

## SECTION 4

### SPECIFIC SPECIFICATIONS AND SPECIAL CONDITIONS FOR

- 4.0 The purpose of these specifications is to procure an annual service contract for sewer system cleaning and inspection and trenchless sewer line construction.

A pre-bid conference has been scheduled to be conducted at the Purchasing Office, Third Floor, City Hall, 2 E. Bay Street, Savannah, GA. This meeting will allow contractors to discuss the specifications and resolve any questions and/or misunderstandings that may arise with city staff. You are invited to attend.

- 4.1 Division I: Sewer Inspection and Cleaning

The City's intent is to develop unit costs for sewer inspection and cleaning. The proposed unit costs in this division will be for services in addition to the sewer inspection and cleaning listed in Division II: Sewer Line Reconstruction.

- 4.2 Sewer Inspection & Services: The Contractor will provide equipment and personnel to perform video recording by closed circuit color televising. This service will require suitable metering devices to be attached to the interval inspection equipment so that the exact location of the camera within the pipeline can be noted at all times. Television inspection of pipelines shall be performed by experienced personnel who are trained in locating and assessing pipe deficiencies, infiltration sources and quantities, and service connections. During the video taping of the sewer mains, the contractor shall provide audio comment on the tape pertaining to the conditions and locations of pipe deficiencies, infiltration sources and service connections. The condition and defects in each line segment will be evaluated in order to rate each segment according to NASSCO PACP guidelines. Television inspection reports and DVDs shall be submitted to the City. All video logs, pre-rehabilitation and post-rehabilitation shall be submitted with each invoice. Any invoices without complete pre and post rehabilitation logs and DVDs will not be approved for payment until the required logs are submitted.

- 4.2.1 Should any portion of the inspection DVDs be of inadequate quality or coverage, as determined by the City, the Contractor will have the portion re-inspected and video taped at no additional expense to the City. Should any pre-tape not be acceptable to the City because of the quality of the tape, 10% of the cost of the rehabilitation process will be deducted from the invoice for that line segment. All pre-videos shall be on a separate DVD from the post-video.

- 4.2.2 The televising work shall be arranged and conducted so that it can be performed with the least interference to all vehicular and pedestrian traffic. All detours, signage, street closing shall be performed in accordance with the current revision of the City of Savannah manual on "Traffic Controls and Temporary Street Construction and Maintenance." All detours around construction must be reviewed and approved by the

Traffic Engineer. The contractor shall be responsible for providing traffic signs, policing, advertising, etc.

- 4.2.3 The Contractor shall carry out his operations in strict accordance with all applicable OSHA standards. Particular attention is drawn to those safety requirements involving entering and working in confined spaces and or near overhead power lines.
- 4.3 Television Inspection
  - 4.3.1 Measurement and Payment: Measurement and payment shall be based on the work required as described in this Specification and Contract. Payment will be based on a per linear foot basis as measured from the center of manhole to manhole of the televised sewer.
  - 4.3.2 A per linear foot unit cost for the televising of sewer mains will be established based on the diameter of the main.
  - 4.3.3 The per linear foot unit cost for the televising shall include the expenses for mobilization, waste water bypassing, traffic control, bonding and all other incidental work not included in the Contract Bid Schedule.
  - 4.3.4 The unit cost for televising should not include expenses for sewer main cleaning except for the use of a water jet for camera transport. A separate unit cost for sewer main cleaning will be established in the bid schedule as defined below in this division.
  - 4.3.5 Payment for the work included in this section will be in accordance with the prices set forth in the proposal for the actual quantity of work performed. Monthly progress payments will be made based on the work performed during that period. The Contractor shall submit (as defined within these specifications) the required DVDs, logs and test results along with the invoice for each months completed work.
  - 4.3.6 In an effort to define anticipated mobilization costs for this Contract, the City intends to initially provide a minimum listing of sewer mains to be televised by the Contractor at the initiation of the contract.
  - 4.3.7 The Contractor will be required to work continuously on the initial listing of work sites until each area has been completed. Time is of essence in completing the initial listing of sites. The Contractor will be required to complete all sites within the duration of the Contract.
  - 4.3.8 The Contractor shall furnish all personnel and equipment to perform the required work with satisfactory quality at a rate of progress which will insure completion in an acceptable time frame. If at any time Contractor's personnel appear to the City to be inefficient or are not performing quality work, the City may request from the Contractor to increase the efficiency, change the personnel or equipment, and the Contractor shall conform to the order.

- 4.3.9 Upon the Contractor's completion of the initial listing, it may be necessary for the Contractor to re-mobilize to the City's service area to perform additional work. The vendor will not be required to re-mobilize to the service area more than three times beyond the initial mobilization at the onset of the project.
- 4.3.10 The Contractor shall provide crews as needed to complete work without undue delay, and shall be able to begin work within 21 days from award of contract.
- 4.4 Sewer Cleaning Services:
- 4.4.1 The Contractor will provide suitable equipment and personnel to clean and remove sand, grease, roots and miscellaneous debris from the sewer mains as identified by the owner. As part of this process the Contractor must remove debris materials cleaned from the sections of sewer mains and transported to the dewatering dump pad located on Agonic Road for disposal. Allowing the cleaning debris to migrate into downstream sewer systems will not be allowed.
- 4.4.2 The Contractor must exercise caution while operating equipment during sewer cleaning. If sewer back-up occurs and enters private property due to the Contractor's operation, negligence, the Contractor shall be responsible for mitigation of damages including property damage repair, or replacement of damaged property at the contractor's expense. The Contractor will not receive final payment for work completed as a part of this Contract until claims pertaining to private property damage have been resolved.
- 4.4.3 The sewer cleaning work shall be arranged and conducted so that it can be performed with least interference to all vehicular and pedestrian traffic. All detours, signage, street closing shall be performed in accordance with the current revision of the City of Savannah manual on "Traffic Controls and Temporary Street Construction and Maintenance." All detours around construction must be reviewed and approved by the Traffic Engineer. The contractor shall be responsible for providing traffic signs, policing, advertising, etc.
- 4.4.4 The installer shall carry out operations in strict accordance with all applicable OSHA standards. Particular attention should be paid to those safety requirements involving entering and working in confined spaces and or near overhead power lines.
- 4.4.5 Measurement and Payment: Measurement and payment shall be based on the work required as described in these specifications. Payment for sewer cleaning will be based on a per linear foot basis as measured from the center of manhole to center of manhole of the cleaned sewer.
- 4.4.6 The per linear foot unit cost for the sewer cleaning services shall include all expenses for mobilization, waste water bypassing, traffic control, bonding and all other incidental work not included in the Contract Bid Schedule.

- 4.4.7 The proposed unit cost listed in the Bid Schedule will be based on sewer main and diameter size. For payment purposes, the Contractor and City will evaluate sections of sewer to be cleaned to determine the extent of debris contained in the system prior to the initiation of the cleaning.
- 4.4.8 The following definition of terms will be utilized for the evaluation of pre-existing conditions for payment purposes:
- 4.4.9 Cleaning refers to the removal of sand and/or debris from a section of pipe based on the diameter of pipe (8", 10", 12", 15", 24") described in the bid schedule.
- 4.4.10 Cleaning of sewer lines as part of the overall cleaning process, television process or rehabilitation process shall not include extra charges for heavy cleaning except for lines which are found to have debris in excess of half the diameter of the pipe. This cost will be in lieu of, rather than in addition to, the regular cleaning cost. Lines which meet this criteria must be documented with the City prior to cleaning. This documentation shall be in the form of recent video inspections or on site inspection by the City's Inspector. Extra charges for heavy cleaning, heavy root removal, heavy grease removal or heavy tuberculation, shall be for that section of the pipe involved. For example: (1) Heavy roots found in 2 parts of the pipe; charges will be for that a section of the pipe which ended heavy root removal; (2) a section of pipe with a belly in the line hold dirt; a charge for heavy cleaning for that section of pipe only.
- 4.4.11 Payment for the work included in this section will be in accordance with the prices set forth in the bid proposal for the quantity of work performed. Monthly progress payments will be made based on the work performed during that period.
- 4.4.12 In an effort to define anticipated mobilization costs for this Contract, the City intends to provide an initial minimum listing of sewer mains to be cleaned by the Contractor at the initiation of the contract.
- 4.4.13 The Contractor will be required to work continuously on the initial listing of work sites until each area has been completed. Time is of essence in completing the initial listing of sites. The Contractor will be required to complete all sites within the duration of the Contract.
- 4.4.14 The Contractor shall furnish all personnel and equipment to perform the required work with satisfactory quality at a rate of progress which will insure completion in an acceptable time frame. If at any time Contractor's personnel appear to the City to be inefficient or are not performing quality work, the City may request from the Contractor to increase the efficiency, change the personnel or equipment, and the Contractor shall conform to the order.
- 4.4.15 Upon the Contractor's completion of the initial listing, it may be necessary for the Contractor to re-mobilize to the City's service area to perform additional work. The

vendor will not be required to re-mobilize to the service area more than three times beyond the initial mobilization at the onset of the project.

- 4.4.16 The Contractor shall also be capable of providing crews as needed to complete this work without undue delay, and shall be able to begin work within 21 days from award of contract.
- 5.0 Division II: Sewer Line Reconstruction: The City will consider the following two processes for trenchless sewer lines:
- 5.1 Trenchless Pipe Reconstruction Alternative 1, Sanitary Sewer Mains refers to the installation of a Resin Impregnated, Cured-In-Place Pipe within the existing sewer pipe. This process includes requirements to clean and televise sewer mains; line existing main with resin impregnated tube; internally re-establish existing sewer service and perform television inspection of the completed installation in accordance with contract documents.
- 5.2 Trenchless Pipe Reconstruction Alternative 2, Sanitary Sewer Mains, refers to the pipe bursting and lining process. This process includes requirements to rehabilitate existing sanitary sewers by the pipe bursting method which splits the existing pipe while immediately installing a new polyethylene pipe; reconnect existing sewer service connecting; and perform television inspection of the completed installation in accordance with the Contract documents. Only hydraulically and pneumatically operated equipment will be allowed for this replacement.
- 6.0 Resin Impregnated Cured in Place Pipe -Alternative I:
- 6.1 It is the intent of this specification to provide for the reconstruction of pipelines and conduits by the installation of a resin-impregnated flexible tube which is formed to the original conduit by use of a hydrostatic head. The resin is cured using hot water under hydrostatic pressure or steam within the tube. The Cured-In-Place Pipe (CIPP) will be continuous and tight fitting.
- 6.2 This specification references ASTM F1216 (Rehabilitation of pipelines by the inversion and curing of a resin-impregnated tube), ASTM F1743 (Rehabilitation of pipelines by pulled-in-place installation of a cured-in-place thermosetting resin pipe), Modified ASTM D790 (Test methods for flexural properties of unreinforced plastics) which are made a part hereof by such reference and shall be the latest edition and revision thereof. In case of conflicting requirements between this specification and these referenced documents, this specification will govern.
- 6.3 Since sewer products are intended to have a 50 year design life, and in order to minimize the City's risk, only proven products with substantial successful long term track records will be approved.

- 6.4 Products and Installers seeking approval must meet the following criteria to be deemed Commercially Acceptable by the City of Savannah:
- 6.4.1 For a product to be considered Commercially Acceptable, a minimum of 100,000 linear feet of successful wastewater collection system installations in the U.S. must be documented.
  - 6.4.2 For an Installer to be considered as Commercially Acceptable, the Installer must satisfy all insurance, financial, and bonding requirements of the City, and must have had at least 2 (two) years active experience in the commercial installation of the product bid. In addition, the Installer must have successfully installed at least 50,000 linear feet of the product bid in wastewater collection systems. Also, the Installer must provide technically competent personnel capable of insuring that the intended “structural requirements” of the below specifications are adhered to for each proposed installation. The Installer will provide qualifications of personnel to be involved in the review of the “structural requirements” of each installation, for this project.
  - 6.4.3 In addition, the Installer shall provide the name and qualifications of the Independent Testing Firm which shall perform the materials and installation testing and inspection as required in these specifications. Acceptable documentation of these minimum installations and qualifications must be submitted to the City as part of the bid.
- 6.5 Materials
- 6.5.1 Tube: The sewn Tube shall consist of one or more layers of absorbent non-woven felt fabric and meet the requirements of ASTM F1216 or ASTM F1743, Section 5. The tube shall be constructed to withstand installation pressures, have sufficient strength to bridge missing pipe, and stretch to fit irregular pipe sections.
  - 6.5.2 The wetout Tube shall have a uniform thickness that when compressed at installation pressures will meet or exceed the required thickness.
  - 6.5.3 The Tube shall be sewn to a size that when installed will tightly fit the internal circumference and length of the original pipe. Allowance should be made for circumferential stretching during inversion. Overlapped layers of felt in longitudinal seams that cause lumps in the final product shall not be utilized.
  - 6.5.4 The outside layer of the Tube (before wetout) shall be coated with an impermeable, flexible membrane that will contain the resin and facilitate monitoring of resin saturation during the resin impregnation (wetout) procedure.
  - 6.5.5 The Tube shall be homogeneous across the entire wall thickness containing no intermediate or encapsulated elastomeric layers. No material shall be included in the Tube that may cause delamination in the cured CIPP. No dry or unsaturated layers shall be evident.

- 6.5.6 The wall color of the interior pipe surface of CIPP after installation shall be a light reflective color (i.e., green, beige, or any color approved by the City, while no blue pipe shall be accepted), so that a clear detailed examination with closed circuit television inspection equipment may be made.
- 6.5.7 Seams in the Tube shall be stronger than the unseamed felt.
- 6.5.8 The outside of the Tube shall be marked for distance at regular intervals along its entire length, not to exceed 5 ft. Such markings shall include the Manufacturers name or identifying symbol. The tubes must be manufactured in the USA.
- 6.5.9 Resin: The resin system shall be a corrosion resistant polyester, vinyl ester, or epoxy and catalyst system that when properly cured within the tube composite meets the requirements of ASTM F1216 and ASTM F1743, the physical properties herein, and those which are to be utilized in the Design of the CIPP for this project. The resin shall produce CIPP which will comply with the structural and chemical resistance requirements of this specification.
- 6.5.10 The Contractor shall utilize ASTM F1216, Appendix XI to determine the needed thickness of each installation. As a part of this determination, the Contractor shall assume conditions of no bonding to the original pipe wall and ground water at ground surface.
- 6.5.11 The Contractor must have performed long-term testing for flexural creep of the CIPP pipe material installed by his Company. Such testing results are to be used to determine the long-term, time dependent flexural modulus to be utilized in the product design. This is a performance test of the materials (Tube and Resin) and general workmanship of the installation and curing. A percentage of the instantaneous flexural modulus value (as measured by ASTM D-790 testing) will be used in design calculations for external buckling. The percentage, or the long-term creep retention value utilized, will be verified by this testing. Values in excess of 50% will not be applied unless substantiated by qualified third party test data. The materials utilized for the contracted project shall be of a quality equal to or better than the materials used in the long-term test with respect to the initial flexural modulus used in design.
- 6.5.12 The Enhancement Factor 'K' to be used in 'Partially Deteriorated' Design conditions shall be assigned a value of 7. Application of Enhancement (K) Factors in excess of 7 shall be substantiated through independent test data
- 6.5.13 The layers of the cured CIPP shall be uniformly bonded. It shall not be possible to separate any two layers with a probe or point of a knife blade so that the layers separate cleanly or the probe or knife blade moves freely between the layers. If separation of the layers occur during testing or field samples, new samples will be cut from the work. Any reoccurrence may cause rejection of the work.

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

MINIMUM PHYSICAL PROPERTIES

<u>Property</u>	<u>Cured Composite Test Method</u>	<u>Cured Composite per ASTM F1216</u>	<u>(400k Resin)</u>
Modulus of Elasticity	ASTM D-790(short term)	250,000 psi	400,000 psi
Flexural Stress	ASTM D-790	4,500 psi	4,500 psi

The required structural CIPP wall thickness shall be based as a minimum, on the above listed Minimum Physical Properties in accordance with the Design Equations in the appendix of ASTM F 1216, and the following design parameters:

Design Safety Factor	=2.0%
Retention Factor for Long-Term Flexural Modulus to be used in Design (as determined by Long-Term tests as described in above)	=1% - 60%
Ovality*	= 2%
Enhancement Factor, k	= See Section Above
Groundwater Depth (above invert)*	= At Grade
Soil Depth (above crown)*	= 10 Ft.
Soil Modulus**	= 700 psi
Soil Density**	=120 pcf
Live Load*	= None
Design Condition (partially or fully deteriorated)***	= PD

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

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

\*\*\* Based on review of video logs, conditions of pipeline can be fully or partially deteriorated. (See ASTM F1216 Appendix).

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

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

6.6 Inspection and Testing Requirements



- 6.6.1 Chemical Resistance: The proposed CIPP shall meet the chemical resistance requirements of ASTM F1216, Appendix X2. CIPP samples for testing shall be of tube and resin system similar to that proposed for actual construction. It is required that CIPP samples with and without plastic coating meet these chemical testing requirements.
- 6.6.2 Hydraulic Capacity: Overall, the hydraulic profile shall be maintained as large as possible. The CIPP shall have a minimum of the full flow capacity of the original pipe before rehabilitation. Calculated capacities may be derived using a commonly accepted roughness coefficient for the existing pipe material taking into consideration its age and condition.
- 6.6.3 CIPP Field Samples: The Contractor shall submit test results from field installations in the USA of the same resin system and tube materials as proposed for the actual installation. These tests results may verify that the CIPP physical properties specified in ASTM F1216 and ASTM F1743 have been achieved in previous field applications. Samples for this project shall be made and tested as described below for each inversion. The contractor shall cut at least a 12" sample of the cured liner and provide it to a City of Savannah representative at the time of the lining process. The sample shall be sent to the laboratory contracted to test the sample. The City of Savannah will package the sample and ship it to the laboratory. The cost to ship these samples will be deducted from the contractor's invoice.
- 6.6.4 CIPP samples shall be prepared and physical properties tested in accordance with ASTM F1216 or ASTM F1743, Section 8, using either method proposed. The flexural properties must meet or exceed the values listed in Table 1 of the applicable ASTM.
- 6.6.5 Wall thickness of samples shall be determined as described in paragraph 8.16 of ASTM F1743. The minimum wall thickness at any point shall not be less than 87½% of the required thickness as calculated in utilizing the design parameters listed under ASTM F1216.
  - 6.6.5.1 The City will review laboratory test as a part of the review for payment. If any laboratory test is submitted and does not meet the minimum requirement as set forth in sections 6.5.014 and 6.6.5 the following will apply: If any one parameter is within 10% of the minimum requirements, that line segment will be accepted at a 10% reduction charge for that line segment. If any two parameters do not meet the minimum requirements, the whole line segment is unacceptable and suitable replacement rehabilitation of the line segment shall be completed with the approval of the City of Savannah.
- 6.6.6 Visual inspection of the CIPP shall be in accordance with ASTM F1743, Section 8.6
- 6.7 Installation
  - 6.7.1 It shall be the responsibility of the City to locate and designate all manhole access points open and accessible for the work, and provide rights of access to these points. If a street must be closed to traffic because of the orientation of the sewer, the Contractor shall

institute the actions necessary to do this for the mutually agreed time period. The City shall also provide access to water hydrants for cleaning, inversion and other work items requiring water. However, the Contractor will be required to obtain back-flow device and a usage meter from the City of Savannah Water Department, (telephone number 912-651-6584).

- 6.7.2 **Cleaning of Sewer Lines:** The Contractor shall remove all internal debris out of the sewer line that will interfere with the installation of CIPP. Allowing the cleaning debris to migrate into downstream sewer systems without removal will not be permitted. For all debris removed from the sewers during the cleaning operation, the City will provide a dump site at the Agonic Road facility.
- 6.7.3 The Contractor must exercise caution while operating equipment during sewer cleaning. If sewer back-up occurs and enters private property due to the Contractor's operation or negligence, the Contractor shall be responsible for mitigation of damages including property damage repair, or replacement of damaged property at the contractor's expense. The Contractor will not receive final payment for work completed as a part of this Contract until claims pertaining to private property damage have been resolved.
- 6.7.4 **Bypassing Sewage:** The Contractor, when required, shall provide for the flow of sewage around the section or sections of pipe designated for repair. The bypass shall be made by plugging the line at an existing upstream manhole and pumping the flow into a downstream manhole or adjacent system. The pump and bypass lines shall be of adequate capacity and size to handle the wet-weather flow. The Contractor shall also provide adequate back-up in the case of emergencies, and shall continuously monitor bypass operations. The City will require a detail plan of the bypass equipment and procedure to be submitted. The Contractor will be responsible for damage and expenses resulting from the failure of maintaining the existing flow.
- 6.7.5 **Inspection of Pipelines:** Inspection of pipelines shall be performed by experienced personnel trained in locating breaks, obstacles and service connections by close circuit television. The condition and defects of each line segment will be evaluated in order to route each segment to NASSCO PACP guidelines. The interior of the pipeline shall be carefully inspected to determine the location of any conditions which may prevent proper installation of CIPP into the pipelines, and it shall be noted so that these conditions can be corrected. A video tape and suitable log shall be kept for later reference by the City.
- 6.7.6 **Line Obstructions:** It shall be the responsibility of the Contractor to clear the line of obstructions such as solids and roots that will prevent the insertion of CIPP. If pre-installation inspection reveals an obstruction such as a protruding service connection, dropped joint, or a collapse that will prevent the inversion process, and cannot be removed by conventional sewer cleaning equipment, the City shall make a point repair excavation to uncover and remove or repair the obstruction.
- 6.7.7 The work necessary for the installation of the CIPP shall be arranged and conducted so that it can be performed with the least interference to all vehicular and pedestrian traffic.

All detours, signage, street closing shall be performed in accordance with the current revision of the City of Savannah manual on “Traffic Controls and Temporary Street Construction and Maintenance.” All detours around construction must be reviewed and approved by the Traffic Engineer. The Contractor shall be responsible for providing traffic signs, policing, advertising, etc.

- 6.7.8 The Installer shall carry out his operations in strict accordance with all applicable OSHA standards. Particular attention should be paid to those safety requirements involving entering and working in confined spaces and overhead power lines.
- 6.7.9 The Contractor shall be responsible for confirming the locations of all branch service connections prior to installing and curing the CIPP.
- 6.7.10 CIPP installation shall be in accordance with ASTM F1216, Section 7, or ASTM F1743, Section 6, with the following modifications:
- 6.7.11 Resin Impregnation: The quantity of resin used for tube impregnation shall be sufficient to fill the volume of air voids in the tube with additional allowances for polymerization shrinkage and the loss of resin through cracks and irregularities in the original pipe wall. A vacuum impregnation process shall be used. To insure thorough resin saturation throughout the length of the felt tube, the point of vacuum shall be no further than 25 feet from the point of initial resin introduction.
- 6.7.12 After a vacuum in the tube is established, a vacuum point shall be no further than 75 feet from the leading edge of the resin. The leading edge of the resin slug shall be as near to perpendicular as possible. A roller system shall be used to uniformly distribute the resin throughout the tube. If the Installer uses an alternate method of resin impregnation, the method must produce the same results. Any alternate resin impregnation method must be proven.
- 6.7.13 Tube Insertion: The wetout tube shall be positioned in the pipeline using either inversion or a pull-in method. If pulled into place, a power winch should be utilized and care should be exercised not to damage the tube as a result of pull-in friction. The tube should be pulled-in or inverted through an existing manhole or approved access point and fully extend to the next designated manhole or termination point.
- 6.7.14 Temperature gauges shall be placed inside the tube at the invert level of each end to monitor the temperatures during the cure cycle.
- 6.7.15 Curing shall be accomplished by utilizing hot water under hydrostatic pressure or steam in accordance with the manufacturer’s recommended cure schedule.
- 6.8 Reinstatement of Branch Connections
  - 6.8.1 It is the intent of these specifications that branch connections to buildings be reopened without excavation, utilizing a remote controlled cutting device, monitored by a video TV

camera. The Contractor shall certify that he has a minimum of 2 complete working cutters plus spare key components on the site before each inversion. Unless otherwise directed by the City or its authorized representative, all laterals will be reinstated. No additional payment will be made for excavations for the purpose of reopening connections, and the Contractor will be responsible for all costs and liability associated with such excavation and restoration work.

- 6.8.2 Lateral openings shall be brushed smooth and have no jagged edges. These openings shall conform to the original shape of the opening. Any excess holes in the liner caused by mis-drilling will be repaired by the Contractor at his expense. The method to complete these repairs will be pre-approved by the City. All lateral openings shall not have residual resin left by the CIPP process nor shall the opening be larger than 25% of the original opening (e.g. if the lateral is 4" in diameter, the final opening shall not exceed 5"). If the lateral exceeds this requirement, the contractor shall repair the lateral to its pre-rehabilitation diameter at the contractor's expense.
- 6.8.3 Construction schedules will be submitted and approved by the City. At no time will any service connection remain inoperative for more than an eight hour period. Any service that will be inoperative for more than eight hours will be temporarily connected to a bypass system. The installer shall notify residents of inoperative service connection and shall be responsible for any damages incurred as a result of said inoperative connection. The Contractor shall notify individual property Owners at least 48 hours in advance, and provide the time frame of the service connection interruption.
- 6.8.4 Public Notification: The Contractor shall make every effort to maintain service usage throughout the duration of the project. In the event that a service will be out of service, the maximum amount of time of no service shall be 8 hours for any property served by the sewer. A public notification program shall be implemented, and shall as a minimum, require the Contractor to be responsible for contacting each home or business connected to the sanitary sewer and informing them of the work to be conducted, and when the sewer will be off-line. The Contractor shall also provide the following:
- A. Written notice to be delivered to each home or business two days prior to the beginning of work being conducted on a section of sewer. The notice will provide a local telephone number and name of the Contractor so residents can call to discuss the project or any problems which could arise.
  - B. Personal contact will be made with any home or business that cannot be reconnected within the time stated in the written notice.
  - C. The Contractor shall be responsible for confirming the locations of all branch service connections prior to installing and curing the CIPP.
  - D. Clean-outs: The contractor shall install, per City of Savannah specifications, a clean-out on the resident or business owner's lateral. This clean-out shall be necessary in order to monitor or bypass, if necessary, the owner's sewer water during the rehabilitation

process. This clean-out shall become a permanent part of the sewer lateral upon completion of the rehabilitation process. Concurrence with the City on which clean-outs need to be installed will be on a case-by-case basis.

- 6.8.5 If sewer back-up occurs and enters private property due to the Contractor's operation or negligence, the Contractor shall be responsible for property damage repair or damage replacement expenses. The Contractor will not receive final payment for work completed as a part of this Contract until claims pertaining to private property damage have been resolved. If the contractor uses the City's sewer cleaning vendor or a private plumber for damages or services on private property, the invoice for this service will be paid immediately upon presentation by the contractor. If sub-contracted vendor invoices have not been paid when the contractor invoices the City for the correlating line segment, the City will withhold funding from the contractor's invoice and include a 15% surcharge to compensate the outside vendor costs which were performed at the request of the contractor as a part of the assigned work.
- 6.8.6 All work shall be scheduled and started in a timely manner so that all personnel and equipment shall leave the work site no later than 9:00pm. Exceptions to this rule will be work conducted in non-residential areas and shall be approved by the City on a case-by-case basis.
- 6.9 Measurement and Payment - Alternative I
  - 6.9.1 Measurement and payment shall be based on the work required as described in this specification and Contract. Payment of CIPP will be made on a per linear foot basis as measured from the center of manhole to center of manhole of the rehabilitated sewer.
  - 6.9.2 A per linear foot unit cost for the CIPP liner at a minimum wall thickness for each sewer main diameter to be rehabilitated will be established. In addition, a per linear foot price to increase the minimum wall thickness for the CIPP liner if pipe conditions or site conditions warrant for each sewer main diameter will be established. The City shall approve all provisions to increase the specified minimum wall thickness.
  - 6.9.3 The per linear foot unit cost for the installation of the CIPP liner shall include all expenses for mobilization, waste water bypassing, traffic control, required excavation and restoration, sewer main cleaning, installation inspection, pre and post televising inspections, required testing, bonding and all other incidental work not included in the Contract Bid Schedule.
  - 6.9.4 Unit costs for service lateral reconnections necessary as a part of the CIPP installation will be established in the Contract Bid Schedule.
  - 6.9.5 It is possible during the performance of the work that a section of sewer requires a Point Repair prior to the installation of the CIPP liner. In this event, the City will have the deficient section of sewer main repaired in order for the CIPP liner to be installed. If additional cleaning and/or televising is necessary after the completion of the Point Repair

prior to the installation of the CIPP liner, the City will have the option of providing the additional cleaning and televising or requiring the Contractor to perform the additional cleaning and televising at the rates established under Section I: Inspection and Evaluation Services in the Bid Schedule.

- 6.9.6 Payment for the work included in this section will be in accordance with the prices set forth in the proposal for the quantity of work performed. Progress payments will be made monthly based on the work performed during that period. The vendor shall submit the required pre- and post- construction DVDs and logs, and laboratory tests results with the invoice for each section of CIPP liner installed. Any line segment on an individual invoice which does not have the required laboratory test results attached to the invoice, will be deducted from that invoice. Contractor must resubmit request for payment for that line segment on a later invoice when the test results are submitted.
- 6.10 In an effort to define anticipated mobilization costs for this Contract, the Owner intends to initially provide a minimum listing of sewer mains to be lined by the Contractor at the initiation of the project.
- 6.11 The Contractor will be required to work continuously on the initial listing of work sites. The Contractor will be required to complete all sites within the duration of the Contract.
- 6.12 The Contractor shall furnish all personnel and equipment to perform the required work with satisfactory quality at a rate of progress which will insure completion in an acceptable time frame. If at any time Contractor's personnel appear to the City to be inefficient or are not performing quality work, the City may request from the Contractor to increase the efficiency, change the personnel or equipment, and the Contractor shall conform to the order.
- 6.13 Site maps of the anticipated sewer mains to be included as a part of the Contract will be distributed at the pre-din meeting. However, it should be understood that this package of anticipated sewer mains will not be inclusive of all work to be performed during the duration of the Contract. The City reserves the right to include additional areas of work if problematic operational conditions warrant. All invoices shall include a site map with the line segment highlighted and identified. If any invoices are received by the city with no maps included, the invoice will not be processed until referenced maps are submitted.
- 6.14 Upon the Contractor's completion of the initial listing, it may be necessary for the Contractor to re-mobilize to the City's service area to perform additional work. The vendor will not be required to re-mobilize to the service area more than three times beyond the initial mobilization at the onset of the project.
- 6.15 The Contractor shall also be capable of providing crews as needed to complete this work without undue delay, and shall be able to begin work within 21 days from award of the contract.
- 7.0 Pipe Bursting-Lining: Alternative 2

7.1 Intent:

- 7.1.1 It is the intent of this specification to provide for the reconstruction of Sanitary Sewer by pipe bursting of the existing pipe and installation of new high density polyethylene pipe in the place of the existing pipe.
- 7.1.2 Since sewer products and installation are intended to have a 50 year design life, and in order to minimize the City's risk, only proven methods and experienced installers with successful long-term track records will be approved.
- 7.1.3 Methods and Installers seeking approval must meet the following criteria to be deemed commercially acceptable. Documentation pertaining to the vendor's adherence to these criteria shall be submitted with the bid.
- 7.1.4 The approved method for rehabilitation of existing sanitary sewers by pipe bursting and installation of new high density polyethylene is "Grundocrack Pipe Replacement System", by T. T. Technologies, Inc. or equal.
- 7.1.5 For an Installer to be considered as Commercially Acceptable, the Installer must satisfy all insurance, financial, and bonding requirements of the Owner, and must have had at least 2 (two) years active experience in the commercial installation of the method bid. In addition, the Installer must have successfully installed at least 5,000 linear feet of the method bid in wastewater collection systems. Also, the Installer must provide qualified technically competent personnel which will perform the work.
- 7.1.6 Personnel performing the polyethylene pipe jointing shall be trained in the use of thermal butt-fusion equipment and recommended methods for new pipe connections. Personnel directly involved with installing the new pipe shall have had training in the proper methods for handling and installing the polyethylene pipe. Training shall be performed by qualified representative.
- 7.1.7 The Contractor's personnel shall be certified by the particular Pipe Bursting System Manufacturer that such firm is a licensed Installer of their system.

7.2 Materials:

- 7.2.1 Polyethylene Plastic Pipe shall be high density polyethylene pipe and meet the applicable requirements of ASTM F714, Polyethylene (PE) Plastic Pipe (SDR-PR) Based on Outside Diameter, ASTM D1248, ASTM D3550.
- 7.2.2 Sizes of the insertions to be used shall be such to renew the sewer to its original or greater than flow capacity.
- 7.2.3 All pipe shall be made of virgin material. No rework except that obtained from the manufacturer's own production of the same formulation shall be used.

7.2.4 The pipe shall be homogenous throughout and shall be free of visible cracks, holes, foreign material, blisters, or other deleterious faults.

7.2.5 Dimension Ratios: The minimum wall thickness of the polyethylene pipe shall meet the following:

Depth of Cover

(Feet)	Minimum SDR of Pipe
0-16.0	17
> 16.1	11

7.2.6 Material color shall be white or green unless otherwise authorized by the City.

7.2.7 Certification of material compliance in accordance with the applicable ASTM Specification will be provided at the owner’s request.

7.2.8 Sewer service connections shall be connected to the new pipe by using “Inserta Tee’s” as manufactured by Fowler Manufacturing Company in Hillsboro, Oregon or equivalent.

7.3 Pipe Joining:

7.3.1 The polyethylene pipe shall be assembled and joined at the site using the thermal butt-fusion method to provide a leak proof joint. Threaded or solvent-cement joints and connections are not permitted. All equipment and procedures used shall be used in strict compliance with the manufacturer’s recommendations. Fusing shall be accomplished by personnel certified as fusion technicians by a manufacturer of polyethylene pipe and/or fusing equipment.

7.3.2 The butt-fused joint shall have true alignment and shall have uniform roll-back beads resulting from the use of proper temperature and pressure.

The joint shall be allowed adequate cooling time before removal of pressure. The fused joint shall be watertight and shall have tensile strength equal to that of the pipe. All joints shall be subject to acceptance by City prior to insertion. All defective joints shall be cut out and replaced at no cost to the City. Any section of the pipe with gash, blister, abrasion, nick, scar, or other deleterious fault greater in depth than ten percent (10%) of the wall thickness, shall not be used and must be removed from the site. However, a defective area of the pipe may be cut out and the joint fused in accordance with the procedures stated above. In addition, any section of pipe having other defects such as concentrated ridges, discoloration, excessive spot roughness, pitting, variable wall thickness or any other defect of manufacturing or handling as determined by the City shall be discarded and not used.



- 7.3.3 Terminal sections of pipe that are joined within the insertion pit shall be connected with full circle pipe repair clamp. The butt gap between pipe ends shall not exceed one-half (½) inch.
- 7.4 Installation
- 7.4.1 It shall be the responsibility of the City to locate and designate all manhole access points open and accessible for the work, and provide rights of access to these points. If a street must be closed to traffic because of the orientation of the sewer, the Contractor shall institute the actions necessary to do this for the mutually agreed time period.
- 7.4.2 The work necessary for the pipe bursting-lining shall be arranged and conducted so that it can be performed with least interference to all vehicular and pedestrian traffic. All detours, signage and street closings shall be performed In accordance with the current revision of the City of Savannah manual on “Traffic Controls and Temporary Street Construction and Maintenance.” All detours around construction must be reviewed and approved by the Traffic Engineer. The Contractor shall be responsible for providing traffic signs, policing, advertising, etc.
- 7.4.3 Cleaning of Sewer Lines: The Contractor shall remove all internal debris out of the sewer line that will interfere with pipe bursting-lines. The procedure of allowing cleaning debris to mitigate into the downstream sewer systems without removal will not be allowed. For all debris removed from the sewers during the cleaning operation the City will provide a dump site located at the Agonic Road facility. Any hazardous waste material encountered during this project will be considered as a changed condition.
- 7.4.4 The Contractor must exercise caution while operating equipment to perform the sewer cleaning. If sewer back-up occurs and enters private property due to the Contractor’s operation or negligence, the Contractor shall be responsible for property damage repair or damages replacement expense. The Contractor will not receive final payment for work completed as a part of this Contract until claims pertaining to private property damage have been resolved.
- 7.4.5 Bypassing Sewage: The Contractor, when required, shall provide for the flow of sewage around the section or sections of pipe designated for repair. The bypass shall be made by plugging the line at an existing upstream manhole and pumping the flow into a downstream manhole or adjacent system. The pump and bypass lines shall be of adequate capacity and size to handle the wet-weather flow. The Contractor shall also provide adequate back-up in the case of emergencies. The Contractor shall continuously monitor bypass operations. The City will require a detail plan of the bypass equipment and procedure to be submitted. The Contractor will be responsible for damages and expenses resulting in the failure of maintaining the existing flow.
- 7.4.6 Inspection of Pipelines: Inspection of pipelines shall be performed by experienced personnel trained in locating breaks, obstacles and service connections by closed circuit television. The condition and defects in each line segment will be evaluated in order to

rate each section according to NASSCO PACP guidelines. The interior of the pipeline shall be carefully inspected to determine the location of any conditions which may prevent proper installation of the slipliner into the pipelines, and it shall be noted so that these conditions can be corrected. A video and suitable log shall be kept for later reference by the City, and provided with the Contractor's request for payment for each section completed.

- 7.4.7 Line Obstructions: It shall be the responsibility of the Contractor to clear the line of obstructions such as solids and roots that will prevent the insertion of the slipliner. If pre-installation inspection reveals an obstruction such as a protruding service connection, dropped joint, or a collapse that will prevent the sliplining process which cannot be removed by conventional sewer cleaning equipment, the Contractor shall notify the City who will make a point repair excavation to uncover and remove or repair the obstruction.
- 7.4.8 The Contractor shall carry out his operations in strict accordance with all applicable OSHA standards. Particular attention should be paid to those safety requirements involving entering and working in confined spaces and overhead power lines.
- 7.4.9 Insertion or launching pits shall only be allowed at locations of existing or proposed manholes, unless otherwise approved by the City to minimize impact of existing trees.
- 7.4.10 Equipment used to perform the work shall be located away from buildings so as to minimize any noise impact. The Contractor shall provide silencers or other devices to reduce machine noise as required to meet public relationship requirements.
- 7.4.11 The Contractor shall install all pulleys, rollers, bumpers, alignment control devices and other equipment required to protect existing manholes, and to protect the pipe from damage during installation. Lubrication may be used as recommended by the manufacturer. Under no circumstances will the pipe be stressed beyond its elastic limit.
- 7.4.12 The installed pipe shall be allowed cooling relaxation due to tensile stressing prior to any reconnection of service lines, sealing of the manhole connection or backfilling of the insertion pit for the manufacturer's recommended amount of time, but not less than four (4) hours. Sufficient excess length of new pipe, but not less than (4) inches, shall be allowed to protrude into the manhole.
- 7.4.13 Following the relaxation period, the manhole connection shall be sealed. Sealing shall be made with material approved by the City and/or his representative and shall extend a minimum of eight (8) inches into the manhole wall in such a manner as to form a smooth uniform watertight joint.
- 7.5 Field Testing:
  - 7.5.1 After the existing line is completely replaced, the work will be internally inspected with television camera and recorded on DVDs. The finished tape shall be continuous over the entire length of the sewer between two manholes and to be free from visual defects.

- 7.5.2 Defects which may affect the integrity or strength of the pipe in the opinion of the City shall be repaired or the pipe replaced at the Contractor's expense.
- 7.5.3 The completed DVD will be provided by the contractor along with the request for payment of a completed section.
- 7.6 Reinstatement of Branch Connections:
- 7.6.1 It is the intent of these specifications that service connections to buildings be established by open excavation. Prior to Pipe Bursting-lining of a section of sewer, all service connections will be located and excavated before pipe insertion to expedite reconnection. Upon commencement, pipe insertion shall be continuous and without interruption from one manhole to another, except as approved by the City. Upon completion of insertion of the new pipe, the Contractor shall expedite the reconnection of services.
- 7.6.2 Construction schedules will be submitted and approved by the City. At no time will any service connection remain inoperative for more than an eight hour period. Any service that will be inoperative for more than eight hours will be temporarily connected to a bypass system. The installer shall notify residents of inoperative service connection and shall be responsible for any damages incurred as a result of said inoperative connection. The Contractor shall notify individual property owners at least 48 hours in advance, and provide the time frame of the service connection interruption.
- 7.6.3 Public Notification: The Contractor shall make every effort to maintain service usage throughout the duration of the project. In the event that a sewer will be out of service, the maximum amount of time of no service shall be 8 hours for any property served by the sewer. A public notification program shall be implemented, and shall as a minimum, require the Contractor to be responsible for contacting each home or business connected to the sanitary sewer and informing them of the work to be conducted, and when the sewer will be off-line. The Contractor shall also provide the following:
- A. Written notice delivered to each home or business two days prior to the beginning of work being conducted on a section of sewer. The notice will provide a local telephone number and name of the Contractor so residents can call to discuss the project or any problems which could arise.
  - B. Personal contact will be made with any home or business which cannot be reconnected within the time stated in the written notice.
  - C. The contractor shall be responsible for confirming the locations of all branch service connections prior to the installation.
- 7.6.4 If sewer back-up occurs and enters private property due to the Contractor's operation, negligence, or failure to provide the above listed requirements, the Contractor shall be responsible for property damage repair or damage replacement expenses. The Contractor

will not receive final payment for work completed as a part of this Contract until claims pertaining to private property damage have been resolved.

7.7 Measurement and Payment:

- 7.7.1 Measurement and payment shall be based on the work required as described in this specification and Contract. Payment of Pipe Bursting-lining will be made on a per linear foot basis as measured from the center of manhole to manhole of the rehabilitated sewer.
- 7.7.2 A per linear foot unit cost for Pipe Bursting-lining for each sewer main diameter to be rehabilitated will be established. In addition, a per linear foot price for Pipe Bursting-lining of each sewer main diameter to be rehabilitated less than 16.0 feet in-depth and greater than 16.0 feet in-depth will be established. Also, unit costs for insertion pits for Pipe Bursting-lining access will be established for installation less than 16.0 feet in-depth and greater than 16.0 feet in depth.
- 7.7.3 The bid schedule will contain unit prices for service lateral reconnections necessary for Pipe Bursting-lining for installations less than 16.0 feet in-depth and greater than 16.0 feet in-depth.
- 7.7.4 It is the City's intent to establish an annual contract for the performance of Pipe Bursting-lining. This Pipe Bursting-lining will be implemented in applications where the deteriorated conditions or flow capacity concerns of the sewer prevent the practice application of Alternate #1, Cured in Place Pipe.
- 7.7.5 Estimated quantities for the Pipe Bursting-lining have been developed utilizing past years applications. Due to the "as needed" basis of this application, the owner will establish a unit cost for the "mobilization" to perform Pipe Bursting-lining. Payment for mobilization shall be based on preparatory work and operations to include, but not be limited to, those costs necessary for the movement of personnel, equipment, supplies, and bonding expenses. The application of the mobilization unit cost can be submitted by the Contractor for each work assignment which requires the Contractor to travel to the owner's service area (Chatham County, Georgia). Work assignments, as a minimum, will include the location and volume of the work to be performed. The Contractor is to notify the owner of the completion of each assignment. Work for each assignment will be inspected for acceptance prior to the Contractor's forces departing the owner's service area. The owner reserves the right to modify the scope of a work assignment while it is in progress. The owner will not pay for mobilization expenses for the Contractor to return to the service area to repair or correct defective work. If the vendor elects to remove his personnel and/or equipment from the service area while work is in progress on a work assignment, the mobilization unit cost provision in for the Pipe Bursting-lining alternative will not apply.
- 7.7.6 The unit cost described above and listed under Section 2: Alternative 2, Pipe Bursting-lining, shall include expenses for the Contractor's performance of all other incidental work necessary to perform Pipe Bursting as described in these specifications. These

expenses shall include but not be limited to costs for excavation and restoration for insertion pits and lateral reconnections, pre and post televising inspections, traffic control, waste water by-passing, insurance, labor, travel and other required activities.

## 8.0 General Specifications

### 8.1 The bid response must include the following documents in this order

- Bid Proposal Form ( as a cover sheet)
- Exception Sheet
- Non-Discrimination Statement
- Proposed Schedule of MWBE Participation
- Other requested submittals as stated

All referenced documents must be completed and returned in their entirety to constitute a complete bid.

### 8.2 All bids must be submitted in DUPLICATE.

### 8.3 Vendor is responsible for determining and acknowledging any addenda issued in connection with the bid solicitation.

### 8.4 All bids must be submitted electronically through the City of Savannah's supplier portal. Requested documentation may be attached to the bidder's response. A supplier guide for assistance in submitting responses can be found by clicking on the Important Documents tab of the Purchasing SavEPro webpage at:

<http://www.savannahga.gov/cityweb/purchasingweb.nsf>

### 8.5 To submit and be awarded a bid, bidders must be registered as a bidder on the City of Savannah's website at [www.savannahga.gov](http://www.savannahga.gov).

### 8.6 Bonding:

As this bid requires bid and payment/performance bonds, all original bonds must be submitted manually in sealed opaque envelope, plainly marked with the bid number and equipment, supply and/or service description listed above and mailed or delivered as follows in sufficient time to ensure receipt by the Purchasing Director on or before 1:30 P.M. on the date specified as the closing date in the event posting.

(a) US Postal Service Standard Mail Mailing Address: Purchasing Director, Post Office Box 1027, Savannah, Georgia 31402. It is the bidder's responsibility to insure that the bid is delivered to the Purchasing Office prior to the deadline for bids. It is not enough for the bid to be delivered to the Post Office Box. While the City generally collects mail from the post office box once daily, a bidder submitting to the PO Box does so at their own risk.



(b) Hand or Overnight/Express Delivery Address: Purchasing Director, 3rd Floor, City Hall, 2 E. Bay Street, Savannah, GA 31401.

A scanned copy of the bond may be attached to the electronic submission.

Bonds required are as follows:

(A) Each bidder shall post a bid bond, certified check or money order made payable to the City in the amount of 5% of the bid price. A company check is not acceptable. No bids shall be read or considered without a proper form of security. This bond may be attached to the electronic submission for this bid but an original, signed and notarized bond must be delivered to the Purchasing Office

(B) No bond, certified check, or U.S. Money Order is required.

(C) Bidder shall post a payment / performance bond, certified check or money order payable to the City in the amount of 100% of the bid price if awarded the purchase. Such bond(s) are due prior to contract execution as a guarantee that goods meet requirements of the contract including timely delivery, performance specifications and warranty requirements. Such bonds will also guarantee quality performance of services and timely payment of invoices to any subcontractors.

(D) Bidder shall post a performance bond, certified check or money order in the amount of % of the bid price if awarded the purchase. Such bond(s) are due prior to contract execution as a guarantee of timely delivery and that equipment, materials and /or goods are delivered according to specifications.

Whenever a bond is provided, it shall be executed by a surety authorized to do business in the State of Georgia, approved by the City, and must be executed on the attached forms. At the discretion of the City, other forms of security may be considered in lieu of a performance bond.

8.7 Warranty: All work performed under this Contract shall be warranted to be free from defects in material and workmanship for a period of five years from the date of acceptance. If the City determines that the process has failed during the warranty period, the Contractor will perform any and all repairs at no additional cost to the Owner.

8.8 Original invoices should be sent to:

City of Savannah  
Accounts Payable  
P.O. Box 1027  
Savannah, GA 31402  
Duplicate invoices should be sent to:

City of Savannah

Sewer Maintenance  
230 Agonic Rd  
Savannah, GA 31406

- 8.9 This contract may be renewed for two additional (12) month terms if all terms and conditions remain unchanged and if all parties so agree.
- 8.10 The City reserves the right to award this contract in whole or in part, by section and or by alternative but the City prefers a single contractor. It is anticipated that this contract may be awarded to more than one contractor and that determination of the best method for rehabilitation shall be made on a case by case basis. Also, a primary and secondary vendor may be awarded if deemed desirable.
- 8.11 The bid prices submitted in Section I for Inspection and Cleaning will be used for two purposes. First, the City intends to make a separate award for inspection and cleaning apart from the award for sewer line reconstruction. This award could be made to a different bidder than the successful bidder for the reconstruction work and therefore the bid prices submitted shall be "stand alone" prices and shall include all mobilization, overhead and other costs as described in the bid specifications. Secondly, while bid prices for the reconstruction work shall include inspection and cleaning as described in the specifications, situations may arise that require a separate billing for this work i.e. after inspection of a particular line, it is determined that the line is too deteriorated for the CIP process and reconstruction is changed to a different process. To determine proper billing rates for these situations, the prices submitted in Section I will be used.

If a bidder does not want to be considered for a stand alone award for Section I, they may so state as part of their bid submittal. All bidders, however, must submit pricing for Section I to be considered for any reconstruction award.

- 8.12 Restoration of Sites for Pipe Bursting: The Contractor will be responsible for compaction of lateral and entry pit sites to pre-construction conditions. The City, at its option, will provide compaction tests at no cost to the contractor; however, if the compaction test fails, the contractor will be responsible for re-compaction and additional compaction test costs. Suitable fill materials will be provided by the City if necessary. The city will provide final pavement if necessary. For non-paved sites, restoration will include grass sod.
- 9.0 Drug Screening:
- 9.1 Drug Screening Requirements: The Contractor shall not assign or refer any individual, (whether as a contract employee, independent contractor, or in any other capacity), to perform services in any public right of way or at any facility or property owned by the City of Savannah without that individual having completed drug screening in conformance with the Drug Free Workplace Act of 1988. The Contractor shall be responsible to ensure that each such drug screening is conducted in accordance with all

applicable laws, including the Drug Free Workplace Act of 1988. Drug screening shall be accomplished by the Contractor at no additional cost to the City of Savannah.

- 9.2 Time of Certification: A Drug Free Workplace Certification shall be submitted to the City of Savannah Risk Management Department and the City of Savannah Purchasing Department prior to the Contractor receiving final award of this contract. All drug screens shall be conducted professionally and in a manner designed to produce accurate and complete results. The Contractor shall certify in writing whether or not the employees he/she submits are eligible for task assignment to City of Savannah worksites, property and facilities. A contract employee's privilege to work at any City of Savannah property being granted is contingent upon an eligible certification from the Contractor.
- 9.3 Time of Drug Screening: The Drug screening shall have been completed not more than thirty (30) business days prior to the date that the Contractor submits the certification to the City of Savannah and is good for one (1) calendar year after this date. This certification shall be resubmitted upon any renewal(s) of the contract. The Contractor must also certify the existence of a random drug screening program for all employees engaged on City worksites. Additionally, the City of Savannah reserves the right to require the Contractor to drug screen any of his employees engaged on City of Savannah worksites at any time during the term of the contract when reasonable suspicion exists that an employee may be under the influence of drugs or alcohol. Drug screening shall be mandatory when the Contractor's employees are involved in accidents in which City property is damaged or injuries occur to any person on City of Savannah worksites. All contract employees involved in such accidents shall be immediately drug screened. Failure to comply with these requirements may result in the immediate termination of the remaining portion of the contract and or disbarment of the Contractor from participation in future contracts at the sole discretion of the City of Savannah.
- 9.4 Components of Drug Screening Requirements: The Contractor shall insure professional sample collection in an unobserved, controlled environment. See attachment 1 for drug screening requirements. The levels of each screened drug are listed in Attachment 1. Samples that return test results in higher amounts than those shown for the listed drugs are considered positive. Contract employees that test positive will not be considered eligible for work at City of Savannah worksites, properties or facilities for the remainder of the contract term.
- 9.5 Form of Certification : To satisfy the requirements of this Section, the Contractor's certification shall be made by a duly authorized representative and agent of the Contractor; shall be substantially in the form of the sample certification attached as Appendix A; and shall be provided on the Contractor's letterhead.
- 9.6 Positive Results: In the event that the drug screen of the Contractor's employee indicates positive results, the Contractor shall promptly notify the City of Savannah Risk Management Department of the employee's ineligibility to work on City of Savannah worksites. The City of Savannah does not consider the Contractor's employees or agents that test positive for illegal drugs or alcohol to be eligible for task assignment on City of



Savannah work sites. Contract employees who test positive shall not be allowed to work on City of Savannah worksites for the remainder of the contract term or a minimum of (6) six months. A second positive test for any contract employee on subsequent contracts shall result in permanent revocation of contract work privileges on City of Savannah property.

9.7 Records: For each employee or agent for whom the Contractor provides a Certification, the Contractor shall retain all reports, records, and documents the Contractor obtained or created as part of his effort to comply with this Section, (supporting records), for a period of one year from the date of the Certification. Upon request by the City of Savannah Risk Management Department, the Contractor shall make all such supporting records, whether in computerized format or otherwise, available for review by the City of Savannah for audit purposes, within five (5) business days of such request.

10.0 Insurance Requirements:

10.1 The successful vendor must show proof of general liability insurance and a standard worker's compensation policy at the time of award of contract. The amount of liability insurance required under this contract is \$500,000. If any authorized subcontractor is used, the primary vendor must show the subcontractor as additionally insured.

10.2 The contractor shall purchase and maintain insurance in the amounts and types shown below for the protection from claims caused by the contractor's personnel or work, or by any subcontractor performing work for the contractor. Insurance shall not be for amounts less than those required by law.

10.3 Worker's Compensation: The contractor shall require each subcontractor to supply a certificate showing issuance of workmen's compensation coverage.

10.4 Comprehensive General Liability - Coverage shall be written on an occurrence basis. City of Savannah to be additional insured on General and Pollution Liability. Coverage shall provide against the following risks:

- a. Board Form Property Damage
- b. Independent Contractors
- c. XCU Hazards (explosion, collapse, and underground damage)
- d. Contractual Liability (arising from indemnity agreement in contract)
- e. Completed Operations
- f. Premises & Operations
- g. Pollution - \$ 500,000 Per Occurrence, \$1,000,000 Aggregate

Comprehensive General Liability coverage shall be combined single limit for bodily injury and property damage and shall be written for the following limits:

\$500,000 - General Aggregate Limit

\$500,000 - Products – Completed Operations Aggregate Limit  
\$500,000 - Personal and Advertising Injury Limit  
\$500,000 - Each Occurrence Limit  
\$500,000 - Fire Damage Limit  
\$ 5,000 - Medical Expense Limit (Any one person)

10.5 Commercial catastrophe (Umbrella) Liability shall be written for the following limits:

\$500,000 - Each occurrence for Bodily Injury and Property Damage  
\$500,000 - Annual Aggregate

10.6 OCP - Owner's and Contractor's Protective Liability shall be written for the following limits:

\$500,000 - Each occurrence for Bodily Injury and Property Damage  
\$500,000 - Annual Aggregate

10.7 Comprehensive Automobile Liability shall be written for all owned vehicles, non-ownership liability and hired vehicles and shall be written for the following limits:

\$500,000

## NON-DISCRIMINATION STATEMENT

The bidder certifies that:

- (1) No person shall be excluded from participation in, denied the benefit of, or otherwise discriminated against on the basis of race, color, national origin, or gender in connection with any bid submitted to the City of Savannah or the performance of any contract resulting therefrom;
- (2) That it is and shall be the policy of this Company to provide equal opportunity to all business persons seeking to contract or otherwise interested in contracting with this Company, including those companies owned and controlled by racial minorities, cultural minorities, and women;
- (3) In connection herewith, We acknowledge and warrant that this Company has been made aware of, understands and agrees to take affirmative action to provide such companies with the maximum practicable opportunities to do business with this Company;
- (4) That this promise of non-discrimination as made and set forth herein shall be continuing in nature and shall remain in full force and effect without interruption;
- (5) That the promises of non-discrimination as made and set forth herein shall be and are hereby deemed to be made as part of and incorporated by reference into any contract or portion thereof which this Company may hereafter obtain and;
- (6) That the failure of this Company to satisfactorily discharge any of the promises of non-discrimination as made and set forth herein shall constitute a material breach of contract entitling the City of Savannah to declare the contract in default and to exercise any and all applicable rights and remedies including but not limited to cancellation of the contract, termination of the contract, suspension and debarment from future contracting opportunities, and withholding and or forfeiture of compensation due and owing on a contract.

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**Signature**

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**Title**



**PROPOSED SCHEDULE OF M/WBE PARTICIPATION**

Name of Bidder/Proposer: \_\_\_\_\_ Bid No. \_\_\_\_\_

Project Title \_\_\_\_\_

Name of M/WBE Participant	Name of Majority Owner	Telephone	Address (City, State)	Type of Work Sub-Contracted	Estimated Sub-contract Value	MBE or WBE
					%	
					%	
					%	
					%	

MBE Participation Value: \_\_\_\_\_ %      Women Participation Value: \_\_\_\_\_ %

**The undersigned will enter into a formal agreement with the M/WBE Subcontractors/Proposers identified herein for work listed in this schedule conditioned upon executing of a contract with the Mayor and Aldermen of the City of Savannah.**

**Joint Venture Disclosure**

If the prime bidder is a joint venture, please describe below the nature of the joint venture and level of work and financial participation to be provided by the Minority/Female joint venture firm.

Joint Venture Firms	Level of Work	Financial Participation

Printed name (company officer or representative): \_\_\_\_\_

Signature: \_\_\_\_\_

Title: \_\_\_\_\_

Telephone: \_\_\_\_\_ Fax: \_\_\_\_\_

Note: The Minority/Woman-Owned Business Office is available to identify qualified M/WBE's. Please contact the Office at (912) 651-3653. This form may be copied as needed. The City of Savannah has also posted a list of registered M/WBE's on its website @ [www.savannahga.gov](http://www.savannahga.gov).