

General Info

Total:

\$229,979.75

Number	Description
2020 Sewer Improvement Project	Project consists of heavy cleaning, pipe lining, and sewer pipe point repairs.
Deadline	Allows zero unit prices and labor
08/20/2020 03:00 PM UTC	Yes
Vendor	Allows negative unit prices and labor
Insituform Technologies LLC	No
Submitted	
08/20/2020 01:58 PM UTC	
Signed by	
Christlanda Adkins	
Opened	
08/20/2020 03:02 PM UTC By jill.webb@gahanna.gov	

VENDOR RESOURCES

Vendor Resources Page
Informational page containing instructional videos for vendors.

BidExpress Customer Support Team
Customer support contact. Available Monday-Friday from
7:00am-8:00pm eastern time.

ATTACHMENT LIST

Notice to Bidders.pdf (16.3 KB)

Information and Requirements for Bidders.pdf (85.2 KB)

Supplemental Specifications.pdf (1.17 MB)

Prevailing Wage Docs.pdf (635 KB)

2020 Sewer Improvements.pdf (5.93 MB)

2020 Sewer Improvement Plans.pdf (10.9 MB)

Owner Contractor Agreement and Admin Docs.pdf (579 KB)

City of Columbus CMS Supplement.pdf (21.7 KB)

Bid Guaranty and Contract Bond.pdf (10.8 KB)

PREVAILING WAGE RATES

Current Prevailing Wage Rates are to be included in the contract. The current rates become part of the contract awarded to the lowest and best bidder. The links listed below provide access to forms, regulations, and general information on prevailing wage compliance. These are for information purposes only.

[Prevailing Wage Rates](#)

[Forms & Publications](#)

CONTRACTOR'S QUALIFICATION STATEMENT

The bidder is required to state the following in full detail as will enable the Director of Public Service and Engineering and Council of the City of Gahanna to judge its responsibility, experience, skill and financial standing to meet the obligations of the Contract.

ORGANIZATION:

(a) Number of years your organization has been in business as a Contractor: *

40

(b) Number of years your organization has been in business under its present business name. List any other or former names your organization has operated under. *

40

(c) If your organization is a corporation, list the following: date of incorporation, state of incorporation, President's name, Vice President's name(s), Secretary's name and Treasurer's name. If not applicable, state "not applicable." *

N/A-Limited Liability Company

(d) If your organization is a partnership, list the following: date of organization, type of partnership (if applicable) and name(s) of general partner(s). If not applicable, state "not applicable." *

N/A

(e) If your organization is individually owned, list the following: date of organization and name of owner. If not applicable, state "not applicable." *

N/A

(f) If the form of your organization is other than those listed above, describe it and name the principals. If not applicable, state "not applicable." *

Limited Liability Company-see attached board member list

LICENSING:

(a) List jurisdictions and trade categories in which your organization is legally qualified to do business, and indicate registration or license numbers, if applicable. *

all 50 states

(b) List jurisdictions in which your organization's partnership or trade name is filed. *

N/A-No trade name

EXPERIENCE:

(a) List the categories of work that your organization normally performs with its own forces. *

Trenchless sewer rehabilitation.

(b) List all details of any work your organization has failed to complete. If none, state "none." *

None

(c) List any Claims that your organization or any of its officers have initiated, any Claims initiated against your organization or any of its officers, any mediation or arbitration proceedings or lawsuits related to any contract your organization or any of its officers have been involved in or is currently involved in, or any judgements or awards outstanding against your organization or any of its officers within the last five (5) years. Please give details for each Claim, including the names and telephone numbers of the persons who are parties, the amount of the Claim, the type of Claim and basis for the Claim, and the outcome. If none, state "none." *

See attached legal disclosure.

Note: As used in this document "Claim" means a Claim initiated under the Contract Documents for a contract.

(d) List any officer or principal of your organization that has ever been an officer or principal of another organization when it failed to complete a contract within the last five (5) years. Please give details for each instance, including the names and telephone numbers of the persons who are parties to the contract, and the reason(s) the contract was not completed. If none, state "none." *

N/A

(e) List contracts your organization has in progress with an original contract sum of more than \$100,000.00, giving the name of contract, owner and its telephone number, design professional and its telephone number if applicable, contract amount, percent complete and scheduled completion date. State total amount of work in progress and under contract. If none, state "none." *

See attached.

(f) Provide the following information for each contract your organization has had during the last five (5) years, including current contracts, where the contract sum is fifty percent (50%) or more of the bid amount for this Contract, including add alternates: name of contract, scope of work, contract sum, name of owner's representative and owner's telephone number. *

See attached.

Note: If there are more than ten (10) of these contracts, only provide information on the most recent ten (10) contracts, including current contracts.

(g) Provide the following information for each contract your organization has had during the last five (5) years, which your organization believes is of comparable or greater size and complexity than the Owner's contract: name of contract, scope of work, contract sum, name of owner's representative and owner's telephone number. *

See attached.

Note: If there are more than five (5) of these contracts, only provide information on the most recent five (5) contracts, including current contracts.

(h) State the average annual amount of contracts your organization has performed during the last five (5) years. *

Booked between 350-450 million dollars.

(i) If any of the following members of your organization's management, president, chairman of the board, or any director, operates or has operated another company during the last five (5) years, identify the member of management and the name of the company. If none, state "none." *

None.

(j) If your organization is operating under a trade name registration with the Secretary of State for the State of Ohio, identify the entity for which the trade name is registered. If none, state "none." *

No trade name.

(k) If your organization is a division or wholly-owned subsidiary of another entity or has another relationship with another entity, identify the entity of which it is a division or wholly-owned subsidiary or with which it has another relationship and also identify the nature of the relationship. If not applicable, state "not applicable." *

Insituform is a wholly-owned subsidiary of Aegion Corporation.

(l) List the education, training and experience for each person who will fill a management role on the Contract, including without limitation the Contract Executive, Contract Manager and Contract Superintendent. For each person listed, include with the other information the last three contracts on which the person worked and the name and telephone number of the owner. *

See attached resumes.

REFERENCES:

(a) List all trade references. *

See attached references.

(b) List all bank references. *

See attached bank references.

(c) List the name of your surety bonding company along with the name and address of your surety agent. *

See attached.

FINANCING:

(a) Attach a financial statement, preferably audited, including your organization's latest balance sheet and income statement showing the following items: current assets (e.g., cash, joint venture accounts, accounts receivable, notes receivable, accrued income, deposits, materials inventory and prepaid expenses), net fixed assets, other assets, current liabilities (e.g., accounts payable, notes payable, accrued expenses, provision for income taxes, advances, accrued salaries and accrued payroll taxes) and other liabilities (e.g., capital, capital stock, authorized and outstanding shares par values, earned surplus and retained earnings). **(To upload - Refer to Financial Statements Upload area after the Contractor's Qualification Statement of this solicitation).**

(b) List the name and address of the firm preparing attached financial statement, and date thereof. *

Price Waterhouse 12/31/2019

(c) State if the attached financial statement for the identical organization is named on page one. If not, explain the relationship and financial responsibility of the organization whose financial statement is provided (e.g., parent-subsiary). *

Insituform included in parent financial statement (Aegion Corporation).

(d) State if the organization whose financial statement is attached will act as guarantor of the Contract. *

Not needed. Insituform bonding capacity is \$750 million dollars.

CERTIFICATION:

The undersigned certifies for the reliance of the Owner that after diligent investigation, to the best of the undersigned's belief, the information provided with this Contractor's Qualification Statement is true, accurate and not misleading.

Company Name: *

Insituform Technologies, LLC

Signature: *

Christlanda Adkins

Date: *

8/20/2020

Printed Name and Title: *

Christlanda Adkins Contracting and Attesting Officer

CONTRACTOR'S QUALIFICATION STATEMENT (FINANCIAL STATEMENT UPLOAD)

Name	Omission Terms	Submitted File
Financial Statement Upload Financial Statement Upload		Gahanna OH 2019 IT LLC Balance Sheet w Audit Opinion Financial Stmt 08 20 2020.pdf
1 Required Document		

CONTRACTOR'S QUALIFICATION STATEMENT (ADDITIONAL MATERIAL)

Name	Omission Terms	Submitted File
Optional: Vendor is not required to complete.		
Additional Material Upload #1 Optional Upload as Needed (10MB limit)		Resumes for upload Gahanna OH 08 20 2020.pdf
Additional Material Upload #2 Optional Upload as Needed (10MB limit)		Gahanna OH Submittal -1 08 20 2020.pdf
Additional Material Upload #3 Optional Upload as Needed (10MB limit)		Gahanna OH Submittal-2 experience reports 08 20 2020.pdf
3 Required Documents		

SUBCONTRACTORS LIST

The bidder is required to state, in detail, in the space provided below, the name, address, experience and the work to be performed by subcontractors in this Contract, including approximate percentage of the Contract cost by subcontractor. If no subcontractors are to be used, so state. *

Tele-Vac Environmental
7611 Easy Street
Mason, OH 45040

The work that Tele-Vac will perform on this project for Insituform will be the Pre CIPP Sanitary Sewer Cleaning & CCTV, Mainline Chemical Grouting, Lateral Status Determination via Lateral Launching, and Trimming Protruding Laterals. This portion of the work will be approximately 23% of the project cost.

Insituform has worked with Tele-Vac as a subcontractor on several projects both within the Columbus Ohio area as well as surrounding Cities and Villages .
Project references available upon request.

Note: The bidder shall perform within its own organization, work amounting to not less than fifty percent (50%) of the total Contract cost.

CORPORATE AFFIDAVIT

Optional: Vendor is not required to complete.

To be filled in and executed if the contractor is a corporation.

State of: *

No bid

County of (ss): *

No bid

_____ ,
being first duly sworn, *

No bid

deposes and says that he or she is Secretary of

_____ , *

No bid

a corporation organized and existing under and by virtue of the laws of the state of

_____ , *

No bid

and having its principal office at

_____ (Address), *

No bid

_____ **(City), ***

No bid

_____ **(County), ***

No bid

_____ **(State). ***

No bid

**Affiant further says he or she is familiar with the records, minutes, books and by-laws of the _____
(Name of Corporation). ***

No bid

Affiant further says that

_____ (Name of Officer), *

No bid

(Title) *

No bid

of the Corporation is duly authorized to sign the Contract for the
_____ **(Contract) ***

No bid

for said Corporation by virtue of _____ **(state whether a provision of by-laws or a resolution of the Board of Directors), ***

No bid

_____ **(if by resolution, give date of adoption).**

No bid

Signature: *

No bid

CONTRACTOR'S PERSONAL PROPERTY TAX AFFIDAVIT (O.R.C. § 5719.042)

State of: *

Missouri

County of (ss): *

St. Louis

_____, **Affiant, ***

Christlanda Adkins

being first duly sworn, deposes and says:

1. I am the (Title): *

Contracting and Attesting Officer

of (Contractor): *

Insituform Technologies, LLC

2. The Contractor's offices are located at: *

17988 Edison Avenue
Chesterfield, MO 63005

3. I am the Contractor's duly authorized representative for making this affidavit.

4. Effective this _____ day: *

20th

of _____: *

August

20 _____: *

20

the Contractor _____ with delinquent personal property taxes on the general list of personal property in any Ohio county. *

is not charged

delinquent personal property taxes:

County:

0.00

Amount (include total amount, with penalties and interest thereon):

County:

0.00

Amount (include total amount, with penalties and interest thereon):

County:

0.00

Amount (include total amount, with penalties and interest thereon):

County:

0.00

Amount (include total amount, with penalties and interest thereon):

Signature: *

Christlanda Adkins

NONCOLLUSION AFFIDAVIT

State of: *

Missouri

County of (ss): *

St. Louis

Contractor, *

Christlanda Adkins

being first duly sworn, deposes and says that he or she is

other

of

(company name), *

Insituform Technologies, LLC

the party making the foregoing bid; that such bid is not made in the interest of or on behalf of any undisclosed person, partnership, company, association, organization, or corporation; that such bid is genuine and not collusive or sham; that said bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that any one shall refrain from bidding; that said bidder has not in any manner, directly or indirectly, sought by agreement, communication or conference with anyone to fix any overhead, profit, or cost element of such bid price, or of that of any other bidder, or to secure any advantage against the Owner awarding the Contract to anyone interested in the proposed Contract; that all statements contained in such bid are true; and further, that said bidder has not, directly or indirectly, submitted its bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid and will not pay any fee in connection therewith, to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof, or to any other individual except to such person or persons as have a partnership or other financial interest with said bidder in its general business.

Signature: *

Christlanda Adkins

ESCROW WAIVER

Contractor, *

Insituform Technologies, LLC

agrees to abide by City of Gahanna Ordinance No. 0077-2017. Pursuant to such ordinance and the City's home rule authority, Contractor waives the requirements of Sections 153.13, 153.14 and 153.63 of the Ohio Revised Code that an escrow account be established relating to the Contract and that interest be paid on retainage.

Signature: *

Christlanda Adkins

BID GUARANTY AND CONTRACT BOND & SURETY UPLOADS

Name	Omission Terms	Submitted File
Bid Guaranty and Contract Bond Bid Guaranty and Contract Bond (Form located in Attachement List)		Gahanna OH Bid Guaranty and Contract Bond 08 20 2020.pdf
Surety Company's Power of Attorney Power of attorney for surety company		Gahanna OH Surety Company's Power of Attorney 08 20 2020.pdf
Surety Company's Financial Statement Financial statement for surety company		Gahanna OH Surety Company's Financial Statement 08 20 2020.pdf
Surety Company's Certificate of Complaine from the Ohio Department of Insurance Certificate of complaine from the Ohio Department of Insurance for surety company		Gahanna OH Surety Company's Certificate of Compliance from the Ohio Dept of Insurance 08 20 2020.pdf
4 Required Documents		

BID FORM & BIDDER CERTIFICATION

Having carefully reviewed the Information and Requirements for Bidders, Drawings, Specifications and other Contract Documents for the Project including having also received, read, and taken into account any Addenda and likewise having inspected the site and the conditions affecting and governing the Project and confirmed the location of the site utilities and all existing structures, the undersigned hereby proposes to furnish all materials and to perform all labor, as specified and described in the said Specifications and/or as shown on the said Drawings for all Work necessary to complete the Project on a timely basis and in accordance with the Contract Documents regardless of whether expressly provided for in such Specifications and Drawings.

Before completing the Bid Form, the undersigned represents that it has carefully reviewed the Notice to Bidders, Information and Requirements for Bidders, this Bid Form, Form of Bid Guaranty and Contract Bond, Contractor's Affidavit (O.R.C. 5719.042), Owner-Contractor Agreement, General Conditions of the Contract (EJCDC C-700, 2013) (as modified), Drawings, Project Specifications, and all other Contract Documents. Failure to comply with provisions of the Contract Documents may be cause for disqualification of the bid.

BONDS AND CONTRACT: If the undersigned is notified of bid acceptance, it agrees to furnish required bonds as indicated in the Information and Requirements for Bidders.

COMPLETION OF WORK: In submitting a bid, the undersigned agrees to execute the Owner-Contractor Agreement in the form included in the Contract Documents and to substantially complete its Work as required by the Contract Documents.

NOTE A: The wording of the Bid Form shall be used throughout, without change, alteration, or addition. Any change may cause it to be rejected.

NOTE B: Bidder is cautioned to bid only on the Brands or Standards specified.

NOTE C: If there is an inconsistency or conflict in the Bid amount, the lowest amount shall control, whether expressed in numbers or words.

INSTRUCTIONS FOR SIGNING

A. The person signing for a sole proprietorship must be the sole proprietor or his authorized representative. The name of the sole proprietor must be shown below.

B. The person signing for a partnership must be a partner or his authorized representative.

C. The person signing for a corporation must be the president, vice president or other authorized representative; or he must show authority, by affidavit, to bind the corporation.

D. The person signing for some other legal entity must show his authority, by affidavit, to bind the legal entity.

Legal Name of Bidder: *

Insituform Technologies, LLC

Bidder is: *

other legal entity

Name and Title of Person Legally Authorized to Bind Bidder to a Contract: *

Christlanda Adkins

Address: *

17988 Edison Avenue Chesterfield, MO 63005

Telephone Number: *

(636) 530-8679

Fax Number:

Federal Tax ID Number: *

13-3032158

Signature: *

Christlanda Adkins

Date: *

8/20/20

When the Bidder is a partnership or a joint venture, state name and address of each partner in the partnership or participant in the joint venture below:

Name and Address:

N/A

BID FORM (INSTRUCTIONS)

Include the cost of all labor and material for the bid items listed below. Bidder is to fill in all blanks related to the bid items for which a bid is being submitted. If there is a difference between the total bid amount and the total of the individual amounts for labor and materials stated under a bid item, the total of the individual amounts shall be the amount deemed to be inserted in the blank for the total labor and materials for each bid item. If there is an inconsistency or conflict in the bid amount, the lowest amount shall control, whether expressed in numbers or words.

For items the City designates as alternate, enter a negative value if it is to be deducted from the Base Bid. Otherwise the item(s) will be included as an addition to the base bid. If opting out of bidding an alternate item, check mark the box in the optional column located to the left of the item to insert the words "No Bid".

BID FORM

\$229,979.75

REF #	ITEM #	DESCRIPTION	QTY	UNIT	MATERIAL	LABOR	Extension
Alternates are not included in bid total.							
1	614	MAINTENANCE OF TRAFFIC	1.00	LS	\$300.00	\$700.00	\$1,000.00
2	SS-3	BYPASS PUMPING	1.00	LS	\$900.00	\$2,100.00	\$3,000.00
3	SPEC	8" CURED IN PLACE PIPE PRE LINER	5,929.00	LF	\$1.58	\$3.67	\$31,127.25
4	SPEC	8" CURED IN PLACE PIPE (4.5 MM MINIMUM THICKNESS)	5,929.00	LF	\$8.25	\$19.25	\$163,047.50
5	SPEC	MAINLINE GROUTING	5.00	CF	\$663.00	\$1,547.00	\$11,050.00
6	SPEC	LATERAL STATUS DETERMINATION	149.00	EA	\$31.50	\$73.50	\$15,645.00
7	SPEC	TRIMMING PROTRUDING LATERALS	1.00	EA	\$33.00	\$77.00	\$110.00
8	SPEC	GRASS/LANDSCAPING ALLOWANCE	5,000.00	SY	\$0.30	\$0.70	\$5,000.00
							Total: \$229,979.75



Report of Independent Auditors

To the Management of Insituform Technologies, LLC:

We have audited the accompanying balance sheet of Insituform Technologies, LLC as of December 31, 2019.

Management's Responsibility for the Balance Sheet

Management is responsible for the preparation and fair presentation of the balance sheet in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of the balance sheet that is free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on the balance sheet based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the balance sheet is free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the balance sheet. The procedures selected depend on our judgment, including the assessment of the risks of material misstatement of the balance sheet, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the Company's preparation and fair presentation of the balance sheet in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the balance sheet. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the accompanying balance sheet presents fairly, in all material respects, the financial position of Insituform Technologies, LLC as of December 31, 2019 in accordance with accounting principles generally accepted in the United States of America.

PricewaterhouseCoopers LLP

Saint Louis, Missouri
March 12, 2020

Insituform Technologies, LLC

Balance Sheet

(in thousands)

	December 31, 2019
Assets	
Current assets	
Cash and cash equivalents	\$ 5,880
Receivables, net	33,494
Retainage	14,834
Contract assets	21,194
Inventories	12,891
Prepaid expenses and other	3,970
Assets held for sale	2,377
Total current assets	<u>94,640</u>
Property, plant and equipment, net	36,039
Non-current assets	
Goodwill	88,527
Intangibles	1,788
Operating lease assets	22,046
Deferred income taxes	10,340
Other long-term assets	3,361
Total non-current assets	<u>126,062</u>
Total assets	<u><u>\$ 256,741</u></u>
Liabilities and stockholders' equity	
Current liabilities	
Accounts payable	\$ 23,317
Accrued expenses	29,448
Contract liabilities	11,637
Current maturities of long-term debt	-
Total current liabilities	<u>64,402</u>
Non-current liabilities	
Long-term debt, less current maturities	-
Operating lease liabilities	17,089
Deferred income taxes	13,272
Other long-term liabilities	252
Total non-current liabilities	<u>30,613</u>
Stockholders' equity	
Common stock	-
Additional paid-in capital	128,381
Retained earnings	33,345
Accumulated other comprehensive loss	-
Non-controlling interest	-
Total stockholders' equity	<u>161,726</u>
Total liabilities and stockholders' equity	<u><u>\$ 256,741</u></u>

Education:

BS Construction Management

Years of Industry Experience: 8

Years of Similar Project Experience:

- 5

Certifications:

- Construction Management

Contact:

Jeffrey Petruzzi
253F Worcester Rd
Charlton, MA 01507
508-277-2693
Jpetruzzi@aegion.com

OVERVIEW

Mr. Petruzzi has 8 years of field and operational experience with cured in place (CIPP) installations at Insituform Technologies. His operational experience includes specializing in {small/medium/large} diameter Over-the-Hole (OTH) wetout and installation applications.

His specific duties and responsibilities include:

- Project Management
- Oversee day to day operations
- Manage office staff and projects
- Estimate and bid projects
- Procure subcontractors and vendors
- Financially responsible for projects from kick off through closeout

HIGHLIGHTS OF RELATED PROJECT EXPERIENCE

Cheektowaga, NY Phase IV Rehab Sewer Shed 7 2019

160,00 LF Sanitary Sewer Lining of 8' to 24"

Saratoga, NY Interceptor Rehab Phase VI 2019

3,500 LF of Sanitary Lining 36" to 60"

Quincy, MA FY2019 CIPP Improvements 2019

6,400 LF Sanitary Lining of 8" to 38"

Greater New Haven 24" Interceptor 2018

2,800 Sanitary Sewer lining of 24"

Lewiston, ME Franklin Pasture Sewer Repair 2017

2,000 LF of sanitary lining of 36"

Dedham, MA - On Call Services 2015

33,600 LF of Sanitary lining of 8" to 18"

Jason Wolfe

Superintendent



Education: 1996-1999 Franklin County High School

Years of Industry Experience: 6

Years of Similar Project Experience:

- 9

Certifications:

- CDL Class B with Hazmat endorsement
- OSHA 40 hour certification
- Confined space certification

Contact:

Jason Wolfe
4044 Drewersburg Road
West Harrison, IN 47060
513-497-8011
jwolfe@aegion.com

OVERVIEW

Mr. Wolfe has 6 years of field and operational experience with cured in place (CIPP) installations at Insituform Technologies. His operational experience includes specializing in {small/medium/large} diameter Over-the-Hole (OTH) wetout and installation applications.

His specific duties and responsibilities include:

- Management of job budget
- Manage progress of project to ensure completion on schedule
- Scheduling of team and supplies
- Act as on site Safety Officer to ensure crew members are in accordance of company safety values.

HIGHLIGHTS OF RELATED PROJECT EXPERIENCE

Dayton, OH Southeast Sanitary - 2013

15,825 LF of 8" diameter sanitary, OTH

Xenia, OH Phase II - 2014

15,503 LF of 8" diameter sanitary, OTH

Columbus, OH CIP #650404-100041 - 2015

47,522 LF of 8"-48" diameter sanitary, OTH

Columbus, OH CIP #650874-1000002- 2016

17,045 LF of 8"-24" diameter sanitary, OTH

Dayton, OH Upper Riverdale Phase 6 - 2016

19,757 LF of 8" diameter sanitary, OTH

Columbus, OH CIP #650875-1000003- 2018-2019

12,320 LF of 8"-15" diameter sanitary, OTH

Columbus, OH CIP #650875-10 – 2018-2019

17,356 LF of 8"10" diameter sanitary, OTH

Dayton, OH CT-18-2061 – 2018-2019

22,408 LF of 8" diameter sanitary, OTH

Cincinnati, OH MSDGC – 2019-2020

10,302 LF of 8"-24" diameter sanitary, OTH

Springfield, OH 2019 CIPP - 2019

4,023 LF of 8"-24" diameter sanitary, OTH

Information available on additional Over-the-Hole small, medium and large diameter onsite wetout projects upon request



Nelson Leite

Email Address: NLeite@Aegion.com

Contact Number: 774.364.1927

EDUCATION

**Certified Insituform Cured in Place Pipe Installer
Certified as an HVAC Apprentice, High School Graduate**

WORK EXPERIENCE

2017-current

Insituform Technologies, LLC. Charlton, MA

Operations Manager

Overseeing Atlantic area with 11 crews and Pressure Pipe Installations

WORK EXPERIENCE

June 2011- 2017

Insituform Technologies, LLC. Charlton, MA

Senior Superintendent and Crew Leader

- ◆ Supervised 20 plus Over the Hole (OTH) Wetout Installations
- ◆ Plan & implement execution of assigned active project installations ranging from \$15k-\$5m
- ◆ Successfully installed miles of CIPP liner ranging in size from 6" to 84"
- ◆ Manage more than 20 projects annually in the Atlantic Area territory
- ◆ Oversee 6 immediate crew reports and up to 14 on OTH Projects
- ◆ Manage specialized construction crews, equipment & numerous subcontractors
- ◆ Ensure all standard operating procedures, safety and quality requirements are met for crew
- ◆ Manage the payroll input for installation crew for all assigned projects
- ◆ Perform pre-bid investigation work pertaining to the area
- ◆ Attend pre-bid and pre-construction meetings to assure successful project completion
- ◆ Meet with potential & active clients on environmentally & publicly sensitive projects
- ◆ Plan & commit crew resources to meet client's goals & internal corporate financial goals
- ◆ Conduct continuing education and safety sessions regarding industry practices for crew members

MAJOR ACCOMPLISHMENTS

- ◆ Achieved Multiple years of Incident/Injury Free Award of Excellence
- ◆ Continue to utilize Best Construction Methods and Installation practices to finish projects under hours and on time.
- ◆ Consistently help meet or exceeded Atlantic area business plan annually since hire
- ◆ Successfully mitigated and close problem projects throughout multiple Atlantic Area Offices
- ◆ Maintain an internal training regimen for all direct reports
- ◆ Recognized for excellent Problem Solving Skills
- ◆ Consistently recognized as a Member of the Mile Club for large diameter installations numerous times.

WORK EXPERIENCE

Nov. 2000-March 2017

Professional CIPP Installer

- ◆ Superintendent of CIPP Installation Crew from 2011 to present
- ◆ Foreman of CIPP Installation Crew from 2005 to 2011
- ◆ Qualified to operate TV Trucks, CIPP Boilers and Water Jetters used on CIPP Installation from 2000 to 2005
- ◆ Qualified to operate, trouble shoot and repair all equipment used for CIPP installation

- ◆ Qualified to perform DOT method of installation for Drainage and Stormwater projects
- ◆ Qualified and Certified to use 48 inch and 72 inch Dual Gland machine
- ◆ Qualified and Certified to use Mini and Regular RFM (Reilly Fingers Machine) machines.
- ◆ Qualified and Certified to use Water Chip Machine
- ◆ Qualified and Certified to perform all the functions required for an OTH Project
- ◆ Qualified to instruct crew members on the all the CIPP installation equipment currently in use

COMPUTER SKILLS

Microsoft Office Applications, Primavera P6

Jose Andino

General Superintendent



Education:

Years of Industry Experience: over 10 years in cured in place piping systems and over 5 in supervision of installation.

Years of Similar Project Experience:

- 14 years

Certifications:

- OSHA certified 30
- OSHA certified 10

Contact:

Jose Andino
3898 Welden Drive
Lebanon, OH 45036
508-208-9728
jandino@aegion.com

OVERVIEW

Mr. Andino has over 10 years of field and operational experience with cured in place (CIPP) installations at Insituform Technologies. 5 years of which has been in supervisory capacities as a Forman, a Superintendent and recently a General Superintendent.

His operational experience includes specializing in small/medium diameter Over-the-Hole (OTH) wetout and installation applications.

His specific duties and responsibilities include:

- Supervise and coordinate all the activities of the workers on all phases of CIPP.
- Guide employees to become better team members and grow with company
- Ensure safety policies and regulations are met.
- Communicate with Subcontractors, project managers and crew.
- Account for crew members and expedite workflow to minimize labor cost.
- Ensure written work instructions are followed.
- Comply and verify all preventive maintenance and procedures are performed on all construction and CDL vehicles.
- Directing and providing support for all crew members in all phases of construction related functions, manage five man team, responsible for reporting and regulating labor hours.
- Gather information for pre-bid investigation work to ensure accurate bids are submitted to customers.
- Coordinating crew functions and subcontractors when necessary.
- Verify all necessary materials, equipment and supplies are available to perform assignments. Planning logistics.
- Making sure that all ISO 9001 operating procedures and quality requirements are met.
- Provided appropriate safety training, supplies and equipment.
- Solve construction problems that occurred on the job site.
- Provide information thru I.Q. reporting on quality issues and Give feedback on how to prevent future quality issues

HIGHLIGHTS OF RELATED PROJECT EXPERIENCE

Cheektowaga, NY - 2017

100,000 LF of 8"-10" diameter sanitary sewer rehabilitation
Worth \$3.5 million

Torrington, CT - 2017

15,000 LF of 8"-12" diameter sanitary sewer rehabilitation

Jose Andino

General Superintendent



Worth \$2.48 million

BWSC Various Projects MA 2017

8"-15" diameter sanitary sewer
rehabilitation

Worth \$1.8 million

Cheektowaga 2015/2016

120,000 LF of 8"-15" diameter sanitary
sewer rehabilitation

Worth \$4.2 million

Greater New Haven WPCA 2015/2016

15,500 LF of 8"-27" diameter sanitary
sewer rehabilitation

Worth \$3.3 million

Jose Andino

General Superintendent



City of Revere Phase VI MA-2015/2016

36,000 LF of 8"-12" diameter sanitary sewer rehabilitation

Worth \$1.1 million

Village of Saugerties-2015/2016

6,700 LF of 8"-15" diameter sanitary sewer rehabilitation

Worth \$325,000

Additional information available upon request

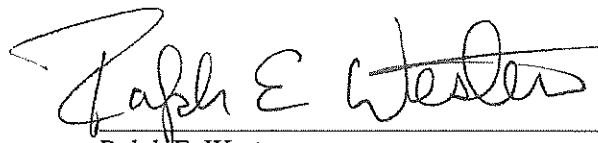
INSITUFORM TECHNOLOGIES, LLC

**PRESIDENT APPOINTMENT OF
CONTRACTING AND ATTESTING OFFICERS**

The undersigned, being the President of Insituform Technologies, LLC, a Delaware Limited Liability Company (the "Company"), and pursuant to the authority set forth in the Limited Liability Company Operating Agreement of the Company, hereby determines that:

1. Christlanda Adkins, Janet Hass, Jana Lause, Diane Partridge, Whitney Schulte, and Ursula Youngblood are appointed as Contracting and Attesting Officers of the Company, each with the authority, individually and in the absence of the others, subject to the control of the Board of Managers of the Company, to: (i) certify and attest to the signature of any officer of the Company; (ii) enter into and bind the Company to perform pipeline rehabilitation activities of the Company and all matters related thereto, including the maintenance of one or more offices and facilities of the Company; (iii) execute and to deliver documents on behalf of the Company; and (iv) take such other action as is or may be necessary and appropriate to carry out the project, activities and work of the Company.
2. Any person previously appointed or serving as a Contracting and Attesting Officer of the Company prior to the date hereof and who is not named above is hereby removed from any such appointment.

Dated: October 31, 2019

A handwritten signature in black ink, appearing to read "Ralph E. Western", written over a horizontal line.

Ralph E. Western
President



**Bureau of Workers'
Compensation**

30 W. Spring St.
Columbus, OH 43215

Certificate of Ohio Workers' Compensation

This certifies that the employer listed below participates in the Ohio State Insurance Fund as required by law. Therefore, the employer is entitled to the rights and benefits of the fund for the period specified. This certificate is only valid if premiums and assessments, including installments, are paid by the applicable due date. To verify coverage, visit www.bwc.ohio.gov, or call 1-800-644-6292.

This certificate must be conspicuously posted.

Policy number and employer
01411787

Period Specified Below
07/01/2019 to 07/01/2020

INSITUFORM TECHNOLOGIES LLC
17988 EDISON AVE
CHESTERFIELD, MO 63005-3700



www.bwc.ohio.gov
Issued by: BWC

Stephanie Z. McCloud

Administrator/CEO

You can reproduce this certificate as needed.

Ohio Bureau of Workers' Compensation

Required Posting

Section 4123.54 of the Ohio Revised Code requires notice of rebuttable presumption. Rebuttable presumption means an employee may dispute or prove untrue the presumption (or belief) that alcohol, marihuana or a controlled substance not prescribed by the employee's physician is the proximate cause (main reason) of the work-related injury.

The burden of proof is on the employee to prove the presence of alcohol, marihuana or a controlled substance was not the proximate cause of the work-related injury. An employee who tests positive or refuses to submit to chemical testing may be disqualified for compensation and benefits under the Workers' Compensation Act.



**Bureau of Workers'
Compensation**

You must post this language with the Certificate of Ohio Workers' Compensation.



Bureau of Workers' Compensation

30 W. Spring St.
Columbus, OH 43215

Certificate of Ohio Workers' Compensation

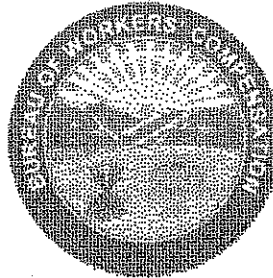
This certifies that the employer listed below participates in the Ohio State Insurance Fund as required by law. Therefore, the employer is entitled to the rights and benefits of the fund for the period specified. This certificate is only valid if premiums and assessments, including installments, are paid by the applicable due date. To verify coverage, visit www.bwc.ohio.gov, or call 1-800-644-6292.

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Policy number and employer
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INSITUFORM TECHNOLOGIES LLC
17988 EDISON AVE
CHESTERFIELD, MO 63005-3700



www.bwc.ohio.gov
Issued by: BWC

Stephanie McCloud

Administrator/CEO

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Bureau of Workers' Compensation

You must post this language with the Certificate of Ohio Workers' Compensation.



Department of
Administrative Services

Mike DeWine, Governor
Jon Husted, LL Governor

Matt Damschroder, Director

05/14/2020

Insituform Technologies, LLC Insituform
Technologies, LLC
INSITUFORM TECHNOLOGIES, LLC
17888 Edison Avenue
Chesterfield, MO 63005

Subject: Certificate of Compliance Certification
Status: Conditional
Effective Dates: 05/14/2020 through 11/10/2020

Dear Insituform Technologies, LLC Insituform Technologies,
LLC:

The Equal Opportunity Division of the Ohio Department of Administrative Services (Division) hereby issues INSITUFORM TECHNOLOGIES, LLC a Certificate of Compliance. The Certificate shall be in force for 180 days from the date of issuance.

Section 9.47 of the Revised Code requires the Division to review affirmative action programs and plans of each company desiring to participate on state-assisted construction contracts and determine whether that company has violated any affirmative action programs and goals for which that company was obligated to meet during the preceding five years. Based on the above-referenced review, the Division has found no such violation(s).

Please be advised that for INSITUFORM TECHNOLOGIES, LLC to maintain certification status, INSITUFORM TECHNOLOGIES, LLC must continue to ensure equal employment opportunities in accordance with applicable State and Federal EEO laws, rules, regulations and guidelines, and meet those contractual obligations for which INSITUFORM TECHNOLOGIES, LLC has agreed.

Sincerely,

Eric M. Seabrook
Deputy Director
State EEO Coordinator

2/14/2018

OhioBWC - Employer - Service: (State construction contractor look-up) - Results

OhioBWC - Employer - Service: (State construction contractor look-up) - Results

Policy number: 1411787-0

Company name: INSITUFORM TECHNOLOGIES LLC

Construction contractor status: APPROVED

Construction contractor status date: 11/14/2013

[search again](#)

Note: BWC has designed this database for those responsible for ensuring that a construction contractor or subcontractor has a drug-free program that complies with HB 80 for any State of Ohio public improvement project. A contractor, subcontractor or lower-tier subcontractor in an APPROVED status has agreed to implement or has implemented a BWC-approved drug-free program (Drug-Free Safety or comparable program) which makes the company compliant with the mandate of the Ohio legislature through HB 80. While state contracting authorities are expected to review this database for the most current information, you may print this as verification of your current status.

Click the Help tab in the upper-right hand corner for more status definitions.

UNITED STATES OF AMERICA
STATE OF OHIO
OFFICE OF THE SECRETARY OF STATE

I, Jon Husted, do hereby certify that I am the duly elected, qualified and present acting Secretary of State for the State of Ohio, and as such have custody of the records of Ohio and Foreign business entities; that said records show INSITUFORM TECHNOLOGIES, LLC, a Delaware For Profit Limited Liability Company, Registration Number 1021775, filed on August 6, 1998, is currently in FULL FORCE AND EFFECT upon the records of this office.



Witness my hand and the seal of the Secretary of State at Columbus, Ohio this 8th day of August, A.D. 2018.

Jon Husted

Ohio Secretary of State

Validation Number: 201822001646

201203401179

DATE:	DOCUMENT ID	DESCRIPTION	FILING	EXPED	PENALTY	CERT	COPY
02/08/2012	201203401179	CONVERSION WITHIN SOS RECORDS (CVS)	125.00	100.00	.00	.00	.00

Receipt

This is not a bill. Please do not remit payment.

DIAMOND ACCESS
ATTN: LISA VAIDO
887 SOUTH HIGH STREET
COLUMBUS, OH 43206

**STATE OF OHIO
CERTIFICATE
Ohio Secretary of State, Jon Husted**

1021775

It is hereby certified that the Secretary of State of Ohio has custody of the business records for
INSITUFORM TECHNOLOGIES, LLC
and, that said business records show the filing and recording of:

Document(s)
CONVERSION WITHIN SOS RECORDS
CHANGE BUSINESS TYPE FOR. PROFIT LIM. LIAB. CO.

Document No(s):
201203401179



United States of America
State of Ohio
Office of the Secretary of State

Witness my hand and the seal of the
Secretary of State at Columbus, Ohio
this 2nd day of February, A.D. 2012.

Jon Husted

Ohio Secretary of State

Delaware

PAGE 1

The First State

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF DELAWARE DO HEREBY CERTIFY THAT THE ATTACHED IS A TRUE AND CORRECT COPY OF THE CERTIFICATE OF CONVERSION OF A DELAWARE CORPORATION UNDER THE NAME OF "INSITUFORM TECHNOLOGIES, INC." TO A DELAWARE LIMITED LIABILITY COMPANY, CHANGING ITS NAME FROM "INSITUFORM TECHNOLOGIES, INC." TO "INSITUFORM TECHNOLOGIES, LLC", FILED IN THIS OFFICE ON THE THIRTIETH DAY OF DECEMBER, A.D. 2011, AT 11:28 O'CLOCK A.M.


AND I DO HEREBY FURTHER CERTIFY THAT THE EFFECTIVE DATE OF THE AFORESAID CERTIFICATE OF CONVERSION IS THE THIRTY-FIRST DAY OF DECEMBER, A.D. 2011, AT 11:58 O'CLOCK P.M.

0889565 8100V

111355498

You may verify this certificate online
at corp.delaware.gov/authver.shtml




Jeffrey W. Bullock, Secretary of State
AUTHENTICATION: 9264943

DATE: 12-30-11

State of Delaware
Secretary of State
Division of Corporations
Delivered 11:40 AM 12/30/2011
FILED 11:28 AM 12/30/2011
SRV 111355498 - 0889565 FILE

STATE OF DELAWARE
CERTIFICATE OF CONVERSION
FROM A CORPORATION TO A
LIMITED LIABILITY COMPANY PURSUANT TO
SECTION 18-214 OF THE LIMITED LIABILITY COMPANY ACT

- 1.) The jurisdiction where the Corporation first formed is Delaware.
- 2.) The jurisdiction immediately prior to filing this Certificate is Delaware.
- 3.) The date the Corporation first formed is March 27, 1980.
- 4.) The name of the Corporation immediately prior to filing this Certificate is Insituform Technologies, Inc.
- 5.) The name of the Limited Liability Company as set forth in the Certificate of Formation is Insituform Technologies, LLC.
- 6.) The effective time of the conversion shall be 11:58 p.m. EST on December 31, 2011.

IN WITNESS WHEREOF, the undersigned has executed this Certificate on the 27th day of December, 2011.

INSITUFORM TECHNOLOGIES, INC.

By: April A. Greer
April A. Greer
Assistant Secretary

State of Delaware
Secretary of State
Division of Corporations
Delivered 11:40 AM 12/30/2011
FILED 11:28 AM 12/30/2011
SRV 111355498 - 0889565 FILE

**STATE of DELAWARE
LIMITED LIABILITY COMPANY
CERTIFICATE of FORMATION**

- **First:** The name of this limited liability company is Insituform Technologies, LLC.
- **Second:** The address of its registered office in the State of Delaware is Corporation Trust Center, 1209 Orange Street in the City of Wilmington, Delaware 19801.

The name of its registered agent at such address is The Corporation Trust Company.

- **Third:**

This filing shall be effective 11:58 p.m. EST on December 31, 2011.

IN WITNESS WHEREOF, the undersigned has executed this Certificate on the 27th day of December, 2011.



April A. Greer
Organizer



Company ID Number: 19959

Client Company ID Number: 1120902

If you have any questions, contact E-Verify at 1-888-464-4218.

Approved by:

Employer Insituform Technologies, LLC	
Name (Please Type or Print) <i>Lon B Fini-Frock</i>	Title <i>Executive Assistant</i>
Signature <i>Lon B Fini-Frock</i>	Date <i>8/2/16</i>
E-Verify Employer Agent TALX Corporation	
Name (Please Type or Print) Aaron Wade	Title
Signature Electronically Signed	Date 08/22/2016
Department of Homeland Security – Verification Division	
Name (Please Type or Print) USCIS Verification Division	Title
Signature Electronically Signed	Date 08/23/2016

Request for Taxpayer Identification Number and Certification

Give Form to the
 requester. Do not
 send to the IRS.

Print or type See Specific Instructions on page 2.	1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank. Insituform Technologies, LLC		
	2 Business name/disregarded entity name, if different from above		
	3 Check appropriate box for federal tax classification; check only one of the following seven boxes: <input checked="" type="checkbox"/> Individual/sole proprietor or single-member LLC <input type="checkbox"/> Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=partnership) ▶ _____ Note. For a single-member LLC that is disregarded, do not check LLC; check the appropriate box in the line above for the tax classification of the single-member owner. <input type="checkbox"/> Other (see instructions) ▶ _____		4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3): Exempt payee code (if any) _____ Exemption from FATCA reporting code (if any) _____ <i>(Applies to accounts maintained outside the U.S.)</i>
	5 Address (number, street, and apt. or suite no.) 17988 Edison Avenue		Requester's name and address (optional)
	6 City, state, and ZIP code Chesterfield, MO 63005		
	7 List account number(s) here (optional)		

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the Part I instructions on page 3. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN* on page 3.

Note. If the account is in more than one name, see the instructions for line 1 and the chart on page 4 for guidelines on whose number to enter.

Social security number	
[] [] [] - [] [] - [] [] [] []	
or	
Employer identification number	
1 3 - 3 0 3 2 1 5 8	

Part II Certification

Under penalties of perjury, I certify that:

- The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
- I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
- I am a U.S. citizen or other U.S. person (defined below); and
- The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions on page 3.

Sign Here	Signature of U.S. person ▶ Christlanda Adkins	Date ▶ Contracting & Attesting Officer
------------------	--	---

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. Information about developments affecting Form W-9 (such as legislation enacted after we release it) is at www.irs.gov/fw9.

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following:

- Form 1099-INT (interest earned or paid)
- Form 1099-DIV (dividends, including those from stocks or mutual funds)
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
- Form 1099-S (proceeds from real estate transactions)
- Form 1099-K (merchant card and third party network transactions)

- Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
- Form 1099-C (canceled debt)
- Form 1099-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See *What is backup withholding?* on page 2.

By signing the filled-out form, you:

- Certify that the TIN you are giving is correct (or you are waiting for a number to be issued),
- Certify that you are not subject to backup withholding, or
- Claim exemption from backup withholding if you are a U.S. exempt payee. If applicable, you are also certifying that as a U.S. person, your allocable share of any partnership income from a U.S. trade or business is not subject to the withholding tax on foreign partners' share of effectively connected income, and
- Certify that FATCA code(s) entered on this form (if any) indicating that you are exempt from the FATCA reporting, is correct. See *What is FATCA reporting?* on page 2 for further information.



Insituform®

An Aegion® Company

CORPORATE BACKGROUND

Insituform Technologies, LLC is a diversified, international corporation specializing in trenchless reconstruction of municipal and industrial pipelines of all types - sewer, storm drain, water, gas oil, chemical process, slurry and nuclear power pipelines. Application sizes range from under 6-inches to over 96-inches in diameter. Based on size, experience, technology, capability and resources, INSITUFORM is the worldwide leader in full-spectrum piping reconstruction contracting.

Insituform's expertise is based on over 40 years of experience spent in the reconstruction of more than 20,000 miles (over 100,000,000 ft.) of pipe. Currently, INSITUFORM offers a full spectrum of trenchless rehabilitation products including Insituform's flagship cured-in-place pipe (CIPP), iPlus Infusion®, iPlus® Composite, Tit Liner® HDPE systems for industrial pipelines and our Insituform Blue® product line for potable water renewal including the InsituMain® System and InsituGuard® HDPE rehabilitation system for transmission and distribution mains, robotic service reinstatement.

The corporate history that encompasses today's worldwide Insituform Technologies, LLC organization derives from a host of resources, people, technology and experience merged from former licensees and affiliates of the original Insituform® pipe reconstruction process.

INSITUFORM is a leader in quality management, becoming the first specialty piping corporation to receive ISO 9000 quality installation certification in 1995.

Insituform Technologies is one of the largest trenchless technology companies in the world, with annual revenues exceeding \$914 million in 2010. As of 2011, Insituform is now a wholly owned subsidiary of Aegion Corporation. Aegion stock is publicly held on the NASDAQ exchange under the symbol "AGN".

PERSONNEL

Insituform Technologies, LLC's worldwide organization consists of over 3,000 employees. Every specialty and function associated with an international, technology-driven business is incorporated. Outside of manufacturing operations, the predominance of INSITUFORM personnel engage in project crew duties for pipeline reconstruction.

INSITUFORM maintains and staffs an extensive Research and Development facility engaged in new product and technical installation development. Experts are available to assist operations units in developing specialized solutions to particular client needs for underground piping system analysis and reconstruction.

INSITUFORM maintains a centralized design team at the world headquarters in St. Louis, Missouri with responsibility for ensuring that service conditions are met by products in each application. When necessary, special industrial design considerations and constraints such as corrosion, abrasion, unusual loading, pressure, temperature, etc. are fully included in specific application designs. INSITUFORM has assigned technical market managers to specific segments who have intimate knowledge of process and facility operations and are able to provide advice and field technical assistance in special applications as may be required to meet critical or unusual client needs.

By nature, field applications of pipeline service, assessment and reconstruction activities are highly regionalized. In the United States, INSITUFORM meets the needs of local municipal, industrial and military clients for responsive service by deploying personnel at strategic locations to minimize the cost and burden to clients of extensive mobilization. As an integrated company, sharing of expert personnel and specialized equipment between locations in response to client and project needs is part of normal operations.

QUALITY ASSURANCE

A strategy goal of Insituform Technology is operational excellence. This goal of quality assurance is being achieved on two fronts.

Best Practices Program: First, INSITUFORM has completed its long-term goal of merging all licensees throughout the United States and solidifying relationships with worldwide subsidiaries and affiliates. Achieving uniform high standards of quality across all operating units is essential to ensure long-term service to client needs. In doing so, INSITUFORM has developed comprehensive bench-marking studies to identify the "Best Practices" of the most efficient and best quality manufacturing and installation procedures for each product line, and can therefore share these best practices with INSITUFORM's regional offices, subsidiaries, and licensees throughout the world. INSITUFORM believes that the only way to guarantee quality is to integrate product development, manufacturing and installation under a best practices program, coupled with ISO 9001 Quality Management Programs.

ISO 9001 Quality Assurance Program: INSITUFORM's second long-term goal is to maintain ISO 9001 quality certification for its manufacturing facilities. This certification process was completed in 1995. ISO certification is not only consistent with the goal of achieving operational excellence for the municipal market, it is an essential requirement for the industrial market, where ISO certification has become an increasingly greater requirement for acceptance as a qualified supplier.

Quality Assurance Inspection Program and Training: A pilot program for the detection and recording of internal non-conformance was established. Persons were selected and trained for conducting internal auditing, probably the most important aspect of ISO because it provides ongoing self-evaluation of the effectiveness of the quality system. Every member of the organization is familiar with, and fully committed to the company's "Quality Policy" and non-conformance identification program.

Internal Audit Findings: Predetermined elements of the quality system are audited each month, and at year's end every ISO 9001 requirement will have been reviewed at least once. Findings are reported to the manager responsible for the appropriate department for resolution.

Management Review and Client Review: At least twice a year, managers meet to review and assess the quality system as a whole. Quality objectives are evaluated and amended or increased as appropriate. Resource needs are identified and action plans formulated. Once a project is completed, the client receives a Customer Survey form. This comprehensive form is INSITUFORM's report card which identifies project success, as well as areas where improvement is suggested.

INSITUFORM

The rehabilitation processes offered by Insituform were developed to provide a means of reconstructing existing pipe, conduit or passageways without extensive excavation. Some typical applications include:

1. Halting settlement by stopping the infiltration of soil and bedding material which often accompanies groundwater infiltration and can cause soil voids and shifting ground in gravity pipelines.
2. Eliminating infiltration of groundwater through joints, breaks and missing sections of gravity pipeline.
3. Increasing the capacity of existing pipelines by smoothing the interior surface and providing smooth transitions over joints and protrusions.
4. Reducing maintenance and increasing capacity by reducing deposits and eliminating root intrusions into gravity pipelines.
5. Protecting the pipe from attack by corrosive chemical effluent and vapors.
6. Eliminating the exfiltration of pollutants and chemicals into surrounding groundwater aquifers through joints and cracks in pipelines.
7. Strengthening the existing pipe by the installation of a tight fitting Insituform® CIPP within the old, thereby bridging joints, cracks and disconnected pipes into a single continuous conduit.

Briefly, here are just a few of the benefits realized from the reconstruction of pipelines using the Insituform[®] cured-in-place pipe (CIPP) process:

Virtually eliminates excavation problems - Depending on the type of pipe or passageway to be reconstructed (sewers, drains, or conduits), excavation can virtually be eliminated. Existing access (sewer manholes) is usually sufficient. Side connections can generally be 'reinstated' by cutting out from within. Bends can be negotiated.

Restores full size capacity, reduces maintenance - These tight-fitting pipes are continuous over pipe joints, openings and faults, and the capacity is nearly always increased. The smoothness also reduces deposits because there are no places for deposits to form, thereby reducing maintenance.

Builds corrosion-resistant pipe, resists chemical attack - In the case of the Insituform process, various thermosetting resins can be selected to resist the corrosive effects of the effluent.

Builds a continuous pipe - (a new pipe within the old) - Insituform[®] CIPP bridges breaks and missing sections of pipe eliminating infiltration, exfiltration or loss of product in pressure pipes. Insituform fits tightly and bridges disconnected pipes into a single continuous pipe.

Reconstructs unusually shaped pipes without loss of capacity - Elliptical, egg-shaped, flat bottom horseshoe or rectangular conduits can be reinstated to their existing shape by the tight fitting Insituform process.

Accomplishes these things in sizes from 6- to 96-inches in diameter - Insituform[®] CIPP has been constructed in these sizes and may be applicable to those beyond.

Solves difficult jobs - In addition to negotiating bends, it is possible to reconstruct remote sections inaccessible to wheeled vehicles (e.g. inside building) with the Insituform process. In addition to being installed without excavation, Insituform[®] CIPP has been installed where access to only one end is feasible (vertical wells). Also, it is possible to reconstruct pipelines with reducers or only a portion of a pipeline.

Solves stringent time restraints - Preparation time is reduced by eliminating street openings and risk of damage to other utilities. Insituform[®] CIPP can generally be installed and completed in less on-the-job time than traditional open cut construction methods.

Offers more convenience to commerce and public - Little inconvenience is caused to the public, commercial business or existing utility operations because excavations are generally eliminated. Little work space is needed for installation. This alone means fewer restrictions on access to property and shops and greater assurance of safety.

Longevity - For normal applications, such as gravity sewers, the service life of Insituform[®] CIPP can be expected to approach fifty years. Service life of Insituform[®] CIPP is a function of the temperature, pressure, velocity, and chemical and abrasive properties of the materials being carried.

Custom-Engineered - Insituform[®] tubes are custom-engineered to optimize total life performance using time-proven formulas. These take into account requirements for diameter, length, condition of pipe, flow rates, temperature, pressure and corrosiveness of the materials being carried.

INSITUFORM, STANDARD INSTALLATION PROCESS

The standard Insituform[®] process has been used throughout the world for the rehabilitation of over 20,000 miles, of pipe ranging in size from 6" to 96". The process uses a resin-impregnated, flexible felt tube which is installed into and through an existing pipe using water or air pressure. While the liner is held tightly against the host pipe, hot water or steam is circulated through a heat exchanger to cure the thermostat resin.

The flexible resin tube can accommodate various pipe shapes - round, square, rectangular, oval or arched. The Insituform[®] tube can negotiate bends, elbows, missing sections, offset joints, misalignment and steep slopes. Standard applications include process and sanitary sewer, storm drains, process lines, slurry lines, force mains and siphons. Resin systems used include polyester, vinyl ester and epoxy, designed to meet service requirements. Installation lengths typically range from 250 feet to over 2,500 feet, depending on pipe size and condition. Service laterals are re-opened internally using robotic cutters.



17988 Edison
Chesterfield, MO 63005

Tel: 636-530-8000
Fax: 636-530-8744
www.insituform.com

CERTIFICATE OF COMPLIANCE

February 5, 2020

To Whom It May Concern:

This letter certifies that Insituform tubes are manufactured in Batesville, Mississippi, USA, by Insituform Technologies, LLC and meet all relevant specifications for a cured-in-place pipe product: ASTM D 5813, ASTM F 1216, and ASTM F 1743. Insituform tubes have been manufactured in the USA since 1981.

The finished tube is manufactured using multiple layers of polyester felt, with one layer coated with Polypropylene plastic. The layers are cut/slit to the desired width and sewn concentrically to form the final tube. The coated layer is also sealed at the seam, using an extrusion or taping process. The extrusion process is used on the standard (inverted) tubes, and the taping process is used on the pull-in tubes (also known as ILS or iPlus Infusion). The standard (inverted) tubes are manufactured with the coated layer on the outside, and the pull-in tubes are manufactured with the coated layer on the inside. After wet out, the pull-in tubes are placed in a plastic wrap to contain the resin.

Felt production is achieved by a non-woven needle punch process using Polyester fiber. The finished product is tested for thickness under a specified load and for tensile strength in accordance with ASTM D 5813. The fabric tube has a minimum tensile strength of 750 psi (5 MPa) in both the longitudinal and the transverse direction. The seam strength of the tube is also tested on a regular basis and also meets or exceeds the minimum tensile strength of 750 psi (5 MPa) in both longitudinal and transverse direction. For Quality Assurance purposes, the material is also tested for weight and thickness.

All standard (inverted) tubes are run through a dye bath prior to shipment to ensure there are no leaks. Following the inspection process all tubes (except InsituMain, which are used in water lines) are printed with yard marks.

All tubes with tapers, transitions, or any change in tube diameter or thickness are produced under the same specifications, with the same materials, and meet the same material testing requirements as the standard tube.

The quality system used by Insituform Technologies, LLC is ISO 9001:2015 certified.

The end use of the Insituform tube is to rehabilitate sewer and drainage pipes to increase the life of the pipe and prevent a dig and replacement of a pipe.

Please contact us directly with any questions you may have.

Sincerely,

INSITUFORM TECHNOLOGIES, LLC

A handwritten signature in black ink, appearing to read "E. Zaltsman", is written over a horizontal line.

Eugene Zaltsman
Sr. Applications Engineer



Insituform
Technologies, LLC

17988 Edison
Chesterfield, MO 63005

Tel: 636-530-8000
Fax: 636-530-8744
www.insituform.com

INSTALLER CERTIFICATION

Date: February 5, 2020

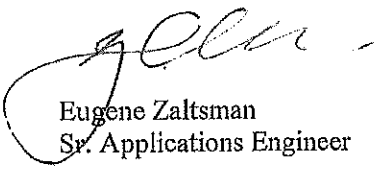
To Whom It May Concern:

Insituform Technologies, LLC is a vertically integrated pipeline rehabilitation company. As such, Insituform is not only the manufacturer of the cured-in-place pipeline rehabilitation system of the same name, but also offers the benefits of a full research and development department, licensed engineers on staff for design of products to suit each individual situation, and regional contracting offices that perform all field services including installation.

This letter shall serve to certify that Insituform Technologies, LLC is authorized to install Insituform products supplied by Insituform Technologies, LLC.

Sincerely,

INSITUFORM TECHNOLOGIES, LLC



Eugene Zaltsman
Sr. Applications Engineer



Insituform Technologies, LLC is a subsidiary of Aegion Corporation

INSITUFORM TECHNOLOGIES, LLC
BOARD OF MANAGERS AND OFFICERS
(Current as of February 1, 2020)

<u>BOARD OF MANAGERS</u>
<i>Charles R. Gordon</i> Member, Board of Managers
<i>David F. Morris</i> Member, Board of Managers

<u>OFFICERS</u>	
<u>Name</u>	<u>Office</u>
Ralph E. Western	– President
David F. Morris	– Executive Vice President
Mark A. Menghini	– Senior Vice President and Secretary
Kenneth L. Young	– Senior Vice President, Treasury and Tax
John L. Heggemann	– Senior Vice President
Stephen Callahan	– Senior Vice President
Kent W. Bartholomew	– Vice President, Deputy General Counsel and Assistant Secretary
Dennis Pivin	– Vice President – Safety
Larry Mangels	– Vice President, Operational Controller

<u>CONTRACTING AND ATTESTING OFFICERS</u>
Christlanda Adkins
Gina Gurrieri
Janet Hass
Jana Lause
Diane Partridge
Whittney Schulte
Ursula Youngblood

Business Address for Officers and Board of Managers:
17988 Edison Avenue
Chesterfield, MO 63005

**ACTION BY UNANIMOUS WRITTEN CONSENT
OF THE BOARD OF MANAGERS OF
INSITUFORM TECHNOLOGIES, LLC**

The following actions are taken by the unanimous written consent of the Board of Managers (the "Board") of Insituform Technologies, LLC, a Delaware limited liability company (the "Company"), as of this 19th day of August 2019.

Removal/Appointment of Officers

WHEREAS, the Board of the Company has determined it to be in the best interests of the Company to accept the resignation, removal or appointment of the following officer of the Company.

NOW, THEREFORE, BE IT

RESOLVED, that effective August 12, 2019, Ralph E. Western's resignation as the Company's Senior Vice President and General Manager is hereby accepted; and be it

FURTHER RESOLVED, that effective August 12, 2019, Charles R. Gordon's resignation as the Company's President is hereby accepted; and be it

FURTHER RESOLVED, that effective August 12, 2019, Ralph E. Western be and hereby is appointed as President of the Company, to serve until his successor shall have been duly appointed and qualified or until his death, resignation or removal from said office; and be it

FURTHER RESOLVED, that effective August 1, 2019, John L. Heggemann be and hereby is appointed as Senior Vice President of the Company to serve until his successor shall have been duly appointed and qualified or until his death, resignation or removal from said office.

Restatement of Officers

BE IT RESOLVED, that following the implementation of the foregoing resolutions, the following are the officers of the Company:

<u>Name</u>	<u>Office</u>
Ralph E. Western	-- President
David F. Morris	-- Executive Vice President
Mark A. Menghini	-- Senior Vice President and Secretary
Kenneth L. Young	-- Senior Vice President and Treasurer
John L. Heggemann	-- Senior Vice President
Stephen Callahan	-- Senior Vice President
Dawn Landmann	-- Senior Vice President, Tax
Daniel P. Schoenekase	-- Vice President, Deputy General Counsel and Assistant Secretary
Kent W. Bartholomew	-- Vice President, Deputy General Counsel and Assistant Secretary
Dennis Pivin	-- Vice President -- Safety
Larry Mangels	-- Vice President and Operational Controller
Chuck Delaney	-- Vice President -- Operations

; and be it

FURTHER RESOLVED, that any person previously appointed or serving as an officer of the Company prior to the date hereof and who is not named above is hereby removed from any such office; and be it

FURTHER RESOLVED, that all actions taken by the above appointed officers prior to the date of the foregoing resolutions that are within the authority conferred thereby are hereby ratified, confirmed, approved, and adopted as actions of the Company.

This Action by Written Consent may be executed in counterparts, each of which shall be deemed an original but all of which together will constitute one and the same instrument. Counterpart signature pages to this Action by Written Consent transmitted by facsimile transmission, by electronic mail in portable document format (.pdf), or by other electronic means intended to preserve the original graphic and pictorial appearance of a document, will have the same effect as physical delivery of the paper document bearing an original signature.

IN WITNESS WHEREOF, the undersigned, being all of the Board of Managers of the Company, have executed this Action by Unanimous Written Consent as of the date first written above.



Charles R. Gordon



David F. Morris



17988 Edison Avenue
Chesterfield, MO 63005
www.insituform.com

Insituform Technologies, LLC is a subsidiary of Aegion Corporation

Insituform Personnel Company Resume

Charles R. Gordon, President & Chief Executive Officer

Mr. Gordon serves as our President and Chief Executive Officer. Most recently, Mr. Gordon served in the position of Chief Executive Officer of Natural Systems Utilities, LLC, a distributed water infrastructure company and he continues to be a member of its Board of Directors. Prior to Natural Systems Utilities, Mr. Gordon served as President and Chief Operating Officer of Nuverra Environmental Solutions, Inc. from October 2010 through September 2013. Nuverra provides environmental services to the oil and gas industries. Mr. Gordon served as Chief Executive Officer of Siemens Water Technologies, a business unit of Siemens AG, a world leader in products, systems and services for water and wastewater treatment for industrial, institutional and municipal customers, from 2007 through 2010. Previously, Mr. Gordon served as President of the Siemens Water Technologies Systems Division from 2005 through 2006. Mr. Gordon was named President of USFilter's Service and Products Division in 1999, which was later acquired by Siemens. Mr. Gordon was named Vice President of the Southern Region of Arrowhead Industrial Water (later acquired by USFilter) in 1991.

Ralph Western, President, Senior Vice President and General Manager

Mr. Western serves as Vice President and General Manager of Infrastructure Solutions and is responsible for the overall growth and profitability of Aegion's Infrastructure Solutions platform. Mr. Western has been with Aegion for than 10 years and has almost 25 years of experience in the manufacturing and engineering sector and has his MBA from Wesleyan University. He has a proven track record of driving productivity improvement and delivering results during his tenure at Aegion.

David F. Morris, Executive Vice President

Mr. Morris joined Aegion in 2005 as our Vice President, General Counsel and Secretary from the law firm of Thompson Coburn LLP, where he was a partner in its corporate and securities practice areas. He became our Chief Administrative Officer in 2007 and was promoted to Executive Vice President in 2014 and appointed Interim Chief Financial Officer in November 2017.

Mark A. Menghini, Senior Vice President, & Secretary

Mr. Menghini joined Aegion in 2013 as our Deputy General Counsel. He was appointed Senior Vice President in October 2014 and most recently served as the Company's Senior Vice President, Deputy General Counsel and Assistant Secretary. Prior to joining Aegion, Mark was an officer and shareholder with the law firm of Greensfelder, Hemker & Gale, P.C., a regional law firm based in St. Louis, Missouri.

Kenneth L. Young, Senior Vice President & Treasurer

Mr. Young has served as our Vice President and Treasurer since April 2009. Prior to that time, he served as the Chief Financial Officer, Secretary and Treasurer for Huttig Building Products, Inc., a public company based in St. Louis, Missouri, from 2005 to 2009, and as Corporate Treasurer for MEMC Electronic Materials, a public company based in St. Louis, Missouri, from 1989 to 2005.

Education:

BS Construction Management

Years of Industry Experience: 8

Years of Similar Project Experience:

- 5

Certifications:

- Construction Management

Contact:

Jeffrey Petruzzi
253F Worcester Rd
Charlton, MA 01507
508-277-2693
Jpetruzzi@aegion.com

OVERVIEW

Mr. Petruzzi has 8 years of field and operational experience with cured in place (CIPP) installations at Insituform Technologies. His operational experience includes specializing in {small/medium/large} diameter Over-the-Hole (OTH) wetout and installation applications.

His specific duties and responsibilities include:

- Project Management
- Oversee day to day operations
- Manage office staff and projects
- Estimate and bid projects
- Procure subcontractors and vendors
- Financially responsible for projects from kick off through closeout

HIGHLIGHTS OF RELATED PROJECT EXPERIENCE

Cheektowaga, NY Phase IV Rehab Sewer Shed 7 2019

160,00 LF Sanitary Sewer Lining of 8' to 24"

Saratoga, NY Interceptor Rehab Phase VI 2019

3,500 LF of Sanitary Lining 36" to 60"

Quincy, MA FY2019 CIPP Improvements 2019

6,400 LF Sanitary Lining of 8" to 38"

Greater New Haven 24" Interceptor 2018

2,800 Sanitary Sewer lining of 24"

Lewiston, ME Franklin Pasture Sewer Repair 2017

2,000 LF of sanitary lining of 36"

Dedham, MA - On Call Services 2015

33,600 LF of Sanitary lining of 8" to 18"

Jason Wolfe

Superintendent



Education: 1996-1999 Franklin County High School

Years of Industry Experience: 6

Years of Similar Project Experience:

- 9

Certifications:

- CDL Class B with Hazmat endorsement
- OSHA 40 hour certification
- Confined space certification

Contact:

Jason Wolfe
4044 Drewersburg Road
West Harrison, IN 47060
513-497-8011
jwolfe@aegion.com

OVERVIEW

Mr. Wolfe has 6 years of field and operational experience with cured in place (CIPP) installations at Insituform Technologies. His operational experience includes specializing in {small/medium/large} diameter Over-the-Hole (OTH) wetout and installation applications.

His specific duties and responsibilities include:

- Management of job budget
- Manage progress of project to ensure completion on schedule
- Scheduling of team and supplies
- Act as on site Safety Officer to ensure crew members are in accordance of company safety values.

HIGHLIGHTS OF RELATED PROJECT EXPERIENCE

Dayton, OH Southeast Sanitary - 2013

15,825 LF of 8" diameter sanitary, OTH

Xenia, OH Phase II - 2014

15,503 LF of 8" diameter sanitary, OTH

Columbus, OH CIP #650404-100041 - 2015

47,522 LF of 8"-48" diameter sanitary, OTH

Columbus, OH CIP #650874-1000002- 2016

17,045 LF of 8"-24" diameter sanitary, OTH

Dayton, OH Upper Riverdale Phase 6 - 2016

19,757 LF of 8" diameter sanitary, OTH

Columbus, OH CIP #650875-1000003- 2018-2019

12,320 LF of 8"-15" diameter sanitary, OTH

Columbus, OH CIP #650875-10 – 2018-2019

17,356 LF of 8"10" diameter sanitary, OTH

Dayton, OH CT-18-2061 – 2018-2019

22,408 LF of 8" diameter sanitary, OTH

Cincinnati, OH MSDGC – 2019-2020

10,302 LF of 8"-24" diameter sanitary, OTH

Springfield, OH 2019 CIPP - 2019

4,023 LF of 8"-24" diameter sanitary, OTH

Information available on additional Over-the-Hole small, medium and large diameter onsite wetout projects upon request



Nelson Leite

Email Address: NLeite@Aegion.com

Contact Number: 774.364.1927

EDUCATION

**Certified Insituform Cured in Place Pipe Installer
Certified as an HVAC Apprentice, High School Graduate**

WORK EXPERIENCE

2017-current

Insituform Technologies, LLC. Charlton, MA

Operations Manager

Overseeing Atlantic area with 11 crews and Pressure Pipe Installations

WORK EXPERIENCE

June 2011- 2017

Insituform Technologies, LLC. Charlton, MA

Senior Superintendent and Crew Leader

- ◆ Supervised 20 plus Over the Hole (OTH) Wetout Installations
- ◆ Plan & implement execution of assigned active project installations ranging from \$15k-\$5m
- ◆ Successfully installed miles of CIPP liner ranging in size from 6" to 84"
- ◆ Manage more than 20 projects annually in the Atlantic Area territory
- ◆ Oversee 6 immediate crew reports and up to 14 on OTH Projects
- ◆ Manage specialized construction crews, equipment & numerous subcontractors
- ◆ Ensure all standard operating procedures, safety and quality requirements are met for crew
- ◆ Manage the payroll input for installation crew for all assigned projects
- ◆ Perform pre-bid investigation work pertaining to the area
- ◆ Attend pre-bid and pre-construction meetings to assure successful project completion
- ◆ Meet with potential & active clients on environmentally & publicly sensitive projects
- ◆ Plan & commit crew resources to meet client's goals & internal corporate financial goals
- ◆ Conduct continuing education and safety sessions regarding industry practices for crew members

MAJOR ACCOMPLISHMENTS

- ◆ Achieved Multiple years of Incident/Injury Free Award of Excellence
- ◆ Continue to utilize Best Construction Methods and Installation practices to finish projects under hours and on time.
- ◆ Consistently help meet or exceeded Atlantic area business plan annually since hire
- ◆ Successfully mitigated and close problem projects throughout multiple Atlantic Area Offices
- ◆ Maintain an internal training regimen for all direct reports
- ◆ Recognized for excellent Problem Solving Skills
- ◆ Consistently recognized as a Member of the Mile Club for large diameter installations numerous times.

WORK EXPERIENCE

Nov. 2000-March 2017

Professional CIPP Installer

- ◆ Superintendent of CIPP Installation Crew from 2011 to present
- ◆ Foreman of CIPP Installation Crew from 2005 to 2011
- ◆ Qualified to operate TV Trucks, CIPP Boilers and Water Jetters used on CIPP Installation from 2000 to 2005
- ◆ Qualified to operate, trouble shoot and repair all equipment used for CIPP installation

- ◆ Qualified to perform DOT method of installation for Drainage and Stormwater projects
- ◆ Qualified and Certified to use 48 inch and 72 inch Dual Gland machine
- ◆ Qualified and Certified to use Mini and Regular RFM (Reilly Fingers Machine) machines.
- ◆ Qualified and Certified to use Water Chip Machine
- ◆ Qualified and Certified to perform all the functions required for an OTH Project
- ◆ Qualified to instruct crew members on the all the CIPP installation equipment currently in use

COMPUTER SKILLS

Microsoft Office Applications, Primavera P6

Jose Andino

General Superintendent



Education:

Years of Industry Experience: over 10 years in cured in place piping systems and over 5 in supervision of installation.

Years of Similar Project Experience:

- 14 years

Certifications:

- OSHA certified 30
- OSHA certified 10

Contact:

Jose Andino
3898 Welden Drive
Lebanon, OH 45036
508-208-9728
jandino@aegion.com

OVERVIEW

Mr. Andino has over 10 years of field and operational experience with cured in place (CIPP) installations at Insituform Technologies. 5 years of which has been in supervisory capacities as a Forman, a Superintendent and recently a General Superintendent.

His operational experience includes specializing in small/medium diameter Over-the-Hole (OTH) wetout and installation applications.

His specific duties and responsibilities include:

- Supervise and coordinate all the activities of the workers on all phases of CIPP.
- Guide employees to become better team members and grow with company
- Ensure safety policies and regulations are met.
- Communicate with Subcontractors, project managers and crew.
- Account for crew members and expedite workflow to minimize labor cost.
- Ensure written work instructions are followed.
- Comply and verify all preventive maintenance and procedures are performed on all construction and CDL vehicles.
- Directing and providing support for all crew members in all phases of construction related functions, manage five man team, responsible for reporting and regulating labor hours.
- Gather information for pre-bid investigation work to ensure accurate bids are submitted to customers.
- Coordinating crew functions and subcontractors when necessary.
- Verify all necessary materials, equipment and supplies are available to perform assignments. Planning logistics.
- Making sure that all ISO 9001 operating procedures and quality requirements are met.
- Provided appropriate safety training, supplies and equipment.
- Solve construction problems that occurred on the job site.
- Provide information thru I.Q. reporting on quality issues and Give feedback on how to prevent future quality issues

HIGHLIGHTS OF RELATED PROJECT EXPERIENCE

Cheektowaga, NY - 2017

100,000 LF of 8"-10" diameter sanitary sewer rehabilitation
Worth \$3.5 million

Torrington, CT - 2017

15,000 LF of 8"-12" diameter sanitary sewer rehabilitation

Jose Andino

General Superintendent



Worth \$2.48 million

BWSC Various Projects MA 2017

8"-15" diameter sanitary sewer
rehabilitation

Worth \$1.8 million

Cheektowaga 2015/2016

120,000 LF of 8"-15" diameter sanitary
sewer rehabilitation

Worth \$4.2 million

Greater New Haven WPCA 2015/2016

15,500 LF of 8"-27" diameter sanitary
sewer rehabilitation

Worth \$3.3 million

Jose Andino

General Superintendent



City of Revere Phase VI MA-2015/2016

36,000 LF of 8"-12" diameter sanitary sewer rehabilitation
Worth \$1.1 million

Village of Saugerties-2015/2016

6,700 LF of 8"-15" diameter sanitary sewer rehabilitation
Worth \$325,000

Additional information available upon request



	CEO INTRODUCTION TO THE MANUAL
1	SAFETY PROCESS STRUCTURE AND GENERAL PROCEDURES
2	INSPECTIONS
3	CONFINED SPACE ENTRY PROCEDURE
4	EXCAVATION AND TRENCHING
5	TUNNELS/SHAFTS/BLASTING
6	HYDROGEN SULFIDE GAS
7	HOT WORK PERMIT
8	HAZARDOUS ENERGY CONTROL (LOCK-OUT/TAG-OUT)
9	HAZCOM AND PSM
10	RESPIRATORY PROTECTION PROGRAM
11	PERSONAL PROTECTIVE EQUIPMENT
12	CRANES, HOISTS, RIGGING AND LIFTING EQUIPMENT
13	LIFT TRUCK OPERATION
14	FALL PROTECTION, SCAFFOLDS AND LADDERS, AND WALKING & WORKING SURFACES
15	TEMPORARY HEATING
16	PORTABLE LIGHTING, EXTENSION CORDS AND GFCI USE
17	FIRE PROTECTION AND PREVENTION
18	DRIVING
19	WORK ZONE CONTROL FLAGGING OPERATIONS
20	TRAINING
21	INJURY AND INCIDENT INVESTIGATION REPORTING
22	EMERGENCY PREPAREDNESS PLANNING
23	MODEL SITE SPECIFIC SAFETY PLAN



17988 Edison Avenue
Chesterfield, MO 63005

Tel: (636) 530-8000
Fax: (636) 530-8746
www.aegion.com

EQUAL EMPLOYMENT OPPORTUNITY POLICY

The employment policy of Insituform Technologies, LLC is to provide equal opportunity to all persons. Our company, therefore, has made a commitment to equal employment opportunity, and establishing and maintaining a diverse workforce. No employee or applicant for employment will be discriminated against because of race, creed, citizenship, color, religion, sex, national origin, age, sexual orientation, gender identity, marital status, pregnancy, childbirth or related medical condition, genetic information, disability, veteran status, or any other classification protected by federal, state and local laws and ordinances.

Insituform Technologies, LLC has developed procedures to assure that this policy is understood and carried out by managerial, administrative, and supervisory personnel. We have informed subcontractors, vendors, suppliers, and labor unions of our Equal Employment Opportunity policy, and of their obligations to comply with this policy.

Steve Callahan has been designated our EEO Coordinator and is responsible for compliance with state and federal equal employment opportunity laws. If you believe you have not been treated in accordance with this policy, you should contact your supervisor, local Human Resources representative, or Steve Callahan; Senior Vice President, Global Human Resources at 636-530-8603.

The continued success of our EEO Policy requires maximum cooperation from every employee throughout our organization. Equal employment opportunity is not only the law, but it is a principle of Insituform Technologies, LLC.

Charles R. Gordon
President & Chief Executive Officer

Date

CO= R620720
 E= BZ08958

EQUAL EMPLOYMENT OPPORTUNITY
 2016 EMPLOYER INFORMATION REPORT
 REPORT - TYPE 8

SECTION B - COMPANY IDENTIFICATION

1. AEGION HQ EXECUTI
 17988 EDISON AVE
 CHESTERFIELD, MO 63005

SECTION C - TEST FOR FILING REQUIREMENT

1-Y 2-Y 3-Y DUNS NO.:0 EIN :133032158

2.a. ITI MASON OH
 3898 WELDEN DRIVE
 LEBANON, OH 45036

WARREN COUNTY
 c. Y

SECTION E - ESTABLISHMENT INFORMATION

NAICS: 237110 Water and Sewer Line and
 Related Structures Construction

SECTION D - EMPLOYMENT DATA

JOB CATEGORIES	HISPANIC OR LATINO		NOT-HISPANIC OR LATINO										OVERALL TOTALS			
	MALE	FEMALE	WHITE	BLACK OR AFRICAN AMERICAN	NATIVE HAWAIIAN OR PACIFIC ISLANDER	ASIAN	AMERICAN INDIAN OR ALASKAN NATIVE	TWO OR MORE RACES	WHITE	BLACK OR AFRICAN AMERICAN	NATIVE HAWAIIAN OR PACIFIC ISLANDER	ASIAN		AMERICAN INDIAN OR ALASKAN NATIVE	TWO OR MORE RACES	
EXECUTIVE/SR OFFICIALS & MGRS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FIRST/MID OFFICIALS & MGRS	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	5
PROFESSIONALS	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
TECHNICIANS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SALES WORKERS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ADMINISTRATIVE SUPPORT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRAFT WORKERS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OPERATIVES	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
LABORERS & HELPERS	0	0	6	1	0	0	0	0	0	0	0	0	0	0	0	7
SERVICE WORKERS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	15	1	0	0	0	0	0	0	0	0	0	0	0	18
PREVIOUS REPORT TOTAL	0	0	16	1	0	0	0	0	0	0	0	0	0	0	0	18

SECTION F - REMARKS



FINANCIAL INFORMATION

Bonding Company: Travelers Casualty & Surety Company of America
One Tower Square, 13CZ
Hartford, CT 06183
Richard W. DuPont, St. Louis Manager (314) 579-8315
Best Guide Rating 2013: A+ FSC XIV

Agent: JW Terrill
825 Maryville Centre Drive, Suite 200
Chesterfield, MO 63017
Dana Dragoy (314) 594-2700
Bonding Capacity: \$300,000,000

Insurance Company: Liberty Insurance Corporation / Liberty Mutual
12250 Weber Hill Road, Suite 300
St. Louis, MO 63126
Denise Lampen, (314) 843-0600 x260

Agent: Lockton Companies / St. Louis
#1 Cityplace Drive, Suite 160
St. Louis, MO 63141
Carol Henzler, (314) 432-0500 x3285

Banking: Bank of America Merrill Lynch
Bank of America, N.A.
Merrill Lynch, Pierce, Fenner & Smith Incorporated
800 Market Street
St. Louis, MO 63101
Kevin M. Knopf, Sr. VP (314) 466-7726

Trade Reference: **AOC**
950 HWY 57 E
Collierville, TN 38017
Phone: (901) 854-2818
Fax: (901) 854-7223

Auriga Polymers
4235 S. Stream Blvd.
Charlotte, NC 28217
Attn: Kay Mills
Phone: (980) 233-8269
Fax: (980) 233-6602

United Initiators, Inc.
555 Garden Street
Elyria, OH 44036
Phone: (440) 326-2413

J.W.TERRILL

a Marsh & McLennan Agency LLC company

January 22, 2020

Re: **Insituform Technologies, LLC**

Insurance, Benefits & Risk Management

Suite 200
825 Maryville Centre Drive
St. Louis, MO 63017

314-594-2700

www.jwterryill.com

To Whom It May Concern:

Insituform Technologies, LLC is a valued Travelers Casualty and Surety Company of America surety customer. Travelers Casualty and Surety Company of America is one of the most financially sound insurance companies in the United States and enjoys a Best Rating of A++ with financial strength category of XV.

Due to Insituform Technologies, LLC's reputation, technical expertise, financial strength, quality equipment and experienced labor force, J.W. Terrill is prepared to consider performance and payment bonds for single jobs in the \$250,000,000 range with an aggregate work program of \$700,000,000.

Should a project be awarded to and accepted by Insituform Technologies, LLC, we are prepared to consider providing the required bonds on their behalf. Any bonds are subject to acceptable review of the contract terms and conditions, bond forms, confirmation of financing, and any other underwriting considerations at the time of the request. It should be understood that any arrangement for bonds is strictly a matter between Insituform Technologies, LLC and Travelers Casualty and Surety Company of America. We assume no liability to third parties or to you if for any reason we do not execute said bonds.

Please feel free to contact me if you have any specific questions regarding Insituform Technologies, LLC or their surety bond program.

Sincerely,



Andrew P. Thome
President



Report of Independent Auditors

To the Management of Insituform Technologies, LLC:

We have audited the accompanying balance sheet of Insituform Technologies, LLC as of December 31, 2019.

Management's Responsibility for the Balance Sheet

Management is responsible for the preparation and fair presentation of the balance sheet in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of the balance sheet that is free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on the balance sheet based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the balance sheet is free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the balance sheet. The procedures selected depend on our judgment, including the assessment of the risks of material misstatement of the balance sheet, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the Company's preparation and fair presentation of the balance sheet in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the balance sheet. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the accompanying balance sheet presents fairly, in all material respects, the financial position of Insituform Technologies, LLC as of December 31, 2019 in accordance with accounting principles generally accepted in the United States of America.

PricewaterhouseCoopers LLP

Saint Louis, Missouri
March 12, 2020

Insituform Technologies, LLC
Balance Sheet
(in thousands)

	December 31, 2019
Assets	
Current assets	
Cash and cash equivalents	\$ 5,880
Receivables, net	33,494
Retainage	14,834
Contract assets	21,194
Inventories	12,891
Prepaid expenses and other	3,970
Assets held for sale	2,377
Total current assets	94,640
Property, plant and equipment, net	36,039
Non-current assets	
Goodwill	88,527
Intangibles	1,788
Operating lease assets	22,046
Deferred income taxes	10,340
Other long-term assets	3,361
Total non-current assets	126,062
Total assets	\$ 256,741
Liabilities and stockholders' equity	
Current liabilities	
Accounts payable	\$ 23,317
Accrued expenses	29,448
Contract liabilities	11,637
Current maturities of long-term debt	-
Total current liabilities	64,402
Non-current liabilities	
Long-term debt, less current maturities	-
Operating lease liabilities	17,089
Deferred income taxes	13,272
Other long-term liabilities	252
Total non-current liabilities	30,613
Stockholders' equity	
Common stock	-
Additional paid-in capital	128,381
Retained earnings	33,345
Accumulated other comprehensive loss	-
Non-controlling interest	-
Total stockholders' equity	161,726
Total liabilities and stockholders' equity	\$ 256,741

Aegion Corporation and Subsidiaries

Consolidated Financial Statements and Supplemental Consolidating Information

December 31, 2019

(With Report of Independent Auditors)

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Report of Independent Auditors

To the Board of Directors:

We have audited the accompanying consolidated financial statements of Aegion Corporation and its subsidiaries, which comprise the consolidated balance sheets as of December 31, 2019 and December 31, 2018, and the related consolidated statements of operations, comprehensive income, equity and cash flows for the years then ended.

Management's Responsibility for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on the consolidated financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on our judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the Company's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Aegion Corporation and its subsidiaries as of December 31, 2019 and December 31, 2018, and the results of their operations and their cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Emphasis of Matter

As discussed in Note 2 to the consolidated financial statements, the Company changed the manner in which it accounts for leases in 2019. Our opinion is not modified with respect to this matter.

Other Matter

Our audit was conducted for the purpose of forming an opinion on the consolidated financial statements taken as a whole. The consolidating information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the consolidated financial statements. The consolidating information has been subjected to the auditing procedures applied in the audit of the consolidated financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the consolidated financial statements or to the consolidated financial statements themselves and other additional procedures, in accordance with auditing standards generally accepted in the United States of America. In our opinion, the consolidating information is fairly stated, in all material respects, in relation to the consolidated financial statements taken as a whole. The consolidating information is presented for purposes of additional analysis of the consolidated financial statements rather than to present the financial position, results of operations and cash flows of the individual companies and is not a required part of the consolidated financial statements. Accordingly, we do not express an opinion on the financial position, results of operations and cash flows of the individual companies.

PricewaterhouseCoopers LLP

Saint Louis, Missouri
March 12, 2020

AEGION CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF OPERATIONS
(in thousands, except per share amounts)

	Years Ended December 31,		
	2019	2018	2017
Revenues	\$ 1,213,935	\$ 1,333,568	\$ 1,359,019
Cost of revenues	967,700	1,066,642	1,074,207
Gross profit	246,235	266,926	284,812
Operating expenses	199,430	219,823	226,173
Goodwill impairment	—	1,389	45,390
Definite-lived intangible asset impairment	—	2,169	41,032
Impairment of assets held for sale	23,427	—	—
Acquisition and divestiture expenses	3,375	7,004	2,923
Restructuring and related charges	9,030	6,894	12,814
Operating income (loss)	10,973	29,647	(43,520)
Other income (expense):			
Interest expense	(14,002)	(17,327)	(16,001)
Interest income	1,038	516	145
Other	(10,893)	(9,881)	(2,201)
Total other expense	(23,857)	(26,692)	(18,057)
Income (loss) before taxes on income	(12,884)	2,955	(61,577)
Taxes (benefit) on income (loss)	6,564	(132)	5,005
Net income (loss)	(19,448)	3,087	(66,582)
Non-controlling interests income	(1,444)	(159)	(2,819)
Net income (loss) attributable to Aegion Corporation	\$ (20,892)	\$ 2,928	\$ (69,401)
Earnings (loss) per share attributable to Aegion Corporation:			
Basic	\$ (0.67)	\$ 0.09	\$ (2.09)
Diluted	(0.67)	0.09	(2.09)

The accompanying notes are an integral part of the consolidated financial statements.

AEGION CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(in thousands)

	Years Ended December 31,		
	2019	2018	2017
Net income (loss)	\$ (19,448)	\$ 3,087	\$ (66,582)
Other comprehensive income (loss):			
Currency translation adjustments	13,915	(14,651)	20,839
Deferred gain (loss) on hedging activity, net of tax ⁽¹⁾	(6,237)	(1,621)	1,402
Pension activity, net of tax ⁽²⁾	(33)	(654)	93
Total comprehensive loss	(11,803)	(13,839)	(44,248)
Comprehensive income attributable to non-controlling interests	(1,493)	(1)	(3,040)
Comprehensive loss attributable to Aegion Corporation	\$ (13,296)	\$ (13,840)	\$ (47,288)

⁽¹⁾ Amounts presented net of tax of \$164, \$(48) and \$930 for the years ended December 31, 2019, 2018 and 2017, respectively.

⁽²⁾ Amounts presented net of tax of \$8, \$(134) and \$22 for the years ended December 31, 2019, 2018 and 2017, respectively.

The accompanying notes are an integral part of the consolidated financial statements.

AEGION CORPORATION AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
(in thousands, except share amounts)

	December 31,	
	2019	2018
Assets		
Current assets		
Cash and cash equivalents	\$ 64,874	\$ 83,527
Restricted cash	1,348	1,359
Receivables, net of allowances of \$7,224 and \$9,695, respectively	192,604	204,541
Retainage	33,103	33,572
Contract assets	51,092	62,467
Inventories	57,193	56,437
Prepaid expenses and other current assets	33,909	32,172
Assets held for sale	16,092	7,792
Total current assets	450,215	481,867
Property, plant & equipment, less accumulated depreciation	101,091	107,059
Other assets		
Goodwill	256,835	260,633
Intangible assets, less accumulated amortization	104,828	119,696
Operating lease assets	71,466	—
Deferred income tax assets	1,216	1,561
Other non-current assets	9,862	21,601
Total other assets	444,207	403,491
Total Assets	\$ 995,513	\$ 992,417
Liabilities and Equity		
Current liabilities		
Accounts payable	\$ 60,614	\$ 64,562
Accrued expenses	96,577	88,020
Contract liabilities	37,562	32,339
Current maturities of long-term debt	32,803	29,469
Liabilities held for sale	6,485	5,260
Total current liabilities	234,041	219,650
Long-term debt, less current maturities	243,629	282,003
Other liabilities		
Operating lease liabilities	56,253	—
Deferred income tax liabilities	11,254	8,361
Other non-current liabilities	15,243	12,216
Total other liabilities	82,750	20,577
Total liabilities	560,420	522,230
(See Commitments and Contingencies: Note 13)		
Equity		
Preferred stock, undesignated, \$.10 par – shares authorized 2,000,000; none	—	—
Common stock, \$.01 par – shares authorized 125,000,000; shares issued and	307	319
Additional paid-in capital	101,148	122,818
Retained earnings	358,998	379,890
Accumulated other comprehensive loss	(32,694)	(40,290)
Total stockholders' equity	427,759	462,737
Non-controlling interests	7,334	7,450
Total equity	435,093	470,187
Total Liabilities and Equity	\$ 995,513	\$ 992,417

The accompanying notes are an integral part of the consolidated financial statements.

AEGION CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF EQUITY
(in thousands, except number of shares)

	Years Ended December 31,		
	2019	2018	2017
Common Stock - Shares			
Balance, beginning of year	31,922,409	32,462,542	33,956,304
Issuance of common stock upon stock option exercises	52,783	—	43,573
Issuance of shares pursuant to restricted stock units	237,416	312,182	95,510
Issuance of shares pursuant to performance units	111,158	296,909	49,672
Issuance of shares pursuant to deferred stock units	84,184	28,308	30,559
Forfeitures of restricted shares	—	—	(1,084)
Shares repurchased and retired	(1,691,991)	(1,177,532)	(1,711,992)
Balance, end of year	30,715,959	31,922,409	32,462,542
Common Stock - Amount			
Balance, beginning of year	\$ 319	\$ 325	\$ 340
Issuance of common stock upon stock option exercises	1	—	—
Issuance of shares pursuant to restricted stock units	2	3	1
Issuance of shares pursuant to performance units	1	3	—
Issuance of shares pursuant to deferred stock units	1	—	—
Shares repurchased and retired	(17)	(12)	(16)
Balance, end of year	\$ 307	\$ 319	\$ 325
Additional Paid-In Capital			
Balance, beginning of year	\$ 122,818	\$ 140,749	\$ 167,700
Issuance of common stock upon stock option exercises	955	—	822
Shares repurchased and retired	(30,376)	(25,769)	(37,833)
Equity-based compensation expense	7,751	7,838	10,060
Balance, end of year	\$ 101,148	\$ 122,818	\$ 140,749
Retained Earnings			
Balance, beginning of year	\$ 379,890	\$ 376,694	\$ 446,095
Cumulative effect adjustment (see Revenues: Note 3)	—	268	—
Net income (loss) attributable to Aegion Corporation	(20,892)	2,928	(69,401)
Balance, end of year	\$ 358,998	\$ 379,890	\$ 376,694
Accumulated Other Comprehensive Loss			
Balance, beginning of year	\$ (40,290)	\$ (23,522)	\$ (45,635)
Currency translation adjustment and derivative transactions, net	7,596	(16,768)	22,113
Balance, end of year	\$ (32,694)	\$ (40,290)	\$ (23,522)
Non-Controlling Interests			
Balance, beginning of year	\$ 7,450	\$ 10,810	\$ 7,683
Net income	1,444	159	2,819
Investments from non-controlling interest	—	—	158
Distributions to non-controlling interests	(1,609)	—	(71)
Sale of non-controlling interests	—	(3,361)	—
Currency translation adjustment, net	49	(158)	221
Balance, end of year	\$ 7,334	\$ 7,450	\$ 10,810
Total Equity			
Balance, beginning of year	\$ 470,187	\$ 505,056	\$ 576,183
Cumulative effect adjustment (See Revenues: Note 3)	—	268	—
Net income (loss)	(19,448)	3,087	(66,582)
Issuance of common stock upon stock option exercises	956	—	822
Issuance of shares pursuant to restricted stock units	2	3	1
Issuance of shares pursuant to performance units	1	3	—
Issuance of shares pursuant to deferred stock units	1	—	—
Shares repurchased and retired	(30,393)	(25,781)	(37,849)
Equity-based compensation expense	7,751	7,838	10,060
Investments from non-controlling interest	—	—	158
Distributions to non-controlling interests	(1,609)	—	(71)
Sale of non-controlling interests	—	(3,361)	—
Currency translation adjustment and derivative transactions, net	7,645	(16,926)	22,334
Balance, end of year	\$ 435,093	\$ 470,187	\$ 505,056

The accompanying notes are an integral part of the consolidated financial statements.

AEGION CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
(in thousands)

	Years Ended December 31,		
	2019	2018	2017
Cash flows from operating activities:			
Net income (loss)	\$ (19,448)	\$ 3,087	\$ (66,582)
Adjustments to reconcile to net cash provided by operating activities:			
Depreciation and amortization	36,163	37,855	44,419
(Gain) loss on sale of fixed assets	(662)	143	(59)
Equity-based compensation expense	7,751	7,838	10,060
Deferred income taxes	3,146	(648)	(9,376)
Non-cash restructuring charges	12,782	13,814	10,080
Goodwill impairment	—	1,389	45,390
Definite-lived intangible asset impairment	—	2,169	41,032
Impairment of assets held for sale	23,427	—	—
Loss on sale of business	—	7,048	—
Loss on foreign currency transactions	503	623	2,152
Other	(744)	1,278	(1,562)
Changes in operating assets and liabilities (net of acquisitions):			
Receivables net, retainage and contract assets	16,416	(6,821)	(29,847)
Inventories	(3,413)	2,306	(1,926)
Prepaid expenses and other assets	4,578	614	8,732
Accounts payable and accrued expenses	(6,711)	(7,339)	18,803
Contract liabilities	5,091	(24,144)	(5,924)
Other operating	(65)	457	(1,798)
Net cash provided by operating activities	78,814	39,669	63,594
Cash flows from investing activities:			
Capital expenditures	(28,772)	(30,514)	(30,830)
Proceeds from sale of fixed assets	1,339	3,036	707
Patent expenditures	(293)	(299)	(379)
Other acquisition activity	—	(9,000)	(9,045)
Sale of Bayou, net of cash disposed	—	37,942	—
Net cash provided by (used in) investing activities	(27,726)	1,165	(39,547)
Cash flows from financing activities:			
Proceeds from issuance of common stock upon stock option exercises	956	—	823
Repurchase of common stock	(30,393)	(25,775)	(37,849)
Investments from non-controlling interest	—	—	158
Distributions to non-controlling interests	(1,609)	—	(71)
Payment of contingent consideration	—	—	(500)
Credit facility amendment fees	—	(1,657)	—
Proceeds from (payments on) notes payable, net	(273)	234	639
Proceeds from (payments on) line of credit, net	(7,000)	(7,000)	2,000
Principal payments on long-term debt	(28,438)	(26,250)	(21,647)
Net cash used in financing activities	(66,757)	(60,448)	(56,447)
Effect of exchange rate changes on cash	(2,995)	(4,045)	6,553
Net decrease in cash, cash equivalents and restricted cash for the year	(18,664)	(23,659)	(25,847)
Cash, cash equivalents and restricted cash, beginning of year	84,886	108,545	134,392
Cash, cash equivalents and restricted cash, end of year	66,222	84,886	108,545
Cash, cash equivalents and restricted cash, assets held for sale, end of year	—	—	(989)
Cash, cash equivalents and restricted cash, end of year	\$ 66,222	\$ 84,886	\$ 107,556
Supplemental disclosures of cash flow information:			
Cash paid (received) for:			
Interest	\$ 14,977	\$ 15,622	\$ 14,998
Income taxes	(1,579)	4,625	5,649

The accompanying notes are an integral part of the consolidated financial statements.

AEGION CORPORATION AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. DESCRIPTION OF BUSINESS

Aegion Corporation combines innovative technologies with market leading expertise to maintain, rehabilitate and strengthen pipelines and other infrastructure around the world. For nearly 50 years, the Company has played a pioneering role in finding transformational solutions to rehabilitate aging infrastructure, primarily pipelines in the wastewater, water, energy, mining and refining industries. The Company also maintains the efficient operation of refineries and other industrial facilities and provide innovative solutions for the strengthening of buildings, bridges and other structures. Aegion is committed to Stronger. Safer. Infrastructure®. The Company believes that the depth and breadth of its products and services platform make Aegion a leading “one-stop” provider for the world’s infrastructure rehabilitation and protection needs.

The Company is primarily built on the premise that it is possible to use technology to extend the structural design life and maintain, if not improve, the performance of infrastructure, mostly pipe. The Company is proving that this expertise can be applied in a variety of markets to protect pipelines in oil, gas, mining, wastewater and water applications and extending this to the rehabilitation and maintenance of commercial structures and the provision of professional services in energy-related industries. Many types of infrastructure must be protected from the corrosive and abrasive materials that pass through or near them. The Company’s expertise in non-disruptive corrosion engineering and abrasion protection is now wide-ranging, opening new markets for growth. The Company has a long history of product development and intellectual property management. The Company manufactures most of the engineered solutions it creates as well as the specialized equipment required to install them. Finally, decades of experience give the Company an advantage in understanding municipal, energy, mining, industrial and commercial customers. Strong customer relationships and brand recognition allow the Company to support the expansion of existing and innovative technologies into new high growth end markets.

The Company’s predecessor was originally incorporated in Delaware in 1980 to act as the exclusive United States licensee of the Insituform® cured-in-place pipe (“CIPP”) process, which Insituform’s founder invented in 1971. The Insituform® CIPP process served as the first trenchless technology for rehabilitating sewer pipelines and has enabled municipalities and private industry to avoid the extraordinary expense and extreme disruption that can result from conventional “dig-and-replace” methods. For nearly 50 years, the Company has maintained its leadership position in the CIPP market from manufacturing to technological innovations and market share.

In order to strengthen the Company’s ability to service the emerging demands of the infrastructure protection market and to better position the Company for sustainable growth, the Company embarked on a diversification strategy in 2009 to expand its product and service portfolio and its geographical reach. Through a series of strategic initiatives and key acquisitions, the Company now possesses a broad portfolio of cost-effective solutions for rehabilitating and maintaining aging or deteriorating infrastructure, protecting new infrastructure from corrosion worldwide and providing integrated professional services in engineering, procurement, construction, maintenance, and turnaround services for oil and natural gas companies, primarily in the midstream and downstream markets.

Recognizing that the breadth of offerings expanded beyond the Company’s flagship Insituform® brand, which constituted less than half of the Company’s revenues in 2011, the Company reorganized Insituform Technologies, Inc. (“Insituform”), the parent company at the time, into a new holding company structure in October 2011. Aegion became the new parent company and Insituform became a wholly-owned subsidiary of Aegion. Aegion reflects the Company’s mission of extending its leadership capabilities to furnish products and services to provide: (i) long-term protection for water and wastewater pipes, oil and gas pipelines and infrastructure as well as commercial and governmental structures and transportation infrastructure; and (ii) integrated professional services to energy companies.

Strategic Initiatives/Acquisitions/Divestitures

Restructuring Activities

On July 28, 2017, the Company’s board of directors approved a comprehensive global realignment and restructuring plan (the “Restructuring”). As part of the Restructuring, the Company announced plans to: (i) divest the Company’s pipe coating and insulation businesses in Louisiana, The Bayou Companies, LLC and Bayou Wasco Insulation, LLC (collectively “Bayou”); (ii) exit all non-pipe related contract applications for the Tyfo® system in North America; (iii) right-size the cathodic protection services operation in Canada and the CIPP businesses in Australia and Denmark; and (iv) reduce corporate and other operating costs.

During 2018 and 2019, the Company's board of directors approved additional actions with respect to the Restructuring, which included the decisions to: (i) divest the Australia and Denmark CIPP businesses; (ii) take actions to further optimize operations within North America, including measures to reduce consolidated operating costs; and (iii) divest or otherwise exit multiple additional international businesses, including: (a) the Company's cathodic protection installation activities in the Middle East, including Corppower International Limited, the Company's cathodic protection materials manufacturing and production joint venture in Saudi Arabia; (b) United Pipeline de Mexico S.A. de C.V., the Company's Tite Liner® joint venture in Mexico ("United Mexico"); (c) the Company's Tite Liner® businesses in Brazil and Argentina; (d) Aegion South Africa Proprietary Limited, the Company's Tite Liner® and CIPP joint venture in the Republic of South Africa; and (e) the Company's CIPP contract installation operations in England, the Netherlands, Spain and Northern Ireland.

The Company completed the divestitures of Bayou and the Denmark CIPP business in 2018. The Company also completed the divestitures of the Netherlands CIPP business and its Tite Liner® joint venture in Mexico in 2019, as well as the shutdown of activities for the CIPP business in England. The Company completed the divestitures of CIPP operations in Australia and Spain in early 2020 (see Note 17). Remaining divestiture and shutdown activities include the sale of the Northern Ireland contracting operation and minor final dissolution activities in South America and South Africa, all of which is expected to be completed in the first half of 2020. Additionally, the exit of the Company's cathodic protection installation activities in the Middle East is substantially complete, though management expects minimal wind-down activities will extend through the second quarter of 2020 related to a small number of projects remaining in backlog.

As part of efforts to optimize the cathodic protection operations in North America, the Company's management initiated plans during the fourth quarter of 2019 to further downsize operations in the U.S., including the closure of three branch offices and the exit of capital intensive drilling activities at four branch offices. These actions included a reduction of approximately 20% of the cathodic protection domestic workforce and an exit of drilling activities that contributed approximately 20% to our cathodic protection domestic revenues in 2019. Management expects these actions to improve our cathodic protection cost structure in the U.S., eliminate unprofitable results in certain parts of the business and reduce consolidated annual expenses for the business overall. Also during the fourth quarter of 2019, the Company reduced corporate headcount and took other actions to reduce corporate costs. See Note 4.

Infrastructure Solutions Segment ("Infrastructure Solutions")

During 2019, the Company initiated plans to sell its CIPP contracting business in Ireland, Environmental Techniques Limited ("Environmental Techniques"), and Spain, Insituform Technologies Iberica SA ("Insituform Spain"). Accordingly, the Company has classified the assets and liabilities as held for sale on the Consolidated Balance Sheet at December 31, 2019. See Note 6. Additionally, see Note 17 for additional information on the sale of Insituform Spain, effective February 13, 2020.

In October 2019, the Company sold its CIPP contracting operations of Insituform Netherlands to GMB Riolerings technieken B.V., a Dutch company ("GMB"). In connection with the sale, the Company entered into a five-year tube supply agreement whereby GMB will buy liners from the Company.

During 2018, the Company's board of directors approved a plan to divest the Company's CIPP business in Australia ("Insituform Australia"). While restructuring actions in Insituform Australia led to improvements in operating results, an assessment of the long-term fit within the Company's portfolio led to the decision to divest the business. Accordingly, the Company has classified Insituform Australia's assets and liabilities as held for sale on the Consolidated Balance Sheets at December 31, 2019 and 2018. See Note 6. Additionally, see Note 17 for additional information on the sale of Insituform Australia, effective January 24, 2020.

In November 2018, the Company sold substantially all of the fixed assets and inventory from its CIPP operations in Denmark for a sale price of DKK 10.5 million (approximately \$1.6 million). In connection with the sale, the Company entered into a five-year exclusive tube-supply agreement whereby the buyers will purchase Insituform® CIPP liners from the Company. The buyers are also entitled to use the Insituform® trade name based on a trademark license granted for the same five-year time period.

In March 2017, the Company acquired Environmental Techniques Limited and its parent holding company, Killeen Trading Limited (collectively "Environmental Techniques"), for a purchase price of £6.5 million, approximately \$8.0 million, which was funded from the Company's international cash balances. Environmental Techniques provides trenchless drainage inspection, cleaning and rehabilitation services throughout the United Kingdom and the Republic of Ireland.

Corrosion Protection Segment (“Corrosion Protection”)

In October 2019, the Company sold its fifty-five percent (55%) interest in United Mexico, its Mexican Tite Liner® joint venture, to its joint venture partner, Miller Pipeline de Mexico, S.A. de C.V., a Mexican company (“Miller”). Miller owned the remaining forty-five percent (45%) interest in United Mexico. In connection with the sale, the Company entered into a long-term license agreement pursuant to which United Mexico will be the exclusive licensee in Mexico with respect to certain trademarks, patents and other intellectual property relating to the Company’s pipe lining business. The Company further expects to enter into a long-term agreement for the supply of equipment and consumables as well as the provision of services to United Mexico.

In August 2018, the Company sold substantially all of the assets of its wholly-owned subsidiary, The Bayou Companies, LLC and its fifty-one percent (51%) interest in Bayou Wasco Insulation, LLC. The sale price was \$46 million, consisting of \$38 million paid in cash at closing and \$8 million in a fully secured, two-year loan payable to Aegion. Aegion is also eligible to receive an additional \$4 million in total earn-out payments based on performance of the divested businesses in 2019 and 2020. Cash proceeds, net of customary closing costs, were used to repay outstanding borrowings on the Company’s line of credit. The sale resulted in a pre-tax loss of \$7.0 million during 2018, which was included in “Other expense” in the Consolidated Statements of Operations.

In May 2018, the Company acquired the operations of Hebna Inc., Hebna Canada Inc. and Hebna Corporation (collectively “Hebna”), for a purchase price of \$6.0 million. The transaction was funded from a combination of domestic and international cash balances, with fifty percent (50%) of the purchase price being paid by the Company’s joint venture in Oman, in which the Company is a fifty-one percent (51%) partner. Hebna provides pipeline lining services, including compressed-fit lining, slip-lining, liner and free-standing pipe fusing, pipeline assessment and integrity management, pipeline pigging and calibration, and roto-lining services primarily in the United States, Canada and Middle East.

Energy Services Segment (“Energy Services”)

In July 2018, the Company acquired the operations of Plant Performance Services LLC and P2S LLC (collectively “P2S”), for a purchase price of \$3.0 million. The transaction was funded from domestic cash balances. P2S specializes in general mechanical turnaround services, specialty welding services and field fabrication services primarily for the downstream oil and gas industry.

Purchase Price Accounting

The Company finalized its accounting for P2S and Hebna in 2019 and Environmental Techniques in 2018. There were no significant adjustments to the purchase price accounting in either period. In total, the transaction purchase price(s) to acquire P2S, Hebna and Environmental Techniques was approximately \$17.0 million, of which, identified assets included goodwill of \$7.3 million, intangible assets of \$5.5 million, property, plant and equipment of \$3.5 million and net working capital of \$0.7 million. The goodwill and definite-lived intangible assets associated with the P2S and Hebna acquisitions are deductible for tax purposes; whereas, the goodwill and definite-lived intangible assets associated with the Environmental Techniques acquisition are not deductible for tax purposes.

The Company’s acquisition of Environmental Techniques contributed revenues of \$9.5 million, \$7.5 million and \$4.0 million, and net income (loss) of \$(0.1) million, \$0.1 million and \$(0.7) million in 2019, 2018 and 2017, respectively. Revenue and net income contributions associated with Hebna and P2S were de minimus in 2019 and 2018.

2. ACCOUNTING POLICIES

Principles of Consolidation

The consolidated financial statements include the accounts of the Company, its wholly-owned subsidiaries and majority-owned subsidiaries in which the Company is deemed to be the primary beneficiary. All significant intercompany transactions and balances have been eliminated.

Accounting Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Accumulated Other Comprehensive Loss

As set forth below, the Company's accumulated other comprehensive loss is comprised of three main components: (i) currency translation; (ii) derivatives; and (iii) gains and losses associated with the Company's defined benefit plan in the United Kingdom (in thousands):

	December 31,	
	2019	2018
Currency translation adjustments ⁽¹⁾	\$ (27,241)	\$ (41,107)
Derivative hedging activity	(4,522)	1,715
Pension activity	(931)	(898)
Total accumulated other comprehensive loss	\$ (32,694)	\$ (40,290)

⁽¹⁾ During 2019, as a result of selling or disposing of certain international entities, \$10.9 million was reclassified out of accumulated other comprehensive loss to "Other expense" in the Consolidated Statements of Operations.

For the Company's international subsidiaries, the local currency is generally the functional currency. Assets and liabilities of these subsidiaries are translated into U.S. dollars using rates in effect at the balance sheet date while revenues and expenses are translated into U.S. dollars using average exchange rates. The cumulative translation adjustment resulting from changes in exchange rates are included in the Consolidated Balance Sheets as a component of "Accumulated other comprehensive loss" in total stockholders' equity. Net foreign exchange transaction losses of \$0.5 million, \$0.6 million and \$2.2 million for 2019, 2018 and 2017, respectively, are included in "Other expense" in the Consolidated Statements of Operations.

Research and Development

The Company expenses research and development costs as incurred. Research and development costs of \$6.4 million, \$5.6 million and \$4.2 million for the years ended December 31, 2019, 2018 and 2017, respectively, are included in "Operating expenses" in the consolidated statements of operations.

Taxation

The Company provides for estimated income taxes payable or refundable on current year income tax returns as well as the estimated future tax effects attributable to temporary differences and carryforwards, based upon enacted tax laws and tax rates, and in accordance with FASB ASC 740, *Income Taxes* ("FASB ASC 740"). FASB ASC 740 also requires that a valuation allowance be recorded against any deferred tax assets that are not likely to be realized in the future. The determination is based on the Company's ability to generate future taxable income and, at times, is dependent on its ability to implement strategic tax initiatives to ensure full utilization of recorded deferred tax assets. Should the Company not be able to implement the necessary tax strategies, it may need to record valuation allowances for certain deferred tax assets, including those related to foreign income tax benefits. Significant management judgment is required in determining the provision for income taxes, deferred tax assets and liabilities and any valuation allowances recorded against net deferred tax assets.

In accordance with FASB ASC 740, tax benefits from an uncertain tax position may be recognized when it is more likely than not that the position will be sustained upon examination, including resolutions of any related appeals or litigation processes, based on the technical merits. In addition, this recognition model includes a measurement attribute that measures the position as the largest amount of tax that is greater than 50% likely of being realized upon ultimate settlement in accordance with FASB ASC 740. This interpretation also provides guidance on derecognition, classification, interest and penalties, accounting in interim periods, disclosure and transition.

The Company recognizes tax liabilities in accordance with FASB ASC 740 and adjusts these liabilities when judgment changes as a result of the evaluation of new information not previously available. Due to the complexity of some of these uncertainties, the ultimate resolution may result in a payment that is materially different from the current estimate of the tax liabilities. These differences will be reflected as increases or decreases to income tax expense in the period in which they are determined. While the Company believes the resulting tax balances as of December 31, 2019 and 2018 were appropriately accounted for in accordance with FASB ASC 740, the ultimate outcome of such matters could result in favorable or unfavorable adjustments to the consolidated financial statements and such adjustments could be material.

Refer to Note 12 for additional information regarding taxes on income and the impact of the TCJA.

Earnings per Share

Earnings per share have been calculated using the following share information:

	Years Ended December 31,		
	2019	2018	2017
Weighted average number of common shares used for basic EPS	31,130,222	32,345,382	33,150,949
Effect of dilutive stock options and restricted and deferred stock unit awards	—	652,621	—
Weighted average number of common shares and dilutive potential common stock used for dilutive EPS	31,130,222	32,998,003	33,150,949

The Company excluded 529,539 restricted and deferred stock units in 2019 and 735,577 stock options and restricted and deferred stock units in 2017 from the diluted earnings per share calculation for the Company's common stock because of the reported net loss for the periods. The Company excluded 4,049 and 73,897 stock options in 2018 and 2017, respectively, from the diluted earnings per share calculations for the Company's common stock because they were anti-dilutive as their exercise prices were greater than the average market price of common shares for each period.

Purchase Price Accounting

The Company accounts for its acquisitions in accordance with FASB ASC 805, *Business Combinations*. The base cash purchase price plus the estimated fair value of any non-cash or contingent consideration given for an acquired business is allocated to the assets acquired (including identified intangible assets) and liabilities assumed based on the estimated fair values of such assets and liabilities. The excess of the total consideration over the aggregate net fair values assigned is recorded as goodwill. Contingent consideration, if any, is recognized as a liability as of the acquisition date with subsequent adjustments recorded in the consolidated statements of operations. Indirect and general expenses related to business combinations are expensed as incurred.

The Company typically determines the fair value of tangible and intangible assets acquired in a business combination using independent valuations that rely on management's estimates of inputs and assumptions that a market participant would use. Key assumptions include cash flow projections, growth rates, asset lives, and discount rates based on an analysis of weighted average cost of capital.

Classification of Current Assets and Current Liabilities

The Company includes in current assets and current liabilities certain amounts realizable and payable under construction contracts that may extend beyond one year. The construction periods on projects undertaken by the Company generally range from less than one month to 24 months.

Cash, Cash Equivalents and Restricted Cash

The Company classifies highly liquid investments with original maturities of 90 days or less as cash equivalents. Recorded book values are reasonable estimates of fair value for cash and cash equivalents.

Cash, cash equivalents and restricted cash reported within the Consolidated Balance Sheets and Consolidated Statements of Cash Flows are as follows (in thousands):

Balance sheet data	December 31,	
	2019	2018
Cash and cash equivalents	\$ 64,874	\$ 83,527
Restricted cash	1,348	1,359
Cash, cash equivalents and restricted cash	\$ 66,222	\$ 84,886

Restricted cash held in escrow primarily relates to funds reserved for legal requirements, deposits made in lieu of retention on specific projects performed for municipalities and state agencies, or advance customer payments and compensating balances for bank undertakings in Europe. Restricted cash related to operations is similar to retainage, and is, therefore, classified as a current asset, consistent with the Company's policy on retainage.

Inventories

Inventories are stated at the lower of cost (first-in, first-out) or net realizable value. Actual cost is used to value raw materials and supplies. Standard cost, which approximates actual cost, is used to value work-in-process, finished goods and construction materials. Standard cost includes direct labor, raw materials and manufacturing overhead based on normal capacity. For certain businesses within our Corrosion Protection segment, the Company uses actual costs or average costs for all classes of inventory.

Retainage

Many of the contracts under which the Company performs work contain retainage provisions. Retainage refers to that portion of revenue earned by the Company but held for payment by the customer pending satisfactory completion of the project. The Company generally invoices its customers periodically as work is completed. Under ordinary circumstances, collection from municipalities is made within 60 to 90 days of billing. In most cases, 5% to 15% of the contract value is withheld by the municipal owner pending satisfactory completion of the project. Collections from other customers are generally made within 30 to 45 days of billing. Unless reserved, the Company believes that all amounts retained by customers under such provisions are fully collectible. Retainage on active contracts is classified as a current asset regardless of the term of the contract. Retainage is generally collected within one year of the completion of a contract, although collection can extend beyond one year from time to time. As of December 31, 2019, retainage receivables aged greater than 365 days approximated 18% of the total retainage balance and collectibility was assessed as described in the allowance for doubtful accounts section below.

Allowance for Doubtful Accounts

Management makes estimates of the uncollectibility of accounts receivable and retainage. The Company records an allowance based on specific accounts to reduce receivables, including retainage, to the amount that is expected to be collected. The specific allowances are reevaluated and adjusted as additional information is received. After all reasonable attempts to collect the receivable or retainage have been explored, the account is written off against the allowance. The Company also includes reserves related to certain accounts receivable that may be in litigation or dispute or are aged.

Long-Lived Assets

Property, plant and equipment and other identified intangibles (primarily customer relationships, patents and acquired technologies, trademarks, licenses and non-compete agreements) are recorded at cost, net of accumulated depreciation, amortization and impairment, and, except for goodwill, are depreciated or amortized on a straight-line basis over their estimated useful lives. Changes in circumstances such as technological advances, changes to the Company's business model or changes in the Company's capital strategy can result in the actual useful lives differing from the Company's estimates. If the Company determines that the useful life of its property, plant and equipment or its identified intangible assets should be shortened, the Company would depreciate or amortize the net book value in excess of the salvage value over its revised remaining useful life, thereby increasing depreciation or amortization expense.

Long-lived assets, including property, plant and equipment and other intangibles, are reviewed for impairment whenever events or changes in circumstances indicate that the carrying value of an asset may not be recoverable. Such impairment tests are based on a comparison of undiscounted cash flows to the recorded value of the asset. The estimate of cash flow is based upon, among other things, assumptions about expected future operating performance. The Company's estimates of undiscounted cash flow may differ from actual cash flow due to, among other things, technological changes, economic conditions, changes to its business model or changes in its operating performance. If the sum of the undiscounted cash flows is less than the carrying value, the Company recognizes an impairment loss, measured as the amount by which the carrying value exceeds the fair value of the asset.

Impairment Review – 2017

As part of the Restructuring, the Company exited all non-pipe related contract applications for the Tyfo[®] system in North America. As a result of this action, the Company evaluated the fair value of long-lived assets in its Fyfe reporting unit in accordance with FASB ASC 360, *Property, Plant and Equipment* ("FASB ASC 360"). The results of the Fyfe reporting unit and its related asset groups are reported within the Infrastructure Solutions reportable segment.

Based on the results of the valuation, the carrying amount of certain long-lived assets for the Fyfe North America asset group exceeded the fair value. Accordingly, the Company recorded impairment charges of \$3.4 million to trademarks, \$20.8 million to customer relationships and \$16.8 million to patents and acquired technology in 2017. The impairment charges were recorded to "Definite-lived intangible asset impairment" in the Consolidated Statement of Operations. Property, plant and equipment were determined to have a carrying value that exceeded fair value; thus, no impairment was recorded.

The fair value estimates described above were determined using observable inputs and significant unobservable inputs, which are based on level 3 inputs as defined in the Fair Value Measurements section below.

Goodwill

Under FASB ASC 350, the Company conducts an impairment test of goodwill on an annual basis or when events or changes in circumstances indicate that the carrying value of goodwill may not be recoverable. An impairment charge will be recognized to the extent that the fair value of a reporting unit is less than its carrying value. Factors that could potentially trigger an impairment review include (but are not limited to):

- significant underperformance of a segment relative to expected, historical or forecasted operating results;
- significant negative industry or economic trends;
- significant changes in the strategy for a segment including extended slowdowns in the segment's market;
- a decrease in market capitalization below the Company's book value; and
- a significant change in regulations.

Whether during the annual impairment assessment or during a trigger-based impairment review, the Company estimates the fair value of its reporting units and compares such fair value to the carrying value of those reporting units to determine if there are any indications of goodwill impairment.

Fair value of reporting units is estimated using a combination of two valuation methods: a market approach and an income approach with each method given equal weight in estimating the fair value assigned to each reporting unit. Absent an indication of fair value from a potential buyer or similar specific transaction, the Company believes the use of these two methods provides a reasonable estimate of a reporting unit's fair value. Assumptions common to both methods are operating plans and economic outlooks, which are used to forecast future revenues, earnings and after-tax cash flows for each reporting unit. These assumptions are applied consistently for both methods.

The market approach estimates fair value by first determining earnings before interest, taxes, depreciation and amortization ("EBITDA") multiples for comparable publicly-traded companies with similar characteristics of the reporting unit. The EBITDA multiples for comparable companies are based upon current enterprise value. The enterprise value is based upon current market capitalization and includes a control premium. The Company believes this approach is appropriate because it provides a fair value estimate using multiples from entities with operations and economic characteristics comparable to its reporting units.

The income approach is based on forecasted future (debt-free) cash flows that are discounted to present value using factors that consider timing and risk of future cash flows. The Company believes this approach is appropriate because it provides a fair value estimate based upon the reporting unit's expected long-term operating cash flow performance. Discounted cash flow projections are based on financial forecasts developed from operating plans and economic outlooks, growth rates, estimates of future expected changes in operating margins, terminal value growth rates, future capital expenditures and changes in working capital requirements. Estimates of discounted cash flows may differ from actual cash flows due to, among other things, changes in economic conditions, changes to business models, changes in the Company's weighted average cost of capital, or changes in operating performance.

The discount rate applied to the estimated future cash flows is one of the most significant assumptions utilized under the income approach. The Company determines the appropriate discount rate for each of its reporting units based on the weighted average cost of capital (“WACC”) for each individual reporting unit. The WACC takes into account both the pre-tax cost of debt and cost of equity (including the risk-free rate on twenty year U.S. Treasury bonds), and certain other company-specific and market-based factors. As each reporting unit has a different risk profile based on the nature of its operations, the WACC for each reporting unit is adjusted, as appropriate, to account for company-specific risks. Accordingly, the WACC for each reporting unit may differ.

Annual Impairment Assessment – October 1, 2019

The Company had six reporting units for purposes of assessing goodwill at October 1, 2019 as follows: Municipal Pipe Rehabilitation, Fyfe, Corpro, United Pipeline Systems, Coating Services and Energy Services.

Significant assumptions used in the Company’s October 2019 goodwill review included: (i) discount rates ranging from 12.0% to 16.0%; (ii) annual revenue growth rates generally ranging from 1.6% to 4.9%; (iii) operating margin stability in the short term related to certain reporting units affected by the Restructuring, but slightly increased operating margins long term; and (iv) peer group EBITDA multiples.

The Company’s assessment of each reporting unit’s fair value in relation to its respective carrying value yielded no reporting units with a fair value below carrying value or within 10 percent of its carrying value. The Energy Services reporting unit had a fair value only slightly above 10 percent of its carrying value. The Energy Services reporting unit, which had \$48.0 million of goodwill recorded at the impairment testing date, has several large customers and primarily operates in the California downstream oil and gas market, which has experienced significant market changes in recent years. Projected cash flows were based on continued strength in the Central California downstream energy market and a continued, growing relationship with its primary customer base. If these assumptions do not materialize in a manner consistent with Company’s expectations, there is risk of impairment to recorded goodwill.

Impairment Review – 2017

As part of the Restructuring, the Company exited all non-pipe related contract applications for the Tyfo[®] system in North America. As a result of this action, the Company evaluated the goodwill of its Fyfe reporting unit and determined that a triggering event occurred. Based on the impairment analysis, the Company determined that recorded goodwill at the Fyfe reporting unit was impaired by \$45.4 million, which was recorded to “Goodwill impairment” in the Consolidated Statement of Operations during 2017. As of December 31, 2017, the Company had remaining Fyfe goodwill of \$9.6 million. Projected cash flows were based, in part, on the ability to grow third-party product sales and pressure pipe contracting in North America, and maintaining a presence in other international markets. If these assumptions do not materialize in a manner consistent with Company’s expectations, there is risk of additional impairment to recorded goodwill.

Fair Value Measurements

FASB ASC 820, *Fair Value Measurements* (“FASB ASC 820”), defines fair value and establishes a framework for measuring and disclosing fair value instruments. The guidance establishes a three-tier fair value hierarchy, which prioritizes the inputs used in measuring fair value. These tiers include:

- Level 1 – defined as quoted prices in active markets for identical instruments;
- Level 2 – defined as inputs other than quoted prices in active markets that are either directly or indirectly observable;
- Level 3 – defined as unobservable inputs in which little or no market data exists, therefore requiring an entity to develop its own assumptions.

The Company uses these levels of hierarchy to measure the fair value of certain financial instruments on a recurring basis, such as for derivative instruments; on a non-recurring basis, such as for acquisitions and impairment testing; for disclosure purposes, such as for long-term debt; and for other applications, as discussed in their respective footnotes. Changes in assumptions or estimation methods could affect the fair value estimates; however, the Company does not believe any such changes would have a material impact on its financial condition, results of operations or cash flows. Other financial instruments including cash and cash equivalents and short-term borrowings, including notes payable, are recorded at cost, which approximates fair value, which is based on Level 2 inputs as previously defined. The Company had no transfers between Level 1, 2 or 3 inputs during 2019, 2018 or 2017.

Investments in Variable Interest Entities

The Company evaluates all transactions and relationships with variable interest entities (“VIE”) to determine whether the Company is the primary beneficiary of the entities in accordance with FASB ASC 810, *Consolidation*. Other than the sale of the Company’s interest in United Mexico, there were no changes in the Company’s VIEs during 2019.

Financial data for consolidated variable interest entities are summarized in the following tables (in thousands):

Balance sheet data	December 31,	
	2019	2018
Current assets	\$ 18,304	\$ 33,066
Non-current assets	7,635	6,466
Current liabilities	8,261	12,953
Non-current liabilities	1,962	8,780

Statement of operations data	Years Ended December 31,		
	2019 ⁽¹⁾	2018 ⁽²⁾	2017
Revenue	\$ 28,403	\$ 49,809	\$ 91,947
Gross profit	9,508	9,898	15,194
Net (income) loss attributable to Aegion Corporation	(1,100)	(1,374)	3,432

⁽¹⁾ Includes activity from our Tite Liner® joint venture in Mexico, which was sold during the fourth quarter of 2019.

⁽²⁾ Includes activity from our pipe coating and insulation joint venture in Louisiana, which was sold during the third quarter of 2018.

Accounting Standards Updates

In December 2019, the FASB issued Accounting Standards Update No. 2019-12, *Simplifying the Accounting for Income Taxes*, which removes certain exceptions to the general principles in Topic 740 and also clarifies and amends existing guidance to improved consistent application. The guidance is effective for the Company's fiscal year beginning January 1, 2021, including interim periods within that fiscal year. Early adoption is permitted. The Company is currently evaluating the impact this guidance will have on its consolidated financial statements and does not expect it will have a material impact on the Company's consolidated financial statements.

In August 2018, the FASB issued Accounting Standards Update No. 2018-13, *Fair Value Measurement: Disclosure Framework—Changes to the Disclosure Requirements for Fair Value Measurement*, which modifies the disclosure requirements for Level 1, Level 2 and Level 3 instruments in the fair value hierarchy. The guidance is effective for the Company's fiscal year beginning January 1, 2020, including interim periods within that fiscal year. The adoption of this standard is not expected to have a material impact on its consolidated financial statements.

In February 2018, the FASB issued Accounting Standards Update No. 2018-02, *Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income*, which permits a company to reclassify the income tax effects of the Tax Cuts and Jobs Act on items within accumulated other comprehensive income to retained earnings. Companies may adopt the new guidance using one of two transition methods: (i) retrospective to each period (or periods) in which the income tax effects are recognized, or (ii) at the beginning of the period of adoption. The Company adopted this standard effective January 1, 2019 and elected not to reclassify the tax effects due to the immaterial impact on the Company's consolidated financial statements.

In June 2016, the FASB issued Accounting Standards Update No. 2016-13, *Measurement of Credit Losses on Financial Instruments*, which changes the way in which entities estimate and present credit losses for most financial assets, including accounts receivable. The guidance is effective for the Company's fiscal year beginning January 1, 2020, including interim periods within that fiscal year. For the Company's trade receivables, certain other receivables and certain other financial instruments, it will be required to use a new forward-looking "expected" credit loss model based on historical loss rates that will replace the existing "incurred" credit loss model, which will generally result in earlier recognition of allowances for credit losses. The Company adopted this standard effective January 1, 2020, the impact of which was not material on the Company's consolidated financial statements.

In February 2016, the FASB issued Accounting Standards Update No. 2016-02, *Leases (Topic 842)*, which requires lessees to present right-of-use assets and lease liabilities on the balance sheet for all leases with lease terms longer than twelve months. The Company adopted this standard, effective January 1, 2019, using the adoption-date transition provision, which recognizes and measures leases existing at January 1, 2019 but without retrospective application. See Note 7.

3. REVENUES

On January 1, 2018, the Company adopted FASB ASC 606, *Revenue from Contracts with Customers* ("FASB ASC 606") for all contracts that were not completed using the modified retrospective transition method. The Company recognized the cumulative effect of initially applying FASB ASC 606 as an adjustment to the opening balance of retained earnings. Prior period information has not been restated and continues to be reported under the accounting standards in effect for those periods.

The Company recorded a net reduction to opening retained earnings of \$0.3 million as of January 1, 2018 due to the cumulative impact of adopting FASB ASC 606, with the impact primarily related to royalty license fee revenues. The impact to revenues for the years ended December 31, 2019 and 2018 was a decrease of \$0.4 million and an increase of \$1.8 million, respectively, as a result of applying FASB ASC 606.

Performance Obligations

A performance obligation is a promise in a contract to transfer a distinct good or service to the customer, and is the unit of account in FASB ASC 606. A contract's transaction price is allocated to each distinct performance obligation and recognized as revenue when, or as, the performance obligation is satisfied. For contracts in which construction, engineering and installation services are provided, there is generally a single performance obligation as the promise to transfer the individual goods or services is not separately identifiable from other promises in the contracts and, therefore, not distinct. The bundle of goods and services represents the combined output for which the customer has contracted. For product sales contracts with multiple performance obligations where each product is distinct, the Company allocates the contract's transaction price to each performance obligation using its best estimate of the standalone selling price of each distinct good in the contract. For royalty license agreements whereby intellectual property is transferred to the customer, there is a single performance obligation as the license is not separately identifiable from the other goods and services in the contract.

The Company's performance obligations are satisfied over time as work progresses or at a point in time. Revenues from products and services transferred to customers over time accounted for 92.3%, 93.5% and 93.5% of revenues for the years ended December 31, 2019, 2018 and 2017, respectively. Revenues from construction, engineering and installation services are recognized over time using an input measure (e.g., costs incurred to date relative to total estimated costs at completion) to measure progress toward satisfying performance obligations. Incurred cost represents work performed, which corresponds with, and thereby best depicts, the transfer of control to the customer. Contract costs include labor, material, overhead and, when appropriate, general and administrative expenses. Revenues from maintenance contracts are structured such that the Company has the right to consideration from a customer in an amount that corresponds directly with the performance completed to date. Therefore, the Company utilizes the practical expedient in FASB ASC 606-55-255, which allows the Company to recognize revenue in the amount to which it has the right to invoice. Applying this practical expedient, the Company is not required to disclose the transaction price allocated to remaining performance obligations under these agreements. Revenues from royalty license arrangements are recognized either at contract inception when the license is transferred or when the royalty has been earned, depending on whether the contract contains fixed consideration. Revenues from stand-alone product sales are recognized at a point in time, when control of the product is transferred to the customer. Revenues from these types of contracts accounted for 7.7%, 6.5% and 6.5% of revenues for the years ended December 31, 2019, 2018 and 2017, respectively.

On December 31, 2019, the Company had \$464.6 million of remaining performance obligations from construction, engineering and installation services. The Company estimates that approximately \$452.8 million, or 97.5%, of the remaining performance obligations at December 31, 2019 will be realized as revenues in the next 12 months.

Contract Estimates

Accounting for long-term contracts involves the use of various techniques to estimate total contract revenue and costs. For long-term contracts, the Company estimates the profit on a contract as the difference between the total estimated revenue and expected costs to complete a contract, and recognizes that profit over the life of the contract. Contract estimates are based on various assumptions to project the outcome of future events that sometimes span multiple years. These assumptions include labor productivity and availability; the complexity of the work to be performed; the cost and availability of materials; the performance of subcontractors; and the availability and timing of funding from the customer.

The Company's contracts do not typically contain variable consideration or other provisions that increase or decrease the transaction price. In rare situations where the transaction price is not fixed, the Company estimates variable consideration at the most likely amount to which it expects to be entitled. The Company includes estimated amounts in the transaction price to the extent it is probable that a significant reversal of cumulative revenue recognized will not occur when the uncertainty associated with the variable consideration is resolved. For royalty license agreements, the Company applies the sales-based and usage-based royalty exception and recognizes royalties at the later of: (i) when the subsequent sale or usage occurs; or (ii) the satisfaction or partial satisfaction of the performance obligation to which some or all of the sales-or usage-based royalty has been allocated. For contracts in which a portion of the transaction price is retained and paid after the good or service has been transferred to the customer, the Company does not recognize a significant financing component. The primary purpose of the retainage payment is often to provide the customer with assurance that the Company will perform its obligations under the contract, rather than to provide financing to the customer.

The Company's estimates of variable consideration and determination of whether to include estimated amounts in the transaction price are based largely on an assessment of anticipated performance and all information (historical, current and forecasted) that is reasonably available.

Revenue by Category

The following tables summarize revenues by segment and geography (in thousands):

	Year Ended December 31, 2019			
	Infrastructure Solutions	Corrosion Protection	Energy Services	Total
Geographic region:				
United States	\$ 427,220	\$ 159,408	\$ 328,048	\$ 914,676
Canada	65,370	57,663	—	123,033
Europe	49,157	15,121	—	64,278
Other foreign	49,050	62,898	—	111,948
Total revenues	\$ 590,797	\$ 295,090	\$ 328,048	\$ 1,213,935

	Year Ended December 31, 2018			
	Infrastructure Solutions	Corrosion Protection	Energy Services	Total
Geographic region:				
United States	\$ 430,187	\$ 200,397	\$ 335,707	\$ 966,291
Canada	62,292	71,320	—	133,612
Europe	54,567	12,227	—	66,794
Other foreign	57,075	109,796	—	166,871
Total revenues	\$ 604,121	\$ 393,740	\$ 335,707	\$ 1,333,568

	Year Ended December 31, 2017			
	Infrastructure Solutions	Corrosion Protection	Energy Services	Total
Geographic region:				
United States	\$ 437,944	\$ 299,643	\$ 290,726	\$ 1,028,313
Canada	60,675	79,059	—	139,734
Europe	58,520	13,319	—	71,839
Other foreign	55,015	64,118	—	119,133
Total revenues	\$ 612,154	\$ 456,139	\$ 290,726	\$ 1,359,019

The following tables summarize revenues by segment and contract type (in thousands):

	Year Ended December 31, 2019			
	Infrastructure Solutions	Corrosion Protection	Energy Services	Total
Contract type:				
Fixed fee	\$ 523,042	\$ 203,887	\$ 704	\$ 727,633
Time and materials	—	65,084	327,344	392,428
Product sales	67,512	26,119	—	93,631
License fees	243	—	—	243
Total revenues	\$ 590,797	\$ 295,090	\$ 328,048	\$ 1,213,935

	Year Ended December 31, 2018			
	Infrastructure Solutions	Corrosion Protection	Energy Services	Total
Contract type:				
Fixed fee	\$ 556,642	\$ 296,217	\$ 16,134	\$ 868,993
Time and materials	—	58,372	319,573	377,945
Product sales	45,030	39,151	—	84,181
License fees	2,449	—	—	2,449
Total revenues	\$ 604,121	\$ 393,740	\$ 335,707	\$ 1,333,568

	Year Ended December 31, 2017			
	Infrastructure Solutions	Corrosion Protection	Energy Services	Total
Contract type:				
Fixed fee	\$ 569,701	\$ 353,480	\$ 9,225	\$ 932,406
Time and materials	—	56,288	281,501	337,789
Product sales	41,878	46,371	—	88,249
License fees	575	—	—	575
Total revenues	\$ 612,154	\$ 456,139	\$ 290,726	\$ 1,359,019

Contract Balances

The timing of revenue recognition, billings and cash collections results in billed accounts receivable, contract assets and contract liabilities on the Consolidated Balance Sheets. Contract assets represent work performed that could not be billed either due to contract stipulations or the required contractual documentation has not been finalized. Substantially all unbilled amounts are expected to be billed and collected within one year.

For fixed fee and time-and-materials based contracts, amounts are billed as work progresses in accordance with agreed-upon contractual terms, either at periodic intervals or upon achievement of contractual milestones. Generally, billing occurs subsequent to revenue recognition, resulting in contract assets. For some royalty license arrangements, minimum amounts are billed over the license term as quarterly royalty amounts are determined. This results in contract assets as the Company recognizes revenue for the license when the license is transferred to the customer at contract inception. The Company's contract liabilities consist of advance payments, billings in excess of revenue recognized and deferred revenue.

The Company's contract assets and contract liabilities are reported in a net position on a contract-by-contract basis at the end of each reporting period. Advance payments, billings in excess of revenue recognized and deferred revenue are each classified as current.

Net contract assets (liabilities) consisted of the following (in thousands):

	December 31,	
	2019 ⁽¹⁾	2018 ⁽²⁾
Contract assets – current	\$ 51,092	\$ 62,467
Contract liabilities – current	(37,562)	(32,339)
Net contract assets	\$ 13,530	\$ 30,128

⁽¹⁾ Amounts exclude contract assets of \$5.4 million and contract liabilities of \$0.1 million that were classified as held for sale at December 31, 2019 (see Note 6).

⁽²⁾ Amounts exclude contract assets of \$1.8 million and contract liabilities of less than \$0.1 million that were classified as held for sale at December 31, 2018 (see Note 6).

Included in the change of total net contract assets was a \$11.4 million decrease in contract assets, primarily related to the timing between work performed on open contracts and contractual billing terms, and a \$5.2 million increase in contract liabilities, primarily related to the timing of customer advances on certain contracts.

Substantially all of the \$32.3 million and \$51.6 million contract liabilities balances at December 31, 2018 and December 31, 2017, respectively, were recognized in revenues during 2019 and 2018, respectively.

Impairment losses recognized on receivables and contract assets were not material during 2019, 2018 and 2017.

4. RESTRUCTURING

On July 28, 2017, the Company's board of directors approved the Restructuring. As part of the Restructuring, the Company announced plans to: (i) divest Bayou; (ii) exit all non-pipe related contract applications for the Tyfo® system in North America; (iii) right-size the cathodic protection services operation in Canada and the CIPP businesses in Australia and Denmark; and (iv) reduce corporate and other operating costs.

During 2018 and 2019, the Company's board of directors approved additional actions with respect to the Restructuring, which included the decisions to: (i) divest the Australia and Denmark CIPP businesses; (ii) take actions to further optimize operations within North America, including measures to reduce consolidated operating costs; and (iii) divest or otherwise exit multiple additional international businesses, including: (a) the Company's cathodic protection installation activities in the Middle East, including Corppower International Limited, the Company's cathodic protection materials manufacturing and production joint venture in Saudi Arabia; (b) United Pipeline de Mexico S.A. de C.V., the Company's Tite Liner® joint venture in Mexico; (c) the Company's Tite Liner® businesses in Brazil and Argentina; (d) Aegion South Africa Proprietary Limited, the Company's Tite Liner® and CIPP joint venture in the Republic of South Africa; and (e) the Company's CIPP contract installation operations in England, the Netherlands, Spain and Northern Ireland.

The Company completed the divestitures of Bayou and the Denmark CIPP business in 2018. The Company also completed the divestitures of the Netherlands CIPP business and its Tite Liner® joint venture in Mexico in 2019, as well as the shutdown of activities for the CIPP business in England. The Company completed the divestitures of CIPP operations in Australia and Spain in early 2020 (see Note 17). Remaining divestiture and shutdown activities include the sale of the Northern Ireland contracting operation and minor final dissolution activities in South America and South Africa, all of which is expected to be completed in the first half of 2020. Additionally, the exit of the Company's cathodic protection installation activities in the Middle East is substantially complete, though management expects minimal wind-down activities will extend through the second quarter of 2020 related to a small number of projects remaining in backlog.

As part of efforts to optimize the cathodic protection operations in North America, management initiated plans during the fourth quarter of 2019 to further downsize operations in the U.S., including the closure of three branch offices and the exit of capital intensive drilling activities at four branch offices. These actions included a reduction of approximately 20% of the cathodic protection domestic workforce and an exit of drilling activities that contributed approximately 20% to our cathodic protection domestic revenues in 2019. Management expects these actions to improve our cathodic protection cost structure in the U.S., eliminate unprofitable results in certain parts of the business and reduce consolidated annual expenses for the business overall. Also during the fourth quarter of 2019, the Company reduced corporate headcount and took other actions to reduce corporate costs.

Total pre-tax restructuring and related impairment charges since the Restructuring's inception were \$171.9 million (\$155.7 million post-tax) and consisted of cash charges totaling \$45.3 million and non-cash charges totaling \$126.6 million. Cash charges included employee severance, retention, extension of benefits, employment assistance programs, early lease and contract termination costs and other restructuring charges associated with the restructuring efforts described above. Non-cash charges included (i) \$86.4 million related to goodwill and long-lived asset impairment charges recorded in 2017 as part of exiting the non-pipe FRP contracting market in North America, and (ii) \$40.2 million related to allowances for accounts receivable, write-offs of inventory and long-lived assets, impairment of definite-lived intangible assets, release of cumulative currency translation adjustments as well as net losses on the disposal of both domestic and international entities. The Company reduced headcount by approximately 650 employees as a result of these actions.

The Company is substantially complete with respect to its restructuring efforts and expects to incur additional cash charges of between \$2 million and \$4 million. Also, the Company could incur additional non-cash charges primarily associated with the release of cumulative currency translation adjustments and losses on the closure or liquidation of international entities. The identified charges are primarily focused in the international operations of both Infrastructure Solutions and Corrosion Protection, but will also include certain charges in Energy Services and Corporate to a lesser extent.

During 2019, 2018 and 2017, the Company recorded pre-tax restructuring charges as follows (in thousands):

	Year Ended December 31, 2019				
	Infrastructure Solutions	Corrosion Protection	Energy Services	Corporate	Total
Severance and benefit related costs	\$ 938	\$ 3,179	\$ 553	\$ 1,685	\$ 6,355
Contract termination costs	601	1,089	234	98	2,022
Relocation and other moving costs	190	408	55	—	653
Other restructuring costs ⁽¹⁾	13,642	4,592	819	4,258	23,311
Total pre-tax restructuring charges	\$ 15,371	\$ 9,268	\$ 1,661	\$ 6,041	\$ 32,341

⁽¹⁾ Includes charges primarily related to certain wind-down costs, inventory obsolescence, fixed asset disposals, release of cumulative currency translation adjustments and other restructuring-related costs in connection with exiting or divesting the CIPP operations in Europe and Australia, exiting the cathodic protection operations in the Middle East and right-sizing the cathodic protection services operation in North America.

	Year Ended December 31, 2018				
	Infrastructure Solutions	Corrosion Protection	Energy Services	Corporate	Total
Severance and benefit related costs	\$ 3,038	\$ 1,094	\$ 234	\$ 170	\$ 4,536
Contract termination costs	1,999	25	—	150	2,174
Relocation and other moving costs	184	—	—	—	184
Other restructuring costs ⁽¹⁾	13,311	7,936	28	1,317	22,592
Total pre-tax restructuring charges	\$ 18,532	\$ 9,055	\$ 262	\$ 1,637	\$ 29,486

⁽¹⁾ Includes charges primarily related to certain wind-down costs, allowances for accounts receivable, fixed asset disposals and other restructuring-related costs in connection with exiting non-pipe-related contract applications for the Tyfo® system in North America, divesting the CIPP operations in Australia and Denmark, and exiting the cathodic protection operations in the Middle East. Amounts also include goodwill and definite-lived intangible asset impairments related to Denmark and definite-lived intangible asset impairments related to the cathodic protection operations in the Middle East.

	Year Ended December 31, 2017			
	Infrastructure Solutions	Corrosion Protection	Corporate	Total
Severance and benefit related costs	\$ 4,274	\$ 2,442	\$ 629	\$ 7,345
Contract termination costs	4,545	775	—	5,320
Relocation and other moving costs	26	121	—	147
Other restructuring costs ⁽¹⁾	8,434	1,522	975	10,931
Total pre-tax restructuring charges	\$ 17,279	\$ 4,860	\$ 1,604	\$ 23,743

⁽¹⁾ Includes charges primarily related to exiting non-pipe-related applications for the Tyfo® system in North America and right-sizing the cathodic protection services operation in Canada, inclusive of wind-down costs, professional fees, patent write offs, fixed asset disposals and certain other restructuring and related charges.

Restructuring costs related to severance, other termination benefit costs and early lease and contract termination costs were \$9.0 million, \$6.9 million and \$12.8 million in 2019, 2018 and 2017, respectively, and are reported on a separate line in the Consolidated Statements of Operations.

The following tables summarize restructuring charges recognized in 2019, 2018 and 2017 as presented in their affected line in the Consolidated Statements of Operations (in thousands):

	Year Ended December 31, 2019				
	Infrastructure Solutions	Corrosion Protection	Energy Services	Corporate	Total ⁽¹⁾
Cost of revenues	\$ 469	\$ 1,869	\$ —	\$ —	\$ 2,338
Operating expenses	5,349	1,131	819	3,444	10,743
Restructuring and related charges	1,729	4,676	842	1,783	9,030
Other expense ⁽²⁾	7,824	1,592	—	814	10,230
Total pre-tax restructuring charges	\$ 15,371	\$ 9,268	\$ 1,661	\$ 6,041	\$ 32,341

⁽¹⁾ Total pre-tax restructuring charges include cash charges of \$19.5 million and non-cash charges of \$12.8 million. Cash charges consist of charges incurred during the year that will be settled in cash, either during the current period or future periods.

⁽²⁾ Includes charges related to the loss on disposal of restructured entities, including the release of cumulative currency translation adjustments resulting from those disposals.

	Year Ended December 31, 2018				
	Infrastructure Solutions	Corrosion Protection	Energy Services	Corporate	Total ⁽¹⁾
Cost of revenues	\$ 1,281	\$ 600	\$ —	\$ —	\$ 1,881
Operating expenses	7,291	4,547	28	1,317	13,183
Goodwill impairment	1,389	—	—	—	1,389
Definite-lived intangible asset impairment	870	1,299	—	—	2,169
Restructuring and related charges	5,221	1,119	234	320	6,894
Other expense ⁽²⁾	2,480	1,490	—	—	3,970
Total pre-tax restructuring charges	\$ 18,532	\$ 9,055	\$ 262	\$ 1,637	\$ 29,486

⁽¹⁾ Total pre-tax restructuring charges include cash charges of \$12.1 million and non-cash charges of \$17.4 million. Cash charges consist of charges incurred during the year that will be settled in cash, either during the current period or future periods.

⁽²⁾ Includes charges related to the loss on disposal of restructured entities, including the release of cumulative currency translation adjustments resulting from those disposals.

	Year Ended December 31, 2017			
	Infrastructure Solutions	Corrosion Protection	Corporate	Total ⁽¹⁾
Cost of revenues	\$ 30	\$ 15	\$ —	\$ 45
Operating expenses	8,404	1,507	973	10,884
Restructuring and related charges	8,845	3,338	631	12,814
Total pre-tax restructuring charges	\$ 17,279	\$ 4,860	\$ 1,604	\$ 23,743

⁽¹⁾ Total pre-tax restructuring charges include cash charges of \$13.6 million and non-cash charges of \$10.1 million. Cash charges consist of charges incurred during the year that will be settled in cash, either during the current period or future periods.

The following tables summarize restructuring activity during 2019, 2018 and 2017 (in thousands):

	Reserves at December 31, 2018	2019 Charge to Income	Foreign Currency Translation	Utilized in 2019		Reserves at December 31, 2019
				Cash ⁽¹⁾	Non-Cash	
Severance and benefit related costs	\$ 1,742	\$ 6,355	\$ (11)	\$ 3,697	\$ —	\$ 4,389
Contract termination costs	359	2,022	(20)	1,408	—	953
Relocation and other moving costs	—	653	(3)	283	—	367
Other restructuring costs	311	23,311	(4)	8,457	12,782	2,379
Total pre-tax restructuring charges	\$ 2,412	\$ 32,341	\$ (38)	\$ 13,845	\$ 12,782	\$ 8,088

	Reserves at December 31, 2017	2018 Charge to Income	Foreign Currency Translation	Utilized in 2018		Reserves at December 31, 2018
				Cash ⁽¹⁾	Non-Cash	
Severance and benefit related costs	\$ 3,864	\$ 4,536	\$ (69)	\$ 6,589	\$ —	\$ 1,742
Contract termination costs	650	2,174	(19)	2,446	—	359
Relocation and other moving costs	—	184	—	184	—	—
Other restructuring costs	675	22,592	(3)	5,581	17,372	311
Total pre-tax restructuring charges	\$ 5,189	\$ 29,486	\$ (91)	\$ 14,800	\$ 17,372	\$ 2,412

	2017 Charge to Income	Utilized in 2017		Reserves at December 31, 2017
		Cash ⁽¹⁾	Non-Cash	
Severance and benefit related costs	\$ 7,345	\$ 3,481	\$ —	\$ 3,864
Contract termination costs	5,320	2,706	1,964	650
Relocation and other moving costs	147	147	—	—
Other restructuring costs	10,931	2,140	8,116	675
Total pre-tax restructuring charges	\$ 23,743	\$ 8,474	\$ 10,080	\$ 5,189

⁽¹⁾ Refers to cash utilized to settle charges during the year.

5. SUPPLEMENTAL BALANCE SHEET INFORMATION

Allowance for Doubtful Accounts

Activity in the allowance for doubtful accounts is summarized as follows (in thousands):

	Years Ended December 31,		
	2019	2018	2017
Balance, beginning of year	\$ 9,695	\$ 5,775	\$ 6,098
Bad debt expense ⁽¹⁾	(1,259)	8,188	3,155
Write-offs and adjustments	(1,212)	(4,268)	(3,478)
Balance, end of year	\$ 7,224	\$ 9,695	\$ 5,775

⁽¹⁾ The Company recorded bad debt expense (reversals) of less than \$(0.1) million, \$5.3 million and \$0.4 million in 2019, 2018 and 2017, respectively, as part of the restructuring efforts (see Note 4) and was primarily due to the exiting of certain low-return businesses mainly in foreign locations.

Inventories

Inventories are summarized as follows (in thousands):

	December 31,	
	2019	2018 ⁽¹⁾
Raw materials and supplies	\$ 27,415	\$ 29,343
Work-in-process	5,739	2,510
Finished products	14,937	15,205
Construction materials	9,102	9,379
Total	\$ 57,193	\$ 56,437

⁽¹⁾ During 2018, the Company incurred non-cash charges of \$2.8 million related to estimates for inventory obsolescence within its cathodic protection operations. The charges were recorded to cost of revenues in the Consolidated Statement of Operations.

Property, Plant and Equipment

Property, plant and equipment consisted of the following (in thousands):

	Estimated Useful Lives (Years)	December 31,	
		2019	2018
Land and land improvements		\$ 5,359	\$ 10,521
Buildings and improvements	5 — 40	50,589	47,430
Machinery and equipment	4 — 10	143,128	147,918
Furniture and fixtures	3 — 10	35,440	37,471
Autos and trucks	3 — 10	47,197	51,129
Construction in progress		7,475	14,626
		289,188	309,095
Less – Accumulated depreciation		(188,097)	(202,036)
Property, plant & equipment, less accumulated depreciation		\$ 101,091	\$ 107,059

Depreciation expense was \$22.2 million, \$23.9 million and \$29.3 million for the years ended December 31, 2019, 2018 and 2017, respectively. The decrease in 2018 was primarily due to the held for sale classification, and subsequent sale thereof, of Bayou's assets and a partial year classification for Australia's assets during 2018.

Accrued Expenses

Accrued expenses consisted of the following (in thousands):

	December 31,	
	2019	2018
Vendor and other accrued expenses	\$ 30,730	\$ 35,450
Estimated casualty and healthcare liabilities	13,138	17,419
Job costs	12,041	9,878
Accrued compensation	23,089	23,882
Operating lease liabilities	15,828	—
Income taxes payable	1,751	1,391
Total	\$ 96,577	\$ 88,020

6. ASSETS AND LIABILITIES HELD FOR SALE

During the first half of 2019, the Company initiated plans to sell several entities as part of its ongoing strategic actions intended to generate higher returns and more predictable and sustainable long-term earnings growth. Within Infrastructure Solutions, the Company initiated plans to divest its CIPP contracting businesses in Europe: Insituform Netherlands, Insituform Spain and Environmental Techniques. See Notes 1 and 17 for additional information on the sale of the CIPP contracting operations of Insituform Netherlands and Insituform Spain. Within Corrosion Protection, the Company initiated plans to divest its interest in United Mexico. See Note 1 for additional information on the sale of the Company's interest in United Mexico. During the fourth quarter of 2019, the Company's board of directors approved the action to sell several parcels of land located near its corporate headquarters.

The Company is currently in various stages of discussions with third parties for Environmental Techniques and believes that it is probable that a sale will occur in the first half of 2020. The Company also believes it is probable that a sale of the land parcels will occur in 2020. In the event the Company is unable to liquidate the assets and liabilities at a price that is less than favorable, the Company could incur a loss on disposal.

During 2018, the Company's board of directors approved a plan to divest the assets and liabilities of Insituform Australia. See Note 17 for additional information on the sale of Insituform Australia, effective January 24, 2020.

The relevant asset and liability balances at December 31, 2019 and 2018 are accounted for as held for sale and measured at the lower of carrying value or fair value less cost to sell. Based on management's expectation of fair value less cost to sell, the Company recorded an impairment of assets held for sale of \$23.4 million in the Consolidated Statement of Operations during 2019. During the second quarter of 2019, impairment charges of \$5.1 million and \$3.9 million were recorded for Insituform Australia and Insituform Netherlands, respectively, which are reported within the Infrastructure Solutions reportable segment, and \$1.1 million and \$1.8 million were recorded for Corppower and United Mexico, respectively, which are reported within the Corrosion Protection reportable segment. During the fourth quarter of 2019, certain terms of the Insituform Netherlands transaction changed and the sale resulted in further impairment charges of \$2.6 million. Additionally, impairment charges of \$6.0 million and \$2.9 million, respectively, were recorded in the fourth quarter of 2019 for Insituform Spain, which is reported within the Infrastructure Solutions reportable segment, and Corporate based on management's current expectation of fair value less cost to sell. In the event the Company is unable to sell the assets and liabilities or sells them at a price or on terms that are less favorable, or at a higher cost than currently anticipated, the Company could incur additional impairment charges or a loss on disposal.

The following table provides the components of assets and liabilities held for sale (in thousands):

	2019 ⁽¹⁾	2018 ⁽²⁾
Assets held for sale:		
Current assets		
Receivables, net	\$ 4,136	\$ 1,309
Retainage	518	15
Contract assets	5,350	1,777
Inventories	2,097	2,123
Prepaid expenses and other current assets	799	300
Total current assets	12,900	5,524
Property, plant & equipment, less accumulated depreciation	10,962	2,268
Goodwill	4,224	—
Intangible assets, less accumulated amortization	1,528	—
Operating lease assets	326	—
Other non-current assets	130	—
Impairment of assets held for sale	(13,978)	—
Total assets held for sale	\$ 16,092	\$ 7,792
Liabilities held for sale:		
Current liabilities		
Accounts payable	\$ 2,174	\$ 1,331
Accrued expenses	3,961	3,891
Contract liabilities	122	38
Total current liabilities	6,257	5,260
Operating lease liabilities	174	—
Other non-current liabilities	54	—
Total liabilities held for sale	\$ 6,485	\$ 5,260

⁽¹⁾ Includes Insituform Australia, Insituform Spain, Environmental Techniques and land held at Corporate.

⁽²⁾ Includes Insituform Australia.

7. LEASES

Effective January 1, 2019, the Company adopted FASB ASC 842 using the adoption-date transition provision rather than at the earliest comparative period presented in the financial statements. Therefore, the Company recognized and measured leases existing at January 1, 2019 but without retrospective application. The Company also elected the package of practical expedients not to reassess prior conclusions related to contracts containing leases, lease classification and initial direct costs and the lessee practical expedient to combine lease and non-lease components. The Company also made a policy election to not recognize right-of-use assets and lease liabilities for short-term leases for all asset classes. The impact of FASB ASC 842 on the Consolidated Balance Sheet beginning January 1, 2019 was through the recognition of operating lease assets and corresponding operating lease liabilities of \$70.5 million. No impact was recorded to the Consolidated Statement of Operations or beginning retained earnings.

The Company's operating lease portfolio includes operational field locations, administrative offices, equipment, vehicles and information technology equipment. The majority of the Company's leases have remaining lease terms of 1 year to 20 years, some of which include options to extend the leases for 5 years or more. Right-of-use assets are presented within "Operating lease assets" on the Consolidated Balance Sheet. The current portion of operating lease liabilities are presented within "Accrued expenses", and the non-current portion of operating lease liabilities are presented within "Operating lease liabilities" on the Consolidated Balance Sheet.

Operating lease assets and liabilities are recognized based on the present value of lease payments over the lease term at inception. For purposes of calculating operating lease liabilities, lease terms may be deemed to include options to extend or terminate the lease when it is reasonably certain that the Company will exercise that option. Operating leases in effect prior to January 1, 2019 were recognized at the present value of the remaining payments on the remaining lease term as of January 1, 2019. A portion of the Company's real estate, equipment and vehicle leases is subject to periodic changes in the Consumer Price Index, LIBOR or other market index. The changes to these indexes are treated as variable lease payments and recognized in the period in which the obligation for those payments is incurred. Because most leases do not provide an explicit rate of return, the Company utilizes its incremental secured borrowing rate on a lease-by-lease basis in determining the present value of lease payments at the commencement date of the lease.

The following table presents the components of lease expense (in thousands):

	Year Ended December 31, 2019
Operating lease cost	\$ 22,235
Short-term lease cost	25,382
Total lease cost	\$ 47,617

Supplemental cash flow information related to leases was as follows (in thousands):

	Year Ended December 31, 2019
Cash paid for amounts included in the measurement of lease liabilities:	
Operating cash flows from operating leases	\$ 22,144
Right-of-use assets obtained in exchange for lease obligations:	
Operating leases	\$ 18,879

Supplemental balance sheet information related to leases was as follows (in thousands):

	December 31, 2019 ⁽¹⁾
Operating leases:	
Operating lease assets	\$ 71,466
Accrued expenses	\$ 15,828
Other liabilities	56,253
Total operating lease liabilities	\$ 72,081
Weighted-average remaining lease term (in years)	5.74
Weighted-average discount rate	5.71%

⁽¹⁾ Amounts exclude operating lease assets of \$0.3 million, accrued expenses of \$0.2 million and other liabilities of \$0.2 million that were classified as held for sale at December 31, 2019 (see Note 5).

Operating lease liabilities under non-cancellable leases were as follows (in thousands):

	December 31, 2019
2020	\$ 18,739
2021	16,287
2022	13,509
2023	10,950
2024	7,845
Thereafter	16,358
Total undiscounted operating lease liabilities	83,688
Less: Imputed interest	(11,607)
Total discounted operating lease liabilities	\$ 72,081

Minimum rental commitments under non-cancellable leases as of December 31, 2018 for years 2019 through 2023 were \$19.8 million, \$15.1 million, \$11.5 million, \$8.1 million and \$5.4 million, respectively, and \$7.2 million thereafter.

8. GOODWILL AND INTANGIBLE ASSETS

Goodwill

The following table presents a reconciliation of the beginning and ending balances of goodwill (in thousands):

	Infrastructure Solutions	Corrosion Protection	Energy Services	Total
Balance, December 31, 2017				
Goodwill, gross	\$ 246,486	\$ 74,369	\$ 80,246	\$ 401,101
Accumulated impairment losses	(61,459)	(45,400)	(33,527)	(140,386)
Goodwill, net	185,027	28,969	46,719	260,715
2018 Activity:				
Acquisitions ⁽¹⁾	—	2,715	1,258	3,973
Impairments ⁽²⁾	(1,389)	—	—	(1,389)
Foreign currency translation	(1,965)	(701)	—	(2,666)
Balance, December 31, 2018				
Goodwill, gross	244,521	76,383	81,504	402,408
Accumulated impairment losses	(62,848)	(45,400)	(33,527)	(141,775)
Goodwill, net	181,673	30,983	47,977	260,633
2019 Activity:				
Foreign currency translation	(137)	563	—	426
Reclassification to assets held for sale ⁽³⁾	(4,224)	—	—	(4,224)
Balance, December 31, 2019				
Goodwill, gross	240,160	76,946	81,504	398,610
Accumulated impairment losses	(62,848)	(45,400)	(33,527)	(141,775)
Goodwill, net	\$ 177,312	\$ 31,546	\$ 47,977	\$ 256,835

⁽¹⁾ During 2018, the Company recorded goodwill of \$2.7 million and \$1.3 million related to the acquisitions of Hebna and P2S, respectively (see Note 1).

⁽²⁾ During 2018, the Company recorded a \$1.4 million goodwill impairment related to restructuring activities in Denmark (see Note 4).

⁽³⁾ During 2019, the Company classified certain assets of its CIPP contracting operation in Europe as held for sale (see Note 6).

Intangible Assets

Intangible assets consisted of the following (in thousands):

	Weighted Average Useful Lives (Years)	December 31, 2019			December 31, 2018		
		Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
License agreements	0.7	\$ 3,894	\$ (3,825)	\$ 70	\$ 3,894	\$ (3,716)	\$ 178
Leases	1.0	864	(777)	87	864	(689)	175
Trademarks	8.3	15,699	(6,911)	8,788	15,751	(6,202)	9,549
Non-competes	3.3	2,301	(1,354)	947	2,529	(1,229)	1,300
Customer relationships	7.2	157,576	(76,832)	80,744	159,719	(66,753)	92,966
Patents and acquired technology	9.0	39,288	(25,097)	14,192	38,338	(22,810)	15,528
Total intangible assets	—	\$ 219,622	\$ (114,795)	\$ 104,828	\$ 221,095	\$ (101,399)	\$ 119,696

Amortization expense was \$13.7 million, \$14.0 million and \$16.1 million for the years ended December 31, 2019, 2018 and 2017, respectively. Estimated amortization expense for the years ended December 31, 2020, 2021, 2022, 2023 and 2024 is \$13.5 million, \$13.5 million, \$13.3 million, \$13.3 million and \$13.3 million, respectively.

9. LONG-TERM DEBT AND CREDIT FACILITY

Long-term debt consisted of the following (in thousands):

	December 31,	
	2019	2018
Term note, due February 27, 2023, annualized rates of 4.09% and 4.59%, respectively	\$ 253,750	\$ 282,188
Line of credit, 4.01% and 4.45%, respectively	24,000	31,000
Other notes with interest rates from 3.3% to 7.8%	770	1,031
Subtotal	278,520	314,219
Less – Current maturities of long-term debt	32,803	29,469
Less – Unamortized loan costs	2,088	2,747
Total	\$ 243,629	\$ 282,003

Required principal payments for each of the next five years are summarized as follows (in thousands):

	December 31, 2019
2020	\$ 32,803
2021	25,060
2022	30,844
2023	189,813
2024	—
Thereafter	—
Total	\$ 278,520

Financing Arrangements

In October 2015, the Company entered into an amended and restated \$650.0 million senior secured credit facility with a syndicate of banks. In February 2018 and December 2018, the Company amended this facility (the “amended Credit Facility”). The amended Credit Facility consists of a \$225.0 million revolving line of credit and a \$308.4 million term loan facility, each with a maturity date in February 2023.

During 2018, the Company paid expenses of \$3.1 million associated with the amended Credit Facility, \$1.4 million related to up-front lending fees and \$1.7 million related to third-party arranging fees and expenses, the latter of which was recorded in “Interest expense” in the Consolidated Statement of Operations in 2018. In addition, the Company had \$2.4 million in unamortized loan costs associated with the original Credit Facility, of which \$0.6 million was written off and recorded in “Interest expense” in the Consolidated Statement of Operations in 2018.

Generally, interest is charged on the principal amounts outstanding under the amended Credit Facility at the British Bankers Association LIBOR rate plus an applicable rate ranging from 1.25% to 2.25% depending on the Company’s consolidated leverage ratio. The Company can also opt for an interest rate equal to a base rate (as defined in the credit documents) plus an applicable rate, which is also based on the Company’s consolidated leverage ratio. The applicable LIBOR borrowing rate (LIBOR plus Company’s applicable rate) as of December 31, 2019 was approximately 4.09%.

The Company’s indebtedness at December 31, 2019 consisted of \$253.8 million outstanding from the term loan under the amended Credit Facility and \$24.0 million on the line of credit under the amended Credit Facility. Additionally, the Company had \$0.8 million of debt held by its joint ventures (representing funds loaned by its joint venture partners). During 2019, the Company had net repayments of \$7.0 million on the line of credit due to improved domestic working capital management.

As of December 31, 2019, the Company had \$26.1 million in letters of credit issued and outstanding under the amended Credit Facility. Of such amount, \$12.2 million was collateral for the benefit of certain of our insurance carriers and \$13.9 million was for letters of credit or bank guarantees of performance or payment obligations of foreign subsidiaries.

The Company’s indebtedness at December 31, 2018 consisted of \$282.2 million outstanding from the term loan under the amended Credit Facility, \$31.0 million on the line of credit under the amended Credit Facility and \$1.0 million of third-party notes and bank debt. During 2018, the Company had net repayments on the line of credit of \$7.0 million, which included a \$35.0 million repayment from the proceeds on the Bayou sale, net of borrowings of \$28.0 million for domestic working capital needs.

At December 31, 2019 and 2018, the estimated fair value of the Company’s long-term debt was approximately \$286.8 million and \$307.7 million, respectively. Fair value was estimated using market rates for debt of similar risk and maturity and a discounted cash flow model, which are based on Level 3 inputs as defined in Note 2.

In October 2015, the Company entered into an interest rate swap agreement for a notional amount of \$262.5 million, which is set to expire in October 2020. The notional amount of this swap mirrors the amortization of a \$262.5 million portion of the Company's \$350.0 million term loan drawn from the original Credit Facility. The swap requires the Company to make a monthly fixed rate payment of 1.46% calculated on the amortizing \$262.5 million notional amount, and provides for the Company to receive a payment based upon a variable monthly LIBOR interest rate calculated on the same amortizing \$262.5 million notional amount. The receipt of the monthly LIBOR-based payment offsets a variable monthly LIBOR-based interest cost on a corresponding \$262.5 million portion of the Company's term loan from the original Credit Facility. After considering the impact of the interest rate swap agreement, the effective borrowing rate on the Company's term note as of December 31, 2019 was approximately 3.83%. This interest rate swap is used to partially hedge the interest rate risk associated with the volatility of monthly LIBOR rate movement and is accounted for as a cash flow hedge. See Note 15.

In March 2018, the Company entered into an interest rate swap forward agreement that begins in October 2020 and expires in February 2023 to coincide with the amortization period of the amended Credit Facility. The swap will require the Company to make a monthly fixed rate payment of 2.937% calculated on the then amortizing \$170.6 million notional amount, and provides for the Company to receive a payment based upon a variable monthly LIBOR interest rate calculated on the same amortizing \$170.6 million notional amount. The receipt of the monthly LIBOR-based payment will offset the variable monthly LIBOR-based interest cost on a corresponding \$170.6 million portion of the Company's term loan from the amended Credit Facility. This interest rate swap will be used to partially hedge the interest rate risk associated with the volatility of monthly LIBOR rate movement and accounted for as a cash flow hedge. See Note 15.

The amended Credit Facility is subject to certain financial covenants, including a consolidated financial leverage ratio and consolidated fixed charge coverage ratio. Subject to the specifically defined terms and methods of calculation as set forth in the amended Credit Facility's credit agreement, the financial covenant requirements, as of each quarterly reporting period end, are defined as follows:

- Consolidated financial leverage ratio, as amended, compares consolidated funded indebtedness to amended Credit Facility defined income with a maximum amount not to exceed 3.25 to 1.00. At December 31, 2019, the Company's consolidated financial leverage ratio was 2.88 to 1.00 and, using the amended Credit Facility defined income, the Company had the capacity to borrow up to \$37.5 million of additional debt.
- Consolidated fixed charge coverage ratio, as amended, compares amended Credit Facility defined income to amended Credit Facility defined fixed charges with a minimum permitted ratio of not less than 1.25 to 1.00. At December 31, 2019, the Company's fixed charge ratio was 1.38 to 1.00.

At December 31, 2019, the Company was in compliance with all of its debt and financial covenants as required under the amended Credit Facility.

10. STOCKHOLDERS' EQUITY

Share Repurchase Plan

In December 2018, the Company's board of directors authorized the open market repurchase of up to two million shares of the Company's common stock through one or more trading plans established in accordance with Rule 10b5-1 of the Securities Exchange Act of 1934. The program did not establish a time period in which the repurchases had to be made. In December 2018, the Company amended its Credit Facility, which limited the open market share repurchases to \$32.0 million for 2019. The Company began repurchasing shares under this program in January 2019. In December 2019, the Company's board of directors authorized the open market repurchase of up to an additional two million shares of the Company's common stock. The program did not establish a time period in which the repurchases had to be made, although the authorization is limited to \$40.0 million in 2020 by the Company's amended Credit Facility while the Company's consolidated financial leverage ratio remains greater than 2.50 to 1.00. Once repurchased, the Company promptly retires such shares.

The Company is also authorized to repurchase up to \$10.0 million of the Company's common stock in each calendar year in connection with the Company's equity compensation programs for employees. The participants in the Company's equity plans may surrender shares of common stock in satisfaction of tax obligations arising from the vesting of restricted stock and restricted stock unit awards under such plans and in connection with the exercise of stock option awards. The deemed price paid is the closing price of the Company's common stock on The Nasdaq Global Select Market on the date that the restricted stock or restricted stock unit vests or the shares of the Company's common stock are surrendered in exchange for stock option exercises. With regard to stock option awards, the option holder may elect a "net, net" exercise in connection with the exercise of employee stock options such that the option holder receives a number of shares equal to the built-in gain in the option shares divided by the market price of the Company's common stock on the date of exercise, less a number of shares equal to the taxes due upon the exercise of the option divided by the market price of the Company's common stock on the date of exercise. The shares of Company common stock surrendered to the Company for taxes due on the exercise of the option are deemed repurchased by the Company.

During 2019, the Company acquired 1,492,348 shares of the Company's common stock for \$26.3 million (\$17.64 average price per share) through the open market repurchase program discussed above, 151,234 shares of the Company's common stock for \$3.1 million (\$20.26 average price per share) in connection with the satisfaction of tax obligations in connection with the vesting of restricted stock units and performance units, and 48,409 shares of the Company's common stock for \$1.0 million (\$20.52 average price per share) in connection with "net, net" exercises of employee stock options. Once repurchased, the Company immediately retired all such shares.

During 2018, the Company acquired 949,464 shares of the Company's common stock for \$20.3 million (\$21.36 average price per share) through the open market repurchase programs discussed above and 228,068 shares of the Company's common stock for \$5.5 million (\$24.08 average price per share) in connection with the satisfaction of tax obligations in connection with the vesting of restricted stock and restricted stock units. Once repurchased, the Company immediately retired all such shares. During 2018, the Company did not acquire any of the Company's common stock in connection with "net, net" exercises of employee stock options.

During 2017, the Company acquired 1,599,093 shares of the Company's common stock for \$35.3 million (\$22.10 average price per share) through open market repurchase programs and 112,899 shares of the Company's common stock for \$2.5 million (\$22.15 average price per share) in connection with the satisfaction of tax obligations in connection with the vesting of restricted stock and restricted stock units. Once repurchased, the Company immediately retired all such shares. During 2017, the Company did not acquire any of the Company's common stock in connection with "net, net" exercises of employee stock options.

Equity-Based Compensation Plans

Employee Plans

In April 2016, the Company's stockholders approved the 2016 Employee Equity Incentive Plan, which was amended in 2017 by the First Amendment to the 2016 Employee Equity Incentive Plan (as amended, the "2016 Employee Plan"). In April 2018, the Company's stockholders approved the Second Amendment to the 2016 Employee Equity Incentive Plan, which increased by 1,700,000 the number of shares of the Company's common stock reserved and available for issuance in connection with awards issued under the 2016 Employee Plan. The 2016 Employee Plan, which replaced the 2013 Employee Equity Incentive Plan, provides for equity-based compensation awards, including restricted shares of common stock, performance awards, stock options, stock units and stock appreciation rights. The 2016 Employee Plan is administered by the compensation committee of the board of directors, which determines eligibility, timing, pricing, amount and other terms or conditions of awards. As of December 31, 2019, 2,099,380 shares of the Company's common stock were available for issuance under the 2016 Employee Plan.

Director Plans

In April 2016, the Company's stockholders approved the 2016 Non-Employee Director Equity Incentive Plan (the "2016 Director Plan"), which replaced the 2011 Non-Employee Director Equity Incentive Plan. In April 2019, the Company's stockholders approved an amendment and restatement of the 2016 Director Plan, which among other things, increased by 300,000 the number of shares of the Company's common stock reserved and available for issuance in connection with awards issued under the 2016 Director Plan. The 2016 Director Plan provides for equity-based compensation awards, including non-qualified stock options and stock units. The board of directors administers the 2016 Director Plan and has the authority to establish, amend and rescind any rules and regulations related to the 2016 Director Plan. As of December 31, 2019, 321,406 shares of the Company's common stock were available for issuance under the 2016 Director Plan.

Prior to the 2016 Director Plan, the board of directors administered the 2011 Non-Employee Director Equity Plan ("2011 Director Plan"), the 2006 Non-Employee Director Equity Plan ("2006 Director Plan") and the 2001 Non-Employee Director Equity Plan ("2001 Director Plan"), all of which contained substantially the same provisions as the current plan. At December 31, 2019, there were 52,296 deferred stock units outstanding under the 2011 Director Plan, 39,109 deferred stock units outstanding under the 2006 Director Plan and 31,850 deferred stock units outstanding under the 2001 Director Equity Plan.

Activity and related expense associated with these plans are described in Note 11.

11. EQUITY-BASED COMPENSATION

Stock Awards

Stock awards, which include shares of restricted stock, restricted stock units and performance stock units, are awarded from time to time to executive officers and certain key employees of the Company. Stock award compensation is recorded based on the award date fair value and charged to expense ratably through the requisite service period. The forfeiture of unvested restricted stock, restricted stock units and performance stock units causes the reversal of all previous expense recorded as a reduction of current period expense.

A summary of stock award activity is as follows:

	2019		Years Ended December 31, 2018		2017	
	Stock Awards	Weighted Average Award Date Fair Value	Stock Awards	Weighted Average Award Date Fair Value	Stock Awards	Weighted Average Award Date Fair Value
Outstanding at December 31, 2018	1,143,205	\$ 23.26	1,428,878	\$ 21.53	1,501,021	\$ 20.58
Period Activity:						
Restricted stock units awarded	325,321	20.02	281,567	24.13	257,532	23.06
Performance stock units awarded	146,367	22.78	219,943	23.25	213,436	28.18
Restricted shares distributed	(76,686)	18.26	—	—	(179,169)	22.44
Restricted stock units distributed	(237,416)	18.83	(312,182)	17.47	(95,510)	20.71
Performance stock units	(111,155)	25.85	(296,909)	21.55	(49,672)	21.95
Restricted shares forfeited	—	—	—	—	(1,084)	23.01
Restricted stock units forfeited	(74,075)	22.09	(90,896)	21.79	(81,626)	20.36
Performance stock units forfeited	(80,597)	25.30	(87,196)	25.95	(136,050)	24.29
Outstanding at December 31, 2019	1,034,964	\$ 23.20	1,143,205	\$ 23.26	1,428,878	\$ 21.53

Expense associated with stock awards was \$7.0 million, \$6.8 million and \$9.0 million in 2019, 2018 and 2017, respectively. Unrecognized pre-tax expense of \$9.6 million related to stock awards is expected to be recognized over the weighted average remaining service period of 1.8 years for awards outstanding at December 31, 2019.

Deferred Stock Unit Awards

Deferred stock units are generally awarded to directors of the Company and represent the Company's obligation to transfer one share of the Company's common stock to the grantee at a future date. Historically, awards were fully vested, and fully expensed, on the date of grant. Beginning in April 2019, as a result of the amendment and restatement of the 2016 Director Plan discussed above, the expense related to the issuance of deferred stock units is based on the award date fair value and charged to expense ratably through the requisite service period, which is generally one year. The forfeiture of unvested deferred stock units causes the reversal of all previous expense to be recorded as a reduction of current period expense.

A summary of deferred stock unit activity is as follows:

	2019		Years Ended December 31, 2018		2017	
	Deferred Stock Units	Weighted Average Award Date Fair Value	Deferred Stock Units	Weighted Average Award Date Fair Value	Deferred Stock Units	Weighted Average Award Date Fair Value
Outstanding at December 31, 2018	287,350	\$ 20.80	269,977	\$ 20.14	253,445	\$ 19.93
Period Activity:						
Awarded	50,174	19.64	45,681	23.72	47,091	23.53
Distributed	(84,184)	20.38	(28,308)	19.22	(30,559)	23.57
Outstanding at December 31, 2019	253,340	\$ 20.71	287,350	\$ 20.80	269,977	\$ 20.14

Expense associated with awards of deferred stock units was \$0.7 million, \$1.1 million and \$1.1 million in 2019, 2018 and 2017, respectively. Unrecognized pre-tax expense of \$0.4 million related to deferred stock unit awards is expected to be recognized over the weighted average remaining service period of 0.3 years for awards outstanding at December 31, 2019.

Stock Options

Stock options on the Company's common stock are awarded from time to time to executive officers and certain key employees of the Company. Stock options granted generally have a term of seven to ten years and an exercise price equal to the market value of the underlying common stock on the date of grant.

A summary of stock option activity is as follows:

	2019		Years Ended December 31, 2018		2017	
	Shares	Weighted Average Exercise Price	Shares	Weighted Average Exercise Price	Shares	Weighted Average Exercise Price
Outstanding, beginning of year	52,783	\$ 18.11	126,680	\$ 23.06	170,253	\$ 21.99
Exercised	(52,783)	18.11	—	—	(43,573)	18.87
Canceled/Expired	—	—	(73,897)	26.60	—	—
Outstanding, end of year	—	\$ —	52,783	\$ 18.11	126,680	\$ 23.06
Exercisable, end of year	—	\$ —	52,783	\$ 18.11	126,680	\$ 23.06

In 2019, 2018 and 2017, there were no expenses related to stock options as all issued stock options were fully vested.

Financial data for stock option exercises are summarized in the following table (in thousands):

	Years Ended December 31,		
	2019	2018	2017
Amount received from stock option exercises	\$ 956	\$ —	\$ 823
Total intrinsic value of stock option exercises ⁽¹⁾	129	—	370
Tax expense (benefit) of stock option exercises recorded in income tax expense	312	(1,556)	(63)
Aggregate intrinsic value of outstanding stock options	—	—	386
Aggregate intrinsic value of exercisable stock options	—	—	386

⁽¹⁾ Calculations based on a weighted average market price of the Company's stock at the time of exercise of \$20.55 and \$27.35 for the years ended December 31, 2019 and 2017, respectively.

12. TAXES ON INCOME

Income (loss) before taxes on income was as follows (in thousands):

	Years Ended December 31,		
	2019	2018	2017
Domestic	\$ 3,627	\$ 8,142	\$ (40,007)
Foreign	(16,511)	(5,187)	(21,570)
Total	\$ (12,884)	\$ 2,955	\$ (61,577)

Provisions for taxes on income (loss) consisted of the following components (in thousands):

	Years Ended December 31,		
	2019	2018	2017
Current:			
Federal	\$ (2,775)	\$ (4,765)	\$ 3,764
Foreign	5,705	6,025	7,512
State	460	(651)	3,351
Subtotal	3,390	609	14,627
Deferred:			
Federal	538	947	(8,706)
Foreign	(199)	(1,531)	(1,099)
State	2,835	(157)	183
Subtotal	3,174	(741)	(9,622)
Total tax provision	\$ 6,564	\$ (132)	\$ 5,005

Income tax expense differed from the amounts computed by applying the U.S. federal income tax rate of 21% for 2019 and 2018 and 35% for 2017 to income (loss) before taxes on income as a result of the following (in thousands):

	Years Ended December 31,		
	2019	2018	2017
Income taxes (benefit) at U.S. federal statutory tax rate	\$ (2,706)	\$ 621	\$ (21,552)
Increase (decrease) in taxes resulting from:			
Change in the balance of the valuation allowance for deferred tax assets allocated to foreign income tax expense	806	590	4,598
Change in the balance of the valuation allowance for deferred tax assets allocated to domestic income tax expense	2,960	(944)	12,755
State income taxes, net of federal income tax benefit	2,603	(798)	2,270
Divestitures	5,613	2,133	—
Meals and entertainment	470	517	785
Changes in taxes previously accrued	(1,070)	(536)	(1,339)
Foreign tax rate differences	(643)	1,301	913
Share-based compensation	358	(1,427)	131
Goodwill impairment	—	291	6,359
Recognition of uncertain tax positions	(717)	(218)	(62)
Deemed mandatory repatriation	—	(842)	10,406
Release of deferred tax liability on foreign earnings	—	—	(7,051)
Domestic Production Activities deduction	—	—	(1,921)
Other matters	(1,110)	(820)	(1,287)
Total tax provision	\$ 6,564	\$ (132)	\$ 5,005
Effective tax rate	(50.9%)	(4.5%)	(8.1%)

On December 22, 2017, the U.S. government enacted the TCJA, which includes significant changes to the U.S. corporate income tax system including: (i) a federal corporate rate reduction from 35% to 21%; (ii) limitations on the deductibility of interest expense and executive compensation; (iii) creation of new minimum taxes such as the Global Intangible Low Taxed Income (“GILTI”) tax and the base erosion anti-abuse tax (“BEAT”); and (iv) the transition of U.S. international taxation from a worldwide tax system to a modified territorial tax system, which resulted in a one time U.S. tax liability on those earnings that have not previously been repatriated to the U.S. Beginning in 2018, the Company no longer records U.S. federal income tax on its share of income from foreign subsidiaries and no longer records a benefit for foreign tax credits related to that income.

In its reporting since the TCJA was enacted, the Company had been recording provisional amounts for certain enactment-date effects of the TCJA by applying the guidance in SAB 118 because the enactment-date accounting for these effects had not yet been completed. In 2018 and 2017, the Company recorded a net tax expense related to the enactment-date effects of the TCJA that included recording the one-time transition tax liability related to undistributed earnings of certain foreign subsidiaries that were not previously taxed and adjusting deferred tax assets and liabilities for the changes in the federal tax rate.

The one-time transition tax is based on total post-1986 earnings and profits (“E&P”) that were previously deferred from U.S. income taxes. The tax is based on the amount of those earnings held in cash and other specified assets, either at the end of 2017 or the average of the year end balances for 2015 and 2016. Based on the Company’s initial analysis of the TCJA in 2017, it recorded a provisional estimated net tax expense of \$2.4 million, which consisted of a charge of \$10.4 million for the deemed mandatory repatriation, and reduced by a \$7.1 million release of a deferred tax liability on unremitted foreign earnings and \$0.9 million of other TCJA related impacts. Upon further analysis of the TCJA and notices and regulations issued and proposed by the U.S. Department of the Treasury and the Internal Revenue Service (“IRS”), the Company finalized its calculations of the transition tax liability during 2018. Adjustments included further refinement of computations related to earnings and profits, cash and cash equivalents, state income tax and foreign withholding taxes pursuant to guidance issued during the year. The final transition tax liability consisted of a charge of \$9.6 million for the deemed mandatory repatriation, and reduced by the \$7.1 million release of a deferred tax liability on unremitted foreign earnings and \$2.0 million of other TCJA related impacts. The Company decreased its December 31, 2017 provisional amount by \$1.9 million during 2018, which is included as a component of income tax expense.

The transition tax liability, as filed on the 2017 federal income tax return and after utilization of foreign tax credits, including foreign tax credits carried back from 2018, was \$1.1 million. Although Congressional intent and the statutory language were clear that the transition tax could be paid over a period of eight years, and the Company properly elected to pay the transition tax liability over a period of eight years, IRS guidance published in April 2018 indicated that taxpayers in a net overpayment position would have all overpayments first applied to successive installments of the transition tax liability. Legislative proposals were passed in the U.S. House of Representatives in late December 2018 to correct the application of this IRS guidance; however there has been no action in the U.S. Senate to pass legislation addressing this issue. As a result of the overpayment from 2017 and the anticipated utilization of 2018 foreign tax credits, no further tax payments related to the transition tax will be required.

Net deferred taxes consisted of the following (in thousands):

	December 31,	
	2019	2018
Deferred income tax assets:		
Foreign tax credit carryforwards	\$ 4,101	\$ 507
Net operating loss carryforwards	19,079	22,909
Accrued expenses	15,281	12,987
Other	8,431	8,652
Total gross deferred income tax assets	46,892	45,055
Less valuation allowance	(34,247)	(28,451)
Net deferred income tax assets	12,645	16,604
Deferred income tax liabilities:		
Property, plant and equipment	(5,689)	(6,038)
Intangible assets	(12,203)	(10,609)
Other	(4,791)	(6,757)
Total deferred income tax liabilities	(22,683)	(23,404)
Net deferred income tax liabilities	\$ (10,038)	\$ (6,800)

The Company's tax assets and liabilities, netted by taxing location, are in the following captions in the balance sheets (in thousands):

	December 31,	
	2019	2018
Noncurrent deferred income tax assets, net	\$ 1,216	\$ 1,561
Noncurrent deferred income tax liabilities, net	(11,254)	(8,361)
Net deferred income tax liabilities	\$ (10,038)	\$ (6,800)

The Company's deferred tax assets at December 31, 2019 included \$19.1 million in federal, state and foreign net operating loss ("NOL") carryforwards. These NOLs include \$11.9 million, which if not used will expire between the years 2020 and 2039, and \$7.2 million that have no expiration dates. The Company also has deferred tax amounts related to foreign tax credit carryforwards of \$4.1 million, of which, \$0.4 million will expire in 2026 if not used, \$3.6 million will expire in 2029 if not used and \$0.1 million have no expiration date.

For financial reporting purposes, a valuation allowance of \$34.2 million has been recognized at December 31, 2019 to reduce the deferred tax assets related to certain federal, state and foreign net operating loss carryforwards and other assets, for which it is more likely than not that the related tax benefits will not be realized, due to uncertainties as to the timing and amounts of future taxable income. The valuation allowance at December 31, 2018 was \$28.5 million.

As of December 31, 2019, a valuation allowance has been recorded so that the amount of the deferred tax asset remaining is more likely than not to be realized. The amount of the deferred tax asset considered realizable; however, could be adjusted if estimates of future taxable income during the carryforward period are reduced or increased or if objective negative evidence in the form of cumulative losses is no longer present and additional weight may be given to subjective evidence such as our projections for growth.

Activity in the valuation allowance is summarized as follows (in thousands):

	Years Ended December 31,		
	2019	2018	2017
Balance, at beginning of year	\$ 28,451	\$ 29,782	\$ 15,428
Additions	8,789	1,879	19,260
Reversals	(6,776)	(2,102)	(183)
Remeasurement of U.S. deferred tax balances	—	—	(5,141)
Other adjustments	3,783	(1,108)	418
Balance, at end of year	\$ 34,247	\$ 28,451	\$ 29,782

As a result of the deemed mandatory repatriation provisions in the TCJA, the Company included \$206.7 million of undistributed earnings in income subject to U.S. tax at reduced tax rates. Certain provisions within the TCJA effectively transition the U.S. to a territorial system and eliminates deferral on U.S. taxation for certain amounts of income that are not taxed at a minimum level. At this time, the Company does not intend to distribute earnings in a taxable manner; and therefore, intends to limit distributions to: (i) earnings previously taxed in the U.S.; (ii) earnings that would qualify for the 100 percent dividends received deduction provided in the TCJA; or (iii) earnings that would not result in significant foreign taxes. As a result, the Company has not recognized a deferred tax liability on any remaining undistributed foreign earnings as of December 31, 2019.

FASB ASC 740, *Income Taxes* ("FASB ASC 740"), prescribes a more-likely-than-not threshold for the financial statement recognition and measurement of a tax position taken or expected to be taken in a tax return. FASB ASC 740 also provides guidance on de-recognition, classification, interest and penalties, accounting in interim periods and disclosure of uncertain tax positions in financial statements.

A reconciliation of the beginning and ending balance of unrecognized tax benefits is as follows (in thousands):

	Years Ended December 31,		
	2019	2018	2017
Balance, at beginning of year	\$ 1,955	\$ 2,229	\$ 2,465
Additions for tax positions of prior years	9	8	12
Lapse in statute of limitations	(587)	(264)	(274)
Foreign currency translation	7	(18)	26
Balance, at end of year, total tax provision	\$ 1,384	\$ 1,955	\$ 2,229

The total amount of unrecognized tax benefits, if recognized, that would affect the effective tax rate was \$0.3 million at December 31, 2019.

The Company recognizes interest and penalties, if any, related to unrecognized tax benefits in income tax expense. During the years ended December 31, 2019, 2018 and 2017, approximately \$0.2 million was expensed for interest and penalties in each year.

The Company believes that it is reasonably possible that the total amount of unrecognized tax benefits will change in 2020. The Company has certain tax return years subject to statutes of limitation that will expire within twelve months. Unless challenged by tax authorities, the expiration of those statutes of limitation is expected to result in the recognition of uncertain tax positions in the amount of approximately \$0.7 million.

The Company is subject to taxation in the United States, various states and foreign jurisdictions. With few exceptions, the Company is no longer subject to U.S. federal, state, local or foreign examinations by tax authorities for years before 2015.

13. COMMITMENTS AND CONTINGENCIES

Litigation

The Company is involved in certain litigation incidental to the conduct of its business and affairs. Management, after consultation with legal counsel, does not believe that the outcome of any such litigation, individually or in the aggregate, will have a material adverse effect on the Company's consolidated financial condition, results of operations or cash flows.

Contingencies

In connection with the Brinderson acquisition, certain pre-acquisition matters were identified in 2014 whereby a loss was both probable and reasonably estimable. The Company establishes liabilities in accordance with FASB ASC Subtopic No. 450-20, *Contingencies - Loss Contingencies*, and, accordingly, recorded an accrual related to various legal, tax, employee benefits and employment matters. At December 31, 2016, the accrual relating to these matters was \$6.0 million. During 2017, the Company made a \$0.3 million payment related to one of the above matters. Additionally, the Company reassessed its reserve during 2017 for: (i) the lapse of certain payroll tax statutory limitation periods; and (ii) further developments in the legal status of these matters, including the preliminary settlement through mediated resolution of several matters. Following consultation with internal and third-party legal and tax counsel, the Company lowered its accrual for such matters by \$1.5 million during 2017. The accrual adjustments resulted in an offset to "Operating expense" in the Consolidated Statement of Operations. During 2018, the Company made an additional \$0.2 million payment related to one of the above matters. As of December 31, 2018, the remaining accrual relating to these matters was \$4.0 million. During 2019, the Company paid \$4.3 million to resolve all outstanding matters, with the final accrual adjustment of \$0.3 million recorded to "Operating expenses" in the Consolidated Statement of Operations.

Purchase Commitments

The Company had no material purchase commitments at December 31, 2019.

Guarantees

The Company has many contracts that require the Company to indemnify the other party against loss from claims, including claims of patent or trademark infringement or other third-party claims for injuries, damages or losses. The Company has agreed to indemnify its surety against losses from third-party claims of subcontractors. The Company has not previously experienced material losses under these provisions and, while there can be no assurances, currently does not anticipate any future material adverse impact on its consolidated financial position, results of operations or cash flows.

The Company regularly reviews its exposure under all its engagements, including performance guarantees by contractual joint ventures and indemnification of its surety. As a result of the most recent review, the Company has determined that the risk of material loss is remote under these arrangements and has not recorded a liability for these risks at December 31, 2019 on its consolidated balance sheet.

Retirement Plans

Approximately 1,050 of our U.S. employees participate in multi-employer retirement plans. Substantially all of the Company's remaining U.S. employees are eligible to participate in one of the Company's sponsored defined contribution savings plans, which are qualified plans under the requirements of Section 401(k) of the Internal Revenue Code. Company contributions to the domestic plans were \$5.2 million, \$5.7 million and \$6.3 million for the years ended December 31, 2019, 2018 and 2017, respectively.

Certain foreign subsidiaries maintain various other defined contribution retirement plans. Company contributions to such plans for the years ended December 31, 2019, 2018 and 2017 were \$0.8 million, \$1.1 million and \$1.0 million, respectively.

In connection with the Company's 2009 acquisition of Corpro, the Company assumed an obligation associated with a contributory defined benefit pension plan sponsored by a subsidiary of Corpro located in the United Kingdom. Employees of this Corpro subsidiary no longer accrue benefits under the plan; however, Corpro continues to be obligated to fund prior period benefits. Both the pension expense and funding requirements for the years ended December 31, 2019, 2018 and 2017 were immaterial to the Company's consolidated financial position and results of operations. The plan assets and benefit obligation at December 31, 2019 were approximately \$6.9 million and \$6.2 million, respectively. The Company used a discount rate of 2.1% for the evaluation of the pension liability. The Company recorded an asset associated with the overfunded status of this plan of approximately \$0.7 million, which is included in other long-term assets on the consolidated balance sheet. The plan assets and benefit obligation at December 31, 2018 approximated \$7.9 million and \$7.1 million, respectively. Plan assets consist of investments in equity and debt securities as well as cash, which are primarily Level 2 inputs as defined in Note 2.

14. SEGMENT AND GEOGRAPHIC INFORMATION

The Company has three operating segments, which are also its reportable segments: Infrastructure Solutions; Corrosion Protection; and Energy Services. The Company's operating segments correspond to its management organizational structure. Each operating segment has leadership that reports to the chief operating decision manager ("CODM"). The operating results and financial information reported by each segment are evaluated separately, regularly reviewed and used by the CODM to evaluate segment performance, allocate resources and determine management incentive compensation.

The following disaggregated financial results have been prepared using a management approach that is consistent with the basis and manner with which management internally disaggregates financial information for the purpose of making internal operating decisions. The Company evaluates performance based on stand-alone operating income (loss), which includes acquisition and divestiture expenses and restructuring charges, if applicable.

In 2019, the Company began reporting Corporate expenses separately rather than allocating those costs to the operating segments. The reported information for 2018 and 2017 has been revised to conform to the current period presentation.

Financial information by segment was as follows (in thousands):

	Years Ended December 31,		
	2019	2018	2017
Revenues:			
Infrastructure Solutions	\$ 590,797	\$ 604,121	\$ 612,154
Corrosion Protection	295,090	393,740	456,139
Energy Services	328,048	335,707	290,726
Total revenues	\$ 1,213,935	\$ 1,333,568	\$ 1,359,019
Gross profit:			
Infrastructure Solutions	\$ 144,074	\$ 132,411	\$ 140,823
Corrosion Protection	60,927	92,968	108,240
Energy Services	41,234	41,547	35,749
Total gross profit	\$ 246,235	\$ 266,926	\$ 284,812
Operating income (loss):			
Infrastructure Solutions ⁽¹⁾	\$ 42,079	\$ 37,509	\$ (47,316)
Corrosion Protection ⁽²⁾	(5,635)	16,283	32,222
Energy Services ⁽³⁾	9,740	9,638	7,736
Corporate ⁽⁴⁾	(35,211)	(33,783)	(36,162)
Total operating income (loss)	10,973	29,647	(43,520)
Other income (expense):			
Interest expense	(14,002)	(17,327)	(16,001)
Interest income	1,038	516	145
Other ⁽⁵⁾	(10,893)	(9,881)	(2,201)
Total other expense	(23,857)	(26,692)	(18,057)
Income (loss) before taxes on income	\$ (12,884)	\$ 2,955	\$ (61,577)
Total assets:			
Infrastructure Solutions	\$ 508,226	\$ 500,977	\$ 531,746
Corrosion Protection	278,694	279,106	329,848
Energy Services	161,165	163,109	152,416
Corporate	31,336	41,432	22,775
Assets held for sale	16,092	7,793	70,314
Total assets	\$ 995,513	\$ 992,417	\$ 1,107,099
Capital expenditures:			
Infrastructure Solutions	\$ 10,679	\$ 12,730	\$ 16,680
Corrosion Protection	11,437	9,754	8,603
Energy Services	3,437	3,053	2,713
Corporate	3,219	4,977	2,834
Total capital expenditures	\$ 28,772	\$ 30,514	\$ 30,830
Depreciation and amortization:			
Infrastructure Solutions	\$ 13,773	\$ 16,758	\$ 18,731
Corrosion Protection	12,487	11,874	15,598
Energy Services	7,490	7,111	6,726
Corporate	2,413	2,112	3,364
Total depreciation and amortization	\$ 36,163	\$ 37,855	\$ 44,419

- (1) Operating income for 2019 includes: (i) \$7.5 million of restructuring charges (see Note 4); (ii) \$1.0 million of costs primarily related to the planned divestiture of certain international operations; and (iii) \$17.6 million of impairment charges to assets held for sale (see Note 6). Operating income for 2018 includes: (i) \$16.1 million of restructuring charges (see Note 4); and (ii) \$0.4 million of cost incurred related to the disposition of Denmark. Operating loss for 2017 includes: (i) \$17.5 million of restructuring charges (see Note 4); (ii) \$45.4 million of goodwill impairment charges (see Note 2); (iii) \$41.0 million of definite-lived intangible asset impairment charges (see Note 2); and (iv) \$0.1 million of costs incurred related to the acquisition of Environmental Techniques.
- (2) Operating loss for 2019 includes: (i) \$7.7 million of restructuring charges (see Note 4); (ii) \$0.1 million of divestiture costs; and (iii) \$2.9 million of impairment charges to assets held for sale (see Note 6). Operating income for 2018 includes: (i) \$7.6 million of restructuring charges (see Note 4); and (ii) \$2.5 million of costs incurred related to the divestiture of Bayou. Operating income for 2017 includes \$4.9 million of restructuring charges (see Note 4) and (ii) \$1.6 million of costs incurred related to the planned divestiture of Bayou.
- (3) Operating income for 2019 includes \$1.7 million of restructuring charges (see Note 4). Operating income for 2018 includes \$0.3 million of restructuring charges (see Note 4).
- (4) Operating loss for 2019 includes: (i) \$5.2 million of restructuring charges (see Note 4); (ii) \$2.2 million of costs primarily related to the planned divestiture of certain international operations; and (iii) \$2.9 million of impairment charges to assets held for sale (see Note 6). Operating loss for 2018 includes \$1.6 million of restructuring charges (see Note 4) and \$4.1 million of divestiture costs. Operating loss for 2017 includes \$1.6 million of restructuring charges (see Note 4) and \$1.2 million of divestiture costs.
- (5) Other expense for 2019 includes \$10.2 million of restructuring charges (see Note 4). Other expense for 2018 includes charges of \$7.0 million related to the loss on the sale of Bayou (see Note 1) and \$4.0 million of restructuring charges (see Note 4).

The following table summarizes revenues, gross profit, operating income (loss) and long-lived assets by geographic region (in thousands):

	Years Ended December 31,		
	2019	2018	2017
Revenues: ⁽¹⁾			
United States	\$ 914,676	\$ 966,291	\$ 1,028,313
Canada	123,033	133,612	139,734
Europe	64,278	66,794	71,839
Other foreign	111,948	166,871	119,133
Total revenues	\$ 1,213,935	\$ 1,333,568	\$ 1,359,019
Gross profit: ⁽¹⁾			
United States	\$ 175,705	\$ 178,024	\$ 226,026
Canada	22,183	22,823	31,173
Europe	14,849	8,379	11,997
Other foreign	33,498	57,700	15,616
Total gross profit	\$ 246,235	\$ 266,926	\$ 284,812
Operating income (loss): ⁽¹⁾			
United States	\$ 6,212	\$ 174	\$ (33,583)
Canada	7,460	9,482	12,220
Europe	(11,363)	(10,599)	(3,771)
Other foreign	8,664	30,590	(18,386)
Total operating income (loss)	\$ 10,973	\$ 29,647	\$ (43,520)
Long-lived assets: ⁽¹⁾⁽²⁾			
United States	\$ 80,910	\$ 105,978	\$ 93,472
Canada	7,462	7,725	8,816
Europe	2,499	8,295	13,435
Other foreign	10,220	6,662	9,586
Total long-lived assets	\$ 101,091	\$ 128,660	\$ 125,309

(1) Attributed to the country of origin.

(2) Long-lived assets do not include goodwill, intangible assets, operating lease assets or deferred tax assets.

15. DERIVATIVE FINANCIAL INSTRUMENTS

As a matter of policy, the Company uses derivatives for risk management purposes, and does not use derivatives for speculative purposes. From time to time, the Company may enter into foreign currency forward contracts to hedge foreign currency cash flow transactions. For cash flow hedges, gain or loss is recorded in the Consolidated Statements of Operations upon settlement of the hedge. All of the Company's hedges that are designated as hedges for accounting purposes were highly effective; therefore, no notable amounts of hedge ineffectiveness were recorded in the Company's Consolidated Statements of Operations for either the settlement of cash flow hedges or the outstanding hedged balance. At December 31, 2019, the Company's cash flow hedges were in a net deferred loss position of \$4.6 million compared to net deferred gain position of \$1.8 million at December 31, 2018. The change during the period was due to unfavorable movements in short-term interest rates relative to the hedged position. The Company presents derivative instruments in the consolidated financial statements on a gross basis. Deferred gains and losses were recorded in other non-current assets and other non-current liabilities, respectively, and other comprehensive income on the Consolidated Balance Sheets. The net periodic change of the Company's cash flow hedges was recorded on the foreign currency translation adjustment and derivative transactions line of the Consolidated Statements of Equity.

The Company also engages in regular inter-company trade activities and receives royalty payments from certain of its wholly-owned entities, paid in local currency, rather than the Company's functional currency, U.S. Dollars. The Company utilizes foreign currency forward exchange contracts to mitigate the currency risk associated with the anticipated future payments from certain of its international entities. During 2019, 2018 and 2017, losses of \$0.2 million, \$0.5 million and \$0.1 million, respectively, were recorded upon settlement of foreign currency forward exchange contracts. Gains and losses of this nature are recorded to "Other income (expense)" in the Consolidated Statements of Operations.

In October 2015, the Company entered into an interest rate swap agreement for a notional amount of \$262.5 million, which is set to expire in October 2020. The notional amount of this swap mirrors the amortization of a \$262.5 million portion of the Company's \$350.0 million term loan drawn from the original Credit Facility. The swap requires the Company to make a monthly fixed rate payment of 1.46% calculated on the amortizing \$262.5 million notional amount and provides for the Company to receive a payment based upon a variable monthly LIBOR interest rate calculated by amortizing the \$262.5 million same notional amount. The receipt of the monthly LIBOR-based payment offsets a variable monthly LIBOR-based interest cost on a corresponding \$262.5 million portion of the Company's term loan from the original Credit Facility. This interest rate swap is used to partially hedge the interest rate risk associated with the volatility of monthly LIBOR rate movement and is accounted for as a cash flow hedge.

In March 2018, the Company entered into an interest rate swap forward agreement that begins in October 2020 and expires in February 2023 to coincide with the amortization period of the amended Credit Facility. The swap will require the Company to make a monthly fixed rate payment of 2.937% calculated on the then amortizing \$170.6 million notional amount, and provides for the Company to receive a payment based upon a variable monthly LIBOR interest rate calculated on the same amortizing \$170.6 million notional amount. The receipt of the monthly LIBOR-based payment will offset the variable monthly LIBOR-based interest cost on a corresponding \$170.6 million portion of the Company's term loan from the amended Credit Facility. This interest rate swap will be used to partially hedge the interest rate risk associated with the volatility of monthly LIBOR rate movement and accounted for as a cash flow hedge.

The following table summarizes the Company's derivative positions at December 31, 2019:

	Position	Notional Amount	Weighted Average Remaining Maturity In Years	Average Exchange Rate
Interest Rate Swap	—	\$ 190,312,500	3.2	—

The following table summarizes the fair value amounts of the Company's derivative instruments, all of which are Level 2 inputs as defined in Note 2 (in thousands):

Designation of Derivatives	Balance Sheet Location	December 31,	
		2019	2018
Hedging Instruments:			
Interest Rate Swaps	Other non-current assets	\$ 261	\$ 3,648
	Total Assets	\$ 261	\$ 3,648
Interest Rate Swaps	Other non-current liabilities	\$ 4,899	\$ 1,885
	Total Liabilities	\$ 4,899	\$ 1,885
Forward Currency Contracts	Accrued expenses	\$ —	\$ 44
	Total Liabilities	\$ —	\$ 44
	Total Derivative Assets	\$ 261	\$ 3,648
	Total Derivative Liabilities	4,899	1,929
	Total Net Derivative Asset (Liability)	\$ (4,638)	\$ 1,719

16. SELECTED QUARTERLY FINANCIAL DATA (UNAUDITED)

Unaudited quarterly financial data was as follows (in thousands, except per share data):

	First Quarter ⁽¹⁾	Second Quarter ⁽²⁾	Third Quarter ⁽³⁾	Fourth Quarter ⁽⁴⁾
Year Ended December 31, 2019:				
Revenues	\$ 276,904	\$ 318,740	\$ 308,789	\$ 309,502
Gross profit	48,295	67,437	66,792	63,711
Operating income (loss)	(774)	459	14,649	(3,361)
Net income (loss)	(3,991)	(8,147)	6,349	(13,659)
Earnings (loss) per share attributable to Aegion Corporation:				
Basic	\$ (0.13)	\$ (0.27)	\$ 0.20	\$ (0.47)
Diluted	\$ (0.13)	\$ (0.27)	\$ 0.19	\$ (0.47)

⁽¹⁾ Includes pre-tax expenses of \$2.9 million related to our restructuring efforts (see Note 4).

⁽²⁾ Includes pre-tax expenses of \$6.5 million related to our restructuring efforts (see Note 4).

⁽³⁾ Includes pre-tax expenses of \$8.6 million related to our restructuring efforts (see Note 4).

⁽⁴⁾ Includes pre-tax expenses of \$14.3 million related to our restructuring efforts (see Note 4).

	First Quarter ⁽¹⁾	Second Quarter ⁽²⁾	Third Quarter ⁽³⁾	Fourth Quarter ⁽⁴⁾
Year Ended December 31, 2018:				
Revenues	\$ 324,861	\$ 335,030	\$ 339,679	\$ 333,998
Gross profit	61,504	71,053	72,673	61,696
Operating income (loss)	3,181	14,459	13,009	(1,002)
Net income (loss)	(1,476)	7,198	141	(2,776)
Earnings (loss) per share attributable to Aegion Corporation:				
Basic	\$ (0.06)	\$ 0.24	\$ (0.01)	\$ (0.08)
Diluted	\$ (0.06)	\$ 0.24	\$ (0.01)	\$ (0.08)

⁽¹⁾ Includes pre-tax expenses of \$5.2 million related to our restructuring efforts (see Note 4).

⁽²⁾ Includes pre-tax expenses of \$2.9 million related to our restructuring efforts (see Note 4).

⁽³⁾ Includes pre-tax expenses of \$7.4 million related to our restructuring efforts (see Note 4).

⁽⁴⁾ Includes pre-tax expenses of \$13.9 million related to our restructuring efforts (see Note 4).

17. SUBSEQUENT EVENTS

Sale of Insituform Australia

On January 24, 2020, the Company sold its Australian CIPP contracting entity, Insituform Pacific Pty Limited ("IPPL"), to Insituform Holdings Pty Ltd, an entity affiliated with Killard Infrastructure Pty Ltd. In connection with the sale, the Company entered into an exclusive five-year tube supply agreement whereby IPPL, under its new ownership, will buy liners exclusively from the Company. IPPL is also entitled to use the Insituform® trade name in Australia based on a trademark license granted for the same five-year time period. During the second quarter of 2019, the Company recorded an impairment charge of \$5.1 million to adjust carrying value to the expected fair value less cost to sell. No additional impairment charges are expected to be recorded as the net carrying value approximated or was less than the sale price.

Sale of Insituform Spain

On February 13, 2020, the Company sold its Spanish CIPP contracting entity, Insituform Technologies Iberica, S.A. ("Insituform Spain") to Lajusocrey S.L. In connection with the sale, the Company entered into a five-year tube supply agreement whereby Insituform Spain will buy liners from the Company. The buyers are also entitled to use the Insituform® trade name in Spain based on a trademark license granted for the same five-year time period. During the fourth quarter of 2019, the Company recorded an impairment charge of \$6.0 million to adjust carrying value to the expected fair value less cost to sell. No additional impairment charges are expected to be recorded as the net carrying value approximated or was less than the sale price.

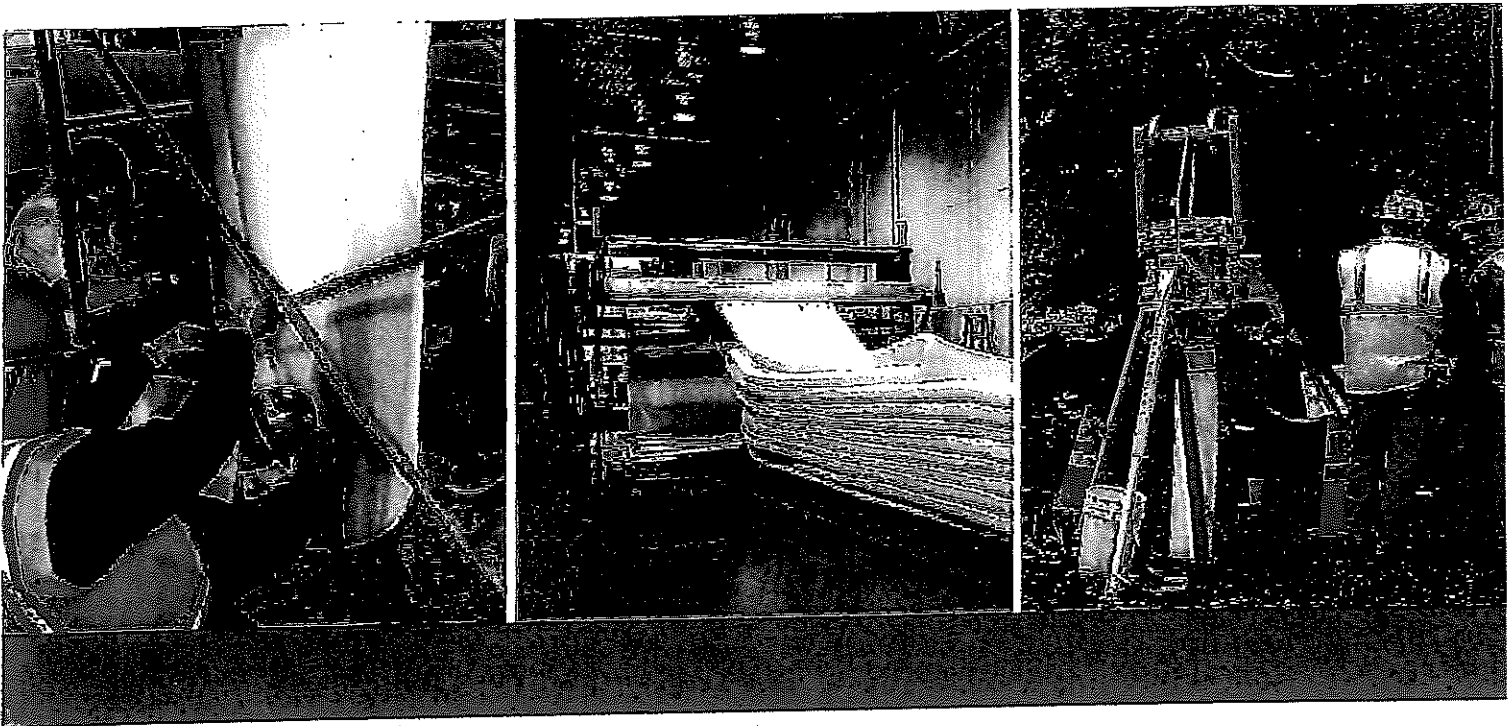
Supplemental Information
Aegion Corporation and Subsidiaries
Consolidating Schedule - Balance Sheet
As of December 31, 2019 (in thousands)

SCHEDULE 1

	Institutoform Technologies, LLC	Institutoform Technologies USA, LLC	Corpro Companies Inc.	United Pipeline Systems, Inc.	Aegion Coating Services, LLC	Fuhrvrap Construction Services, Inc.	Brinderson, LLC	Schultz Industrial Services, Inc.	Other Aegion Subsidiaries and Eliminations	Consolidated Aegion
Assets										
Current assets										
Cash and cash equivalents	\$ 5,880	\$ 8,812	\$ 5,626	\$ 1,309	\$ 2,586	\$ 559	\$ (35)	\$ (210)	\$ 41,695	\$ 66,222
Receivables, net	33,494	9,668	36,420	4,275	5,984	664	3,806	30,224	68,069	192,604
Retainage	14,834	5,379	1,225	-	2	279	-	-	11,384	33,103
Contract assets	21,194	3,192	3,759	394	3,060	484	865	6,516	11,618	51,092
Inventories	12,891	10	11,439	2,637	3,839	-	-	-	26,377	57,193
Prepaid expenses and other	3,970	61	846	63	563	90	657	1,462	26,197	33,909
Assets held for sale	2,377	-	-	-	-	-	-	-	13,715	16,092
Total current assets	94,640	27,122	59,315	8,678	16,034	2,086	5,293	37,992	199,055	450,215
Property, plant and equipment, net	36,039	4,184	7,519	2,862	12,908	66	591	411	36,511	101,091
Non-current assets										
Goodwill	88,527	12,235	18,833	865	4,414	2,915	44,392	2,327	82,277	256,835
Intangibles	1,788	-	10,069	689	15,089	-	33,875	2,085	41,233	104,828
Operating lease assets	22,046	6,470	12,820	325	448	559	918	4,908	22,972	71,466
Deferred income taxes	10,340	2,601	6,921	221	5,375	361	721	655	(25,979)	1,216
Other long-term assets	3,361	-	13,155	-	-	3	533	-	(7,190)	9,862
Total non-current assets	126,062	21,306	61,848	2,100	25,326	3,838	80,439	9,975	113,313	444,207
Total assets	\$ 256,741	\$ 52,612	\$ 128,682	\$ 13,640	\$ 54,268	\$ 5,990	\$ 86,323	\$ 48,378	\$ 348,879	\$ 995,513
Liabilities and stockholders' equity										
Current liabilities										
Accounts payable	\$ 23,317	\$ 4,354	\$ 7,001	\$ 1,689	\$ 1,131	\$ 163	\$ 364	\$ 4,296	\$ 18,299	\$ 60,614
Accrued expenses	29,448	12,467	7,809	1,033	3,374	(3,268)	924	9,342	35,428	96,577
Contract liabilities	11,637	4,939	3,691	3,035	1,691	576	-	45	11,948	37,562
Current maturities of long-term debt	-	-	-	-	-	-	-	-	32,803	32,803
Liabilities held for sale	-	-	-	-	-	-	-	-	6,485	6,485
Total current liabilities	64,402	21,760	18,501	5,777	6,196	(2,529)	1,288	13,683	104,963	234,041
Non-current liabilities										
Long-term debt, less current maturities	-	-	-	-	-	-	-	-	243,629	243,629
Operating lease liabilities	17,089	5,250	9,696	227	209	470	773	4,456	18,083	56,253
Deferred income taxes	13,272	2,976	6,921	244	5,577	361	2,842	656	(21,595)	11,254
Other long-term liabilities	252	-	47,257	(7,555)	11,265	36,111	(18,942)	20,298	(73,443)	15,243
Total non-current liabilities	30,613	8,226	63,874	(7,084)	17,051	36,942	(15,327)	25,410	166,674	326,379
Stockholders' equity										
Common stock	-	1	-	-	14	-	-	2	290	307
Additional paid-in capital	128,381	(31,257)	3,293	8,071	28,968	13,809	146,605	5,976	(202,698)	101,148
Retained earnings	33,345	53,882	43,014	6,876	2,039	(42,232)	(46,243)	3,310	305,007	358,998
Accumulated other comprehensive loss	-	-	-	-	-	-	-	-	(32,694)	(32,694)
Non-controlling interest	-	-	-	-	-	-	-	-	7,334	7,334
Total stockholders' equity	161,726	22,626	46,307	14,947	31,021	(28,423)	100,362	9,288	77,239	435,093
Total liabilities and stockholders' equity	\$ 256,741	\$ 52,612	\$ 128,682	\$ 13,640	\$ 54,268	\$ 5,990	\$ 86,323	\$ 48,378	\$ 348,879	\$ 995,513

INSITUFORM® CIPP

Affordable, reliable and non-disruptive solutions for sewer pipe reconstruction



Our Trenchless Solution

The Insituform® cured-in-place pipe (CIPP) is a jointless, seamless, pipe-within-a-pipe used to rehabilitate sanitary sewers, storm sewers and force mains.

Insituform® CIPP addresses your top concerns:

Infiltration reduction. Water entering your sewer system through cracks, holes and joint failures can overload your treatment facilities, especially during wet weather. Insituform® CIPP significantly reduces this infiltration. In dry climates, roots find the sewer system an attractive source of water and nutrients and create blockages and overflows. Insituform® CIPP contains your flow within the pipe while keeping external water and roots out.

Structural integrity. Insituform® CIPP restores structural integrity to your damaged sewer pipes. The design models used, independent test results and over 40 years of service all confirm that Insituform® CIPP is a structural product with a 100-year design life.

Increased flow capacity. Insituform® CIPP provides the least cross-sectional reduction of all methods used to rehabilitate pipes. There are no joints or seams that can separate over time and the smooth, jointless interior provides excellent abrasion resistance and typically improves flow capacity.

Affordability. The Insituform® CIPP process is usually less expensive than conventional dig and replace methods of sewer repair. When the lost business revenues, traffic congestion and social costs associated with other methods are considered, your savings are immeasurable.

Installation flexibility. Insituform® CIPP can be installed using either air or water inversion, or by pulling into place. The cure can be done with steam or hot water. All processes are consistent with nationally recognized standards and Insituform's own ISO-certified quality control program. Since each job is unique, we apply the most cost-effective, technically optimal solution to meet your pipeline rehabilitation needs.



Insituform®

INSITUFORM® CIPP

Insituform® CIPP is the best choice for trenchless rehabilitation.

Insituform superior processes

Since inventing CIPP over 40 years ago, Insituform has developed the highest quality manufacturing and installation systems in the trenchless industry.

As a vertically integrated company, we take responsibility for research and development, manufacturing, installation and service. Our systems are designed to produce consistency and high performance in our products and services.

Manufacturing

Insituform's patented manufacturing capabilities are certified to the ISO 9001:2008 standard, ensuring that our tubes are constructed for optimal long-term performance. During the manufacturing process, each tube goes through 25 separate quality checks.

Wet out

Insituform's resin impregnation process ensures that Insituform® CIPP achieves the required strength and enables wet out of many lengths, diameters and thicknesses.

Insituform's wet out facilities utilize environmentally friendly methods and equipment. In fact, Insituform has been recognized by the United States' Environmental Protection Agency for efforts to protect the environment at its various wet out facilities.

Installation

Every Insituform installation is completed using our own safety-certified crews who follow strict safety procedures and documented work practices. Each crew is equipped with highly specialized equipment, backup resources and engineering support.

Insituform's advanced installation methods include air invert steam cure, which reduces water usage on a job site by approximately 95% and energy usage by 75%.

Transportation Solutions

Insituform offers affordable, trenchless solutions to renew and extend the life of underground stormwater control and drainage structures. A large number of culverts running under the nation's roadways are approaching or have exceeded their expected design life. A culvert or storm sewer pipe collapse can have catastrophic effects on the traveling public, your budget and your credibility. Insituform can help you avoid the direct costs and the social costs of a failure by proactively renewing your underground assets.

For transportation projects, particularly culverts, Insituform uses installation methods that minimize the use of water and maximize resin containment, thus protecting downstream waters from contamination.

The Insituform® CIPP Installation Process



Step 1:

A resin-saturated, coated felt tube is inverted (shown) or pulled into a damaged pipe.



Step 2:

Hot water or steam is used to cure the resin and form a tight-fitting, jointless and corrosion-resistant replacement pipe.



Step 3:

Service laterals are restored internally with robotically controlled cutting devices and the rehabilitated pipe is inspected by closed-circuit TV.

The Insituform® CIPP Technical Envelope

The Insituform® CIPP Technical Envelope

Diameter range	4 in. – 124 in.*
pH range	0.5 – 10.5
Effluent temperature	up to 140° F
Pipe condition — fully deteriorated	Yes
Pipe condition — partially deteriorated	Yes
Bends	Yes
Offset joints	Yes
Diameter changes	Yes, without manhole access
Thickness changes	Yes, without manhole access
Typical shot length	200 ft. – 1000 ft.
Host pipe shape	All shapes
Host pipe material	All materials

* Thickness and length limitations in larger diameters

This table refers to general purpose municipal sewer CIPP projects. Insituform can provide products that extend beyond these parameters through our engineering group. Please contact your local representative at 800.234.2992 for assistance with applications extending beyond this technical envelope.



Insituform®

an AEGION company

Insituform Technologies, LLC
17988 Edison Avenue
St. Louis, MO 63005
800.234.2992
www.insituform.com

Independent Test Results

Product tested:
Cured-In-Place Pipe Insituform® Process

Test:
Design Life

Conducted by:
Trenchless Technology Center at Louisiana Tech University; funded by U.S. Army Corps of Engineers

Report Date:
August 1984

INNOVATIVE METHODS OF TESTING the long-term structural behavior of Cured-In-Place Pipe (CIPP) demonstrates that the Insituform product design life exceeds 50 years and that ASTM F-1216 design recommendations for physical properties are conservative for the Insituform product.

The research was conducted by the Trenchless Technology Center (TTC) at Louisiana Tech University and funded by the U.S. Army Corps of Engineers. The purpose was to provide, for the first time, an independent assessment of manufacturer's claims regarding long-term buckling behavior of their pipeline rehabilitation products.

Research conducted by the Trenchless Technology Center at Louisiana Tech University confirms Insituform's 50-year design life.

The expected design life and long-term behavior of trenchless pipeline rehabilitation products is important to owners and engineers in evaluating the various systems available in the marketplace, especially since none of these systems have been in actual service for the design lives claimed. This becomes even more critical considering the recent growth of the trenchless pipeline rehabilitation industry and that many products have less than five years of experience.

The research included both experimental and analytical studies related to the application of CIPP and Fold-and-Formed Pipe (FFP) technologies in partially deteriorated, gravity pipeline applications where bonding did not exist between the plastic pipe and the host pipe.

Five manufacturers participated in the test program. Seven different products, including six CIPP products and one FFP product, were evaluated in approximately 200 tests. Insituform products that were tested included Insituform® Standard, which is a widely used polyester resin Insitupipe® material, and Insituform® Enhanced, which contains an additive to the polyester resin to increase the flexural properties of the finished Insituform product.

The plastic pipes were encased in steel pipes, with hydrostatic pressure applied between the two pipes. To measure long-term performance, each test remained under constant pressures for up to 10,000 hours or until failure, whichever occurred first. The test results were plotted and extrapolated beyond the test period to estimate behavior up to 50 years.

Standardized material tests (flexure, tensile and pipe stiffness tests) were also conducted to characterize the fundamental properties of the product materials.

PUTTING CLAIMS TO THE TEST

Overview of Test System and Procedures

The installation of all products used in the test was performed by the manufacturers on the Louisiana Tech University campus under close monitoring by TTC personnel. Forty specimens each of Insituform

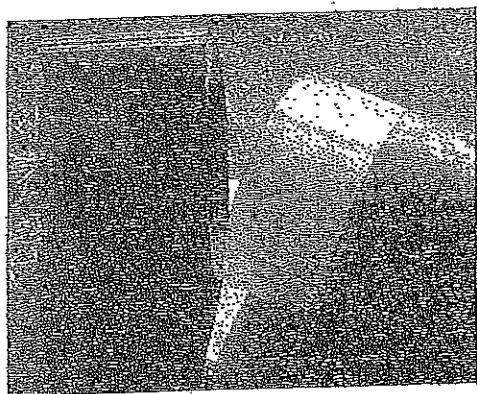


Figure 1

Standard and Insituform Enhanced were tested.

Each test specimen was installed to fit snugly inside a 1.83 m (6 ft.) long, 305 mm (12 in.) internal diameter, schedule 40 steel casing pipe. Each casing pipe was fitted with short, bolted pipe segments (clamshells) at each end. (See Figure 1).

Preparing the specimens for testing involved trimming the ends flush with the clamshells, removing the clamshells, and cleaning the ends of the specimens.

This resulted in the plastic pipe extending beyond the ends of the steel casing pipes. The specimens were then fitted with end seals applied externally, spanning the casing pipe and plastic pipe. (See Figure 2). The end seals contained the water at the prescribed pressure, which was

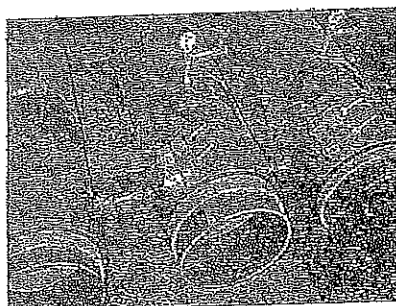


Figure 2

supplied between the plastic and casing pipes from a pressurized water distribution system.

At least three specimens of each product were used for short-term buckling tests to determine the upper pressure limit for the long-term tests. A regulator was used to raise the pressure on the specimen, and the rate of load application was kept constant until failure occurred.

For the long-term tests, each specimen was pressurized at a controlled rate of 10 psi/minute (69 kPa/minute) until a selected pressure was reached. A minimum of five pressure levels were selected for each product to cause the specimens to fail at various times over a 10,000-hour test period.

Specimens were monitored at least once a day for evidence of buckling. Failures that occurred during normal work hours were monitored manually. After normal work hours, failures were detected electronically.

Material Characterization Tests

Numerous tests, including flexural modulus, flexural strength and tensile strength, were conducted on each product according to ASTM standards. On each of these tests, the results found that both Insituform products far surpassed the design values. (See Table 1).

Table 1
Material Characterization Tests (Short-term)

PHYSICAL PROPERTY	INSITUFORM PRODUCT	ASTM TEST METHOD	MANUFACTURER'S DESIGN VALUE psi (MPa)	TTC TEST RESULTS psi (MPa)
Flexural Modulus	Standard	D790	300,000 (2070)	448,530 (3090)
	Enhanced	D790	400,000 (2760)	538,620 (3710)
Flexural Strength	Standard	D790	4,500 (31)	8,310 (58)
	Enhanced	D790	4,000 (28)	8,400 (58)

From TTC Technical Report #302, Table 4-2

SHORT-TERM TEST RESULTS

Short-term buckling tests demonstrate that Insituform design is conservative in terms of both the enhancement factor, K, and the predicted buckling pressures using the following ASTM F-1216 design model:

$$P = \frac{2KE_L}{(1-\nu^2)} \cdot \frac{1}{(DR-1)^3} \cdot \frac{C}{N} \quad (1)$$

- where, P = Buckling pressure, psi (MPa)
 K = Enhancement factor
 E_L = Long-term (time-corrected) modulus of elasticity, psi (MPa)
 ν = Poisson's ratio
 DR = Dimension ratio (outside diameter divided by thickness)
 C = Ovality factor = 1 (for test program)
 N = Safety factor = 1 (for analysis of test data)

The enhancement factor, K, is a measure of the restraining action of the host pipe that encases the Insituform product and greatly increases the allowable external buckling pressure. A conservative enhancement factor of 7 is typically recommended for design. The tests measured the average enhancement factor, K, of the Insituform Standard at 9.8 and the Insituform Enhanced product at 10.5.

CREEP FACTOR

Creep factor reflects the reduction in buckling resistance of a plastic pipe over time, typically 50 years. The creep factor, C_L , is the ratio of Experimental E_L to the measured flexural modulus reported in Table 1 and represents the retention of buckling resistance at 50 years (i.e., $E_L = C_L E$). A value of C_L greater than the manufacturer's recommended value is desirable. As shown in Table 2, the reported creep factor confirms the conservative nature of the 50% creep reduction factor applied to flexural modulus in the Insituform product design.

Table 2

Creep Factor

	TTC Creep Factor, C_L	Manufacturer's Recommended Design Value
Insituform Standard	0.58 (42% reduction)	0.50 (50% reduction)
Insituform Enhanced	0.73 (27% reduction)	0.50 (50% reduction)

From TTC Technical Report #302, Table 4-8

LONG-TERM TEST RESULTS

Regression analysis was used to extrapolate long-term buckling pressures beyond the 10,000-hour test period to 50 years. (See Figure 3, next page).

Flexural Modulus

Test results supported the flexural modulus reduced to account for long-term effects, E_L , used in the Insituform product design, by comparing it to the experimentally derived apparent long-term flexural modulus for a 50-year design life. The tested value greatly exceeded the conservative value used in the Insituform product design. (See Table 3).

Table 3

Flexural Modulus (Long-term)

	TTC Experimental E_L psi (MPa)	Manufacturer's Recommended Design E_L psi (MPa)
Insituform Standard	269,990 (1790)	150,000 (1090)
Insituform Enhanced	393,965 (2720)	200,000 (1380)

From TTC Technical Report #302, Table 4-9

LONG-TERM BUCKLING BEHAVIOR

It is important that the design procedures used for a rehabilitation product accurately predict the long-term structural behavior of the product. The TTC data analysis compared the long-term buckling test data to that predicted by Equation 1. This comparison indicated that Equation 1 conservatively predicts long-term hydrostatic buckling behavior of both Insituform products.

50 - PLUS YEARS DESIGN LIFE

One of the primary goals of the TTC test program was to evaluate the design lives of various rehabilitation products. This was accomplished by comparing the 50-year extrapolated test pressure to the design 50-year buckling pressure calculated using Equation 1 with manufacturer's recommended design values for E_L . An Insituform design life in excess of 50 years was confirmed.

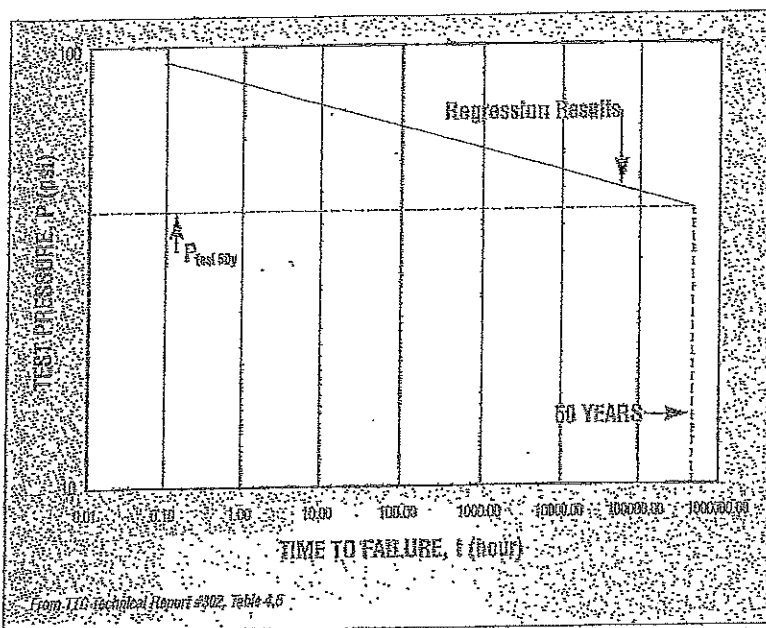


Figure 3. Long-term Test and Regression Results for Insituform Enhanced Product.

WITHSTANDING THE TESTS OF TIME

The most rigorous, innovative and independent tests ever conducted on pipeline rehabilitation products clearly demonstrates that service life beyond 50 years can be expected with properly designed and installed Insituform products.

A copy of "Long-Term Structural Behavior of Pipeline Rehabilitation Systems" (TTC Technical Report #302) may be obtained by writing:

Trenchless Technology Center
Louisiana Tech University
P.O. Box 10348
Ruston, Louisiana 71272

or by calling (318) 257-4072.



**Insituform
Technologies, Inc.**

Worldwide Pipeline Rehabilitation

702 Spirit 40 Park Drive
Chesterfield, MO 63005

Toll Free: 800-234-2992
Phone: 636-530-8000
Fax: 636-519-8010

An Insituform® cured-in-place pipe (CIPP) continues to exceed industry performance standards after 30 years in service.

Independent Test Results

Product tested:
Insituform® Cured-In-Place Pipe (CIPP)

Test:
Flexural Properties

Conducted by:
Bodycote Materials Testing Ltd.

Report Date:
November 2001

SUMMARY OF RESULTS

- After 30 years of service in a London sewer carrying both domestic and industrial effluent, an Insituform® CIPP was found to have a flexural modulus exceeding the nearest contemporary UK Water Industry Specification by 50%, and the current US standard by more than 90%.
- The 30-year-old pipe's flexural modulus was an improvement over test data obtained after 20 years in service.
- There was no apparent deterioration in the overall performance of the Insituform® CIPP between its 20th and 30th year in service.

INTRODUCTION

In October 2001, tests were conducted by Bodycote Materials Testing Ltd. to determine the flexural properties of the samples taken from an Insituform® CIPP that had been in service for 30 years.

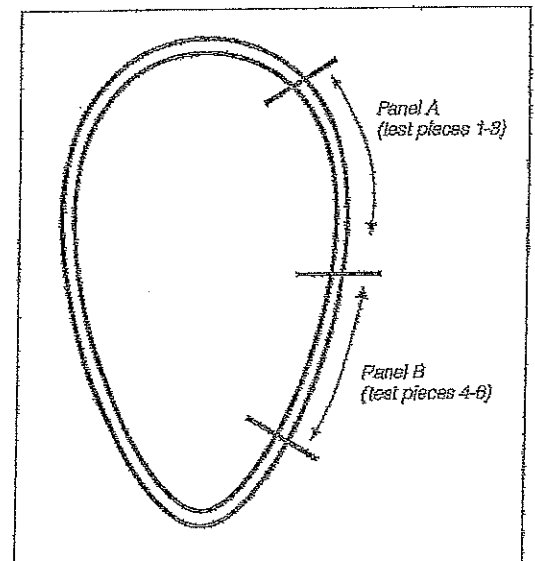
The pipe samples were taken from a 1,170 mm X 600 mm (46 in. X 24 in.) egg-shaped sewer at Riverside Close in Hackney, London. This is the same Insituform® CIPP that was sampled and tested in 1991, after 20 years in service, by Bodycote's predecessor MTS Pendar Ltd.

Supervising removal of the samples were representatives from both Bodycote and the sewer Owner, Thames Water Utilities Limited.

PROCEDURE

Two panels, approximately 300 mm (12 in.) square, were taken from a side wall of the sewer, approximately four meters downstream from a manhole. Three test pieces were cut from each panel as shown in the diagram below.

The flexural properties of each test piece were determined by the method of BS EN ISO 178, in accordance with current UK Water Industry Specification (WIS) 4-34-04.

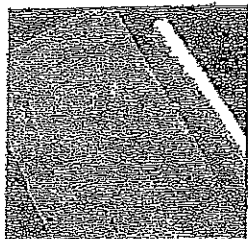


RESULTS AND CONCLUSIONS

After 30 years in service, the Insituform® CIPP continues to exceed industry performance

standards, and further, the pipe showed no significant deterioration in overall performance between its 20th and 30th years of service.

Table 1
30-Year Test Results



View of inside face of sample panel and a test piece cut from it.

Sample	Flexural Modulus	Flexural Strength
Panel A	3,100 MPa 450,000 psi	39 MPa 5,700 psi
Panel B	3,500 MPa 500,000 psi	47 MPa 6,800 psi
Mean	3,300 MPa 480,000 psi	43 MPa 6,200 psi

Table 2
Comparison of Mean Flexural Properties After 30 and 20 Years of Service

Flexural Property	Samples		Industry Standards	
	30-year	20-year	WIS 4-34-04	ASTM F 1216
Modulus	3,300	2,900	2,200*	—
	480,000	420,000	—	250,000
Strength	43	45	25	—
	6,200	6,700	—	4,500

* As specified in Issue 1 of the WIS. Issue 2 refers to declared values but does not specify a minimum flexural modulus.

REFERENCES:

1. WIS 4-34-04 April 1986: Issue 1, "Specification for Polyester Insituform Sewer Linings."
2. WIS 4-34-04 March 1995: Issue 2, "Specification for Renovation of Gravity Sewers by Lining with Cured-in-Place Pipes."
3. BS EN ISO 178: 1996, "Plastics-Determination of Flexural Properties."
4. ASTM F 1216, "Standard Practice for Rehabilitation of Existing Pipelines and Conduits by the Inversion and Curing of a Resin-Impregnated Tube."
5. MTS Pendar Report 48204, September 19, 1991 (20-year test)
6. Bodycote Report B1f0254, November 16, 2001 (30-year test)



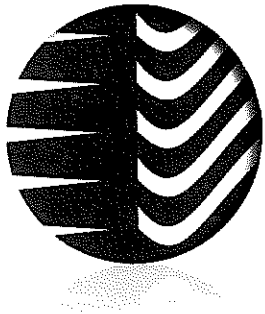
Insituform
Technologies, Inc.

Worldwide Pipeline Rehabilitation

702 Spirit 40 Park Drive
Chesterfield, MD 63005

Toll Free: 800-234-2992
Phone: 636-530-8000





CERTIFICATE OF REGISTRATION

This is to certify that

Insituform Technologies, LLC

Headquarters

17999 Edison Avenue, Chesterfield, Missouri, 63005, USA

Refer to Attachment to Certificate of Registration dated March 17, 2020 for additional certified sites
operates a

Quality Management System

which complies with the requirements of

ISO 9001:2015

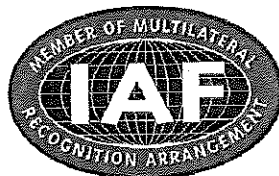
for the following scope of certification

Design, development, manufacturing and installation of products for the rehabilitation of
pipelines using trenchless technology. Certification of installation services is non-
transferrable and applies only when performed directly by Insituform Technologies, LLC.

Certificate No.: CERT-0133635
File No.: 1650845
Issue Date: March 17, 2020

Original Certification Date: February 11, 2014
Certification Effective Date: March 16, 2020
Certification Expiry Date: March 13, 2023

Heather Mahon
Global Head of Technical Services
SAI Global Assurance



ATTACHMENT TO CERTIFICATE OF REGISTRATION

These sites are registered under Certificate No: CERT-0133635 issued on March 17, 2020

File No.		Effective Date
1650845	Insituform Technologies, LLC Headquarters 17999 Edison Avenue Chesterfield , Missouri 63005 USA Design, development, manufacturing and installation of products for the rehabilitation of pipelines using trenchless technology	March 16, 2020
1650848	Insituform Technologies, LLC Wetout 7605 18th Street Edmonton , Alberta T6P 1N9 Canada Manufacturing	March 16, 2020
1650849	Insituform Technologies, LLC Wetout 912 Stanton Road Olyphant , Pennsylvania 18447 USA Manufacturing	March 16, 2020
1650850	Insituform Technologies, LLC Wetout 468 Cypress Road Ocala , Florida 34472 USA Manufacturing	March 16, 2020
1650851	Insituform Technologies, LLC Wetout 2255 W. 850 N. Cedar City , Utah 84721 USA Manufacturing	March 16, 2020
1650853	Insituform Technologies, LLC Installation West 9654 Titan Court Littleton , Colorado 80125 USA Preparation and Installation	March 16, 2020
1650854	Insituform Technologies, LLC Manufacturing 160 Corporate Drive Batesville , Mississippi 38606 USA Manufacturing	March 16, 2020

These registrations are dependent on Insituform Technologies, LLC Headquarters (File No. 1650845) maintaining their scope of registration to ISO 9001:2015

ATTACHMENT TO CERTIFICATE OF REGISTRATION

These sites are registered under Certificate No: CERT-0133635 issued on March 17, 2020

1650855	Insituform Technologies, LLC Wetout 2130 Stout Field West Drive Indianapolis , Indiana 46241 USA Manufacturing	March 16, 2020
1650856	Insituform Technologies, LLC Wetout 3061 Dublin Circle Bessemer , Alabama 35022 USA Manufacturing	March 16, 2020
1650857	Insituform Technologies, LLC Wetout 6526 Bluebonnet Parkway McGregor , Texas 76657 USA Manufacturing	March 16, 2020
1650858	Insituform Technologies, LLC Wetout 91-255 Kalaeloa Boulevard Kapolei , Hawaii 96707 USA Manufacturing	March 16, 2020
1650859	Insituform Technologies, LLC Installation Central 580 Goddard Avenue Chesterfield , Missouri 63005 USA Preparation and Installation	March 16, 2020
1650860	Insituform Technologies, LLC Installation Canada 5743 - 68 Avenue NW Edmonton , Alberta T6B 3P8 Canada Preparation and Installation	March 16, 2020
1650863	Insituform Technologies, LLC Installation - Eastern Region 709 E. Ordinance Road Baltimore , Maryland 21226 USA Preparation and Installation.	March 16, 2020

These registrations are dependent on Insituform Technologies, LLC
Headquarters (File No. 1650845) maintaining their scope of registration to
ISO 9001:2015

ATTACHMENT TO CERTIFICATE OF REGISTRATION

These sites are registered under Certificate No: CERT-0133635 issued on March 17, 2020

1650864	Insituform Technologies, LLC Installation - Eastern Region 253 B Worcester Road Charlton , Massachusetts 01507 USA Preparation and Installation.	March 16, 2020
1650866	Insituform Technologies, LLC Installation - Eastern Region 6966 Business Park Blvd. North Jacksonville , Florida 32256 USA Preparation and Installation.	March 16, 2020
1650867	Insituform Technologies, LLC Installation - Eastern Region 9001 NW 97 Terrace Suite F Medley , Florida 33178 USA Preparation and Installation.	March 16, 2020
1650868	Insituform Technologies, LLC Installation - Eastern Region 1819 John Moore Rd. Monroe , North Carolina 28110 USA Preparation and Installation.	March 16, 2020
1650869	Insituform Technologies, LLC Installation - Eastern Region 3016 U.S Highway 301 N. Suite 900 Tampa , Florida 33619 USA Preparation and Installation.	March 16, 2020
1650870	Insituform Technologies, LLC Installation - Eastern Region 3061 Dublin Circle Bessemer , Alabama 35022 USA Preparation and Installation.	March 16, 2020
1650872	Insituform Technologies, LLC installation - Eastern Region 5033 Mosson Rd. Fort Worth , Texas 76119 USA Preparation and Installation.	March 16, 2020

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ISO 9001:2015

ATTACHMENT TO CERTIFICATE OF REGISTRATION

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1650873	Insituform Technologies, LLC Installation - Eastern Region 18378 Tom Dr. Hammond , Louisiana 70403 USA	March 16, 2020
	Preparation and Installation.	
1650874	Insituform Technologies, LLC Installation - Eastern Region 13502 Almeda School Road Houston , Texas 77047 USA	March 16, 2020
	Preparation and Installation.	
1650876	Insituform Technologies, LLC Installation - Eastern Region 1410 Gould Blvd LaVergne , Tennessee 37086 USA	March 16, 2020
	Preparation and Installation.	
1650878	Insituform Technologies, LLC Installation - Western Region 10260 Matern Place Sante Fe Springs , California 90670 USA	March 16, 2020
	Preparation and Installation.	
1650879	Insituform Technologies, LLC Installation - Western Region 645 W. 24th St., Ste 102 Tempe , Arizona 85281 USA	March 16, 2020
	Preparation and Installation.	
1650880	Insituform Technologies, LLC Installation - Western Region 91-255 Kalaeloa Blvd. Kapolei , Hawaii 96707 USA	March 16, 2020
	Preparation and Installation.	
1650881	Insituform Technologies, LLC Installation - Western Region 17220 Bel Ray Place Belton , Missouri 64012 USA	March 16, 2020
	Preparation and Installation.	

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ATTACHMENT TO CERTIFICATE OF REGISTRATION

These sites are registered under Certificate No: CERT-0133635 issued on March 17, 2020

1650882	Insituform Technologies, LLC Installation - Western Region 1088 Victory Drive Howell , Michigan 48843 USA	March 16, 2020
	Preparation and Installation.	
1650883	Insituform Technologies, LLC Installation - Western Region 11351 W. 183rd St. Orland Park , Illinois 60467 USA	March 16, 2020
	Preparation and Installation.	
1650885	Insituform Technologies, LLC Installation - Western Region 2130 Stout Field West Drive Indianapolis , Indiana 46241 USA	March 16, 2020
	Preparation and Installation.	
1650886	Insituform Technologies, LLC Installation - Canadian Region 8009 57th Street SE Unit 4 Calgary , Alberta T2C 5K7 Canada	March 16, 2020
	Preparation and Installation.	
1650887	Insituform Technologies, LLC Installation - Canadian Region 139 Rue Barr Saint-Laurent , Québec H4T 1W6 Canada	March 16, 2020
	Preparation and Installation.	
1650888	Insituform Technologies, LLC Installation - Canadian Region 3 Burford Rd. Hamilton , Ontario L8E 3C6 Canada	March 16, 2020
	Preparation and Installation.	
1680743	Insituform Technologies, LLC 19165 SW 119th Street Tualatin , Oregon 97062-7384 USA	March 16, 2020
	Preparation and Installation	

These registrations are dependent on Insituform Technologies, LLC
Headquarters (File No. 1650845) maintaining their scope of registration to
ISO 9001:2015

Proprietary Property and Trade Secret of Aegion, Inc. Unauthorized Use, Dissemination and Disclosure Strictly Prohibited.

Contract Qualification Closed Projects (2013 - Present) - Parameter Summary

Month Ending Date	06-30-2020	
Reporting Entity		
JDE Company Code	00152;00390;00160;00380;00381	
Region		
Owner State		
Project Material Family		
Project Manager		
Project Number		
Role		
Project Manager		
Value Range	Start	End
Project Value (\$)	100000	
Bid Proposal Date		
Project Closed Date	08-18-2015	08-18-2020
Diameter	8	8
Linear Feet		

Proprietary Property and Trade Secret of Aegion, Inc. Unauthorized Use, Dissemination and Disclosure Strictly Prohibited.

Contract Qualification Closed Projects (2013 - Present) - Summary

	AIS	ILS	SIT	STD	UVG	Total	SR's (taps)
8	2,278,384	38,812	702	18,186	1,511	2,337,596	56,320
Total	2,278,384	38,812	702	18,186	1,511	2,337,596	

Contract Qualification Closed Projects (2013 - Present) - Detail

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
152010	Prime	GLASGOW, VA - CONTRACT 1 SAN SWR LINE CIPP REHAB	JC	\$380,988.80	\$371,351.00

Project Manager	Bid Date	Project Close Date
Rosengarten, Nicholas S	03-01-2018	10-26-2018

	AIS	STD	Total	SR's
8	10,350	756	11,106	117
Total	10,350	756	11,106	

Customer	Owner
Town of Glasgow, VA 1100 Blue Ridge Road PO Box 326 Rockbridge Glasgow VA 24555 +1 540 2582246	Town of Glasgow, VA 1100 Blue Ridge Road PO Box 326 Rockbridge Glasgow VA 24555 +1 540 2582246

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
152013	Sub	HAMPTON ROADS MECH.YORKTOWN VA REH. MH & SEW. LINING,YORKTOWN	JC	\$472,333.00	\$445,522.00

Project Manager	Bid Date	Project Close Date
Rosengarten, Nicholas S	03-01-2018	08-28-2019

	AIS	Total	SR's
8	753	753	0
Total	753	753	

Customer	Owner
Hampton Roads Mechanical-Chesapeake, VA 932 Corporate Lane Chesapeake VA 23320 +1 757 4361120	US Navy - Portsmouth,VA-Department of the Navy - Norfolk Naval Shipyard Norfolk City Portsmouth VA 23709 +1 757 3968183

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
152014	Sub	HAMPTON ROADS MEC NORFOLK VA NORFOLK NAVAL YARD INSTALL CIP	JC	\$307,490.00	\$333,040.10

Project Manager	Bid Date	Project Close Date
Rosengarten, Nicholas S	10-31-2017	08-30-2019

	AIS	Total	SR's
8	2,032	2,032	78
Total	2,032	2,032	

Customer	Owner
Hampton Roads Mechanical-Chesapeake, VA	US Navy - Portsmouth,VA-Department of the Navy -
932 Corporate Lane Chesapeake VA 23320	Norfolk Naval Shipyard Norfolk City Portsmouth VA 23709
+1 757 4361120	+1 757 3968183

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
16077104	Prime	GARDNER MA,-WO#1 PIPE RELINING #2012-104	JC	\$433,595.00	\$391,297.00

Project Manager	Bid Date	Project Close Date
Szela,Mark E	04-09-2013	02-19-2016

	AIS	Total	SR's
8	2,948	2,948	34
Total	2,948	2,948	

Customer	Owner
City of Gardner, MA	City of Gardner, MA
City Hall 95 Pleasant Street Suite 114 Worcester Gardner MA 01440-2630	City Hall 95 Pleasant Street Suite 114 Worcester Gardner MA 01440-2630
+1 978 6304010	+1 978 6304010

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
160835	Prime	MDC-HARTFORD, CT #2009-61 METRO DIST. COMMISSION	JC	\$4,890,043.19	\$5,091,475.74

Project Manager	Bid Date	Project Close Date
Szela,Mark E	08-14-2012	06-09-2016

	AIS	Total	SR's
8	36,474	36,474	609
Total	36,474	36,474	

Customer	Owner
The Metropolitan District Commission-Hartford, CT	The Metropolitan District Commission-Hartford, CT
555 Main Street Hartford Hartford CT 06142-0800	555 Main Street Hartford Hartford CT 06142-0800
+1 860 2787850	+1 860 2787850

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
160884	Sub	NATIONAL WATER MAIN - NATICK NATICK-3 YR SWR REHAB	JC	\$314,868.00	\$368,063.00

Project Manager	Bid Date	Project Close Date
Szela,Mark E	06-06-2013	07-11-2017

	AIS	Total	SR's
8	11,265	11,265	160
Total	11,265	11,265	

Customer	Owner
Town of Natick, MA - Department of Public Works 75 West Street Middlesex Natick MA 01760-4353 +1 508 6517310	Town of Natick, MA - Department of Public Works 75 West Street Middlesex Natick MA 01760-4353 +1 508 6517310

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
16089004	Prime	BRIDGEPORT,CT-#WPB 353131 RE#4 RELEASE #4 -2013 ANNUAL TERM	JC	\$299,819.00	\$376,441.92

Project Manager	Bid Date	Project Close Date
Szela,Mark E	08-22-2016	06-16-2017

	AIS	Total	SR's
8	693	693	16
Total	693	693	

Customer	Owner
City of Bridgeport, CT - Water Pollution Control Authority 695 Seaview Avenue Fairfield Bridgeport CT 06601 +1 203 3325550	City of Bridgeport, CT - Water Pollution Control Authority 695 Seaview Avenue Fairfield Bridgeport CT 06601 +1 203 3325550

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
16089007	Prime	BRIDGEPORT,CT-#WPB 353131 RE#7 RELEASE #7 -2013 ANNUAL TERM	JC	\$344,277.80	\$381,881.22

Project Manager	Bid Date	Project Close Date
Szela,Mark E	03-22-2017	02-08-2018

	AIS	Total	SR's
8	228	228	1
Total	228	228	

Customer	Owner
City of Bridgeport, CT - Water Pollution Control Authority 695 Seaview Avenue Fairfield Bridgeport CT 06601 +1 203 3325550	City of Bridgeport, CT - Water Pollution Control Authority 695 Seaview Avenue Fairfield Bridgeport CT 06601 +1 203 3325550

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
16089008	Prime	BRIDGEPORT,CT-#WPB 353131 RE#8 RELEASE #8 -2013 ANNUAL TERM	JC	\$655,243.00	\$1,230,913.39

Project Manager	Bid Date	Project Close Date
Szela,Mark E	04-26-2017	06-15-2018

	AIS	Total	SR's
8	2,441	2,441	49
Total	2,441	2,441	

Customer	Owner
City of Bridgeport, CT - Water Pollution Control Authority	City of Bridgeport, CT - Water Pollution Control Authority
695 Seaview Avenue Fairfield Bridgeport CT 06601	695 Seaview Avenue Fairfield Bridgeport CT 06601
+1 203 3325550	+1 203 3325550

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
160921	Sub	P.GIOIOSO & SONS,CAMBRIDGE MA CONCORD AVE. - CONTRACT #9	JC	\$234,152.00	\$276,595.00

Project Manager	Bid Date	Project Close Date
Petruzzi,Jeffrey J.	12-05-2013	03-24-2016

	AIS	Total	SR's
8	1,144	1,144	39
Total	1,144	1,144	

Customer	Owner
Gioioso Contrtactors	City of Cambridge, MA
Geneva Street Suffolk Boston MA 2136	795 Massachusetts Avenue Middlesex Cambridge MA 02139-1413
+1 617 3645800	+1 617 3494848

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
160929	Sub	SB GENERAL CONTRACTING, INC. CITY OF TAUNTON #CWSRF#3793	JC	\$3,201,910.00	\$2,855,566.00

Project Manager	Bid Date	Project Close Date
Szela,Mark E	02-12-2014	01-15-2017

	AIS	Total	SR's
8	2,646	2,646	61
Total	2,646	2,646	

Customer	Owner
City of Taunton, MA	City of Taunton, MA
15 Summer Street Bristol Taunton MA 02780-3430	15 Summer Street Bristol Taunton MA 02780-3430
+1 508 8211027	+1 508 8211027

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
160930	Sub	NATIONAL WATER MAIN - MALDEN SWR SYSTEM REHAB. PHASE 3A	JC	\$1,284,487.10	\$1,207,041.70

Project Manager	Bid Date	Project Close Date		AIS	Total	SR's
Szela,Mark E	02-11-2014	01-29-2016	8	30,296	30,296	714
			Total	30,296	30,296	

Customer	Owner
National Water Main Cleaning Co	City of Malden, MA
25 Marshall Street Norfolk Canton MA 02021	200 Pleasant Street Room 615 Middlesex Malden MA 02148-4884
+1 781 8280863	+1 617 3977046

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
160934	Sub	NATIONAL WATER MAIN - NORWOOD MEADOWBROOK AREA #NPW-14-05	JC	\$328,537.00	\$220,327.50

Project Manager	Bid Date	Project Close Date		AIS	Total	SR's
Szela,Mark E	02-13-2014	12-30-2015	8	6,924	6,924	144
			Total	6,924	6,924	

Customer	Owner
National Water Main Cleaning Co	Town of Norwood, MA
25 Marshall Street Norfolk Canton MA 02021	566 Washington Street Norfolk Norwood MA 02062
+1 781 8280863	+1 781 7621413

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
160942	Sub	J.D'AMICO, FRAMINGHAM MA W&S IMPROVEM.,PW268,BETHANY	JC	\$111,355.00	\$105,442.40

Project Manager	Bid Date	Project Close Date		AIS	Total	SR's
Szela,Mark E	06-05-2014	01-21-2016	8	948	948	14
			Total	948	948	

Customer	Owner
J. D'amico Inc	Town of Framingham, MA
10 York Avenue Norfolk Randolph MA 02368	100 Western Avenue Middlesex Framingham MA 01702-7404
+1 781 9613700	+1 508 6204899

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
160964	Prime	MANSFIELD, MA - (2014) 2014 SWR SYSTEM REHAB	JC	\$409,324.00	\$431,827.20

Project Manager	Bid Date	Project Close Date
Szela, Mark E	09-17-2014	01-12-2016

	AIS	Total	SR's
8	2,010	2,010	31
Total	2,010	2,010	

Customer	Owner
Town of Mansfield, MA	Town of Mansfield, MA
Six Park Row Bristol Mansfield MA 02048	Six Park Row Bristol Mansfield MA 02048
+1 508 2617377	+1 508 2617377

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
160972	Prime	GREATER NEW HAVEN WATER POLL. CWF 2012-02 SEWER PROJECT	JC	\$3,317,194.00	\$3,350,484.09

Project Manager	Bid Date	Project Close Date
Szela, Mark E	04-22-2014	10-03-2016

	AIS	ILS	STD	Total	SR's
8	8,140	10,554	3,204	21,898	426
Total	8,140	10,554	3,204	21,898	

Customer	Owner
City of New Haven, CT- Water Pollution Control Authority	City of New Haven, CT- Water Pollution Control Authority
260 East Street New Haven New Haven CT 06511	260 East Street New Haven New Haven CT 06511
+1 203 4665281	+1 203 4665281

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
160978	Sub	NATIONAL WATER MAIN -SAUGUS SAUGUS, MA #CWSRF3911	JC	\$780,042.00	\$780,429.00

Project Manager	Bid Date	Project Close Date
Szela, Mark E	09-09-2014	01-22-2016

	AIS	Total	SR's
8	5,187	5,187	92
Total	5,187	5,187	

Customer	Owner
Town of Saugus, MA	Town of Saugus, MA
298 Central Street Essex Saugus MA 01906-4109	298 Central Street Essex Saugus MA 01906-4109
+1 781 2314125	+1 781 2314125

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
160981	Sub	UMBRO & SONS CONST,CT#12309010 CONT.#12-309-010,REHAB CONTR.5	JC	\$2,029,728.00	\$1,647,132.50

Project Manager	Bid Date	Project Close Date
Szela,Mark E	03-05-2015	01-25-2016

	AIS	Total	SR's
8	199	199	8
Total	199	199	

Customer	Owner
Umbro & Sons Construction, Inc	Boston Water & Sewer Commission
PO Box 255654 Suffolk Boston MA 02125	980 Harrison Avenue Suffolk Boston MA 02119-2540
+1 617 4270030	+1 617 9897000

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
160984	Sub	NATIONAL WATER MAIN - DEDHAM 2015 SWR ON CALL-CONRT.#4	JC	\$906,332.50	\$742,018.00

Project Manager	Bid Date	Project Close Date
Petruzzi,Jeffrey J.	01-08-2015	12-22-2015

	AIS	Total	SR's
8	20,460	20,460	398
Total	20,460	20,460	

Customer	Owner
Town of Dedham, Ma - Department of Public Works	Town of Dedham, MA
55 River Street Norfolk Dedham MA 02026-2935	55 River Street Norfolk Dedham MA 02026-2935
+1 781 7519350	+1 781 7519350

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
160991	Sub	NATIONAL WATER MAIN - REVERE SS REHAB, PHASE 5 CWSRF #3910	JC	\$1,719,485.00	\$1,643,315.10

Project Manager	Bid Date	Project Close Date
Szela,Mark E	03-02-2015	12-21-2015

	AIS	Total	SR's
8	49,828	49,828	1,335
Total	49,828	49,828	

Customer	Owner
National Water Main and Cleaning-Canton,MA	City of Revere, MA
25 Marshall Street Norfolk Canton MA 02021	City Hall 281 Broadway Suffolk Revere MA 02151
+1 781 8280863	+1 781 2868183

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
160993	Prime	NARRAGANSETT BAY-#304.59C C#304.59C -NBC INTERCEPTOR	JC	\$802,529.00	\$727,070.99

Project Manager	Bid Date	Project Close Date
Szela,Mark E	04-08-2015	01-21-2016

	AIS	Total	SR's
8	607	607	4
Total	607	607	

Customer	Owner
Narragansett Bay Commission	Narragansett Bay Commission
One Service Road Providence Providence RI 02905	One Service Road Providence Providence RI 02905
+1 401 4618848	+1 401 4618848

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
160999	Prime	MANCHESTER BY THE SEA, BASIN 1 SWR SYSM REHAB - RE-BID	JC	\$495,855.00	\$438,172.10

Project Manager	Bid Date	Project Close Date
Szela,Mark E	05-28-2015	01-08-2016

	AIS	Total	SR's
8	4,527	4,527	81
Total	4,527	4,527	

Customer	Owner
Town of Manchester by the Sea, MA	Town of Manchester by the Sea, MA
Town Hall - Central St Essex Manchester-By-The-Sea MA 1944	Town Hall - Central St Essex Manchester-By-The-Sea MA 1944
+1 508 5261242	+1 508 5261242

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161000	Sub	SB GENERAL CONTRACT,TAUNTON MA CONTRACT#S-2014-1,PHASE11 SSES	JC	\$796,716.50	\$939,253.33

Project Manager	Bid Date	Project Close Date
Szela,Mark E	02-11-2015	10-05-2017

	AIS	Total	SR's
8	1,790	1,790	38
Total	1,790	1,790	

Customer	Owner
City of Taunton, MA	City of Taunton, MA
15 Summer Street Bristol Taunton MA 02780-3430	15 Summer Street Bristol Taunton MA 02780-3430
+1 508 8211027	+1 508 8211027

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161001	Sub	NATIONAL WATER MAINMIDDLETOWN UPPER EASTON'S PT,JH DWYER RD.	JC	\$154,040.00	\$172,700.00

Project Manager	Bid Date	Project Close Date
Szela,Mark E	06-04-2015	10-08-2015

	AIS	Total	SR's
8	1,917	1,917	14
Total	1,917	1,917	

Customer	Owner
Town of Middletown,RI	Town of Middletown,RI
Town Hall 350 E Main Road Newport Middletown RI 02842-5267	Town Hall 350 E Main Road Newport Middletown RI 02842-5267
+1 401 8492898	+1 401 8492898

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161002	Prime	ARLINGTON, MA -PHASE #7 PHASE 7 SANITARY SWR	JC	\$1,058,434.28	\$1,057,195.00

Project Manager	Bid Date	Project Close Date
Petruzzi,Jeffrey J.	07-01-2015	12-30-2015

	AIS	Total	SR's
8	12,763	12,763	276
Total	12,763	12,763	

Customer	Owner
Town of Arlington, MA	Town of Arlington, MA
730 Massachusetts Ave 730 Massachusetts Avenue Middlesex Arlington MA 02476-4908	730 Massachusetts Ave 730 Massachusetts Avenue Middlesex Arlington MA 02476-4908
+1 781 6461000	+1 781 6461000

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161003	Sub	NATIONAL WATER MAIN-SHELTON,CT LONG HILL AVE. & BREWSTER LANE	JC	\$182,221.96	\$174,457.61

Project Manager	Bid Date	Project Close Date
Szela,Mark E	12-18-2014	08-31-2015

	AIS	Total	SR's
8	390	390	5
Total	390	390	

Customer	Owner
City of Shelton, CT	City of Shelton, CT
54 Hill Street Fairfield Shelton CT 06484	54 Hill Street Fairfield Shelton CT 06484
+1 203 9241555	+1 203 9241555

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161004	Sub	INLAND WATERS, STONEHAM, MA PHASE 5 SANITARY SWR REHAB	JC	\$159,636.00	\$204,108.60

Project Manager	Bid Date	Project Close Date
Szela, Mark E	03-11-2015	10-09-2015

	AIS	Total	SR's
8	3,503	3,503	58
Total	3,503	3,503	

Customer	Owner
Town of Stoneham, Ma	Town of Stoneham, MA
35 Central Street Middlesex Stoneham MA 02180-2048	35 Central Street Middlesex Stoneham MA 02180-2048
+1 617 3873970	+1 617 3873970

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161007	Sub	INLAND WATERS, INC.-MILTON, MA SS INFILTRATION REHAB-YR.10	JC	\$258,167.00	\$255,484.99

Project Manager	Bid Date	Project Close Date
Szela, Mark E	06-01-2015	10-14-2015

	AIS	Total	SR's
8	7,668	7,668	68
Total	7,668	7,668	

Customer	Owner
Town of Milton, MA-Department of Public Works	Town of Milton, MA-Department of Public Works
629 Randolph Avenue Norfolk Milton MA 02186-3240	629 Randolph Avenue Norfolk Milton MA 02186-3240
+1 617 6965728	+1 617 6965728

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161011	Prime	NORTH ATTLEBOROUGH, MA 2 YR SWR REHAB #16-440-012	JC	\$714,883.30	\$634,963.57

Project Manager	Bid Date	Project Close Date
Petruzzini, Jeffrey J.	07-27-2015	12-10-2015

	AIS	ILS	Total	SR's
8	1,794	406	2,200	46
Total	1,794	406	2,200	

Customer	Owner
Town of North Attleborough, MA - Department of Public Works	Town of North Attleborough, MA - Department of Public Works
49 Whiting Street Bristol North Attleboro MA 02760-2428	49 Whiting Street Bristol North Attleboro MA 02760-2428
+1 508 6959131	+1 508 6959131

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161018	Prime	SAUGUS, MA -SUB SYST 4 REHAB SWR REHAB. SUBSYSTEM 4	JC	\$960,224.00	\$942,010.50

Project Manager	Bid Date	Project Close Date
Szela,Mark E	07-30-2015	11-23-2016

	AIS	Total	SR's
8	6,291	6,291	108
Total	6,291	6,291	

Customer	Owner
Town of Saugus, MA 298 Central Street Essex Saugus MA 01906-4109 +1 781 2314125	Town of Saugus, MA 298 Central Street Essex Saugus MA 01906-4109 +1 781 2314125

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161021	Prime	QUINCY MA, PHASE 11 B COASTAL STRUCTURES I/I REDUCT.	JC	\$1,900,707.00	\$2,205,146.78

Project Manager	Bid Date	Project Close Date
Petruzzi,Jeffrey J.	06-18-2015	10-13-2017

	AIS	STD	Total	SR's
8	1,444	1,442	2,887	31
Total	1,444	1,442	2,887	

Customer	Owner
City of Quincy, MA 55 Sea Street Norfolk Quincy MA 02169-2572 +1 617 3761912	City of Quincy, MA 55 Sea Street Norfolk Quincy MA 02169-2572 +1 617 3761912

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161022	Prime	CHEEKTOWAGA, NY CCTV & REHAB OF SS VIA CIPP	JC	\$4,402,606.10	\$4,288,659.67

Project Manager	Bid Date	Project Close Date
Szela,Mark E	07-29-2015	11-06-2018

	AIS	ILS	Total	SR's
8	75,590	3,085	78,676	1,729
Total	75,590	3,085	78,676	

Customer	Owner
Town of Cheektowaga, NY 275 Alexander Ave Erie Cheektowaga NY 14211 +1 716 8977288	Town of Cheektowaga, NY 275 Alexander Ave Erie Cheektowaga NY 14211 +1 716 8977288

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
16102301	Prime	LEOMINSTER, MA- WO#1 2015 SWR LINE REHAB-RELEASE 1	JC	\$960,007.00	\$1,156,378.50

Project Manager	Bid Date	Project Close Date
Szela,Mark E	09-18-2015	01-13-2017

	AIS	Total	SR's
8	1,633	1,633	20
Total	1,633	1,633	

Customer	Owner
City of Leominster, MA	City of Leominster, MA
109 Graham Street Worcester Leominster MA 01453-4234	109 Graham Street Worcester Leominster MA 01453-4234
+1 978 5347590	+1 978 5347590

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161025	Sub	NATIONAL WATER MAIN-DARTMOUTH 2015 SS REHAB-#15-1A REBID	JC	\$252,227.00	\$252,283.00

Project Manager	Bid Date	Project Close Date
Szela,Mark E	05-21-2015	01-15-2016

	AIS	Total	SR's
8	6,758	6,758	95
Total	6,758	6,758	

Customer	Owner
Town of Dartmouth. MA	Town of Dartmouth. MA
400 Slocum Street Bristol Dartmouth MA 02747	400 Slocum Street Bristol Dartmouth MA 02747
+1 508 9101800	+1 508 9101800

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
16103102	Prime	LOWELL MA, RELEASE 2 CTR# IFB 16-36,CIPP LINING	JC	\$287,685.00	\$339,094.00

Project Manager	Bid Date	Project Close Date
Petruzzi,Jeffrey J.	03-17-2016	11-23-2016

	AIS	Total	SR's
8	276	276	2
Total	276	276	

Customer	Owner
City of Lowell, MA	City of Lowell, MA
451 First Street Boulevard And Route 110 Middlesex Lowell MA 01850	451 First Street Boulevard And Route 110 Middlesex Lowell MA 01850
+1 978 9704248	+1 978 9704248

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
16103104	Prime	LOWELL MA, RELEASE 4 CTR# IFB 16-36,CIPP LINING	JC	\$143,565.00	\$153,702.08

Project Manager	Bid Date	Project Close Date
Petruzzi,Jeffrey J.	02-27-2017	03-31-2017

	AIS	Total	SR's
8	247	247	5
Total	247	247	

Customer	Owner
City of Lowell, MA	City of Lowell, MA
451 First Street Boulevard And Route 110 Middlesex Lowell MA 01850	451 First Street Boulevard And Route 110 Middlesex Lowell MA 01850
+1 978 9704248	+1 978 9704248

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
16103105	Prime	LOWELL MA, RELEASE 5 CTR# IFB 16-36,CIPP LINING	JC	\$103,640.00	\$97,639.00

Project Manager	Bid Date	Project Close Date
Petruzzi,Jeffrey J.	05-18-2017	06-09-2017

	AIS	Total	SR's
8	443	443	10
Total	443	443	

Customer	Owner
City of Lowell, MA	City of Lowell, MA
451 First Street Boulevard And Route 110 Middlesex Lowell MA 01850	451 First Street Boulevard And Route 110 Middlesex Lowell MA 01850
+1 978 9704248	+1 978 9704248

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
16103106	Prime	LOWELL MA, RELEASE 6 CTR# IFB 16-36,CIPP LINING	JC	\$216,590.00	\$272,050.00

Project Manager	Bid Date	Project Close Date
Szela,Mark E	09-06-2017	02-09-2018

	AIS	Total	SR's
8	838	838	13
Total	838	838	

Customer	Owner
City of Lowell, MA	City of Lowell, MA
451 First Street Boulevard And Route 110 Middlesex Lowell MA 01850	451 First Street Boulevard And Route 110 Middlesex Lowell MA 01850
+1 978 9704248	+1 978 9704248

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161034	Prime	CAMBRIDGE, MA - 2015 SWR& STORMWATER INFRASTRUCTURE	JC	\$1,052,545.00	\$864,981.50

Project Manager	Bid Date	Project Close Date		AIS	Total	SR's
Szela,Mark E	07-30-2015	04-06-2017	8	6,506	6,506	156
			Total	6,506	6,506	

Customer	Owner
City of Cambridge, MA	City of Cambridge, MA
795 Massachusetts Avenue Middlesex Cambridge MA 02139-1413	795 Massachusetts Avenue Middlesex Cambridge MA 02139-1413
+1 617 3494848	+1 617 3494848

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161035	Sub	NORTHERN CONST. SVC.,LLC MGM SPRINGFIELD MA	JC	\$114,258.50	\$170,555.50

Project Manager	Bid Date	Project Close Date		AIS	Total	SR's
Szela,Mark E	06-22-2015	09-28-2017	8	60	60	2
			Total	60	60	

Customer	Owner
City of Springfield, MA-Water & Sewer Commission	City of Springfield, MA-Water & Sewer Commission
Route 5 Hampden Springfield MA 01101-0995	Route 5 Hampden Springfield MA 01101-0995
+1 413 7876257	+1 413 7876257

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161036	Sub	NATIONAL WATER MAIN-BEVERLY,MA SS SUBSYSTEM REHAB #15-021	JC	\$582,129.50	\$638,136.12

Project Manager	Bid Date	Project Close Date		AIS	Total	SR's
Petruzzi,Jeffrey J.	08-06-2015	02-26-2016	8	7,233	7,233	143
			Total	7,233	7,233	

Customer	Owner
City of Beverly, MA	City of Beverly, MA
191 Cabot Street Essex Beverly MA 01915-5849	191 Cabot Street Essex Beverly MA 01915-5849
+1 508 9216000	+1 508 9216000

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161038	Prime	ROCKPORT, MA - 2015 REHAB SWR REHAB. SUB AREA 6	JC	\$552,937.25	\$618,709.61

Project Manager	Bid Date	Project Close Date
Szela, Mark E	10-08-2015	03-25-2016

	AIS	Total	SR's
8	6,424	6,424	124
Total	6,424	6,424	

Customer	Owner
Town of Rockport, MA	Town of Rockport, MA
Town Office Building 34 Broadway Essex Rockport MA 01966-1537	Town Office Building 34 Broadway Essex Rockport MA 01966-1537
+1 978 5467888	+1 978 5467888

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
16103901	Prime	BETHLEHEM, NY-TERM WO1 CIPP PIPE SERV.CT#2014-073	JC	\$417,037.00	\$335,592.96

Project Manager	Bid Date	Project Close Date
Szela, Mark E	11-18-2015	11-14-2016

	AIS	Total	SR's
8	5,648	5,648	127
Total	5,648	5,648	

Customer	Owner
Town of Bethlehem, NY	Town of Bethlehem, NY
445 Delaware Ave Albany Delmar NY 12054-3041	445 Delaware Ave Albany Delmar NY 12054-3041
+1 518 4394955	+1 518 4394955

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161043	Sub	UMBRO & SONS CONS.-WORBURN, MA CIP PRJT. 1 - #16-IFB-010	JC	\$349,142.00	\$331,999.00

Project Manager	Bid Date	Project Close Date
Petruzzi, Jeffrey J.	10-08-2015	11-03-2016

	AIS	Total	SR's
8	2,357	2,357	55
Total	2,357	2,357	

Customer	Owner
Umbro & Sons Construction, Inc	City of Woburn, MA
PO Box 255654 Suffolk Boston MA 02125	10 Common Street Middlesex Woburn MA 01801-4164
+1 617 4270030	+1 781 9324400

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161053	Sub	NATIONAL WATER MAIN - DEDHAM 2015 SWR ON CALL NWM 12-2016	JC	\$1,191,532.50	\$1,065,167.00

Project Manager	Bid Date	Project Close Date		AIS	Total	SR's
Szela,Mark E	02-24-2016	04-17-2017	8	26,116	26,116	496
			Total	26,116	26,116	

Customer	Owner
National Water Main Cleaning Co	Town of Dedham, MA
25 Marshall Street Norfolk Canton MA 02021	55 River Street Norfolk Dedham MA 02026-2935
+1 781 8280863	+1 781 7519350

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161054	Sub	NATIONAL WATER MAIN - REVERE SS REHAB, PHASE 6 NWM 13-2016	JC	\$1,470,577.00	\$1,325,815.63

Project Manager	Bid Date	Project Close Date		AIS	Total	SR's
Petruzzi,Jeffrey J.	03-29-2016	02-22-2017	8	34,191	34,191	1,054
			Total	34,191	34,191	

Customer	Owner
City of Revere, MA	City of Revere, MA
City Hall 281 Broadway Suffolk Revere MA 02151	City Hall 281 Broadway Suffolk Revere MA 02151
+1 781 2868183	+1 781 2868183

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161055	Sub	SB GENERAL CONTRACT,TAUNTON MA CONTRACT #S-2015-1-PHASE 12	JC	\$157,338.00	\$159,396.00

Project Manager	Bid Date	Project Close Date		AIS	Total	SR's
Szela,Mark E	03-09-2016	02-20-2017	8	1,753	1,753	37
			Total	1,753	1,753	

Customer	Owner
SB General Contracting	City of Taunton, MA
14 Renmar Avenue Norfolk Walpole MA 02072	15 Summer Street Bristol Taunton MA 02780-3430
+1 508 6608700	+1 508 8211027

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161072	Sub	NATIONAL WATER MAIN-SHELTON,CT LONG HILL AVE. & BREWSTER LANE	JC	\$142,190.77	\$148,481.41

Project Manager	Bid Date	Project Close Date		AIS	Total	SR's
Szela,Mark E	07-01-2016	01-16-2017	8	2,826	2,826	68
			Total	2,826	2,826	

Customer	Owner
National Water Main and Cleaning-Canton,MA	City of Shelton, CT
25 Marshall Street Norfolk Canton MA 02021	54 Hill Street Fairfield Shelton CT 06484
+1 781 8280863	+1 203 9241555

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161075	Prime	CHEEKTOWAGA, NY CCTV & REHAB-DOC ID#9280	JC	\$3,391,004.40	\$3,126,399.73

Project Manager	Bid Date	Project Close Date		AIS	Total	SR's
Szela,Mark E	06-29-2016	09-03-2017	8	53,513	53,513	1,311
			Total	53,513	53,513	

Customer	Owner
Town of Cheektowaga, NY	Town of Cheektowaga, NY
275 Alexander Ave Erie Cheektowaga NY 14211	275 Alexander Ave Erie Cheektowaga NY 14211
+1 716 8977288	+1 716 8977288

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161077	Prime	TORRINGTON, CT -EAST BASIN SWR REHAB PJT.#ESB-041-053016	JC	\$2,408,151.00	\$2,382,990.25

Project Manager	Bid Date	Project Close Date		AIS	Total	SR's
Szela,Mark E	05-31-2016	11-29-2017	8	42,093	42,093	745
			Total	42,093	42,093	

Customer	Owner
City of Torrington, CT	City of Torrington, CT
140 Main St Litchfield Torrington CT 06790-5201	140 Main St Litchfield Torrington CT 06790-5201
+1 860 4892241	+1 860 4892241

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161080	Sub	VMS CONSTR. CO.UCONN STORRS CT UCONN STORRS CAMPUS PROJ.90231	JC	\$177,000.00	\$139,412.00

Project Manager	Bid Date	Project Close Date
Petruzzi,Jeffrey J.	06-09-2016	01-10-2018

	AIS	Total	SR's
8	808	808	0
Total	808	808	

Customer	Owner
Vms, Inc 162 Lake Street Tolland Vernon Rockville CT 06066-5831 +1 860 8710278	University of Connecticut - Main Campus - Storrs, CT Main Campus Tolland Storrs CT 6269 +1 860 4862000

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161084	Sub	NATIONAL WATER MAIN -ARLINGTON PHASE 8 SS REHAB	JC	\$264,726.00	\$260,525.10

Project Manager	Bid Date	Project Close Date
Szela,Mark E	06-16-2016	10-07-2016

	AIS	Total	SR's
8	8,413	8,413	214
Total	8,413	8,413	

Customer	Owner
Town of Arlington, MA 730 Massachusetts Ave 730 Massachusetts Avenue Middlesex Arlington MA 02476-4908 +1 781 6461000	Town of Arlington, MA 730 Massachusetts Ave 730 Massachusetts Avenue Middlesex Arlington MA 02476-4908 +1 781 6461000

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161085	Prime	LIVERPOOL NY, 2016 PROJECT SANIT. SEWER LINING PROJECT	JC	\$149,380.00	\$146,902.00

Project Manager	Bid Date	Project Close Date
Szela,Mark E	08-11-2016	01-04-2017

	AIS	Total	SR's
8	2,647	2,647	62
Total	2,647	2,647	

Customer	Owner
Village of Liverpool, NY 310 Sycamore Street Onondaga Liverpool NY 13088 +1 315 2222222	Village of Liverpool, NY 310 Sycamore Street Onondaga Liverpool NY 13088 +1 315 2222222

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161087	Sub	H. OSTERHOUDT EXCAVATING SS REHAB.- NEW PLATZ, NY	JC	\$120,915.00	\$116,055.10

Project Manager	Bid Date	Project Close Date		AIS	Total	SR's
Szela,Mark E	06-14-2016	10-14-2016	8	2,880	2,880	51
			Total	2,880	2,880	

Customer	Owner
Town of New Paltz, NY	Town of New Paltz, NY
New Paltz- Not Available Ulster New Paltz NY 12561-0550	New Paltz- Not Available Ulster New Paltz NY 12561-0550
+1 na	+1 na

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161092	Prime	MARSHFIELD, MA -FY2017 CONTRACT 2017-06	JC	\$135,309.75	\$148,253.88

Project Manager	Bid Date	Project Close Date		AIS	Total	SR's
Szela,Mark E	09-01-2016	03-17-2017	8	1,625	1,625	38
			Total	1,625	1,625	

Customer	Owner
Town of Marshfield, MA	Town of Marshfield, MA
870 Moraine Street Plymouth Marshfield MA 02050	870 Moraine Street Plymouth Marshfield MA 02050
+1 781 8345575	+1 781 8345575

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161096	Sub	WM. J. KELLER & SONS CONST. PITTSFIELD, MA - IFB#17-007	JC	\$257,306.00	\$233,808.00

Project Manager	Bid Date	Project Close Date		AIS	Total	SR's
Petruzzi,Jeffrey J.	09-08-2016	05-02-2017	8	6,738	6,738	123
			Total	6,738	6,738	

Customer	Owner
City of Pittsfield, MA	City of Pittsfield, MA
70 Allen Street Berkshire Pittsfield MA 01201-6261	70 Allen Street Berkshire Pittsfield MA 01201-6261
+1 413 4999339	+1 413 4999339

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161102	Sub	NATIONAL WATER MAIN - REVERE 20" CSO PIPELINE	JC	\$136,663.00	\$144,643.00

Project Manager	Bid Date	Project Close Date
Szela,Mark E	10-12-2016	07-20-2017

	AIS	Total	SR's
8	171	171	5
Total	171	171	

Customer	Owner
City of Revere, MA	City of Revere, MA
City Hall 281 Broadway Suffolk Revere MA 02151	City Hall 281 Broadway Suffolk Revere MA 02151
+1 781 2868183	+1 781 2868183

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161104	Sub	NATIONAL WATER MAIN - KENMORE 2016 SS REHAB-KENMORE, NY	JC	\$147,895.00	\$143,287.00

Project Manager	Bid Date	Project Close Date
Szela,Mark E	07-29-2016	03-30-2017

	STD	Total	SR's
8	2,689	2,689	48
Total	2,689	2,689	

Customer	Owner
National Water Main Cleaning Co	Village of Kenmore, NY
25 Marshall Street Norfolk Canton MA 02021	Kenmore Municipal Building - Room 17 29 Erie Kenmore NY 14217
+1 781 8280863	+1 716 8735700

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161105	Prime	NATIONAL WATER MAIN-DANVERS WASTEWATER FACILITIES IMPRVMT	JC	\$315,040.00	\$305,437.50

Project Manager	Bid Date	Project Close Date
Szela,Mark E	08-25-2016	04-25-2017

	AIS	STD	Total	SR's
8	8,504	741	9,246	107
Total	8,504	741	9,246	

Customer	Owner
Town of Danvers, MA	Town of Danvers, MA
1 Burroughs Street Essex Danvers MA 01923-2701	1 Burroughs Street Essex Danvers MA 01923-2701
+1 978 7772668	+1 978 7772668

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161109	Sub	INLAND WATERS, INC.-BRAINTREE CIPP LINING SEWER PIPELINES	JC	\$121,641.00	\$121,149.40

Project Manager	Bid Date	Project Close Date
Szela,Mark E	08-11-2016	03-08-2017

	AIS	Total	SR's
8	2,664	2,664	40
Total	2,664	2,664	

Customer	Owner
Inland Waters Pipeline Svcs 275 Scituate Avenue Providence Johnston RI 02919-4724 +1 401 9435302	Town of Braintree-Braintree, MA 2 Jfk Memorial Drive Norfolk Braintree MA 02184 +1 781 7948250

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161122	Sub	NATIONAL WATER MAIN-BURLINGTON PROJECT 6 & 7 SEWER REHAB.	JC	\$190,477.00	\$189,736.00

Project Manager	Bid Date	Project Close Date
Szela,Mark E	11-17-2016	07-06-2017

	AIS	Total	SR's
8	3,683	3,683	41
Total	3,683	3,683	

Customer	Owner
National Water Main Cleaning Co 25 Marshall Street Norfolk Canton MA 02021 +1 781 8280863	Town of Burlington, MA 25 Center Street Middlesex Burlington MA 01803-3038 +1 781 2701670

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161123	Sub	NATIONAL WATER MAIN-WESTWOOD FY17 SEWER SYSTEM REHAB	JC	\$178,828.00	\$152,174.00

Project Manager	Bid Date	Project Close Date
Szela,Mark E	01-19-2017	03-23-2018

	AIS	Total	SR's
8	4,156	4,156	55
Total	4,156	4,156	

Customer	Owner
National Water Main Cleaning Co 25 Marshall Street Norfolk Canton MA 02021 +1 781 8280863	Town of Westwood, MA Town Hall 580 High Street Norfolk Westwood MA 02090 +1 781 3266450

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161125	Sub	UMBRO & SONS CONS.CT16-309-001 BWSC CONTRACT #16-309-001	JC	\$499,615.00	\$495,334.00

Project Manager	Bid Date	Project Close Date		AIS	Total	SR's
Szela,Mark E	09-29-2016	10-10-2017	8	792	792	30
			Total	792	792	

Customer	Owner
Umbro & Sons Construction	Boston Water & Sewer Commission
1 PO Box 255654 Suffolk	980 Harrison Avenue Suffolk Boston MA 02119-2540
+1 617 4270030	+1 617 9897000

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161127	Prime	SAUGUS, MA - CWSRF #4114 SWR REHAB. CWSRF#4114	JC	\$1,063,966.50	\$1,035,799.89

Project Manager	Bid Date	Project Close Date		AIS	Total	SR's
Szela,Mark E	02-10-2017	04-13-2018	8	25,478	25,478	591
			Total	25,478	25,478	

Customer	Owner
Town of Saugus, MA	Town of Saugus, MA
298 Central Street Essex Saugus MA 01906-4109	298 Central Street Essex Saugus MA 01906-4109
+1 781 2314125	+1 781 2314125

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161128	Sub	NATIONAL WATER MAIN - KENMORE 2017 CDBG, KENMORE, NY	JC	\$131,780.00	\$146,523.00

Project Manager	Bid Date	Project Close Date		AIS	Total	SR's
Szela,Mark E	02-16-2017	07-24-2017	8	646	646	11
			Total	646	646	

Customer	Owner
National Water Main Cleaning Co	Village of Kenmore, NY
25 Marshall Street Norfolk Canton MA 02021	Kenmore Municipal Building - Room 17 29 Erie Kenmore NY 14217
+1 781 8280863	+1 716 8735700

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161130	Sub	NATIONAL WATER MAIN-SHELTON,CT LONG HILL AVE. & BREWSTER LANE	JC	\$269,751.49	\$282,073.48

Project Manager	Bid Date	Project Close Date		AIS	Total	SR's
Szela,Mark E	02-28-2017	11-27-2017	8	871	871	15
			Total	871	871	

Customer	Owner
City of Shelton, CT	City of Shelton, CT
54 Hill Street Fairfield Shelton CT 06484	54 Hill Street Fairfield Shelton CT 06484
+1 203 9241555	+1 203 9241555

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161132	Prime	WATERTOWN MA,I & I REMOVAL PRJ INFILTRATION & INFLOW REMOVAL	JC	\$385,312.00	\$395,236.00

Project Manager	Bid Date	Project Close Date		AIS	Total	SR's
Szela,Mark E	03-23-2017	09-14-2018	8	4,018	4,018	132
			Total	4,018	4,018	

Customer	Owner
Town of Watertown, MA	Town of Watertown, MA
124 Orchard Street Middlesex Watertown MA 02472-1816	124 Orchard Street Middlesex Watertown MA 02472-1816
+1 617 9726420	+1 617 9726420

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161133	Sub	NATIONAL WATER MAIN,YORKVILLE YORKVILLE SEWER REHAB PROJECT	JC	\$571,558.00	\$1,053,574.30

Project Manager	Bid Date	Project Close Date		AIS	Total	SR's
Szela,Mark E	01-26-2017	07-27-2018	8	25,228	25,228	521
			Total	25,228	25,228	

Customer	Owner
National Water Main and Cleaning-Canton,MA	Village of Yorkville,NY
25 Marshall Street Norfolk Canton MA 02021	30th 6th Street Oneida Yorkville NY 13495
+1 781 8280863	+1 315 7242313

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161134	Prime	CHEEKTOWAGA, NY (PHASE III) PHASE III CIPP SEWER SHED #3	JC	\$3,767,932.10	\$3,348,586.34

Project Manager	Bid Date	Project Close Date
Szela, Mark E	04-05-2017	09-26-2018

	AIS	ILS	Total	SR's
8	38,982	12,233	51,216	1,293
Total	38,982	12,233	51,216	

Customer	Owner
Town of Cheektowaga, NY	Town of Cheektowaga, NY
275 Alexander Ave Erie Cheektowaga NY 14211	275 Alexander Ave Erie Cheektowaga NY 14211
+1 716 8977288	+1 716 8977288

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161135	Sub	NATIONAL WATER MAIN - DEDHAM 2015 SWR ON CALL- #4, (Yr. 3)	JC	\$237,209.50	\$202,623.50

Project Manager	Bid Date	Project Close Date
Szela, Mark E	05-12-2017	08-18-2017

	AIS	Total	SR's
8	3,950	3,950	77
Total	3,950	3,950	

Customer	Owner
National Water Main Cleaning Co	Town of Dedham, MA
25 Marshall Street Norfolk Canton MA 02021	55 River Street Norfolk Dedham MA 02026-2935
+1 781 8280863	+1 781 7519350

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161139	Sub	JABLONSKI EXCAVATING, INC. SS REHAB CONTRT #1 GEN CONST.	JC	\$1,080,435.00	\$1,038,740.00

Project Manager	Bid Date	Project Close Date
Szela, Mark E	05-02-2017	08-09-2018

	AIS	Total	SR's
8	27,358	27,358	745
Total	27,358	27,358	

Customer	Owner
Jablonski Excavating, Inc.	Village of Frankfort, NY
678 County Highway 108 Montgomery St Johnsville NY 13452	110 Railroad Street Herkimer Frankfort NY 13340
+1 518 5685874	+1 315 8957651

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161142	Prime	NATIONAL WATER MAIN,FRANKLINMA SS SYSTEM REHAB, PHASE 5	JC	\$189,173.00	\$200,209.00

Project Manager	Bid Date	Project Close Date
Szela,Mark E	04-26-2017	08-25-2017

	AIS	Total	SR's
8	5,288	5,288	71
Total	5,288	5,288	

Customer	Owner
Town of Franklin, MA	Town of Franklin, MA
Municipal Building 355 East Central Street Norfolk Franklin MA 02038	Municipal Building 355 East Central Street Norfolk Franklin MA 02038
+1 508 5204915	+1 508 5204915

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161143	Prime	STRATFORD CT,BID#2017-017 SS LINING PJ BARNUM AVE,ACCESS	JC	\$651,741.00	\$756,534.45

Project Manager	Bid Date	Project Close Date
Szela,Mark E	05-17-2017	08-06-2018

	AIS	Total	SR's
8	12,596	12,596	163
Total	12,596	12,596	

Customer	Owner
Town of Stratford, CT	Town of Stratford, CT
2725 Main Street Fairfield Stratford CT 06615-5818	2725 Main Street Fairfield Stratford CT 06615-5818
+1 555 5551212	+1 555 5551212

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161147	Prime	MARION, MA - 2017 SS IMPRVMENTS I/I REMOVAL-AREA CR-4A-1	JC	\$186,128.00	\$174,506.48

Project Manager	Bid Date	Project Close Date
Szela,Mark E	06-01-2017	09-14-2017

	AIS	Total	SR's
8	2,772	2,772	14
Total	2,772	2,772	

Customer	Owner
Town of Marion, MA	Town of Marion, MA
2 Spring Street Plymouth Marion MA 02738	2 Spring Street Plymouth Marion MA 02738
+1 508 5551212	+1 508 5551212

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161149	Prime	BOSTON COLLEGE,CHESTNUT HILL CPM GC STORM & SEWER UPGRADES	JC	\$224,000.00	\$231,927.70

Project Manager	Bid Date	Project Close Date
Szela,Mark E	06-02-2017	11-16-2017

	AIS	Total	SR's
8	1,032	1,032	3
Total	1,032	1,032	

Customer	Owner
Boston College	Boston College
140 Commonwealth Avenue Middlesex Chestnut Hill MA 02467	140 Commonwealth Avenue Middlesex Chestnut Hill MA 02467
+1 617 5528000	+1 617 5528000

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161152	Sub	T. BUCK CONST., INC. BAILEYVILLE-PHASE 1 UTILITY	JC	\$180,155.50	\$169,958.50

Project Manager	Bid Date	Project Close Date
Szela,Mark E	05-12-2017	09-01-2017

	AIS	Total	SR's
8	703	703	5
Total	703	703	

Customer	Owner
Town of Baileyville, ME	Town of Baileyville, ME
63 Broadway Washington Baileyville ME 04694	63 Broadway Washington Baileyville ME 04694
+1 207 4273442	+1 207 4273442

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161156	Sub	NATIONAL WATER MAIN - READING CONT. #17-14 COLL. SYS IMPVMNT	JC	\$152,245.00	\$156,441.50

Project Manager	Bid Date	Project Close Date
Szela,Mark E	05-10-2017	09-20-2017

	AIS	Total	SR's
8	3,785	3,785	59
Total	3,785	3,785	

Customer	Owner
National Water Main and Cleaning-Canton,MA	Town of Reading, MA
25 Marshall Street Norfolk Canton MA 02021	16 Lowell St Middlesex Reading MA 01867-2685
+1 781 8280863	+1 781 9429080

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161163	Prime	NEWTON, MA - #C-3606 CIP PROJECT 5 REHAB No. C-3606	JC	\$2,833,298.40	\$2,922,776.92

Project Manager	Bid Date	Project Close Date
Szela, Mark E	08-10-2017	11-05-2018

	AIS	ILS	Total	SR's
8	12,326	12,534	24,860	443
Total	12,326	12,534	24,860	

Customer	Owner
City of Newton, MA	City of Newton, MA
1000 Commonwealth Avenue Middlesex New Town MA 2456	1000 Commonwealth Avenue Middlesex New Town MA 2456
+1 617 5527175	+1 617 5527175

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161164	Prime	PLYMOUTH, MA #21729 PIPELINE REHAB PO#18001592-000	JC	\$435,827.00	\$416,511.90

Project Manager	Bid Date	Project Close Date
Szela, Mark E	08-15-2017	02-22-2018

	AIS	Total	SR's
8	1,931	1,931	45
Total	1,931	1,931	

Customer	Owner
Town of Plymouth, MA	Town of Plymouth, MA
11 Lincoln Street Plymouth Plymouth MA 02360-3397	11 Lincoln Street Plymouth Plymouth MA 02360-3397
+1 508 8304070	+1 508 8304070

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161168	Sub	NATIONAL WATER MAIN, DANVERS MA WW FACILITIES IMPRO. J#DAN002-7	JC	\$144,056.00	\$135,595.00

Project Manager	Bid Date	Project Close Date
Szela, Mark E	08-24-2017	05-22-2018

	AIS	Total	SR's
8	2,337	2,337	22
Total	2,337	2,337	

Customer	Owner
National Water Main Cleaning Co	Town of Danvers, MA
25 Marshall Street Norfolk Canton MA 02021	1 Burroughs Street Essex Danvers MA 01923-2701
+1 781 8280863	+1 978 7772668

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161184	Prime	MECHANIC FALLS ME,ELM& LAUREL ELM ST & LAUREL ST. SEW.LINING	JC	\$129,750.00	\$189,021.15

Project Manager	Bid Date	Project Close Date
Szela,Mark E	11-14-2017	07-17-2018

	AIS	Total	SR's
8	147	147	0
Total	147	147	

Customer	Owner
Mechanic Falls Sanitary District	Mechanic Falls Sanitary District
56 Lewiston St. Androscoggin Mechanic Falls ME 4256	56 Lewiston St. Androscoggin Mechanic Falls ME 4256
+1 207 3453077	+1 207 3453077

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161191	Sub	NATIONAL WATER MAIN, SALEM MA SALEM MA SEWER REHAB, BID#T-09	JC	\$124,500.00	\$105,539.80

Project Manager	Bid Date	Project Close Date
Szela,Mark E	09-13-2017	03-27-2018

	AIS	Total	SR's
8	1,197	1,197	27
Total	1,197	1,197	

Customer	Owner
National Water Main and Cleaning-Canton,MA	City of Salem, MA-Department of Public Services
25 Marshall Street Norfolk Canton MA 02021	120 Washington Street 4th Floor Essex Salem MA 01970
+1 781 8280863	+1 978 7459595

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161198	Sub	NATIONAL WATER MAIN,REVERE MA COMPREHENSIVE SEW. SYSTEM REH.	JC	\$598,737.00	\$533,278.70

Project Manager	Bid Date	Project Close Date
Szela,Mark E	11-16-2017	12-13-2018

	AIS	STD	Total	SR's
8	9,456	31	9,487	266
Total	9,456	31	9,487	

Customer	Owner
National Water Main Cleaning Co	City of Revere, MA
25 Marshall Street Norfolk Canton MA 02021	City Hall 281 Broadway Suffolk Revere MA 02151
+1 781 8280863	+1 781 2868183

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
16120201	Prime	LEOMINSTER MA,RELEASE#1 SEW. LINE RECONST.W/CIPP REL#1	JC	\$1,874,520.52	\$1,659,659.87

Project Manager	Bid Date	Project Close Date
Szela,Mark E	05-10-2018	03-12-2019

	AIS	Total	SR's
8	19,684	19,684	326
Total	19,684	19,684	

Customer	Owner
City of Leominster, MA 109 Graham Street Worcester Leominster MA 01453-4234 +1 978 5347590	City of Leominster, MA 109 Graham Street Worcester Leominster MA 01453-4234 +1 978 5347590

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161210	Prime	CHEEKTOWAGA, NY(PHASE IV) 2018 PHASE IV TV/CLN & CIPP SHED #7	JC	\$5,153,366.60	\$4,859,593.54

Project Manager	Bid Date	Project Close Date
Szela,Mark E	04-20-2018	09-16-2019

	AIS	Total	SR's
8	105,546	105,546	1,978
Total	105,546	105,546	

Customer	Owner
Town of Cheektowaga, NY 275 Alexander Ave Erie Cheektowaga NY 14211 +1 716 8977288	Town of Cheektowaga, NY 275 Alexander Ave Erie Cheektowaga NY 14211 +1 716 8977288

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161212	Sub	NATIONAL WATER MAIN-MIDDLETOWN UPPER EASTON POINT 2018	JC	\$860,875.00	\$837,979.00

Project Manager	Bid Date	Project Close Date
Szela,Mark E	03-14-2018	10-31-2018

	AIS	Total	SR's
8	23,151	23,151	440
Total	23,151	23,151	

Customer	Owner
National Water Main and Cleaning-Canton,MA 25 Marshall Street Norfolk Canton MA 02021 +1 781 8280863	Town of Middletown,RI Town Hall 350 E Main Road Newport Middletown RI 02842-5267 +1 401 8492898

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161221	Sub	VMS CONSTR. CO.UCONN STORRS CT UCONN CLAY SEWER P#90231-PH2	JC	\$140,145.00	\$149,132.46

Project Manager	Bid Date	Project Close Date		AIS	Total	SR's
Szela,Mark E	05-15-2018	11-01-2018	8	413	413	1
			Total	413	413	

Customer	Owner
VMS Construction Company- Vernon,CT	University of Connecticut - Main Campus - Storrs, CT
162 Lake Street Tolland Vernon CT 6066	Main Campus Tolland Storrs CT 6269
+1 860 8710278	+1 860 4862000

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161223	Prime	JAFFREY, NH - 2018 REHAB PO#6955 - CIPP SWR REHAB.	JC	\$177,446.00	\$180,532.00

Project Manager	Bid Date	Project Close Date		AIS	Total	SR's
Szela,Mark E	07-20-2018	08-24-2018	8	352	352	5
			Total	352	352	

Customer	Owner
Town of Jaffrey, NH	Town of Jaffrey, NH
23 Knight Street Cheshire Jaffrey NH 03452	23 Knight Street Cheshire Jaffrey NH 03452
+1 603 5326521	+1 603 5326521

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161225	Sub	NATIONAL WATER MAIN,REVERE MA COMPREHENSIVE SS REHAB PHASE 8	JC	\$648,707.00	\$483,056.80

Project Manager	Bid Date	Project Close Date		AIS	Total	SR's
Szela,Mark E	05-29-2018	07-22-2020	8	10,254	10,254	240
			Total	10,254	10,254	

Customer	Owner
National Water Main and Cleaning- Canton,MA	City of Revere, MA
25 Marshall Street Norfolk Canton MA 02021	City Hall 281 Broadway Suffolk Revere MA 02151
+1 781 8280863	+1 781 2868183

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161226	Prime	NARRAGANSETT BAY,CONT#304.66C C#304.66C,FY2018,PO#370617	JC	\$1,453,199.00	\$1,319,144.20

Project Manager	Bid Date	Project Close Date
Szela,Mark E	06-05-2018	08-09-2019

	AIS	Total	SR's
8	301	301	3
Total	301	301	

Customer	Owner
Narragansett Bay Commission	Narragansett Bay Commission
One Service Road Providence Providence RI 02905	One Service Road Providence Providence RI 02905
+1 401 4618848	+1 401 4618848

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161230	Prime	MARION, MA - 2018 SS IMPRVMENTS I/I REMOVAL-AREA CR-5B & 5C	JC	\$129,073.00	\$130,760.01

Project Manager	Bid Date	Project Close Date
Szela,Mark E	06-28-2018	12-11-2018

	AIS	Total	SR's
8	1,235	1,235	7
Total	1,235	1,235	

Customer	Owner
Town of Marion, MA	Town of Marion, MA
2 Spring Street Plymouth Marion MA 02738	2 Spring Street Plymouth Marion MA 02738
+1 508 5551212	+1 508 5551212

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161233	Prime	BELMONT, MA -COMMON ST. REHAB SEWER & DRAIN REHAB	JC	\$126,160.00	\$146,763.00

Project Manager	Bid Date	Project Close Date
Szela,Mark E	08-01-2018	02-04-2019

	AIS	Total	SR's
8	2,488	2,488	53
Total	2,488	2,488	

Customer	Owner
Town of Belmont, MA - Office of Community Development	Town of Belmont, MA - Office of Community Development
19 Moore Street Homer Municipal Building 19 Moore St Middlesex Belmont MA 02478	19 Moore Street Homer Municipal Building 19 Moore St Middlesex Belmont MA 02478
+1 617 9932650	+1 617 9932650

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161237	Sub	R.F. JORDAN & SON'S-MACHIAS,ME SOUTH SIDE SWR INTERCEPTOR I	JC	\$142,239.00	\$166,883.00

Project Manager	Bid Date	Project Close Date		AIS	Total	SR's
Szela,Mark E	12-21-2017	11-15-2018	8	1,398	1,398	1
			Total	1,398	1,398	

Customer	Owner
RF Jordan & Sons Construction, Inc. 85 Water Street Hancock Ellsworth ME 04605 +1 207 6679321	Town of Machias, ME 27 Easy Main St Washington Machias ME 04654 +1 207 2556621

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161241	Sub	NATIONAL WATER MAIN-DANVERS MA COMPREHENSIVE SWR SYSTEM REHAB	JC	\$180,124.00	\$180,462.00

Project Manager	Bid Date	Project Close Date		AIS	Total	SR's
Szela,Mark E	07-19-2018	12-14-2018	8	6,799	6,799	82
			Total	6,799	6,799	

Customer	Owner
National Water Main Cleaning Co 25 Marshall Street Norfolk Canton MA 02021 +1 781 8280863	Town of Danvers, MA 1 Burroughs Street Essex Danvers MA 01923-2701 +1 978 7772668

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161249	Sub	TRUE BLUE ENVIRONMENTAL SERVIC CSO #20 OLD MILL RD MIDDLETOWN	JC	\$132,020.00	\$169,610.15

Project Manager	Bid Date	Project Close Date		AIS	Total	SR's
Szela,Mark E	11-02-2017	07-23-2019	8	6,207	6,207	101
			Total	6,207	6,207	

Customer	Owner
True Blue Environmental-Wallingford, CT 5 Northfield Road New Haven Wallingford CT 06492 +1 203 2693355	City of Middletown,CT-*Main Municipal Building 245 DeKoven Drive Po Box 1300 Middlesex Middletown CT 06457-1300 +1 860 3438085

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161253	Sub	NATIONAL WATER MAIN-BEVERLY,MA SS SUBSYSTEM REHAB #18-028	JC	\$548,942.00	\$525,744.00

Project Manager	Bid Date	Project Close Date
Petruzzi,Jeffrey J.	09-26-2018	03-09-2020

	AIS	Total	SR's
8	9,244	9,244	160
Total	9,244	9,244	

Customer	Owner
National Water Main and Cleaning-Canton,MA	City of Beverly, MA
25 Marshall Street Norfolk Canton MA 02021	191 Cabot Street Essex Beverly MA 01915-5849
+1 781 8280863	+1 508 9216000

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161254	Sub	INLAND WATER - WEYMOUTH, MA 2018 SS REHAB - WEYMOUTH, MA	JC	\$227,544.00	\$214,075.00

Project Manager	Bid Date	Project Close Date
Szela,Mark E	09-12-2018	03-04-2019

	AIS	Total	SR's
8	4,132	4,132	47
Total	4,132	4,132	

Customer	Owner
Inland Waters Pipeline Svcs	Town of Weymouth, MA
275 Scituate Avenue Providence Johnston RI 02919-4724	120 Winter Street Norfolk Weymouth MA 02188-3305
+1 401 9435302	+1 781 3375100

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161255	Sub	JABLONSKI EXCAV.-E. SYRACUSE SSO MITIGATION PHASE 2 SS SYS.	JC	\$220,578.00	\$240,588.00

Project Manager	Bid Date	Project Close Date
Szela,Mark E	09-13-2018	10-16-2019

	AIS	Total	SR's
8	5,133	5,133	138
Total	5,133	5,133	

Customer	Owner
Jablonski Excavating, Inc.	Village of East Syracuse, NY
678 County Highway 108 Montgomery St Johnsville NY 13452	204 North Center Street Onondaga East Syracuse NY 13057
+1 518 5685874	+1 315 4630974

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161259	Prime	WARREN RI,CHILD STREET SIPHON CHILD ST. SIPHON CIPP PROJECT	JC	\$108,000.00	\$108,000.00

Project Manager	Bid Date	Project Close Date
Szela,Mark E	12-19-2018	04-09-2019

	STD	Total	SR's
8	130	130	2
Total	130	130	

Customer	Owner
Town of Warren, RI	Town of Warren, RI
Town Hall 514 Main Street Bristol Warren RI 02885	Town Hall 514 Main Street Bristol Warren RI 02885
+1 401 2457340	+1 401 2457340

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161269	Sub	VMS CONST.-UCONN-PHASE 3 UCONN CLAY SEWER P#.90231-PH3	JC	\$123,284.00	\$82,054.00

Project Manager	Bid Date	Project Close Date
Petruzzi,Jeffrey J.	12-06-2018	08-24-2019

	AIS	Total	SR's
8	2,291	2,291	20
Total	2,291	2,291	

Customer	Owner
VMS Construction Company- Vernon,CT	University of Connecticut - Main Campus - Storrs, CT
162 Lake Street Tolland Vernon CT 6066	Main Campus Tolland Storrs CT 6269
+1 860 8710278	+1 860 4862000

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161279	Sub	NATIONAL WATER MAIN,PLYMOUTH PIPELINE REHAB PRJ.JOB#PLY0018	JC	\$165,300.00	\$184,078.10

Project Manager	Bid Date	Project Close Date
Szela,Mark E	02-07-2019	11-04-2019

	AIS	Total	SR's
8	3,570	3,570	81
Total	3,570	3,570	

Customer	Owner
National Water Main Cleaning Co	Town of Plymouth, MA
25 Marshall Street Norfolk Canton MA 02021	11 Lincoln Street Plymouth Plymouth MA 02360-3397
+1 781 8280863	+1 508 8304070

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161280	Sub	COMMONWEALTH CONST & UTILITIES WINCHESTER, MA- PHASE 2 SS RHB	JC	\$108,423.00	\$106,330.00

Project Manager	Bid Date	Project Close Date
Szela, Mark E	02-21-2019	07-26-2019

	AIS	Total	SR's
8	3,789	3,789	52
Total	3,789	3,789	

Customer	Owner
Commonwealth Construction & Utility Co	Town of Winchester, MA.
Maynard Ma Middlesex Maynard MA 01754	71 Mount Vernon Street Middlesex Winchester MA 01890
+1 978 9384888	+1 781 7217120

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161288	Sub	NATIONAL WATER MAIN-KENMORE 18 2018-CONT. A., KENMORE, NY	JC	\$360,070.00	\$360,855.00

Project Manager	Bid Date	Project Close Date
Petruzzi, Jeffrey J.	10-30-2018	11-18-2019

	AIS	Total	SR's
8	5,470	5,470	126
Total	5,470	5,470	

Customer	Owner
National Water Main and Cleaning-Canton, MA	Village of Kenmore, NY
25 Marshall Street Norfolk Canton MA 02021	Kenmore Municipal Building - Room 17 29 Erie Kenmore NY 14217
+1 781 8280863	+1 716 8735700

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
161289	Sub	NATIONAL WATER MAIN-W. SENECA 2019 PHASE 5 WEST SENECA	JC	\$538,714.00	\$421,202.00

Project Manager	Bid Date	Project Close Date
Petruzzi, Jeffrey J.	04-04-2019	11-25-2019

	AIS	Total	SR's
8	8,629	8,629	93
Total	8,629	8,629	

Customer	Owner
National Water Main Cleaning Co	Town of West Seneca, NY
25 Marshall Street Norfolk Canton MA 02021	1250 Union Road Erie Buffalo NY 14224-2989
+1 781 8280863	+1 716 6745600

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
380166	Prime	COLUMBUS,OH -CIP#650404-100041 2014 ANNUAL LINING CONTRACT	JC	\$3,658,966.20	\$4,423,628.09

Project Manager	Bid Date	Project Close Date
Szela,Mark E	10-22-2014	07-11-2018

	AIS	Total	SR's
8	46,516	46,516	1,152
Total	46,516	46,516	

Customer	Owner
City of Columbus, OH-Broad Street	City of Columbus, OH-Broad Street
90 West Broad Street Franklin Columbus OH 43215	90 West Broad Street Franklin Columbus OH 43215
+1 614 6458100	+1 614 6458100

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
380167	Prime	MT. ORAB, OH 2014 SANITARY SEWER REHAB.	JC	\$543,642.60	\$565,502.13

Project Manager	Bid Date	Project Close Date
Ball, Jerry L	10-20-2014	08-04-2017

	AIS	Total	SR's
8	12,283	12,283	152
Total	12,283	12,283	

Customer	Owner
Village of Mt Orab, Oh	Village of Mt Orab, Oh
211 South High Street Brown Mt Orab OH 45154	211 South High Street Brown Mt Orab OH 45154
+1 937 4444141	+1 937 4444141

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
380168	Prime	BOARD OF CO. COMM. CLERMONT CO COLLECTION SYS. #6402-62005	JC	\$1,821,322.90	\$1,998,359.21

Project Manager	Bid Date	Project Close Date
Ball, Jerry L	03-05-2015	06-08-2016

	AIS	Total	SR's
8	4,758	4,758	54
Total	4,758	4,758	

Customer	Owner
Clermont County-Batavia, OH-Water and Sewer	Clermont County-Batavia, OH
2379 Clermont Center Drive Clermont Batavia OH 45103	101 East Main Street 3rd Floor Clermont Batavia OH 45103
+1 513 7327930	+1 555 5555555

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
380169	Prime	COLUMBUS,OH -CIP#650874-100002 BLUEPRINT LINDEN LINING,PHASE2	JC	\$3,578,159.50	\$3,424,115.13

Project Manager	Bid Date	Project Close Date
Szela,Mark E	12-10-2014	06-14-2018

	AIS	Total	SR's
8	45,120	45,120	1,582
Total	45,120	45,120	

Customer	Owner
City of Columbus, OH-Broad Street	City of Columbus, OH-Broad Street
90 West Broad Street Franklin Columbus OH 43215	90 West Broad Street Franklin Columbus OH 43215
+1 614 6458100	+1 614 6458100

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
380172	Prime	DAYTON,OH -SE SANITARY PHASE 4 SOUTHEAST SANITARY LINER PH 4	JC	\$789,673.30	\$859,663.00

Project Manager	Bid Date	Project Close Date
Ball, Jerry L	02-26-2015	01-27-2016

	AIS	Total	SR's
8	24,312	24,312	673
Total	24,312	24,312	

Customer	Owner
City of Dayton, OH	City of Dayton, OH
101 W Third Street Montgomery Dayton OH 45402	101 W Third Street Montgomery Dayton OH 45402
+1 937 3333333	+1 937 3333333

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
380173	Prime	BATAVIA, OH - 2015 2015 SS IMPROVEMENTS	JC	\$391,311.80	\$337,816.01

Project Manager	Bid Date	Project Close Date
Ball, Jerry L	04-30-2015	10-07-2015

	AIS	Total	SR's
8	4,344	4,344	98
Total	4,344	4,344	

Customer	Owner
Village of Batavia, OH	Village of Batavia, OH
65 North Second Street Clermont Batavia OH 45103	65 North Second Street Clermont Batavia OH 45103
+1 513 7322020	+1 513 7322020

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
380174	Prime	DAYTON,OH-UPPER RIVERDALE,PH 5 SANITARY LINING PHASE 5	JC	\$1,022,254.30	\$1,078,419.50

Project Manager	Bid Date	Project Close Date
Ball, Jerry L	03-26-2015	04-26-2016

	AIS	Total	SR's
8	25,413	25,413	699
Total	25,413	25,413	

Customer	Owner
City of Dayton, OH	City of Dayton, OH
101 W Third Street Montgomery Dayton OH 45402	101 W Third Street Montgomery Dayton OH 45402
+1 937 3333333	+1 937 3333333

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
380176	Prime	FAIRFIELD, OH - SWR REHAB SEWER REHAB VIA CIPP METHOD	JC	\$155,756.10	\$154,733.50

Project Manager	Bid Date	Project Close Date
Ball, Jerry L	07-13-2015	12-01-2015

	AIS	Total	SR's
8	5,613	5,613	109
Total	5,613	5,613	

Customer	Owner
City of Fairfield, OH	City of Fairfield, OH
Fairfield Municipal Building 5350 Pleasant Butler Fairfield OH 45014	Fairfield Municipal Building 5350 Pleasant Butler Fairfield OH 45014
+1 513 8675375	+1 513 8675375

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
380178	Prime	DAYTON OH,UPPER RIVERDALE,PH 6 SANITARY LINING PHASE 6	JC	\$987,190.00	\$911,726.70

Project Manager	Bid Date	Project Close Date
Ball, Jerry L	09-24-2015	08-02-2016

	AIS	Total	SR's
8	25,836	25,836	805
Total	25,836	25,836	

Customer	Owner
City of Dayton, OH	City of Dayton, OH
101 W Third Street Montgomery Dayton OH 45402	101 W Third Street Montgomery Dayton OH 45402
+1 937 3333333	+1 937 3333333

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
380179	Prime	FAIRBORN OH, BID NO. 15-10 SANIT. SEWER REHAB, BID 15-10	JC	\$143,832.80	\$158,724.60

Project Manager	Bid Date	Project Close Date
Ball, Jerry L	12-09-2015	06-12-2016

	AIS	Total	SR's
8	2,499	2,499	50
Total	2,499	2,499	

Customer	Owner
City of Fairborn, OH 44 West Hebble Ave 44 West Hebble Avenue Greene Fairborn OH 45324 +1 937 7543030	City of Fairborn, OH 44 West Hebble Ave 44 West Hebble Avenue Greene Fairborn OH 45324 +1 937 7543030

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
380182	Prime	DAYTON,OH WOLF CREEK SANITARY LINER PHASE 4	JC	\$774,492.60	\$846,903.80

Project Manager	Bid Date	Project Close Date
Ball, Jerry L	02-18-2016	02-06-2017

	AIS	Total	SR's
8	26,644	26,644	633
Total	26,644	26,644	

Customer	Owner
City of Dayton, OH 101 W Third Street Montgomery Dayton OH 45402 +1 937 3333333	City of Dayton, OH 101 W Third Street Montgomery Dayton OH 45402 +1 937 3333333

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
380184	Prime	BOARD OF CO. COMM. CLERMONT CO COLLECTION SYS. #6402-62006	JC	\$2,774,701.50	\$2,665,980.87

Project Manager	Bid Date	Project Close Date
Szela,Mark E	07-21-2016	02-01-2018

	AIS	STD	Total	SR's
8	1,842	2,020	3,862	5
Total	1,842	2,020	3,862	

Customer	Owner
Clermont County-Batavia, OH-Water and Sewer 2379 Clermont Center Drive Clermont Batavia OH 45103 +1 513 7327930	Clermont County-Batavia, OH 101 East Main Street 3rd Floor Clermont Batavia OH 45103 +1 555 5555555

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
380189	Prime	BEXLEY, OH -2017 SS IMPRVMENTS 2017 SS IMPROVEMENTS	JC	\$184,345.00	\$177,474.50

Project Manager	Bid Date	Project Close Date		AIS	Total	SR's
Ball, Jerry L	02-01-2017	09-14-2017	8	6,619	6,619	99
			Total	6,619	6,619	

Customer	Owner
City of Bexley, OH	City of Bexley, OH
2242 Main Street Franklin Bexley OH 43209	2242 Main Street Franklin Bexley OH 43209
+1 614 2358694	+1 614 2358694

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
380190	Prime	FAIRBORN OH, BID NO. 17-05 SANIT. SEWER REHAB, BID 17-05	JC	\$119,807.00	\$121,631.20

Project Manager	Bid Date	Project Close Date		AIS	Total	SR's
Ball, Jerry L	03-30-2017	06-30-2017	8	5,009	5,009	121
			Total	5,009	5,009	

Customer	Owner
City of Fairborn, OH	City of Fairborn, OH
44 West Hebble Ave 44 West Hebble Avenue Greene Fairborn OH 45324	44 West Hebble Ave 44 West Hebble Avenue Greene Fairborn OH 45324
+1 937 7543030	+1 937 7543030

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
380191	Sub	UNITED PIPE RENEWAL, INC. UPPER ARLINGTON-2017 SWR PRJT.	JC	\$303,005.35	\$294,153.00

Project Manager	Bid Date	Project Close Date		AIS	Total	SR's
Szela, Mark E	03-10-2017	01-29-2018	8	10,207	10,207	92
			Total	10,207	10,207	

Customer	Owner
City of Upper Arlington, OH	City of Upper Arlington, OH
3600 Tremont Road Franklin Upper Arlington OH 43221	3600 Tremont Road Franklin Upper Arlington OH 43221
+1 614 5835040	+1 614 5835040

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
380193	Prime	XENIA,OH- 2017,CONT#XE-057 REHAB EXISTING SWR PIPELINE	JC	\$215,589.50	\$220,767.61

Project Manager	Bid Date	Project Close Date
Ball, Jerry L	04-04-2017	09-25-2017

	AIS	Total	SR's
8	9,973	9,973	191
Total	9,973	9,973	

Customer	Owner
City of Xenia, OH	City of Xenia, OH
101 North Detroit Street Greene Xenia OH 45385	101 North Detroit Street Greene Xenia OH 45385
+1 937 3767232	+1 937 3767232

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
380194	Prime	REYNOLDSBURG, OH - ROCKY DEN SANITARY SEWER REHAB	JC	\$240,116.75	\$225,801.00

Project Manager	Bid Date	Project Close Date
Ball, Jerry L	05-05-2017	09-22-2017

	AIS	Total	SR's
8	6,261	6,261	121
Total	6,261	6,261	

Customer	Owner
City of Reynoldsburg, OH	City of Reynoldsburg, OH
7232 E. Main St Franklin Reynoldsburg OH 43068	7232 E. Main St Franklin Reynoldsburg OH 43068
+1 614 3226840	+1 614 3226840

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
380195	Prime	CLARK COUNTY COMMISSIONER,2017 CLARK COUNTY SEWER REHAB 2017	JC	\$206,999.00	\$226,018.25

Project Manager	Bid Date	Project Close Date
Szela,Mark E	06-08-2017	04-18-2018

	AIS	Total	SR's
8	9,133	9,133	151
Total	9,133	9,133	

Customer	Owner
County of Clark, OH	County of Clark, OH
50 East Columbia Street Clark Springfield OH 45501	50 East Columbia Street Clark Springfield OH 45501
+1 937 5212005	+1 937 5212005

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
380198	Sub	UNGER CONSTRUCTION, LTD SANITARY SEWER SYS IMPRVMENTS	JC	\$137,650.00	\$81,833.00

Project Manager	Bid Date	Project Close Date
Ball, Jerry L	04-21-2017	10-31-2017

	AIS	Total	SR's
8	1,909	1,909	26
Total	1,909	1,909	

Customer	Owner
Unger Construction LTD 761 Tomlin Road Adams West Union OH 45693 +1 937 7251806	Village of Manchester, OH 400 Pike Street Adams Manchester OH 45144 +1 937 5492516

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
380203	Prime	GLENDALE, OH - 2017 SS I/I REDUCTION - PHASE 1	JC	\$181,673.00	\$183,691.40

Project Manager	Bid Date	Project Close Date
Szela, Mark E	08-29-2017	03-06-2018

	AIS	Total	SR's
8	2,291	2,291	35
Total	2,291	2,291	

Customer	Owner
Village of Glendale, Oh 30 Village Square Hamilton Glendale OH 45246 +1 513 7716860	Village of Glendale, Oh 30 Village Square Hamilton Glendale OH 45246 +1 513 7716860

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
380205	Prime	MASON, OH - DOWNTOWN SS REHAB DOWNTOWN SS REHAB. PHASE 2	JC	\$553,767.00	\$342,805.66

Project Manager	Bid Date	Project Close Date
Szela, Mark E	09-12-2017	05-07-2018

	AIS	Total	SR's
8	11,554	11,554	158
Total	11,554	11,554	

Customer	Owner
City of Mason, OH 6000 Mason - Montgomery Rd. Warren Mason OH 45040 +1 513 2298500	City of Mason, OH 6000 Mason - Montgomery Rd. Warren Mason OH 45040 +1 513 2298500

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
380212	Prime	FAIRBORN OH, BID NO. 18-02 SANIT.SEW. LINING2018 BID18-02	JC	\$136,947.75	\$171,241.75

Project Manager	Bid Date	Project Close Date
Szela,Mark E	02-27-2018	06-12-2018

	AIS	Total	SR's
8	4,557	4,557	70
Total	4,557	4,557	

Customer	Owner
City of Fairborn, OH	City of Fairborn, OH
44 West Hebble Ave 44 West Hebble Avenue Greene Fairborn OH 45324	44 West Hebble Ave 44 West Hebble Avenue Greene Fairborn OH 45324
+1 937 7543030	+1 937 7543030

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
380216	Prime	XENIA,OH- 2018 SWR PIPELINES SWR PIPELINES REHAB PRJT 2018	JC	\$309,265.65	\$345,374.40

Project Manager	Bid Date	Project Close Date
Szela,Mark E	04-12-2018	09-14-2018

	AIS	Total	SR's
8	10,882	10,882	183
Total	10,882	10,882	

Customer	Owner
City of Xenia, OH	City of Xenia, OH
101 North Detroit Street Greene Xenia OH 45385	101 North Detroit Street Greene Xenia OH 45385
+1 937 3767232	+1 937 3767232

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
380219	Prime	AUGLAIZE COUNTY COMMISSIONERS NORTHWEST ST. SS REHAB CONT. A	JC	\$140,426.00	\$132,236.00

Project Manager	Bid Date	Project Close Date
Szela,Mark E	04-26-2018	10-04-2018

	AIS	Total	SR's
8	4,989	4,989	106
Total	4,989	4,989	

Customer	Owner
Auglaize County-Wapakoneta, OH-Commissioners	Auglaize County-Wapakoneta, OH-Commissioners
209 S. Blackhoof St Auglaize Wapakoneta OH 45895	209 S. Blackhoof St Auglaize Wapakoneta OH 45895
+1 419 7388945	+1 419 7388945

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
380220	Prime	GREENVILLE, OH 2018 PROJECT SS LINING MAINTENANCE PROJECT	JC	\$183,743.45	\$177,352.67

Project Manager	Bid Date	Project Close Date		AIS	Total	SR's
Szela,Mark E	06-21-2018	12-17-2018	8	3,732	3,732	119
			Total	3,732	3,732	

Customer	Owner
City of Greenville, OH	City of Greenville, OH
100 Public Square Darke Greenville OH 45331	100 Public Square Darke Greenville OH 45331
+1 937 5484930	+1 937 5484930

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
380221	Prime	SPRINGFIELD OH, 2018 MISC.SS 2018 MISC. SS LINING PROJECT	JC	\$343,494.00	\$587,782.92

Project Manager	Bid Date	Project Close Date		AIS	Total	SR's
Szela,Mark E	06-22-2018	07-12-2019	8	4,506	4,506	135
			Total	4,506	4,506	

Customer	Owner
City of Springfield, OH	City of Springfield, OH
76 E High Street Clark Springfield OH 45501	76 E High Street Clark Springfield OH 45501
+1 937 3247700	+1 937 3247700

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
380222	Prime	DAYTON,OH -CT-18-2061 SANITARY LINER PHASE 8	JC	\$777,801.78	\$713,410.80

Project Manager	Bid Date	Project Close Date		AIS	Total	SR's
Szela,Mark E	06-07-2018	06-05-2019	8	22,408	22,408	664
			Total	22,408	22,408	

Customer	Owner
City of Dayton, OH	City of Dayton, OH
101 W Third Street Montgomery Dayton OH 45402	101 W Third Street Montgomery Dayton OH 45402
+1 937 3333333	+1 937 3333333

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
38022801	Prime	MONTGOMERY COUNTY,OH-2018 WO#1 SS LINING #130026-17	JC	\$320,602.00	\$498,736.25

Project Manager	Bid Date	Project Close Date
Toke, Amal B	07-17-2019	03-12-2020

	AIS	Total	SR's
8	5,429	5,429	108
Total	5,429	5,429	

Customer	Owner
Montgomery County Ohio-*Main Office-Dayton,OH	Montgomery County Ohio-*Main Office-Dayton,OH
451 W Third Street Montgomery Dayton OH 45422	451 W Third Street Montgomery Dayton OH 45422
+1 937 2254693	+1 937 2254693

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
380230	Prime	HAMILTON OH,2018 CONTR#18-34 2018 SEWER LINING CONTR.#18-34	JC	\$382,190.00	\$438,353.88

Project Manager	Bid Date	Project Close Date
Toke, Amal B	12-20-2018	02-24-2020

	AIS	Total	SR's
8	4,123	4,123	159
Total	4,123	4,123	

Customer	Owner
City of Hamilton, OH	City of Hamilton, OH
345 High Street Suite 450 Butler Hamilton OH 45011	345 High Street Suite 450 Butler Hamilton OH 45011
+1 513 7857278	+1 513 7857278

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
380234	Sub	PERFORMANCE PIPELING, UPPER AR 2019 SUSTAINABLE SWR PRJT	JC	\$195,896.00	\$184,005.98

Project Manager	Bid Date	Project Close Date
Toke, Amal B	02-12-2019	01-28-2020

	AIS	Total	SR's
8	4,866	4,866	48
Total	4,866	4,866	

Customer	Owner
Performance Pipelining Inc-Ottawa, IL	City of Upper Arlington, OH
1551 West Norris Drive Ottawa IL 61350	3600 Tremont Road Franklin Upper Arlington OH 43221
+1 815 4330080	+1 614 5835040

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
380237	Prime	GREENVILLE OH, 2019 PROJECT SANITARY SEWER LINING PROJECT	JC	\$199,668.01	\$214,808.81

Project Manager	Bid Date	Project Close Date
Toke, Amal B	08-01-2019	12-23-2019

	AIS	Total	SR's
8	1,750	1,750	41
Total	1,750	1,750	

Customer	Owner
City of Greenville, OH 100 Public Square Darke Greenville OH 45331 +1 937 5484930	City of Greenville, OH 100 Public Square Darke Greenville OH 45331 +1 937 5484930

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
381003	Prime	LOWER BURRELL MUNICIPAL AUTH LBMA LITTLE PUCKETA INTERCPTN	JC	\$1,649,801.00	\$1,501,204.23

Project Manager	Bid Date	Project Close Date
Merriman, Shayne D	04-18-2017	07-23-2019

	AIS	STD	Total	SR's
8	35,130	1,089	36,219	553
Total	35,130	1,089	36,219	

Customer	Owner
City of Lower Burrell, PA 2800 Bethel Street Westmoreland Lower Burrell PA 15068 +1 724 8892007	City of Lower Burrell, PA 2800 Bethel Street Westmoreland Lower Burrell PA 15068 +1 724 8892007

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
381004	Sub	SIPPEL DEVELOPMENT, #2017-3 MOXHAM PART II (CONT#2017-03)	JC	\$199,221.00	\$207,925.73

Project Manager	Bid Date	Project Close Date
Rosengarten, Nicholas S	02-22-2017	12-09-2017

	AIS	Total	SR's
8	8,885	8,885	179
Total	8,885	8,885	

Customer	Owner
City of Johnstown, PA 401 Main Street Cambria Johnstown PA 15901 +1 814 5332104	City of Johnstown, PA 401 Main Street Cambria Johnstown PA 15901 +1 814 5332104

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
381005	Sub	SIPPEL DEVELOPMENT, #2017-4 MOXHAM PART II (CONT#2017-04)	JC	\$162,756.50	\$164,904.65

Project Manager	Bid Date	Project Close Date
Rosengarten, Nicholas S	02-21-2017	09-06-2018

	AIS	Total	SR's
8	6,382	6,382	140
Total	6,382	6,382	

Customer	Owner
City of Johnstown, PA 401 Main Street Cambria Johnstown PA 15901 +1 814 5332104	City of Johnstown, PA 401 Main Street Cambria Johnstown PA 15901 +1 814 5332104

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
381009	Prime	VERONA BOROUGH, PA SANITARY SWR REHAB. PHASE 2	JC	\$101,650.58	\$110,468.00

Project Manager	Bid Date	Project Close Date
Merriman, Shayne D	08-23-2017	03-31-2018

	AIS	Total	SR's
8	1,639	1,639	37
Total	1,639	1,639	

Customer	Owner
Borough of Verona, PA 736 East Railroad Avenue Allegheny Verona PA 15147 +1 412 8288080	Borough of Verona, PA 736 East Railroad Avenue Allegheny Verona PA 15147 +1 412 8288080

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
381012	Prime	MCCLURE MUNICIPAL AUTHORITY CONT. #17-01 - 2017 SWR REHAB	JC	\$572,532.50	\$949,555.25

Project Manager	Bid Date	Project Close Date
Rosengarten, Nicholas S	09-06-2017	06-27-2018

	AIS	Total	SR's
8	16,433	16,433	212
Total	16,433	16,433	

Customer	Owner
McClure Municipal Authority- McClure,PA 2 Will Lepley Lane Snyder McClure PA 17814 +1 570 6584755	McClure Municipal Authority- McClure,PA 2 Will Lepley Lane Snyder McClure PA 17814 +1 570 6584755

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
381016	Prime	MID-MON VALLEY WPCA CONTRACT #2018-01 - ALLENPORT	JC	\$144,677.00	\$176,137.44

Project Manager	Bid Date	Project Close Date
Merriman, Shayne D	03-01-2018	11-03-2018

	AIS	Total	SR's
8	542	542	1
Total	542	542	

Customer	Owner
Mid Mon Valley Water Pollution Control Authority	Mid Mon Valley Water Pollution Control Authority
Po Box 197 Washington Allenport PA 15412	Po Box 197 Washington Allenport PA 15412
+1 724 3264421	+1 724 3264421

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
381017	Prime	ROSS TOWNSHIP 2018 SS REHAB CONTRACT B - MH-MH LINING	JC	\$429,218.00	\$435,761.30

Project Manager	Bid Date	Project Close Date
Merriman, Shayne D	02-28-2018	01-29-2019

	AIS	Total	SR's
8	11,310	11,310	173
Total	11,310	11,310	

Customer	Owner
Ross Township-Pittsburgh,PA	Ross Township-Pittsburgh,PA
1000 Ross Municipal Drive Allegheny Pittsburgh PA 15237	1000 Ross Municipal Drive Allegheny Pittsburgh PA 15237
+1 412 9317055	+1 412 9317055

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
381022	Prime	PETERS TOWNSHIP SANI AUTHORITY RUTLEDGE DR. #2018-01	JC	\$111,235.30	\$109,042.84

Project Manager	Bid Date	Project Close Date
Merriman, Shayne D	08-08-2018	11-07-2018

	AIS	Total	SR's
8	2,576	2,576	22
Total	2,576	2,576	

Customer	Owner
Peters Township Sanitary Authority-McMurray, PA	Peters Township Sanitary Authority-McMurray, PA
3244 Washington Road Washington McMurray PA 15317-3153	3244 Washington Road Washington McMurray PA 15317-3153
+1 724 9416709	+1 724 9416709

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
381023	Prime	PORT ROYAL MUN AUTHORITY THIRD ST SS PIPE LINING	JC	\$121,635.00	\$101,003.30

Project Manager	Bid Date	Project Close Date
Merriman, Shayne D	08-30-2018	11-09-2018

	AIS	Total	SR's
8	1,965	1,965	26
Total	1,965	1,965	

Customer	Owner
Port Royal Municipal Authority 804 W Eight Street Junata Port Royal PA 17082 +1 717 5272711	Port Royal Municipal Authority 804 W Eight Street Junata Port Royal PA 17082 +1 717 5272711

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
381025	Prime	STARK COUNTY COMMISSIONERS P 597 EAST CANTON SAN SWR PROJ	JC	\$319,942.00	\$356,718.50

Project Manager	Bid Date	Project Close Date
Merriman, Shayne D	09-13-2018	07-19-2019

	AIS	Total	SR's
8	9,342	9,342	146
Total	9,342	9,342	

Customer	Owner
County of Stark County Sanitary Engineers, OH 1701 Mahoning Road N E 1701 Mahoning Road N.E. Stark Canton OH 44705-7901 +1 330 4512303	County of Stark County Sanitary Engineers, OH 1701 Mahoning Road N E 1701 Mahoning Road N.E. Stark Canton OH 44705-7901 +1 330 4512303

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
381028	Prime	MAHONING COUNTY COMMISSION NEW MIDDLETON SAN SWR PHASE 3	JC	\$729,451.00	\$702,947.25

Project Manager	Bid Date	Project Close Date
Merriman, Shayne D	09-26-2018	10-18-2019

	AIS	Total	SR's
8	17,160	17,160	262
Total	17,160	17,160	

Customer	Owner
Mahoning County-Youngstown,OH 761 Industrial Road Mahoning Youngstown OH 44509 +1 330 7935514	Mahoning County-Youngstown,OH 761 Industrial Road Mahoning Youngstown OH 44509 +1 330 7935514

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
381035	Prime	DORMONT, PA - CONTRACT #1 COMPREHENSIVE SWR SYS-MH TO MH	JC	\$151,902.00	\$157,050.50

Project Manager	Bid Date	Project Close Date
Merriman, Shayne D	04-30-2019	09-09-2019

	AIS	Total	SR's
8	3,529	3,529	128
Total	3,529	3,529	

Customer	Owner
Borough of Dormont,PA	Borough of Dormont,PA
1444 Hillsdale Avenue Allegheny Pittsburgh PA 15216	1444 Hillsdale Avenue Allegheny Pittsburgh PA 15216
+1 412 5618900	+1 412 5618900

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
390450	Prime	BALTIMORE, MD - CONTRACT #898 STONEY RUN /JONES FALL SWRSLED	JC	\$7,066,130.15	\$6,351,824.59

Project Manager	Bid Date	Project Close Date
Rosengarten, Nicholas S	09-12-2012	09-09-2016

	AIS	Total	SR's
8	58,101	58,101	1,563
Total	58,101	58,101	

Customer	Owner
City of Baltimore, MD-Department of Public Works	City of Baltimore, MD-Department of Public Works
200 Holiday St. Able Wolman Bldg Baltimore City Baltimore MD 21202	200 Holiday St. Able Wolman Bldg Baltimore City Baltimore MD 21202
+1 410 3966883	+1 410 3966883

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
390451	Prime	BALTIMORE, MD - CONTRT #SC 899 WESTERN RUN/JONES FALLS SWRSHD	JC	\$10,641,781.40	\$10,160,517.41

Project Manager	Bid Date	Project Close Date
Rosengarten, Nicholas S	09-12-2012	09-16-2016

	AIS	Total	SR's
8	95,896	95,896	2,842
Total	95,896	95,896	

Customer	Owner
City of Baltimore, MD-Department of Public Works 200 Holiday St. Able Wolman Bldg Baltimore City Baltimore MD 21202 +1 410 3966883	City of Baltimore, MD-Department of Public Works 200 Holiday St. Able Wolman Bldg Baltimore City Baltimore MD 21202 +1 410 3966883

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
390452	Prime	BALTIMORE, MD - CONTRT #SC 900 UPPER JONES FALLS/MARYLAND AVE	JC	\$12,796,256.60	\$10,438,086.43

Project Manager	Bid Date	Project Close Date
Rosengarten, Nicholas S	09-12-2012	09-23-2016

	AIS	STD	Total	SR's
8	74,330	140	74,469	4,530
Total	74,330	140	74,469	

Customer	Owner
City of Baltimore, MD-Department of Public Works 200 Holiday St. Able Wolman Bldg Baltimore City Baltimore MD 21202 +1 410 3966883	City of Baltimore, MD-Department of Public Works 200 Holiday St. Able Wolman Bldg Baltimore City Baltimore MD 21202 +1 410 3966883

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
39046509	Prime	PWCSA-TERM,CONT#SA-1213-WO#9 PO#1600658&1600668MARUMSCO HIL	JC	\$654,936.10	\$652,346.35

Project Manager	Bid Date	Project Close Date
Lake, Will Jonathan	08-13-2015	05-18-2016

	AIS	Total	SR's
8	21,938	21,938	491
Total	21,938	21,938	

Customer	Owner
Prince William County Service Authority	Prince William County Service Authority
4 County Complex Court P.O. Box 2266 4 County Complex Court P O Box 2266 Prince William Woodbridge VA 22195-0266	4 County Complex Court P.O. Box 2266 4 County Complex Court P O Box 2266 Prince William Woodbridge VA 22195-0266
+1 703 3358981	+1 703 3358981

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
39046511	Prime	PWCSA-TERM,CONT#SA-1213-WO#11 PO#28511 OC - WOODBRIDGE, VA	JC	\$543,842.75	\$554,197.50

Project Manager	Bid Date	Project Close Date
Lake, Will Jonathan	10-06-2016	01-27-2017

	AIS	STD	Total	SR's
8	16,413	115	16,528	386
Total	16,413	115	16,528	

Customer	Owner
Prince William County Service Authority	Prince William County Service Authority
4 County Complex Court P.O. Box 2266 4 County Complex Court P O Box 2266 Prince William Woodbridge VA 22195-0266	4 County Complex Court P.O. Box 2266 4 County Complex Court P O Box 2266 Prince William Woodbridge VA 22195-0266
+1 703 3358981	+1 703 3358981

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
39046512	Prime	PWCSA-TERM,CONT#SA-1213-WO#12 PO#1800032 ON - WOODBRIDGE, VA	JC	\$549,711.50	\$536,396.25

Project Manager	Bid Date	Project Close Date
Rosengarten, Nicholas S	08-14-2017	03-23-2018

	AIS	Total	SR's
8	17,552	17,552	395
Total	17,552	17,552	

Customer	Owner
Prince William County Service Authority	Prince William County Service Authority
4 County Complex Court P.O. Box 2266 4 County Complex Court P O Box 2266 Prince William Woodbridge VA 22195-0266	4 County Complex Court P.O. Box 2266 4 County Complex Court P O Box 2266 Prince William Woodbridge VA 22195-0266
+1 703 3358981	+1 703 3358981

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
390478	Prime	BALTIMORE, MD-#897R GREENMOUNT HAMPDEN,BOLTON HILL AREAS	JC	\$16,421,520.80	\$12,313,705.10

Project Manager	Bid Date	Project Close Date
Rosengarten, Nicholas S	04-10-2013	09-19-2016

	AIS	STD	Total	SR's
8	123,936	1,696	125,633	6,275
Total	123,936	1,696	125,633	

Customer	Owner
City of Baltimore, MD-Department of Public Works	City of Baltimore, MD-Department of Public Works
200 Holiday St. Able Wolman Bldg Baltimore City Baltimore MD 21202	200 Holiday St. Able Wolman Bldg Baltimore City Baltimore MD 21202
+1 410 3966883	+1 410 3966883

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
390488	Prime	BALTIMORE, MD - CONTRACT #912 EAST PORTION/LOW LEVEL SWRSHD	JC	\$8,899,096.50	\$4,575,543.96

Project Manager	Bid Date	Project Close Date		AIS	Total	SR's
Rosengarten, Nicholas S	10-23-2013	07-27-2016	8	11,724	11,724	664
			Total	11,724	11,724	

Customer	Owner
City of Baltimore, MD-Department of Public Works 200 Holiday St. Able Wolman Bldg Baltimore City Baltimore MD 21202 +1 410 3966883	City of Baltimore, MD-Department of Public Works 200 Holiday St. Able Wolman Bldg Baltimore City Baltimore MD 21202 +1 410 3966883

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
390497	Sub	METRA IND.- BALTIMORE, MD #913 #913 WEST PART OF SANI SEWER	JC	\$1,063,820.50	\$314,477.30

Project Manager	Bid Date	Project Close Date		AIS	Total	SR's
Rosengarten, Nicholas S	11-06-2013	09-30-2016	8	4,044	4,044	322
			Total	4,044	4,044	

Customer	Owner
City of Baltimore, MD-Department of Public Works 200 Holiday St. Able Wolman Bldg Baltimore City Baltimore MD 21202 +1 410 3966883	City of Baltimore, MD-Department of Public Works 200 Holiday St. Able Wolman Bldg Baltimore City Baltimore MD 21202 +1 410 3966883

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
390506	Prime	BALTIMORE CO. CONT#14120 SXC STEMMER'S RUN SEWERSHED REHAB	JC	\$217,149.00	\$237,358.60

Project Manager	Bid Date	Project Close Date
Lake, Will Jonathan	07-23-2014	11-25-2015

	AIS	Total	SR's
8	2,774	2,774	41
Total	2,774	2,774	

Customer	Owner
County of Baltimore,MD	County of Baltimore,MD
111 West Chesapeake Avenue Baltimore Towson MD 21204	111 West Chesapeake Avenue Baltimore Towson MD 21204
+1 410 8873461	+1 410 8873461

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
390511	Sub	MICHAEL F. RONCA & SONS, INC. US RT30 SAN SWR REHAB.	JC	\$249,149.00	\$231,936.28

Project Manager	Bid Date	Project Close Date
Lake, Will Jonathan	06-30-2014	04-26-2016

	AIS	Total	SR's
8	8,727	8,727	36
Total	8,727	8,727	

Customer	Owner
Township of East Lampeter	Township of East Lampeter
2250 Old Philadelphia Pike Dauphin Lancaster PA 17111	2250 Old Philadelphia Pike Dauphin Lancaster PA 17111
+1 717 3931567	+1 717 3931567

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
390519	Prime	MOOSIC, PA - (BB#A5) 2014 BERNIE AVE./PITTSTON AVE REHAB	JC	\$252,225.00	\$263,290.83

Project Manager	Bid Date	Project Close Date
Lake, Will Jonathan	10-17-2014	12-04-2015

	AIS	UVG	Total	SR's
8	2,150	1,511	3,662	39
Total	2,150	1,511	3,662	

Customer	Owner
Borough of Moosic, PA	Borough of Moosic, PA
715 Mian St. Lackawanna Moosic PA 18507	715 Mian St. Lackawanna Moosic PA 18507
+1 570 4575480	+1 570 4575480

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
390525	Prime	BALTIMORE CO. CONT#15004 SXO GWYNNS FALLS (RE-BID)	JC	\$5,186,896.00	\$5,178,703.02

Project Manager	Bid Date	Project Close Date
Rosengarten, Nicholas S	01-29-2015	04-18-2017

	AIS	STD	Total	SR's
8	50,468	291	50,759	1,122
Total	50,468	291	50,759	

Customer	Owner
County of Baltimore,MD	County of Baltimore,MD
111 West Chesapeake Avenue Baltimore Towson MD 21204	111 West Chesapeake Avenue Baltimore Towson MD 21204
+1 410 8873461	+1 410 8873461

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
390528	Sub	AMERICAN WATER-PHASE 3(T.O. 1) PO-NL003-24153,FT.MEADE MD	JC	\$314,427.20	\$117,016.15

Project Manager	Bid Date	Project Close Date
Rosengarten, Nicholas S	03-03-2015	01-22-2016

	AIS	Total	SR's
8	2,987	2,987	21
Total	2,987	2,987	

Customer	Owner
American Water Company-New Jersey America Water-Absecon,NJ	American Water Company-New Jersey America Water-Absecon,NJ
1025 Laurel Oak Road Atlantic Absecon NJ 08205	1025 Laurel Oak Road Atlantic Absecon NJ 08205
+1 856 3094707	+1 856 3094707

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
390532	Prime	FREEHOLD NJ, TOWNSHIP CONTRACT #14-14, RT 79	JC	\$230,896.00	\$216,681.43

Project Manager	Bid Date	Project Close Date
Lake, Will Jonathan	02-12-2015	04-26-2016

	AIS	Total	SR's
8	5,144	5,144	61
Total	5,144	5,144	

Customer	Owner
Township of Freehold, NJ	Township of Freehold, NJ
1 Municipal Plaza Monmouth Freehold NJ 07728-3099	1 Municipal Plaza Monmouth Freehold NJ 07728-3099
+1 732 2942000	+1 732 2942000

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
390536	Prime	BALTIMORE CO. CONT#15057 SX0 W. LOW LEVEL STRUCTURAL LINING	JC	\$1,184,797.00	\$927,619.64

Project Manager	Bid Date	Project Close Date
Rosengarten, Nicholas S	04-30-2015	12-07-2017

	AIS	STD	Total	SR's
8	14,553	142	14,695	410
Total	14,553	142	14,695	

Customer	Owner
County of Baltimore,MD	County of Baltimore,MD
111 West Chesapeake Avenue Baltimore Towson MD 21204	111 West Chesapeake Avenue Baltimore Towson MD 21204
+1 410 8873461	+1 410 8873461

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
390538	Prime	NORTHAMPTON BUCKS CO(I-S-A-15) ANNUAL CIPP LINING #I-S-A-15	JC	\$251,122.10	\$264,348.95

Project Manager	Bid Date	Project Close Date
Lake, Will Jonathan	05-27-2015	10-28-2016

	AIS	Total	SR's
8	7,121	7,121	53
Total	7,121	7,121	

Customer	Owner
Northampton Bucks County Municipal Authority-Richboro,PA	Northampton Bucks County Municipal Authority-Richboro,PA
111 Township Road Bucks Richboro PA 18954	111 Township Road Bucks Richboro PA 18954
+1 215 3578515	+1 215 3578515

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
390542	Prime	WARMINSTER MUNICIPAL AUTH.2015 COLL.SYST.CIPP REPR.,CONT#15-6	JC	\$317,803.00	\$329,795.70

Project Manager	Bid Date	Project Close Date
Lake, Will Jonathan	05-27-2015	10-14-2015

	AIS	Total	SR's
8	5,202	5,202	104
Total	5,202	5,202	

Customer	Owner
Warminster Municipal Authority	Warminster Municipal Authority
415 Gibson Ave. Bucks Warminster PA 18974	415 Gibson Ave. Bucks Warminster PA 18974
+1 215 6756113	+1 215 6756113

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
390545	Sub	DOLI CONST., MIDDLETOWN, PA CONT. #14-5 SR230 IMPRVMENTS	JC	\$134,910.00	\$89,993.50

Project Manager	Bid Date	Project Close Date
Lake, Will Jonathan	11-25-2014	12-30-2015

	AIS	Total	SR's
8	2,951	2,951	59
Total	2,951	2,951	

Customer	Owner
Middletown Borough Authority- Middletown, PA	Middletown Borough Authority- Middletown, PA
453 S. Lawrence St. Northumberland Middletown PA 17857	453 S. Lawrence St. Northumberland Middletown PA 17857
+1 717 3881143	+1 717 3881143

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
390548	Prime	BALTIMORE CO. CONT#14135 SX0 GWYNN'S FALLS SEWERSHED	JC	\$4,365,942.00	\$4,166,621.38

Project Manager	Bid Date	Project Close Date
Rosengarten, Nicholas S	07-30-2015	03-28-2017

	AIS	Total	SR's
8	50,077	50,077	1,141
Total	50,077	50,077	

Customer	Owner
County of Baltimore,MD	County of Baltimore,MD
111 West Chesapeake Avenue Baltimore Towson MD 21204	111 West Chesapeake Avenue Baltimore Towson MD 21204
+1 410 8873461	+1 410 8873461

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
390550	Prime	UPPER MACUNGIE TOWNSHIP CIPP LINING "A" MAINLINE REHAB	JC	\$210,334.00	\$215,515.35

Project Manager	Bid Date	Project Close Date
Lake, Will Jonathan	07-21-2015	01-30-2016

	AIS	Total	SR's
8	3,717	3,717	83
Total	3,717	3,717	

Customer	Owner
Upper Macungie Township Authority- Breinigsville, PA	Upper Macungie Township Authority- Breinigsville, PA
8330 Schantz Road Lehigh Breinigsville PA 18031	8330 Schantz Road Lehigh Breinigsville PA 18031
+1 610 3959355	+1 610 3959355

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
390551	Prime	LOWER MACUNGIE TOWNSHIP, PA CIPP LINING "B" MAINLINE REHAB	JC	\$163,821.00	\$166,143.25

Project Manager	Bid Date	Project Close Date		AIS	Total	SR's
Lake, Will Jonathan	07-21-2015	12-30-2015	8	4,364	4,364	27
			Total	4,364	4,364	

Customer	Owner
Township of Lower Macungie, PA	Township of Lower Macungie, PA
3400 Brooksideroad Lehigh Macungie PA 18062	3400 Brooksideroad Lehigh Macungie PA 18062
+1 610 9964343	+1 610 9964343

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
390552	Prime	SALISBURY TOWNSHIP, PA 2015 SS REHAB MAIN LINE CIPP	JC	\$190,129.00	\$191,383.85

Project Manager	Bid Date	Project Close Date		AIS	Total	SR's
Lake, Will Jonathan	08-31-2015	10-29-2015	8	3,401	3,401	37
			Total	3,401	3,401	

Customer	Owner
Township of Salisbury,PA	Township of Salisbury,PA
2900 S. Pike Ave. Lehigh Allentown PA 18103	2900 S. Pike Ave. Lehigh Allentown PA 18103
+1 610 7974000	+1 610 7974000

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
390557	Prime	PHILADELPHIA, PA #164080 PATTISON AVE. -POXX16000193	JC	\$421,020.00	\$454,078.76

Project Manager	Bid Date	Project Close Date		SIT	Total	SR's
Rosengarten, Nicholas S	01-12-2016	06-27-2016	8	702	702	0
			Total	702	702	

Customer	Owner
Philadelphia Water Department- Philadelphia,PA	Philadelphia Water Department- Philadelphia,PA
1101 Market Street Aramark Tower 2nd Floor 2nd Floor Philadelphia Philadelphia PA 19184	1101 Market Street Aramark Tower 2nd Floor 2nd Floor Philadelphia Philadelphia PA 19184
+1 215 6856203	+1 215 6856203

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
390559	Prime	BALTIMORE CO. CONT#15229 SX0 WEST LOW LEVEL SEWERSHED	JC	\$2,837,308.20	\$2,492,560.40

Project Manager	Bid Date	Project Close Date
Rosengarten, Nicholas S	01-21-2016	04-20-2018

	AIS	Total	SR's
8	38,062	38,062	851
Total	38,062	38,062	

Customer	Owner
County of Baltimore,MD	County of Baltimore,MD
111 West Chesapeake Avenue Baltimore Towson MD 21204	111 West Chesapeake Avenue Baltimore Towson MD 21204
+1 410 8873461	+1 410 8873461

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
390562	Prime	MOUNT LAUREL TWNShP,NJ -2015 SS REHAB - CONTRACT #2015-09	JC	\$195,407.00	\$187,460.80

Project Manager	Bid Date	Project Close Date
Rosengarten, Nicholas S	03-15-2016	07-27-2016

	AIS	Total	SR's
8	2,757	2,757	64
Total	2,757	2,757	

Customer	Owner
Mount Laurel Township Municipal Utilities Authority	Mount Laurel Township Municipal Utilities Authority
1201 S. Church St. Burlington Mount Laurel NJ 08054	1201 S. Church St. Burlington Mount Laurel NJ 08054
+1 856 2340062	+1 856 2340062

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
390564	Prime	WEST WHITELAND TOWNSHIP CIPP REPAIR PROJECT	JC	\$218,295.00	\$230,438.00

Project Manager	Bid Date	Project Close Date
Lake, Will Jonathan	06-08-2016	11-15-2016

	AIS	Total	SR's
8	6,218	6,218	69
Total	6,218	6,218	

Customer	Owner
Township of West Whiteland, PA	Township of West Whiteland, PA
101 Commerce Dr. Chester Exton PA 19341	101 Commerce Dr. Chester Exton PA 19341
+1 610 3639525	+1 610 3639525

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
390567	Prime	WARMINSTER MUNICIPAL AUTH.2016 SS REHAB. CONTRACT -2016	JC	\$339,803.00	\$359,305.30

Project Manager	Bid Date	Project Close Date		AIS	Total	SR's
Lake, Will Jonathan	06-30-2016	12-09-2016	8	6,748	6,748	69
			Total	6,748	6,748	

Customer	Owner
Warminster Municipal Authority	Warminster Municipal Authority
415 Gibson Ave. Bucks Warminster PA 18974	415 Gibson Ave. Bucks Warminster PA 18974
+1 215 6756113	+1 215 6756113

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
390571	Sub	VIDEO PIPE SVCS. -STEELTON, PA STEELTON, PA - CONT. #2016-01	JC	\$152,000.00	\$166,691.15

Project Manager	Bid Date	Project Close Date		AIS	Total	SR's
Lake, Will Jonathan	09-02-2016	12-07-2016	8	850	850	15
			Total	850	850	

Customer	Owner
Borough of Steelton, PA	Borough of Steelton, PA
123 N Front Street Dauphin Steelton PA 17113	123 N Front Street Dauphin Steelton PA 17113
+1 717 9399842	+1 717 9399842

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
390572	Prime	MEDFORD, NJ - PO#16-01719 SLIP LINING SWR MAIN STOKES RD	JC	\$110,299.20	\$116,968.84

Project Manager	Bid Date	Project Close Date		AIS	Total	SR's
Rosengarten, Nicholas S	09-16-2016	09-30-2016	8	1,457	1,457	13
			Total	1,457	1,457	

Customer	Owner
Township of Medford, NJ	Township of Medford, NJ
17 North Main Street Burlington Medford NJ 08055	17 North Main Street Burlington Medford NJ 08055
+1 609 6542608	+1 609 6542608

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
390573	Prime	LOWER GWYNEDD TOWNSHIP - PA 2016 SANITARY SEWER REHAB	JC	\$139,569.00	\$137,925.85

Project Manager	Bid Date	Project Close Date
Rosengarten, Nicholas S	09-21-2016	01-13-2017

	AIS	Total	SR's
8	2,719	2,719	22
Total	2,719	2,719	

Customer	Owner
Township of Lower Gwynedd, PA	Township of Lower Gwynedd, PA
1130 N. Bethlehem Pike Montgomery Spring House PA 19477	1130 N. Bethlehem Pike Montgomery Spring House PA 19477
+1 215 6465302	+1 215 6465302

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
390574	Prime	GREEN LANE-MARLBOROUGH JT AUTH 2016 COLLECTION SYS CIPP	JC	\$119,894.80	\$114,530.03

Project Manager	Bid Date	Project Close Date
Rosengarten, Nicholas S	10-13-2016	11-18-2016

	AIS	Total	SR's
8	3,625	3,625	37
Total	3,625	3,625	

Customer	Owner
Green Lane Marlborough Joint Authority-Green Lane, PA	Green Lane Marlborough Joint Authority-Green Lane, PA
6040 Upper Ridge Road Montgomery Green Lane PA 18054	6040 Upper Ridge Road Montgomery Green Lane PA 18054
+1 215 2344180	+1 215 2344180

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
390580	Prime	EASTON UTILITIES 2016 SEWER LINE REPAIR	JC	\$569,723.20	\$722,226.83

Project Manager	Bid Date	Project Close Date
Lake, Will Jonathan	09-16-2016	07-19-2017

	AIS	Total	SR's
8	12,271	12,271	278
Total	12,271	12,271	

Customer	Owner
Easton Utilities-Water & Wastewater	Easton Utilities-Water & Wastewater
201 N. Washington Street Talbot Easton MD 21601	201 N. Washington Street Talbot Easton MD 21601
+1 410 8226110x1246	+1 410 8226110x1246

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
390583	Sub	WEXCON, INC. -BALLY, PA SS IMPVMENTS-CONTRACT A	JC	\$344,868.75	\$336,977.33

Project Manager	Bid Date	Project Close Date		AIS	Total	SR's
Rosengarten, Nicholas S	10-18-2016	02-23-2017	8	12,892	12,892	178
			Total	12,892	12,892	

Customer	Owner
Borough of Bally,PA	Borough of Bally,PA
425 Chestnut St. Bucks Bally PA 19053	425 Chestnut St. Bucks Bally PA 19053
+1 610 8452351	+1 610 8452351

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
390584	Prime	NORTH LONDONDERRY, PA MAIN LINE & MANHOLE LINING	JC	\$263,337.50	\$263,613.50

Project Manager	Bid Date	Project Close Date		AIS	Total	SR's
Rosengarten, Nicholas S	12-08-2016	06-20-2018	8	957	957	15
			Total	957	957	

Customer	Owner
Township of North Londonderry, PA	Township of North Londonderry, PA
655 E Ridge Rd Lebanon Palmyra PA 17078	655 E Ridge Rd Lebanon Palmyra PA 17078
+1 717 8381373	+1 717 8381373

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
390588	Prime	RUNNEMEDE, NJ - RB2014-8 SANITARY SEWER IMPROVEMENTS	JC	\$625,970.00	\$622,119.46

Project Manager	Bid Date	Project Close Date		STD	Total	SR's
Rosengarten, Nicholas S	11-30-2016	04-20-2018	8	3,700	3,700	69
			Total	3,700	3,700	

Customer	Owner
Borough of Runnemede, NJ	Borough of Runnemede, NJ
24 N. Black Horse Pike Camden Runnemede NJ 08078	24 N. Black Horse Pike Camden Runnemede NJ 08078
+1 856 9395161	+1 856 9395161

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
390589	Sub	HARKINS BUILDERS, INC. PERRY PT. VETERANS VILLAGE	JC	\$228,710.00	\$236,305.01

Project Manager	Bid Date	Project Close Date
Rosengarten, Nicholas S	01-16-2017	06-13-2018

	AIS	Total	SR's
8	4,289	4,289	122
Total	4,289	4,289	

Customer	Owner
Perry Point VA Medical Center	Perry Point VA Medical Center
Perry Point Village Cecil Perry Point MD 21902	Perry Point Village Cecil Perry Point MD 21902
+1 410 6422411	+1 410 6422411

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
390590	Prime	WARMINSTER MUNICIPAL AUTH.2017 SS REHAB. CONTRACT -2017	JC	\$348,899.00	\$348,899.00

Project Manager	Bid Date	Project Close Date
Lake, Will Jonathan	03-10-2017	07-14-2017

	AIS	Total	SR's
8	6,654	6,654	87
Total	6,654	6,654	

Customer	Owner
Warminster Municipal Authority	Warminster Municipal Authority
415 Gibson Ave. Bucks Warminster PA 18974	415 Gibson Ave. Bucks Warminster PA 18974
+1 215 6756113	+1 215 6756113

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
390591	Prime	NORTHAMPTON BUCKS COUNTY 2017 SANITARY SEWER REHAB 2017	JC	\$199,220.00	\$222,370.00

Project Manager	Bid Date	Project Close Date
Rosengarten, Nicholas S	03-31-2017	12-15-2017

	AIS	Total	SR's
8	2,110	2,110	8
Total	2,110	2,110	

Customer	Owner
Northampton Bucks County Municipal Authority-Richboro,PA	Northampton Bucks County Municipal Authority-Richboro,PA
111 Township Road Bucks Richboro PA 18954	111 Township Road Bucks Richboro PA 18954
+1 215 3578515	+1 215 3578515

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
390598	Sub	PERFORMANCE PIPELING, INC. PERFORMANCE PIPELING, INC.	JC	\$215,493.00	\$232,695.73

Project Manager	Bid Date	Project Close Date
Rosengarten, Nicholas S	06-08-2017	02-05-2018

	AIS	Total	SR's
8	7,499	7,499	125
Total	7,499	7,499	

Customer	Owner
Township of Bridgewater, NJ	Township of Bridgewater, NJ
100 Commons Way Somerset Bridgewater NJ 08807	100 Commons Way Somerset Bridgewater NJ 08807
+1 908 7256300	+1 908 7256300

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
390599	Prime	UPPER MACUNGIE TOWNSHIP-2017 CONTRACT A - 2017 SS REHAB	JC	\$276,332.00	\$249,687.69

Project Manager	Bid Date	Project Close Date
Rosengarten, Nicholas S	05-17-2017	12-22-2017

	AIS	Total	SR's
8	4,893	4,893	73
Total	4,893	4,893	

Customer	Owner
Upper Macungie Township Authority- Breinigsville, PA	Upper Macungie Township Authority- Breinigsville, PA
8330 Schantz Road Lehigh Breinigsville PA 18031	8330 Schantz Road Lehigh Breinigsville PA 18031
+1 610 3959355	+1 610 3959355

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
390600	Prime	LOWER MACUNGIE TOWNSHIP-2017 CONTRACT B - 2017 SS REHAB PJT	JC	\$469,213.67	\$465,330.91

Project Manager	Bid Date	Project Close Date
Rosengarten, Nicholas S	05-17-2017	01-23-2018

	AIS	Total	SR's
8	18,148	18,148	361
Total	18,148	18,148	

Customer	Owner
Township of Lower Macungie, PA	Township of Lower Macungie, PA
3400 Brooksideroad Lehigh Macungie PA 18062	3400 Brooksideroad Lehigh Macungie PA 18062
+1 610 9964343	+1 610 9964343

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
390601	Prime	SALISBURY TOWNSHIP, PA-2017 2017 SS REHAB-CONTRACT C	JC	\$104,261.67	\$104,147.12

Project Manager	Bid Date	Project Close Date		AIS	Total	SR's
Rosengarten, Nicholas S	05-17-2017	12-21-2017	8	3,958	3,958	71
			Total	3,958	3,958	

Customer	Owner
Township of Salisbury,PA	Township of Salisbury,PA
2900 S. Pike Ave. Lehigh Allentown PA 18103	2900 S. Pike Ave. Lehigh Allentown PA 18103
+1 610 7974000	+1 610 7974000

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
390607	Prime	AUGUSTA CO. SVC. AUTHORITY MT. SIDNEY SEWER REHAB	JC	\$286,123.00	\$296,560.15

Project Manager	Bid Date	Project Close Date		AIS	Total	SR's
Rosengarten, Nicholas S	06-30-2017	11-10-2017	8	1,771	1,771	0
			Total	1,771	1,771	

Customer	Owner
Augusta County-Verona,VA	Augusta County-Verona,VA
18 Government Center Lane PO Box 859 Augusta Verona VA 24482	18 Government Center Lane PO Box 859 Augusta Verona VA 24482
+1 540 2455600	+1 540 2455600

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
390612	Prime	ANTIETAM VALLEY MUNICIPAL AUTH AVMA SEWER REPAIRS	JC	\$113,904.00	\$119,838.60

Project Manager	Bid Date	Project Close Date		AIS	Total	SR's
Lake, Will Jonathan	07-25-2017	10-16-2017	8	3,072	3,072	66
			Total	3,072	3,072	

Customer	Owner
Antietam Valley Municipal Authority-Reading,PA	Antietam Valley Municipal Authority-Reading,PA
502 Butter Lane Berks Reading PA 19606	502 Butter Lane Berks Reading PA 19606
+1 610 7790150	+1 610 7790150

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
390613	Sub	PRISM CONTRACT.&ENG.WAYNESBORO WAYNESBORO CIPI&IS-10&PINE AVE	JC	\$161,568.00	\$188,371.70

Project Manager	Bid Date	Project Close Date
Rosengarten, Nicholas S	06-14-2017	12-19-2017

	AIS	Total	SR's
8	4,245	4,245	36
Total	4,245	4,245	

Customer	Owner
Prism Contractors & Engineers, Inc- Yorktown, VA	City of Waynesboro, VA
108 Quartermarsh Drive York Yorktown VA 23692	503 W. Main St., Suite 211 Charles Yancey Municipal Building 503 W Waynesboro City Waynesboro VA 22980
+1 757 8761021	+1 540 9426706

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
390616	Prime	MACUNGIE PA,2017 P#399917.006 2017 CIPPL PROJ.,P#399917.002	JC	\$447,818.00	\$428,242.25

Project Manager	Bid Date	Project Close Date
Rosengarten, Nicholas S	10-12-2017	04-18-2018

	AIS	Total	SR's
8	12,479	12,479	231
Total	12,479	12,479	

Customer	Owner
Borough of Macungie, PA	Borough of Macungie, PA
21 Locust Street Lehigh Macungie PA 18062	21 Locust Street Lehigh Macungie PA 18062
+1 610 9962503	+1 610 9962503

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
390633	Prime	WARMINSTER MUNICIPAL AUTH.2018 STORM SEWER REHAB-2018 PO12756	JC	\$346,400.00	\$347,941.00

Project Manager	Bid Date	Project Close Date
Rosengarten, Nicholas S	04-17-2018	10-24-2018

	AIS	Total	SR's
8	9,760	9,760	157
Total	9,760	9,760	

Customer	Owner
Warminster Municipal Authority	Warminster Municipal Authority
415 Gibson Ave. Bucks Warminster PA 18974	415 Gibson Ave. Bucks Warminster PA 18974
+1 215 6756113	+1 215 6756113

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
390634	Prime	BALTIMORE CO. CONT#17254 SX0 BAYBRIAR RD. SWR REHAB	JC	\$748,696.00	\$785,442.53

Project Manager	Bid Date	Project Close Date		AIS	Total	SR's
Rosengarten, Nicholas S	04-05-2018	08-02-2019	8	7,774	7,774	139
			Total	7,774	7,774	

Customer	Owner
County of Baltimore,MD	County of Baltimore,MD
111 West Chesapeake Avenue Baltimore Towson MD 21204	111 West Chesapeake Avenue Baltimore Towson MD 21204
+1 410 8873461	+1 410 8873461

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
390635	Prime	CHELTENHAM, PA 2017 #17-82-109 2017 PA SMALL WATER/SWR GRANT	JC	\$212,583.70	\$188,615.78

Project Manager	Bid Date	Project Close Date		AIS	Total	SR's
Rosengarten, Nicholas S	02-22-2018	06-26-2018	8	4,790	4,790	75
			Total	4,790	4,790	

Customer	Owner
Township of Cheltenham, PA	Township of Cheltenham, PA
8230 Old York Road Montgomery Elkins Park PA 19027-1589	8230 Old York Road Montgomery Elkins Park PA 19027-1589
+1 215 8871000	+1 215 8871000

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
390638	Prime	UPPER MACUNGIE TOWNSHIP-2018-A CONTRACT A - 2017 SS REHAB	JC	\$143,983.58	\$176,447.56

Project Manager	Bid Date	Project Close Date		AIS	Total	SR's
Rosengarten, Nicholas S	05-14-2018	12-19-2018	8	1,190	1,190	6
			Total	1,190	1,190	

Customer	Owner
Upper Macungie Township Authority- Breinigsville, PA	Upper Macungie Township Authority- Breinigsville, PA
8330 Schantz Road Lehigh Breinigsville PA 18031	8330 Schantz Road Lehigh Breinigsville PA 18031
+1 610 3959355	+1 610 3959355

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
390639	Prime	LOWER MACUNGIE TOWNSHIP-2018-B CONTRACT B - 2018 SS REHAB PJT	JC	\$359,543.71	\$339,933.30

Project Manager	Bid Date	Project Close Date		AIS	Total	SR's
Rosengarten, Nicholas S	05-14-2018	12-17-2018	8	11,549	11,549	151
			Total	11,549	11,549	

Customer	Owner
Township of Lower Macungie, PA	Township of Lower Macungie, PA
3400 Brooksideroad Lehigh Macungie PA 18062	3400 Brooksideroad Lehigh Macungie PA 18062
+1 610 9964343	+1 610 9964343

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
390640	Prime	SALISBURY TOWNSHIP, PA-2018-D 2018 SS REHAB-CONTRACT C	JC	\$317,381.29	\$305,543.01

Project Manager	Bid Date	Project Close Date		AIS	Total	SR's
Rosengarten, Nicholas S	05-14-2018	04-04-2019	8	8,726	8,726	143
			Total	8,726	8,726	

Customer	Owner
Township of Salisbury,PA	Township of Salisbury,PA
2900 S. Pike Ave. Lehigh Allentown PA 18103	2900 S. Pike Ave. Lehigh Allentown PA 18103
+1 610 7974000	+1 610 7974000

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
390642	Prime	GLOUCESTER TOWNSHIP MUA NJ 2018 SEWER REHAB,CONT#18005	JC	\$140,660.00	\$137,828.00

Project Manager	Bid Date	Project Close Date		AIS	Total	SR's
Rosengarten, Nicholas S	06-26-2018	11-06-2018	8	467	467	11
			Total	467	467	

Customer	Owner
Gloucester Township Municipal Utilities Authority, NJ	Gloucester Township Municipal Utilities Authority, NJ
Landing Road Chews Landing Camden Glendora NJ 08029	Landing Road Chews Landing Chews Landing Camden Glendora NJ 08029
+1 856 2278666	+1 856 2278666

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
390645	Prime	SHARON HILL, PA - 2018 CIPP LINING PROJECT SAN SWR	JC	\$111,400.00	\$134,848.80

Project Manager	Bid Date	Project Close Date
Rosengarten, Nicholas S	09-13-2018	11-27-2018

	AIS	Total	SR's
8	3,090	3,090	116
Total	3,090	3,090	

Customer	Owner
Borough of Sharon Hill, PA 250 Sharon Avenue Delaware Sharon Hill PA 19079 +1 610 5868200	Borough of Sharon Hill, PA 250 Sharon Avenue Delaware Sharon Hill PA 19079 +1 610 5868200

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
390648	Sub	MOBILE DREDGING & VIDEO PIPE WYOMISSING, PA 2018 SEWR REHAB	JC	\$188,570.00	\$127,712.60

Project Manager	Bid Date	Project Close Date
Rosengarten, Nicholas S	07-09-2018	12-07-2018

	AIS	Total	SR's
8	4,692	4,692	70
Total	4,692	4,692	

Customer	Owner
Mobile Dredging & Video Pipe, Inc- Chester,PA 3100 Bethel Rd Delaware Chester PA 19013 +1 610 4979500	Borough of Wyomissing, PA 22 Reading Boulevard Berks Wyomissing PA 19610 +1 610 3767481

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
390649	Prime	WILLIAMSPORT SANITARY AUTHORIT WILLIAMSPORT PA 2018 SWR RELIN	JC	\$396,577.00	\$327,268.90

Project Manager	Bid Date	Project Close Date
Merriman, Shayne D	09-21-2018	03-20-2019

	AIS	Total	SR's
8	3,542	3,542	55
Total	3,542	3,542	

Customer	Owner
Williamsport Municipal Water Authority-Williamsport, PA 253 West Fourth Street Lycoming Williamsport PA 17701 +1 570 3222134	Williamsport Municipal Water Authority-Williamsport, PA 253 West Fourth Street Lycoming Williamsport PA 17701 +1 570 3222134

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
390659	Prime	WARREN TOWNSHIP SEWERAGE AUTH. CONT#60-STAGE I/II SEW.SERV.	JC	\$1,028,362.50	\$887,072.85

Project Manager	Bid Date	Project Close Date
Rosengarten, Nicholas S	01-09-2019	06-20-2019

	AIS	Total	SR's
8	13,976	13,976	121
Total	13,976	13,976	

Customer	Owner
Warren Township Sewerage Authority-Warren,NJ	Warren Township Sewerage Authority-Warren,NJ
46 Mountain Boulevard Somerset Warren NJ 07059	46 Mountain Boulevard Somerset Warren NJ 07059
+1 908 7538000	+1 908 7538000

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
390661	Prime	RUTLEDGE, PA -SS REHAB PHASE 3 SANITARY SWR PHASE 3	JC	\$358,616.00	\$363,450.50

Project Manager	Bid Date	Project Close Date
Rosengarten, Nicholas S	03-27-2019	09-25-2019

	AIS	Total	SR's
8	6,982	6,982	164
Total	6,982	6,982	

Customer	Owner
Borough of Rutledge,PA	Borough of Rutledge,PA
212 Unity Terrace Delaware Rutledge PA 19070	212 Unity Terrace Delaware Rutledge PA 19070
+1 610 5441028	+1 610 5441028

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
390668	Prime	SUSQUEHANNA CO. HOUSING/REDEV. WASHINGTON & FRANKLIN ST. 2019	JC	\$283,463.00	\$269,857.50

Project Manager	Bid Date	Project Close Date
Rosengarten, Nicholas S	05-08-2019	08-19-2019

	AIS	Total	SR's
8	2,233	2,233	65
Total	2,233	2,233	

Customer	Owner
Tri-Boro Muicipal Authority	Tri-Boro Muicipal Authority
83 Erie Blvd. Susquehanna Susquehanna PA 18847	83 Erie Blvd. Susquehanna Susquehanna PA 18847
+1 570 8534719	+1 570 8534719

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
390669	Sub	GARNEY COMPANIES,HENRICO VA UPHAM BROOK TRUNK SEWER	JC	\$132,016.00	\$79,938.65

Project Manager	Bid Date	Project Close Date
Rosengarten, Nicholas S	05-08-2018	07-29-2019

	AIS	Total	SR's
8	2,419	2,419	30
Total	2,419	2,419	

Customer	Owner
Garney Construction-Richmond,VA 6020 Brook Road Henrico Richmond VA 23227 +1 423 2585500	Henrico County-Richmond, VA 4301 East Parham Road Henrico Richmond VA 23228 +1 804 5014000

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
390675	Prime	UPPER MACUNGIE TOWNSHIP-2019-C CONTRACT C - 2019 SS REHAB	JC	\$117,734.65	\$82,593.73

Project Manager	Bid Date	Project Close Date
Rosengarten, Nicholas S	07-18-2019	01-16-2020

	AIS	Total	SR's
8	875	875	16
Total	875	875	

Customer	Owner
Upper Macungie Township Authority-Breinigsville, PA 8330 Schantz Road Lehigh Breinigsville PA 18031 +1 610 3959355	Upper Macungie Township Authority-Breinigsville, PA 8330 Schantz Road Lehigh Breinigsville PA 18031 +1 610 3959355

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
390678	Prime	LOWER MACUNGIE TOWNSHIP-2019-A CONTRACT A - 2019 SS REHAB PJT	JC	\$638,497.25	\$649,419.01

Project Manager	Bid Date	Project Close Date
Rosengarten, Nicholas S	07-18-2019	01-17-2020

	AIS	Total	SR's
8	21,342	21,342	383
Total	21,342	21,342	

Customer	Owner
Township of Lower Macungie, PA 3400 Brooksideroad Lehigh Macungie PA 18062 +1 610 9964343	Township of Lower Macungie, PA 3400 Brooksideroad Lehigh Macungie PA 18062 +1 610 9964343

JDE Job Number	Role	Project Description	Project Status	Contract Value	Final Contract Amount
390682	Prime	HANOVER COUNTY, VA -PO#03297 ASHLAND SEWER REHAB	JC	\$400,475.00	\$414,225.00

Project Manager	Bid Date	Project Close Date
Rosengarten, Nicholas S	09-09-2019	05-13-2020

	AIS	Total	SR's
8	3,622	3,622	18
Total	3,622	3,622	

Customer	Owner
Hanover County Public Utilities- Hanover, VA	Hanover County Public Utilities- Hanover, VA
7516 County Complex Road Hanover Hanover VA 23069-0470	7516 County Complex Road Hanover Hanover VA 23069-0470
+1 804 3656105	+1 804 3656105

Contract Qualification Closed Projects (2013 - Present) - Detail Contract Value

Project JDE Job Number	Contract Value	Final Contract Amount
152010	\$380,988.80	\$371,351.00
152013	\$472,333.00	\$445,522.00
152014	\$307,490.00	\$333,040.10
16077104	\$433,595.00	\$391,297.00
160835	\$4,890,043.19	\$5,091,475.74
160884	\$314,868.00	\$368,063.00
16089004	\$299,819.00	\$376,441.92
16089007	\$344,277.80	\$381,881.22
16089008	\$655,243.00	\$1,230,913.39
160921	\$234,152.00	\$276,595.00
160929	\$3,201,910.00	\$2,855,566.00
160930	\$1,284,487.10	\$1,207,041.70
160934	\$328,537.00	\$220,327.50
160942	\$111,355.00	\$105,442.40
160964	\$409,324.00	\$431,827.20
160972	\$3,317,194.00	\$3,350,484.09
160978	\$780,042.00	\$780,429.00
160981	\$2,029,728.00	\$1,647,132.50
160984	\$906,332.50	\$742,018.00
160991	\$1,719,485.00	\$1,643,315.10
160993	\$802,529.00	\$727,070.99
160999	\$495,855.00	\$438,172.10
161000	\$796,716.50	\$939,253.33
161001	\$154,040.00	\$172,700.00
161002	\$1,058,434.28	\$1,057,195.00
161003	\$182,221.96	\$174,457.61
161004	\$159,636.00	\$204,108.60
161007	\$258,167.00	\$255,484.99
161011	\$714,883.30	\$634,963.57
161018	\$960,224.00	\$942,010.50
161021	\$1,900,707.00	\$2,205,146.78
161022	\$4,402,606.10	\$4,288,659.67
16102301	\$960,007.00	\$1,156,378.50
161025	\$252,227.00	\$252,283.00
16103102	\$287,685.00	\$339,094.00

Project JDE Job Number	Contract Value	Final Contract Amount
16103104	\$143,565.00	\$153,702.08
16103105	\$103,640.00	\$97,639.00
16103106	\$216,590.00	\$272,050.00
161034	\$1,052,545.00	\$864,981.50
161035	\$114,258.50	\$170,555.50
161036	\$582,129.50	\$638,136.12
161038	\$552,937.25	\$618,709.61
16103901	\$417,037.00	\$335,592.96
161043	\$349,142.00	\$331,999.00
161053	\$1,191,532.50	\$1,065,167.00
161054	\$1,470,577.00	\$1,325,815.63
161055	\$157,338.00	\$159,396.00
161072	\$142,190.77	\$148,481.41
161075	\$3,391,004.40	\$3,126,399.73
161077	\$2,408,151.00	\$2,382,990.25
161080	\$177,000.00	\$139,412.00
161084	\$264,726.00	\$260,525.10
161085	\$149,380.00	\$146,902.00
161087	\$120,915.00	\$116,055.10
161092	\$135,309.75	\$148,253.88
161096	\$257,306.00	\$233,808.00
161102	\$136,663.00	\$144,643.00
161104	\$147,895.00	\$143,287.00
161105	\$315,040.00	\$305,437.50
161109	\$121,641.00	\$121,149.40
161122	\$190,477.00	\$189,736.00
161123	\$178,828.00	\$152,174.00
161125	\$499,615.00	\$495,334.00
161127	\$1,063,966.50	\$1,035,799.89
161128	\$131,780.00	\$146,523.00
161130	\$269,751.49	\$282,073.48
161132	\$385,312.00	\$395,236.00
161133	\$571,558.00	\$1,053,574.30
161134	\$3,767,932.10	\$3,348,586.34
161135	\$237,209.50	\$202,623.50
161139	\$1,080,435.00	\$1,038,740.00
161142	\$189,173.00	\$200,209.00
161143	\$651,741.00	\$756,534.45

Project JDE Job Number	Contract Value	Final Contract Amount
161147	\$186,128.00	\$174,506.48
161149	\$224,000.00	\$231,927.70
161152	\$180,155.50	\$169,958.50
161156	\$152,245.00	\$156,441.50
161163	\$2,833,298.40	\$2,922,776.92
161164	\$435,827.00	\$416,511.90
161168	\$144,056.00	\$135,595.00
161184	\$129,750.00	\$189,021.15
161191	\$124,500.00	\$105,539.80
161198	\$598,737.00	\$533,278.70
16120201	\$1,874,520.52	\$1,659,659.87
161210	\$5,153,366.60	\$4,859,593.54
161212	\$860,875.00	\$837,979.00
161221	\$140,145.00	\$149,132.46
161223	\$177,446.00	\$180,532.00
161225	\$648,707.00	\$483,056.80
161226	\$1,453,199.00	\$1,319,144.20
161230	\$129,073.00	\$130,760.01
161233	\$126,160.00	\$146,763.00
161237	\$142,239.00	\$166,883.00
161241	\$180,124.00	\$180,462.00
161249	\$132,020.00	\$169,610.15
161253	\$548,942.00	\$525,744.00
161254	\$227,544.00	\$214,075.00
161255	\$220,578.00	\$240,588.00
161259	\$108,000.00	\$108,000.00
161269	\$123,284.00	\$82,054.00
161279	\$165,300.00	\$184,078.10
161280	\$108,423.00	\$106,330.00
161288	\$360,070.00	\$360,855.00
161289	\$538,714.00	\$421,202.00
380166	\$3,658,966.20	\$4,423,628.09
380167	\$543,642.60	\$565,502.13
380168	\$1,821,322.90	\$1,998,359.21
380169	\$3,578,159.50	\$3,424,115.13
380172	\$789,673.30	\$859,663.00
380173	\$391,311.80	\$337,816.01
380174	\$1,022,254.30	\$1,078,419.50

Project JDE Job Number	Contract Value	Final Contract Amount
380176	\$155,756.10	\$154,733.50
380178	\$987,190.00	\$911,726.70
380179	\$143,832.80	\$158,724.60
380182	\$774,492.60	\$846,903.80
380184	\$2,774,701.50	\$2,665,980.87
380189	\$184,345.00	\$177,474.50
380190	\$119,807.00	\$121,631.20
380191	\$303,005.35	\$294,153.00
380193	\$215,589.50	\$220,767.61
380194	\$240,116.75	\$225,801.00
380195	\$206,999.00	\$226,018.25
380198	\$137,650.00	\$81,833.00
380203	\$181,673.00	\$183,691.40
380205	\$553,767.00	\$342,805.66
380212	\$136,947.75	\$171,241.75
380216	\$309,265.65	\$345,374.40
380219	\$140,426.00	\$132,236.00
380220	\$183,743.45	\$177,352.67
380221	\$343,494.00	\$587,782.92
380222	\$777,801.78	\$713,410.80
38022801	\$320,602.00	\$498,736.25
380230	\$382,190.00	\$438,353.88
380234	\$195,896.00	\$184,005.98
380237	\$199,668.01	\$214,808.81
381003	\$1,649,801.00	\$1,501,204.23
381004	\$199,221.00	\$207,925.73
381005	\$162,756.50	\$164,904.65
381009	\$101,650.58	\$110,468.00
381012	\$572,532.50	\$949,555.25
381016	\$144,677.00	\$176,137.44
381017	\$429,218.00	\$435,761.30
381022	\$111,235.30	\$109,042.84
381023	\$121,635.00	\$101,003.30
381025	\$319,942.00	\$356,718.50
381028	\$729,451.00	\$702,947.25
381035	\$151,902.00	\$157,050.50
390450	\$7,066,130.15	\$6,351,824.59
390451	\$10,641,781.40	\$10,160,517.41

Project JDE Job Number	Contract Value	Final Contract Amount
390452	\$12,796,256.60	\$10,438,086.43
39046509	\$654,936.10	\$652,346.35
39046511	\$543,842.75	\$554,197.50
39046512	\$549,711.50	\$536,396.25
390478	\$16,421,520.80	\$12,313,705.10
390488	\$8,899,096.50	\$4,575,543.96
390497	\$1,063,820.50	\$314,477.30
390506	\$217,149.00	\$237,358.60
390511	\$249,149.00	\$231,936.28
390519	\$252,225.00	\$263,290.83
390525	\$5,186,896.00	\$5,178,703.02
390528	\$314,427.20	\$117,016.15
390532	\$230,896.00	\$216,681.43
390536	\$1,184,797.00	\$927,619.64
390538	\$251,122.10	\$264,348.95
390542	\$317,803.00	\$329,795.70
390545	\$134,910.00	\$89,993.50
390548	\$4,365,942.00	\$4,166,621.38
390550	\$210,334.00	\$215,515.35
390551	\$163,821.00	\$166,143.25
390552	\$190,129.00	\$191,383.85
390557	\$421,020.00	\$454,078.76
390559	\$2,837,308.20	\$2,492,560.40
390562	\$195,407.00	\$187,460.80
390564	\$218,295.00	\$230,438.00
390567	\$339,803.00	\$359,305.30
390571	\$152,000.00	\$166,691.15
390572	\$110,299.20	\$116,968.84
390573	\$139,569.00	\$137,925.85
390574	\$119,894.80	\$114,530.03
390580	\$569,723.20	\$722,226.83
390583	\$344,868.75	\$336,977.33
390584	\$263,337.50	\$263,613.50
390588	\$625,970.00	\$622,119.46
390589	\$228,710.00	\$236,305.01
390590	\$348,899.00	\$348,899.00
390591	\$199,220.00	\$222,370.00
390598	\$215,493.00	\$232,695.73

Project JDE Job Number	Contract Value	Final Contract Amount
390599	\$276,332.00	\$249,687.69
390600	\$469,213.67	\$465,330.91
390601	\$104,261.67	\$104,147.12
390607	\$286,123.00	\$296,560.15
390612	\$113,904.00	\$119,838.60
390613	\$161,568.00	\$188,371.70
390616	\$447,818.00	\$428,242.25
390633	\$346,400.00	\$347,941.00
390634	\$748,696.00	\$785,442.53
390635	\$212,583.70	\$188,615.78
390638	\$143,983.58	\$176,447.56
390639	\$359,543.71	\$339,933.30
390640	\$317,381.29	\$305,543.01
390642	\$140,660.00	\$137,828.00
390645	\$111,400.00	\$134,848.80
390648	\$188,570.00	\$127,712.60
390649	\$396,577.00	\$327,268.90
390659	\$1,028,362.50	\$887,072.85
390661	\$358,616.00	\$363,450.50
390668	\$283,463.00	\$269,857.50
390669	\$132,016.00	\$79,938.65
390675	\$117,734.65	\$82,593.73
390678	\$638,497.25	\$649,419.01
390682	\$400,475.00	\$414,225.00
\$191,059,869.80	\$177,292,191.57	

NAR Project Pre-Close Review - Parameter Summary

Month Ending Date	07-31-2020
Project Number	380238;380223;380239;380240;380241;380244;380236;380246;380245;380249
Region	
Owner State	
Reporting Entity	

NAR Project Pre-Close Review - Summary

	AIS	Total	SR's (taps)
6	1,428	1,428	970
8	52,995	52,995	
10	3,588	3,588	
12	1,483	1,483	
15	779	779	
18	363	363	
24	94	94	
Total	60,731	60,731	

NAR Project Pre-Close Review - Detail

Project JDE Job Number	Role	Project Description	Project Status	Original Contract Amount	Project Value Local	Final Contract Amount
380223	Sub	PERFORMANCE PIPELINING, INC CLERMONT CTY OH 2018 SWR REHAB	JA	8% \$575,326.75	\$523,736.75	\$673,449.06

Project Manager	Project Close Date
Toke, Amal B	05/15/19

	AIS	Total	SR's
8	19,929	19,929	347
10	2,107	2,107	
Total	22,036	22,036	

Customer	Owner
Performance Pipelining Inc-Ottawa, IL	Clermont County-Batavia, OH
1551 West Norris Drive Ottawa IL 61350	101 East Main Street 3rd Floor Clermont Batavia OH 45103
+1 815 4330080	+1 555 5555555

Project JDE Job Number	Role	Project Description	Project Status	Original Contract Amount	Project Value Local	Final Contract Amount
380236	Prime	SPRINGFIELD,OH - 2019 CIPP 2019 SANITARY CIPP PROJECT	JA	8% \$213,285.82 +CO #1	\$213,285.82	\$253,635.49

Project Manager	Project Close Date
Toke, Amal B	12/19/19

	AIS	Total	SR's
8	2,687	2,687	84
10	356	356	
12	26	26	
15	497	497	
18	363	363	
24	94	94	
Total	4,023	4,023	

Customer	Owner
City of Springfield, OH	City of Springfield, OH
76 E High Street Clark Springfield OH 45501	76 E High Street Clark Springfield OH 45501
+1 937 3247700	+1 937 3247700

Project JDE Job Number	Role	Project Description	Project Status	Original Contract Amount	Project Value Local	Final Contract Amount
380238	Prime	BATAVIA, OH (2019) SS IMPVMNTS 2019 SS IMPROVEMENTS	JA	8% \$879,923.00	\$879,923.00	\$681,198.69

Project Manager	Project Close Date
Toke, Amal B	05/15/20

	AIS	Total	SR's
6	1,428	1,428	97
8	4,626	4,626	
Total	6,055	6,055	

Customer	Owner
Village of Batavia, OH	Village of Batavia, OH
65 North Second Street Clermont Batavia OH 45103	65 North Second Street Clermont Batavia OH 45103
+1 513 7322020	+1 513 7322020

Project JDE Job Number	Role	Project Description	Project Status	Original Contract Amount	Project Value Local	Final Contract Amount
380239	Prime	HAMILTON, OH,2019 CONT#19-17 2019 SEWER LINING CONTR.#19-17	JA	8% \$388,870.00	\$388,390.00	\$280,396.00

Project Manager	Project Close Date
Toke, Amal B	04/07/20

	AIS	Total	SR's
8	6,324	6,324	191
10	768	768	
Total	7,092	7,092	

Customer	Owner
City of Hamilton, OH	City of Hamilton, OH
345 High Street Suite 450 Butler Hamilton OH 45011	345 High Street Suite 450 Butler Hamilton OH 45011
+1 513 7857278	+1 513 7857278

Project JDE Job Number	Role	Project Description	Project Status	Original Contract Amount	Project Value Local	Final Contract Amount
380240	Prime	BYESVILLE, OH - PHASE II SS REHAB - PHASE II	JA	8% \$593,865.44 + Change Orders	\$594,412.72	\$389,707.04

Project Manager	Project Close Date
Toke, Amal B	02/28/20

	AIS	Total	SR's
8	5,948	5,948	68
12	1,457	1,457	
Total	7,405	7,405	

Customer	Owner
Village of Byesville, OH	Village of Byesville, OH
221 East Main Street Guernsey Byesville OH 45723	221 East Main Street Guernsey Byesville OH 45723
+1 740 6853251	+1 740 6853251

Project JDE Job Number	Role	Project Description	Project Status	Original Contract Amount	Project Value Local	Final Contract Amount
380241	Prime	FAIRFIELD, OH 2019 REHAB SEWER REHAB CIPP METHOD	JA	8% \$164,737.50	\$164,737.50	\$217,306.50

Project Manager	Project Close Date
Toke, Amal B	04/09/20

	AIS	Total	SR's
8	6,346	6,346	92
15	282	282	
Total	6,628	6,628	

Customer	Owner
City of Fairfield, OH	City of Fairfield, OH
Fairfield Municipal Building 5350 Pleasant Butler Fairfield OH 45014	Fairfield Municipal Building 5350 Pleasant Butler Fairfield OH 45014
+1 513 8675375	+1 513 8675375

Project JDE Job Number	Role	Project Description	Project Status	Original Contract Amount	Project Value Local	Final Contract Amount
380244	Sub	PERFORMANCE PIPELING, UPPER AR 2020 SUSTAINABLE SOLUTION	JA	8% \$144,649.85	\$142,954.05	\$138,333.30

Project Manager	Project Close Date
Toke, Amal B	05/12/20

	AIS	Total	SR's
8	4,413	4,413	67
10	357	357	
Total	4,770	4,770	

Customer	Owner
Performance Pipelining Inc-Ottawa, IL	City of Upper Arlington, OH
1551 West Norris Drive Ottawa IL 61350	3600 Tremont Road Franklin Upper Arlington OH 43221
+1 815 4330080	+1 614 5835040

Project JDE Job Number	Role	Project Description	Project Status	Original Contract Amount	Project Value Local	Final Contract Amount
380245	Prime	MONTGOMERY COUNTY, OH TERRACE VILLA - CONTRACT- I	JA	8% \$159,610.00	\$167,798.00	\$16,400.00

Project Manager	Project Close Date
Toke, Amal B	07/30/20

	AIS	Total	SR's
8	2,722	2,722	24
Total	2,722	2,722	

Customer	Owner
Montgomery County Ohio-*Main Office-Dayton,OH	Montgomery County Ohio-*Main Office-Dayton,OH
451 W Third Street Montgomery Dayton OH 45422	451 W Third Street Montgomery Dayton OH 45422
+1 937 2254693	+1 937 2254693

NAR Project Pre-Close Review - Detail Contract Value

Project JDE Job	Project Value	Final Contract Amount
380223	\$523,736.75	\$673,449.06
380236	\$213,285.82	\$253,635.49
380238	\$879,923.00	\$681,198.69
380239	\$388,390.00	\$280,396.00
380240	\$594,412.72	\$389,707.04
380241	\$164,737.50	\$217,306.50
380244	\$142,954.05	\$138,333.30
380245	\$167,798.00	\$16,400.00
Total:	\$3,075,237.84	\$2,650,426.08

BID GUARANTY AND CONTRACT BOND
(O.R.C § 153.571)

Know all persons by these presents, that we, the undersigned Insituform Technologies, LLC
(Contractor) as principal and Travelers Casualty and Surety Company of America as surety are hereby
held and firmly bound unto the City of Gahanna, as obligee in the penal sum of the dollar amount of the
bid submitted by the principal to the obligee on August 20, 2020, to undertake the
2020 Sewer Improvement Project (Project).

The penal sum referred to herein shall be the dollar amount of the principal's bid to the obligee,
incorporating any additive or deductive alternates made by the principal on the date referred to above to
the obligee, which are accepted by the obligee. In no case shall the penal sum exceed the amount of

Two hundred twenty nine thousand nine hundred seventy seven dollars (\$229,979.75) and seventy five cents.
(If the foregoing blank is not filled in, the penal sum will be the full amount of the principal's bid,
including add alternates. Alternatively, if the blank is filled in the amount stated must not be less than the
full amount of the bid including add alternates, in dollars and cents. A percentage is not acceptable.) For
the payment of the penal sum well and truly to be made, we hereby jointly and severally bind ourselves,
our heirs, executors, administrators, successors, and assigns.

Signed this 20 day of August, 2020.

The condition of the above obligations is such that whereas the above named principal has submitted a
bid for work on the Contract.

Now, therefore, if the obligee accepts the bid of the principal and the principal fails to enter into a proper
contract in accordance with the bid, plans, details, specifications and bills of material; and in the event the
principal pays to the obligee the difference not to exceed ten percent (10%) of the penalty hereof
between the amount specified in the bid and such larger amount for which the obligee may in good faith
contract with the next lowest bidder to perform the work covered by the bid; or in the event the obligee
does not award the contract to the next lowest bidder and resubmits the contract for bidding, the
principal pays to the obligee the difference not-to-exceed ten percent (10%) of the penalty hereof
between the amount specified in the bid, or the costs, in connection with the resubmission, of printing
new contract documents, required advertising, and printing and mailing notices to prospective bidders,
whichever is less, then this obligation shall be null and void, otherwise to remain in full force and effect; if
the obligee accepts the bid of the principal and the principal within ten (10) days after the awarding of the
contract enters into a proper contract in accordance with the bid, plans, details, specifications and bills of
material, which said contract is made a part of this bond the same as though set forth herein.

Now also, if the said principal shall well and faithfully do and perform the things agreed by said principal
to be done and performed according to the terms of said contract; and shall pay all lawful claims of
subcontractors, materialmen, and laborers, for labor performed and materials furnished in the carrying
forward, performing, or completing of said contract; we agreeing and assenting that this undertaking shall
be for the benefit of any materialman or laborer having a just claim, as well as for the obligee herein; then
this obligation shall be void; otherwise the same shall remain in full force and effect; and surety shall
indemnify the obligee against all damage suffered by failure of the principal to perform the contract
according to its provisions and in accordance with the plans, details, specifications and bills of material
therefor and to pay all lawful claims of subcontractors, materialmen, and laborers for labor performed or
material furnished in carrying forward, performing, or completing the contract and surety further agrees
and assents that this undertaking is for the benefit of any subcontractor, materialman, or laborer having a

just claim, as well as for the obligee; it being expressly understood and agreed that the liability of the surety for any and all claims hereunder shall in no event exceed the penal amount of this obligation as herein stated.

The said surety hereby stipulates and agrees that no modifications, omissions, or additions in or to the terms of the said contract or in or to the plans or specifications therefore shall in any wise affect the obligations of said surety on its bond, and does hereby waive notice of any such modifications, omissions or additions to the terms of the contract or to the work or to the specifications.

Signed and sealed this 20 day of August, 2020.

Insituform Technologies, LLC, 17988 Edison Avenue, Chesterfield, MO 63005

Principal

Signature

Christlanda Adkins, Contracting & Attesting Officer

Printed Name and Title

Travelers Casualty and Surety Company of America

Surety

Signature

Andrew P. Thome, Attorney-in-Fact

Printed Name and Title

One Tower Square, Hartford, CT 06183

Surety's Address

860-277-0111

Surety's Telephone Number

860-277-3931

Surety's Fax Number

J.W. Terrill, A Marsh & McLennan Agency, LLC company

Surety's Agent

825 Maryville Centre Drive, Suite 200, St. Louis, MO 63017

Surety Agent's Address

314-594-2700

Surety Agent's Telephone Number

888-284-5307

Surety Agent's Fax Number

State of Missouri
County of St. Louis

On 08/20/2020, before me, a Notary Public in and for said County and State, residing herein, duly commissioned and sworn, personally appeared Andrew P. Thome known to me to be Attorney-In-Fact of

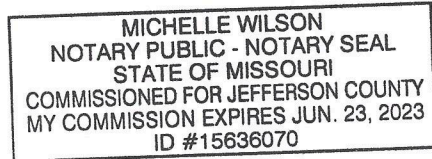
Travelers Casualty and Surety Company of America

a corporation described in and that executed the within and foregoing instrument, and known to me to be the person who executed the said instrument in behalf of said corporation, and he duly acknowledged to me that such corporation executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, the day and year stated in this certificate above.



Michelle Wilson, Notary Public



My Commission Expires: _____



**Travelers Casualty and Surety Company of America
Travelers Casualty and Surety Company
St. Paul Fire and Marine Insurance Company**

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That Travelers Casualty and Surety Company of America, Travelers Casualty and Surety Company, and St. Paul Fire and Marine Insurance Company are corporations duly organized under the laws of the State of Connecticut (herein collectively called the "Companies"), and that the Companies do hereby make, constitute and appoint **Andrew P. Thome**, of **Chesterfield, Missouri**, their true and lawful Attorney-in-Fact to sign, execute, seal and acknowledge any and all bonds, recognizances, conditional undertakings and other writings obligatory in the nature thereof on behalf of the Companies in their business of guaranteeing the fidelity of persons, guaranteeing the performance of contracts and executing or guaranteeing bonds and undertakings required or permitted in any actions or proceedings allowed by law.

IN WITNESS WHEREOF, the Companies have caused this instrument to be signed, and their corporate seals to be hereto affixed, this **3rd** day of **February**, 2017.



State of Connecticut

City of Hartford ss.

By:
Robert L. Raney, Senior Vice President

On this the **3rd** day of **February**, 2017, before me personally appeared **Robert L. Raney**, who acknowledged himself to be the Senior Vice President of Travelers Casualty and Surety Company of America, Travelers Casualty and Surety Company, and St. Paul Fire and Marine Insurance Company, and that he, as such, being authorized so to do, executed the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

In Witness Whereof, I hereunto set my hand and official seal.

My Commission expires the **30th** day of **June**, 2021



Marie C. Tetreault, Notary Public

This Power of Attorney is granted under and by the authority of the following resolutions adopted by the Boards of Directors of Travelers Casualty and Surety Company of America, Travelers Casualty and Surety Company, and St. Paul Fire and Marine Insurance Company, which resolutions are now in full force and effect, reading as follows:

RESOLVED, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President, any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary may appoint Attorneys-in-Fact and Agents to act for and on behalf of the Company and may give such appointee such authority as his or her certificate of authority may prescribe to sign with the Company's name and seal with the Company's seal bonds, recognizances, contracts of indemnity, and other writings obligatory in the nature of a bond, recognizance, or conditional undertaking, and any of said officers or the Board of Directors at any time may remove any such appointee and revoke the power given him or her; and it is

FURTHER RESOLVED, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President may delegate all or any part of the foregoing authority to one or more officers or employees of this Company, provided that each such delegation is in writing and a copy thereof is filed in the office of the Secretary; and it is

FURTHER RESOLVED, that any bond, recognizance, contract of indemnity, or writing obligatory in the nature of a bond, recognizance, or conditional undertaking shall be valid and binding upon the Company when (a) signed by the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President, any Second Vice President, any Assistant Secretary, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary and duly attested and sealed with the Company's seal by a Secretary or Assistant Secretary; or (b) duly executed (under seal, if required) by one or more Attorneys-in-Fact and Agents pursuant to the power prescribed in his or her certificate or their certificates of authority or by one or more Company officers pursuant to a written delegation of authority; and it is

FURTHER RESOLVED, that the signature of each of the following officers: President, any Executive Vice President, any Senior Vice President, any Vice President, any Assistant Vice President, any Secretary, any Assistant Secretary, and the seal of the Company may be affixed by facsimile to any Power of Attorney or to any certificate relating thereto appointing Resident Vice Presidents, Resident Assistant Secretaries or Attorneys-in-Fact for purposes only of executing and attesting bonds and undertakings and other writings obligatory in the nature thereof, and any such Power of Attorney or certificate bearing such facsimile signature or facsimile seal shall be valid and binding upon the Company and any such power so executed and certified by such facsimile signature and facsimile seal shall be valid and binding on the Company in the future with respect to any bond or understanding to which it is attached.

I, **Kevin E. Hughes**, the undersigned, Assistant Secretary of Travelers Casualty and Surety Company of America, Travelers Casualty and Surety Company, and St. Paul Fire and Marine Insurance Company, do hereby certify that the above and foregoing is a true and correct copy of the Power of Attorney executed by said Companies, which remains in full force and effect.

Dated this 20 day of August, 2020



Kevin E. Hughes, Assistant Secretary

**To verify the authenticity of this Power of Attorney, please call us at 1-800-421-3880.
Please refer to the above-named Attorney-in-Fact and the details of the bond to which the power is attached.**

TRAVELERS CASUALTY AND SURETY COMPANY OF AMERICA

HARTFORD, CONNECTICUT 06183

FINANCIAL STATEMENT AS OF DECEMBER 31, 2019

CAPITAL STOCK \$ 6,480,000

ASSETS		LIABILITIES & SURPLUS	
CASH AND INVESTED CASH	\$ 90,238,215	UNEARNED PREMIUMS	\$ 1,079,715,557
BONDS	3,590,884,327	LOSSES	772,047,572
STOCKS	297,933,044	LOSS ADJUSTMENT EXPENSES	174,714,866
INVESTMENT INCOME DUE AND ACCRUED	37,250,410	COMMISSIONS	46,970,467
OTHER INVESTED ASSETS	3,986,514	TAXES, LICENSES AND FEES	14,728,588
PREMIUM BALANCES	263,364,263	OTHER EXPENSES	43,134,846
NET DEFERRED TAX ASSET	52,134,926	CURRENT FEDERAL AND FOREIGN INCOME TAXES	12,674,197
REINSURANCE RECOVERABLE	31,203,529	REMITTANCES AND ITEMS NOT ALLOCATED	17,964,746
SECURITIES LENDING REINVESTED COLLATERAL ASSETS	3,732,602	AMOUNTS WITHHELD / RETAINED BY COMPANY FOR OTHERS	26,565,278
RECEIVABLES FROM PARENT, SUBSIDIARIES AND AFFILIATES	11,831,826	RETROACTIVE REINSURANCE RESERVE ASSUMED	826,255
ASSUMED REINSURANCE RECEIVABLE AND PAYABLE	567,396	POLICYHOLDER DIVIDENDS	11,482,845
OTHER ASSETS	3,574,968	PROVISION FOR REINSURANCE	9,837,205
		ADVANCE PREMIUM	2,140,883
		PAYABLE FOR SECURITIES LENDING	3,732,602
		CEDED REINSURANCE NET PREMIUMS PAYABLE	46,059,812
		OTHER ACCRUED EXPENSES AND LIABILITIES	421,937
		TOTAL LIABILITIES	\$ 2,263,017,456
		CAPITAL STOCK	\$ 6,480,000
		PAID IN SURPLUS	433,803,760
		OTHER SURPLUS	1,683,400,804
		TOTAL SURPLUS TO POLICYHOLDERS	\$ 2,123,684,564
TOTAL ASSETS	\$ 4,386,702,020	TOTAL LIABILITIES & SURPLUS	\$ 4,386,702,020

STATE OF CONNECTICUT)
 COUNTY OF HARTFORD) SS.
 CITY OF HARTFORD)

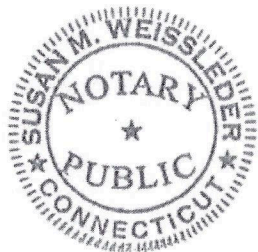
MICHAEL J. DOODY, BEING DULY SWORN, SAYS THAT HE IS VICE PRESIDENT - FINANCE, OF TRAVELERS CASUALTY AND SURETY COMPANY OF AMERICA, AND THAT TO THE BEST OF HIS KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT STATEMENT OF THE FINANCIAL CONDITION OF SAID COMPANY AS OF THE 31ST DAY OF DECEMBER, 2019.

Michael J. Doody
 VICE PRESIDENT - FINANCE

Susan M. Weissleder
 NOTARY PUBLIC

SUBSCRIBED AND SWORN TO BEFORE ME THIS
 26TH DAY OF MARCH, 2020

SUSAN M. WEISSLEDER
 Notary Public
 My Commission Expires November 30, 2022



Office of Risk Assessment
50 West Town Street
Third Floor - Suite 300
Columbus, Ohio 43215
(614)644-2658
Fax(614)644-3256
www.insurance.ohio.gov

Ohio Department of Insurance

Mike DeWine - Governor

Jillian Froment - Director

Certificate of Compliance



Issued 03/20/2020

Effective 04/02/2020

Expires 04/01/2021

I, Jillian Froment, hereby certify that I am the Director of Insurance in the State of Ohio and have supervision of insurance business in said State and as such I hereby certify that

TRAVELERS CASUALTY AND SURETY COMPANY OF AMERICA

of Connecticut is duly organized under the laws of this State and is authorized to transact the business of insurance under the following section(s) of the Ohio Revised Code:

Section 3929.01 (A)

Accident & Health	Multiple Peril - Farmowners
Aircraft	Multiple Peril - Homeowners
Allied Lines	Ocean Marine
Boiler & Machinery	Other Liability
Burglary & Theft	Private Passenger Auto - Liability
Commercial Auto - Liability	Private Passenger Auto - No Fault
Commercial Auto - No Fault	Private Passenger Auto - Physical Damage
Commercial Auto - Physical Damage	Surety
Credit	Workers Compensation
Earthquake	
Fidelity	
Financial Guaranty	
Fire	
Glass	
Inland Marine	
Medical Malpractice	
Multiple Peril - Commercial	

TRAVELERS CASUALTY AND SURETY COMPANY OF AMERICA certified in its annual statement to this Department as of December 31, 2019 that it has admitted assets in the amount of \$4,386,702,020, liabilities in the amount of \$2,263,017,456, and surplus of at least \$2,123,684,564.

IN WITNESS WHEREOF, I have hereunto subscribed my name and caused my seal to be affixed at Columbus, Ohio, this day and date.

Handwritten signature of Jillian Froment in cursive.

Jillian Froment, Director

