STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0047(113)42	C1	C11

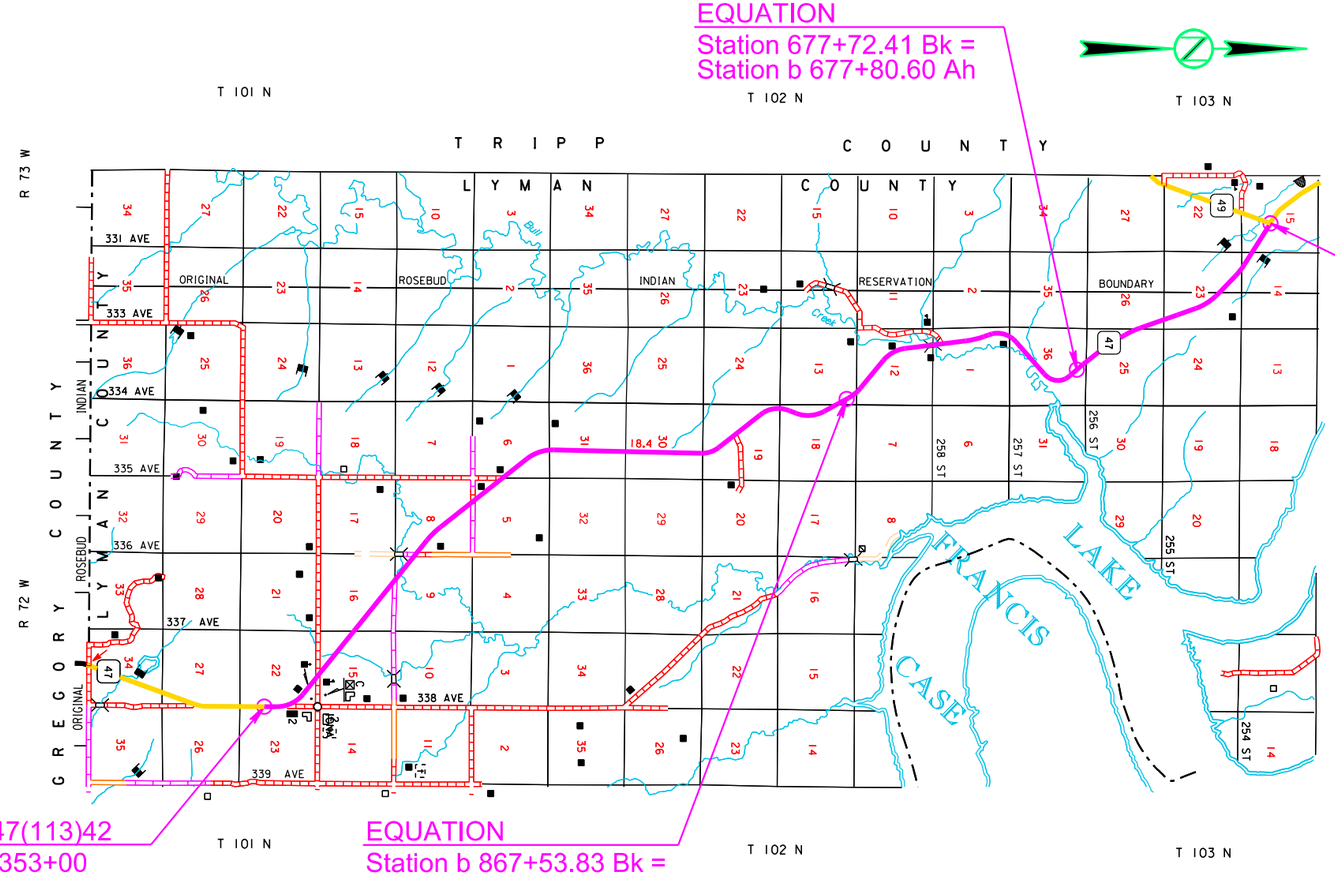
REV DATE:
INITIAL:

FOR BIDDING PURPOSES ONLY

SECTION C: TRAFFIC CONTROL PLANS

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 11670
BENJAMIN CHARLES SCHOLTZ
SOUTH DAKOTA
2024-08-26

INDEX OF SHEETS



EQUATION
Station 677+72.41 Bk =
Station b 677+80.60 Ah

BEGIN P 0047(113)42
Station 505+75
Located 1,944.57' North and 2,019.34' West of the southeast corner of Section 15 - Township 103 North - Range 73 West of the 5th PM
MRM 58.00 + 0.039

END P 0047(113)42
Station c 1353+00
Located 1,482.63' North and 3' West of the southeast corner of Section 22 - Township 101 North - Range 72 West of the 5th PM
MRM 41.00 + 0.996

EQUATION
Station b 867+53.83 Bk =
Station c 865+98.20 Ah

Plotting Date:

SECTION C ESTIMATE OF QUANTITIES

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
634E0010	Flagging	700.0	Hour
634E0020	Pilot Car	250.0	Hour
634E0110	Traffic Control Signs	711.0	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0275	Type 3 Barricade	9	Each
634E0560	Remove Pavement Marking, 4" or Equivalent	14,616	Ft
634E0600	4" Temporary Pavement Marking Tape Type I	14,616	Ft
634E0630	Temporary Pavement Marking	80.0	Mile
634E1002	Detour and Restriction Signing	506.6	SqFt
634E1215	Contractor Furnished Portable Changeable Message Sign	4	Each

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 temporary speed limit signs will have a minimum mounting height of 5 feet in rural locations, even when mounted on portable supports.

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, unless approved by the Engineer.

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.

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

At no time will a vertical drop-off of greater than 3 inches be left overnight adjacent to the traveled way. The Contractor will utilize embankment material to ensure a 3-inch vertical drop-off is not exceeded. The slope of the embankment material will not be steeper than a 4:1 within 30 feet of the traveled way.

The Contractor will furnish, install, maintain, and remove TRUCK CROSSING (W8-6) signs daily. The TRUCK CROSSING signs will be displayed always when haul vehicles are hauling material. When hauling conditions no longer exist, the signs will be covered or removed from view. The exact number and location will be determined during construction. Payment for additional signs will be based on the contract unit price per square foot for "Traffic Control Signs".

GROOVED PAVEMENT (W8-15) signs with MOTORCYCLE (W8-15P) plaques are required in advance of areas that have been cold milled and are not resurfaced the same day. The GROOVED PAVEMENT sign assemblies will be installed a minimum of 1000 feet in advance of cold milled sections and remain in place until the sections have been resurfaced.

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.

A mobile work operation will be allowed provided the rumble strip or rumble stripe grooving, flush sealing, and pavement marking can be completed satisfactorily by a continuously moving work operation. A mobile work operation will require approval by the Engineer.

If inappropriate or conflicting pavement markings exist, the markings will be removed and replaced with applicable temporary pavement markings when the work duration is more than 3 days. When the work duration is less than 3 days, the channelizing devices in the area where the pavement markings conflict will be placed at one-half of the normal channelizing device spacing. Pavement marking removals will be incidental to the contract unit price per foot for "Remove Pavement Marking, 4" or equivalent". Temporary pavement marking will be paid for at the contract unit price per mile/foot for "Temporary Pavement Marking". The additional channelizing devices will be incidental to the contract lump sum price for "Traffic Control, Miscellaneous".

DETOUR SIGNING

The Contractor will furnish and install the detour signs as shown in these plans. Prior to installing the signs, the Contractor will mark the sign locations and review them with the Engineer. Detour signs will be installed on fixed location, ground mounted, breakaway supports. It will be the responsibility of the Contractor to maintain and reinstall these signs during the project as required by the construction progress. Upon completion of the project, the Contractor will remove the detour signs.

All costs for furnishing the signs, posts, and mounting hardware, and for installing, maintaining, covering, and removing the detour signs will be incidental to the contract unit price per square foot for "Detour and Restriction Signing".

FLAGGING

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

Additional flagger warning signs and flagger hours have been included in the Estimate of Quantities for use on intersecting roads. These flaggers will be used as directed by the Engineer and will be used primarily during daytime hours. Also included in the Estimate of Quantities are WAIT FOLLOW PILOT CAR signs for use on low volume intersecting roads as determined by the Engineer. WAIT FOLLOW PILOT CAR signs will not block the view of the stop sign.

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".

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 11670
BENJAMIN CHARLES SCHOLTZ
SOUTH DAKOTA
2024-10-24

TRAFFIC CONTROL FOR CULVERT PIPE REPAIR

Pipe culvert repair work will require isolated removal and replacement of existing surfacing on US Hwy 47. There are several culvert repairs that are expected to require shoulder and lane closures. The pipe repair work including replacement of surfacing shall be completed prior to the mill and overlay operations. The Table of Traffic Control for Culvert Pipe Repair contains a summary of expected impacts to mainline surfacing and associated traffic. This table is provided for information only and actual impacts will be dependent on the Contractor's operations. The proposed work is expected to require shoulder closures, lane closures, utilization of shoulders, and/or sequencing pipe installation between the east and west sides of the roadway in order to complete the pipe work as shown in the plans. In some cases, it may be necessary to add fill material on the inslope in order to temporarily widen the shoulder for carrying traffic. All work associated with furnishing, installing, maintaining, removal and disposal of inslope fill material for temporary sequencing shall be paid for at the contract lump sum price for Incidental Work, Grading.

TABLE OF TRAFFIC CONTROL FOR CULVERT PIPE REPAIR

Station	*L/R*	*Estimated Impact on Traffic Lanes*
554+15	L/R	Shoulder Impact Only
55+16	L/R	Shoulder Impact Only
574+54	R	Shoulder Impact Only
583+92	L/R	Excavation extends across east and westbound traffic lanes
584+02	L/R	Excavation extends across east and westbound traffic lanes
585+25	L/R	Shoulder Impact Only
671+75	L/R	Shoulder Impact Only
678+50	L/R	Shoulder Impact Only
700+10	L/R	Shoulder Impact Only
712+80	L/R	Excavation extends across east and westbound traffic lanes; utilize traffic diversion
741+54	L	Shoulder Impact Only
749+03	R	Shoulder Impact Only
752+54	L/R	Shoulder Impact Only
761+00	L/R	Shoulder Impact Only
767+98	L/R	Shoulder Impact Only
778+05	L/R	Shoulder Impact Only
808+65	L/R	Shoulder Impact Only
811+98	L/R	Shoulder Impact Only
822+46	L/R	Excavation extends across east and westbound traffic lanes
839+75	L/R	Excavation extends across east and westbound traffic lanes
900+00	L/R	Shoulder Impact Only
910+30	L/R	Shoulder Impact Only
937+55	L/R	Shoulder Impact Only
939+04	L/R	Shoulder Impact Only
939+40	L/R	Shoulder Impact Only
967+51	L/R	Shoulder Impact Only
969+32	L/R	Shoulder Impact Only
973+46	R	Shoulder Impact Only
981+66	L/R	Shoulder Impact Only
981+81	L/R	Shoulder Impact Only
998+44	L/R	Excavation extrends across east and westbound traffic lanes
997+74	R	Shoulder Impact Only
1026+34	L/R	Shoulder Impact Only
1042+82	L/R	Shoulder Impact Only
1049+33	L/R	Shoulder Impact Only
1066+40	L/R	Shoulder Impact Only
1078+36	L/R	Shoulder Impact Only
1100+00	L/R	Shoulder Impact Only
1101+34	L/R	Shoulder Impact Only
1113+63	L/R	Shoulder Impact Only
1121+94	L/R	Excavation extends across east and westbound traffic lanes; utilize detour route
1187+50	L/R	Shoulder Impact Only
1240+32	L/R	Shoulder Impact Only
1243+45	L/R	Shoulder Impact Only
1264+28	L	Shoulder Impact Only
1284+23	L/R	Shoulder Impact Only
1286+20	L	Shoulder Impact Only
1302+21	L/R	Shoulder Impact Only
1311+81	L/R	Shoulder Impact Only
1312+25	L/R	Shoulder Impact Only

TEMPORARY PAVEMENT MARKING

The total length of no passing zone on this project is estimated to be 10.424 miles.

It is estimated that 48 DO NOT PASS (R4-1) and 44 PASS WITH CARE (R4-2) signs will be required to mark the no passing zones, should the Contractor elect to use these signs.

Temporary flexible vertical markers (tabs) may be used as detailed in the specifications.

Temporary pavement marking paint will not be allowed on the final lift of asphalt surfacing. Temporary pavement marking paint will not be allowed on the chip seal, fog seal, or flush seal. Temporary flexible vertical markers (tabs) must be used on the final lift of asphalt surfacing. The Contractor may use tabs with covers, uncovering them for the chip seal, fog seal, or flush seal. As an alternative, the Contractor may install new tabs for the fog seal or flush seal.

Covers on the tabs will be sufficiently secured to prevent traffic from dislodging the cover and when removed, the covers will be properly disposed of. The Contractor will remove and properly dispose of the tabs after permanent pavement marking is applied. Method of removal will be nondestructive to the road surface and will be accomplished within one week of completion of the permanent pavement marking.

Full reflectivity of all temporary flexible vertical markers (tabs) is required at all times. The Contractor will be required to replace any missing or non-reflective tabs after each installation as detailed below at no additional cost to the State.

Quantities of Temporary Pavement Markings consist of:

One pass on top of the milled surface
One pass on the Blade Laid Asphalt Concrete
One pass on top of the final top lift of asphalt concrete
One pass prior to the flush seal, length as determined by the Engineer
One pass after the flush seal

If the Engineer determines that an additional pass prior to the flush seal is not required, this application of the temporary pavement marking will be eliminated. If the flush seal is eliminated for the project, the application of the temporary pavement marking on top of the flush seal as well as the additional pass prior to the flush seal will be eliminated.

No adjustment in the contract unit price for "Temporary Pavement Marking" will be made because of a variation in quantities.

In the absence of a signed lane closure or pilot car operation, FLAGGER (W20-7) symbol signs and flaggers, or a shadow vehicle with rotating yellow lights or strobe lights will be positioned on the shoulder in advance of workers for both directions of traffic during the installation and removal of the temporary flexible vertical markers (tabs). The traffic control device used will be moved intermittently to provide proper warning of the work operation. A ROAD WORK AHEAD (W20-1) sign, a WORKER (W21-1) symbol sign or a BE PREPARED TO STOP (W3-4) sign will be mounted on the rear of the shadow vehicle. The method of traffic control used by the Contractor for this work must be approved by the Engineer.

Prior to nightfall, tabs will be required to mark centerline on segments of roadway where existing centerline markings have been removed and new markings have not been installed.

TEMPORARY PAVEMENT MARKING TAPE, TYPE I

Temporary pavement marking for stop lines will consist of 4" Temporary Pavement Marking Tape Type I. Placement of each 24" white stop line will be accomplished by placing six pieces of 4" x 12' tape adjacent to one another. Each workspace requires two stop lines which is an equivalent of approximately 144' of 4" tape (5 workspaces at 144' = 720'). Temporary pavement marking on centerline will consist of temporary flexible vertical markers (tabs) or temporary raised pavement markers and will be used as depicted on standard plate 634.25 when the stop condition must remain in place during nighttime hours, 9:00 pm to 6:00 am (Estimate 5 workspaces remaining during nighttime hours x 2,200' per workspace = 11,000'). Temporary tape will be removed upon completion of the project.

TABLE OF TEMPORARY PAVEMENT MARKING TAPE

Traffic Control Type	Length Required per Layout (Ft)	No. of Layouts (Ft)	Total Length Required (Ft)
Lane Closure Using Stop Signs (Standard Plate 634.25)	2544	5	12720
Road Closed with Traffic Detour (Standard Plate 634.28)	1896	1	1896

TRAFFIC CONTROL FOR ASPHALT CONCRETE RESURFACING

The Contractor will need to install LOOSE GRAVEL (W8-7) signs with advisory speed plaques (W13-1P) in areas where loose sand is present during the flush seal operation. LOOSE GRAVEL signs have been included in these plans for this.

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)

The Engineer may approve alternate messages to fit project conditions, which may include the following for use during normal traffic flow:

REDUCE SPEED
TWO WAY TRAFFIC

or

ROAD WORK AHEAD
EXPECT DELAYS

During peak times when traffic queues exist or during incident management:

SLOW TRAFFIC AHEAD
BE PREPARED TO STOP

or

CRASH AHEAD
BE PREPARED TO STOP

The portable changeable message signs may be relocated as determined by the Engineer. The signs will not be stored long term on the shoulders of the roadway.

INCIDENTS

An incident is an emergency road user occurrence, a natural disaster, or other unplanned event that affects or impedes the normal flow of traffic such as a crash, hazardous materials spill, or other event.

The Contractor will set up a meeting prior to start of work to plan and coordinate responses to an incident. The Contractor will invite the Department of Transportation, the South Dakota Highway Patrol, the Lyman County Sheriff and local emergency response entities to the meeting.

The Contractor will assist to maintain traffic as required by these plan notes and as agreed to at that meeting.

Emergency vehicle access through the project will be considered and discussed at the meeting.

The Contractor may be required to modify messages on portable changeable message signs or relocate portable changeable message signs, and to provide flaggers to direct or detour traffic. The Contractor should be prepared to relocate advance warning signs if determined to be necessary for a major traffic incident lasting more than two hours. Fixed location ground mounted signs may be covered and additional portable signs provided.

No additional payment will be made for the modification of portable changeable message sign messages or the relocation of portable changeable message signs. Cost for the relocation of an advance warning sign due to an incident will be 50% of the designated sign rate. Flaggers will be paid for at the contract unit price per hour for "Flagging".

PRESS RELEASE ANNOUNCEMENTS

The SDDOT will prepare a press release to be released 5 days prior to any phase change or any other major change that affects traffic flow. The SDDOT will be responsible to keep law enforcement, emergency services, and the traveling public notified of changes in project access. The Contractor will provide the Engineer with pertinent information 7 days prior to any phase change or any other major change that affects traffic flow.

LIGHTING FOR NIGHTTIME WORK

Flagger stations, working construction equipment and active workspaces will be lighted between sunset and sunrise. Non-glare light sources will be provided.

Light levels are as defined in Section 2.9.2 of NCHRP 476.

Light in conformance with Level I will be provided at the active workspaces.

Light in conformance with Level II will be provided at the locations of working construction equipment.

Light in conformance with Level III is to be provided where labor intensive work is being completed such as during hand work, pavement sawing, project inspection, materials testing, and flagging.

Acceptable light sources will be Contractor furnished stand-alone lights or vehicle/equipment mounted lights. Stand-alone units will be marked with a minimum of two reflectorized drums on an approaching traffic side.

Cost for this lighting will be included in the contract lump sum price for "Traffic Control, Miscellaneous".

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 11670
BENJAMIN CHARLES SCHULTZ
SOUTH DAKOTA
2024-10-24

Traffic Control Details

FOR BIDDING PURPOSES ONLY

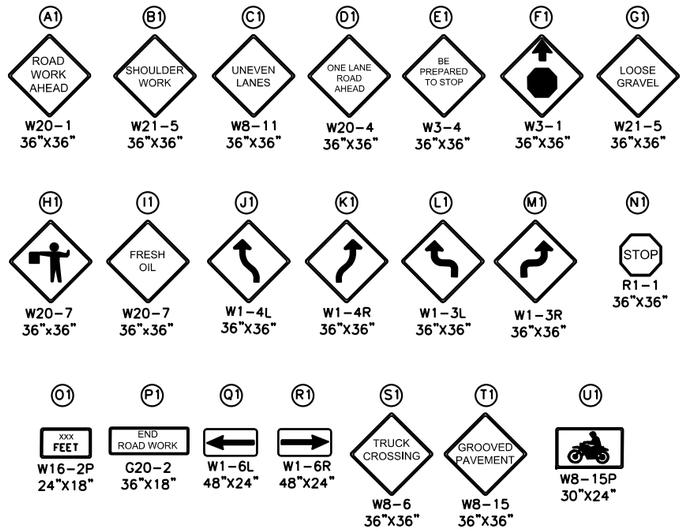
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0047(113)42	C5	C11

REV DATE:
INITIAL:

TABLE FOR TRAFFIC CONTROL SIGNS (SqFt)

Sign Description	Symbol	Sign Code	Width (in)	Height (in)	Sign Quantity (SqFt)	Asphalt Surface Treatment No. of Signs	Asphalt Surface Treatment Total SqFt	Road Closed With Traffic Diverted No. of Signs	Road Closed With Traffic Diverted Total SqFt	Work Beyond the Shoulder No. of Signs	Work Beyond the Shoulder Total SqFt	Work on Shoulders No. of Signs	Work on Shoulders Total SqFt	Lane Closure with Flagger No. of Signs	Lane Closure with Flagger Total SqFt	Lane Closure using Stop Signs No. of Signs	Lane Closure using Stop Signs Total SqFt	Long Term Road Work No. of Signs	Long Term Road Work Total SqFt	Field Determined Signs No. of Signs	Field Determined Signs Total SqFt	Estimated Quantity* No. of Signs	Estimated Quantity* Total SqFt
ROAD WORK AHEAD	A1	W20-1	36	36	9.0	2	18.0	2	18.0	2	18.0	2	18.0	2	18.0	2	18.0	2	18.0			8	72.0
SHOULDER WORK	B1	W21-5	36	36	9.0							2	18.0									2	18.0
UNEVEN LANES	C1	W8-11	36	36	9.0	10	90.0															10	90.0
ONE LANE ROAD AHEAD	D1	W20-4	36	36	9.0									2	18.0	2	18.0					2	18.0
BE PREPARED TO STOP	E1	W3-4	36	36	9.0													2	18.0	4	36.0	6	54.0
STOP AHEAD	F1	W3-1	36	36	9.0											2	18.0					2	18.0
LOOSE GRAVEL	G1	W8-7	36	36	9.0	10	90.0															10	90.0
FLAGGER	H1	W20-7	36	36	9.0	2								2				2	18.0	2	18.0	6	54.0
FRESH OIL	I1	W21-2	36	36	9.0	2														2	18.0	4	36.0
CURVE LEFT	J1	W1-4L	36	36	9.0			2	18.0													2	18.0
CURVE RIGHT	K1	W1-4R	36	36	9.0			2	18.0													2	18.0
REVERSE CURVE LEFT	L1	W1-3L	36	36	9.0															2	18.0	2	18.0
REVERSE CURVE RIGHT	M1	W1-3R	36	36	9.0											1	9.0			2	18.0	3	27.0
STOP	N1	R1-1	36	36	9.0											2	18.0					2	18.0
___ FEET (supplemental distance plaque)	O1	W16-2P	24	18	3.0									2								2	6.0
END ROAD WORK	P1	G20-2	36	18	4.5	2	9.0			2	9.0	2	9.0	2	9.0			2	9.0	2	9.0	8	36.0
LEFT LARGE ARROW	Q1	W1-6L	48	24	8.0			1	8.0											2	16.0	3	24.0
RIGHT LARGE ARROW	R1	W1-6R	48	24	8.0			1	8.0											2	16.0	3	24.0
TRUCK CROSSING	S1	W8-6	36	36	9.0															4	36.0	4	36.0
GROOVED PAVEMENT	T1	W8-15	36	36	9.0	2														2	18.0	4	36.0
					Total		207.0		70.0		27.0		45.0		45.0		81.0		63.0		203.0		711.0

*Only the largest quantity installed during any phase, plus the Field Determined Signs, will be used for the estimated quantity.
Work Beyond Shoulder and Work on Shoulder will be considered one phase.
Lane Closure Using Stop Signs, Lane Closed w/ Flagger, and Long Term Road Work will be considered one phase.



OTHER TRAFFIC CONTROL QUANTITIES

Item	Unit	Hwy 47 Detour	Traffic Control Layouts	Field Determined	Total	Estimated Quantity**
Flagging	Hour		580	120	700	Use Total
Pilot Car	Hour		200	50	250	Use Total
Temporary Flexible Vertical Markers (Tabs)	Mile		32	1	33	Use Total
Remove Pavement Marking, 4" or Equivalent	Ft		13616		13616	Use Total
4" Temporary Pavement Marking Tape Type I	Ft		13616		13616	Use Total
Temporary Pavement Marking	Mile		80		80	Use Total
Contractor Furnished Portable Changeable Message Sign	Each	4			4	Use Total

**Note: Only the largest quantity installed during any phase plus the Field Determined quantity will be used as the estimated quantity, unless noted as "Use Total".

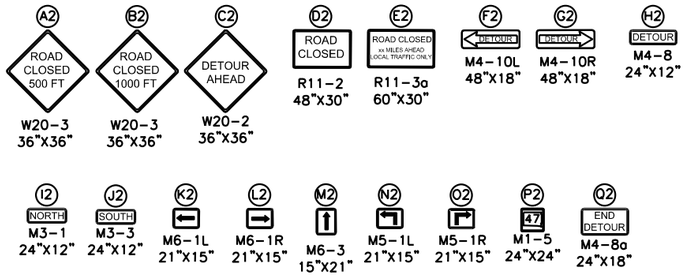
TYPE 3 BARRICADES, 8' DOUBLE SIDED

Layout	Quantity (Each)
Lane Closure Using Stop Signs	1
Road Closed w ith Traffic Diverted	5
Hw y 47 Detour	8
Field Determined	3
Estimated Quantity**	**9**

**Only the largest quantity installed during any phase plus the Field Determined Signs w ill be used for the estimated quantity.

TABLE FOR DETOUR SIGNING (SqFt)

Sign Description	Symbol	Sign Code	Width (in)	Height (in)	Sign Quantity (SqFt)	Hwy 47 Detour No. of Signs	Hwy 47 Detour Total SqFt	Field Determined No. of Signs	Field Determined Total SqFt	Estimated Quantity* No. of Signs	Estimated Quantity* Total SqFt
ROAD CLOSED 500 FT AHEAD	A2	W20-3	36	36	9.0	4	36.0			4	36.0
ROAD CLOSED 1000 FT AHEAD	B2	W20-3	36	36	9.0	4	36.0			4	36.0
DETOUR AHEAD	C2	W20-2	36	36	9.0	5	45.0	2	18.0	7	63.0
ROAD CLOSED	D2	R11-2	48	30	10.0	2	20.0	2	20.0	4	40.0
ROAD CLOSED XX MILES AHEAD LOCAL TRAFFIC ONLY	E2	R11-3a	60	30	12.5	2	25.0	2		4	50.0
ARROW LEFT W/DETOUR	F2	M4-10L	48	18	6.0	1	6.0			1	6.0
ARROW RIGHT W/DETOUR	G2	M4-10R	48	18	6.0	1	6.0			1	6.0
DETOUR	H2	M4-8	24	12	2.0	20	40.0	2	4.0	22	44.0
NORTH	I2	M3-1	24	12	2.0	15	30.0	2	4.0	17	34.0
SOUTH	J2	M3-3	24	12	2.0	7	14.0	2	4.0	9	18.0
LEFT ARROW	K2	M6-1L	21	15	2.2	3	6.6	2	4.4	5	10.9
RIGHT ARROW	L2	M6-1R	21	15	2.2	2	4.4	2	4.4	4	8.8
UP ARROW	M2	M6-3	15	21	2.2	11	24.1	2	4.4	13	28.4
UP-LEFT ARROW	N2	M5-1L	21	15	2.2	2	4.4	2	4.4	4	8.8
UP-RIGHT ARROW	O2	M5-1R	21	15	2.2	2	4.4	2	4.4	4	8.8
HWY 47	P2	M1-5	24	24	4.0	22	88.0	2	8.0	24	96.0
END DETOUR	Q2	M4-8a	24	18	3.0	2	6.0	2	6.0	4	12.0
					Total		395.8		85.9		506.6



Plotting Date:

Hwy 47 Detour

FOR BIDDING PURPOSES ONLY

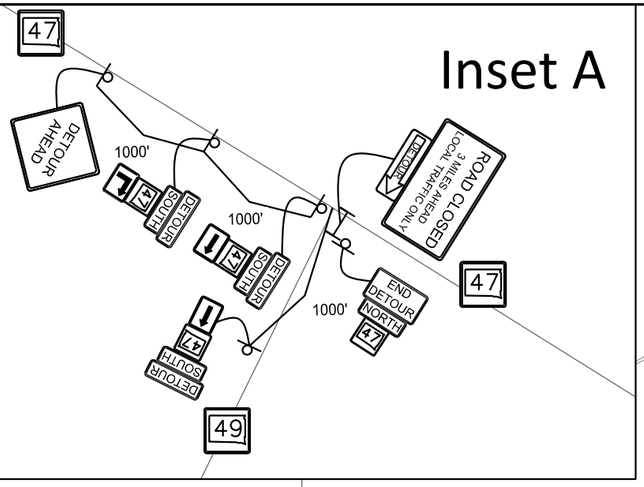
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0047(113)42	C6	C11

REV DATE:
INITIAL:

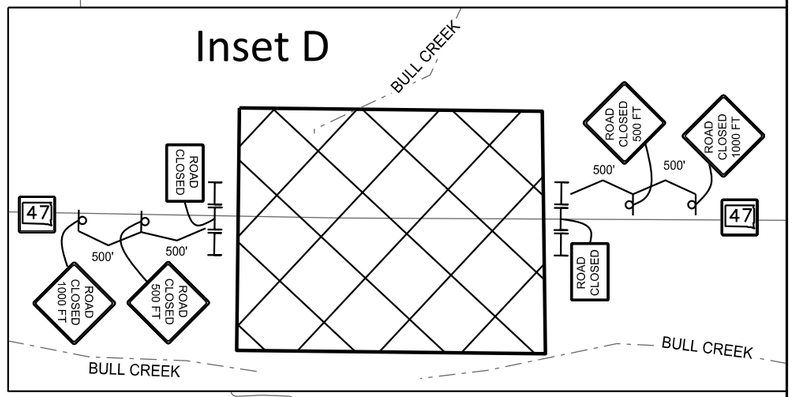
SCALE IN FEET
0 12,500 25,000

LEGEND	
KEY	ITEM
- - - - - - - - - -	DETOUR ROUTE
	WORK LOCATION
M	MESSAGE BOARD
H	TYPE 3 BARRICADE (8', DOUBLE SIDED)

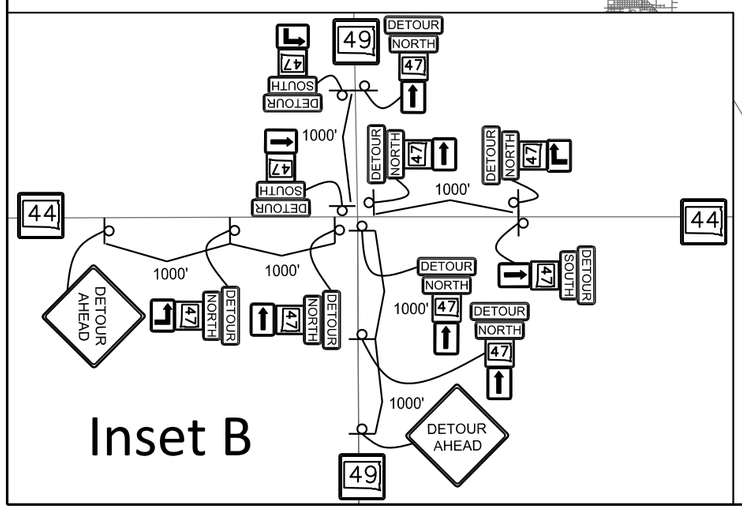
Inset A



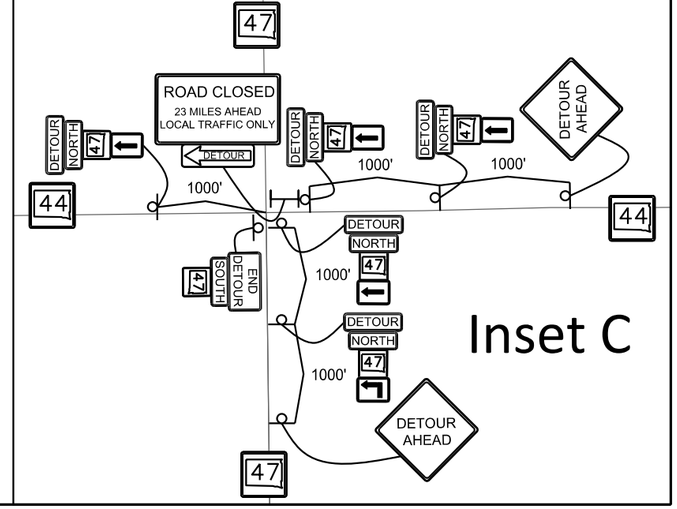
Inset D



Inset B



Inset C



Plotting Date:

See Inset A
See Inset B
See Inset C
See Inset D

Chamberlain
Oacoma
Pukwana
Hamill
Ideal
Iona
Ola
Witten
Carter
Jordan Junction
Winner
Colome
Dallas
Gregory
Dixon
Burke
Academy
Platte

BULL CREEK
MISSOURI RIVER

SD HWY 47/ PARK AVE
11TH STREET
11TH STREET
SD HWY 47/ PARK AVE

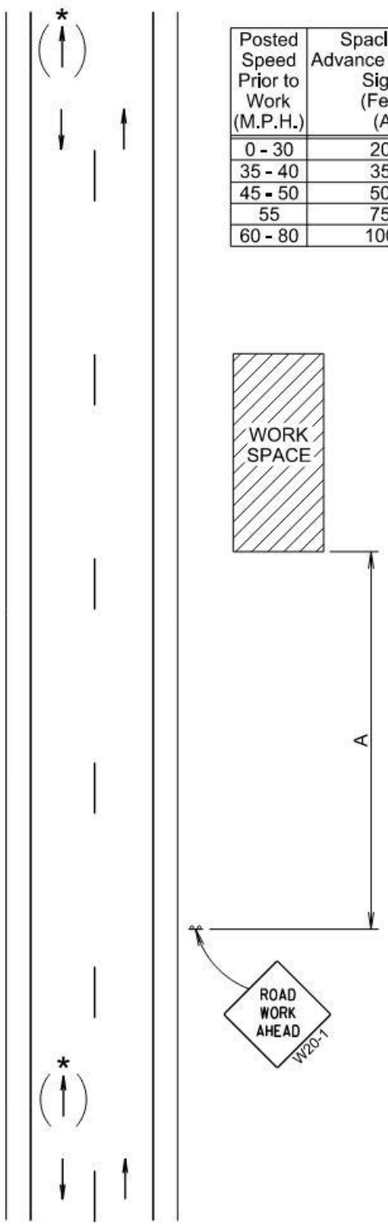
The signs illustrated are not required if the work space is behind a barrier, more than 2 feet behind the curb, or 15 feet or more from the edge of any roadway.

The signs illustrated will be used where there are distracting situations; such as: vehicles parked on shoulder, vehicles accessing the work site via the highway, and equipment traveling on or crossing the roadway to perform work operations.

The ROAD WORK AHEAD sign may be replaced with other appropriate signs, such as the SHOULDER WORK sign. The SHOULDER WORK sign may be used for work adjacent to the shoulder.

* If the work space is on a divided highway, an advance warning sign should also be placed on the left side of the directional roadway.

For short term, short duration, or mobile operations, all signs and channelizing devices may be eliminated if a vehicle with an activated flashing or revolving yellow light is used.



Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)
0 - 30	200
35 - 40	350
45 - 50	500
55	750
60 - 80	1000

January 22, 2021

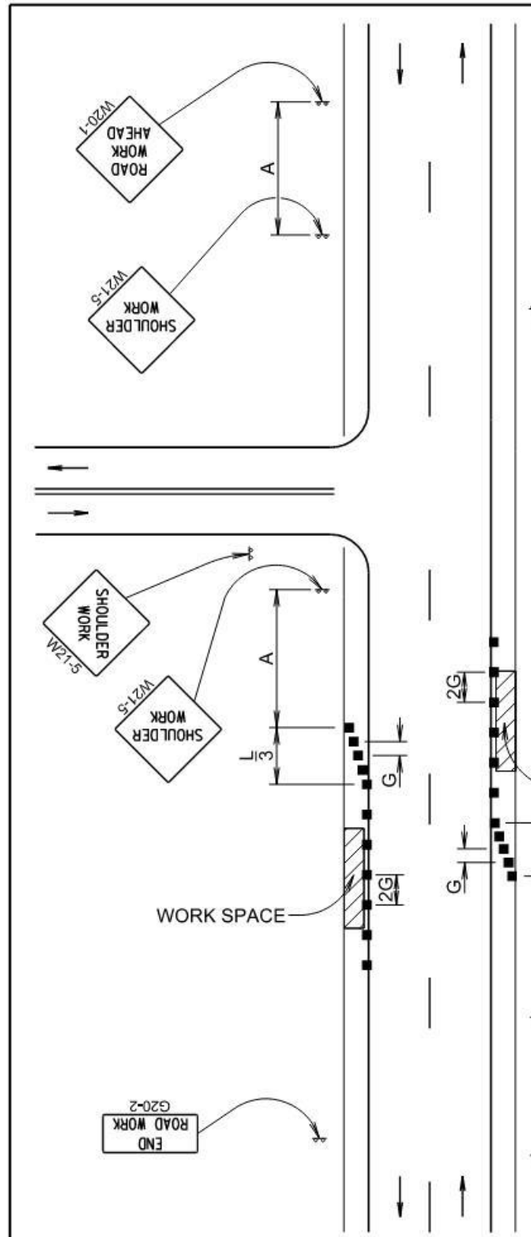
Published Date: 2025

SDDOT

WORK BEYOND THE SHOULDER

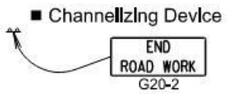
PLATE NUMBER 634.01

Sheet 1 of 1



Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)	Taper Length (Feet) (L)	Spacing of Channelizing Devices (Feet) (G)
0 - 30	200	180	25
35 - 40	350	320	25
45	500	600	25
50	500	600	50
55	750	660	50
60 - 65	1000	780	50

■ Channelizing Device



The channelizing devices will be drums or 42" cones if traffic control must remain overnight.

For short duration operations (1 hour or less) all channelizing devices may be eliminated if a vehicle with an activated flashing or revolving yellow light is used.

Worker signs (W21-1 or W21-1a) may be used instead of SHOULDER WORK signs.

A SHOULDER WORK sign should be placed on the left side of a divided or one-way roadway only if the left shoulder is affected.

The SHOULDER WORK sign on an intersecting roadway is not required if drivers emerging from that roadway will encounter another advance warning sign before they reach a work activity area.

January 22, 2021

Published Date: 2025

SDDOT

WORK ON SHOULDERS

PLATE NUMBER 634.03

Sheet 1 of 1

* 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.

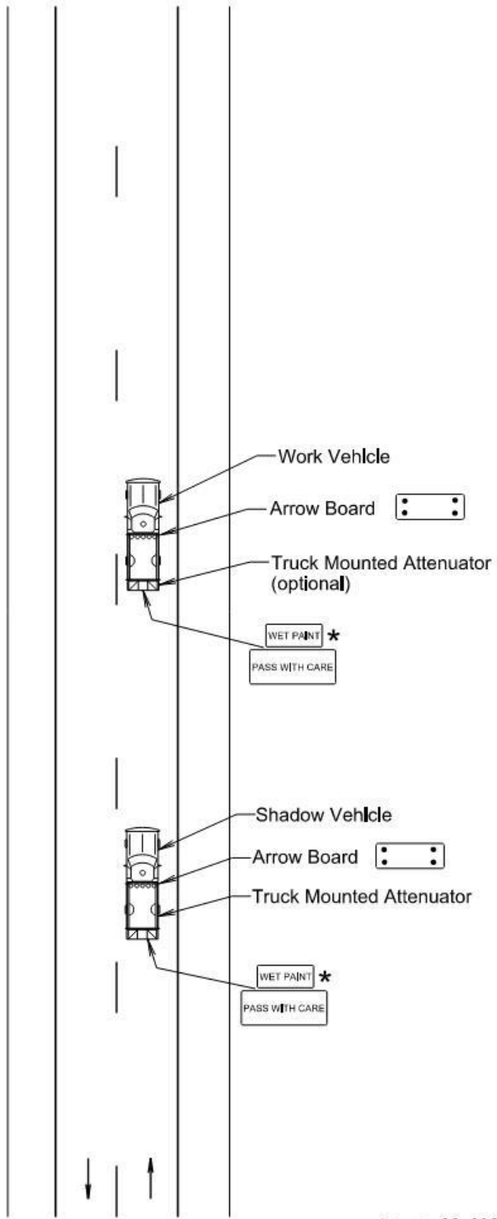
Shadow and Work vehicles will display high-intensity rotating, flashing, oscillating, or strobe lights, flags, signs, or arrow boards.

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".

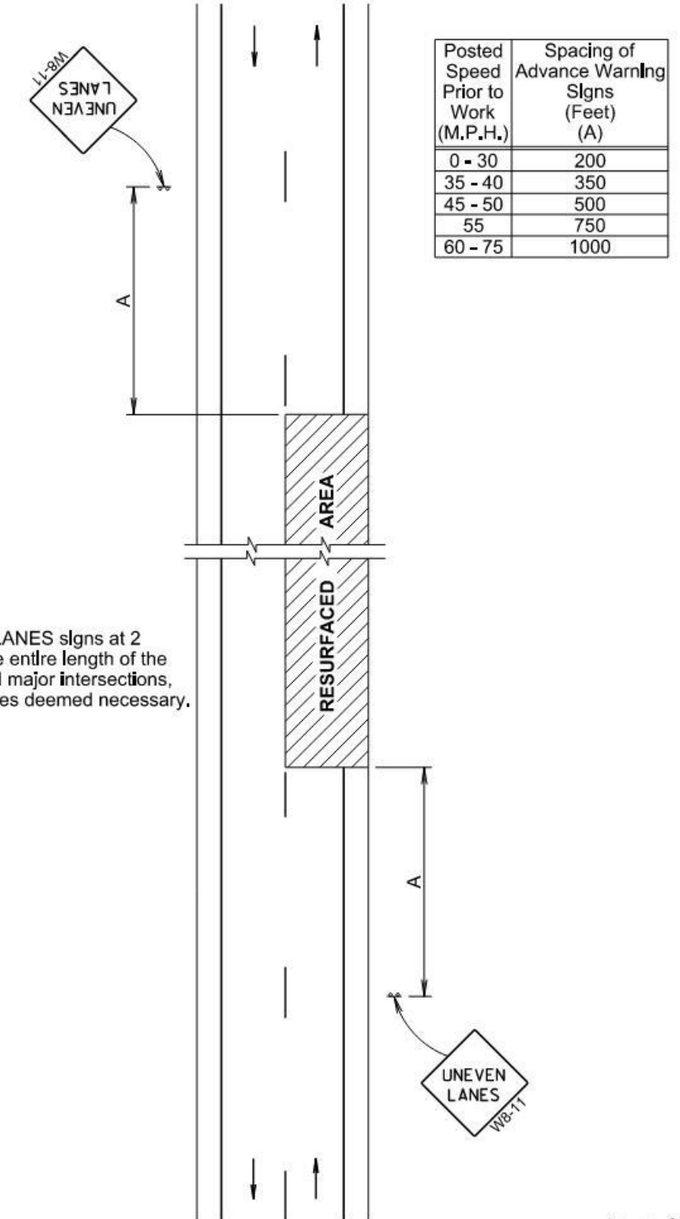
All costs associated with the traffic control for mobile operation including signs, arrow boards and equipment will be incidental to the contract lump sum price for "Traffic Control, Miscellaneous".



January 22, 2021

Published Date: 2025	SDDOT	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)
0 - 30	200
35 - 40	350
45 - 50	500
55	750
60 - 75	1000



Install additional UNEVEN LANES signs at 2 mile intervals throughout the entire length of the uneven area and at affected major intersections, edge of towns, and other sites deemed necessary.

January 22, 2021

Published Date: 2025	SDDOT	UNEVEN ROAD SURFACE	PLATE NUMBER 634.22
			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.

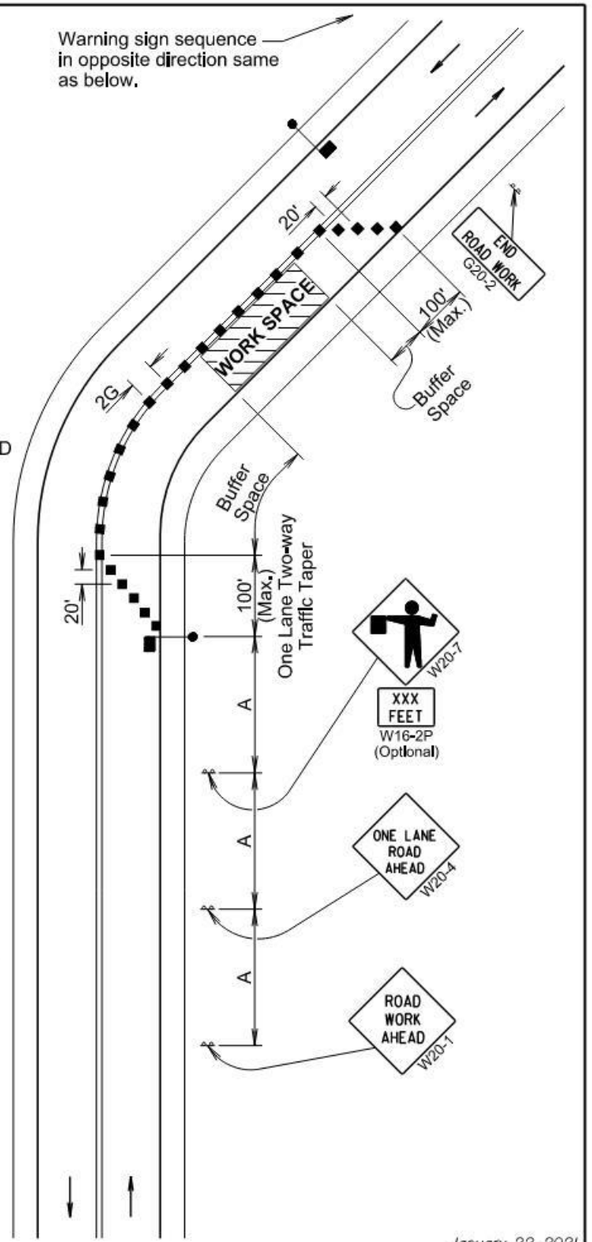
Channelizing devices are not required along the centerline adjacent to work area when pilot cars are utilized for escorting traffic through the work area.

END ROAD WORK G20-2

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: 2025	SDDOT	LANE CLOSURE WITH FLAGGER PROVIDED	PLATE NUMBER 634.23
			Sheet 1 of 1

Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)	Taper Length (Feet) (L)	Spacing of Channelizing Devices (Feet) (G)
0 - 30	200	180	25
35 - 40	350	320	25
45	500	600	25
50	500	600	50
55	750	660	50
60 - 65	1000	780	50

(24 W) 24" White Temporary Pavement Marking

(4 Y) 4" Yellow Temporary Pavement Marking

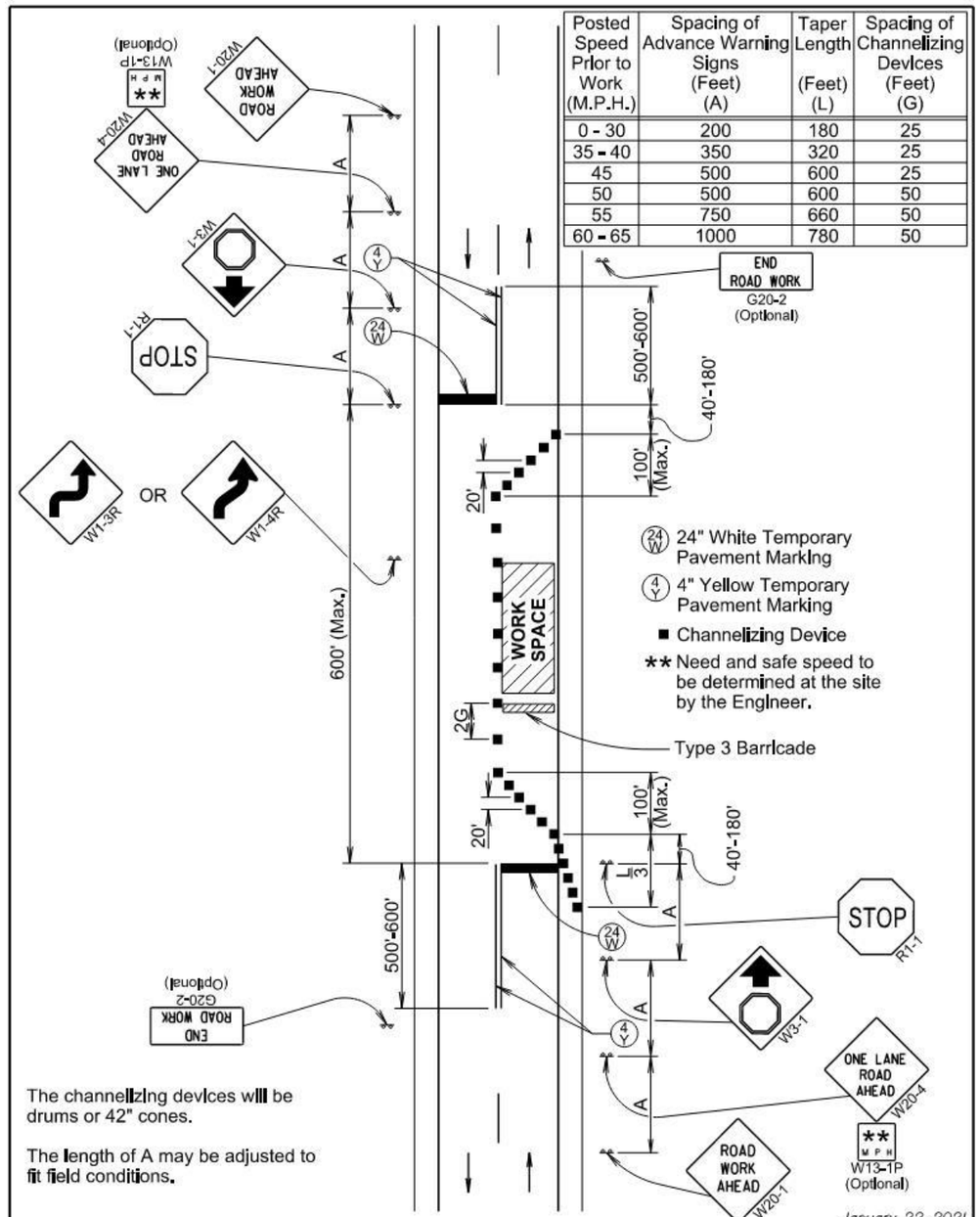
■ Channelizing Device

** Need and safe speed to be determined at the site by the Engineer.

Type 3 Barricade

The channelizing devices will be drums or 42" cones.

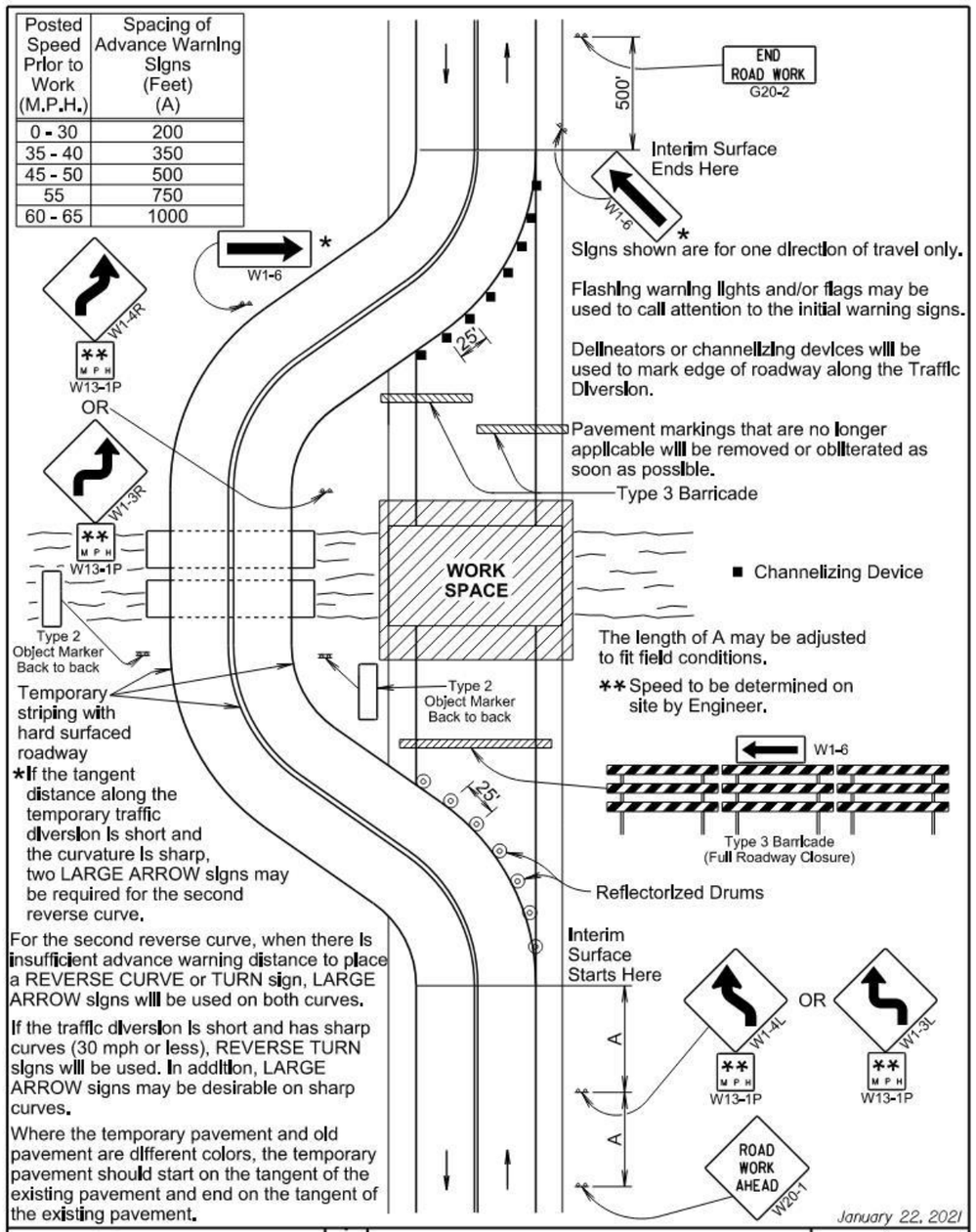
The length of A may be adjusted to fit field conditions.



January 22, 2021

Published Date: 2025	SDDOT	LANE CLOSURE USING STOP SIGNS	PLATE NUMBER 634.25
			Sheet 1 of 1

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



■ Channelizing Device

Signs shown are for one direction of travel only.

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

Delineators or channelizing devices will be used to mark edge of roadway along the Traffic Diversion.

Pavement markings that are no longer applicable will be removed or obliterated as soon as possible.

Type 3 Barricade

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

** Speed to be determined on site by Engineer.

*If the tangent distance along the temporary traffic diversion is short and the curvature is sharp, two LARGE ARROW signs may be required for the second reverse curve.

For the second reverse curve, when there is insufficient advance warning distance to place a REVERSE CURVE or TURN sign, LARGE ARROW signs will be used on both curves.

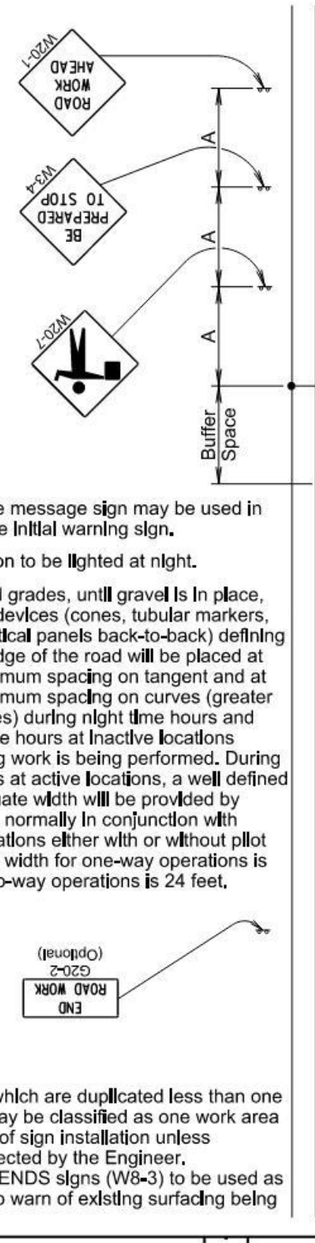
If the traffic diversion is short and has sharp curves (30 mph or less), REVERSE TURN signs will be used. In addition, LARGE ARROW signs may be desirable on sharp curves.

Where the temporary pavement and old pavement are different colors, the temporary pavement should start on the tangent of the existing pavement and end on the tangent of the existing pavement.

January 22, 2021

Published Date: 2025	SDDOT	ROAD CLOSED WITH TRAFFIC DIVERTED	PLATE NUMBER 634.28
			Sheet 1 of 1

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



A changeable message sign may be used in addition to the initial warning sign.

Flagger station to be lighted at night.

On unfinished grades, until gravel is in place, reflectorized devices (cones, tubular markers, drums, or vertical panels back-to-back) defining the outside edge of the road will be placed at 264 feet maximum spacing on tangent and at 132 feet maximum spacing on curves (greater than 3 degrees) during night time hours and during daytime hours at inactive locations where grading work is being performed. During daytime hours at active locations, a well defined path of adequate width will be provided by motor grader, normally in conjunction with flagging operations either with or without pilot car. Minimum width for one-way operations is 12 feet for two-way operations is 24 feet.

Work areas which are duplicated less than one mile apart, may be classified as one work area for purposes of sign installation unless otherwise directed by the Engineer. PAVEMENT ENDS signs (W8-3) to be used as appropriate to warn of existing surfacing being removed.

Flagger

Posted Speed Prior to Work (M.P.H.)	Length of Longitudinal Buffer Space (Feet)
20	115
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645

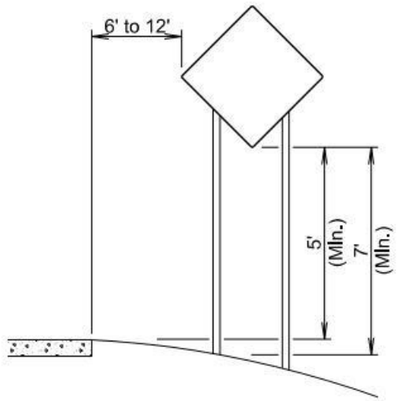
Buffer space dependent on work site limitations.

January 22, 2021

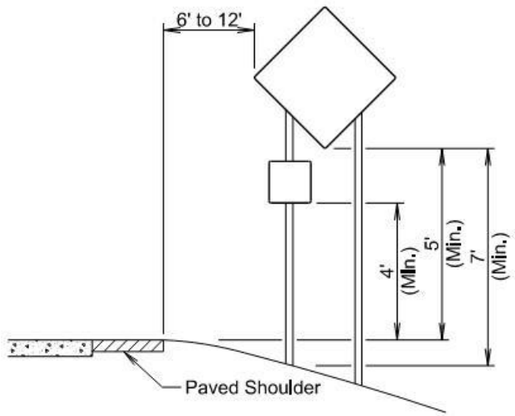
Published Date: 2025	SDDOT	LONG TERM ROAD WORK	PLATE NUMBER 634.31
			Sheet 1 of 1

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0047(113)42	C11	C11

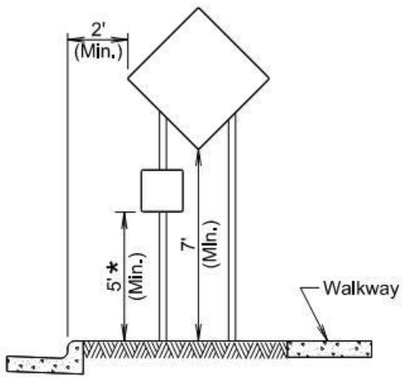
Plotting Date: 8/22/2024



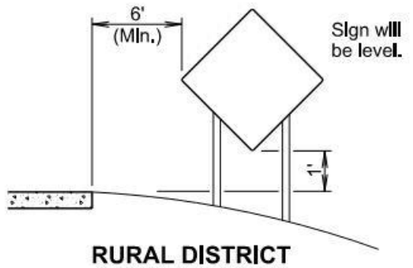
RURAL DISTRICT



RURAL DISTRICT WITH SUPPLEMENTAL PLATE



URBAN DISTRICT

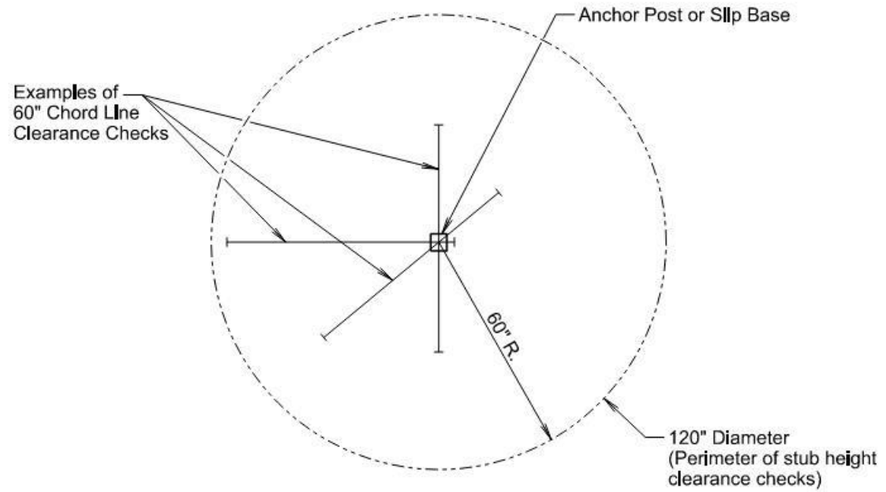


RURAL DISTRICT
3 DAY MAXIMUM
(Not applicable to regulatory signs)

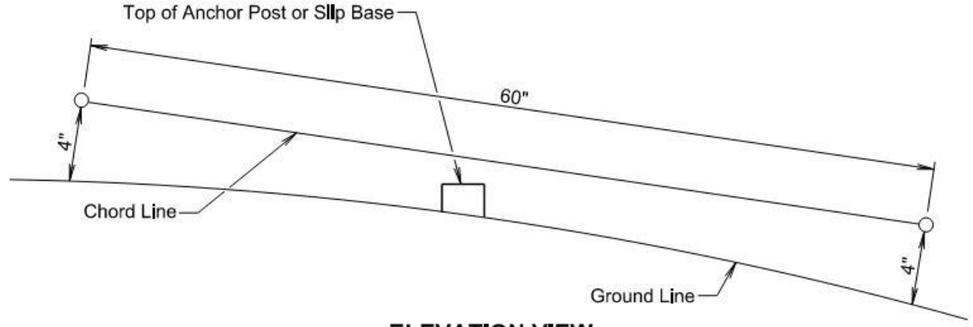
* If the bottom of supplemental plate is mounted lower than 7 feet above a pedestrian walkway, the supplemental plate should not project more than 4" into the pedestrian facility.

January 22, 2021

Published Date: 2024	SDDOT	CRASHWORTHY SIGN SUPPORTS (Typical Construction Signing)	PLATE NUMBER 634.85
			Sheet 1 of 1



PLAN VIEW
(Examples of stub height clearance checks)



ELEVATION VIEW

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

Published Date: 2024	SDDOT	BREAKAWAY SUPPORT STUB CLEARANCE	PLATE NUMBER 634.99
			Sheet 1 of 1