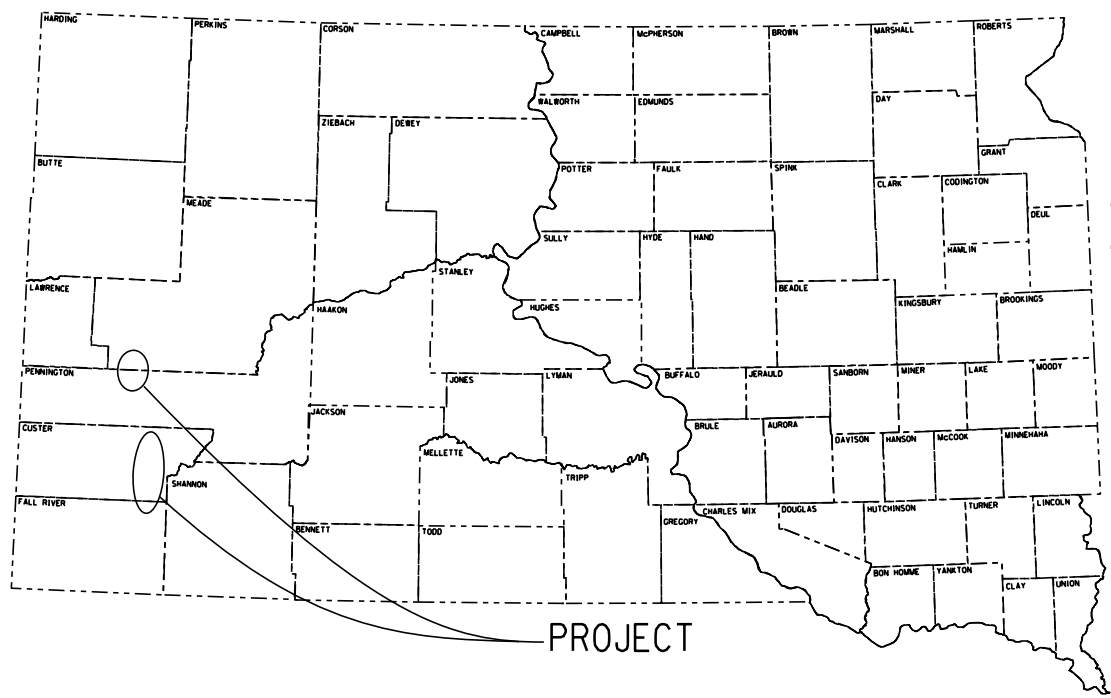


STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	079N-492, 079S-492 & etc.	1	9

Plotting Date: 05/20/2013

PLOT SCALE - 1:200



STATE OF SOUTH DAKOTA  
DEPARTMENT OF TRANSPORTATION  
PLANS FOR PROPOSED

**PROJECTs 079N-492, 079S-492, 016EB-452,  
016WB-452, 090E-452 & 090W-452**

**HIGHWAYs SD79, US16, & I-90  
CUSTER, FALL RIVER, MEADE &  
PENNINGTON**

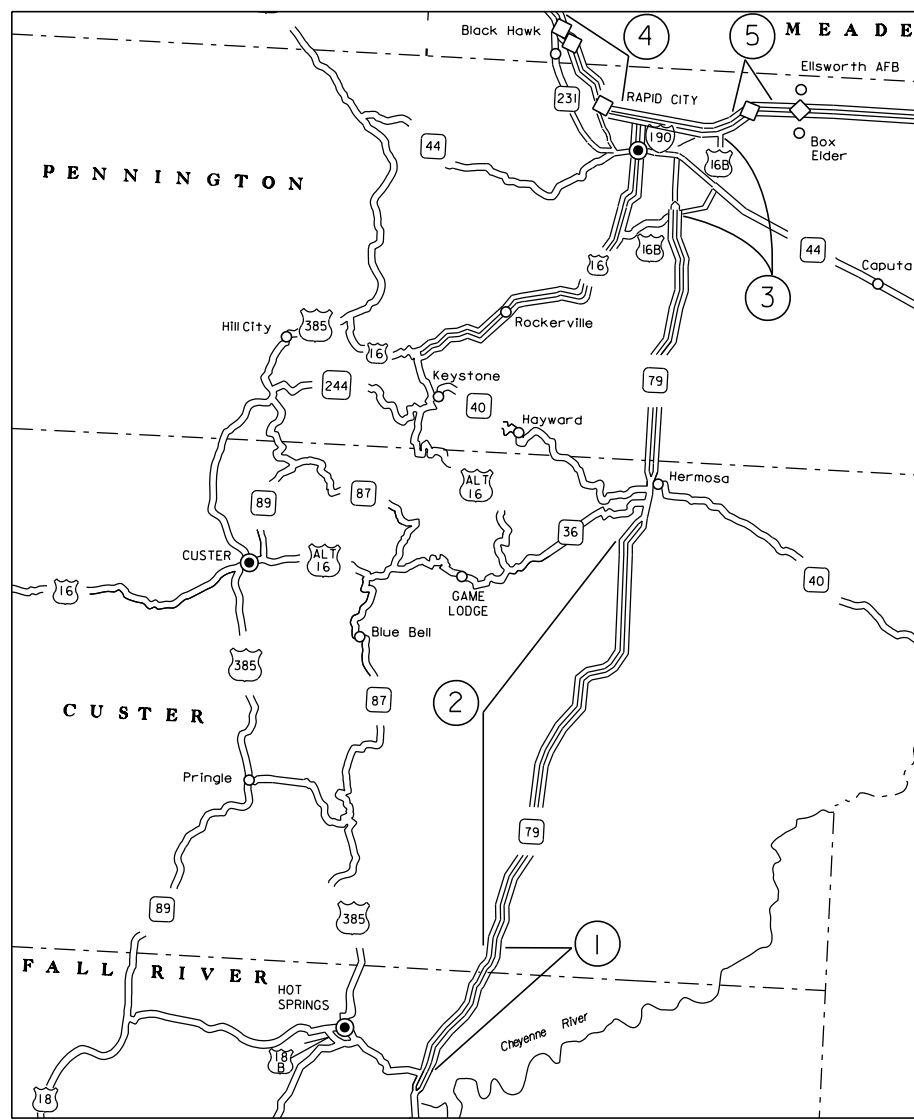
**MICROSURFACING (Shoulder Repair)  
PCNs i30r, i30t, i30w, i30x, i30v & i30u**

- ① SD 79N, MRM 27.000 to MRM 33.848  
079N-492, i30r
- ② SD 79S, MRM 33.355 to MRM 58.900  
079S-492, i30t
- ③ US 16B, MRM 67.200 to MRM 73.100  
016EB-452, i30w & 016WB-452, i30x
- ④ I-90, MRM 50.000 to MRM 56.600  
090E-452, i30v & 090W-452, i30u
- ⑤ I-90, MRM 61.600 to MRM 62.500  
090E-452, i30v & 090W-452, i30u

i30r = 6.848 miles  
i30t = 25.545 miles  
i30w = 5.900 miles  
i30x = 5.900 miles  
i30v = 7.500 miles  
i30u = 7.600 miles

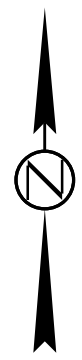
Total Project Length = 59.293 miles

Storm Water Permit  
No Permit Required



INDEX OF SHEETS

Sheets 1:	Title Sheet
Sheets 2-5:	Estimate of Quantities & Plan Notes
Sheet 6:	Microsurfacing Shoulder Settlement Detail
Sheet 7:	Gring Rumble Strip DN PCC Pavement Detail
Sheet 8-9:	Standard Plates



PLOTTED FROM - TRRC11951

PLOT NAME - 1

FILE - ... \130RTITLE.DGN

### ESTIMATE OF QUANTITIES (SD 79 N, i30r)

Bid Item Number	Item	Quantity	Unit
009E0010	Mobilization	Lump Sum	LS
320E0300	Asphalt Emulsion for Microsurfacing	3,424	Gal
320E4510	Mineral Aggregate for Microsurfacing	137.0	Ton
320E7012	Grind 12" Rumble Strip or Stripe in Asphalt Concrete	6.8	Mile
330E0210	SS-1h or CSS-1h Asphalt for Flush Seal	3.4	Ton
634E0010	Flagging	20	Hour
634E0100	Traffic Control	782	Unit
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0420	Type C Advance Warning Arrow Panel	2	Each

### ESTIMATE OF QUANTITIES (SD 79 S, i30t)

Bid Item Number	Item	Quantity	Unit
009E0010	Mobilization	Lump Sum	LS
320E0300	Asphalt Emulsion for Microsurfacing	12,773	Gal
320E4510	Mineral Aggregate for Microsurfacing	510.9	Ton
320E7012	Grind 12" Rumble Strip or Stripe in Asphalt Concrete	25.5	Mile
330E0210	SS-1h or CSS-1h Asphalt for Flush Seal	12.7	Ton
634E0010	Flagging	50	Hour
634E0100	Traffic Control	782	Unit
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0420	Type C Advance Warning Arrow Panel	2	Each

### ESTIMATE OF QUANTITIES (US 16 EB, i30w)

Bid Item Number	Item	Quantity	Unit
009E0010	Mobilization	Lump Sum	LS
320E0300	Asphalt Emulsion for Microsurfacing	2,950	Gal
320E4510	Mineral Aggregate for Microsurfacing	118.0	Ton
634E0010	Flagging	20	Hour
634E0100	Traffic Control	782	Unit
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0420	Type C Advance Warning Arrow Panel	2	Each

### ESTIMATE OF QUANTITIES (US 16 WB, i30x)

Bid Item Number	Item	Quantity	Unit
009E0010	Mobilization	Lump Sum	LS
320E0300	Asphalt Emulsion for Microsurfacing	2,950	Gal
320E4510	Mineral Aggregate for Microsurfacing	118.0	Ton
634E0010	Flagging	20	Hour
634E0100	Traffic Control	782	Unit
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0420	Type C Advance Warning Arrow Panel	2	Each

### ESTIMATE OF QUANTITIES (I-90 E, i30v)

Bid Item Number	Item	Quantity	Unit
009E0010	Mobilization	Lump Sum	LS
320E0300	Asphalt Emulsion for Microsurfacing	3,750	Gal
320E4510	Mineral Aggregate for Microsurfacing	150.0	Ton
380E6550	Grind 16" Rumble Strip in PCC Pavement	7.5	Mile
634E0010	Flagging	20	Hour
634E0100	Traffic Control	782	Unit
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0420	Type C Advance Warning Arrow Panel	2	Each

### ESTIMATE OF QUANTITIES (I-90 E, i30u)

Bid Item Number	Item	Quantity	Unit
009E0010	Mobilization	Lump Sum	LS
320E0300	Asphalt Emulsion for Microsurfacing	3,800	Gal
320E4510	Mineral Aggregate for Microsurfacing	152.0	Ton
380E6550	Grind 16" Rumble Strip in PCC Pavement	7.6	Mile
634E0010	Flagging	20	Hour
634E0100	Traffic Control	782	Unit
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0420	Type C Advance Warning Arrow Panel	2	Each

### SPECIFICATIONS

Standard Specifications for Roads and Bridges, 2004 Edition and Required Provisions, Supplemental Specifications and/or Special Provisions as included in this Proposal.

### SEQUENCE OF OPERATIONS

1. Set up traffic control for lane closure.
2. Complete Microsurfacing.
3. Remove traffic control.
4. Set up traffic control for lane closure.
5. Complete Rumble Strips.
6. Remove traffic control.
7. Set up traffic control for lane closure.
8. Complete Flush Seal.
9. Remove traffic control.

### HISTORICAL PRESERVATION OFFICE CLEARANCES

To obtain State Historical Preservation Office (SHPO) clearance, a cultural resources survey may need to be conducted by a qualified archaeologist. In lieu of a cultural resources survey, the Contractor could request a records search from Jim Donohue, State Archaeological Research Center (SARC). Provide SARC 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 no artifacts have been found on the site. The Contractor shall arrange and pay for the cultural resource survey and/or records search.

If any earth disturbing activities occur within the current geographical or historic boundaries of any South Dakota reservation, the Contractor shall obtain Tribal Historical Preservation Office (THPO) clearance. If no THPO exists, the required SHPO clearance shall suffice, with documentation of Tribal contact efforts provided to SHPO.

To facilitate SHPO or THPO responses, the Contractor should submit a records search or cultural resources survey report to the DOT Environmental Engineer, 700 East Broadway Avenue, Pierre, SD 57501-2586 (605-773-3268). Allow 30 days from the date this information is submitted to the Environmental Engineer for SHPO/THPO approval. The Contractor is responsible for obtaining all required permits and clearances for staging areas, borrow sites, waste disposal sites, and all material processing sites. The Contractor shall provide the required permits and clearances to the Engineer at the preconstruction meeting.

### WASTE DISPOSAL SITE

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

Construction/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 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/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/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.

**TABLE OF MATERIAL QUANTITIES (PCN i30r)**

Highway	Begin	End	Shoulder	Total Length	Width	Mineral Aggregate for Microsurfacing	Asphalt Emulsion for Microsurfacing	Grind 12" Rumble Strip or Stripe in Asphalt Concrete	SS-1h or CSS-1h Asphalt for Flush Seal
	MRM	MRM		(ft)	(ft)	(Ton)	(Gal)	(Mile)	(Ton)
SD 79 N	27.000	33.848	Median	36157.4	2	137.0	3424	6.8	3.4

**TABLE OF MATERIAL QUANTITIES (PCN i30t)**

Highway	Begin	End	Shoulder	Total Length	Width	Mineral Aggregate for Microsurfacing	Asphalt Emulsion for Microsurfacing	Grind 12" Rumble Strip or Stripe in Asphalt Concrete	SS-1h or CSS-1h Asphalt for Flush Seal
	MRM	MRM		(ft)	(ft)	(Ton)	(Gal)	(Mile)	(Ton)
SD 79 S	33.355	58.900	Median	134877.6	2	510.9	12773	25.5	12.7

**TABLE OF MATERIAL QUANTITIES (PCN i30w)**

Highway	Begin	End	Shoulder	Total Length	Width	Mineral Aggregate for Microsurfacing	Asphalt Emulsion for Microsurfacing
	MRM	MRM		(ft)	(ft)	(Ton)	(Gal)
US 16B E	67.200	73.100	Outside	31152.0	2	118.0	2950

**TABLE OF MATERIAL QUANTITIES (PCN i30x)**

Highway	Begin	End	Shoulder	Total Length	Width	Mineral Aggregate for Microsurfacing	Asphalt Emulsion for Microsurfacing
	MRM	MRM		(ft)	(ft)	(Ton)	(Gal)
US 16B W	67.200	73.100	Outside	31152.0	2	118.0	2950

**TABLE OF MATERIAL QUANTITIES (PCN i30v)**

Highway	Begin	End	Shoulder	Total Length	Width	Mineral Aggregate for Microsurfacing	Asphalt Emulsion for Microsurfacing	Grind 16" Rumble Strip in PCC Pavement
	MRM	MRM		(ft)	(ft)	(Ton)	(Gal)	(Mile)
I-90 E	50.000	56.600	Outside	34848.0	2	132.0	3300	6.6
I-90 E	61.600	62.500	Outside	4752.0	2	18.0	450	0.9
					<b>Totals</b>	<b>150.0</b>	<b>3750</b>	<b>7.5</b>

**TABLE OF MATERIAL QUANTITIES (PCN i30u)**

Highway	Begin	End	Shoulder	Total Length	Width	Mineral Aggregate for Microsurfacing	Asphalt Emulsion for Microsurfacing	Grind 16" Rumble Strip in PCC Pavement
	MRM	MRM		(ft)	(ft)	(Ton)	(Gal)	(Mile)
I-90 W	50.000	56.600	Outside	34848.0	2	132.0	3300	6.6
I-90 W	61.500	62.500	Outside	5280.0	2	20.0	500	1.0
					<b>Totals</b>	<b>152.0</b>	<b>3800</b>	<b>7.6</b>

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	079N-492, 079S-492 & etc.	4	9

## MICROSURFACING

The asphalt shoulder settlement along the project varies from ¼" to 1" along the longitudinal joint between the PCCP and asphalt pavement. The Contractor shall fill in this settlement along the project in accordance with the details found in these plans. Microsurfacing material shall be placed against the PCC Pavement to assure the longitudinal joint is filled and sealed.

Microsurfacing shall be performed in accordance with the Special Provision For Polymer-Modified Microsurfacing with the following modifications:

The Surface Course and Rut Filling shall be applied 2' wide. This work may be done with one pass provided the asphalt shoulder settlement filling does not recess below the top of PCCP more than ¼". The 300' test strip shall select a location with 1" or greater settlement to determine if one pass will provide acceptable results. If unacceptable results occur the Contractor shall perform Rut Filling of shoulder settlement greater than ½" prior to the final Surface Course as directed by the Engineer.

Microsurfacing shall not be placed on any bridge or bridge approach slabs.

## RATES OF MATERIALS

The Estimate of Quantities is based on the following quantities of material per mile. This rate is for estimating purposes only and will vary based on asphalt shoulder settlement conditions found in the field.

### **Asphalt Shoulder Settlement Filling Course**

Microsurfacing – SDDOT Type II or III Mineral Aggregate

Aggregate For Microsurfacing applied 2' wide 20.0 Tons/mile

Asphalt For Microsurfacing applied 2' wide 500 Gal/mile

## MICROSURFACING QUANTITIES

Due to the dollar amount budgeted for this work, the locations of microsurfacing are for estimating purposes only. The Engineer reserves the right to add or eliminate locations once the budgeted dollar amount for the project is met.

## RUMBLE STRIPS/STRIPES

Water shall be used with the rumble strip/stripe installation for dust control.

Rumble strips or stripes shall not be placed on any bridge decks or approach slabs, or within 50 feet of any railroad crossings.

## RUMBLE STRIP/STRIPE ROADWAY CLEANING

The Contractor shall remove loose material from the driving surface and/or asphalt shoulders of the roadway on a daily basis. Loose material may be used as fillet material adjacent to the paved shoulder. It shall be the Contractor's responsibility to ensure the loose material does not enter any vegetated areas and/or waterways.

All costs associated with this work shall be incidental to the contract unit price per mile for installing Rumble Strips or Stripes.

## GRIND RUMBLE STRIP IN PCC PAVEMENT

The Contractor shall grind in rumble strips in the PCC Pavement as per the details provided in these plans. The Contractor shall demonstrate to the Engineer on a 500 foot test section that the equipment and method will provide the desired ground rumble strip without damaging the pavement. If the desired results are not met, as determined by the Engineer, the Contractor shall provide different equipment or methods until satisfactory installation is complete. Damaged pavement shall be replaced by the Contractor at no additional cost to the State.

## FLUSH SEAL

SS-1h or CSS-1h Emulsified Asphalt for Flush Seal shall be applied 4.0 feet wide at the rate of 0.05 gallons per square yard after the installation of ground in rumble strips on SD 79.

The distributor shall be equipped with guards to prevent any overspray of emulsified asphalt from coming in contact with the existing pavement marking. A guide installed on the distributor equipment shall be used to follow the alignment of the existing pavement marking. If there is any damage to the existing pavement marking, the Contractor shall replace in kind, at no additional cost to the State.

The seasonal restrictions of Section 330 of the Standard Specifications shall be waived provided the temperature requirements are met.

## PERMANENT PAVEMENT MARKINGS

The State will replace any pavement marking disturbed along SD 79 due to microsurfacing work. The Contractor shall provide the State a minimum 2 week notice of microsurfacing work, so that the State can coordinate their activities to re-paint the yellow edge line after microsurfacing work.

## MAINTENANCE OF TRAFFIC

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. Hours of darkness are defined, as ½ hour after sunset until ½ hour before sunrise.

Storage of vehicles and equipment shall be as near the right-of-way as possible. Contractor's employees should mobilize at a location off the right-of-way and arrive at the work sites in a minimum number of vehicles necessary to perform the work. 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.

## MAINTENANCE OF TRAFFIC (CONTINUED)

Existing guide, route, informational logo, regulatory, and warning signs shall be temporarily reset and maintained during construction. Removing, relocating, covering, salvaging and resetting of existing traffic control devices, including delineation, shall be the responsibility of the Contractor. Non-applicable signing shall be covered or removed during periods of inactivity. Periods of inactivity shall be defined as no work taking place for a period of more than 36 hours. The cost of removing or covering non-applicable signs shall be incidental to the contract lump sum price for, Traffic Control, Miscellaneous.

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.

The quantity of signs paid for will be for the greatest number of installations per sign per PCN in place at any one time regardless of the number of set-ups on the project.

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 documentation that all breakaway sign supports comply with FHWA NCHRP 350 or MASH crash-worthy requirements. The Contractor shall provide installation details at the preconstruction meeting for all breakaway sign support assemblies.

The Contractor shall be required to have a person available 24 hour/day, 7 days/week to maintain traffic control devices. The name and cellular telephone number of this individual shall be given to the Engineer at the preconstruction meeting.

The Contractor or designated traffic control subcontractor shall make night inspections at the initial set up of traffic control and every week thereafter to ensure the adequacy, legibility and reflectivity of each sign and device. A written summary of each inspection shall be given to the Engineer within 24 hours after completion of the inspection. The cost for the nighttime inspection work shall be incidental to the contract lump sum price for Traffic Control, Miscellaneous.

Vehicles working in traffic or alongside traffic shall be equipped with a flashing amber light visible from all directions. The amber light shall be mounted on the uppermost part of the contractor's vehicle. Lights must have peak intensity within the range of 40 to 400 candelas and must flash at 75 ± 15 flashes per minute. Vehicle flasher/hazard lights are not acceptable.

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.

**MAINTENANCE OF TRAFFIC (CONTINUED)**

Drums are required in all lane closure tapers.

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

Two sets of traffic control signs are provided on the project to move the traffic control along with the work activity.

Lane closure traffic control shall be removed prior to nightfall.

**TABLE OF TRAFFIC CONTROL (SD 79 N, PCN i30r)**

SIGN CODE	SIGN SIZE	DESCRIPTION	#	UNITS PER SIGN	UNITS
G20-2	36" x 18"	END ROAD WORK	2	17	34
R2-1	24" x 30"	SPEED LIMIT ##	6	18	108
R2-6aP	24" x 18"	FINES DOUBLE	4	7	28
W3-5	48" x 48"	REDUCED SPEED LIMIT AHEAD	4	34	136
W4-2	48" x 48"	LEFT OR RIGHT LANE ENDS (SYMBOL)	4	34	136
W20-1	48" x 48"	ROAD WORK AHEAD	4	34	136
W20-5	48" x 48"	LT. OR RT. LANE CLOSED AHEAD	4	34	136
W20-7a	48" x 48"	FLAGGER	2	34	68
<b>TOTAL UNITS</b>					<b>782</b>

**TABLE OF TRAFFIC CONTROL (SD 79S, PCN i30t)**

SIGN CODE	SIGN SIZE	DESCRIPTION	#	UNITS PER SIGN	UNITS
G20-2	36" x 18"	END ROAD WORK	2	17	34
R2-1	24" x 30"	SPEED LIMIT ##	6	18	108
R2-6aP	24" x 18"	FINES DOUBLE	4	7	28
W3-5	48" x 48"	REDUCED SPEED LIMIT AHEAD	4	34	136
W4-2	48" x 48"	LEFT OR RIGHT LANE ENDS (SYMBOL)	4	34	136
W20-1	48" x 48"	ROAD WORK AHEAD	4	34	136
W20-5	48" x 48"	LT. OR RT. LANE CLOSED AHEAD	4	34	136
W20-7a	48" x 48"	FLAGGER	2	34	68
<b>TOTAL UNITS</b>					<b>782</b>

**TABLE OF TRAFFIC CONTROL (US 16EB, PCN i30w)**

SIGN CODE	SIGN SIZE	DESCRIPTION	#	UNITS PER SIGN	UNITS
G20-2	36" x 18"	END ROAD WORK	2	17	34
R2-1	24" x 30"	SPEED LIMIT ##	6	18	108
R2-6aP	24" x 18"	FINES DOUBLE	4	7	28
W3-5	48" x 48"	REDUCED SPEED LIMIT AHEAD	4	34	136
W4-2	48" x 48"	LEFT OR RIGHT LANE ENDS (SYMBOL)	4	34	136
W20-1	48" x 48"	ROAD WORK AHEAD	4	34	136
W20-5	48" x 48"	LT. OR RT. LANE CLOSED AHEAD	4	34	136
W20-7a	48" x 48"	FLAGGER	2	34	68
<b>TOTAL UNITS</b>					<b>782</b>

**TABLE OF TRAFFIC CONTROL (US 16WB, PCN i30x)**

SIGN CODE	SIGN SIZE	DESCRIPTION	#	UNITS PER SIGN	UNITS
G20-2	36" x 18"	END ROAD WORK	2	17	34
R2-1	24" x 30"	SPEED LIMIT ##	6	18	108
R2-6aP	24" x 18"	FINES DOUBLE	4	7	28
W3-5	48" x 48"	REDUCED SPEED LIMIT AHEAD	4	34	136
W4-2	48" x 48"	LEFT OR RIGHT LANE ENDS (SYMBOL)	4	34	136
W20-1	48" x 48"	ROAD WORK AHEAD	4	34	136
W20-5	48" x 48"	LT. OR RT. LANE CLOSED AHEAD	4	34	136
W20-7a	48" x 48"	FLAGGER	2	34	68
<b>TOTAL UNITS</b>					<b>782</b>

**TABLE OF TRAFFIC CONTROL (I-90 E, PCN i30v)**

SIGN CODE	SIGN SIZE	DESCRIPTION	#	UNITS PER SIGN	UNITS
G20-2	36" x 18"	END ROAD WORK	2	17	34
R2-1	24" x 30"	SPEED LIMIT ##	6	18	108
R2-6aP	24" x 18"	FINES DOUBLE	4	7	28
W3-5	48" x 48"	REDUCED SPEED LIMIT AHEAD	4	34	136
W4-2	48" x 48"	LEFT OR RIGHT LANE ENDS (SYMBOL)	4	34	136
W20-1	48" x 48"	ROAD WORK AHEAD	4	34	136
W20-5	48" x 48"	LT. OR RT. LANE CLOSED AHEAD	4	34	136
W20-7a	48" x 48"	FLAGGER	2	34	68
<b>TOTAL UNITS</b>					<b>782</b>

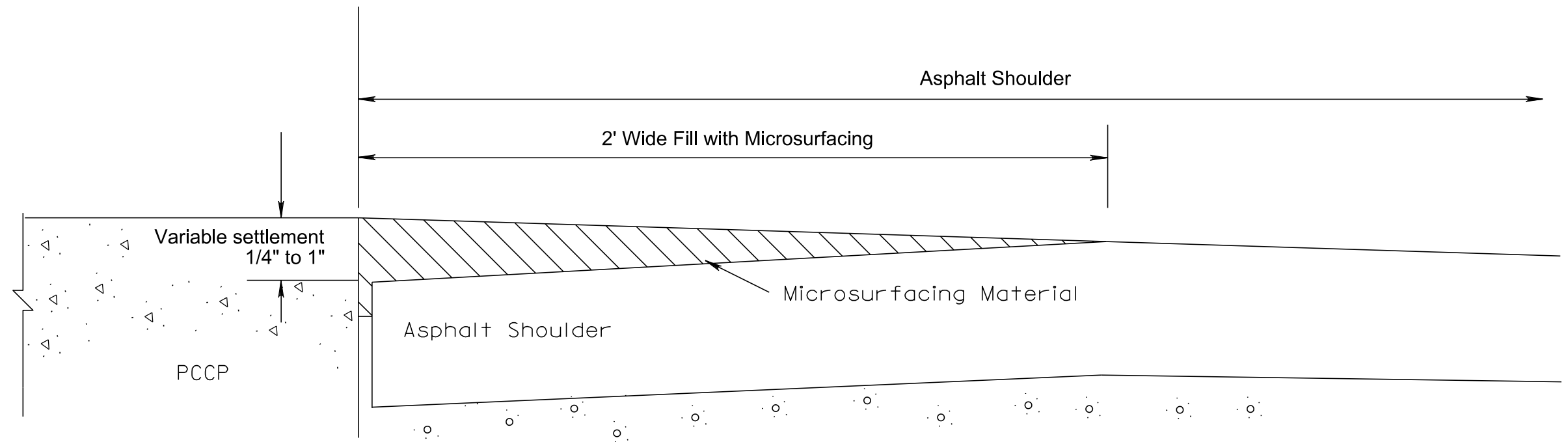
**TABLE OF TRAFFIC CONTROL (I-90 W, PCN i30u)**

SIGN CODE	SIGN SIZE	DESCRIPTION	#	UNITS PER SIGN	UNITS
G20-2	36" x 18"	END ROAD WORK	2	17	34
R2-1	24" x 30"	SPEED LIMIT ##	6	18	108
R2-6aP	24" x 18"	FINES DOUBLE	4	7	28
W3-5	48" x 48"	REDUCED SPEED LIMIT AHEAD	4	34	136
W4-2	48" x 48"	LEFT OR RIGHT LANE ENDS (SYMBOL)	4	34	136
W20-1	48" x 48"	ROAD WORK AHEAD	4	34	136
W20-5	48" x 48"	LT. OR RT. LANE CLOSED AHEAD	4	34	136
W20-7a	48" x 48"	FLAGGER	2	34	68
<b>TOTAL UNITS</b>					<b>782</b>

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	079N-492, 079S-492 & etc.	6	9

Plotting Date: 05/10/2012

# Microsurfacing Asphalt Shoulder Settlement along PCCP



PLOT SCALE - 1:300

PLOTTED FROM - TRRC11951

PLOT NAME - 2

FILE - ... \ASPHALTSHOULDERREPAIR.DGN

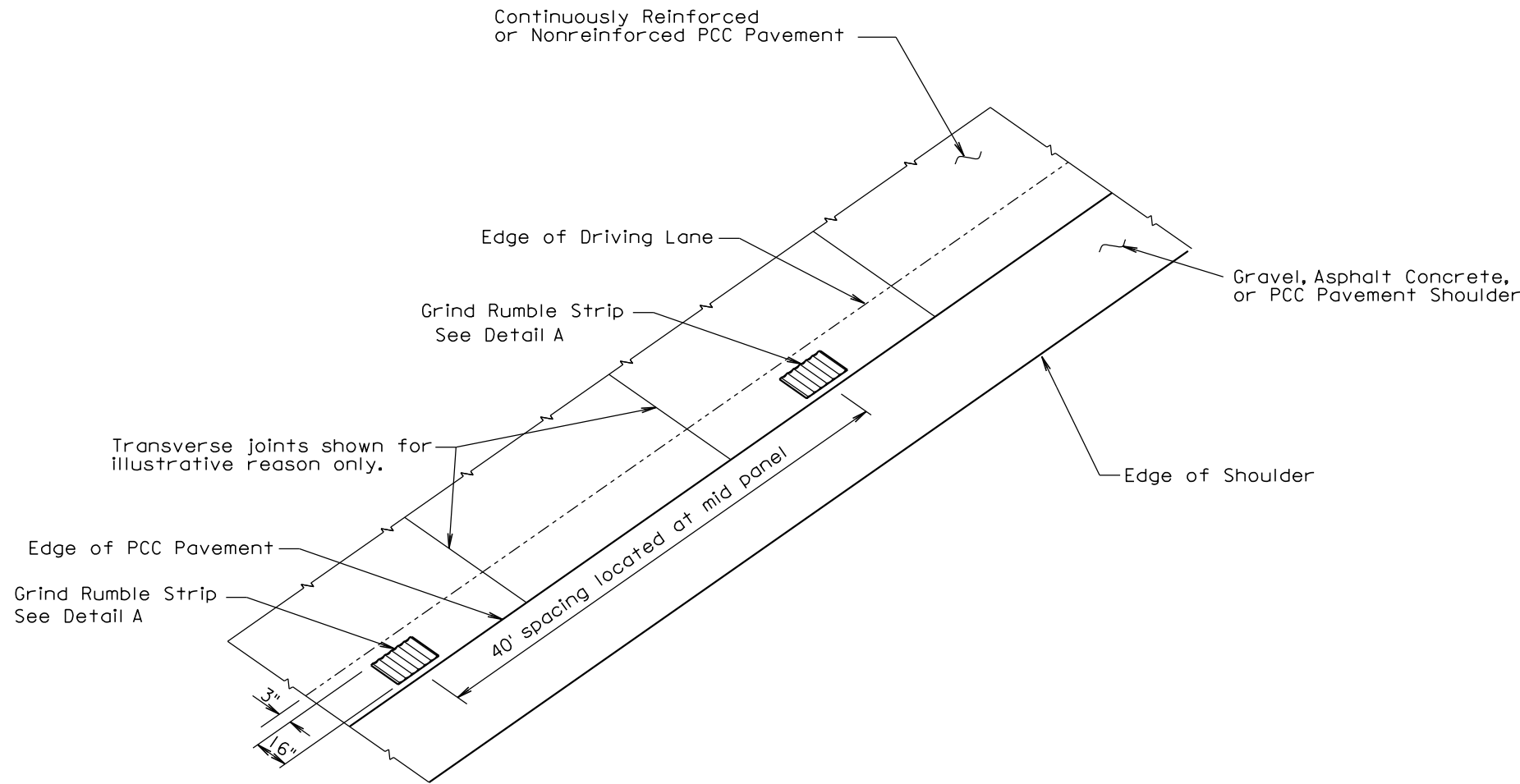
# GRIND RUMBLE STRIP ON PCC PAVEMENT SHOULDER

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	079N-492, 079S-492 & etc.	7	9

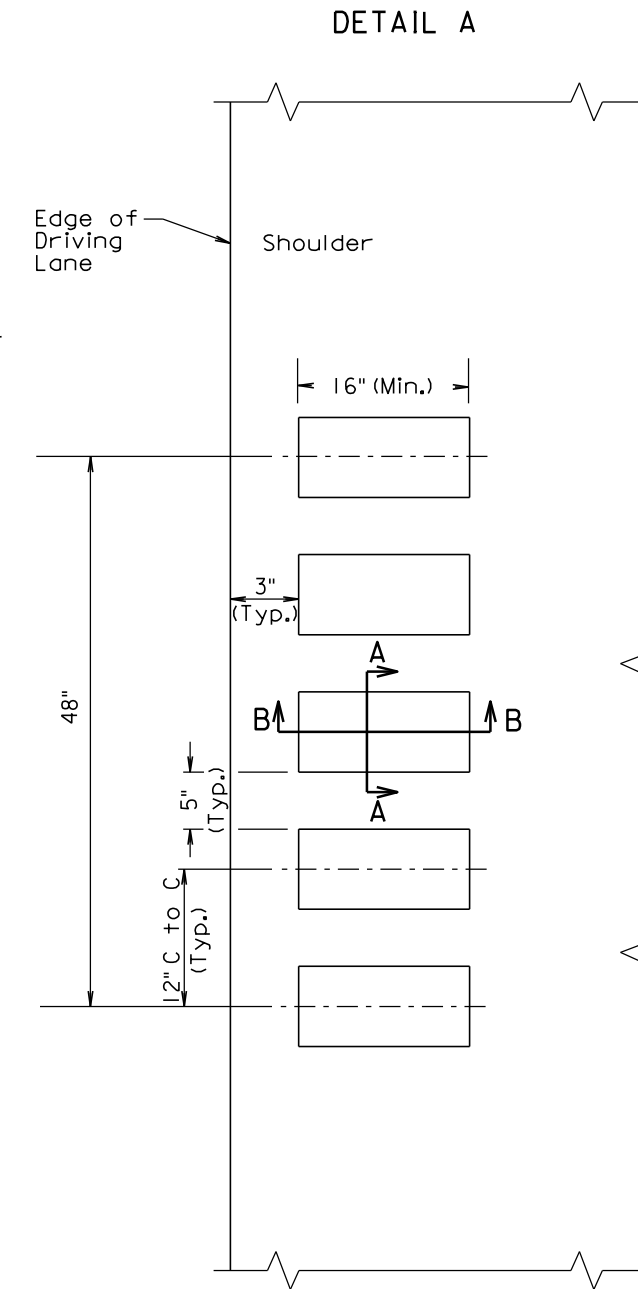
Plotting Date: 05/10/2013

PLOT SCALE - 1:200

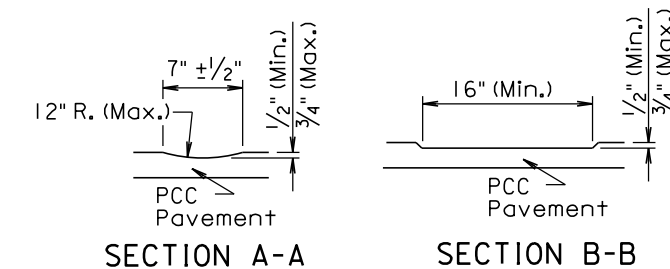
PLOT NAME - 2



PERSPECTIVE OF TYPICAL RUMBLE STRIPS ON PCC PAVEMENT SHOULDER



PLAN VIEW TO GRIND RUMBLE STRIP IN PCC PAVEMENT



SECTION A-A

SECTION B-B

A rumble strip shall be constructed on the portland cement concrete shoulders by grinding rumble strips as per these details. The rumble strip shall be centered between the transverse joint and shall not be installed across any transverse pavement joints.

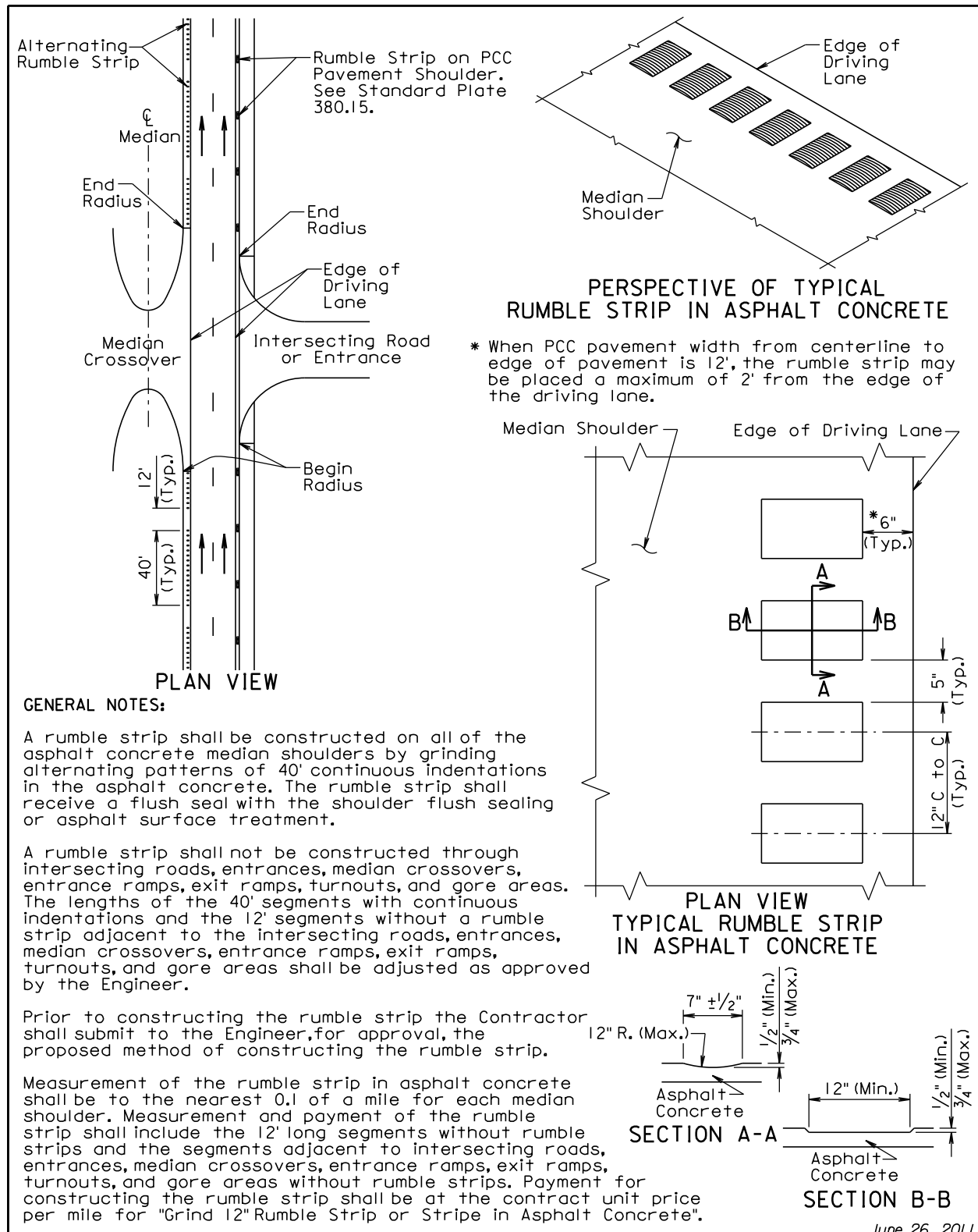
A rumble strip shall not be constructed through intersecting roads, entrances, and turnouts. The locations shall be adjusted as approved by the Engineer.

Prior to constructing the rumble strip the Contractor shall demonstrate a 500 foot test section that the equipment and method will provide satisfactory results.

Measurement of the rumble strip shall be to the nearest 0.1 of a mile for each shoulder. Measurement and payment of the rumble strip shall include the gaps without rumble strips and the segments adjacent to the intersecting roads, entrances, and turnouts without rumble strips. Payment for constructing the rumble strip shall be at the contract unit price per mile for "Grind 16" Rumble Strip or Stripe in PCC Pavement".

PLOTTED FROM - TRRC11951

FILE - ... \PCCRUMBLESTRIP.DGN

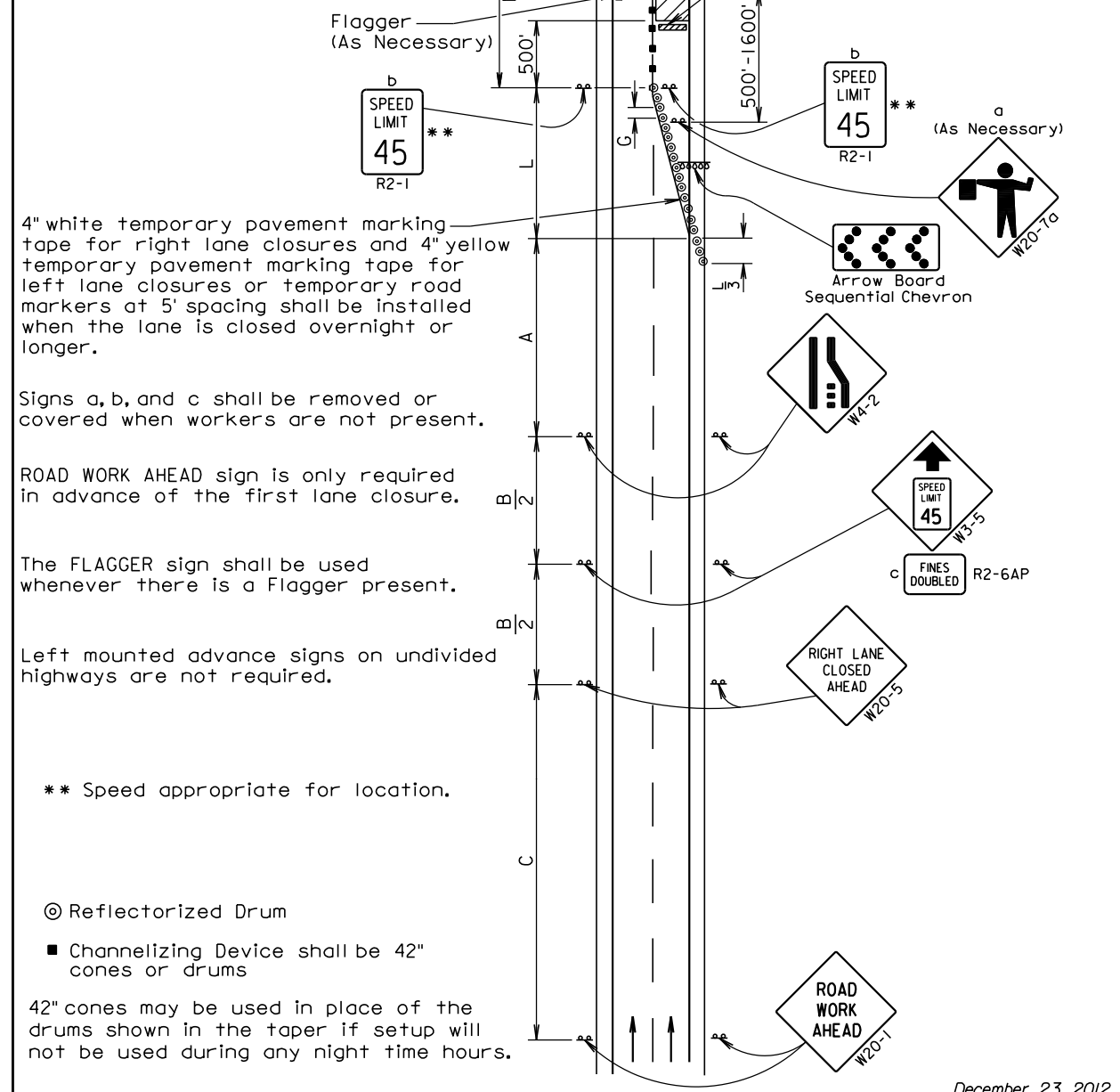


June 26, 2011

Published Date: 2nd Qtr. 2013	SDDOT	12" RUMBLE STRIP IN ASPHALT CONCRETE ON DIVIDED HIGHWAY MEDIAN SHOULDER	PLATE NUMBER 320.26
			Sheet 1 of 1

Posted Speed Prior to Work (M.P.H.)	Spacing of Channelizing Devices (Feet) (C)	Taper Length (Feet) (L)	Spacing of Advanced Warning Signs (Feet) (ABC)
0 - 30	25	180	200
35 - 40	25	320	350
45 - 50	50 *	600	500
55	50 *	660	750
60 - 65	50 *	780	1000
70 - 75	50 *	900	1000 1500 2640

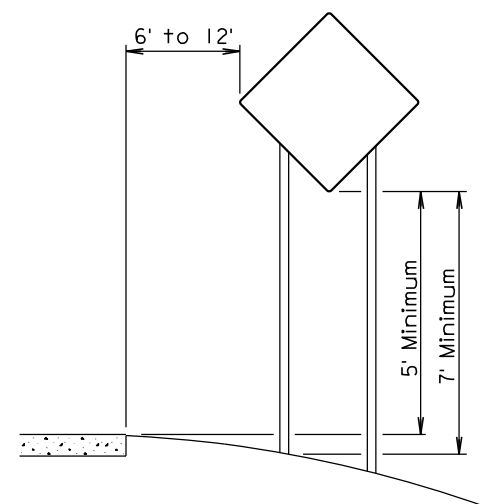
\* Spacing to be every 40' for 42" cones.



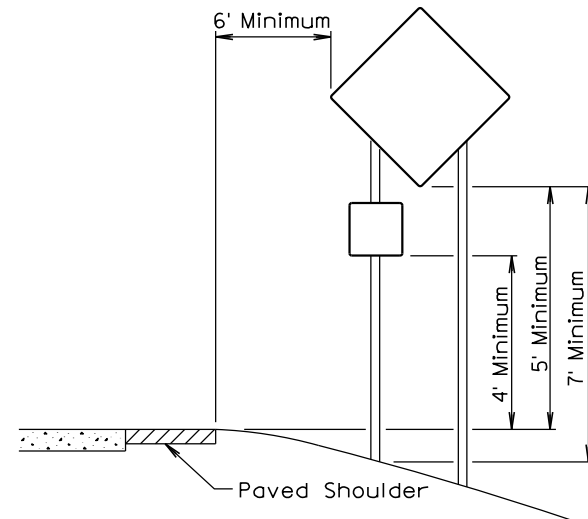
December 23, 2012

Published Date: 2nd Qtr. 2013	SDDOT	MANNED WORK SPACE SIGNING FOR DIVIDED AND UNDIVIDED HIGHWAYS	PLATE NUMBER 634.63
			Sheet 1 of 1

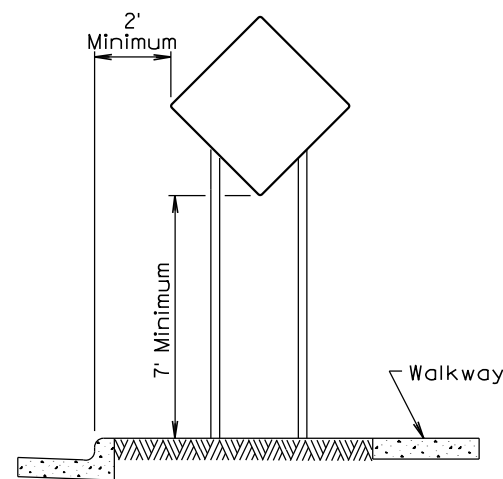




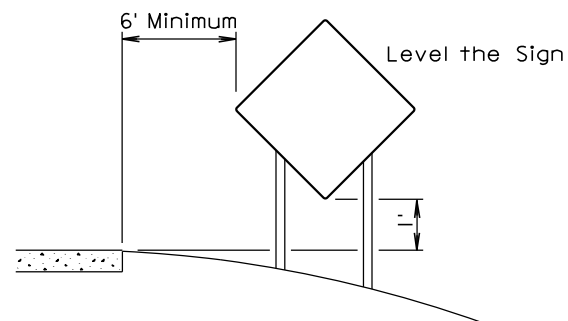
RURAL DISTRICT



RURAL DISTRICT WITH  
SUPPLEMENTAL PLATE



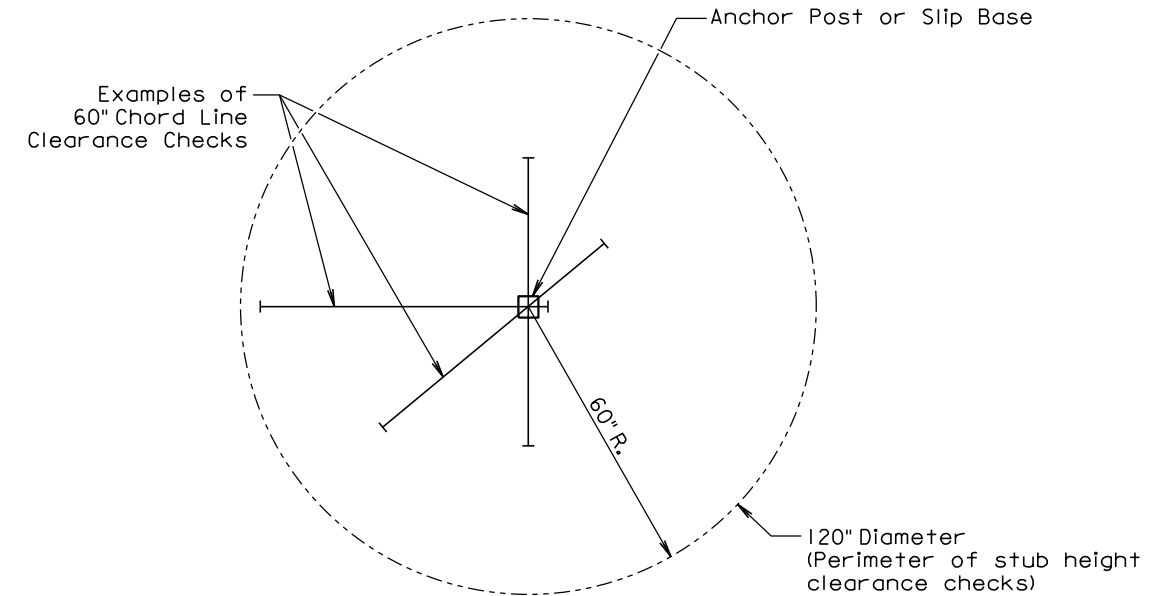
URBAN DISTRICT



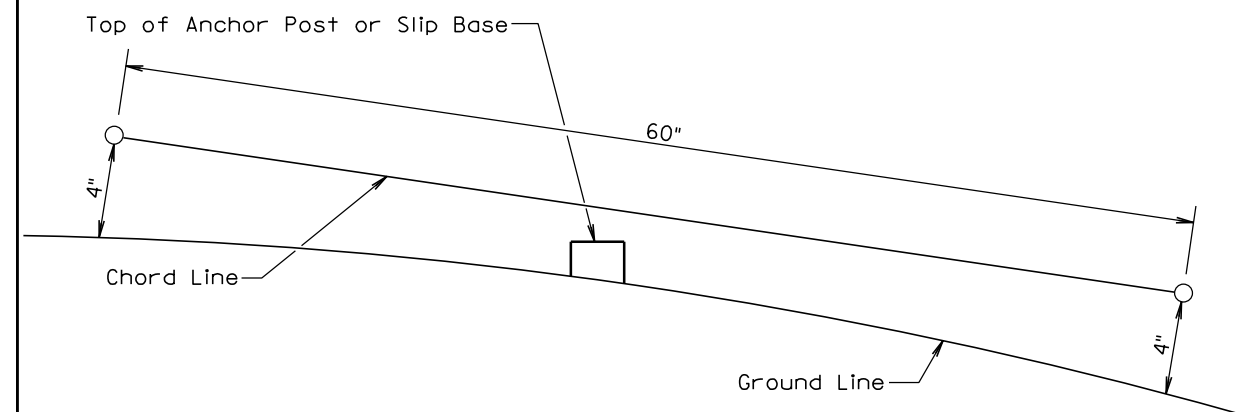
RURAL DISTRICT  
3 DAY MAXIMUM

February 14, 2011

Published Date: 2nd Qtr. 2013	S D D O T	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: 2nd Qtr. 2013	S D D O T	BREAKAWAY SUPPORT STUB CLEARANCE	PLATE NUMBER 634.99
			Sheet 1 of 1