

**CONTRACT DOCUMENTS, SPECIFICATIONS  
AND  
CONTRACT DRAWINGS**

**FOR  
TWO YEAR CONTRACT FOR REHABILITATION OF SANITARY SEWER MANHOLES**

**JEFFERSON PARISH DEPARTMENT OF CAPITAL PROJECTS**

**BID NUMBER: 50-00143320**

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**ADDENDUM NO. 1**

**DATE ISSUED: October 26, 2023**

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**BID DATE: October 31, 2023 at 2:00 PM**

**BID LOCATION: Jefferson Parish General Government Building  
Jefferson Parish Purchasing Dept., Suite 4400  
200 Derbigny St., Gretna, LA 70053**

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This addendum shall be part of the Contract Documents as provided in the instructions to Bidders.

The following items are issued to add to, modify, and clarify the Contract Documents. These items shall have full force and effect as the Contract Documents, and the cost involved shall be included in the bid prices.

Acknowledge receipt of the addendum by inserting its number on the Bid Form of the Bid Documents. Failure to do so will subject the bidder to rejection.

This Addendum No. 1 consists of 45 pages including all attachments.

## **Addendum No. 1 Revised Items**

### **General**

1. A copy sign-in sheet from the non-mandatory pre-bid conference held on October 13, 2023 is included herein.

### **Specifications Revisions**

1. The LOUISIANA UNIFORM PUBLIC WORK BID FORM shall be removed in its entirety and replaced with the revised Bid Form included as part of this addendum.
2. SECTION 01025 MEASUREMENT AND PAYMENT shall be removed in its entirety and replaced with the revised specification included as part of this addendum.
3. SECTION 02657 SEWER MANHOLE REHABILITATION shall be removed in its entirety and replaced with the revised specification included as part of this addendum.

**PRE-BID CONFERENCE SIGN-IN SHEET**

BID #:50-00143320 DESCRIPTION: Two year contract for rehabilitation of sanitary sewer manholes.  
 LOCATION: GGB 200 Derbigny Street, Suite 4400 Gretna La. 70053  
 DATE AND TIME:10/13/2023 @ 10:00 am  
 START TIME: 10:03 Am STOP TIME: 10:32 Am

COMPANY NAME	COMPANY REPRESENTATIVE	PHONE	EMAIL ADDRESS	SIGN-IN TIME
Jefferson Parish Purchasing	Donna Reamey	504-364-2684	Dreamey@jeffparish.net	
JP SCIP	Sid Trouard	504-736-6386	strouard@jeffparish.net	9:45
JP SCIP	BUSTER LYONS	504-812-6456	blyons@deii.net	9:45
BLD Services, LLC	Brent Albert	504-466-1344	brenta@bldllc.net	9:46
JP SCIP	Timothy Smith	504-275-5730	t.smith@deii.net	9:52

TO: JEFFERSON PARISH
PURCHASING DEPT
200 DERBIGNY ST. SUITE 4400
GRETNA, LA 70053
(Owner to provide name and address of owner)

BID FOR: TWO YEAR CONTRACT FOR REHABILIT
SANITARY SEWER MANHOLES FOR JEF
PARISH CAPITAL PROJECTS.

REVISED AS PER ADDENDUM # 1

The undersigned bidder hereby declares and represents that she/he; a) has carefully examined and understands the Bidding Documents, b) has not received, relied on, or based his bid on any verbal instructions contrary to the Bidding Documents or any addenda, c) has personally inspected and is familiar with the project site, and hereby proposes to provide all labor, materials, tools, appliances and facilities as required to perform, in a workmanlike manner, all work and services for the construction and completion of the referenced project, all in strict accordance with the Bidding Documents prepared by:

and dated:
(Owner to provide name of entity preparing bidding documents.)

Bidders must acknowledge all addenda. The Bidder acknowledges receipt of the following ADDENDA: (Enter the number the Designer has assigned to each of the addenda that the Bidder is acknowledging)

TOTAL BASE BID: For all work required by the Bidding Documents (including any and all unit prices designated "Base Bid" \* but not alternates) the sum of:

Dollars (\$) \_\_\_\_\_

ALTERNATES: For any and all work required by the Bidding Documents for Alternates including any and all unit prices designated as alternates in the unit price description.

Alternate No. 1 (Owner to provide description of alternate and state whether add or deduct) for the lump sum of:
N/A Dollars (\$) \_\_\_\_\_

Alternate No. 2 (Owner to provide description of alternate and state whether add or deduct) for the lump sum of:
N/A Dollars (\$) \_\_\_\_\_

Alternate No. 3 (Owner to provide description of alternate and state whether add or deduct) for the lump sum of:
N/A Dollars (\$) \_\_\_\_\_

NAME OF BIDDER: \_\_\_\_\_

ADDRESS OF BIDDER: \_\_\_\_\_

LOUISIANA CONTRACTOR'S LICENSE NUMBER: \_\_\_\_\_

NAME OF AUTHORIZED SIGNATORY OF BIDDER: \_\_\_\_\_

TITLE OF AUTHORIZED SIGNATORY OF BIDDER: \_\_\_\_\_

SIGNATURE OF AUTHORIZED SIGNATORY OF BIDDER \*\*: \_\_\_\_\_

DATE: \_\_\_\_\_

THE FOLLOWING ITEMS ARE TO BE INCLUDED WITH THE SUBMISSION OF THIS LOUISIANA UNIFORM PUBLIC WORK BID FORM:

\* The Unit Price Form shall be used if the contract includes unit prices. Otherwise it is not required and need not be included with the form. The number of unit prices that may be included is not limited and additional sheets may be included if needed.

\*\* A CORPORATE RESOLUTION OR WRITTEN EVIDENCE of the authority of the person signing the bid for the public work as prescribed by LA-R.S. 38:2218 (B)(5).

BID SECURITY in the form of a bid bond, certified check or cashier's check as prescribed by LA-R.S. 38:2218.(A) is attached to and made a part of this bid.

LOUISIANA UNIFORM PUBLIC WORK BID FORM  
UNIT PRICE FORM

Bid# 50-00143320

TO: JEFFERSON PARISH  
PURCHASING DEPT  
200 DERBIGNY ST. SUITE 4400  
GRETN, LA 70053  
(Owner to provide name and  
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**TWO YEAR CONTRACT FOR REHABILITATION OF  
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<b>DESCRIPTION:</b>	<input checked="" type="checkbox"/> Base Bid      0001 - Resetting Existing Manhole Rings and Covers <input type="checkbox"/> Alt.#__			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
1	500.00	EA		

<b>DESCRIPTION:</b>	<input checked="" type="checkbox"/> Base Bid      0002 - Furnishing and Installing New Manhole Rings and Covers <input type="checkbox"/> Alt.#__			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
2	250.00	EA		

<b>DESCRIPTION:</b>	<input checked="" type="checkbox"/> Base Bid      0003 - Adjusting Manholes <input type="checkbox"/> Alt.#__			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
3	500.00	EA		

<b>DESCRIPTION:</b>	<input checked="" type="checkbox"/> Base Bid      0004 - Furnish and Install Sewer Manholes (Brick) (4 Foot Diameter) <input type="checkbox"/> Alt.#__			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
4	300.00	VF		

<b>DESCRIPTION:</b>	<input checked="" type="checkbox"/> Base Bid      0005 - Furnish and Install Sewer Manholes (Brick) (6 Foot Diameter) <input type="checkbox"/> Alt.#__			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
5	120.00	VF		

<b>DESCRIPTION:</b>	<input checked="" type="checkbox"/> Base Bid      0006 - Furnish and Install Sewer Manholes (Precast) (4 Foot Diameter) <input type="checkbox"/> Alt.#__			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
6	600.00	VF		

<b>DESCRIPTION:</b>	<input checked="" type="checkbox"/> Base Bid      0007 - Furnish and Install Sewer Manholes (Precast) (6 Foot Diameter) <input type="checkbox"/> Alt.#__			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
7	150.00	VF		

<b>DESCRIPTION:</b>	<input checked="" type="checkbox"/> Base Bid      0008 - Furnish and Install Sewer Manholes (Fiber Glass) (4 Foot Diameter) <input type="checkbox"/> Alt.#__			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
8	120.00	VF		

Wording for "DESCRIPTION" is to be provided by the Owner.  
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LOUISIANA UNIFORM PUBLIC WORK BID FORM  
UNIT PRICE FORM

Bid# 50-00143320

TO: JEFFERSON PARISH  
PURCHASING DEPT  
200 DERBIGNY ST. SUITE 4400  
GRETNA, LA 70053  
(Owner to provide name and  
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**TWO YEAR CONTRACT FOR REHABILITATION OF  
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<b>DESCRIPTION:</b>	<input checked="" type="checkbox"/> Base Bid      0009 - Furnish and Install Sewer Manholes (Fiber Glass) (6 Foot Diameter) <input type="checkbox"/> Alt.#__			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
9	60.00	VF		

<b>DESCRIPTION:</b>	<input checked="" type="checkbox"/> Base Bid      0010 - Repair Manhole Line Connection <input type="checkbox"/> Alt.#__			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
10	300.00	EA		

<b>DESCRIPTION:</b>	<input checked="" type="checkbox"/> Base Bid      0011 - Remove and Replace Precast Manhole Concrete Manhole Wall/Cone <input type="checkbox"/> Alt.#__			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
11	100.00	VF		

<b>DESCRIPTION:</b>	<input checked="" type="checkbox"/> Base Bid      0012 - Remove and Replace Manhole Wall (Brick) <input type="checkbox"/> Alt.#__			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
12	300.00	VF		

<b>DESCRIPTION:</b>	<input checked="" type="checkbox"/> Base Bid      0013 - Rehabilitate/Rebuild Manhole Bench/Trough <input type="checkbox"/> Alt.#__			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
13	200.00	EA		

<b>DESCRIPTION:</b>	<input checked="" type="checkbox"/> Base Bid      0014 - Manhole Inserts <input type="checkbox"/> Alt.#__			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
14	3,000.00	EA		

<b>DESCRIPTION:</b>	<input checked="" type="checkbox"/> Base Bid      0015 - Hydraulic water plug to fill voids and stop leaks in structures <input type="checkbox"/> Alt.#__			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
15	100.00	BG		

<b>DESCRIPTION:</b>	<input checked="" type="checkbox"/> Base Bid      0016 - Chemical Grout to Fill Voids and Stop Leaks in Structures <input type="checkbox"/> Alt.#__			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
16	500.00	GL		

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LOUISIANA UNIFORM PUBLIC WORK BID FORM  
UNIT PRICE FORM

Bid# 50-00143320

TO: JEFFERSON PARISH  
PURCHASING DEPT  
200 DERBIGNY ST. SUITE 4400  
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<b>DESCRIPTION:</b>	<input checked="" type="checkbox"/> Base Bid      0017 - Sewer Manhole Rehabilitation by lining (4 foot dia. manhole) <input type="checkbox"/> Alt.#__			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
17	9000.00	VF		

<b>DESCRIPTION:</b>	<input checked="" type="checkbox"/> Base Bid      0018 - Sewer Manhole Rehabilitation by lining (6 foot dia manhole) <input type="checkbox"/> Alt.#__			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
18	3,000.00	VF		

<b>DESCRIPTION:</b>	<input checked="" type="checkbox"/> Base Bid      0019 - Additional epoxy coating for cementitious lining (4 foot dia manhole) <input type="checkbox"/> Alt.#__			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
19	500.00	VF		

<b>DESCRIPTION:</b>	<input checked="" type="checkbox"/> Base Bid      0020 - Additional epoxy coating cementitious lining (6 foot dia manhole) <input type="checkbox"/> Alt.#__			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
20	200.00	VF		

<b>DESCRIPTION:</b>	<input checked="" type="checkbox"/> Base Bid      0021 - Removal and Replacement of Portland Cement Concrete Roadway <input type="checkbox"/> Alt.#__      Pavement (High-Early Strength) (Per 1 Inch Thickness)			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
21	150.00	SQYD		

<b>DESCRIPTION:</b>	<input checked="" type="checkbox"/> Base Bid      0022 - Removal of Asphaltic Concrete Pavement (Full Depth) and Placement <input type="checkbox"/> Alt.#__      of Pavement Patching (12 Inch Min. Thickness)			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
22	500.00	SQYD		

<b>DESCRIPTION:</b>	<input checked="" type="checkbox"/> Base Bid      0023 - Placement and Removal of Mainline Traffic Maintenance Surfacing (Hard) <input type="checkbox"/> Alt.#__      (6 Inch Min. Thick Asphalt)			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
23	150.00	SQYD		

<b>DESCRIPTION:</b>	<input checked="" type="checkbox"/> Base Bid      0024 - Placement and Removal of Non-Mainline Traffic Maintenance <input type="checkbox"/> Alt.#__      Surfacing (Aggregate) (Vehicular Measurement)			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
24	200.00	CUYD		

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UNIT PRICE FORM

Bid# 50-00143320

TO: JEFFERSON PARISH  
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<b>DESCRIPTION:</b>	<input checked="" type="checkbox"/> Base Bid      0025 - Milling Asphalt Pavement (2 Inch Thick) <input type="checkbox"/> Alt.#__			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
25	100.00	SQYD		

<b>DESCRIPTION:</b>	<input checked="" type="checkbox"/> Base Bid      0026 - Asphalt Concrete (Wearing Course) (2 Inch Thick) <input type="checkbox"/> Alt.#__			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
26	100.00	SQYD		

<b>DESCRIPTION:</b>	<input checked="" type="checkbox"/> Base Bid      0027 - Removal and Replacement of Combination Concrete Curb and Gutter <input type="checkbox"/> Alt.#__ (Mountable)			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
27	100.00	LF		

<b>DESCRIPTION:</b>	<input checked="" type="checkbox"/> Base Bid      0028 - Removal and Replacement of Combination Concrete Curb and Gutter <input type="checkbox"/> Alt.#__ (Barrier)			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
28	100.00	LF		

<b>DESCRIPTION:</b>	<input checked="" type="checkbox"/> Base Bid      0029 - Replacement of Concrete Curb (Mountable) <input type="checkbox"/> Alt.#__			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
29	100.00	LF		

<b>DESCRIPTION:</b>	<input checked="" type="checkbox"/> Base Bid      0030 - Replacement of Concrete Curb (Barrier) <input type="checkbox"/> Alt.#__			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
30	100.00	LF		

<b>DESCRIPTION:</b>	<input checked="" type="checkbox"/> Base Bid      0031 - Removal and Replacement of Concrete Driveways (4 Inch Thick) <input type="checkbox"/> Alt.#__			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
31	50.00	SQYD		

<b>DESCRIPTION:</b>	<input checked="" type="checkbox"/> Base Bid      0032 - Removal and Replacement of Concrete Driveways (6 Inch Thick) <input type="checkbox"/> Alt.#__			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
32	200.00	SQYD		

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LOUISIANA UNIFORM PUBLIC WORK BID FORM  
UNIT PRICE FORM

Bid# 50-00143320

TO: JEFFERSON PARISH  
PURCHASING DEPT  
200 DERBIGNY ST. SUITE 4400  
GRETN, LA 70053  
(Owner to provide name and  
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**TWO YEAR CONTRACT FOR REHABILITATION OF  
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<b>DESCRIPTION:</b> <input checked="" type="checkbox"/> Base Bid 0033 - Removal and Replacement of Concrete Driveways (6 Inch Thick W/Wash Gravel to Match) <input type="checkbox"/> Alt.#__				
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
33	50.00	SQYD		

<b>DESCRIPTION:</b> <input checked="" type="checkbox"/> Base Bid 0034 - Removal and Replacement of Concrete Driveways (6 Inch Thick W/ Brick to Match) <input type="checkbox"/> Alt.#__				
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
34	50.00	SQYD		

<b>DESCRIPTION:</b> <input checked="" type="checkbox"/> Base Bid 0035 - Removal and Replacement of Concrete Driveways (8 Inch Thick) <input type="checkbox"/> Alt.#__				
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
35	50.00	SQYD		

<b>DESCRIPTION:</b> <input checked="" type="checkbox"/> Base Bid 0036 - Removal and Replacement of Driveway (Stone) <input type="checkbox"/> Alt.#__				
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
36	20.00	SQYD		

<b>DESCRIPTION:</b> <input checked="" type="checkbox"/> Base Bid 0037 - Removal and Replacement of Sidewalks (Concrete) (4 Inch Thick) (Residential) <input type="checkbox"/> Alt.#__				
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
37	200.00	SQYD		

<b>DESCRIPTION:</b> <input checked="" type="checkbox"/> Base Bid 0038 - Removal and Replacement of Sidewalks (Concrete) (4 Inch Thick W/ Wash Gravel to Match) <input type="checkbox"/> Alt.#__				
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
38	50.00	SQYD		

<b>DESCRIPTION:</b> <input checked="" type="checkbox"/> Base Bid 0039 - Removal and Replacement of Sidewalks (Brick) <input type="checkbox"/> Alt.#__				
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
39	20.00	SQYD		

<b>DESCRIPTION:</b> <input checked="" type="checkbox"/> Base Bid 0040 - Removal and Replacement of Sidewalks (Stone) <input type="checkbox"/> Alt.#__				
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
40	20.00	SQYD		

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UNIT PRICE FORM

Bid# 50-00143320

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<b>DESCRIPTION:</b>	<input checked="" type="checkbox"/> Base Bid      0041 - Removal and Replacement of Sidewalks (Concrete) (5 Inch Thick) <input type="checkbox"/> Alt.#__      (Commercial)			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
41	100.00	SQYD		

<b>DESCRIPTION:</b>	<input checked="" type="checkbox"/> Base Bid      0042 - Installation of Handicap Access Ramp at Curb/Street Transition <input type="checkbox"/> Alt.#__			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
42	100.00	SQYD		

<b>DESCRIPTION:</b>	<input checked="" type="checkbox"/> Base Bid      0043 - Removal and Replacement of Incidental Concrete Paving (Up to <input type="checkbox"/> Alt.#__      6 Inch Thick)			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
43	100.00	SQYD		

<b>DESCRIPTION:</b>	<input checked="" type="checkbox"/> Base Bid      0044 - Additional Sheeting, Bracing and Foundation Lumber (as Directed) <input type="checkbox"/> Alt.#__			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
44	1,000.00	MFBM		

<b>DESCRIPTION:</b>	<input checked="" type="checkbox"/> Base Bid      0045 - Additional Granular Material <input type="checkbox"/> Alt.#__			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
45	500.00	TN		

<b>DESCRIPTION:</b>	<input checked="" type="checkbox"/> Base Bid      0046 - Additional Limestone <input type="checkbox"/> Alt.#__			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
46	100.00	TN		

<b>DESCRIPTION:</b>	<input checked="" type="checkbox"/> Base Bid      0047 - Slab Sodding <input type="checkbox"/> Alt.#__			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
47	1,000.00	SQYD		

<b>DESCRIPTION:</b>	<input checked="" type="checkbox"/> Base Bid      0048 - Setup 6 Inch By-Pass Pumping <input type="checkbox"/> Alt.#__			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
48	10.00	EA		

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<b>DESCRIPTION:</b>	<input checked="" type="checkbox"/> Base Bid      0049 - Setup 8 Inch By-Pass Pumping <input type="checkbox"/> Alt.#__			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
49	10.00	EA		

<b>DESCRIPTION:</b>	<input checked="" type="checkbox"/> Base Bid      0050 - Setup 10 Inch By-Pass Pumping <input type="checkbox"/> Alt.#__			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
50	10.00	EA		

<b>DESCRIPTION:</b>	<input checked="" type="checkbox"/> Base Bid      0051 - Setup 12 Inch By-Pass Pumping <input type="checkbox"/> Alt.#__			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
51	10.00	EA		

<b>DESCRIPTION:</b>	<input checked="" type="checkbox"/> Base Bid      0052 - Operation of 6 Inch By-Pass Pumping <input type="checkbox"/> Alt.#__			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
52	2.00	DY		

<b>DESCRIPTION:</b>	<input checked="" type="checkbox"/> Base Bid      0053 - Operation of 6 Inch By-Pass Pumping <input type="checkbox"/> Alt.#__			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
53	1.00	WK		

<b>DESCRIPTION:</b>	<input checked="" type="checkbox"/> Base Bid      0054 - Operation of 6 Inch By-Pass Pumping <input type="checkbox"/> Alt.#__			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
54	1.00	MO		

<b>DESCRIPTION:</b>	<input checked="" type="checkbox"/> Base Bid      0055 - Operation of 8 Inch By-Pass Pumping <input type="checkbox"/> Alt.#__			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
55	2.00	DY		

<b>DESCRIPTION:</b>	<input checked="" type="checkbox"/> Base Bid      0056 - Operation of 8 Inch By-Pass Pumping <input type="checkbox"/> Alt.#__			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
56	1.00	WK		

Wording for "DESCRIPTION" is to be provided by the Owner.  
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LOUISIANA UNIFORM PUBLIC WORK BID FORM  
UNIT PRICE FORM

Bid# 50-00143320

TO: JEFFERSON PARISH  
PURCHASING DEPT  
200 DERBIGNY ST. SUITE 4400  
GRETNA, LA 70053  
(Owner to provide name and  
address of owner)

**TWO YEAR CONTRACT FOR REHABILITATION OF  
SANITARY SEWER MANHOLES FOR JEFFERSON  
PARISH CAPITAL PROJECTS.**

REVISED AS PER ADDENDUM # 1

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<b>DESCRIPTION:</b>	<input checked="" type="checkbox"/> Base Bid      0057 - Operation of 8 Inch By-Pass Pumping <input type="checkbox"/> Alt.#__			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
57	1.00	MO		

<b>DESCRIPTION:</b>	<input checked="" type="checkbox"/> Base Bid      0058 - Operation of 10 Inch By-Pass Pumping <input type="checkbox"/> Alt.#__			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
58	2.00	DY		

<b>DESCRIPTION:</b>	<input checked="" type="checkbox"/> Base Bid      0059 - Operaton of 10 Inch By-Pass Pumping <input type="checkbox"/> Alt.#__			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
59	1.00	WK		

<b>DESCRIPTION:</b>	<input checked="" type="checkbox"/> Base Bid      0060 - Operation of 10 Inch By-Pass Pumping <input type="checkbox"/> Alt.#__			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
60	1.00	MO		

<b>DESCRIPTION:</b>	<input checked="" type="checkbox"/> Base Bid      0061 - Operation of 12 Inch By-Pass Pumping <input type="checkbox"/> Alt.#__			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
61	2.00	DY		

<b>DESCRIPTION:</b>	<input type="checkbox"/> Base Bid      0062 - Operation of 12 Inch By-Pass Pumping <input checked="" type="checkbox"/> Alt.# <u>6</u>			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
62	1.00	WK		

<b>DESCRIPTION:</b>	<input checked="" type="checkbox"/> Base Bid      0063 - Operation of 12 Inch By-Pass Pumping <input type="checkbox"/> Alt.#__			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
63	1.00	MO		

<b>DESCRIPTION:</b>	<input checked="" type="checkbox"/> Base Bid      0064 - Extension of Force Main (6-Inch Bypass Pump) <input type="checkbox"/> Alt.#__			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
64	50.00	LF		

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UNIT PRICE FORM

Bid# 50-00143320

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GRETN, LA 70053  
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**TWO YEAR CONTRACT FOR REHABILITATION OF  
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<b>DESCRIPTION:</b>	<input checked="" type="checkbox"/> Base Bid      0065 - Extension of Force Main (8-Inch Bypass Pump) <input type="checkbox"/> Alt.#__			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
65	50.00	LF		

<b>DESCRIPTION:</b>	<input checked="" type="checkbox"/> Base Bid      0066 - Extension of Force Main (10-Inch Bypass Pump) <input type="checkbox"/> Alt.#__			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
66	50.00	LF		

<b>DESCRIPTION:</b>	<input checked="" type="checkbox"/> Base Bid      0067 - Extension of Force Main (12-Inch Bypass Pump) <input type="checkbox"/> Alt.#__			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
67	50.00	LF		

<b>DESCRIPTION:</b>	<input checked="" type="checkbox"/> Base Bid      0068 - Traffic Control (Flagman) <input type="checkbox"/> Alt.#__			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
68	500.00	HR		

<b>DESCRIPTION:</b>	<input checked="" type="checkbox"/> Base Bid      0069 - Traffic Control (Policeman) <input type="checkbox"/> Alt.#__			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
69	200.00	HR		

<b>DESCRIPTION:</b>	<input checked="" type="checkbox"/> Base Bid      0070 - Excavating and Uncovering Buried Manholes (Deeper Than 1 Foot) <input type="checkbox"/> Alt.#__			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
70	50.00	EA		

<b>DESCRIPTION:</b>	<input checked="" type="checkbox"/> Base Bid      0071 - Additional Cementitious Lining for Restoration of Original Manhole <input type="checkbox"/> Alt.#__      Profile			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
71	250.00	BG		

<b>DESCRIPTION:</b>	<input checked="" type="checkbox"/> Base Bid      0072 - Manhole Frame and Chimney Sealant/Coating <input type="checkbox"/> Alt.#__			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
72	3,000.00	EA		

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LOUISIANA UNIFORM PUBLIC WORK BID FORM  
UNIT PRICE FORM

Bid# 50-00143320

TO: JEFFERSON PARISH  
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200 DERBIGNY ST. SUITE 4400  
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(Owner to provide name and  
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**TWO YEAR CONTRACT FOR REHABILITATION OF  
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<b>DESCRIPTION:</b>	<input checked="" type="checkbox"/> Base Bid      0073 - Heavy Manhole Debris Cleaning <input type="checkbox"/> Alt.#__			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
73	500.00	HR		

<b>DESCRIPTION:</b>	<input checked="" type="checkbox"/> Base Bid      0074 - Install Force Main Discharge Tee/Turndown (4 Inch Dia. Force Main) <input type="checkbox"/> Alt.#__			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
74	10.00	EA		

<b>DESCRIPTION:</b>	<input checked="" type="checkbox"/> Base Bid      0075 - Install Force Main Discharge Tee/Turndown (6 Inch Dia. Force Main) <input type="checkbox"/> Alt.#__			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
75	20.00	EA		

<b>DESCRIPTION:</b>	<input checked="" type="checkbox"/> Base Bid      0076 - Install Force Main Discharge Tee/Turndown (8 Inch Dia. Force Main) <input type="checkbox"/> Alt.#__			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
76	10.00	EA		

<b>DESCRIPTION:</b>	<input type="checkbox"/> Base Bid <input type="checkbox"/> Alt.#__			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)

<b>DESCRIPTION:</b>	<input type="checkbox"/> Base Bid <input type="checkbox"/> Alt.#__			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)

<b>DESCRIPTION:</b>	<input type="checkbox"/> Base Bid <input type="checkbox"/> Alt.#__			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)

<b>DESCRIPTION:</b>	<input type="checkbox"/> Base Bid <input type="checkbox"/> Alt.#__			
REF NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)

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**SECTION 01025  
MEASUREMENT AND PAYMENT**

**Part 1 - General**

Payment for the various items of the Bid Schedule, as further specified herein, shall include all compensation to be received by the Contractor for furnishing all tools, equipment, supplies, and manufactured articles, and for all labor, operations, and incidentals pertinent to the items of work being described, as necessary to complete the various items of work, all in accordance with the requirements of the Contract Documents, including all appurtenances thereto, and including all costs of compliance with the regulations of public agencies having jurisdiction. The Contractor is hereby informed that no separate payment will be made for any item that is not specifically set forth in the Bid Schedule. Therefore, all costs shall be included in the prices quoted in the Bid Schedule for the various items of work.

All estimated quantities stipulated in the Bid Form or other Contract Documents are approximate and are to be used only:

- (a) As a basis for estimating the probable cost of the work, and
- (b) For the purpose of comparing the bids submitted for the Work. The actual amounts of work performed and materials furnished under unit price items may differ from the estimated quantities. The basis of payment for work and materials will be the actual amount of work performed and materials furnished.

All costs associated with Mobilization, Construction Layout, Temporary Erosion Control Measures, and other items without a specific pay item costs shall be considered incidental to the work and included in the overall project cost. All work, materials, equipment, and other incidentals associated with such as items shall conform with the latest Jefferson Parish and Louisiana Department of Transportation & Development standard specifications and details, and any other applicable local, state, and federal guidelines and regulations.

**Part 2 - Measurement and Payment**

Item 1: Resetting Existing Manhole Rings & Covers

**A. MEASUREMENT:**

The measurement for Resetting Existing Manhole Rings & Covers will be per each location.

**B. PAYMENT:**

The actual quantity of Resetting Existing Manhole Rings & Covers will be paid at the unit bid price. Payment shall include cleaning & resetting existing manhole cover & frame/ring, grouting/sealing and any other material, labor, equipment, and incidentals necessary to complete this item.

Item 2: Furnish & Install New Manhole Rings & Covers

**A. MEASUREMENT:**

The measurement to Furnish & Install New Manhole Rings & Covers will be made per each location.

**B. PAYMENT:**

The actual quantity to Furnish & Install New Manhole Rings & Covers will be paid at the unit bid price. Payment shall include new manhole cover & frame/ring, grouting/sealing and any other material, labor, equipment, and incidentals necessary to complete this item. If roadway removal and replacement are required, they will be paid under separate items.

Item 3: Adjusting Manholes

**A. MEASUREMENT:**

The measurement for Adjusting Manholes will be made per each adjustment basis based on an elevation adjustment up to one (1') foot in either direction.

**B. PAYMENT:**

The actual number of manholes adjustments will be paid at the unit bid price. Payment will constitute full compensation for furnishing all labor, equipment, and materials, and other incidentals necessary to locate, excavate, and adjust the manhole to proper grade, including the resetting the existing cover & frame utilizing riser rings, brick/mortar, and/or grout to the desired elevation. This adjustment may be either an increase or decrease in the existing manhole casting elevation and will not exceed one (1) foot in either direction. If roadway removal and replacement are required, they will be paid under separate items.

Items 4-9: Furnish and Install Sewer Manholes

**A. MEASUREMENT:**

The measurement to Furnish and Install Sewer Manholes, including rebuilding existing manhole structures in entirety, will be made by the vertical foot, or portion thereof, based on manhole type, measured from the invert of the deepest line to the top of casting, for 4-foot-wide or 6-foot-wide manholes.

**B. PAYMENT:**

The actual quantity of manholes constructed will be paid at the unit bid price. Payment for the required size and depth of manhole shall include all testing, labor, equipment, materials, and incidentals, including, but not limited to, temporary sheeting & bracing, excavation, backfill, top slabs, foundation, reinforcement, bedding, brick/mortar, joints, gaskets, boots, filter cloth wrap, drop pipe, bench/trough, castings, risers and cones, grout, and finishing, etc. necessary to complete a new or completely rebuilt manhole installation as specified. If roadway removal and replacement are required, they will be paid under separate items.

Item 10: Repair Manhole Line Connection

**A. MEASUREMENT:**

The measurement to Repair Manhole Line Connection will be made per each line connection made/repaired.

**B. PAYMENT:**

The actual number of Repair Manhole Line Connection will be paid at the unit bid price. Payment will constitute full compensation for furnishing all testing, wrapping, sealing with grout, and any other material, labor, equipment, and incidentals necessary for each manhole line connection made/repaired.

Item 11: Remove & Replace Precast Concrete Manhole Wall/Cone

**A. MEASUREMENT:**

The measurement to Remove & Replace Precast Concrete Manhole Wall/Cone will be made per vertical foot, or portion thereof, per the applicable pay item.

**B. PAYMENT:**

The actual quantity to remove & replace precast concrete manhole walls/cones will be paid at the unit bid price. Payment shall include all testing, labor, equipment, materials, including, but not limited to, temporary sheeting & bracing, excavation, backfill, reinforcement, filter cloth, gaskets, boots, reinforcement, resetting existing manhole castings, grout, etc. and other incidentals to complete the manhole wall/cone installation. Precast manhole chimney restoration work will be paid per vertical foot under the Remove & Replace Manhole Wall (Brick) pay item. If roadway removal and replacement are required, they will be paid under separate items. If required, work associated to repair manhole line connections, rehabilitation of manhole bench/troughs, furnishing & installing new manhole rings & covers, and manholes adjustments will be paid under the respective pay item unit bid prices.

Item 12: Remove & Replace Manhole Wall (Brick)

**A. MEASUREMENT:**

The measurement to Remove & Replace Manhole Wall (Brick) will be made per vertical foot, or portion thereof.

**B. PAYMENT:**

The actual quantity to remove & replace brick manhole walls will be paid at the unit bid price. Payment shall include all labor, equipment, and materials including, but not limited to, temporary sheeting & bracing, excavation, backfill, filter cloth, resetting existing manhole castings, brick, mortar, grout, finishing, etc., and other incidentals to complete the manhole wall installation. If roadway removal and replacement are required, they will be paid under separate items. If required, work associated to repair manhole line connections, rehabilitation of manhole bench/troughs, furnishing & installing new manhole rings & covers, and manholes adjustments will be paid under the respective pay item unit bid prices.

Item 13: Rehabilitate/Rebuild Manhole Bench/Trough

**A. MEASUREMENT:**

The measurement to Rehabilitate/Rebuild Manhole Bench/Trough will be made per each location as specified by Work Order and/or as directed by the Project

Manager.

B. PAYMENT:

The actual quantity to rehabilitate/rebuild the bench and invert of an existing manhole will be paid at the unit bid price. Payment shall include all labor, equipment, materials, tools, and other incidentals necessary to completely rebuild a bench and invert within an existing sanitary sewer manhole. The unit bid price shall also include all cleaning and preparatory work, protection of existing equipment and piping, and confined space entry.

Item 14: Manhole Inserts

A. MEASUREMENT:

The measurement for Manhole cover Inserts will be made per each location as specified by Work Order and/or as directed by the Project Manager.

B. PAYMENT:

The actual quantity to install a manhole cover insert will be paid at the unit bid price. Payment shall include obtaining field measures, cleaning manhole frame, and all the other labor, equipment, material, and other incidentals necessary to complete this item.

Item 15: Hydraulic Water Plug to Fill Voids and Stop Leaks in Structures

A. MEASUREMENT:

The MEASUREMENT for Hydraulic Water Plug to Fill Voids and Stop Leaks in Structures will be per bag used. It is intended that hydraulic water plug work will typically be performed as needed for non-structural infiltration control to fill voids and stop active leaks in conjunction with the application of full depth lining and any other required manhole rehabilitation work.

B. PAYMENT:

The actual quantity of bags used will be paid at the unit bid price. This price and payment will constitute full compensation for furnishing all labor, equipment, material, and incidentals necessary to complete this item of work.

Item 16: Chemical Grout to Fill Voids and Stop Leaks in Structures

A. MEASUREMENT:

The MEASUREMENT for Chemical Grout to Fill Voids and Stop Leaks in Structures will be by the gallon injected into void or leak, measured by metering the amount of chemical grout pumped for injection. It is intended that chemical grout work will typically be performed as needed for non-structural infiltration control to fill voids and stop active leaks in conjunction with the application of full depth lining and any other required manhole rehabilitation work.

**B. PAYMENT:**

The actual quantity of gallons injected, will be paid at the unit bid price. This price and payment will constitute full compensation for furnishing all labor, equipment, material, and incidentals necessary to complete this item of work.

**Item 17: Sewer Manhole Rehabilitation by Lining (4 Foot Dia. Manhole)**

**A. MEASUREMENT:**

The measurement for sewer manhole rehabilitation by lining will be per vertical foot. Refer to Section 02657 for minimum lining thickness.

**B. PAYMENT:**

Payment for sewer manhole rehabilitation by lining will be paid at the unit bid price. Payment shall include all materials, labor, equipment, and related work items to rehabilitate a manhole, including but not limited to, locating the manhole (up to 1 hour); excavating & uncovering the manhole (if less than 1 foot deep); normal required manhole cleaning; surface preparation; pre-&post photographic documentation; plugging or blocking incoming pipes; application & finishing of lining components as required; curing; testing and inspection; cleanup; and other incidentals. Photographic documentation must be submitted prior to requesting payment.

**Item 18: Sewer Manhole Rehabilitation by Lining (6 Foot Dia. Manhole)**

**A. MEASUREMENT:**

The measurement for sewer manhole rehabilitation by lining will be per vertical foot. Refer to Section 02657 for minimum lining thickness.

**B. PAYMENT:**

Payment for sewer manhole rehabilitation by lining will be paid at the unit bid price. Payment shall include all materials, labor, equipment, and related work items to rehabilitate a manhole, including but not limited to, locating the manhole (up to 1 hour); excavating & uncovering the manhole (if less than 1 foot deep); normal required manhole cleaning; surface preparation; pre-&post photographic documentation; plugging or blocking incoming pipes; application & finishing of lining components as required; curing; testing and inspection; cleanup; and other incidentals. Photographic documentation must be submitted prior to requesting payment.

**Item 19: Additional Epoxy Coating for Cementitious Lining (4 Foot Dia. Manhole)**

**A. MEASUREMENT:**

The measurement for additional epoxy coating for cementitious lining will be per vertical foot. The additional 100% epoxy coating is to be used for added corrosion protection to cementitious lined masonry manholes only. Refer to Section 02657 for minimum coating thickness and manhole locations the additional epoxy coating is to be applied in conjunction with the initial cementitious lining.

**B. PAYMENT:**

Payment for the additional epoxy coating will be paid at the unit bid price. Payment shall include all materials, labor, equipment, and related work items associated with the application of the additional epoxy coating, including but not limited to, pre- & post photographic documentation; plugging or blocking incoming pipes; application & finishing of lining as required; curing; testing and inspection; cleanup; and other incidentals. Photographic documentation must be submitted prior to requesting payment.

Item 20: Additional Epoxy Coating for Cementitious Lining (6 Foot Dia. Manhole)

**A. MEASUREMENT:**

The measurement for additional epoxy coating for cementitious lining will be per vertical foot. The additional 100% epoxy coating is to be used for added corrosion protection to cementitious lined masonry manholes only. Refer to Section 02657 for minimum coating thickness and the manhole locations the additional epoxy coating is to be applied in conjunction with the initial cementitious lining.

**B. PAYMENT:**

Payment for the additional epoxy coating will be paid at the unit bid price. Payment shall include all materials, labor, equipment, and related work items associated with the application of the additional epoxy coating, including but not limited to, pre- & post photographic documentation; plugging or blocking incoming pipes; application & finishing of lining as required; curing; testing and inspection; cleanup; and other incidentals. Photographic documentation must be submitted prior to requesting payment.

Item 21: Removal and Replacement of Portland Cement Concrete Roadway (High-Early Strength)

**A. MEASUREMENT:**

The measurement for Removal and Replacement of Portland Cement Concrete Roadway (high-early strength) will be made per square yard per one (1") inch thick increments.

**B. PAYMENT:**

The actual quantity of applicable roadway removed and replaced will be paid at the unit bid price. Payment will constitute full compensation for furnishing all testing, labor, equipment, materials, including, but not limited to, removal of pavement, bedding, base, forms, reinforcement, structure box-outs, joints, dowels, wire mesh (if required), engineering fabrics, replacement of pavement markings and striping, cleaning, disposal of removed & excess material, etc., and any other incidentals necessary to complete the applicable item of work in accordance with the Jefferson Parish Standard Details and specifications, or as otherwise specified.

Concrete pavement will be paid for in one (1") inch thick increments, with a minimum thickness of 7 inches, i.e.:

7 inches = 7 x unit bid price

9 inches = 9 x unit bid price

**NOTE:** There will be no direct payment for the removal of curb which is attached to and removed with the roadway surface.

Item 22: Removal of Asphaltic Concrete Pavement (Full Depth) & Placement of Pavement Patching (12" Min. Thickness)

A. MEASUREMENT:

The measurement for Removal and Replacement of Asphaltic Concrete Pavement, and Placement of Pavement Patching (12" Min. Thickness) will be made per square yard based on thickness.

B. PAYMENT:

The actual quantity of asphaltic pavement removed and/or replaced with asphalt concrete pavement patching will be paid at the applicable unit bid price. Payment will constitute full compensation for furnishing all testing, labor, equipment, materials, including, but not limited to, saw-cutting, removal of pavement & subsurface materials, bedding, base, engineering fabrics, application of prime & tack coats, structure box-outs, replacement of pavement markings and striping, cleaning, disposal of removed & excess material, and any other incidentals necessary to complete the applicable item of work in accordance with the Jefferson Parish Standard Details and specifications, or as otherwise specified.

Item 23: Placement and Removal of Mainline Traffic Maintenance Surfacing (Hard) (6" Min. Thick Asphalt)

A. MEASUREMENT:

The measurement for Placement and Removal of Mainline Traffic Maintenance Surfacing (Hard) (6" Min. Thick Asphalt) will be made per square yard.

B. PAYMENT:

The actual quantity of the mainline traffic maintenance (hard) surfacing removed and/or replaced will be paid at the applicable unit bid price. Payment will constitute full compensation for furnishing all testing, labor, equipment, materials, including, but not limited to, bedding, base, engineering fabrics, application of prime & tack coats, structure box-outs, replacement of pavement markings and striping, cleaning, saw-cutting, removal of surfacing, excavation of subsurface materials, disposal of removed & excess material, and any other incidentals necessary to complete the applicable item of work in accordance with the Jefferson Parish Standard Details and specifications, or as otherwise specified.

Item 24: Placement and Removal of Non-Mainline Traffic Maintenance Surfacing (Aggregate)

A. MEASUREMENT:

The measurement for Placement and Removal of Non-Mainline Traffic Maintenance Surfacing (Aggregate) will be made per cubic yard (vehicular measurement).

B. PAYMENT:

The actual quantity of the non-mainline traffic maintenance (aggregate) surfacing removed and/or replaced will be paid at the applicable unit bid price. Payment will constitute full compensation for furnishing all testing, labor, equipment, materials, including, but not limited to, bedding, base, engineering fabrics, removal of surfacing, excavation of subsurface materials, disposal of removed & excess material, and any other incidentals necessary to complete the applicable item of work.

Item 25: Milling Asphalt Pavement (2" thick)

A. MEASUREMENT:

The measurement for Milling Asphalt Pavement (2" Thick) will be made per square yard.

B. PAYMENT:

The actual quantity of the milling asphalt pavement will be paid at the applicable unit bid price. Payment will constitute full compensation for furnishing all labor, equipment, and other incidental costs to perform the work including, but not limited to removal, hauling, and disposal of asphalt material.

Item 26: Asphaltic Concrete (Wearing Course) (2" Thick)

A. MEASUREMENT:

The measurement for Asphaltic Concrete (Wearing Course) (2" Thick) will be made per square yard.

B. PAYMENT:

The actual quantity of the asphaltic concrete pavement will be paid at the applicable unit bid price. Payment will constitute full compensation for furnishing all testing, labor, equipment, materials, including, but not limited to, application of tack coats, structure box-outs, replacement of pavement markings and striping, cleaning, and any other incidentals necessary to complete the applicable item of work.

Items 27-30: Removal and Replacement of Combination Concrete Curb and Gutter and Replacement of Concrete Curb

A. MEASUREMENT:

The measurement for Removal and Replacement of Concrete Curb and Gutter and Replacement of Concrete Curb will be made per linear foot, along the face of the curb.

B. PAYMENT:

The actual quantity of concrete curb, gutter, and concrete curb removed and/or replaced will be paid at the applicable unit bid price. Payment will constitute full compensation for furnishing all testing, labor, equipment, materials, including, but not limited to, excavation, backfill, forms, joints, dowels, cleaning, disposal of removed & excess material, and any other incidentals necessary to complete the applicable item of work in accordance with the Jefferson Parish Standard Details and specifications, or as otherwise specified.

Items 31-36: Removal and Replacement of Driveways

A. MEASUREMENT:

The measurement for Removal and Replacement of Driveways will be made per square yard.

B. PAYMENT:

The actual quantity of driveway removed and replaced will be paid at the applicable unit bid price. Payment will constitute full compensation for furnishing all labor, equipment, materials, including, but not limited to, excavation, backfill, forms, surface material (concrete, wash gravel, brick, stone, etc.), joints, dowels, wire mesh (if existing), saw-cutting, cleaning, disposal of removed & excess material, and any other incidentals necessary to complete the applicable item of work in

accordance with the Jefferson Parish Standard Details and specifications, or as otherwise specified.

Items 37-41: Removal and Replacement of Sidewalks

A. MEASUREMENT:

The measurement for Removal and Replacement of Sidewalks will be made per square yard.

B. PAYMENT:

The actual quantity of sidewalk removed and replaced will be paid at the applicable unit bid price. Payment will constitute full compensation for furnishing all labor, equipment, and materials, including, but not limited to, excavation, backfill, forms, surface material (concrete, wash gravel, brick, stone, etc.), joints, dowels, wire mesh (if existing), saw-cutting, cleaning, disposal of removed & excess material, and any other incidentals necessary to complete the applicable item of work in accordance with the Jefferson Parish Standard Details and specifications, or as otherwise specified.

Item 42: Installation of Handicap Access Ramp at Curb/Street Transition

A. MEASUREMENT:

The measurement for the Installation of Handicap Access Ramp at Curb/Street Transition will be made per square yard of surface area formed and/or tooled, within the limits of ramp and curb transitions.

B. PAYMENT:

The actual surface area of sidewalk/curb formed and tooled to meet all applicable regulatory requirements will be paid at the unit bid price. The bid price shall include all labor and any materials or special tools/forms to complete the work in accordance with all regulatory requirements. NOTE: This bid item is intended to compensate for the extra labor involved in forming access ramps. This item does not include the cost for concrete replacement (for sidewalk and curb). Those items will be paid for under the respective applicable bid items.

Item 43: Removal and Replacement of Incidental Concrete Paving

A. MEASUREMENT:

The measurement for Removal and Replacement of Incidental Concrete Paving will be made per square yard.

B. PAYMENT:

The actual quantity of incidental concrete paving removed and replaced will be paid at the applicable unit bid price. Payment will constitute full compensation for furnishing all labor, equipment, materials, including, but not limited to, excavation, backfill, forms, joints, dowels, wire mesh (if existing), saw-cutting, cleaning, disposal of removed & excess material, and any other incidentals necessary to complete the applicable item of work as specified.

Item 44: Additional Sheeting, Bracing, and Foundation Lumber (As Directed)

A. MEASUREMENT:

The measurement for payment for Additional Sheeting, Bracing, and Foundation Lumber, where not covered by contract requirements, and when directed by the Project Manager will be made per 1000-foot board measure (MFBM) or portion thereof. Measurement will be to the nearest 0.25 MFBM.

**B. PAYMENT:**

Where specific site conditions dictate, and at the discretion and direction of the Project Manager, the use of additional sheeting, bracing, and foundation lumber, above that required by the contract requirements, will be supplied and placed as directed. All sheeting, bracing, and foundation lumber supplied and placed shall be left in place, unless otherwise directed. The actual quantity of additional lumber supplied and placed will be paid at the unit bid price. Payment will constitute full compensation for furnishing all labor, equipment, materials, and other incidentals to perform the work. If directed to remove the additional sheeting, bracing, and/or foundation lumber, the cost for removal and disposal will be at no direct cost.

Item 45: Additional Granular Material

**A. MEASUREMENT:**

The measurement for Additional Granular Material will be made per ton.

**B. PAYMENT:**

Where specific site conditions dictate, and at the discretion and direction of the Project Manager, the use of additional granular material (pumped river sand), above that specifically required by the Contract, when directed, will be supplied and placed. The additional granular material shall be placed in lifts and compacted in accordance with the Parish Details and specifications, or as otherwise specified. The actual quantity of additional granular material supplied and placed, when directed, will be paid at the unit bid price. Payment will constitute full compensation for furnishing all labor, equipment, materials, and other incidentals to perform the work.

Item 46: Additional Limestone

**A. MEASUREMENT:**

The measurement for Additional Limestone will be made per ton.

**B. PAYMENT:**

Where specific site conditions dictate, and at the discretion and direction of the Project Manager, the use of additional limestone above that specifically required by the Contract, when directed will be supplied and placed. The additional limestone shall be placed in lifts and compacted in accordance with the Parish Details and specifications, or as otherwise specified. The actual quantity of additional limestone supplied and placed, when directed, will be paid at the unit bid price. Payment will constitute full compensation for furnishing all labor, equipment, materials, and other incidentals to perform the work.

Item 47: Slab Sodding

**A. MEASUREMENT:**

The measurement for Slab Sodding will be made per square yard of finished surface, after all conditions of the specifications have been met.

**B. PAYMENT:**

The actual quantity of slab sodding satisfactorily placed will be paid at the unit bid price. Payment will constitute full compensation for furnishing all labor, equipment, materials, including, but no limited to, topsoil, fertilizer, water, etc., and other incidentals necessary to perform the work. It is the Contractor's responsibility to continue to water and maintain the slab sodding until the completion of the project.

## Items 48-67: Set-up and Operation of By-Pass Pumping

### A. MEASUREMENT:

Separate measurement will be made per the bypass pumping set-up and operation of bypass pumping made per applicable pump size bid items. These items are in addition to the minimum required bypass pumping of other bid items and will only be allowed upon prior approval of the Project Manager and/or Director of the Department of Sewerage. Each bypass pumping set-up will be measured separately and made per each bypass pumping set-up and subsequent removal; and shall include all level controls; installation of up to 100 feet of discharge force main, up to 60 feet of suction piping; and a full tank of fuel. Bypass pumping for 4" bypass pumps & under will not be measured for payment.

If additional by-pass pumping discharge force main is required to reach the designated discharge point, this additional bypass pumping discharge force main will be measured by the linear foot and be paid at the appropriate "Extension of Force Main" unit bid item for the pump size.

Operation of bypass pumping will be measured for the operation of each size of bypass pump bid, and will be paid in accordance with the following schedule:

- 1 Day (DY) = 24 hours
- 1 Week (WK) = 3 days through 7 days
- 1 Month (MO) = 21 days through 31 days

### B. PAYMENT:

Payment for set-up of the bypass pumping will be paid at the unit bid price per each based on the pump size required. This item will only be used for bypass pumping beyond the minimum requirements of other bid items. Payment for the operation of each size bypass pump shall be paid at the daily, weekly, or monthly unit bid prices. Payment for operation of bypass pumping will constitute full payment for the day-to-day operation of each pump, including fueling and daily checks on operation. Payment for the extension of discharge force main beyond the minimum required length to be provided will be paid per linear foot.

## Items 68-69: Traffic Control

### A. MEASUREMENT:

Measurement for payment of Traffic Control will be measured for payment as stipulated herein.

### B. PAYMENT:

Payment for all costs associated with the development and implementation of site-specific traffic control device plans, traffic control device set-up & removal, including cones, signs, & other necessary devices, etc., and traffic control device operation & maintenance are considered incidental to the other work and provided at no additional cost to the Owner. In high traffic volume areas & other instances the assessment work cannot be safely performed, flagman or law enforcement services can be utilized as needed upon approval by the Owner. When flagman or law enforcement services are utilized the Contractor shall be compensated on an

hourly basis.

Item 70: Excavating & Uncovering Buried Manholes (Deeper than 1 Foot)

A. MEASUREMENT:

Measurement for payment of Excavating & Uncovering Buried Manholes (Deeper than 1 Foot) will be measured for payment per each.

B. PAYMENT:

The actual quantity of excavating & uncovering buried manholes (deeper than 1 foot) will be paid at the unit bid price. Payment will constitute full compensation for furnishing all labor, equipment, materials, and other incidentals necessary to perform the work. For manholes less than 1 foot deep all costs associated with excavation & uncovering a manhole shall be included in the respective bid item.

Item 71: Additional Cementitious Lining for Restoration of Original Manhole Profile

A. MEASUREMENT:

Measurement for payment of Additional Cementitious Lining for Restoration of Original Manhole Profile will be measured for payment per bag used.

B. PAYMENT:

The actual quantity of bags used will be paid at the unit bid price. This price and payment will constitute full compensation for furnishing all labor, equipment, material, and incidentals necessary to complete this item of work.

Item 72: Manhole Frame And Chimney Sealant / Coating

A. MEASUREMENT:

Measurement for payment of Manhole Frame and Chimney Sealant / Coating will be measured for payment per each manhole sealed/coated.

B. PAYMENT:

The actual quantity of manhole frame and chimney sealant / coating will be paid at the unit bid price. Payment will constitute full compensation for furnishing all labor, equipment, materials, and other incidentals necessary to apply the manhole internal frame and chimney sealant/coating along with the surface preparation work required to facilitate a proper application and bond.

Item 73: Heavy Manhole Debris Cleaning

A. MEASUREMENT:

Measurement for payment of Heavy Manhole Debris Cleaning will be measured for payment per hour. Contractor shall only perform heavy manhole debris cleaning upon approval by the Owner's Project Representative.

B. PAYMENT:

Payment for heavy manhole cleaning will constitute full compensation for furnishing all labor, equipment, materials, and other incidentals necessary to perform the

heavy manhole debris cleaning work and properly disposing of the removed debris at the designated location.

Items 74-76: Install Force Main Discharge Tee/Turndown

A. MEASUREMENT:

The measurement to Install Force Main Discharge Tee/Turndown will be made based on the applicable force main pipe size per each location as specified by Work Order and/or as directed by the Project Manager.

B. PAYMENT:

The actual quantity to install a force main discharge tee/turndown will be paid at the unit bid price. Payment shall include all labor, equipment, materials, including, but not limited to, piping, fittings, joints, tees, caps, bends, anchors, boots, sealants, etc., and other incidentals necessary to complete this item per each location based on the force main pipe size.

**SECTION 02657  
SEWER MANHOLE REHABILITATION**

**PART 1 - GENERAL**

**1.01 Summary of Work**

- A. This section covers all workmanship, equipment, materials, quality, and other general requirements for wastewater structure rehabilitation, including surface preparation, application, and performance for installation of chemical grouting, sealing leaks, water plugs, lining & coating of sewer manhole structures.
- B. The work areas will be designated by the Project Manager/Owner. The installer's personnel shall not be permitted in any area other than those expressly designated by the Project Manager.
- C. The installer shall coordinate with the Project Manager/Owner regarding availability of work areas, completion times, safety, access, and other factors that can impact sewer collection operations.
- D. There is only one approved manhole surface lining systems, namely a sulfide resistant cementitious liner. See section 2.04.A.
- E. All manhole frame castings shall be sealed with a flexible urethane or modified epoxy/urethane sealant/coating. See section 2.03.D
- F. All cementitious lined manholes that are within 100 feet of a lift station, manholes with a sewer force main discharge, drop manholes, and other manholes displaying signs of severe corrosion as determined by the Owner's representative/resident inspector shall be additionally coated with a 100% solids epoxy coating for added corrosion protection. See section 2.04.B.
- G. All required normal manhole cleaning, surface preparation, and debris disposal shall be included in the unit price bid for the respective manhole rehabilitation and/or lining pay items. Heavy and excessive manhole cleaning as determined by the Owner's representative shall be paid for under pay item no. 73. Refer to Section 3.03.I for additional information.

## **1.02 References**

Referenced publications found within this specification shall be the latest revision unless otherwise specified. All applicable sections and applicable parts within the referenced publications shall become a part of this specification as if fully included.

1. ASTM C78, Standard Test Method for Flexural Strength of Concrete
2. ASTM C109, Standard Test Method for Compressive Strength of Hydraulic Cement Mortars
3. ASTM C157, Standard Test Method for Length Change of Hardened Hydraulic-Cement Mortar and Concrete
4. ASTM C307, Standard Test Method for Tensile Strength of Chemical-Resistant Mortar, Grouts, and Monolithic Surfacing
5. ASTM C580, Standard Test Method for Flexural Strength and Modulus of Elasticity of Chemical-Resistant Mortars, Grouts, Monolithic Surfacing, and Polymer Concretes
6. ASTM C596, Standard Test Method for Drying Shrinkage of Mortar Containing Hydraulic Cement
7. ASTM C882, Standard Test Method for Bond Strength of Epoxy-Resin Systems Used with Concrete By Slant Shear
8. ASTM F2414, Standard Practice for Sealing Sewer Manholes Using Chemical Grouting
9. ASTM C920 – Specification for Elastomeric Joint Sealants
10. ASTM D3960 – Practice for Determining Volatile Organic Compound (VOC) Content of Paints and Related Coatings
11. ASTM D4259 – Practice for Abrading Concrete
12. ASTM D4787 – Standard Practice for Continuity Verification of Liquid or Sheet Linings Applied to Concrete Substrates
13. ASTM E337 – Standard Practice Test Method for Measuring Humidity with a Psychrometer
14. ~~ASTM F710 – Practice for Preparing Concrete Floors and Other Monolithic Surfaces to Receive Resilient Flooring~~
15. ASTM D4541 – Adhesion
16. ASTM D412 – Tensile Strength and Elongation
17. ASTM D2240 – Tear Strength
18. ASTM D1737 – Hardness
19. ASTM D460 – Taber Abrasion
20. NACE Pub. 6D-173 – A Manual for Painter Safety
21. NACE Pub. 6G-164 – Surface Preparation Abrasives for Industrial Maintenance Paintings
22. ~~NACE Pub. TPC2 – Coatings and Linings for Immersion Service~~
23. NACE Pub. 6F-163 – Surface Preparation of Steel or Concrete Tank Interiors
24. NACE RP0892-92 – Standard Recommended Practice, Lining over Concrete in Immersion Service

25. NACE RP0288-88 – Standard Recommended Practice, Inspection of Linings on Steel and Concrete
26. Federal Standard 595 B – Federal Standard Colors
27. Guideline No. 03732 – Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings, and Polymer Overlays (Federal Standard Colors and International Concrete Restoration Institute)
28. The Published Standards of the National Association of Corrosion Project Managers
29. SSPC-SP12 (Steel Structures Painting Council) – Surface Preparation and Cleaning of Steel and Other Hard Materials by High and Ultrahigh Pressure Water Pressure Prior to Recoating
30. SSPC-SP13 – Surface Preparation of Concrete
31. SSPC-PA-3 – “A Guide to Safety in Paint Application”
- ~~32. SSPC Guide 12 – Guide for Illumination of Industrial Painting Projects~~
33. OSHA 1915.35 – Standards – 29 CFR – Painting
34. ANSI/ASC Exhaust Systems – Abrasive Blasting Operations – Ventilation and Safe Practice

### **1.03 Product Submittals**

All submittals shall be submitted in accordance with the applicable portions of these specifications.

#### **A. Pre-Approval Product Submittals**

1. Products will not be considered by Project Manager as an “or-equal” or substitute unless a written request for approval has been submitted by the Bidder and has been received by Project Manager at least 15 days prior to the date for receipt of Bids. Requests for approval shall include all of the following information:
  - a. A cover sheet stating the name of the proposed product and the name of the currently specified product (with applicable specification section number) which the proposed product is requesting to be approved as an “or-equal.” The letter shall provide evidence that the installing contractor has a minimum of 10-years of experience installing the proposed “equal” product.
  - b. A letter from the installer stating that the proposed product is in compliance with all aspects of the specifications including all applicable physical properties, thicknesses, dimensions, cure-times, and warranty requirements. The Installer shall also include with the letter complete references (with current contact information) showing exactly how many successful installations of the proposed product that the installer has completed to date.
  - c. A letter from the manufacturer stating that the proposed product is in compliance with all aspects of the specifications including all applicable physical properties, thicknesses, dimensions, cure-times, and warranty requirements.

- d. Documentation that the installer of the product has been trained and certified by the manufacturer and meets the experience requirements of these specifications.
  - e. A list of the last five projects completed by the installer utilizing the applications and methods similar to those proposed for this project, along with the quantities installed and a contact person for the Owner or Project Manager for each project.
2. The burden of proof of the merit of the proposed item is upon the Bidder. Project Manager's decision of approval or disapproval of a proposed item will be final. If Project Manager approves any such proposed item, such approval will be set forth in an Addendum issued to all prospective Bidders. Bidders shall not rely upon approvals made in any other manner.

#### B. Product Submittals

1. The contractor shall submit the following information to the Project Manager for approval prior to beginning the application and installation of the sewer rehabilitation products and systems to be utilized for this work, if applicable for the proposed product or system:
  - a. Material type and manufacturer to be used, including catalog data showing manufacturer's clarifications and updates, ASTM references, data sheets for all products supplied, material composition, specifications, physical properties and chemical resistance, manufacturer's recommended mix, additives and set time.
  - b. Manufacturer's detailed description of recommended procedures for handling, storing and ventilation requirements for materials, including temperature & humidity range limits.
  - c. Manufacturer's detailed description of processes to execute the use of material including equipment required.
  - d. Detailed description of field-testing processes and procedures.
  - e. Material Safety Data Sheets (MSDS) for any materials brought on-site.
  - f. Submit daily reports that contain the following information: Substrate conditions, ambient conditions, application procedures, work completed with location thereof, and pre-&post construction photographs.
  - g. A letter from the installer stating that the proposed product is in compliance with all aspects of the specifications including all applicable physical properties, thicknesses, dimensions, cure-times, and warranty requirements. The Installer shall also include with the letter complete references (with current contact information) showing exactly how many successful installations of the proposed product that the installer has completed to date.
  - h. A letter from the manufacturer stating that the proposed product is in compliance with all aspects of the specifications including all

applicable physical properties, thicknesses, dimensions, cure-times, and warranty requirements.

- i. Documentation that the installer of the product has been trained and certified by the manufacturer and meets the experience requirements of these specifications.

#### **1.04 Quality Assurance**

- A. Do not use or retain contaminated, outdated, diluted, or otherwise compromised materials. Do not use materials from previously opened containers.
- B. Use only products meeting the applicable design and other requirements included in these specifications and those that are applied by a prior approved installer. Use products of one manufacturer in any one coating, lining, or resurfacing system application with compatible materials. Provide the same material product for touch-up or repair as for original material.
- C. If any requirements of this specification conflict with an applicable part of a referenced standard, the more stringent requirement shall apply.
- D. Make available all locations and phases of the work for access by the Project Manager/Owner or other personnel designated representative. The installer shall provide ventilation and egress to safely access the work areas for inspection.
- E. Conduct work so that the products or system is installed as specified herein, or otherwise directed by the Project Manager/Owner, and according to manufacturer's recommendation. Inspect work continually to ensure that the products or system is installed as specified herein, or otherwise directed by the Project Manager/Owner. The installer shall inspect the work to determine conformance with the specifications and referenced documents. The installer shall inform the Project Manager of the progress and the quality of the work through daily reports. Any nonconforming coating system work shall be corrected as recommended by the manufacturer or as directed by the Project Manager/Owner.
- F. The methods of construction shall be in accordance with all requirements as specified and the manufacturer's requirements.
- G. Employ only tradespeople who have completed at least five (5) similar projects within the last ten (10) years using similar materials. This experience shall be strictly limited to wastewater structure rehabilitation work as specified with only products previously approved. Projects with products not approved for use on this project prior to bid or as specified herein will not be considered for record of experience.
- H. Materials shall be applied only during good weather periods as per manufacturer requirements. Air and surface temperatures as well as dew point shall be within limits prescribed by the manufacturer for the product being applied and work areas shall be reasonably free of airborne dust at the time of application and while drying. The structure surface must be properly cleaned and prepared in accordance with the manufacturer's requirements prior to application.

- I. Upon completing the installation, the Contractor must obtain written certification from the manufacturer that all work has been performed in accordance with the requirements and within the limits prescribed by the manufacturer.
- J. All safety precautions recommended by the manufacturer shall be strictly adhered to at all times when work is in progress.
- K. Do not use floor drains, ditches, or storm drains for disposal of materials.
- L. If applicable, the installer shall take all precautions and implement all measures necessary to avert potential hazards associated with the handling, mixing, and/or application of materials as described on the pertinent Material Safety Data Sheets or container labels.

### **1.05 Delivery and Storage**

- A. Materials shall be stored in accordance with the manufacturer's recommendations in enclosed structures and shall be protected from weather and adverse temperature conditions. Flammable materials shall be stored in accordance with state and local codes. Materials exceeding storage life recommended by the manufacturer shall be removed from the site.
- B. If applicable, store all materials only in an area or areas designated by the Project Manager/Owner solely for this purpose. Confine mixing, thinning, clean-up and associated operations, and storage of materials-related debris before authorized disposal, to these areas. If material is delivered in buckets or bags, all materials are to be stored on pallets or similar storage/handling skids off the ground in sheltered areas in which the temperature is maintained between 50F and 90F, or temperature range required by the manufacturer.
- C. If applicable, the mixing of materials shall be in an enclosed mixing area designated by the Project Manager/Owner. This enclosed area must protect the mixing operation and materials from direct sunlight, inclement weather, freezing, or other means of damage or contamination. Protect all other concrete and metallic surfaces and finishes from any spillage of material(s) within the mixing area.
- D. If applicable to manufacturer's packaging standards, deliver all materials to the job site in their original, unopened containers. Each container shall bear the manufacturer's name and label.
  - 1. Labels on all material containers must show the following information:
    - a. Name or title of product
    - b. Federal Specification Number if applicable
    - c. Manufacturer's batch number and date of manufacture
    - d. Manufacturer's name
    - e. Generic type of material
    - f. Application and mixing instructions
    - g. Hazardous material identification label
    - h. Shelf-life date
    - i. Storage requirements
- E. All containers shall be clearly marked indicating any personnel safety hazards associated with the use of or exposure to the materials.

- F. All materials shall be handled and stored to prevent damage or loss of label.
- G. Do not use or retain contaminated, outdated, prematurely opened, diluted, or otherwise compromised materials.

### **1.06 Job Conditions**

- A. Environmental:
  - 1. Prepare surfaces and apply products within air and surface temperature range in accordance with manufacturer's instructions.
  - 2. Prepare surfaces and apply products within relative humidity range in accordance with manufacturer's instructions.
  - 3. Do not prepare surfaces or apply products in rain, snow, fog, or mist.
  - 4. Do not apply or spray materials if wind velocity causes overspray.

### **1.07 Warranties**

Provide an affidavit executed under seal by an officer of the manufacturer stating that if their proposed grout, coating, and/or lining system is used on this project, the manufacturer will warrant the finished, in-place, products / systems against infiltration and corrosion for the minimum number of years from the installation date as specified below:

- A. Chemical Grouts / Frame and Chimney Sealants or Coatings / Sulfide resistant Cementitious and Epoxy Coatings: Manufacturer warranty shall include a five (5) year minimum limited warranty covering the product will perform its function as intended and will remain free of defects. The contractor shall warrant that the installation was performed in accordance with the manufacturer's recommendation. The contractor will further warrant that the work performed will remain free from defects, failure due to defective material, installation, or workmanship for a period of five (5) years from the date of completion, or for the same period of the manufacturer limited warranty if greater.

Both the manufacturer and the installer shall stand behind their warranty for the duration of the respective warranty period.

For all other sewer structure rehabilitation products, not used for coating or lining systems, the manufacturer shall provide a certified letter to include a warranty covering both materials and installation beginning on the date of final acceptance for the number of years as specified for the specific product, or the manufacturer's standard warranty period, whichever is greater. The warranty term terms & conditions shall also be attached to the letter from the manufacturer. The installer shall stand behind the manufacturer's warranty covering both materials and installation beginning on the date of final acceptance.

## **PART 2 – PRODUCTS/MATERIALS**

### **2.01 General**

- A. All products and materials specified herein for use on this project are to establish performance, quality, and other general requirements.
- B. All products to be used on this project must be pre-approved by the Project Manager if not specified. The lining system to be utilized shall be a protective lining system designed to protect concrete and other surfaces against corrosion from hydrogen sulfide gas, acids, and other substances common in raw domestic wastewater. Coating materials must be designed to provide long term protection for wastewater manholes subjected to extremely high levels of hydrogen sulfide induced corrosion.
- C. Other manufacturers or products seeking pre-approval must be submitted to the Project Manager prior to the bid opening to be considered in accordance with the submittals section of this specification.

### **2.02 Substitutions**

- A. Other manufacturers or products seeking pre-approval must be submitted to the Project Manager prior to the bid opening to be considered in accordance the submittals section of this specification.

### **2.03 Infiltration Control Products/Materials**

- A. Acrylic or Acrylate Base Grout for non-structural infiltration control: Follow ASTM F2414 and as specified herein.
  - 1. Two-part chemical grout mixed at point of injection.
  - 2. Minimum 25 percent acrylic or acrylate base material by volume.
    - a. To increase strength or offset dilution during injection period, use higher concentration of base material as directed by Project Manager.
  - 3. Controllable reaction time: 10 seconds to 1 hour.
  - 4. Viscosity: 1.5 centipoises water.
    - a. May be increased maximum of 2.5 centipoises water as directed by Project Manager.
    - b. Remain constant throughout injection period.
  - 5. Tolerates dilution and reacts in moving water.
  - 6. Final reaction:
    - a. Produces chemically, continuous irreversible, non-biodegradable, flexible gel, impermeable to water at pressures up to 15 psi in pure form.
    - b. Produces stabilized soil in ground that will not become brittle or rigid.

7. Gel does not bleed water under stress.
8. Dehydrated gel returns to 90 percent of its original volume and form after prolonged period of low ground water.
9. Do not use catalyst containing dimethyl amino propionitrile (DMAPM).
10. Use root inhibitor (50% active dichlobenil) when roots are present in manholes, connecting pipes or laterals.
  - a. Change dye color to confirm root inhibited grout is being injected.
11. Use latex additive for increased tensile strength.
12. Tinted to allow detection of grout in drill holes or at leakage locations.
13. Approved Manufacturers/Products.
  - a. Grout
    - 1) Avanti, AV-118 Duriflex
      - a) Additives
        - (1) AV-101 Catalyst T+
        - (2) AV-103 Catalyst SP
      - 2) Or Equal
  - b. Root Inhibitor
    - 1) Avanti, Norosac AC50W – Root Inhibitor
    - 2) Or Equal
  - c. Latex Additives
    - 1) AV-257 Icoset
    - 2) Or Equal

B. Urethane Base Grout for non-structural infiltration control: Follow ASTM F2414 and as specified herein.

1. Ratio: One part urethane prepolymer to 10 parts water by volume (10 to 50 percent prepolymer).
2. Liquid prepolymer:
  - a. Solids content: 77 to 100 percent.
  - b. Specific Gravity: 1.04
  - c. Flash Point: 20 degrees F.
  - d. Viscosity: 200 to 1,200 centipoises water at 70 degrees F.
3. Water for reacting prepolymer: pH of 5 to 9.
4. Use manufacturer recommended gel control agent to control cure time as required.
5. Final Reaction:
  - a. Produces chemically continuous irreversible, non-biodegradable, flexible gel, impermeable to water at pressures up to 15 psi in pure form.
6. Use root inhibitor (50% active dichlobenil) when roots are present in manholes, connecting pipes, or laterals.
7. Use latex additive for increased tensile strength.
8. Tinted to allow detection of grout in drill holes or at leakage

locations.

9. Approved Manufacturers/Products.

a. Grout

- 1) Avanti, Acrylic Gel AV-350 Multi Gel
- 2) De Neef, Inc., Hydro Active Multigel NF.
- 3) Or Equal

b. Root Inhibitor

- 1) Avanti, Norosac AC50W – Root Inhibitor
- 2) Or Equal

c. Latex Additives

- 1) Avanti, AV-257 Icoset
- 2) Or Equal

C. Hydraulic Water Plugs for non-structural infiltration control

1. Rapid setting to plug active leaks prior to other rehabilitation work
2. Initial Set Time at 70 degrees F: 60 to 90 seconds
3. Final Set Time at 70 degrees F: One hour
4. Compressive Strength (ASTM C109): 2500 psi at 24 hours / 4,000 psi at 28 days
5. Length Change (ASTM C157): 0 percent
6. Approved Manufacturers/Products.

a. Parson Environmental Products.

- 1) Parson Quick Plug

b. Strong Company, Inc.

- 1) Strong-Plug

c. Or Equal

D. Manhole Frame and Chimney Sealant/Coating

1. Internal manhole frame-chimney sealant/coating shall be a composed of a urethane or modified epoxy/urethane hybrid sealant/coating capable of remaining flexible and bonded to the manhole surface when subjected to ground movement and to prevent leakage of water through the application areas throughout its design life.
2. Sealant/Coating products shall be stored, prepared, mixed, and applied in accordance with the manufacturer recommendations.
3. Contractor/personnel responsible for the application of the sealant/coating product shall be properly qualified and certified by the manufacturer.
4. Sealant shall be suitable for spraying by pneumatic gun or troweling applications to the manhole areas to be sealed.
5. Sealant/Coating shall be corrosion resistant in municipal sewer environment applications and shall be chemically resistant to exposure to sewerage containing moisture, hydrogen sulfide, carbon dioxide, and methane.
6. Sealant/Coating shall be applied to the interior section of the

manhole frame-chimney and adjustment rings area overlapping the bottom portion of the casting frame and top of the lowest adjustment ring or chimney section by a minimum of three (3") inches, with a minimum overall width of six (6") inches.

7. Surface area shall be cleaned and prepared to remove any loose material, oils, dust, and rust prior to application in accordance with manufacturer recommendations. The area to be sealed shall be abrasive blast cleaned, chemically cleaned, and/or abraded as needed to ensure proper application and adhesion to the areas to be sealed as recommended by the manufacturer. If necessary, the contractor shall use adhesion promoters and/or recommended primers per the manufacturer recommendations. Surface to be sealed shall be dry prior to application of sealant.
8. Sealant/Coating application shall be uniform in color and texture.
9. Any other necessary manhole adjustment, repair, rebuild, replacement, and/or lining/coating work shall be completed prior to the application of the frame-chimney sealant/coating.
10. Frame-chimney sealants/coatings must be certified by the manufacturer as compatible with the other manhole rehabilitation products and/or systems.
11. Sealant/Coating shall be tack free within 60 minutes and/or fully cured within 24 hours.
12. Thickness: 250 mils (1/4") min. or per manufacturer requirements.
13. Approved Manufacturers/Products.
  - a. Madewell Products Corporation
    - 1) Madewell 806 Trowelable
  - b. Rainstopper
    - 1) Ring Seal
  - c. Or Equal

#### **2.04 Manhole Surface Rehabilitation Products/Materials**

- A. H<sub>2</sub>S Resistant Cementitious Modified Silica Mortar Reconstruction for Manhole Restoration
  1. Quick setting (under 20 minutes), high strength, sulfide resistant cement material.
  2. Suitable for troweling or rotary spray application to inside of manhole.
  3. Use additives to increase corrosion resistance or bond strength at manufacturer's direction and with Project Manager's approval.
  4. Initial set time per manufacturer's recommendation and per project conditions.
  5. Density when applied: 134 lb/cf +/- 5lb/cf
  6. Compressive strength (ASTM C109) at 1 day

- a. Per manufacturer recommendation
    - b. Minimum acceptable: 2,000 psi
  - 7. Compressive strength (ASTM C109) at 28 days.
    - a. Per manufacturer recommendation
    - b. Minimum acceptable: 5,500 psi
  - 8. Bond Strength (ASTM C882) at 28 days
    - a. Per manufacturer recommendation
    - b. Minimum acceptable: 1,640 psi
  - 9. Flexural Strength (ASTM C78) at 28 days
    - a. Per manufacturer recommendation
    - b. Minimum acceptable: 1,200
  - 10. Shrinkage (ASTM C596) at 28 days: 0 percent
  - 11. Freeze/Thaw (ASTM C666): no visible damage
  - 12. Thickness: 1 inch (1") minimum.
  - 13. Approved Manufacturers/Products.
    - a. Rainstopper
      - 1) CMS 10K
    - b. Madewell
      - 1) Mainstay ML-72
    - c. Or Equal
- B. 100% Solids Epoxy Coating (To be used for added corrosion protection to cementitious lined masonry manholes only.)
- 1. 100% solids epoxy coating shall be used over a new cementitious lined manholes within 100' of a sewer lift station, manholes with a sewer force main discharge, drop manholes, and manholes displaying signs of severe corrosion as determined by the Owner's Representative/Resident Inspector. (Note: For manholes to be initially lined with a cementitious liner prior to the application of a 100% solids epoxy coating, the cementitious lining material(s) shall contain no Calcium Aluminate.)
  - 2. Existing wall preparation: Follow manufacturer's recommendations
  - 3. Thickness: 150 mils minimum.
  - 4. Approved Manufacturers/Products.
    - a. Rainstopper
      - 1) SG Mastic – Two Part Epoxy
    - b. Epoxytech, LLC
      - 1) CPP Liner
    - c. Warren Environmental
      - 1) 301-14 TDS Epoxy Spray System

## **PART 3 - EXECUTION**

### **3.01 Maintenance of Service**

- A. Maintain service usage throughout duration of project, unless otherwise authorized by the Project Manager or Owner. Proper notice shall be provided to the property Owner in advance of any service interruption. No property shall be without service for more than 8 hours.

### **3.02 Manhole Preparation**

- A. Manhole Preparation: Following approved submittals for rehabilitation products used.
  - 1. Divert flow from channel. Bypass pumping shall be considered incidental to the work unless otherwise approved by the Owner. Refer to the bypass pumping section.
  - 2. Prevent extraneous material from entering sewer lines during cleaning and rehabilitation work.
    - a. Filter solids-laden water through an approved de-silting device. No material shall be allowed to go downstream. Notify the Project Manager and Owner immediately if any deleterious material was released downstream.
  - 3. Clean interior surface of manhole of debris, dirt, oil, grease, remains of old coating materials, and any other extraneous materials in accordance with manufacturer's recommendations.
  - 4. Pressure wash interior of manholes to remove loose mortar, concrete, and debris in accordance with manufacturer's requirements or applicable industry standards.
  - 5. Stop leakage into manhole.
  - 6. Repair irregularities and missing material in manhole to restore manhole to original profile and to provide a final smooth surface.
- B. Chemical Grouting for Leakage Control.
  - 1. Provide 48-hour notice to Project Manager prior to start of work for equipment inspection and testing.
    - a. Allow measurements to be taken.
    - b. Demonstrate acceptable grout volumetric measuring technique.
  - 2. Adjust chemical mixing ratios required for specific application.
    - a. Minimum gel time 30 seconds, or otherwise specified or as directed by Project Manager.
  - 3. Do not block pipes entering/exiting manhole with grout.
    - a. Use mirror or camera to confirm pipes are not blocked.
  - 4. Do not damage manhole structure during operations.
    - a. Repair damaged locations as directed by Project

Manager/Owner in accordance with manufacturer recommendations.

5. Protect area of manhole below repair work.
    - a. Do not allow solid material to enter sewage flow.
    - b. Remove protective devices as soon as practical.
  6. Manhole Sealing: Follow ASTM F2414 and as specified herein.
    - a. Brick manholes.
      - 1) Drill only the number of holes necessary to stop leakage following industry standards and chemical grout manufacturer's recommendations.
        - a) Do not use curtain of grout sealing method, unless otherwise specified or directed by the Project Manager.
      - 2) Proceed with manhole reconstruction / rehabilitation using processes as specified and in accordance with the manufacturer requirements and applicable industry standards.
    - b. Precast manholes.
      - 1) Seal pipe connections as specified by drilling between pipe and manhole opening and injecting grout.
      - 2) If required, seal precast manhole base by drilling holes at leakage points along bench to wall, and in channel.
      - 3) At precast joints, inject grout through holes drilled at leaking joint.
- C. Hydraulic Water Plugs for Leakage Control: Following approved submittals.
1. Provide mechanical key by undercutting or square cutting opening and removing loose materials.
  2. Mix, handle, place, and cure material.
  3. Finish surface as required for other rehabilitation work.

### **3.03 Manhole Rehabilitation**

- A. Locate Existing Manhole.
  1. Using available records, maps, GPS coordinates, metal detectors or other technology and techniques to locate, excavate, and expose manhole. All costs associated with excavating & uncovering buried manholes deeper than one (1) foot to be paid under the respective bid item. If the contractor is unable to locate the manhole based on the information available and/or after a minimum of one (1) hour of reasonable effort expended in the field, the contractor shall notify the Project Manager / Owner.
- B. Reset/Replace and adjust manhole frame and cover if required: Refer to Section 02605 and Standard Details. Refer to Section 01025 regarding

the measurement & payment for adjusting manholes, resetting manhole rings & covers, and furnishing & installing new manhole rings & covers.

C. Chemical Grouting: Following ASTM F2414 and as specified herein.

D. Manhole Cementitious Profile Restoration.

1. Using an approved hydrogen sulfide (H<sub>2</sub>S) resistant cementitious products approved under Section 2.04.A the contractor shall restore the manhole to its original as built profile condition prior to the application of the final 1 inch (1") cementitious coating.
2. Use an approved chemical grout or hydraulic water plug as needed for non-structural infiltration control to fill voids and stop active leaks.
3. Restoring a manhole to the original profile shall be defined as restoring missing mortar, missing bricks, and other defects that are not deemed a major structural issue by the Owner's project representative. This item shall be paid for under pay item no. 71.

E. Manhole Surface Cementitious Reconstruction/Rehabilitation: Following approved submittals and as specified herein.

1. Restore manhole to the original profile per Section 3.03.D prior to application of manhole surface cementitious reconstruction / rehabilitation coating.
  1. Mix and handle materials.
  2. Apply materials by troweling or rotary spray equipment. Equipment shall be inspected and tested prior to the beginning of work.
  3. Apply beginning at bottom of brickwork and work upwards to bottom of frame.
    - a. Seal around pipe connections and steps.
  4. Do not allow material to enter sewage flow.
  5. Apply.
    - a. The existing surface shall be restored to the original profile.
    - b. Minimum finished applied thickness: 1 inch (1").
    - b. Confirm with pictures and gauge.
  6. Trowel and brush for smooth finish.
  7. Cure using curing compound when recommended by manufacturer.
    - a. Do not allow flow in manhole or traffic over manhole, until manufacturer's minimum cure times have been achieved.
  8. As stipulated in Section 2.04.B, manholes to be rehabilitated using a cementitious liner must also be coated with an application of an 100% solids epoxy-based material at a minimum thickness of 150 mils. (Note: For manholes to be initially lined with a cementitious liner prior to the application of a 100% solids epoxy liner, the cementitious lining material(s) shall contain no Calcium Aluminate.)

F. All exposed reinforcement shall be treated with an epoxy-based, rapid-

setting, rust inhibiting primer and allowed to cure in accordance with the manufacturer's recommendations.

- G. Trim and seal incoming laterals and pipes.
- H. Contractor shall take measures to prevent lining material from overlapping the metal manhole cover and frame casting. Any overlapping lining materials shall be properly removed from the metal manhole cover and frame casting in accordance with the manufacturer's requirements or recommendations to avoid damaging the metal components.
- I. Remove all construction debris not associated with manhole cleaning, surface preparation, rehabilitation, and/or lining work and dispose of at a Parish approved certified off-site waste disposal facility and shall be included in the bid prices for the respective pay items. Any sewer manhole debris associated with required normal manhole cleaning, surface preparation, rehabilitation, and/or lining work shall be properly disposed of at the Parish Bridge City Wastewater Treatment Plant at no direct payment and shall be included in base bid price for the respective manhole rehabilitation and/or lining pay items. If approved by the Owner's project representative, any debris resulting from heavy and excessive manhole cleaning shall be properly disposed of at the Parish Bridge City Wastewater Treatment Plant and shall be paid under pay item no. 73.

### **3.04 Quality Assurance Inspection & Testing**

- A. Field Inspection & Testing.
  - 1. Make available all locations and phases of the work for access by the Project Manager/Owner or other personnel designated representative as specified herein.
  - 2. The installer shall notify the Project Manager in advance to perform equipment inspections & testing as specified herein prior to performing work.
  - 3. Inspect all material upon receipt to ensure all are supplied by the approved manufacturer and properly labeled, stored, and in conformance with all other manufacturer's requirements and as specified herein.
  - 4. The installer shall visually inspect the work continually in the field to ensure that the products and/or liner system is being installed as specified herein, or otherwise required.
  - 5. Any nonconforming work or damage to materials during installation shall be brought to the attention of the Project Manager and shall be corrected as recommended by the manufacturer or as directed

- by the Project Manager/Owner.
6. The installer shall inform the Project Manager of the overall progress and the quality of the work through daily reports.
  7. The installer shall provide pre-&post construction photographs with daily reports as specified herein.
  8. The installer shall visually inspect the work after installation in the presence of the Project Manager, Owner, and/or designated field representative to determine conformance with the specifications and referenced standard documents.
  9. All surfaces to be inspected shall be properly cleaned and prepared to permit for close visual inspection.
  10. If necessary provide flow-through plugs for the duration needed to adequately perform the field inspection and any testing.
  11. Verify no inflow or infiltration and stoppage of all leaks.
  12. Verify services are reinstated and unobstructed.
  13. Verify curing of surfacing materials in conformance with manufacturer's recommendations.
  14. Perform visual inspections of coating & lining areas to detect holidays. Upon full cure the coating or lining material shall be tested by high voltage spark detection in accordance with NACE RP0188 and/or per manufacturer's recommendation to verify a pin-hole free surface and identify any discontinuities. Voltage shall be set at 11,000 volts, or minimum required based on thickness.
  15. Any and all deficiencies or defective work not in compliance with these specifications and/or manufacturer requirements shall be marked for repair or removal/replacement by the installer at no additional cost.
  16. For grout and concrete test for compressive strength following ASTM C109.
  17. The installer shall collect, label, and store representative product samples as required by the manufacturer and applicable standards per approved product submittals.
    - a. Additional product samples may be required as directed.
    - b. Store and maintain product samples until the contract performance bond has expired.
    - c. Ensure and verify required testing is performed by an approved certified laboratory.

### **3.05 Warranty Inspections**

- A. Owner or Owner's representative will conduct visual inspection within three (3) months prior to expiration of warranty to determine integrity of rehabilitation materials and water-tightness.
  1. Complete post inspection during first high groundwater period (spring or fall) following acceptance of work.

2. Contractor will accompany Project Manager or designated representative on inspections.
3. Inspect 25 percent minimum of manholes rehabilitated at locations selected by the Project Manager or Owner.
  - a. Infiltration and Inflow: None
  - b. Structural Repairs: Sound
  - c. If more than one manhole fails warranty inspection, inspect all manholes with similar characteristics.
  - d. Repair defects in accordance with manufacturer warranty and recommendations.