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ADDENDUM 1
IM-0020-02(078) / 105444301

Newton County

Dear Sir or Madam:

Please attach to and make a part of the proposal assembly the attached sheets:

Replace sheets 4, 27, 50-53, 237-239, 249-251, and 267. Insert sheets 53A , 239A 251A and 251B. Also attached is Sheet 2 of Section 905 – Proposal (Addendum No. 1), this sheet should be substituted for similar sheet now in the proposal.

Kindly acknowledge receipt and attachment of the proposal sheets by signing below and returning this letter.

Yours very truly,

B. B. House, P.E.
Contract Administration Engineer

Contractor

By _____

Date _____

SECTION 905

I (We) enclose a certified check, cashier's check or bid bond for **five percent (5%) of total price proposed** and hereby agree that in case of my (our) failure to execute the contract and furnish bond within Ten (10) days after notice of award, the amount of this check (proposal guarantee bond) will be forfeited to the State of Mississippi as liquidated damages arising out of my (our) failure to execute the contract as proposed. It is understood that in case I am (we are) not awarded the work, the check will be returned as provided in the Specifications.

Proposer acknowledges receipt of and has added to and made a part of the Proposal and Contract documents the following addendum (addenda):

ADDENDUM NO. 1 DATED 10/7/2011	ADDENDUM NO. ___ DATED _____
ADDENDUM NO. ___ DATED _____	ADDENDUM NO. ___ DATED _____
ADDENDUM NO. ___ DATED _____	ADDENDUM NO. ___ DATED _____
ADDENDUM NO. ___ DATED _____	ADDENDUM NO. ___ DATED _____

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

Number	Description
1	Replace sheets 4, 27, 50-53, 237-239, 249-251, and 267. Insert sheets 53A , 239A 251A and 251B.

Respectfully Submitted,

DATE _____

Contractor

BY _____
Signature

TITLE _____

ADDRESS _____

CITY, STATE, ZIP _____

PHONE _____

FAX _____

EMAIL _____

(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

construction of the Project and the Stormwater permit. Any additional permits required will be the responsibility of the Proposer.

Project services shall include but are not limited to:

- Design Services – complete development of construction plans
- Quality Control (QC) of design
- Construction Services – necessary to build and ensure high quality workmanship of the designed facility

The Project shall include one or more of the following bridge sites in the following order:

1. I-20 EB and WB over Chunky River (Bridges 119.3A and 119.3B)
2. I-20 EB and WB over Chunky River Relief (Bridges 118.9A and 118.9B)
3. I-20 EB and WB over Hickory Little Rock Road (Bridges 116.8A and 116.8B)
4. I-20 EB and WB over Oakahatta Creek (Bridges 116.7A and 116.7B)
5. I-20 EB and WB over Turkey Creek (Bridges 111.9A and 111.9B)

The Proposers will be required to determine the maximum number of bridge site locations (pair of bridges) to be improved/widened ~~(i.e. both the eastbound and westbound bridge, where applicable, at each location)~~, as described in Section 904 – NTP No. 2618-D5-1 DB for as many of the bridge locations that can be improved/widened up to a maximum lump sum proposal price of \$10 Million.

The Commission may utilize a separate Firm to provide MDOT with Project Management Assistance. MDOT will be responsible for the Construction Inspection and Job Acceptance Testing in accordance with the Mississippi Standard Specification for Roadway and Bridge Construction; however, the Proposer's Design Engineering Firm will be responsible for Design Quality Control.

The Project has been approved as a Categorical Exclusion (CE). As Built plans of the bridges are provided to the Proposers. The Proposer shall be responsible for completing all necessary investigations, permits and design.

The submittal of a Proposal in response to this RFP, with all required signatures, shall constitute the Proposer's agreement to enter into a contract with the Commission for the completion of the Project under the terms set forth in the Contract. The terms of the Contract are not negotiable.

The Commission values a partnering approach on projects and as such this Project will require regular Partnering Sessions.

The contract for this Project contains a Disadvantaged Business Enterprise (DBE) goal of ten percent (10%) of the Contract Price. The Proposer shall submit a DBE committal

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO PROPOSERS NO. 824 DB

CODE: (SP)

DATE: 03/10/2009

SUBJECT: Lane Closure Restrictions

Proposers are hereby advised that:

1. One lane of interstate roadways and all ramps are to remain open to traffic at all times.
2. **Temporary lane closures shall NOT be permitted on the following holidays or the day preceding them: New Year's Day, Independence Day, Labor Day, Memorial Day, Thanksgiving, and Christmas Day. In the event one of the aforementioned holidays fall during the weekend or on a Monday, no lane closure will be allowed during that weekend or the Friday immediately preceding said holiday.**
3. The maximum allowable lane closure length shall be limited to one mile.
4. Work zones in the same lane shall be spaced no closer than one mile. Work zones in adjacent lanes shall be spaced no closer than three miles.
5. Work requiring a temporary lane closure shall begin within the limits of the closure within one hour of the closure set-up. The Contractor will be assessed a lane rental fee of \$500.00 per closure for each full or partial five minute period should failure to begin work within the allotted time occur.
6. Barrels may be used to delineate pavement drop-offs if used according to MDOT's Special Design Drawing TCP-SC.
7. Portable Changeable Message Signs shall be required on I-20 for advance motorist warning of road work a minimum of two miles ahead of the Work on I-20. These Changeable Message Signs are to remain in place until traffic is placed in its final phase location. These Changeable Message Signs may be used to alert motorist of changing traffic conditions.
8. If lane closures are located within 6 miles of each other, placement of an advance portable changeable message sign is required only in advance of the first closure site.
9. The Portable Changeable Message Sign(s) shall comply with Part VI of the Manual on Uniform Traffic Control Devices (MUTCD) and Special Provision No. 907-619 DB Changeable Message Signs, with exclusion of cellular programming capabilities.
10. If the lane closure restriction listed in Section 16.4 of the Technical Specifications is violated, no excuses will be accepted by the Department and the Contractor will be charged a fee of \$500.00 for each full or partial five minute period until the roadway is back in compliance with the lane closure restriction requirement.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO PROPOSERS NO. 2618-D5-1 DB

DATE: 9/13/2011

SUBJECT: Project Scope

PROJECT: Design-Build Widening of Bridges on I-20 in Newton County
Project No. IM-0020-02(078)/105444301

Work on the project shall consist of the following:

The bridges on I-20 in Newton County will be widened to improve the bridges to the current roadway standards. MDOT intends to maximize the number of bridges to be improved as part of this Project.

The Project shall include one or more of the following bridge sites (both eastbound and westbound, where applicable) in the following order:

1. I-20 EB and WB over Chunky River (Bridges 119.3A and 119.3B)
2. I-20 EB and WB over Chunky River Relief (Bridges 118.9A and 118.9B)
3. I-20 EB and WB over Hickory Little Rock Road (Bridges 116.8A and 116.8B)
4. I-20 EB and WB over Oakahatta Creek (Bridges 116.7A and 116.7B)
5. I-20 EB and WB over Turkey Creek (Bridges 111.9A and 111.9B)

The Project shall include those bridges listed on the Contractor's Schedule Certificate, made a part of this Project by reference.

Project limits are 100 feet in advance of the existing guardrail to a distance of 100 feet beyond the end of the bridge except as follows. The guard rail on the outside shoulder between Bridge 116.7 (A and B) and Bridge 116.8 (A and B) shall be on continuous system of guardrail at each side that connects to each of the bridges and all of the guardrail meets MDOT Standards.

Work within the Project limits includes, but is not limited to:

- Removal and disposal of the existing bridge railing and deck to accomplish bridge widening.
- Bridge Widening: except for I-20 WB over Chunky River Relief (Bridge 118.9A).
- Remove existing joint armor and reconstruct joints on existing bridges.
- Remove existing bearing assemblies and replace with new elastomeric bearing pads.
- At the Turkey Creek WB Bridge (111.9 A), reconstruct the integral abutment end wall at the east end of the bridge.
- Remove excess debris and clean entire surface of caps at all interior and end bent locations.

- [Installation of a new pressure relief joint at both the entrance and exit of both bridges \(EB and WB\) over Turkey Creek \(Bridges 111.9A and 111.9B\) as described in Section 13.5 of the Technical Specifications.](#)
- [Lane widening shall match existing pavement structure. If existing structure includes an asphalt overlay, the paving bracket shall be designed to accommodate the full concrete pavement depth and a 1.5 inch asphalt overlay.](#)
- The new shoulder shall be a minimum of 6 inches of Class 5, Group E granular material (base) and a minimum of 5.75 inches Asphalt (12.5 MM ST HMA or WMA).
- Installation and maintenance of temporary erosion control.
- Install necessary embankment material.
- Install new guardrail approaching the bridge. Deliver all salvaged guardrail to MDOT at the MDOT Kalem Maintenance Yard in Scott County.
- Within the Project limits and those areas disturbed by the Contractor:
 - Restripe the shoulder lines.
 - Restripe the centerline to match existing centerline spacing.
 - Install new raised pavement markers.
- Perform grassing per the Mississippi Standard Specifications for Road and Bridge Construction.

Construction of the Project will be within Mississippi Department of Transportation (MDOT) Right of Way. The Commission has secured the Categorical Exclusion for the construction of the Project. Any additional permits required will be the responsibility of the Proposer.

Project Services shall include but are not limited to:

- Design Services – complete development of construction plans and permitting
- Quality Control (QC) of design
- Construction Services – necessary to build and ensure high quality workmanship of the designed facility.

The Project will include as many of the above listed bridge locations that can be widened up to a maximum lump sum proposal price of \$10 Million. The Proposer is required to determine the maximum number of bridge locations to be widened in pairs (i.e. both the eastbound and the westbound bridge at each location, where applicable, [except the WB Chunky River Relief \(Bridge 118.9A\) which only has bearing replacement](#)), in the order presented above (from east to west along I-20).

The Project Scope for this Project will include, but is not limited to, the following Design and Construction work items:

Design:

- Preliminary and Final Roadway Design and Plan Preparation
- Preliminary and Final Bridge Superstructure and Substructure Design and Plan Preparation
- Erosion Control Plan

- Traffic Control Plan
- Environmental Coordination
- Roadway and Bridge Drainage Design
- Geotechnical Design
- QC for Design
- Surveying

Design shall meet all appropriate AASHTO *Policy on Geometric Design of Highways and Streets* (latest edition), AASHTO *Standard Specifications for the Design of Highway Bridges* (latest edition), *Manual on Uniform Traffic Control Devices* (latest edition) (MUTCD) and MDOT design criteria as modified by the RFP. Microstation and Geopak shall be used in the preparation of CADD files.

Construction:

- Demolition of portions of the existing bridges with debris removal and disposal
- All necessary roadway and bridge work
- Surveying
- Drainage
- Environmental coordination
- Erosion and sediment control work items
- Traffic control
- Project management
- Construction management
- QC for Construction, including inspection and testing for asphalt and concrete

Construction shall comply with the MDOT *Standard Specifications for Road And Bridge Construction 2004 Edition* as modified by the RFP to accommodate specific Design/Build requirements, *Manual on Uniform Traffic Control Devices* (latest edition), MDOT Standard Drawings, any Special Provisions, Notice to Bidders, current MDOT publications including, but not limited to, the Materials Division Inspection, Certification, and Testing Manual, and existing AASHTO, ASTM, or MDOT Test Methods.

The Commission may utilize a separate Firm to provide MDOT with Project Management Assistance. MDOT will be responsible for the Construction Inspection and Job Acceptance Testing in accordance with the Mississippi Standard Specification for Roadway and Bridge Construction; however, the Proposer's Design Engineering Firm will be responsible for Design Quality Control.

Design and Construction Responsibilities

The Contractor warrants that it will perform all services in accordance with the standards of care and diligence normally practiced by recognized engineering and construction firms in performing services and obligations of a similar nature. The Contractor warrants that the Project shall be fit for its intended purpose and that all materials and equipment furnished shall be of good quality and new unless otherwise authorized by the Commission and that the construction shall conform to the Contract requirements.

The Contractor, consistent with applicable state licensing laws, shall provide the necessary design Work. The design professionals employed by Contractor or procured from qualified design consultants shall be

licensed by the State of Mississippi. The Work, includes, but is not limited to, surveys, roadway design, traffic control, geotechnical work, hydraulic analyses, storm water management, erosion control, superstructure and substructure design for the preparation of the required drawings, false work, shoring, specifications and other contract documents necessary to permit the Contractor to complete the Project in accordance with the Contract.

The Contractor shall be fully and solely responsible for the accuracy of the design and compliance with specifications, standards and design criteria. The Contractor shall construct the Project in accordance with all applicable Federal, State and local Laws and the Contract.

The Contractor shall perform quality control services as defined in the Technical Requirements, Section 3.2 Construction Testing Requirements.

The Contractor shall provide the necessary supervision, labor, inspection, testing for asphalt and concrete only, material, equipment, machinery, temporary utilities and other temporary facilities to permit performance of all earthwork, drainage, foundation work, all traffic control, substructure and superstructure work, excavation, erosion and sediment control work, field layout work, design and construction management and all other work necessary to complete construction of the Project in accordance with the Contract. Contractor shall perform all construction activities efficiently and with the requisite expertise, skill and competence to satisfy the requirements of the Contract. Contractor at all times shall exercise control over the means, methods, sequences and techniques of construction. Contractor's operations and construction methods shall comply with all applicable federal, state and local regulations including but not limited to worker safety, protection and health and protection of the environment and applicable permit requirements.

Control of Work

The Contractor shall be solely responsible for determining the appropriate means, methods and scheduling necessary to complete the Work in a timely manner and in accordance with all Contract requirements. MDOT and FHWA will have the right to review and inspect the Work at any time.

1. Contract Interpretations

The Engineer will decide all questions which may arise as to the quality and acceptability of materials, the Work and the progress of the Work; all questions which may arise as to the interpretation of the specifications; and all questions as to the fulfillment of the Contract.

The Engineer will have the authority, but not the responsibility to suspend the Work, wholly or in part, because of the Contractor's failure to correct conditions unsafe for workers or the general public, for failure to carry out provisions of the Contract, or for failure to carry out orders. The Engineer may also suspend Work for periods deemed necessary due to unsuitable weather conditions, for any conditions considered unsuitable for the prosecution of the Work, or for any other condition or reason deemed to be in the public interest. The Engineer may authorize, in writing, the continued prosecution of Work activities past their specified seasonal limits when it is determined that the quality of the Work will not be reduced and the public interest will be best served. The Engineer will have authority to enforce and make effective all decisions and orders relating to the Contract.

2. Governmental Approvals and Permits

The Contractor is responsible for obtaining all Governmental Approvals and permits necessary to construct the Project. Copies of all correspondence and permits shall be forwarded to MDOT within seven (7) days after the correspondence is received. The Contractor shall integrate design practices to avoid and/or minimize potential Work impacts to wetlands and water of the US. The Contractor shall bear the cost and responsibility of resolving any deviations among the Project Right-of-Way limits, drawings or other information included in the permits that would violate the intent or spirit of the permits. Any proposed changes within the permitted areas shall be coordinated with MDOT and the appropriate agency, and performed to MDOT's satisfaction.

3. Plans for Construction

Prior to the start of construction of any phase or portion of Work, the Contractors shall have plans stamped by MDOT as "Released for Construction" for that phase or portion of Work.

SECTION 13.0 – ROADWAYS AND PAVEMENTS

13.0 ROADWAYS AND PAVEMENTS**13.1 Roadway Design Criteria**

Project design will be in compliance with the MDOT Roadway Design Manual, freeway conditions, rolling terrain and rural setting. The design of roadways will be in accordance with Table 13.4-1. Table 2-7B of the MDOT Roadway Design Manual shall be revised as detailed in Table 13.4-1

13.2 Horizontal Alignment

The horizontal alignment shall follow the existing alignment.

13.3 Vertical Alignment

Vertical alignment shall match the existing alignment.

13.4 Earthwork and Grading

Roadway earthwork and grading design and construction will conform to the typical sections and the following specific requirements:

The minimum embankment slopes, outside of the clear zone, will be constructed using normal 3:1 slopes unless flatter slopes are determined to be necessary from the geotechnical investigation performed in accordance with MDOT SOP TMD-20-14-00-000. Embankments will be constructed with suitable material acquired from either onsite excavation or hauled from offsite borrow pits or a combination of both. Embankment material shall be placed and compacted in accordance with the contract documents.

Safety barriers shall be used to protect motorists from obstructions.

The Contractor shall perform excavation (and undercut, if necessary) of the roadway, side slopes, ditches and channels, structures, and all other items necessary for the construction of this Project. Excavation shall include all materials above the subgrade (and undercut, if required) and the disposal of all materials not suitable for re-use in construction.

The Contractor shall be responsible for locating and obtaining all borrow material required for this Project, including all approvals, permits, and fees required for obtaining and hauling the borrow material.

Grading of excavated areas, embankments and other areas disturbed by construction shall meet all erosion and sedimentation control requirements.

13.5 Pavement Selection

Pavement section shall be as described in Section 904 NTP No. 2618-~~D7D5~~-1 DB.

Where required in the scope of work described in Section 904 NTP No 2618-D5-1 DB, the Contractor shall install a pressure relief joint between the approach slab and the concrete pavement as shown on Figure 13.5-1.

SECTION 13.0 – ROADWAYS AND PAVEMENTS

13.6 Roadway Safety

All roadway guardrail and roadside barriers shall be designed according to design speed using current MDOT standards and shall meet requirements for the AASHTO’s 2009 Manual for Assessing Safety Hardware (MASH), TL3. All roadway pavement sections on the Project shall incorporate rumble strips along the inside and outside shoulders.

Table 13.4-1 Typical Roadway Section Criteria

	Interstates (Mainline)
Functional Classification	Freeway
Design Speed	70 mph
Control of Access	Full (type 1)
Number of Through Lanes	4
Lane Width	12 ft.
Outside Shoulder Width, Usable	12 ft.
Outside Shoulder Width, Surfaced	10 ft.
Median Shoulder Width, Usable	8 ft.
Median Shoulder Width, Surfaced	4 ft.
Auxiliary Lane Width	12 ft.
Auxiliary Lane Shoulder Width	10 ft. surfaced 12 ft. useable
Median Type	Depressed
Median Minimum Width	64 ft.
Cross Slope Travel Lane	2%
Cross Slope Shoulder	4 %
Total (Final) Bridge Minimum Width	T.W. +12ft (out)+6ft (Med)
Minimum Clear Span	
Roadside Clear Zone (Obstruction)	30 ft.
Cut Foreslope (Within Clear Zone)	6:1
Depth of Ditch	4 ft.
Cut Backslope	3:1
Safety Slope (Within clear Zone)	6:1
Fill Slope (Outside Clear Zone)	3:1
Stopping Sight Distance (AASHTO)	730 ft.
Maximum Horizontal Curve	3° 30'
Superelevation Rate	See table 3-4 A ($e_{max}=0.10$)
Maximum Grade	3%
Vertical Curve K Factor (Crest) (MDOT)	290
Vertical Curve K Factor (Sag) (AASHTO)	181

13.6.1 Notes for Table 13-4-1

1. The minimum vertical clearance for all bridge over highways and streets shall be 16’ – 6” or maintain the existing vertical clearance.
2. The minimum vertical clearance over railroads shall be 23’ – 6” or more if required by the railroad.
3. Horizontal Sight Distances- See Subsection 3.50 in the MDOT Roadway Design Manual for applicable criteria.
4. T.W. refers to the travel way or the total lane width.

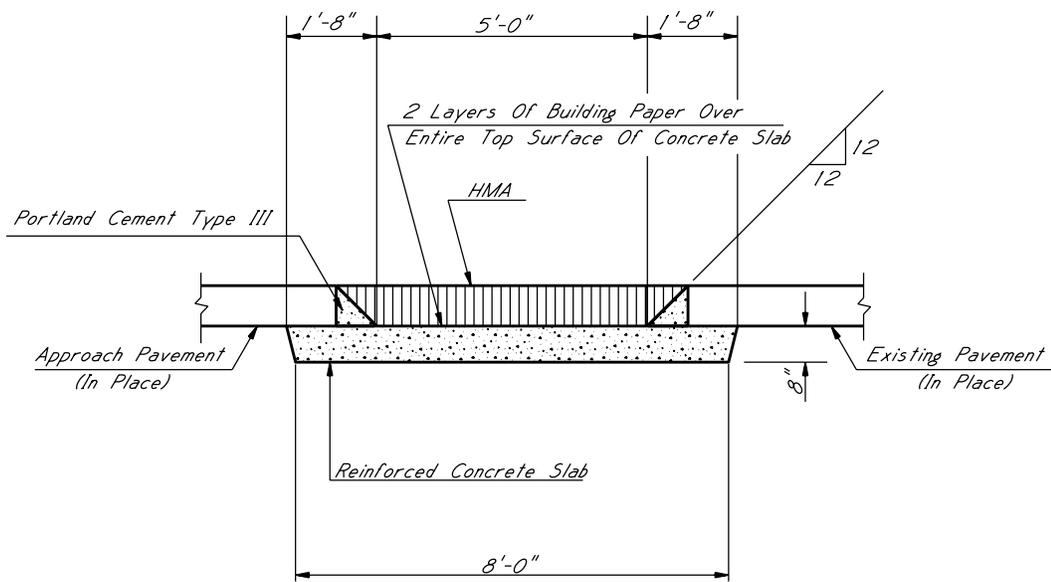
SECTION 13.0 – ROADWAYS AND PAVEMENTS

5. Approach Roadway width is defined by the total lane width plus the total useable shoulder.
6. Horizontal clearances at railroads shall meet the requirements of AREMA and the Railroad Company.
7. Clear zone to be based upon speed, side slope and traffic volume.
8. Where auxiliary lanes are used along the mainline, clear zone is measured for the outside edge of the auxiliary lane.
9. The bridge end approach slabs shall be constructed and widened in accordance with the current MDOT Roadway Design Standard Drawings. Use Special Design Sheet BE-1A.

13.7 Deliverables

At a minimum, the Contractor shall submit the following to MDOT for review or comment:

Deliverable	Comment	Schedule	Reference Section
Preliminary Plans (30%) and Cross Sections	✓	According to Contractor’s Schedule	2.2.2
Final Plans (100%) and Cross Sections	✓	Prior to Request For Release for Construction	2.2.4
Release for Construction Plans and Cross Sections	✓	According to Contractor’s Schedule	2.2.5
As Built Drawings	✓	30 days after Completion of Construction	2.2.8



Joint Between Reinforced Concrete Slab And Approach Pavement Must Be Free To Slide.

PRESSURE RELIEF JOINT

Install At Each Bridge End Pavement Across Full Width Of Approach Roadway

**FIGURE 13.5-1
PRESSURE RELIEF
JOINT DETAILS**

SECTION 15.0 – STRUCTURES – WIDENINGS

15.4.5 Bearings

Elastomeric bearings shall be designed in accordance with AASHTO Division I, Section 14. Natural rubber in elastomeric bearings will not be allowed. Replacement elastomeric bearings shall have the same compressed height as the existing bearing. Any new bearings for a given span (including replacement bearings), shall utilize the same design at all locations in that span.

All bearings shall be designed and detailed to be replaceable by jacking while maintaining traffic.

Traffic shall be stopped during the raising and lowering of the bridge to replace the bearings (see Section 16.4). At a minimum, jacking the bridge shall be accomplished by jacking an entire end of a span. to minimize the stresses on the end diaphragms.
Bearings shall not be replaced with traffic on the bridge (see Section 16.4).

Bearings at integral abutments are excluded from the bearing replacement requirements.

On Bridge 118.9A (I-20 over Chunky Relief) all bearing assemblies at the piers shall be replaced except elastomeric bearings.

15.4.6 Bridge Railings

All barriers shall be 32" tall, New Jersey Shape concrete barrier which meets NCHRP Report 350 TL-4 criteria. The surface of the bridge rails shall be given a spray finish in accordance with Mississippi Standard Specifications for Road and Bridge Construction, Section 804.03.19.3.2 Spray Finishes.

15.4.7 Expansion Joints

Expansion joints shall be reconstructed as follows:

1. All existing joint armoring, if any, shall be removed.
2. Joints at Intermediate Bents - Bridge decks adjacent to an expansion joint over an intermediate bent shall be removed for a minimum distance of two (2) feet from the centerline of the existing joint. Contractor shall provide a neat demolition line by saw cutting. The depth of the saw cut shall be adjusted to protect the longitudinal steel. Longitudinal reinforcing steel shall be protected during the demolition process. New transverse reinforcing steel shall be placed prior to concrete placement. Concrete placement shall be made so that a minimum one (1) inch joint is provided. The joint repair shall comply with the details provided on Figure 15.4.7-1 – Joints at Intermediate Bents.
3. Joints at Non-Integral Abutments - Bridge deck adjacent to an expansion joint at a non-integral abutment, shall be removed for a minimum distance of two (2) feet from the centerline of the existing joint. Contractor shall provide a neat demolition line by saw cutting. The depth of the saw cut shall be adjusted to protect the longitudinal steel. Longitudinal reinforcing steel shall be protected during the demolition process. New transverse reinforcing steel shall be placed prior to concrete placement. Concrete placement shall be made so that a minimum one (1) inch joint is provided. Abutment wall adjacent to an expansion joint shall be removed to a depth of the existing slab or to the top of paving bracket, whichever is greater. Vertical steel in the abutment

SECTION 15.0 – STRUCTURES – WIDENINGS

shall be protected. The top of the abutment wall shall be reconstructed so that a minimum one (1) inch joint is provided. The joint repair shall comply with the details provided on Figure 15.4.7-1 – Joints at Non-Integral Abutments.

4. Joints at Integral Abutments - Bridge deck adjacent to an expansion joint at an integral abutment, shall be removed for a minimum distance of two (2) feet from the back of the abutment wall at the bridge end. Contractor shall provide a neat demolition line by saw cutting. The depth of the saw cut shall be adjusted to protect the longitudinal steel. Longitudinal reinforcing steel shall be protected during the demolition process. New transverse reinforcing steel shall be placed prior to concrete placement. The top of the abutment wall shall be removed to a depth of the existing slab. Vertical steel in the abutment shall be protected. The top of the abutment wall and slab shall be reconstructed so that a minimum one (1) inch joint is provided. The joint repair shall comply with the details provided on Figure 15.4.7-1 – Joints at Integral Abutments.
5. After completing the repairs to the concrete decks, abutments and bridge end pavement the joints shall be sealed with a silicone sealant.

~~Expansion joints shall be provided to accommodate the movement of the bridge. Existing bridge joint armoring shall be removed. The existing deck shall be removed for a minimum distance of two (2) feet from the centerline of the existing joint. Contractor shall provide a neat demolition line by saw cutting to a minimum depth of one (1) inch to remove cracked and broken concrete. Longitudinal reinforcing steel shall be protected during the demolition process. New transverse reinforcing steel shall be placed prior to concrete placement. Concrete placement shall be made so that a minimum one (1) inch joint is provided, and sealed with a silicone sealant.~~

Finger Joints shall be used when the movement rating of the expansion joints is greater than two (2) inches. The design and construction of the finger joint shall be similar to the joint plans shown at the end of this Section 15. Modular joints shall not be used. Expansion finger joints and rail plates shall be galvanized in accordance with ASTM A 123.

For normal geometry conditions, cellular or modular joints shall not be used. When present, curvature of the structure shall be considered in the design of the expansion joint. If it can be shown that expansion finger joints are not feasible for use due to excessive horizontal curvature of the structure, other joint types may be considered, when approved by MDOT.

15.4.8 Bridge Drainage

- a. Bridge deck drainage shall be provided as necessary to keep the ten (10) year event for a five (5) minute interval from spreading into the travel lanes. Rainfall intensity – Duration – Frequency Curves are provided in MDOT Roadway Design Manual Figure 7-4f. Bridge deck drainage design shall be in accordance with FHWA Circular No.21, “Design of Bridge Deck Drainage” (HEC-21).
- b. Bridge deck drainage shall be contained on the bridge deck prior to passing through the bridge deck drains. Bridge deck drainage shall not be allowed to pass through the railing.
- c. Bridge deck drains shall extend below the bottom flange of steel girders. Where drainage scuppers and drain pipes are used, pipes shall be located inside of the exterior girder.

SECTION 15.0 – STRUCTURES – WIDENINGS

- d. Bridge deck drains for precast-prestressed concrete girder spans may utilize drain holes with a minimum opening of three (3) inches by eight (8) inches. Drain holes shall be located adjacent to the bridge barrier.
- e. No bridge deck drainage shall drain onto the railroad right-of-way or onto a roadway, sidewalk, and shoulder.

15.4.9 *Cranes on Existing Bridges*

Cranes may be placed on existing bridges provided that the Lead Design Engineer has determined that the existing structure can safely support the proposed crane at an inventory rating. Crane mats shall be placed over the portion of the bridge deck that the crane will cross or set up on. Contractor shall submit stamped calculations and supporting documentation to MDOT demonstrating that the existing bridge can safely carry the crane load.

Any damage to the bridge or bridge deck shall be immediately repaired by the Contractor.

15.4.10 *Load Rating*

The Contractor shall load rate the widened portion of all bridges. The load ratings shall be in accordance with the requirements below. A report for each Structure shall be submitted detailing the ratings for all axle configurations identified. Calculations shall be supplied to MDOT in an acceptable format.

HS20-44 Truck shall be used for the operating and inventory levels.

The following trucks shall be use to rate operating level. The axle weight for each truck and spacing is provided below:

HS-SHORT
 8 kip -- 12 ft -- 20 kip -- 4 ft -- 20 kip -- 10 ft -- 16 kip -- 4 ft --16 kip
 total weight = 80 kip

HS-LONG
 8 kip -- 12 ft -- 20 kip -- 4 ft -- 20 kip -- 22 ft -- 16 kip -- 4 ft --16 kip
 total weight = 80 kip

CONCRETE TRUCK
 10 kip -- 12 ft -- 25 kip -- 4 ft -- 25 kip
 total weight = 60 kip

TANDEM AXLE
 20 kip -- 4 ft -- 20 kip
 total weight = 40 kip

The bridge ratings shall be summarized in a table at the start of the calculations showing the critical point in the bridge for each truck.

SECTION 15.0 – STRUCTURES – WIDENINGS

15.4.11 Temporary Concrete Traffic Barriers

Temporary concrete traffic barriers which meet the NCHRP Report 350 TL-3 criteria shall be used on the bridge deck to separate the work area from the traffic. When the temporary concrete traffic barriers are to be placed less than eight (8) ft. from an open edge of bridge deck, the barriers shall be safely attached to the bridge deck. The bridge deck attachments shall be designed to carry the TL-3 loading. When the temporary concrete traffic barriers are removed from the bridge deck, the attachments shall be completely removed and the deck repaired with a non-shrink grout. Design calculations and plan sheets shall be submitted to MDOT for review in the Final Design Review Phase (Section 2.2.4).

15.5 Deliverables

At a minimum the Contractor shall submit the following to MDOT:

Deliverable	Review and Comment	Schedule	Reference Section
Preliminary Design	✓	According to Contractor’s Schedule	2.2.2
Final Design	✓	Prior to RFC Submittal	2.2.4
RFC Documents	✓	Prior to Construction of the designed portion of Project	2.2.5
As-Built Drawings and Records	✓	30 days following Construction of the designed portion of Project	2.2.8
Rating of Widened Portion of each Bridge	✓	30 days following Construction of the designed portion of Project	15.4.10
Temporary Concrete Traffic Barrier Details and Calculations	✓	At the Final Design Review Phase	15.4.11
Jacking Plans for Bearing Pad Replacement with Calculations	✓	30 days prior to installation of the replacement bearing pads	15.4.5

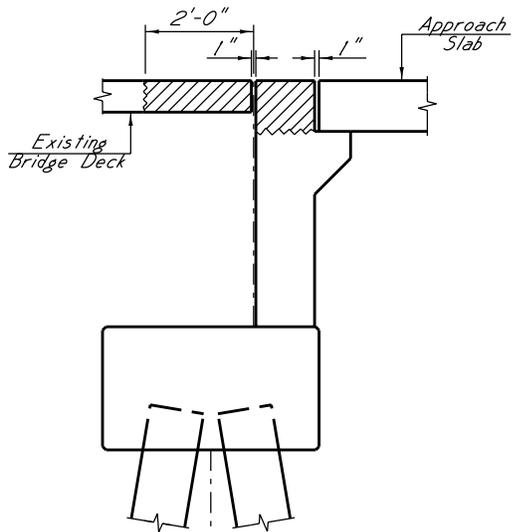


Figure 15.4.7-1
**Joints At Non-Integral
 Abutments**

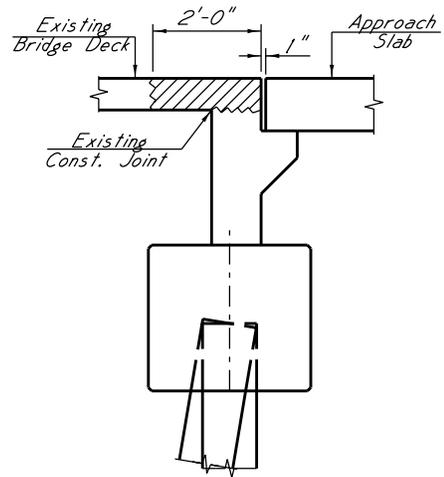


Figure 15.4.7-1
**Joints At Integral
 Abutments**

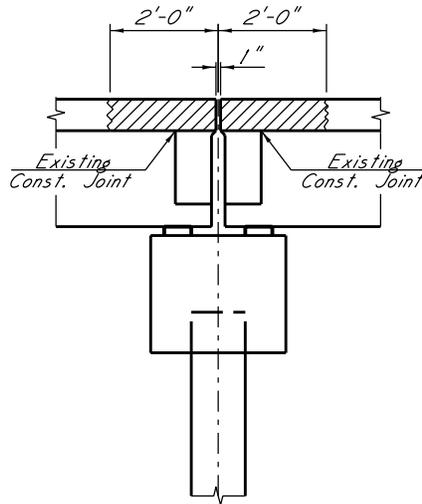


Figure 15.4.7-1
**Joints At Intermediate
 Bents**

**FIGURE 15.4.7-1
 EXPANSION JOINT DETAILS**

CONTRACTOR'S SCHEDULE CERTIFICATE

State of _____

County of _____

_____, hereinafter denoted as CONTRACTOR, does hereby certify that it has or will obtain, the labor, material and equipment resources needed and shall perform the Work described in the Project Scope on or before the dates specified below:

Completion Date: Calendar Days _____ from Notice to Proceed

Completion Date shall be defined as Partial Acceptance date defined in Section 907-105.16.1.

The Contractor does hereby propose to complete the following bridge sites (eastbound and westbound, as indicated) and all associated Work, which must be in consecutive order east to west (put an "x" to indicate choice):

	Included as part of this Proposal	Not included in this Proposal
1. I-20 EB and WB over Chunky River (Bridges 119.3A and 119.3B)	<input type="checkbox"/>	<input type="checkbox"/>
2. I-20 EB <u>and WB</u> over Chunky River Relief (Bridges <u>118.9A and 118.9B</u>)	<input type="checkbox"/>	<input type="checkbox"/>
3. I-20 EB and WB over Hickory Little Rock Road (Bridges 116.8A and 116.8B)	<input type="checkbox"/>	<input type="checkbox"/>
4. I-20 EB and WB over Oakahatta Creek (Bridges 116.7A and 116.7B)	<input type="checkbox"/>	<input type="checkbox"/>
5. I-20 EB and WB over Turkey Creek (Bridges 111.9A and 111.9B)	<input type="checkbox"/>	<input type="checkbox"/>

Further, CONTRACTOR hereby agrees that attainment or non-attainment of the Completion Days stated above shall be the measure of performance for the assessment of liquidated damages

Witness our signature this the _____ day of _____, 2011

Contractor