



**Date:** May 08, 2018

**To:** Thomas J. Bonfield, City Manager

**Through:** W. Bowman Ferguson, Deputy City Manager

**From:** Donald F. Greeley, Director, Water Management

**Subject:** 2018 Sewer Lining Program - North  
Award of Construction Contract to Insituform Technologies, LLC

### **Executive Summary**

The Department of Water Management (DWM) opened bids on April 11, 2018 for the 2018 Sewer Lining Program - North. The project consists of installing approximately 250,000 linear feet (LF) of cured-in-place pipe (CIPP) to address deteriorated sewer mains primarily located in the Eno and Lick Basins. These basins are located in the northern portion of the City.

These two sewer basins are among those identified as priority areas in a recent study to locate and reduce Rain-Derived Inflow/Infiltration (RDI/I), which is a measure of rainfall that enters the sanitary sewer system. The sewer mains in these basins are shown in Attachment A. To date, this is the largest CIPP contract bid by the City, and it is accompanied by a similar contract this cycle for work to be performed in the southern part of the City.

The City received five bids, one of which was deemed non-responsive. The DWM recommends award of the contract to Insituform Technologies, LLC; the lowest responsive and responsible bidder.

### **Recommendation**

The DWM recommends City Council:

1. Authorize the City Manager to execute a contract with Insituform Technologies, LLC for the 2018 Sewer Lining Program - North in the amount of \$7,221,347.50.
2. Establish a Contingency fund for the contract in the amount of \$778,652.50.
3. Authorize the City Manager to negotiate Change Orders for the contract provided that the total contract cost does not exceed \$8,000,000.00.

### **Background**

The City's Sewer Collection Permit requires the City to repair any known defects in the collection system. Pipe and manhole deterioration and failure is common and much can be attributed to one or more factors including corrosive sewer gases, poor installation, groundwater inflow and infiltration, root intrusion, construction activities, ground movement, and age.

Over the years, using flow monitoring, inspections, maintenance records and sanitary sewer evaluations; DWM have identified and rehabilitated or replaced sewer mains and manholes in poor and deteriorating condition. In an effort to improve these rehabilitation efforts, DWM embarked on a Rain-Derived Inflow/Infiltration (RDI/I) reduction program consisting of increased sewer-flow monitoring and basin modeling. RDI/I is a term used for the rainfall that enters a sewer system via overland flow/runoff or rain-derived groundwater.

The increased flow monitoring, combined with hydraulic modeling, helps pinpoint or drill down to

leaking areas of sewer basins and sub-basins. This allows for one to make recommendations for rehabilitation, replacement, or further data gathering. The recent effort centered on 16 sub-basins where DWM had broad-scale evidence of high RDI/I. The flow monitoring and modeling assisted in locating the sources of the RDI/I.

With the areas of high RDI/I known, DWM is proposing to rehabilitate several mains using CIPP. CIPP has been used frequently by the City over the past 20 years, as it allows for the rehabilitation of sewer lines without the use of open cut excavation. This results in lower costs and minimal service interruptions.

The CIPP process essentially installs a new pipe inside of the existing pipe, using the manholes as entry and exit points for the work. The newly installed CIPP creates a seamless stretch of pipe from manhole to manhole securing the structural integrity of the pipe, preventing root intrusion, and reducing the amount of infiltration and inflow into the system.

This one-year contract begins to address nine of the sub-basins on the North side of the City with the highest level of inflow and infiltration. It is the largest CIPP contract bid by the City, to date, and is accompanied by a similar contract this cycle for work in the southern part of the City. The other contract award, titled 2018 Sewer Lining Program – South, consists of 220,000 LF of sewer mains being rehabilitated.

**Issues and Analysis**

The bid results are:

<b>Contractor</b>	<b>Bid Amount</b>	<b>Difference</b>
<b>Insituform Technologies, LLC</b>	<b>\$7,221,347.50</b>	
SAK Construction, LLC	\$7,344,400.00	2%
AM-Liner East, Inc.	\$7,999,025.00	11%
Layne Inliner, LLC	\$8,518,625.00	18%
IPR Southeast, LLC	~Non Responsive~	

City staff evaluated and tabulated all bids and, along with the City’s EO/EA Department, found four of them to be responsive. DWM recommends contract award to Insituform Technologies, LLC, as the lowest responsible and responsive bidder.

**Alternatives**

Do not perform the cured-in-place rehabilitation. As mentioned above, pipe being rehabilitated has deficiencies in structural integrity, root intrusion, inflow and infiltration, or some other defect that warrants action. By not performing this project, failures in the system may occur leading to sewer overflows, the capacity of the system is reduced, and we are not abiding by the City’s Sewer Collection Permit obligations.

**Financial Impact**

Funding for this contract is available in the following accounts:

<b>Organization Code</b>	<b>Object Code</b>	<b>Project Code</b>	<b>Amount</b>
4100P002	731000	PSN18	\$7,221,437.50
4100P002	731900	PSN18	\$ 778,652.50
		<b>Total</b>	<b>\$8,000,000.00</b>

**UBE Summary**

The Equal Opportunity/Equity Assurance Department reviewed the bid submitted by Insituform Technologies, LLC, Inc. of Monroe, NC and determined that they are in compliance with the Ordinance to Promote Equal Business Opportunities in City Contracting.

**UBE REQUIREMENTS**

No MUBE or WUBE goals were set.

**WORKFORCE STATISTICS****Total Workforce:**

<b>Employment Category</b>	<b>Total Employees</b>	<b>Total Males</b>	<b>Total Females</b>
Executive Officials and Managers	66	61	5
Officials and Managers	593	529	64
Professional	376	277	99
Technicians	367	297	70
Sales Workers	31	21	10
Clerical	340	95	245
Craft Workers	1691	1653	38
Operatives	536	507	29
Labor	325	302	23
Service	9	4	5
<b>Total</b>	<b>4334</b>	<b>3746</b>	<b>588</b>

**Male:**

<b>Employment Category</b>	<b>White</b>	<b>Black</b>	<b>Hispanic</b>	<b>Asian or Pacific Islander</b>	<b>Indian or Alaskan Native</b>	<b>Two or More Races*</b>
Executive Officials and Managers	57	0	2	1	1	0
Officials and Managers	419	21	64	16	2	7
Professional	198	16	35	22	1	5
Technicians	181	39	58	5	5	9
Sales Workers	21	0	0	0	0	0
Clerical	54	16	18	4	1	2
Craft Workers	789	145	602	65	3	49
Operatives	238	135	98	12	14	10
Labor	124	41	126	6	0	5

Service	1	1	1	0	0	1
Total	2082	414	1004	131	27	88

**Female:**

<b>Employment Category</b>	<b>White</b>	<b>Black</b>	<b>Hispanic</b>	<b>Asian or Pacific Islander</b>	<b>Indian or Alaskan Native</b>	<b>Two or More Races*</b>
Executive Officials and Managers	4	1	0	0	0	0
Officials and Managers	46	5	9	4	0	0
Professional	71	9	8	7	1	3
Technicians	17	20	26	4	0	3
Sales Workers	6	0	3	1	0	0
Clerical	164	17	41	13	0	10
Craft Workers	21	4	10	1	1	1
Operatives	7	18	2	1	0	1
Labor	4	9	9	0	0	1
Service	2	0	3	0	0	0
Total	342	83	111	31	2	19

Attachment: Attachment A – Project Location Map  
Attachment B - UBE Compliance Report – EO/EA