

SECTION 905 -- PROPOSAL (CONTINUED)

I (We) hereby certify by digital signature and electronic submission via Bid Express of the Section 905 proposal below, that all certifications, disclosures and affidavits incorporated herein are deemed to be duly executed in the aggregate, fully enforceable and binding upon delivery of the bid proposal. I (We) further acknowledge that this certification shall not extend to the bid bond or alternate security which must be separately executed for the benefit of the Commission. This signature does not cure deficiencies in any required certifications, disclosures and/or affidavits. I (We) also acknowledge the right of the Commission to require full and final execution on any certification, disclosure or affidavit contained in the proposal at the Commission's election upon award. Failure to so execute at the Commission's request within the time allowed in the Standard Specifications for execution of all contract documents will result in forfeiture of the bid bond or alternate security.

Bidder acknowledges receipt of and has added to and made a part of the proposal and contract documents the following addendum (addenda):

ADDENDUM NO. <u> 1 </u>	DATED <u> 8/17/2023 </u>	ADDENDUM NO. <u> </u>	DATED <u> </u>
ADDENDUM NO. <u> </u>	DATED <u> </u>	ADDENDUM NO. <u> </u>	DATED <u> </u>
ADDENDUM NO. <u> </u>	DATED <u> </u>	ADDENDUM NO. <u> </u>	DATED <u> </u>

Number	Description
1	Revised Table of Contents; Revised Notice To Bidders No. 5249; Added Special Provision 907-688-2; Revised Bid Items; Amendment EBSx Download Required.

TOTAL ADDENDA: 1
(Must agree with total addenda issued prior to opening of bids)

Respectfully Submitted,

DATE _____

Contractor

BY _____
Signature

TITLE _____

ADDRESS _____

CITY, STATE, ZIP _____

PHONE _____

FAX _____

E-MAIL _____

(To be filled in if a corporation)

Our corporation is chartered under the Laws of the State of _____ and the names, titles and business addresses of the executives are as follows:

President Address

Secretary Address

Treasurer Address

The following is my (our) itemized proposal.
NHPP-0008-03(059)/ 108245301000
Rankin County(ies)

Revised 01/26/2016

**MISSISSIPPI DEPARTMENT OF TRANSPORTATION
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PROJECT: NHPP-0008-03(059)/108245301 - Rankin

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(REVISIONS TO THE ABOVE WILL BE INDICATED ON THE SECOND SHEET
OF SECTION 905 AS ADDENDA)

08/16/2023 02:05 PM

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 5249

CODE:(SP)

DATE: 08/17/2023

SUBJECT: Scope of Work

PROJECT: NHPP-0008-03(059) 108245301 – Rankin County

The contract documents do not include an official set of construction plans but may, by reference, include some Standard Drawings when so specified in a Notice to Bidders entitled, “Standard Drawings”.

A general description of the work required on the project is as follows:

Mill/overlay and concrete rehabilitation of approximately 9.2 miles of existing pavement on US 49 beginning at the Simpson County line (BOP Station 10+00) and ending south of Florence (EOP Station 545+00). A section northbound and southbound from Station 288+70 to 337+43 will be omitted due to a future project. Details of specific work are mentioned in the following sections.

US 49 Northbound

From Station 10+00 (BOP) to Station 288+70

From Station 337+43 to Station 482+20

Work in this section shall consist of milling/overlaying with 2” and variable of 12.5-mm, HT Polymer Modified asphalt on mainline, 12.5-mm, HT asphalt on the outside shoulder, full depth repairs of CRCP, and pressure grouting. See attached tables for additional details. All guardrail not meeting current MDOT standards shall be replaced. Traffic will be allowed to run on the milled surfaces no more than five (5) consecutive days.

From Station 482+20 to Station 545+00 (EOP)

Work in this section shall consist of milling/overlaying with 2” and variable of 12.5-mm, HT Polymer Modified asphalt on mainline, 12.5-mm, HT asphalt on the outside shoulder, full depth repairs of JRCP, pressure grouting, and sawing and sealing of joints. See attached tables for additional details on full depth repairs. All guardrail not meeting current MDOT standards shall be replaced. Traffic will be allowed to run on the milled surfaces no more than five (5) consecutive days.

US 49 Southbound

From Station 10+00 (BOP) to Station 288+70

From Station 477+32 to Station 545+00 (EOP)

Work in this section shall consist of milling/overlaying with 2” and variable of 12.5-mm, HT Polymer Modified asphalt on mainline, 12.5-mm, HT asphalt on the outside shoulder, full depth repairs of CRCP, pressure grouting, and ditch repair. See attached tables for additional details.

All guardrail not meeting current MDOT standards shall be replaced. Traffic will be allowed to run on the milled surfaces no more than five (5) consecutive days.

From Station 337+43 to Station 477+32

Work in this section shall consist of milling/overlaying with 2" and variable of 12.5-mm, HT Polymer Modified asphalt on mainline, 12.5-mm, HT asphalt on the outside shoulder, full depth repairs of JRCP, pressure grouting, and sawing and sealing of joints. See attached tables for additional details on full depth repairs. All guardrail not meeting current MDOT standards shall be replaced. Traffic will be allowed to run on the milled surfaces no more than five (5) consecutive days.

Star Road Turn Lanes

The turn lanes on Star Road shall be widened according to the attached detail drawings. Excess excavation shall be used to remove existing material to a depth of 13". The new pavement structure shall consist of 6" of crushed stone (day-lighted) and 7" of 12.5-mm, HT, Leveling asphalt placed in 3 lifts (2@2.5" and 1@2"). Type V Geotextile shall be placed under all areas requiring stone. This work shall be completed before milling and paving operations begin. Care shall be taken to limit the drop off to no greater than 2" if work cannot be completed in one day. Any work necessary to grade the ditches and/or restabilize any disturbed areas shall be absorbed under other items bid.

49 South to Eagle Post Road Turn Lane

Existing asphalt shall be removed to a depth of 14". The new pavement structure shall consist of 6" of crushed stone (day-lighted) and 8" of 12.5-mm HT, Leveling asphalt placed in 3 lifts (2@3" and 1@2"). Type V Geotextile shall be placed under all areas requiring stone. This work shall be completed before milling and paving operations begin. Care shall be taken to limit the drop off to no greater than 2" if work cannot be completed in one day. Any work necessary to grade the ditches and/or restabilize any disturbed areas shall be absorbed under other items bid.

GENERAL NOTES:

MILLING

Milling/paving will not begin until an **approved** asphalt mix design has been received, nor until such time that, in the opinion of the Engineer, weather conditions have been consistently suitable enough to allow placement of the asphalt pavement after the milling operations.

The reclaimed asphalt pavement (RAP) material removed by the milling operation shall become the property of the Contractor.

Where milling is required, the Contractor shall provide outlets in the existing shoulders at sufficient intervals to prevent pooling or standing water on the milled surface, the cost of which shall be absorbed in other items bid.

Milling and paving operations shall be performed such that a -2% slope from centerline is provided in normal crown roadway sections. Super-Elevation through curves shall be maintained as it currently exists or improved as directed. Where slope correction is required correction will be

made by milling, paving, or combination thereof as directed by the Engineer. Milling correction: Mill outside edge of pavement to a depth of 1½” on a 2% slope towards the centerline. Paving Correction: Mill to depth of 1½” on existing slope and 2¼” and variable on centerline and 1½” on outside edge. Combination Method: Combination of both methods as directed by the Engineer to achieve the desired slope. In super elevated areas where correct SE exist milling will transition to thickness through curves. Where correct SE does not exist milling will transition at curves to correct SE as directed by the Engineer.

Milling operations shall be performed in accordance with the Contract documents and the MDOT Standard Specifications. Variable width and length transitions may be required for tie-ins at ramps, local roads, project limits.

Milling of driveway pads shall be conducted in a manner to prevent gouging or otherwise affecting the roadway pavement structure and slope. Milling of driveway pads shall not be done in simultaneous path with main line milling.

Traffic will be allowed to travel on the milled surface for five (5) consecutive days. Traffic will be allowed to run on all milled local roads (and crossovers) for 30 days unless otherwise stated. The Contractor will be assessed a penalty of **\$5,000 per calendar day** afterwards until the milled surfaces are covered with the next lift of asphalt. This allowance is for the Contractor’s convenience, and thus, the Contractor is responsible for any pavement failures or damage sustained during this period. Milling and paving of paved shoulders shall conform to Subsection 406.03.2 of the Standard Specifications.

PAVING

Prior to mainline milling and paving operations, failed areas in the existing concrete pavement shall be removed and repaired. JRCPC concrete failed areas shall be repaired as per the attached details. The load transfer assemblies, redwood filler board, and joint sealing shall not be paid for directly, and shall be considered included under pay item 503-A: 6” and Variable Reinforced Concrete Pavement, Broom Finish. CRCPC concrete failed areas shall be repaired as per the attached details and be paid under 8” and Variable Continuously Reinforced Concrete Pavement, Broom. The concrete pavement failures shall be removed by saw cutting and excavating the failed material. Any failures in the cement treated base shall be removed and replaced with Class “C” concrete. Payment will be made under pay item 503-D: Concrete for Base Repair. A list of the failed areas is shown in the attached tables. Pavement repairs shall be completed as a continuous operation in order to minimize traffic impacts. 12.5-mm HT, Leveling asphalt shall be placed to grade over the concrete repair, prior to opening traffic. Payment will be made under 403-B. Lane closures shall remain in place until the failed area has been completely repaired and lane closures shall not be left unattended.

A table showing locations of underlying problems with the concrete pavement has been included. The following sequence of operations will be used to correct the underlying concrete pavement problems: Fill voids under the concrete pavement, joints at the centerline of the concrete pavement, and joints at the edge of pavement between the concrete pavement and the soil cement-treated shoulder by pressure grouting. After pressure grouting, mill and replace the asphalt over the joint to a maximum depth of six inches (6”) per attached detail. After milling and prior to

replacement, if there is any remaining depth of asphalt over the joint, repair any failed asphalt by removing all loose/broken pieces. Replacement of milled area and any repair areas are to be made with 12.5-mm HT, Leveling asphalt back to existing finish grade.

The surface lift for failed area repair or concrete punchout repair shall have a maximum deviation of 3/8" as determined by a 10-foot straight edge. Any location that deviates more than this tolerance, as determined by the Engineer, shall be corrected at no additional cost to the State.

Per Subsection 401.02.3.2, the asphalt mix design shall be submitted to the Engineer at least 10 working days prior to its proposed use.

If traditional excavation methods are used, the removal area shall first be saw cut full depth including concrete, where applicable, to create a neat line and prevent damage to the adjacent pavement structure. Payment for saw cuts will be made using the appropriate items. If milling techniques are used, the area will not require saw cuts but care should be exercised to create a neat removal line and to prevent damaged to the adjacent pavement structure. If saw cuts are used in conjunction with milling, payment will be made using the appropriate pay items. Payment will not be made for saw cuts that are not performed.

Publicly maintained roads and streets should be paved to the existing right-of-way and in accordance with the attached drawings.

Privately owned entrances shall be paved to the shoulder line per the included typical drawing unless otherwise directed. Pad dimensions shall match the existing lengths and widths unless otherwise directed. Pads shall be shaped horizontally and vertically to prevent excessive drop-offs. Any new driveway pads deemed necessary by the Engineer shall be placed according to specifications.

GRANULAR SHOULDER MATERIAL

Where applicable, the existing shoulders are to be raised to match the new pavement elevation by placing variable depth granular material. The shoulders shall be graded and pulled up on a daily basis to eliminate drop-offs in excess of 2¼". Placement of the granular material on the finished asphalt course shall not be permitted. The existing shoulder shall be scarified to allow incorporation of the new shoulder material. The material shall be bladed, rolled, and compacted to a finished slope of four percent (4%) in normal crown sections. Placement of this material shall be performed to provide a uniform and compacted shoulder with a minimum depth and width of material placed. Shoulders with adequate shoulder material in place shall be bladed to a slope of four percent (4%) in normal crown sections. The cost of blading will be an absorbed item and is to be included in the price of other items bid.

Granular material (Class 5 Group C) shall be provided around driveway pads as directed to prevent shoulder drop-offs and shall be placed in a timely manner. Drop-offs exceeding 2¼" shall be corrected within two (2) calendar days of the placement of the pad. Stabilizer aggregate shall be used as directed by the Engineer.

Any material excavated from the existing shoulder during pavement widening operations or as a result of shoulder blading shall be used on the existing shoulder to match the new pavement elevation and any surplus material shall be spread along the edge of the shoulders, fore slopes, or other adjacent areas as directed by the Engineer and will be an absorbed item. Material which cannot be suitably placed in adjacent areas and deemed to be excess excavation by the Engineer shall be removed from the project site. Payment for removal of excess material will be made using pay item 203-G: Excess Excavation. Asphalt or rip rap placed as fill material on the shoulders shall be removed; the cost of which shall be absorbed in other items bid.

TEMPORARY AND PERMANENT PAVEMENT MARKINGS

Temporary traffic stripe will be required immediately after the milling and/or required overlay and prior to opening area to traffic. Temporary stripe shall be placed in the same location and configuration as the permanent stripe except that it may be offset as required for milling and paving operations. If temporary stripe is offset, the Contractor shall conduct operations in a manner to insure the final temporary stripe is placed at the required location of the permanent stripe. If removal of temporary offset stripe is required in order to achieve the correct location and alignment of permanent stripe, the cost of removal will be absorbed in other items bid. Placing double temporary centerline will not be allowed.

Temporary striping shall conform to finished stripe specifications for alignment, neatness, and straightness.

The use of short strips of traffic tape will not be allowed unless approved by the Engineer.

All permanent striping will be double drop thermoplastic, 90-mil thickness unless otherwise specified in Subsection 626.03.1.2. Edge lines will be placed to accommodate the lane widths shown on the attached applicable typical sections unless prevented by field conditions.

Rumble strip will be placed throughout the project limits in accordance with the attached details and MDOT Standard Drawings.

Payment for edge stripe on local roads shall be made under pay item 626-G: Thermoplastic Double Drop Detail Stripe, White when the length of said stripe is less than 150 feet when measured from the end of the radius. If the measured length is greater than 150 feet, then payment shall be made under pay item 626-B: 6" Thermoplastic Double Drop Traffic Stripe, Continuous White.

Payment for centerline stripe on local roads shall be made under pay item 626-G: Thermoplastic Double Drop Detail Stripe, Yellow when the length of said stripe is less than 150 feet when measured from the stop bar. If the measured length is greater than 150 feet, then payment shall be made under pay item 626-E: 6" Thermoplastic Double Drop Traffic Stripe, Continuous Yellow. Centerline stripe shall be omitted on local roads whose width is less than 20 feet.

The face of all existing undisturbed curbs shall be painted with at least two coats of white traffic paint with glass beads being required in the top coat. The cost associated with the painting of new or existing curb shall be included in other items bid.

The face of all existing, painted, concrete islands shall be painted with at least two coats of white traffic paint with glass beads being required in the top coat. The cost associated with the painting of new or existing curb shall be included in other items bid.

Pavement section marking tape on this project shall be located prior to overlaying and placed back in the same location after paving operations have ceased. The section marking shall be 8-inch high performance cold plastic detail stripe and shall be four feet (4') in length. The marking shall be centered across the centerline stripe. The cost of this item shall be absorbed in other items bid.

GUARDRAIL

Guardrails shall be replaced at the locations shown on the attached table. Removal of guardrail shall consist of removal of bridge end section, w-beam/thrie beam, terminal end section, posts, and all other appurtenances. All guardrail removed shall be replaced the same day and prior to reopening the adjacent lane of traffic. Voids created by the removal of posts, concrete anchors, footings, etc. shall be backfilled and compacted in accordance with Section 203 of the Standard Specifications.

Asphalt shall be extended under the guard rail and two feet (2') behind guard rail post as per the attached detail. The area to be paved shall be bladed to accommodate 3'' of 12.5-mm HT asphalt. The elevation of the finished surface of the asphalt pavement shall provide for the required MASH guardrail height (see Standard Drawings). The excavated material shall be retained and used to raise the existing shoulder to match the new pavement elevation. The cost of blading will be an absorbed item and should be included in the price of other pay items bid. Material which cannot be placed and blended in adjacent areas and deemed to be excess excavation by the Engineer shall be removed under pay item 203-G: Excess Excavation.

The asphalt guardrail pad shall be removed or milled and repaved prior to the placement of the new guardrail. Removal of the guardrail pad shall be paid for using the milling pay item. Asphalt shall be extended under the guard rail and two feet (2') behind guard rail post as per the attached detail. The area to be paved shall be bladed to accommodate 3'' of 12.5-mm HT asphalt. The elevation of the finished surface of the asphalt pavement shall provide for the required MASH guardrail height (see Standard Drawings).

Guardrail lengths are based on terminal end length of 37.5'. If terminal of length other than this is used, an adjustment in w-beam length is required.

All dimensions and spacings for bridge rail connectors shall be verified in the field by the Contractor prior to fabrication.

PERMANENT SIGNS

Permanent signs as listed on the attached tables shall be replaced. Unless otherwise listed in the attached tables, existing posts, anchors, angles/bars, and other components are to be reused. The Contractor shall use new bolts, screws, washers, nuts, etc. of the required sizes in the installation of signs. If required as part of the sign replacement activities, all post and I-beam lengths in these plans are estimated. Post lengths for all signs shall be verified in the field by the Contractor prior to fabrication. Installation dates shall be clearly written in bold black markings on the back bottom

half off all signs with a permanent marking stick that is waterproof, fade resistant, and marks on wet or dry surfaces. If existing sign posts or footings are to be replaced, the existing posts and footings are to be removed and the area backfilled and compacted in accordance with Section 203 of the Standard Specifications. Removal of sign, post, and footing and backfilling will be paid using the removal of sign pay item.

Object markers at bridge approaches and other locations are to be replaced as shown in the attached table. Removal of object markers shall be absorbed in the cost of other items bid.

TRAFFIC CONTROL

The Contractor shall erect and maintain construction signing and provide all signs and traffic control devices necessary to safely maintain traffic around and through the work areas in accordance with the Traffic Control Plan and the MUTCD. The cost shall be included in the price bid for pay item 618-A: Maintenance of Traffic. Fluorescent orange sheeting shall be used on all construction and traffic control signs except those designated in the plans to be black legend and border on white background.

Standard roadside construction signs, barricades, etc. shall be placed in accordance with the attached tables, drawings, and as directed by the Engineer. W20-1 signs shall be placed on all public road approaches as shown or as directed. Payment for standard roadside construction signs, barricades, etc. will be made using the appropriate pay items.

The Contractor shall on a daily basis, remove all debris from within the roadway and a 30-foot clear zone which, in the opinion of the Engineer, is a hazard to the traveling public. This activity shall begin with the beginning of work or the beginning of the contract time, whichever comes first. No direct payment will be made for the debris removal; the cost shall be included in the prices of items bid. Failure of the Contractor to remove the debris as prescribed herein shall be just cause for withholding the monthly progress estimate payment or suspending active operations until the debris is satisfactorily removed by the Contractor.

Temporary asphalt joints (aka paper joints) shall be employed at all locations requiring traffic to traverse an uneven, transverse, pavement joint. Paper joints shall be a minimum of nine feet (9') in length and for the full width of the milled/paved surface. Paper joints shall be adequately maintained.

MISCELLANEOUS NOTES

It shall be the responsibility of the Contractor to protect existing structures such as pipes, inlets, aprons, bridges, etc. from damage which might occur during construction. The Contractor shall replace or repair, as directed by the Engineer, any structures damaged by the Contractor during the life of the contract. No payment will be made for replacement or repair of damaged items.

Any signs that are in conflict with construction of this project shall be removed and relocated by the Contractor as directed by the Engineer; the cost of which shall be absorbed in other items bid.

Removal of existing raised pavement markers shall be included in the prices for other items bid.

Incidental work such as removing vegetation, shaping and compacting shoulders, removing and resetting signs and/or mailboxes, removing excess asphalt material, project clean-up, and other items of incidental work necessary to complete the project will not be measured for separate payment and will be considered included in the prices of items bid.

Erosion mat shall be paid and installed per the attached detail.

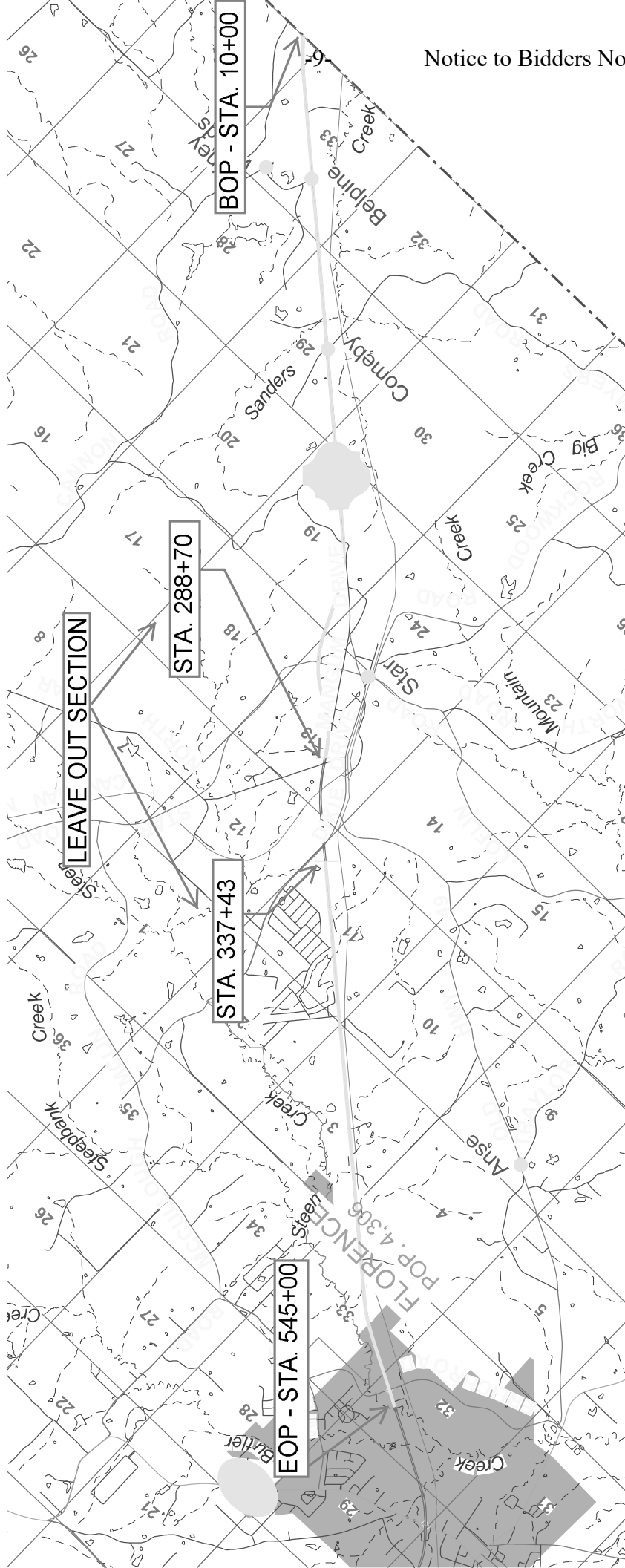
Crossover delineators shall be installed and paid for using pay item 630-F: Delineators, Flexible Post Mounted, Crossover, Type II. Said delineators shall be installed as per the attached detail.

Prior to the final inspection, bridges, islands, and areas with curb shall be swept/cleaned. Care should be taken to prevent milled asphalt, asphalt debris, vegetative/granular debris, etc. from entering drainage structures or clogging other drainage ways. Disposal of material will not be measured for separate payments.

Following the overlaying operation the transverse joints in the pavement shall be sawed and sealed within seven (7) days. The details for sawing and sealing transverse joints for this section are in the Standard Specifications. The width of the sawing and sealing operation will be from edge of pavement to edge of pavement, unless otherwise directed by the Engineer, to prevent "sympathy cracking". It is the responsibility of the Contractor to locate and mark all existing joints that are to be sawed and sealed prior to the milling operation. The Contractor shall notify the Department when this is to take place so that they can oversee the work and determine the width that each joint will be sawed and sealed.

The pipe listed in the attached table shall have the existing debris and sediment removed by the Contractor and shall be paid for using pay item 202-B: Removal of Debris and Sand from Pipe, All Sizes. The applicable pay item shall be measured along the length of the pipe. The depth of sediment in the pipe is approximately 1-foot deep and is for estimation purposes only. The actual depth of the sediment shall be field verified by the Contractor prior to bidding the Project. The disposal of this material will not be measured for separate payment. Any tree removal or clearing for equipment access will be at the Engineer's discretion and shall be absorbed in other items bid.

RANKIN COUNTY
US HWY 49
NHPP-0008-03(059)
108245/301000



EQUATIONS:

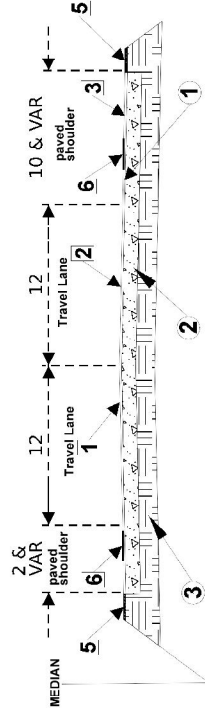
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- STA. 160+91.900 AH = 160+91.150 BK
- STA. 264+06.320 AH = 264+37.680 BK
- STA. 474+82.800 AH = 474+77.340 BK

**RANKIN COUNTY
NHPP-0008-03(059)
108245/301000
HIGHWAY 49**

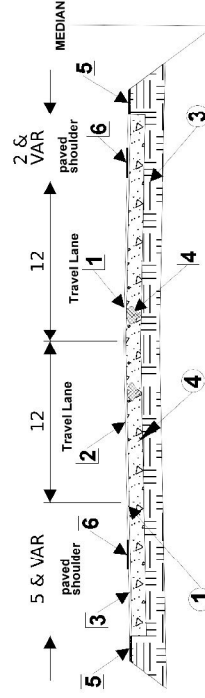
STATE	PROJECT NO.
MISS.	NHP-0008-03(059)

HIGHWAY 49 TYPICAL SECTION FOR JRCP

HIGHWAY 49 NORTHBOUND
STATION: 482+20 TO EOP



HIGHWAY 49 SOUTHBOUND
STATION: 337+43 TO 477+32



LEGEND

- [Symbol] = Overlay with 2" 12.5mm, Mix, HT Polymer Modified
- [Symbol] = Overlay outside shoulder, with 2" 12.5mm, Mix, HT, Non-Polymer Modified
- [Symbol] = Class 5 Group C
- [Symbol] = JRCP
- [Symbol] = Clay gravel
- [Symbol] = Rumble strips

- Existing:**
- ① - 4" & variable of existing asphalt
 - ② - 8" & variable of Jointed Reinforced Concrete Pavement (JRCP)
 - ③ - 6" Clay gravel
 - ④ - 6" & variable of Jointed Reinforced Concrete Pavement (JRCP)

- Proposed:**
- 1 - Mill 2" of Existing Asphalt Pavement
 - 2 - Overlay Mainline with 2" 12.5mm, HT, Asphalt Pavement, Polymer Modified
 - 3 - Overlay outside shoulder 2" 12.5mm, HT, Asphalt Pavement, Non-Polymer Modified
 - 4 - Repair failed area per concrete punchout typical
 - 5 - Place variable depth "Class 5 Group C" to bring shoulders to grade
 - 6 - Place rumble strip on shoulder

MISSISSIPPI DEPARTMENT OF TRANSPORTATION	
DETAIL OF	
JRCP SECTION	
PROJECT: NHPP-0008-03(059)	SECTION NUMBER: 1
COUNTY: RANKIN	DATE: 7/14/2022
FILENAME: 49 TYPICAL TS.DGN	DESIGN TEAM: DISTRICT 5, DCECD

STATE	PROJECT NO.
MISS.	NHP-0008-P3059

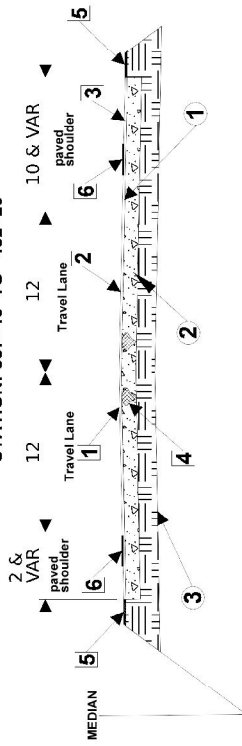
**RANKIN COUNTY
NHPP-0008-03(059)
108245/301000
HIGHWAY 49**

HIGHWAY 49 TYPICAL SECTION FOR CRCP

HIGHWAY 49 NORTHBOUND

STATION: BOP TO 288+70

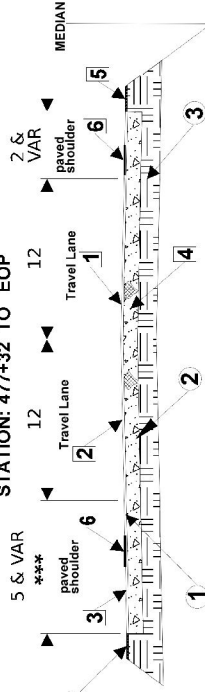
STATION: 337+43 TO 482+20



HIGHWAY 49 SOUTHBOUND

STATION: BOP TO 288+70

STATION: 477+32 TO EOP



*** OUTSIDE PAVED SHOULDER WIDTH FOR SOUTHBOUND
10+00 TO 25+00 (PAVED SHOULDER WIDTH 6'-0" AND VARIABLE)
25+00 TO 205+00 (PAVED SHOULDER WIDTH 4'-0" AND VARIABLE)
210+00 TO 288+70 (PAVED SHOULDER WIDTH 8'-0" AND VARIABLE)
480+00 TO 543+55 (PAVED SHOULDER WIDTH 10'-0" AND VARIABLE)

Existing:

- ① - 4" and variable of existing asphalt
- ② - 8" & variable of Continuously Reinforced Concrete Pavement (CRCP)
- ③ - 6" of cement treated base

Proposed:

- ① - Mill 2" of Existing Asphalt Pavement
- ② - Overlay Mainline with 2" 12.5mm, HT, Asphalt Pavement, Polymer Modified
- ③ - Overlay outside shoulder 2" 12.5mm, HT, Asphalt Pavement, Non-polymer Modified
- ④ - Repair failed area per concrete punchout typical
- ⑤ - Place variable depth crushed stone to bring shoulders to grade
- ⑥ - Place rumble strip on shoulder

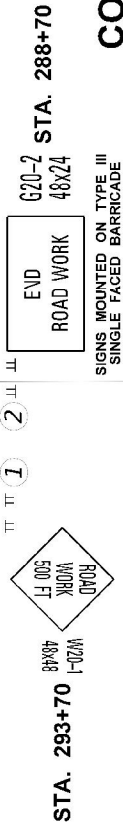
LEGEND

- ① = Overlay with 2" 12.5mm, Mix, HT Polymer Modified
- ② = Overlay outside shoulder with 2" 12.5mm, Mix, HT, Non-Polymer Modified
- ③ = Class 5 Group C
- ④ = CRCP
- ⑤ = Cement treated base
- ⑥ = Rumble strips

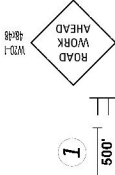
MISSISSIPPI DEPARTMENT OF TRANSPORTATION	
DETAIL OF	
CRCP SECTION	
PROJECT: NHPP-0008-03(059)	PROJECT NUMBER
COUNTY: RANKIN	SECTION: 2
FILENAME: 49 TYPICAL.TSDGN	DATE: 1/14/2022
DESIGN TEAM: DISTRICT 5, DESIGP	

RANKIN COUNTY NHPP-0008-03(059) 108245/301000 HIGHWAY 49

OMITTING STATIONS: 288+70 TO 337+43



SIGNS MOUNTED ON TYPE III SINGLE FACED BARRICADE

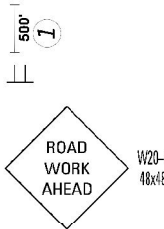


LOCAL ROADS

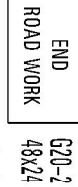
SEE STANDARD ROADSIDE CONSTRUCTION SIGN TABLE FOR LOCATIONS

SEE STANDARD ROADSIDE CONSTRUCTION SIGN TABLE FOR LOCATIONS

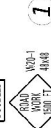
LOCAL ROADS



SIGNS MOUNTED ON TYPE III SINGLE FACED BARRICADE



SIGNS MOUNTED ON TYPE III SINGLE FACED BARRICADE



SIGN LEGEND

SIGN LEGEND	DESCRIPTION
1	ROAD WORK AHEAD W20-1 48x48
2	END ROAD WORK W20-2 48x24
3	SPEED LIMIT XX R2-1 48x60
4	ROAD WORK AHEAD W20-1 48x48
5	WHEN WORKERS ARE PRESENT SPEEDING FINES DOUBLED R16-3 48x60

NOTE:

OMITTING STATIONS 288+70 TO 337+43, W20-1 "ROAD WORK AHEAD" SIGNS IS REQUIRED AT EACH LOCAL ROAD, STREET, OR HIGHWAY ENTERING THE PROJECT.

G20-2 "END ROAD WORK" SIGNS MOUNTED ON TYPE III SINGLE FACED BARRICADE 6 FEET WIDE.

R16-3, W3-5, R2-1 "SPEED LIMIT SPEED WARNING AND SPEEDING FINES DOUBLED" SIGNS WILL ALSO BE REQUIRED. THE R2-1 WILL REQUIRE FLUORESCENT ORANGE PLAQUE.

FIELD CONDITIONS MAY REQUIRE SOME SIGNS ON THE DETAIL TO BE ADJUSTED.

THE ABOVE SHOWN ITEMS WILL BE PAID UNDER THE APPROPRIATE PAY ITEM.

Notice to Bidders No. 24

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
DETAIL OF
TRAFFIC CONTROL PLAN

PROJECT: NHPP-0008-03(059)
COUNTY: RANKIN
FILENAME: 49_TYPICAL.IS.DGN
REGION: TEAM DISTRICT 5 DESIGD 1/14/2002

DATE: 1/14/2002
TIME: 10:00 AM
USER: J. RANKIN

RANKIN COUNTY NHPP-0008-03(059) 108245/301000 HIGHWAY 49

STATE MISS. PROJECT NO. NHPP-0008-03(059)

NOTE:

OMITTING STATIONS 288+70 TO 337+34, W20-1 "ROAD WORK AHEAD" SIGNS IS REQUIRED AT EACH LOCAL ROAD STREET, OR HIGHWAY ENTERING THE PROJECT.

G20-2 "END ROAD WORK" SIGNS MOUNTED ON TYPE III SINGLE FACED BARRICADE 6 FEET WIDE.

R16-3, W3-5, R2-1 "SPEED LIMIT, SPEED WARNING, AND SPEEDING FINES DOUBLE" SIGNS WILL ALSO BE REQUIRED. THE R2-1 WILL REQUIRE FLUORESCENT ORANGE PLAQUE.



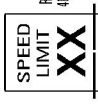
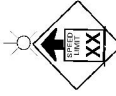

FIELD CONDITIONS MAY REQUIRE SOME SIGNS ON THE DETAIL TO BE ADJUSTED.

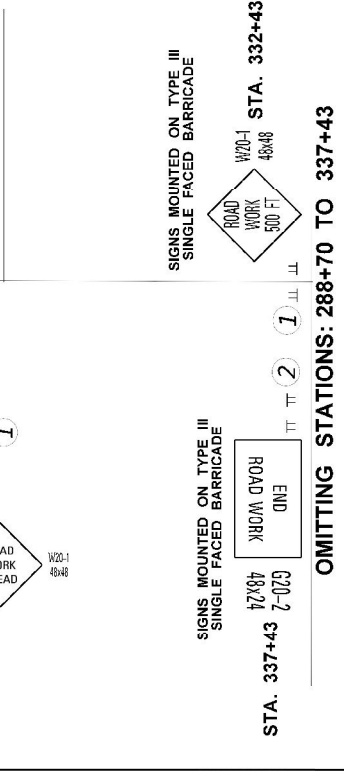
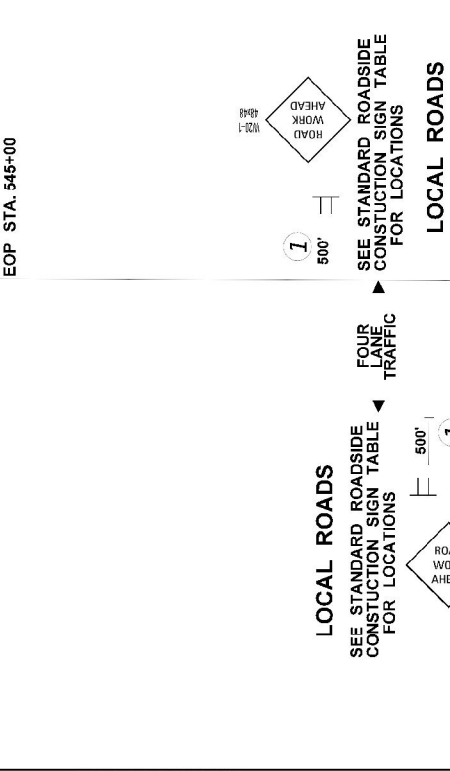
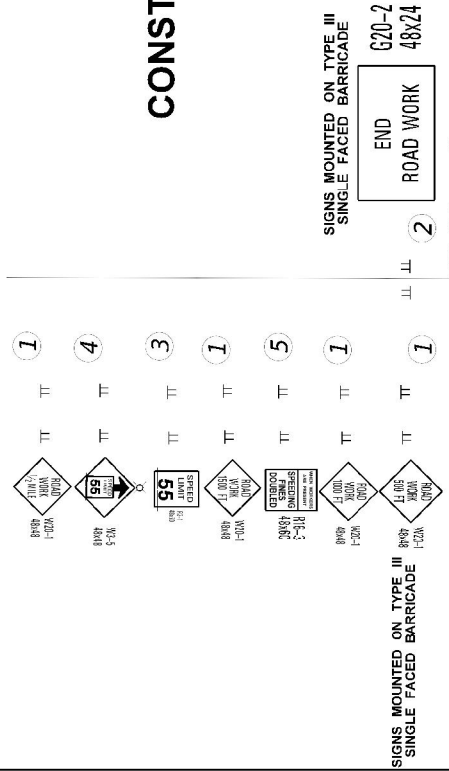
THE ABOVE SHOWN ITEMS WILL BE PAID UNDER THE APPROPRIATE PAY ITEM.

TRAFFIC CONTROL SIGNS REQUIRED:

- 8 - G20-2 "END ROAD WORK"
- 43 - W20-1 "ROAD WORK AHEAD XX"
- 16 - TYPE III SINGLE FACED BARRICADE
- 4 - R16-3 "WHEN WORKERS ARE PRESENT SPEEDING FINES ARE DOUBLED"
- 6 - R2-1 "SPEED LIMIT XX" SIGNS
- 4 - W3-5 "SPEED LIMIT AHEAD XX" SIGNS
- 4 - TYPE B WARNING LIGHTS

CONSTRUCTION SIGNING DETAIL

SIGN LEGEND	DESCRIPTION
1	 W20-1 48x48 ROAD WORK AHEAD
2	 G20-2 48x24 END ROAD WORK
3	 R2-1 48x60 SPEED LIMIT XX
4	 W3-5 48x48 SPEED LIMIT AHEAD XX
5	 R16-3 48x60 WHEN WORKERS ARE PRESENT SPEEDING FINES DOUBLED



MISSISSIPPI DEPARTMENT OF TRANSPORTATION
DETAIL OF
TRAFFIC CONTROL PLAN

PROJECT: NHPP-0008-03(059)
COUNTY: RANKIN
FILENAME: 49 TYPICAL.TSDGN
DESIGN TEAM: DISTRICT 5, DESIGD
DATE: 1/14/2022

OMITTING STATIONS: 288+70 TO 337+43

PUNCHOUT CRCP QUANTITIES 108245/301000													
Station	Station	Location	Width (ft)	Length (ft)	503-B001 Saw Cut Longitudinal Joint, LF	503-C004 Saw Cut, 3 - inch	503-C010 Saw Cut, Full Depth, LF	202-B069 Removal of Concrete Pavement w/ Variable Depth Overlay	202-B045 Removal of Cement Treated Base, All Depths, SY	503-D001 Concrete for Base Repair, CY	503-E002 Tie Bars, NO.5 Deformed, Drilled And Epoxied or Grouted, EA	503-A001 8" and Variable Continuously Reinforced Concrete Pavement, Broom Finish, SY	403-B001 12.5-mm, HT, Asphalt Pavement, Leveling, Ton
159+56	159+64	RRL	12	8	8	24	32	11	5.5	1	5	11	2
479+92	480+00	LLL	12	8	8	24	32	11	5.5	1	5	11	2
479+92	480+00	RLL	15	8	8	30	38	13	6.5	1	5	13	2
480+23	480+31	LLL	15	8	8	30	38	13	6.5	1	5	13	2
480+23	480+31	RLL	15	8	8	30	38	13	6.5	1	5	13	2
482+25	482+33	LLL	12	8	8	24	32	11	5.5	1	5	11	2
482+25	482+33	RLL	16	8	8	32	40	14	7	1	5	14	2
484+22	484+57	LLL	12	34	34	24	58	45	22.5	1	18	45	10
484+22	484+57	RLL	21	34	34	42	76	79	39.5	1	18	79	17
TOTAL					124.00	260.00	384.00	210.00	105.00	9.00	71.00	210.00	41.00

Quantities were rounded on estimate, quantities to be used as directed by the Engineer. CRCP repairs were estimated using the PR-1B Typical CRC Pavement Repair Standard. If the Contractor elects to use PR-1A Optipal Welding Method, then the pay item quantities will be adjusted accordingly. The load transfer device necessary for jointed concrete pavement repair is to be included in the cost of the 503-A001 pay item.

PUNCHOUT JRPC QUANTITIES 108245/301000													
Station	Station	Location	Width (ft)	Length (ft)	503-C010 Saw Cut, Full Depth, LF	503-B001 Saw Cut Longitudinal Joint, LF	202-B069 Removal of Concrete Pavement w/ Variable Depth Overlay	202-B045 Removal of Cement Treated Base, All Depths, SY	503-D001 Concrete for Base Repair, CY	503-F002 1" Smooth Dowel Bars, Drilled & Epoxied or Grouted, EA	503-E002 Tie Bars, NO.5 Deformed, Drilled And Epoxied or Grouted, EA	503-A014 6" and Variable Reinforced Concrete Pavement, Broom Finish, SY	403-B001 12.5-mm, HT, Asphalt Pavement, Leveling, Ton
369+40	369+46	LLL	12	6	30	6	8	4	1	12	4	8	1
369+40	369+46	RLL	15	6	36	6	10	5	1	15	4	10	2
403+60	403+66	LLL	12	6	30	6	8	4	1	12	4	8	1
425+80	426+20	LLL	12	40	64	40	53	26.5	1	12	21	53	6
425+80	426+20	RLL	19	40	78	40	84	42	1	19	21	84	9
428+80	429+20	LLL	12	40	64	40	53	26.5	1	12	21	53	6
441+00	441+20	LLL	12	20	44	20	27	13.5	1	12	11	27	3
441+00	441+20	RLL	15	20	50	20	33	16.5	1	15	11	33	4
444+00	444+20	LLL	12	20	44	20	27	13.5	1	12	11	27	3
444+60	445+00	LLL	12	40	64	40	53	26.5	1	12	21	53	6
461+36	461+42	RLL	15	6	36	6	10	5	1	15	4	10	2
467+00	467+40	LLL	12	40	64	40	53	26.5	1	12	21	53	9
468+49	468+55	LLL	12	6	30	6	8	4	1	12	4	8	1
468+49	468+55	RLL	15	6	36	6	10	5	1	15	4	10	1
476+75	477+15	LLL	12	40	64	40	53	26.5	1	12	21	53	6
476+75	477+15	RLL	15	40	70	40	67	33.5	1	15	21	67	7
TOTAL					804.00	376.00	557.00	278.50	16.00	214.00	204.00	557.00	67.00

Quantities were rounded on estimate, quantities to be used as directed by the Engineer. The load transfer device necessary for jointed concrete pavement repair is to be included in the cost of the 503-A001 pay item.

FAILED AREAS AND PRESSURE GROUT QUANTITIES 108245/301000									
Beginning Station	Ending Station	Direction	Lane	Length (FT)	Width (FT)	202-B009 Removal of Asphalt, Failed Areas (SY)	403-B001 12.5-mm, HT, Asphalt Pavement, Leveling, Ton	512-A001 Holes (EACH)	512-B001 Cement Pressure Grout Slurry, Type 5 (POUNDS)
78+15	78+55	NB	RT RRL	40	2	8.9	2.2	9	40
155+30	156+65	NB	RT RRL	135	2	30.0	7.4	28	135
160+00	160+30	NB	RT RRL	30	2	6.7	1.7	7	30
161+85	162+15	NB	RT RRL	30	2	6.7	1.7	7	30
163+80	164+20	NB	RT RRL	40	2	8.9	2.2	9	40
165+65	165+80	NB	RT RRL	15	2	3.3	0.8	4	15
167+30	167+50	NB	RT RRL	20	2	4.4	1.1	5	20
171+00	171+20	NB	RT RRL	20	2	4.4	1.1	5	20
186+80	187+20	NB	RT RRL	40	2	8.9	2.2	9	40
190+80	191+10	NB	RT RRL	30	2	6.7	1.7	7	30
196+40	197+00	NB	RT RRL	60	2	13.3	3.3	13	60
198+40	198+70	NB	RT RRL	30	2	6.7	1.7	7	30
209+55	210+00	NB	RT RRL	45	2	10.0	2.5	10	45
226+30	226+45	NB	RT RRL	15	2	3.3	0.8	4	15
286+30	286+80	NB	RT RRL	50	2	11.1	2.8	11	50
542+00	543+40	NB	CL RRL	140	2	31.1	7.7	29	140
Totals:						164	41	164	740

**Notes: Locations and Measurements are Approximate and may Vary With Field Conditions.
All failed areas and pressure grouting locations facing upstation direction.**

GUARD RAIL QUANTITIES 108245/301000													
STATION	GUARDRAIL		TERMINAL END		CABLE ANCHOR TYPE 1	TYPE "A"	BRIDGE END		DELINEATORS		TYPE 3 OBJECT MARKERS	GUARDRAIL REMOVAL	REMARKS
	LOCATION (LT/RT)	W-BEAM (LF)	FLARED END SECTION	NON-FLARED END SECTION			SPECIAL SECTIONS, GUARD RAIL BRIDGE END CONNECTOR	WHITE	YELLOW				
545+00	L7/LT	112.5	1			1	1	6		1	190		
545+00	RT/LT	112.5	1			1	1	6		1	190		
541+10	RT/RT	200	1			1	1	8		1	250		
541+35	L7/RT	175	1			1	1	7		1	225		
493+75	RT/RT	450	1			1	1	10		1	500		
442+45	RT/RT	250	1			1	1	8		1	300		
76+00	L7/LT	350	1			1	1	10		2	400		
97+75	L7/LT	350	1			1	1	10		1	400		
123+05	L7/LT	260	1			1	1	10		1	310		
189+85	L7/LT	225	1			1	1	8		1	275		
199+05	L7/LT	350	1			1	1	10		1	400	Reinstall as existing condition. Remove & Reset recreational signs on object marker post. Cost absorbed.	
367+05	L7/LT	30	1			1	1	4		2	80		
380+80	L7/LT	200	1			1	1	8		1	250		
447+90	L7/LT	350	1			1	1	8		1	400		
496+45	L7/LT	85	1			1	1	5		1	135		
TOTAL =		3500.00	4.00	11.00	11.00	4.00	4.00	105.00	13.00	17.00	4305.00	LF.	
			EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	LF.	

* REMOVAL OF ALL GUARDRAIL (BRIDGE END SECTIONS, W-BEAM, TYPE-I CABLE ANCHORAGE, TERMINAL END SECTIONS, ETC.) WILL BE PAID UNDER PAY ITEM 202-B REMOVAL OF GUARD RAIL.

* REMOVAL OF GUARDRAIL DELINEATORS ARE CONSIDERED INCIDENTAL TO THE REMOVAL OF GUARDRAIL AND WILL NOT BE MEASURED AS A SEPARATE PAY ITEM.

* ALL GUARDRAIL, POSTS, BLOCKOUTS, CONCRETE ANCHORS, HARDWARE, ETC. WILL BE THE PROPERTY OF THE CONTRACTOR.

* TOTAL GUARDRAIL LENGTH IS BASED ON A TERMINAL END SECTION 37.5' LONG. IF A TERMINAL END SECTION OF A DIFFERENT LENGTH IS USED, THE LENGTH OF THE W-BEAM MAY HAVE TO BE ADJUSTED.

REMOVAL OF OBJECT MARKERS WILL NOT BE MEASURED AS A SEPARATE PAY ITEM AND SHALL BE ABSORBED IN OTHER ITEMS

TURN LANE WIDENING AND REPAIRS 108245/301000												
STATION	LENGTH, LF	WIDTH, LF	AREA, SY	202-B009 REMOVAL OF ASPHALT PAVEMENT, FAILED AREAS	503-C010 SAW CUT, FULL DEPTH, LF	202-B092 REMOVAL OF CURB, ALL TYPES	203-G002 EXCESS EXC, LVM, CY	209-A005 GEOTEXTILE TYPE V., SY	304-F002 610 CRUSHED STONE, TON	403-A001 12.5 MM, HT, TON	403-B001 12.5 MM, HT, LEVELING, TON	REMARKS
252+50	115.00	13.00	83.06		54.00	54.00	37.49	83.06	23.36	31.98		Star Rd. Widening
254+40	94.00	12.00	62.67		57.00	57.00	28.29	62.67	17.63	24.13		W. Main St. Widening
539+50	217.00	10.00	241.11	241.11	237.00			241.11	67.81		106.09	Eagle Post Rd. Failed Area
			TOTAL	241.11	348.00	111.00	65.78	386.83	108.80	56.10	106.09	

NOTES: ANY AREAS DISTURBED BY THE CONTRACTOR SHALL BE RESTABILIZED AT NO ADDITIONAL COST TO THE STATE
ADEQUATE DITCH DRAINAGE SHALL BE PROVIDED, AND ALL SITE GRADING AND INCIDENTAL GRASSING SHALL BE ABSORBED IN OTHER ITEMS BID

DITCH REPAIRS 108245/301000									
STATION	STATION	LENGTH, LF	WIDTH, LF	DEPTH, LF	203-G002 EXCESS EXC, LVM, AH (CY)	203-EX041 BORROW EXC, AH, LVM, B9-6 (CY)	229-A001 EROSION MAT (SY)	202-B114 REMOVAL OF DEBRIS AND SAND FROM PIPE, ALL SIZES (LF)	Remarks
229+80	238+08	828.00	9.00	1.00	128.80	172.50	736.00	8.00	US 49 SB LT
					128.80	172.50	736.00	8.00	
NOTES: ANY AREAS DISTURBED BY THE CONTRACTOR SHALL BE RESTABILIZED AT NO ADDITIONAL COST TO THE STATE ALL SITE GRADING, INCIDENTAL GRASSING AND SOLID SODDING IN AND AROUND REPAIRED DITCH SHALL BE ABSORBED IN OTHER ITEMS BID SEE DETAIL FOR INSTALLATION OF EROSION MAT FOR ADDITIONAL INFORMATION									

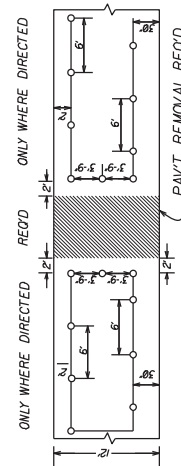
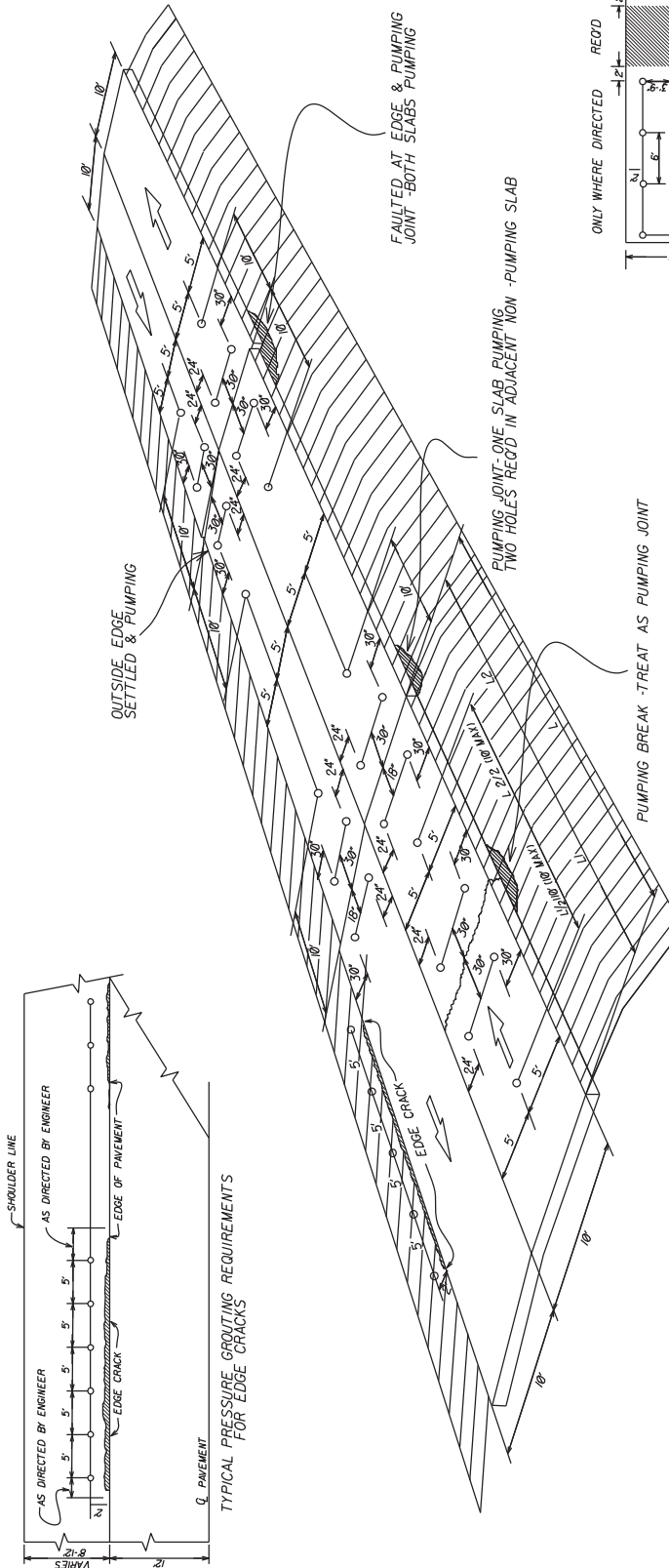
619-D2001 Standard Roadside Construction Signs, 10 Square Feet or More					
Station	Location	Description	Quantity	Unit	Remarks
51+00	RRL	W20-1 (Road Work Ahead)	16	SF	Everett Reese Rd
65+75	RRL	W20-1 (Road Work Ahead)	16	SF	Piney Woods Rd
120+70	RRL	W20-1 (Road Work Ahead)	16	SF	Cox 40 Rd
134+75	RRL	W20-1 (Road Work Ahead)	16	SF	Speights Rd
127+70	LLL	W20-1 (Road Work Ahead)	16	SF	Myers Rd
145+00	RRL	W20-1 (Road Work Ahead)	16	SF	Big Jim Ln
202+00	RRL	W20-1 (Road Work Ahead)	16	SF	Levi Cooper Rd
210+00	LLL	W20-1 (Road Work Ahead)	16	SF	Mangum Dr
254+15	RRL	W20-1 (Road Work Ahead)	16	SF	Star Rd
254+00	LLL	W20-1 (Road Work Ahead)	16	SF	W Main St
257+00	LLL	W20-1 (Road Work Ahead)	16	SF	Pecan Ln
279+50	LLL	W20-1 (Road Work Ahead)	16	SF	Wesleyanna St
293+70	LLL & RLL	W20-1 (Road Work Ahead 500 FT)	32	SF	288+70 TO 337+43 Omitted
332+43	LRL & RRL	W20-1 (Road Work Ahead 500 FT)	32	SF	288+70 TO 337+43 Omitted
366+45	RRL	W20-1 (Road Work Ahead)	16	SF	Richmond Dr
365+50	LLL	W20-1 (Road Work Ahead)	16	SF	Collins Rd
391+00	RRL	W20-1 (Road Work Ahead)	16	SF	Monmouth Rd
391+55	LLL	W20-1 (Road Work Ahead)	16	SF	Brewer Rd
434+00	LLL	W20-1 (Road Work Ahead)	16	SF	Thames Cr
451+50	LLL	W20-1 (Road Work Ahead)	16	SF	Fern Dr
468+65	LLL	W20-1 (Road Work Ahead)	16	SF	Spell Ln
485+50	LLL	W20-1 (Road Work Ahead)	16	SF	Summerlin Rd
537+00	RRL	W20-1 (Road Work Ahead)	16	SF	Eagle Post Rd
535+70	LLL	W20-1 (Road Work Ahead)	16	SF	Eagle Post Rd
541+25	LLL	W20-1 (Road Work Ahead)	16	SF	49 Pl
US 49 NB	LRL & RRL	W20-1 (Road Work Ahead 1/2 MI)	32	SF	2640' South of BOP
US 49 NB	LRL & RRL	W3-5 (Speed Zone 55 MPH)	32	SF	2000' South of BOP
US 49 NB	LRL & RRL	R2-1 (Speed Limit 55 MPH)	40	SF	1750' South of BOP
US 49 NB	LRL & RRL	W20-1 (Road Work Ahead 1500 FT)	32	SF	1500' South of BOP
US 49 NB	LRL & RRL	R16-3 (Speeding Fines Doubled)	40	SF	1250' South of BOP
US 49 NB	LRL & RRL	W20-1 (Road Work Ahead 1000 FT)	32	SF	1000' South of BOP
US 49 NB	LRL & RRL	W20-1 (Road Work Ahead 500 FT)	32	SF	500' South of BOP
US 49 SB	LLL & RLL	W20-1 (Road Work Ahead 1/2 MI)	32	SF	2640' North of EOP
US 49 SB	LLL & RLL	W3-5 (Speed Zone 55 MPH)	32	SF	2000' North of EOP
US 49 SB	LLL & RLL	R2-1 (Speed Limit 55 MPH)	40	SF	1750' North of EOP
US 49 SB	LLL & RLL	W20-1 (Road Work Ahead 1500 FT)	32	SF	1500' North of EOP
US 49 SB	LLL & RLL	R16-3 (Speeding Fines Doubled)	40	SF	1250' North of EOP
US 49 SB	LLL & RLL	W20-1 (Road Work Ahead 1000 FT)	32	SF	1000' North of EOP
US 49 SB	LLL & RLL	W20-1 (Road Work Ahead 500 FT)	32	SF	500' North of EOP
US 49 SB	LLL & RLL	R2-1 (Speed Limit 65 MPH)	40	SF	750' South of BOP

TOTAL		952	SF		
619-G7001 Warning Lights, Type "B"					
Station	Location	Description	Quantity	Unit	Remarks
US 49 NB	LRL & RRL	Mounted on W3-5	2	EA	1750' South of BOP
US 49 SB	LLL & RLL	Mounted on W3-5	2	EA	1750' North of EOP
TOTAL			4	EA	
619-D1001 Standard Roadside Construction Signs, Less than 10 Square Feet					
Station	Location	Description	Quantity	Unit	Remarks
550+00	LRL & RRL	G20-2 (End Road Work)	16	SF	500' North of EOP
337+43	LLL & RLL	G20-2 (End Road Work)	16	SF	288+70 TO 337+43 Omitted
288+70	LRL & RRL	G20-2 (End Road Work)	16	SF	288+70 TO 337+43 Omitted
5+00	LLL & RLL	G20-2 (End Road Work)	16	SF	500' South of BOP
US 49 NB	LRL & RRL	Fluorescent Orange Plaque	10	SF	1750' South of BOP. Mounted on R2-1
US 49 SB	LLL & RLL	Fluorescent Orange Plaque	10	SF	1750' North of EOP. Mounted on R2-1
US 49 SB	LLL & RLL	Fluorescent Orange Plaque	10	SF	750' South of BOP. Mounted on R2-1
TOTAL			94	SF	
619-G4005 Barricades. Type III, Single Faced					
Station	Location	Description	Quantity	Unit	Remarks
550+00	LRL & RRL	Mounted on G20-2	12	LF	500' North of EOP
337+43	LLL & RLL	Mounted on G20-2	12	LF	288+70 TO 337+43 Omitted
5+00	LRL & RRL	Mounted on W20-1 (Road Work Ahead 500 FT)	12	SF	500' South of BOP
550+00	LLL & RLL	Mounted on W20-1 (Road Work Ahead 500 FT)	12	SF	500' North of EOP
332+43	LRL & RRL	Mounted on W20-1 (Road Work Ahead 500 FT)	12	SF	288+70 TO 337+43 Omitted
293+70	LLL & RLL	Mounted on W20-1 (Road Work Ahead 500 FT)	12	SF	288+70 TO 337+43 Omitted
288+70	LRL & RRL	Mounted on G20-2	12	LF	288+70 TO 337+43 Omitted
5+00	LLL & RLL	Mounted on G20-2	12	LF	500' South of BOP
TOTAL			96	LF	

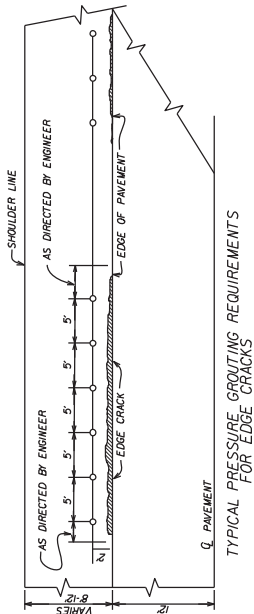
MISSISSIPPI DEPARTMENT OF TRANSPORTATION
 PRESSURE GROUTING DETAILS

PROJECT NO.: NEHP-0008-03(059)
 COUNTY: HANKIN

FILE NAME: _____
 DESIGN TEAM: _____
 SHEET NUMBER: **69-1**
 SHEET NUMBER: 69

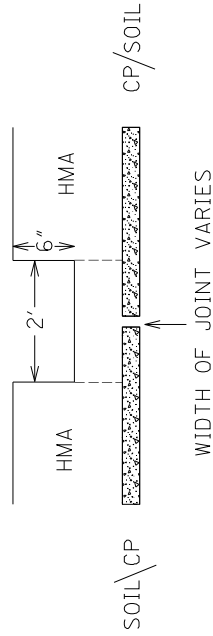


- NOTES:
- DO NOT LOCATE HOLES WITHIN 18" OF JOINT BREAK OR PAVEMENT EDGE. ADDITIONAL HOLES MAY BE REQUIRED IF THE SLAB IS BROKEN. KNOWN CAVITY LOCATIONS SHOULD TAKE PRECEDENCE IN LOCATING HOLES.
 - THE ABOVE HOLE LOCATIONS FOR THE CONDITIONS CITED ARE TO BE PERFORMED IN THE INITIAL GROUTING OPERATION.
 - THE DIMENSIONS & LOCATIONS SHOWN ARE TYPICAL. THE EXACT DIMENSIONS & LOCATIONS MAY VARY DURING CONSTRUCTION AS DIRECTED BY THE ENGINEER.



STATE	PROJECT NO.
MISS.	MPP-0098-03059

LONGITUDINAL JOINT REPAIR

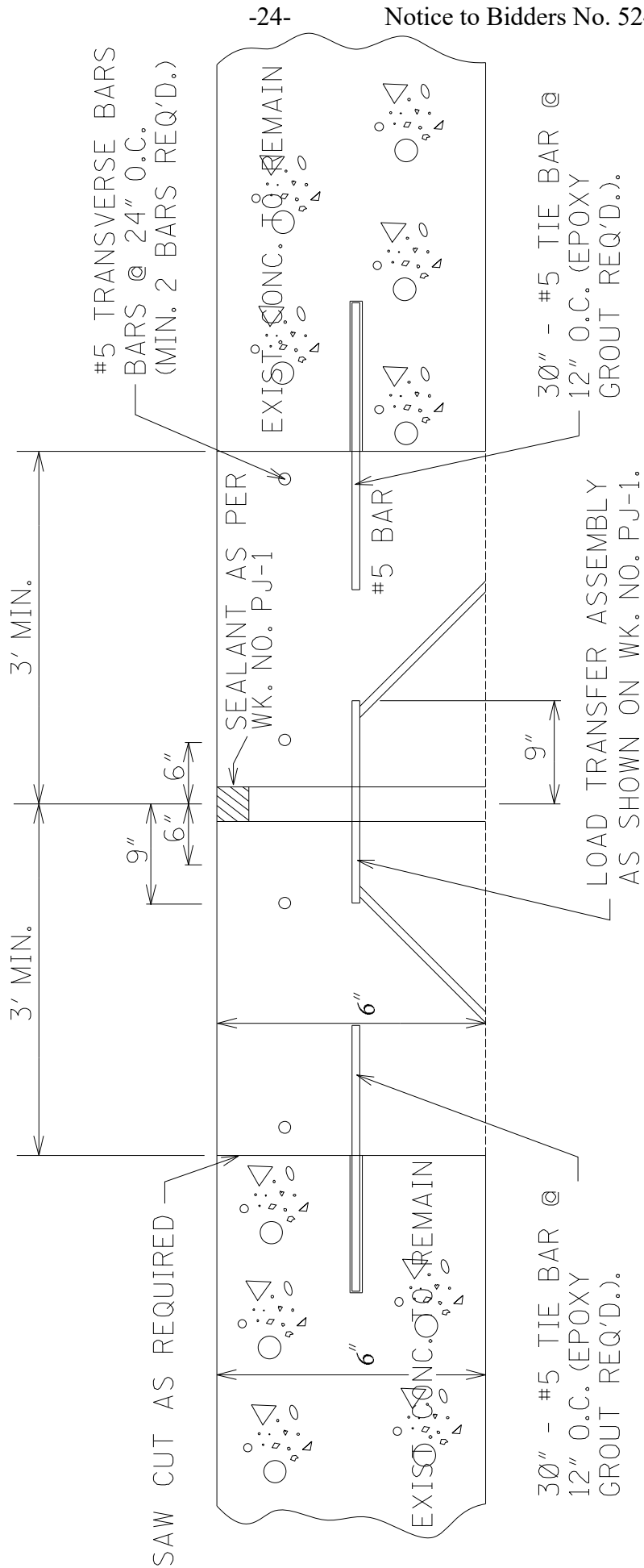


Prior to mill/overlay of the lanes, where condition of existing HMA surface course indicates underlying problems with the CP, Fillvoids under the CP, joints at the centerline of the CP, and joints at the edge of pavement between the CP and soilcment treated shoulder by pressure grouting. Subsequent to pressure grouting, mill and replace HMA over the joint to a maximum depth of 6". After milling and prior to replacement, if there is any remaining depth of HMA over the joint, repair any failed HMA by removing all loose/broken pieces. Replacement of milled area and any repair area to be made with 12.5mm, HT, Asphalt Pavement, Leveling back to existing finish grade.

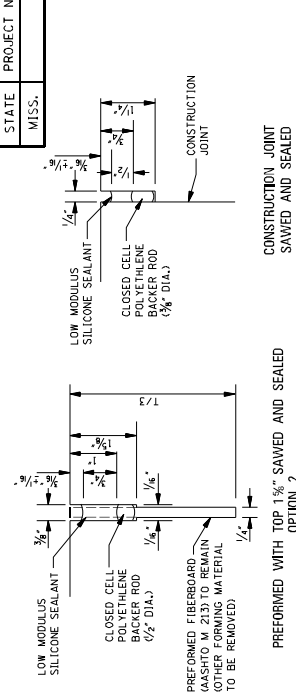
NOTE: REFER TO PRESSURE GROUTING DETAIL SHEET.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION	
LONGITUDINAL JOINT REPAIR	
WORKING NUMBER	101R-1
COUNTY	RANKIN
FILE NAME	DESIGN TEAM
DATE	7/01/2023
BY	REVISION

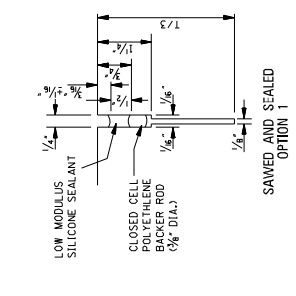
CONCRETE EXPANSION JOINT REPAIR DETAILS



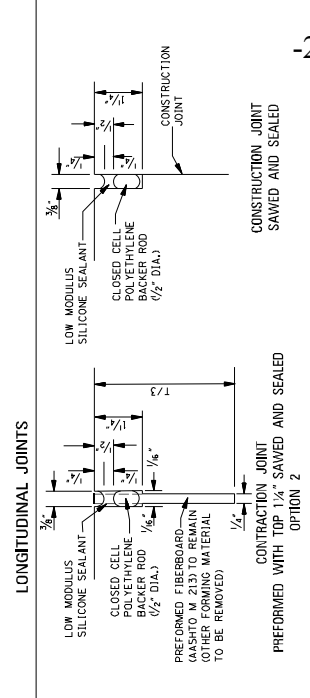
SECTIONAL VIEW OF REPLACED JOINT



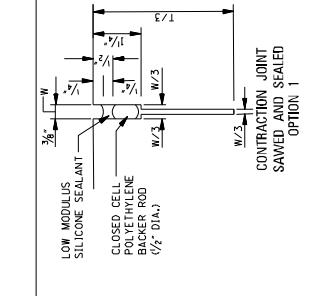
SAWED AND SEALED CONSTRUCTION JOINT OPTION 1



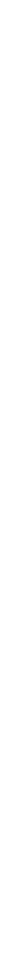
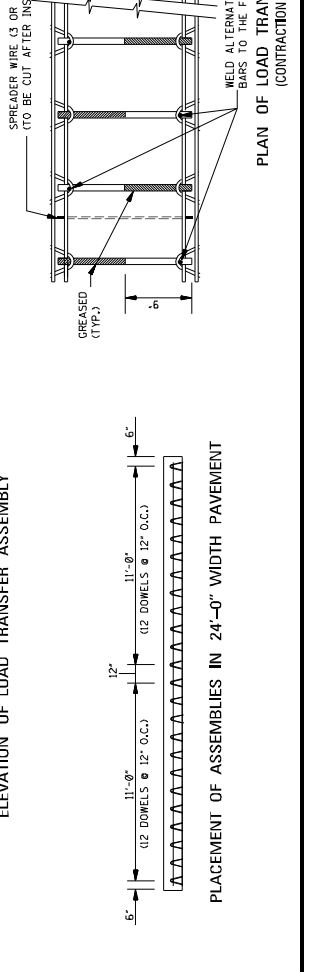
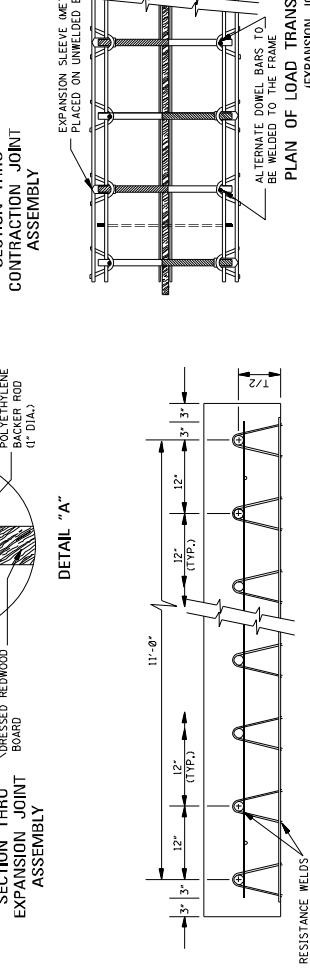
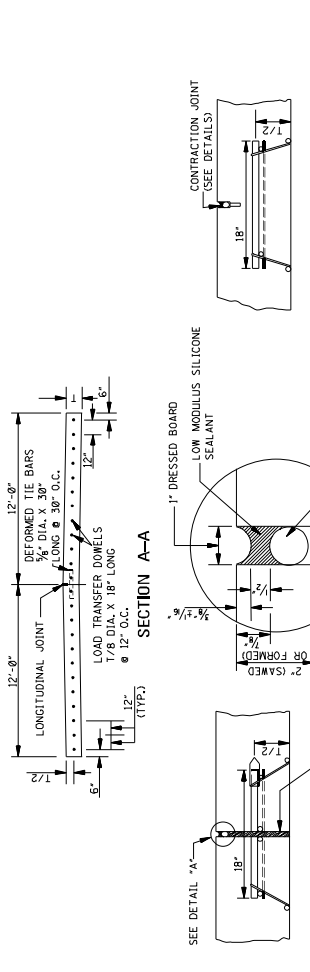
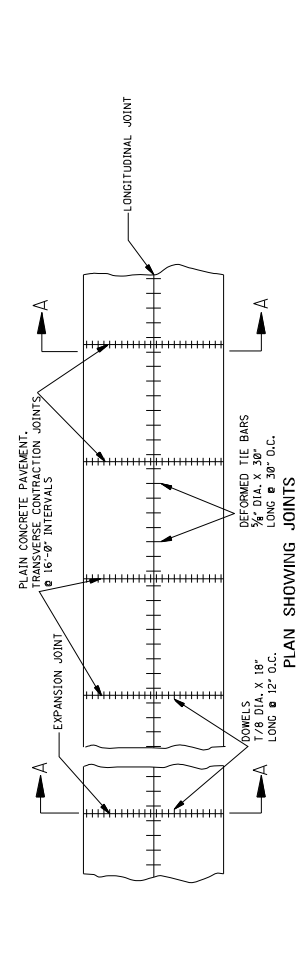
SAWED AND SEALED CONSTRUCTION JOINT OPTION 2



CONSTRUCTION JOINT SAWED AND SEALED OPTION 1



CONSTRUCTION JOINT SAWED AND SEALED OPTION 2



GENERAL NOTES:

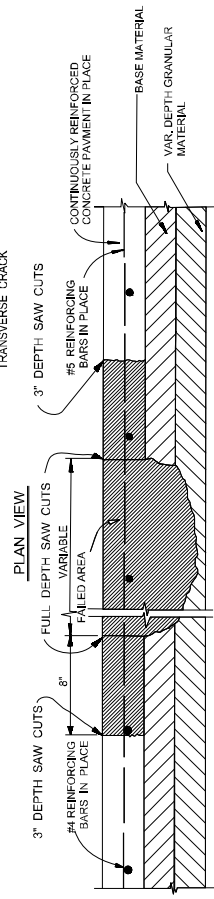
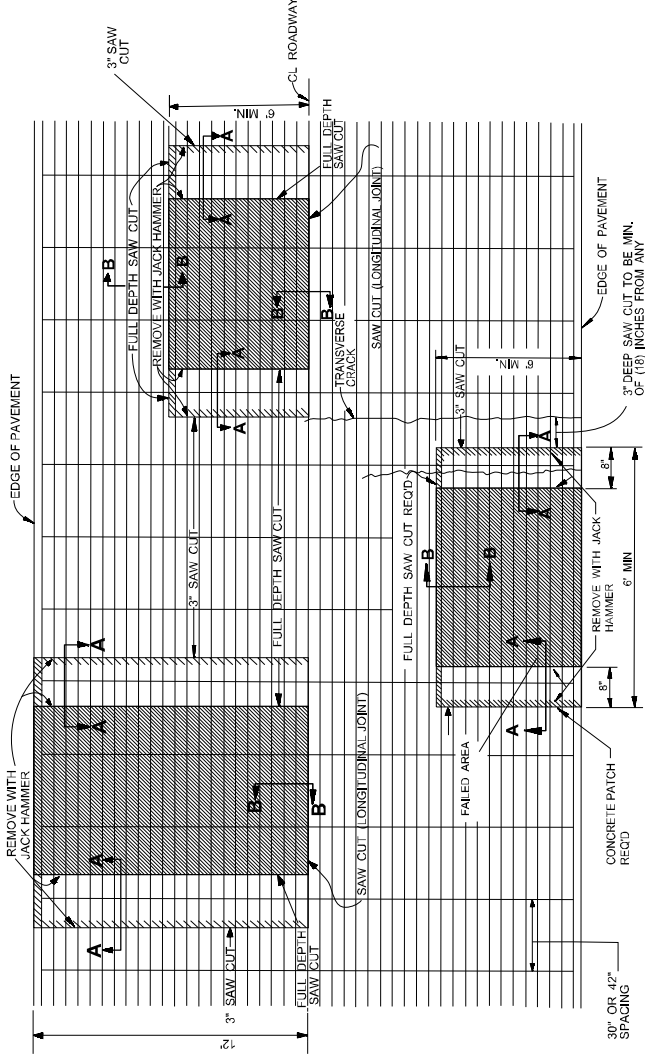
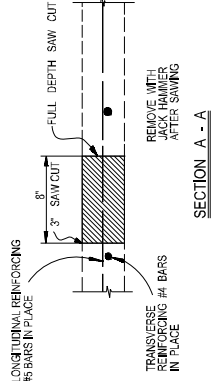
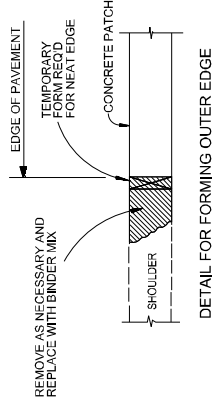
1. DOWEL BAR SPECIFICATIONS: AASHTO M 31 GRADE 60. TOLERANCES: THE PERMISSIBLE VARIATION IN STRAIGHTNESS SHALL BE A MAXIMUM OF 0.015" IN THE LENGTH OF THE DOWEL. THE TOLERANCES IN THE LENGTH SHALL BE +/- 0.25". THE MAXIMUM PERMISSIBLE ALIGNMENT VARIATION SHALL BE 0.25" IN THE LENGTH OF THE DOWEL IN EACH PLANE, BOTH HORIZONTALLY AND VERTICALLY. COATING: DOWELS SHALL BE SHOP PAINTED. FILL LENGTH WITH ONE OF THE FOLLOWING PAINTS AS PER SPECIFICATION: (1) FEDERAL SPECIFICATION TT-P-64B, (2) FEDERAL SPECIFICATION TT-P-30A, OR (3) STEEL STRUCTURES PAINTING COUNCIL SPECIFICATION SSPC-PAIN 11.
2. ASSEMBLY FRAME SPECIFICATIONS: AASHTO M 32. ALL FRAME WIRES SHALL BE W3.5 OR GREATER EXCEPT THE SPREADER WIRES WHICH SHALL BE W3 OR GREATER.
3. ANCHOR PINS: THE ASSEMBLY SHALL BE SECURED TO CEMENT TREATED OR ASPHALT BASE WITH RASSEL HILTI POWERS OR EQUIVALENT TIES MINIMUM 8 PER 12 FT. SECTION. -- 3 ON EACH OR OTHER APPROVED TIE SHALL BE RESPONSIBLE FOR SECURING THE ENTIRE ASSEMBLY IN SUCH A MANNER AS TO PREVENT DISPLACEMENT.
4. FOR CONSIDERATION OF USE OF OTHER LOAD TRANSFER ASSEMBLIES, THE CONTRACTOR SHALL PROVIDE DRAWINGS TO THE ENGINEER FOR APPROVAL.
5. PREFORMED FILLER IS NOT AN ALTERNATIVE FOR REDWOOD FILLER AT EXPANSION JOINTS UNLESS SPECIFICALLY REQUIRED ON THE PLANS.

NOTICE TO BIDDERS NO. 249

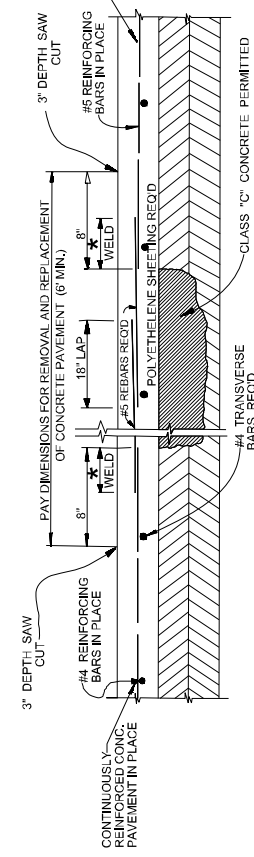
MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN
CONCRETE PAVEMENT JOINTS

BY	REVISION

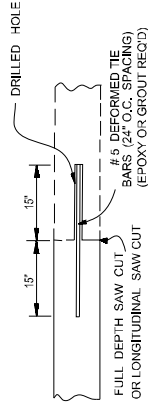
DATE: _____
ISSUE DATE: AUGUST 01, 2017
DRAWING NUMBER: PJ-1
SHEET NUMBER: 6004



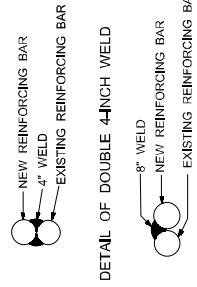
SECTIONAL VIEW (SHOWING AREA TO BE REMOVED)



SECTIONAL VIEW (SHOWING REPLACED AREA)



SECTION B - B



DETAIL OF DOUBLE 1/4-INCH WELD



DETAIL OF SINGLE 8-INCH WELD

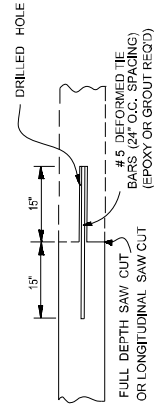
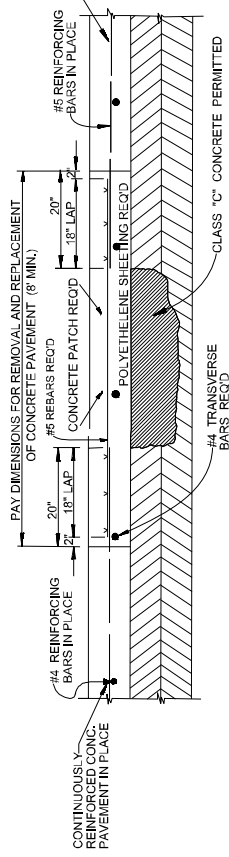
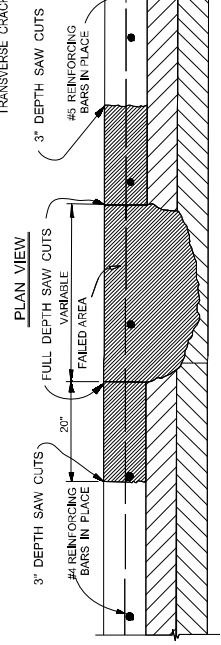
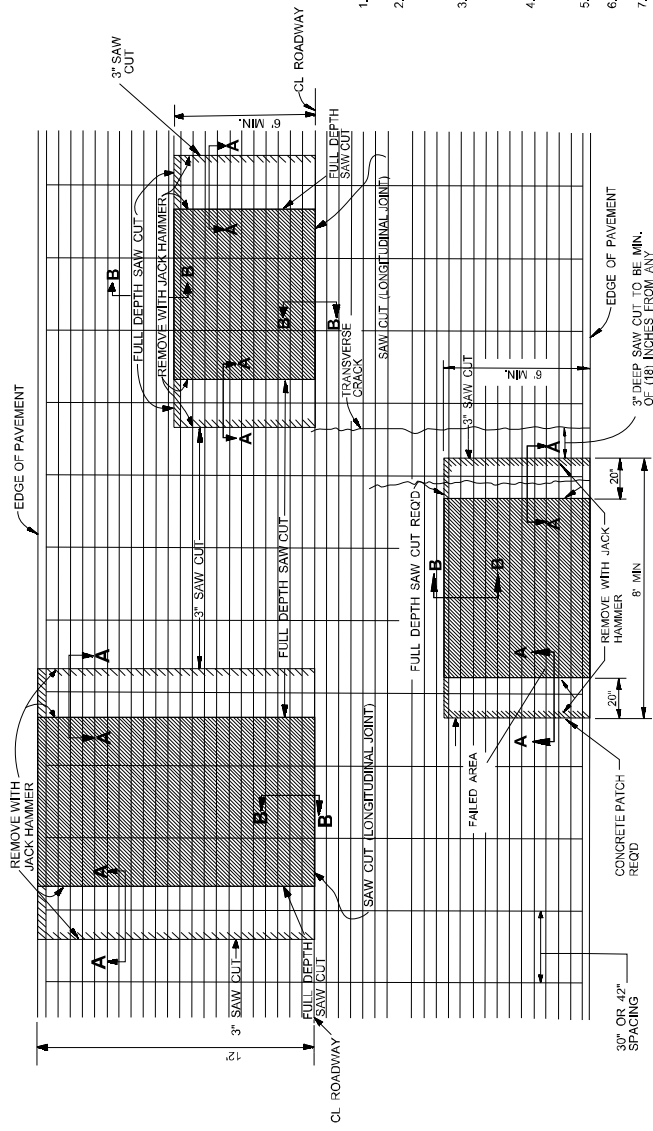
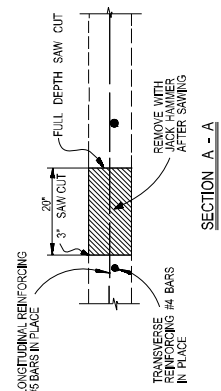
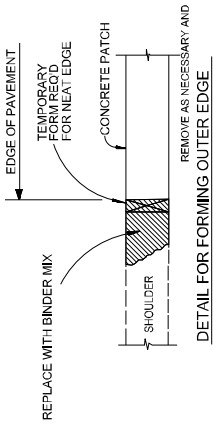
GENERAL NOTES

1. REMOVE EXISTING MATERIALS TO DIMENSIONS DETERMINED BY THE ENGINEER.
2. REMOVAL OF ASPHALT PATCHES AND CONCRETE PAVEMENT WILL BE PAID FOR UNDER THE APPROPRIATE PAY ITEM.
3. REINFORCING BARS TO BE FIELD CUT AS DIRECTED BY THE ENGINEER. COST OF REQUIRED REINFORCING BARS TO BE INCLUDED IN THE BID PRICE OF THE CONCRETE PAVEMENT.
4. REMOVAL OF FAILED BASE (PAY AS REMOVAL OF GEMENT TREATED BASE - S.V.A.) BACKFILL WITH CLASS "C" CONCRETE (BASE REPAIR).
5. PAVEMENT EDGE ADJACENT TO SHOULDER SHALL BE PERFORMED.
6. SEE SHEET NO. 102 FOR DETAILS NOT SHOWN.
7. POLYETHYLENE SHEETING SHALL BE TWO (2) LAYERS OF 8 MIL THICKNESS. (ABSORBED ITEM).
8. REINFORCING BARS WILL BE SUPPORTED AS SHOWN ON SHEET NO. 102.
9. ALL SAW CUTS (3\"/>

Notice to Bidders No. 249 - Co

DATE	12-15-98
CHECKED	
FILE NAME	
DESIGN TEAM	
PROJECT NO.	
COUNTY	
WORKSHEET NUMBER	PT-1A
SHEET NUMBER	

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
TYPICAL CRC PAVEMENT REPAIR
(OPTIONAL WELDING METHOD)
PROJECT NO. :
COUNTY :
DATE: 12-15-98



- GENERAL NOTES**
1. REMOVE EXISTING MATERIALS TO DIMENSIONS DETERMINED BY THE ENGINEER.
 2. REMOVAL OF ASPHALT PATCHES AND CONCRETE PAVEMENT WILL BE PAID FOR UNDER THE APPROPRIATE PAY ITEM.
 3. REINFORCING BARS TO BE FIELD CUT AS DIRECTED BY THE ENGINEER. COST OF REQUIRED REINFORCING BARS TO BE INCLUDED IN THE BID PRICE OF THE CONCRETE PAVEMENT.
 4. REMOVAL OF FAILED BASE (PAV AS REMOVAL OF CEMENT BASE) SHALL BE -SY-1, BACKFILL WITH CLASS "C" CONCRETE (BASE REPAIR).
 5. PAVEMENT EDGE ADJACENT TO SHOULDER SHALL BE UNPAVED.
 6. SEE SHEET NO. 102 FOR DETAILS NOT SHOWN.
 7. POLYETHYLENE SHEETING SHALL BE TWO (2) LAYERS OF 8 MIL THICKNESS. (ABSORBED ITEM).
 8. REINFORCING BARS WILL BE SUPPORTED AS SHOWN ON SHEET NO. 102.
 9. ALL SAW CUTS (3\"/>

DATE	REVISION

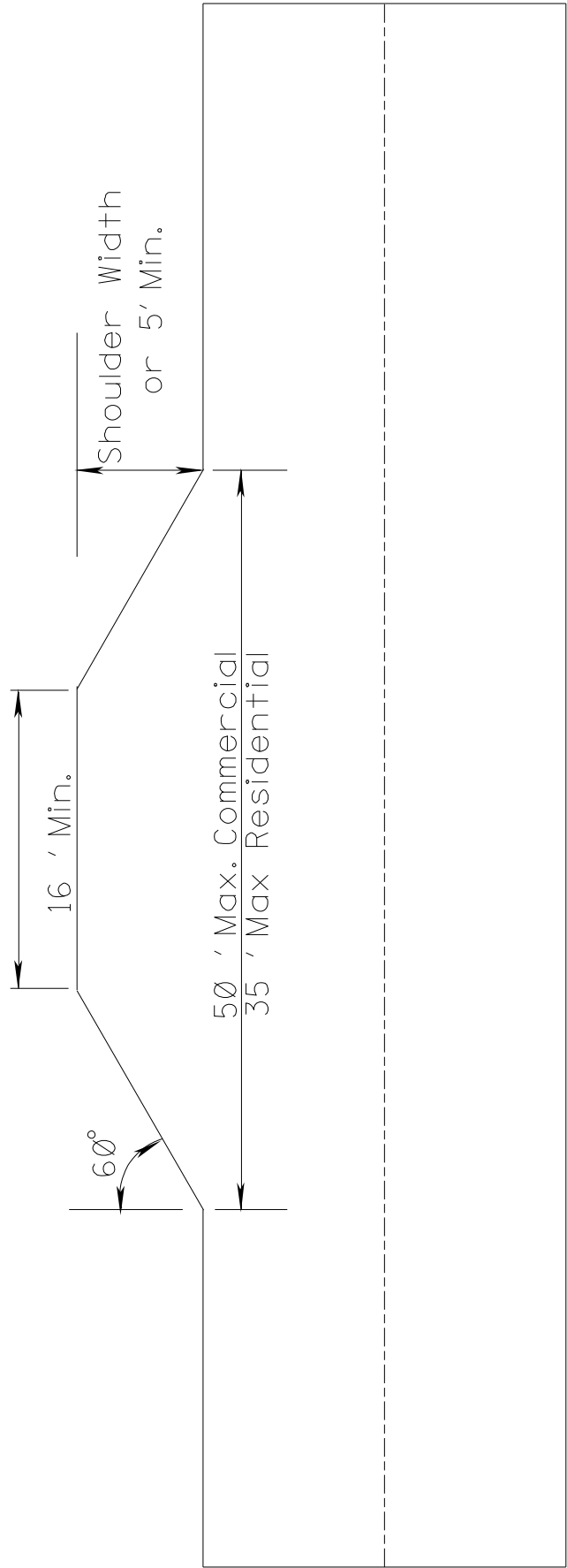
DESIGN TEAM: _____ DATE: _____

PROJECT NO.: _____
 COUNTY: _____

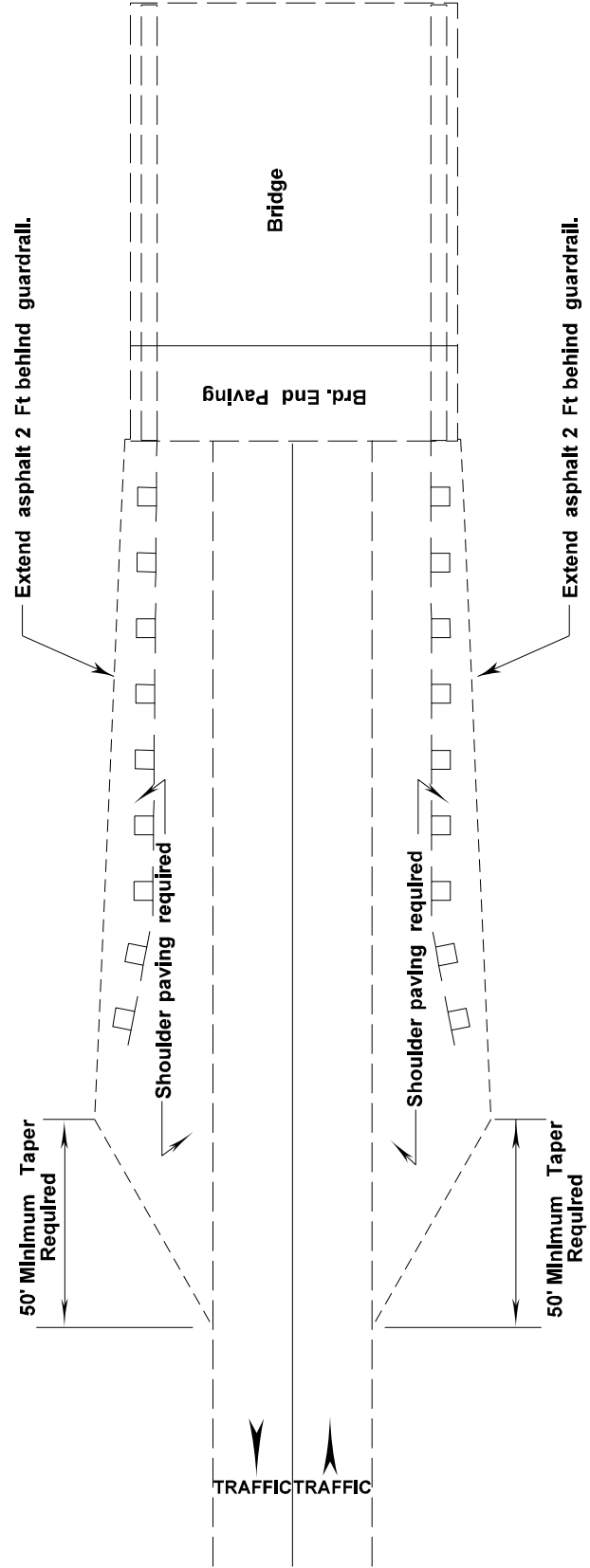
WORKING NUMBER: CR-1B
 SHEET NUMBER: _____

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
 TYPICAL CRC PAVEMENT REPAIR

TYPICAL RAMP/PAD DETAIL

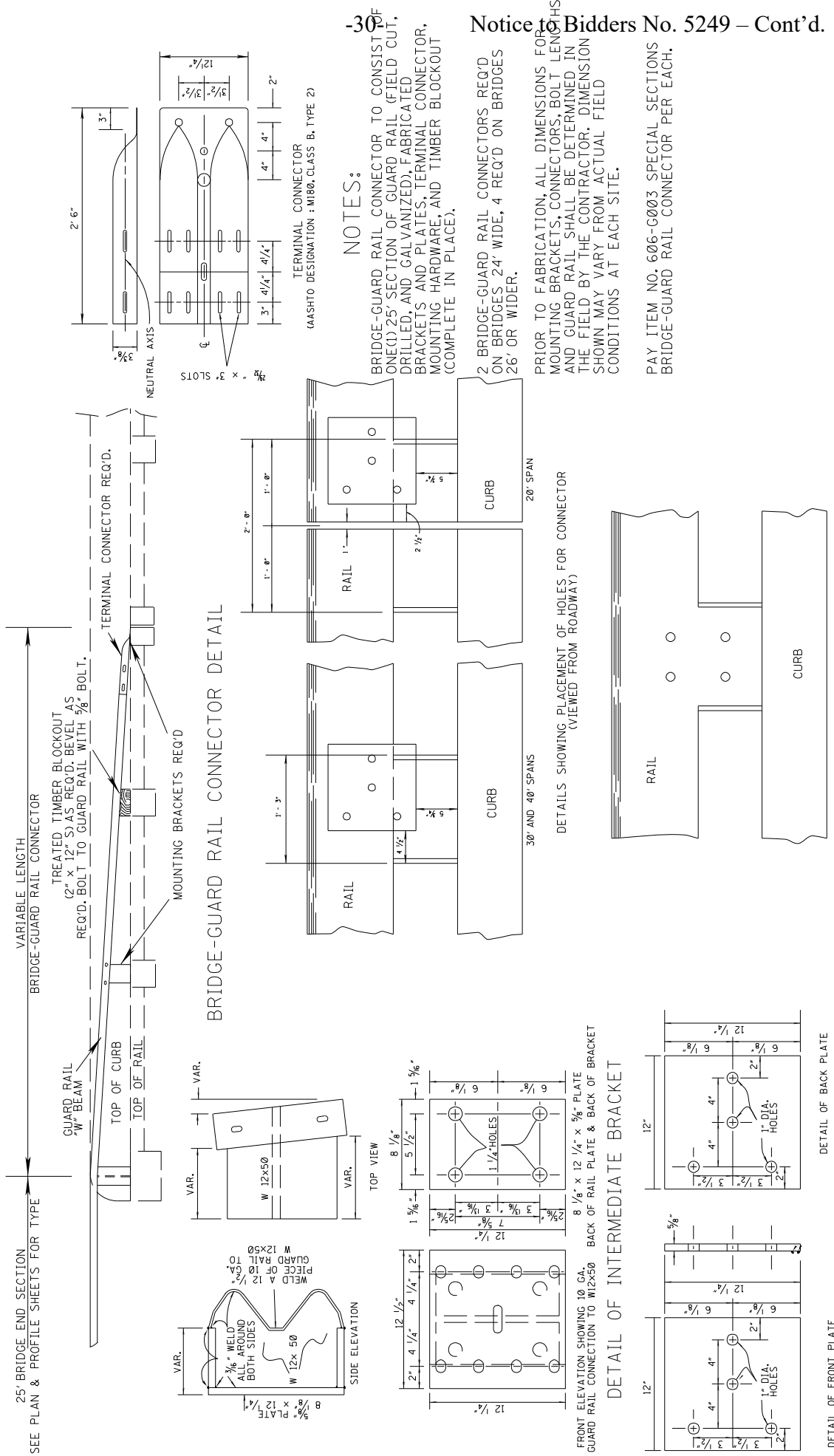


TYPICAL DETAIL OF ADDITIONAL SHOULDER PAVING
REQUIRED AT GUARDRAIL LOCATIONS



*Asphalt Thlc.kness
See scope of work for additional details

SPECIAL DESIGN BRIDGE-GUARD RAIL CONNECTOR



SEE PLAN & PROFILE SHEETS FOR TYPE

VARIABLE LENGTH BRIDGE-GUARD RAIL CONNECTOR

NEUTRAL AXIS

BRIDGE-GUARD RAIL CONNECTOR DETAIL

30° AND 40° SPANS

20° SPAN

DETAILS SHOWING PLACEMENT OF HOLES FOR CONNECTOR (VIEWED FROM ROADWAY)

DETAILS SHOWING PLACEMENT OF HOLES FOR INTERMEDIATE BRACKET (VIEWED FROM ROADWAY)

NOTES:
BRIDGE-GUARD RAIL CONNECTOR TO CONSIST OF ONE(1) 25' SECTION OF GUARD RAIL (FIELD CUT, DRILLED, AND GALVANIZED), FABRICATED BRACKETS AND PLATES, TERMINAL CONNECTOR, MOUNTING HARDWARE, AND TIMBER BLOCKOUT (COMPLETE IN PLACE).

2 BRIDGE-GUARD RAIL CONNECTORS REQ'D ON BRIDGES 24' WIDE, 4 REQ'D ON BRIDGES 26' OR WIDER.

PRIOR TO FABRICATION, ALL DIMENSIONS FOR MOUNTING BRACKETS, CONNECTORS, BOLT LENGTHS AND GUARD RAIL SHALL BE DETERMINED IN THE FIELD BY THE CONTRACTOR. DIMENSION SHOWN MAY VARY FROM ACTUAL FIELD CONDITIONS AT EACH SITE.

PAY ITEM NO. 606-G003 SPECIAL SECTIONS BRIDGE-GUARD RAIL CONNECTOR PER EACH.

TERMINAL CONNECTOR
(AASHTO DESIGNATION : M180, CLASS B, TYPE 2)

FRONT ELEVATION SHOWING 10 GA. GUARD RAIL CONNECTION TO W12x50

FRONT ELEVATION SHOWING 10 GA. GUARD RAIL CONNECTION TO W12x50

DETAIL OF INTERMEDIATE BRACKET

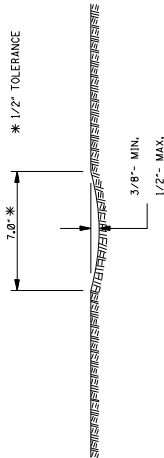
DETAIL OF TERMINAL CONNECTOR PLATE

DETAIL OF FRONT PLATE

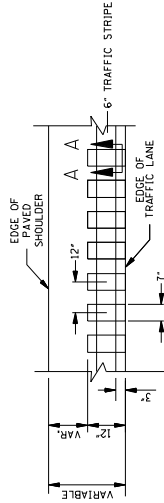
DETAIL OF BACK PLATE

GENERAL NOTES

1. GROUND-IN RUMBLE STRIPES SHALL BE APPLIED TO ALL PAVED SHOULDERS ON THIS PROJECT.
2. GROUND-IN RUMBLE STRIPES SHALL BE APPLIED TO ALL INTERSECTIONS, ROADWAYS OR OTHER INTERUPTIONS IN NORMAL SHOULDER WIDTH AS DIRECTED BY THE ENGINEER.
3. COST TO BE PAID FOR USING APPROPRIATE PAY ITEMS.
4. GROUND-IN RUMBLE STRIPES SHALL BE APPLIED TO:
 - A. MAINLINE
 - B. INTERSECTING ROADWAY IF OVERLAP OR RECONSTRUCTED BEYOND NORMAL MAINLINE R.O.M.
 - C. ANY ROADWAY WITH EXISTING RUMBLE STRIPES PRIOR TO CONSTRUCTION.

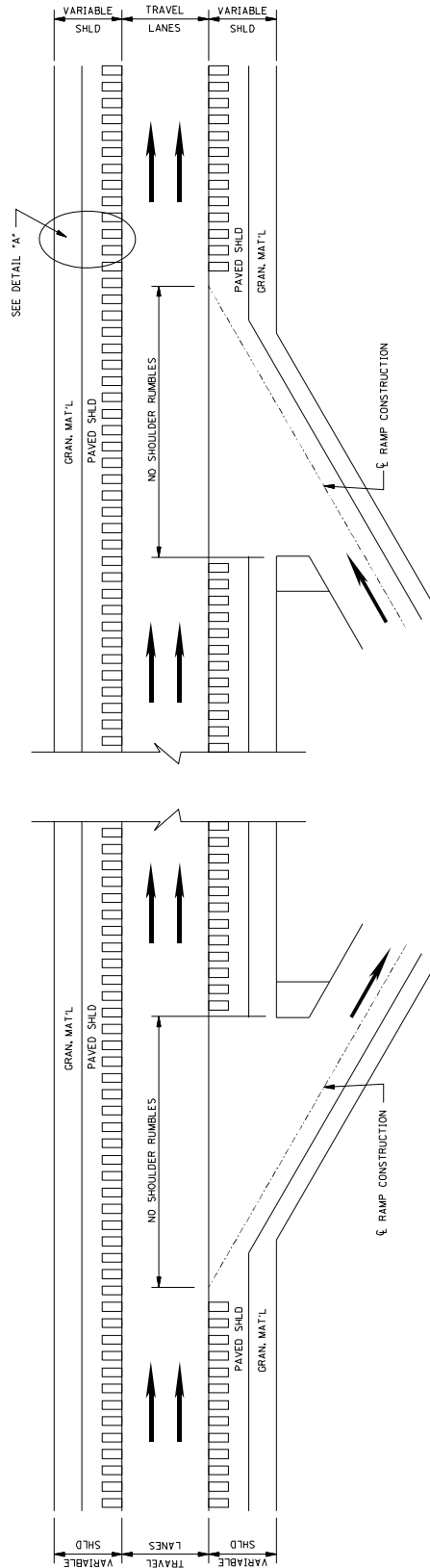


SECTION "A-A"



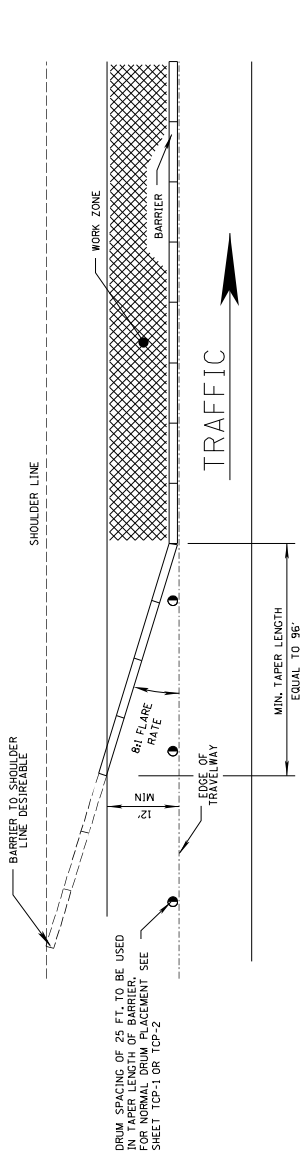
DETAIL "A"

****NOTE:** The rumble stripes will be placed 1 foot outside the pavement joint on mainline

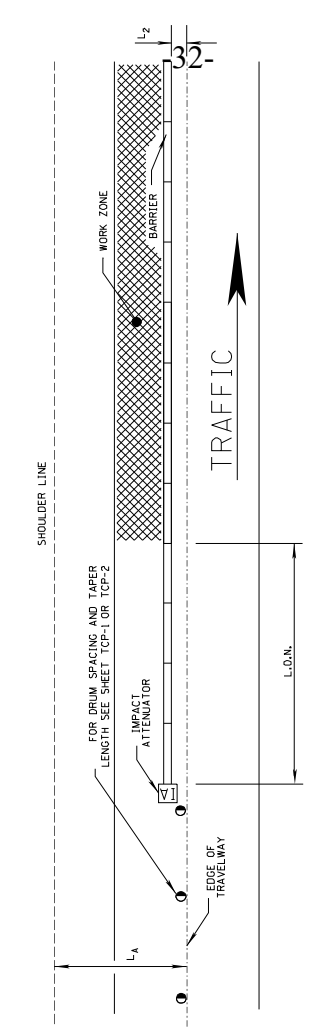


PLAN
NOT TO SCALE
DETAILS OF
RUMBLE STRIPES

DATE	REVISION	BY



DETAIL OF POSITIVE BARRIER WITH TAPER



DETAIL OF POSITIVE BARRIER WITH IMPACT ATTENUATOR

NOTES:
 1. LENGTH OF NEED, L.O.N. = $\frac{L_1 L_2}{L_1}$

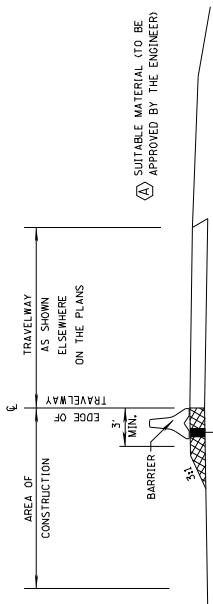
WHERE: L_1 = LATERAL EXTENT OF THE AREA OF CONCERN
 L_2 = RUNOUT LENGTH
 L_2 = LATERAL OFFSET FROM EDGE OF TRAVELED WAY TO BARRIER.

GENERAL NOTES:

- ALL TRAFFIC CONTROL ITEMS SHOWN ON THIS SHEET SHALL BE PAID FOR UNDER OTHER BID ITEMS.
- FOR DETAILS OF DRUM PLACEMENT SEE OTHER TRAFFIC CONTROL PLANS.

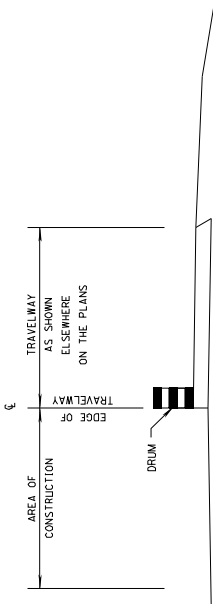
2. RUNOUT LENGTH (L_2) IS TO BE DETERMINED USING THE FOLLOWING TABLE:

DESIGN SPEED (mph)	OVER 10,000 veh/day	5,000-10,000 veh/day	1,000-5,000 veh/day	UNDER 1,000 veh/day
70	360	330	290	250
60	300	250	210	200
50	230	190	160	150
40	160	130	110	100
30	110	90	80	70



ELEVATION VIEW FOR POSITIVE BARRIER

- NOTES:
- POSITIVE BARRIER IS REQUIRED IN THE AREA OF OPEN PUNCH OUTS THAT ARE WITHIN SIX (6) FEET OF THE TRAVELWAY WHENEVER ACTUAL REPAIR WORK IS NOT BEING PERFORMED WITHIN THE LANE CLOSURE.
 - MATERIAL USED TO SUPPORT POSITIVE BARRIER MUST BE AT SAME ELEVATION AS PAVEMENT IN ADJACENT TRAVELWAY.
 - DELINEATORS REQUIRED ON ALL NON-REFLECTIVE BARRIER, AS SHOWN ON WORKING NO. OMB-3.



ELEVATION VIEW FOR DRUM

- NOTES:
- WHILE WORK IS BEING PERFORMED WITHIN THE LANE CLOSURE DROP-OFFS MUST BE PROTECTED WITH DRUMS, ETC. IN EMERGENCIES EXCAVATED SECTION MAY BE BACKFILLED WITH GRANULAR MATERIAL TO AVOID OVERNIGHT DROP-OFFS.
 - LANE CLOSURES WITH OPEN PUNCH OUT AREAS MAY NOT BE LEFT UNATTENDED WHEN DRUMS ARE BEING USED FOR LANE CLOSURE

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
LANE CLOSURE DETAILS FOR GREATER THAN 3 INCH DROPOFF

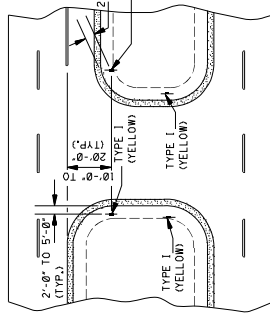
PROJ. NO.: WHP-0008-03(059)
 COUNTY: RANKIN

DATE: _____
 DESIGN TEAM: _____
 CHECKED: _____

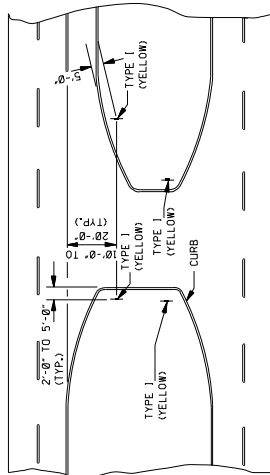
REVISIONS:

DATE	BY	REVISION

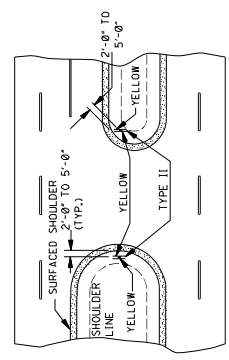
TRANSPORTATION LETTERS
 MISSISSIPPI DEPARTMENT OF TRANSPORTATION
 NUMBER: WHP-0008-03(059)
 SHEET NUMBER: SDTCP-C



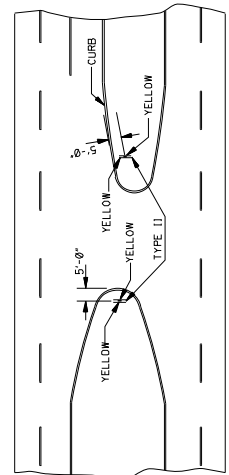
TYPICAL DELINEATION AT A CROSSOVER WITH USABLE SHOULDERS AND A MEDIAN WIDTH OVER 42'-0"



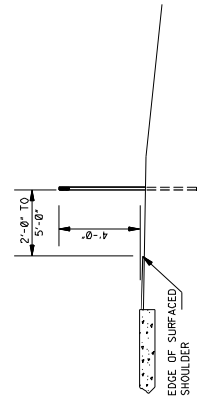
TYPICAL DELINEATION AT A CURBED CROSSOVER WITH A MEDIAN WIDTH OVER 42'-0"



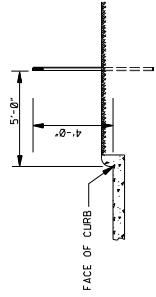
TYPICAL DELINEATION AT A CROSSOVER WITH USABLE SHOULDERS AND A MEDIAN WIDTH OF 42'-0" OR LESS



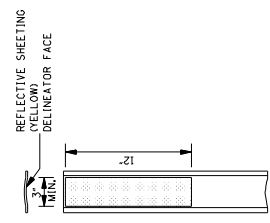
TYPICAL DELINEATION AT A CURBED CROSSOVER WITH A MEDIAN WIDTH OF 42'-0" OR LESS



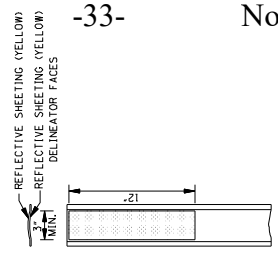
DELINEATOR MOUNTING ON CROSSOVER WITH USABLE SHOULDER



DELINEATOR MOUNTING ON CURBED CROSSOVER



DETAIL OF TYPE I FLEXIBLE POST DELINEATOR



DETAIL OF TYPE II FLEXIBLE POST DELINEATOR

NOTE: CARBONITE'S CURV-FLEX DELINEATOR POSTS ARE SHOWN. OTHER FLEXIBLE POSTS THAT HAVE BEEN APPROVED FOR LISTING IN THE DEPARTMENT'S "APPROVED SOURCE OF MATERIALS" MAY BE FURNISHED.

NOTE: PLACE DELINEATORS NO MORE THAN 28'-0" FROM EDGE OF TRAVEL LANES EDGES.

GENERAL NOTES:

1. THE UNIT PRICE OF DELINEATOR INCLUDES COST(S) OF DELINEATOR FACE(S), POST, HARDWARE AND INSTALLATION.
2. DELINEATOR FACE WILL BE ENCAPSULATED LENS REFLECTIVE SHEETING.
3. POST REQUIRING THE INSTALLATION OF A BASE SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION.
4. THE COLOR OF DELINEATORS SHALL BE THE COLOR OF THE ADJACENT EDGELINE PER MUTCD SECTION 3F.03.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN

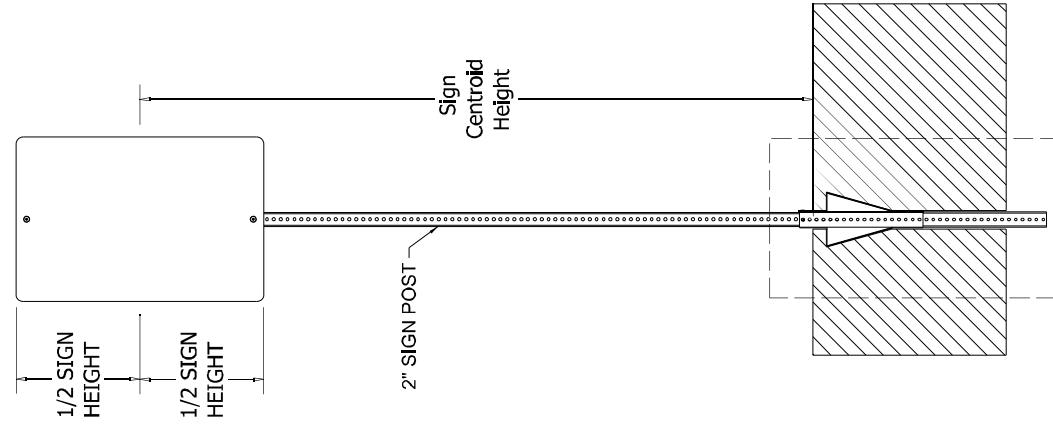
TYPICAL CROSSOVER DELINEATION

ISSUE DATE: AUGUST 01, 2017
SHEET NUMBER 6316

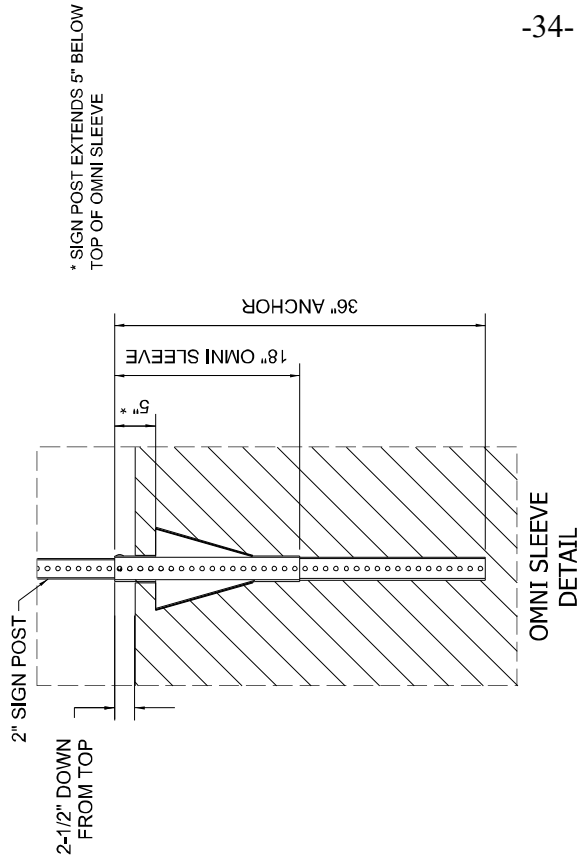
DATE	REVISION

FMS. CON:	PROJECT NO.
STATE	MISS.

SOIL INSTALLATION



SEE OMNI SLEEVE DETAIL

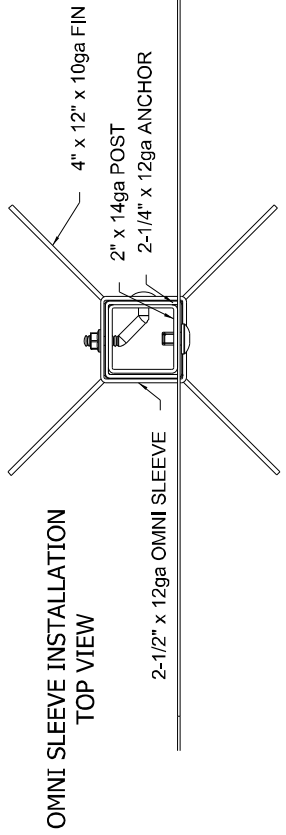


MATERIALS:
 PERFORATED SQUARE STEEL TUBE POST AND ANCHOR (PSSST): Must be ASTM A1011, Grade 50 steel with an average minimum yield strength after cold-forming must be 60,000 psi. It must be corner welded, scarfed after welding, then zinc coated after scarfing. It must be coated with a chromate conversion coating and a clear organic polymer topcoat. Its interior and exterior will be galvanized. It must have 7/16" holes spaced 1" apart along the centerline of each of its four sides.

POST must be 2" x 14ga x appropriate length.

ANCHOR must be 2-1/4" x 12ga x 36".

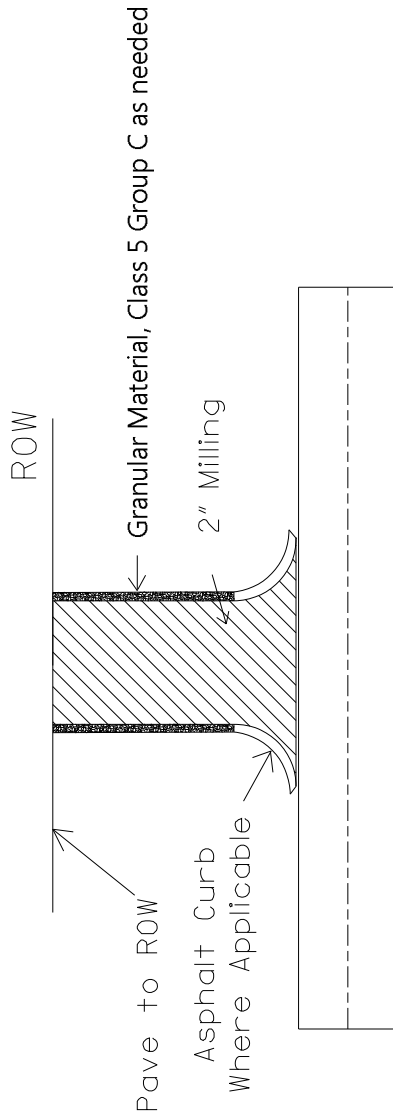
OMNI SLEEVE (to be absorbed) must be:
 2-1/2" x 12ga x 18" and contain four 4" x 12" x 10ga ASTM A569 steel flns welded to each of the four corner edges of the square sleeve with 4" flat end of each fln positioned 5" down from one end, and must be galvanized. A medium corner bolt must be used to secure the assembly.




OMNI SLEEVE INSTALLATION TOP VIEW

MISSISSIPPI DEPARTMENT OF TRANSPORTATION	
SIGN SUPPORT HARDWARE	
BY	REVISION
2.0" SQUARE POST	
PROJ. NO. :	NHPP-0008-03(059)
COUNTY :	RANKIN
FILE NAME :	JSS-2.DGN
DATE :	9/2/2021
DESIGNER :	TEJ
CHECKED :	TEJ
DATE :	9/2/2021
NO. OF SHEETS :	2
SHEET NUMBER :	2
PRICE :	\$PC \$

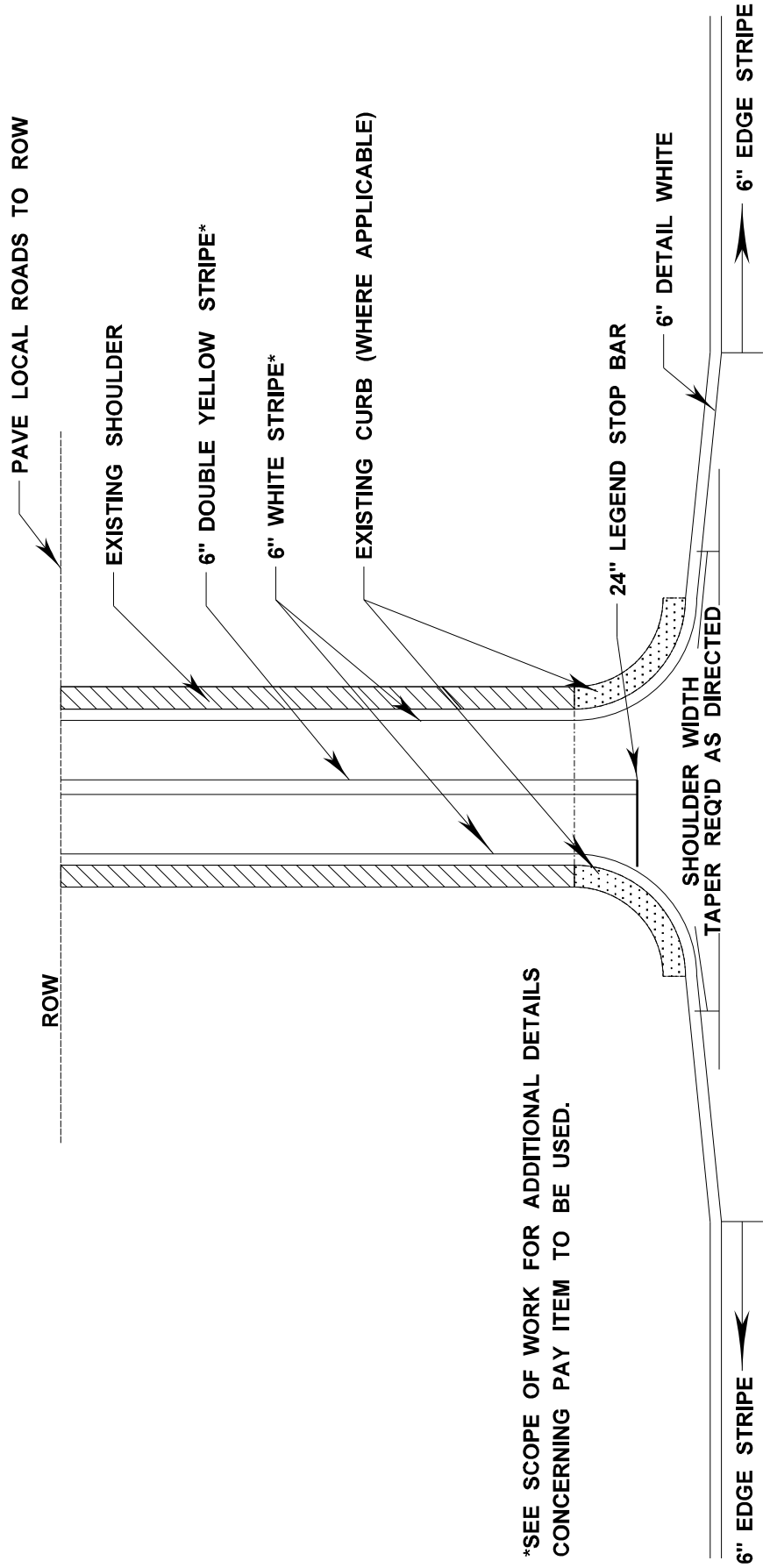
MILLING AND PAVING Detail LOCAL ROADS



Notes:

- Mill limits of county/local roads at a depth of 2".
- Place 2" of 12.5mm, HT, Polymer Modified Asphalt to tie to mainline overlay.
- Milling/Paving area = 

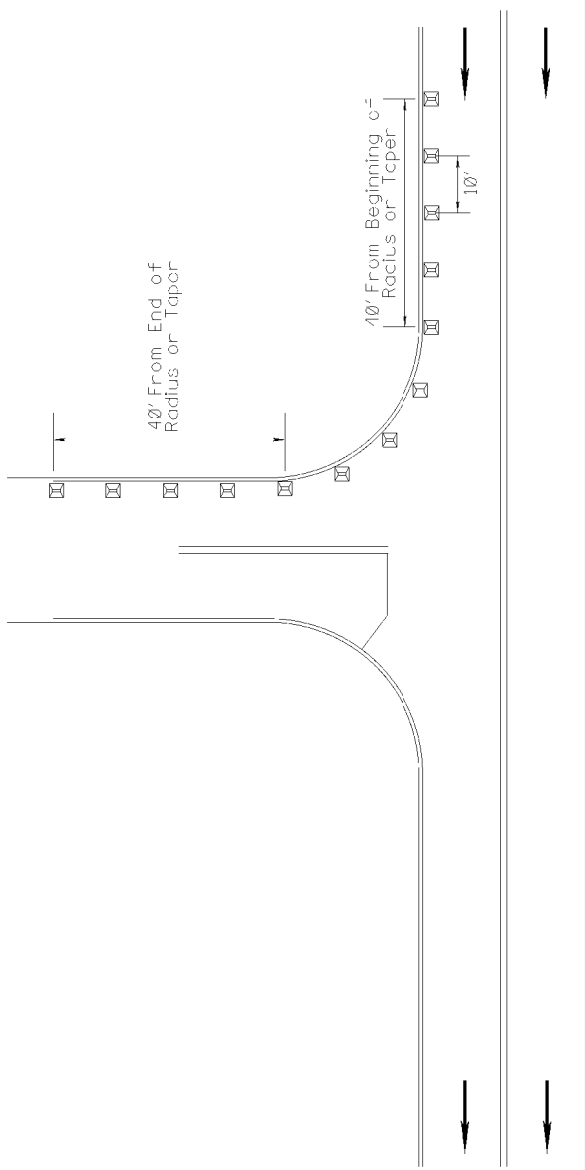
STRIPE DETAIL - LOCAL ROADS



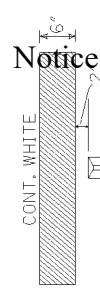
*SEE SCOPE OF WORK FOR ADDITIONAL DETAILS CONCERNING PAY ITEM TO BE USED.

NOTE: CENTERLINE STRIPE SHALL BE OMITTED ON LOCAL ROADS WHOSE WIDTH IS LESS THAN 20 FEET.

TYPICAL FOR RAISED PAVEMENT MARKERS PLACED ON SIDE ROAD RADIUS 4-LANE TRAFFIC



-37-



DETAIL A

→ DIRECTION OF TRAFFIC

NOTE 1: MARKERS SHALL BE PLACED EVERY 10 FEET.

NOTE 2: MARKERS SHALL BE VISIBLE FROM THE TRAVELING MOTORIST ON STATE DESIGNATED HIGHWAYS.

NOTE 3: MARKERS SHALL BE USED PERFORMANCE TYPE WAY CLEAR.

NOTE 4: FIVE (5) MARKERS SHALL BE PLACED ALONG MAINLINE EDGE STRIPE.

NOTE 5: MARKERS FOR COUNTY ROADS SHALL CONTINUE DOWN THE EDGE STRIPE A DISTANCE OF 40 FEET.

NOTE 6: MARKERS SHALL NOT BE ROTATED WHEN BEING PLACED ALONG RADIUS OF LOCAL ROAD.

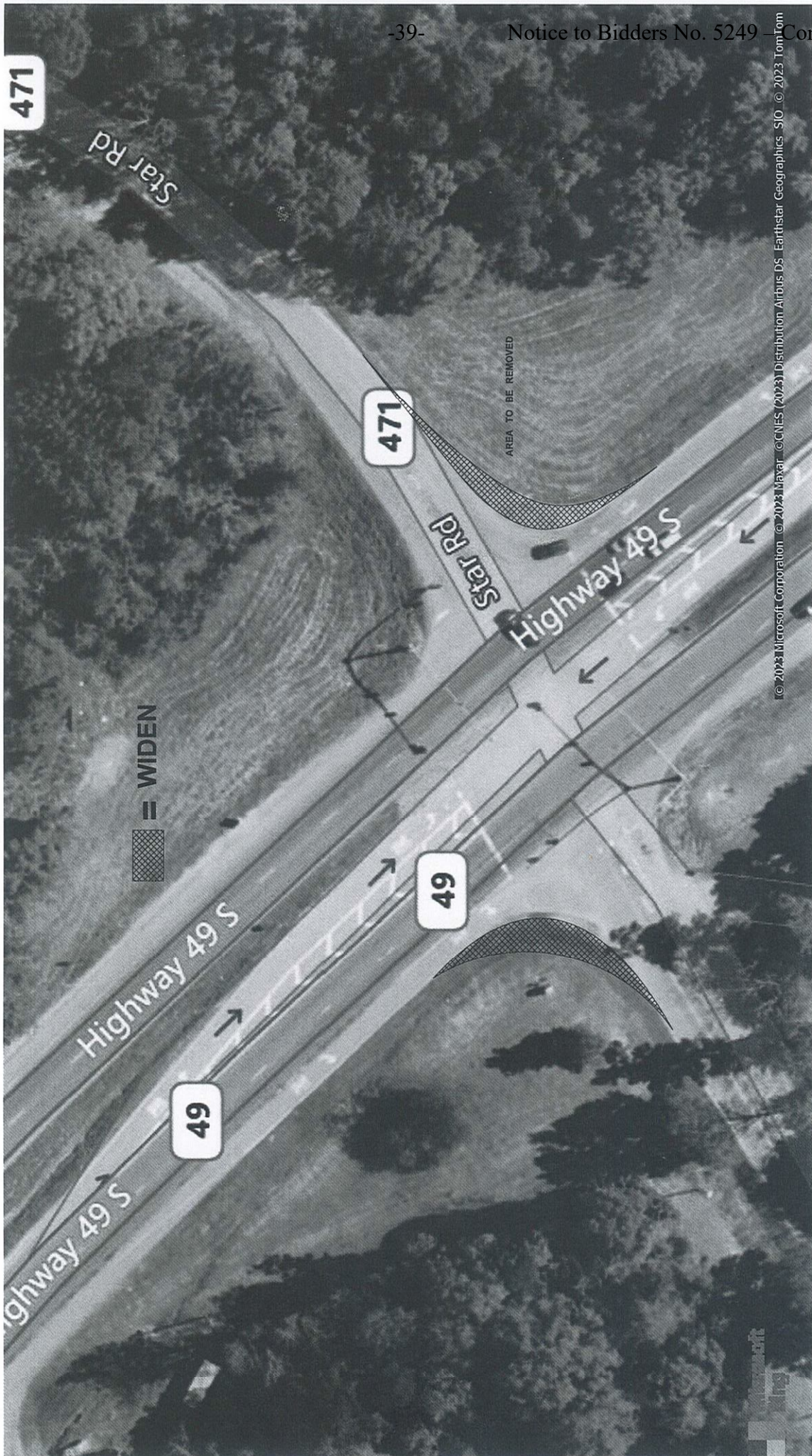
Notice to Bidders No. 5249 - Cont'd.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION	
4- ANF	
2-WAY CLEAR RAISED PAVEMENT MARKERS OF TYPE WAY CLEAR	
WARRANT NUMBER: 03/05/03	
PROJECT NO. NHP-0008-03(059)	
COUNTY: RANKIN	
FILENAME: SPASIDERPRM.DGN	
DESIGNER:	DATE:

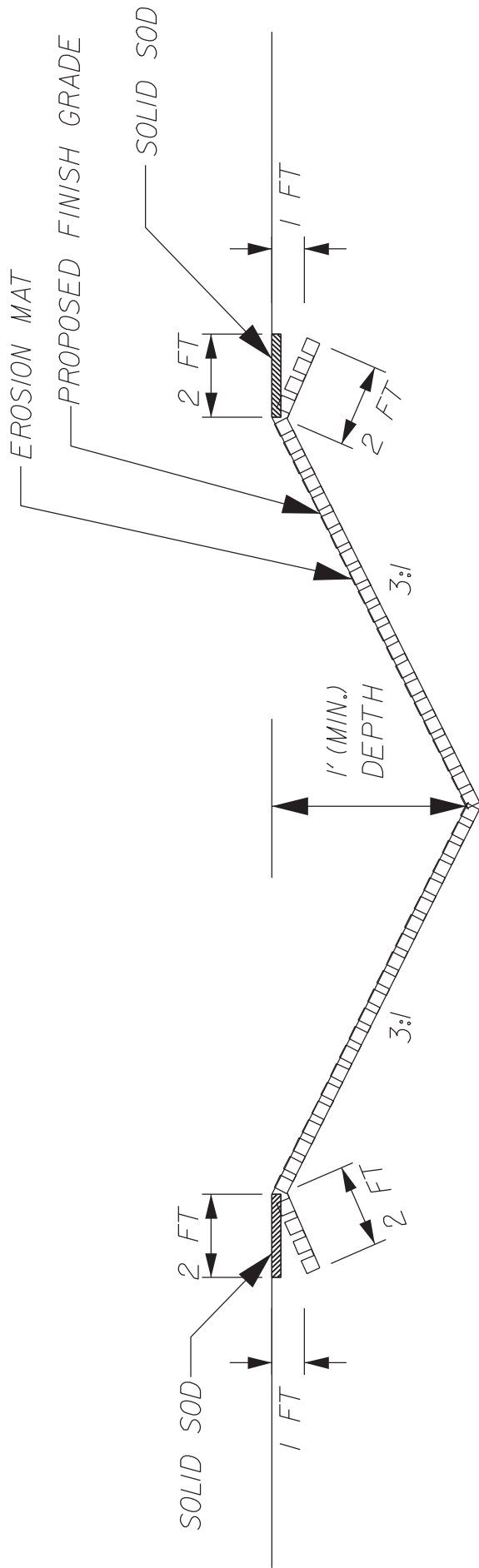
STATE	PROJECT NO.
MISS.	



RIGHT TURN LANE WIDENING AT STAR RD/ W MAIN ST



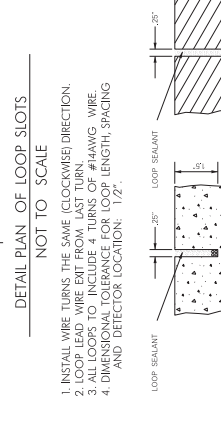
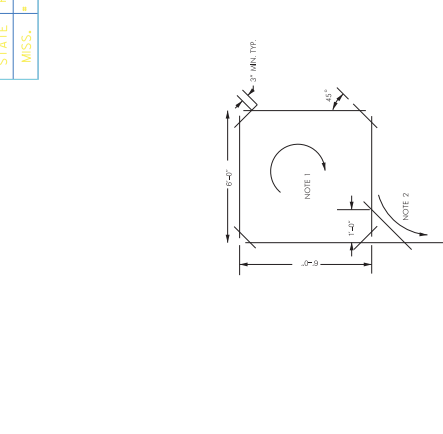
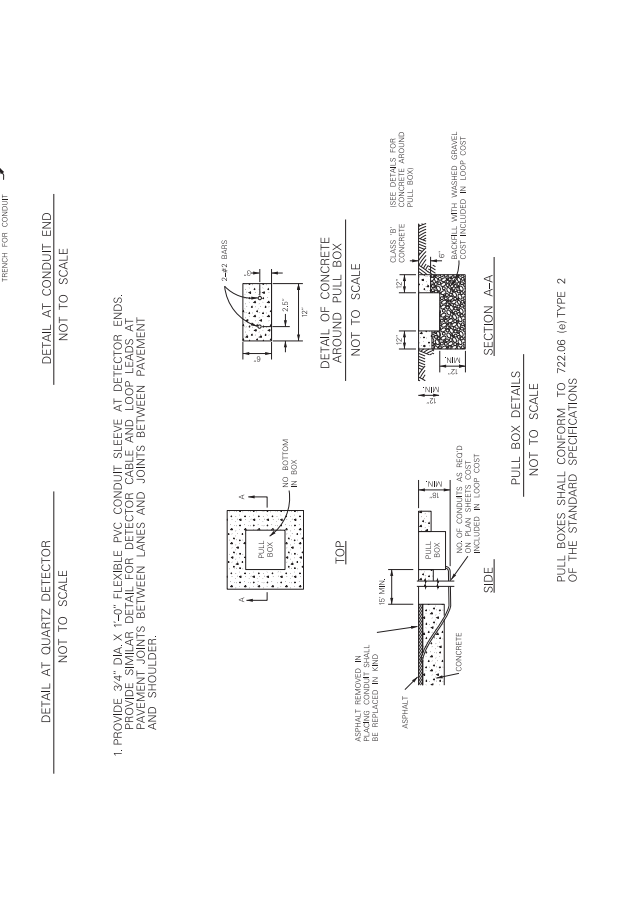
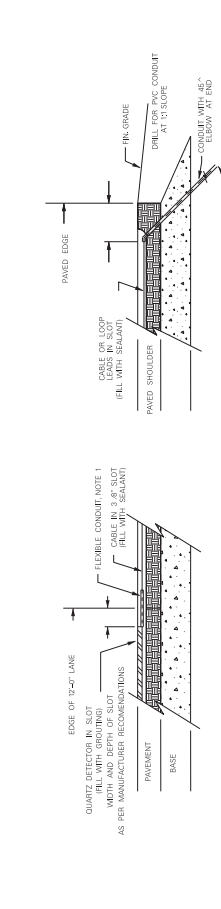
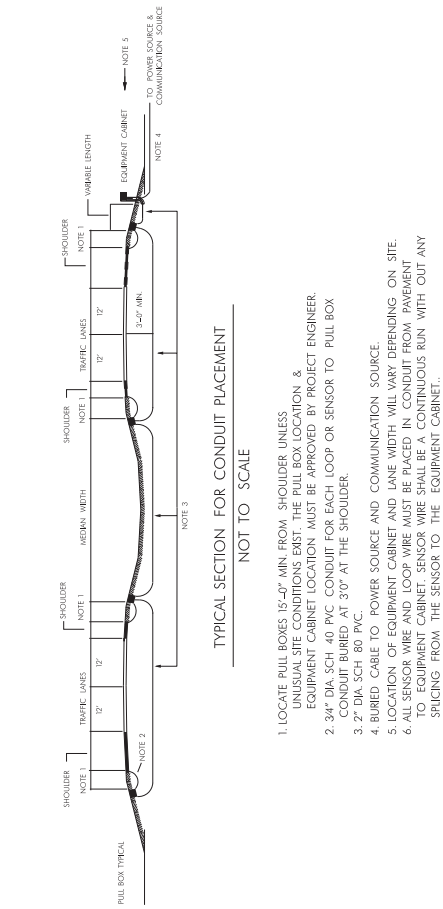
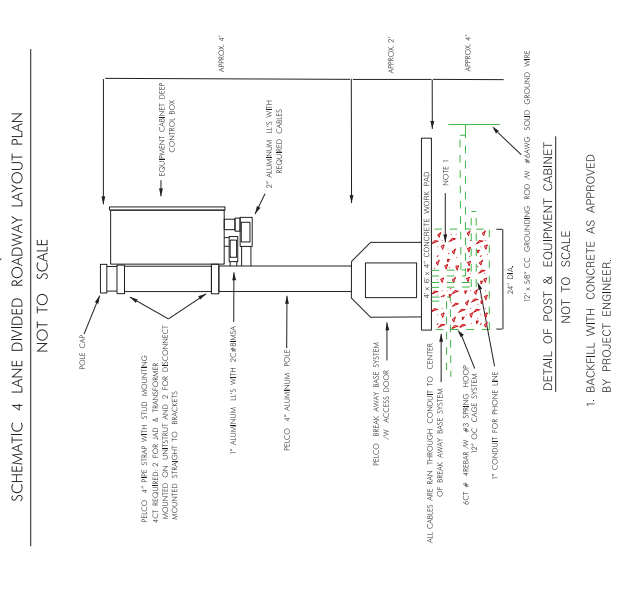
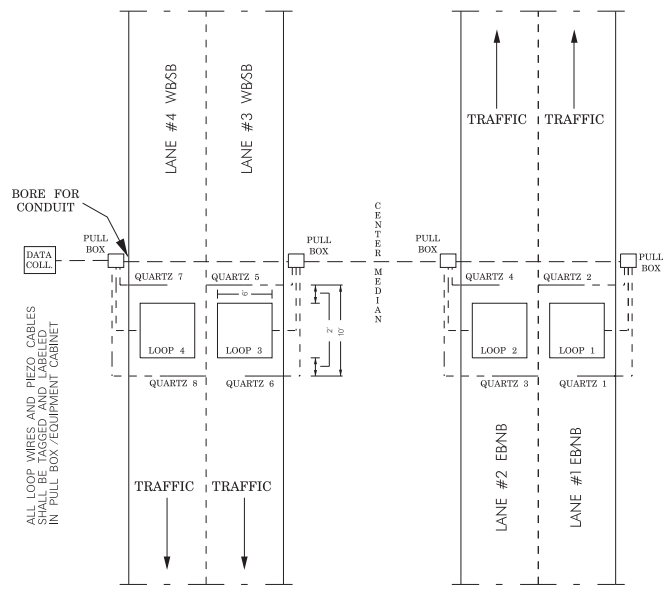
DETAIL FOR US 49 SOUTHBOUND DITCH REPAIR



EROSION MAT LINED DITCH

NOT TO SCALE

Note: The pay area shall only be the actual area of the ditch to be lined with erosion mat. Any overlap or toe areas, as required by the manufacturer's recommendations, shall be absorbed.



MISSISSIPPI DEPARTMENT OF TRANSPORTATION
TRAFFIC RECORDER
WIM KISTLER SYSTEM

4 LANE DIVIDED ROADWAY LAYOUT PLAN

DATE: _____ REVISION: _____ FILENAME: **rdg** CHECKED: _____

WIP/ISSUE NUMBER: _____ SHEET NUMBER: _____

INSTALLATION NOTES

- EXACT LOCATION TO BE VERIFIED IN FIELD BY STATE PLANNING ENGINEER.
- SATURATED WITH ALL COMPONENTS SHALL BE VERIFIED BY STATE PLANNING ENGINEER.


SPECIFICATIONS

ALL WORK SHALL CONFORM TO S.P. 907-688-A.

ADDENDUM

PAY ITEM NO.	PAY ITEM	UNIT	RANKIN : 108245-301000	
			Prelim	Final
202-B009	Removal of Asphalt Pavement, Failed Areas	SY	406	
202-B045	Removal of Cement Treated Base, All Depths	SY	384	
202-B069	Removal of Concrete Pavement w/ Variable Depth Overlay	SY	767	
202-B092	Removal of Curb, All Types	LF	111	
202-B114	Removal of Debris and Sand From Pipe, All Sizes	LF	8	
202-B158	Removal of Guard Rail, Including Rails, Posts and Terminal Ends	LF	4,305	
202-B240	Removal of Traffic Stripe	LF	685	
203-EX040	Borrow Excavation, AH, LVM, Class B9	CY	173	
203-G002	Excess Excavation, LVM, AH	CY	195	
209-A005	Geotextile Stabilization, Type V, Non-Woven	SY	387	
229-A001	Erosion Mat	SY	736	
304-B003	Granular Material, Class 5, Group C	TON	6,156	
304-F002	Size 610 Crushed Stone Base	TON	109	
403-A001	12.5-mm, HT, Asphalt Pavement	TON	15,173	
403-B001	12.5-mm, HT, Asphalt Pavement, Leveling	TON	255	
403-D001	12.5-mm, HT, Asphalt Pavement, Polymer Modified	TON	34,426	
907-403-P002	Asphalt for Pothole Patching	TON	50	
406-D001	Fine Milling of Bituminous Pavement, All Depths	SY	431,915	
407-A001	Asphalt for Tack Coat	GAL	42,217	
907-413-E001	Sawing and Sealing Transverse Joints in Asphalt Pavement	LF	34,545	
423-A001	Rumble Strips, Ground In	MI	31	
503-A001	8" and Variable Continuously Reinforced Concrete Pavement, Broom Finish	SY	210	
503-A006	6" and Variable Reinforced Concrete Pavement, Broom Finish	SY	557	
503-B001	Saw Cut, Longitudinal Joints	LF	500	
503-C004	Saw Cut, 3-inch	LF	260	
503-C010	Saw Cut, Full Depth	LF	1,536	
503-D001	Concrete for Base Repair	CY	25	
503-E002	Tie Bars, No. 5 Deformed Drilled and Epoxied or Grouted	EA	275	
503-F002	1" Smooth Dowel Bars, Drilled & Epoxied or Grouted	EA	214	
907-512-A001	Holes	EA	164	
907-512-B001	Cement Pressure Grout Slurry, Type 5	LBS	740	
606-B003	Guard Rail, Class A, Type 1, 1W Beam, Metal Post	LF	3,500	
606-C003	Guard Rail, Cable Anchor, Type 1	EA	11	
606-D005	Guard Rail, Bridge End Section, Type A	EA	4	
606-E005	Guard Rail, Terminal End Section, Flared	EA	4	
606-E007	Guard Rail, Terminal End Section, Non-Flared	EA	11	
606-G002	Special Sections, Guard Rail Bridge End Connector	EA	4	
618-A001	Maintenance of Traffic	LS	1	
619-A1001	Temporary Traffic Stripe, Continuous White	MI	38	
619-A2001	Temporary Traffic Stripe, Continuous Yellow	MI	30	
619-A3001	Temporary Traffic Stripe, Skip White	MI	42	
619-A5001	Temporary Traffic Stripe, Detail	LF	47,850	
619-A6001	Temporary Traffic Stripe, Legend	SF	870	
619-A6002	Temporary Traffic Stripe, Legend	LF	2,896	

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
SUMMARY OF QUANTITIES



Working Number
SO-1

Sheet Number
1

PROJ NO: NHPP-0008-03(059)
 COUNTY: RANKIN

FILENAME: 108245301
 Design Team Checked Date

STATE	PROJECT NO.
MISS	NHPP-0008-03(059)


① LOCATION IS AT THE FOLLOWING GPS COORDINATES: 32.050665 N, -89.986409 W

ADDENDUM

SUMMARY OF QUANTITIES (SHEET 2)

PAY ITEM NO.	PAY ITEM	UNIT	RANKIN : 108245-301000	
			Prelim	Final
619-D1001	Standard Roadside Construction Signs, Less than 10 Square Feet	SF	94	
619-D2001	Standard Roadside Construction Signs, 10 Square Feet or More	SF	952	
619-G4005	Barricades, Type III, Single Faced	LF	96	
619-G7001	Warning Lights, Type "B"	EA	4	
620-A001	Mobilization	LS	1	
626-A001	6" Thermoplastic Double Drop Traffic Stripe, Skip White	MI	21	
626-B002	6" Thermoplastic Double Drop Traffic Stripe, Continuous White	MI	19	
626-E001	6" Thermoplastic Double Drop Traffic Stripe, Continuous Yellow	MI	15	
626-G004	Thermoplastic Double Drop Detail Stripe, White	LF	24,305	
626-G005	Thermoplastic Double Drop Detail Stripe, Yellow	LF	23,504	
626-H001	Thermoplastic Double Drop Legend, White	SF	868	
626-H002	Thermoplastic Double Drop Legend, White	LF	2,896	
627-J001	Two-Way Clear Reflective High Performance Raised Markers	EA	743	
627-K001	Red-Clear Reflective High Performance Raised Markers	EA	5,871	
627-L001	Two-Way Yellow Reflective High Performance Raised Markers	EA	99	
630-F003	Delineators, Flexible Post Mounted, Crossover, Type II	EA	50	
630-F006	Delineators, Guard Rail, White	EA	105	
630-F007	Delineators, Guard Rail, Yellow	EA	13	
630-G004	Type 3 Object Markers, OM-3R or OM-3L	EA	17	
907-688-A001	Traffic Recorder W/M Kistler System	EA	1	

①

MISSISSIPPI DEPARTMENT OF TRANSPORTATION	
SUMMARY OF QUANTITIES	
	
Working Number	SQ-2
Sheet Number	2
PROJ NO: NHPP-0008-03(059)	Checked
COUNTY: RANKIN	Date
FILENAME: 108245301	
Design Team	

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-688-2

CODE: (SP)

DATE: 1/09/2018

SUBJECT: Traffic Recorder Weigh-In-Motion (WIM) System

Section 907-688, Traffic Recorder WIM System, is hereby added to and made a part of the 2017 Edition of the Mississippi Standard Specifications for Road and Bridge Construction as follows.

SECTION 907-688 – TRAFFIC RECORDER WIM SYSTEM

907-688.01--Description. This work consists of furnishing Traffic Recorder WIM Systems of the types specified which includes assembling, constructing, erecting, and installing a new complete system in conformity with these specifications to insure properly operating units in accordance with the designs and at the locations shown on the plans, or as directed. This axle detector system should classify and weigh vehicles in all lanes. Submittals shall be sent directly to the Planning Analysis section of the Planning Division with a copy of the cover letter sent to the Project Engineer. The submittals will be returned within a seven (7) business day period from when they are received.

The Contractor shall include all hardware and software necessary to operate the field station unattended, **which includes a battery backup and modem**. The station is to operate continuously without human intervention.

The system may be a Traffic Recorder WIM Kistler System (907-688-A) or a Traffic Recorder WIM Brass Linguini (BL) Piezo System (907-688-B). The type of system shall be defined in the plans or contract documents.

The Traffic Recorder WIM Kistler System shall utilize two (2) Kistler quartz sensor strips as utilized by Mikros RAKTEL 8010 System or latest system as approved by MDOT and one (1) loop per lane in all lanes as recommended by the manufacturer.

The Traffic Recorder WIM Brass Linguini (BL) Piezo System shall utilize two (2) Class 1 BL Piezo strips as utilized by Mikros RAKTEL 8010 System or latest system as approved by MDOT and one (1) loop per lane in all lanes as recommended by the manufacturer.

The person(s) performing the installation of the Mikros RAKTEL Piezo Classification System must be certified by Mikros or an authorized Mikros representative in the installation procedures of the Mikros RAKTEL Piezo Classification System and must be on the job site at each installation when the Mikros RAKTEL Systems are being installed. Certification can be acquired from Mikros or an authorized Mikros representative as long as a certified Mikros representative is on site to assist during the installation. Details regarding Mikros certification can be acquired through direct communication with Mikros or an authorized Mikros representative. Any delays in the construction due to the certification process will not be grounds for an extension of the completion date.

A multiplexer shall be required for sites utilizing two (2) Mikros RAKTEL Systems in order for both systems to have access to one phone line.

The Contractor shall provide three (3) copies of all manuals on Installation, Operating, Schematics, and Maintenance for the entire System.

The sensors, equipment cabinet, inductive loops, cables, leads, and electronic hardware and software will be furnished, installed, tested, calibrated and made operational by the Contractor. The Contractor shall provide all services required for construction, tests, the satisfactory performance period(s), and miscellaneous usage on this project until the site inspection of the project. Deposits, customer charges, connection cost, etc., associated with the System up to and including the date of the site inspection (Subsection 907-688.03.18.1--Site Inspection) of the System shall be the responsibility of the Contractor. At least five (5) business days prior to starting work, the Contractor shall provide notice to the MDOT Planning Division and the MDOT Project Office so that a representative of the Planning Division can be on site while the work is being performed.

907-688.02--Materials. The materials used in the traffic recorder WIM system shall conform with the requirements of these specifications as set out herein. Prior to the scheduled start of work, the Contractor shall provide the Engineer with submittals on the following items and shall obtain the Engineer's approval before starting affected work. The Contractor shall use new materials and equipment. Any existing traffic counting equipment at the site is the sole property of the MDOT and shall not be removed by the Contractor.

907-688.02.1--Sensors. For Traffic Recorder WIM BL Piezo Systems, vehicle axle detectors shall utilize piezoelectric cable in a sensor assembly and be of a type that has been shown to be successful for vehicle classification in both asphaltic and portland cement concrete pavements. BL Piezo sensor length shall be eleven (11) feet minimum. Sensors as delivered from manufacturer shall include a shielded transmission cable of sufficient length for a continuous run to the equipment cabinet without splicing. Piezoelectric Cable/Sensors shall be as those utilized by Mikros RAKTEL 8010 System or latest system as approved by MDOT. Sensitivity dispersion shall be Class 1, $\pm 5\%$.

For Traffic Recorder WIM Kistler Systems, the Kistler Quartz Cable/Sensors shall be utilized and be of a type that has been shown to be successful on other MDOT projects for weigh-in-motion in both asphaltic and portland cement concrete pavements. Kistler Quartz sensor length shall be six (6) feet minimum. Sensors as delivered from manufacturer shall include a shielded transmission cable of sufficient length for a continuous run to the equipment cabinet without splicing. All Kistler Quartz Sensors shall be grounded using AWG # 8 stranded copper, green jacketed ground wire. The ground wire shall be of sufficient length for a continuous run from the sensor to the equipment cabinet without splicing. Kistler Quartz Cable/Sensors shall be as those utilized by Mikros RAKTEL 8010 System or latest system as approved by MDOT.

907-688-02.2--Shielded Transmission Cable. Coaxial cable type RG58 C/U shall conform to IMSA 50-2 for polyethylene insulated, polyethylene jacketed cable, AWG #14. Cable shall meet the requirements of Section 636 for the Standard Specifications.

907-688.02.3--Conduit and Pull Boxes. Conduit and pull boxes shall meet the requirements of Sections 647 & 668 of the Standard Specifications.

907-688.02.3.1--Under Roadways. Conduit under the roadway shall be Schedule 80 PVC or coated rigid galvanized steel.

907-688.02.3.2--Other Conduit. Other conduit shall be Schedule 40 PVC, direct buried conduit unless noted otherwise.

907-688.02.3.3--Pull Boxes. Pull boxes shall be size Type 2 and the cover does not require words inscribed on the top.

907-688.02.4--Loop Wire. Loop wire, IMSA 51-3, AWG #14 stranded copper, shall meet the requirements of Subsection 722.03 of the Standard Specifications.

907-688.02.5--Loop Sealant. Loop sealant shall be "Traffic Loop Sealant" as manufactured by 3M Corporation, or approved equal.

907-688.02.6--Sensor Cement. The sensor assembly shall be cemented into the pavement with sand – epoxy grouting of a type recommended by the sensor manufacturer for Traffic Recorder WIM Kistler Systems and with epoxy resin of a type recommended by the sensor manufacturer for Traffic Recorder WIM BL Piezo Systems.

907-688.02.7--Equipment Cabinet. The installation and setup of the equipment cabinet and all its applications must comply with all requirements of the plans. The Contractor will install the equipment cabinet along the highway right of way at a location approved by the Engineer. The equipment cabinet shall utilize a locking door. The housing shall be positioned so that the data collector will be approximately four (4) feet above the ground and mounted on a pole as depicted in the plans. Lightning protection shall be provided for each installation. A 5/8-inch by 12-foot ground rod shall be used with AWG #6 copper conductors. Class B concrete shall be used for equipment cabinet footings and 4'x6'x4" concrete work pad as described in the plans.

907-688.03--Construction Requirements. The general layout of the work shall conform to the detail shown on the typical installation plans and shall be verified at each location with the Project Engineer. No hazards, such as open holes on site during construction, shall be left overnight.

All traffic control shall meet the requirements as defined in the most updated Manual on Uniform Traffic Control Devices.

907-688.03.1--Manufacturer's Recommendations. Sensors must be installed in accordance with the approved procedures and specifications provided by the sensor manufacturer. All sensors and connecting cables shall be positioned and installed to assure compatibility with the inductive loops to provide electrical signals for vehicle classification.

907-688.03.2--Conflicts. Conflicts between any piece of equipment, which if installed as shown in relation to any previously installed equipment that may impair the proper operation of that equipment, shall be resolved by the Contractor as approved by the Engineer.

907-688.03.3--Conduit Runs. The number of conductors, conduits and fittings necessary to produce an operative system as specified herein shall be provided by the contractor. All joints, connections, etc. shall be completely water and moisture tight. Shielded transmission cable and wire leads shall be installed in conduit from paved shoulders to pull boxes.

907-688.03.4--Slots in Pavement. All slots required in pavement and paved shoulders shall be saw cut with diamond blade power saw. Edges shall be straight, smooth and true. Depth shall be uniform.

907-688.03.4.1--Loop Slots. Slots for loop wire shall be ¼-inch minimum width. Slot depth shall be 2½ inches in asphalt and 1½ inches in concrete. Diagonal slots shall be cut at corners by overlapping cuts so that the entire slot intended for wire has full depth. There shall be no jagged edges or protrusions which may damage wire. When the top lift of asphalt is an Open Graded Friction Course, the loops shall be cut in the top immediate lift beneath the open graded friction course.

907-688.03.4.2--Cable Slots. Slots for cable shall be protected by a foam tube layer below the bitumen protective layer and be 0.32-inch width ($\pm 1/16''$) and 3.15-inch depth for Traffic Recorder WIM Kistler Systems and 3/8-inch width ($\pm 1/16''$) and 2¼-inch depth for Traffic Recorder WIM BL Piezo Systems. To ensure that the slots are full depth, all turns and overlay cuts shall not exceed 45 degrees. There shall be no jagged edges or protrusions which may damage cable. Cable leads from each sensor shall be run in individual saw cut slots at a minimum spacing of 12 inches.

907-688.03.4.3--Sensors Slots. Slots for sensors shall be of the width and depth specified by the sensor manufacturer. Cavity of sensor slots may be made with chisel between saw cut sides, but the bottom shall be smooth and level without protrusions. In overlays of four inches (4'') or less, the slot shall extend to the top of the course below the overlay. Before placing sensor, the slot shall be cleaned with compressed air.

907-688.03.5--Loop Assemblies. Inductive loop assemblies shall meet the requirements of Section 635 of the Standard Specifications.

907-688.03.6--Inspection. Pavement slots shall be inspected at time of sensor and cable installation. Surfaces shall be clean and dry, free of all dust, grit, moisture and other contaminants that might affect sealant or cement bond.

907-688.03.6.1--Sensor Check. Prior to final installation, sensor assembly shall be placed in position in slot and inspected for compliance with manufacturer's requirements as to clearance, surface alignment, etc. Sensor output shall be checked using an oscilloscope or other test equipment recommended by the sensor manufacturer. For Kistler sensors, a Kistler test kit must also be used to ensure each sensor output is within acceptable range per manufacturer recommendation before use.

907-688.03.6.2--Cable Inspection. The cable shall not have any cuts, nicks, abrasions or breaks in the insulation at the time of filling slot with sealant. Any sensor having defects in the shielded transmission cable shall be replaced.

907-688.03.6.3--Loop Inspection. The loop wire shall not have any cuts, nicks, abrasions or breaks in the insulation before or after installation in the slot. Loop inductance shall be 124 microhenries.

907-688.03.7--Sensor Installation. For Traffic Recorder WIM Kistler Systems, approved sand/epoxy grouting shall completely fill the cavity spaces and surround all three sides of the sensor assembly. To insure that there are no voids under the sensor assembly the sensor shall first be removed after installation inspection, the slot partially filled with epoxy, then the sensor pressed into position and the side cavities filled to the pavement surface before the bottom epoxy has hardened. Sensor installation shall be protected from traffic until sand/epoxy grouting is sufficiently cured. The person(s) performing the installation of the Kistler quartz sensors must be certified by Kistler in the installation procedures of Kistler quartz sensors and must be on the job site at each installation when the quartz sensors are being installed. Certification can be acquired from Kistler as long as a certified Kistler representative is on site to assist during the installation. Details regarding Kistler certification can be acquired through direct communication with Kistler. Any delays in the construction due to the certification process will not be grounds for an extension of the completion date.

For Traffic Recorder WIM BL Piezo Systems, approved epoxy cement shall completely fill the cavity spaces and surround all four sides of the sensor assembly. All excess encapsulate shall be removed from pavement surface and sensor to conduit to prevent damage during installation. Sensor installation shall be protected from traffic until epoxy cement is sufficiently cured.

907-688.03.8--Sleeves. Flexible sleeve or other protection shall be provided for shielded cable at sensor ends to prevent damage. The Contractor shall take care to insure that the sleeve is not filled with epoxy cement. In addition, the Contractor shall provide flexible sleeve, approximately 12 inches long, at pavement construction joints including joints between lanes and between pavement and paved shoulder.

907-688.03.9--Cable and Wire Installation. The cable or lead wires shall be placed in the bottom of the slot so that there are no kinks, curls, straining or stretching of the insulation. The two loop lead wires shall be twisted two to five turns per foot before placement in the slot. Special care shall be taken in seating the cable and wire so that the insulation will not be broken or abraded. No sharp tools such as screwdriver or metal object shall be used for this operation.

907-688.03.9.1--Conditions. The Contractor shall install the sealant in strict adherence to the manufacturer's recommendation and these specifications. No sealant shall be installed during inclement weather or under any condition which might introduce moisture into the pavement slots.

907-688.03.9.2--Sealant. The viscosity of the sealant shall be such that it can be readily placed in the slot, completely surround the wires, displace all air and fill the slot so that the sealant is flush with the roadway surface. The finished installation shall be waterproof and present a neat workmanlike appearance. Minimum required clearance shall be maintained to cable and wire.

907-688.03.9.3--Protection. The sealant shall be sufficiently hardened before opening to traffic.

907-688.03.10--Cleaning. All excess encapsulate and sealant shall be removed from pavement surface, inductive loop, and sensor after installation. A hand grinder shall be used to smooth out rough or high areas that might affect sensor operation.

907-688.03.11--Tags. Each shielded transmission cable and pair of lead wires shall be uniquely identified by an insulated, waterproof tag in every pull box.

907-688.03.12--Trenching and Backfilling. All trenching shall be done by mechanical means and all sides shall be straight and vertical. Width of trenches shall not exceed eight (8) inches on either side of placed conduits. All backfill shall be made with a friable material, which has been approved by the Engineer. Material shall be placed in compacted lifts as approved by the Engineer. The site, including shoulders and grassing, shall be returned to its original condition.

907-688.03.13--Jacking or Boring. Approved jacking or boring methods shall be used where a conduit must be placed under an existing roadway. Jacking/boring pits shall be kept a minimum of five (5) feet from the edge of shoulder, and care shall be taken not to disturb existing pavement. Excessive use of water or other methods which could undermine pavements shall not be permitted. The jacking/boring site must be returned to its undisturbed state upon completion of the operation. Only experienced labor shall be used for jacking/boring work. Conduit shall be not less than 36 inches below pavement surface.

907-688.03.14--Pull Boxes. The location of the pull boxes must be approved by the Project Engineer. Pull boxes shall be set on 12-inch minimum thickness washed gravel. Holes for drainage shall be provided in bottom of pull box. Conduit entering pull box shall be located so as to leave the major portion of the box clear.

907-688.03.15--Conduit. Conduit shall be laid to a depth of not less than 36 inches below the finished grade, except at conduit ends. All conduits shall be run at least 10 feet outside shoulder unless otherwise approved. One size of conduit shall be used for each run; no reducing couplings will be permitted.

907-688.03.16--Conductor Installation. Before placing shielded cable or wire leads in conduit, the conduit shall be cleaned with compressed air and rigid metal conduit shall be cleaned with a mandrel. Only approved lubricants which will not injure conductor insulation while pulling cables shall be used.

907-688.03.17--Plant Establishment. Any areas of vegetation disturbed during the installation of the WIM, pull boxes, equipment cabinets, etc. shall be graded and grassed / solid sodded to the satisfaction of the Engineer to return the area to its condition prior to construction. It also may be necessary to install temporary erosion control devices during the installation process. Unless pay items for these items of work are included in the bid items, the cost of this work will be included in other items bid.

907-688.03.18--System Acceptance. The Contractor shall be required to demonstrate to the Engineer the satisfactory operation of each device installed on this project.

Calibration. The Contractor shall be required to perform calibration on Traffic Recorder WIM Systems as to conform to the below Planning Division WIM calibration standards. The Contractor/Subcontractor must have a representative from the vendor or manufacturer who is knowledgeable of the system to make necessary adjustments to the system during calibration. The Contractor must provide an air ride suspension truck and air ride suspension flatbed trailer (18-wheeler weighing approximately 75,000 to 80,000 pounds) along with a driver who is an insured motor carrier for the calibration. Five (5) consecutive passes at the same consistent speed ranging between 50 mph to 60 mph over the sensors are required per lane to set the calibration factors of the sensors. Ten (10) consecutive passes at the same consistent speed ranging between 50 mph to 60 mph over the sensors without any adjustments to meet the tolerance level are required per lane. Each pass over the sensors must be at a constant speed without deceleration or acceleration. The tolerance level must meet 95% probability of conformity for the functional performance requirements for WIM systems for MDOT and be within $\pm 10\%$ for the steering weight, $\pm 15\%$ for the truck tandem, $\pm 15\%$ for the trailer tandem, and ± 7 for the gross weight. An MDOT representative will be present during the calibration to determine if the tolerance level is met. Calibration shall take place one (1) week after the installation of the BL Piezo sensors and two (2) weeks after the installation of the Kistler sensors as recommended in the Kistler Installation Instructions Manual.

907-688.03.19--Material Warranty. The following warranty stipulations are in addition to those covered by Subsection 106.01 of the Standard Specifications.

907-688.03.19.1--Site Inspection. After meeting the consecutive polling requirement, a site inspection may be made upon completion of an individual site but must be made before the final inspection of the project.

The Contractor, with MDOT's representatives present to verify that the site is working properly, shall test all Traffic Recorder WIM Systems.

Sensors, loops and related components at all sites shall be operational at the final inspection of the project.

Consecutive Polling. All Traffic Recorder WIM Systems shall have polled and transmitted data without any problems for at least 10 consecutive days and data for each day must pass quality control and quality assurance checks prior to site inspection.

907-688.03.19.2--Guarantee. At each location, the Contractor shall warrant and guarantee all sensors, loops and related components for a period of 12 months, beginning at the date of release from maintenance, or partial release from maintenance, of the project.

907-688.03.19.3--Responsibility. It is the intent of the preceding paragraph to provide for equipment that performs as intended by the manufacturer. It is the further intent to obtain from the Contractor a level of workmanship that will assure the Department of an operation system devoid of Contractor laxities. Failure to perform as indicated shall require the Contractor to replace

in kind or repair, at the Contractor's option, the equipment or workmanship in question. All material and labor cost resulting from the replacement or repair of equipment or correction of poor workmanship shall be at no additional costs to the Department.

907-688.03.19.4--Repairs. The Department shall report any failures and outages to the Contractor. The Contractor will be required to make the necessary repairs within 10 business days of the report. The Contractor shall not be responsible for outages occurring during the 12-month warranty period due to vandalism, traffic accidents, or any problems not related to materials or workmanship. The Contractor will be required to make the necessary repairs for such outages and a reasonable cost for such repair(s) will be borne by the Department.

907-688.03.19.5--Manufacturer's Guarantees. All manufacturer's standard warranties or guarantees for all electrical and mechanical equipment which are provided as customary trade practice shall be made out to the Department and shall begin simultaneously with the commencement of the 12-month warranty period.

907-688.03.19.6--Guarantee of Repairs. This warrantee and guarantee on the fixed or replaced items shall be identical in scope to the warrantee and guarantee in Subsections 907-688.03.19.1 through 907-688.03.19.5.

907-688.04--Method of Measurement. Traffic Recorder WIM system of the type specified, complete in place and accepted, will be measured per each location.

907-688.05--Basis of Payment. Traffic Recorder WIM system, measured as prescribed above, will be paid for at the contract unit price per each, which price shall be full compensation for furnishing, installing, testing and guaranteeing all equipment, and for all materials, labor, equipment, operation, and other incidentals necessary to complete the work.

Payment will be made under:

907-688-A: Traffic Recorder WIM Kistler System, * - per each

907-688-B: Traffic Recorder WIM Brass Linguini (BL) Piezo System, * - per each

* Site No. or Location may be specified

Mill & Overlay approximately 9 miles of US 49 from the Simpson County Line to south of Florence, known as Federal Aid Project No. NHPP-0008-03(059) / 108245301 in Rankin County.

Line No.	Item Code	Adj Code	Quantity	Units	Description [Fixed Unit Price]
Roadway Items					
0010	202-B009		406	Square Yard	Removal of Asphalt Pavement, Failed Areas
0020	202-B045		384	Square Yard	Removal of Cement Treated Base, All Depths
0030	202-B069		767	Square Yard	Removal of Concrete Pavement w/ Variable Depth Overlay
0040	202-B092		111	Linear Feet	Removal of Curb, All Types
0050	202-B114		8	Linear Feet	Removal of Debris and Sand From Pipe, All Sizes
0060	202-B158		4,305	Linear Feet	Removal of Guard Rail, Including Rails, Posts and Terminal Ends
0070	202-B240		685	Linear Feet	Removal of Traffic Stripe
0080	203-EX040	(E)	173	Cubic Yard	Borrow Excavation, AH, LVM, Class B9
0090	203-G002	(E)	195	Cubic Yard	Excess Excavation, LVM, AH
0100	209-A005		387	Square Yard	Geotextile Stabilization, Type V, Non-Woven
0110	229-A001		736	Square Yard	Erosion Mat
0120	304-B003	(GT)	6,156	Ton	Granular Material, Class 5, Group C
0130	304-F002	(GT)	109	Ton	Size 610 Crushed Stone Base
0140	403-A001	(BA1)	15,173	Ton	12.5-mm, HT, Asphalt Pavement
0150	403-B001	(BA1)	255	Ton	12.5-mm, HT, Asphalt Pavement, Leveling
0160	403-D001	(BA1)	34,426	Ton	12.5-mm, HT, Asphalt Pavement, Polymer Modified
0170	406-D001		431,915	Square Yard	Fine Milling of Bituminous Pavement, All Depths
0180	407-A001	(A2)	42,217	Gallon	Asphalt for Tack Coat
0190	423-A001		31	Mile	Rumble Strips, Ground In
0200	503-A001	(C)	210	Square Yard	8" and Variable Continuously Reinforced Concrete Pavement, Broom Finish
0210	503-A006	(C)	557	Square Yard	6" and Variable Reinforced Concrete Pavement, Broom Finish
0220	503-B001		500	Linear Feet	Saw Cut, Longitudinal Joints
0230	503-C004		260	Linear Feet	Saw Cut, 3-inch
0240	503-C010		1,536	Linear Feet	Saw Cut, Full Depth
0250	503-D001		25	Cubic Yard	Concrete for Base Repair
0260	503-E002		275	Each	Tie Bars, No. 5 Deformed Drilled and Epoxied or Grouted
0270	503-F002		214	Each	1" Smooth Dowel Bars, Drilled & Epoxied or Grouted
0280	606-B003		3,500	Linear Feet	Guard Rail, Class A, Type 1, 'W' Beam, Metal Post
0290	606-C003		11	Each	Guard Rail, Cable Anchor, Type 1
0300	606-D005		4	Each	Guard Rail, Bridge End Section, Type A
0310	606-E005		4	Each	Guard Rail, Terminal End Section, Flared
0320	606-E007		11	Each	Guard Rail, Terminal End Section, Non-Flared

Line No.	Item Code	Adj Code	Quantity	Units	Description [Fixed Unit Price]
0330	606-G002		4	Each	Special Sections, Guard Rail Bridge End Connector
0340	618-A001		1	Lump Sum	Maintenance of Traffic
0350	619-A1001		38	Mile	Temporary Traffic Stripe, Continuous White
0360	619-A2001		30	Mile	Temporary Traffic Stripe, Continuous Yellow
0370	619-A3001		42	Mile	Temporary Traffic Stripe, Skip White
0380	619-A5001		47,850	Linear Feet	Temporary Traffic Stripe, Detail
0390	619-A6001		870	Square Feet	Temporary Traffic Stripe, Legend
0400	619-A6002		2,896	Linear Feet	Temporary Traffic Stripe, Legend
0410	619-D1001		94	Square Feet	Standard Roadside Construction Signs, Less than 10 Square Feet
0420	619-D2001		952	Square Feet	Standard Roadside Construction Signs, 10 Square Feet or More
0430	619-G4005		96	Linear Feet	Barricades, Type III, Single Faced
0440	619-G7001		4	Each	Warning Lights, Type "B"
0450	620-A001		1	Lump Sum	Mobilization
0460	626-A001		21	Mile	6" Thermoplastic Double Drop Traffic Stripe, Skip White
0470	626-B002		19	Mile	6" Thermoplastic Double Drop Traffic Stripe, Continuous White
0480	626-E001		15	Mile	6" Thermoplastic Double Drop Traffic Stripe, Continuous Yellow
0490	626-G004		24,305	Linear Feet	Thermoplastic Double Drop Detail Stripe, White
0500	626-G005		23,504	Linear Feet	Thermoplastic Double Drop Detail Stripe, Yellow
0510	626-H001		868	Square Feet	Thermoplastic Double Drop Legend, White
0520	626-H002		2,896	Linear Feet	Thermoplastic Double Drop Legend, White
0530	627-J001		743	Each	Two-Way Clear Reflective High Performance Raised Markers
0540	627-K001		5,871	Each	Red-Clear Reflective High Performance Raised Markers
0550	627-L001		99	Each	Two-Way Yellow Reflective High Performance Raised Markers
0560	630-F003		50	Each	Delineators, Flexible Post Mounted, Crossover, Type II
0570	630-F006		105	Each	Delineators, Guard Rail, White
0580	630-F007		13	Each	Delineators, Guard Rail, Yellow
0590	630-G004		17	Each	Type 3 Object Markers, OM-3R or OM-3L
0600	907-403-P001	(BA1)	100,000	Pounds	Asphalt for Pothole Patching
0610	907-413-E001		34,545	Linear Feet	Sawing and Sealing Transverse Joints in Asphalt Pavement
0620	907-512-A001		164	Each	Holes
0630	907-512-B001		740	Pounds	Cement Pressure Grout Slurry, Type 5
0632	907-688-A001		1	Each	Traffic Recorder WIM Kistler System
0640	907-906001		520	Hours	Trainees [\$5.00]