ST. TAMMANY PARISH

MICHAEL B. COOPER
PARISH PRESIDENT

August 1, 2024

Please find the following addendum to the below-mentioned BID.

Addendum No.: 2

Bid#: 24-26-2

Project Name: Moonraker Dr. Drainage

Bid Due Date: Tuesday, August 6, 2024

GENERAL INFORMATION:

1. Please remove Section 04 - Unit Price Form and replace it with Section 04 – Unit Price Form – Revised (Attached). Please note any bid not submitted on the revised Unit Price Form will be deemed non-responsive.

2. Please add Section 13 - Specifications for Cured-in-Place Pipe (CIPP) to the package (Attached).

QUESTIONS & ANSWERS:

Question 1. Please explain the locations where bid items 2 and 3 will be installed.

Answer 1. Items 2 and 3 will be installed where the ground is disturbed or as needed on the project.

Question 2. Our count for bid item 4 is 9 possible cofferdams, where you have 6 required.

Answer 2. The correct quantity is six, if more are required a change order will be issued.

Question 3. For bid item 8 you show 1400 LNFT whereas we count 1575 LNFT of 18" pipe.

Answer 3. The quantity has been changed to 1700 LNFT. Please refer to General Information #1.

Question 4. For bid item 9 you show 300 LNFT whereas we count none.

Answer 4. Line item #9 has been removed. Please refer to General Information #1.

Question 5. Have you CCTV'd the pipelines that you want repaired, or inspected the pipes internally in some fashion?

Answer 5. They were previously inspected and that's how they were identified for repair.

Question 6. After looking through LDOTD Standard Specs, I have been unable to find a specification regarding Cured-in-Place Pipe. Could you point me in the right direction?

Answer 6. Please refer to General Information #2.

Question 7. Will rehabilitation of catch basins include coating of the inside walls? If so, what material are you requiring to be sprayed?

Answer 7. The rehabilitation of Catch Basins includes all work to rehabilitate catch basins and any modifications needed to complete lining work. Catch basins will only require concrete patches to make it water tight.

Question 8. What is required for the cofferdam's, and why are they necessary? Water depth?

Answer 8. The cofferdams will be required as needed. There is no specific requirement for them. They will be used when needed to complete the lining of the pipe at the bulkhead or waters edge. Water depth is based on the tides, therefore a depth cannot be provided.

Question 9. What all is required for rehabilitating the catch basins? Liner or patching concrete and making them water tight?

Answer 9. Please refer to answer #7.

ATTACHMENTS:

1. Section 04 – Unit Price Form – Revised.pdf
2. Section 13 – Cured In Place (CIPP) Specifications.pdf

End of Addendum # 2

LOUISIANA UNIFORM PUBLIC WORK BID FORM
UNIT PRICE FORM - REVISED

TO:

St. Tammany Parish Government

21454 Koop Drive, Suite 2F

Mandeville, LA. 70471

(OWNER TO PROVIDE NAME AND ADDRESS OF OWNER)

BID FOR:

Moonraker Dr Drainage

Bid No. 24-26-2

(OWNER TO PROVIDE PROJECT NAME & OTHER IDENTIFYING INFO)

UNIT PRICES: This form shall be used for any & all work required by the Bidding Documents & described as unit prices. Amounts shall be stated in figures & only in figures.

Description:	☑ BASE BID OR ☐ ALT #		Temporary Signs and Barricades	
REF NO.:	**QUANTITY**	**UNIT OF MEASURE**	**UNIT PRICE**	**UNIT PRICE EXTENSION (Quantity times unit price)**
1	1	LUMP		
Description:	☑ BASE BID OR ☐ ALT #		Slab Sodding (Centipede)	
REF NO.:	**QUANTITY**	**UNIT OF MEASURE**	**UNIT PRICE**	**UNIT PRICE EXTENSION (Quantity times unit price)**
2	2000	SQYD		
Description:	☑ BASE BID OR ☐ ALT #		Borrow	
REF NO.:	**QUANTITY**	**UNIT OF MEASURE**	**UNIT PRICE**	**UNIT PRICE EXTENSION (Quantity times unit price)**
3	50	CUYD		
Description:	☑ BASE BID OR ☐ ALT #		Cofferdam	
REF NO.:	**QUANTITY**	**UNIT OF MEASURE**	**UNIT PRICE**	**UNIT PRICE EXTENSION (Quantity times unit price)**
4	6	EACH		

Wording for "description" is to be provided by the Owner. All Quantities Estimated. The Contractor will be paid based upon actual quantities as verified by the Owner.

UNIT PRICES: This form shall be used for any & all work required by the Bidding Documents & described as unit prices. Amounts shall be stated in figures & only in figures.

Description:	☑ BASE BID OR	☐ ALT #	Adjusting Catch Basins	
REF NO.:	**QUANTITY**	**UNIT OF MEASURE**	**UNIT PRICE**	**UNIT PRICE EXTENSION (Quantity times unit price)**
5	2	EACH		
Description:	☑ BASE BID OR	☐ ALT #	Mobilization	
REF NO.:	**QUANTITY**	**UNIT OF MEASURE**	**UNIT PRICE**	**UNIT PRICE EXTENSION (Quantity times unit price)**
6	1	LUMP		
Description:	☑ BASE BID OR	☐ ALT #	Rehabilitate Catch Basins	
REF NO.:	**QUANTITY**	**UNIT OF MEASURE**	**UNIT PRICE**	**UNIT PRICE EXTENSION (Quantity times unit price)**
7	2	EACH		
Description:	☑ BASE BID OR	☐ ALT #	18" CIPP Liner	
REF NO.:	**QUANTITY**	**UNIT OF MEASURE**	**UNIT PRICE**	**UNIT PRICE EXTENSION (Quantity times unit price)**
8	1700	LNFT		
Description:	☐ BASE BID OR	☐ ALT #		
REF NO.:	**QUANTITY**	**UNIT OF MEASURE**	**UNIT PRICE**	**UNIT PRICE EXTENSION (Quantity times unit price)**
Description:	☐ BASE BID OR	☐ ALT #		
REF NO.:	**QUANTITY**	**UNIT OF MEASURE**	**UNIT PRICE**	**UNIT PRICE EXTENSION (Quantity times unit price)**

Wording for "description" is to be provided by the Owner. All Quantities Estimated. The Contractor will be paid based upon actual quantities as verified by the Owner.

SPECIFICATIONS FOR CURED-IN-PLACE PIPE (CIPP)

This specification references ASTM F1216 (Rehabilitation of pipelines by the inversion and curing of a resin-impregnated tube), ASTM F1743 (Rehabilitation of pipelines by pulled-in-place installation of a cured-in-place thermosetting resin pipe), and ASTM D790 (Test methods for flexural properties of non-reinforced plastics) which are made a part hereof by such reference and shall be the latest edition and revision thereof. In case of conflicting requirements between this specification and these referenced documents, this specification will govern.

MATERIALS

Tube - The sewn Tube shall consist of one or more layers of absorbent non-woven felt fabric and meet the requirements of ASTM F1216 or ASTM F1743, Section 5. The tube shall be constructed to withstand installation pressures, have sufficient strength to bridge missing pipe, and stretch to fit irregular pipe sections.

The wet out Tube shall have a uniform thickness that when compressed at installation pressures will meet or exceed the Design thickness.

The Tube shall be sewn to a size that when installed will tightly fit the internal circumference and length of the original pipe. Allowance should be made for circumferential stretching during inversion. Overlapped layers of felt in longitudinal seams that cause lumps in the final product shall not be utilized.

The outside layer of the Tube (before wet out) shall be coated with an impermeable, flexible membrane that will contain the resin and facilitate monitoring of resin saturation during the resin impregnation (wet out) procedure.

The Tube shall be homogeneous across the entire wall thickness containing no intermediate or encapsulated elastomeric layers. No material shall be included in the Tube that may cause delamination in the cured CIPP. No dry or unsaturated layers shall be evident.

The wall color of the interior pipe surface of CIPP after installation shall be a light reflective color so that a clear detailed examination with closed circuit television inspection equipment may be made.

Seams in the Tube shall be stronger than the non-seamed felt.

The outside of the Tube shall be marked for distance at regular intervals along its entire length, not to exceed 5 ft. Such markings shall include the Manufacturers name or identifying symbol. The tubes must be manufactured in the USA.

Resin - The resin system shall be a corrosion resistant polyester, vinyl ester, or epoxy and catalyst system that when properly cured within the tube composite meets the requirements of ASTM F1216 and ASTM F1743, the physical properties herein, and those which are to be utilized in the Design of the CIPP for this project. The resin shall produce CIPP which will comply with the structural and chemical resistance requirements of this specification.

STRUCTURAL REQUIREMENTS

The CIPP shall be designed as per ASTM F1216, Appendix X.1. The CIPP design shall assume no bonding to the original pipe wall.

The Contractor must have performed long-term testing for flexural creep of the CIPP pipe material installed by his Company. Such testing results are to be used to determine the Long-term, time dependent flexural modulus to be utilized in the product design. This is a performance test of the materials (Tube and Resin) and general workmanship of the installation and curing. A percentage of the instantaneous flexural modulus value (as measured by ASTM D-790 testing) will be used in design calculations for external buckling. The percentage, or the long-term creep retention value utilized, will be verified by this testing. Values in excess of 50% will not be applied unless substantiated by qualified third party test data. The materials utilized for the contracted project shall be of a quality equal to or better than the materials used in the long-term test with respect to the initial flexural modulus used in Design.

The Enhancement Factor 'K' to be used in 'Partially Deteriorated' Design conditions shall be assigned a value of 7. Application of Enhancement (K) Factors in excess of 7 shall be substantiated through independent test data.

The layers of the cured CIPP shall be uniformly bonded. It shall not be possible to separate any two layers with a probe or point of a knife blade so that the layers separate cleanly or the probe or knife blade moves freely between the layers. If separation of the layers occur during testing of field samples, new samples will be cut from the work. Any reoccurrence may cause rejection of the work.

The cured pipe material (CIPP) shall conform to the structural properties, as listed below.

MINIMUM PHYSICAL PROPERTIES

Composite Property	Test Method	Cured Composite min. per ASTM F1216	Cured (400,000 psi Resin)
Modulus of Elasticity	ASTM D-790 (short term)	250,000 psi	400,000 psi

Flexural Stress	ASTM D-790	4,500 psi	4,500 psi

The required structural CIPP wall thickness shall be based as a minimum, on the physical properties in Section 5.5 and in accordance with the Design Equations in the appendix of ASTM F 1216, and the following design parameters:

Design Safety Factor = 2.0

Retention Factor for Long-Term Flexural Modulus to be used in Design = max 50%
(*as determined by Long-Term tests described in paragraph 5.2*)

Ovality* = 2%

Enhancement Factor, k = See Section 5.3

Groundwater Depth (above invert)* = ft.

Soil Depth (above crown)* = ft.

Soil Modulus** = Psi

Soil Density** = 120 pcf

Live Load** = H20 Highway

Design Condition (partially or fully deteriorated)*** = ***

* Denotes information which can be provided here or in inspection video tapes or project construction plans. Multiple line segments may require a table of values.

** Denotes information required only for fully deteriorated design conditions.

*** Based on review of video logs, conditions of pipeline can be fully or partially deteriorated. (See ASTM F1216 Appendix) The Owner will be sole judge as to pipe conditions and parameters utilized in Design.

Refer to the attached Dimensional Ratio table for specific pipe section requirements, based on the pipe condition, depth, ovality, etc. as computed for the conditions shown, using ASTM F 1216 Design Equations.

Any layers of the tube that are not saturated with resin prior to insertion into the existing pipe shall not be included in the structural CIPP wall thickness computation.

TESTING REQUIREMENTS

Chemical Resistance - The CIPP shall meet the chemical resistance requirements of ASTM F1216, Appendix X2. CIPP samples for testing shall be of tube and resin system similar to

that proposed for actual construction. It is required that CIPP samples with and without plastic coating meet these chemical testing requirements.

Hydraulic Capacity - Overall, the hydraulic profile shall be maintained as large as possible. The CIPP shall have a minimum of the full flow capacity of the original pipe before rehabilitation. Calculated capacities may be derived using a commonly accepted roughness coefficient for the existing pipe material taking into consideration its age and condition.

CIPP Field Samples - When requested by the Owner, the Contractor shall submit test results from field installations in the USA of the same resin system and tube materials as proposed for the actual installation. These test results must verify that the CIPP physical properties specified in Section 5.5 have been achieved in previous field applications. Samples for this project shall be made and tested as described in Section 10.1.

INSTALLATION RESPONSIBILITIES FOR INCIDENTAL ITEMS

It shall be the responsibility of the contractor to locate and designate all access points open and accessible for the work, and provide rights of access to these points. If a street must be closed to traffic because of the orientation of the sewer, the contractor shall institute the actions necessary to do this for the mutually agreed time period.

Cleaning of Lines - The Contractor, when required, shall remove all internal debris out of the line that will interfere with the installation of CIPP.

Inspection of Pipelines - Inspection of pipelines shall be performed by experienced personnel trained in locating breaks, obstacles and service connections by close circuit television. The interior of the pipeline shall be carefully inspected to determine the location of any conditions which may prevent proper installation of CIPP into the pipelines, and it shall be noted so that these conditions can be corrected. A video tape and suitable log shall be kept for later reference by the Owner.

Line Obstructions - It shall be the responsibility of the Contractor to clear the line of obstructions such as solids and roots that will prevent the insertion of CIPP. If pre-installation inspection reveals an obstruction such as a protruding service connection, dropped joint, or a collapse that will prevent the inversion process, that was not evident on the pre-bid video and it cannot be removed by conventional sewer cleaning equipment, then the Contractor shall make a point repair excavation to uncover and remove or repair the obstruction. Such excavation shall be approved in writing by the Owner's representative prior to the commencement of the work and shall be considered as a separate pay item.

Public Notification - The Contractor shall make every effort to maintain service usage throughout the duration of the project. In the event that a service will be out of service, the maximum amount of time of no service shall be 8 hours for any property served by the sewer. A public notification program shall be implemented, and shall as a minimum, require the Contractor to be responsible for contacting each home or business connected to

the sanitary sewer and informing them of the work to be conducted, and when the sewer will be off-line. The Contractor shall also provide the following:

A. Written notice to be delivered to each home or business the day prior to the beginning of work being conducted on the section, and a local telephone number of the Contractor they can call to discuss the project or any problems which could arise.

B. Personal contact with any home or business, which cannot be reconnected within the time stated in the written notice.

INSTALLATION

CIPP installation shall be in accordance with ASTM F1216, Section 7, or ASTM F1743, Section 6, with the following modifications:

Resin Impregnation - The quantity of resin used for tube impregnation shall be sufficient to fill the volume of air voids in the tube with additional allowances for polymerization shrinkage and the loss of resin through cracks and irregularities in the original pipe wall. A vacuum impregnation process shall be used. To insure thorough resin saturation throughout the length of the felt tube, the point of vacuum shall be no further than 25 feet from the point of initial resin introduction.

After vacuum in the tube is established, a vacuum point shall be no further than 75 feet from the leading edge of the resin. The leading edge of the resin slug shall be as near to perpendicular as possible. A roller system shall be used to uniformly distribute the resin throughout the tube. If the Installer uses an alternate method of resin impregnation, the method must produce the same results. Any alternate resin impregnation method must be proven.

Tube Insertion – The wet out tube shall be positioned in the pipeline using either inversion or a pull-in method. If pulled into place, a power winch should be utilized and care should be exercised not to damage the tube as a result of pull-in friction. The tube should be pulled-in or inverted through an existing manhole or approved access point and fully extend to the next designated manhole or termination point.

Temperature gauges shall be placed inside the tube at the invert level of each end to monitor the temperatures during the cure cycle.

Curing shall be accomplished by utilizing hot water under hydrostatic pressure in accordance with the manufacturer’s recommended cure schedule.

INSPECTION

CIPP samples shall be prepared and physical properties tested in accordance with ASTM F1216 or ASTM F1743, Section 8, using either method proposed. The flexural properties must meet or exceed the values listed in Table 1 of the applicable ASTM.

Wall thickness of samples shall be determined as described in paragraph 8.1.6 of ASTM F1743. The minimum wall thickness at any point shall not be less than 87½% of the design thickness as calculated in paragraph 5.6 of this document.

Visual inspection of the CIPP shall be in accordance with ASTM F1743, Section 8.6.

CLEAN-UP

Upon acceptance of the installation work and testing, the Contractor shall restore the project area affected by the operations to a condition at least equal to that existing prior to the work.