

STATE OF	PROJECT	SHEET	TOTAL SHEETS
SOUTH DAKOTA	090 E-468	1	15
Plotting Date:	05/06/2013		

INDEX OF SECTIONS

Sheet No.	1:	Title and Index
Sheets No.	2 - 3:	Estimate, Notes, and Tables
Sheets No.	4 - 11:	Bridge Sheets
Sheets No.	12 - 13:	Overwidth Detour Details
Sheets No.	14 - 15	Standard Plates

ESTIMATE OF QUANTITIES

Bid Item Number	Item	Quantity	Unit
009E0010	Mobilization	Lump Sum	LS
410E2600	Membrane Sealant Expansion Joint	31.9	Ft
460E0300	Breakout Structural Concrete	0.3	CuYd
460E0700	Joint Nosing Material	21	SqFt
634E0010	Flagging	100	Hour
634E0100	Traffic Control	433	Unit
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0420	Type C Advance Warning Arrow Panel	1	Each
634E1002	Detour Signing	212.0	SqFt

SPECIFICATIONS

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

SEQUENCE OF OPERATIONS

- 1. Set up traffic control for Phase 1.
- 2. Complete bridge work for Phase 1.
- 3. Open the completed lane and set up traffic control for Phase 2.
- 4. Complete Bridge work for Phase 2.
- 5. Remove Traffic Control.

STORM WATER

Construction activities constitute less than 1 acre of disturbance.

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.

WASTE DISPOSAL SITE

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

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 Highway, Road, and Railway Construction/Demolition Debris Disposal Under the South Dakota Waste Management Program issued by the Department of Environment and Natural Resources.

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

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 designated option borrow sites provided within the plans.

All earth disturbing activities not designated within the plans require review of cultural resources impacts. This work includes, but is not limited to: staging areas, borrow sites, waste disposal sites, and all material processing sites.

The Contractor shall arrange and pay for a cultural resource survey and/or records search. The Contractor has the option to contact Jim Donohue, State Archaeological Research Center (ARC) at 605-394-1741 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 staging areas, borrow sites, waste disposal sites, or material processing sites 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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TRAFFIC CONTROL – GENERAL NOTES

- 1. Requests to deviate from the sequence of operations shall be submitted in writing to the Engineer for review. Approval of an alternate sequence of operations will only be allowed when the proposed changes meet with the Department's intent for traffic control and sequencing of the work. An alternate sequence shall be submitted for review a minimum of one week prior to potential implementation.
- 2. Unless otherwise stated in these plans, no work will be allowed during hours of darkness. Hours of darkness are defined, as 1/2 hour after sunset until 1/2 hour before sunrise.
- 3. Storage of vehicles and equipment shall be as near the right-of-way as possible. Contractor's employees should mobilize at a location off the right-of-way and arrive at the work sites in a minimum number of vehicles necessary to perform the work. Indiscriminate driving and parking of vehicles within the right-of-way will not be permitted. Any damage of the vegetation, surfacing, embankment, delineators, and existing signs resulting from such indiscriminate use shall be repaired and/or restored by the Contractor, at no expense to the State, and to the satisfaction of the Engineer.
- 4. Existing guide, route, informational logo, regulatory, and warning signs shall be temporarily reset and maintained during construction. Removing, relocating, covering, salvaging and resetting of existing traffic control devices, including delineation, shall be the responsibility of the Contractor. Non-applicable signing shall be covered or removed during periods of inactivity. Periods of inactivity shall be defined as no work taking place for a period of more than 24 hours. The cost of removing or covering non-applicable signs shall be incidental to the contract lump sum price for, Traffic Control, Miscellaneous.
- 5. Construction signing mounted on portable supports shall not be used for a duration of more than 3 days, unless approved by the Engineer. Construction signing that remains in the same location for more than 3 days shall be mounted on fixed location, ground mounted, breakaway supports.
- 6. If inappropriate/conflicting pavement markings exist, the markings shall be removed and replaced with applicable temporary pavement markings when the work duration is more than 3 days. When the work duration is less than 3 days, the channelizing devices in the area where the pavement markings conflict shall be placed at a spacing of ¹/₂ G. Pavement marking removals shall be paid for at the contract unit price for Remove Pavement Marking, 4" or equivalent. Temporary pavement marking shall be paid for at the contract unit bid price for Temporary Pavement Marking. The additional channelizing devices shall be incidental to the contract lump sum price for Traffic Control, Miscellaneous.
- 7. The quantity of Signs paid for will be for the greatest number of installations per sign in place at any one time regardless of the number of set-ups on the project.
- 8. Any delineators and signs damaged or lost shall be replaced by the Contractor at no cost to the State.
- 9. All materials and equipment shall be stored a minimum distance of 30' from the traveled way during nonworking hours.

TRAFFIC CONTROL – GENERAL NOTES (CONTINUED)

- 10. The Contractor shall provide documentation that all breakaway sign supports comply with FHWA NCHRP 350 or MASH crash-worthy requirements. The Contractor shall provide installation details at the preconstruction meeting for all breakaway sign support assemblies.
- 11. The Contractor shall be required to have a person available 24 hour/day, 7 days/week to maintain traffic control devices. The name and cellular telephone number of this individual shall be given to the Engineer at the preconstruction meeting.
- 12. The Contractor or designated traffic control subcontractor shall make night inspections at the initial set up of traffic control and every week thereafter to ensure the adequacy, legibility and reflectivity of each sign and device. A written summary of each inspection shall be given to the Engineer within 24 hours after completion of the inspection. The cost for the nighttime inspection work shall be incidental to the contract lump sum price for Traffic Control, Miscellaneous.
- 13. Vehicles working in traffic or alongside traffic shall be equipped with a flashing amber light visible from all directions. The amber light shall be mounted on the uppermost part of the contractor's vehicle. Lights must have peak intensity within the range of 40 to 400 candelas and must flash at 75 ± 15 flashes per minute. Vehicle flasher/hazard lights are not acceptable.
- 14. All construction operations shall be conducted in the general direction of traffic movement.
- 15. If there is a discrepancy between the traffic control plans, standard plates, and the MUTCD - whichever is more stringent shall be used.
- 16. Temporary Road Markers shall be used for lane closure tapers or lane shift tapers. Temporary Road Markers used for tapers and shifts will not be measured for payment and will be incidental to the contract lump sum price for Traffic Control, Miscellaneous.
- 17. Drums are required in all lane closure tapers.

TRUCK OR TRAILER MOUNTED CRASH ATTENUATOR

A Truck or Trailer Mounted Crash Attenuator shall be utilized at the beginning of the work area as depicted in MUTCD Typical Application 33 during hours that workers are present, and shall be removed from the roadway at the end of each working day. A type III Barricade shall be placed in front of the removal area in the absence of the Truck or Trailer Mounted Crash Attenuator. The crash attenuator shall meet or exceed NCHRP 350 Test Level 3 criteria or current MASH requirements.

The Attenuator will remain the property of the Contractor at the end of the project. The cost for the Truck or trailer Mounted Crash Attenuator shall be incidental to the contract lump sum price for Traffic Control Miscellaneous.

OVERWIDTH DETOUR SIGNING

Overwidth signs shall be furnished and installed by the Contractor as shown on plan sheet. See Traffic Control Overwidth Detour sheet and Typical Overwidth Sign Detail sheet for sheeting color and legend size details.

It will be the responsibility of the Contractor to maintain and reinstall these signs during the project as required by construction progress. Upon completion of the project the Contractor shall remove the width restriction signs. Payment for furnishing, installing, maintaining, and removing the signs and hardware shall be incidental to the contract item for Detour Signing.

Overwidth detour signs shall be paid for at the contract unit price per square foot for Detour Signing.

TABLE OF OVERWIDTH DETOUR SIGNING

Sign Size	Description	Number Required	Quantity (SqFt)
5'x4'	OVER WIDTH VEHICLES	9	180
8'x4'	WIDTH RESTRICTION OVER XX FT WIDE	1	32
	Total:		212

COORDINATION WITH PROJECT P 0231(11)81, PCN 02R2

A width restriction may be in place on SD Highway 231.

Work on the project that involves routing overwidth vehicles onto SD Highway 231 shall not begin until the width restriction is lifted on SD Highway 231.

mid-June.

INVENTORY OF TRAFFIC CONTROL DEVICES

SIGN CODE	SIGN SIZE	DESCRIPTION	NUMBER REQUIRED	UNITS PER SIGN				
G20-2	36" x 18"	END ROAD WORK	1	17	17			
R2-1	24" x 30"	SPEED LIMIT ##	3	18	54			
W3-5	48" x 48"	REDUCED SPEED LIMIT AHEAD	2	34	68			
W4-2	48" x 48"	LEFT OR RIGHT LANE ENDS (SYMBOL)	2	34	68			
W20-1	48" x 48"	ROAD WORK AHEAD	2	34	68			
W20-5	48" x 48"	LT. OR RT. LANE CLOSED AHEAD	2	34	68			
W20-7a	48" x 48"	FLAGGER	1	34	34			
****		TYPE III BARRICADE - 8 FT. DOUBLE SIDED	1	56	56			
	TOTAL UNITS 433							

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DAKOTA	090 E-468	3	15

It is anticipated that the width restriction on SD Highway 231 will be lifted by



PLAN

INDEX OF BRIDGE SHEETS-

Sheet No. I - Layout for Upgrading

Sheet No. 2 - Estimate of Structure Quantities and Notes

Sheet No. 3 - Notes (Continued)

Sheet No. 4 - West Approach Slab Joint Details

Sheet Nos. 5 through 8 - Original Construction Plans

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ESTIMATE OF STRUCTURE QUANTITIES

ITEM NO.	DESCRIPTION	QUANTITY	UNIT
410E2600	Membrane Sealant Expansion Joint	31.9	Ft
460E0300	Breakout Structural Concrete	0.3	CuYd
460E0700	Joint Nosing Material	21.3	SqFt

SPECIFICATIONS

- 1. Design Specifications: AASHTO Standard Specifications for Highway Bridges 17th Edition using Working Stress Design.
- 2. Construction Specifications: South Dakota Standard Specifications for Roads and Bridges, 2004 Edition and Required Provisions, Supplemental Specifications and/or Special Provisions as included in the Proposal.

DETAILS AND DIMENSIONS OF EXISTING BRIDGE

All details and dimensions of the existing bridge, contained in these plans, are based on the original construction plans and shop plans. It is the Contractor's responsibility to inspect and verify the actual field conditions and any necessary as-built dimensions affecting the satisfactory completion of the work required for this project.

SCOPE OF BRIDGE WORK & SEQUENCE OF OPERATIONS

All work on this structure shall be accomplished with the traffic control shown in the project plans. Alternate sequence of operations may be submitted by the Contractor for approval by the Engineer at the pre-construction meeting.

- 1. Remove the existing approach slab joint and portions of the approach slab and sleeper slab as detailed in the plans for Phase 1 of construction.
- 2. Install joint nosing material in plan specified locations in the west approach slab and install new membrane joint for Phase 1 of construction.
- 3. Repeat steps 1 through 2 for Phase 2 of construction.

CONCRETE BREAKOUT & EXISTING JOINT REMOVAL

- 1. The existing approach slab and sleeper slab shall be broken out to the limits shown on the plans and shall include removal of the existing strip seal joint. Breakout limits shall be defined with a 3/4" deep sawcut (unless specified otherwise in these plans), where practical, as approved by the Engineer. Reinforcing steel that is exposed and is scheduled for use in the new construction shall be cleaned and straightened to the satisfaction of the Engineer. Care shall be taken not to damage the existing reinforcing steel that is to be reused in the new construction during concrete breakout. Any reinforcing steel that is damaged during concrete breakout shall be replaced or repaired, as approved by the Engineer, by the Contractor at no cost to the Department.
- 2. The existing concrete anchors of the strip seal expansion device that are to remain in place shall be trimmed flush with the concrete breakout limits. The trimmed surface shall be smooth and free of all burrs, filings and any foreign materials that will impair the complete bonding of the Joint Nosing Material to this surface.
- 3. All broken out concrete and the existing strip seal joint shall be disposed of by the Contractor. Any disposal of discarded material shall be in accordance with the Construction Specifications.
- 4. The existing reinforcing steel in the approach slab is epoxy coated. Reinforcing steel that is exposed and is scheduled for use in the new construction shall be cleaned of all adhering concrete and rust (if present) with a wire brush and straightened to the satisfaction of the Engineer. Any reinforcing steel that is damaged during concrete breakout shall be replaced or repaired, as approved by the Engineer, by the Contractor at no cost to the Department. After all concrete removal and rebar straightening, the Contractor shall visually inspect the epoxy coating on the salvaged reinforcing steel with the Engineer and repair all areas of damaged epoxy coating as approved by the Engineer. The damaged coating areas shall be repaired with a touch up coating material supplied by an epoxy coating manufacturer who supplies coating material for new epoxy coated reinforcing steel. This coating shall be inert in concrete and compatible with the existing coating on the reinforcing steel. The coating shall be allowed to cure for 24 hours or as per the manufacturer's recommendations, whichever is more stringent, before concrete can be placed. These bars shall be clean and free from all surface contaminants before coating. The cost of cleaning and placing the epoxy touch up coating to the existing reinforcing steel shall be incidental to the various bid items.
- 5. The contract unit price per cubic yard for "Breakout Structural Concrete" shall include breaking out concrete, removal of the existing strip seal joint, cleaning, straightening and repairing existing reinforcing steel, and disposal of all broken out material.

MEMBRANE SEALANT EXPANSION JOINT

- Joints.

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1. Install the membrane sealant expansion joint at the plan shown location in conformance with the following notes.

2. The Membrane Sealant shall be one of membrane sealant types from the approved product list for Membrane Sealant Expansion

3. The manufacturer shall supply the membrane sealant in packaging that precompresses the membrane sealant. The precompressed dimension shall be as recommended by the sealant manufacturer to provide a water tight seal throughout a joint movement range of + 25% (minimum) from the specified joint opening dimension. Membrane Sealant generally comes pre-compressed from manufacturer at 2 3/4". In order to install at warmer temperatures, contractor may need to request greater pre-compression. In no case shall the precompressed dimension exceed 75% of the joint opening width. The foam sealant shall be slowly self expanding to permit workers ample time to install the membrane sealant before the membrane sealant exceeds the joint opening width.

4. The membrane sealant shall be supplied in pieces 5 feet in length or longer. The foam sealant shall be ultra-violet and ozone resistant.

5. The bonding adhesive used to attach the membrane sealant to the adjacent concrete and joint nosing material shall be approved by the membrane sealant manufacturer.

6. Adhesive used to join adjacent pieces of the membrane sealant shall be as recommended by the manufacturer.

7. If Styrofoam filler material is used in the construction, it shall be closed cell and water-tight as approved by the Engineer.

8. The minimum ambient air temperature at the time of joint installation and adhesive curing shall be 40° F.

9. A technical representative of the membrane sealant manufacturer shall be present at the jobsite during installation. The technical representative shall be knowledgeable in the correct procedures for the preparation and installation of the joint material to insure the Contractor installs the joint to the Manufacturers recommendations.

10. The joint opening shall be constant width and shall have smooth vertical sides. Surfaces of material adjacent to the joint shall be at the correct grade and crown as approved by the Engineer.

ESTIMATE OF STRUCTURE QUANTITIES AND NOTES
FOR
306' – 0" CONT. CONCRETE BRIDGE

APRIL 2013				2	8
DESIGNED BY: CK. DES. BY DRAFTED BY RS RS RS					

MEMBRANE SEALANT EXPANSION JOINT (CONTINUED)

- 11. Concrete and joint nosing material surfaces that will be in contact with the membrane sealant shall be thoroughly cleaned by abrasive blasting to remove all laitance and contaminants (such as oil, curing compounds, etc.) from the concrete surface. At a minimum two passes of abrasive blasting with the nozzle held at an angle to within 1 to 2 inches of the a concrete surface will be required. Cleaning of the concrete surfaces with solvents, wire brushing, or grinding shall not be permitted.
- 12. After abrasive blasting, but immediately prior to membrane joint installation, the entire joint contact surface shall be air blasted. The air compressor used for joint cleaning shall be equipped with trap devices capable of providing moisture-free and oil-free air at a recommended pressure of 90 psi. To obtain complete bonding with the adhesive, the adjacent surfaces must be dry and clean. The contact surfaces for the joint shall be visually inspected by the Engineer immediately prior to joint installation to verify the surface is dry and clean.
- 13. Individual spliced sections shall be installed as per the manufacturers' recommendations. The membrane joint sealant manufacturer shall submit a detailed installation procedure to the Engineer at least 5 days prior to joint installation for his review.
- 14. Traffic shall not be allowed on the joint for a minimum 3 hours unless otherwise directed by the Engineer.
- 15. The Membrane Sealant Expansion Joint will be measured in feet to the nearest one-tenth foot, complete in place. Measurement will be made of the overall horizontal length. The Membrane Sealant Expansion Joint will be paid for at the contract unit price per foot complete in place. Payment for this item shall be full compensation for furnishing all the required materials in place, inclusive of labor, equipment and incidentals necessary to complete the work in accordance with the plans and the foregoing specifications.

NOSING MATERIAL ADJACENT TO BRIDGE JOINT

- 1. The material adjacent to the membrane sealant joint labeled as joint nosing material on Sheet No. 4 of 8 shall be supplied as one of types from the approved product list for Joint Nosing Material.
- 2. The joint nosing material shall be furnished from one source and shall be installed in accordance with the manufacturer's recommendations as approved by the Engineer.
- 3. All costs for materials, labor, equipment, tools and any incidentals necessary to furnish and install the nosing material shall be incidental to the contract price per square foot for Joint Nosing Material.

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Cut Existing Anchors at Concrete Breakout Limits (typ.)

TEMP.	DIMENSION "X"
40°	3″
50°	2 7/8″
$\Delta 60^{\circ}$	2 3/4"
△ 70°	2 5/8"
∆ 80°	2 1/2"

 \bigtriangleup Membrane Sealant comes pre-compressed from manufacturer at 2¾". The manufacturer is able to pre-compress Membrane Sealant up to 75% of the sealant width. In order to install at warmer temperatures, contractor may need to request greater pre-compression.

ESTIMATED QUANTITIES (For West Approach Slab Only)						
UNIT	QUANTITY					
Ft.	31.9					
Cu. Yd.	0.3					
Sq. Ft.	21.3					
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(EAST BOUND LANES) WEST APPROACH SLAB JOINT DETAILS FOR 306' - 0" CONTINUOUS CONCRETE BRIDGE 30'- 0" ROADWAY 0° SKEW OVER BOX ELDER CREEK SEC. 16-T2N-R7E STR NO 52-383-264 PROJECT NUMBER PCN i2ut 090E-468 PENNINGTON COUNTY S. D. DEPT. OF TRANSPORTATION APRIL 2013 (4) OF (8)

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PLAN OF STRIP SEAL

GENERAL NOTES:

- I. Materials for the Steel Extrusion shall conform to ASTM-A36, A242 or A588. Materials for the 2" x 2" x 5/6" welded steel plates shall conform to ASTM-A36. Material for the $\frac{1}{2}$ " diameter x 6" Concrete Anchors shall conform to Type A steel studs of Section 7 of the latest edition of the ANSI / AWS DI.I Structural Welding Code-Steel.
- 2. Material for the neoprene seal shall conform to ASTM D2628 modified to omlt the recovery test. No splices will be permitted in the neoprene seal
- 3. The lubricant-adhesive used to install the neoprene seal shall conform to the requirements of ASTM D4070. The neoprene seal and the lubricant adhesive should be supplied or recommended by the same source as they must be compatible
- 4. The installation of the neoprene seal shall be as recommended by its Manufacturer and approved by the Engineer, but in general shall be as follows: The neoprene seal shall be installed and bonded to the steel extrusion with a high-solids lubricant adhesive. The neoprene surfaces shall be roughened with a wire brush before the application of the lubricant adhesive. The neoprene seal may be installed either prior to or after the time the steel extrusions are concreted in the approach slabs. The steel extrusion shall be dry, clean, free from dirt, arease and contaminates at the time the neoprene seal is installed.
- 5. Due to the length of the steel extrusions, splices are permitted. No welds shall be permitted in the internal section of the extrusion where the neoprene seal is located. Weld details shall be shown on the shop plans for approval by the Engineer. Welding shall be in accordance with latest edition of the ANSI/AWS DLI Structural Welding Code-Steel. Galvanize the steel extrusions and anything welded to them after all welding is completed. They shall be galvanized in accordance with AASHTO MITI (ASTM AI23). If welded splices are used subsequent to galvanizing, the weld details and the procedures for preparing the surface for welding and repairing the galvanizing after welding shall be included with the shop plans.
- 6. The thickness and shape of the neoprene seal may vary from the sketch shown (Detail "C" on this sheet) according to the manufacturer's design; however, the wedge lugs must properly fit the groove in the steel extrusion. Before installation, the shop plans of the proposed neoprene seal showing the fixed dimensions, thickness of neoprene seal, and dimensions pertinent to the fit of the neoprene seal in the steel extrusion shall be submitted to and approved by the Engineer.
- 7. Since the configuration and dimensions of the steel extrusion may vary according to each manufacturer's design, they need not conform exactly to that shown in DETAIL "D", however, any deviations from the plan shown configuration or dimensions must be approved by the Office of Bridge Design.
- 8. The Strip Seal Expansion Joint supplier shall submit a detailed gland installation procedure with the shop plans.
- 9. The cost of welding shall be included in the unit cost for Strip Seal Expansion Joint,
- 10. The neoprene seal shall be of sufficient length such that a minimum length of 6" shall extend beyond each end of the steel extrusions
- 11. The Strip Seal Expansion Joint will be measured in linear feet to the nearest one-tenth foot, complete in place. Measurement will be made of the overall horizontal length. The Strip Seal Expansion Joint will be paid for at the contract unit price per linear foot complete in place. Payment for this item shall be full compensation for furnishing all the required materials in place. Inclusive of labor, equipment and incidentals necessary to complete the work in accordance with plans and the foregoing specifications.
- ★ 12. Due to phased construction, the steel extrusion shall be spliced in the Field at the location shown above. The Weld Details and the procedures for preparing the surface for welding and repairing the galvanizing after welding shall be included with the shop plans.

THE CONTRACTOR HAS THE OPTION OF BUILDING THE APPROACH SLAB RETROFIT FOR THE FULL WIDTH OF THE ROADWAY AT ONE TIME OR BUILDING THE APPROACH SLAB RETROFIT IN TWO PHASES USING THE PLAN SHOWN OPTIONAL CONSTRUCTION JOINT. ALL REFERENCES TO PHASE I AND PHASE 2 CONSTRUCTION ARE GIVEN IN THE EVENT THE CONTRACTOR ELECTS TO BUILD THE APPROACH SLAB RETROFIT IN TWO PHASES.





BRIDGE ENGINEER





	STATE OF	PROJECT	SHEET	TOTAL SHEETS
	SOUTH DAKOTA	090 E-468	12	15
	Plotting Date:	05/06/2013		
VERWIDTH EHICLES	C			
VERWIDTH EHICLES	D			

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STATE OF	PROJECT	SHEET	TOTAL SHEETS
SOUTH DAKOTA	090 E-468	13	15
Plotting (Date: 05/06/2013		







		STATE OF	PROJECT	SHEET	TOTAL
090 E-400 15 1	SOI DAK	SOUTH DAKOTA	090 E-468	15	15