SECTION 905 -- PROPOSAL (CONTINUED)

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

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

ADDENDUM NO.	1	DATED	9/17/2026	ADDENDUM NO.		DATED	
ADDENDUM NO		DATED		ADDENDUM NO.		DATED	
ADDENDUM NO		DATED		ADDENDUM NO.		DATED	

Number	Description
1	Revised Header on SP 907-420-7; Amendment EBSx Download Required.

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

Respectfully Submitted,

DATE _____

_____
Contractor

BY _____
Signature

TITLE _____

ADDRESS _____

CITY, STATE, ZIP _____

PHONE _____

FAX _____

E-MAIL _____

(To be filled in if a corporation)

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

_____
President — Address

_____
Secretary — Address

_____
Treasurer — Address

The following is my (our) itemized proposal.

STBG-0209-00(007)/ 110227301000
Covington County(ies)

Revised 01/26/2016

For Informational Purposes Only

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-420-7 **CODE: (SP)**

DATE: 08/26/2026

SUBJECT: Deep Injection Undersealing

Section 907-420, Undersealing, is hereby added to and made a part of the 2017 Edition of the Mississippi Standard Specifications for Road and Bridge Construction as follows:

SECTION 907-420 – DEEP INJECTION UNDERSEALING

907-420.01--Description. This work shall consist of raising, filling voids, undersealing, or densification of base soils under concrete pavement or other locations by furnishing, hauling and injecting polyurethane material through tubes placed at the horizontal and vertical locations determined by the Contractor and approved by the Project Engineer into the base soils, which most effectively and efficiently complete the desired repairs. All work will be monitored at the surface to insure that the pavement is raised to the desired elevations or soils are at the desired degree of densification.

907-420.02--Material.

907-420.02.1--General. The material for raising and undersealing shall be a water blown, closed cell, high density polyurethane system with the following physical characteristics and properties:

Technical Property	Requirement	Test Method
Density, minimum	3.69 lbs / ft^3	ASTM D1622 (air rise)
Compressive strength, minimum	90 psi	ASTMD 1621
Density, maximum	4.2 lbs / ft^3	ASTM D1622 (air rise)
Volume Change, maximum shrinkage (10 years)	5.0 %	
Curing Rate	90 percent of compressive strength within 15 minutes after injection	

The material used for raising and/or undersealing shall be a high-density polyurethane material, as approved by the Engineer. The material shall be a polyurethane-forming mixture, having a water insoluble diluent, that permits the formation of polyurethanes in excess water. The presence of these water insoluble diluents provides polyurethane foam with improved dimensional stability properties. This formula and these characteristics must be certified by the manufacturer.

The material shall have a warranty against shrinkage and deterioration for a period of ten years. During the warranty period, the manufacturer shall replace by injection any failed material at the manufacturer's expense.

Acceptance of the polyurethane material will be based on certification and results from tests required by the Engineer.

The Contractor shall provide to the Engineer certification from the manufacturer stating that the material provided is in accordance with this special provision. The MSDS for all pertinent production material shall be included with the certification.

When requested by the Engineer, pumping units in service shall perform a product density test by injecting a sample of the unit's polyurethane material into a test cylinder of known volume. The sample's density shall be in accordance with this special provision.

When requested by the Engineer, the Contractor, in the presence of the Engineer, shall inject the ambient temperature (70º - 90º F) polyurethane material into a container holding 40 gallons of ambient temperature water at 70º F. The resulting product shall demonstrate consistent, closed cell polyurethane material.

All stored polyurethane material shall be sealed and protected from contamination of dust or any foreign material.

907-420.02.2--Contractor Pre-Qualification Requirements. The Contractor shall have a minimum of three years of experience in performing this type of work and a minimum of 5 projects on which the Contractor has successfully done this type of work. Prior to beginning work, the Contractor shall submit certification to the Engineer that the Contractor meets the minimum required experience. The certification shall include a listing of previous clients with contact names and phone numbers.

Prior to being approved for performing this type of work, the following documents shall be supplied by the Contractor to the Engineer and found to be acceptable:

(a) An installation plan to include hole patterns, locations, depths, and anticipated quantities.
(b) A copy of the Contractor's Employee Safety Manual specific to polyurethane pavement raising and undersealing work.

907-420.02.3--Equipment Requirements. The Contractor shall provide at minimum, the following equipment:

(a) A pumping unit capable of injecting the high density polyurethane material beneath the pavement. The pumping unit shall be equipped with a dial gauge in increments of 0.10 pound and shall be capable of controlling the rate of flow of material as well as the rate of rise of the pavement.
(b) Pressure and temperature control devices capable of maintaining proper temperature and proportionate mixing of the polyurethane component materials.
(c) Pneumatic or electric drills capable of efficiently drilling 9/16 to 3/4-inch diameter

injection holes through the pavement without damaging the structural integrity of the existing pavement.

(d) Laser levels or dial indicator devices capable of monitoring and verifying that the pavement is raised to an even plane and to the required elevation.

(e) All necessary electric generators, compressors, heaters, hoses, containers, valves and gauges to efficiently conduct and control the work.

907-420.03--Construction Requirements. The Contractor shall provide a profile from laser level readings or string lines of each area that needs to be raised or undersealed. Each profile shall be accepted by the Engineer prior to performing the work at the profile location.

At locations where pavement is to be raised or undersealed, a series of 9/16-inch to 3/4-inch diameter holes shall be drilled through the pavement and underlying base at the appropriate locations and depths as determined by the Contractor. The pavement surrounding each hole shall not be damaged.

The polyurethane material shall be injected through the drilled holes until all known or encountered voids under the pavement are filled. The rate and amount of material injection shall be determined by the Contractor.

The pumping unit shall be calibrated daily or as directed by the Engineer. If calibration results show inconsistencies from calibration to calibration, the work shall be stopped until the cause for the inconsistencies are corrected to the satisfaction of the Engineer.

Injection nozzles shall prevent leakage during injection and shall be removed at completion of the injection or driven into the injection hole to a minimum of 1¼ inches below the surface. Any excessive material on the surface shall be removed from the area and the holes shall be sealed with polyurethane material or a non-expansive cementitious grout approved by the Engineer.

907-420.03.1--Raising or Undersealing Roadway Pavements. All drill tailings, excess polyurethane material and other debris shall be cleaned up at the end of each working day or before the lane is opened to traffic. When adjacent lanes are open to traffic, provisions shall be made to prevent material from encroaching onto the open lane or squirting onto passing vehicles. Polyurethane material shall not enter into gutters or closed drainage systems. Suitable means to restrict the infiltration of the residue into a closed drainage system shall be provided. Polyurethane material shall be removed from the pavement surface before any residue is blown by traffic action or wind. All removed material shall be disposed of in an environmentally acceptable manner in accordance with all federal, state and local regulations.

Corrections to the grade of adjacent slabs, if necessary, or as determined by the Engineer, shall be made in accordance with this special provision. All raised pavement shall match the existing grade of adjacent slabs to provide positive drainage. Final elevations of raised pavement areas shall be within 1/4 inch of the required elevations as determined by the profile or the Engineer.

The Contractor will be responsible for any pavement blowouts, excessive pavement lifting or pavement damage that may occur as a result of the Contractor's work. The Contractor shall repair any subject areas to the satisfaction of the Engineer at the Contractor's expense.

The roadway may be open to traffic when the polyurethane material has reached 90 percent of the material's designed compressive strength.

The Contractor shall transfer all warranties on the polyurethane material to the client upon acceptance of the work by the Engineer.

907-420.03.2--Undersealing Bases. For soil densification and compaction of unconsolidated base soils, a series of 9/16-inch to 1 3/8-inch diameter holes (as required for tube placement) shall be drilled at approximately 3 to 4-foot intervals through the pavement above the area requiring soil remediation. The exact location, spacing, hole size and depth shall be determined by the Contractor and approved by the Engineer.

The polyurethane material shall be injected through injection tubes inserted into the drilled holes to the proper depth or depths as determined by on-site soils analysis, or dynamic cone penetrometer testing. The rate and amount of material injected shall be determined by the Contractor.

There will be no direct payment for the cost of dynamic cone penetrometer tests, or any material, tools, equipment, or labor incidental thereto, but the cost shall be considered absorbed in the contract unit price for deep injection undersealing.

Continuous laser level or dial indicator micrometer readings shall be in place and monitored by the Contractor during injection to determine sufficient material usage and soils densification as indicated by pavement movement of 1/16 of an inch.

907-420.04--Method of Measurement. Undersealing, complete and accepted, will be measured by the pound. The quantity will be based on the supplier's packaging information for the material delivered and incorporated into the project.

907-420.05--Basis of Payment. Undersealing concrete pavement, as measured above, will be paid for at the contract price per pound, which price shall include all mobilization, labor, equipment, materials, and incidentals necessary to complete the required work.

Payment will be made under:

907-420-B: Deep Injection Undersealing - per pound