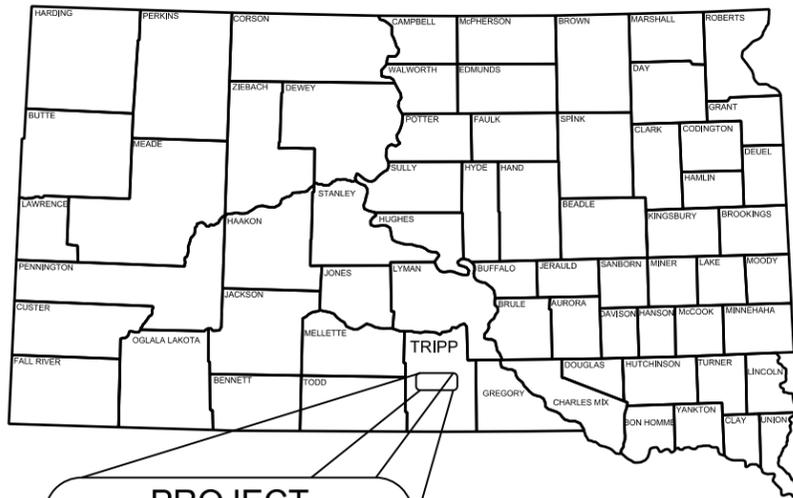


STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 6139(09), P 6302(03)	1	13
Plotting Date: 12/17/15 Revised Date: x/xx/15 Initials: TLW			



STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION
PLANS FOR PROPOSED
PROJECT P 6139(09) & P 6302(03)
TRIPP COUNTY
MAINTENANCE PATCHING AND ASPHALT SURFACE TREATMENT
PCN 04LK & PCN 04LL

INDEX OF SHEETS

SHEET 1	TITLE AND LAYOUT MAP
SHEET 2	ESTIMATE OF QUANTITIES
SHEET 3-5	PLAN NOTES
SHEET 6-7	TABLE OF ESTIMATE OF QUANTITIES
SHEET 8	TRAFFIC CONTROL
SHEET 9	TYPICAL SECTIONS
SHEET 10	RATES OF MATERIALS
SHEET 11-12	STANDARD PLATES
SHEET 13	SPECIAL DETAILS

PROJECT
From 296 St. north 17.6 miles on 315 Ave. to 0.6 miles South of US 18 in Winner, SD & From 310 Ave. east 11.0 miles on 296 St. to 321 Ave.

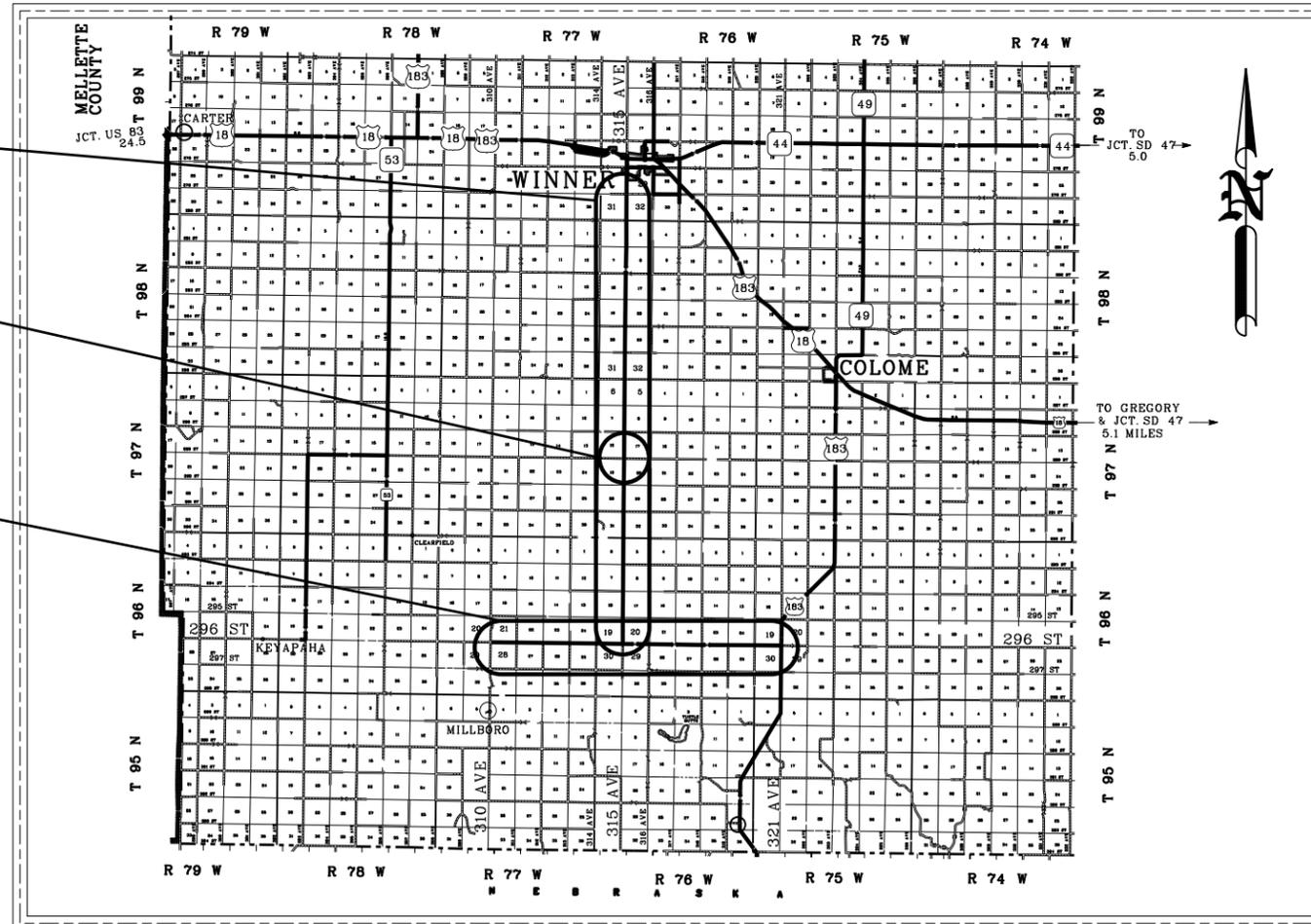
PROJECT P 6139(09); PCN 04LK
STA. 0+00 - 929+30
From 296 St. North 17.6 miles on 315 Ave. to Winner

PROJECT P 6139(09); PCN 04LK
1600' Exception
STA. 363+60 - 379+60
From 600' South of 289th Street to 1000' North of 289th Street on 315th Avenue

PROJECT P 6302(03); PCN 04LL
STA. 0+00 - 581+00
From 310th Ave. East 11.0 miles on 296th St. to 321st Ave.

MAJOR STREAM: KEYA PAHA RIVER
AREA DISTURBED: 90.1 Acres Asphalt Surface

STORM WATER PERMIT
(None Required)



DESIGN DESIGNATION

315th	ADT (2014)	257
	ADT (2034)	284
	DHV	43
	D	50%
	T DHV	6.1%
	T*ADT	13.4%
	V	50 mph
296th	ADT (2014)	89
	ADT (2034)	98
	DHV	15
	D	50%
	T DHV	6.1%
	T*ADT	13.4%
	V	50 mph



PLANS S14-P641
Survey by: Brosz Engineering, Inc. Pierre, SD
Plans by: Brosz Engineering, Inc. Pierre, SD

Gross length	151030.0 Feet	28.6 Miles
Length of exceptions	1600.0 Feet	0.30 Miles
Net length	149430.0 Feet	28.3 Miles

ESTIMATE OF QUANTITIES

P6139(09), PCN 04LK
 315th Ave., from 0.6 miles South of US18 at Winner, south 17.6 miles to 296th St.

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
120E0100	Unclassified Excavation, Digouts	12	CuYd
260E1010	Base Course	17.8	Ton
320E2000	Maintenance Patching	1809.8	Ton
330E0300	SS-1h or CSS-1h Asphalt for Fog Seal	51.8	Ton
330E3000	Sand for Fog Seal	10.0	Ton
360E0020	AE150S Asphalt for Surface Treatment	310.5	Ton
360E1020	Type 1B Cover Aggregate	2679.0	Ton
633E1300	Pavement Marking Paint, White	789	Gal
633E1305	Pavement Marking Paint, Yellow	306	Gal
634E0010	Flagging	200.0	Hour
634E0020	Pilot Car	100.0	Hour
634E0110	Traffic Control Signs	298	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0630	Temporary Pavement Marking	34.6	Mile

P6302(03), PCN 04LL
 296th St., from 310 Ave. west 11.0 miles to 321 Ave./US183

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
120E0100	Unclassified Excavation, Digouts	254	CuYd
260E1010	Base Course	388.3	Ton
320E2000	Maintenance Patching	2420.3	Ton
330E0300	SS-1h or CSS-1h Asphalt for Fog Seal	32.9	Ton
330E3000	Sand for Fog Seal	10.0	Ton
360E0020	AE150S Asphalt for Surface Treatment	197.5	Ton
360E1020	Type 1B Cover Aggregate	1704.3	Ton
633E1300	Pavement Marking Paint, White	495	Gal
633E1305	Pavement Marking Paint, Yellow	257	Gal
634E0010	Flagging	240.0	Hour
634E0020	Pilot Car	120.0	Hour
634E0110	Traffic Control Signs	319	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0630	Temporary Pavement Marking	22.0	Mile

SPECIFICATIONS

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

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 C: WATER SOURCE

The Contractor shall not withdraw water with equipment previously used outside the State of South Dakota without prior approval from the SDDOT Environmental Office. Thoroughly wash all construction equipment before entering South Dakota to reduce the risk of invasive species introduction into the project vicinity.

Action Taken/Required:

The Contractor shall obtain the necessary permits from the regulatory agencies such as the Department of Environment and Natural Resources (DENR) and the United States Army Corps of Engineers (COE) prior to executing water extraction activities.

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.

GENERAL NOTES

The work on this project will consist of removal of unsatisfactory material, milling, base course, asphalt maintenance patching, asphalt surface treatment and fog seal to include all incidentals, equipment, labor and fuel to complete the above items.

EXISTING PAVEMENT CONDITIONS AND TRAFFIC VOLUMES

The existing pavement conditions for each project are listed below. The descriptions are from the McLeod procedure for seal coat design. The traffic volumes are also shown.

Existing Pavement Surface Texture	Project	Traffic Volume ADT
Slightly pocked, porous & oxidized	P 6139(09), PCN 04LK	257
Slightly pocked, porous & oxidized	P 6302(03), PCN 04LL	89

SEQUENCE OF OPERATIONS

The following sequence of operations will be followed on a per project basis unless an alternate sequence is submitted in writing to and approved by the Engineer at least two weeks prior to the requested change.

1. Install fixed location traffic control devices.
2. Install and remove temporary traffic control devices as needed.
3. Prior to construction no passing zones need to be marked by the Contractor to save locations for re-striping.
4. Complete unclassified excavation dig-outs, base course, and maintenance patching as determined by the Engineer.
5. Place temporary flexible vertical markers (tabs) with double covers.
6. Apply asphalt surface treatment.
7. Remove plastic covers on tabs after asphalt surface treatment application.
8. Broom asphalt treated areas.

9. Apply fog seal.
10. Remove plastic covers on tabs after fog seal application.
11. Apply permanent pavement marking paint.
12. Remove "for construction only" traffic control devices.

The Contractor is required to notify the Area Engineer at least 10 days prior to beginning asphalt surface treatment operations.

ESTIMATED QUANTITIES

The quantities of asphalt for surface treatment and cover aggregate are based on the rates shown in the Rates of Materials. This is only an estimate. The actual application rates of materials will be determined by mix design as stated in these plans. The mix design rates may vary from the estimated rates stated in the Rates of Materials depending on the aggregate source, gradation and flakiness index. The application rates may also be adjusted in the field due to results of gradations, flakiness index and differing surface conditions. Pay quantities will be based off the actual target rates the inspectors use even though they may vary significantly from plans estimates.

SHOULDER WORK

Prior to construction, County employees will inspect shoulders for excess vegetation and spray if necessary. It will be the Contractor's responsibility to notify the County a minimum of 30 days prior to commencing work on the project. The County assumes no responsibility for the effectiveness of the herbicide applied.

Vegetation and accumulated material on or adjacent to the roadway shall be removed by the Contractor to the satisfaction of the Engineer prior to asphalt surface treatment. This work is considered incidental to other contract items and separate measurement or payment will not be made.

GENERAL MAINTENANCE OF TRAFFIC

Removing, relocating, covering, salvaging and resetting of existing traffic control devices, including delineation, shall be the responsibility of the Contractor. Cost for this work shall be incidental to the contract unit prices for the various items unless otherwise specified in the plans. Any 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 County or State, and to the satisfaction of the Engineer.

The Contractor shall contact the Engineer before closing any road or causing any obstruction to traffic, and furnish and erect suitable barricades and warning signs, as shown on the plans and directed by the Engineer.

The maintaining of barricades and warning signs and their subsequent removal, or for any other incidentals necessary for the proper direction, safety and convenience of traffic during the construction of the project shall be paid at the contract lump sum price for "Traffic Control, Miscellaneous".

The Traffic Control Layout is set up for one (1) work zone. If the Contractor desires to set up more than one working zone additional signs shall be required with no additional measurement or payment.

The Contractor shall furnish any flagging required. Only certified flaggers will be allowed. Tickets showing the name, certification number of the flagger and the number of hours flagging shall be supplied to the Engineer, daily.

In addition to the traffic control shown in the layouts contained in these plans, the Contractor shall provide additional flagger(s) and flagger symbol sign(s) at major intersections during daylight hours after the asphalt surface treatment has been applied and prior to the initial brooming being completed.

The Contractor shall furnish, install and maintain TRUCK CROSSING signs. The TRUCK CROSSING signs shall be displayed at all times when haul vehicles are hauling material. When hauling conditions no longer exist, the signs shall be covered or removed from view. The exact number and location shall be determined on construction.

Payment for additional signs will be based on the contract unit price per square foot for "Traffic Control Signs". Flagger(s) shall provide each motorist with a printed notice on the Contractor's letterhead similar to the one shown. Cost for the notice shall be incidental to the contract unit prices for the various items.

"CONTRACTOR'S LETTERHEAD"

THIS ROADWAY IS BEING RESURFACED WITH A CHIP SEAL APPLICATION.

THIS TYPE OF CONSTRUCTION HAS THE POTENTIAL OF CAUSING VEHICLE DAMAGE SUCH AS CHIPPED WINDSHIELDS AND BROKEN HEADLIGHTS DUE TO ROCKS BEING THROWN BY HIGH SPEED ONCOMING TRAFFIC.

YOU MAY WISH TO CONSIDER TAKING AN ALTERNATE ROUTE. IF YOU PROCEED, KEEP TO THE RIGHT AND DRIVE 40 MPH OR LESS. ANOTHER FLAGGER AND A PILOT CAR WILL BE ESCORTING YOU AROUND THE SEAL COAT APPLICATION AREA.

THANK YOU.

UNCLASSIFIED EXCAVATION, DIGOUTS

Unclassified Excavation, Digouts will include all excavation and removal of unsatisfactory material. Unstable material will be excavated and removed to an estimated depth of 1', cut to a true line with a vertical face, by means of a saw or milling machine or as directed by the Engineer. Base Course will be placed and compacted to the satisfaction of the Engineer to within 4 inches of the top of the digout area. Asphalt concrete will be placed to a minimum of the top 4 inches of the digout area in two lifts. If there is no unstable material below the existing asphalt the deteriorated asphalt can be removed or milled/processed in place and reused as base course.

The quantity of digouts will be measured and paid for per cubic yard of the removed volume. Base Course will be paid for by the ton. Asphalt Concrete will be paid for at the contract unit price per ton for Maintenance Patching. Traffic will be maintained and controlled by the contractor through the digout locations. All digout locations shall be backfilled prior to night traffic conditions.

WATER FOR GRANULAR MATERIAL

Cost of water for compaction of the granular material shall be incidental to the various bid items to complete the maintenance patching. Three percent, plus or minus of optimum, moisture shall be required at the time of compaction of the base course, unless otherwise directed by the Engineer.

MAINTENANCE PATCHING

Prior to the Asphalt Surface Treatment the contractor shall repair any surface deformations, pot holes, edge breakups, wheel ruts or irregularities by removing the unstable material, cutting to a true line with a vertical face or as directed by the Engineer and placing hot mix asphalt concrete in the repair area. The repair shall restore the driving surface to a smooth and stable condition.

Payment for Maintenance Patching will be by the ton. The contractor should inspect the roadway for an accurate assessment of the surface condition prior to bidding the work.

The Asphalt Concrete furnished by the contractor for Maintenance Patching shall meet the requirements for Asphalt Concrete Composite.

It is anticipated that a large portion of this work will involve patching of small areas which are more conducive to patching by hand versus patching with a paver. It is vital that the asphalt mix available be utilized in as an efficient and effective manner as possible prior to the seal coat placement and as such the Contractor should not assume that this work can all be done with full width high production mechanical equipment. Hand labor will be necessary. It is the responsibility of the Contractor to visit the project prior to bidding to attain understanding of what will need to be done by hand and what can be done with equipment. The material table is intended as an aid to the Contractor in ascertaining approximate sizes of repair areas. Changes to this table are to be expected once work begins.

TEMPORARY PAVEMENT MARKING

Paint will not be allowed for Temporary Pavement Marking.

Prior to asphalt surface treatment the Contractor shall install night visible temporary flexible vertical marker (tabs) at equal 40' spacing for the

temporary pavement marking as per section 634.3 , L.2 , of the Specifications. The Contractor shall install DO NOT PASS signs at the beginning of all No Passing Zones and PASS WITH CARE signs at the end of all No Passing Zones. The number of DO NOT PASS and PASS WITH CARE signs is estimated to be 68 each. The cost for furnishing and installing shall be incidental to the various traffic control bid items.

The temporary flexible vertical markers (tabs) shall have secure covers. If the covers become detached, prior to sealing, the temporary road marker shall be replaced with a new marker. Any markers that are non-reflective shall be cleaned or replaced.

The Contractor shall remove and dispose of the temporary flexible vertical markers (tabs) after the Permanent Pavement Marking has been applied. Method of removal shall be non-destructive to the road surface and shall result in the marker being separated from the adhesive (the adhesive shall remain on the road surface and the marker is discarded) or the marker shall be cut in such a manner that no more than a 1/4" of the vertical portion of the marker remains on the road surface. Removal shall be accomplished within seven days of completion of the Permanent Pavement Marking.

Flagger symbol signs and flaggers or shadow vehicle with rotating amber or strobe lights shall be positioned on the roadway shoulder in advance of the workers in both directions of traffic during the installation and removal of the temporary road markers.

The traffic control shall be moved intermittently to provide proper warning of the work operation. A ROAD WORK AHEAD (W20-1) , or BE PREPARED TO STOP (W3-4) sign shall be mounted on the rear of the shadow vehicle.

The cost for the traffic control to remove and install the temporary flexible vertical markers (tabs) shall be incidental to the contract unit price per mile for "Temporary Pavement Marking". The method of traffic control used for this operation shall be approved by the Engineer.

The Contractor is advised that if during the dig-out, or maintenance patching operations the centerline markings are obliterated, temporary flexible vertical markers (tabs) shall be installed prior to nightfall. It is anticipated that these markers shall remain in place throughout the chip seal and fog seal operations, therefore, no separate payment will be made for temporary flexible vertical markers (tabs).

ASPHALT SURFACE TREATMENT

Prior to any Asphalt Surface Treatment the entire surface shall be broomed from the center over the edge of the shoulder. This will be considered incidental to the placement of the surface treatment.

Asphalt for Asphalt Surface Treatment will be AE 150S. Sample containers will be provided by the Engineer and samples will be taken by the Contractor and witnessed by the Engineer. Bill of Lading will be provided for each tanker load of Oil for Asphalt.

Aggregate for Asphalt Surface Treatment meeting the requirements for Type 1B Cover Aggregate will be furnished by the Contractor.

Surface treatment operations will be permitted only during daylight hours, when conditions are dry and when the wind does not adversely affect the spraying operation. Do not apply Asphalt Surface Treatment to any bridges. All existing utility covers and manhole lids along any route shall be masked

prior to the asphalt surface treatment application to prevent oil and aggregates from adhering to the covers. The masking material shall be removed upon completion of the final brooming operations. All costs for this work shall be incidental to the various contract bid items.

Step 8 in the mix design section should be omitted and that the emulsion application target rate shall be 0.30 gallons per square yard and that the actual rate used on construction may be adjusted up or down from that by an engineer on construction.

ASPHALT FOR FOG SEAL

Prior to any Fog Seal the entire surface shall be broomed from the center over the edge of the shoulder. This will be considered incidental to the placement of the fog seal.

Asphalt for Fog Seal will be CSS-1h or SS-1h oil. Asphalt will be blended 1/2 water and 1/2 oil for a diluted solution applied at a rate of 0.10 gallons per square yard (0.05 gallons per square yard of asphalt). The water will not be paid for separately.

The Fog Seal will be applied no more than 5 calendar days after the completion of the Asphalt Surface Treatment.

PERMANENT PAVEMENT MARKING PAINT

Permanent pavement markings shall be furnished and applied by the Contractor in accordance with Section 633 of the Specifications, the details in these plans and as per manufacturer's recommendations.

The application of Permanent Pavement Marking Paint may begin 7 calendar days following completion of Fog Seal and shall be completed within 14 calendar days following completion of Fog Seal.

For each working day the application of permanent pavement marking paint remains uncompleted after the previously stated time requirements, the Contractor will be assessed liquidated damages at the rate of \$250.00 per day. This provision applies up to the Contract Completion Date, as extended. After the completion date, liquidated damages will be assessed in accordance with section 8.8, until the Permanent Pavement Marking is completed, even though the project may be open to traffic.

The approximate paint application rates shall be as follows:

Dashed Yellow Centerline 6.2 gallons per mile
Solid Yellow Centerline 22.5 gallons per mile
Solid White 4" Edgeline 22.5 gallons per mile

COLD WEATHER WATERBORNE PAINT

Waterborne paint applied after October 15 shall be formulated as cold-weather waterborne paint and shall be applied in accordance with the manufacturer's recommendations, including minimum temperature requirements.

Cold-weather waterborne paint shall conform to Section 980 of the Specifications except for the following:

980.1: Resin Binder shall be FASTRACK™ XSR™ manufactured by Dow, or an approved equal.

980.1 A. Quantitative Requirements:

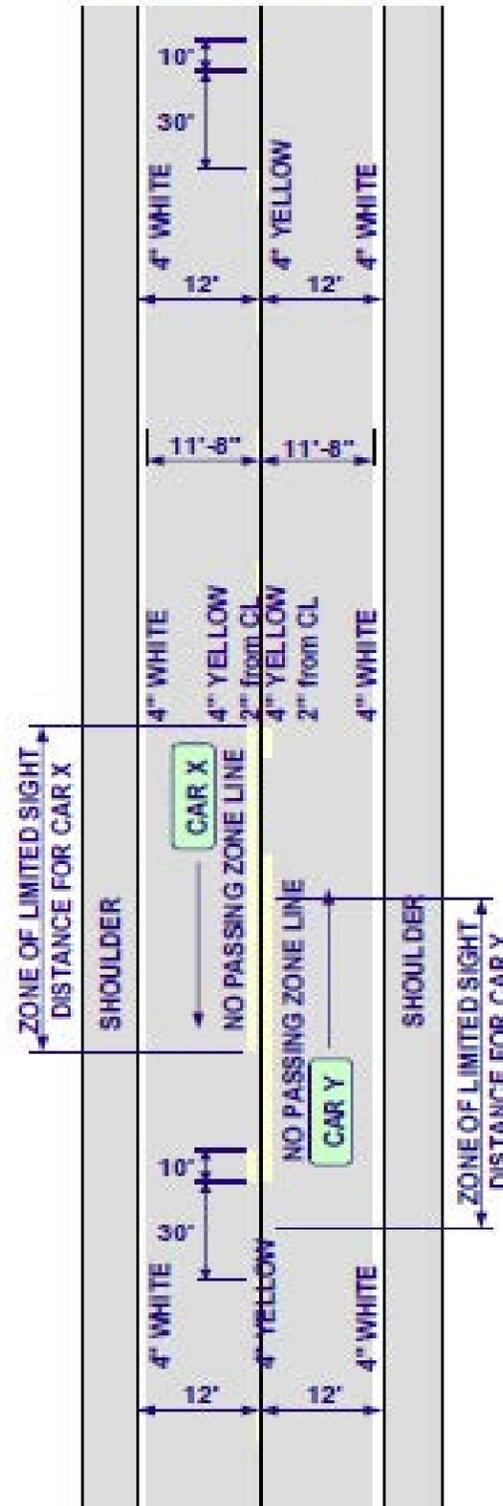
Pigment, percent by weight: 60.0 to 63.0 for white and 58.5 to 61.5 for yellow.

Pigment, percent by weight; tested in accordance with ASTM D3723: 60.0 to 63.0 for white and 56.1 to 59.2 for yellow.

Non-volatile Vehicle, percent by weight; tested in accordance with NIST 141C (Method 4051.1): 41.5 minimum for white and 41.5 minimum for yellow.

PROJECT	Length	Pavement Marking Paint	
		White	Yellow
P 6139(09)			
Solid Yellow Centerline	9.1 MILE		205 gallons
Dashed Centerline	16.3 MILE		101 gallons
Solid White Edgeline	17.3 MILE	789 gallons	
P 6302(03)			
Solid Yellow Centerline	8.6 MILE		194 gallons
Dashed Centerline	10.1 MILE		63 gallons
Solid White Edgeline	11.0 MILE	495 gallons	
TOTAL		1284 gallons	563 gallons

**PAVEMENT MARKING
TWO LANE ROADWAY**



STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 6139(09); P 6302(03)	6	13
Plotting Date: 03/19/15 Revised Date: xx/xx/15 Initials: RMW			

TABLE OF MATERIAL

P 6302(03); PCN 04LL - from 310th Ave. East 11.0 miles on 296th St. to 321st Ave.					
Description	Start Station	Full Width Feet	Length Feet	Maint. Patch Sq. Yd.	1-1/2" Asphalt Tons
Alligator cracking, heavy-moderate wheel rutting	0+00	24	2700	7200.0	600.0
Alligator cracking, moderate wheel rutting	32+00	24	120	320.0	27.0
Alligator cracking, moderate wheel rutting	38+00	24	300	800.0	67.0
Alligator cracking, moderate wheel rutting	47+00	24	600	1600.0	133.0
Alligator cracking, wheel rutting, potholes	75+00	24	250	666.7	56.0
Alligator cracking, wheel rutting, up to approach	79+00	24	400	1066.7	89.0
Alligator cracking, wheel rutting, patch at field appr.	84+50	24	230	613.3	51.0
Alligator cracking, match Nbound patch past approach	91+00	24	120	320.0	27.0
Pothole, breakup and chunks blown out	115+00	24	120	320.0	27.0
Alligator cracking, moderate wheel rutting	128+00	24	600	1600.0	133.0
Alligator cracking, moderate wheel rutting	143+00	24	200	533.3	45.0
Alligator cracking, moderate wheel rutting	157+50	24	200	533.3	45.0
Alligator cracking, moderate wheel rutting	228+00	24	200	533.3	45.0
Alligator cracking, moderate wheel rutting	263+00	24	200	533.3	45.0
Alligator cracking, moderate wheel rutting	317+50	24	150	400.0	33.0
Alligator cracking, heavy wheel rutting	334+00	24	600	1600.0	133.0
Alligator cracking, heavy wheel rutting	350+00	24	100	266.7	22.0
Alligator cracking, moderate wheel rutting	355+00	24	150	400.0	33.0
Alligator cracking, moderate wheel rutting	367+00	24	60	160.0	13.0
Alligator cracking, moderate wheel rutting	368+00	24	60	160.0	13.0
Alligator cracking, moderate wheel rutting	385+00	24	400	1066.7	89.0
Alligator cracking, moderate wheel rutting	422+50	24	950	2533.3	211.0
Alligator cracking, moderate wheel rutting	524+00	24	100	266.7	22.0
Alligator cracking, moderate wheel rutting	529+00	24	700	1866.7	156.0
Alligator cracking, heavy wheel rutting	549+00	24	400	1066.7	89.0
Alligator cracking, moderate wheel rutting	577+00	24	200	533.3	45.0
					2249.0

P 6302(03); PCN 04LL - from 310th Ave. East 11.0 miles on 296th St. to 321st Ave.							
Description	Start Station	W.bound Lt	E.bound Rt	Length Feet	4" Depth	Uncl. Ex.-	Base Course
					Asphalt Tons	Digout Cu. Yd.	
Potholes, breakup and chunks blown out	6+00		6	60	9.0	13.3	20.6
Potholes, breakup and chunks blown out	49+00		24	60	36.0	53.3	82.8
Potholes, breakup and chunks blown out	59+00		24	40	24.0	35.6	55.3
Potholes, breakup and chunks blown out	101+00		6	10	1.5	2.2	3.3
Edge holes, breakup and chunks blown out	123+50	6		10	1.5	2.2	3.3
Edge holes, breakup and chunks blown out	124+00		6	10	1.5	2.2	3.3
Potholes, breakup and chunks blown out	150+00	6		12	1.8	2.7	4.2
Potholes, breakup and chunks blown out	155+00		6	20	3.0	4.4	6.8
Potholes, breakup and chunks blown out	211+30	10		10	2.5	3.7	5.8
Potholes, breakup and chunks blown out	228+50		8	100	20.0	29.6	45.8
Potholes, breakup and chunks blown out	255+00	12		200	60.0	88.9	133.1
Potholes, breakup and chunks blown out	350+20	6		30	4.5	6.7	10.4
Potholes, breakup and chunks blown out	445+00	6		20	3.0	4.4	6.8
Potholes, breakup and chunks blown out	574+00	6		20	3.0	4.4	6.8
					171.3	254	388.3

P 6302(03); PCN 04LL '- 296 St. east from 310 Ave. 11.0 miles to 321 Ave.						
Start of Project	0+00	area SqYd	AE150S Surf. Treat. Ton	Type 1B Cover Aggregate Ton	SS1h or CSS-1h Fog Seal Ton	Sand for Fog Seal Ton
End of Project	581+00	154933.3	197.5	1704.3	32.9	10.0

TABLE OF MATERIAL

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 6139(09); P 6302(03)	7	13
Plotting Date: 03/19/15 Revised Date: xx/xx/15 Initials: RMW			

P 6139(09); PCN 04LK	- from 296 St. north 17.6 miles on 315 Ave. to Winner				
	Start	Full Width	Length	Maint. Patch	1-1/2" Asphalt
Description	Station	Feet	Feet	Sq. Yd.	Tons
Alligator Cracking, transverse crack depressed	20+00	24	300	800	67
Alligator Cracking, transverse crack depressed	89+00	24	600	1600	133
Alligator Cracking, end of existing patch	102+00	24	80	213	18
Alligator Cracking, wheel rutting	105+80	24	420	1120	94
Alligator Cracking, wheel rutting, over culvert	180+00	24	500	1333	111
Alligator Cracking, wheel rutting, potholes	216+00	24	2000	5333	445
Alligator Cracking, wheel rutting, up to approach	270+00	24	600	1600	133
Alligator Cracking, wheel rutting, up to existing patch	286+00	24	800	2133	178
Alligator Cracking, match Nbound patch past approach	301+00	24	800	2133	178
Alligator Cracking, breakup from approach to top hill	317+00	24	2000	5333	445
					1802

P 6139(09); PCN 04LK	- from 296 St. north 17.6 miles on 315 Ave. to Winner						
	Start	S.bound	N.bound	Length	4" Depth Asphalt	Uncl. Ex.- Digout	Base Course
Description	Station	Lt	Rt	Feet	Tons	Cu.Yd.	Tons
Pothole, breakup and chunks blown out	210+00		6	40	6	8.9	13.8
Pothole, breakup and chunks blown out	843+00		6	6	0.9	1.3	2.0
Pothole, breakup and chunks blown out	844+00		6	6	0.9	1.3	2.0
					7.8	12	17.8

P 6139(09); PCN 04LK	- from 296 St. north 17.6 miles on 315 Ave. to Winner					
	area	AE150S Surf. Treat.	Type 1B Cover Aggregate	SS1h or CSS-1h Fog Seal	Sand for Fog Seal	
Start of Project	0+00	SqYd	Ton	Ton	Ton	Ton
End of Project	929+30	243546.7	310.5	2679.0	51.8	10.0

P 6139 (09)

ITEMIZED LIST FOR TRAFFIC CONTROL SIGNS

SIGN CODE	SIGN DESCRIPTION	CONVENTIONAL ROAD			
		NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
W3-4	BE PREPARED TO STOP	2	48" x 48"	16	32
W8-6	TRUCK CROSSING	2	48" x 48"	16	32
W8-7	LOOSE GRAVEL	2	48" x 48"	16	32
W8-11	UNEVEN LANES	2	48" x 48"	16	32
W13-1P	ADVISORY SPEED (plaque)	2	30" x 30"	6	12
W20-1	ROAD WORK AHEAD	2	48" x 48"	16	32
W20-4	ONE LANE ROAD AHEAD	2	48" x 48"	16	32
W20-7	FLAGGER (symbol)	2	48" x 48"	16	32
W21-2	FRESH OIL	2	48" x 48"	16	32
G20-1	ROAD WORK NEXT __ MILES	3	36" x 18"	5	15
G20-2	END ROAD WORK	3	36" x 18"	5	15
		CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT			298

P 6302 (03)

ITEMIZED LIST FOR TRAFFIC CONTROL SIGNS

SIGN CODE	SIGN DESCRIPTION	CONVENTIONAL ROAD			
		NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
W3-4	BE PREPARED TO STOP	3	48" x 48"	16	48
W8-6	TRUCK CROSSING	2	48" x 48"	16	32
W8-7	LOOSE GRAVEL	2	48" x 48"	16	32
W8-11	UNEVEN LANES	2	48" x 48"	16	32
W13-1P	ADVISORY SPEED (plaque)	2	30" x 30"	6	12
W20-1	ROAD WORK AHEAD	2	48" x 48"	16	32
W20-4	ONE LANE ROAD AHEAD	2	48" x 48"	16	32
W20-7	FLAGGER (symbol)	2	48" x 48"	16	32
W21-2	FRESH OIL	2	48" x 48"	16	32
G20-1	ROAD WORK NEXT __ MILES	5	36" x 18"	5	25
G20-2	END ROAD WORK	2	36" x 18"	5	10
		CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT			319

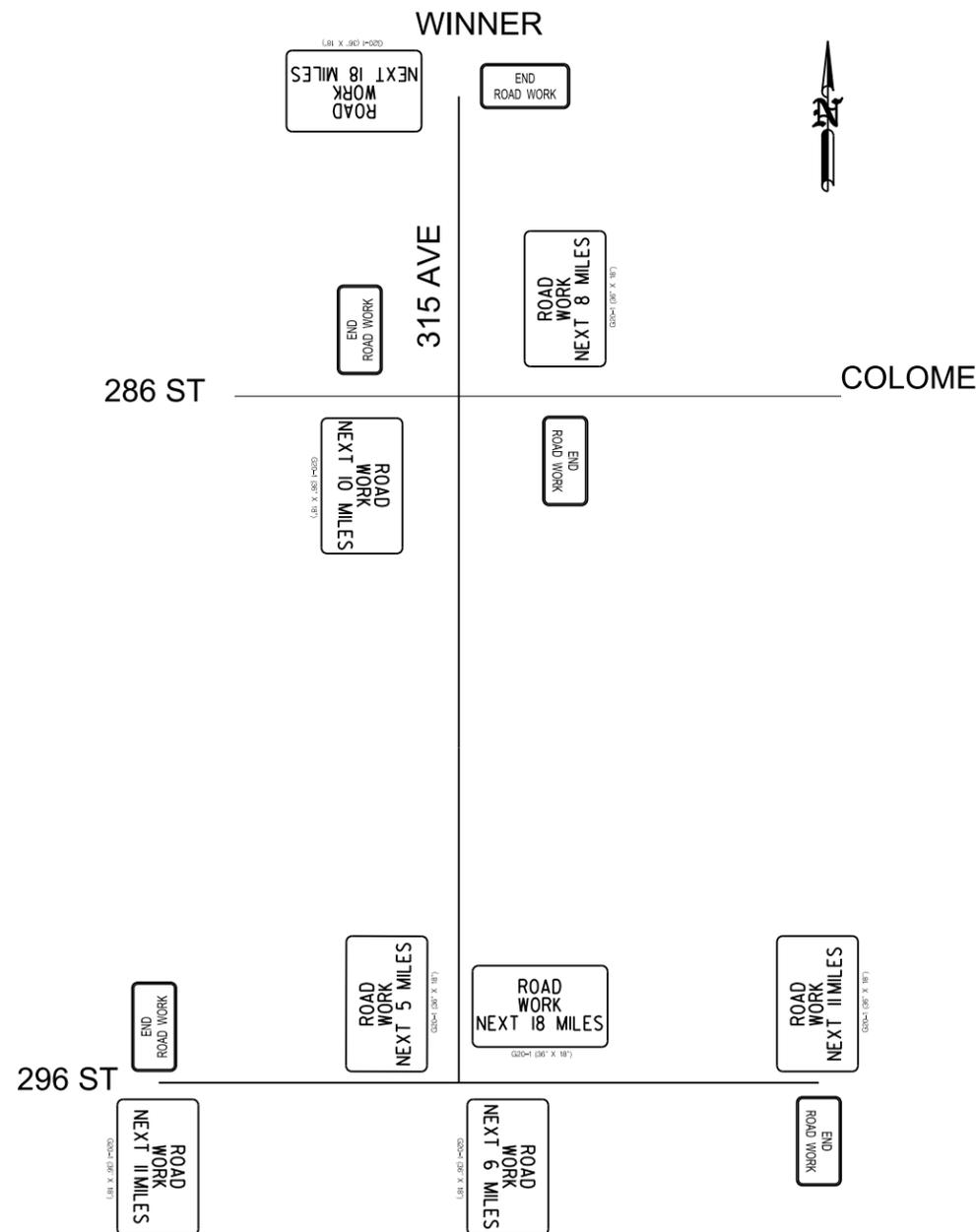
Notes:

All Fixed Location signs shall remain in place until the permanent pavement marking is complete.

All Fixed Location signs shall be placed 200' to 300' from intersection. Exact location to be approved by the Engineer.

Construction signs shall not obscure existing signs and must be installed a minimum of 200' from an existing sign.

All Fixed Location signs shall be staggered to allow wide farm machinery to pass.

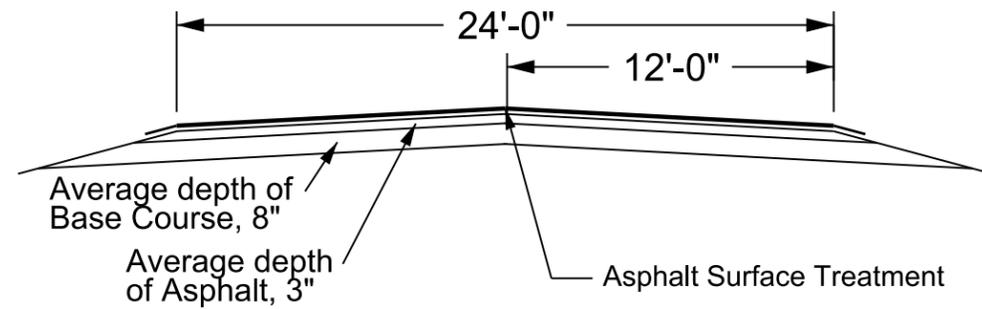


STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 6139(08), P 6132(01)	9	13
Plotting Date: 9/30/15 Revised Date: mm/dd/yy Initials: RMW			

TYPICAL SECTIONS

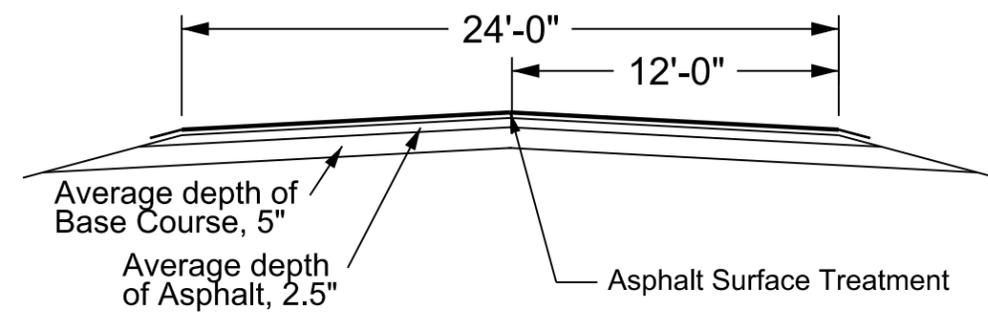
Typical Sections P 6139(09), PCN 04LK

Sta. 0+00 - 664+00 (315 Ave.)

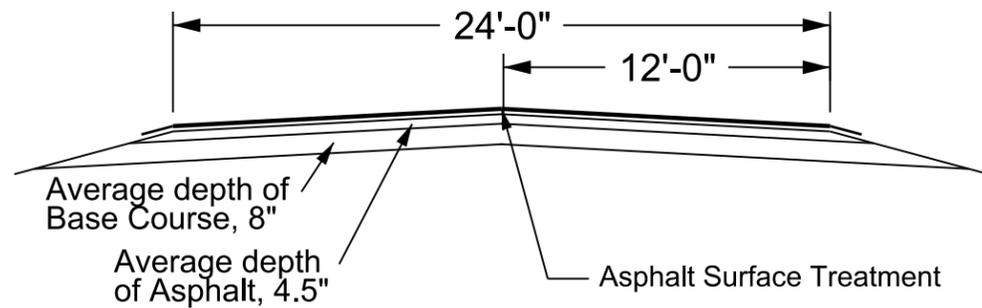


Typical Sections P 6302(03), PCN 04LL

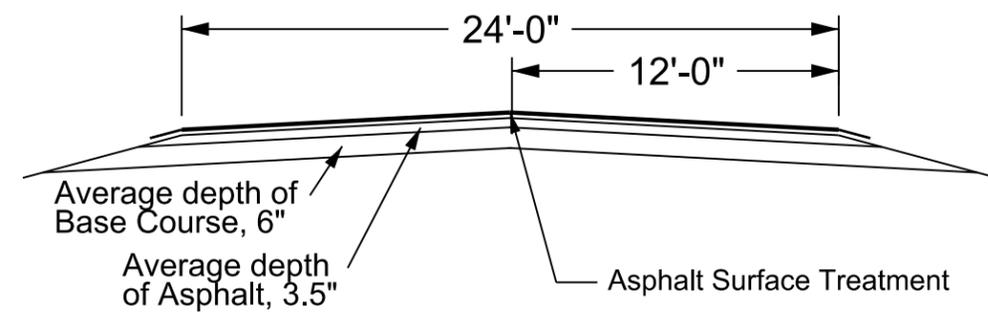
Sta. 0+00 - 264+00 (296 St.)



Sta. 664+00 - 929+30 (315 Ave.)



Sta. 264+00 - 581+00 (296 St.)



RATES OF MATERIALS

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 6139(08), P 6132(01)	10	13

Plotting Date: 9/30/15
Revised Date: mm/dd/yy
Initials: RMW

P 6139(09), PCN 04LK

0+00 to 363+60 & 379+60 to 929+30

AE150S Asphalt for Surface Treatment at the rate of 0.34 tons/station applied 24 feet wide
(Rate = 0.30 gallons per square yard). = 310.5 Ton

Type 1B Cover Aggregate at the rate of 2.9333 tons/station applied 24 feet wide
(Rate = 22 pounds per square yard). = 2679.0 Ton

SS-1h or CSS-1h for Fog Seal at a rate of 0.0567 tons/station applied 24 feet wide
(Rate = 0.05 gallons per square yard). = 51.8 Ton

Sand for Fog Seal, to cover 2000 square yards
(Rate = 10 pounds per square yard). = 10.0 Ton

P 6302(03), PCN 04LL

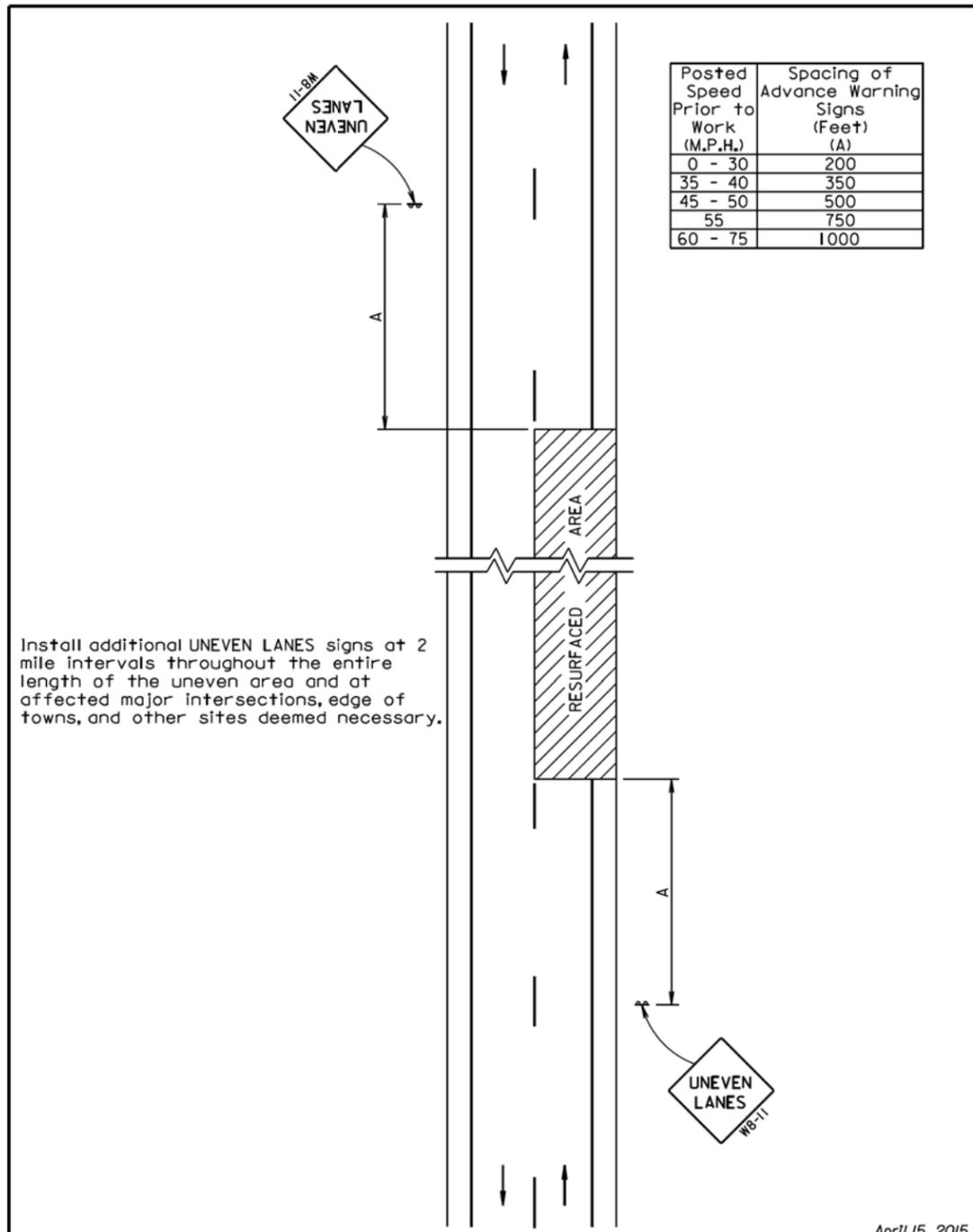
0+00 to 581+00

AE150S Asphalt for Surface Treatment at the rate of 0.34 tons/station applied 24 feet wide
(Rate = 0.30 gallons per square yard). = 197.5 Ton

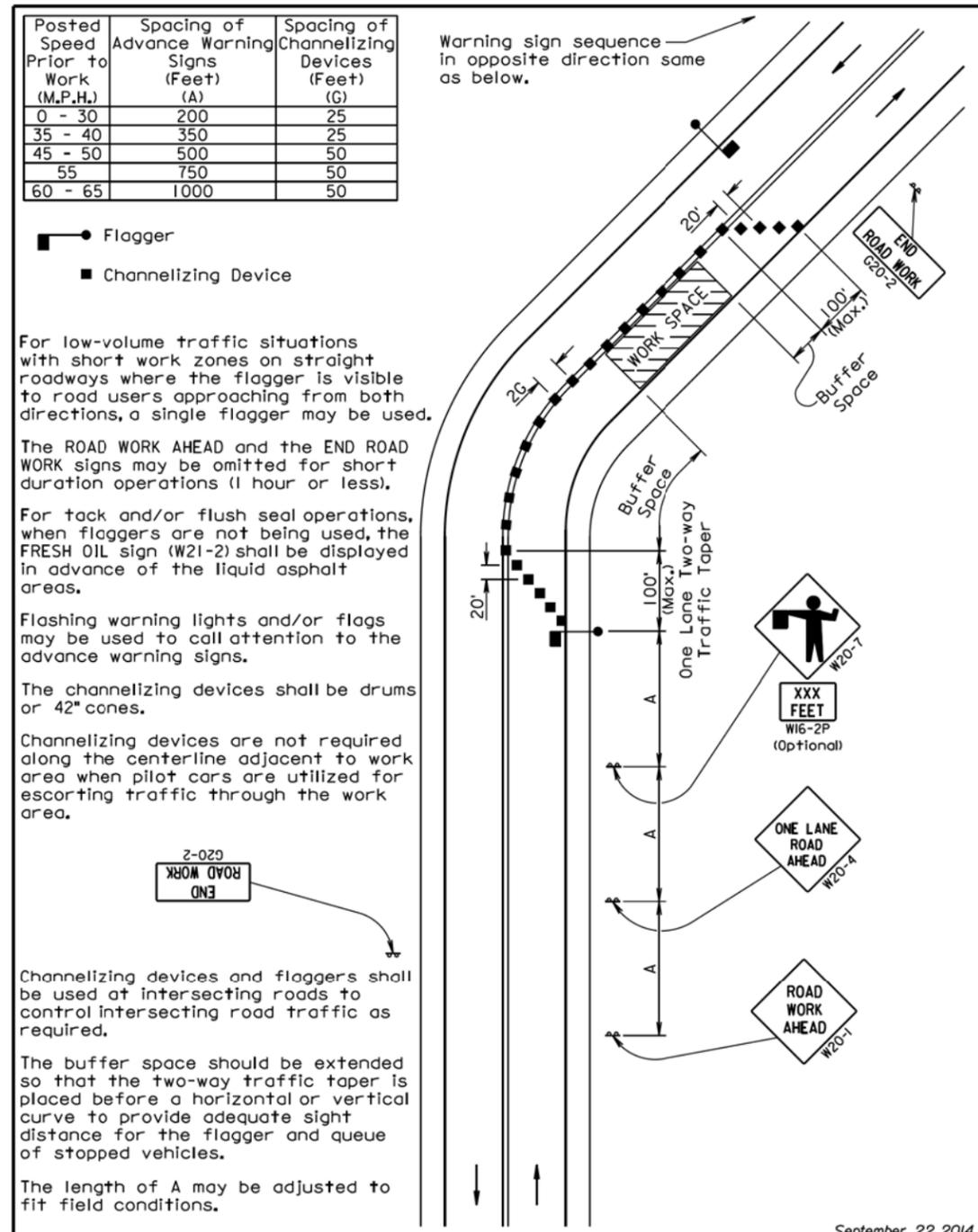
Type 1B Cover Aggregate at the rate of 2.93334 tons/station applied 24 feet wide
(Rate = 22 pounds per square yard). = 1704.3 Ton

SS-1h or CSS-1h for Fog Seal at a rate of 0.0566 tons/station applied 24 feet wide
(Rate = 0.05 gallons per square yard). = 32.9 Ton

Sand for Fog Seal, to cover 2000 square yards
(Rate = 10 pounds per square yard). = 10.0 Ton



April 15, 2015



September 22, 2014

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 6139(09), P 6302(03)	12	13
Plotting Date: 03/31/15 Revised Date: mm/dd/yy Initials: RMW			

