

STATE OF SOUTH DAKOTA  
 DEPARTMENT OF TRANSPORTATION  
 PLANS FOR PROPOSED

**PROJECT P 0013(167)**  
**SD HWYS 26 & 47**  
**FAULK, HAND & HYDE COUNTIES**  
 ROUT & SEAL  
 PCN 096A

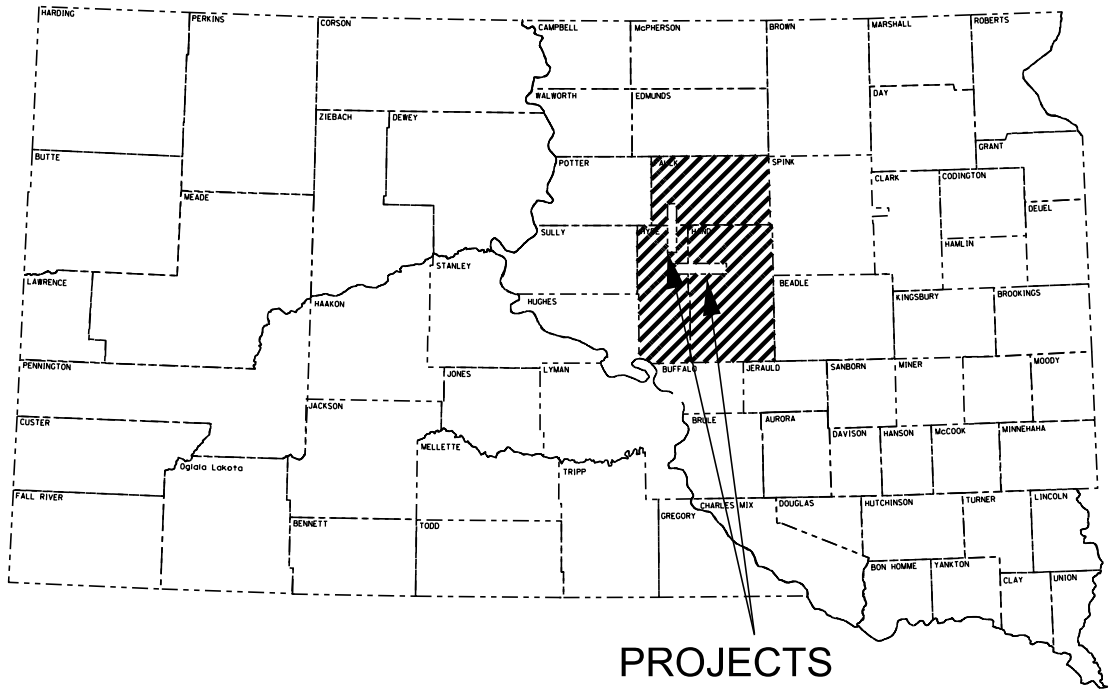
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 0013(167)	1	11

Plotting Date: 01/16/2024

**Index of Sheets**

- Sheet: 1-3 Title Sheet & Layout Map
- Sheet: 4-5 Estimate of Quantities and Environmental Commitments
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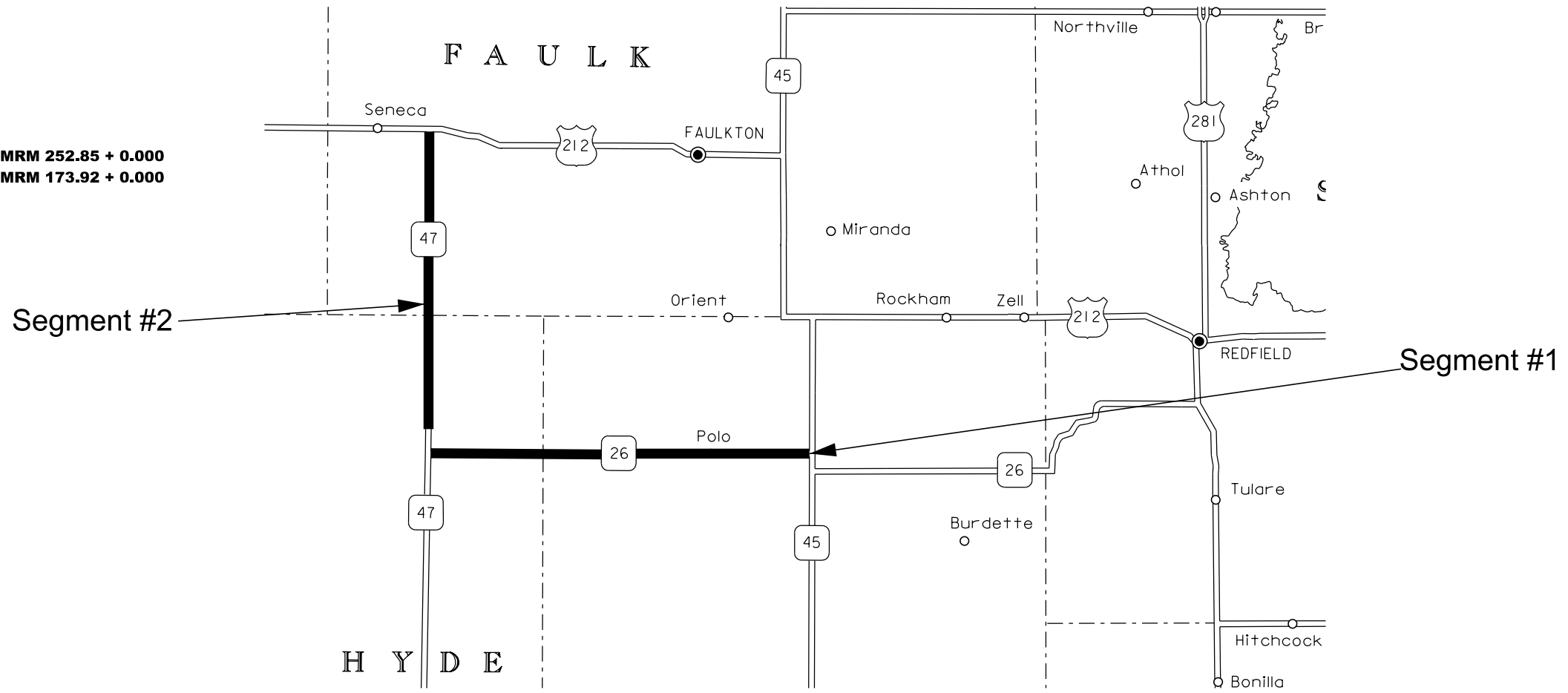
PLOT SCALE - 1" = 1000'



PROJECTS



**SEGMENT 1 - SD 26 - MRM 230.12 + 0.000 TO MRM 252.85 + 0.000**  
**SEGMENT 2 - SD 47 - MRM 157.00 + 0.778 TO MRM 173.92 + 0.000**



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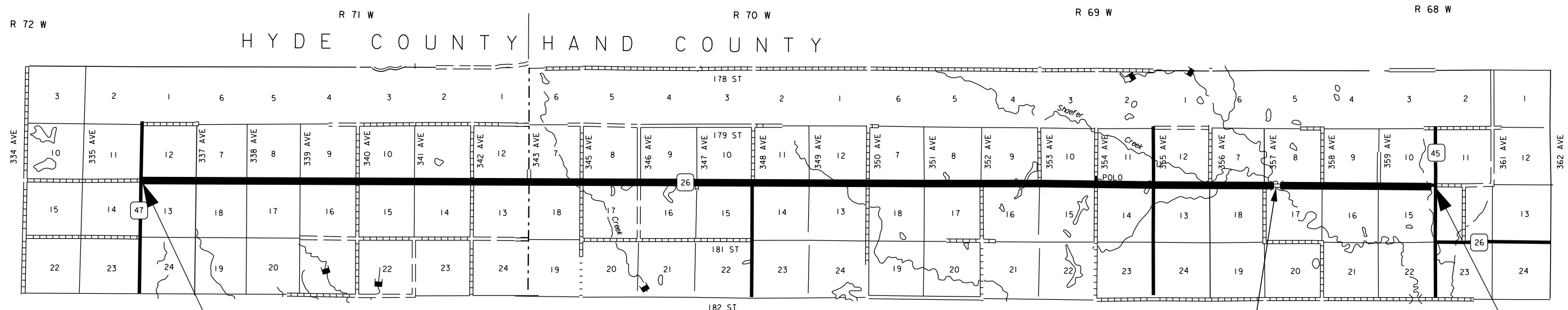
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 00131671	2	11
Plotting Date: 12/07/2023			

# SD HIGHWAY 26

## SEGMENT #1

### HAND & HYDE COUNTIES

LENGTH: 22.728 MILES



SEGMENT #1  
BEGIN PROJECT  
Sta. 0+00  
MRM 230.12 + 0.000  
MILEAGE 0.000

Str. 30-132-080  
Prestressed Girder Bridge  
106.5'=0.020 Miles  
MRM 250.09

SEGMENT #1  
END PROJECT  
Sta. 1200+03  
MRM 252.85 + 0.000  
MILEAGE 22.728

DESIGN DESIGNATION	
AADT (2022)	95
AADT (2042)	141
DHV	0
D	51
DHV T%	8.7%
AADT T%	19.2%
V	65MPH

STORM WATER PERMIT  
(None required)

PROJECT LENGTH	
Gross Length:	120,003.8' 22.728 Miles
Deductions:	106.50' 0.020 Miles
Net Length:	119,897.3' 22.708 Miles

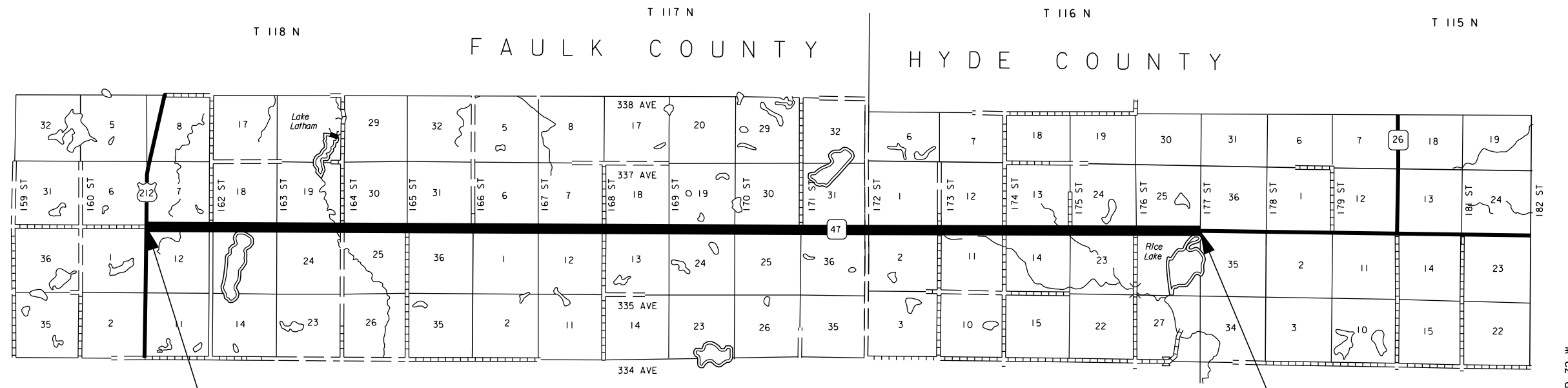
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 0013(167)	3	11
Plotting Date: 01/02/2024			

# SD HIGHWAY 47

## SEGMENT #2

### FAULK & HYDE COUNTIES

LENGTH: 16.135 MILES



**SEGMENT #2  
BEGIN PROJECT  
STA. 851+92.8  
MRM 173.92+0.000  
MILEAGE 137.987**

**SEGMENT #2  
END PROJECT  
STA. 0+00  
MRM 157.00+0.778  
MILEAGE 121.852**

DESIGN DESIGNATION	
AADT(2022)	263
AADT(2042)	393
DHV	44
D	51
DHV T%	12.8%
AADT T%	28.2%
V	65 mph

**STORM WATER PERMIT**  
(None required)

PROJECT LENGTH	
Gross Length:	85,192.8' 16.135 Miles
Deductions:	00.00' 0.000 Miles
Net Length:	85,192.8' 16.135 Miles

# Estimate of Quantities

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
350E0010	Asphalt Concrete Crack Sealing	50,212	Lb
633E1200	High Build Waterborne Pavement Marking Paint, White	2,260	Gal
633E1205	High Build Waterborne Pavement Marking Paint, Yellow	315	Gal
634E0010	Flagging	190.0	Hour
634E0020	Pilot Car	95.0	Hour
634E0110	Traffic Control Signs	210.0	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS

**Table of Quantities (For Information Only)**

ITEM	Segment 1 – SD 26	Segment 2 - 47	QUANTITY	UNIT
Mobilization	Lump Sum	Lump Sum	Lump Sum	LS
Asphalt Concrete Crack Sealing	30491	19721	50212	Lb
High Build Waterborne Pavement Marking Paint, White	1535	725	2260	Gal
High Build Waterborne Pavement Markings Paint, Yellow	177	138	315	Gal
Flagging	120	70	190	Hour
Pilot Car	60	35	95	Hour
Traffic Control	105.0	105.0	210.0	SqFt
Traffic Control, Miscellaneous	Lump Sum	Lump Sum	Lump Sum	LS

**SPECIFICATIONS**

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

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## 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.

### 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 B4: BALD EAGLE

Bald eagles are known to occur in this area

#### Action Taken/Required:

If a nest is observed within one mile of the project site, notify the Project Engineer immediately so that he/she can consult with the Environmental Office for an appropriate course of action.

#### 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.

#### 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.

All costs 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: HISTORICAL PRESERVATION OFFICE CLEARANCES

The SDDOT has obtained concurrence with the State Historical Preservation Office (SHPO or THPO) 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 100 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/THPO 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.

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
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Plotting Date: 11/29/2023			

Revised 1/5/23 PAR

**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.

**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.

All construction operations will be conducted in the general direction of traffic movement.

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.

Fixed location signing placed more than 4 calendar days prior to the start of construction will be covered or laid down until the time of construction. The covers must be approved by the Engineer prior to installation. The cost of materials, labor, and equipment necessary to complete this work will be incidental to other contract items. No separate payment will be made.

All fixed location signs, sign posts, and breakaway bases will be removed within 7 calendar days following pavement marking.

Traffic will be maintained on the driving lanes. Use of the shoulder as a driving lane will not be permitted. Any damage to the shoulder due to rerouted traffic or Contractor's equipment will be repaired at no expense to the Department.

**FLAGGING**

Operations will be conducted so that the traveling public will not have to wait longer than 15 minutes at the flagger station.

It is required that the flaggers and pilot car operators be able to communicate with one another. If an emergency vehicle needs to pass through the project, the Contractor will be required to expedite traffic movement. All costs associated with this will be incidental to the contract unit price per hour for "Flagging"

**CONSTRUCTION REQUIREMENTS**

Shoulder bevel slopes greater than 3/8 inch per foot will not be routed and sealed unless directed by the Engineer.

The contract unit price per pound for Asphalt Concrete Crack Sealing will be nonnegotiable regardless of changes in quantity.

**ASPHALT CONCRETE AGGREGATES**

SDDOT asphalt mixes are known to contain crushed ledge rock such as granite. The Contractor can expect to encounter various percentages of crushed ledge rock both in larger aggregates and the fines. For information only, all segments are known or believed to contain ledge rock.

**ROADWAY CLEANING**

The Contractor will be responsible for removing the router tailings from the roadway surface, including shoulders, intersecting roads, and/or as directed by the Engineer.

Router tailings must be blown entirely off the roadway prior to placement of sealant.

**PERMANENT PAVEMENT MARKINGS**

The Contractor will be required to repaint all existing pavement markings including centerline and edge lines. Traffic Control will be incidental to the Cost of the application. The striper and advance tailing warning vehicle must be equipped with flashing amber lights or advance warning arrow boards. All materials will be applied as per manufacturer's recommendations.

**HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT**

All materials will be applied as per manufacturer's recommendations. High build waterborne pavement marking paint will conform to the supplemental specifications for Section 980.1 B.

Reflective media will consist of glass beads.

**RATES OF MATERIALS FOR HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT**

- Solid 6" line = 33.8 Gals/Mile
- Solid 4" line = 22.5 Gals/Mile
- Dashed 4" line = 6.2 Gal/Mile
- Glass Beads = 8 Lbs/Gal.

6" Edge-Lines will be installed on **Segment 1 (SD HWY 26)**.

All cost for materials, labor and equipment necessary to furnish and install the pavement markings will be incidental to the contract unit price for the respective High Build Waterborne Pavement Marking Paint items.

**RETROREFLECTIVITY FOR PAVEMENT MARKING PAINT**

The Department may take retroreflectivity readings on the pavement marking lines after 2 days and within 30 days of the line application using either a portable or mobile retroreflectometer that conforms to 30-meter geometry. If the Department chooses to take retroreflectivity readings, three retroreflectivity readings will be taken on each line at each test location. The three readings will be averaged and become the reading for that test location.

If the Department chooses to take retroreflectivity readings, three readings will be taken on the edge lines and lane lines in the direction of application. For combination solid yellow and skip yellow lines for turn lanes and for centerline markings on two-way roadways, three readings will be taken in one direction, the reflectometer will be turned 180 degrees and three more readings will be taken. The six readings for the centerline markings will be averaged and become the test reading for that test location.

If the Department chooses to take readings, the minimum retroreflectivity values will be 275 mc/m2/lux for white and 170 mc/m2/lux for yellow.

**TRAFFIC CONTROL SIGNS**

Traffic control signs have been included in a table for each route. Payment will only be for those signs used on each route.

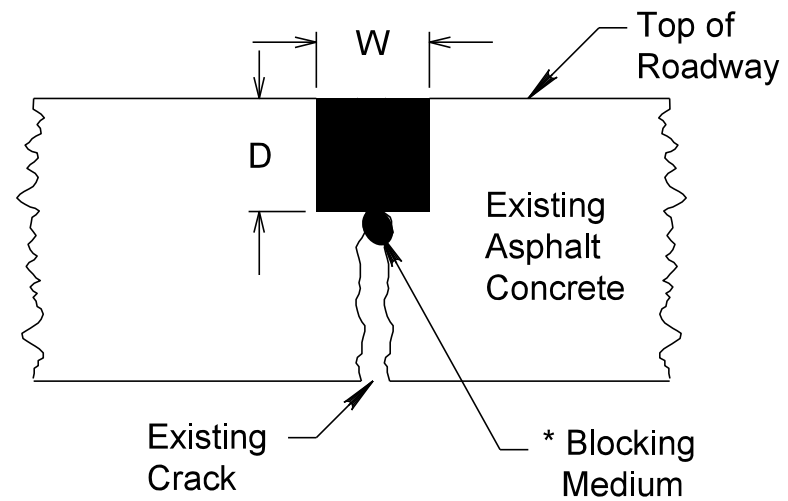
PLOT SCALE - 1:200

PLOTTED FROM - TRHJUN104

PLOT NAME - 1

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## TYPICAL RESERVOIR SECTION



\* Inert compressible material required for cracks 3/8" or more in width. The backer rod will be a nonmoisture absorbing, resilient material approximately 25 percent larger in diameter than the width of the joint to be sealed. The backer rod will be compatible with the sealant and no bond or reaction will occur between the rod and the sealant.

D & W = 3/4"

Recommended Backer Rod Diameter for Joint Width	
Joint Width	Rod Diameter
3/16" - 1/4"	3/8"
1/4" - 3/8"	1/2"
3/8" - 1/2"	5/8"
5/8" - 3/4"	7/8"
3/4" - 7/8"	1"
7/8" - 1"	1 1/4"
1" - 1 1/4"	1 1/2"
1 1/4" - 1 1/2"	2"

\* Messages on signs will vary depending on the operation being conducted.

Vehicle-mounted signs will be mounted in a manner such that they are not obscured by equipment or supplies. Sign legends on vehicle-mounted signs will be covered or turned from view when work is not in progress.

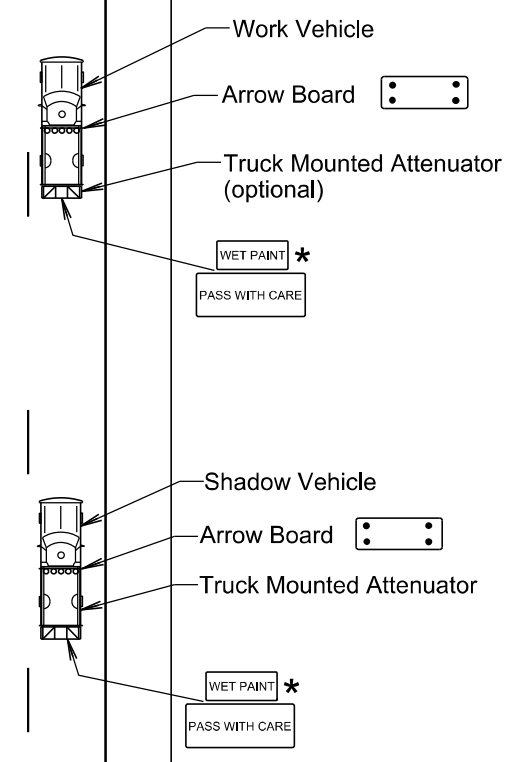
Shadow and Work vehicles will display high-intensity rotating, flashing, oscillating, or strobe lights, flags, signs, or arrow boards.

Vehicle hazard warning signals will not be used instead of the vehicle's high-intensity rotating, flashing, oscillating, or strobe lights.

When an arrow board is used, it will be used in the caution mode. Marching Diamonds are acceptable.

Arrow boards will, as a minimum, be Type B, with a size of 60" x 30".

All costs associated with the traffic control for mobile operation including signs, arrow boards and equipment will be incidental to the contract lump sum price for "Traffic Control, Miscellaneous".



January 22, 2021

Published Date: 2024	S D D O T	MOBILE OPERATIONS ON 2-LANE ROAD	PLATE NUMBER 634.06
			Sheet 1 of 1

Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)	Spacing of Channelizing Devices (Feet) (G)
0 - 30	200	25
35 - 40	350	25
45	500	25
50	500	50
55	750	50
60 - 65	1000	50

Flagger  
 Channelizing Device

For low-volume traffic situations with short work zones on straight roadways where the flagger is visible to road users approaching from both directions, a single flagger may be used.

The ROAD WORK AHEAD and the END ROAD WORK signs may be omitted for short duration operations (1 hour or less).

For tack and/or flush seal operations, when flaggers are not being used, the FRESH OIL sign (W21-2) will be displayed in advance of the liquid asphalt areas.

Flashing warning lights and/or flags may be used to call attention to the advance warning signs.

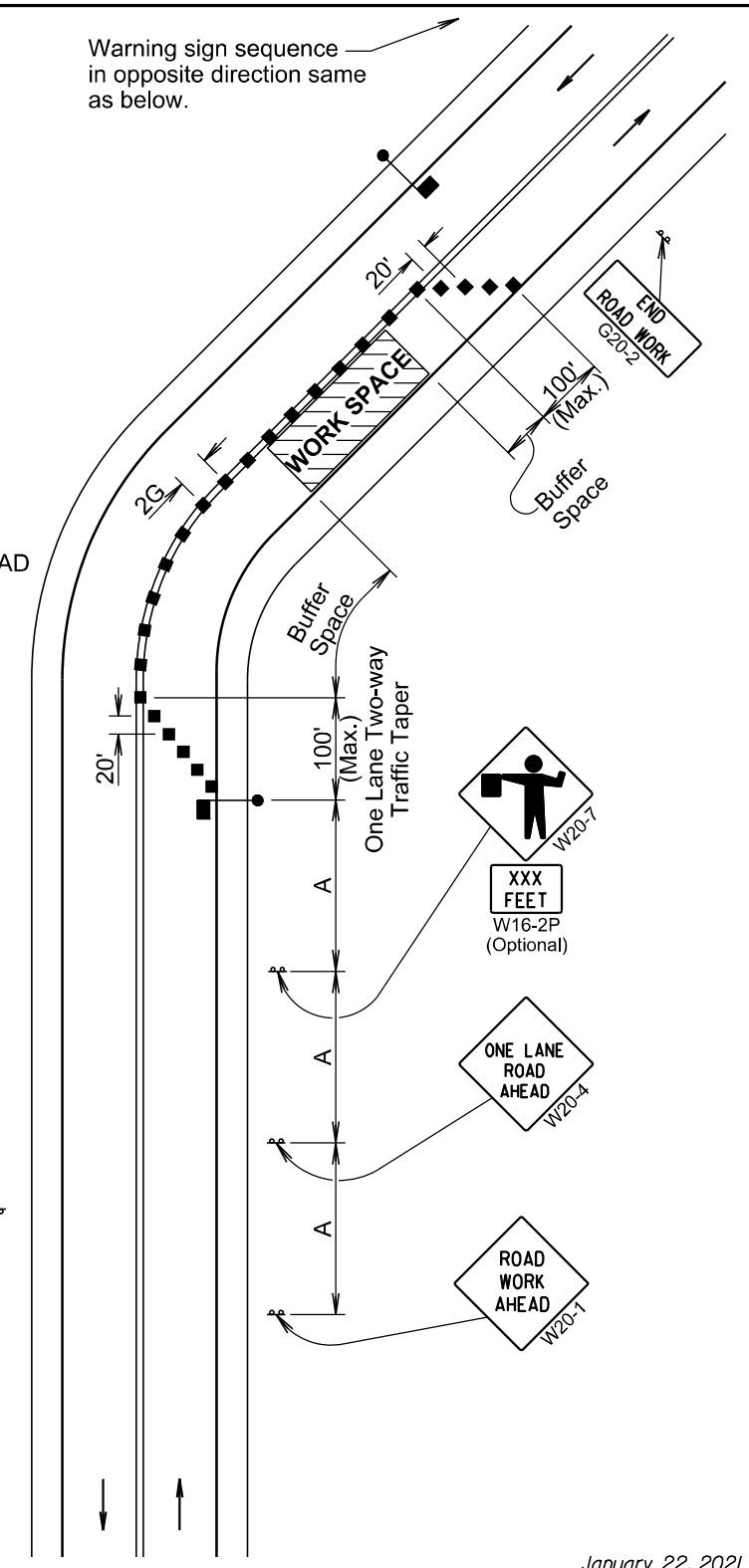
The channelizing devices will be drums or 42" cones.

Channelizing devices are not required along the centerline adjacent to work area when pilot cars are utilized for escorting traffic through the work area.

Channelizing devices and flaggers will be used at intersecting roads to control intersecting road traffic as required.

The buffer space should be extended so that the two-way traffic taper is placed before a horizontal or vertical curve to provide adequate sight distance for the flagger and queue of stopped vehicles.

The length of A may be adjusted to fit field conditions.



January 22, 2021

Published Date: 2024	S D D O T	LANE CLOSURE WITH FLAGGER PROVIDED	PLATE NUMBER 634.23
			Sheet 1 of 1

PLOT SCALE - 1:200

PLOTTED FROM - TRHJUNT04

PLOT NAME - 1

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**Segment #1 (SD 26)**

SIGN CODES	SIGN DESCRIPTION	CONVENTIONAL ROAD			
		NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
W-20-1	ROAD WORK AHEAD	2	48" X 48"	16.0	32.0
W-20-4	ONE LANE ROAD AHEAD	2	48" X 48"	16.0	32.0
W-20-7	FLAGGER(symbol)	2	48" X 48"	16.0	32.0
G20-2	END ROAD WORK	2	36" X 18"	4.5	9.0
		CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT			105.0

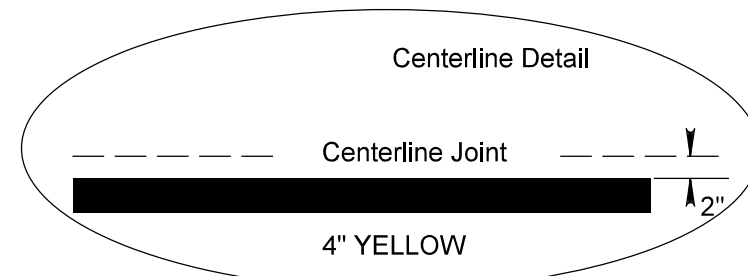
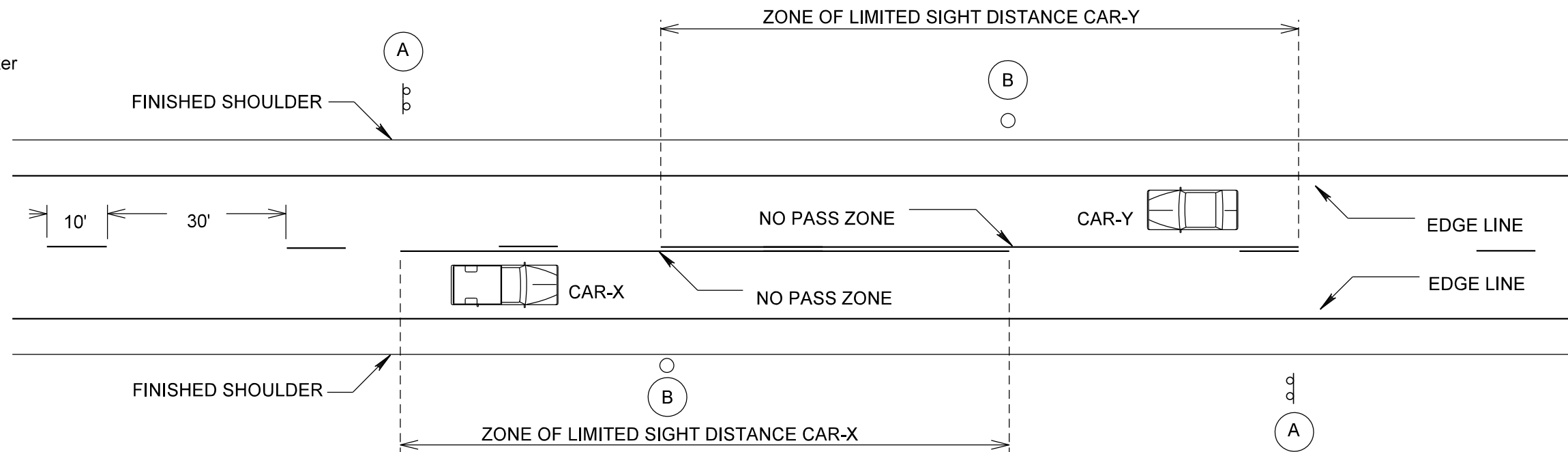
**Segment #2 (SD 47)**

SIGN CODES	SIGN DESCRIPTION	CONVENTIONAL ROAD			
		NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
W-20-1	ROAD WORK AHEAD	2	48" X 48"	16.0	32.0
W-20-4	ONE LANE ROAD AHEAD	2	48" X 48"	16.0	32.0
W-20-7	FLAGGER(symbol)	2	48" X 48"	16.0	32.0
G20-2	END ROAD WORK	2	36" X 18"	4.5	9.0
		CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT			105.0

# SD HIGHWAY 26 PAVEMENT MARKING LAYOUT

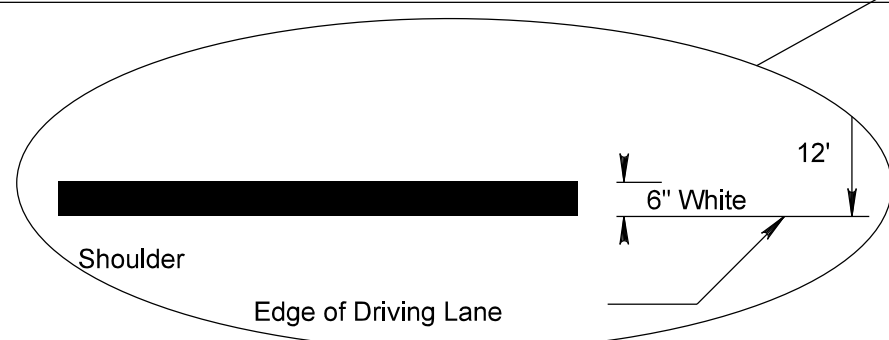
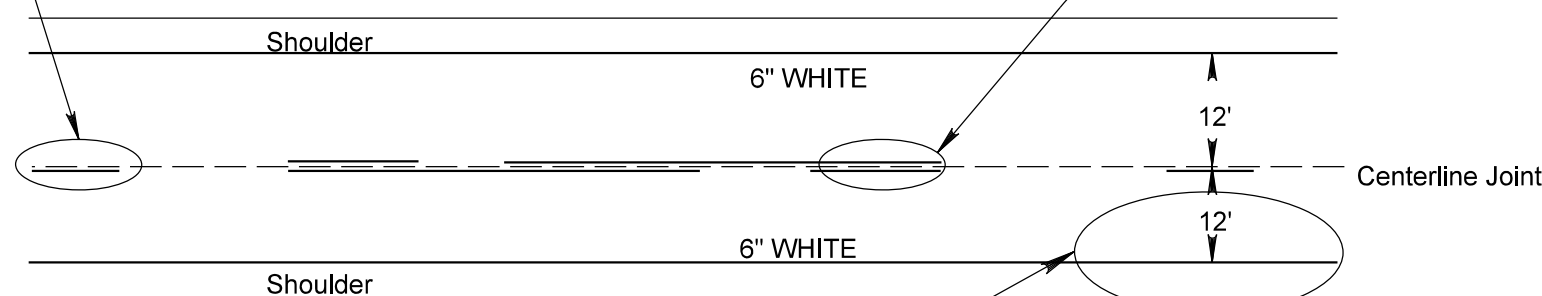
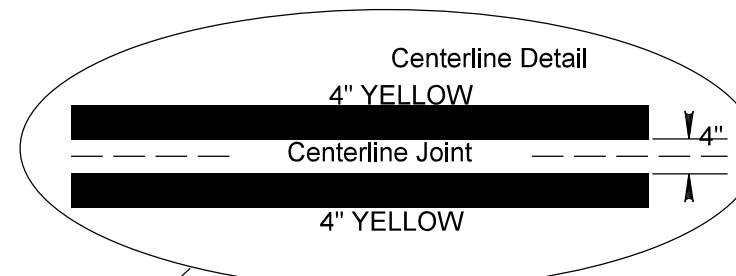


B End of Zone Marker



NOTE: A TWO "GUN" SYSTEM WILL BE USED TO OBTAIN THIS PATTERN.

WHEN A SINGLE SKIP LINE EXISTS, THE SKIP WILL BE PLACED TO THE SOUTH OR EAST OF THE CENTERLINE JOINT.



## FURNISHING AND APPLYING HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT

1. The approximate paint application rates will be as follows:

- Undivided Roadway
- Dashed 4" Line  
6.2 Gallons/Pass-Mile
- Solid 4" Line  
22.5 Gallons/Pass-Mile
- Solid 6" Line  
33.8 Gallons/Pass-Mile

2. The typical pavement markings as shown on this sheet will be applied throughout the entire length of the project.

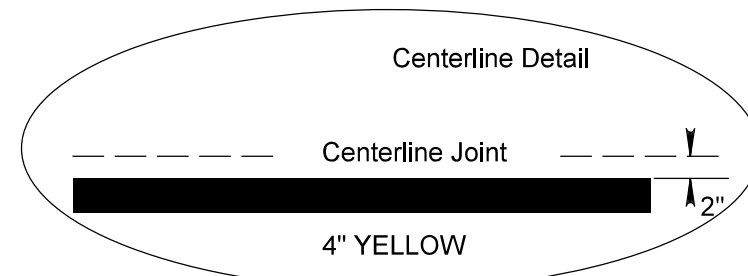
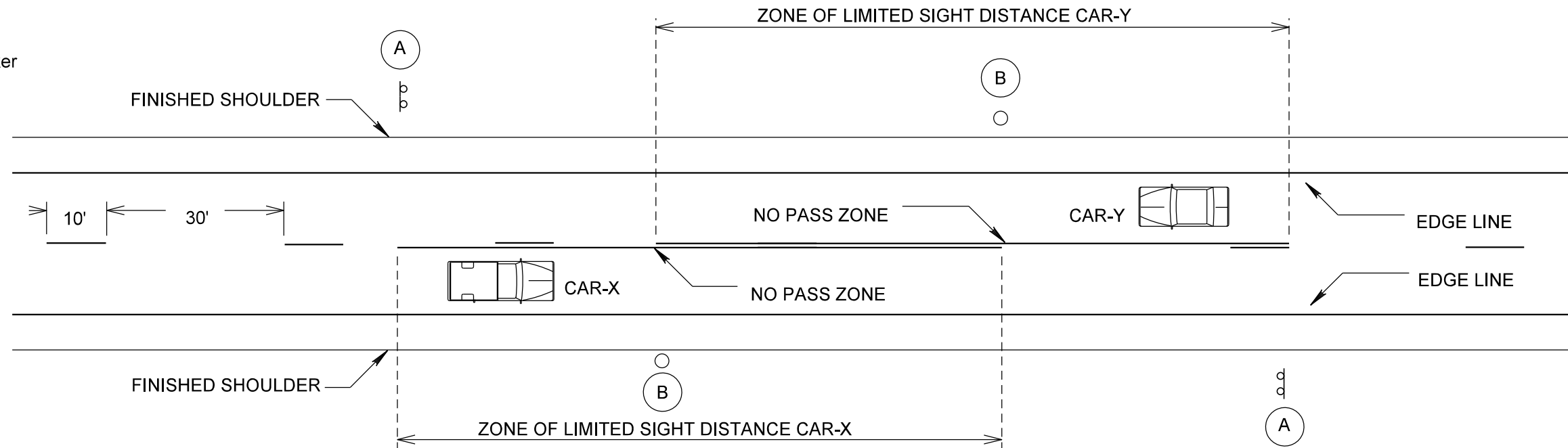
3. Exact location of the NO PASSING ZONE lines will be determined in the field by the Engineer. A dash of white paint will mark the beginning and end of all no passing zones. NO PASSING ZONE signs and the ending post in fence lines, if present, will not be used as the beginning and ending NO PASSING ZONE lines.

4. 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 or advance warning arrow panel.

# SD HIGHWAY 47 PAVEMENT MARKING LAYOUT

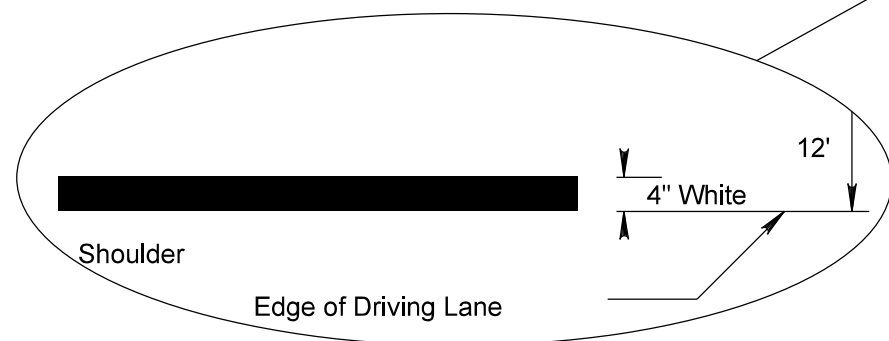
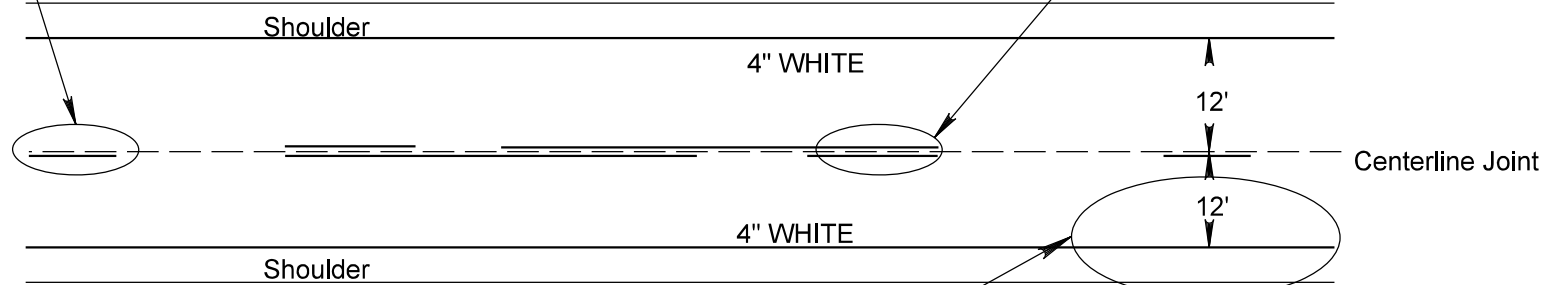
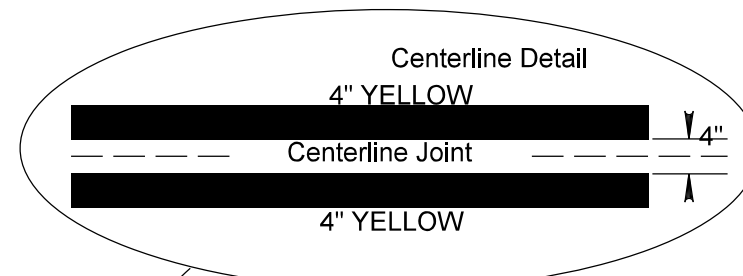


B End of Zone Marker



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