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	STATE OF	PROJECT	SHEET	TOTAL SHEETS
	SOUTH DAKOTA	IM 0033(45)	1	10
	Plotting	Date: 04/10/2025		
INE	DEX OF	<u>SHEETS</u>		
Sheet No.	1: Layout	Maps & Index of Sheets		
Sheet No.	2-4: Estim	ate of Quantities & Notes		
		Reservoir Detail		
		ial Details for Ramp Signing Indard Plates		•
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		May 2	1, 2025	

ESTIMATE OF QUANTITIES

BID ITEM	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
350E0010	Asphalt Concrete Crack Sealing	61,444	Lb
634E0010	Flagging	336.0	Hour
634E0110	Traffic Control Signs	1,050.2	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0275	Type 3 Barricade	40	Each
634E0330	Temporary Raised Pavement Markers	13,440	Ft
634E0420	Type C Advance Warning Arrow Board	2	Each

SPECIFICATIONS

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

ENVIRONMENTAL COMMITMENTS

The SDDOT is committed to protecting the environment and uses Environmental Commitments as a communication tool for the Engineer and Contractor to ensure that attention is given to avoid, minimize, and/or mitigate an environmental impact. Environmental commitments to various agencies and the public have been made to secure approval of this project. An agency with permitting authority can delay a project if identified environmental impacts have not been adequately addressed. Unless otherwise designated, the Contractor's primary contact regarding matters associated with these commitments will be the Project Engineer. During construction, the Project Engineer will verify that the Contractor has met Environmental Commitment requirements. These environmental commitments are not subject to change without prior written approval from the SDDOT Environmental Office.

Additional guidance on SDDOT's Environmental Commitments can be accessed through the Environmental Procedures Manual found at: <https://dot.sd.gov/media/documents/EnvironmentalProceduresManual.pdf >

For guestions regarding change orders in the field that may have an effect on an Environmental Commitment, the Project Engineer will contact the Environmental Engineer at 605-773-3180 or 605-773-4336 to determine whether an environmental analysis and/or resource agency coordination is necessary.

Once construction is complete, the Project Engineer will review all environmental commitments for the project and document their completion.

COMMITMENT B: FEDERALLY THREATENED, ENDANGERED, AND PROTECTED SPECIES

COMMITMENT B2: WHOOPING CRANE

The Whooping Crane is a spring and fall migratory bird in South Dakota that is about 5 feet tall and typically stops on wetlands, rivers, and agricultural lands along their migration route. An adult Whooping Crane is white with a red crown and a long, dark, pointed bill. Immature Whooping Cranes are cinnamon brown. While in flight, their long necks are kept straight and their long dark legs trail behind. Adult Whooping Cranes' black wing tips are visible during flight.

Action Taken/Required:

Harassment or other measures to cause the Whooping Crane to leave the site is a violation of the Endangered Species Act. If a Whooping Crane is sighted roosting in the vicinity of the project, borrow pits, or staging areas associated with the project, cease construction activities in the affected area until the Whooping Crane departs and immediately contact the Project Engineer. The Project Engineer will contact the Environmental Office so that the sighting can be reported to USFWS.

COMMITMENT H: WASTE DISPOSAL SITE

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

Action Taken/Required:

Construction and/or demolition debris may not be disposed of within the Public ROW.

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

The waste disposal site(s) will not be located in a wetland, within 200 feet of surface water, or in an area that adversely affects wildlife, recreation, aesthetic value of an area, or any threatened or endangered species, as approved by the Environmental Office and the Project Engineer.

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

Construction and/or demolition debris consisting of concrete, asphalt 1. concrete, or other similar materials will be buried in a trench separate from wood debris. The final cover over the construction and/or demolition debris will consist of a minimum of 1 foot of soil capable of supporting vegetation. Waste disposal sites provided outside of the Public ROW will be seeded in accordance with Natural Resources Conservation Service recommendations. The seeding recommendations may be obtained through the appropriate County NRCS Office. The Contractor will control the access to waste disposal sites not within the Public ROW with fences, gates, and placement of a sign or signs at the entrance to the site stating, "No Dumping Allowed".

2. Concrete and asphalt concrete debris may be stockpiled within view of the ROW for a period not to exceed the duration of the project. Prior to project completion, the waste will be removed from view of the ROW or buried, and the waste disposal site reclaimed as noted above.

6-1.13, and ARSD 74:27:10:06. 1.31.

All costs associated with furnishing waste disposal site(s), disposing of waste, maintaining control of access (fence, gates, and signs), and

contract items.

COMMITMENT I: HISTORIC PRESERVATION OFFICE CLEARANCES

The SDDOT has obtained concurrence with the State Historic Preservation Office (SHPO or THPO) for all work included within the project limits and all department designated sources and designated option material sources, stockpile sites, storage areas, and waste sites provided within the plans.

Action Taken/Required:

All earth disturbing activities not designated within the plans require a cultural resource review prior to scheduling the pre-construction meeting. This work includes but is not limited to: Contractor furnished material

and waste areas.

The Contractor will arrange and pay for a record search and when necessary. a cultural resource survey. The Contractor has the option to contact the state Archaeological Research Center (ARC) at 605-394-1936 or another qualified archaeologist, to obtain either a records search or a cultural resources survey. A record search might be sufficient for review if the site was previously surveyed; however, a cultural resources survey may need to be conducted by a qualified archaeologist.

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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-

Failure to comply with the requirements stated above may result in civil penalties in accordance with South Dakota Solid Waste Law, SDCL 34A-6-

reclamation of the waste disposal site(s) will be incidental to the various

sources, material processing sites, stockpile sites, storage areas, plant sites,

COMMITMENT I: HISTORIC PRESERVATION OFFICE CLEARANCES -CONTINUED

The Contractor will provide ARC with the following: a topographical map or aerial view in which the site is clearly outlined, site dimensions, project number, and PCN. If applicable, provide evidence that the site has been previously disturbed by farming, mining, or construction activities with a landowner statement that artifacts have not been found on the site.

The Contractor will submit the cultural resources survey report to SDDOT Environmental Office, 700 East Broadway Avenue, Pierre, SD 57501-2586. SDDOT will submit the information to the appropriate SHPO/THPO. Allow 30 Days from the date this information is submitted to the Environmental Engineer for SHPO/THPO review.

In the event of an inadvertent discovery of human remains, funerary objects, or if evidence of cultural resources is identified during project construction activities, then such activities within 100 feet of the inadvertent discovery will immediately cease and the Project Engineer will be immediately notified. The Project Engineer will contact the SDDOT Environmental Office, who will contact the appropriate SHPO/THPO within 48 hours of the discovery to determine an appropriate course of action.

SHPO/THPO review does not relieve the Contractor of the responsibility for obtaining any additional permits and clearances for Contractor furnished material sources, material processing sites, stockpile sites, storage areas, plant sites, and waste areas that affect wetlands, threatened and endangered species, or waterways. The Contractor will not utilize a site known or suspected of having contaminated soil or water. The Contractor will provide the required permits and clearances to the Project Engineer at the preconstruction meeting.

COORDINATION BETWEEN CONTRACTORS

A separate contract for Project IM 0905(121)236 - PCN 06P1 will be awarded to another Contractor for I-90 EB Concrete Repair and Asphalt Shoulders on I-90 EB adjacent to this project (PCN 09KP).

The Contractor will schedule work so as not to interfere with or hinder the progress of the work performed by the other Contractor on PCN 06P1. Conflicting traffic control devices may need to be temporarily adjusted or removed as directed by the Engineer and at no additional cost to the contract.

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.

I-90 E & I90 W – Signs for the lane closures & ramp work on I-90 will be paid for once regardless on the numbers times they are set up.

> Estimated 5-mile-long traffic control lane closure setups: 190E = 4 (2 per driving lane 2 per passing lane) I90 W = 10 (5 per driving lane 5 per passing lane)

I-90 segments will not be opened to traffic until sealant has cured sufficiently to avoid pickup by traffic, or as approved by the Engineer.

LANE CLOSURES

Interstate lane closures shorter than 5 miles will be used if 5 miles is greater than the length of work that can be accomplished in one day's production. More than one lane closure may be permitted; however, there will be a minimum of a three-mile section between lane closures, excluding the tapers.

GENERAL TRAFFIC CONTROL

Existing guide, route, informational logo, regulatory, and warning signs will be temporarily reset and maintained during construction. Removing, relocating, covering, salvaging, and resetting of existing traffic control devices, including delineation, will be the responsibility of the Contractor. Cost for this work will be incidental to the contract unit prices for the various items unless otherwise specified in the plans. Any delineators and signs damaged or lost will be replaced by the Contractor at no cost to the State.

All temporary traffic control sign locations will be set in the field by the Contractor and verified by the Engineer prior to installation.

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

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

Unless otherwise stated in these plans, work will not be allowed during hours of darkness.

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

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

A Type 3 Barricade will be installed at the end of a lane closure taper as detailed in these plans. Additional Type 3 Barricades will be installed facing traffic within the closed lane at a spacing of 1/4 mile.

Construction vehicles will exit or enter the construction work zone at locations identified by the Engineer. At no time will construction vehicles utilize the maintenance crossovers or the Interstate median to exit or enter Interstate traffic.

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

FLAGGING

Work on both segments on I-90 will have a flagger prior to the sealing operation and one prior to the routing operation, or as approved by the engineer.

All costs associated with this will be incidental to the contract unit price per hour for "Flagging".

WORK ZONE SPEED REDUCTION (I-90 SEGMENTS)

The Department is required to obtain a speed reduction resolution prior to the installation of any SPEED LIMIT (R2-1) signs shown on standard plate 634.63. To provide adequate time for the resolution to be enacted, the Contractor will inform the Engineer a minimum of 3 weeks prior to the scheduled installation of any work zone speed reduction signs on the project. The information provided by the Contractor will include the anticipated date of sign installation, the newly reduced speed limit, the location of the work zone, and the anticipated completion date of work requiring the speed reduction.

ITEMIZED LIST FOR TRAFFIC CONTROL SIGNS

Segment 1 – I-90 EB:

		E	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	3	36" x 48"	12.0	36.0
R2-1	SPEED LIMIT 45	2	36" x 48"	12.0	24.0
R2-1	SPEED LIMIT 80	3	36" x 48"	12.0	36.0
R2-6aP	FINES DOUBLE (plaque)	1	36" x 24"	6.0	6.0
W3-2	YIELD AHEAD (symbol)	2	48" x 48"	16.0	32.0
W3-5	SPEED REDUCTION AHEAD (65 MPH)	2	48" x 48"	16.0	32.0
W3-5	SPEED REDUCTION AHEAD (45 MPH)	1	48" x 48"	16.0	16.0
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
W5-4	RAMP NARROWS	1	48" x 48"	16.0	16.0
W13-1P	ADVISORY SPEED (plaque)	1	30" x 30"	6.3	6.3
W13-4P	ON RAMP (plaque)	1	36" x 36"	9.0	9.0
W20-1	ROAD WORK AHEAD	5	48" x 48"	16.0	80.0
SPECIAL	RAMP WORK AHEAD	1	48" x 48"	16.0	16.0
W20-5	LEFT or RIGHT LANE CLOSED AHEAD	2	48" x 48"	16.0	32.0
W20-7	FLAGGER (symbol)	3	48" x 48"	16.0	48.0
SPECIAL	EXIT w/45° ARROW	1	36" x 32"	8.0	8.0
G20-2	END ROAD WORK	3	48" x 24"	8.0	24.0
			EXPRESSWAY / INTERSTATE TRAFFIC CONTROL SIGNS SQFT 525.		

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ITEMIZED LIST FOR TRAFFIC CONTROL SIGNS-CONTINUED

Segment 2 – I-90 WB:

		EXPRESSWAY / INTERSTATE			TE
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	3	36" x 48"	12.0	36.0
R2-1	R2-1 SPEED LIMIT 45		36" x 48"	12.0	24.0
R2-1	SPEED LIMIT 80	3	36" x 48"	12.0	36.0
R2-6aP	FINES DOUBLE (plaque)	1	36" x 24"	6.0	6.0
W3-2	YIELD AHEAD (symbol)	2	48" x 48"	16.0	32.0
W3-5	SPEED REDUCTION AHEAD (65 MPH)	2	48" x 48"	16.0	32.0
W3-5	SPEED REDUCTION AHEAD (45 MPH)	1	48" x 48"	16.0	16.0
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
W5-4	RAMP NARROWS	1	48" x 48"	16.0	16.0
W13-1P	ADVISORY SPEED (plaque)	1	30" x 30"	6.3	6.3
W13-4P	ON RAMP (plaque)	1	36" x 36"	9.0	9.0
W20-1	ROAD WORK AHEAD	5	48" x 48"	16.0	80.0
SPECIAL	RAMP WORK AHEAD	1	48" x 48"	16.0	16.0
W20-5	LEFT or RIGHT LANE CLOSED AHEAD	2	48" x 48"	16.0	32.0
W20-7	FLAGGER (symbol)	3	48" x 48"	16.0	48.0
SPECIAL	EXIT w/45° ARROW	1	36" x 32"	8.0	8.0
G20-2	END ROAD WORK	3	48" x 24"	8.0	24.0
		EXPRESSWAY / INTERSTATE TRAFFIC CONTROL SIGNS SQFT 525.1			525.1

TEMPORARY RAISED PAVEMENT MARKERS

Temporary raised pavement markers will be used for marking edge lines, lane lines, and centerlines. Temporary raised pavement markers will be used on all new permanent surfacing sections of roadway and on existing surfacing where temporary marking locations are different than existing marking locations, unless noted or as directed by the Engineer.

Temporary raised pavement markers will 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.

Temporary raised pavement markers will be paid for per lane closure when installed not to exceed the plans amount, unless approved by the Engineer.

Plans 5-mile-long traffic control lane closure setups: I90 E = 4 @ 960' Each = 3840' I90 W = 10 @ 960' Each = 9600'Total = 13,440'

All costs to furnish, install, replace if necessary, and remove the markers will be incidental to the contract unit price per foot for "Temporary Raised Pavement Markers".

BLOCKING MEDIUM MATERIAL

All costs for furnishing and placing the blocking material medium will be incidental to the contract unit price per pound for Asphalt Concrete Crack Sealing.

BLOTTING MATERIAL

Blotting material will be placed over the sealant material immediately following placement of sealant on all cracks.

ESTIMATED CRACK SEALING

All work will meet the construction requirements detailed in Section 350. The actual quantity used in the field will be the basis for Contractor payment, with no adjustment in contract unit price allowed.

All work will be performed in accordance with the "Typical Reservoir Section" as detailed on the Typical Reservoir Section sheet.

Longitudinal centerline and longitudinal lane cracks will be routed so that there is **no** over band present at the crack surface.

Transverse cracks will be routed so that there is a *minimal* amount of over band present at the crack surface.

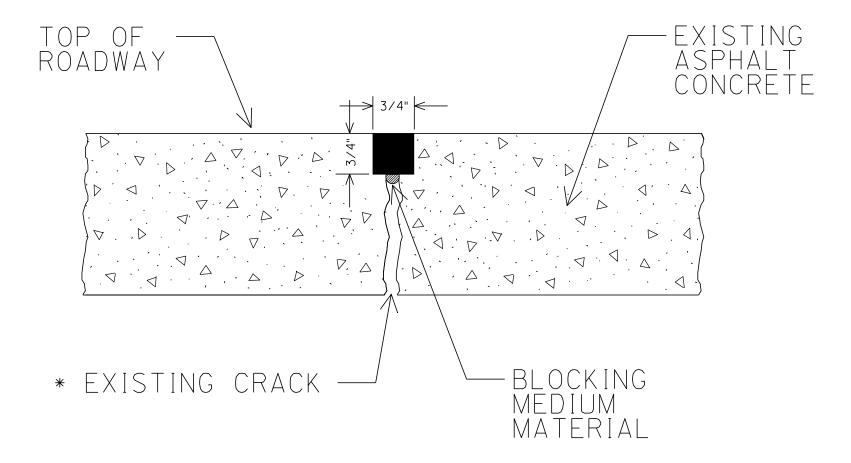
I-90 consists of a Class S Mainline Asphalt Concrete with HR Asphalt Concrete Shoulders. On & Off Ramps Consists of HR Asphalt Concrete surface. All cracks on this segment will be routed so that there is **no** over band present at the crack surface. The Contractor will coordinate with the Engineer to determine if some cracks are small enough to not require a rout & seal.

No routing will occur when within 1 foot of the top of the asphalt sluff.

ROUTE	MRM TO MRM	APPROX. FEET TO BE ROUTED Mainline (34')	APPROX. FEET TO BE ROUTED Outside Shoulder (6')	APPROX. FEET TO BE ROUTED TOTAL	A (SEAI (est
I-90 EB (Segment 1) [Mainline, Shoulders]	227.00 + 0.270 to 236.00 + 0.218	5202	5472	10674	
I-90 EB (Segment 1) [On & Off Ramps]	Exit 235			3243	
I-90 WB (Segment 2) [Mainline, Shoulders]	227.00 + 0.027 to 251.60 + 0.000	6290	29268	35558	
I-90 WB (Segment 2) [On & Off Ramps]	Exits 235, 241, 248 & 251			5386	
	TOTALS:	11,492	34,740	22,861	

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	SOUTH DAKOTA	IM 0033(45)	C4	C10
APPROX.				
CRACK SEALANT (LBS	3)			
(est 1.12#/FT)	,			
11955				
3632				
39825				
6032				
61,444				

TYPICAL RESERVOIR SECTION

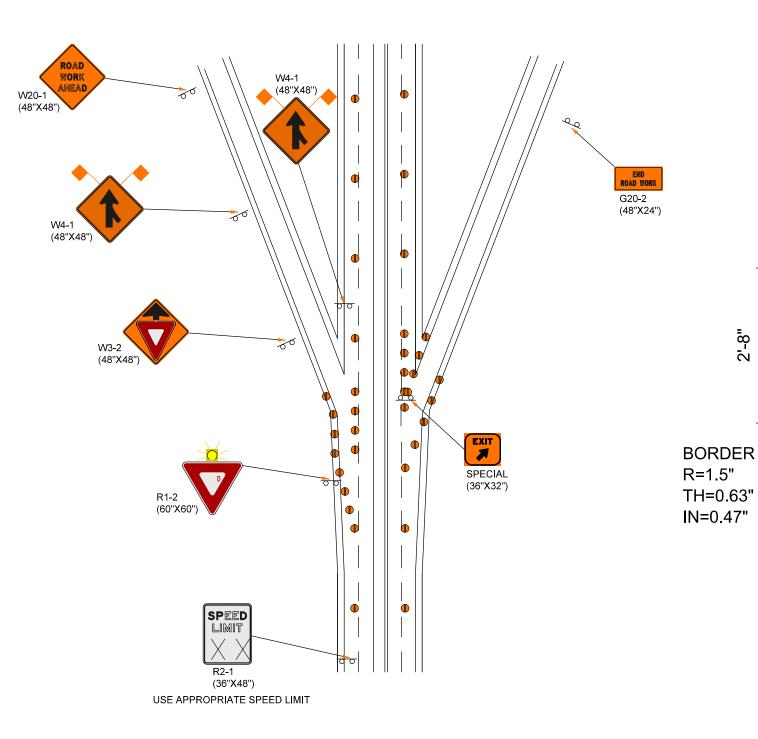


* The blocking medium material will be used in cracks that are 3/8" or more in width.

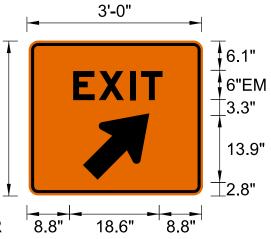
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TRAFFIC CONTROL

RAMP ENTRANCE AND EXIT DRIVING LANE CLOSURE







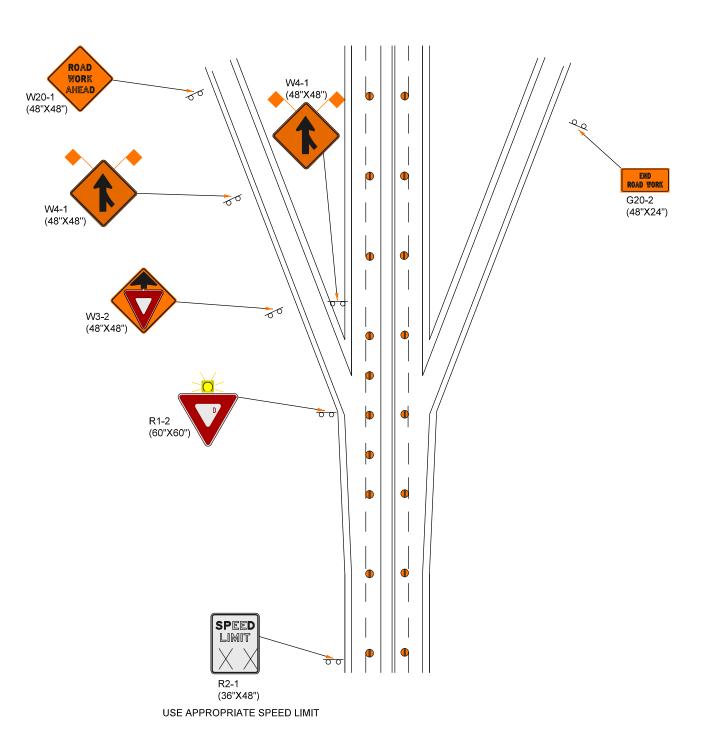
Panel Style: construction_guide.ssi M.U.T.C.D.: 2009 Edition



THE WARNING LIGHT SHALL BE A SHIELDED TYPE B, IN ACCORDANCE WITH THE MUTCD -- AND SHALL BE INCIDENTAL TO THE CONTRACT UNIT PRICE PER SQUARE FOOT FOR "TRAFFIC CONTROL SIGNS"

TRAFFIC CONTROL

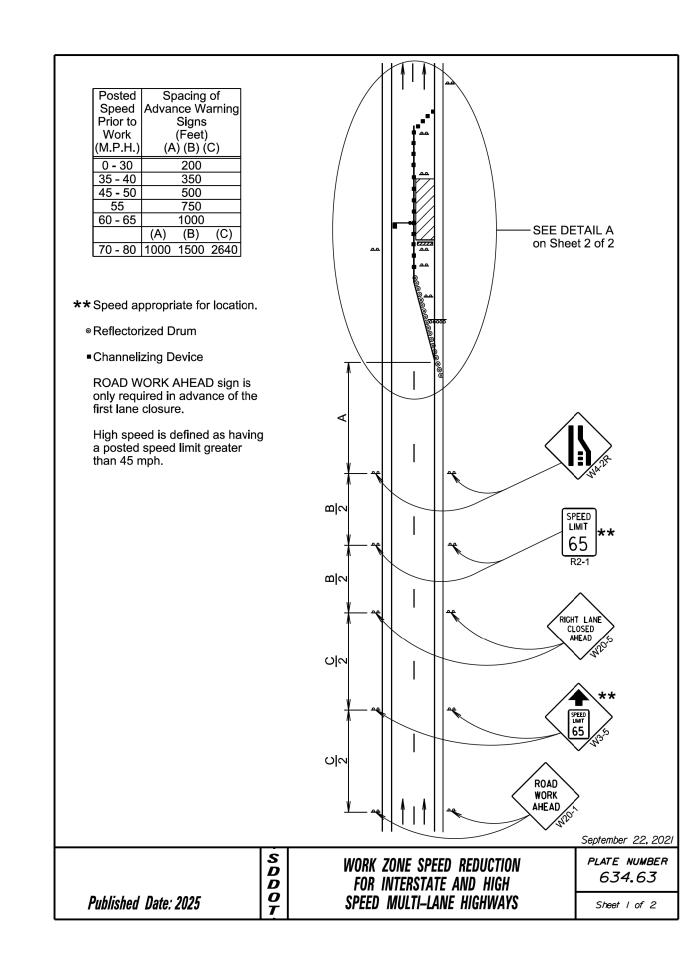
RAMP ENTRANCE AND EXIT PASSING LANE CLOSURE

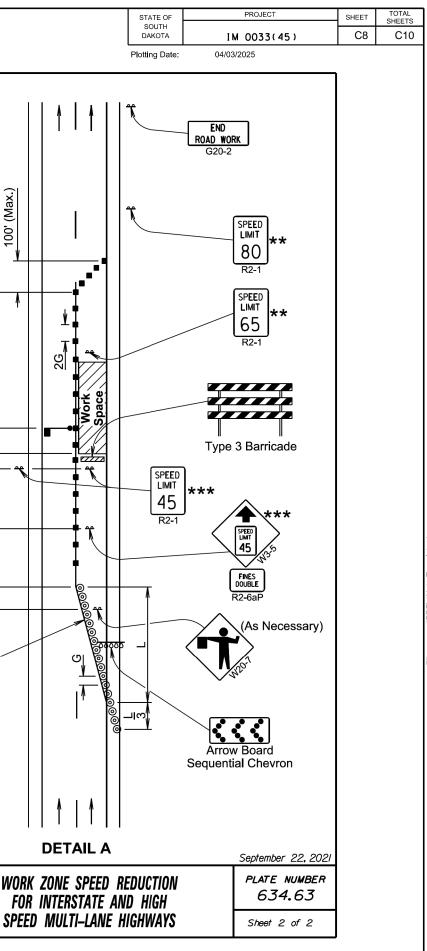


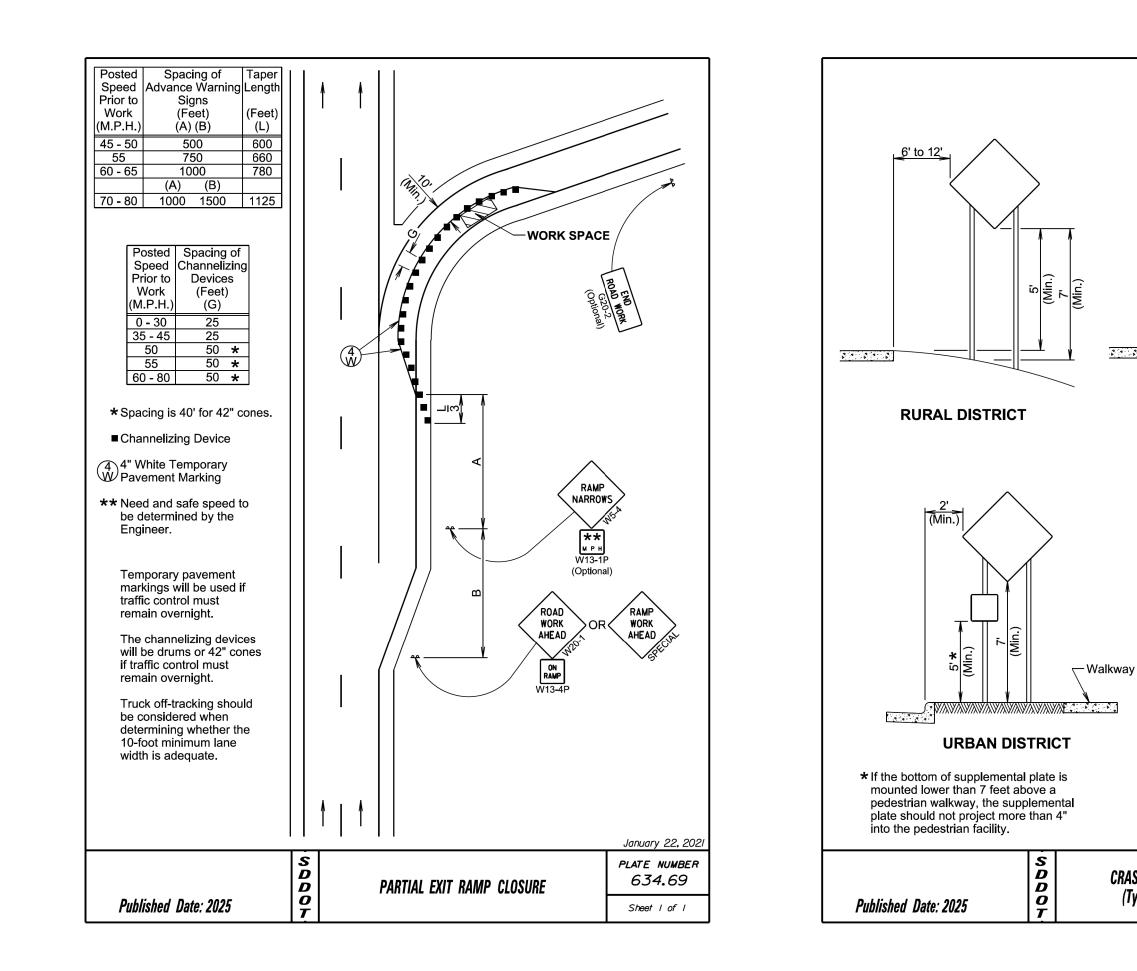
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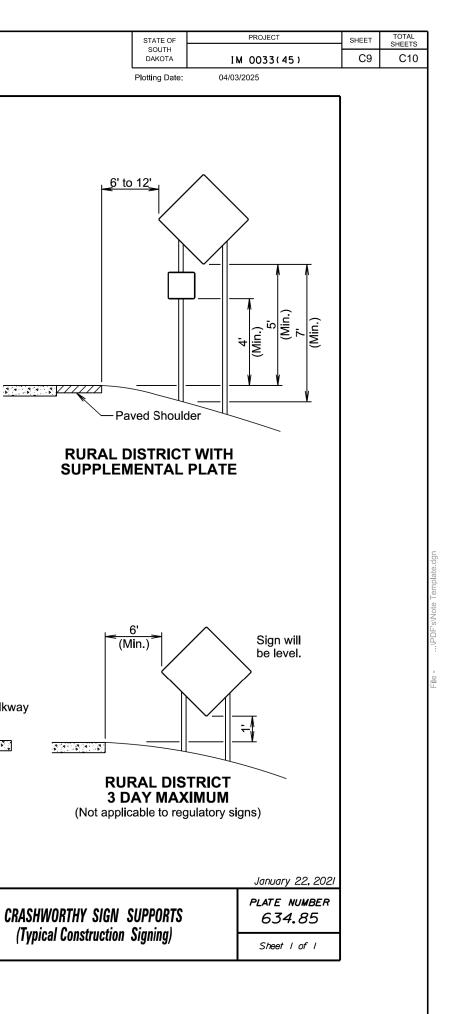
THE WARNING LIGHT SHALL BE A SHIELDED TYPE B, IN ACCORDANCE WITH THE MUTCD AND SHALL BE INCIDENTAL TO THE CONTRACT UNIT PRICE PER SQUARE FOOT FOR "TRAFFIC CONTROL SIGNS"

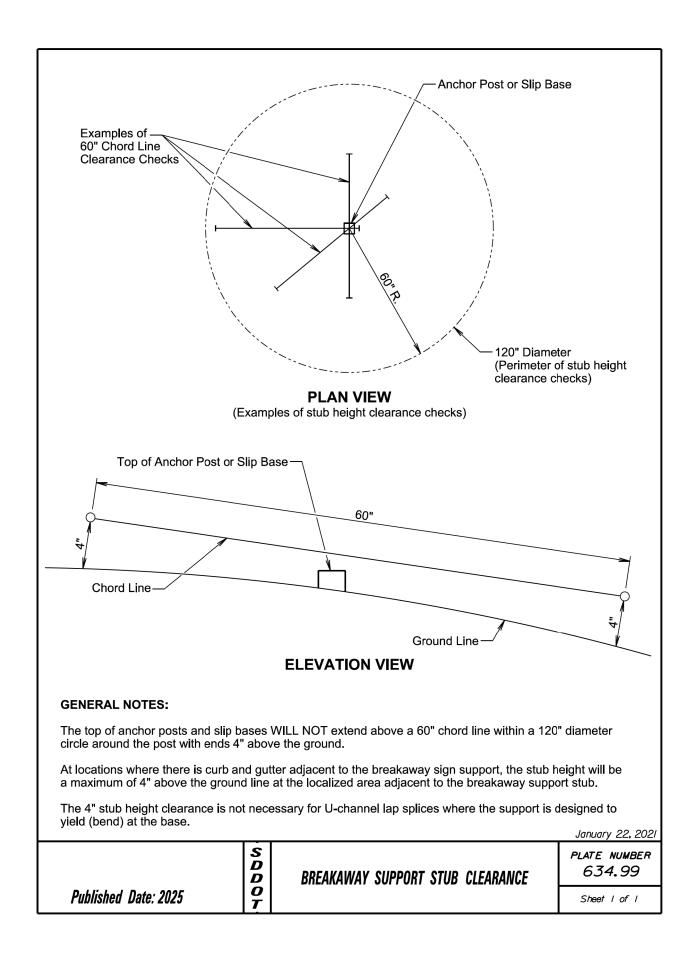






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