



**Brunswick-Glynn County
Joint Water and Sewer Commission**

**IFB No. 20-008
Invitation For Bid**

**CIPP Repairs
Altama Avenue Corridor and Sea Palms Development
for the
Brunswick-Glynn County Joint Water and Sewer Commission**

Friday, September 27, 2019

Responses Due by:

12:00 NOON, EST Tuesday, November 5, 2019 to:

**Purchasing Division
Joint Water and Sewer Commission
1703 Gloucester Street
Brunswick, Georgia 31520
(912) 261-7127**

**Submit responses in hard copy only; electronic or fax responses will not be accepted.
Responses received after the deadline or at any other locations will not be accepted.**

**Mandatory Pre-Bid meeting will be held on Tuesday, October 22th at 2:00 p.m.
JWSC Commission Chambers – 1703 Gloucester St, Brunswick, GA 31520**

**Deadline for questions is Friday, October 25th, no later than 5:00 p.m. EST.
Questions must be directed in writing (via e-mail) to the
Purchasing Director, Pamela Drury-Crosby, email- pcrosby@bgjwsc.org**

**FOR COMPLETE DETAILS OF THIS SOLICITATION, please visit the BGJWSC website, utilizing the
following link:**

<http://www.bgjwsc.org/departments/procurement/>

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SECTION 1

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I. Intent and Purpose

The Brunswick-Glynn County Joint Water and Sewer Commission (JWSC) is in the process of evaluating downstream conveyance systems improvements required to address various I/I related issues throughout the JWSC service area. This project contains rehabilitation work elements to reduce I/I flows via CIPP lining.

The preliminary report identifies two (2) separate areas as top candidates for CIPP rehabilitation. Located in the Brunswick district, the Altama Avenue corridor is a main thoroughfare connecting downtown Brunswick to the Northern Mainland district. It experiences significant traffic due to its proximity to educational and healthcare institutions along the route. Located in the SSI district, the Sea Palms neighborhood is a major residential development located on either side of Frederica Road (the only North/South route for the mid and north island areas) just a few miles north of the Sea Island Road intersection. See Exhibit A for maps of each area where the work is to be performed.

II. Scope of Work

JWSC requests qualified individuals and firms with experience in grout/CIPP and point repairs. Firms should have the qualification to provide the requested services that will include all labor, materials and equipment required to complete the required repairs, documentation, acceptance tests, visual inspection or vacuum test and warranty in accordance with established standards using approved products as detailed in the Technical Specifications included as Exhibit B. Pricing should be all inclusive with coordination and responsibility of all activities related to permitting, traffic control, flagging bypass pumping, jetter truck, OSHA confined space entry compliance, and debris removal included.

The timeframe to complete this scope of work (including final reports) is estimated not to exceed one hundred and fifty (150) calendar days. Bidders are advised to consider this aspect thoroughly as they plan and evaluate the multiple elements that will be involved to execute this project within the desired timeframe.

III. Schedule of Events

Listed below is the tentative schedule of events associated with this project:

Date	Event
No later than 09/27/2019	Solicitation Released; Bid Docs Available for prospective Bidders
10/22/2019 – 11:00 a.m.	Mandatory Pre-Bid Meeting - JWSC Headquarters
10/25/2019 – 5:00 p.m.	Deadline for Questions
11/05/2019 - NOON	Bids Due
11/07/2019	Anticipated Award Date
11/07 - 12/15/2019	Contract Execution Period and Pre-Construction Meeting/Notice to Proceed
Week of 01/06/2020	Commencement of Work
May 2020	Completion of Work

IV. Instructions to Bidders

These instructions are to be followed by every entity bidding to provide the Brunswick-Glynn County Joint Water and Sewer Commission (JWSC) with goods and/or services. These instructions constitute an integral part of the Bid, and any Bidder agrees that tender of a Bid constitutes acknowledgement and acceptance of its obligation to adhere to these instructions, which are to be incorporated into and considered part of any contract the Bidder ultimately executes with the JWSC.

1. If there is any question whatsoever regarding any portion of the specifications, it shall be the Bidder's responsibility to seek clarification immediately from the JWSC, as early as possible prior to the bid opening. Regarding requests for interpretations of specifications must be made in writing via email to the Purchasing Division no later than 5:00 p.m. EST on Friday, Oct 25th, 2019. Please direct all questions to the Pamela Drury-Crosby, Purchasing Director at pcrosby@bgjwsc.org. No oral communications from the Owner Contact or other individual is binding. No contact with the JWSC staff, Commission members or any public official concerning the project during the procurement process is allowed, except through the owner contact. A violation of this provision may result in disqualification of Bidder.
2. Unless it is otherwise stated in the bid documents, it shall be the responsibility of the bidder to inform itself as to all conditions of the work site and to make and take account thereof in calculating and submitting its bid. Documents may be made available by the JWSC during the bidding process; no warranty of accuracy is made in regard to these documents, and it is the responsibility of the bidder to make its own investigations as to the nature of the work and the conditions under which it shall be performed, and to make its own independent assumptions as to these matters. The burden of anticipating unforeseen circumstances, either hidden or latent, and the conditions of the work site and all related circumstances, and the cost of accommodating therefore should unanticipated circumstances be later encountered shall rest upon the bidder.
3. The pre-bid meeting will be held at the JWSC Commission Chambers located at 1703 Gloucester Street, Brunswick GA on Tuesday, October 22, 2019 at 2:00PM. Attendance is **MANDATORY**. The purpose of this meeting is to present and clarify information about the Project and process, and respond to any immediate questions that Bidders may have about this IFB. A list of persons in attendance will be recorded and posted on the Owner's website. Late entry to the meeting will not be allowed.
4. Information submitted by the Bidder in the bid process shall be subject to disclosure after bid award in accordance with the Georgia Open Records Act. Proprietary information must be identified and be accompanied by a signed affidavit outlining the redacted information. Entire bids may not be deemed proprietary. All updates to solicitation documents and any addenda will be posted on the JWSC website: <http://www.bgjwsc.org/departments/procurement/> It is the responsibility of all bidders to monitor this site for updates and addenda that may be added during the procurement process.
5. Bids must be made on the enclosed Bid Form. Unless otherwise requested, one (1) electronic, one (1) hard-copy original and at least five (5) copies of the Bid form package need to be submitted, and these copies must be **typewritten or printed in ink**. All copies of any Bid Forms must be signed in ink by the person or persons authorized to sign the Bid Form. The person signing the Bid Form must initial any changes or corrections.
6. The name of the person, firm, or corporation making the Bid must be printed in ink, along with the Bidder's signature, on all separate sheets of the Bid Form. If a Bid is made by an individual, his name and post office address must be shown. If made by a firm, or partnership, the name and the post office address

of each member of the firm or partnership must be shown. If made by a Corporation, the person or persons signing the Bid must show the name of the State under the laws of which the Corporation is chartered and his, or their authority for signing same. The names, titles and addresses of the President, Secretary and the Treasurer and the corporate authority for doing business in this state shall be listed and returned with the Bid Form.

7. All Bids must be hand delivered, delivered by courier service, or mailed via the United States Postal Service. No facsimiles will be accepted. The person, firm, or corporation making the Bid shall submit it in a sealed envelope on or before the date and time specified in the Bid package. The envelope shall be marked "**Sealed Bid**" and carry the Bid title, and date and time of opening as set forth in the Bid package. The envelope shall also bear the name of the party making the Bid and the party's address. Address Bids to *Brunswick-Glynn County Joint Water and Sewer Commission, 1703 Gloucester Street, Brunswick, GA 31520 ATTN: Purchasing Division.*
8. Alterations to the documents are strictly prohibited and shall result in automatic disqualification of the Bidder's bid. If there are "exceptions" to the specifications or comments to any of the solicitation requirements or other language, then the bidder may ask questions regarding those requirements or submit additional documentation as to the variation from the specifications, but may not alter any of the language contained in the solicitation. In the case of goods, the person, firm or corporation making the Bid may Bid all items. All items may be considered separately, at the discretion of the JWSC.
9. Bidders for construction contracts where the laws of Georgia or the United States of America require a license in order to perform such construction must list the license number and class on the face of the bid envelope and must enclose copies of any required license with the bid.
10. When public work is let out for bid, no person shall prevent or attempt to prevent competition in such bid. Such bidders must make an oath filed with the officer who makes payments under the contract that they have not prevented or attempted to prevent competition in the bid process. Such oath must be signed by: if a partnership, all partners and any officer or agent or other person who acted on the partnership's behalf during the bid process; if a corporation, all officers, agents, or other persons who acted for the corporation in the bid process.
11. Bids shall not be withdrawn or cancelled by the bidder pas the bid opening date and time. The bidder may make modifications/corrections to the bid by submitting a corrected sealed bid but only if the change is prior to the bid opening. The corrected document should be clearly marked that it supersedes the bid opening originally submitted. No modification or corrections will be allowed subsequent to the bid opening.
12. Bidders are hereby notified and agree by submission of a Bid Form that if additional items not listed in the Bid Form become necessary and require unit prices not established by the Bid Form, the unit prices of such items shall be negotiated and shall be directly proportional to the established unit prices of similar items on the Bid Form.
13. By tendering a bid, a Bidder agrees to leave the bid open for acceptance by the JWSC for (60) days after the date set for the opening thereof.
14. By tendering a bid, the bidder certifies that the bidder has carefully examined these instructions and the terms and specifications applicable to and made a part of the bid. The Bidder further certifies that the

prices shown in any schedule of items on which the Bidder is proposing are in accordance with the conditions, terms and specifications of the bid and that they are aware that any exception taken thereto may disqualify the bid. Bidders are required to inform themselves fully as to the availability of materials and the conditions relating to construction and labor under which any work will be or is now being performed. No error or misjudgment nor any lack of information on local conditions, general laws or regulations on the part of the Bidder shall merit withdrawal of the bid.

15. The time slated for completion of this work is stated in the Bid Form. Failure to complete the work within this period shall result in payment to the JWSC of liquidated damages in an amount provided for by contract for each calendar day in excess of the contract time.
16. While price is the prime criteria, and the JWSC intends to purchase at the lowest responsible bid available, price shall not be the sole criteria utilized by the JWSC in evaluating the bid package submitted. The following criteria shall also be utilized by the JWSC in determining the lowest responsible bid.
 - a. Ability of Bidder to perform in the time frame need by the JWSC.
 - b. Reputation of the Bidder in its industry.
 - c. Reasonableness of the bid in relation to anticipated costs.
 - d. Ongoing relationships with the JWSC based on above-average prior performance of work with the Commission.
17. The Bidder must employ such methods and means in carrying out the work as will not cause any interruption of or interference with any other Contractor.
18. The successful Bidder must comply with the applicable Risk Management Requirements prior to beginning performance, and during the contract period.
19. The Contract between the JWSC and the Contractor shall be executed on a form provided by JWSC and will be subject to all requirements of the contract documents (which include but may not be limited to the Contract, these instructions, any Purchase Orders, and the Risk Management Requirements), and shall form a binding contract between the contracting parties.
20. Failure to execute the Contract, any required Surety Performance and Payment Bonds, or to furnish any required satisfactory proof of carriage of required insurance within ten (10) days from the date of notice of award of the Contract shall be just cause for the annulment of the award and for forfeiture of the bid guaranty to the JWSC, not as a penalty, but in liquidation of damages sustained. At the discretion of the JWSC, the award may then be made to the next lowest responsible vendor, or the work may be re-advertised or constructed by the JWSC.
21. Any Contract and Contract Bonds shall be executed in duplicate.
22. Award of this bid shall be by action of the JWSC Board at its regular monthly meeting.
23. The JWSC reserves the right, with or without notice or cause, to accept any bid regardless of the amount thereof; to reject any bid, or any number of bids; to negotiate with any Bidder for a reduction of or alterations in its bid; to reject all bids and to call for additional bids upon the same or different invitations to bid, plans or specifications; to be sole judge, in its discretion, on all questions as to whether or not a bid

complies with the invitation to Bid, the plans or the specifications, and as to the solvency and sufficiency of any and all sureties on all bonds.

One (1) electronic (USB drive), One (1) original hard-copy and Five (5) hard-copies of your response must be submitted no later than 12:00 Noon on Tuesday, November 5, 2019 to:

Pamela Drury-Crosby, Purchasing Director
Brunswick-Glynn County Joint Water and Sewer Commission
1703 Gloucester Street
Brunswick, Georgia 31520

V. Required Bid Submittals

The following items are required to be included as part of the bid submittal. Failure to include any of these items may result in the bid being deemed non-responsive:

A. Bid Form

B. Bidder Qualification Information, including References. Failure to provide satisfactory references will result in the bid being deemed non-responsive.

C. Georgia Security and Immigration Compliance Act of 2006 form - Contractor Affidavit and Agreement form and Subcontractor Affidavit form (if applicable) <https://www.verify9.com/state-laws/georgia-e-verify/>

JWSC cannot consider any bid which does not include completed affidavits. It is not the intent of this notice to provide detailed information or legal advice concerning the Georgia Security & Immigration Compliance Act of 2006, as amended on May 11, 2009. All Bidders intending to do business with JWSC are responsible for independently apprising themselves and complying with the requirements of that law and its effect on JWSC procurements and their participation in those procurements.

D. Drug Free Workplace Affidavit

E. Addenda (if any issued).

V. Contract (use general terms and conditions)

After selection of the agency, a proposed contract shall be supplied and is subject to review and approval of the JWSC Attorney. Specific insurance requirements will be established and added as an attachment to the final contract.

SECTION 2

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EXHIBIT A

CIPP REHABILITATION REFERENCES MAP

ALTAMA AVENUE CORRIDOR AND SEA PALMS DEVELOPMENT

EXHIBIT B

CIPP REHABILITATION TECHNICAL SPECIFICATIONS

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SECTION 01000
SANITARY SEWER PIPE CLEANING

PART 1 GENERAL

1.1 SCOPE OF SERVICES AND WORK PHASING

- A. The purpose of this bid is to obtain competitive unit prices for all labor, material, and equipment necessary to clean existing sanitary sewers to remove solids, roots, soil, sand, pieces of broken pipe, bricks, grease, grit from sewer lines and manholes and other debris, thus improving flow and facilitating television inspection for sewer evaluation ranging in size from 8-inch to 24-inch diameter. The work includes hydraulic root cutting and cleaning, grinding protruding break-in service connections, remote televising and recording of the sewer. Cleaning includes initial manhole wall washing by high-pressure water jet. All project locations will be within the Owner service area.
- B. The work to be completed on each section of sewer will be performed in phases as defined in the following:
1. Phase 1 Pre-cleaning Inspection.
 - a. The preferred method for Pre-Cleaning Inspection is color CCTV conforming to NASSCO Pipeline Assessment Certification Program (PACP), and for the data to be exported electronically in a PACP certified format. Since this inspection is performed prior to cleaning, it is understood that the video may not provide an “unobstructed view of the entire pipe”.
 - b. The Contractor may propose other methods to the Owner prior to bid for inspection such as, zoom camera inspection, digital sidewall scanning inspections, acoustical technology, etc.
 - c. If the Contractor is performing the Pre-Cleaning Inspection, the method must be pre-approved by the Owner prior to inspection of the sewer interior.
 2. Phase 2 Sewer Pipe Cleaning. Based on the Owner’s review, he or she will determine if additional work will be required. At the sole discretion of the Owner is to either declare the work on the particular sewer segment complete or notify the Contractor of additional work (i.e. Phase 3: Light Sewer Cleaning, Heavy Cleaning, Deposit Cut, Root Cut Medium, Root Cut Ball, or Lateral Cut).
 3. Phase 3 Additional Sewer Pipe Cleaning (Optional). The Contractor shall perform the assigned additional work, which may be any one of the following items as defined in these specifications: Light Sewer Cleaning, Heavy Cleaning, Deposit Cut, Root Cut Medium, Root Cut Ball, or Lateral Cut.
 4. Phase 4 Post Cleaning Inspection. Final televising of the sewer segment to evaluate the condition of the sewer segment after all cleaning has been performed in Phase 3. Phase 4 will be required to be performed and will be reimbursed at the bid unit price.
 - a. The recorded video (including audio) must show the entire circumference of the sewer. The electronic report and video shall be named by line segment. Any flow control to remove standing water and debris shall be incidental to the contract. It is not the intent

of this specification to require bypass pumping to control heavy flow; however, the Contractor must, at a minimum, make reasonable effort to control the flow by using flushing equipment to temporarily retain flow or to remove standing water. The Contractor must also consider weather conditions to obtain the best video image of the sewer. This may require the Contractor to delay any video work after major rain events until the system can return to lower dry weather flow. The Contractor shall submit PACP data to include the electronic video reports, logs, etc. for the Owner's review as required in Part 1 Section 6.

- b. The segments of sewer to be cleaned and televised through this contract will be located primarily within the paved areas of the public right-of-way; however, there may be some sewer segments that are located within public easements on private property. The successful bidder, with assistance of the Owner as required, will be responsible to coordinate and gain access to any and all sewer segments and will be responsible for any restoration in accordance with Part III Section 5. This will include written authorization between Contractor and landowner.
- C. The Contractor shall furnish all labor, components, materials, tools, and appurtenances necessary for the performance and completion of the contract.
- D. Award of the contract will be determined through an evaluation of bids and made in light of the best interest of the Owner.
- E. The Contractor will be held fully liable for any damages incurred that are caused by his or her negligence.
- F. Patents, Trade Secrets, and Copyrights: The Contractor shall pay all license fees and royalties and assume all costs incidental to the use in the performance of the work or the incorporation in the work of any invention, design, process, product or device which is the subject of patent rights, trade secrets protection rights, or copyrights held by others. The Contractor shall indemnify and hold harmless the Owner and Engineer and anyone directly or indirectly employed by either of them from and against all claims, damages, losses and expenses (including attorney's fees and court and arbitration costs) arising out of any infringement of patent rights, trade secret protection rights, or copyrights incidental to the use in the performance of the work or resulting from the incorporation in the work of any invention, design, process, product or device not specified in the contract documents, and shall defend all such claims in connection with any alleged infringement of such rights.

1.2 OWNER

- A. This contract will be administered and performed under the direction and inspection of the Owner. Questions pertaining to this contract, before and after award, should be directed to the Owner at 912-261-7108 and aburroughs@bgjwsc.org.

1.3 TIME OF PERFORMANCE, SCHEDULING AND LIQUIDATED DAMAGES

- A. Upon award of the contract, the Contractor shall CCTV at least three (3) segments or 1,000 feet of pipe and submit the data to the Owner to verify that the CCTV database is compatible with the Owner's PACP Database, and the deliverables are acceptable to the Owner. The Owner shall verify acceptability of the deliverables within five (5) business days of receipt. After the Owner verifies compatibility of the database, the Owner shall then issue to the Contractor a written "Notice to

Proceed” including a date for commencement of work. The Contractor shall begin work on the date stated in the written “Notice To Proceed” (but no later than ten (10) calendar days after receipt) with an adequate force and sufficient resources to demonstrate due diligence in the performance of the contract.

- B. It is understood that the bidder may have other contracts with the Owner during the period of this contract. By bidding this work, the bidder is agreeing to provide an adequate number of crews in order to perform the work concurrently with due diligence and as specified in his approved schedule.
- C. If a daily dollar amount for liquidated damages has not been established for this project, the Owner reserves the right to impose liquidated damages under the terms of the contract.

1.4 COMPLIANCE AND ACCEPTANCE

- A. Compliance with this contract shall be complete when all conditions set forth in these specifications have been met. The following defines each work item, the level of effort, and quality of work that will be necessary to meet the intent of this specification:
- B. Pre-cleaning Inspection:
 - 1. The preferred method for Pre-Cleaning Inspection is color CCTV conforming to National Association of Sewer Service Companies’ (NASSCO) Pipeline Assessment Certification Program (PACP), exported electronically in a PACP compliant format. Other methods for inspection, including CCTV, zoom camera inspection, digital sidewall scanning inspections, acoustical technologies, etc. must be preapproved by the Owner prior to inspection of the sewer interior.
 - 2. Should the level or type of debris differ from the original inspection, the work type can be adjusted by the Owner to the proper work type and the work shall be paid at the adjusted, proper rate. The Contractor shall be responsible for providing evidence of the change in conditions to the Owner.
- C. Light Sewer Cleaning (Each Segment)
 - 1. Removal of Deposits Settled (DS):
 - a. Up to 12-inches 25%
 - b. 12-inches to 24-inches 15%
 - c. 24-inches and greater 5%
 - 2. The Contractor shall clean the sewer and associated manholes, including drop connections and benches, to remove all Deposits Settled (DS), so that the sewer is ready for televising. This will require an unlimited amount of passes of a hydraulic flusher to remove all loose debris and collect it for removal in the downstream manhole. All debris must be removed from the sewer, including any debris that may have been washed up into any service connections (does not include known pre-existing conditions in service connections), drop connections or the bench wall of the manholes. This item does not include any root cutting, deposit removal, or grinding of protruding service connections.
- D. Heavy Sewer Cleaning (Each Segment)
 - 1. Removal of Obstructions (OB) and Deposits Settled (DS) that exceed percentage established for light cleaning. This also includes Deposits Attached Grease (DAGS) if able to remove with

rotating nozzle or other mechanical means; not to include saws or cutters. Compliance with this section requires substantial effort towards cleaning.

2. Under this bid item, the Contractor shall remove all obstructions in the sewer. All debris must be removed from the sewer, including any debris that may have been washed up into any service connections (does not include known pre-existing conditions in service connections), drop connections or the bench wall of the manholes. This includes all grease, rocks, debris, sticks, etc. that will reduce the hydraulic capacity of the sewer and limit future maintenance access of remote equipment. This work will include an unlimited number of passes by high velocity hydro-cleaning equipment. A mechanical/hydraulic Spinner Nozzle may be used where necessary at no additional cost to the Owner; however, the Contractor shall be responsible for any damage to the sewer or any service connections. This item does not include cutting/grinding protruding break-in connections, as that work will be paid under a separate bid item.
 3. The Contractor shall maintain detailed documentation of cleaning efforts made to remove these items. Such documentation shall be made available to the Owner at any time.
 4. The Contractor shall immediately notify the Owner if he believes that this level of cleaning will cause a sewer collapse due to the existing deterioration of the host pipe. The Owner's determination whether to continue or stop work is final.
- E. Root Cut (Each segment)
1. Root Cut Medium - Removal of Roots Medium (RM), and Root Balls (RB) in one (1) or two (2) joints.
 2. Root Cut Ball – Removal of Root Balls (RB) removed in at least three (3) joints.
 3. The Owner shall determine if the sewer segment requires root cut cleaning. All roots must be screened, collected, and removed from the sewer for proper disposal offsite by the Contractor in accordance with the applicable regulations.
 4. The Contractor shall immediately notify the Owner if he believes that these activities performed under this paragraph will cause a sewer collapse due to the existing deterioration of the host pipe. Owner's determination whether to continue or stop work is final.
- F. Deposit Cut (Each Segment)
1. Removal of Deposits Attached Encrustation (DAE) and Deposits Attached Grease (DAGS) that require a cutter to remove.
 2. Under this bid item, the Contractor shall remove all obstructions in the sewer. All debris must be removed from the sewer, including any debris that may have been washed up into any service connections (does not include known pre-existing conditions in service connections), drop connections or the bench wall of the manholes. This includes all deposits, grease, debris, sticks, etc. that will reduce the hydraulic capacity of the sewer and limit future maintenance access of remote equipment. This work will include an adequate number of passes using high velocity hydro-cleaning equipment required to produce a clean pipe in accordance with these specifications. A mechanical/hydraulic root, chain cutter, etc. may be used where necessary at no additional cost to the Owner; however, the Contractor shall be responsible for any damage

to the sewer or any service connections. This item does not include cutting/grinding protruding break-in connections, as that work will be paid under a separate bid item.

3. Compliance with this section requires substantial effort towards cleaning, chipping, cutting, grinding, etc. to remove hardened deposits, grease, etc. The Contractor shall use remote CCTV equipment to monitor the progress of the work and ensure that the sewer is not damaged.
 4. The Contractor shall immediately notify the Owner if he believes that activities performed under this paragraph will cause damage due to the existing deterioration of the host pipe. The Owner's determination whether to continue or stop work is final.
 5. The Contractor shall maintain detailed documentation of cleaning efforts made to remove these items.
 6. If attached deposits cannot be removed by tools normally used in the industry, the Owner should be consulted immediately. The Owner and the Contractor should discuss whether to cancel the work on that segmentation or negotiate a flat rate or hourly rate for the Contractor to do the work.
- G. Lateral Cuts
1. Removing protruding laterals, excludes DIP, SP, CAS etc.
 2. The Owner shall determine when break-in service connections will require grinding based on his review of the initial survey television inspection. The Contractor shall cut/grind the protruding service connection by using a remote grinding/cutting device capable of removing concrete, vitrified clay, PVC and other types of pipe material. The device shall be specifically designed to cut/grind protruding service connections. The Contractor shall use remote CCTV equipment to monitor the progress of the work and ensure that the service connection is not damaged.
 3. The protruding break-in service connection shall be cut/ground flush to the main sewer pipe without scouring or damaging the main sewer or service connection. All cuttings must be screened, collected, and removed from the sewer for proper disposal.
 4. During the final survey television inspection, the Contractor shall slowly pan the entire circumference of the trimmed connection to verify the quality of the work.
 5. The Contractor shall immediately notify the Owner if he believes that the pipe is not structurally sound. The Contractor and Owner shall discuss the severity and risk of cutting/grinding the lateral. The Owner shall then determine, if they want the lateral cut/ground, at the Owners risk, or if the work should not be performed on this contract.
 6. If other than typical lateral materials are encountered, the Contractor shall notify the Owner and the Owner and Contractor should discuss the ability, costs and risks associated with cutting/grinding the lateral. The Owner shall decide, whether to cut/grind the lateral or to not cut/grind the lateral. If the Owner decides to cut/grind the lateral, the price should be negotiated between the Owner and Contractor, prior to cutting/grinding the lateral.
- H. Debris Records
1. The Contractor shall keep records of types of debris, removed from each segment of pipe and provide these records to Owner in the format requested by Owner.

I. Final Survey Television Inspection

1. As in the initial survey television inspection pay item, CCTV inspections will be conducted entirely in electronic format.
2. All CCTV work shall conform to the most current NASSCO PACP standards. The documentation of the work shall consist of NASSCO PACP CCTV Reports, Unmodified NASSCO PACP database, logs, electronic reports, etc. noting defects and observations encountered during the inspection.
3. The documentation of the work shall consist of PACP CCTV Reports, PACP database, logs, electronic reports, etc. noting important features encountered during the inspection. The speed of travel shall be slow enough to inspect each pipe joint, tee connection, structural deterioration, infiltration and inflow sources, and deposits, but should not, at any time, be faster than 30 feet per minute, except as noted otherwise in this document.

1.5 LIABILITIES AND ASSUMPTIONS

A. Liability and Assumptions

In order to minimize and appropriately allocate costs and risks, it is in the best interest of all contracted parties (Owner and Contractor) and prospective parties (i.e. Bidders) to understand thoroughly the risks associated with any particular project. For that reason we will define herein, what is standard practice in the procurement and completion of sewer cleaning and inspection so that everyone involved can effectively assess their obligations, risks, and duties.

B. Assumptions

It is reasonable and customary to assume the following, unless otherwise detailed in writing:

1. The Owner has provided the Parties (Contractor and/or Bidders), in writing, with all of the information that the Owners possess that would allow the Parties to accurately and fully assess the entire scope of the project.
2. The Owner possesses or has contracted the services of a person or entity who possesses the knowledge, expertise and experience to fully understand the scope of the service for which they are attempting to contract with the Parties.
3. The Parties are knowledgeable, capable and legally authorized to contract for the services in question.
4. The infrastructure for which the services are requested are in suitable condition to allow for the activities which are usual and customary for the services requested without undue risk to the Parties equipment or personnel, unless otherwise described by the Owner in writing.

C. Liabilities

Should it be found during initial investigation and/or during the course of performance that conditions are different than those which are typical and customary and outside of the assumptions listed above, the Contractor may negotiate a reasonable change in terms. The Owner reserves the right to re-bid such work if it results in a substantial increase in cost by more than 5% of the total project.

D. Notification

1. If observed defects are believed to be such that further cleaning operations may compromise the structural integrity and/or cause the pipe to become unusable, the Contractor must provide written communication to the Owner's designee of the observed condition(s) and reason to believe that continued cleaning operations may cause substantial damage. The Owner will then direct the Contractor as to what services, precautions, etc., the Owner will require of the Contractor. If the contract documents do not address this potential, then the Owner and Contractor will negotiate in good faith, the conditions under which the work is to continue or cease to continue.
2. This exception may only be used to prevent asset damage and shall not be used to eliminate difficult or adverse cleaning areas that were previously documented in these documents or by prior written communication with the Owner.

1.6 SUBMITTALS

- A. All submittals are due as scheduled. Work will not proceed until all submittals are received and approved. The project manager reserves the right to adjust the due dates of the submittals based on Contractor performance. The Contractor shall label each submittal indicating what is represented, name of Contractor, and project number. All submittals identified as being in error shall be re-performed and corrected at the Contractor's expense.
- B. Submittals Required with Bid Documents include:
 1. List of references per Part 2 Section 7
 2. Documentation of Certification of PACP Software
- C. Liability Insurance
 1. The Contractor's commercial general liability limits must be not less than \$1,000,000, each occurrence, subject to general aggregate of \$1,000,000, and include pesticide or herbicide applicator coverage.
 2. Liability Insurance. Seven (7) days prior to the pre-construction meeting, the Contractor shall submit written evidence that he has obtained pollution liability coverage; limits must be not less than \$1,000,000 combined single limit each occurrence/aggregate.. In addition, the Contractor's commercial general liability limits must be not less than \$1,000,000, each occurrence, subject to general aggregate of \$1,000,000, and include pesticide or herbicide applicator coverage. The Owner shall be named as an additional insured with respect to General Liability.
- D. Submittals required of the Successful Bidder seven (7) days prior to the Pre-construction Meeting:
 1. Name of the project supervisor and resumes.
 2. Documentation of NASSCO PACP certification for all CCTV operators, database and software.
 3. Site Safety Plan. A complete site safety plan must be submitted one (1) week prior to the pre-construction meeting. Work will not begin until an approved site safety plan is in place.

4. Sample inspection CCTV data and video or data from other approved inspection method.

E. Submittals Required for the Pre-Construction Meeting:

1. An initial comprehensive schedule of work, see Part 4, Paragraph D (To be approved by the Owner).

2. Management Organization: Provide an organization chart depicting the essential organizational elements and senior personnel of the proposed Contractor and the functions and interrelationships of the personnel proposed to provide technical support, project management and supervision for this project. Provide succinct resumes of the personnel proposed to provide technical support and project management for this project. The personnel designated in the management summary for essential positions shall not be changed except with the permission of Owner. The Owner will only approve such a change when, in its opinion, the substitute personnel have equal or greater qualifications and experience to those intended to be replaced.

3. Proof that Contractor is an approved/bonded Contractor with the Owner.

F. Submittals Required One (1) Week Prior to Any Cleaning & Televising Work:

1. Site specific site safety plan addenda.

2. Entry releases, if applicable.

3. Submit equipment manufacturer's operational manuals and guidelines to the Owner for review. Strictly follow such instructions unless otherwise directed by the Owner.

G. Weekly Submittals

1. Detailed updates to the work schedule will be provided to the project manager no later than 1:00 p.m. on the Friday preceding the next week's cleaning and televising work.

2. DVDs, logs, and / or electronic worksheets submitted seven (7) days prior to work. All field paperwork must be submitted before the Contractor's invoice will be processed for payment.

3. Corrections to punch list items as required by the project manager to fulfill the requirements of this specification.

H. Final Submittals Prior to Payment

1. Corrections to punch list items as required by the Owner to fulfill the requirements of this specification.

2. At the end of the contract, the Contractor shall submit a hard drive including all videos and reports for the entire contract.

3. The digital information shall contain files which store each line segment as unique digital record.

PART 2 SPECIAL PROVISIONS

2.1 OWNER RIGHTS

- A. The Owner reserves the right to stop the work when, in the project manager's judgment, the Contractor's work or activities are threatening the health and safety of the public or endangering the environment or endangering the waters of the state. Work shall not proceed until a satisfactory resolution has been achieved, as determined in the sole and unfettered opinion of the Owner.
- B. The Contractor or Subcontractor shall not perform any work which is not specifically identified in the work schedule unless approved by the Owner. Notification of such work must be received no later than 8:00 a.m. on the day the work is to be performed. A list of persons available to be notified will be given at the pre-construction meeting.

2.2 EMERGENCY RESPONSE

- A. The Contractor shall provide a telephone number to the Owner. This number is intended for the project manager's use in contacting the evening/weekend/holiday emergency work crew for emergencies resulting from the Contractor's actions or lack thereof during this project. This crew shall be responsible for contacting the Owner within one-half hour after the first verbal or electronic notification. If the Contractor's crew has not responded to the site of the emergency within one hour of the first summons, verbal or electronic, the Owner will make all necessary repairs and bill the Contractor for all work performed. Costs related to the emergency response will be incidental to the contract and not measured for payment.

2.3 WORKING HOURS

- A. The Contractor must complete all work such that no homeowner is without sewer service, unless otherwise directed by the Owner. Local noise ordinances or agencies having control over roadway closures may control starting or stopping operations. Prior to starting operations, the Contractor shall advise the Owner of the restrictions imposed by the local agencies.
- B. The Contractor may be required to work days, nights or weekends to achieve the lowest depth flows in the sewer pipes and not conflict with public events.
- C. No work will be allowed on weekends or holidays except at the discretion of the Owner.

2.4 DECREASE/INCREASE IN SERVICE AND STOP WORK DUE TO INCLEMENT WEATHER

- A. The Owner, at its option, may increase or decrease any or all service requirements provided for under this contract. The Owner further reserves the right to suspend or stop the performance of any or all of the work of this contract due to inclement weather conditions.

2.5 PRE-CONSTRUCTION MEETING

- A. Following award of the contract and before starting any work the Contractor, job superintendent/project manager, and crew leader shall meet with the Owner. The Contractor will be notified of the date, time, and place of the meeting.
- B. Attendance:
 - 1. Owner

2. Owners Inspector
3. Engineer
4. Contractor's Representative
5. Contractor's Superintendent
6. Major Subcontractors
7. Major Suppliers
8. Others, as appropriate

C. Agenda:

1. Distribution and discussion of:
 - a. List of Major Subcontractors and Suppliers
 - b. Projected Construction Schedules
2. Critical Work Sequencing
3. Major Equipment Deliveries and Priorities
4. Project Coordination
 - a. Designation of Responsible Personnel
5. Procedures and processing of:
 - a. Field decisions
 - b. Requests for Information
 - c. Submittals
 - d. Deliverables
 - e. Change Orders
 - f. Applications for Payment
6. Procedures for maintaining Record Documents
7. Use of Premises:
 - a. Office, Work and Storage Areas
 - b. Owner's Requirements
8. Construction Facilities, Controls and Construction Aids.
9. Procedures for Reporting Sanitary Sewer Overflows (SSOs).
10. Temporary Utilities.

2.6 CLOSE-OUT PROCEDURES

- A. Progress Meetings: Project closeout will be completed in phases by project. The Owner will hold progress meetings at predetermined intervals, or as determined necessary by the Owner. Items covered in the meetings include the following:
1. Punch List: This list will detail all items requiring correction, repair, or improvements in order to be accepted. The Contractor will address these items within seven (7) calendar days or as specified by the Owner. Failure to complete punch list items will result in a stop work notice and delay of payment until completed to the satisfaction of the Owner.
 2. Reports and Submittals: Final reports, post-tapes and other submittals previously described will be finalized and submitted.
 3. Review of the status of pay estimates.
 4. Issue project worksheets, as necessary.
 5. Work scheduling issues.

2.7 PRE-QUALIFICATIONS

- A. The successful low bidder must have an onsite field supervisor with a minimum three (3) years of experience specializing in the cleaning and televising of sewers. A foreman for each crew performing cleaning and television inspection with a minimum of five (5) years of experience specializing in that type of work may be substituted for the onsite field supervisor requirement.

The Contractor shall provide the names, titles, phone numbers and addresses of a minimum of two (2) references that can be used to verify this experience. The references must be contract managers or persons of authority over cleaning and televising work performed by the Contractor.

1. The Contractor shall also provide five (5) similar projects with cleaning and inspection equipment as proposed for this project.
2. The Contractor must have foreman or supervisors meeting all pre-qualifications for the duration of the contract.

B. PACP Requirements

1. Current NASSCO PACP certification of all CCTV operators, working on this project, will be required for all CCTV work. The work shall comply with current NASSCO standards.
2. Database shall be NASSCO-PACP (Current Version) Certified Access Database.
3. CCTV Software shall be NASSCO-PACP (Current Version) certified.
4. CCTV inspections (Color Video including audio and Data Collected) will be conducted and delivered entirely in electronic format.

PART 3 GENERAL PROVISIONS

3.1 MAINTENANCE OF TRAFFIC

- A. The Contractor shall be responsible for maintaining "local" traffic at all times and for notifying the proper authorities regarding the closing of the roads. The Contractor will be responsible for obtaining all permits required for maintenance of traffic.
- B. The Contractor shall not begin work until standard barricades and warning signs are in an acceptable position and the markers and signs conform to the Federal Highway Administration (FHWA) "Manual of Uniform Traffic Control Devices for Streets and Highways" and all applicable state and local requirements. The Contractor assumes all responsibilities and liabilities regarding strict adherence to applicable sections for the maintenance of traffic and public safety as set forth in the FHWA "Manual of Uniform Traffic Control Devices for Streets and Highways". All traffic control devices must be in place prior to starting work.
- C. The cost of all traffic control devices shall not be paid separately, but shall be included in the other prices/items in the contract.
- D. The Contractor shall maintain local traffic at all times during all phases of this project in a manner causing the least amount of inconvenience to the abutting property owners. Temporary driveways, temporary roadways, or run around as may be necessary to provide vehicular access to and from the abutting properties shall be constructed, maintained, and subsequently removed by the Contractor as directed by the Owner.
- E. The portion of the pavement not affected by the work shall be kept clear of all material and equipment.
- F. The Contractor shall hold harmless the Owner and all its representation from all suits, actions, of claims of any character brought on account of any injuries or damages sustained by any person or persons or property in the performance of this contract.

- G. If at any time traffic has to be blocked (emergencies only), the Contractor shall notify the nearest fire, police departments and service departments.
- H. The cost of maintenance of traffic shall be incidental to the contract and not measured for payment.

3.2 EXISTING UTILITIES

- A. The Contractor must take the necessary precautions for the protection of any utility encountered on the project or the restoration of any utility damaged during the work.
- B. If an excavation is required, the Contractor shall notify, at least 48 hours before breaking ground, all public or private service corporations having wire, poles, pipes, conduit, manholes, or other structures that may be affected by this operation, including all structures which are affected and not shown on these plans. Owners of underground utilities, which are members of the state's one call service, can be notified by calling the one call service. Non-member underground utility owners must be called directly.
- C. All maintenance, repair, and replacement of existing utilities shall be in accordance with the rules and regulations of the various utility companies having jurisdiction.
- D. All existing storm sewers, driveway drains, surface drain pipes and other property, removed or damaged during construction shall be repaired and reconnected by the Contractor as directed by the Owner at no additional cost to the Owner.
- E. The Contractor must repair manholes dismantled or damaged during the cleaning process, and replace manhole frames and covers damaged during the cleaning process.

3.3 REQUEST FOR SUPPLEMENTARY INFORMATION

- A. It shall be the responsibility of the Contractor to make timely requests of the Owner for supplemental information, which should be furnished by Owner under the terms of this contract, and as required in the planning and execution of the work. Such requests may be submitted from time to time as the need approaches, but each shall be filed in ample time to permit appropriate action to be taken by all parties involved to avoid delay.
- B. Each request shall be in writing, and list the various items and the latest day by which each will be required by the Contractor. The first list shall be submitted within two (2) weeks after contract award and shall be as complete as possible at that time. The Contractor shall, if required, furnish promptly any assistance and information the Owner may require in responding to these requests of the Contractor. The Contractor shall be fully responsible for all delays arising from failure to comply with this section.

3.4 USE OF PREMISES

- A. The Contractor shall not trespass upon or in any way disturb private property without first obtaining written permission from the Owner to do so. A copy of such written permission shall be furnished to the Owner prior to accessing the site.
- B. It shall be the Contractor's responsibility to work equipment around poles, trees, or other obstructions and to do so at his own expense.

- C. If the Contractor finds it necessary to obtain additional working area, it shall be the Contractor's responsibility for its acquisition.
- D. The Contractor shall, at no additional expense, restore such property to the full satisfaction of the Owner and shall obtain from the Owner a written release stating that restoration has been satisfactorily made. A copy of the completed written release shall be furnished to the Owner prior to payment.
- E. All items within the street right-of-way or sewer easement shall be removed, or removed and replaced, or restored as directed by the Owner.
- F. The Contractor shall ensure all employees have a non-expired badge or visible identification during any time that they are on the project site or within private property. This identification must be worn so that it is readily recognized and readable to the public. Contractor shall provide picture identification at the time of service upon request to the Owner and public.

3.5 PROTECTION OF TREES

- A. The Contractor shall avoid any unnecessary damage to trees. Branches which overhang the project limits and which interfere with the operation of equipment shall be tied back to avoid damage, if possible. Where injury to branches is unavoidable, the cuts should be made sufficiently close to the branch collar, so as not to leave a protruding stub, without cutting into the branch collar. Each cut shall be made with the appropriately sized pruning shear, which should have properly matched, sharpened blades. Pruning cuts shall not be painted or otherwise treated. The Contractor, at no additional expense, shall remove any trees damaged beyond saving, and make restitution to the Owner (public or private).

3.6 FENCING

- A. Any fences, including hedge and shrubs that need to be removed to facilitate the work shall be replaced in kind or with repairs satisfactory to the Owner, at the Contractor's expense to a condition equal to or better than existing prior to such damage. Fencing relocated for the convenience of accommodating construction activities shall be returned to its original location at the completion of the work. Replacement of fences, hedges, and shrubs shall be considered incidental to the contract and not measured for payment.

3.7 RESTORATION

- A. All roadway berms and drainage ditches disturbed by the work shall be restored, reshaped, and graded to drain.
- B. Pavement restoration, if necessary, shall conform to the Owner's specifications. Trench backfill and compaction shall be in conformance with the local street restoration jurisdiction.
- C. The remediation of sunken trenches caused by activities conducted in this contract shall be the Contractor's responsibility. Sunken areas shall be backfilled and compacted to meet adjoining grades; the surface shall be re-seeded or resurfaced with asphalt or concrete matching the existing surfacing.
- D. The Contractor shall restore unpaved areas by seeding and mulching. No direct payment will be made for seeding and mulching.

- E. Driveways shall be restored in accordance with the Owner's specifications depending upon who has jurisdiction for the driveway.
- F. All disturbed areas shall be restored as nearly as possible to their original condition.
- G. All restoration shall be completed in strict accordance with the appropriate items of the specifications as directed by the Owner.
- H. The cost of all restoration of streets, drives, walks; sod, etc. shall be incidental to the contract and not measured for payment.
- I. The restoration of sod areas and driveways shall be kept current with the project work. Failure to keep restoration of these items completed reasonably close shall result in a stop work notice and delay of payment until such restoration is completed to the satisfaction of the Owner.

3.8 CLEANUP

- A. The Contractor shall keep the work area in an uncluttered condition by the frequent removal of debris, at a minimum daily. The Contractor shall remove all debris and unused material and leave the area in a condition similar to the condition of the area before any work was performed.
- B. Conserve Water. Do not waste water from the public water supply through poor connections, hydrants left open, or any other cause.
- C. Remove waste and surplus materials, rubbish, and temporary construction facilities from site following final test of utilities and completion of the Work.

3.9 PROPERTY DAMAGE

- A. The Contractor will be required to make repairs and/or clean the property immediately if there is any damage to private or public property caused by activities related to this contract.
- B. The Contractor shall immediately investigate any and all reports of sewage backing up into fixtures served by the sewer segment that is being cleaned or televised.

3.10 ACCESS TO MUNICIPAL WATER SUPPLIES

- A. The Contractor will be required to rent an appropriately sized hydrant meter with backflow preventer from the Owner for access to the municipal water supply and exercise care to prevent contamination of the potable water system.
- B. The cost of water should not be billed separately, but shall be included in the other prices/items in the contract.

PART 4 EXECUTION

4.1 GENERAL

- A. The Contractor shall furnish and maintain, in good condition, all cleaning and televising equipment necessary for proper execution of the work.

- B. Do not begin cleaning until both upstream and downstream manholes have been checked for flow monitors and other mechanical devices.
- C. **Maintaining Flow:** It will be the responsibility of the Contractor, throughout the tenure of this contract, to provide and maintain sufficient flow at all times to pass any surge in flow and prevent any SSOs due to obstruction caused by cleaning or CCTV equipment. Take precautions to protect sanitary sewer mains and manholes from damage that might be inflicted by the improper selection of cleaning processes or improper use of equipment. When using hydraulically-propelled devices take precautions to ensure that the water pressure created does not cause damage to or flooding of public or private property. Do not surcharge any sanitary sewer to an elevation that could cause overflow of sewage into area waterways, homes or buildings, or onto the surface.
- D. Do not use or obstruct fire hydrants when there is a fire in the area. Remove water meters, fittings and piping from fire hydrants at the end of each working day.
- E. **Retrieval of Materials and Equipment:** It shall be the Contractor's responsibility to remove materials and equipment that has been lodged in the sewer from cleaning, television inspection, or point repair excavations.
- F. **Work Schedule.** This schedule shall outline the sequence in which the Contractor proposes to conduct his operations and shall be approved by the Owner before work is started. The Contractor shall use a time-scaled logic diagram format. The level of detail of activities shall provide clear, concise communication of the plan of work. At a minimum, activities showing initial mobilization, start-up, cleaning and televising, and any resultant point repairs shall be included.
- G. Original and updated schedules must be provided to the Owner in writing on appropriately sized single sheets. A color print will be required in order to distinguish different types of activities from one another. The software used for producing the schedules must have the capability to tailor the form and format of schedules, and accompanying reports, to the Owner's requirements.
- H. The Owner may require additional updates to the schedule as changes occur. These additional updates will be submitted to the project manager within 24 hours of the request. Changes to the schedule are subject to approval of the Owner.

4.2

SEWER CLEANING AND GRINDING OF SERVICE CONNECTIONS

- A. The Contractor shall provide equipment that is specifically designed and constructed for sewer cleaning. Solids and debris resulting from the cleaning operation shall be collected and removed from the downstream manhole and disposed of at a site selected by the Owner and approved by appropriate jurisdictional personnel. Passing debris from any sewer section to any other sewer section is not allowed. Load debris from the manholes into an enclosed container permitted by the Health Department for liquid waste hauling. Remove solids and semi-solids resulting from cleaning operations from the site and dispose them lawfully at the end of each work day. Do not accumulate debris, liquid waste, or sludge on the site except in totally enclosed containers approved by the Owner. Under no circumstances shall sewage solids be dumped onto the surface, street, or into ditches, inlets, or storm drains.

- B. The Contractor shall use the manufacturer's recommended size tools for the various size pipes. Equipment recommended by the manufacturer to protect the manhole and pipe, such as pull-in slant jack rollers and roller and yoke assembly, roller manhole jacks, etc. shall be utilized.
- C. The Contractor shall dispose of all sanitary debris and material at a location to be provided and directed by the Owner. The Contractor shall not be reimbursed for disposal costs.
- D. The Contractor is required to submit documentation of the work that is performed and the type of debris removed, as well as landfill permits and disposal documentation.
- E. The Contractor shall have a CCTV camera in the sewer, during all cleaning operations to include: Lateral Cut and Deposit Cut. The camera shall be used for the Contractor's verification that the cleaning equipment is not damaging the public sewer. No submittal is required for this item and the cost for monitoring the cleaning equipment operation shall be included in the associated unit cost for the cleaning item. This in no way waives the Contractor's responsibility for damaging the sewer but is intended to bring the resulting damage to the Contractor's attention so that the operation can be stopped in a timely manner.

4.3

TELEVISION INSPECTION AND COMPUTERIZED EQUIPMENT

- A. Immediately after cleaning, video inspect the sanitary sewer line to document the condition of the line and to locate existing service connections. Notify the Owner 24 hours in advance of any television inspection so that the Owner may observe inspection operations.
- B. Contractor shall use a color pan, tilt and zoom, camera or a digital side scanning camera (panoramic) specifically designed and constructed for color video sewer inspection. Each sewer to be televised shall be suitably isolated to eliminate or control flow during video inspection or panoramic inspection to allow for the entire circumference of the pipe to be viewed.
- C. Lighting for the camera or panoramic scanning camera shall provide a clear picture of the entire periphery of the existing sewer. A reflector in front of the camera may be required to enhance lighting in dark or large diameter pipe.
- D. The pan, tilt, zoom camera shall pause, pan, and visually inspect all service connections, pipe ends, and maintenance or structural defects. If utilizing a panoramic view inspection system, pausing and panning is not necessary during the inspection and can be used by the Owner if the image clearly depicts the inside of the lateral for post processing of the scans. Images of both manholes of each segment shall also be provided on each CCTV report to document their condition from the casting to the invert. All service connections that have cracked or defective pipe, roots, and/or grease shall be dye tested during the video inspection or after the panoramic inspection utilizing a pan, tilt, zoom camera. Addresses for all service connections dye tested will be noted. The address of each investigation shall be clearly noted on each CCTV report. Provide monitoring and video recording of the televised sewer inspection, locating each sewer service connection entering the sewer. If a blockage cannot be removed and hampers the televising of the sewer in one direction, then the Contractor shall attempt to complete the segment by televising from the other manhole to complete the segment. This reversal must immediately follow the initial direction on the same report. The Contractor must immediately report the obstruction to the Owner.
- E. The Contractor shall perform all CCTV inspections in accordance with NASSCO's Pipeline Assessment Certification Program (PACP). CCTV inspections will be conducted entirely in electronic format. The entire pan, tilt, and zoom inspection survey shall be recorded in MPEG-1

format written in a digital format (ex. DVD, Hard Drive) and submitted with digital links to the survey. All panoramic side scanning inspection survey shall be recorded in an acceptable panoramic format and submitted with digital links to the survey. All cleaning and television inspection reports shall be within +/- two (2) feet of the measured linear footage between manholes along the existing sewer centerline from the start of pipe to end of pipe. Work not following these specifications may be rejected for payment and the Contractor may be required to re do the work.

- F. Survey television inspection videos shall be continuous for pipe segments between manholes. Do not leave gaps in the video recording of a segment between manholes and do not show a single segment on more than one video, unless specifically allowed by the Owner.
- G. CCTV Reports, logs, electronic reports, and worksheets must include the following information and conform to the applicable guidelines:
 - 1. CCTV Reports, NASSCO PACP Certified Database and electronic worksheets must accompany all inspection work.
 - 2. Cleaning Reports: All cleaning work must be documented, as specified by the Owner.
 - 3. All Owner and NASSCO PACP required header information must be fully and accurately entered on all CCTV reports. See Header Field Checklist for mandatory and required Header Fields.

PART 5 PAYMENT FOR WORK

5.1 MEASUREMENT AND PAYMENT

- A. Cleaning of sewers will be measured for payment by the linear foot of the various diameters of sewer actually cleaned and verified through television inspection. In cases where the sewer is entirely inspected manhole-to-manhole, payments will be based on the measured linear footage between manholes along the existing sewer centerline from the center of the manhole at the unit price submitted on the unit price page.
- B. Acceptance of sewer cleaning work is subject to successful completion of the television inspection. If the television inspection shows solids, soil, sand, grease, grit, or other debris remaining in the line, cleaning will be considered unsatisfactory. Repeat cleaning and inspection of the line segment until cleaning is judged satisfactory by the Owner.
- C. Payment for the collection, removal, transportation and legal disposal of liquid wastes, soil, sand and other debris removed from sanitary sewer greater than or equal to 48-inches in diameter while performing cleaning shall be by cubic yard. Measurement shall be by properly executed waste manifest for rolloff container. The container shall be available on site as needed by the Contractor. The container shall not be loaded with material other than debris from the sanitary sewer system, shall not contain excessive free water, and shall be filled to the appropriate capacity for transportation.
- D. Lateral Cuts will be calculated for payment based on multiplying the number of laterals satisfactorily completed and meeting the specification governing final acceptance, by the bid unit price for each.

- E. All invoicing will be by sewer segment and payment and will not be made until all work; including punch list items (rework and additional work) are completed for each sewer segment. Any invoice for sewer segments that are not cleaned and complete will not be accepted by the Owner. Poor or unacceptable-quality video (hazy, unclear images) will not qualify for payment.
- F. The following items of work will not be measured for payment but the cost thereof will be considered as incidental to the contract:
1. Data entry, computerized equipment, software, and hardware to submit the required electronic submittals, including the DVDs, records, and logs.
 2. Completion of all electronic forms.
 3. Collection, removal, transportation and legal disposal of liquid wastes, soil, sand and debris regardless of quantity of material.
 4. Photographic equipment and supplies used to show sewer pipe and manhole defects.
 5. Bypass pumping, reverse setups required to bracket an obstruction and/or sewer flow control where required by the Contractor to perform his or her work.
 6. Providing temporary and final paving at any proposed excavations.
 7. Providing temporary and final restoration of grass areas.
 8. Emergency after-hours response.
 9. Re-televising and re-cleaning following a point repair completed by the Contractor without prior approval of the Owner.
 10. Demobilization and mobilization because of suspension of work.
 11. Updates to the schedule as required by the Owner.
 12. Right of entry access to private property.
 13. Dye testing of service connections in order to meet the CCTV specification.
 14. Reconstruction of manholes dismantled for cleaning equipment access, and repair damage cause by dismantling or cleaning equipment.
- G. In order for the Owner to properly and accurately track costs of the contract, the Contractor shall submit timely invoices with backups accordingly and the final invoice on each project within 30 days after the completion of the project.
- H. Performance and Payment Bond: The bond securing the performance of the contract shall be effective for the full maximum period of the contract including the optional renewal period(s) specified. The bond amount indicated shall be deemed adequate surety for the initial and optional renewal periods. The cost of performance surety shall be treated as an overhead expense and shall be included in the bid amounts. The Owner shall not pay the cost of surety as a direct bill item.

END OF SECTION

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SECTION 02000 – SANITARY SEWER PIPE CONDITION ASSESSMENT USING CCTV**

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SECTION 02000
SANITARY SEWER PIPE CONDITION ASSESSMENT USING CCTV

PART 1 GENERAL

1.1 SCOPE OF SERVICES AND WORK PHASING

- A. The purpose of this bid is to obtain competitive unit prices for all labor, material, and equipment necessary to inspect via closed-circuit television (CCTV) existing sewers. The work includes remote televising and recording of the sewer. All project locations will be within the Owner's service area.
- B. The work to be completed on each section of sewer will be performed in phases as defined in the following:
 - 1. Phase 1: Inspection.
 - 1. Sewer sections shall be inspected by means of remote CCTV. If a blockage hampers the inspection of the sewer in one direction, then the Contractor shall attempt to complete the section by televising from the other manhole to complete the section. The Contractor must immediately report the obstruction to the Owner or his representative (hereinafter referred to as "Owner"). All CCTV work shall conform to Current NASSCO-PACP standards.
 - 2. CCTV inspections will be delivered entirely in electronic format.
 - 1. All PACP Header information shall be completed in accordance with PACP Guidelines. In addition to mandatory Header fields, additional fields are required as noted on the attached Header Field Matrix.
 - 2. The documentation of the work shall consist of PACP CCTV Reports, PACP database, logs, electronic reports, etc. noting important features encountered during the inspection. The speed of travel shall be slow enough to inspect each pipe joint, tee connection, structural deterioration, infiltration and inflow sources, and deposits, but should not, at any time, be faster than 30 feet per minute, except as noted otherwise in this document.
 - 3. The camera must be centered in the pipe to provide accurate distance measurements to provide locations of features in the sewer and these footage measurements shall be displayed and documented on the video. All PACP Observations shall be identified by audio and on PACP log. All video must be continuously metered from manhole. The pipe should be clean enough to ensure all defects, features and observations are seen and logged. If cleaning is required, see Section 01000 – Sanitary Sewer Pipe Cleaning.
- C. The Contractor shall furnish all labor, components, materials, tools, and appurtenances necessary for

the performance and completion of the contract.

- D. Award of the contract will be determined through an evaluation of bids and in the best interest of the Owner.
- E. The Contractor will be held fully liable for any damages incurred that are caused by his or her negligence.
- F. Patents, Trade Secrets, and Copyrights: The Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the work or the incorporation in the work of any invention, design, process, product or device which is the subject of patent rights, trade secrets protection rights, or copyrights held by others. The Contractor shall indemnify and hold harmless the Owner and Engineer and anyone directly or indirectly employed by either of them from and against all claims, damages, losses and expenses (including attorney's fees and court and arbitration costs) arising out of any infringement of patent rights, trade secret protection rights, or copyright incident to the use in the performance of the work or resulting from the incorporation in the work of any invention, design, process, product or device not specified in the contract documents, and shall defend all such claims in connection with any alleged infringement of such rights.

1.2 OWNER

This contract will be administered and performed under the direction and inspection of the Owner or his designated representative. Questions pertaining to this contract, before and after award, should be directed to the Owner at 912-261-7108 and aburroughs@bgjwsc.org.

1.3 TIME OF PERFORMANCE, SCHEDULING AND LIQUIDATED DAMAGES

- A. Upon award of the contract, the Contractor shall CCTV at least three (3) segments or 1,000 feet of pipe and submit the data to the Owner to verify that the CCTV database is compatible with the Owner's PACP Database, and the deliverables are acceptable to the Owner. The Owner shall verify acceptability of the deliverables within five (5) business days of receipt. After the Owner verifies compatibility of the inspection deliverables including the database, the Owner shall then issue to the Contractor a written "Notice to Proceed" including a date for commencement of work. The Contractor shall begin work on the date stated in the written "Notice To Proceed" (but no later than ten (10) calendar days after receipt) with an adequate force and sufficient resources to demonstrate due diligence in the performance of the contract.
- B. It is understood that the bidder may have other contracts with the Owner during the period of this contract. By bidding this work, the bidder is agreeing to provide an adequate number of crews in order to perform the work concurrently with due diligence and as specified in his approved schedule.
- C. If a daily dollar amount for liquidated damages has not been established for this project, the Owner reserves the right to impose liquidated damages under the terms of the contract.

1.4 COMPLIANCE AND ACCEPTANCE

A. Compliance with this contract shall be complete when all conditions set forth in these specifications have been met. The following defines each work item, the level of effort, and quality of work that will be necessary to meet the intent of this specification.

B. Television Inspection

1. As in the initial survey television inspection pay item, CCTV inspections will be delivered entirely in electronic format.
2. All CCTV work shall conform to the most current NASSCO PACP standards. The documentation of the work shall consist of NASSCO PACP CCTV Reports, NASSCO PACP database, logs, electronic reports, etc. noting defects and observations encountered during the inspection.

1.5 LIABILITIES AND ASSUMPTIONS

A. Liability and Assumptions

In order to minimize and appropriately allocate costs and risks, it is in the best interest of all contracted parties (Owner and Contractor) and prospective parties (i.e. Bidders) to understand thoroughly the risks associated with any particular project. For that reason we will define herein, what is standard practice in the procurement and completion of sewer cleaning and inspection so that everyone involved can effectively assess their obligations, risks and duties. Liability for removal of equipment that becomes stuck in the sewer should be discussed in the contract. The Owner makes no guarantee that the sanitary sewer designated for survey television after cleaning is clear for the passage of the camera set-up. Select the appropriate equipment, tools and methods for securing safe passage of the camera.

1. Negligence Caused – Contractor
2. Owner Decision to proceed after concerns raised – Owner
3. Unforeseen Hazard (I.E. hole in pipe under flow line and not visible) – To be discussed in advance to mutually agree upon liability based on the CCTV leading up to the hazard.

B. Assumptions

It is reasonable and customary to assume the following, unless otherwise detailed in writing:

1. The Owner has provided the Parties (Contractor and/or Bidders), in writing, with all of the information that the Owners possess that would allow the Parties to accurately and fully assess the entire scope of the project.
2. The Owner possesses or has contracted the services of a person or entity who possesses the knowledge, expertise and experience to fully understand the scope of the service for which they are

attempting to contract with the Parties.

3. The Parties are knowledgeable, capable and legally authorized to contract for the services in question.
4. The infrastructure for which the services are requested are in suitable condition to allow for the activities which are usual and customary for the services requested without undue risk to the Parties equipment or personnel, unless otherwise described by the Owner in writing.

C. Liabilities

Should it be found during initial investigation and/or during the course of performance that conditions are different than those which are typical and customary and outside of the assumptions listed above, the Contractor may negotiate a reasonable change in terms. If the Owner and the Contractor cannot agree on a change in terms, the Owner reserves the right to re-bid or cancel such work.

D. Notification

1. If observed defects are believed to be such that further operations may compromise the structural integrity and/or cause the pipe to become unusable, the Contractor must provide written communication to the Owner's designee of the observed condition(s) and reason to believe that continued operations may cause substantial damage. The Owner will then direct the Contractor as to what services, precautions, etc., the Owner will require of the Contractor. If the contract documents do not address this potential, then the Owner and Contractor will negotiate in good faith, the conditions under which the work is to continue or cease to continue.
2. This exception may only be used to prevent asset damage and shall not be used to eliminate difficult or adverse areas that were previously documented in these documents or by prior written communication with the Owner.

1.6 SUBMITTALS

- A. All submittals are due as scheduled. Work will not proceed until all submittals are received and approved. The Owner reserves the right to adjust the due dates of the submittals based on Contractor performance. The Contractor shall label each submittal indicating what is represented, name of Contractor, and project number. All submittals identified as being in error shall be re-performed and corrected at the Contractor's expense.
- B. Submittals Required with Bid Documents include:
 1. List of references per Part 2 Section 7.
 2. Documentation of Certification of PACP Software.
- C. Liability Insurance

1. The Contractor's commercial general liability limits must be not less than \$1,000,000, each occurrence, subject to general aggregate of \$1,000,000.
2. Liability Insurance. Seven (7) days prior to the pre-construction meeting, the Contractor shall submit written evidence that it has obtained commercial general liability limits must be not less than \$1,000,000 combined single limit each occurrence/aggregate. Owner shall be named as an additional insured with respect to General Liability, and shall identify additional insured parties, such as the General Contractor, as applicable, with respect to General Liabilities.

D. Submittals required of the Successful Bidder seven (7) days prior to the Pre- construction Meeting:

1. Name of the project supervisor and resumes
2. Documentation of NASSCO PACP certification for all CCTV operators, database and software
3. Site Safety Plan. A complete site safety plan, specific for the project, must be submitted one (1) week prior to the pre-construction meeting. Work will not begin until an approved site safety plan is in place
4. Sample inspection CCTV data and video or data from other approved inspection method.

E. Submittals Required for the Pre-construction Meeting:

1. An initial comprehensive schedule of work, see Part IV, Paragraph D (To be approved by the Owner).
2. Management Organization: Provide an organization chart depicting the essential organizational elements and senior personnel of the proposed Contractor and the functions and interrelationships of the personnel proposed to provide technical support, project management and supervision for this project. Provide succinct resumes of the personnel proposed to provide technical support and project management for this project. The personnel designated in the management summary for essential positions shall not be changed except with the permission of Owner. The Owner will only approve such a change when, in its opinion, the substitute personnel have equal or greater qualifications and experience to those intended to be replaced
3. Proof that Contractor is an approved/bonded Contractor with the Owner.

F. Submittals Required One (1) Week Prior to Any Cleaning & Televising Work

1. Site specific site safety plan addenda.
2. Entry releases, if applicable.

3. Submit equipment manufacturer's operational manuals and guidelines to the Owner for review. Strictly follow such instructions unless otherwise directed by the Owner.

G. Weekly Submittals

1. Detailed updates to the work schedule will be provided to the Owner no later than 1:00 p.m. on the Friday preceding the next week's cleaning and televising work.
2. Electronic data and video/scan submittals, logs, and / or electronic worksheets submitted seven (7) days prior to work. All field paperwork must be submitted before the Contractor's invoice will be processed for payment.
3. Corrections to punch list items as required by the Owner to fulfill the requirements of this specification.

H. Final Submittals Prior to Payment

1. Corrections to punch list items as required by the Owner to fulfill the requirements of this specification.
2. At the end of the contract, the Contractor shall submit a hard drive including all videos and reports for the entire contract.
3. The digital information shall contain files which store each line segment as unique digital record.

PART 2 SPECIAL PROVISIONS

2.1 OWNER RIGHTS

- A. The Owner reserves the right to stop the work when in the Owner's judgment the Contractor's work or activities are threatening the health and safety of the public or endangering the environment or endangering the waters of the state. Work shall not proceed until a satisfactory resolution has been achieved, according to the Owner.
- B. The Contractor or Subcontractor shall not perform any work which is not specifically identified in the work schedule unless approved by the Owner. Notification of such work must be received no later than 8:00 a.m. on the day the work is to be performed. A list of persons available to be notified will be given at the pre-construction meeting.

2.2 EMERGENCY RESPONSE

The Contractor shall provide direct contact information to the Owner. These numbers are intended for the Owner's use in contacting the evening/weekend/holiday emergency work crew for emergencies resulting from the Contractor's actions or lack thereof during this project. This crew shall be responsible for

contacting the Owner within one-half hour after the first verbal and electronic notification. If the Contractor's crew has not responded to the site of the emergency within one hour of the first contact, verbal and electronic, the Owner will make all necessary repairs and bill the Contractor for all work performed. Costs related to the emergency response will be incidental to the contract and not measured for payment.

2.3 WORKING HOURS

- A. The Contractor must complete all work such that no homeowner is without sewer service, unless otherwise directed by the Owner. Local noise ordinances or agencies having control over roadway closures may control starting or stopping operations. Prior to starting operations, the Contractor shall advise the Owner of the restrictions imposed by the local agencies.
- B. The Contractor may be required to work days, nights or weekends to achieve the lowest depth flows in the sewer pipes and not conflict with public events.
- C. No work will be allowed on weekends or holidays except at the discretion of the Owner.

2.4 DECREASE/INCREASE IN SERVICE AND STOP WORK DUE TO INCLEMENT WEATHER

- A. The Owner, at its option, may increase or decrease any or all service requirements provided for under this contract. The Owner further reserves the right to suspend or stop the performance of any or all of the work of this contract due to inclement weather conditions.

2.5 PRE-CONSTRUCTION MEETING

- A. Following award of the contract and before starting any work the Contractor, Job Superintendent/Project Manager, and Crew Leader shall meet with the Owner. The Contractor will be notified of the date, time, and place of the meeting.
- B. Attendance:
 - 1. Owner
 - 2. Owner's Inspector
 - 3. Engineer
 - 4. Contractor's Representative(s)
 - 5. Contractor's Superintendent
 - 6. Major Subcontractors
 - 7. Major Suppliers
 - 8. Others, as appropriate
- C. Agenda:
 - 1. Distribution and discussion of:

1. List of major Subcontractors and Suppliers
2. Projected Construction Schedules
2. Critical Work Sequencing
3. Major Equipment Deliveries and Priorities
4. Project Coordination
 - a. Designation of Responsible Personnel
5. Procedures and processing of:
 - a. Field decisions.
 - b. Requests for Information
 - c. Submittals
 - d. Deliverables
 - e. Change Orders
 - f. Applications for Payment
6. Procedures for maintaining Record Documents
7. Use of Premises
 - a. Office, Work and Storage Areas
 - b. Owner's Requirements
8. Construction Facilities, Controls and Construction Aids.
9. Procedures for reporting Sanitary Sewer Overflows (SSOs).
10. Temporary Utilities.

2.6 CLOSE-OUT PROCEDURES

Progress Meetings: Project closeout will be completed in phases by project. The Owner will hold progress meetings at predetermined intervals, or as determined necessary by the Owner. Items covered in the meetings include the following.

1. Punch List: This list will detail all items requiring correction, repair, or improvements in order to be accepted. The Contractor will address these items within seven (7) calendar days or as specified by the Owner. Failure to complete punch list items will result in a stop work notice and delay of payment until completed to the satisfaction of the Owner.
2. Reports and Submittals: Final reports, post-tapes and other submittals previously described will be finalized and submitted.
3. Review of the status of pay estimates.
4. Issue project worksheets, as necessary.
5. Work scheduling issues.

2.7 PRE-QUALIFICATIONS

- A. The successful bidder must have an onsite field supervisor with a minimum three (3) years of

experience specializing in the televising of sewers. A foreman for each crew performing television inspection with a minimum of five (5) years of experience specializing in that type of work may be substituted for the onsite field supervisor requirement. The Contractor shall provide the names, titles, phone numbers and addresses of a minimum of two (2) references that can be used to verify this experience. The references must be contract managers or persons of authority over cleaning and televising work performed by the Contractor.

1. The Contractor shall also provide five (5) similar projects with inspection equipment as proposed for this project.
2. The Contractor must have foreman or supervisors meeting all pre-qualifications for the duration of the contract.

B. PACP Requirements

1. Current NASSCO PACP certification of all CCTV operators, working on this project, will be required for all CCTV work.
2. Database shall be NASSCO-PACP (Current Version) Certified Access Database.
3. CCTV Software shall be NASSCO-PACP (Current Version) certified.
4. CCTV inspections (Color Video including audio and Data Collected) will be conducted and delivered entirely in electronic format.

PART 3 GENERAL PROVISIONS

3.1 MAINTENANCE OF TRAFFIC

- A. The Contractor shall be responsible for maintaining "local" traffic at all times and for notifying the proper authorities regarding the closing of the roads. The Contractor will be responsible for obtaining all permits required for maintenance of traffic.
- B. The Contractor shall not begin work until standard barricades and warning signs are in an acceptable position and the markers and signs conform to the Federal Highway Administration (FHWA) "Manual of Uniform Traffic Control Devices for Streets and Highways" and all applicable state and local requirements. The Contractor assumes all responsibilities and liabilities regarding strict adherence to applicable sections for the maintenance of traffic and public safety as set forth in the FHWA "Manual of Uniform Traffic Control Devices for Streets and Highways", and other applicable regulations. All traffic control devices must be in place prior to starting work.
- C. The cost of all traffic control devices shall not be paid separately, but shall be included in the other price items in the contract.
- D. The Contractor shall maintain local traffic at all times during all phases of this project in a manner causing the least amount of inconvenience to the abutting property Owners. Temporary driveways, temporary roadways, or run around as may be necessary to provide vehicular access to and from the

abutting properties shall be constructed, maintained, and subsequently removed by the Contractor as directed by the Owner.

- E. The portion of the pavement not affected by the work shall be kept clear of all material and equipment.
- F. The Contractor shall hold harmless the Owner and all its representation from all suits, actions, of claims of any character brought on account of any injuries or damages sustained by any person or persons or property in the performance of this contract.
- G. If at any time traffic has to be blocked (emergencies only), the Contractor shall notify the nearest fire, police departments and service departments.
- H. The cost of maintenance of traffic shall be incidental to the contract and not measured for payment.

3.2 EXISTING UTILITIES

- A. The Contractor must take the necessary precautions for the protection of any utility encountered on the project or the restoration of any utility damaged during the work.
- B. If an excavation is required, the Contractor shall notify, at least 48 hours before breaking ground, all public or private service corporations having wire, poles, pipes, conduit, manholes, or other structures that may be affected by this operation, including all structures which are affected and not shown on these plans. Owners of underground utilities, which are members of the state's one call service, can be notified by calling. Non-member underground utility Owners must be called directly.
- C. All maintenance, repair, and replacement of existing utilities shall be in accordance with the rules and regulations of the various utility companies having jurisdiction.
- D. All existing storm sewers, driveway drains, surface drain pipes and other property, removed or damaged during construction shall be repaired and reconnected by the Contractor as directed by the Owner at no additional cost to the Owner.

3.3 REQUEST FOR SUPPLEMENTARY INFORMATION

- A. It shall be the responsibility of the Contractor to make timely requests of the Owner for supplemental information, which should be furnished by the Owner under the terms of this contract, and as required in the planning and execution of the work. Such requests may be submitted from time to time as the need approaches, but each shall be filed in ample time to permit appropriate action to be taken by all parties involved to avoid delay.
- B. Each request shall be in writing, and list the various items and the latest day by which each will be required by the Contractor. The first list shall be submitted within two (2) weeks after contract award and shall be as complete as possible at that time. The Contractor shall, if required, furnish promptly any assistance and information the Owner may require in responding to these requests of the

Contractor. The Contractor shall be fully responsible for all delays arising from failure to comply with this section.

3.4 USE OF PREMISES

- A. The Contractor shall not trespass upon or in any way disturb private property without first obtaining written permission from the property Owner and/or Owner or Prime Contractor as appropriate to do so. A copy of such written permission shall be furnished to the Owner prior to accessing the site.
- B. It shall be the Contractor's responsibility to work equipment around poles, trees, or other obstructions and to do so at his own expense.
- C. If the Contractor finds it necessary to obtain additional working area, it shall be the Contractor's responsibility for its acquisition.
- D. The Contractor shall, at no additional expense, restore such property to the original condition in the sole and unfettered opinion of the system Owner. The Contractor must take photographs and/or videos of existing properties prior to disturbance of each property, and make a copy available to the system Owner.
- E. All items within the street right-of-way or sewer easement shall be removed, or removed and replaced, or restored as directed by the Owner.
- F. The Contractor shall ensure all employees have a non-expired badge or visible identification during any time that they on the project site or within private property. This identification must be worn so that it is readily recognized and readable to the public. Contractor shall provide picture identification at the time of service upon request to the Owner and public.

3.5 PROTECTION OF TREES

- B. The Contractor shall avoid any unnecessary damage to trees. Branches which overhang the project limits and which interfere with the operation of equipment shall be tied back to avoid damage, if possible. Where injury to branches is unavoidable, the cuts should be made sufficiently close to the branch collar, so as not to leave a protruding stub, without cutting into the branch collar. Each cut shall be made with the appropriately sized pruning shear, which should have properly matched, sharpened blades. Pruning cuts shall not be painted or otherwise treated. The Contractor, at no additional expense, shall remove any trees damaged beyond saving, and make restitution to the Owner (public or private).

3.6 FENCING

- A. Any fences, including hedge and shrubs, that need to be removed to facilitate the work shall be replaced, in kind or with repairs satisfactory to the Owner, at the Contractor's expense to a condition equal to or better than existing prior to such damage. Fencing relocated for the convenience of accommodating construction activities shall be returned to its original location at the completion of

the work. Replacement of fences, hedges, and shrubs shall be considered incidental to the contract and not measured for payment.

3.7 RESTORATION

- A. All roadway berms and drainage ditches disturbed by the work shall be restored, reshaped, and graded to drain.
- B. Pavement restoration, if necessary, shall conform to the Owner's regulations, or the Owner's Specifications depending upon who has jurisdiction for the street. Trench backfill and compaction shall be in conformance with the local street restoration jurisdiction.
- C. The remediation of sunken trenches caused by activities conducted in this contract shall be the Contractor's responsibility. Sunken areas shall be backfilled and compacted to meet adjoining grades; the surface shall be re-seeded or resurfaced with asphalt or concrete matching the existing surfacing.
- D. The Contractor shall restore unpaved areas by seeding and mulching. No direct payment will be made for seeding and mulching.
- E. Driveways shall be restored in accordance with Owner's regulations, or the Owner's Specifications depending upon who has jurisdiction for the driveway.
- F. All disturbed areas shall be restored as nearly as possible to their original condition.
- G. All restoration shall be completed in strict accordance with the appropriate items of the specifications as directed by the Owner.
- H. The cost of all restoration of streets, drives, walks; sod, etc. shall be incidental to the contract and not measured for payment.
- I. Restoration shall be kept current with the project work. Failure to keep restoration of these items completed reasonably close shall result in a stop work notice and delay of payment until such restoration is completed to the satisfaction of the Owner.

3.8 CLEANUP

- A. The Contractor shall keep the work area in an uncluttered condition by the frequent removal of debris, at a minimum daily. The Contractor shall remove all debris and unused material and leave the area in a condition similar to the condition of the area before any work was performed.
- B. Conserve Water. Do not waste water from the public water supply through poor connections, hydrants left open, or any other cause.
- C. Remove waste and surplus materials, rubbish, and temporary construction facilities from site following

final test of utilities and completion of the Work.

3.9 PROPERTY DAMAGE

- A. The Contractor shall immediately investigate any and all reports of sewage backing up into fixtures served by the sewer section that is being cleaned or televised.
- B. The Contractor will be required to notify the Owner immediately if he causes any damage to private or public property caused by activities related to this contract. The Contractor shall make repairs and/or clean the property immediately in a timeframe that is acceptable to the Owner.

3.10 ACCESS TO MUNICIPAL WATER SUPPLIES

- A. The Contractor will be required to rent an appropriately sized hydrant meter with backflow preventer from the Owner for access to the municipal water supply and exercise care to prevent contamination of the potable water system.
- B. The cost of water should not be billed separately, but shall be included in the other prices/items in the contract.

PART 4 EXECUTION

4.1 GENERAL

- A. The Contractor shall furnish and maintain, in good condition, all cleaning and televising equipment necessary for proper execution of the work.
- B. Do not begin cleaning until both upstream and downstream manholes have been checked for flow monitors and other mechanical devices.
- C. Maintaining Flow: It will be the responsibility of the Contractor, throughout the tenure of this contract, to provide and maintain sufficient flow at all times to pass any flash of storm flow of drainage ditches and prevent any backwater flooding due to obstruction caused by cleaning or CCTV equipment. Take precautions to protect sanitary sewer mains and manholes from damage that might be inflicted by the improper selection of cleaning processes or improper use of equipment. When using hydraulically-propelled devices take precautions to ensure that the water pressure created does not cause damage to or flooding of public or private property. Do not surcharge any sanitary sewer to an elevation that could cause overflow of sewage into area waterways, homes or buildings, or onto the surface.
- D. Do not use or obstruct fire hydrants when there is a fire in the area. Remove water meters, fittings and piping from fire hydrants at the end of each working day.

- E. Retrieval of Materials and Equipment: It shall be the Contractor's responsibility to remove materials and equipment that has been lodged in the sewer from cleaning, television inspection, or point repair excavations.
- F. Work Schedule. This schedule shall outline the sequence in which the Contractor proposes to conduct his operations and shall be approved by the Owner before work is started. The Contractor shall use a time-scaled logic diagram format. The level of detail of activities shall provide clear, concise communication of the plan of work. At a minimum, activities showing initial mobilization, start-up, cleaning and televising, and any resultant point repairs shall be included.
- G. Original and updated schedules must be provided to the Owner in writing. The software used for producing the schedules must have the capability to tailor the form and format of schedules, and accompanying reports, to the Owner's requirements.
- H. The Owner may require additional updates to the schedule as changes occur. These additional updates will be submitted to the Owner within 24 hours of the request. Changes to the schedule are subject to approval of the Owner.

4.2 TELEVISION INSPECTION AND COMPUTERIZED EQUIPMENT

- A. The Contractor shall use a color pan and tilt camera or a side wall scanning (panoramic) camera specifically designed and constructed for color sewer inspection. Each sewer to be televised shall be suitably isolated to control flow during the inspection. The Contractor shall provide a recording of the televised sewer inspection, locating each sewer service connection entering the sewer.
- B. Lighting for the pan and tilt camera or side wall scanning camera shall provide a clear picture of the entire periphery of the existing sewer. A reflector in front of the camera may be required to enhance lighting in dark or large diameter pipe.
- C. The pan and tilt camera shall pause, pan, and visually inspect all service connections, pipe ends, and maintenance or structural defects. If utilizing a camera with side wall scanning capabilities, pausing and panning of each lateral is not necessary during the inspection if the image clearly depicts the inside of the lateral for post processing. If a blockage cannot be removed and hampers the televising of the sewer in one direction then the Contractor shall attempt to complete the section by televising from the other manhole to complete the section, this reversal should immediately follow the initial direction. The Contractor must immediately report the obstruction to the Owner.
- D. Side wall scanning inspection systems are imaging cameras that are capable of a continuous 360 degree image capture of the wall of the pipeline being inspected. These systems may have one or multiple cameras to capture the complete interior view of the pipeline. Due to the high resolution of the image quality, the inspections may be conducted at a higher speed than color pan and tilt CCTV method upon approval of the owner. Once the pipeline inspections are completed, the captured images

can be linked with a companion software package that allows for identifying and coding defects and features in the pipeline. Typically these systems provide a fold flat view and a perspective view (typical of CCTV) of the pipeline.

- E. If the image quality is not adequate for post-inspection coding, the Contractor shall be required to repeat the survey at the Contractor's expense.
- F. The Contractor shall perform all CCTV inspections in accordance with NASSCO's Pipeline Assessment Certification Program (PACP). CCTV inspections will be delivered entirely in electronic format. The entire survey shall be recorded in an approved electronic format submitted with electronic links between the data and the video. All television inspection reports shall be within +/- two (2) feet of the measured linear footage between manholes along the existing sewer centerline from the start of pipe to end of pipe. All Owner and PACP required header information must be fully and accurately entered on all CCTV reports. Work not following these specifications may be rejected for payment and the Contractor may be required to re do the work.
- G. Survey television inspection videos shall be continuous for pipe segments between manholes. Do not leave gaps in the video recording of a segment between manholes and do not show a single segment on more than one video, unless specifically allowed by the Owner.
- H. The Contractor shall provide a PACP certified operator on site at all times during the entire survey. If video is to be coded separately from the actual recording, both the onsite Operator and the individual performing the PACP coding shall be PACP certified. The Contractor shall provide proof of certification prior to commencement of work, prior to a change in personnel involved in data collection, and as requested by the Owner.
- I. CCTV Reports, logs, electronic reports, and worksheets must include the following information and conform to the applicable guidelines:
 - 1. CCTV Reports, NASSCO PACP Certified Database, and electronic worksheets must accompany all inspection work.
 - 2. All Owner and NASSCO PACP required header information must be fully and accurately entered on all CCTV reports. See Header Field Checklist for mandatory and required Header Fields.

PART 5 PAYMENT FOR WORK

5.1 MEASUREMENT AND PAYMENT

- A. In cases where the sewer is entirely inspected manhole-to-manhole, payments will be based on the measured linear footage between manholes along the existing sewer centerline from manhole wall to manhole wall at the unit price submitted on the unit price page.
- B. All invoicing will be by sewer segment, and payment and will be made when all punch list items and

rework are completed for each Sewer Segment. Additional work shall be invoiced and paid upon completion. Poor or unacceptable-quality video (hazy, unclear images) will not qualify for payment.

- C. The following items of work will not be measured for payment but the cost thereof will be considered as incidental to the contract:
1. Data entry, computerized equipment, software, and hardware to submit the required electronic submittals, including the DVDs, records, and logs.
 2. Completion of all electronic forms.
 3. Photographic equipment and supplies used to show sewer pipe and manhole defects.
 4. Bypass pumping, reverse setups required to bracket an obstruction and/or sewer flow control where required by the Contractor to perform his or her work.
 5. Providing temporary and final paving at any proposed excavations.
 6. Providing temporary and final restoration of grass areas.
 7. Emergency after-hours response.
 8. Re-televising and re-cleaning following a point repair completed by the Contractor without prior approval of the Owner.
 9. Demobilization and mobilization because of suspension of work.
 10. Updates to the schedule as required by the Owner.
 11. Right of entry access to private property.
 12. Dye testing of service connections in order to meet the CCTV specification.
- D. In order for the Owner to properly and accurately track costs of the contract, the Contractor shall submit timely invoices with backups accordingly and the final invoice on each project within 30 days after the completion of the project.
- E. Performance and Payment Bond: The bond securing the performance of the contract shall be effective for the full maximum period of the contract including the optional renewal period(s) specified. The bond amount indicated shall be deemed adequate surety for the initial and optional renewal periods. The cost of performance surety shall be treated as an overhead expense and shall be included in the bid

amounts. The Owner shall not pay the cost of surety as a direct bill item.

****END OF SECTION****

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SECTION 03000 – CURED-IN-PLACE PIPE (CIPP) INSTALLATION**

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PART 1 GENERAL

- A. This Performance Specification Guideline (PSG) includes the minimum requirements for the rehabilitation of sanitary sewer pipelines by the installation of Cured-In-Place Pipe (CIPP) within the existing, deteriorated pipe as shown on the plans included as part of these contract documents.
- B. The rehabilitation of pipelines shall be done by the installation of a resin-impregnated flexible tube which, when cured by circulating heated water, steam, ambient temperature water or air, or ultraviolet light, shall be continuous and tight-fitting throughout the entire length of the original pipe from manhole to manhole. The CIPP shall cure into a hard, impermeable, corrosion-resistant liner of specified thickness and physical properties, with a uniformly smooth interior surface and provide a structurally sound, jointless and water-tight new pipe-within-a-pipe. The Contractor is responsible for proper, accurate and complete installation of the CIPP using the system selected by the Contractor meeting the Owners requirements.
- C. Neither the CIPP product, system, nor its installation, shall cause adverse effects to any of the Owner's processes or facilities. The installation pressure for the product shall not damage the system in any way, and the use of the product shall not result in the formation or production of any detrimental compounds or by-products at the wastewater treatment plant. The Contractor shall notify the Owner and identify any by-products produced as a result of the installation operations, test and monitor the levels, and comply with any and all local waste discharge requirements. The Contractor shall cleanup, restore existing surface conditions and structures, and repair any of the CIPP system determined to be defective. The Contractor shall conduct installation operations and schedule cleanup in a manner to cause the least possible obstruction and inconvenience to traffic, pedestrians, businesses and property owners or tenants.
- D. The prices submitted by the Contractor, shall include all costs of permits, labor, equipment and materials for the various bid items necessary for furnishing and installing, complete in place, CIPP in accordance with these specifications. All items of work not specifically mentioned herein which are required, by the contractor, to make the product perform as intended and deliver the final product as specified herein shall be included in the respective lump sum and unit prices bid.

1.1 DESCRIPTION OF WORK AND PRODUCT DELIVERY

- A. This PSG covers all work necessary to furnish and install the CIPP. The Contractor shall provide all materials, labor, equipment, and services necessary for traffic control, bypass pumping and/or diversion of flows, cleaning and television inspection of sewers to be rehabilitated, liner installation, reconnection of service connections, all quality controls, provide samples for performance of required material tests, final television inspection, testing of the rehabilitated pipe system, warranty work and other work, all as specified herein.
- B. The product furnished shall be a complete CIPP system including specific materials, applicable equipment and installation procedures. The CIPP system manufacturer may submit, a minimum of 14 calendar days in advance of the bid date, required information to the Owner to obtain pre-approval status. Those CIPP systems that have been pre-approved will not be required to furnish information as required in the submittal section of these specifications unless specifically requested to do so by the Owner or if any of the CIPP system components have changed from those pre-approved by the Owner. All other CIPP systems or multi-

component products will be required to meet the submittal requirements as contained herein.

- C. The CIPP shall be continuous and jointless from manhole to manhole or access point to access point and shall be free of all defects that will affect the long-term life and operation of the pipe.
- D. The CIPP shall fit sufficiently tight within the existing pipe so as to not leak at the manholes, at the service connections or through the wall of the installed pipe. If leakage occurs at the manholes or the service connections, the Contractor shall seal these areas to stop all leakage using a material compatible with the CIPP as directed by the Owner at the price bid in the Proposal. If leakage occurs through the wall of the pipe, the CIPP shall be repaired or removed as recommended by the CIPP manufacturer. Final approval of the CIPP will be based on a leak tight pipe.
- E. The CIPP shall be designed for a life of 50 years or greater and an equal service life unless specifically specified otherwise by the Owner.
- F. The CIPP shall be designed fully structural stand-alone pipe-within-a-pipe. The installed CIPP shall be a structurally designed pipe-within-a-pipe, meet or exceed all contract specified physical properties, fitting tightly within the existing pipe all within the tolerances specified. The installed CIPP shall withstand all applicable surcharge loads (soil overburden, live loads, etc.) and external hydrostatic (groundwater) pressure, if present, for each specific installation location.
- G. The installed CIPP shall have a long term (50 year) corrosion resistance to the typical chemicals found in domestic sewage and defined in the referenced and applicable ASTM standards
- H. All existing and confirmed active service connections and any other service laterals to be reinstated, as directed by the Owner, shall be re-opened robotically or by hand in the case of man-entry size piping, to their original shape and to 90% - 95% of their original area. All over-cut or under-cut service connections will be properly repaired to meet the requirements of these specifications.
- I. All materials furnished, as part of this contract shall be marked with detailed product information, stored in a manner specified by the manufacturer and tested to the requirement of this contract.
- J. Testing and warranty inspections shall be executed by the Owner. Any defects found shall be repaired or replaced by the Contractor.
- K. The Contractor shall furnish, from the project installation, all samples for product testing at the request of the Owner. The Owner shall take possession of the samples for testing and shall maintain the chain of custody, deliver the samples to an approved laboratory and pay for all material and product testing performed under this contract.

1.2 REFERENCES

- A. The following documents form a part of this specification to the extent stated herein and shall be the latest editions thereof. Where differences exist between codes and standards, the requirements of these specifications

shall apply. All references to codes and standards shall be to the latest revised version.

ASTM - D543 Standard and Practice for Evaluating the Resistance of Plastics to Chemical Reagents

ASTM - D638 Standard Test Method for Tensile Properties of Plastics

ASTM - D790 Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials

ASTM - D792 Standard Test Methods for Density and Specific Gravity of Plastics by Displacement.

ASTM - D2122 Standard Test Method for Determining Dimensions of Thermoplastic Pipe and Fittings

ASTM - D2990 Standard Test Methods for Tensile, Compressive, and Flexural Creep and Creep-Rupture of Plastics

ASTM - F1216 Standard Practice for Rehabilitation of Existing Pipelines and Conduits by the Inversion and Curing of a Resin-Impregnated Tube

ASTM - F1743 Standard Practice for Rehabilitation of Existing Pipelines and Conduits by the Pull in and Inflate and Curing of a Resin-Impregnated Tube

ASTM - F2019 Standard Practice for Rehabilitation of Existing Pipelines and Conduits by the Pulled in Place Installation of Glass Reinforced Plastic (GRP) Cured-in-Place Thermosetting Resin Pipe (CIPP)

ASTM - F2561 Standard Practice for Rehabilitation of a Sewer Service Lateral and Its Connection to the Main Using a One Piece Main and Lateral Cured-in-Place Liner

ASTM - D3567 Standard Practice for Determining Dimensions of Fiberglass (Glass- Fiber-Reinforced Thermosetting Resin) Pipe and Fittings

ASTM - D3681 Standard Test Method for Chemical Resistance of “Fiberglass (Glass Fiber Reinforced Thermosetting Resin) Pipe in a Deflected Condition

ASTM - D5813 Standard Specification for Cured-in Place Thermosetting Resin Sewer Pipe

1.3 PERFORMANCE WORK STATEMENT (PWS) SUBMITTAL

- A. The Contractor shall submit, to the Owner a Performance Work Statement (PWS) which clearly defines the CIPP product delivery in conformance with the requirements of these contract documents. Unless otherwise directed by the Owner, the PWS shall at a minimum contain the following:
- B. Clearly indicate that the CIPP will conform to the project requirements as outlined in the Description of Work and as delineated in these specifications.
- C. Where the scope of work is specifically delineated in the contract documents, a detailed installation plan describing all preparation work, cleaning operations, pre- CCTV inspections, bypass pumping, traffic control, installation procedure, method of curing, service reconnection, quality control, testing to be performed, final CCTV inspection, warranties furnished and all else necessary and appropriate for a complete liner installation. A detailed installation schedule shall be prepared, submitted and conform to the requirements of this contract.
- D. Contractor’s description of the proposed CIPP technology, including a detailed plan for identifying all active service connections maintaining service, during mainline installation, to each home connected to the section of pipe being lined, including temporary service for commercial, industrial and apartment complexes, if required by the contract.
- E. A description of the CIPP materials to be furnished for the project. Materials shall be fully detailed in the submittals and conform to these specifications and/or shall conform to the pre-approved product submission.
- F. A statement of the Contractors experience. The Contractor shall have a minimum of three (3) years of continuous experience installing CIPP in pipe of a similar size, length and configuration as contained in this contract. A minimum of 150,000 linear feet of shop wet-out liner installation is required and minimum of 6 onsite wet-out installations are required as specifically applicable to this contract. The lead personnel including the superintendent, the foreman and the lead crew personnel for the CCTV inspection, resin wet-out, the liner installation, liner curing and the robotic service reconnections each must have a minimum of three (3) years of total experience with the CIPP technology proposed for this contract and must have demonstrated competency and experience to perform the scope of work contained in this contract. The name and experience

of each lead individual performing work on this contract shall be submitted with the PWS. Personnel replaced by the contractor, on this contract, shall have similar, verifiable experience as the personnel originally submitted for the project.

- G. Engineering design calculations, in accordance with the Appendix of ASTM F1216, for each length of liner to be installed including the thickness of each proposed CIPP. It will be acceptable for the Contractor to submit a design for the most severe line condition and apply that design to all of the line sections. These calculations shall be performed and certified by a qualified, Professional Engineer. All calculations shall include data that conforms to the requirements of these specifications or has been pre- approved by the Owner.
- H. Proposed manufacturers technology data shall be submitted for all CIPP products and all associated technologies to be furnished.
- I. Submittals shall include information on the cured-in-place pipe intended for installation and all tools and equipment required for a complete installation. The PWS shall identify which tools and equipment will be redundant on the job site in the event of equipment breakdown. All equipment to be furnished for the project, including proposed back-up equipment, shall be clearly described. The Contractor shall outline the mitigation procedure to be implemented in the event of key equipment failure during the installation process.
- J. A detailed description of the Contractor's proposed procedures for removal of any existing blockages in the pipeline that may be encountered during the cleaning process.
- K. Contractor shall inform the Owner of work schedules for CIPP installation. Provide 24-hour notice so that the Owner may witness the "wet-out" procedure and inversion and curing of liner.
- L. A detailed public notification plan shall be prepared and submitted including detailed staged notification to residences affected by the CIPP installation.
- M. An odor control plan shall be submitted, by the contractor, that will ensure that project specific odors will be minimized at the project site and surrounding area.
- N. Compensation for all work required for the submittal of the PWS shall be included in the various pipelining items contained in the Proposal.

1.4 PRODUCT SUBMITTALS

- A. Fabric Tube – including the manufacturer and description of product components such as felts and reinforcing materials. Use tube sized so as to snugly fit the internal circumference of the existing sewer and produce specified cured thickness and physical properties.
- B. Flexible membrane (coating) material – including materials specific to the proposed curing method and recommended repair (patching) procedure if applicable.
- C. Raw Resin Data - the manufacturer and description of product components including the Spectroscopic Wavelength diagram for the resin being furnished and results of testing performed by resin manufacture demonstrating compliance with specified chemical resistance requirements.

- D. Manufacturers' shipping, storage and handling recommendations for all components of the CIPP system.
- E. All Safety Data Sheets (SDS) for all materials to be furnished for the project.
- F. Tube wet-out & cure method including:
 - 1. A complete description of the proposed wet-out procedure for the proposed technology.
 - 2. The Manufacturer's recommended cure method for each diameter and thickness of liner to be installed. The PWS shall contain a detailed curing procedure outlining the curing medium, the method of application and how the curing temperatures will be monitored.
- G. Compensation for all work required for the submittal of product data shall be included in the Lump Sum price contained in the Proposal for Mobilization.

1.5 SAFETY

- A. The Contractor shall conform to all work safety requirements of pertinent regulatory agencies, and shall secure the site for the working conditions in compliance with the same. The Contractor shall erect such signs and other devices as are necessary for the safety of the work site.
- B. The Contractor shall perform all of the Work in accordance with applicable OSHA standards. Emphasis shall be placed upon the requirements for entering confined spaces and with the equipment being utilized for pipe renewal.
- C. The Contractor shall submit a proposed Safety Plan to the Owner, prior to beginning any work, identifying all competent persons. The plan shall include a description of a daily safety program for the job site and all emergency procedures to be implemented in the event of a safety incident. All work shall be conducted in accordance with the Contractor's submitted Safety Plan.
- D. Compensation for all work required for the submittal of the Safety Plan shall be included in the various pipelining items contained in the Proposal.

1.6 QUALITY CONTROL PLAN (QCP)

- A. A detailed quality control plan (QCP) shall be submitted to the Owner that fully represents and conforms to the requirements of these specifications. At a minimum the QCP shall include the following:
 - 1. A detailed discussion of the proposed quality controls to be performed by the Contractor.
 - 2. Defined responsibilities, of the Contractor's personnel, for assuring that all quality requirements for this

contract are met. These shall be assigned, by the Contractor, to specific personnel.

3. Proposed procedures for quality control, product sampling and testing shall be defined and submitted as part of the plan.
 4. Proposed methods for product performance controls, including method of and frequency of product sampling and testing both in raw material form and cured product form.
 5. Scheduled performance and product test result reviews between the Contractor and the Owner at a regularly scheduled job meeting.
 6. Inspection forms and guidelines for quality control inspections shall be prepared in accordance with the standards specified in this contract and submitted with the QCP.
- B. Two (2) days of inspector training, by the CIPP system manufacture, for the Owner's inspectors shall be provided. This training shall be prior to liner installation, include both technical and field training and include all key aspects of visual inspection and sampling procedures for testing requirements. On smaller projects having an estimated duration of less than two (2) weeks of installation work, the system manufacturer shall furnish a check list containing key elements of the CIPP installation criteria that are important for the Owner's inspector to ensure that quality control and testing requirements are performed in accordance with the contract documents.
- C. Compensation for all work required for the submittal of the QCP shall be included in the various pipelining items contained in the Proposal. Compensation for inspector training shall be included in the price bid in the Proposal.

1.7 CIPP REPAIR/REPLACEMENT

- A. Occasionally installations will result in the need to repair or replace a defective CIPP. The Contractor shall outline specific repair or replacement procedures for potential defects that may occur in the installed CIPP. Repair/replacement procedures shall be as recommended by the CIPP system manufacturer and shall be submitted as part of the PWS.
- B. Defects in the installed CIPP that will not affect the operation and long term life of the product shall be identified and defined.
- C. Repairable defects that may occur in the installed CIPP shall be specifically defined by the Contractor based on manufacturer's recommendations, including a detailed step-by-step repair procedure, resulting in a finished product meeting the requirements of these contract specifications.
- D. Unrepairable defects that may occur to the CIPP shall be clearly defined by the Contractor based on the manufacturer's recommendations, including a recommended procedure for the removal and replacement of the

CIPP.

1.8 AS-BUILT DRAWINGS/RECORDS

- A. As-Built drawings/records, pre & post inspection videotapes, CDs or other electronic media shall be submitted to the Owner, by the Contractor, within two (2) weeks of final acceptance of said work or as specified by the Owner. As-Built drawings/records will include the identification of the work completed by the Contractor and shall be prepared on one (1) set of Contract Drawings/Records provided to the Contractor at the onset of the project.
- B. As-Built drawings/records shall be kept on the project site at all times, shall include all necessary information as outlined in the PWS or as agreed to by the Owner and the Contractor at the start of the Contract, shall be updated as the work is being completed and shall be clearly legible.
- C. Compensation for all work required for the submittal and approval of As-Built drawings/records shall be included in the various pipelining items contained in the Proposal.

1.9 WARRANTY

- A. The materials used for the project shall be certified by the manufacturer for the specified purpose. The Contractor shall warrant the CIPP material and installation for a period of one (1) year. During the Contractor warranty period, any defect which may materially affect the integrity, strength, function and/or operation of the pipe, shall be repaired at the Contractor's expense in accordance with procedures included in Section 1.7 CIPP Repair/Replacement and as recommended by the manufacturer.
- B. On any work completed by the contractor that is defective and/or has been repaired, the contractor shall warrant this work for (1) year in addition to the warrantee required by the contract.
- C. After a pipe section has been rehabilitated and for a period of time up to one (1) year following completion of the project, the Owner may inspect all or portions of the rehabilitated system. The specific locations will be selected at random by the Owner's inspector and should include all sizes of CIPP from this project. If it is found that any of the CIPP has developed abnormalities since the time of "Post Construction Television Inspection," the abnormalities shall be repaired and/or replaced as defined in Section 1.7 CIPP Repair/Replacement and as recommended by the manufacturer. If, after inspection of a portion of the rehabilitated system under the contract, problems are found, the Owner may televise all the CIPP installed on the contract. All verified defects shall be repaired and/or replaced by the Contractor and shall be performed in accordance with Section 1.7 CIPP Repair/Replacement and per the original specifications, all at no additional cost to the Owner.

PART 2 PRODUCTS

2.1 MATERIALS

- A. The CIPP System must meet the chemical resistance requirements of these contract documents.
- B. All materials shipped to the project site shall be accompanied by test reports certifying that the material conforms to the ASTM standards listed herein. Materials shall be shipped, stored, and handled in a manner consistent with written recommendations of the CIPP system manufacturer to avoid damage. Damage includes, but is not limited to, gouging, abrasion, flattening, cutting, puncturing or ultra-violet (UV) degradation. On site storage locations shall be approved by the Owner. All damaged materials shall be promptly removed from the project site at the Contractor's expense and disposed of in accordance with all current applicable agency regulations.

2.2 FABRIC TUBE

- A. The fabric tube shall consist of one (1) or more layers of absorbent non-woven felt fabric, felt/fiberglass, felt/carbon fiber, carbon fiber or fiberglass and meet the requirements of ASTM F 1216, ASTM F 1743, or ASTM F2019 and ASTM D5813. The fabric tube shall be capable of absorbing and carrying resins, constructed to withstand installation pressures and curing temperatures and have sufficient strength to bridge missing pipe segments and stretch to fit irregular pipe sections. The contractor shall submit certified information from the felt manufacturer on the nominal void volume in the felt fabric that will be filled with resin.
- B. The wet-out fabric tube shall have a uniform thickness and excess resin distribution that when compressed at installation pressures will meet or exceed the design thickness after cure.
- C. The fabric tube shall be manufactured to a size and length that when installed will tightly fit the internal circumference, meeting applicable ASTM standards or better, of the original pipe. Allowance shall be made for circumferential stretching during installation. The tube shall be properly sized to the diameter of the existing pipe and the length to be rehabilitated and be able to stretch to fit irregular pipe sections and negotiate bends. The Contractor shall determine the minimum tube length necessary to effectively span the designated run between manholes. The Contractor shall verify the lengths in the field prior to ordering and prior to impregnation of the tube with resin to ensure that the tube will have sufficient length to extend the entire length of the run. The Contractor shall also measure the inside diameter of the existing pipelines in the field prior to ordering liner so that the liner can be installed in a tight-fitted condition.
- D. The outside and/or inside layer of the fabric tube (before inversion/pull-in, as applicable) shall be coated with an impermeable, flexible membrane that will contain the resin and facilitate, if applicable, vacuum impregnation and monitoring of the resin saturation during the resin impregnation (wet-out) procedure.
- E. No material shall be included in the fabric tube that may cause delamination in the cured CIPP. No dry or unsaturated layers shall be acceptable upon visual inspection as evident by color contrast between the tube fabric and the activated resin containing a colorant.

- F. The wall color of the interior pipe surface of CIPP after installation shall be a light reflective color so that a clear detailed examination with closed circuit television inspection equipment may be made. The hue of the color shall be dark enough to distinguish a contrast between the fully resin saturated felt fabric and dry or resin lean areas.
- G. Seams in the fabric tube, if applicable, shall meet the requirements of ASTM D5813.
- H. The outside of the fabric tube shall be marked a maximum of every five (5) feet with the name of the manufacturer or CIPP system, manufacturing lot and production footage.
- I. The minimum length of the fabric tube shall be that deemed necessary by the installer to effectively span the distance from the starting manhole to the terminating manhole or access point, plus that amount required to run-in and run-out for the installation process.
- J. The nominal fabric tube wall thickness shall be constructed, as a minimum, to the nearest 0.5 mm increment, rounded up from the design thickness for that section of installed CIPP. Wall thickness transitions, in 0.5 mm increments or greater as appropriate, may be fabricated into the fabric tube between installation entrance and exit access points. The quantity of resin used in the impregnation shall be sufficient to fill all of the felt voids for the nominal felt thickness.

2.3 RESIN

- A. The resin shall be a corrosion resistant polyester or vinyl ester resin and catalyst system or epoxy and hardener system that, when properly cured within the tube composite, meets the requirements of ASTM F1216, ASTM F1743 or F2019 and ASTM D5813, the physical properties herein, and those which are to be utilized in the design of the CIPP for this project. The resin, specified for the specific application defined in the contract documents, shall produce CIPP which will comply with or exceed the structural and chemical resistance requirements of this specification.
- B. The resin to tube ratio, by volume, shall be furnished as recommended by the manufacturer.

2.4 STRUCTURAL REQUIREMENTS

- A. The physical properties and characteristics of the finished CIPP will vary considerably, depending on the types and mixing proportions of the materials used and the degree of cure executed. It shall be the responsibility of the Contractor to control these variables and to provide a CIPP system which meets or exceeds the minimum properties specified herein.
- B. The CIPP shall be designed as per ASTM F1216 Appendixes. The CIPP design shall assume no bonding to the original pipe wall.
- C. The design engineer shall set the long-term (50 year extrapolated) Creep Retention Factor at 50% of the initial design flexural modulus as determined by ASTM D790 test method. This value shall be used unless

the Contractor submits long-term test data (ASTM D2990) to substantiate a higher retention factor.

- D. The cured pipe material (CIPP) shall, at a minimum, meet or exceed the structural properties, as listed below.

Property	Test Method	Cured Composite Per ASTM F1216	Cured Composite Per Design
Flexural Modulus of Elasticity (Short-Term) Felt Tubes. Felt/Fiberglass, Fiberglass as recommended by the Manufacturer	ASTM D790	250,000 psi	Contractor Value
Flexural Strength (Short-Term) Felt Tubes. Felt/Fiberglass, Fiberglass as recommended by the Manufacturer	ASTM D790	4,500 psi	Contractor Value

2.5 MINIMUM PHYSICAL PROPERTIES

- E. The required structural CIPP wall thickness shall be based, as a minimum, on the physical properties of the cured composite and per the design of the Professional Engineer (see section 1.3.G) and in accordance with the Design Equations contained in the appendix of ASTM F1216, and the following design parameters:

Design Safety Factor	2.0 (1.5 for pipes 36-inches- or larger, if applicable)
Creep Retention Factor	50%
Ovality	2% or as measured by field inspection
Constrained Soil Modulus	Per AASHTO LRFD Section 12 and AWWA Manual M45
Groundwater Depth	As specified or indicated on the Plans
Soil Depth (above the crown)	As specified or indicated on the Plans
Live Load	Highway, railroad or airport as applicable
Soil Load (assumed)	120 lb./cu. ft.
Minimum Service Life	50 years

- F. The Contractor shall submit, prior to installation of the lining materials, certification of compliance with these specifications and/or the requirements of the pre-approved CIPP system. Certified material test results shall be included that confirm that all materials conform to these specification and/or the pre-approved system. Materials not complying with these requirements will be rejected.
- G. The design soil modulus may be adjusted based on data, determined from detailed project soil testing results, as provided by the Owner in the contract documents.

PART 3 INSTALLATION

3.1 CONSTRUCTION REQUIREMENTS

- A. Preparation, cleaning, inspection, flow bypassing and public notification. The Contractor shall clean the interior of the existing host pipe prior to installation of the liner. All debris and obstructions that will affect the installation and the final CIPP product delivery to the Owner shall be removed and disposed of.
- B. The liner shall be constructed of materials and methods that, when installed, shall provide a jointless and continuous structurally sound CIPP able to withstand all imposed static, and dynamic loads on a long-term basis.
- C. The Contractor may, under the direction of the Owner, utilize any of the existing manholes in the project area as installation access points. If a street must be closed to traffic because of the location of the sewer, the Contractor shall furnish a detailed traffic control plan and all labor and equipment necessary. The plan shall be in conformance with the requirements of the local agency having jurisdiction over traffic control.
- D. Cleaning of Pipe Lines – Before ordering liner materials for the project, the Contractor shall remove all internal debris from the pipe line that will interfere with the installation and the final product delivery of the CIPP, as required in these specifications, and accurately measure and document the exact size of the existing pipeline to be rehabilitated. Solid debris and deposits shall be removed from the system and disposed of properly by the Contractor. Moving material from manhole section to manhole section shall not be allowed. As applicable, the contractor shall either plug or install a flow bypass pumping system to properly clean the pipe lines. Precaution shall be taken by the Contractor in the use of cleaning equipment to avoid damage to the existing pipe. The repair of any damage, caused by the cleaning equipment, shall be the responsibility of the Contractor. The Owner will designate a site for the disposal of all debris removed from the Owner's sewer system as a direct result of the cleaning operation. Unless otherwise specified by the Owner, the Contractor shall dispose of all debris at no charge. Should any dumping fees apply, the Contractor shall be compensated at the respective unit price bid in the Proposal for cleaning.
- E. Bypassing Existing Flows - The Contractor shall provide for the flow of existing mainline and service connection effluent around the section or sections of pipe designated for CIPP installation. With most small diameter pipelines, particularly on terminal sewers, plugging will be adequate but must be monitored on a regular basis to prevent backup of sewage into adjacent homes. Service connection effluent may be plugged only after proper notification to the affected residence and may not remain plugged overnight. Installation of the liner shall not begin until the Contractor has installed the required plugs or a sewage bypass system and all pumping facilities have been installed and tested under full operating conditions including the bypass of mainline and side sewer flows. Once the installation has begun, existing flows shall be maintained, until the resin/tube composite is fully cured, cooled down, full televised and the CIPP ends finished. The Contractor shall coordinate sewer bypass and flow interruptions with the Owner at least 14 days in advance and with the property owners and businesses at least 1 business day in advance. The pump and bypass lines shall be of adequate capacity and size to handle peak flows. The Contractor shall submit a detail

of the bypass plan and design to the Owner before proceeding with any CIPP installation. Compensation for bypass pumping and all associated plans and approvals shall be at the price bid in the Proposal.

- F. Contractor shall perform post-cleaning video inspections of the pipelines. Only PACP certified personnel trained in locating breaks, obstacles and service connections by closed circuit television shall perform the inspection. The Contractor shall provide the Owner a copy of the pre-cleaning and post-cleaning video and suitable log, and/or in digital format, for review prior to installation of the CIPP and for later reference by the Owner.
- G. Line Obstructions - It shall be the responsibility of the Contractor to clear the line of obstructions that will interfere with the installation and long-term performance of the CIPP. If pre-installation inspection reveals an obstruction, misalignment, broken or collapsed section or sag that was not identified as part of the original scope of work and will prohibit proper installation of the CIPP, the Contractor may be directed by the Owner to correct the problem(s) prior to installation by utilizing open cut repair methods. The Contractor shall be compensated for this work under a contingency pay item designated for open cut point repairs. Removal of any previously unknown obstructions shall be considered as a changed condition. The cost of removal of obstructions that appeared on pre-bid video documentation and made available to the Contractor, prior to the bid opening, shall be compensated for on a unit price basis in accordance with the contract documents.
- H. The Contractor shall be responsible for confirming the locations of all branch service connections prior to installing the CIPP. If required in the contract documents, each connection will be dye tested to determine whether or not the connection is live or abandoned. The cost for dye testing of existing service connections shall be compensated at the unit price bid in the Proposal for Dye Testing of Existing Service Connections. In the event the status of a service connection cannot be adequately defined, the Owner will make the final decision, prior to installation of the liner, as to the status. Typically only service connections deemed "active" shall be reopened by the Contractor.
- I. The Contractor shall be allowed use water from an owner-approved fire hydrant in the project vicinity. Use of an approved double check backflow assembly shall be required. Contractor shall provide his own approved assembly. Contractor shall pay current market price for all water usage.

3.2 INSTALLATION OF LINER

- A. The liner shall be installed and cured in the host pipe per the manufacturer's specifications as described and submitted in the PWS.
- B. CIPP installation shall be in accordance with the applicable ASTM standards as modified in this section 3.2.
- C. If significant groundwater infiltration is present in the existing sewer such as heavy runners and gushers, the contractor shall install a pre-liner tube or perform chemical grouting to control resin loss and contamination, maintain CIPP thickness, prevent physical property reduction and prevent inadequate curing of the liner

resulting from water or other contamination of the resin during installation. The pre-liner tube shall be a reinforced plastic tube to fit the existing pipeline and shall be continuous from manhole (access) to manhole (access).

- D. The wet-out tube shall be positioned in the pipeline using the method specified by the manufacturer. Care should be exercised not to damage the tube as a result of installation. The liner should be pulled-in or inverted through an existing manhole or approved access point and fully extend to the next designated manhole or termination point.
- E. Prior to installation and as recommended by the manufacturer, remote temperature gauges or sensors shall be placed inside the host pipe to monitor the temperatures during the cure cycle. Liner and/or host pipe interface temperature shall be monitored and logged during curing of the liner.
- F. To monitor the temperature of the liner wall and to verify correct curing, where specified by the contract documents, temperature monitors can be placed between the host pipe and the liner in the bottom of the host pipe (invert) at manholes or access points and/or throughout its entire length (continuous) to monitor the temperature on the outside of the liner during the curing process. For continuous temperature monitoring, a fiber optic cable is installed in the pipe invert prior to the liner installation. The fiber optic cable is monitored by a computer that is capable of recording temperatures at the interface of the liner and the host pipe continuously in time and location throughout the entire pipeline being rehabilitated.
- G. Curing shall be accomplished by utilizing the appropriate medium or ultraviolet light in accordance with the manufacturer's recommended cure procedure and/or schedule. The curing source or in and output temperatures shall be monitored and logged during the cure cycles, if applicable. The manufacturer's recommended cure method & schedule shall be used for each line segment installed, and the liner wall thickness and the existing ground conditions with regard to temperature, moisture level, and thermal conductivity of soil, per ASTM as applicable, shall be taken into account by the Contractor.
- H. For heat cured liners, if any temperature sensor, or continuous sensor location does not reach the temperature as specified by the manufacturer to achieve proper curing or cooling, the installer can make necessary adjustments to comply with the manufacturer's recommendations. For continuous temperature monitoring, the system computer should have an output report that specifically identifies stations along the length of pipe, indicates the maximum temperature achieved and the sustained temperature time at the stations. At each station along the length of the pipe, the computer should record both the maximum temperature and the minimum cool down temperature and comply with the manufacturers recommendations.
- I. For UV Cured Liners, all light train sensor readings, recorded by the tamper proof computer, shall provide output documenting the cure along the entire length of the installed liner. The cure procedure shall be in accordance with the manufacturer's recommendation as included in the PWS submission by the contractor.

3.3 COOL DOWN

- A. The Contractor shall cool the CIPP in accordance with the approved CIPP manufacturer's recommendations as

described and outlined in the PWS.

- B. Temperatures and curing data shall be monitored and recorded, by the Contractor, throughout the installation process to ensure that each phase of the process is achieved as approved in accordance with the CIPP System manufacturer's recommendations.

3.4 FINISH

- A. The installed CIPP shall be continuous over the entire length of a sewer line section and be free from visual defects such as foreign inclusions, dry spots, pinholes, major wrinkles and delamination. The CIPP shall be impervious and free of any leakage through the CIPP wall.
- B. Any defect which will or could affect the structural integrity or strength of the CIPP shall be repaired at the Contractor's expense in accordance with the procedures submitted under Section 1.7 CIPP Repair/Replacement.
- C. The beginning and end of the CIPP shall be sealed to the existing host pipe. The sealing material shall be compatible with the pipe end and shall provide a watertight seal.
- D. If any of the service connections leak water between the host pipe and the installed CIPP, the connection mainline interface shall be sealed to provide a water tight connection.
- E. If the wall of the CIPP leaks, it shall be repaired or removed and replaced with a watertight pipe as recommended by the manufacture of the CIPP system.
- F. Compensation shall be at the actual length of cured-in-place pipe installed. The length shall be measured from center of manhole to center of manhole. The unit price per linear foot installed shall include all materials, labor, equipment and supplies necessary for the complete CIPP installation. Compensation for service connection sealing and pipe sealing at the manhole/wall interface shall be at the unit price bid in the Proposal.

3.5 FLOWABLE FILL OF VOID AREAS

Where required by the owner, the contractor shall backfill voids that remain after installation of CIPP. The material shall be of the flowable fill type and shall be injected into the void while removing all trapped air from the void. The contractor shall submit the proposed method of placing the flowable fill, including pressures that will not collapse the CIPP and air release method to be employed, to the owner for review before any material is installed. The cost of this work shall be at the unit price bid for flowable fill complete and include all material, equipment and labor to complete the filling of the soil void.

3.6 MANHOLE CONNECTIONS AND RECONNECTIONS OF EXISTING SERVICES

- A. A seal, consisting of a resin mixture or hydrophilic seal compatible with the installed CIPP, shall be applied at manhole/wall interface in accordance with the CIPP System manufacturer's recommendations.

- B. Existing services shall be internally or externally reconnected unless indicated otherwise in the contract documents.
- C. Complete reconnections of existing services within 24 hours shall be made after the CIPP has been installed, fully cured, and cooled down. It is the Contractor's responsibility to make sure that all active and/or viable service connections are reconnected.
- D. External reconnections are to be made with a tee fitting in accordance with CIPP System manufacturer's recommendations. Saddle connections shall be seated and sealed to the new CIPP using grout or resin compatible with the CIPP.
- E. A CCTV camera and remote cutting tool shall be used for internal reconnections. The machined opening shall be at least 90 percent of the service connection opening area and the bottom of both openings must match. The opening shall not be more than 100 percent of the service connection opening. The edges of the opening shall not have pipe fragments or CIPP fragments which may obstruct flow or snag debris. In all cases the invert of the sewer connection shall be cut flush with the invert entering the mainline.
- F. In the event that service reinstatements result in openings that are greater than 100 percent of the service connection opening, the Contractor shall install a CIPP type repair, sufficiently in size to completely cover the over-cut service connection. No additional compensation will be paid for the repair of over-cut service connections.
- G. Coupons of pipe material resulting from service tap cutting shall be collected at the next manhole downstream of the pipe rehabilitation operation prior to leaving the site. Coupons may not be allowed to pass through the system.
- H. Compensation shall be at the actual number of services reconnected using either internal or external means as contained in the Proposal. The unit price bid per service line reconnected shall be include all materials, labor, equipment and supplies necessary to complete the work as required in these specifications.

3.7 TESTING OF INSTALLED CIPP

- A. The physical properties of the installed CIPP shall be verified through field sampling and laboratory testing. All materials for testing shall be furnished by the Contractor to the Owner for testing. All materials testing shall be performed at the Owner's expense by an independent third party laboratory selected by the Owner as recommended by the CIPP manufacturer. All tests shall be in accordance with applicable ASTM test methods to confirm compliance with the requirements specified in these contract documents.
- B. The Contractor shall provide samples for testing to the Owner from the actual installed CIPP. Samples shall be provided from each section of CIPP installed or as required by the Owner. The sample shall be cut from a section of cured CIPP that has been inverted or pulled through a like diameter pipe which has been held in place by a suitable heat sink, such as sandbags. All curing, cutting and identification of samples will be

witnessed by the Owner and transmitted by the Owner's representative as specified, to the testing laboratory. On pipelines greater than 18 inches in diameter, the Owner may, at its discretion, require plate samples cured with the CIPP or designate a location in the newly installed CIPP where the Contractor shall take a sample. The Opening produced from the sample shall be repaired in accordance with manufacturer's recommended procedures.

- C. The laboratory results shall identify the test sample location as referenced to the nearest manhole and station. Final payment for the project shall be withheld pending receipt and approval of the test results. If properties tested do not meet the minimum physical and thickness requirements, the CIPP shall be repaired or replaced by the Contractor unless the actual physical properties and the thickness of the sample tested meet the design requirements as required in the contract.
- D. Chemical resistance - The CIPP system installed shall meet the chemical resistance requirements of ASTM F1216 and ASTM D5813. CIPP samples tested shall be of the fabric tube and the specific resin proposed for actual construction. It is required that CIPP samples without plastic coating meet these chemical testing requirements. A certification may be submitted, by the contractor, from the manufacturer verifying that the chemical resistance of the CIPP meets the contract requirements.
- E. Hydraulic Capacity - Overall, the hydraulic capacity shall be maintained as large as possible. The installed CIPP shall, at a minimum, be equal to the full flow capacity of the original pipe before rehabilitation. In those cases where full capacity cannot be achieved after CIPP installation, the Contractor shall submit a request to waive this requirement together with the reasons for the waiver request. Calculated capacities may be derived using a commonly accepted roughness coefficient for the existing pipe material taking into consideration its age and condition.
- F. The installed CIPP thickness shall be measured for each line section installed as per the ASTM requirements specified. If the CIPP thickness does not meet that specified in the contract and submitted as the approved design by the Contractor, then the CIPP shall be repaired or removed unless the tested physical properties and the thickness of the sample tested meet the design requirements as required in the contract. The CIPP thickness shall have tolerance of minus 5% - plus 10%. In worker-entry size piping, the Contractor shall remove a minimum of one (1) sample every line section of installed CIPP to be used to check the CIPP thickness. The samples shall be taken by core drilling 2-inch diameter test plugs at random locations selected by the Owner. The openings produced from the samples shall be repaired in accordance with manufacturer's recommended procedures.
- G. All costs to the Contractor associated with providing cured CIPP samples for testing shall be included in the Lump Sum price bid for Mobilization. Payment for all testing by a laboratory will be paid for by the Owner directly to the laboratory under the lump sum Reserve for Testing item force bid in the Bid Proposal.

3.8 FINAL ACCEPTANCE

- A. All CIPP sample testing and repairs to the installed CIPP, as applicable, shall be completed before final

acceptance, meeting the requirements of these specifications and documented in written form.

- B. The Contractor shall perform a detailed closed-circuit television inspection, in accordance with ASTM standards, in the presence of the Owner after installation of the CIPP and reconnection of the side sewers. A radial view (pan and tilt) TV camera shall be used. The finished CIPP shall be continuous over the entire length of the installation and shall be free of significant visual defects, damage, deflection, holes, leaks and other defects. Unedited digital documentation of the inspection shall be provided to the Owner within ten (10) working days of the CIPP installation. The data shall note the inspection date, location of all reconnected side sewers, debris, as well as any defects in the CIPP, including, but not limited to, gouges, cracks, bumps, or bulges. If post installation inspection documentation is not submitted within ten (10) working days of the CIPP installation, the Owner may at its discretion suspend any further installation of CIPP until the post-installation documentation is submitted. As a result of this suspension, no additional working days will be added to the contract, nor will any adjustment be made for increase in cost. Immediately prior to conducting the closed circuit television inspection, the Contractor shall thoroughly clean the newly installed CIPP removing all debris and build-up that may have accumulated at no additional cost to the Owner.
- C. Bypass pumping or plugging from the upstream manhole shall be utilized to minimize sewage from entering the line during the inspection. In the case of bellies in the line, the pipe shall be cleared of any standing water to provide continuous visibility during the inspection.
- D. Where leakage is observed through the wall of the pipe, the contractor shall institute additional testing including, but not limited to, air testing, hydrostatic (exfiltration) testing, localized testing (such as a grout packer) or any other testing that will verify that the leakage rate of the installed CIPP does not exceed acceptable tolerances specified in the contract. As an alternative to further leakage testing, the contractor may choose to repair any observed leaks.
- E. Upon completion of rehabilitation work and testing, clean and restore project area affected by the work to the full satisfaction of the Owner and shall obtain from the Owner a written release stating that restoration has been satisfactorily made. A copy of the completed written release shall be furnished to the Owner prior to payment.

****END OF SECTION****

EXHIBIT C

BID FORM

BID FORM

Bid of _____

(Hereinafter "Bidder"), organized and existing under the laws of the State of _____,

doing business as _____ (insert "a corporation," "a partnership," or "an individual" or such other business entity designation as is applicable).

To the Brunswick-Glynn County Joint Water and Sewer Commission (hereinafter "Owner" or JWSC).

In compliance with the Request for Bids, Bidder hereby proposes to perform all Work for **Altama and Sea Palms CIPP Project** in strict accordance with the Contract Documents as enumerated in the Request for Bids, within the time set forth therein, and at the prices stated below.

By submission of this bid, Bidder certifies, and in the case of joint bid each party thereto certifies as to the party's own organization that this bid has been arrived at independently, without consultation, communication, or agreement as to any matter relating to this bid with any other Bidder or with any competitor. Bidder also certifies compliance with the Instructions to Bidders. In submitting this bid, Bidder certifies Bidder is qualified to do business in the state of Georgia as required by laws, rules, and regulations or, if allowed by statute, covenants to obtain such qualification prior to contract award.

CONTRACT EXECUTION AND BONDS:

The undersigned Bidder agrees, if this bid is accepted, to enter into an Agreement with OWNER on the form included in the Documents to perform and furnish Work as specified or indicated in the Documents for the Contract Price derived from the bid and within the times indicated herein and in accordance with the other terms and conditions of the Documents. Bidder accepts the terms and conditions of the Documents.

INSURANCE:

Bidder further agrees that bid amount(s) stated herein includes specific consideration for the specified insurance coverages.

CONTRACT TIME:

Bidder hereby agrees to execute the agreement within fourteen (14) calendar days of Notice of Award or as specified by JWSC. Each individual project work order shall be completed within the time period as agreed to by both parties at the time of the individual project work order issuance. If said work is not completed within the time frame stated on the individual project work order, the Contractor shall be liable to pay to the Owner, as liquidated damages the amount of \$1,000.00 per calendar day for each and every day or part of a day thereafter that said work remains substantially incomplete for that particular individual project work order.

BID:

The undersigned proposes to complete, in all respects, sound and conformable with this Contract Document the work for the amounts as shown on the following Pay Item Schedule.

UNIT COST:

If a discrepancy in bid quantity line extension occurs, unit cost bid form entry times (X) quantity will prevail.

ADDENDA:

Bidder acknowledges receipt of the following# of Addenda: _____ (enter each number if applicable)

To be considered responsive, bidders are required to bid on all work items listed on the Bid Form – Pay Item Schedule.

Submitted by:

(NAME OF BIDDER and TITLE)

By: _____
(SIGNATURE)

(DATE)

(SEAL)
(ATTEST)

(ADDRESS)

(PHONE NUMBER)

(LICENSE NUMBER) (If applicable)

(E-MAIL ADDRESS)

BID ITEMS: ALTAMA AVENUE CURED-IN-PLACE PIPE REHAB

Item	Description	Quantity	Units	Unit Price	Total
1	Mobilization	1	LS	\$ -	\$ -
2	Bypass Pumping	1	LS	\$ -	\$ -
3	Traffic Control	1	LS	\$ -	\$ -
4	Sanitary Sewer Mainline Pre-Cleaning Inspection ≤ 12" Diameter	1778	LF	\$ -	\$ -
5	Sanitary Sewer Mainline Pre-Cleaning Inspection > 12" Diameter	2564	LF	\$ -	\$ -
6	Sanitary Sewer Mainline Cleaning ≤ 12" Diameter	1778	LF	\$ -	\$ -
7	Sanitary Sewer Mainline Cleaning > 12" Diameter	2564	LF	\$ -	\$ -
8	Sanitary Sewer Mainline Post-Cleaning Inspection ≤ 12" Diameter	1778	LF	\$ -	\$ -
9	Sanitary Sewer Mainline Post-Cleaning Inspection > 12" Diameter	2564	LF	\$ -	\$ -
10	8" CIPP Mainline Rehabilitation	1186	LF	\$ -	\$ -
11	10" CIPP Mainline Rehabilitation	491	LF	\$ -	\$ -
12	12" CIPP Mainline Rehabilitation	101	LF	\$ -	\$ -
13	15" CIPP Mainline Rehabilitation	383	LF	\$ -	\$ -
14	18" CIPP Mainline Rehabilitation	319	LF	\$ -	\$ -
15	24" CIPP Mainline Rehabilitation	1862	LF	\$ -	\$ -
16	Sanitary Sewer Mainline Heavy Sewer Cleaning ≤ 12" Diameter	1	SEGMENT	\$ -	\$ -
17	Sanitary Sewer Mainline Heavy Sewer Cleaning > 12" Diameter	1	SEGMENT	\$ -	\$ -
18	Sanitary Sewer Mainline Deposit Cut ≤ 12" Diameter	1	SEGMENT	\$ -	\$ -
19	Sanitary Sewer Mainline Deposit Cut > 12" Diameter	1	SEGMENT	\$ -	\$ -
20	Sanitary Sewer Mainline Root Cut Medium ≤ 12" Diameter	1	SEGMENT	\$ -	\$ -
21	Sanitary Sewer Mainline Root Cut Medium > 12" Diameter	1	SEGMENT	\$ -	\$ -
22	Sanitary Sewer Mainline Root Cut Ball ≤ 12" Diameter	1	SEGMENT	\$ -	\$ -
23	Sanitary Sewer Mainline Root Cut Ball > 12" Diameter	1	SEGMENT	\$ -	\$ -
24	Sanitary Sewer Mainline Lateral Cut ≤ 12" Diameter	1	EACH	\$ -	\$ -
25	Sanitary Sewer Mainline Lateral Cut > 12" Diameter	1	EACH	\$ -	\$ -
26	Service Connection Reinstatement	4	EACH	\$ -	\$ -
SUB-TOTAL					

BID ITEMS: SEA PALMS CURED-IN-PLACE PIPE REHAB

Item	Description	Quantity	Units	Unit Price	Total
1	Mobilization	1	LS	\$ -	\$ -
2	Bypass Pumping	1	LS	\$ -	\$ -
3	Traffic Control	1	LS	\$ -	\$ -
4	Sanitary Sewer Mainline Pre-Cleaning Inspection ≤ 12" Diameter	8133	LF	\$ -	\$ -
5	Sanitary Sewer Mainline Cleaning ≤ 12" Diameter	8133	LF	\$ -	\$ -
6	Sanitary Sewer Mainline Post-Cleaning Inspection ≤ 12" Diameter	8133	LF	\$ -	\$ -
7	8" CIPP Mainline Rehabilitation	8133	LF	\$ -	\$ -
8	Sanitary Sewer Mainline Heavy Sewer Cleaning ≤ 12" Diameter	1	SEGMENT	\$ -	\$ -
9	Sanitary Sewer Mainline Deposit Cut ≤ 12" Diameter	1	SEGMENT	\$ -	\$ -
10	Sanitary Sewer Mainline Root Cut Medium ≤ 12" Diameter	1	SEGMENT	\$ -	\$ -
11	Sanitary Sewer Mainline Root Cut Ball ≤ 12" Diameter	1	SEGMENT	\$ -	\$ -
12	Sanitary Sewer Mainline Lateral Cut ≤ 12" Diameter	1	EACH	\$ -	\$ -
13	Service Connection Reinstatement	105	EACH	\$ -	\$ -
SUB-TOTAL					
TOTAL (ALTAMA & SEA PALMS)					

EXHIBIT D

BIDDER QUALIFICATION FORM

BIDDER QUALIFICATION FORM

COMPANY NAME OF BIDDER: _____

NUMBER OF YEARS IN BUSINESS _____

BUSINESS ADDRESS OF COMPANY: _____

TELEPHONE NUMBER: _____

FAX NUMBER: _____

POINT OF CONTACT NAME: _____

POINT OF CONTACT EMAIL ADDRESS: _____

COMPANY TAX ID NUMBER: _____

COMPANY WEBSITE: _____

ENTITY TYPE: Individual/Sole Proprietor Employee Owned Company
 Privately Held Corporation/LLC Partnership
 Publicly Owned Company Attorney

Other (specify): _____

NAME OF PRINCIPAL OFFICERS:

REFERENCES

LIST AT LEAST THREE (3) SIMILAR SEWER CIPP PROJECTS THAT HAVE BEEN COMPLETED WITHIN THE LAST FIVE (5) YEARS, EXCLUDING JWSC PROJECTS.

PROJECT #1

OWNER:

CONTACT NAME:

EMAIL ADDRESS:

PHONE NUMBER:

ADDRESS:

PROJECT DESCRIPTION:

DATE COMPLETED:

PROJECT #2

OWNER:

CONTACT NAME:

EMAIL ADDRESS:

PHONE NUMBER:

ADDRESS:

PROJECT DESCRIPTION:

DATE COMPLETED:

PROJECT #3

OWNER:

CONTACT NAME:

EMAIL ADDRESS:

PHONE NUMBER:

ADDRESS:

PROJECT DESCRIPTION:

DATE COMPLETED:

EXHIBIT E

E-VERIFY REQUIREMENTS

Contractor Affidavit under O.C.G.A. § 13-10-91(b)(1)

By executing this affidavit, the undersigned contractor verifies its compliance with O.C.G.A. § 13-10-91, stating affirmatively that the individual, firm or corporation which is engaged in the physical performance of services on behalf of Brunswick-Glynn County Joint Water and Sewer Commission has registered with, is authorized to use and uses the federal work authorization program commonly known as E-Verify, or any subsequent replacement program, in accordance with the applicable provisions and deadlines established in O.C.G.A. § 13-10-91. Furthermore, the undersigned contractor will continue to use the federal work authorization program throughout the contract period and the undersigned contractor will contract for the physical performance of services in satisfaction of such contract only with subcontractors who present an affidavit to the contractor with the information required by O.C.G.A. § 13-10-91(b). Contractor hereby attests that its federal work authorization user identification number and date of authorization are as follows:

Federal Work Authorization User Identification Number

Date of Authorization

Name of Contractor

Name of Project

Name of Public Employer

I hereby declare under penalty of perjury that the foregoing is true and correct.

Executed on _____, ____, 2019 in _____(city), _____(state).

Signature of Authorized Officer or Agent

Printed Name and Title of Authorized Officer or Agent

SUBSCRIBED AND SWORN BEFORE ME
ON THIS THE _____ DAY OF _____,2019.

NOTARY PUBLIC

My Commission Expires:

E-VERIFY SUBCONTRACTOR AFFIDAVIT AND AGREEMENT

Georgia Security Immigration and Compliance (GSIC) Act

The Brunswick-Glynn County Joint Water and Sewer Commission and Subcontractor agree that compliance with the requirements of O.C.G.A. § 13-10-91 and Rule 300-10-1-.02 of the Rules of the Georgia Department of Labor are conditions of this Agreement for the physical performance of services.

By executing this affidavit, the undersigned subcontractor verifies its compliance with O.C.G.A. § 13-10-91, *stating affirmatively that the individual, firm, or corporation which is contracting with a Contractor contracting with the Brunswick-Glynn County Joint Water and Sewer Commission has registered with and is participating in the federal work authorization program known as: E-Verify”, web address <https://e-verify.uscis.gov/enroll/> operated by the United States Citizenship and Immigration Services Bureau of the United States Department of Homeland Security to verify information of newly hired employees, pursuant to the Immigration Reform and Control Act of 1986 (IRCA), P.L. 99-603], in accordance with the applicable provisions and deadlines established in O.C.G.A. §13-10-91. The undersigned Subcontractor also verifies that he/she/it is using and will continue to use the federal work authorization program throughout the contract period.*

The undersigned Subcontractor agrees that, should it employ or contract with any other subcontractor(s) in connection with the physical performance of services pursuant to the contract with the Brunswick-Glynn County Joint Water and Sewer Commission, Subcontractor will secure from such subcontractor(s) similar verification of compliance with O.C.G.A. § 13-10-91 on the Subcontractor Affidavit provided in Rule 300-10-01-.08 or a substantially similar form. Subcontractor further agrees the Subcontractor will advise the Brunswick-Glynn County Joint Water and Sewer Commission of the hiring of a new subcontractor and will provide the Brunswick-Glynn County Joint Water and Sewer Commission with a Subcontractor Affidavit attesting to the Subcontractor’s name, address, user identification number, and date of authorization to use the Federal Work Authorization Program within five (5) days of the hiring before the Subcontractor begins working on the Project. Subcontractor also agrees to maintain all records of such compliance for inspection by the Brunswick-Glynn County Joint Water and Sewer Commission at any time and to provide a copy of each such verification to the Brunswick-Glynn County Joint Water and Sewer Commission at the time the subcontractor(s) is retained to perform such services.

(Continued on Next Page)

REQUIRED ONLY IF APPLICABLE

E-Verify Employment Eligibility Verification User I.D. Number

Date of Authorization to Use Federal Work Authorization Program

Name of Subcontractor

Title of Authorized Officer or Agent of Subcontractor

Signature and Printed Name of Authorized Officer or Agent

Sworn to and subscribed before me this the __ day of _____, 2019.

NOTARY PUBLIC:

Name: _____

My Commission Expires: _____

(NOTARY SEAL)

As of the effective date of O.C.G.A. § 13-10-91, the applicable federal work authorization program is the "EEV/Basic Pilot Program" operated by the U.S. Citizenship and Immigration Services Bureau of the U.S. Department of Homeland Security, in conjunction with the Social Security Administration (SSA).

EXHIBIT F

DRUG FREE WORKPLACE AFFIDAVIT

CERTIFICATE OF DRUG FREE WORKPLACE

In order to have a drug- free workplace, a business shall:

Publish a statement notifying employees that the unlawful, manufacture, distribution, dispensing, possession, or use of controlled substances is prohibited in the workplace and specifying the actions that shall be taken against employees for violation of such prohibition.

Inform employees about the dangers of drug abuse in the workplace, the business's policy of maintaining a drug-free workplace, any available drug counseling, rehabilitation, and employee assistance programs, and the penalties that may be imposed upon employees for drug abuse violations.

As a condition of working on the commodities or contractual services then under bid, the employee shall notify the employer of any conviction of, or plea of guilty or nolo contendere to, any violation of any controlled substance law of the United States or any State, for a violation occurring in the workplace no later than five (5) days after such conviction.

Impose a sanction on, or require satisfactory participation in a drug abuse assistance or rehabilitation program if such is available in the employee's community, by any employee who is so convicted.

Make a good faith effort to continue to maintain a drug-free workplace through implementation of this section.

As the person authorized to sign this statement, I certify that this firm complies fully with the above requirements.

Company Name: _____

Authorized Signature: _____

Title: _____

Date: _____

EXHIBIT G

INSURANCE REQUIREMENTS

Brunswick-Glynn County Joint Water and Sewer Commission

1703 Gloucester Street
Brunswick, Georgia 31520
(912) 261-7100

INSURANCE REQUIREMENTS

The description section of your insurance certificate must read:

BGJWSC is named as an additional insured on all coverage except Workers' Compensation as per written contract. A waiver of Subrogation applies to all policies shown above as per written contract.

Insurance Requirements

Before starting and until acceptance of the Work by BGJWSC, and without further limiting its liability under the Contract, Company shall procure and maintain at its sole expense, insurance of the types and in the minimum amounts stated below:

SCHEDULE	AMOUNT
<u>Workers' Compensation</u> Georgia Statutory coverage and Employer's Liability (including appropriate Federal Acts)	Statutory Limits (Workers' Compensation) \$500,000 Bodily Injury each accident \$500,000 Bodily Injury by Disease each Employee \$1,000,000 Bodily Injury policy limit
<u>Commercial General Liability</u> Premises-Operations Products-Completed Operations Contractual Liability Independent Contractors Broad Form Property Damage Explosion, Collapse and Underground Hazards (XCU Coverage) as appropriate Primary and Non Contributory	\$1,000,000 each occurrence \$2,000,000 annual aggregate for bodily injury and property damage, combined single limit
<u>Automobile Liability</u> All autos-owned, hired, or non-owned	\$1,000,000 each occurrence, combined single limit
<u>Excess or Umbrella Liability</u> (This is additional coverage and limits above the following primary insurance: Employer's Liability, Commercial General Liability and Automobile Liability)	\$2,000,000 each occurrence and annual aggregate

Company's Commercial General Liability and Excess or Umbrella Liability policies shall be effective for two years after Work is complete. The above Indemnification provision is separate and is not limited by the type of insurance or insurance amounts stated above. The General liability shall contain a "Per Project Aggregate".

Company shall specify BGJWSC as an additional insured for all coverage except Workers' Compensation and Employer's Liability. Such insurance shall be primary and non-contributory as to any and all other insurance or self-insurance maintained by BGJWSC. Company shall include a Waiver of Subrogation on all required insurance in favor of BGJWSC, its commission members, employees, agents, successors and assigns.

Such insurance shall be written by a company or companies authorized to do business in the State of Georgia, rated at least A- VII by A M Best and satisfactory to BGJWSC. Prior to commencing any Work under this Contract, certificates evidencing the maintenance of the insurance shall be furnished to BGJWSC for approval.

EXHIBIT H

Performance Bond

PART B - PERFORMANCE BOND

**State of Georgia
City of Brunswick
County of Glynn**

KNOW ALL MEN BY THESE PRESENT, that we _____

_____, as Principal, and _____

_____, as Surety, do hereby acknowledge ourselves indebted and firmly bound and held unto the Brunswick-Glynn County Joint Water and Sewer Commission (JWSC), for the use and benefit of those entitled thereto in the not to exceed sum of _____

_____ \$ (_____)

for the payment of which will and truly to be made, in lawful money of the United States, we do hereby bind ourselves, successors, assigns, heirs, and personal representatives.

BUT THE CONDITION OF THE FOREGOING OBLIGATION OR BOND IS THIS:

WHEREAS, the JWSC has engaged the said Contractor for the not to exceed sum of _____ \$ (_____)

for the **CIPP REPAIRS, ALTAMA AVENUE CORRIDOR & SEA PALMS DEVELOPMENT** as more fully appears in a written Agreement bearing the same project title, a copy of which Agreement is by reference hereby made a part thereof.

NOW, THEREFORE, if a said Contractor shall fully and faithfully perform all the undertakings and obligations under the said agreement or contract herein before referred to and shall fully indemnify and save harmless the JWSC from all costs and damage whatsoever which it may suffer by reason of any failure on the part of said Contractor to do so, and shall fully reimburse and repay the JWSC such default, and shall guarantee all products and workmanship against defects for a period of one year, then this obligation or bond shall be null and void, otherwise, it shall remain in full force and effect.

And for value received it is hereby stipulated and agreed that no change, extension of time, alteration or addition to the terms of the said Agreement or Contract or in the work to be performed there under, or the Specifications accompanying the same shall in any way affect the obligations under this obligation or bond, and notice is hereby waived of any such damage, extension of time, alteration or addition to the terms of the Agreement or Contract or to the work or to the Specifications.

This bond is given pursuant to and in accordance with the provisions of O.C.G.A. § 36-91-1 *et seq.* and all the provisions of the law referring to this character of bond as set forth in said sections or as may be hereinafter enacted, and these are hereby made a part hereof to the same extent as if set out herein in full.

[Signatures on Next Page]

IN WITNESS WHEREOF, the said Principal has hereunder affixed its signature and said Surety has hereunto caused to be affixed its corporate signature and seal, by its duly authorized officers, on

This the _____ day of _____, 2019, executed in two (2) counterparts.

PRINCIPAL: _____

By: _____

Title: _____

(SEAL)

Signed and Sealed in the Presence of:

1. _____

2. _____

SURETY: _____

By: _____

Title: _____

(SEAL)

Signed and Sealed in the Presence of:

1. _____

2. _____

EXHIBIT I

Payment Bond

PART C - PAYMENT BOND

**State of Georgia
City of Brunswick
County of Glynn**

KNOW ALL MEN BY THESE PRESENT, that we _____

_____, as Principal, and _____

_____, as Surety, do hereby acknowledge ourselves indebted and firmly bound and held unto the Brunswick-Glynn County Joint Water and Sewer Commission (JWSC), for the use and benefit of those entitled thereto in the not to exceed the sum of _____

_____ \$ (_____)

for the payment of which will and truly to be made, in lawful money of the United States, we do hereby bind ourselves, successors, assigns, heirs, and personal representatives.

BUT THE CONDITION OF THE FOREGOING OBLIGATION OR BOND IS THIS:

WHEREAS, the JWSC has engaged the said Contractor for the not to exceed sum of

_____ \$ (_____)

For the **CIPP REPAIRS, ALTAMA AVENUE CORRIDOR & SEA PALMS DEVELOPMENT** as more fully appears in a written Agreement bearing the same project title, a copy of which Agreement is by reference hereby made a part thereof.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if said Contractor and all subcontractors to whom any portion of the work provided for in said Contract is sublet and all assignees of said Contract and of such subcontractors shall promptly make payments to all persons supplying him or them with labor, products, services, or supplies for or in the prosecution of the work provided for in such Contract, or in any amendment or extension of or addition to said Contract, and for the payment of reasonable attorney's fees, incurred by the claimants in suits on this bond, then the above obligation shall be void; otherwise, it shall remain in full force and effect.

HOWEVER, this bond is subject to the following conditions and limitations:

- (a) Any person, firm or corporation that has furnished labor, products, or supplies for or in the prosecution of the work provided for in said Contract shall have a direct right of action against the Contractor and Surety on this bond, which right of action shall be asserted in a proceeding, instituted in the county in which the work provided for in said Contract to be performed or in any county in which Contractor or Surety does business. Such right of action shall be asserted in proceedings instituted in the name of the claimant or claimants for his or their use and benefit against said Contractor and Surety or either of them (but not later than one year after the final settlement of said Contract) in which action such claim or claims shall be adjudicated and judgment rendered thereon.
- (b) The Principal and Surety hereby designate and appoint _____ as agent of each of them to receive and accept service of process or other pleading issue or filed in any proceeding instituted on this bond and hereby consent that such service shall be the same as personal service on the Contractor and/or Surety.
- (c) In no event shall the Surety be liable for a greater sum than the penalty of this bond, or subject to any suit, action or proceeding thereon that is instituted later than one year after the final settlement of said Contract.
- (d) This bond is given pursuant to and in accordance with the provisions of O.C.G.A. § 36-91-1 *et seq.* and all the provisions of the law referring to this character of bond as set forth in said sections or as may be hereinafter enacted, and these are hereby made a part hereof to the same extent as if set out herein in full.

[Signatures on Next Page]

IN WITNESS WHEREOF, the said Principal has hereunder affixed its signature and said Surety has hereunto caused to be affixed its corporate signature and seal, by its duly authorized officers, on

This the _____ day of _____, 2019, executed in two (2) counterparts.

PRINCIPAL: _____

By: _____

Title: _____

(SEAL)

Signed and Sealed in the Presence of:

1. _____

2. _____

SURETY: _____

By: _____

Title: _____

(SEAL)

Signed and Sealed in the Presence of:

1. _____

2. _____

EXHIBIT J

Bid Bond

BID BOND

State of Georgia
City of Brunswick
County of Glynn

KNOW ALL MEN BY THESE PRESENT, that we, _____

_____, as Principal, and

_____, as Surety, are held and firmly bound

unto the Brunswick-Glynn County Joint Water and Sewer Commission (JWSC) in the not to

exceed sum of _____ Dollars

(\$ _____) lawful money of the United states, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, personal representatives, successors and assign, jointly and severally, firmly by these presents.

WHEREAS, the Principal has submitted to the JWSC a Bid for:

CIPP REPAIRS, ALTAMA AVENUE CORRIDOR & SEA PALMS DEVELOPMENT

NOW THEREFORE, the conditions of this obligation are such that if the Bid be accepted, the Principal shall, within fifteen days (15) days after receipt of conformed Contract Documents, execute a contract in accordance with the Bid upon the terms, conditions and prices set forth therein, and in the form and manner required by the JWSC and execute a sufficient and satisfactory Performance Bond and Payment bond payable to the JWSC, each in an amount of one hundred percent (100%) of the total contract price, in form and with security satisfactory to the JWSC, then this obligation shall be void; otherwise, it shall be and remain in full force and virtue in law; and the Surety shall, upon failure of the Principal to comply with any or all to the foregoing requirements within the time specified above, immediately pay to the aforesaid JWSC, upon demand, the amount hereof in good and lawful money of the United States of America, not as a penalty, but as liquidated damages.

This bond is given pursuant to and in accordance with the provisions of O.C.G.A. § 36-91-50 *et seq.*, as amended from time to time, and all the provisions of the law referring to this character of bond as set forth in said sections or as may be hereinafter enacted and these are hereby made a part hereof to the same extent as if set out herein in full.

(Continued on Next Page)

IN WITNESS WHEREOF, the said Principal has hereunder affixed its signature and said Surety has hereunto caused to be affixed its corporate signature and seal, by its duly authorized officers, on

This the _____ day of _____, 2019.

PRINCIPAL: _____

Signed and sealed in the
Presence of:

By: _____

Title: _____

1. _____

(Seal)

2. _____

SURETY: _____

Signed and sealed in the
Presence of:

By: _____

Title: _____

(Seal)

1. _____

2. _____

EXHIBIT K

Contract

**CONTRACT FOR SERVICES
BY AND BETWEEN
BRUNSWICK-GLYNN COUNTY JOINT WATER AND SEWER COMMISSION
AND
CONTRACTOR**

THIS AGREEMENT made and entered into by and between the **BRUNSWICK-GLYNN COUNTY JOINT WATER AND SEWER COMMISSION**, a public corporation created by Local Act of the General Assembly of the State of Georgia, acting by and through its Commissioners (hereinafter referred to as the “JWSC”) and **CONTRACTOR** a (Name of State) licensed to do business in the State of Georgia (hereinafter referred to as the “Contractor”).

WITNESSETH

WHEREAS, The JWSC issued an Invitation for Bids on or about August 6, 2019 (hereinafter referred to as the “Solicitation”) from qualified vendors to provide for its **CIPP Repairs, Altama Avenue & Sea Palms Development** (hereinafter referred to as the “Project”); and

WHEREAS, the Contractor submitted a qualified bid in response to the Solicitation; and

WHEREAS, it is the intention of the parties hereto to enter into this contract (hereinafter referred to as the “Agreement”) in order to provide a statement of the respective covenants, conditions and agreements in connection with the performance of services by Contractor to the JWSC.

NOW THEREFORE, FOR AND IN CONSIDERATION of the mutual covenants and conditions set forth herein, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties agree as follows:

1. INDEPENDENT CONTRACTOR STATUS AND RESPONSIBILITIES

- (a) In the performance of the Project services required under this Agreement, Contractor shall be an "independent contractor" with the authority and responsibility to control and direct the performance and details of the Project Work and services required under this Agreement; provided, however, JWSC shall have a right to inspect Work in progress to determine whether, in JWSC's opinion, the Project services are being performed by Contractor in accordance with the provisions of this Agreement.
- (b) ALL persons hired or used by Contractor shall be Contractor's employees and agents and Contractor shall ensure that such persons are qualified to engage in the activity and services in which they participate. Contractor shall be responsible for the accuracy, completeness and adequacy of any and all work and services performed by Contractor's employees and agents and shall ensure that all applicable licensing and operating requirements of federal, state, county and municipal governments, and all applicable accreditation and other standards of quality generally accepted in the field of Contractor activities are complied with and satisfactorily met.

- (c) Contractor expressly agrees to assume the sole and entire liability (if any liability is determined to exist) to its employees, agents and other persons for all loss, damage or injury caused by Contractor's employees and agents in the course of their employment. The mere participation in the performance of Project services under this Agreement shall not constitute nor be construed as employment with JWSC and shall not entitle Contractor or Contractor's employees, agents or subcontractors to vacation, sick leave, retirement or other benefits afforded by employees of the JWSC. Contractor shall be responsible for payment of applicable income, social security and any other federal, state, and/or local taxes and fees.
- (d) Contractor assumes sole responsibility for completion of the Project undertaken pursuant to this Agreement. The JWSC shall consider Contractor the sole point of contact with regard to contractual matters. Subcontracting of any part of the Project Work or services contemplated by this Agreement may not be entered by Contractor without prior written approval by the JWSC.

2. CONTRACT DOCUMENTS

- (a) This Agreement consists of this document and other documents which are incorporated herein by reference as though set forth fully herein (hereinafter referred to in this Agreement as the Contract Documents), as follows:
 - (1) JWSC's Solicitation, dated September 27, 2019 including Addendums, if any.
 - (2) Contractor's Bid for **CIPP Repairs, Altama Avenue Corridor & Sea Palms Development** dated November 5, 2019.
 - (3) This Agreement, which includes the following Parts:
 - Part A: Contract Form
 - Part B: Performance Bond
 - Part C: Payment Bond
 - Part D: Affidavit of Payment of Claims
 - Part E: Certificate of Insurance
 - Part F: Certificate of Drug Free Workplace
 - Part G: E-Verify Contractor Affidavit and Agreement
 - Part H: E-Verify Subcontractor Affidavit and Agreement
- (b) In case of any conflicts, the terms and conditions set forth in this Agreement shall control over the terms and conditions of the documents incorporated herein by this Section 2, Contract Documents.

3. SCOPE OF WORK

- (a) Contractor agrees to provide all the skill labor, materials and equipment necessary to carry out, in good faith, the complete requirements of the Project specified as **CIPP Repairs, Altama Avenue Corridor & Sea Palms Development** in strict conformity with all sections of the Solicitation, whose program services together with the Contractor's Bid, the Invitation for Bids, Instructions to Bidders, General Conditions, Construction Plans, Standards for Water and Sewer Design and Construction, this Agreement and all addenda hereto annexed, and the Contract Documents shall form essential parts of this Agreement as if fully contained herein.
- (b) Contractor agrees to perform all Project services as contemplated herein in a manner that does not jeopardize the safety of Contractor's workers, JWSC personnel or any other person, including providing and maintaining all necessary precautions for the protection of the public. In addition, Contractor agrees to perform the Project contemplated herein in a manner that poses no threat to the environment or violates any federal, state or local statute, ordinance, rule or regulation regarding environmental concerns.
- (c) Contractor agrees to keep the rights-of-way, easement area and adjacent property free from accumulations of waste materials, rubbish and other debris resulting from the Work, and progressively as the Work is completed he shall remove all waste materials, rubbish and debris from and about the work areas and shall leave the site clean.

4. NOTICE TO PROCEED; LIQUIDATED DAMAGES

- (a) *Notice to Proceed:* The Contractor agrees to commence the Project included in this Agreement on a date to be specified in a written Notice to Proceed and shall fully complete the Project within a period of **One Hundred Twenty (120)** consecutive calendar days after the effective commencement date.
- (b) *Liquidated Damages:* Time is of the essence and is an essential element of this Agreement, and the Contractor shall pay to the JWSC, not as a penalty, but as liquidated damages, the sum of **One Thousand Dollars (\$1,000.00)** for each calendar day that he shall be in default of completing the work within the time limit named herein. These fixed liquidated damages are not established as a penalty but are calculated and agreed upon in advance by the JWSC and the Contractor due to the uncertainty and impossibility of making a determination as to the actual and consequential damages incurred by the JWSC and its rate payers as a result of the failure on the part of the Contractor to complete the Work on time. Such liquidated damages referred to herein are intended to be and are cumulative and shall be in addition to every other remedy now or hereafter enforceable at law, in equity, by statute or under this Agreement.

5. COMPENSATION

- (a) The JWSC agrees to pay the Contractor, in current funds, for the performance of this Agreement based on the units and lump sum pricing for the Project and listed at Exhibit "A," which sums shall also pay for all loss or damage arising out of the nature of the Project aforesaid, or in the

performance of the Project and for all expenses incurred by, or in consequence of the Project, its suspension or discontinuance, and for well and faithful completion of the Project and the whole thereof, as herein provided.

- (b) The JWSC and Contractor agree that the Construction Plans, Standards for Water and Sewer Design and Construction, and all Addenda thereto together are as fully a part of the Contract as if attached or herein repeated. The Contractor, recognizing the particular requirements of the JWSC budgetary process, agrees to waive the terms of O.C.G.A. § 13-11-1 *et seq.*, known as the Georgia Prompt Pay Act. Contractor agrees that the Work and services required by this Agreement may require inspection and approval of the JWSC's engineers or consultants and that the time of repayment shall be tolled for a reasonable time as required for said inspection and approval.
- (c) Contractor further agrees to toll the time for payment herein under for an additional and reasonable period of time for the JWSC representative overseeing the Project or Work contemplated by this Agreement to approve the Work and/or services performed.
- (d) The JWSC shall have forty-five (45) days from approval by the JWSC representative in which to pay the Contractor; subject to any documentation requests by the JWSC as necessary to allow the JWSC to evaluate the completeness and accuracy of monies due.

6. TERM OF AGREEMENT

- (a) This Agreement shall be for a period of **One Hundred Fifty (150)** consecutive calendar days after the effective commencement date of the Work.
- (b) This Agreement is binding on the parties as of date last written below.

7. INSURANCE

Contractor shall not commence Work on the Project under this Agreement until all insurance set forth in the Solicitation, Section 7.0, Insurance (*see* General Conditions), has been obtained and such insurance certificates have been approved by the JWSC. The certificates of insurance shall indicate the JWSC as an additional named insured and that the coverages are primary and not contributory with any similar insurance purchased by the JWSC, and shall contain a provision that such coverage shall not be cancelled until at least thirty (30) days prior written notice has been given to the JWSC.

8. INDEMNIFICATION

To the fullest extent permitted by laws, statutes, rules and regulations, the Contractor shall indemnify and hold harmless the JWSC, its officers, directors, employees, agents and other consultants of each and any of them from and against all claims, costs, damages, losses and expenses, including but not limited to all fees and charges of engineers, attorneys and other professionals and all court costs, arising out of or resulting from the performance of the Work, but only to the extent caused in whole or in part by acts or omission of the Contractor, its officers, directors, employees, agents, and anyone directly or indirectly

employed by them or anyone for whose acts they may be liable, regardless of whether or not such claim, costs, damage, loss or expense is caused in part by a party indemnified hereunder. In any and all claims against the JWSC or any of its agents or employees, the indemnification obligation shall not be limited in any way by the amount or type of damages. Contractor shall not indemnify JWSC, its agents or employees for their own, sole negligence.

9. ASSIGNMENT

Contractor shall not assign or transfer any part of or the entire Project to be performed under this Agreement, or any right accruing hereunder, without the express written consent of JWSC. The JWSC may condition any consent and approval upon such terms and provisions that JWSC may deem necessary. Further, no assignment of claims for money due or to become due to Contractor under this Agreement shall be effective unless the assignment of such claim is first approved, in writing, by the JWSC.

10. PROHIBITED DISCRIMINATION

Contractor shall comply with all applicable federal and state laws prohibiting discrimination against any person on the grounds of race, color, religion, sex, national origin, age, disability, veteran status or any other status protected by law, in employment or in any condition of employment with Contractor or in participation in the benefits of the Work provided by Contractor under this Agreement.

11. COMPLIANCE WITH ALL LAWS

Contractor shall observe and comply with the laws of the State of Georgia which require authorization or licensing to conduct business in the State. Notwithstanding statutory exemptions or exclusions, Contractor agrees to subject itself to the jurisdiction and process of the Courts of the State of Georgia as to all matters and disputes arising or to arise under this Agreement and the performance thereof, including all issues relating to liability for taxes, licenses or fees levied by the State.

12. REMEDIES; DISPUTE RESOLUTION

(a) Contractor irrevocably consents that any legal action or proceeding arising out of or in any manner relating to this Agreement shall be brought in any court in Glynn County, Georgia. Contractor designates the Secretary of the State of Georgia as its agent for service of process, provided no such agent located in Georgia is on file with the said Secretary. Contractor, by the execution and delivery of this Agreement, expressly and irrevocably assents to and submits to the personal jurisdiction of any court in Glynn County, Georgia, and in any said action or proceeding. Contractor hereby expressly and irrevocably waives any claim or defense in any said action or proceeding based on any alleged lack of jurisdiction, improper venue or *forum non conveniens* or any similar basis.

(b) A dispute between the parties arising out of or in any manner relating to this Agreement, or breach thereof, may be submitted to binding arbitration or resolved in a court of law having jurisdiction of such matters. Once a party elect's arbitration, such election is binding on both

parties. An arbitrator selected from a panel in Glynn County, Georgia, provided by the American Arbitration Association shall resolve the dispute. The cost of arbitration shall be borne equally by the parties. The arbitration decision may be appealed in accordance with State law.

- (c) No provision set forth in this Section is to have the effect to abridge the right of any party to proceed in a court of law or equity.

13. MODIFICATION OF AGREEMENT

No modification, alteration or amendment to the terms of this Agreement shall be effective unless written and signed by the authorized representative of all parties hereto.

14. WAIVER

The failure of either party at any time to enforce or require performance of any provision hereof shall in no way operate as a waiver or affect the right of such party at a later time to enforce the same. No waiver by either party of any condition or the breach of any provision contained in this Agreement, whether by conduct or otherwise, in anyone or more instances, shall be deemed to be or construed as a further or continuing waiver of any such condition or breach, or a waiver of any other condition or of any breach of any other provision contained in this Agreement.

15. TERMINATION OF AGREEMENT

- (a) The JWSC may, at any time upon written notice to the Contractor, terminate this Agreement for convenience, without prejudice to any right or remedy of the JWSC, in whole or as to any portion of the Project, then existing or which may thereafter accrue. If the JWSC terminates this Agreement for convenience, then JWSC's only obligation to Contractor will be for payment of compensation earned up to the date of such termination and all outstanding costs including those materials in transit and un-cancellable.
- (b) When the Contractor's services have been terminated by the JWSC, the Contractor in calculating his termination application for payment, shall develop his outstanding costs, including those materials in transit and un-cancellable with the appropriate percentage markups; subcontractors shall follow the same procedures. All costs must be substantiated by adequate back-up documentation. Any retention or payment of moneys due to the Contractor by the JWSC will not release the Contractor from liability.
- (c) The Contractor may not terminate this Agreement without the JWSC's consent except for failure of the JWSC to pay sums due to the Contractor hereunder. Prior to termination, the Contractor must give written notice to the JWSC allowing thirty (30) days to investigate and remedy any failure or breach hereof. Should the JWSC fail to remedy the failure or breach hereof within such thirty (30) days, the Contractor shall give written notice, addressed to the JWSC Executive Director, sent by certified mail, return receipt requested, of its intention to cease providing services upon a day certain after delivery of such notice.

16. AGREEMENT SECURITY - BONDS

- (a) A bid guarantee in an amount not less than five percent (5%) of the amount bid must accompany each bid. Acceptable forms of bid guarantees are: a bid bond, certified check or cashier's check made payable to the Brunswick-Glynn County Joint Water and Sewer Commission. The JWSC will return bid guarantees, other than bid bonds, to unsuccessful Bidders as soon as practicable, but not sooner than the execution of a contract with the successful Bidder. If for any reason whatsoever the successful Bidder withdraws from the competition after opening the bids, or refuses to execute the Contract, the JWSC will proceed on the Bid Bond or deposit the certified check or cashier's check as damages for the Bidder's failure to enter into a contract for the work.
- (b) Performance and Payment bonds, each in an amount equal to one hundred percent (100%) of the contract amount will be required of the successful Bidder.
- (c) The Surety of the Bid Bond, Performance Bond, and Payment Bond shall be a surety company authorized to do business in the State of Georgia, shall be listed in the Department of the Treasury Circular 570, and shall have an underwriting limitation in excess of one hundred percent (100%) of the bid amount. The Bonds and Surety shall be subject to approval by the JWSC legal counsel.
- (d) Attorneys-in-fact who sign and seal Bid Bonds or Contract Bonds must file with each bond a certified and effectively dated copy of their Power of Attorney evidencing the authority of the individual signing the bond.

17. NOTICES

- (a) All notices, approvals, consents, requests, demands, claims or other communications shall be in writing (collectively referred to as Notice).
- (b) It shall be sufficient service of any Notice if the same shall be delivered or mailed by first class registered or certified mail, return receipt requested, postage prepaid and addressed as follows:
 - (1) If to Contractor: **add contractor contact info**
 - (2) If to JWSC: Andrew Burroughs, Interim Executive Director
Brunswick-Glynn County Joint Water
and Sewer Commission
1703 Gloucester Street
Brunswick, Georgia 31520
 - (3) Copy to: Charles A. Dorminy, JWSC Attorney
Hall Booth Smith, P.C.
3528 Darien Highway, Suite 300
Brunswick, Georgia 31525

- (c) Any Notice hereunder shall be deemed to have been given or made as of the time of actual delivery or in the case of mailing when the same should have been received in due course of post. Any notice by facsimile transmission shall be deemed to have been given or made upon receipt and if verified by the facsimile apparatus that the transmission was in fact delivered, including the number to which the facsimile was sent, and the time and date it was transmitted successfully.
- (d) The parties hereto may, by Notice given hereunder, designate any different address to which subsequent Notices shall be sent or the person to whose attention the same shall be directed.

18. WARRANT OF AUTHORITY

Each individual executing this Agreement on behalf of any party expressly represents and warrants that he/she has authority to do so, and thereby to bind the party on behalf of which he/she signs, to the terms of this Agreement.

19. ENTIRE AGREEMENT; BENEFIT TO PARTIES

- (a) This Agreement and any attached exhibit(s) constitute the final and entire agreement and understanding between the parties hereto regarding the subject matter hereof. No prior written promises, or contemporaneous or subsequent oral promises or representations, shall be binding and are to be without effect in the construction of any of the terms or conditions of this Agreement.
- (b) With the exception of rights expressly conferred herein, nothing expressed or mentioned in or to be implied here from is intended or shall be construed to give to any person other than the parties hereto, any legal or equitable right, remedy or claim under or in respect hereto or any agreement, condition or provision herein contained and no provision shall be construed as creating any debt as against Contractor or JWSC in favor of any such person; this Agreement and the covenants, conditions and provisions hereof being intended to be used for the sole and exclusive benefits of the parties hereto.
- (c) Contractor and JWSC, their successors, executors, administrators and assigns hereby agree to the full performance of the covenants herein contained.

20. GOVERNING LAW

This Agreement shall be governed by and construed in accordance with the laws of the State of Georgia.

21. TIME IS OF THE ESSENCE

Time is of the essence in fulfilling all terms and conditions of this Agreement.

22. EXECUTION IN COUNTERPARTS

This Agreement may be simultaneously executed in several counterparts, each of which shall be an original and all of which shall constitute but one and the same instrument.

23. MISCELLANEOUS PROVISIONS

- (a) Section captions herein are for convenience of reference only and neither limits nor amplifies the provisions of this Agreement.
- (b) Should any term, provision or other part of this Agreement be declared illegal or unenforceable, it shall be excised or modified to conform to the appropriate laws or regulations, and the remainder of the Agreement shall not be affected but shall remain in full force and effect.
- (c) The foregoing whereas clauses are hereby incorporated into this Agreement and made a part thereof.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement in their names under seal, all by their duly authorized officers, as of the date last written below, in two (2) counterparts, each of which shall without proof or accounting for the other counterparts, be deemed an original contract.

CONTRACTOR NAME

By: _____
Name, Title Date

Attest to:

By: _____
Name, Title Date and SEAL

**BRUNSWICK-GLYNN COUNTY JOINT
WATER AND SEWER COMMISSION**

By: _____
G. Ben Turnipseed Sr., Commission Chairman Date

Attest to:

By: _____
Janice Meridith, Commission Clerk Date and SEAL

PART A: CONTRACT FORM CONTINUED

Please be advised that the Contract Form, herein above, contemplates the Project described and when the successful Bidder is selected and the Project awarded, then JWSC will provide the successful Bidder with a **CIPP Repairs, Altama Avenue Corridor & Sea Palms Development** agreement which will include the standard contract provisions as set forth in the Contract Form herein, as applicable.