

March 29, 2007

**STATE PROJECT NO. 700-51-0109
F.A.P. NO. BR-5106(503)
ATCHAFALAYA RIVER BRIDGE INSPECTIONS
BERWICK BAY AND MORGAN CITY
ROUTES LA-182 AND US-90
SAINT MARY PARISH**

ADDENDUM NO. 1

SCOPE OF SERVICES

STAGE 3, DESIGN

Part VI: Inspection Services

The selected Consultant/Team will provide all services required to perform an in-depth inspection of the two bridges in this project, more specifically described as follows:

1. A detailed, in-depth field inspection will be performed on all components of the superstructure and all components of the substructure in conformance with AASHTO Manual for Maintenance Inspection of Bridges and the NBIS, except the portions of the piers above ground or above water which will have a cursory visual inspection.

The field inspection of the bridge shall be conducted in a systematic and organized procedure that will be efficient and minimize the possibility of any bridge component being overlooked. Notes must be clear and detailed to the extent that they can be fully interpreted at a later date when a complete report is prepared. Sketches and photographs shall be included in an effort to minimize lengthy descriptions.

The inspection shall be conducted to meet or exceed the requirements expressed in the AASHTO Manual for Maintenance Inspection of Bridges, current issues, the United States Department of Transportation Bridge Inspector's Reference Manual, October 2002, and the Louisiana Department of Transportation and Development Bridge Inspection Report, A Guide to Reporting and Rating. All inspection works shall be performed by qualified Bridge Inspectors who have successfully completed an FHWA approved comprehensive bridge inspection training course.

An assessment of the coating system shall be conducted by a certified SSPC Protective Coating Specialist or a certified NACE Bridge Coating Inspector to determine the condition of the existing coating system of the bridge.

The Consultant/Team shall take all necessary precautions, including the maintenance of traffic, to ensure the safety of the traveling public and the inspection personnel. All necessary traffic control, inspection and bridge access equipment shall be provided by the Consultant/Team.

2. A formal, bound bridge inspection report, document of supplemental information including details, photographs, and sketches highlighting problem areas and their evaluation shall be provided in a format proposed by the Consultant/Team and agreed upon in advance of execution of the inspection by the DOTD.

A separated summary overview of the inspection report shall also be provided by the Consultant/Team.

The Consultant/Team shall provide five completed reports and five summary overview reports in the format previously discussed. All photographs will be in 3 ½" x 5" or 4" x 6" format reproduced from 35 millimeter color print film. Duplicate reports will also have color photographs. All original negatives shall become property of the DOTD, even if prints are not used in the report.

Photographs made with a digital camera having a minimum image resolution of four Mega pixels will be an acceptable alternative. Digital data will also be provided if a digital camera is used.

All photographs, negatives, and/or digital data shall be provided in a pocket at the end of each report.

All field notes shall be bound and submitted along with the final bridge inspection report.

The Consultant/Team shall also provide an electronic version of the inspection report to DOTD.

The Consultant/Team shall update any errors found on the Pontis Structure Inventory and Appraisal Sheet. The Pontis Structure Inventory and Appraisal Sheet will be provided to the Consultant prior to the inspection. Inspection information shall be recorded on the Pontis Structure Inventory and Appraisal Sheet by condition state for each element as per the DOTD Pontis Manual and submitted to the DOTD so that it can be entered into the Pontis database.

3. The DOTD's bridge inspection report form shall be completed according to the aforementioned Guide noting the condition of generally listed bridge components.
4. All deteriorated members will be measured in detail for losses.
5. Roadway slabs, sidewalks, curbs, barriers, and stairs shall be inspected. All structural components shall be inspected. Bearings are to be inspected in-depth,

noting location and temperature. Punch marks are to be placed for future inspection reference. All joints shall be inspected, measured and marked for future reference. The temperature at the time of measurement of the joint opening shall also be recorded. Electrical conduit, electrical junction box, navigational light, aerial obstruction beacons shall be inspected. A cursory inspection is to be made of the stairs, and piers above the ground or water. If any serious problems are detected or suspected as the result of this inspection, a more in-depth inspection will be negotiated as extra work at the discretion of the DOTD. No diver's inspection will be made of the underwater portions. Recent soundings of the river in the vicinity of the bridge, when existing, will be made available to the Consultant/Team. Extensive testing or measuring such as coupon sampling, half-cell corrosion detection, radiographic or ultrasonic crack detection shall not be performed under this Contract. Sounding concrete and steel connections with inspection hammers and steel thickness measurements with electronic thickness meters are typical of what is expected. Deteriorated and deficient conditions discovered during the inspection will be reported along with recommendations as to the necessity of repair or replacement of structure components.

6. The Team Leader must be present at all times during the inspection.
7. The inspection is to include the: main bridge trusses, deck truss approach spans, reinforced concrete approach girder spans, approach slab spans, roadway and its support members, roadway floor beams, and all other components within the inspected structures.
8. The Consultant/Team will be allowed to close one lane of traffic and use snooper and/or bucket truck to perform the inspection for the Atchafalaya River Bridge at Morgan City. Temporary Traffic Control shall be as per Standard Details. The Consultant/Team shall be required to use a police officer, with DOTD Work Zone Law Enforcement training, to close the lane for the moving lane closure. The Consultant/Team will be allowed to close the bridge to traffic and use snooper and/or a bucket truck to perform the inspection for the Atchafalaya River Bridge at Berwick Bay. The Consultant/Team shall use two Type III barricades at each end of the bridge to close the bridge to traffic.
9. Field inspection of the main bridge trusses shall include the following:

The substructures of the main through truss bridge will receive a cursory visual inspection of those portions above ground or above water. Major cracks and spalls will be noted, but no diver's inspection will be made of the under water portions.

Truss members and truss joints of the through trusses will be inspected in detail for cracks, loose and missing rivets and bolts, corrosion of members, gusset plates and splice plates. Alignment of members will be checked. Extent of paint protection and corrosion will be noted, and loss of section, if any, will be measured.

Lateral bracing, sway bracing and wind links will be examined for alignment, corrosion, loose and missing rivets and bolts, collision damage, cracks, etc. Where corrosion is severe, loss of section will be measured. Wind links and wind tongues will be examined for signs of satisfactory recent movement.

Dummy chords will be examined for signs of free movement. A reference system of punch marks will be established from which measurements will be taken and to which future measurements should be correlated. Temperature will be noted.

Fixed bearings will be inspected and expansion bearings will be examined insofar as possible. Current relative position will be measured, temperature noted, and a system of punch marks established for correlation of future measurements.

Expansion joints in roadways will be inspected and measurements of opening recorded, along with temperature. Punch marks will be established for correlation of future measurements.

The underside of the roadways, roadway floor beams, roadway stringers and their bearings, and bracing members will be inspected. The inspection will note cracks, loose and missing rivets and bolts, corrosion, loss of section, misalignment, etc.

An inspection of roadways from the top side will be made to evaluate the condition of pavement, spalls at joints, handrail condition, and sidewalk condition.

Sidewalk and its supporting members will be inspected in detail for cracks, loose and missing rivets and bolts, corrosion of members. Extent of paint protection and corrosion will be noted, and loss of section, if any, will be measured.

10. Field inspection of the deck truss approach spans shall include the following:

The substructure of the deck truss approach spans will receive a cursory visual inspection of those portions above ground or above water. Major cracks and spalls will be noted, but no diver's inspection will be made of the under water portions.

Truss members and truss joints of the deck truss approach spans will be inspected in detail for cracks, loose and missing rivets and bolts, corrosion of members, gusset plates and splice plates. Alignment of members will be checked. Extent of paint protection and corrosion will be noted, and loss of section, if any, will be measured.

The underside of roadways, roadway floor beams, roadway girders, girder bearings, and bracing members will be inspected. Cracks, loose and missing rivets and bolts, corrosion, loss of section, misalignment, etc. will be noted and diagnosed.

The top of the roadways will be inspected to evaluate condition of pavement, spalls at joints, handrail condition, and sidewalk condition. Expansion joints will be inspected for signs of recent movement. The opening will be measured, along with temperature, and a system of punch marks established for correlation of future measurements.

Sidewalk and its supporting members will be inspected in detail for cracks, loose and missing rivets and bolts, corrosion of members. Extent of paint protection and corrosion will be noted, and loss of section, if any, will be measured.

11. Field inspection of the approaches roadway shall include the following:

The substructure of the approach spans will receive a cursory visual inspection of those portions above ground or above water. Major cracks and spalls will be noted, but no diver's inspection will be made of the under water portions.

The underside of roadways, roadway girders, girder bearings will be inspected. Cracks, loss of section, mis-alignment, etc. will be noted and diagnosed.

The top of the roadways will be inspected to evaluate condition of pavement, spalls at joints, handrail condition, and sidewalk condition. Expansion joints will be inspected for signs of recent movement. The opening will be measured, along with temperature, and a system of punch marks established for correlation of future measurements.

12. An assessment of the coating system shall be conducted.

The selected Consultant/Team shall perform such services and shall be responsible for the following:

- a) Physical inspection of the extent of the corrosion will be conducted in accordance with ASTM F 1130-99 diagrams for "Overall Extent of Failure" and "Extent within Affected Area". The type of corrosion must be associated with the rating.
- b) Laboratory tests shall be conducted to determine level of lead contained in the coating system in accordance with ASTM D 3618-85a.
- c) Field tests shall be conducted to determine adhesive strength of the existing primer in accordance with ASTM D 4541-02.
- d) Field tests shall be conducted to determine thickness of the existing coating system in accordance with ASTM D 1186-01.

All Physical inspection, Laboratory tests, and Field tests results shall be reported by structure and segment number (segment sequence information will be provided by DOTD).

13. Recommendations as to repairs, corrections, and any other maintenance functions will be incorporated into the report where deficiencies and deterioration are reported and summarized at the conclusion of the inspection report.
14. The DOTD's equipment and personnel shall not be available for the Consultant/Team's use. However, the DOTD's personnel shall be allowed access to all parts of the inspection.
15. Traffic control operations and procedures when necessary will be the responsibility of the Consultant/Team. These operations and procedures will be coordinated through the DOTD's District 03 Headquarters.
 - a. Atchafalaya River Bridge at Berwick Bay: The Consultant/Team shall be allowed to close the bridge to perform the inspection. The Consultant/Team shall provide four Type III barricades, two at each end of the bridge to close the bridge to traffic.
 - b. Atchafalaya River Bridge at Morgan City: Traffic will be maintained at all times. Lane closure shall be allowed where necessary to block traffic with the restriction that no more than one lane of traffic in each traffic direction can be closed at any one time. A truck with a mounted attenuator shall be used to protect personnel and equipment in the closed lane. The Consultant/Team shall provide two electronic messages, one at each end of the bridge to alert motorists of the ongoing inspection.

The Consultant/Team shall inform the DOTD **thirty (30)** calendar days in advance of the beginning of the inspection so that the DOTD will notify the State's Transportation Commission about this work.

16. A stand by boat for the safety of the inspectors shall be provided in accordance with OSHA.
17. A daily log shall be prepared to show the personnel and equipment used and listing those items inspected in a manner that corresponds with standard nomenclature as is used on the original plans.

A field walk-through for these bridges will be held at **10:00 A.M. CST on Wednesday, March 28, 2007**. This is not a mandatory field walk-through; however, all Consultant/Teams interested in submitting the Qualification Statement are encouraged to attend this field visit. For additional information, please contact the Project Manager.

MINIMUM PERSONNEL REQUIREMENTS

The following requirements must be met at the time of submittal:

1. At least one Principal of the Prime-Consultant under consideration must be a Professional Engineer registered in the State of Louisiana.

2. At least one Principal or other Responsible Member of the Prime-Consultant must be a Professional Civil Engineer registered in the State of Louisiana.
3. The Prime-Consultant must employ on a full time basis, a minimum of two Professional Civil Engineers registered in the State of Louisiana, including one with at least five years experience in bridge design/structural inspection of river crossing structures, and a corresponding support staff.
4. In addition to the above requirements, the Prime-Consultant must also employ on a full time basis, or through the use of a Sub-Consultant(s):
 - a. A minimum of one qualified Structural Bridge Inspector Team Leader. The team leader must meet one of the following requirements:
 - (1) Be a registered Professional Engineer and have successfully completed a Federal Highway Administration (FHWA) approved comprehensive bridge inspection training course, or;
 - (2) Have five years experience in major bridge inspection/evaluation of damaged bridge members, and have successfully completed an FHWA approved comprehensive bridge inspection training course, or;
 - (3) Be certified as a Level III or IV Bridge Safety Inspector under the National Society of Professional Engineer's program for National Certification in Engineering Technologies (NICET), and have successfully completed an FHWA approved comprehensive bridge inspection training course, or;
 - (4) Have a bachelor's degree in engineering from a college or university accredited by, or determined as substantially equivalent, by the Accreditation Board for Engineering and Technology; and have successfully passed the National Council of Examiners for Engineering and Surveying Fundamentals of Engineering examination; and have two years of bridge inspection experience; and have successfully completed an FHWA approved comprehensive bridge inspection training course, or;
 - (5) Have an associate's degree in engineering or engineering technology from a college or university accredited by, or determined as substantially equivalent by, the Accreditation Board for Engineering and Technology; and have four years of bridge inspection experience; and have successfully completed an FHWA approved comprehensive bridge inspection training course.
 - b. A minimum of one qualified Structural Bridge Inspector who has successfully completed an FHWA approved comprehensive bridge inspection training course.
 - c. One certified Society for Protective Coatings (SSPC) Protective Coatings Specialist or certified National Association of Corrosion Engineers (NACE) Bridge Coating Inspector.

The following requirement must be met by the Prime Consultant or Sub-Consultant at the time of Notice to Proceed:

- a. At least two of the inspectors must have completed the Work Zone Traffic Control Technician and Flagger course. At least one inspector or engineer must have completed the Traffic Control Supervisor course.