

GOVERNOR

# STATE OF LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

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WILLIAM D. ANKNER, Ph.D. SECRETARY

April 14, 2009

STATE PROJECT NOS. 450-08-0051, 450-09-0025, 450-09-0026, and 450-10-0140 FEDERAL AID PROJECT NOS. 6104(502) PORT ALLEN – BATON ROUGE (LA 1 – WASHINGTON ST. OVERPASS) **ROUTE I-10** EAST BATON ROUGE and WEST BATON ROUGE PARISHES

SUBJECT: ADDENDUM NO. 4 (CONSTRUCTION PROPOSAL REVISION)

ELECTRONIC BIDDING AMENDMENT NO. 1

#### Gentlemen:

The following proposal revisions dated 04/14/09 on the captioned project for which bids will be received on Wednesday, April 22, 2009 have been posted on http://www.dotd.la.gov/cgi-bin/construction.asp.

- 1. Added the special provision entitled Cost-Plus-Time Bidding Procedure (A + B Method). (1 page)
- 2. Revised the special provision entitled Lane Closure Restrictions. (1 page)
- 3. Added the special provision entitled Determination and Extension of Contract Time. (1 page)
- 4. Revised the special provision entitled Item S-120-D, Epoxy-Urethane Copolymer Overlay System. (8 pages)
- 5. Revised the special provision entitled Contract Time. (1 page)
- 6. Added the Contract Time Form Cost-Plus-Time Bidding Procedure (A+B) Method. (1 page)
- 7. Revised the Construction Proposal Signature and Execution Form. (3 pages)

Please note these revisions in the proposal and bid accordingly. Mandatory electronic bidding is required for this project, and electronic bids and electronic bid bonds must be submitted via www.bidx.com for this letting date.

Sincerely,

RANDAL D. SANDERS, P. E.

CONTRACTS & SPECIFICATIONS ENGINEER

#### Attachments

ec: Mr. Brian Buckel

Mr. Roy Schmidt

Mr. Joseph Palermo

Ms. Jody Colvin

Mr. Brian Delatte

Mr. Eric Burges

Mr. Masood Rasoulian

COST-PLUS-TIME BIDDING PROCEDURE (A + B METHOD)(08/06): The 2006 Standard Specifications and Supplemental Specifications, as amended elsewhere herein, are further amended as follows:

**General.** The process for bidding and the award of this project will take into account not only the contract amount bid but also the bidder's stated contract time in which the project will be completed to final acceptance. This method will only be used to determine the successful bidder. It will not be used to determine the award amount nor final payment to the contractor.

**Definition of Terms.** For this project the following definitions apply:

- (a) Calendar Day Refer to Subsection 101.03.
- (b) Contract Amount The summation of the products of the quantities shown in the Schedule of Items multiplied by the unit bid prices.
- (c) Contract Time The number of calendar days stated in the successful bidders proposal to complete the project to final acceptance as adjusted by authorized extensions.
- (d) Daily Road User Cost The amount which represents the average daily cost of interference and inconvenience to the road user. The Department has assigned a daily road user cost of \$15,000 per calendar day for this project.
- (e) Final Acceptance Refer to Subsection 105.17(b).

**Preparation of Proposal.** In addition to all other bidding requirements of the project specifications, the bidder shall state his required completion time in the space provided on the "CONTRACT TIME" form contained elsewhere herein. The proposed completion time shall be based on the construction phases shown in the plans in their respective order and will be a factor used in considering bids for award. The stated number of calendar days required for completion will be the contract time for this project should the bidder be successful. The total number of days stated by the bidder to complete the project shall not exceed the maximum allowable contract time stated on the "CONTRACT TIME" form contained elsewhere herein. Bids not including a contract time, or showing time to completion in excess of the maximum amount will be considered irregular and will be rejected.

**Consideration of Bids.** After bids are opened and read, they will be compared based on the Total Bid Amount as determined by the following formula. In case of equal total bid amounts between qualified bidders, award will be made to the bidder proposing the lowest contract time.

Total Bid Amount = A + B

Where:

A =the contract amount as defined herein.

B = the product of the number of calendar days of contract time stated by the

bidder and the daily road user cost contained herein.

Conditional Notice to Proceed/Notice to Proceed. If this A + B project is awarded during the months of September, October or November, the Department will consider issuing a Conditional Notice to Proceed with an expiration date of March 1 of the following calendar year, whereupon a Notice to Proceed will become effective. Such request for delay from the contractor shall be in writing with justification for the delay. If a Conditional Notice to Proceed is issued then any assembly period, as provided in the special provision "Contract Time", is negated.

Late Completion. Should the contractor fail to complete the project to final acceptance prior to expiration of the contract time, stipulated damages will be charged an amount equal to the daily road user cost stated herein.

**LANE CLOSURE RESTRICTIONS:** All lanes shall remain open to traffic and no work shall be performed except during the times when lane closures are allowed unless otherwise approved by the Project Engineer. Lane closures shall only be allowed while work is being performed.

One lane closure in each direction will be allowed during the following times:

Sunday 8:30 PM – 5:30 AM Monday Monday 8:30 PM – 5:30 AM Tuesday Tuesday 8:30 PM – 5:30 AM Wednesday Wednesday 8:30 PM – 5:30 AM Thursday Thursday 8:30 PM – 5:30 AM Friday Friday 10 PM – 8 AM Saturday Saturday 10 PM – 8 AM Sunday

Two Lane Closures will only be allowed from 10:00 PM Saturday to 8:00 AM Sunday. Total closure will be allowed in one direction during a one hour period from 1:00 AM to 8:00 AM on Sundays. The road may remain closed for only 1 hour increments. After the 1 hour period, the queue should be cleared out before the road can be closed for another 1 hour period. Complete closure of the bridge shall be allowed during 1:00 AM to 8:00 AM on Sundays for the truss installation only.

No lane closures will be allowed during holidays, including the Friday before a holiday or the Monday after a holiday; LSU home game days and major festivals as determined by the Project Engineer.

**DETERMINATION AND EXTENSION OF CONTRACT TIME (12/08):** Subsection 108.07, Determination and Extension of Contract Time, is amended to include the following.

The contractor shall document for each month of scheduled construction, the occurrence of adverse weather conditions having an impact on controlling items of work. An adverse weather day is a previously scheduled or normally scheduled work day on which rainfall, wet conditions or cold weather will prevent construction operations on the controlling work activity from proceeding for at least 5 continuous hours of the day or 65 percent of the normal work day, whichever is greater, with the normal working force engaged in performing the controlling item of work. If the contractor submits a written request for additional contract time due to adverse weather conditions, the contractor's request will be considered only after the Department agrees with the days and then only for adverse weather days in excess of the allowable number of days per month stated below. Adverse weather days will be documented by the Engineer and agreed upon monthly. Adverse weather days will be prorated for partial months when a work order or final inspection is issued other than the first or last of the month and agreed to by the Department. If the contractor is being considered for disqualification by the Department, an equitable adjustment in contract time may be made at the end of the original contract period, including all days added by approved change orders. Contract time will be adjusted by comparing the actual number of adverse weather days to the statistical number of adverse weather days over the specific time period per the table below. The resulting number of adverse weather days will be multiplied by 1.45 to convert to calendar days. Adjustments for adverse weather cannot result in a contract time reduction. Once adjusted, a new adverse weather day accounting will begin using the adverse weather conditions having an impact on the controlling items of work, in excess of the allowable number of days per month stated below. A second and final contract time adjustment will then be done at the final acceptance of the project. An adjustment in the contract time due to adverse weather will not be cause for an adjustment in the contract amount. There will be no direct or indirect cost reimbursement for excess adverse weather days.

The following are anticipated adverse weather days that the contractor shall include in each month of his calendar day construction schedule.

January	10 days	May	5 days	September	4 days
February	9 days	June	6 days	October	3 days
March	8 days	July	6 days	November	7 days
April	7 days	August	5 days	December	7 days

## ITEM S-120-D, EPOXY-URETHANE COPOLYMER OVERLAY SYSTEM

**Description:** This item specification is not intended to alter the manufacturer's product specifications, provided the product conforms to this specification.

This item includes a crack filling and repairing overlay consisting of an optional Pre-treatment and two (2) layers of hybrid polymer systems with a special blend of extremely hard aggregate designed to provide a 3/8 inch thick application for the purpose of crack treatment, complete waterproofing, and providing a non-skid surface. This specification is intended for use on concrete bridge decks.

The overlay system shall be formulated and applied to withstand continuous heavy traffic, extreme changes in weather conditions, and deformations due to structure loading and temperature changes.

For this specification, the term "copolymer" refers to the chemical combination of epoxy and urethane molecules that results in a flexible overlay system with no added flexibilizers.

#### Materials:

(a) Pre-treatment (Optional): When required by the Epoxy-Urethane Copolymer Overlay system manufacturer to provide the required crack treatment described above, a Pre-treatment shall be applied consisting of a two part hybrid polymer free of any fillers or volatile solvents and formulated to provide a simple volumetric mixing ratio of two components such as one to one or two to one by volume.

This hybrid polymer pretreatment shall be formulated to provide a unique combination of **low viscosity** and **low surface tension** coupled with a built-in affinity for concrete and steel to effectively fill and repair cracks and enhance bonding of the overlay system to the concrete deck.

Physical Requirements of Cured Pre-treatment: When Components A and B are mixed in the appropriate ratio, the cured resin shall conform to the requirements of Table 1. Test methods are discussed later in this specification.

TABLE 1	
PHYSICAL PROPERTIES OF THE CUF	RED SYSTEM
Property	Value
Compressive Strength, min. psi	5000
Tensile Strength, min. psi	2500
Tensile Elongation, percent, min.	25 <sup>±</sup> 5
Water Absorption, percent by wt. max.	0.5%
Shore D Hardness, 25°C (77°F)	70 <sup>±</sup> 5
Gel Time, minutes	30-50
Adhesion to Concrete	100% failure in concrete
Percent Solids	100

**(b) Overlay (Two Layers):** This two-part Epoxy-Urethane Copolymer system shall be free of any fillers or volatile solvents and shall be formulated to provide a simple volumetric mixing ratio of two components such as one to one or two to one by volume.

The Epoxy-Urethane Copolymer system shall be formulated to provide flexibility in the system without any sacrifice of the hardness, chemical resistance or strength of the Epoxy-Urethane Copolymer system. Use of external/conventional flexibilizers is not acceptable. Flexibility shall be introduced by interaction of elastomers

to chemically link in the process of curing so that the flexibility of the molecule is least affected during the low temperature conditions that are confronted in actual use. When the optional Pre-treatment is not used, the Overlay material shall be of low viscosity and low surface tension as needed to provide the crack treatment described above.

Physical requirements of Epoxy-Urethane Copolymer Overlay: When Components A and B are mixed in the appropriate ratio, the cured resin shall conform to the requirements of Table 2. Test methods are discussed later in this specification.

TABLE 2	
PHYSICAL PROPERTIES OF THE CUI	RED SYSTEM
Property	Value
Compressive Strength, min. psi	6000
Tensile Strength, min. psi	2000
Tensile Elongation, percent, min.	30 ± 10
Water Absorption, percent by wt. max.	0.5%
Shore D Hardness, 25°C (77°F), min.	70 <sup>±</sup> 5
Gel Time, minutes	20 – 30
Abrasion Resistance, mg., max.	85
Adhesion to Concrete	100% failure in concrete
Flexural Yield Strength, min. psi	5000
Percent Solids	100

Load Bearing Capabilities of Overlay System: The cured epoxy-urethane system shall exhibit the following load bearing capacity. At approximately 20% strain, the polymer shall retain at least 85% of its original load bearing strength (tensile stress) as per ASTM D-638.

**Pre-treatment and Overlay Compatibility:** The Pre-treatment and Overlay system shall be of compatible materials produced, supplied and certified by the same manufacturer.

(c) Aggregate: Aggregate shall be non-friable, non-polishing, clean and free from surface moisture. The aggregate shall be durable and sound and have a proven record of performance in applications of this type. The aggregate shall be 100 percent fractured, thoroughly washed and kiln dried. The fracture requirements shall be at least one mechanically fractured face and will apply to materials retained on U.S. No. 10 sieve. Aggregate properties shall conform to the properties of Table 3 and Table 4. Test methods are discussed later in this specification.

TABLE 3	
AGGREGATE PROPERTIES	
Property	Value
Moisture Content, max.	0.2 % by weight
Mohs Hardness, min.	6.5
Soundness Loss, 5 cycles in Magnesium Sulfate, max.	8%
Micro-Deval, max.	10%

TABLE 4	
AGGREGATE GRADATION	
Sieve Size	Percent Passing
No 6	60 – 100
No. 10	0-20
No. 20	0 – 10

**Testing:** Tests shall be conducted in accordance with the following methods:

- (a) Compressive Strength: ASTM C 109, Compressive Strength of Hydraulic Cement Mortars. The two components of the resin are to be thoroughly mixed in their appropriate ratios. Two volumes of graded silica sand in accordance with ASTM C 778 shall be added to one volume of mixed resin. The samples shall then be prepared according to the requirements of ASTM C 109 and allowed to cure for 7 days at 23 + 2°C.
- (b) Tensile Strength and Elongation: ASTM D 638, Tensile Properties of Plastics, Specimen Type I or Type II. Samples shall be cured at  $23 \pm 2$ °C ( $73.4 \pm 3.6$ °F) and  $50 \pm 5$ % relative humidity. Speed of testing shall be at 0.5 in./min.
  - (c) Water Absorption: ASTM D 570, Water Absorption of Plastics with the following modifications:
  - (1) The test specimen shall have the following dimensions: Diameter = 3.125 inch; Depth = 0.5 inch
  - (2) The test specimen shall be cured at  $23 \pm 2^{\circ}$ C (73.4  $\pm$  3.6°F) and  $50 \pm 5$ % relative humidity.
- (d) Shore D Hardness: ASTM D 2240, *Rubber Property Durometer Hardness*. The test specimen shall be prepared in accordance with ASTM D 570 (water absorption test) with the following modifications:
  - (1) The test specimen shall have the following dimensions: Diameter = 3.125 inch; Depth = 0.5 inch
  - (2) The test specimen shall be cured at  $23 \pm 2$  °C (73.4  $\pm$  3.6°F) and  $50 \pm 5$ % relative humidity.
- (e) Gel Time: ASTM C 881, Section 11.2 Test Method to Determine the Gel Time of an Epoxy Resin System. Test shall be conducted under the following conditions:

Sample Size:

60 g to 100 g

Sample Mixing Ratio:

Use either 1:1 or 2:1 for Part A to Part B

Temperature:

 $73 \pm 2^{\circ} F (23 \pm 1^{\circ} C) (Class C)$ 

Relative Humidity:

50 + 5%

- (f) Abrasion Resistance: ASTM C 501, Test Method for Relative Resistance to Wear of Unglazed Ceramic Tile by the Taber Abrader. Tests shall be done using a CS-17 wheel and a 1,000 gram load for 1,000 cycles.
  - (g) Adhesion to Concrete: ACI-503-R; Pull-out Test.

(h) Flexural Yield Strength: ASTM D 790.

(i) Soundness Loss: AASHTO T104

(j) Micro-Deval: AASHTO TP58

(k) Moisture Content: AASHTO T255 or ASTM C 566

**System Quality Submittals:** The Epoxy-Urethane Copolymer Overlay system manufacturer shall provide the following submittals:

- (a) Past Performance Submittal: Prior to issuance of Notice to Proceed, the selected Epoxy-Urethane Copolymer Overlay system manufacturer shall submit records demonstrating verifiable satisfactory performance under average daily traffic of at least ten thousand (10,000) for both of the following conditions:
  - (1) at least ten (10) years on at least three (3) bridges in any state
  - (2) at least five (5) years on at least one (1) bridge located in any of the following states: Alabama, Florida, Georgia, Louisiana, Mississippi, or Texas
- **(b) Independent Lab Performance Submittals:** Prior to issuance of Notice to Proceed, the Epoxy-Urethane Copolymer Overlay system manufacturer shall submit documentation showing verification by a nationally recognized independent testing laboratory that the overlay material:
  - (1) Has the capability of preventing the ingress of essentially all the chloride ions into the concrete at 1" depth when tested according to NCHRP-244 method.
  - (2) Has the capability to de-activate the existing chloride ions present in the concrete specimen so that the corrosion of steel rebars embedded in the concrete stop corroding.
  - (3) Fully complies with the test results from the above testing requirements and specified values in Tables 1, 2, 3 and 4 for the individual components and cured system. Subsequently, this certification shall be provided on each lot number to be used on the project.
- (c) Certification for Compliance: At the pre-construction conference, the contractor shall notify the Project Engineer of the source of material.
- (d) Infrared Spectrograph: Prior to issuance of Notice to Proceed, the manufacturer shall furnish an infrared spectra of the Epoxy-Urethane Copolymer liquid material for its permanent record and for individual installation verification. Subsequently, infrared spectra of each liquid component from each lot number (to be used on the project) shall be submitted with the independent lab certification.

- (e) Test Sample for LA DOTD Laboratory: The manufacturer shall furnish a one-quart sample of each component from each lot to the LA DOTD laboratory to verify material supplied by the manufacturer.
- (f) Performance Guarantee Submittal: Prior to Final Acceptance of work, the Epoxy-Urethane Copolymer manufacturer shall submit a Warranty Letter to the LA DOTD Project Engineer stating that the Epoxy-Urethane Copolymer manufacturer guarantees the wearing surface against all failures incurred during normal traffic use for a period of ten (10) years. "Failures" as referred to herein includes the following:
  - (1) Any delaminations
  - (2) Excessive loss of aggregate
  - (3) Skid resistance less than 40 as measured by AASHTO T 242

The guarantee period shall commence on the date of acceptance of the work, typically the date traffic is allowed on the final layer of the overlay. The guarantee covers all labor and materials required to satisfactorily repair or replace the wearing surface, including traffic control.

The **Warranty Letter** shall contain the State Project Number, State Project Name, Route Number, and Parish and be dated and signed by an official representative of the Epoxy-Urethane Copolymer manufacturer.

Should the manufacturer not satisfactorily complete any resulting warranty work, the manufacturer shall not be allowed to bid work in the State of Louisiana until such warranty work is completed and accepted.

# Storage and Handling:

- (a) Packing: All materials shall be packaged in strong, substantial containers. Liquid containers shall be identified as Part A and Part B and shall be plainly marked with the name and address of the manufacturer, name of the product, mixing proportions and instructions, lot and batch numbers, date of manufacture, and quantity contained therein.
- (b) Liquid Material Storage: All liquid material shall be transported and stored in their original containers or application machine tanks. Liquid materials shall be transported and stored under dry, temperature controlled conditions and maintained at a minimum temperature of 60°F and not to exceed 90°F.
- (c) Liquid Material Handling: Protective gloves, clothing, and goggles shall be worn by workers and inspectors directly exposed to the material. Product safety data sheets shall be provided to all workers and inspectors as obtained from the manufacturer.
- (d) Aggregate: All aggregate shall be stored in a dry, moisture-free atmosphere. The aggregate shall be fully protected from any contaminants on the jobsite and shall be stored so as not to be exposed to rain or other moisture sources.

### **Construction Requirements:**

- (a) Surface Preparation: All surfaces to receive the Epoxy-Urethane Copolymer Overlay System are to be patched, cleaned and otherwise prepared as follows:
  - (1) Deck Patching: All patching materials shall be free of Magnesium Phosphate.

All concrete patching shall be of materials which are compatible with the overlay system and approved by the overlay manufacturer and the LA DOTD Project Engineer. All concrete patching shall be scheduled to allow the required curing time with respect to the patching material cure time requirements and compatibility with the overlay system as to not adversely affect the overlay system quality and performance.

(2) Shot Blasting: The entire concrete deck shall be cleaned by shot blasting in accordance with International Concrete Repair Institute (ICRI) Surface Preparation Level 5-7, or ASTM E 965 Pavement Macro-texture Depth of 1.0 mm to 2.0 mm. Shot blasting shall remove any oil, dirt, rubber or any other potentially detrimental material such as curing compound and laitance which, in the manufacturer and LA DOTD Project Engineer's opinion, would prevent proper bonding to and curing of the overlay system. A representative of the overlay system manufacturer shall be present on site to observe the shot blasting operation and shall assist the LA DOTD Project Engineer in inspecting the finished surface.

In areas not able to be reached by the shot blasting equipment (i.e., along curbs and median walls) or areas that cannot be removed (line marking, asphalt, etc.), sandblasting and walk-behind grinders are permitted to an extent satisfactory to the manufacturer and LA DOTD Project Engineer. This should be performed prior to the shot blasting whenever applicable and practical.

For **asphalt surfaces**, the asphalt deck shall be thoroughly power washed to remove any oil, dirt, rubber or any other potentially detrimental material which, in the manufacturer and engineer's opinion, would prevent proper bonding to and curing of the material. This should be done not more than 24 hours prior to application unless otherwise approved by the manufacturer.

Steel surfaces such as expansion joints, sidewalks, steel grids and steel plate to receive the Epoxy-Urethane Copolymer Overlay system, shall be shot or sand blasted clean to SSPC-SP-6 standards. For steel plate decks, consult overlay manufacturer for appropriate specification.

The overlay application equipment is allowed to drive on the deck surface during application provided precautions have been taken to insure that the deck surface will not become contaminated. For any reason traffic is to be allowed on the deck after surface preparation, or between layers, a visual inspection by the manufacturer and the Project Engineer will be required to determine if additional surface preparation is needed before applying material.

All surfaces to be treated shall be dry at the time of application. Immediately before the application of any liquids, all prepared surfaces shall be cleaned with compressed air (or vacuumed) to remove dust and debris.

The application of the system shall not be made under the following conditions:

- (1) Earlier than 24 hours after rain has occurred
- (2) When the forecast for rain is greater than 50% within eight hours after application
- (3) As per manufacturer's instructions

Fog and high humidity will not impede the application of or affect the performance of the overlay. If waiting for 24 hours is impractical, then the moisture content in the concrete substrate shall not exceed 4.5% when measured by an electronic moisture meter. Any exception shall be determined by the moisture content present in the deck which shall not exceed 75% of air entrainment in the mix design.

The minimum recommended temperature in which the system shall be applied is 50°F and rising. All applications at temperatures below 50°F shall require prior written approval from the manufacturer.

(b) Application of the Pre-treatment (optional) and Overlay System: The manufacturer of the Epoxy-Urethane Copolymer material shall have a company representative on the jobsite at all times who, upon consultation with the Project Engineer, may suspend any item of work that is suspect and does not meet the requirements of this specification. Resumption of work will occur only after the manufacturer's representative and the Project Engineer are satisfied that appropriate remedial action has been taken by the contractor.

Workers shall wear all required safety clothing and any special application boots or shoes as required by the manufacturer.

The Pre-treatment (optional) and Overlay shall be applied on all deck areas using metering, mixing and distribution machinery owned and operated by the manufacturer of the epoxy-urethane copolymer material. Hand mixing of material is not permitted.

The application machine shall feature positive displacement volumetric metering pumps controlled by a hydraulic power unit. Components A and B shall be stored in temperature controlled reservoirs capable of maintaining consistent temperature to ensure optimum mixing. Ratio check verification at the pump outlets as well as cycle counting capabilities to monitor output will be standard features. In line mixing shall be motionless so as to not overly shear the material or entrap air in the mix. The machine shall also make maximum use of the working time of the material to insure proper "wetting" of the system by mixing it immediately prior to dispensing onto the deck.

The application rates of the liquid in each layer shall be as recommended by the manufacturer in order to achieve the required 3/8 inch overlay thickness.

# (1) Application of Pre-treatment Liquid (Optional):

After mechanically measuring and mixing the components, the liquid shall be evenly distributed on the clean, dry deck surface at the rate/process recommended by the manufacturer. The overlay application equipment may drive on this layer (prior to being cured) when applying the overlay system.

If the overlay application is going to be applied 6-8 hours <u>after</u> application of the pre-treatment, a medium size coarse silica sand shall be broadcasted evenly into the pre-treatment system (prior to it curing) as directed by the manufacturer.

Measures shall be taken to prevent Pre-treatment liquid from entering into lanes of traffic being maintained on the bridge.

# (2) Application of Overlay and Aggregate (Two Layers):

Prior to the application of liquid resin, all loose aggregate, including any loose aggregate from previous coats, shall be completely removed by vacuum or with compressed air. After mixing of the components via the mechanical application equipment, the liquid shall be evenly distributed on the clean, dry deck surface at the rate recommended by the manufacturer.

After the application of the liquid in each layer of overlay, the maximum time allowed before broadcasting of the aggregate is as follows:

Ambient Temperature	Maximum Time to Broadcast Aggregate
Above 90° F	10 minutes
80° F to 90° F	15 minutes
70° F to 80° F	20 minutes
60° F to 70° F	25 minutes
50° F to 60° F	35 minutes

# No vehicle shall be allowed on the overlay during the curing period.

Broadcasting on decks shall be performed by spreader capable of dispensing the dry aggregate onto the deck in a uniform and accurate manner as directed or otherwise approved by the manufacturer of the Epoxy-Urethane Copolymer overlay.

Aggregate conforming to this specification shall be broadcast to saturation in each layer of Epoxy-urethane copolymer liquid resin before the copolymer begins to gel so that the surface is covered and no wet spots appear. The aggregate must be broadcast in such a manner that the level of the liquid is not disturbed.

Measures shall be taken to prevent liquid from entering or aggregate from being broadcast into lanes of traffic being maintained on the bridge.

After the overlay has hardened, removal of all loose and excess aggregate with a power vacuum or other method shall be made prior to the application of subsequent coats.

Joints in the Overlay (i.e., between two adjacent lanes) shall be staggered and overlapped between successive coats so that no ridges will appear.

**Traffic may be allowed** on the final layer (or in between layers) <u>after</u> the resin has cured (as determined by the manufacturer) and after removal of all excess, loose aggregate.

# **Construction Acceptance:**

(a) Thickness Verification: The Project Engineer shall be notified of the number of gallons used on the project with two notarized statements - one from the contractor and one from the manufacturer. In addition, the contractor shall verify to the Department that the overlay thickness meets the requirements of the project plans and specifications by either a volumetric method or by core sampling at areas determined by the plans, specifications or random locations as directed by the Project Engineer.

Areas deemed by the Department to be of unacceptable thickness shall be re-coated as described above and re-verified until the required minimum thickness is reached as part of this item. This verification may consist of cores, holes, etc., but in all cases, any destructively tested areas shall be repaired by the contractor before final acceptance by the Department as part of this item.

**(b) Drainage Verification:** Following final installation and curing of the overlay system, the Contractor shall saturate the application area with water to investigate for ponding. Areas deemed by the Project Engineer to exhibit ponding shall be re-coated as described above and re-verified until no ponding occurs as part of this item.

**Measurement:** This item, completed and accepted, will be measured for payment per square foot, and will include all materials, testing, labor, equipment, tools, and the performance of all work necessary to complete the item.

**Payment:** Payment for Epoxy-Urethane Copolymer Overlay System will be made at the contract unit price under:

Item No. S-120-D **Pay Item** 

Pay Unit

Epoxy-Urethane Copolymer Overlay System

Square Yard

**CONTRACT TIME (03/05):** The entire contract shall be completed in all details and ready for final acceptance in accordance with Subsection 105.17(b) within the time specified by the contractor, which shall not exceed the maximum allowable contract time stated on the "Contract Time" form contained elsewhere herein.

Prior to assessment of contract time, the contractor will be allowed 90 calendar days from the date stipulated in the Notice to Proceed to commence with portions of the contract work including but not limited to assembly periods, preparatory work for materials fabrications such as test piles, or other activities which hinder progress in the beginning stages of construction. Prior to issuance of the Notice to Proceed, the Department will consider extending the assembly period, upon written request from the contractor justifying the need for additional time.

The contractor shall be responsible for maintenance of traffic from the beginning of the assembly period. During the assembly period, the contractor will be allowed to do patching and other maintenance work necessary to maintain the roadway with no time charges when approved by the engineer.

If the contractor begins regular construction operations prior to expiration of the assembly period, the assessment of contract time will commence at the time construction operations are begun.

The contractor is directed to the special provisions and the plans for any restrictions that may affect work schedules.

# CONTRACT TIME FORM COST-PLUS-TIME BIDDING PROCEDURE (A + B) METHOD

STATE PROJECT NO(S).	450-08-0051, 450-09-0025, 450-09-0026 and 450-10-0140
FEDERAL AID PROJECT NO(S).	6104(502)
NAME OF PROJECT	PORT ALLEN – BATON ROUGE (LA 1 – WASHINGTON ST. OVERPASS)
ROUTE	I-10
PARISH	EAST BATON ROUGE and WEST BATON ROUGE

#### CONTRACT TIME

The bidder shall determine the number of calendar days required for completion and final acceptance of the project and shall state this required time, in words, in the space provided below. The maximum allowable contract time for this project is **two hundred eighty (280) calendar days**. The proposed completion time will be a factor used in considering bids for award of contract in accordance with the special provision, COST-PLUS-TIME BIDDING PROCEDURE (A+B METHOD). The stated number of calendar days required for completion will be the contract time for this project should the bidder be successful. Bids not including a contract time, or showing contract time in excess of the maximum allowable amount, will be considered irregular and will be rejected.

	(Calen	CONTRACT lar Days To Com	`TIME pletion, In Words)	
			***************************************	Calendar Days
<u></u>				

Form CS-01 A + B 12/04

#### CONSTRUCTION PROPOSAL SIGNATURE AND EXECUTION FORM

THIS FORM, THE SCHEDULE OF ITEMS, AND THE PROPOSAL GUARANTY MUST BE COMPLETED AS INDICATED AND SUBMITTED TO THE LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT (DOTD) TO CONSTITUTE A VALID BID

STATE PROJECT NOS.	450-08-0051, 450-09-0025, 450-09-0026 & 450-10-0140		
FEDERAL AID PROJECT NO.	6104(502)		
NAME OF PROJECT	PORT ALLEN – BATON ROUGE (LA 1 – WASHINGTON STREET OVERPASS)		

I (WE) HEREBY CERTIFY THAT I (WE) HAVE CAREFULLY EXAMINED THE PROPOSAL, PLANS AND SPECIFICATIONS, INCLUDING ANY AND ALL ADDENDA, AND THE SITE OF THE ABOVE PROJECT AND AM (ARE) FULLY COGNIZANT OF ALL PROPOSAL DOCUMENTS, THE MASTER COPY OF WHICH IS ON FILE AT DOTD HEADQUARTERS IN BATON ROUGE, LA., AND ALL WORK, MATERIALS AND LABOR REQUIRED THEREIN, AND AGREE TO PERFORM ALL WORK, AND SUPPLY ALL NECESSARY MATERIALS AND LABOR REQUIRED FOR SUCCESSFUL AND TIMELY COMPLETION OF THE ABOVE PROJECT AND TO ACCEPT THE SUMMATION OF THE PRODUCTS OF THE UNIT PRICES BID ON THE SCHEDULE OF ITEMS ATTACHED HERETO AND MADE A PART HEREOF MULTIPLIED BY THE ACTUAL QUANTITY OF UNIT OF MEASURE PERFORMED FOR EACH ITEM, AS AUDITED BY DOTD, AS FULL AND FINAL PAYMENT FOR ALL WORK, LABOR AND MATERIALS NECESSARY TO COMPLETE THE ABOVE PROJECT, SUBJECT TO INCREASE ONLY FOR PLAN CHANGES (CHANGE ORDERS) APPROVED BY THE DOTD CHIEF ENGINEER OR HIS DESIGNEE. THIS BID IS SUBMITTED IN ACCORDANCE WITH THE GENERAL BIDDING REQUIREMENTS IN THE CONSTRUCTION PROPOSAL AND ALL SPECIAL PROVISIONS, PLANS, SUPPLEMENTAL SPECIFICATIONS, AND THE LOUISIANA STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES (2006 EDITION). I (WE) UNDERSTAND THAT THE SUMMATION OF THE PRODUCTS OF THE UNIT PRICES BID ON THE SCHEDULE OF ITEMS MULTIPLIED BY THE ESTIMATED QUANTITY OF UNIT OF MEASURE FOR EACH ITEM, ALONG WITH ANY OTHER FACTORS SPECIFIED TO BE APPLICABLE SUCH AS CONSTRUCTION TIME AND/OR LANE RENTAL, SHALL BE THE BASIS FOR THE COMPARISON OF BIDS. I (WE) UNDERSTAND THAT THE SCHEDULE OF ITEMS MUST CONTAIN UNIT PRICES WRITTEN OUT IN WORDS AND THAT THE SCHEDULE OF ITEMS SUBMITTED AS PART OF THIS BID IS ON THE FORM SUPPLIED BY DOTD IN THE BID PROPOSAL, MY (OUR) PROPOSAL GUARANTY IN THE AMOUNT SPECIFIED FOR THE PROJECT IS ATTACHED HERETO AS EVIDENCE OF MY (OUR) GOOD FAITH TO BE FORFEITED IF THIS BID IS ACCEPTED BY DOTD AND I (WE) FAIL TO COMPLY WITH ANY REQUIREMENT NECESSARY FOR AWARD AND EXECUTION OF THE CONTRACT, AS WELL AS, SIGN AND DELIVER THE CONTRACT AND PAYMENT/PERFORMANCE/RETAINAGE BOND AS REQUIRED IN THE SPECIFICATIONS.

#### NONCOLLUSION DECLARATION (APPLICABLE TO FEDERAL-AID PROJECTS)

I (WE) DECLARE UNDER PENALTY OF PERJURY UNDER THE LAWS OF THE UNITED STATES AND THE STATE OF LOUISIANA THAT I (WE) HAVE NOT DIRECTLY OR INDIRECTLY, ENTERED INTO ANY AGREEMENT, PARTICIPATED IN ANY COLLUSION, OR OTHERWISE TAKEN ANY ACTION IN RESTRAINT OF FREE COMPETITIVE BIDDING IN CONNECTION WITH THE CONTRACT FOR THIS PROJECT NOR VIOLATED LA. R.S. 48:254.

#### BIDDER'S DBE GOAL STATEMENT (APPLICABLE TO DBE GOAL PROJECTS)

IF THIS PROJECT IS DESIGNATED BY SPECIAL PROVISION AS A DISADVANTAGED BUSINESS ENTERPRISE (DBE) GOAL PROJECT IN ACCORDANCE WITH THE DBE PROVISIONS OF THIS CONTRACT, THE BIDDER ASSURES DOTD THAT HE/SHE WILL MEET OR EXCEED THE DBE CONTRACT GOAL, OR IF THE BIDDER CANNOT MEET THE REQUIRED DBE GOAL, THE BIDDER ASSURES DOTD THAT HE/SHE HAS MADE AND CAN DOCUMENT GOOD FAITH EFFORTS MADE TOWARDS MEETING THE GOAL REQUIREMENT IN ACCORDANCE WITH THE CONTRACT AND DBE PROGRAM MANUAL INCORPORATED HEREIN BY REFERENCE.

THE APPARENT LOW BIDDER SHALL COMPLETE AND SUBMIT TO THE DOTD COMPLIANCE PROGRAMS OFFICE, FORM CS-6AAA AND ATTACHMENT(S) AND, IF NECESSARY, DOCUMENTATION OF GOOD FAITH EFFORTS MADE BY THE BIDDER TOWARD MEETING THE GOAL, WITHIN TEN BUSINESS DAYS AFTER THE OPENING OF BIDS FOR THIS PROJECT. RESPONSIVENESS OF INFORMATION SUPPLIED IN THIS SECTION OF THIS CONSTRUCTION PROPOSAL SIGNATURE AND EXECUTION FORM IS GOVERNED BY THE DBE REQUIREMENTS INCLUDED WITHIN THE SPECIFICATIONS AND DBE PROGRAM MANUAL.

# CERTIFICATION OF EMPLOYMENT OF LOUISIANA RESIDENTS TRANSPORTATION INFRASTRUCTURE MODEL FOR ECONOMIC DEVELOPMENT (TIME) PROJECTS (APPLICABLE TO TIME PROJECTS)

IF THIS PROJECT IS DESIGNATED BY SPECIAL PROVISION AS A TRANSPORTATION INFRASTRUCTURE MODEL FOR ECONOMIC DEVELOPMENT (TIME) PROJECT AS DEFINED IN ACT NO. 16 OF THE 1989 FIRST EXTRAORDINARY SESSION OF THE LEGISLATURE WHICH ENACTED PART V OF CHAPTER 7 OF SUBTITLE II OF TITLE 47 OF THE LOUISIANA REVISED STATUTES OF 1950, COMPRISED OF R.S. 47:820.1 THROUGH 820.6.

THE BIDDER CERTIFIES THAT AT LEAST 80 PERCENT OF THE EMPLOYEES EMPLOYED ON THIS TIME PROJECT WILL BE LOUISIANA RESIDENTS IN ACCORDANCE WITH LOUISIANA R.S. 47:820.3.

# NON PARTICIPATION IN PAYMENT ADJUSTMENT (ASPHALT CEMENT AND FUELS) STATEMENT

IF THIS PROJECT IS DESIGNATED BY SPECIAL PROVISION AS BEING SUBJECT TO PAYMENT ADJUSTMENT FOR ASPHALT CEMENT AND/OR FUELS, THE BIDDER HAS THE OPTION OF REQUESTING EXCLUSION FROM SAID PAYMENT ADJUSTMENT PROVISIONS THAT ARE ESTABLISHED BY SPECIAL PROVISION ELSEWHERE HEREIN.

IF THE BIDDER DESIRES TO BE EXCLUDED FROM THESE PAYMENT ADJUSTMENT PROVISIONS,

THE BIDDER IS REQUIRED TO MARK HERE

FAILURE TO MARK THIS BOX PRIOR TO BID OPENING WILL CONSTITUTE FORFEITURE OF THE BIDDER'S OPTION TO REQUEST EXCLUSION.

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# BIDDER SIGNATURE REQUIREMENTS (APPLICABLE TO ALL PROJECTS)

THIS BID FOR THE CAPTIONED PROJECT IS SUBMITTED BY: Name of Principal (Individual, Firm, Corporation, or Joint Venture) If Joint Venture, Name of First Partner If Joint Venture, Name of Second Partner (Louisiana Contractor's License Number of Bidder or First Partner to (Louisiana Contractor's License Number of Second Partner to Joint Joint Venture) Venture) (Business Street Address) (Business Street Address) (Business Mailing Address, if different) (Business Mailing Address, if different) (Area Code and Telephone Number of Business) (Area Code and Telephone Number of Business) (Telephone Number and Name of Contact Person) (Telephone Number and Name of Contact Person) (Telecopier Number, if any) (Telecopier Number, if any) ACTING ON BEHALF OF THE BIDDER, THIS IS TO ATTEST THAT THE UNDERSIGNED DULY AUTHORIZED REPRESENTATIVE OF THE ABOVE CAPTIONED FIRM, CORPORATION OR BUSINESS, BY SUBMISSION OF THIS BID, AGREES AND CERTIFIES THE TRUTH AND ACCURACY OF ALL PROVISIONS OF THIS PROPOSAL, INCLUSIVE OF THE REQUIREMENTS, STATEMENTS, DECLARATIONS AND CERTIFICATIONS ABOVE AND IN THE SCHEDULE OF ITEMS AND PROPOSAL GUARANTY. EXECUTION AND SIGNATURE OF THIS FORM AND SUBMISSION OF THE SCHEDULE OF ITEMS AND PROPOSAL GUARANTY SHALL CONSTITUTE AN IRREVOCABLE AND LEGALLY BINDING OFFER BY THE BIDDER. (Signature) (Signature) (Printed Name) (Printed Name) (Title) (Title) (Date of Signature) (Date of Signature)

### CONTRACTOR'S INFORMATIONAL BID

It is agreed that the total bid(s) shown below, determined by the bidder, are for informational purposes only and that the low bidder for this project will be determined in accordance with the special provision entitled COST-PLUS-TIME-PLUS BIDDING PROCEDURE (A+B METHOD), as determined by the Department.

$A_l$ =Summation of products of the quantities shown in the Schedule of Items (BASE BID plus Replacing Drain Pipes With Steel Piping (ALTERNATE A1) multiplied by the unit prices.
$A_l$ =
OR
$A_2$ =Summation of products of the quantities shown in the Schedule of Items (BASE BID plus Replacing Drain Pipes With Fiberglass Piping (ALTERNATE A2) multiplied by the unit prices.
A <sub>2</sub> =
CONTRACTOR'S TOTAL ALTERNATE AI \$
CONTRACTOR'S TOTAL ALTERNATE A2 \$
CONTRACTOR'S SUBTOTAL ADDITIVE ALTERNATE D-I \$
CONTRACTOR'S TOTAL (BASE BID + SELECTED ALTERNATE + Additive Alternate D-1) \$
B = Bidders proposed contract time for Base Bid and Selected Alternate items and Additive Alternate D-1 multiplied by the Daily User Cost (\$15,000).
B=Calendar Days x \$ 15,000.
B=
Contractor's Total Bid = BASE BID + SELECTED ALTERNATE + Additive Alternate D-1 +B \$

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