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WILLIAM D. ANKNER, Ph.D.
SECRETARY

May 12, 2009

STATE PROJECT NO. 737-93-0055
FEDERAL AID PROJECT NO. 9308(502)
DISTRICT 03 BRIDGE DECK JOINT REPAIRS (BRPM)
ROUTES I-10 and US 90
ACADIA, ST. MARTIN, and ST. MARY PARISHES

SUBJECT: ADDENDUM NO. 1 (CONSTRUCTION PROPOSAL REVISION)

Gentlemen:

The following proposal revisions dated 05/12/09 on the captioned project for which bids will be received on Wednesday, May 27, 2009 have been posted on <http://www.dotd.la.gov/cgi-bin/construction.asp>.

1. Deleted the **Special Provisions** entitled:
 - a. Item NS-805-00002, Polymer Concrete for Portland Cement Concrete Repairs.
 - b. Item NS-805-00004, Joint Seal (Steel Reinforced Elastomeric).
 - c. Item NS-805-00005, Joint Sealing System (Performed Silicone).
1. Added the **Special Provisions** entitled: (5 pages)
 - a. NS Patching and/or Joint Repairs (Polymer Concrete) (03/09).
 - b. NS Joint Seal (steel Reinforced Elastomeric) (03/09)
 - c. NS Joint Sealing System (Preformed Silicone) (03/09).

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

cc: Mr. Brian Buckel
Mr. William Fontenot, Jr.
Mr. Jeffrey Faust
Mr. Danny Tullier
Mr. Eric Burges
Mr. Masood Rasouljan

NS PATCHING AND/OR JOINT REPAIRS (POLYMER CONCRETE)(03/09):

DESCRIPTION. This item consists of mixing, handling, preparing surfaces, placing and curing polymer concrete for the repair and restoration of portland cement concrete deck joint nosings and deck patching in accordance with the plans, the 2006 Louisiana Standard Specifications for Roads and Bridges, and as directed by the engineer.

MATERIALS. The polymer concrete material used for this item shall conform to the following specifications requirements:

(a) Aggregate: Kiln dried well-graded sand (70 percent passing Nos. 4-16 sieve, 20 percent passing No. 85 sieve, 10 percent passing No. 325 sieve) siliceous aggregate blend with shrinkage control additives. The aggregate shall be packaged in 0.5 cubic foot poly-lined paper bags.

(b) Resin: Polyester based resin in a 5 or 50-gallon container.

(c) Catalyst: 50 percent Methyl Ethyl Ketone Peroxide in Dimethyl Phthalate contained in a scribed (mark) pint or gallon container.

The mix ratio for the product shall be a 1:1:1 (1 mark catalyst: 1 gallon resin: 1 bag aggregate) mixture of the above items. The product shall conform to the following physical requirements.

Table 1
Physical Properties of Polymer Concrete

REQUIREMENT	ASTM SPECIFICATION	VALUE
Working time		12-20 minutes
Compressive Strength 2 hours Open to Traffic 24 hours 7 days	C579-82	2500 psi (17.2 MPa) 3000 psi (20.7 MPa) 7000-8000 psi (48.3-55.2 MPa) 12000 psi (82.7 MPa)
PCC Bond Strength	C882-78	3500 psi (24.1 MPa)
Flexural Strength	C580-74	3000 psi (20.7 MPa)
Linear Shrinkage	C531-81	.01% maximum
Coefficient of Thermal Expansion	C531-81	11×10^{-6} in/in/°F
Tensile Strength	C307-77	1200 psi (8.3 MPa)

d) Sampling: Sampling shall be in accordance with the Department's Materials Sampling Manual.

CONSTRUCTION REQUIREMENTS. Surface preparation shall be in accordance with Subsection 805.06(2) of the standard specifications and this special provision. The existing concrete deck surface shall be clean, dry, and free of loose concrete. The

concrete surface shall be primed with one layer of the same polyester resin used in the polymer concrete..

All existing embedded steel angles or metal end dams to be bonded with concrete shall be cleaned and blasted prior to application of primer adhesive and polymer concrete.

Materials used for forming new concrete joints where a seal will be placed, shall be in accordance with the joint seal manufacturer's recommendations.

WARRANTY. Manufacturer shall warrant the product performance for three years from final acceptance. Manufacturer shall be responsible for all costs associated with repair or replacement for the warranty period.

MEASUREMENT. Polymer concrete joint repair will be measured as plan quantity per linear foot (lin m), which includes furnishing all labor, materials, tools, equipment, and incidentals necessary to complete the work.. Polymer concrete patching will be measured by the square yard (sq m). Design quantities will be adjusted if the engineer makes changes to adjust to field conditions, if plan errors are proven, or if design changes are necessary.

PAYMENT. Payment for polymer concrete joint repairs will be made at the contract unit price per linear foot (ln m). Payment for polymer concrete patching will be made at the contract unit price per square yard (sq m).

Payment will be made under:

<u>Item No.</u>	<u>Pay Item</u>	<u>Pay Unit</u>
NS-805-00002 (Lin m)	Joint Repairs (Polymer Concrete)	Lin. Foot
NS-805-00003 (Sq M)	Patching (Polymer Concrete)	Square Yard

NS JOINT SEAL (STEEL REINFORCED ELASTOMERIC) (03/09):

DESCRIPTION. This item provides for the removal and replacement of damaged sections of steel reinforced elastomeric joint seals. It also requires that the contractor warrant the workmanship, materials, quality and performance of the steel reinforced elastomeric joint seals for a period of three (3) years. The work shall be in accordance with the plans, the 2006 Louisiana Standard Specifications for Roads and Bridges, these specifications, and the manufacturer's recommendations.

MATERIALS. Steel reinforced elastomeric joint seal shall be installed as shown on the plans. The replacement steel reinforced elastomeric joint seal shall match the existing joint seal as manufactured by Watson Bowman Acme Corporation or be an approved equal. Concrete adhesive anchors, if used, shall be in accordance with Subsection 1018.22 of the standard specifications and be an approved product listed in QPL 40.

CONSTRUCTION REQUIREMENTS. Where the joint seal is missing or damaged seals have been removed as required, the existing bolts shall be torch-cut and ground smooth and flush with the existing embedded angle. The embedded angle shall then be blast cleaned and all debris at the joint shall be removed. For partial joint seal replacements, the joint seal cross section shall match the existing and remaining joint seal cross section. For complete replacements, joint seals shall be replaced in-kind with a joint seal designed to fit the joint opening as recommended by the manufacturer. The new joint seal may be attached either by welding new studs to the embedded angle or by drilling new holes and using concrete adhesive anchors. The new bolt pattern shall stagger the original bolt pattern.

WARRANTY. Manufacturer shall warrant the product performance for three years from final acceptance. Manufacturer shall be responsible for all costs associated with repair or replacement for the warranty period.

MEASUREMENT. Steel Reinforced Elastomeric Joint Seal will be measured for payment per linear foot (lin m), which includes all materials, labor, equipment, tools, and incidentals necessary to complete the work. Design quantities may be adjusted by the engineer to facilitate sealing of joints.

PAYMENT. Payment for Preformed Elastomeric Joint Seal will be made at the contract unit price per linear foot (lin m)

Payment will be made under:

<u>Item No.</u>	<u>Pay Item</u>	<u>Pay Unit</u>
NS-805-00004 (Lin m)	Joint Seal (Steel Reinforced Elastomeric)	Linear Foot

NS JOINT SEALING SYSTEM (PREFORMED SILICONE) (03/09):

DESCRIPTION. This item consists of handling, testing, preparing surfaces, placing and bonding a preformed silicone joint seal with adhesive to concrete bridge deck joints as indicated in the plans.

MATERIALS. The preformed silicone joint seal used for this item shall conform to the following specifications:

Preformed Silicone Seal Property	ASTM Test Method	Value
Durometer (Shore A)	D 2240	55 +/- 5
Tensile Strength	D 412	550 psi. minimum
Elongation	D 412	250% minimum
Tear (die B)	D 624	80 ppi. minimum
Compression set at 350°F, 22 hrs	D 395	30% maximum
Operating Temperature Range		-60° F to +450° F
Specific Gravity		1.51

The locking adhesive shall be non-sag, high modulus silicone adhesive conforming to the following specifications:

Adhesive Property	Test Method	Value
Sag / Flow	ASTM C 639	3/16in. max.
Color	Visual	Black
Hardness	ASTM C 661	20-25
Tack free time	ASTM C 679	30 minutes max.
Cure through to 1/4 inch thickness	@75° F / 50% RH	5 minutes max.
Resistance to UV	ASTM C 793	No cracking, ozone chalking or degradation
Skim over time (tooling time)	@75° F / 50% RH	5 minutes max.
Peel adhesion to substrates	ASTM C 794	50 PLI

Any rips, tears, or bond failure will be cause for rejection.

CONSTRUCTION REQUIREMENTS. Surface preparation shall be in accordance with Subsection 805.12(c) of the standard specifications along with this special provision. Bond breaker residue shall be completely removed to the satisfaction of the engineer. Existing deck concrete or steel surfaces shall be clean, dry and free of all loose concrete prior to application of the adhesive. The joint seal dimensions shall be sized in

accordance with the plans. Materials used for forming new concrete joints where the seal is to be adhered shall be applied in accordance with the joint seal manufacturer's recommendations. The adhesive shall be applied in accordance with the manufacturer's specifications and all handling and installation shall follow the manufacturer's instructions and recommendations.

WARRANTY. Manufacturer shall warrant the product performance for three years from final acceptance. Manufacturer shall be responsible for all costs associated with repair or replacement for the warranty period.

MEASUREMENT. Preformed Silicone Joint Sealing System, will be measured for payment per linear foot (lin m), which includes all materials, labor, equipment, tools, and incidentals necessary to complete the work. Design quantities may be adjusted by the engineer to facilitate sealing of joints.

PAYMENT. Payment for Preformed Silicone Joint Sealing System will be made at the contract unit price per linear foot (lin m)

Payment will be made under:

<u>Item No.</u>	<u>Pay Item</u>	<u>Pay Unit</u>
NS-805-00005 (Lin m)	Joint Sealing System (Preformed Silicone)	Linear Foot