

STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED
PROJECT P 0011(91)

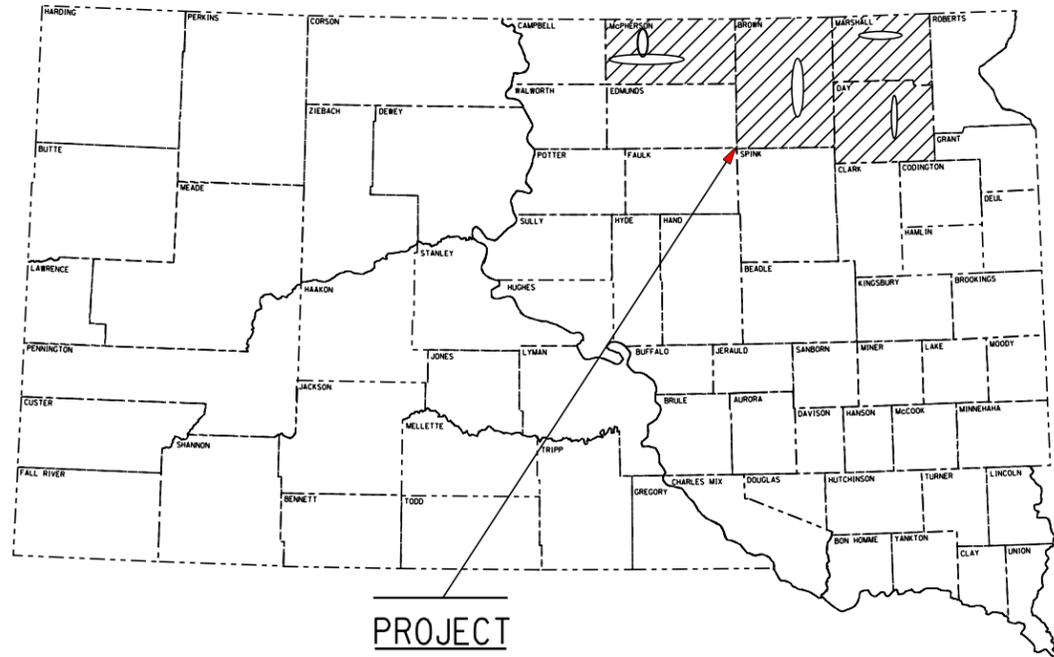
SD HIGHWAYS 47, 10, 25, 37 & 45
BROWN, DAY, MARSHALL,
& McPHERSON COUNTIES

Rout & Seal
PCN 0530

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 0011(91)	1	11
Plotting Date: 03/03/2016			

Revised 3/3/2016 B.A.S
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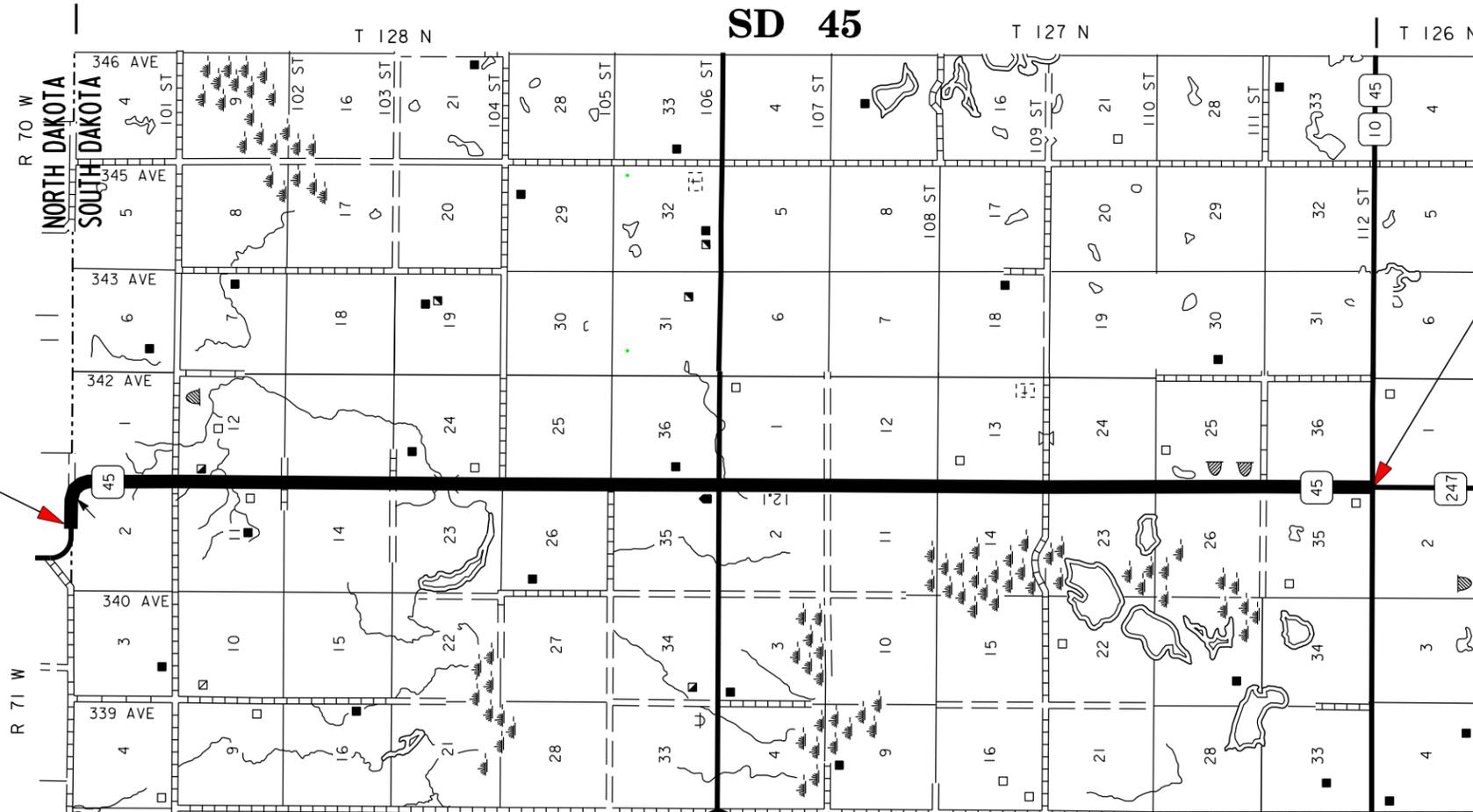
- Sheet No. 1-6: Title Page and Layout Maps
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- Sheet No. 11: Traffic Control



PROJECT

Segment 1

SD 45



Begin Segment 1
STA. 0+00.00
MRM 236.10 +0.076

End Segment 1
STA. 640+77.00
MRM 224.05 +0.000



DESIGN DESIGNATION

ADT (2014)	200
ADT (2032)	262
DHV	33.5
D	50%
T DHV	12.1%
T ADT	26.6%
V	65 m.p.h.

STORM WATER PERMIT

NONE REQUIRED

GROSS LENGTH	64077.00 FEET	12.136 MILES
LENGTH OF EXCEPTIONS	0.00 FEET	0.000 MILES
NET LENGTH	64077.00 FEET	12.136 MILES

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PLOT SCALE - 1:7800

PLOTTED FROM - TRABINT01

PLOT NAME - 8

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Segment 2 SD 37

Str. No. 07-300-353
Sta 122+03.00 to 122+57.00
Continuous Concrete Bridge
54' - 0" = 0.010 Miles
MRM 206.08

Str. No. 07-300-375
Sta 235+09.00 to 236+01.00
Continuous Concrete Bridge
92' - 0" = 0.017 Miles
MRM 203.93

Str. No. 07-300-405
Sta 390+21.00 to 390+75.00
Continuous Concrete Bridge
54' - 0" = 0.010 Miles
MRM 201.01

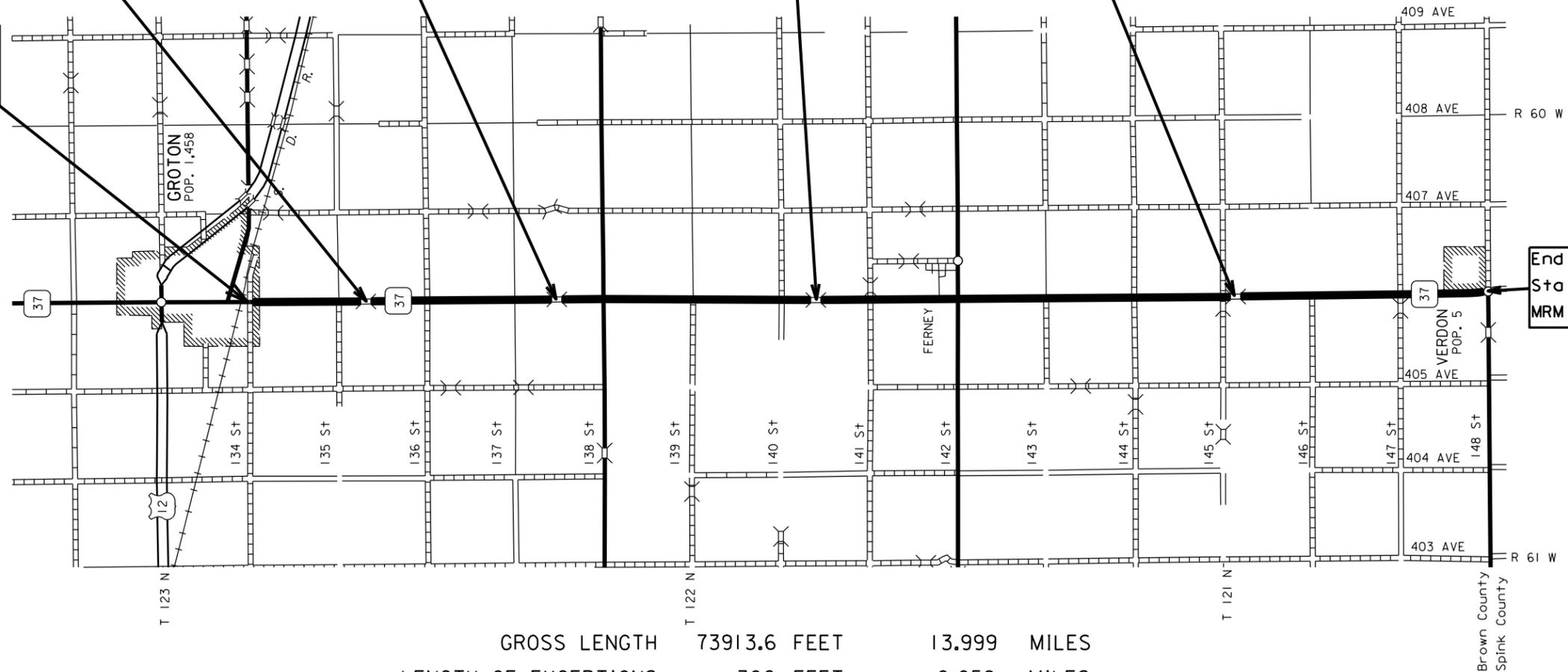
Str. No. 07-300-451
Sta 640+50.00 to 641+56.00
Continuous Concrete Bridge
106' - 0" = 0.020 Miles
MRM 196.31

Begin Segment 2
Sta 0+00.00
MRM 207.41+0.000

End Segment 2
Sta 739+13.60
MRM 193.42 +0.000

DESIGN DESIGNATION

ADT (2014)	1028
ADT (2034)	1340
DHV	146.0
D	50%
T DHV	4
T ADT	8.7%
V	65 MPH



GROSS LENGTH	73913.6 FEET	13.999 MILES
LENGTH OF EXCEPTIONS	306 FEET	0.058 MILES
NET LENGTH	73607.6 FEET	13.941 MILES

Segment 3

SD 25

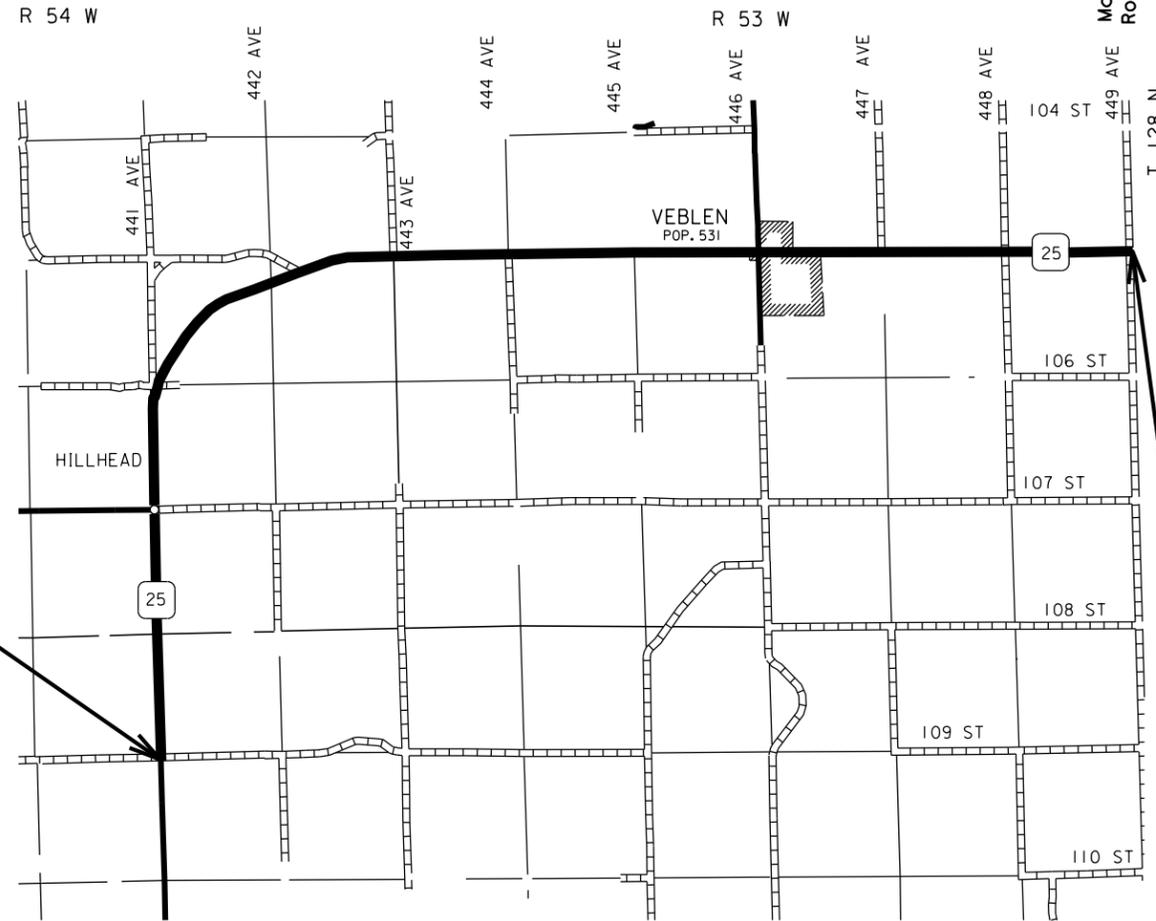


Begin Segment 3
Sta 0+00.00
MRM 219.00+0.085

End Segment 3
Sta 601+04.00
MRM 230.44+0.011

DESIGN DESIGNATION

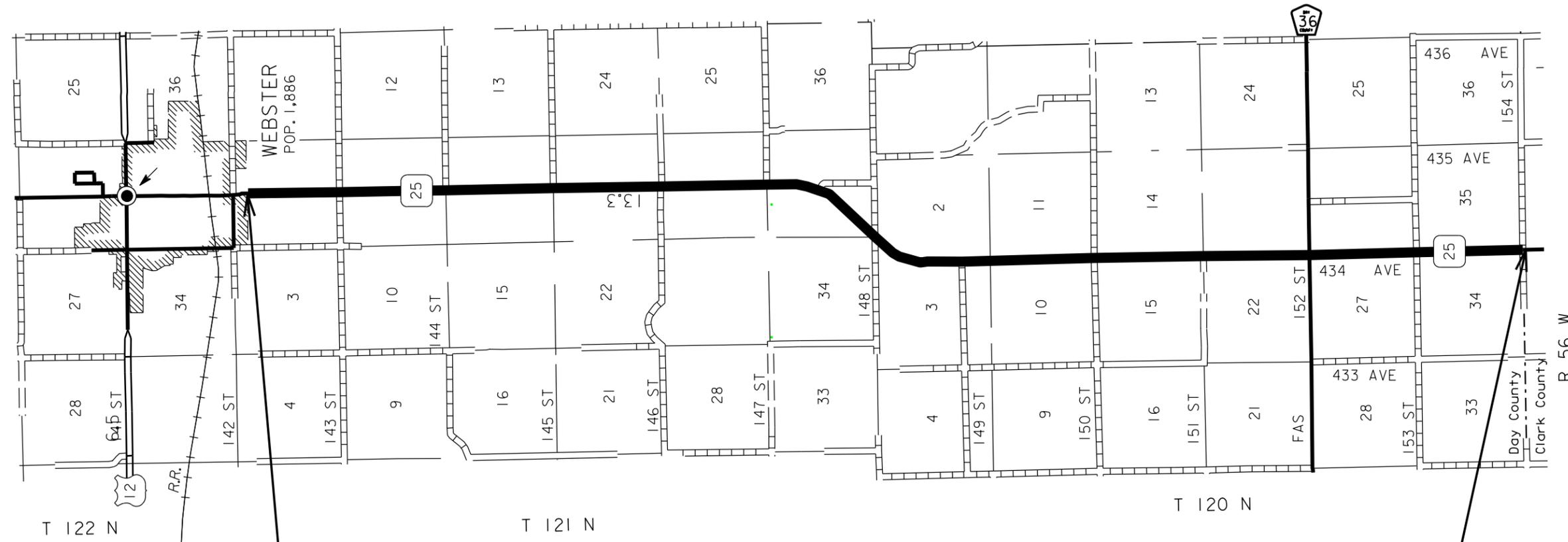
ADT (2014)	339
ADT (2031)	377
DHV	41.1
D	50%
T DHV	5.8
T ADT	12.6%
V	65 MPH



GROSS LENGTH	60104.0 FEET	11.384 MILES
LENGTH OF EXCEPTIONS	0.00 FEET	0.000 MILES
NET LENGTH	60104.0 FEET	11.384 MILES

Segment 4

SD 25



End Segment 4
 STA. 640+29.00
 MRM 181.00 +0.016

Begin Segment 4
 STA. 0+00.00
 MRM 168.84 +0.000

GROSS LENGTH	64029.00 FEET	12.127 MILES
LENGTH OF EXCEPTIONS	0.00 FEET	0.000 MILES
NET LENGTH	64029.00 FEET	12.127 MILES

DESIGN DESIGNATION

ADT (2014)	1069
ADT (2034)	1399
DHV	152.5
D	50%
T DHV	3.6%
T ADT	8.0%
V	60 MPH

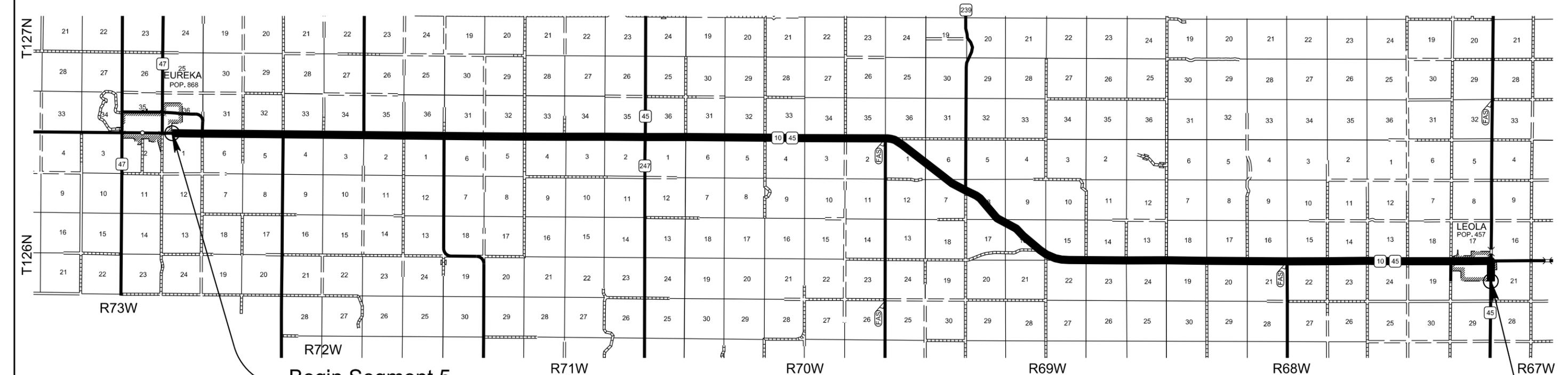


Segment 5

SD 10 & 45

PLOT SCALE - 1:6000

PLOT NAME - 6



Begin Segment 5
 Station 0+00.00
 MRM 225.00 +0.250

DESIGN DESIGNATION
 ADT (2014) Hwy 10 639
 ADT (2034) 683
 DHV 114.7
 D 51%
 T DHV 8.4%
 T ADT 18.5%
 V 65 mph rural
 30 mph urban

GROSS LENGTH	181455.9 FEET	34.366 MILES
LENGTH OF EXCEPTIONS	0.0 FEET	0.000 MILES
NET LENGTH	181455.9 FEET	34.366 MILES

End Segment 5
 Station 1814+55.90
 MRM 201.00 +0.488

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Segment 6

SD 47



PLOT SCALE - 1:6000

PLOT NAME - 6

Begin Segment 6
STA. 0+00
MRM 235.14+0.000



DESIGN DESIGNATION	
ADT (2014)	530
ADT (2034)	689
DHV	88.2
D	50%
T DHV	11.5%
T ADT	25.2
V	65 MPH

GROSS LENGTH	55070.2 FEET	10.430 MILES
LENGTH OF EXCEPTIONS	0.00 FEET	0.000 MILES
NET LENGTH	55070.2 FEET	10.430 MILES

End Segment 6
STA. 550+70.2
MRM 224.60

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Revised 3/3/2016 B.A.S.

Estimate of Quantities

Non-Section Method

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
350E0010	Asphalt Concrete Crack Sealing	170,183	Lb
634E0010	Flagging	332.0	Hour
634E0020	Pilot Car	165.0	Hour
634E0110	Traffic Control Signs	828	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
998E0100	Railroad Protective Insurance	Lump Sum	LS

Table of Quantities (For Informations Only)

ITEM	Segment 1 SD 45	Segment 2 SD 37	Segment 3 SD 25	Segment 4 SD 25	Segment 5 SD 10 & 45	Segment 6 SD 47	QUANTITY	UNIT
Mobilization	Lump Sum	Lump Sum	Lump Sum	LS				
Asphalt Concrete Crack Sealing	11577.6	42550.4	8683.2	11107.6	62326.4	33937.6	170,183	Lb
Flagging	23	83	17	22	121	66	332	Hour
Pilot Car	11	41	8	11	61	33	165	Hour
Traffic Control Signs	138	138	138	138	138	138	828	SqFt
Traffic Control, Miscellaneous	Lump Sum	Lump Sum	Lump Sum	LS				
Railroad Protective Insurance	-	-	-	-	-	Lump Sum	Lump Sum	LS

SPECIFICATIONS

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

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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 B4: BALD EAGLE

Bald eagles are known to occur in this area.

Action Taken/Required:

If a nest is observed within one mile of the project site, notify the Project Engineer immediately so that he/she can consult with the Environmental Office for an appropriate course of action.

COMMITMENT E: STORM WATER

Construction activities constitute less than 1 acre of disturbance.

Action Taken/Required:

At a minimum and regardless of project size, appropriate erosion and sediment control measures must be installed to control the discharge of pollutants from the construction site.

COMMITMENT H: WASTE DISPOSAL SITE

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

Action Taken/Required:

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

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

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

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

1. Construction and/or demolition debris consisting of concrete, asphalt concrete, or other similar materials shall be buried in a trench completely separate from wood debris. The final cover over the construction and/or demolition debris shall consist of a minimum of 1 foot of soil capable of supporting vegetation. Waste disposal sites provided outside of the State ROW shall be seeded in accordance with Natural Resources Conservation Service recommendations. The seeding recommendations may be obtained through the appropriate County NRCS Office. The Contractor shall control the access to waste disposal sites not within the State ROW through the use of fences, gates, and placement of a sign or signs at the entrance to the site stating "No Dumping Allowed".
2. Concrete and asphalt concrete debris may be stockpiled within view of the ROW for a period of time not to exceed the duration of the project. Prior to project completion, the waste shall be removed from view of the ROW or buried and the waste disposal site reclaimed as noted above.

The above requirements will not apply to waste disposal sites that are covered by an individual solid waste permit as specified in SDCL 34A-6-58, SDCL 34A-6-1.13, and ARSD 74:27:10:06.

Failure to comply with the requirements stated above may result in civil penalties in accordance with South Dakota Solid Waste Law, SDCL 34A-6-1.31.

All costs associated with furnishing waste disposal site(s), disposing of waste, maintaining control of access (fence, gates, and signs), and reclamation of the waste disposal site(s) shall be incidental to the various contract items.

COMMITMENT I: HISTORICAL PRESERVATION OFFICE CLEARANCES

The SDDOT has obtained concurrence with the State Historical Preservation Office (SHPO or THPO) for all work included within the project limits and all 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.

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SEQUENCE OF OPERATIONS

The Contractor shall submit his proposed sequence of operations for the Engineer's approval at least one week prior to the preconstruction meeting. The Contractor shall sequence work for half of roadway width at a time.

WORK DESCRIPTION

This project involves crack sealing of asphalt concrete surfaces on the routes shown in the plans.

TRAFFIC CONTROL

Traffic shall be maintained on the driving lanes through the work area by use of flaggers and a pilot car. There are one set of signs per route. Only one lane will be closed at a time. Use of the shoulder as a driving lane will not be permitted. Any damage to the shoulders due to rerouted traffic or Contractor's equipment shall be repaired by the Contractor at no expense to the State.

Removing, relocating, covering, salvaging and resetting of existing traffic control devices, including delineation, shall be the responsibility of the Contractor. Cost of this work shall be incidental to the various contract bid items unless otherwise specified in the plans. Delineators and signs damaged or lost shall be replaced by the Contractor at no cost to the State.

Indiscriminate driving and parking of vehicles within the right-of-way will not be permitted. Any damage to 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.

Work activities during non-daylight hours are subject to prior approval.

Traffic Control Signs., as shown in the Estimate of Quantities, are estimates. Contractor's operation may require adjustments in quantities, either more or less. Payment will be for those signs actually ordered by the Engineer and used. Traffic Control signs will be paid separately for each segment.

Non-fixed location signs may be mounted on portable supports. The bottom of signs on portable or temporary supports shall not be less than seven feet above the pavement in urban areas, and one foot above the pavement in rural areas.

During construction operations, all Contractor's vehicles, equipment, and materials shall be located within that half of the roadway which is closed to through traffic. No temporary parking or material storage will be permitted on that portion of the roadway open to through traffic.

REFLECTORIZED SHEETING REQUIREMENTS for TEMPORARY TRAFFIC CONTROL DEVICES

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

Temporary traffic control devices, including signs, drums, cones, tubular markers, barricades, vertical panels, and direction indicator barricades shall be reflectORIZED with sheeting applied to a satisfactory backing. For all temporary traffic control warning signs, the reflective sheeting shall meet or exceed the standards of Type VII, Type VIII, Type IX, or Type XI as defined by AASHTO M 268 (ASTM D4956). For all other temporary traffic control signs, the reflective sheeting shall meet or exceed the standards of Type IV, Type V, Type VII, Type VIII, Type IX, or Type XI as defined by AASHTO M 268 (ASTM D4956). For barricades, vertical panels, and direction indicator barricades; the reflective sheeting shall meet or exceed the standards of Type III as defined by AASHTO M 268 (ASTM D4956). Round surfaced temporary traffic control devices including, but not limited to; drums, cones, and tubular markers shall be reflectORIZED with reflectORIZED sheeting meeting or exceeding the standards of Type IV as defined by AASHTO M 268 (ASTM D4956). All orange colored material shall be fluorescent.

CONSTRUCTION REQUIREMENTS

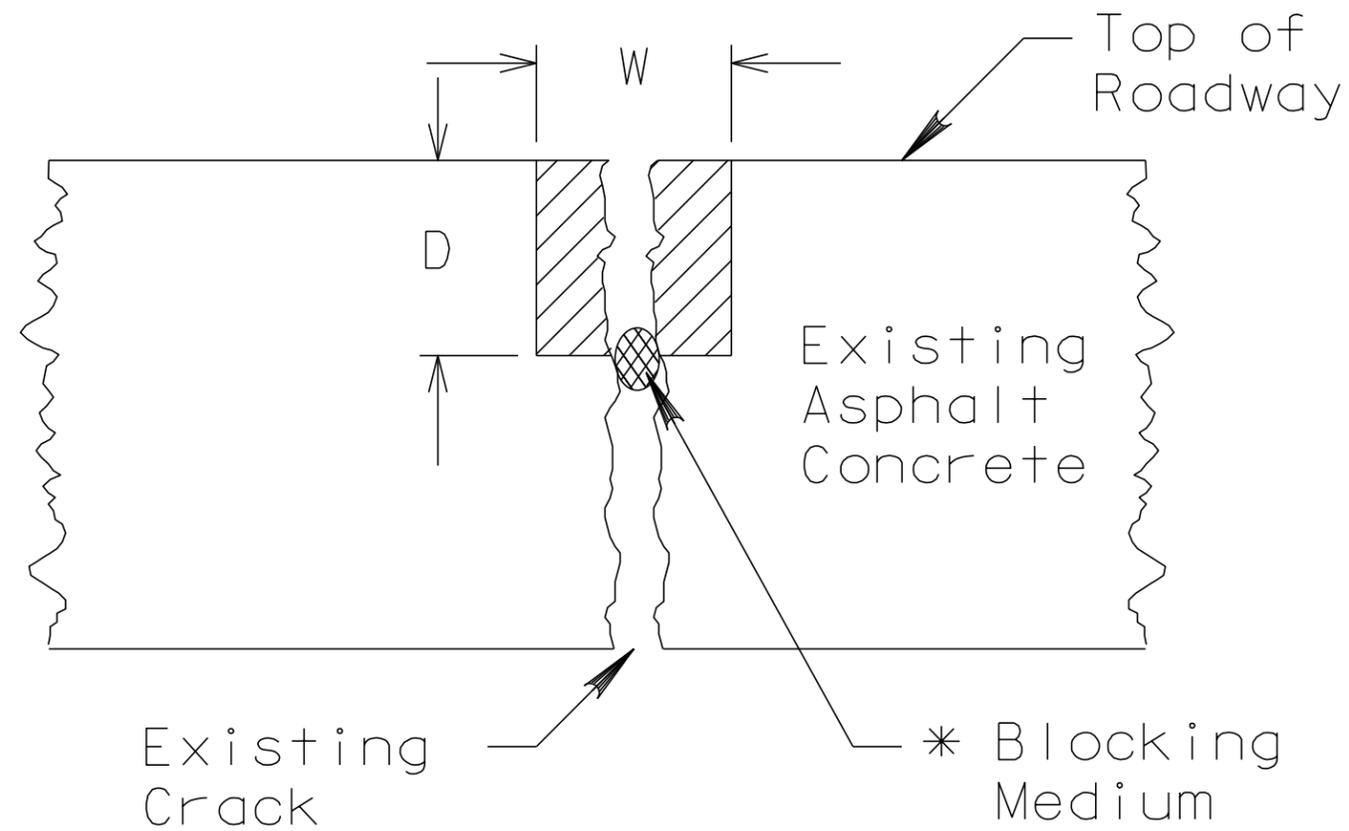
Shoulder bevel slopes greater than 3/8 inch per foot shall not be routed and sealed unless directed by the Engineer.

The contract unit price per pound for ASPHALT CONCRETE CRACK SEALING shall be nonnegotiable regardless of changes in contract quantity.

Contractor shall use a blotting material to be placed over the sealant immediately after placement of sealant throughout the City limits of Veblen and Leola in addition to all areas required by specifications.

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TYPICAL RESERVOIR SECTION



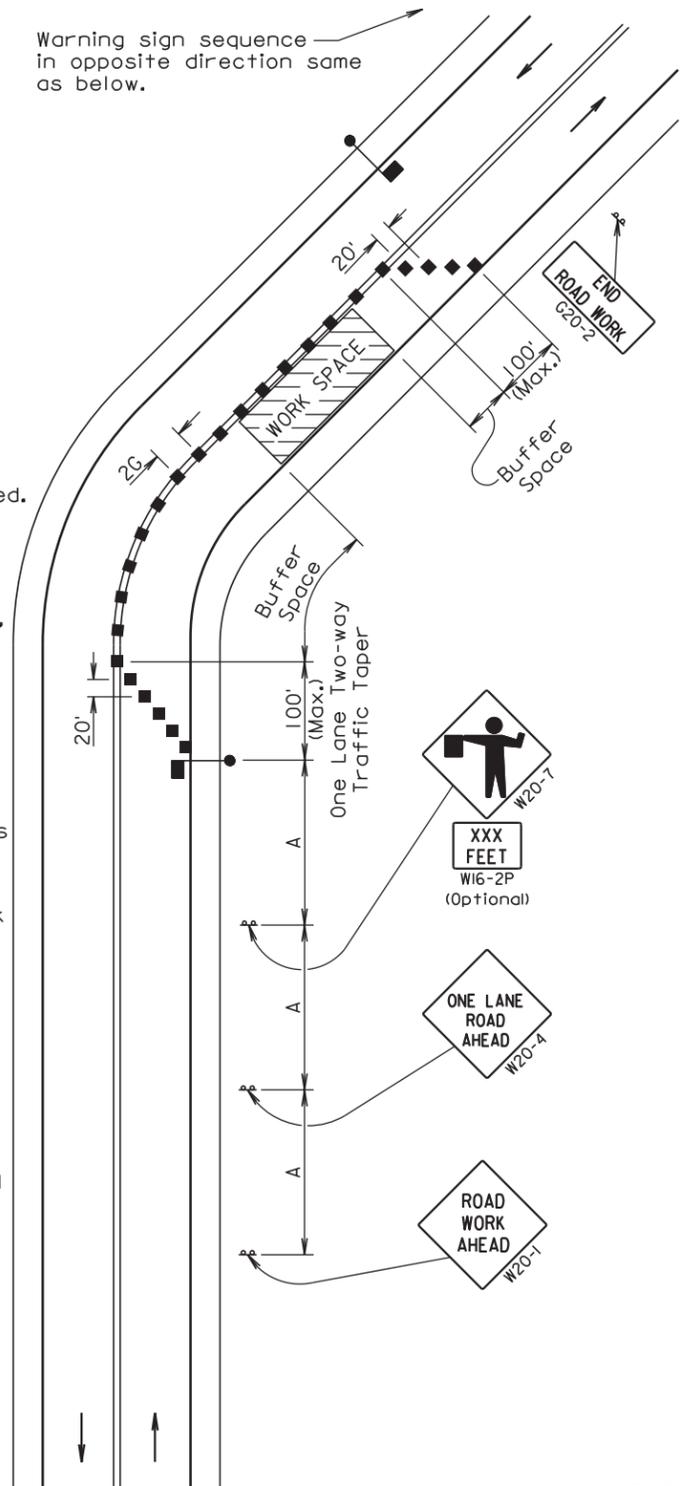
* Inert compressible material required for cracks $\frac{3}{8}$ " or more in width.

$D = W = \frac{3}{4}$ " = Routing & Sealing Dimension

PLOT SCALE - 1:6000

Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)	Spacing of Channelizing Devices (Feet) (C)
0 - 30	200	25
35 - 40	350	25
45 - 50	500	50
55	750	50
60 - 65	1000	50

Warning sign sequence in opposite direction same as below.



- Flagger
- Channelizing Device

For low-volume traffic situations with short work zones on straight roadways where the flagger is visible to road users approaching from both directions, a single flagger may be used.

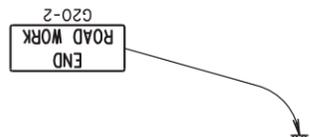
The ROAD WORK AHEAD and the END ROAD WORK signs may be omitted for short duration operations (1 hour or less).

For tack and/or flush seal operations, when flaggers are not being used, the FRESH OIL sign (W21-2) shall be displayed in advance of the liquid asphalt areas.

Flashing warning lights and/or flags may be used to call attention to the advance warning signs.

The channelizing devices shall be drums or 42" cones.

Channelizing devices are not required along the centerline adjacent to work area when pilot cars are utilized for escorting traffic through the work area.



Channelizing devices and flaggers shall be used at intersecting roads to control intersecting road traffic as required.

The buffer space should be extended so that the two-way traffic taper is placed before a horizontal or vertical curve to provide adequate sight distance for the flagger and queue of stopped vehicles.

The length of A may be adjusted to fit field conditions.

September 22, 2014

ITEMIZED LIST FOR TRAFFIC CONTROL SIGNS PER ROUTE

SIGN CODE	SIGN DESCRIPTION	CONVENTIONAL ROAD			
		NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
W20-1	ROAD WORK AHEAD	3	48" x 48"	16	48
W20-4	ONE LANE ROAD AHEAD	2	48" x 48"	16	32
W20-7	FLAGGER (symbol)	3	48" x 48"	16	48
G20-2	END ROAD WORK	2	36" x 18"	5	10
CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT				138	

PLOTTED FROM - TRABINT01

PLOT NAME - 6

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Published Date: 4th Qtr. 2015

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**GUIDES FOR TRAFFIC CONTROL DEVICES
LANE CLOSURE WITH FLAGGER PROVIDED**

PLATE NUMBER
634.23

Sheet 1 of 1