


STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION
PLANS FOR PROPOSED
PROJECT IM 0041(186)
INTERSTATE 90
PENNINGTON COUNTY
ASPHALT CONCRETE CRACK SEALING
PCN 09WG

| | | | |
|--|--------------|---------|-------|
|  <small>Plotting Date: 12/12/2025</small> | PROJECT | SECTION | SHEET |
| | IM 0041(186) | Non | 1/9 |

INDEX OF SHEETS

- 1 General Layout with Index
- 2-4 Estimate of Quantities and Plan Notes
- 5 Crack Sealing Details
- 6-7 Traffic Control Details
- 8-9 Standard Plates



① I-90 W, MRM 67.50+ 0.357 to MRM 80+ 0.500

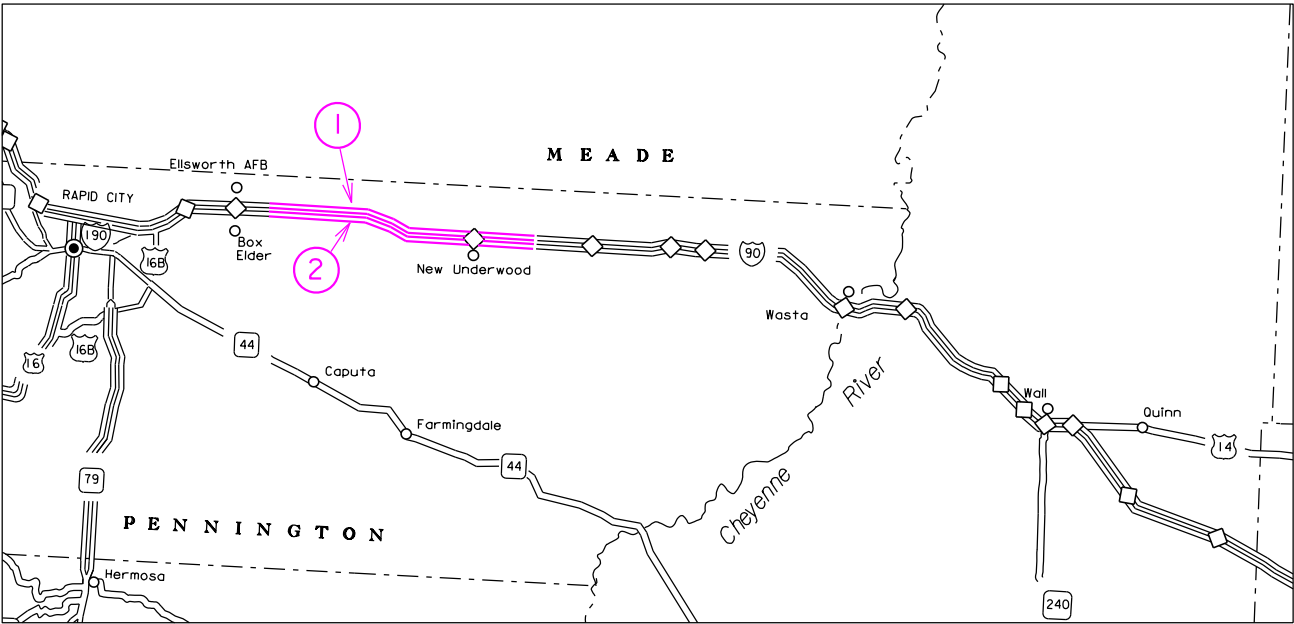
DESIGN DESIGNATION

| | |
|------------|--------|
| ADT (2024) | 7708 |
| ADT (2044) | 10846 |
| DHV | 1994 |
| D | 51% |
| T DHV | 6.8% |
| T ADT | 14.9% |
| V | 80 MPH |

② I-90 E, MRM 67.55+ 0.316 to MRM 80+ 0.500

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STORM WATER PERMIT
No Permit Required

| | |
|----------------------|--------------|
| Gross Length | 25.437 Miles |
| Length of Exceptions | 0.000 Miles |
| Net Length | 25.437 Miles |

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March 4, 2026

ESTIMATE OF QUANTITIES

| BID ITEM NUMBER | ITEM | QUANTITY | UNIT |
|-----------------|--|----------|------|
| 009E0010 | Mobilization | Lump Sum | LS |
| 009E4100 | Construction Schedule, Category I | Lump Sum | LS |
| 350E0010 | Asphalt Concrete Crack Sealing | 10,337 | Lb |
| 634E0010 | Flagging | 200.0 | Hour |
| 634E0110 | Traffic Control Signs | 688.0 | SqFt |
| 634E0120 | Traffic Control, Miscellaneous | Lump Sum | LS |
| 634E0275 | Type 3 Barricade | 4 | Each |
| 634E0420 | Type C Advance Warning Arrow Board | 2 | Each |
| 634E1255 | Contractor Furnished Vehicle Speed Feedback Sign | 2 | Each |

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 questions 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 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

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 Environment 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 concrete, or other similar materials will be buried in a trench completely 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”.
- 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) will be incidental to the various contract items.

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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 a cultural resource review prior to scheduling the pre-construction meeting. 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 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.

The Contractor will provide ARC with the following: a topographical map or aerial view of 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 will immediately cease and the Project Engineer will be immediately notified. The Project Engineer will contact the SDDOT Environmental Office to determine an appropriate course of action.

The Contractor is responsible 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.

ROADWAY CLEANING

The Contractor will be responsible for removing the router tailings from the roadway surface, including shoulders, intersecting roads, median crossovers, sidewalks, etc. as directed by the Engineer.

A Pickup Broom will be required to remove the router tailings from the project as per Sec. 360.3.B.1. All costs associated with this work will be incidental to the various bid items on the project.

CRACK SEALING

All quantities are based on a factor of 0.4 lbs. of sealant per 1 foot of existing crack. Actual quantities used may vary depending upon the location and width of the existing crack. Rates may vary as directed by the Engineer.

The Typical Reservoir Section will be 3/4 inch wide x 3/4 inch deep.

The use of a squeegee will not be allowed on this project except for locations where the sealant begins to run out of the routed crack due to the grade or superelevation of the road and at locations where cracks are less than 6” apart. The squeegee will be used to push the sealant material back into the crack and remove as much sealant as possible from the roadway surface at these locations.

At locations with multiple cracks less than 6” apart, route only the widest crack. Routing will not be required to seal the remaining cracks. Trace these remaining cracks with sealant and use a squeegee to level and fill.

TABLE OF CRACK SEAL QUANTITIES

| Highway | MRM to | | MRM | | Length (Miles) | Asphalt Concrete Crack Sealing (Lb) |
|---------|--------|-------|-------|-------|-------------------|---|
| I-90 E | 67.55+ | 0.316 | 80+ | 0.500 | 12.725 | 4,976 |
| I-90 W | 67.50+ | 0.357 | 80+ | 0.500 | 12.712 | 5,361 |
| | | | | | | |
| | | | Total | | 25.437 | 10,337 |

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.

TRAFFIC CONTROL

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

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

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

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.

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.

Lane closures will be removed prior to nightfall.

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.


On Interstate projects with more than one construction site, slow moving equipment that operates at a speed less than 40 MPH may mobilize between sites if the equipment travels on the shoulder. The slow-moving equipment will also display a flashing amber light and a slow-moving sign.

TRAFFIC CONTROL SIGNS

Traffic control signs have been included in a table for each route. Payment will only be for those signs used on each route.

WORK ZONE SPEED REDUCTION

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.

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CONTRACTOR FURNISHED VEHICLE SPEED FEEDBACK SIGN

The Contractor will provide 2 vehicle speed feedback sign to monitor traffic speeds on designated routes at locations specified in the field by the Engineer.

The vehicle speed feedback sign assembly will include a speed limit sign mounted in conjunction with the radar speed feedback display. The speed display will not flash vehicle speeds exceeding the speed limit or any other messages.

All costs associated with furnishing, maintaining, transporting, relocating if necessary, and removing the radar speed feedback trailers from locations specified by the Engineer will be incidental to the contract unit price per each for “Contractor Furnished Speed Monitoring Radar Trailer”.

INVENTORY OF TRAFFIC CONTROL DEVICES I-90 E, MRM 67.55+ 0.316 to MRM 80+ 0.500

| SIGN CODE | SIGN DESCRIPTION | NUMBER | SIGN SIZE | SQFT PER SIGN | SQFT |
|-----------|----------------------------------|--|-----------|---------------|-------|
| R1-2 | YIELD | 2 | 36" x 36" | 9.0 | 18.0 |
| R2-1 | SPEED LIMIT __ | 6 | 36" x 48" | 12.0 | 72.0 |
| R2-6aP | FINES DOUBLE (plaque) | 1 | 36" x 24" | 6.0 | 6.0 |
| W3-5 | SPEED REDUCTION AHEAD (__ MPH) | 3 | 48" x 48" | 16.0 | 48.0 |
| W4-2 | LEFT or RIGHT LANE ENDS (symbol) | 2 | 48" x 48" | 16.0 | 32.0 |
| W20-1 | ROAD WORK AHEAD | 3 | 48" x 48" | 16.0 | 48.0 |
| W20-5 | LEFT or RIGHT LANE CLOSED AHEAD | 2 | 48" x 48" | 16.0 | 32.0 |
| W21-5a | LEFT or RIGHT SHOULDER CLOSED | 2 | 48" x 48" | 16.0 | 32.0 |
| G20-2 | END ROAD WORK | 2 | 48" x 24" | 8.0 | 16.0 |
| | | EXPRESSWAY / INTERSTATE TRAFFIC CONTROL SIGNS SQFT | | | 344.0 |

INVENTORY OF TRAFFIC CONTROL DEVICES I-90 W, MRM 67.50+ 0.357 to MRM 80+ 0.500

| SIGN CODE | SIGN DESCRIPTION | NUMBER | SIGN SIZE | SQFT PER SIGN | SQFT |
|-----------|----------------------------------|--|-----------|---------------|-------|
| R1-2 | YIELD | 2 | 36" x 36" | 9.0 | 18.0 |
| R2-1 | SPEED LIMIT __ | 6 | 36" x 48" | 12.0 | 72.0 |
| R2-6aP | FINES DOUBLE (plaque) | 1 | 36" x 24" | 6.0 | 6.0 |
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| G20-2 | END ROAD WORK | 2 | 48" x 24" | 8.0 | 16.0 |
| | | EXPRESSWAY / INTERSTATE TRAFFIC CONTROL SIGNS SQFT | | | 344.0 |

SUMMARY OF TRAFFIC CONTROL SIGNS

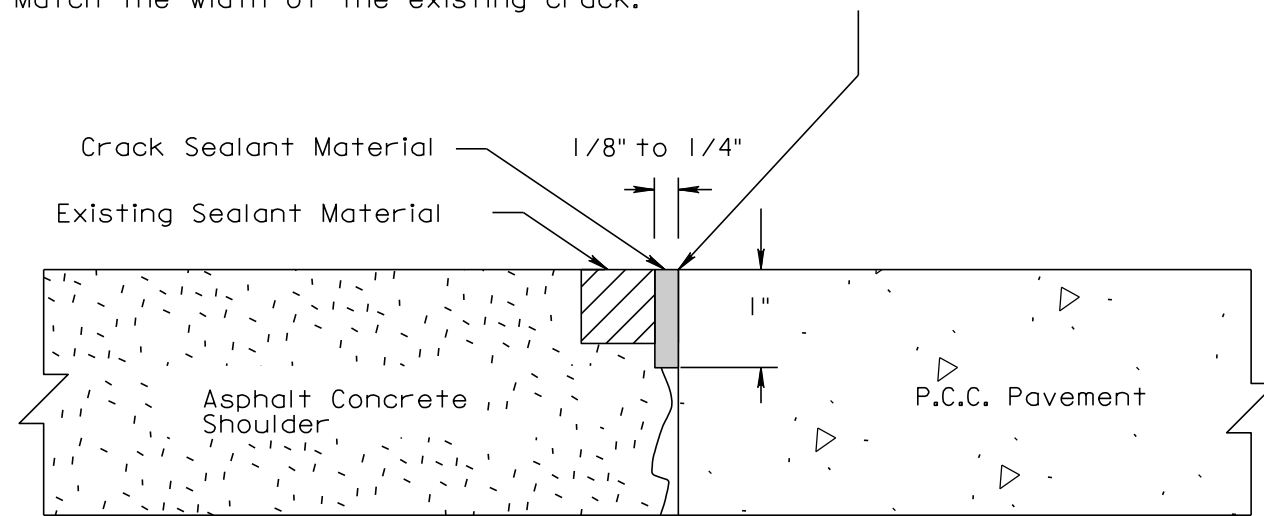
| Highway | MRM to | | MRM | | Traffic Control Signs | Type 3 Barricade | Type C Advance Warning Arrow Board |
|---------|--------|-------|-------|-------|-----------------------|------------------|------------------------------------|
| | | | | | SqFt | Each | Each |
| I-90 E | 67.55+ | 0.316 | 80+ | 0.500 | 344.0 | 2 | 1 |
| I-90 W | 67.50+ | 0.357 | 80+ | 0.500 | 344.0 | 2 | 1 |
| | | | | | | | |
| | | | Total | | 688.0 | 4 | 2 |

CRACK SEALING SHOULDER JOINT ADJACENT TO PCC PAVEMENT

If spalling of the PCC Pavement occurs or the existing sealant is damaged during routing, the Contractor will switch to sawing.

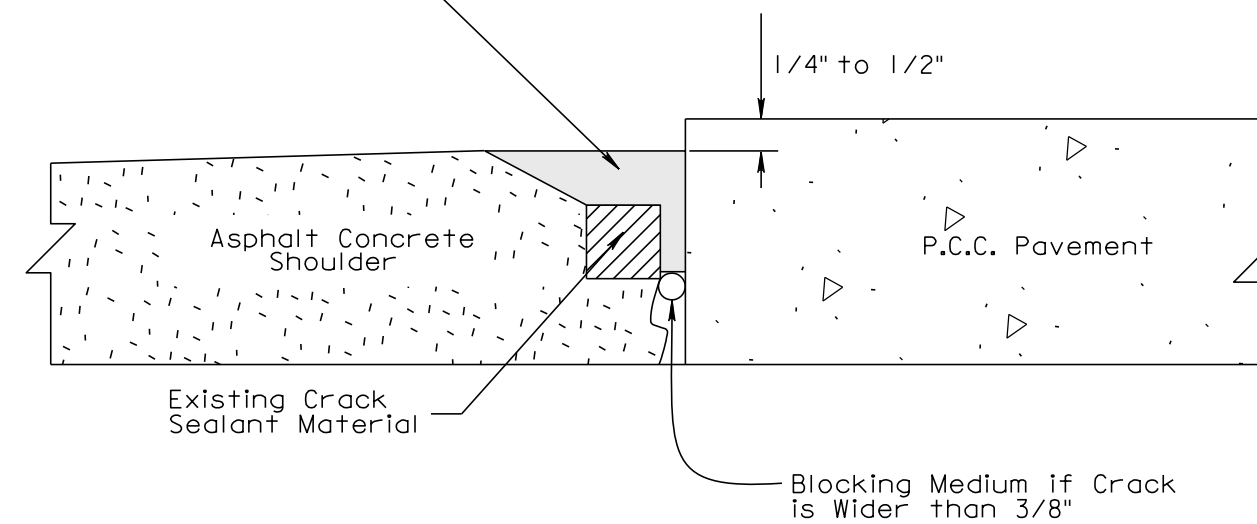
If the existing sealant is easily removed during routing, remove and replace the existing sealant.

If the crack is greater than 1/4", routing will not be required. Match the width of the existing crack.

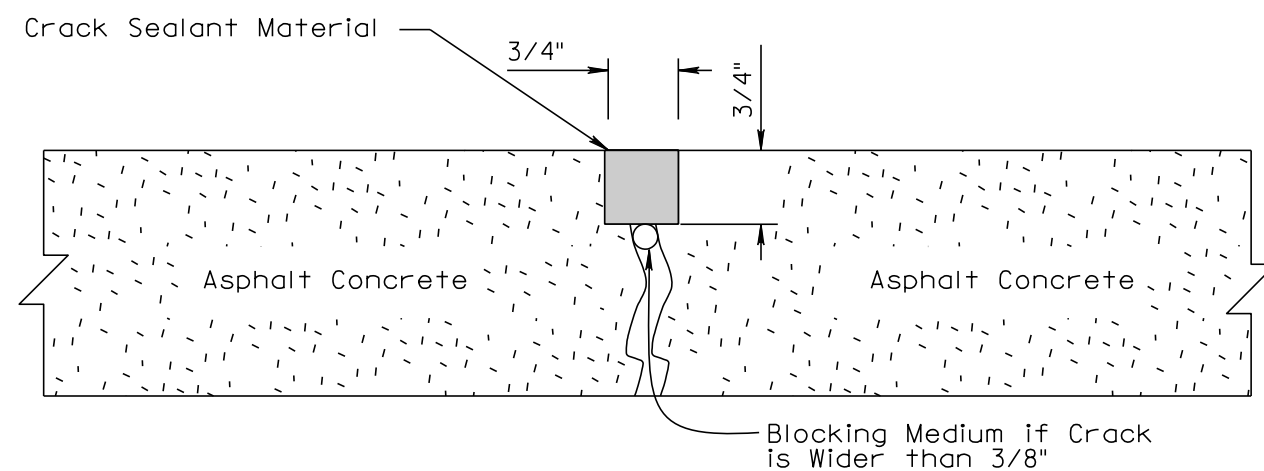


CRACK SEALING SHOULDER JOINT ADJACENT TO PCC PAVEMENT with SETTLEMENT

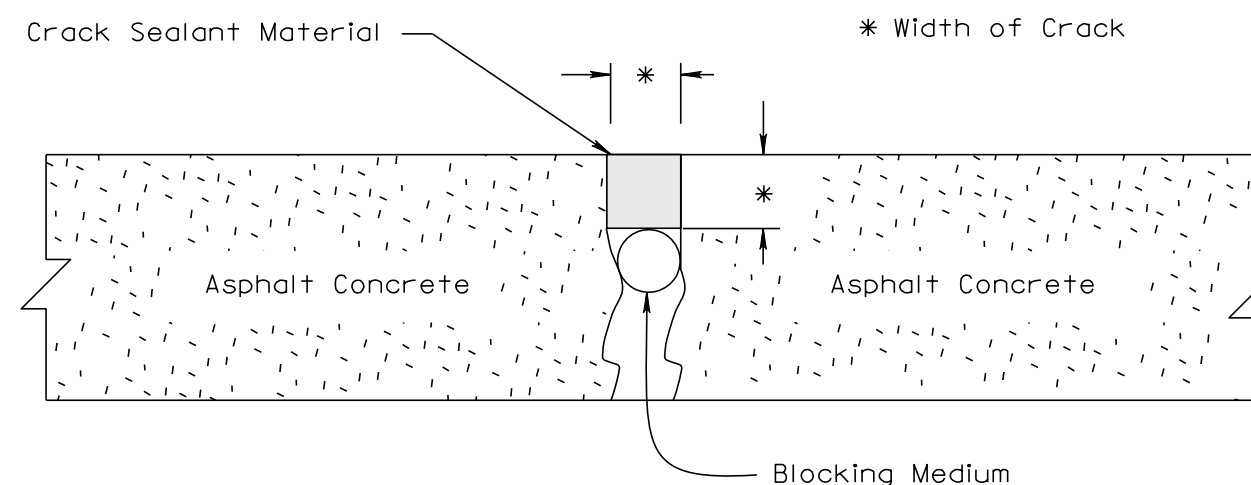
Remove Vegetation, Clean and Seal Crack.
Routing will not be required.



CRACK SEALING FOR CRACKS LESS THAN 3/4" WIDTH (ROUTING REQUIRED)



CRACK SEALING FOR CRACKS 3/4" OR GREATER WIDTH (ROUTING NOT REQUIRED)

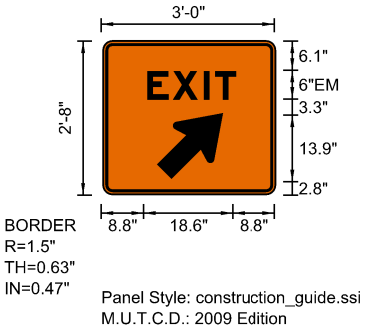
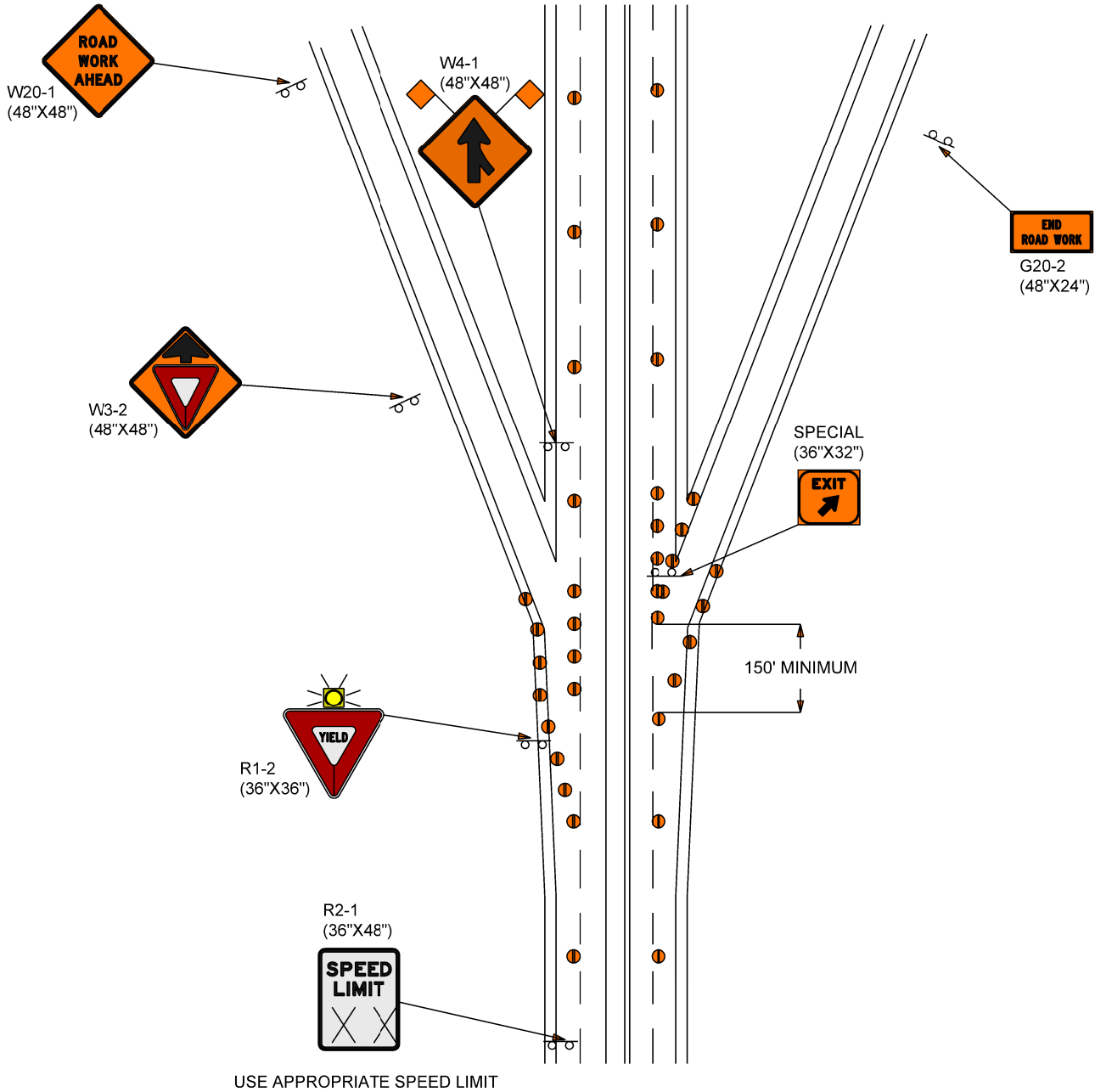


TRAFFIC CONTROL

RAMP ENTRANCE AND EXIT SIGNING DETAILS #1

| | | | |
|-----------------------------|--------------|-------|-----------------|
| STATE OF SOUTH DAKOTA | PROJECT | SHEET | TOTAL SHEETS |
| | IM 0041(186) | Non | 6/9 |

Plotting Date: 03/13/2025



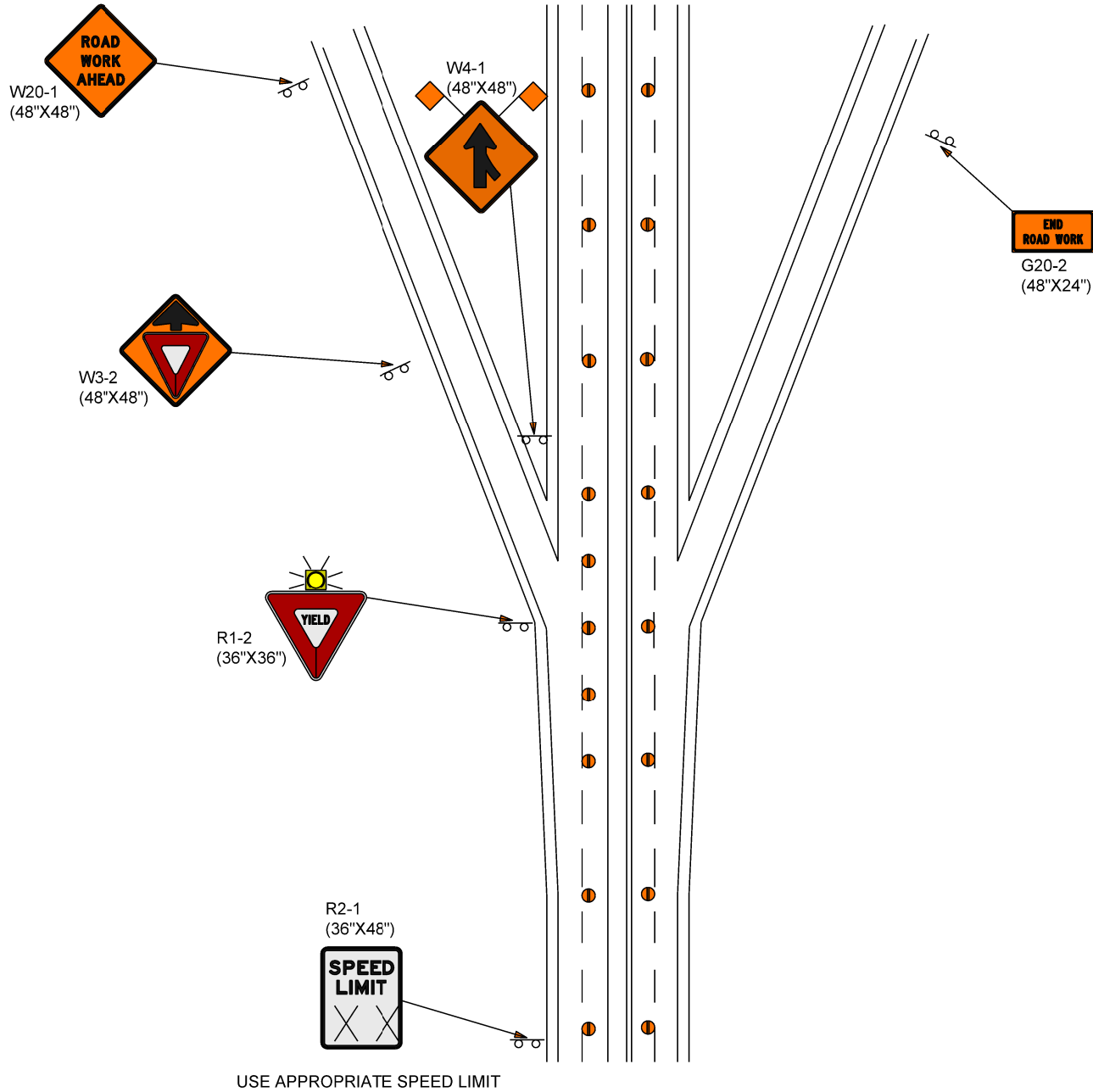
 -- TYPE B SHIELDED WARNING LIGHT

TRAFFIC CONTROL

RAMP ENTRANCE AND EXIT SIGNING DETAILS #2

| | | | |
|-----------------------------|--------------|-------|-----------------|
| STATE OF SOUTH DAKOTA | PROJECT | SHEET | TOTAL SHEETS |
| | IM 0041(186) | Non | 7/9 |

Plotting Date: 03/13/2025



 -- TYPE B SHIELDED WARNING LIGHT

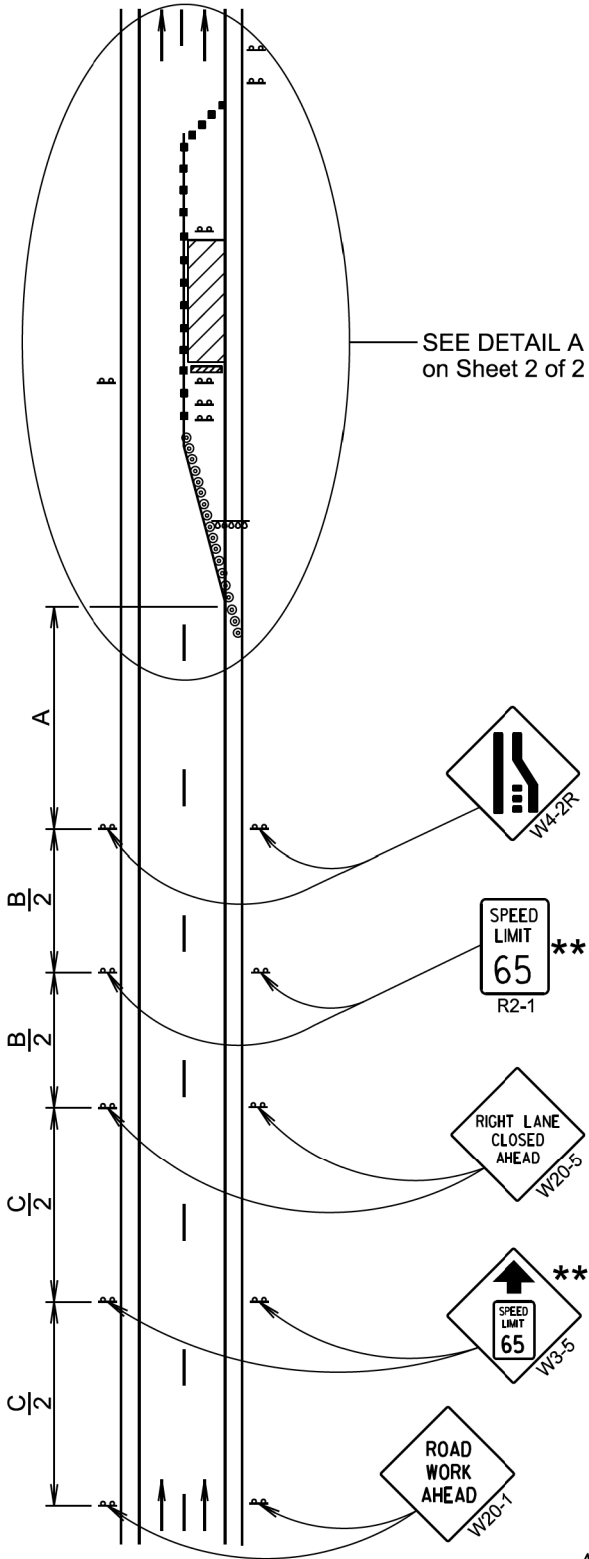
| Posted Speed Prior to Work (M.P.H.) | Spacing of Advance Warning Signs (Feet) | | |
|-------------------------------------|---|------|------|
| | (A) | (B) | (C) |
| 0 - 30 | 200 | | |
| 35 - 40 | 350 | | |
| 45 - 50 | 500 | | |
| 55 | 750 | | |
| 60 - 65 | 1000 | | |
| | (A) | (B) | (C) |
| 70 - 80 | 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 8, 2025

Published Date: 2026

SD
DOT

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 will be covered or removed when workers are not present.

◉ Reflectorized Drum

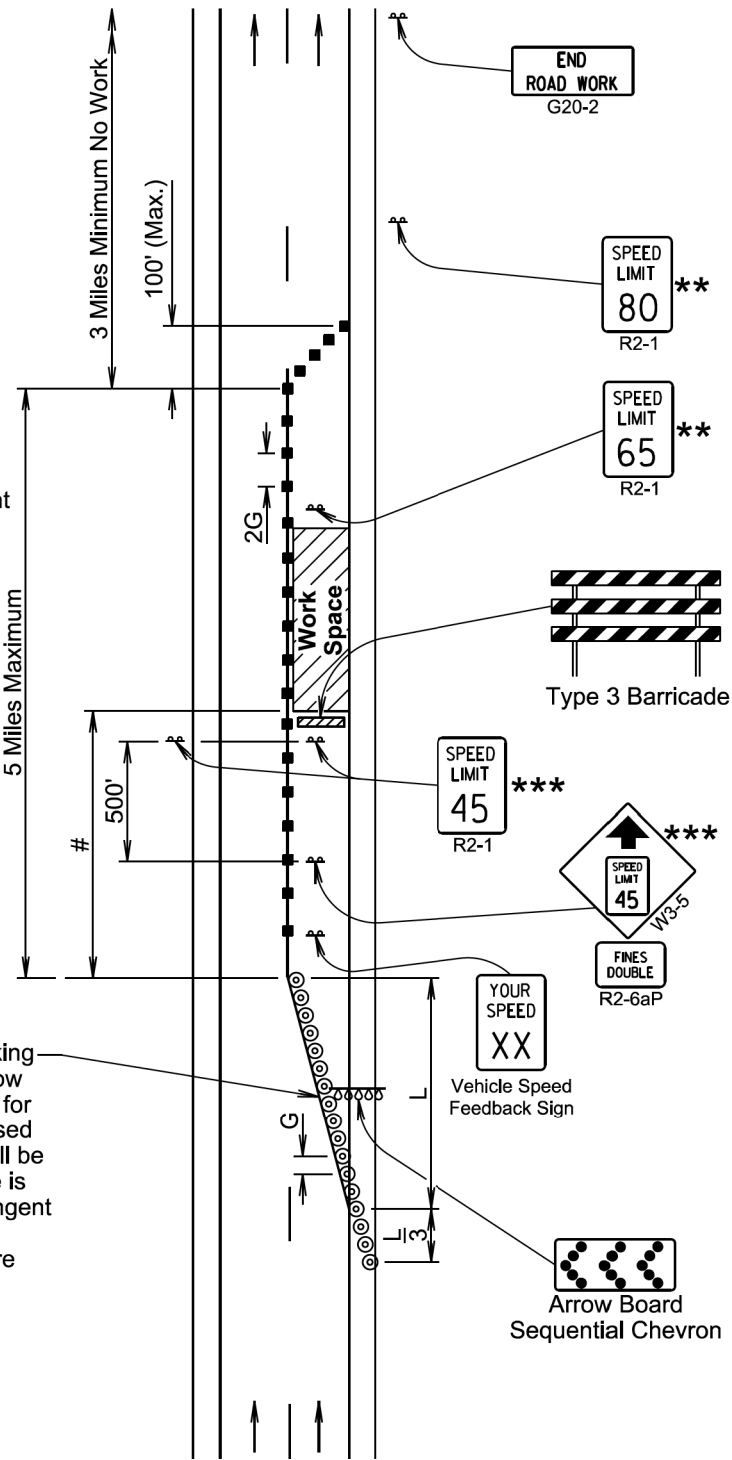
■ Channelizing Device

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

The channelizing devices will 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 raised pavement markers at 5' spacing will 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

April 8, 2025

Published Date: 2026

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WORK ZONE SPEED REDUCTION
FOR INTERSTATE AND HIGH
SPEED MULTI-LANE HIGHWAYS

PLATE NUMBER
634.63

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