0° SKEW
 OVER I29 SEC. 30/31-T99N-R50W
 STR. NO. 42-065-100 P 0020(239)
 PCN 0952

LINCOLN COUNTY
 S. D. DEPT. OF TRANSPORTATION

JANUARY 2026

1 OF 5

**-X220-
 INDEX OF BRIDGE SHEETS -**

- Sheet No. 1 - Layout for Upgrade
- Sheet No. 2 - Estimate of Structure Quantities and Notes
- Sheet Nos. 3 thru 5 - Original Construction Plans

DESIGNED BY TJM LINC0952	CK. DES. BY JKI 0952RA01	DRAFTED BY KR	<i>Steve A. Johnson</i> BRIDGE ENGINEER
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ESTIMATE OF STRUCTURE QUANTITIES

ITEM NO.	DESCRIPTION	QUANTITY	UNIT
320E2701	Asphalt Concrete Bridge Deck Overlay	677.4	SqYd
332E0010	Cold Milling Asphalt Concrete	677	SqYd
491E0172	Concrete Patching Material, Bridge Deck	1.0	CuFt

SPECIFICATIONS

Construction Specifications: Standard Specifications for Roads and Bridges, 10-1-25 Version; Required Provisions; and Special Provisions as included in the Proposal. The Standard Specifications for Roads and Bridges is available for download and viewing at <https://dot.sd.gov/doing-business/contractors/standard-specifications>.

DETAILS AND DIMENSIONS OF EXISTING BRIDGE

All details and dimensions of the existing bridge, contained in these plans, are based on the original construction plans and shop plans. It is the Contractor's responsibility to inspect and verify the actual field conditions and any necessary as-built dimensions affecting the satisfactory completion of the work required for this project.

SCOPE OF BRIDGE WORK & SEQUENCE OF OPERATIONS

All work on this structure will be accomplished with the traffic control shown elsewhere in the plans. Alternate sequence of operations may be submitted by the Contractor for approval by the Engineer a minimum of two weeks prior to the preconstruction meeting.

1. Mill 1" of the existing asphalt overlay.
2. If during the milling operation, portions of the concrete bridge deck come loose or are removed with the asphalt, patch the deck.
3. Clean surface, apply asphalt tack coat and place 1" layer of asphalt overlay.

CONCRETE REPAIR

1. The existing deck is estimated to have 2" of Asphalt composite on the bridge deck. While the milling operations are to be 1" there is the possibility that deeper areas might be removed during milling. If these deeper removals areas are into the concrete deck the concrete is to be repaired following the procedures outlined and not filled with a thicker layer of asphalt.
2. Concrete removal is to be limited to loose or spalled material. Removal will be by abrasive blasting, jackhammers less than 30 pounds, and/or chipping hammers less than 15 pounds. Care will be taken not to damage the reinforcing steel that is to be reused during concrete breakout. Any reinforcing steel that is damaged during concrete breakout will be replaced or repaired, as approved by the Engineer, by the Contractor at no cost to the Department.

3. The patching may not be required on the project and may be omitted from the project as determined by the Engineer.
4. The cost for concrete removal, furnishing and placing patching material including all labor, equipment, tools, and any incidentals necessary to complete the work will be paid for at the contract unit price per cubic foot for Concrete Patching Material, Bridge Deck.

ASPHALT CONCRETE BRIDGE DECK OVERLAY

1. The asphalt placed on the bridge will match the requirements for asphalt placed for the rest of the project.
2. The milling of 1" of the existing asphalt overlay on the bridge deck will be paid for at the contract unit price per square yard. Payment will be full compensation for equipment, materials, labor, and incidentals necessary to mill and clean the bridge deck.
3. The asphalt composite placed on the bridge deck will be paid for at the contract unit price per square yard. Payment will be full compensation for equipment, materials, labor, and incidentals necessary to complete the asphalt bridge deck overlay.

ESTIMATE OF STRUCTURE QUANTITIES AND NOTES
FOR

254' - 0" CONTINUOUS CONCRETE BRIDGE

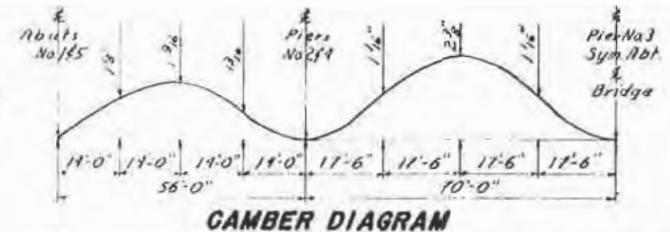
STR. NO. 42-065-100

JANUARY 2026

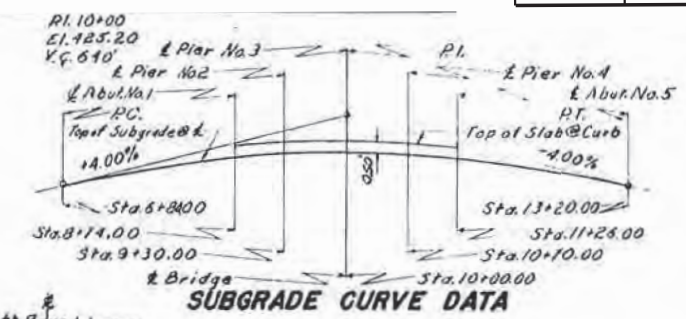
2 OF 5

DESIGNED BY TJM LINC0952	CK. DES. BY JKI 0952MA02	DRAFTED BY TJM	 BRIDGE ENGINEER
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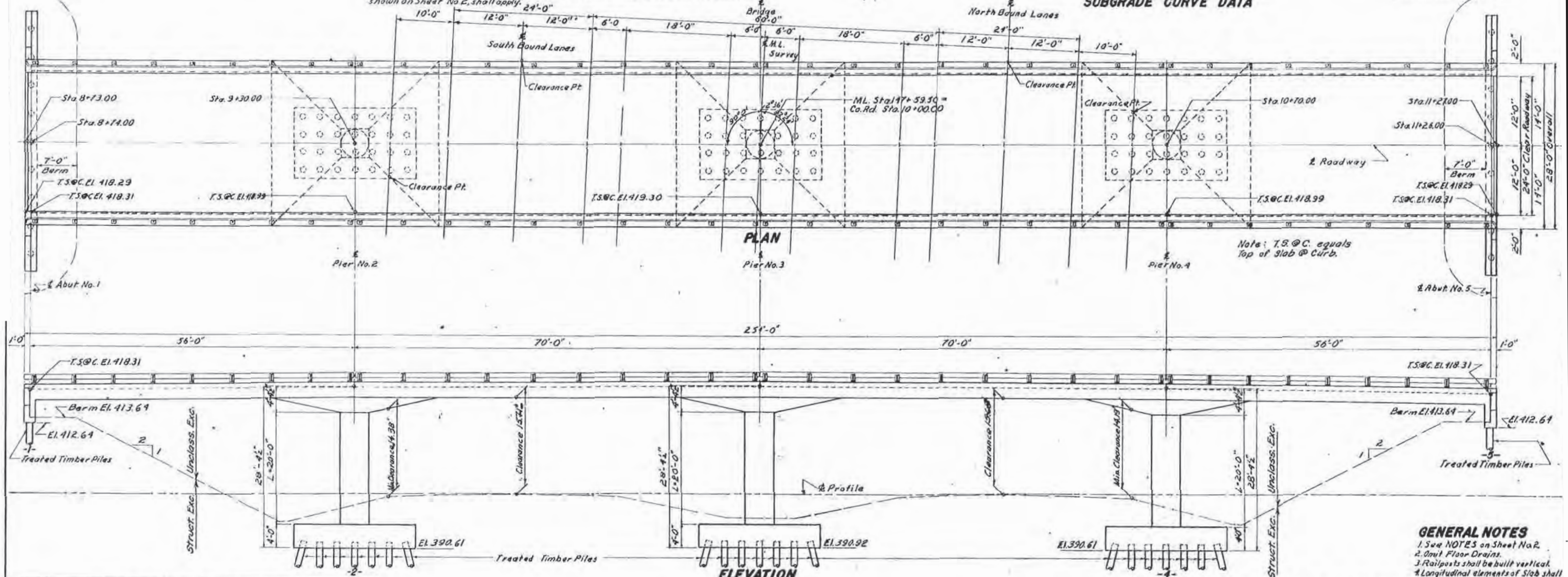
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INDEX OF BRIDGE SHEETS
 Sheet No. 1 - General Drawing & Quantities HSCS-24-00-254-1-3
 Sheet No. 2 - Details of Std. Superstructure HSCS-24-00-254-2-3
 Sheet No. 3 - Details of Std. Substructure HSCS-24-00-254-3-3
 Sheet No. 4 - Railing and Drain Details SCS-24-00-254-3-3



CAMBER DIAGRAM
 NOTE: - Dimensions shown above, for camber at quarter points of spans, superstructure corresponding dimensions shown on Sheet No. 2. All other provisions for camber shown on Sheet No. 2, shall apply.



B.M. No. 11 - El. 399.10
 Spike in T. pole
 236' Lt. Sta. 147+60 M.L.
 B.M. No. 12 - El. 393.21
 Spike in T. Post
 238' Lt. Sta. 159+00 M.L.



Note: T.S.C. equals Top of Slab @ Curb.

GENERAL NOTES
 1. See NOTES on Sheet No. 2.
 2. Outlet Floor Drains.
 3. Railposts shall be built vertical.
 4. Longitudinal elements of Slab shall conform to Vertical Curve.
 5. Surface Finish, Sec. 46.3 X(3) of the current S.D. Standards specifications, shall also include such portions of the structure which are visible from any travelled lane.

TEST HOLE DATA

Sta. All Test Holes on R.	Elevation				Bottom of Hole	Soil Description
	Top of Hole	Silt Clay Dark Brown	Silt Clay Light Brown	Clay Brown		
8+85.00	400.8±	400.8±	398.8±	387.8±	365.8±	El. Silt Clay Dark Brown El. Silt Clay Light Brown El. Clay Brown
9+35.00	400.9±	400.9±	398.9±	389.9±	365.9±	
10+00.00	401.1±	401.1±	399.1±	389.1±	361.1±	
10+55.00	401.1±	401.1±	399.1±	389.1±	361.1±	
11+15	401.1±	401.1±	398.1±	389.1±	361.1±	El. Bottom of Hole

Typical Test Hole

ESTIMATED QUANTITIES

ITEM	Concrete Culverts		Steel - Lbs.		Steel Rolling Lin. Ft.	Treated Timber Piles - All in Ft.	Excavation - cu. Yds. Structure Uncl. Exc.
	Cl. "A"	Cl. "B"	Reinfr.	Struzh.			
Superstructure	250.7	258.0	93,818	35	310.3	19,915.810	15
Abutments No. 1 & No. 5	232		2,105	895		58,930.1690	205
Piers No. 2, 3 & No. 4	103.8		13,895			28,830.840	80
Pier No. 3	51.9		7,945				
TOTAL	429.4	258.0	114,763	930	510.3	1,358,000	300

* One Treated Timber Test Pile shall be driven at Abut. No. 1 & at Piers No. 2, 3, and 4 before remaining piles are ordered.
 * See Grading Plans for Unclassified Excavation.
 PILE NOTE: Piles driven at Abut. No. 1 and Abut. No. 5 including Test Piles, shall obtain their bearing in natural ground below the new embankments, elevations 401.1± and 400.8± respectively. Pre-bored holes thru the fill to natural ground are authorized and in no case shall the maximum diameter of the hole be greater than the nominal piling diameter less 2".
 * See supplemental specifications Dated Feb. 1, 1958.

FOR
254'-0" CONTINUOUS CONCRETE BRIDGE
 24'-0" ROADWAY
 OVER INTERSTATE NO. 29 STA. 147+59.50 SEC. 19/30-T100N-R50W
 STA. 8+73.00 TO 11+27.00 I 093-2(1)
 LINCOLN COUNTY
 SOUTH DAKOTA H20-44
 DEPARTMENT OF HIGHWAYS

STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
S.D.	IM 0020(239)	14	27

BRIDGE GUARDRAIL (CONTINUED)

12. All holes drilled in the existing concrete curbs for the anchor bolts, which secure the fabricated support brackets, shall be to the size and depth as recommended by the Manufacturer. Holes shall be drilled true and normal to the curbs, with care taken to minimize the damage to existing reinforcing steel. Prior to the start of drilling any holes in the concrete curbs for the anchor bolts, an effort will be made by the Contractor to determine and mark on the curb surface the locations of the in place reinforcing bars. If it is found that the in-place reinforcing bars will interfere with the drilling of the holes at their plan shown locations, the entire hole group for a rail post may be shifted slightly as approved by the Engineer so that the drill bit will clear the reinforcing bars of the curb. However, in spite of the efforts made to locate the reinforcing steel, the Contractor can still expect to encounter some reinforcing steel when drilling holes for the anchor bolts. Any drilling through such reinforcing steel to satisfactorily complete this work shall be done by the Contractor at no additional compensation.
13. All guardrail splices shall be lapped in the direction of traffic.
14. The cost of notching and dapping the timber blocks to fit over anchor bolts and Type "B" splices shall be incidental to the contract unit price per foot for "Class B Bridge Guardrail, Design 2T".
15. Class B Bridge Guardrail, Design 2T is considered as the portion of rail placed between the centerline of the first and last rail posts with the pay length being the plan shown quantity. The type of Bridge Guardrail shall be Class B, Type 1.
16. Class B Bridge Guardrail, Design 2T shall be paid for at the contract unit price per foot in place, which price shall be payment in full for furnishing all material, galvanizing specified material, treating timber blocks with preservative, retreatment of cut timber blocks, drilling holes through existing steel rail and drilling through new steel thrie beam guardrail for connecting 8" x 12" timber blocks, welding 1/2" bars, drilling holes in concrete for 3/4" diameter anchor bolts, dapping the timber blocks, sealing anchor bolt holes, and constructing guardrail complete as shown in these plans.

ASPHALT CONCRETE COMPOSITE

Mineral aggregate for the Asphalt Concrete Composite shall conform to the requirements of the Construction Specifications in Section 324 for Class E, Type 1.

Asphalt Concrete Composite may be obtained from a hot plant producing asphalt concrete for the SDDOT in accordance to Class Q, low or medium traffic volume asphalt concrete specifications. All other requirements in the Standard Specifications for Asphalt Concrete Composite shall apply.

The asphalt binder used in the mixture shall be either a PG 64-22 or PG 64-28 Asphalt Binder.

ASPHALT BRIDGE DECK OVERLAY

1. The overlay shall be placed in phases while allowing for one way traffic through the bridge. The Contractor shall submit his plan for placing the asphalt concrete overlay in phases to the Bridge Construction Engineer, through the proper channels, at least 7 days prior to the start of installation for approval.
2. The entire bridge deck shall be overlaid with 2" ± of Asphalt Concrete Composite. The intent is to provide a smooth ride over the bridge. It will be necessary for the Contractor to shape the surface of the asphalt concrete overlay to insure that water drains off the ends of the bridge.
3. Asphalt Concrete Bridge Deck Overlay will be paid for at the contract unit price per square yard. Payment shall be full compensation for equipment, materials, labor, mineral aggregate, asphalt binder and incidentals necessary to furnish and install the asphalt concrete bridge deck overlay.

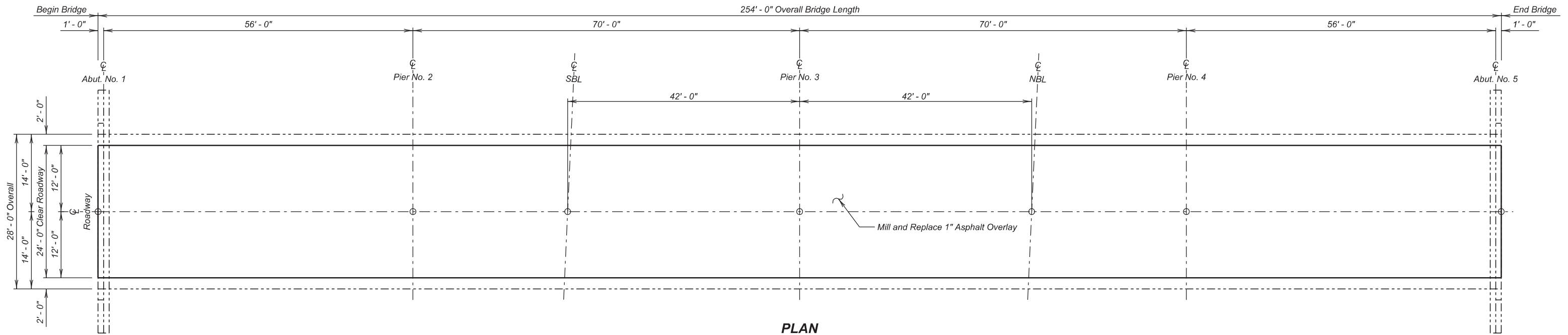
ORIGINAL CONSTRUCTION PLANS

**NOTES (CONTINUED)
FOR
254' - 0" CONTINUOUS CONCRETE BRIDGE**

LINCOLN COUNTY
Str. No. 42-065-100
JANUARY 2005

5 OF 5

DESIGNED BY TB LINC000D	DRAWN BY: TB NOTES	CHECKED BY: EJA 42-065-100	APPROVED: <i>John C. Cole</i> BRIDGE ENGINEER
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PLAN

ESTIMATED QUANTITIES		
ITEM	UNIT	QUANTITY
Asphalt Concrete Bridge Deck Overlay	SqYd	677.4
Cold Milling Asphalt	SqYd	677
Concrete Patching Material, Bridge Deck	CuFt	1.0

**-X220-
INDEX OF BRIDGE SHEETS -**

Sheet No. 1 - Layout for Upgrade
 Sheet No. 2 - Estimate of Structure Quantities and Notes
 Sheet Nos. 3 thru 5 - Original Construction Plans

**LAYOUT FOR UPGRADE
FOR**

254' - 0" CONTINUOUS CONCRETE BRIDGE
 24' - 0" ROADWAY 0° SKEW
 OVER I29 SEC. 30/31-T99N-R50W
 STR. NO. 42-065-130 P 0020(239)
 PCN 0952

LINCOLN COUNTY
 S. D. DEPT. OF TRANSPORTATION

JANUARY 2026

1 OF 5

-X220-

PLANS BY:
 OFFICE OF BRIDGE DESIGN, SOUTH DAKOTA DEPARTMENT OF TRANSPORTATION

DESIGNED BY TJM LINC0952	CK. DES. BY JKI 0952RB01	DRAFTED BY KR	<i>Steve A. Johnson</i> BRIDGE ENGINEER
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STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
S.D.	IM 0020(239)	16	27

Revised 03/19/2026 T.J.M.

ESTIMATE OF STRUCTURE QUANTITIES

ITEM NO.	DESCRIPTION	QUANTITY	UNIT
320E2701	Asphalt Concrete Bridge Deck Overlay	677.4	SqYd
332E0010	Cold Milling Asphalt Concrete	677	SqYd
491E0172	Concrete Patching Material, Bridge Deck	1.0	CuFt

SPECIFICATIONS

Construction Specifications: Standard Specifications for Roads and Bridges, 10-1-25 Version; Required Provisions; and Special Provisions as included in the Proposal. The Standard Specifications for Roads and Bridges is available for download and viewing at <https://dot.sd.gov/doing-business/contractors/standard-specifications>.

DETAILS AND DIMENSIONS OF EXISTING BRIDGE

All details and dimensions of the existing bridge, contained in these plans, are based on the original construction plans and shop plans. It is the Contractor's responsibility to inspect and verify the actual field conditions and any necessary as-built dimensions affecting the satisfactory completion of the work required for this project.

SCOPE OF BRIDGE WORK & SEQUENCE OF OPERATIONS

All work on this structure will be accomplished with the traffic control shown elsewhere in the plans. Alternate sequence of operations may be submitted by the Contractor for approval by the Engineer a minimum of two weeks prior to the preconstruction meeting.

1. Mill 1" of the existing asphalt overlay.
2. If during the milling operation, portions of the concrete bridge deck come loose or are removed with the asphalt, patch the deck.
3. Clean surface, apply asphalt tack coat and place 1" layer of asphalt overlay.

CONCRETE REPAIR

1. The existing deck is estimated to have 2" of Asphalt composite on the bridge deck. While the milling operations are to be 1" there is the possibility that deeper areas might be removed during milling. If these deeper removals areas are into the concrete deck the concrete is to be repaired following the procedures outlined and not filled with a thicker layer of asphalt.
2. Concrete removal is to be limited to loose or spalled material. Removal will be by abrasive blasting, jackhammers less than 30 pounds, and/or chipping hammers less than 15 pounds. Care will be taken not to damage the reinforcing steel that is to be reused during concrete breakout. Any reinforcing steel that is damaged during concrete breakout will be replaced or repaired, as approved by the Engineer, by the Contractor at no cost to the Department.

3. The patching may not be required on the project and may be omitted from the project as determined by the Engineer.
4. The cost for concrete removal, furnishing and placing patching material including all labor, equipment, tools, and any incidentals necessary to complete the work will be paid for at the contract unit price per cubic foot for Concrete Patching Material, Bridge Deck.

ASPHALT CONCRETE BRIDGE DECK OVERLAY

1. The bridge asphalt requirements will match those shown elsewhere in the plans throughout the rest of the project.
2. The milling of 1" of the existing asphalt overlay on the bridge deck will be paid for at the contract unit price per square yard. Payment will be full compensation for equipment, materials, labor, and incidentals necessary to mill and clean the bridge deck.
3. The asphalt composite placed on the bridge deck will be paid for at the contract unit price per square yard. Payment will be full compensation for equipment, materials, labor, and incidentals necessary to complete the asphalt bridge deck overlay.

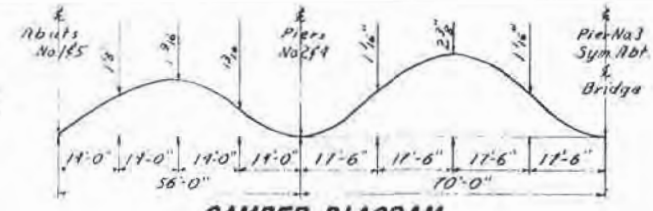
ESTIMATE OF STRUCTURE QUANTITIES AND NOTES
FOR
254' - 0" CONTINUOUS CONCRETE BRIDGE

STR. NO. 42-065-130
JANUARY 2026

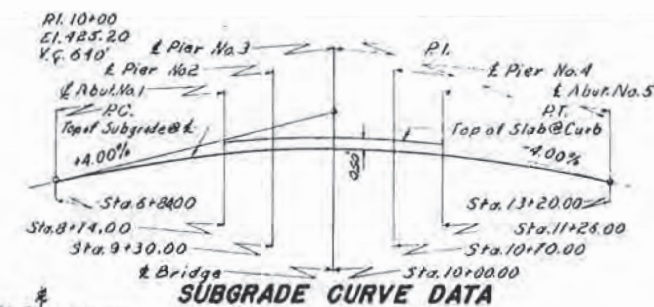
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DESIGNED BY TJM LINC0952	CK. DES. BY JKI 0952MB02	DRAFTED BY TJM	 BRIDGE ENGINEER
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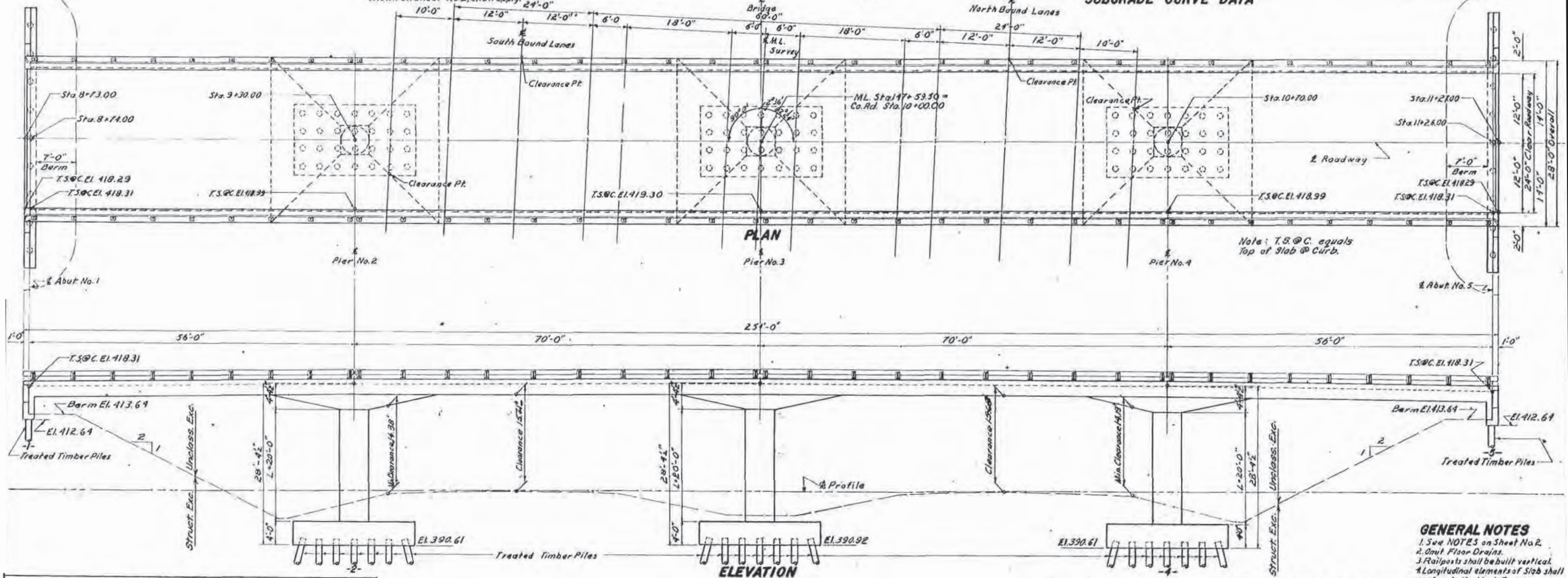
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INDEX OF BRIDGE SHEETS
 Sheet No. 1 - General Drawing & Quantities **HSCS-24-00-254-1-3**
 Sheet No. 2 - Details of Std. Superstructure **HSCS-24-00-254-2-3**
 Sheet No. 3 - Details of Std. Substructure **HSCS-24-00-254-3-3**
 Sheet No. 4 - Railing and Drain Details **SCS-24-00-254-3-3**



NOTE: - Dimensions shown above, for camber at quarter points of spans, supersede corresponding dimensions shown on Sheet No. 2. All other provisions for camber shown on Sheet No. 2, shall apply.



B.M. No. 11 - El. 399.10
 Spike in Pole
 236' Lt. Sta. 147+60 ML.
 B.M. No. 12 - El. 393.21
 Spike in Post
 238' Lt. Sta. 159+00 ML.



TEST HOLE DATA

Sta.	Elevation				
	Top of Hole	Silt Clay Dark Brown	Silt Clay Light Brown	Clay Brown	Bottom of Hole
8+73.00	400.8±	400.8±	398.3±	387.8±	365.3±
9+30.00	400.2±	400.2±	398.9±	383.9±	365.9±
10+00.00	401.1±	401.1±	399.1±	389.1±	361.1±
10+65.00	401.1±	401.1±	399.1±	389.1±	361.1±
11+15	401.1±	401.1±	398.1±	389.1±	361.1±

Legend:
 El. Silt Clay Dark Brown
 El. Silt Clay Light Brown
 El. Clay Brown
 El. Bottom of Hole
 Typical Test Hole

ESTIMATED QUANTITIES

ITEM	Concrete Cu. Yds.		Steel - Lbs.	Steel - Str.	Steel - Lin. Ft.	Treated Timber Piles - Lbs.	Excavation - Cu. Yds.	
	Coarse	Light					Struct.	Unclass.
Superstructure	250.7	2820	93,015	35	810.3	18,945,810	15	
Abutment No. 1 & 5	28.2		2803	668		88,304,680	205	
Pier No. 2, 3, & 4	103.8		18,895			28,930,840	80	
Pier No. 5	51.9		7843					
Totals	429.6	2820	120,960	900	810.3	33,300	300	

One Treated Timber Pile shall be driven at Abut. No. 1 & 5 and at Piers No. 2, 3, and 4 before remaining piles are ordered.
 * See Grading Plans for Unclassified Excavation.
 PILE NOTE: Piles driven at Abut. No. 1 and Abut. No. 5 including Test Piles, shall obtain their bearing in natural ground below the new embankments, elevations 401.1± and 400.8± respectively. Pre-bored holes thru the pile to natural ground are authorized and in no case shall the maximum diameter of the hole be greater than the nominal piling diameter less 2".
 * See supplemental specifications Dated Feb. 1, 1958.

GENERAL NOTES
 1. See NOTES on Sheet No. 2.
 2. Over Floor Drains.
 3. Railposts shall be built vertical.
 4. Longitudinal elements of Slab shall conform to Vertical Curve.
 5. Surface Finish, Sec. 46.3.X(3) of the current S.D. Standards Specifications, shall also include such portions of the structure which are visible from any travelled lane.

GENERAL DRAWING AND QUANTITIES

FOR
254'-0" CONTINUOUS CONCRETE BRIDGE
 24'-0" ROADWAY
 OVER INTERSTATE NO. 29 STA. 147+59.50 SEC. 19/30 T100N-R50W
 STA. 8+73.00 TO 11+27.00 I 093-2(1)
 LINCOLN COUNTY
 SOUTH DAKOTA H20-44
 DEPARTMENT OF HIGHWAYS
 OCT. 1957

ORIGINAL CONSTRUCTION PLANS

STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
S.D.	IM 0020(239)	19	27

BRIDGE GUARDRAIL (CONTINUED)

12. All holes drilled in the existing concrete curbs for the anchor bolts, which secure the fabricated support brackets, shall be to the size and depth as recommended by the Manufacturer. Holes shall be drilled true and normal to the curbs, with care taken to minimize the damage to existing reinforcing steel. Prior to the start of drilling any holes in the concrete curbs for the anchor bolts, an effort will be made by the Contractor to determine and mark on the curb surface the locations of the in place reinforcing bars. If it is found that the in-place reinforcing bars will interfere with the drilling of the holes at their plan shown locations, the entire hole group for a rail post may be shifted slightly as approved by the Engineer so that the drill bit will clear the reinforcing bars of the curb. However, in spite of the efforts made to locate the reinforcing steel, the Contractor can still expect to encounter some reinforcing steel when drilling holes for the anchor bolts. Any drilling through such reinforcing steel to satisfactorily complete this work shall be done by the Contractor at no additional compensation.
13. All guardrail splices shall be lapped in the direction of traffic.
14. The cost of notching and dapping the timber blocks to fit over anchor bolts and Type "B" splices shall be incidental to the contract unit price per foot for "Class B Bridge Guardrail, Design 2T".
15. Class B Bridge Guardrail, Design 2T is considered as the portion of rail placed between the centerline of the first and last rail posts with the pay length being the plan shown quantity. The type of Bridge Guardrail shall be Class B, Type 1.
16. Class B Bridge Guardrail, Design 2T shall be paid for at the contract unit price per foot in place, which price shall be payment in full for furnishing all material, galvanizing specified material, treating timber blocks with preservative, retreatment of cut timber blocks, drilling holes through existing steel rail and drilling through new steel thrie beam guardrail for connecting 8" x 12" timber blocks, welding 1/2" bars, drilling holes in concrete for 3/4" diameter anchor bolts, dapping the timber blocks, sealing anchor bolt holes, and constructing guardrail complete as shown in these plans.

ASPHALT CONCRETE COMPOSITE

Mineral aggregate for the Asphalt Concrete Composite shall conform to the requirements of the Construction Specifications in Section 324 for Class E, Type 1.

Asphalt Concrete Composite may be obtained from a hot plant producing asphalt concrete for the SDDOT in accordance to Class Q, low or medium traffic volume asphalt concrete specifications. All other requirements in the Standard Specifications for Asphalt Concrete Composite shall apply.

The asphalt binder used in the mixture shall be either a PG 64-22 or PG 64-28 Asphalt Binder.

ASPHALT BRIDGE DECK OVERLAY

1. The overlay shall be placed in phases while allowing for one way traffic through the bridge. The Contractor shall submit his plan for placing the asphalt concrete overlay in phases to the Bridge Construction Engineer, through the proper channels, at least 7 days prior to the start of installation for approval.
2. The entire bridge deck shall be overlaid with 2" ± of Asphalt Concrete Composite. The intent is to provide a smooth ride over the bridge. It will be necessary for the Contractor to shape the surface of the asphalt concrete overlay to insure that water drains off the ends of the bridge.
3. Asphalt Concrete Bridge Deck Overlay will be paid for at the contract unit price per square yard. Payment shall be full compensation for equipment, materials, labor, mineral aggregate, asphalt binder and incidentals necessary to furnish and install the asphalt concrete bridge deck overlay.

ORIGINAL CONSTRUCTION PLANS

NOTES (CONTINUED)
FOR
254' - 0" CONTINUOUS CONCRETE BRIDGE

LINCOLN COUNTY
Str. No. 42-065-130
JANUARY 2005

5 OF 5

DESIGNED BY TB LINC000D	DRAWN BY: TB NOTES	CHECKED BY: TB 42-065-130	APPROVED: <i>John C. Cole</i> BRIDGE ENGINEER
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GUARDRAIL LAYOUT

Structure No. 42-065-100
MRM 66.34
129 / 278th Street

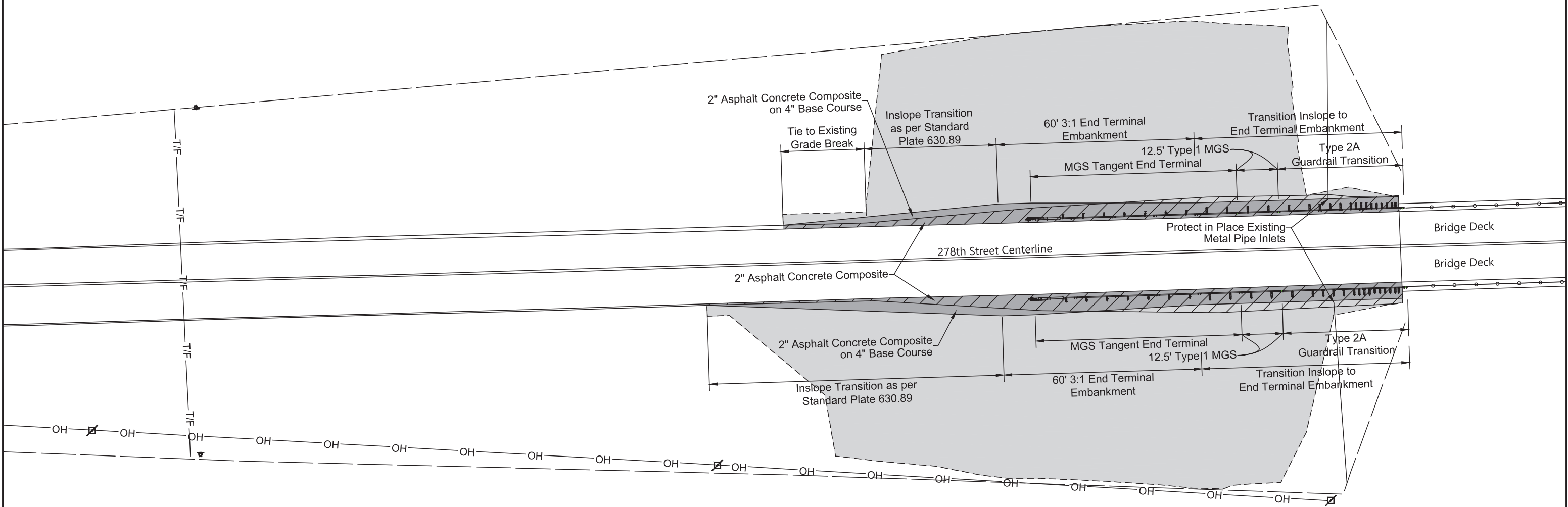
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM 0020(239)	20	27

Plotting Date: 08/29/2020



ORIGINAL CONSTRUCTION PLANS

PLOT SCALE - 1:30



- Remove Asphalt Surfacing
- New Asphalt Surfacing Needed
- New Embankment Grading Needed

GUARDRAIL LAYOUT

Structure No. 42-065-100

MRM 66.34

I29 / 278th Street

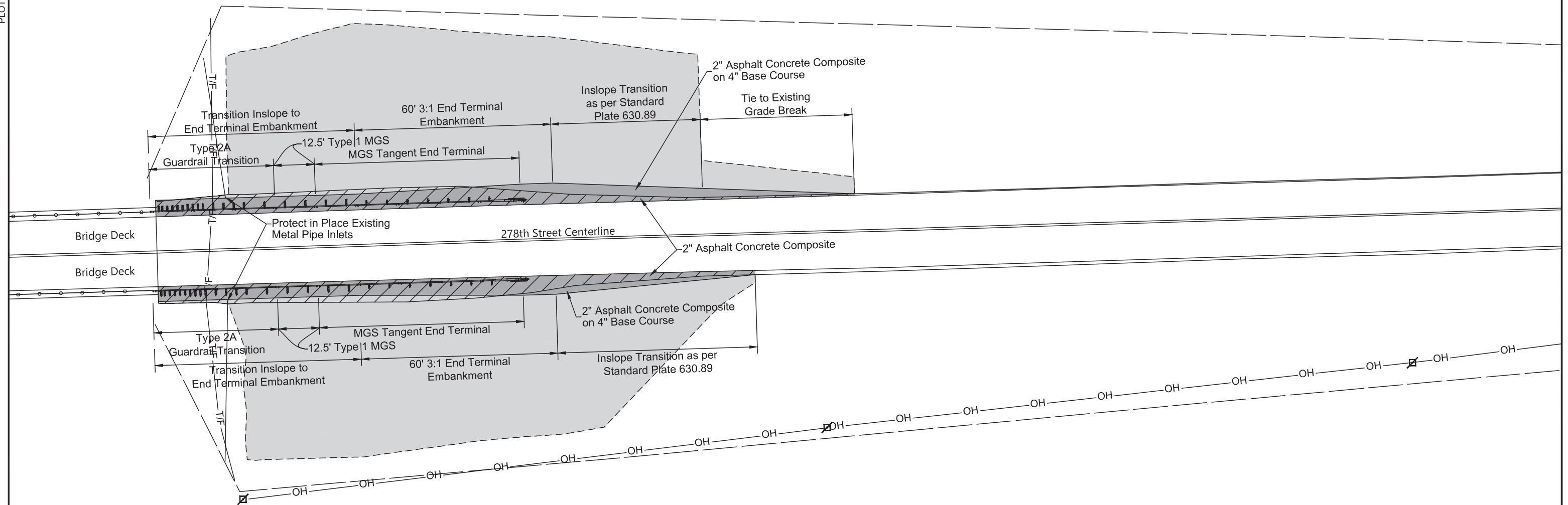
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM 0020(239)	21	27

Plotting Date: 08/29/2020



ORIGINAL CONSTRUCTION PLANS

PLOT SCALE - 1:30



- Remove Asphalt Surfacing
- New Asphalt Surfacing Needed
- New Embankment Grading Needed

GUARDRAIL LAYOUT

Structure No. 42-065-130

MRM 63.34

129 / 281st Street

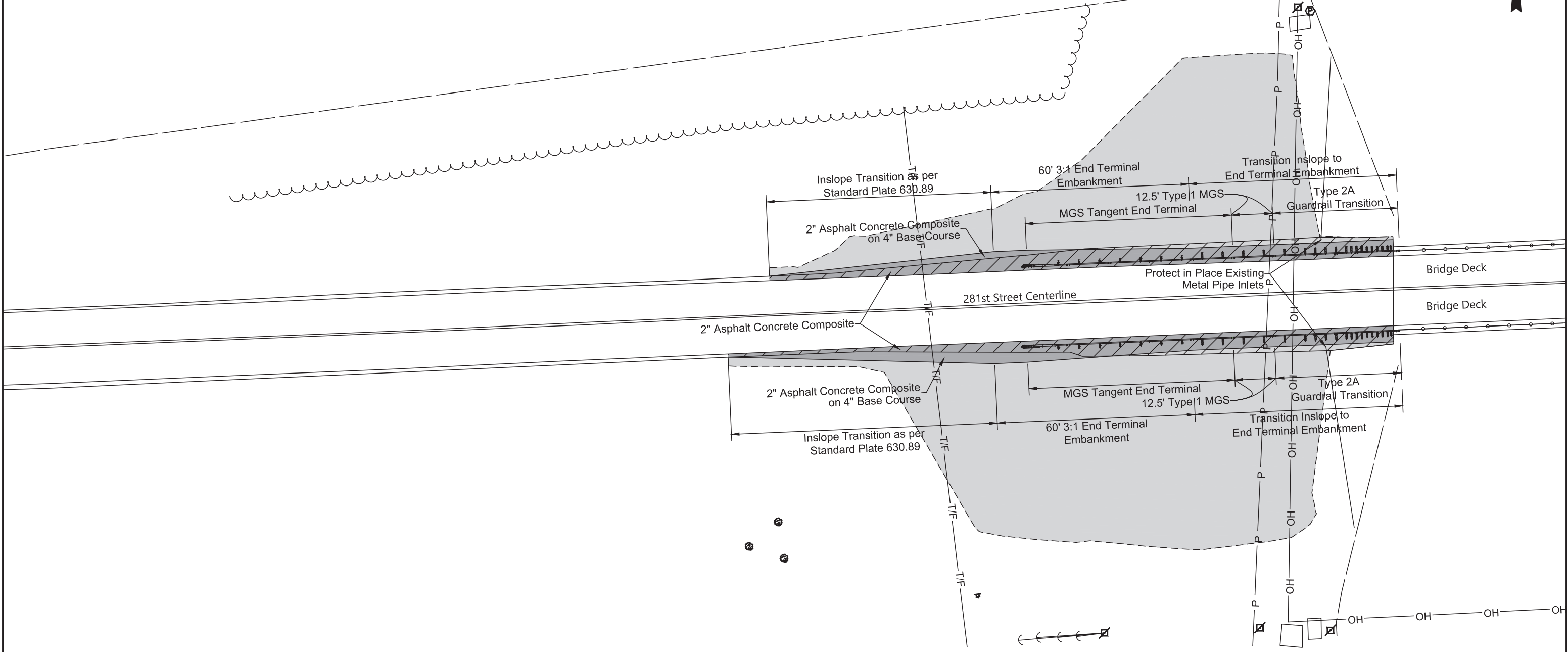
STATE OF SOUTH DAKOTA	PROJECT IM 0020(239)	SHEET 22	TOTAL SHEETS 27
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Plotting Date: 08/29/2020

ORIGINAL CONSTRUCTION PLANS



PLOT SCALE - 1:30



- Remove Asphalt Surfacing
- New Asphalt Surfacing Needed
- New Embankment Grading Needed

GUARDRAIL LAYOUT

Structure No. 42-065-130

MRM 63.34

I29 / 281st Street

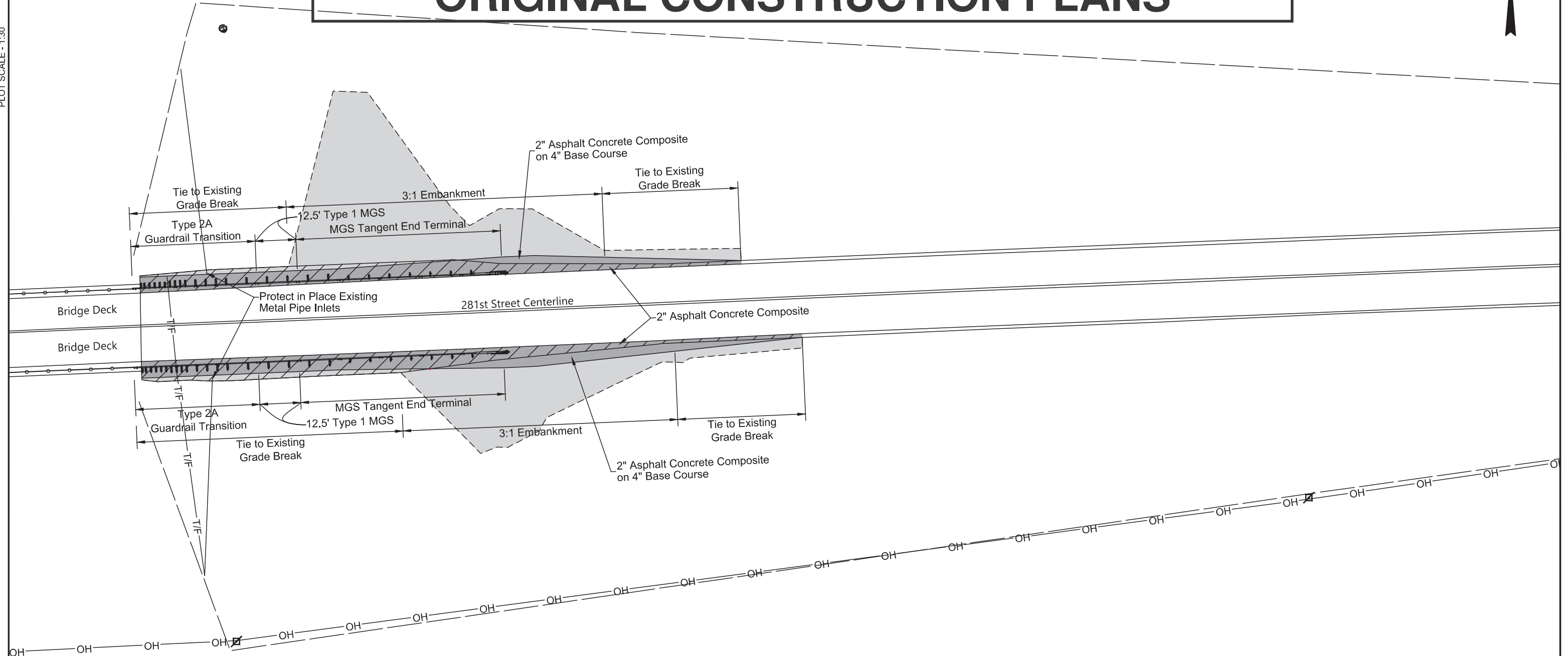
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM 0020(239)	23	27

Plotting Date: 08/29/2020



ORIGINAL CONSTRUCTION PLANS

PLOT SCALE - 1:30



- Remove Asphalt Surfacing
- New Asphalt Surfacing Needed
- New Embankment Grading Needed

ORIGINAL CONSTRUCTION PLANS

Plotting Date: 08/29/2020

TYPE AND DETAILS OF MGS						
Type of MGS	W Beam Rail Single or Double (Nested)	Blockout Size	Blockout Material	Post Size	Post Material	Post Spacing
1	Single	6"x12"x14"	Wood	6"x8"x6'-0"	Wood	6'-3"
1C	Single	6"x12"x14"	Wood	6"x8"x7'-6"	Wood	6'-3"
2	Single	6"x12"x14"	Wood	6"x8"x6'-0"	Wood	3'-1½"
3	Single	6"x12"x14"	Wood	6"x8"x6'-0"	Wood	1'-6¾"
4	Double	6"x12"x14"	Wood	6"x8"x6'-0"	Wood	6'-3"

STANDARD PLATE REFERENCE	
Type of MGS	See Standard Plate(s)
1	630.20, 630.22
1C	630.20, 630.25
2	630.20
3	630.20
4	630.20

GENERAL NOTES:

Asphalt concrete will be the same type used elsewhere on the project or will be as specified in the plans. If asphalt concrete is not specified in the plans, the asphalt concrete will conform to the Specifications for "Asphalt Concrete Composite".

Granular material will be the same type used elsewhere on the project or will be as specified in the plans. If granular material type is not specified in the plans, the material will conform to the Specifications for "Base Course". The granular material will be placed the same thickness as the mainline surfacing or as specified in the plans.

Topsoil is not shown in the transverse section drawing on sheet 2 of 6.

All W beam rail will be Type 1 and Class A (12 Ga.) unless specified otherwise in the plans.

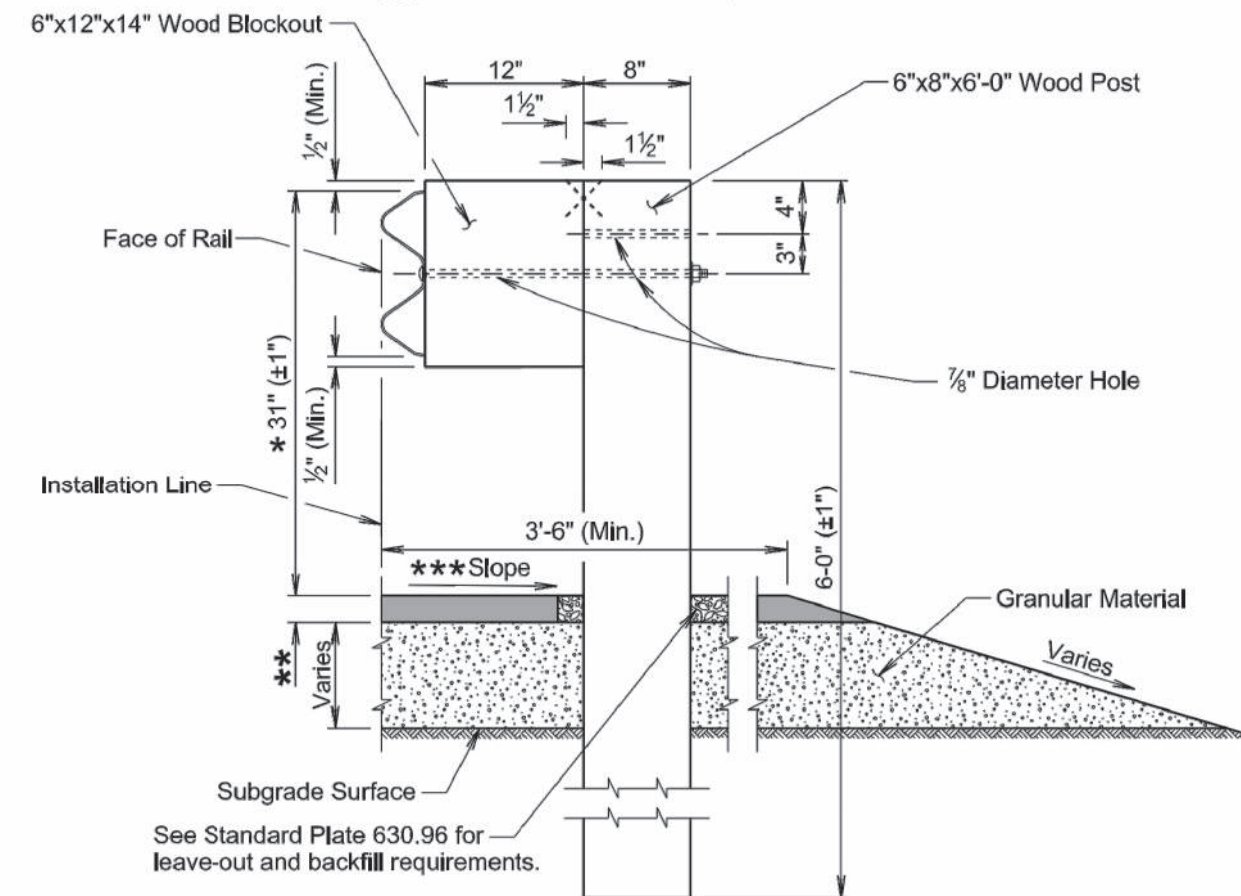
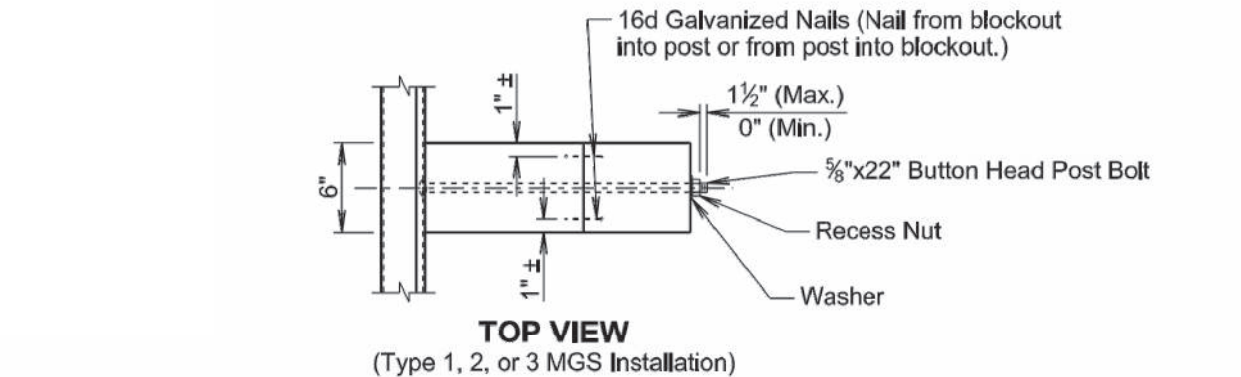
W beam rail section lengths may be 12'-6" and/or 25'-0". The combination of section lengths used will be compatible with the total length of rail per site as shown in the plans.

Slots in the rails will be provided as specified in the plans and by the manufacturer. A drilled hole through the rail is not allowed as a replacement for a slot. If the Contractor must create a slot, a cutting torch or plasma cutter is not allowed. The slot edges will be smooth and free of burrs or notches.

All costs for constructing the MGS including labor, equipment, and materials including all posts, blockouts, steel beam rail, and hardware will be incidental to the contract unit price per foot for the respective MGS contract item.

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* See Standard Plate 630.99

** 2" asphalt concrete or as specified in the plans.

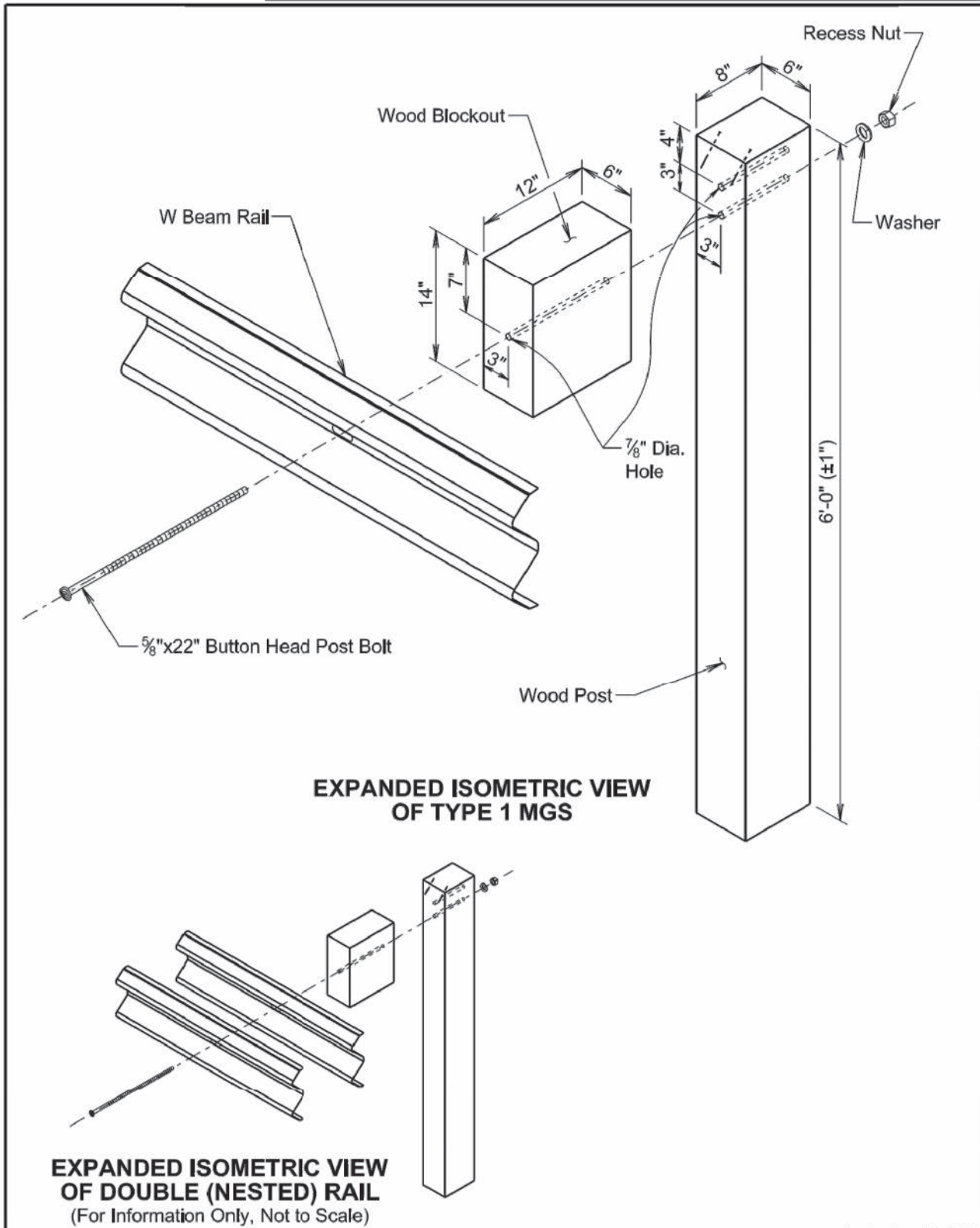
*** The cross slope will be as specified in the plans; however, the cross slope will not be steeper than a 10:1 slope.

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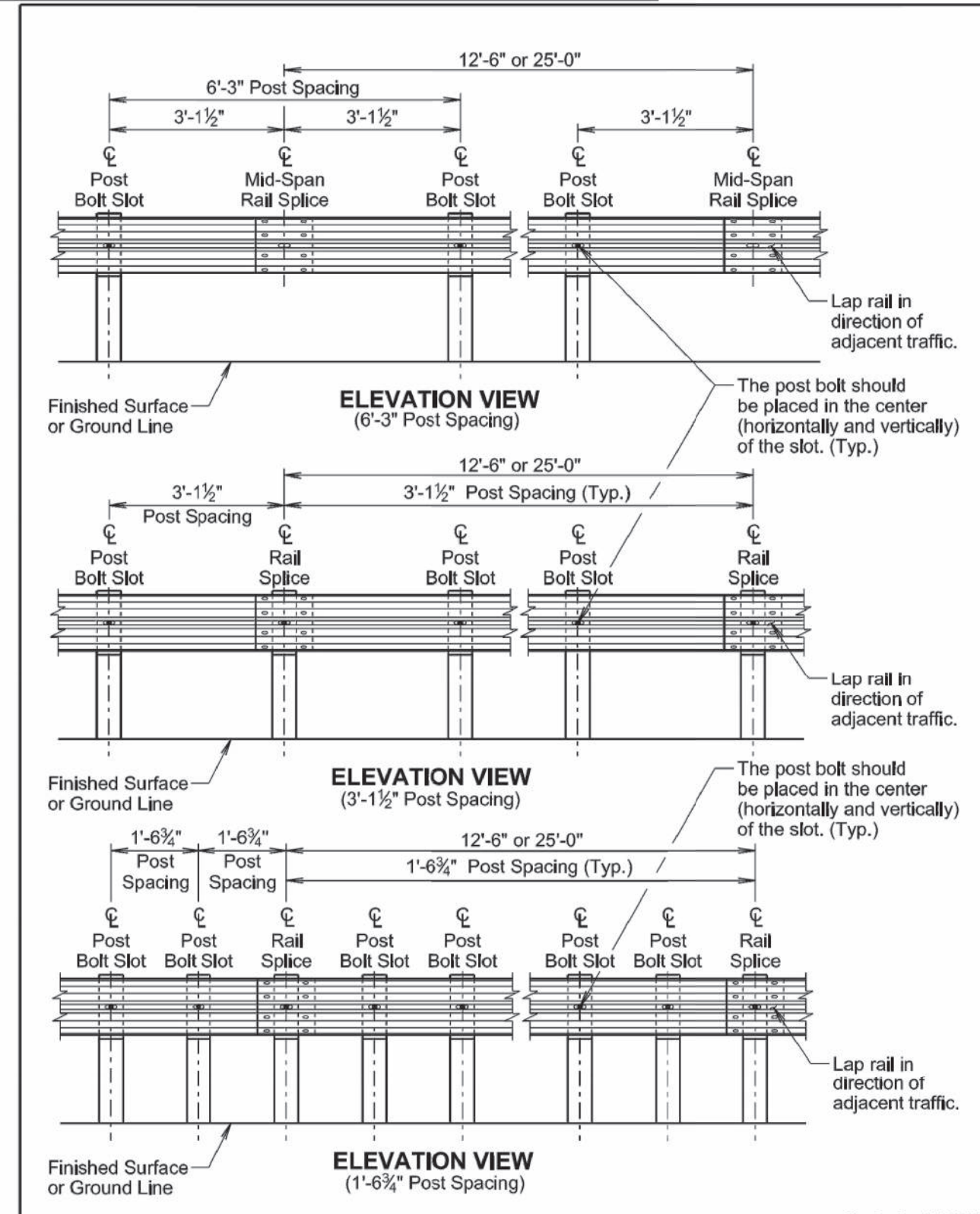
Published Date: 3rd Qtr. 2020	S D D O T	MIDWEST GUARDRAIL SYSTEM (MGS)	PLATE NUMBER 630.20
			Sheet 2 of 6

ORIGINAL CONSTRUCTION PLANS

Plotting Date: 08/29/2020



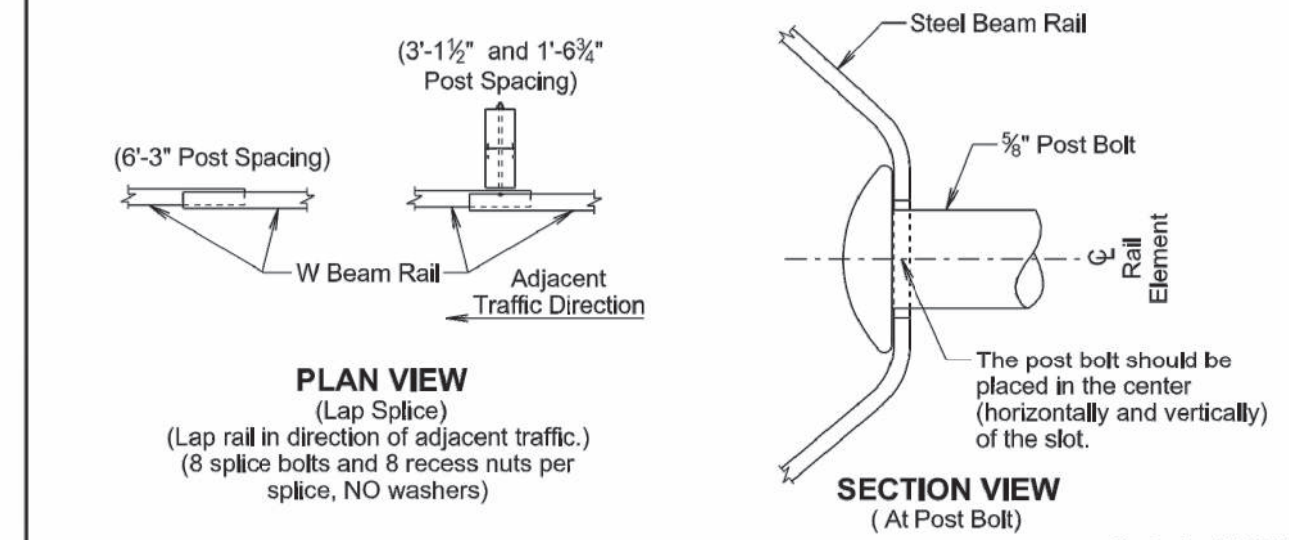
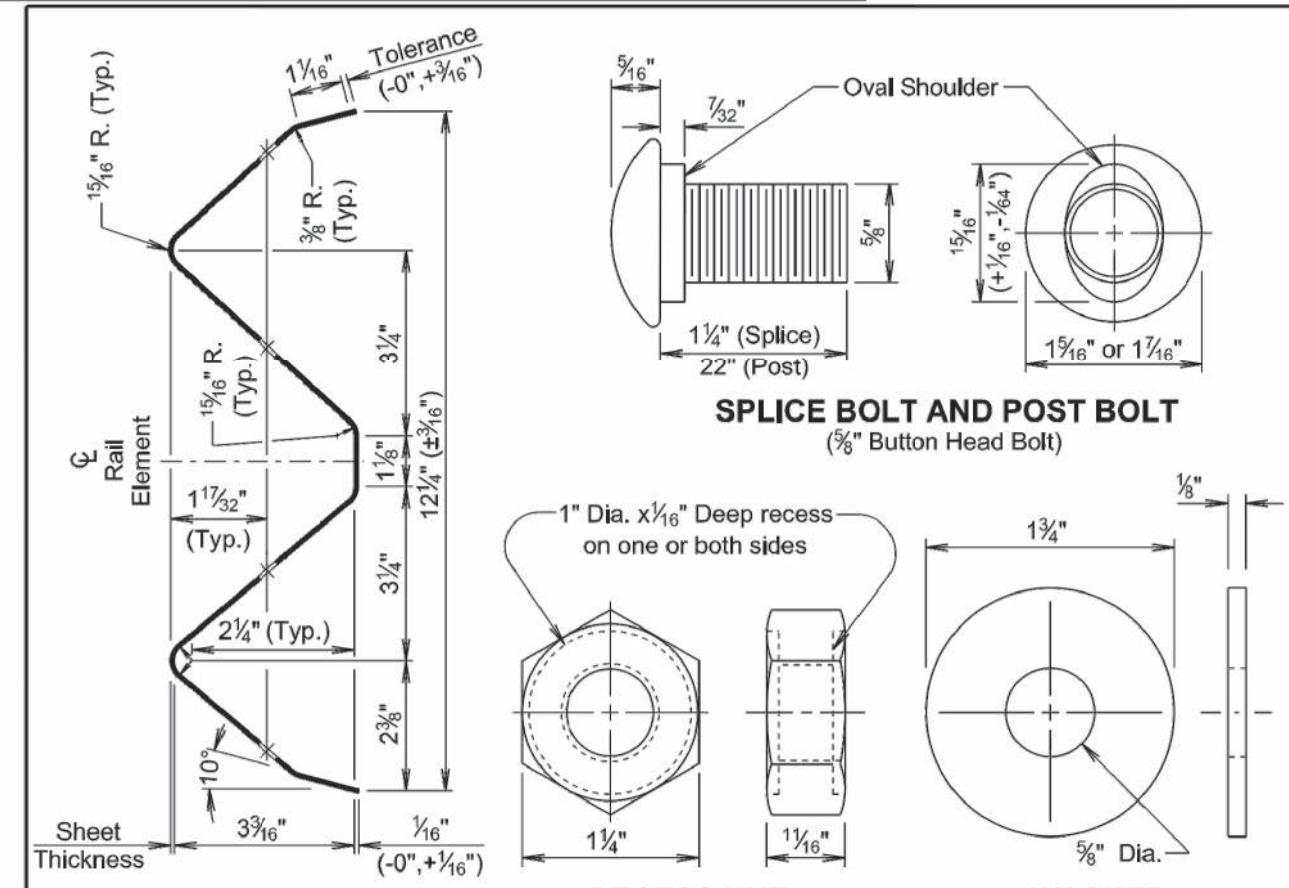
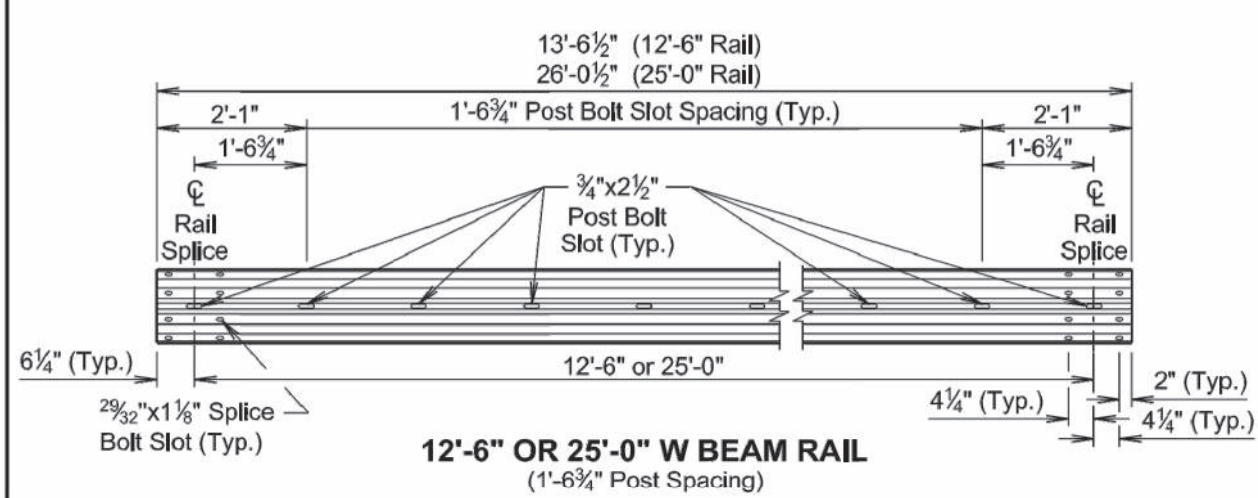
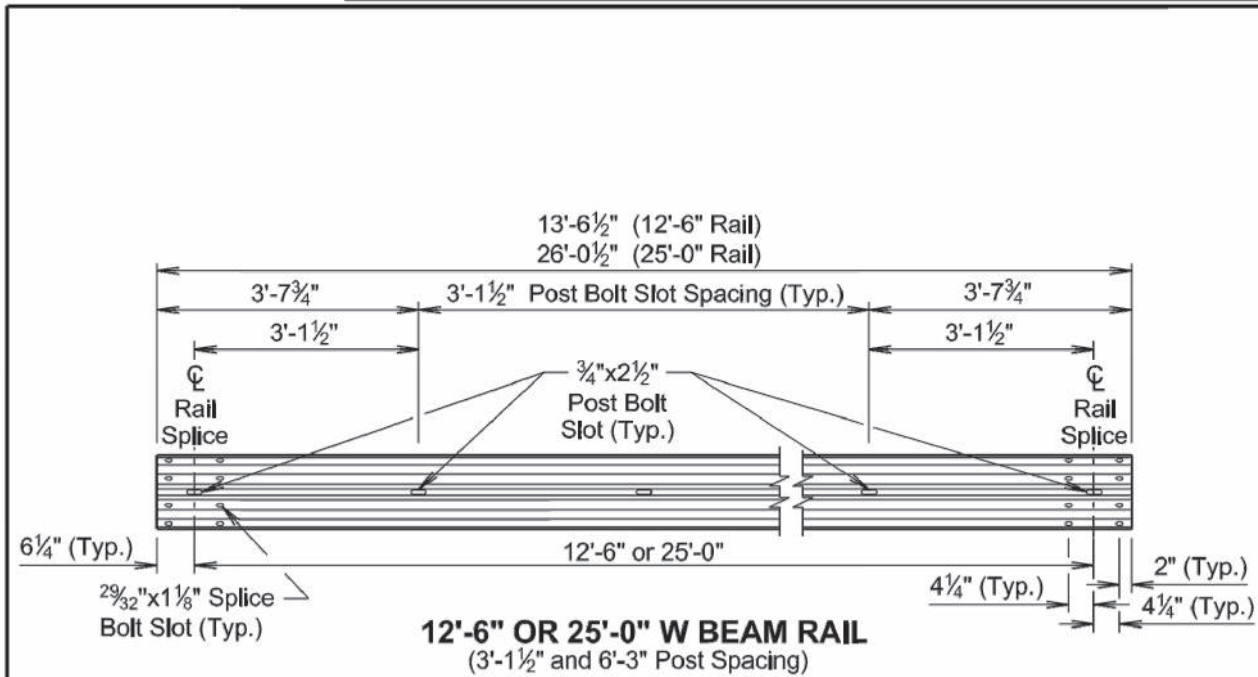
September 14, 2019



September 14, 2019

ORIGINAL CONSTRUCTION PLANS

Plotting Date: 08/29/2020

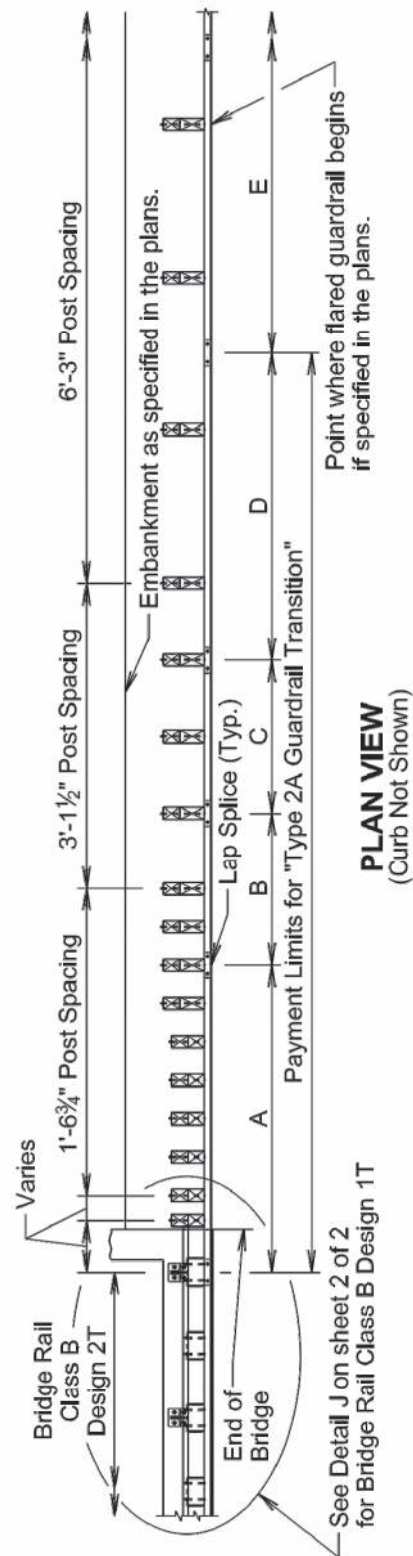


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September 14, 2019

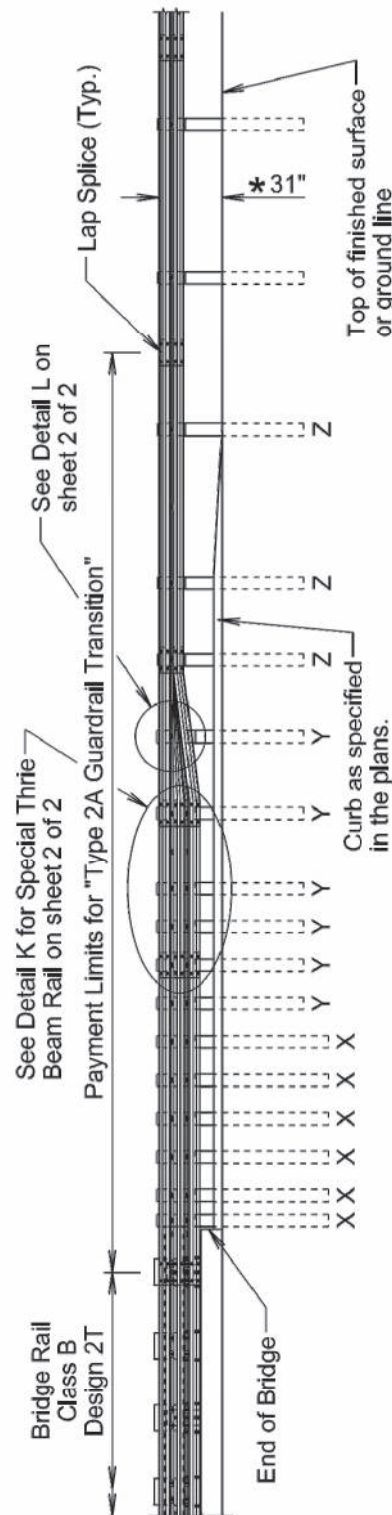
ORIGINAL CONSTRUCTION PLANS

Plotting Date: 08/29/2020



PLAN VIEW
(Curb Not Shown)

- A: 12'-6" Straight Double (Nested) Class A Thrie Beam Guardrail with Wood Posts (See standard plate 630.01)
- B: 6'-3" Straight Single Class A Thrie Beam Guardrail with Wood Posts (See Detail K on sheet 2 of 2)
- C: 6'-3" Asymmetrical W Beam to Thrie Beam Guardrail Transition Section with Wood Posts (See standard plate 630.49)
- D: 12'-6" Straight Type 4 MGS (See standard plate 630.20)
- E: Straight Type 1 MGS or as specified in the plans (See standard plate 630.20)



ELEVATION VIEW

- X: 6"x8"x7'-0" Wood Post and 6"x8"x19" Wood Blockout
- Y: 6"x8"x6'-0" Wood Post and 6"x12"x19" Wood Blockout
- Z: 6"x8"x6'-0" Wood Post and 6"x12"x14" Wood Blockout

* See standard plate 630.99

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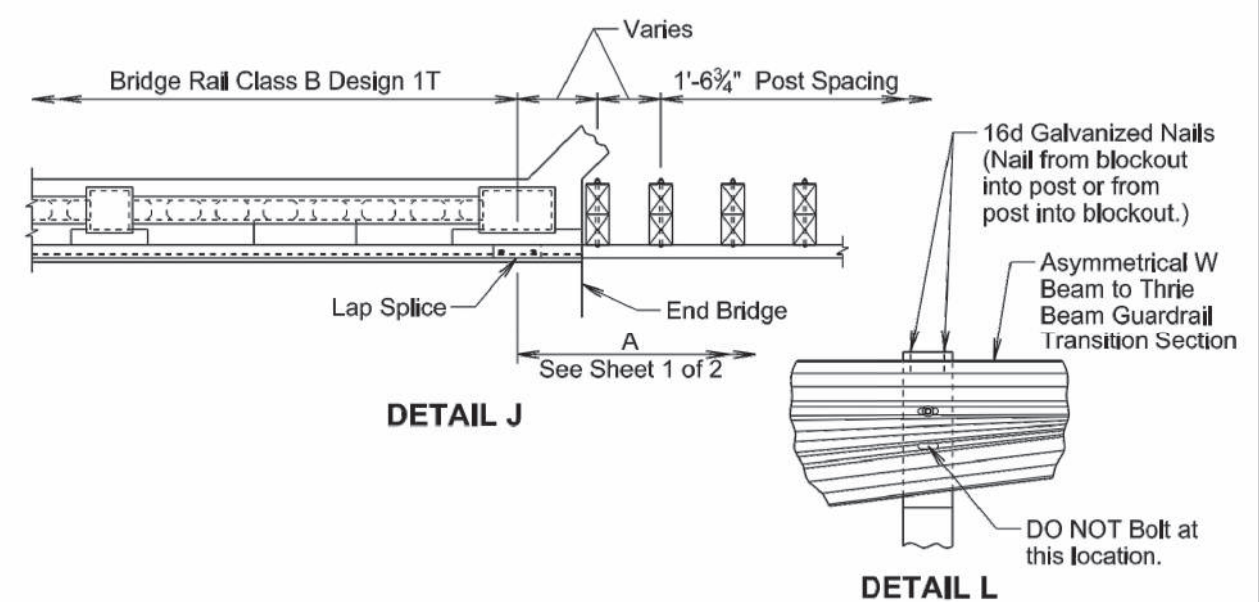
Published Date: 3rd Qtr. 2020

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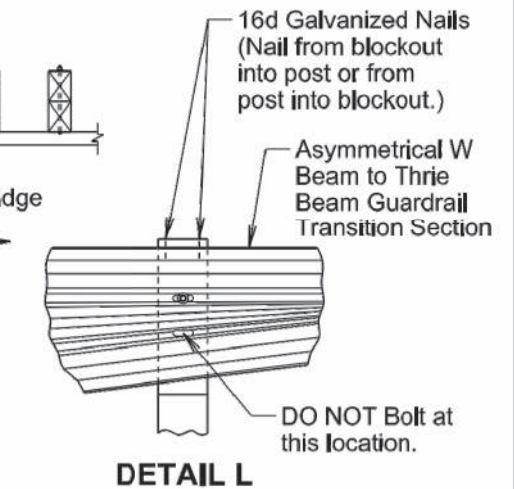
**TYPE 2A GUARDRAIL TRANSITION
(BRIDGE RAIL CLASS B DESIGN 1T OR 2T
TO MIDWEST GUARDRAIL SYSTEM (MGS))**

PLATE NUMBER
630.54

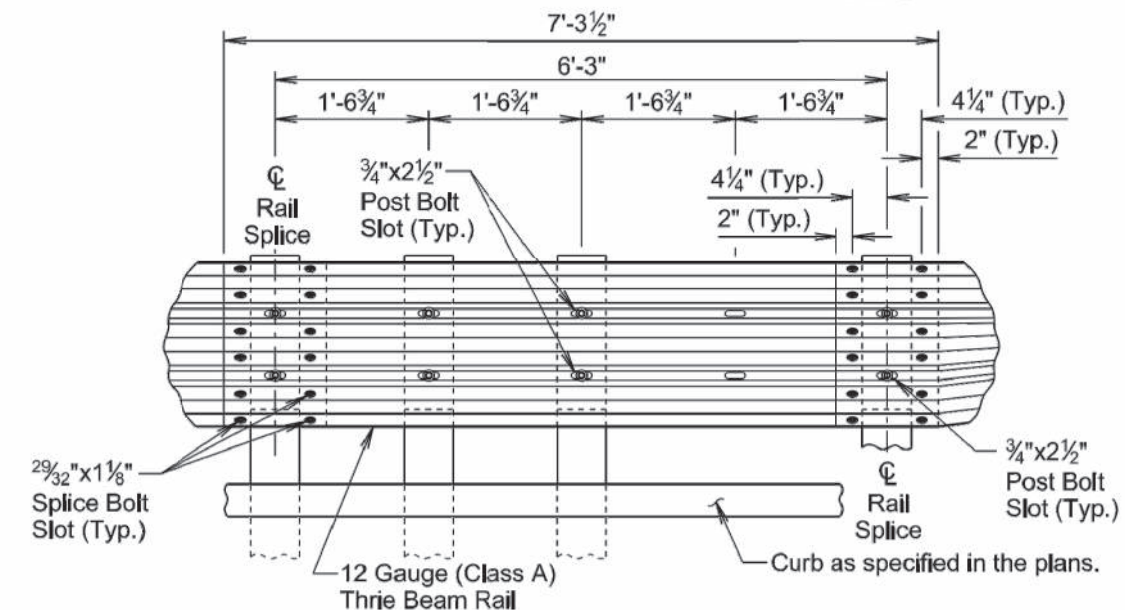
Sheet 1 of 2



DETAIL J



DETAIL L



DETAIL K
(Special Thrie Beam Rail)

GENERAL NOTES:

Throughout the type 2A guardrail transition, slots in the rails will be provided as specified in the plans and by the manufacturer. A drilled hole through the rail is not allowed as a replacement for a slot. If the Contractor must create a slot, a cutting torch or plasma cutter is not allowed. The slot edges will be smooth and free of burrs or notches.

All costs for furnishing and installing the type 2A guardrail transition including labor, equipment, and materials which includes all rail sections, posts and blockouts, hardware, and incidentals will be included in the contract unit price per each for "Type 2A Guardrail Transition".

September 14, 2019

Published Date: 3rd Qtr. 2020

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**TYPE 2A GUARDRAIL TRANSITION
(BRIDGE RAIL CLASS B DESIGN 1T OR 2T
TO MIDWEST GUARDRAIL SYSTEM (MGS))**

PLATE NUMBER
630.54

Sheet 2 of 2