STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	018E-492 & 079N-492	1	10

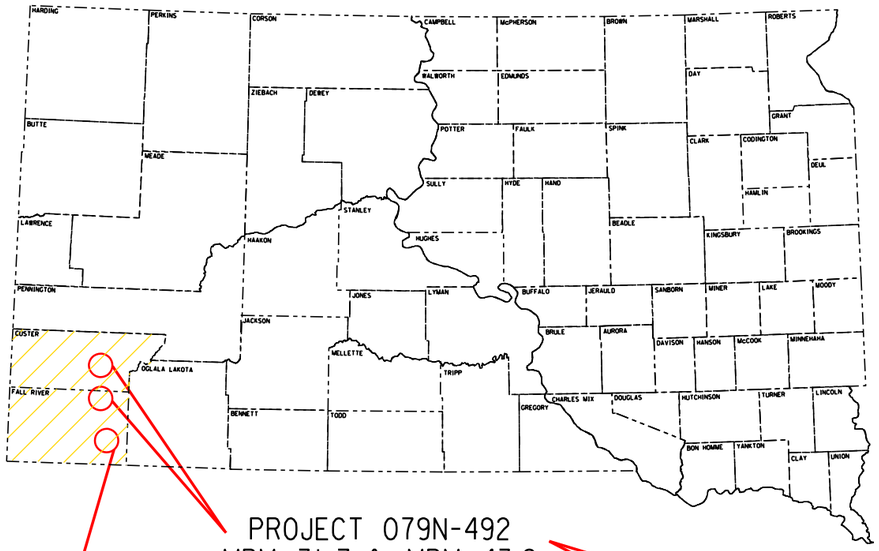
Plotting Date: 03/30/2016

STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION
PLANS FOR PROPOSED

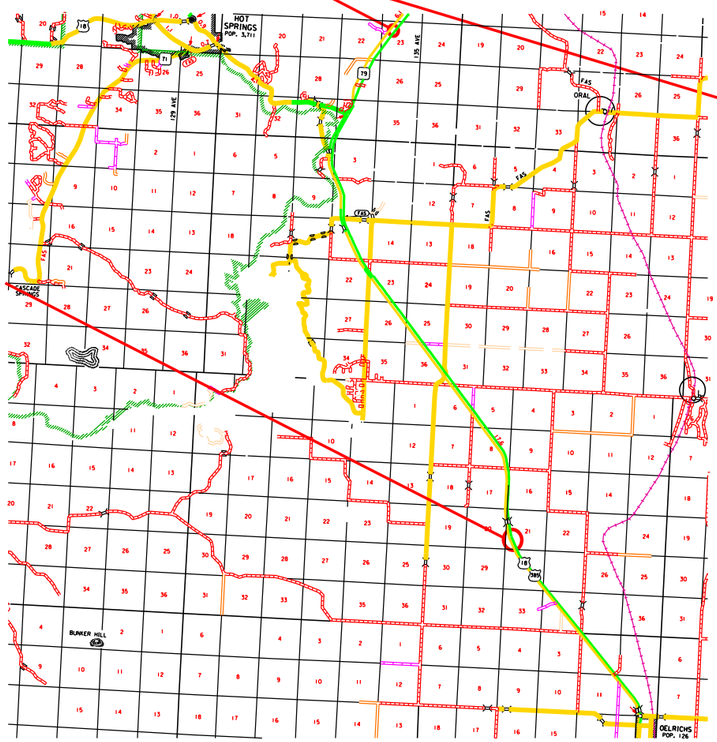
PROJECTS 018E–492 & 079N–492
US HIGHWAY 18
& SD HIGHWAY 79
FALL RIVER & CUSTER COUNTIES

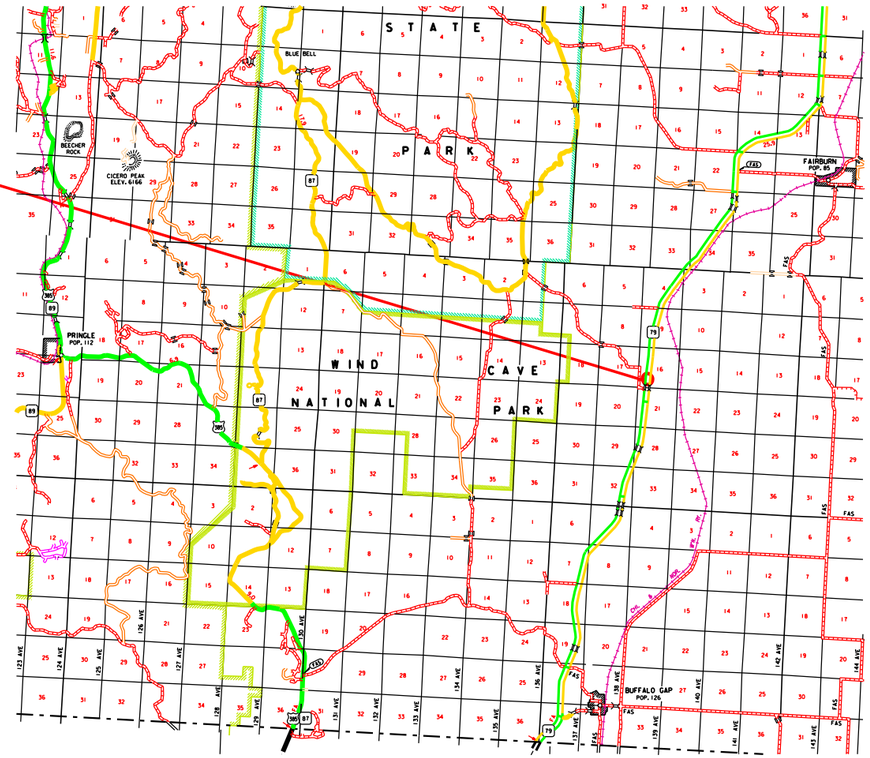
Asphalt Concrete Patching
PCN i45D & PCN i44W

INDEX OF SHEETS



PROJECT 079N-492
MRM 31.7 & MRM 43.2





PROJECT 018E-492
MRM 57.1

US 18 E DESIGN DESIGNATION

ADT (2015)	1072
ADT (2035)	1358
DHV	168.4
D	50%
T DHV	10.8%
T ADT	23.8%
V	70

SD 79 N DESIGN DESIGNATION

ADT (2015)	1787
ADT (2035)	2195
DHV	272.2
D	50%
T DHV	9.7%
T ADT	21.3%
V	70

STORM WATER PERMIT
No Permit Required

Gross Length	930 FEET	0.176 MILES
Length of Exceptions	0.00 FEET	0.000 MILES
Net Length	930 FEET	0.176 MILES

Plot Scale - 1:200
Plotted From - trou10208
File - ...title.dgn

ESTIMATE OF QUANTITIES

PCN i45D

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
320E1200	Asphalt Concrete Composite	323.9	Ton
633E1200	Waterborne Pavement Marking Paint with High Grade Polymer, White	5	Gal
633E1205	Waterborne Pavement Marking Paint with High Grade Polymer,Yellow	3	Gal
634E0010	Flagging	64.0	Hour
634E0110	Traffic Control Signs	644	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0285	Type 3 Barricade, 8' Double Sided	2	Each
634E0420	Type C Advance Warning Arrow Board	2	Each
634E0640	Temporary Pavement Marking	650	Ft

PCN i44W

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
320E1200	Asphalt Concrete Composite	126.8	Ton
633E1200	Waterborne Pavement Marking Paint with High Grade Polymer, White	2	Gal
633E1205	Waterborne Pavement Marking Paint with High Grade Polymer,Yellow	2	Gal
634E0010	Flagging	24.0	Hour
634E0110	Traffic Control Signs	358	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0285	Type 3 Barricade, 8' Double Sided	1	Each
634E0420	Type C Advance Warning Arrow Board	1	Each
634E0640	Temporary Pavement Marking	280	Ft

SPECIFICATIONS

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

SEQUENCE OF OPERATIONS

1. Set up traffic control to close one lane.
2. Complete single lane Asphalt Patching.
3. Switch traffic control to close adjacent lane.
4. Complete adjacent lane Asphalt Patching
5. Install Temporary Pavement Marking.
6. Install Permanent Pavement Marking.
7. Remove traffic control.

ENVIRONMENTAL COMMITMENTS

An Environmental Commitment is a measure that SDDOT commits to implement in order to avoid, minimize, and/or mitigate a real or potential environmental impact. Environmental commitments to various agencies and the public have been made to secure approval of this project. An agency mentioned below with permitting authority can influence a project if perceived 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. These environmental commitments are not subject to change without prior written approval from the SDDOT Environmental Office. The environmental commitments associated with this project are as follows:

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 shall 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 State ROW.

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

The waste disposal site(s) shall 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 Project Engineer.

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

1. Construction and/or demolition debris consisting of concrete, asphalt concrete, or other similar materials shall be buried in a trench completely separate from wood debris. The final cover over the construction and/or demolition debris shall consist of a minimum of 1 foot of soil capable of supporting vegetation. Waste disposal sites provided outside of the State ROW shall be seeded in accordance with Natural Resources Conservation Service recommendations. The seeding recommendations may be obtained through the appropriate County NRCS Office. The Contractor shall control the access to waste disposal sites not within the State ROW through the use of 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 of time not to exceed the duration of the project. Prior to project completion, the waste shall 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) shall 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 designated option borrow sites provided within the plans.

Action Taken/Required:

All earth disturbing activities not designated within the plans require review of cultural resources impacts. This work includes, but is not limited to: staging areas, borrow sites, waste disposal sites, and all material processing sites.

The Contractor shall arrange and pay for a cultural resource survey and/or records search. 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; however, a cultural resources survey may need to be conducted by a qualified archaeologist.

The Contractor shall provide ARC with the following: a topographical map or aerial view on 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 shall submit the records search or cultural resources survey report and if the location of the site is within the current geographical or historic boundaries of any South Dakota reservation to SDDOT Environmental Engineer, 700 East Broadway Avenue, Pierre, SD 57501-2586 (605-773-3180). 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.

If evidence for cultural resources is uncovered during project construction activities, then such activities shall cease and the Project Engineer shall be immediately notified. The Project Engineer will contact the SDDOT Environmental Engineer in order 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 staging areas, borrow sites, waste disposal sites, or material processing sites that affect wetlands, threatened and endangered species, or waterways. The Contractor shall provide the required permits and clearances to the Project Engineer at the preconstruction meeting.

ASPHALT CONCRETE COMPOSITE

Asphalt Concrete Composite shall be furnished by the Contractor.

Mineral Aggregate for Asphalt Concrete Composite shall conform to the requirements of the Standard Specifications for Class E, Type 1 Asphalt Concrete Specifications.

SS-1h or CSS-1h Emulsified Asphalt for Tack shall be applied at the rate of 0.05 gallons per square yard.

The asphalt binder used in the mixture shall be PG 58-28, PG 64-22 or PG 64-28 Asphalt Binder.

A Flush Seal will not be required on the asphalt concrete patching.

Locations and quantities of asphalt repair are subject to change. The exact locations will be determined in the field by the Engineer. The Engineer reserves the right to adjust quantities and/or add locations at no additional cost to the state.

SURFACING THICKNESS DIMENSIONS

Plans tonnage will be applied even though the thickness may vary from that shown in the plans. At those locations where material must be placed to achieve a required elevation for smoothness, plans tonnage may be varied to achieve the required elevation.

TABLE(S) OF ASPHALT CONCRETE REPAIR

PCN i45D

Highway	MRM to	MRM	Description	Width (Ft)	Length (Ft)	Depth (Inches)	Asphalt Concrete Composite (Tons)	Temporary Pavement Marking (Feet)	Pavement Marking Paint, Yellow (Gal)	Pavement Marking Paint, White (Gal)
US 18 E	57.100	57.153	Full Width of Pavement	36	280	2.0	126.8	280	2	2
				Totals	**280**		**126.8**	**280**	**2**	**2**

PCN i44W

Highway	MRM to	MRM	Description	Width (Ft)	Length (Ft)	Depth (Inches)	Asphalt Concrete Composite (Tons)	Temporary Pavement Marking (Feet)	Pavement Marking Paint, Yellow (Gal)	Pavement Marking Paint, White (Gal)
SD 79 N	43.200	43.276	Full Width of Pavement	40	400	2.0	201.3	400	2	3
SD 79 N	31.700	31.747	Full Width of Pavement	39	250	2.0	122.6	250	1	2
				Totals	**650**		**323.9**	**650**	**3**	**5**

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TRAFFIC CONTROL – GENERAL NOTES

1. Each construction work area shall be individually signed throughout the entire length of the construction work area.

2. Requests to deviate from the sequence of operations shall be submitted in writing to the Engineer for review. Approval of an alternate 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. An alternate sequence shall be submitted for review a minimum of one week prior to potential implementation.

3. Unless otherwise stated in these plans, no work will be allowed during hours of darkness.

4. Indiscriminate driving and parking of vehicles within the right-of-way will not be permitted. Any damage of the vegetation, surfacing, embankment, delineators, and existing signs resulting from such indiscriminate use shall be repaired and/or restored by the Contractor, at no expense to the State, and to the satisfaction of the Engineer.

5. Existing guide, route, informational logo, regulatory, warning signs and delineation shall be temporarily reset and maintained during construction as directed by the Engineer. Removing, relocating, salvaging and resetting of the above items shall be the responsibility of the Contractor.

6. Construction signing mounted on portable supports shall not be used for a duration of more than 3 days, unless approved by the Engineer. Construction signing that remains in the same location for more than 3 days shall be mounted on fixed location, ground mounted, breakaway supports.

7. Any delineators and signs damaged or lost shall be replaced by the Contractor at no cost to the State.

8. All materials and equipment shall be stored a minimum distance of 30' from the traveled way during nonworking hours.

9. The Contractor shall provide installation details at the preconstruction meeting for all breakaway sign support assemblies.

10. All haul trucks shall be equipped with a second flashing amber light that is visible from the backside of the haul truck. The costs for the flashing amber lights shall be incidental to the various related contract bid items.

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

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

13. Temporary Flexible Vertical Markers (Tabs) shall be used for lane closure tapers or lane shift tapers and shall be installed at 5' spacing. Tabs used for tapers and shifts will not be measured for payment. All costs associated to furnish, install, maintain (including replacement as required by the Engineer at no added cost to the Department), and remove all markers will be incidental to the contract lump sum price for Traffic Control, Miscellaneous.

14. At no time shall mainline traffic be exposed to differential elevations in traveling lanes due either to milling or paving operations. All lanes that are milled or paved shall be left closed until the adjacent lane is completed in a similar manner with no drop offs. All transitions shall be paved for a smooth ride as approved by the Engineer..

15. The Contractor shall repeat all applicable construction signing every 2 miles or as directed by the Engineer.

16. The Contractor shall keep the portion of the project being used by public traffic in a condition that will adequately and safely accommodate traffic.

17. Road Work Ahead (W20-1) signs shall be placed at applicable intersecting roads and as directed by the Engineer.

PERMANENT PAVEMENT MARKINGS

All surfaces have existing markings and the Contractor is encouraged to review this route prior to bidding.

The pavement marking paint and glass beads shall be furnished and applied by the Contractor and shall meet the requirements for materials and application as per the Standard Specifications for Roads and Bridges, 2015 Edition. All materials shall be applied as per manufacturer's recommendations.

PAVEMENT MARKING PAINT WITH HIGH GRADE POLYMER

This material shall consist of a durable high build, low VOC, fast drying, waterborne traffic paint with a 100% acrylic polymer (DOW DT-400 or DOW HD-21A or equivalent) and with reflective media adhered to the paint. The reflective media shall consist of glass beads as well as bonded core reflective elements.

The bonded core reflective elements shall contain either clear or yellow tinted microcrystalline ceramic beads bonded to the outer surface. All microcrystalline ceramic beads bonded to reflective elements shall have a minimum index of refraction of 1.8 when tested using the liquid oil immersion method.

The Department will take retro-reflectivity readings on the pavement marking lines no sooner than 3 days and no later than 30 days after the completion of all line applications required for an individual highway route using a portable retro-reflectometer conforming to 30-meter geometry. Retro-reflectivity readings will be taken on a test location with cleaning being limited to light hand brooming.

Pavement markings not conforming to the Retro-reflectivity requirements shall be removed and replaced. If replacement of markings cannot be applied within the same year, the Contractor shall schedule subject work to be completed no later than June 15th in the following year. Upon replacement, the retro-reflectivity testing process will be done again requiring new readings.

The Department will randomly select one test location per mile of each edge line including ramps and one test location per mile of centerline (solid and/or skip line will be considered as one centerline). Three retro-reflectivity readings will be taken at each test location. The three readings will be averaged and become the reading for that test location.

Initial Readings (within 3 - 30 days of the line application):

Pavement Marking Color	Minimum Value
White	350 mcd/m2/lux
Yellow	275 mcd/m2/lux

All pavement markings not conforming to the requirements provided in these plans will be considered deficient and shall be removed and replaced. Additional retro-reflectivity readings will be taken by the Department to determine the limits of removal. The removal shall be accomplished using suitable sand blasting or grinding equipment unless the Engineer authorizes other means. The removal process shall remove at least 90% of the deficient line, with no excessive scarring of the existing pavement. The removal width shall be one inch wider all around the nominal width of the pavement marking to be removed. Removal and replacement of the pavement markings shall be at Contractor's expense, with no cost incurred by the State.

RATES OF MATERIALS FOR HIGH GRADE POLYMER PAINT

Solid 4" Line = 27.8 Gals/Mile
Glass Beads – 5.3 Lbs/Gal
Composite Reflective Elements – 2.1 Lbs/Gal

All cost for materials, labor, and equipment necessary to furnish and install the pavement markings shall be incidental to the contract unit price per gallon for Waterborne Pavement Marking Paint with High Grade Polymer, White or Yellow.

ITEMIZED LIST OF TRAFFIC CONTROL DEVICES

(PCN i45D)

SIGN CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
R2-1	SPEED LIMIT 70	1	36" x 48"	12	12
R2-1	SPEED LIMIT 45	2	36" x 48"	12	24
R2-1	SPEED LIMIT 55	3	36" x 48"	12	36
R2-6aP	FINES DOUBLE (plaque)	1	36" x 24"	6	6
W3-5	SPEED REDUCTION AHEAD (45 MPH)	1	48" x 48"	16	16
W3-5	SPEED REDUCTION AHEAD (55 MPH)	2	48" x 48"	16	32
W4-2	LEFT or RIGHT LANE ENDS (symbol)	2	48" x 48"	16	32
W20-1	ROAD WORK AHEAD	2	48" x 48"	16	32
W20-5	LEFT or RIGHT LANE CLOSED AHEAD	2	48" x 48"	16	32
W20-7	FLAGGER (symbol)	1	48" x 48"	16	16
G20-2	END ROAD WORK	2	48" x 24"	8	16
		EXPRESSWAY / INTERSTATE TRAFFIC CONTROL SIGNS SQFT			358

TYPE 3 BARRICADES

ITEM DESCRIPTION	QUANTITY
Type 3 Barricade, 8' Double Sided	1 Each

ARROW BOARDS

ITEM DESCRIPTION	QUANTITY
Type C Arrow Board	1 Each

(PCN i44w)

		EXPRESSWAY / INTERSTATE			
SIGN CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
R2-1	SPEED LIMIT 70	2	36" x 48"	12	24
R2-1	SPEED LIMIT 45	4	36" x 48"	12	48
R2-1	SPEED LIMIT 55	6	36" x 48"	12	72
R2-6aP	FINES DOUBLE (plaque)	2	36" x 24"	6	12
W3-5	SPEED REDUCTION AHEAD (45 MPH)	2	48" x 48"	16	32
W3-5	SPEED REDUCTION AHEAD (55 MPH)	4	48" x 48"	16	64
W4-2	LEFT or RIGHT LANE ENDS (symbol)	4	48" x 48"	16	64
W20-1	ROAD WORK AHEAD	6	48" x 48"	16	96
W20-5	LEFT or RIGHT LANE CLOSED AHEAD	4	48" x 48"	16	64
W20-7	FLAGGER (symbol)	2	48" x 48"	16	32
G20-2	END ROAD WORK	4	48" x 24"	8	32
		EXPRESSWAY / INTERSTATE TRAFFIC CONTROL SIGNS SQFT			644

TYPE 3 BARRICADES

ITEM DESCRIPTION	QUANTITY
Type 3 Barricade, 8' Double Sided	2 Each

ARROW BOARDS

ITEM DESCRIPTION	QUANTITY
Type C Arrow Board	2 Each

REFLECTORIZED SHEETING REQUIREMENTS FOR TEMPORARY TRAFFIC CONTROL DEVICES

Delete the first paragraph of Section 984.1 and replace with the following:

Temporary traffic control devices, including signs, drums, cones, tubular markers, barricades, vertical panels, and direction indicator barricades shall be reflectorized with sheeting applied to a satisfactory backing. Flat surfaced temporary traffic control devices including, but not limited to; signs, barricades, vertical panels, and direction indicator barricades shall be reflectorized with super/very high intensity reflectorized sheeting meeting the standards of Type XI as defined by AASHTO M 268 (ASTM D4956). Round surfaced temporary traffic control devices including, but not limited to; drums, cones, and tubular markers shall be reflectorized with high intensity reflectorized sheeting meeting the standards of Type IV as defined by AASHTO M 268 (ASTM D4956). All orange colored material shall be fluorescent.

TEMPORARY PAVEMENT MARKING

Temporary pavement marking paint shall be used on micro-milled surfaces. Temporary pavement marking paint shall be used for centerline delineation and lane line as directed by the Engineer. The Contractor shall conduct his milling and paving operations such that the surfaces only need to be temporarily painted once. The total quantity for performing this work is 7.881 Miles. Paint shall not be used for Temporary Pavement Marking on the top lift of asphalt concrete.

Temporary Flexible Vertical Markers (Tabs) with covers shall be used on the top lift of asphalt surfacing. After completion of the Flush Seal, the protective covers on the temporary road markers shall be removed. The total quantity for performing this work is 3.21 miles for PCN 04E6 and 4.7 miles for PCN 05MP.
Tabs shall be used on the top lift of asphalt surfacing until permanent pavement marking is applied, and as directed by Engineer.

Tabs shall be attached to the roadway surface with a flexible non-permanent bituminous adhesive capable of being removed from the roadway surface or with an adhesive approved by the Engineer.

The Tabs shall be installed at 5-foot spacing and will be paid for at the contract unit price per foot per 4" line for both Yellow and White markers. The contract unit price per mile for Temporary Pavement Marking will be full compensation for all costs associated to furnish, install, maintain (including replacement as required by the Engineer at no added cost to the Department), and remove all markers.

Flagger symbol signs (W20-7) and flaggers, or a shadow vehicle with rotating yellow lights or strobe lights shall be positioned on the roadway shoulder in advance of workers for both directions of traffic during the installation of temporary road markers. The traffic control device used shall be moved to provide proper warning of the work operation. A ROAD WORK AHEAD (W20-1), a Worker symbol sign (W21-1) or a BE PREPARED TO STOP (W3-4) warning sign shall be mounted on the rear of the shadow vehicle. The method of traffic control used by the Contractor for this work shall be approved by the Engineer.

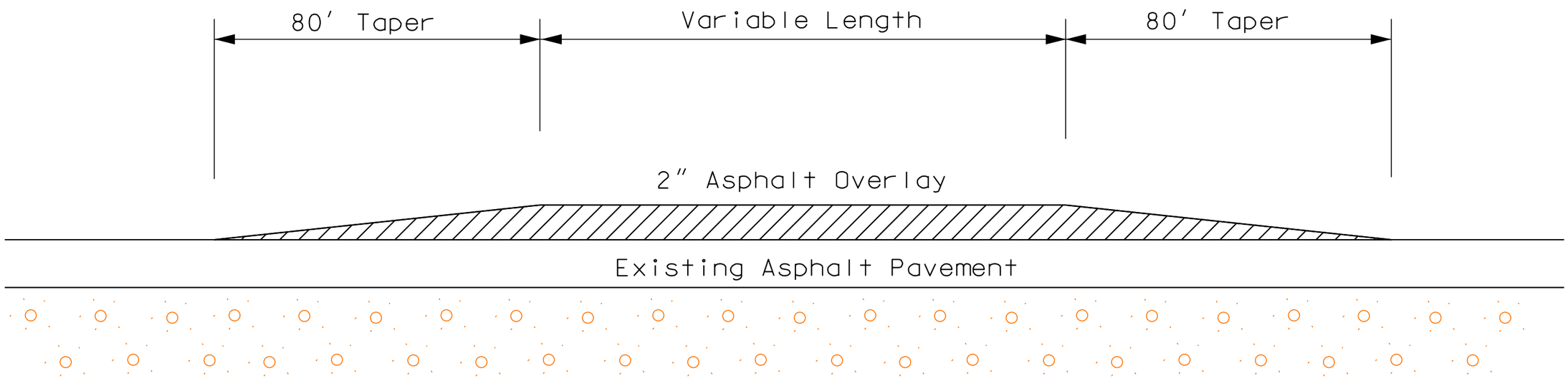
All costs for temporary pavement marking including furnishing, applying, uncovering, maintenance and removal of tabs shall be incidental to the contract unit price per mile for Temporary Pavement Marking.

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	018E-492 & 079N-492	6	10

Plotting Date: 02/23/2016

TAPERS AT EACH END OF ASPHALT PATCHES

LONGITUDINAL SECTION ALONG CENTERLINE
(FULL ROADWAY WIDTH)

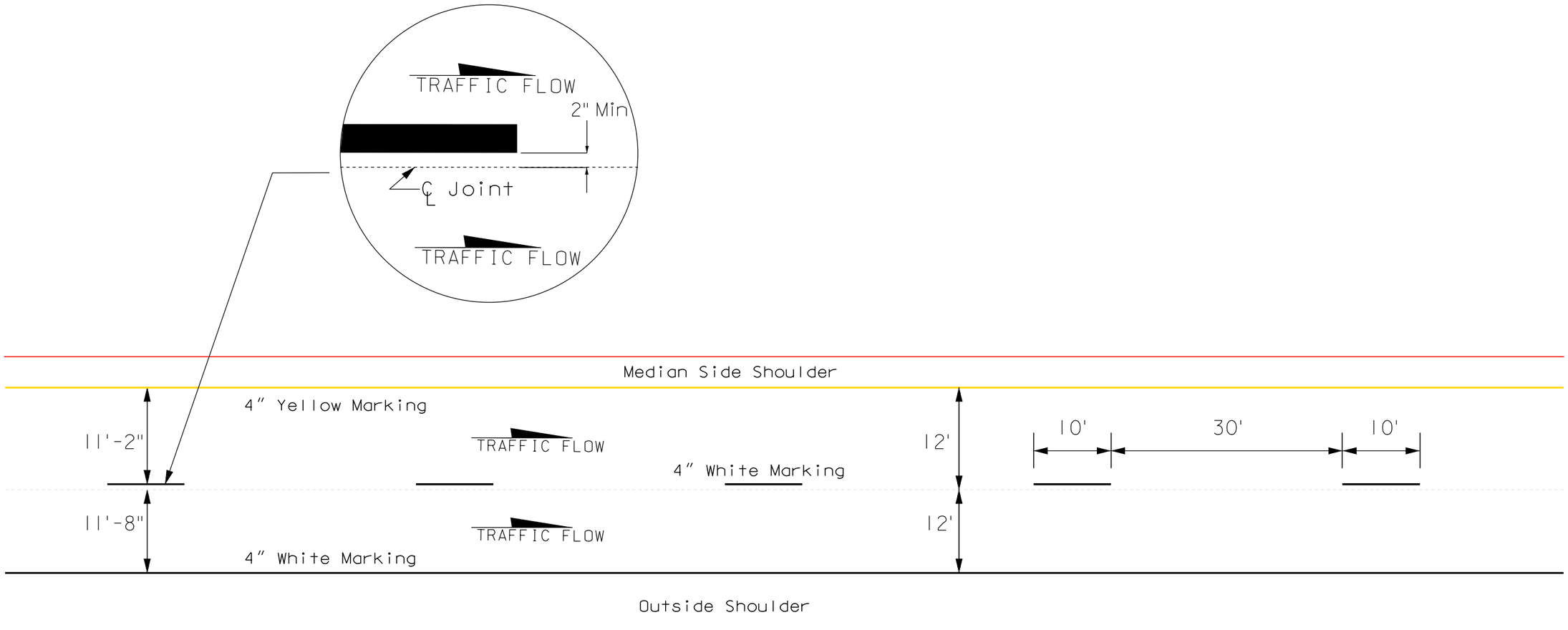


STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	018E-492 & 079N-492	7	10

Plotting Date: 02/23/2016

PAVEMENT MARKING LAYOUT

(TYPICAL 4-LANE DIVIDED)



Vehicle-mounted signs shall be mounted in a manner such that they are not obscured by equipment or supplies.

Sign legends on vehicle-mounted signs shall be covered or turned from view when work is not in progress.

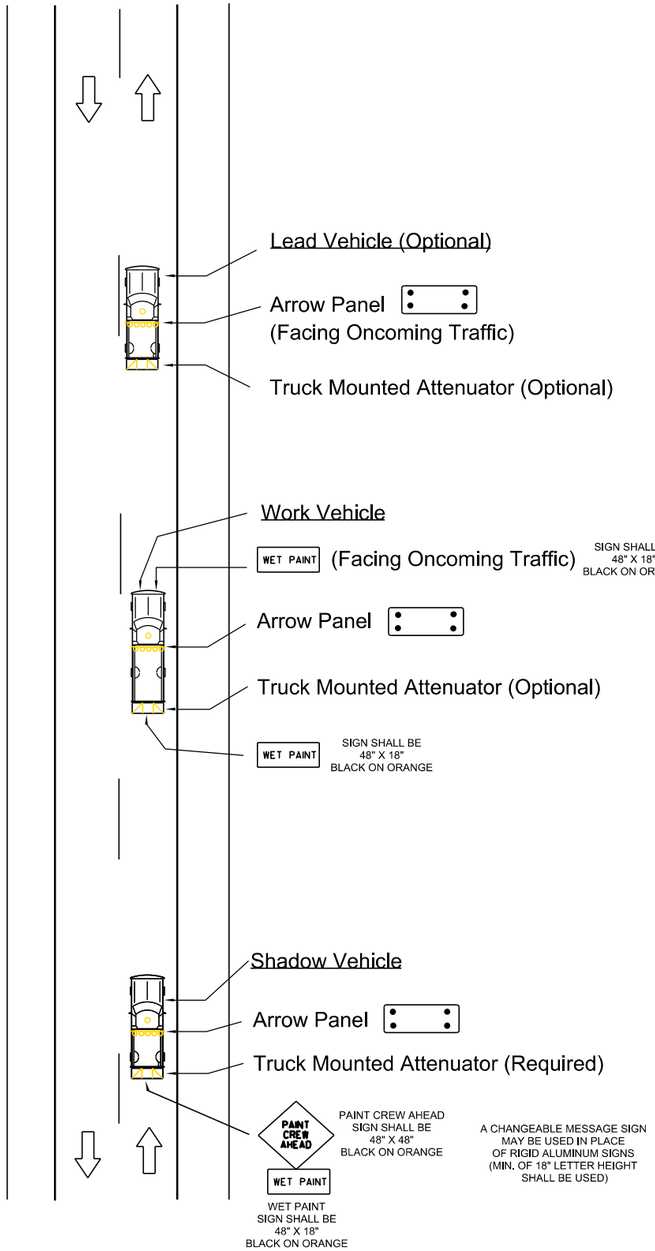
Shadow and Work vehicles shall display high-intensity rotating, flashing, oscillating, or strobe lights, flags, signs, or arrow panels.

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

When an arrow panel is used, it shall be used in the caution mode.

Marching Diamonds are acceptable.

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



GUIDES FOR TRAFFIC CONTROL DEVICES MOBILE OPERATIONS 0N 2-LANE ROAD

MOBILE: Intermittent & Continuous Moving

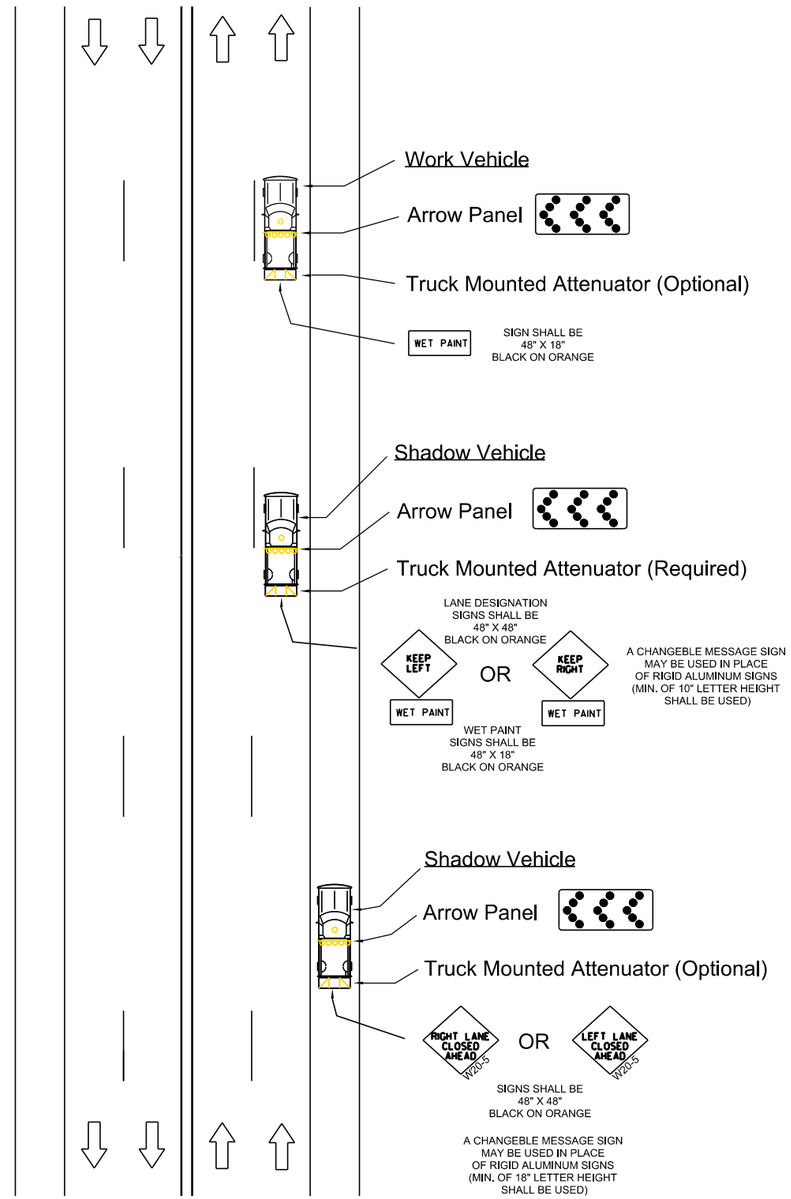
Vehicle-mounted signs shall be mounted in a manner such that they are not obscured by equipment or supplies.

Sign legends on vehicle-mounted signs shall be covered or turned from view when work is not in progress.

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

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

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



GUIDES FOR TRAFFIC CONTROL DEVICES MOBILE OPERATIONS 0N 4-LANE DIVIDED

MOBILE: Intermittent & Continuous Moving

Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A) (B) (C)
0 - 30	200
35 - 40	350
45 - 50	500
55	750
60 - 65	1000
	(A) (B) (C)
70 - 80	1000 1500 2640

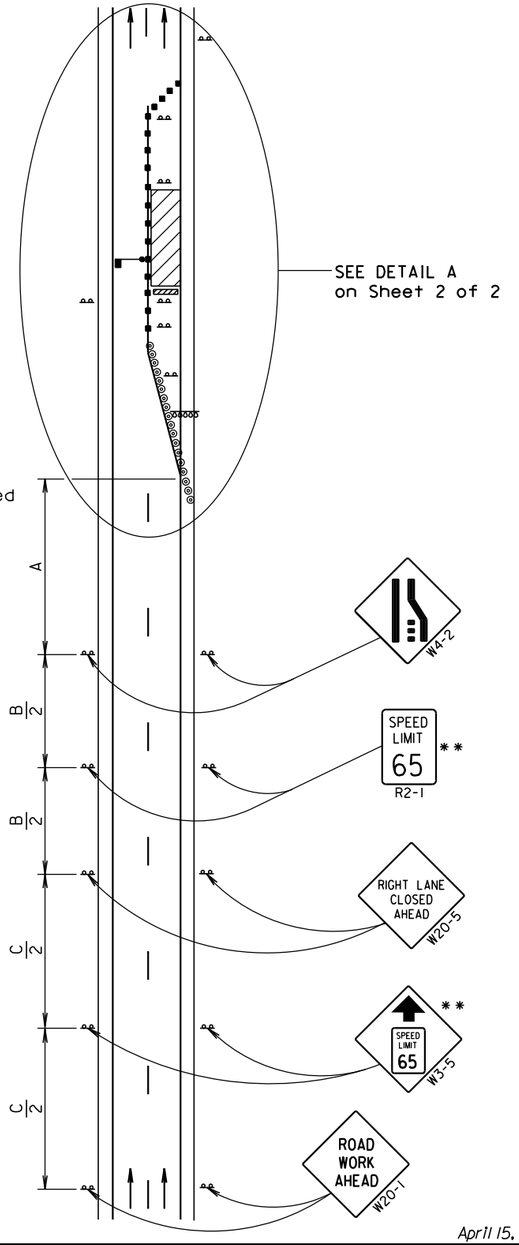
** Speed appropriate for location.

◎ Reflectorized Drum

■ Channelizing Device

ROAD WORK AHEAD sign is only required in advance of the first lane closure.

High speed is defined as having a posted speed limit greater than 45 mph.



April 15, 2015

Published Date: 1st Qtr. 2016	SDDOT	WORK ZONE SPEED REDUCTION FOR INTERSTATE AND HIGH SPEED MULTI-LANE HIGHWAYS	PLATE NUMBER 634.63	Sheet 1 of 2

Posted Speed Prior to Work (M.P.H.)	Spacing of Channelizing Devices (Feet) (G)	Taper Length (Feet) (L)
0 - 30	25	180
35 - 40	25	320
45 - 50	50 *	600
55	50 *	660
60 - 65	50 *	780
70 - 80	50 *	960

* Spacing is 40' for 42" cones.

**Speed appropriate for location.

***Use speed limit designated for the condition when workers are present in the work space. Signs shall be covered or removed when workers are not present.

■—● Flagger (As Necessary)

◎ Reflectorized Drum

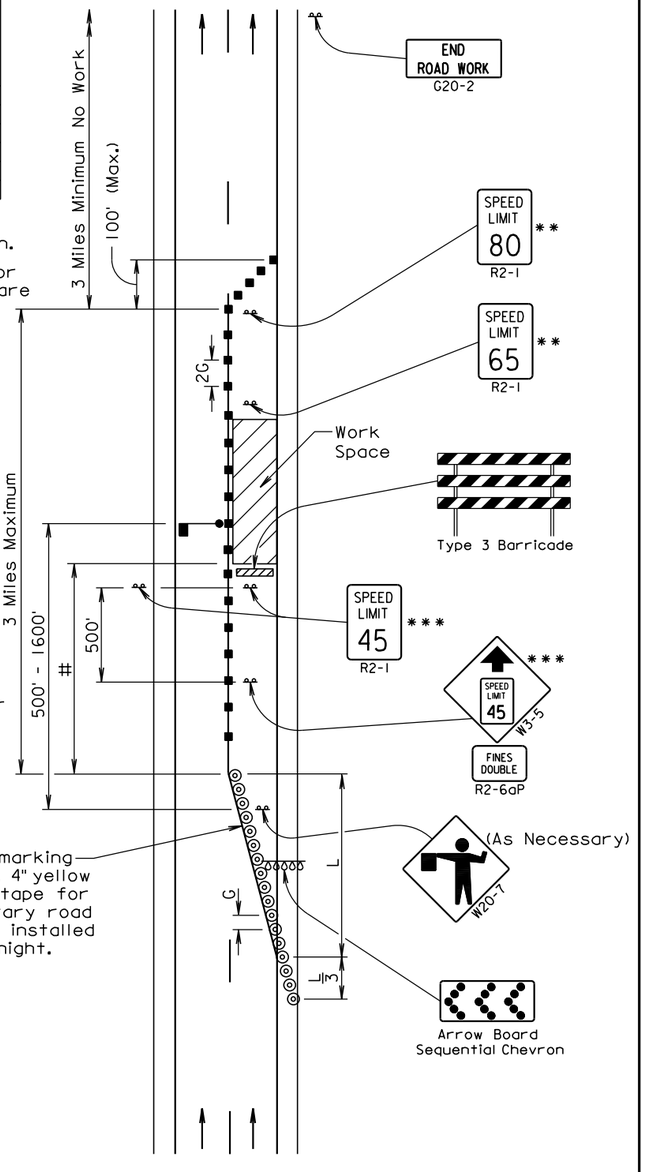
■ Channelizing Device

The Work Space shall be a minimum of 500' from the end of the taper.

The FLAGGER sign shall be used whenever there is a Flagger present.

The channelizing devices shall be 42" cones or drums.

42" cones may be used in place of the drums shown in the taper if setup will not be used during night time hours.

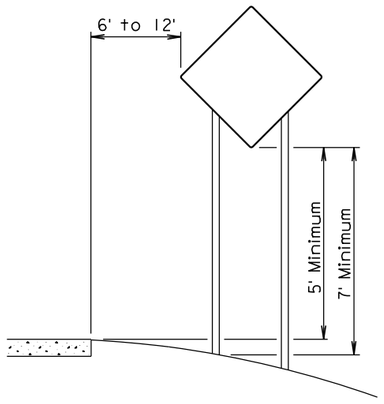


4" white temporary pavement marking tape for right lane closures, 4" yellow temporary pavement marking tape for left lane closures, or temporary road markers at 5' spacing shall be installed when the lane is closed overnight.

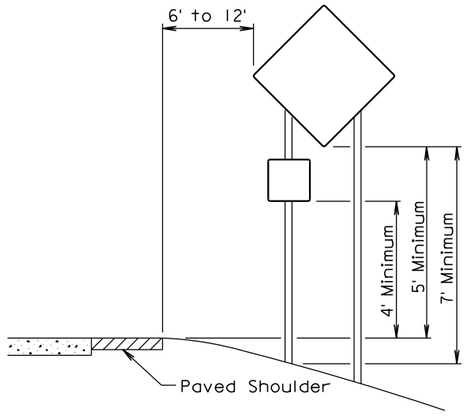
DETAIL A

April 15, 2015

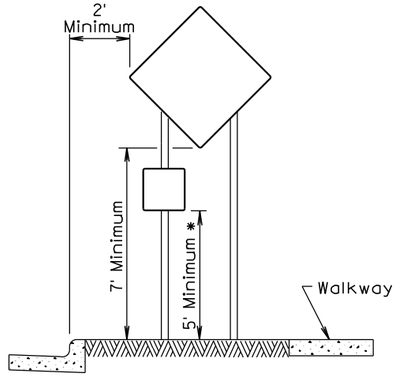
Published Date: 1st Qtr. 2016	SDDOT	WORK ZONE SPEED REDUCTION FOR INTERSTATE AND HIGH SPEED MULTI-LANE HIGHWAYS	PLATE NUMBER 634.63	Sheet 2 of 2



RURAL DISTRICT

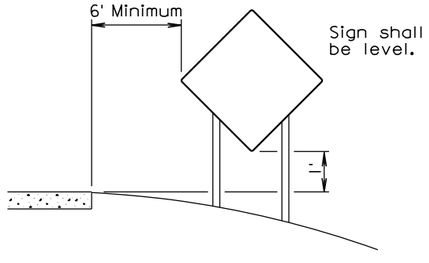


RURAL DISTRICT WITH SUPPLEMENTAL PLATE



URBAN DISTRICT

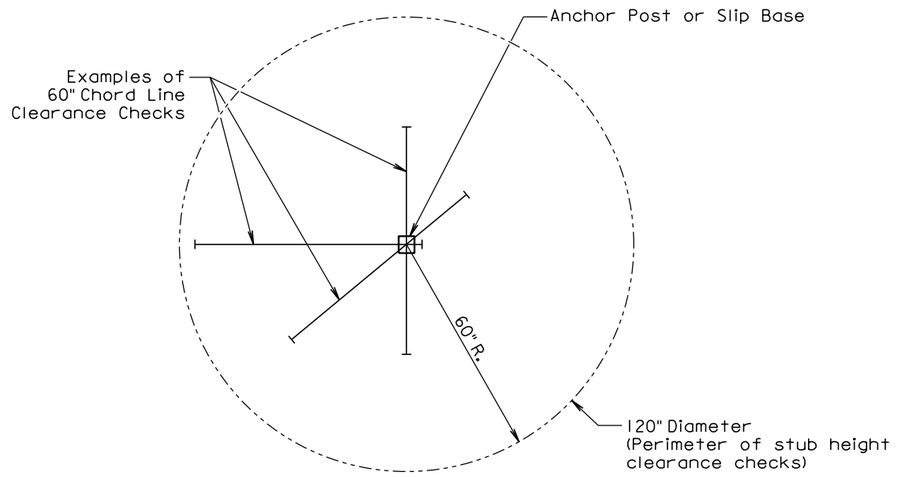
* If the bottom of supplemental plate is mounted lower than 7 feet above a pedestrian walkway, the supplemental plate should not project more than 4" into the pedestrian facility.



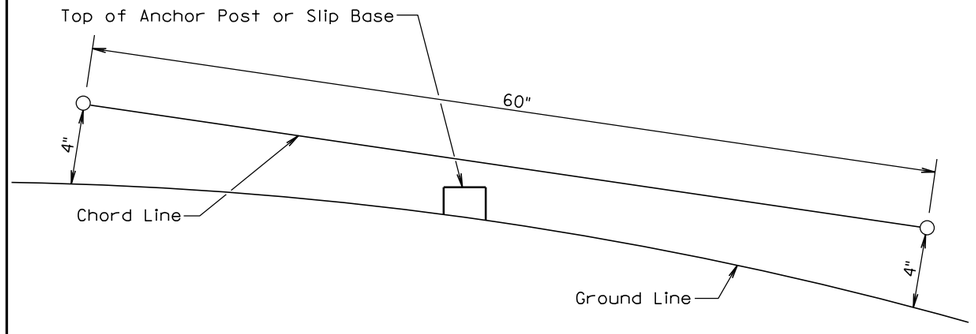
RURAL DISTRICT
3 DAY MAXIMUM
(Not applicable to regulatory signs)

September 22, 2014

Published Date: 1st Qtr. 2016	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 SHALL 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 shall 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.

July 1, 2005

Published Date: 1st Qtr. 2016	SDDOT	BREAKAWAY SUPPORT STUB CLEARANCE	PLATE NUMBER 634.99
			Sheet 1 of 1