Plot Scale - 1:200
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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	090E-451	1	12

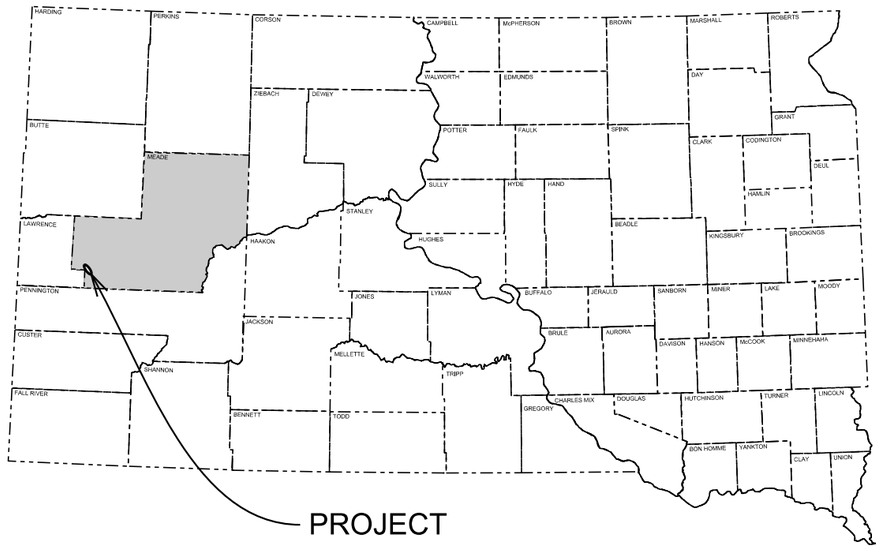
Plotting Date: 08/23/2016

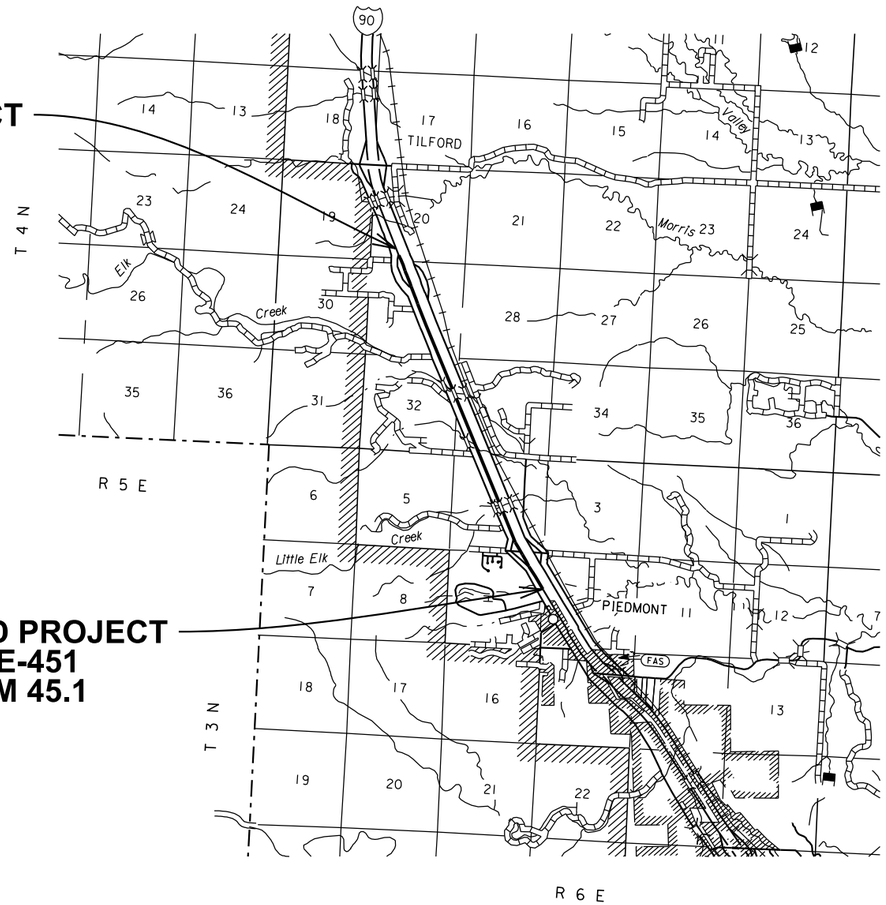
STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED

PROJECT 090E-451
INTERSTATE 90
MEADE COUNTY

PCCP REPAIR
PCN i4h2





INDEX OF SECTIONS

DESIGN DESIGNATION

ADT (2015)	9110
ADT (2035)	11543
DHV	1581
D	51 %
T DHV	6.5 %
T ADT	14.3 %
V	75 MPH

STORM WATER PERMIT

None Required

ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	090E-451	2	12

Estimate of Quantities

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
110E1100	Remove Concrete Pavement	8.0	SqYd
320E2000	Maintenance Patching	4.0	Ton
390E0200	Repair Type A Spall	713.0	SqFt
634E0010	Flagging	80.0	Hour
634E0110	Traffic Control Signs	428.8	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0285	Type 3 Barricade, 8' Double Sided	8	Each
634E0420	Type C Advance Warning Arrow Board	1	Each

SPECIFICATIONS

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

ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

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 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 pit, or staging site associated with the project, cease construction activities in the affected area until the Whooping Crane departs and contact the Project Engineer. The Project Engineer will contact the Environmental Office so that the sighting can be reported to USFWS.

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 Public ROW.

The waste disposal site(s) shall 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 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 Public 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 Public 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 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 review of cultural resources impacts. 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 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 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 shall provide the required permits and clearances to the Project Engineer at the preconstruction meeting.

UTILITIES

The Contractor shall be responsible for locating and protecting any utility that would conflict with any work. Utilities are not planned to be affected on this project. If utilities are identified near the improvement area through the SD One Call Process as required by South Dakota Codified Law 49-7A and Administrative Rule Article 20:25, the contractor shall contact the project engineer to determine modifications that will be necessary to avoid utility impacts.

Any damage done to a utility will be the Contractor's responsibility to repair.

Utilities within the limits of the proposed construction shall be adjusted by the owner unless otherwise indicated in these plans.

EXISTING PCC PAVEMENT

The existing pavement from MRM 40.31 + 0.005 EB to MRM 44.10+0.197 is 8" Nonreinforced PCC Pavement reinforced with welded wire fabric. .

Existing contraction joints are spaced at approximately 80'. Longitudinal joints are reinforced with No. 4 x 30" deformed tie bars spaced 27" center to center. Transverse joints are reinforced with No. 6 x 24" plain round dowel bars spaced 12" center to center.

The existing pavement from MRM 44.10+0.197 to MRM 45.00 + 0.090 is 9" PCC Pavement The welded wire fabric weighs not less than 60 pounds per 100 square feet, the longitudinal wires are No. 1 gauge and are spaced 6" center to center and the transverse wires are No. 4 gauge and are spaced 12" center to center.

Existing contraction joints are spaced at approximately 61.5'. Longitudinal joints are reinforced with No. 5 x 30" deformed tie bars spaced 48" center to center (except at ends of panels). Transverse joints are reinforced with 1¼" x 18" plain round dowel bars spaced 12" center to center.

The aggregate in the existing PCC Pavement is limestone.

Previous repair areas may vary from this.

RESTORATION OF GRAVEL CUSHION

An inspection of the gravel cushion subgrade shall be made after removing concrete from each pavement replacement area. Areas of excess moisture shall be removed to the satisfaction of the Engineer. Loose and excess material shall be removed. Each replacement area shall be leveled and compacted to the satisfaction of the Engineer.

REPAIR TYPE A SPALL

Locations and size (length or width) of concrete spall repair areas are subject to change in the field, at the discretion of the Engineer, at no additional cost to the state. The minimum dimension of the repair area shall be 1'. Payment will be based on actual area replaced.

Type A Spalls shall conform to Section 390 with the following exceptions:

Spalls which are repaired according to plans and specifications and exhibit partial re-spalling or cracking, shall be repaired to the satisfaction of the Engineer at no additional cost to the Department of Transportation.

The PCC Patch material used for spall repair shall be Asphalt Concrete Composite in accordance with the requirements of Section 324, except the mineral aggregate shall be Type 2.

MAINTENANCE PATCHING

Maintenance Patching shall be in accordance with the requirements of Section 324 and the following requirements for the asphalt concrete composite used as Maintenance 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.

Maintenance Patching areas shall be placed 8" thick, in two lifts of 3" and one lift of 2".

TABLE OF QUANTITIES

MRM	Length	Width	Full or Partial Depth	Repair Type A Spall (asphalt concrete)	Remove Concrete Pavement	Maintenance Patching
	Ft	Ft		SqFt	SqYd	Ton
40.81	3	5	Partial	15		
40.81	1	1	Partial	1		
40.81	1	1	Partial	1		
40.82	2	2	Partial	4		
40.83	3	3	Partial	9		
40.87	2	2	Partial	4		
40.87	3	5	Partial	15		
40.87	1	1	Partial	1		
40.89	2	2	Partial	4		
40.89	2	2	Partial	4		
40.89	2	2	Partial	4		
40.9	2	3	Partial	6		
40.926	3	2	Partial	6		
40.926	3	2	Partial	6		
40.926	1	2	Partial	2		
40.926	1	1	Partial	1		
40.926	1	1	Partial	1		
40.926	1	1	Partial	1		
40.93	2	6	Partial	12		
40.93	1	1	Partial	1		
40.95	1	1	Partial	1		
40.96	2	3	Partial	6		
40.96	1	1	Partial	1		
40.97	1	1	Partial	1		
41	6	12	Full		8	4
41.04	2	2	Partial	4		
41.06	1	1	Partial	1		
41.07	2	4	Partial	8		
41.1	1	1	Partial	1		
41.1	1	10	Partial	10		
41.12	1	2	Partial	2		
41.12	1	2	Partial	2		
41.14	1	3	Partial	3		
41.14	1	3	Partial	3		
41.18	1	4	Partial	4		
41.2	1	1	Partial	1		
41.21	4	5	Partial	20		
41.28	1	2	Partial	2		
41.28	1	2	Partial	2		
41.31	1	2	Partial	2		
41.35	1	3	Partial	3		
		Sub total:		**174**	**8**	**4**

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	090E-451	5	12

TABLE OF QUANTITIES (CONT.)

MRM	Length	Width	Full or Partial Depth	Repair Type A Spall (asphalt concrete)	Remove Concrete Pavement	Maintenance Patching
	Ft	Ft		SqFt	SqYd	Ton
41.35	1	1	Partial	1		
41.4	3	3	Partial	9		
41.42	2	12	Partial	24		
41.42	1	1	Partial	1		
41.46	1	2	Partial	2		
41.46	2	2	Partial	4		
41.51	2	3	Partial	6		
41.51	1	2	Partial	2		
41.54	1	2	Partial	2		
41.56	1	1	Partial	1		
41.59	4	3	Partial	12		
41.73	1	12	Partial	12		
41.73	3	4	Partial	12		
41.75	1	4	Partial	4		
41.77	1	4	Partial	4		
41.81	2	2	Partial	4		
41.81	2	2	Partial	4		
41.81	2	2	Partial	4		
41.84	2	3	Partial	6		
41.88	2	3	Partial	6		
41.88	2	3	Partial	6		
41.88	2	3	Partial	6		
41.89	1	3	Partial	3		
41.89	1	3	Partial	3		
41.84	2	3	Partial	6		
41.88	2	3	Partial	6		
41.88	2	3	Partial	6		
41.88	2	3	Partial	6		
41.89	1	3	Partial	3		
41.89	1	3	Partial	3		
41.96	1	4	Partial	4		
41.98	1	2	Partial	2		
41.98	1	2	Partial	2		
41.98	1	2	Partial	2		
41.98	1	2	Partial	2		
42	1	1	Partial	1		
42.01	1	12	Partial	12		
42.01	2	2	Partial	4		
42.04	1	4	Partial	4		
42.12	2	4	Partial	8		
42.24	3	3	Partial	9		
		Sub total:		**214**	**0**	**0**

TABLE OF QUANTITIES (CONT.)

MRM	Length	Width	Full or Partial Depth	Repair Type A Spall (asphalt concrete)	Remove Concrete Pavement	Maintenance Patching
	Ft	Ft		SqFt	SqYd	Ton
42.27	3	3	Partial	9		
42.28	1	3	Partial	3		
42.38	1	3	Partial	3		
42.4	1	2	Partial	2		
42.42	1	1	Partial	1		
42.42	1	2	Partial	2		
42.61	1	1	Partial	1		
42.62	2	12	Partial	24		
42.9	1	3	Partial	3		
42.9	1	1	Partial	1		
42.91	2	3	Partial	6		
42.92	1	2	Partial	2		
43	1	3	Partial	3		
43.01	1	3	Partial	3		
43.13	2	4	Partial	8		
43.16	1	4	Partial	4		
43.16	1	4	Partial	4		
43.16	1	4	Partial	4		
43.21	4	4	Partial	16		
43.37	1	2	Partial	2		
43.48	1	2	Partial	2		
43.48	1	3	Partial	3		
43.5	1	4	Partial	4		
43.5	1	5	Partial	5		
43.55	2	12	Partial	24		
43.56	1	2	Partial	2		
43.57	2	3	Partial	6		
43.63	1	3	Partial	3		
43.63	1	3	Partial	3		
43.69	1	1	Partial	1		
43.77	2	2	Partial	4		
43.86	1	2	Partial	2		
44.12	1	1	Partial	1		
44.23	1	5	Partial	5		
44.24	1	6	Partial	6		
44.25	1	1	Partial	1		
44.26	1	3	Partial	3		
44.28	1	3	Partial	3		
44.28	1	2	Partial	2		
44.29	2	9	Partial	18		
44.32	3	5	Partial	15		
		Sub total:		**210**	**0**	**0**

TABLE OF QUANTITIES (CONT.)

MRM	Length	Width	Full or Partial Depth	Repair Type A Spall (asphalt concrete)	Remove Concrete Pavement	Maintenance Patching
	Ft	Ft		SqFt	SqYd	Ton
44.323	1	12	Partial	12		
44.346	1	1	Partial	1		
44.35	1	1	Partial	1		
44.35	2	4	Partial	8		
44.37	1	1	Partial	1		
44.38	1	8	Partial	8		
44.38	3	5	Partial	15		
44.405	1	4	Partial	4		
44.43	2	4	Partial	8		
44.44	1	2	Partial	2		
44.45	1	6	Partial	6		
44.48	1	6	Partial	6		
44.53	2	12	Partial	24		
44.58	1	2	Partial	2		
44.72	1	3	Partial	3		
45.02	1	2	Partial	2		
45.1	3	4	Partial	12		
		Sub total:		**115**	**0**	**0**
		Total:		**713**	**8**	**4**

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	090E-451	6	12

TRAFFIC CONTROL – GENERAL NOTES

- 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.
- Unless otherwise stated in these plans, no work will be allowed during hours of darkness.
- 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.
- 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.
- Non-applicable traffic control devices shall be completely covered or removed during periods of inactivity. Periods of inactivity shall be defined as no work taking place for a period of more than 2 calendar days.
- 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.
- All regulatory signs shall have a minimum mounting height of 5' in rural locations, even when mounted on portable supports.
- Any delineators and signs damaged or lost shall be replaced by the Contractor at no cost to the State.
- All materials and equipment shall be stored a minimum distance of 30' from the traveled way during nonworking hours.
- The Contractor shall provide installation details at the preconstruction meeting for all breakaway sign support assemblies.
- 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.
- All construction operations shall 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 shall be used, as determined by the Engineer.
- 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.
- I-90 traffic shall not be stopped at any time.
- When Standard Plate 634.63 is used, SPEED LIMIT 65 signs shall be installed prior to RIGHT LANE CLOSED AHEAD signs at a distance of B/2. The REDUCED SPEED AHEAD(45), FINES DOUBLED, SPEED LIMIT 45, AND FLAGGER signs shall be used when the workspace is manned and should be spaced at 500' between each sign. These signs shall be clearly visible within the lane closure and shall be moved to coincide with the manned workspace within the lane closure as directed by the Engineer. Those signs shall be covered or removed immediately when the workspace is no longer manned. The cost for covering or removing these signs shall be incidental to the contract lump sum price for Traffic Control, Miscellaneous.
- Construction vehicles shall exit or enter the construction work zone at locations identified by the Engineer. At no time shall construction vehicles utilize the maintenance crossovers or the I-90 median to exit or enter I-90 traffic.
- The Contractor's employee vehicles will not be allowed to park on the interstate median at any time.
- A Type III Barricade shall be installed as per the details in these plans and at a minimum spacing of 2000' within the lane closure. 3 drums shall be placed across the lane closure in front of any open concrete panel repair area, as directed by the Engineer.

TABLE OF TRAFFIC CONTROL DEVICES

ITEMIZED LIST FOR TRAFFIC CONTROL SIGNS

		EXPRESSWAY / INTERSTATE			
SIGN CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
R1-2	YIELD	2	36"	3.9	7.8
R2-1	SPEED LIMIT 65	4	36" x 48"	12.0	48.0
R2-1	SPEED LIMIT 45	1	36" x 48"	12.0	12.0
R2-1	SPEED LIMIT 75	1	36" x 48"	12.0	12.0
R2-6aP	FINES DOUBLE (plaque)	5	36" x 24"	6.0	30.0
W3-2	YIELD AHEAD (symbol)	2	48" x 48"	16.0	32.0
W3-5	SPEED REDUCTION AHEAD (__ MPH)	3	48" x 48"	16.0	48.0
W4-1	MERGE (symbol)	4	48" x 48"	16.0	64.0
W4-2	LEFT or RIGHT LANE ENDS (symbol)	2	48" x 48"	16.0	32.0
W20-1	ROAD WORK AHEAD	4	48" x 48"	16.0	64.0
W20-5	LEFT or RIGHT LANE CLOSED AHEAD	2	48" x 48"	16.0	32.0
W20-7	FLAGGER (symbol)	1	48" x 48"	16.0	16.0
G20-2	END ROAD WORK	2	48" x 24"	8.0	16.0
SPECIAL	EXIT with 45° arrow	2	30" x 36"	7.5	15.0
		EXPRESSWAY / INTERSTATE TRAFFIC CONTROL SIGNS SQFT			428.8

TABLE OF TYPE 3 BARRICADES

TYPE 3 BARRICADES

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

TYPE C ADVANCE WARNING ARROW PANEL

The quantity of Type C Advance Warning Arrow Panels paid will be the most installations in place at any one time regardless of the number of setups on the project.

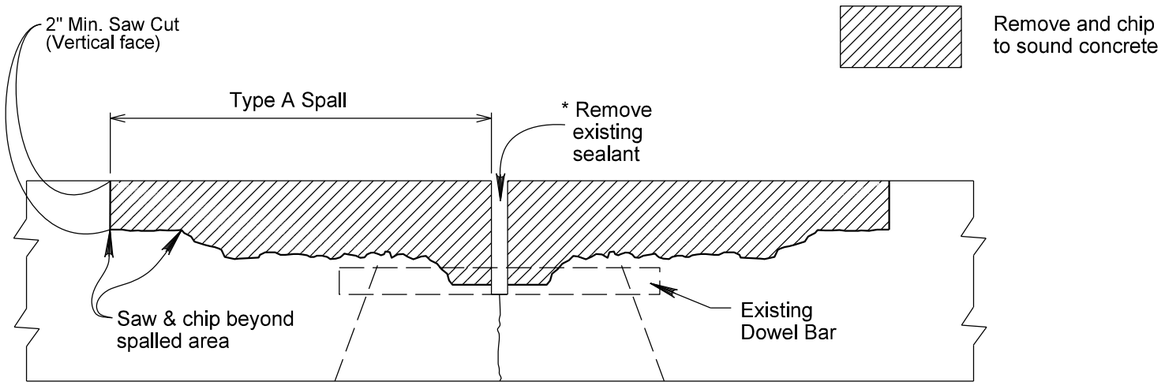
TABLE OF TYPE C ARROW BOARD

ARROW BOARDS

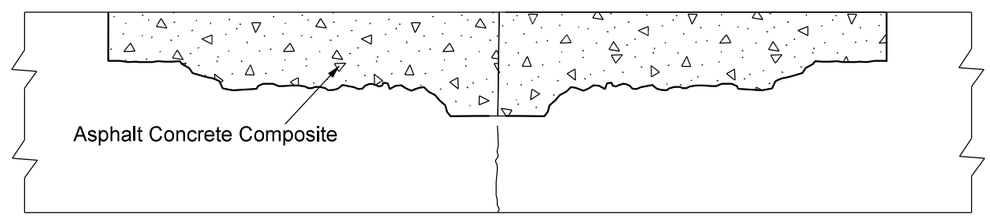
ITEM DESCRIPTION	QUANTITY
Type C Advance Warning Arrow Board	1 Each

REPAIR OF TYPE A SPALLS

SPALL REMOVAL



SPALL PATCH

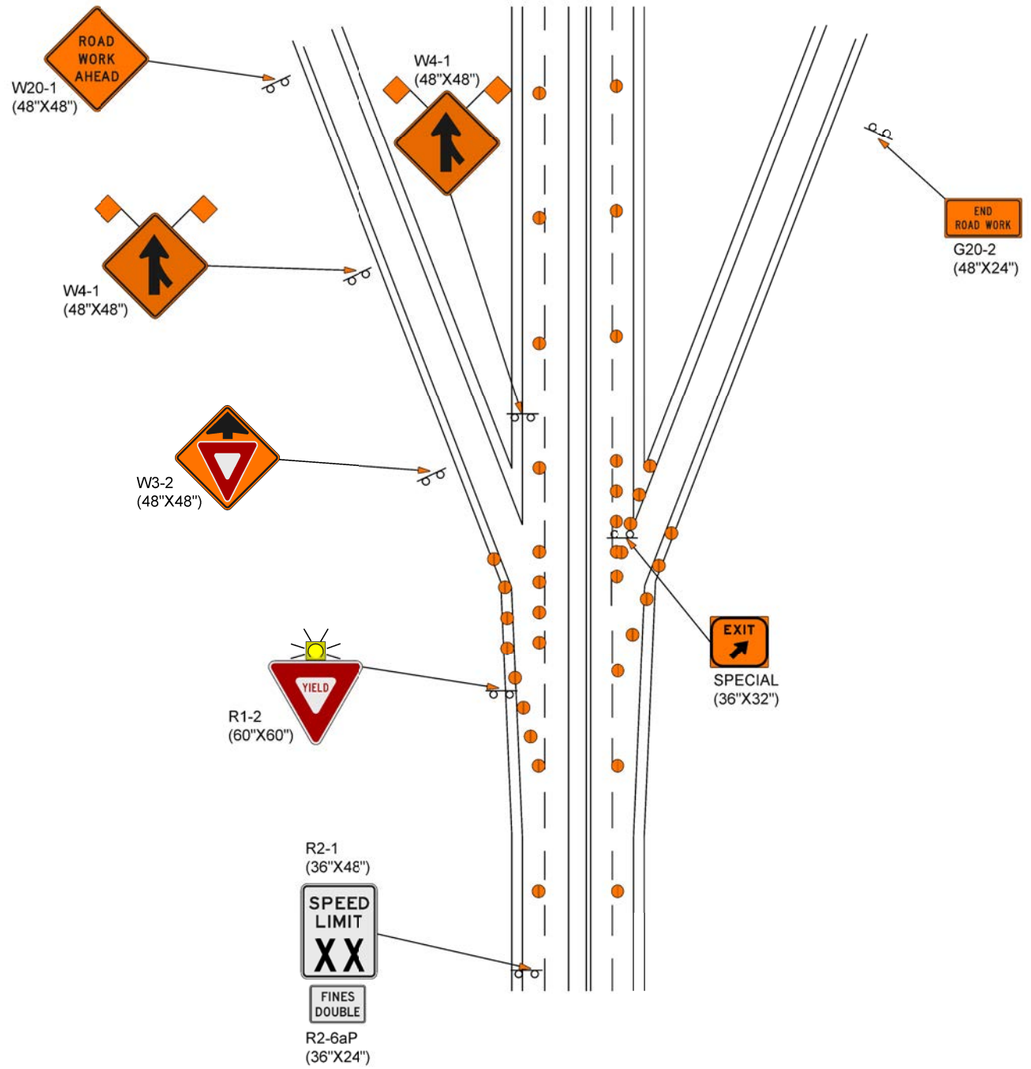


STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	090E-451	8	12

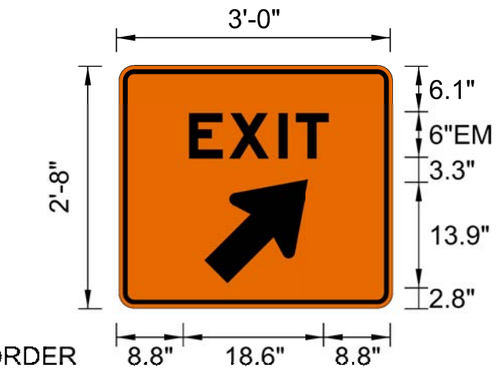
Plotting Date: 08/23/2016

TRAFFIC CONTROL

RAMP ENTRANCE AND EXIT SIGNING DETAILS #1



USE APPROPRIATE SPEED LIMIT



BORDER
R=1.5"
TH=0.63"
IN=0.47"

Panel Style: construction_guide.ssi
M.U.T.C.D.: 2009 Edition

-- THE WARNING LIGHT SHALL BE A SHIELDED TYPE B, IN ACCORDANCE WITH THE MUTCD

Plot Scale - 1.40

Plotted From - trc11610

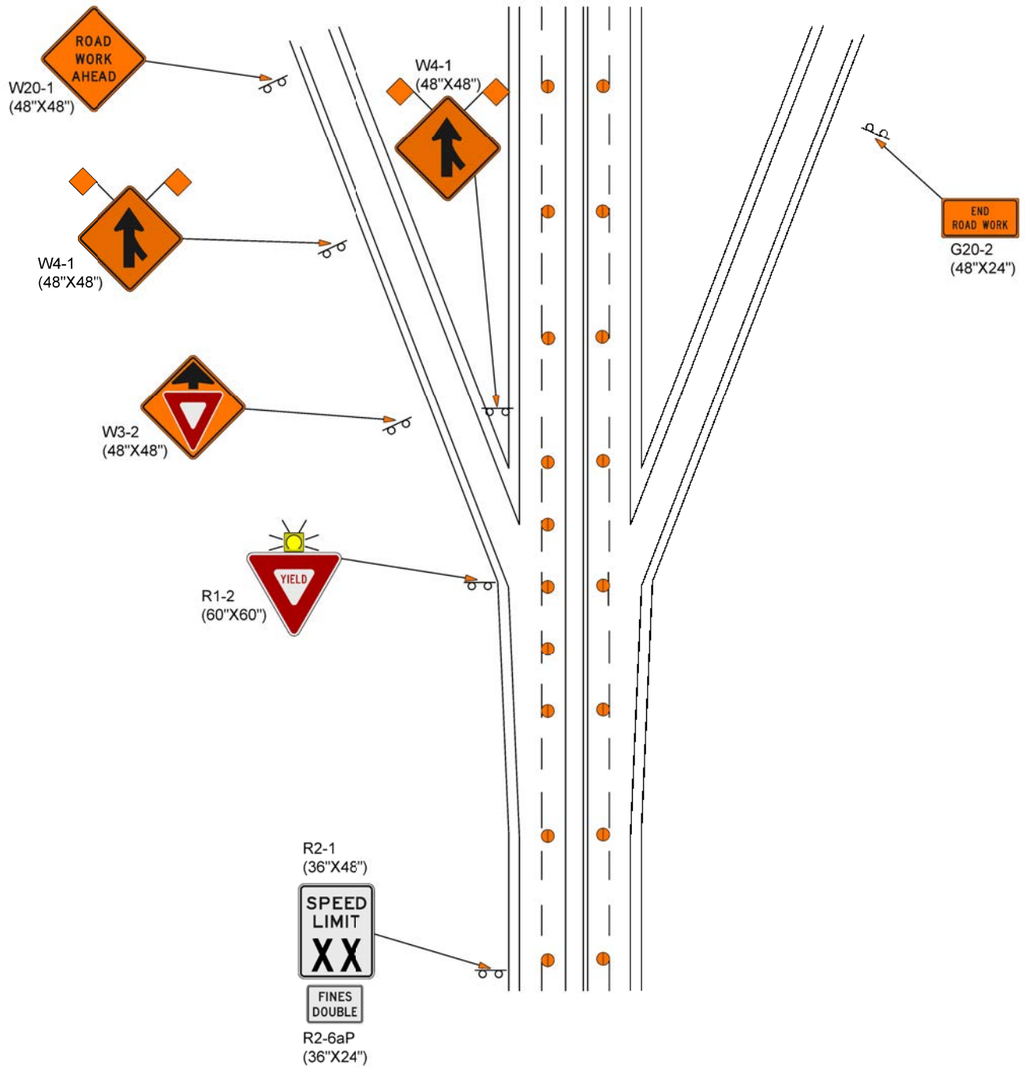
File - ...\Typical ramp signing details.dgn

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	090E-451	9	12

Plotting Date: 08/23/2016

TRAFFIC CONTROL

RAMP ENTRANCE AND EXIT SIGNING DETAILS #2



USE APPROPRIATE SPEED LIMIT

-- THE WARNING LIGHT SHALL BE A SHIELDED TYPE B, IN ACCORDANCE WITH THE MUTCD

Plot Scale - 1.40

Plotted From - lrrc11610

File - ...\Typical ramp signing details.dgn

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

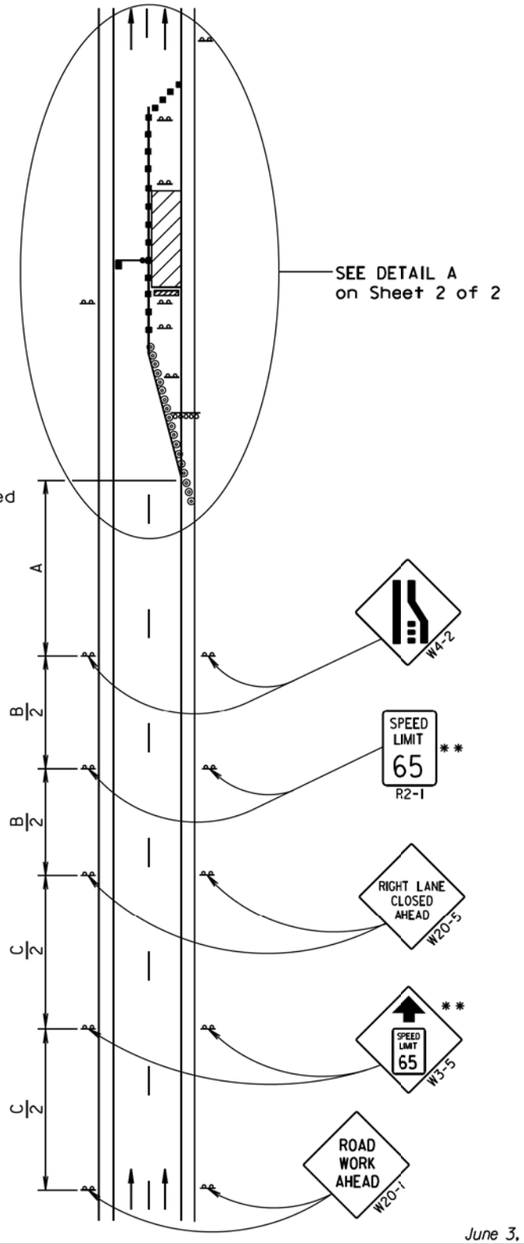
** Speed appropriate for location.

◎ 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.



June 3, 2016

Published Date: 3rd 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	25	600
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

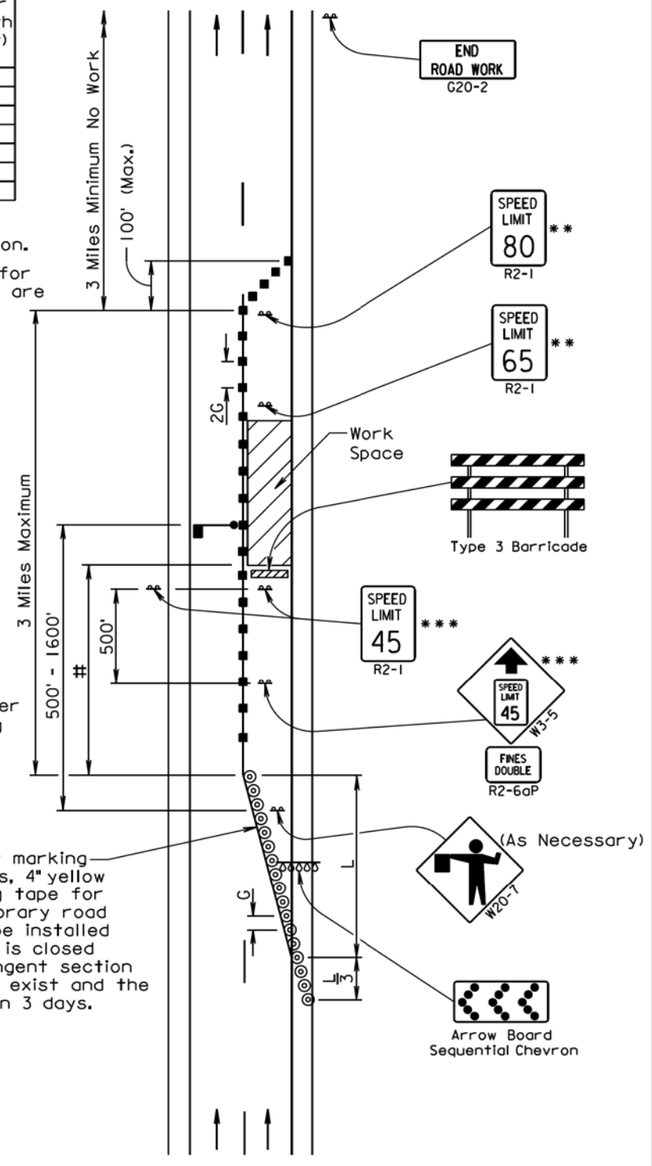
The Work Space shall be a minimum of 500' from the end of the taper.

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 in the taper when the lane is closed overnight, and along the tangent section where the skip lines do not exist and the lane is closed for more than 3 days.



DETAIL A

June 3, 2016

Published Date: 3rd Qtr. 2016	SDDOT	WORK ZONE SPEED REDUCTION FOR INTERSTATE AND HIGH SPEED MULTI-LANE HIGHWAYS	PLATE NUMBER 634.63 Sheet 2 of 2

Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A) (B) (C)	Taper Length (Feet) (L)
0 - 30	200	180
35 - 40	350	320
45 - 50	500	600
55	750	660
60 - 65	1000	780
	(A) (B) (C)	
70 - 80	1000 1500 2640	1125

Posted Speed Prior to Work (M.P.H.)	Spacing of Channelizing Devices (Feet) (G)
0 - 30	25
35 - 45	25
50	50 *
55	50 *
60 - 80	50 *

* Spacing is 40' for 42" cones.

◎ Reflectorized Drum

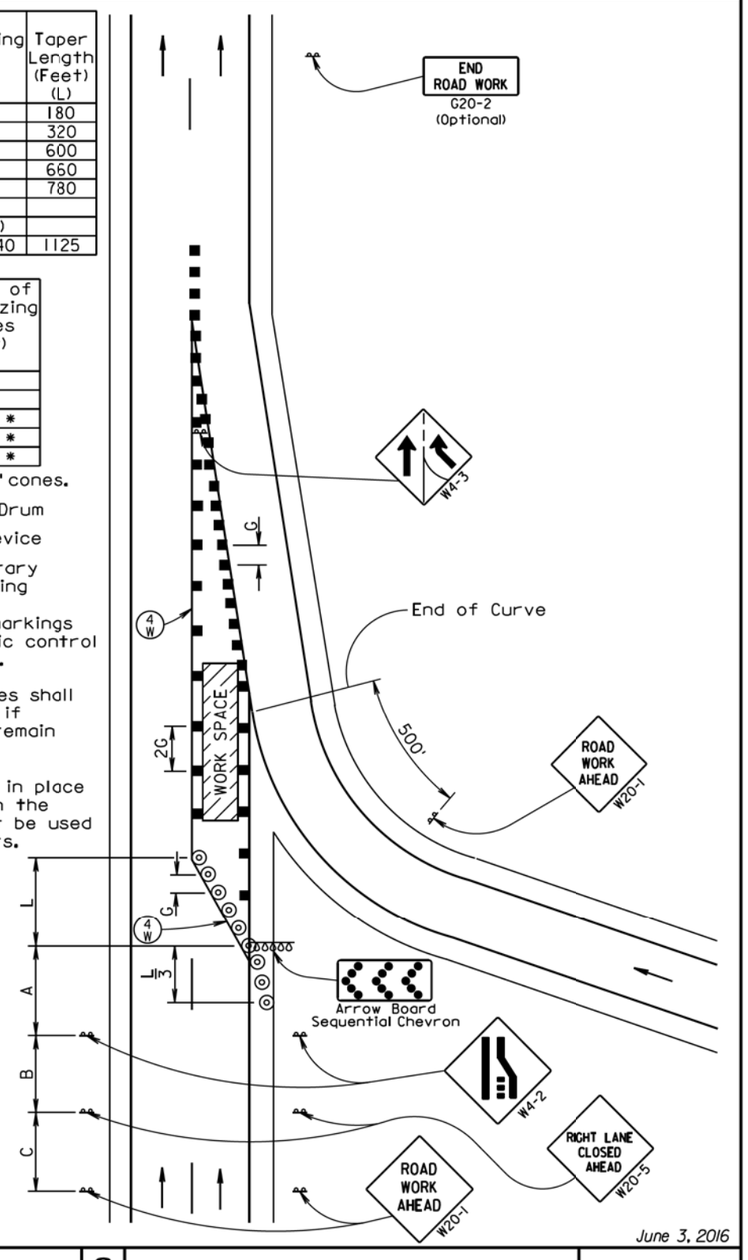
■ Channelizing Device

(4W) 4" White Temporary Pavement Marking

Temporary pavement markings shall be used if traffic control must remain overnight.

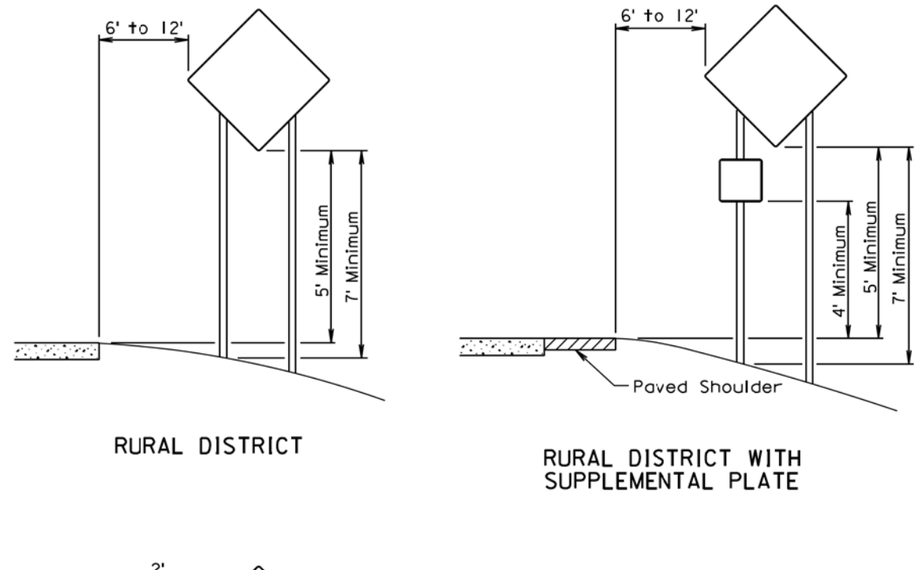
The channelizing devices shall be drums or 42" cones if traffic control must remain overnight.

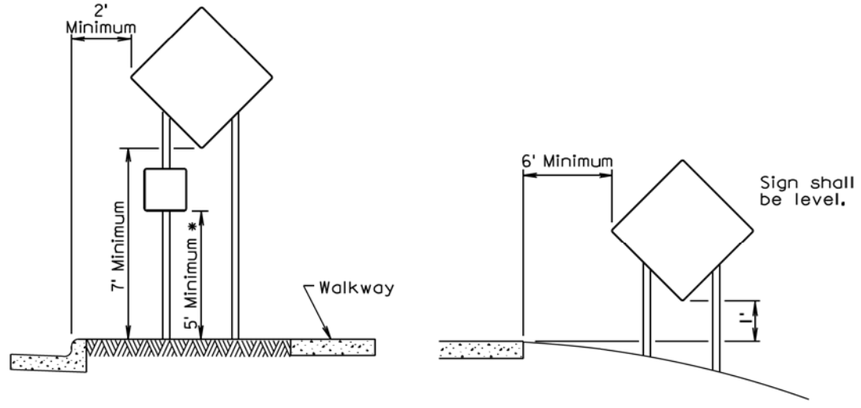
42" cones may be used in place of the drums shown in the taper if setup will not be used during night time hours.



June 3, 2016

Published Date: 3rd Qtr. 2016	SDDOT	GUIDES FOR TRAFFIC CONTROL DEVICES WORK IN VICINITY OF ENTRANCE RAMP	PLATE NUMBER 634.70 Sheet 1 of 1



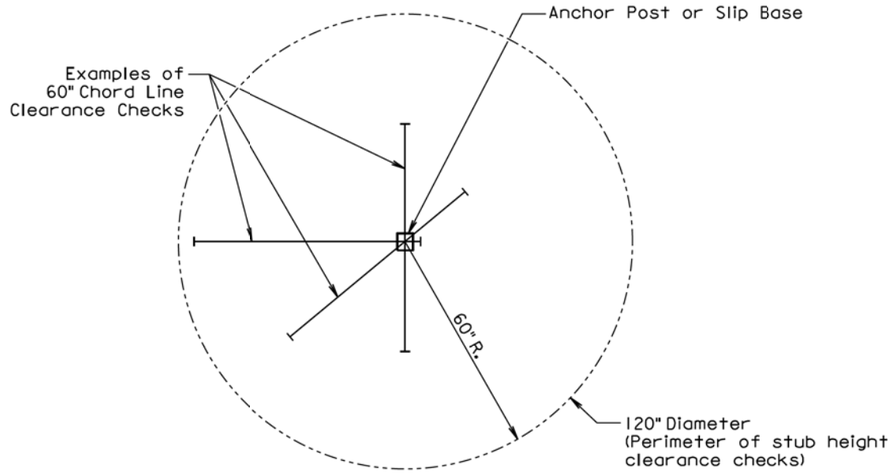


* If the bottom of supplemental plate is mounted lower than 7 feet above a pedestrian walkway, the supplemental plate should not project more than 4" into the pedestrian facility.

(Not applicable to regulatory signs)

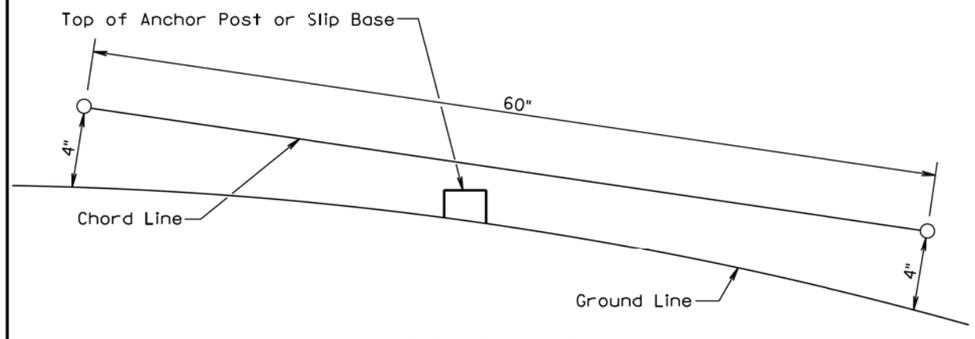
September 22, 2014

Published Date: 3rd 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: 3rd Qtr. 2016	**SDDOT**	***BREAKAWAY SUPPORT STUB CLEARANCE***	*PLATE NUMBER* 634.99
			Sheet 1 of 1