

AUGUSTA COUNTY SERVICE AUTHORITY

18 Government Center Lane
P. O. Box 859
Verona, Virginia 24482-0859



REQUEST FOR SEALED BIDS **Sewer Rehabilitation**

ITB No. 1751

Issue Date: April 18, 2017

Sealed Bids for sewer rehabilitation at various locations in Augusta County, subject to the conditions and instructions attached hereto, will be received at the above office until, but not later than **2:00 o'clock p.m. local Verizon time, May 3, 2017**, then publicly opened, for furnishing sewer rehabilitation by trenchless “fold and form” PVC liner to the Augusta County Service Authority (OWNER).

Technical Questions: Bryan Rieckmann, Field Utility Engineer
Phone: 540-487-0009
Email: briekmann@co.augusta.va.us

Notes: 1. **EMAIL or FAX** Bids will **NOT** be accepted.

Terms: _____% _____ days

Company: _____

Address: _____

City: _____

Phone No. (_____) _____

Official Signature: _____

Printed Name: _____

Title: _____

Date: _____

Email Address: _____

*****THIS COMPLETED PAGE MUST BE INCLUDED WITH YOUR BID SUBMITTAL*****

GENERAL TERMS AND CONDITIONS

1. **PRECEDENCE OF TERMS:** In the event there is a conflict between the general terms and conditions and any special terms and conditions which may be included in this solicitation, the special terms and conditions shall apply.
2. **CLARIFICATION OF TERMS:** If any prospective Bidder has questions about the specifications or other solicitation documents, the prospective Bidder should contact the Technical person whose name appears on the first page of the Invitation to Bid. Any revisions to the solicitation will be made only by addendum, issued by OWNER.
3. **ADDENDA:** In the event there are any addenda, they will be posted to the OWNER's website at www.acsawater.com/bids. It is the Bidder's responsibility to check the website prior to the submittal deadline to ensure that the Bidder has a complete, up-to-date package.
4. **PAYMENT TERMS:** Payments will be made upon verification of delivery and receipt of materials. All pay requests and supporting documentations must be approved by OWNER and will be submitted for payment in accordance with OWNER's payment policies. Approvals for payment under this procurement will be by the OWNER's designated technical representative, or their designee, as noted on Page 1 of this solicitation.
5. **QUALIFICATIONS OF BIDDERS:** OWNERS may make such reasonable investigations as deemed proper and necessary to determine the ability of the Bidder to perform the work and the Bidder shall furnish to OWNER all such information and data for this purpose as may be requested. OWNER reserves the right to inspect Bidders physical facilities prior to award to satisfy questions regarding the Bidders capabilities. OWNER further reserves the right to reject any proposal if the evidence submitted by, or investigations of, such Bidder fails to satisfy OWNER that such Bidder is properly qualified to carry out the obligations of the contract and to complete the work/furnish the item(s) contemplated therein.
6. **ASSIGNMENT OF CONTRACT:** A contract shall not be assignable by the Bidder in whole or in part without the written consent of OWNER.
7. **ANTI-DISCRIMINATION:** By submitting their proposals, all Bidders certify to OWNER that they will conform to the provisions of the Presidential Order #11246, the Federal Civil Rights Act of 1964, as amended, as well as the Virginia Fair Employment Act of 1975, as amended, where applicable, and Section 2.2-4311 of the Virginia Public Procurement Act and that during the performance of this contract, the Bidder agrees as follows:

The Bidder will not discriminate against any employee or applicant for employment because of race, religion, color, sex, national origin, age, disability, or any other basis prohibited by the state law relating to discrimination in employment, except when there is bona fide occupational qualification reasonably necessary to the normal operation of the Bidder. The Bidder agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.

Notices, advertisements and solicitations placed by or on behalf of the Bidder will state that such contractor is an equal opportunity employer.

Notices, advertisements and solicitations placed in accordance with federal law, rule or regulation shall be deemed sufficient for the purpose of meeting the requirements of this section.

The Bidder will include the provisions of the foregoing paragraphs in every subcontract or purchase order of over \$10,000, so that the provisions will be binding upon each subcontractor or vendor.

- 8. NONDISCRIMINATION AGAINST FAITH-BASED ORGANIZATION:** In accordance with the Personal Responsibility and Work Opportunity Reconciliation Act of 1996, P.L. 104-193, the OWNER will not discriminate against faith-based organizations. The bidder also agrees to abide by § 2.2-4343.1 of the Virginia Public Procurement Act.
- 9. MINORITY AND WOMEN-OWNED BUSINESSES:** In accordance with Presidential Executive Orders #12138 & #11625 OWNER actively solicits both minority and women-owned businesses to respond to all Invitations to Bid and Requests for Proposal, and if not already on the Authority's mailing list, you may request application for inclusion on the list. Should you be interested, please contact the Authority at (540) 245-5670 and request information.

Disadvantaged business enterprises (DBE), as defined in 49 CFR 23, shall have equal opportunity to compete for and perform subcontracts which the contractor enters into pursuant to this contract. The contractor will use his best efforts to solicit bids from and to utilize DBE subcontractors or subcontractors with meaningful minority group and female representation among their employees.

- 10. DRUG-FREE WORKPLACE:** During the performance of this contract, the Contractor agrees to (i) provide a drug-free workplace for the contractor's employees; (ii) post in conspicuous places, available to employees and applicants for employment, a statement notifying employees that the unlawful manufacture, sale, distribution, dispensation, possession, or use of a controlled substance or marijuana is prohibited in the contractor's workplace and specifying the actions that will be taken against employees for violation of such prohibition; (iii) state in all solicitations or advertisements for employees placed by or on behalf of the contractor that the contractor maintains a drug-free workplace; and (iv) include the provisions of the foregoing clauses in every subcontract or purchase order of over \$10,000, so that the provisions will be binding upon each subcontractor or vendor.

For the purposes of this section, "*drug-free workplace*" means a site for the performance of work done in connection with a specific contract awarded to a contractor in accordance with this chapter, the employees of whom are prohibited from engaging in the unlawful manufacture, sale, distribution, dispensation, possession or use of any controlled substance or marijuana during the performance of the contract.

- 11. ETHICS IN PUBLIC CONTRACTING:** By submitting their proposals, all Bidders certify that their proposals are made without collusion or fraud and that they have not offered or received any kickbacks or inducements from any other Bidder, supplier, manufacturer or subcontractor in connection with their proposal.
- 12. DEBARMENT:** By submitting a proposal the Bidder certifies that neither it (nor he or she) nor any person or firm which has an interest in the Bidder's firm is disbarred or suspended from bidding or working on a state or federally funded project. No part of this contract will be subcontracted to any person or firm who has been debarred or suspended from bidding or working on a state or federally funded project.
- 13. PUBLIC INSPECTION OF PROCUREMENT RECORDS:** Proposals submitted shall be subject to public inspection only in accordance with Virginia Code § 2.2-4342.
- 14. COSTS OF PROPOSAL PREPARATION:** Any costs incurred by the Bidders in preparing or submitting proposals are the Bidders' responsibility. OWNER will not reimburse any Bidder for any costs incurred as a result of a response to this Invitation to Bid.

15. OWNERSHIP OF MATERIAL: Ownership of all data, material and documentation originated and prepared for OWNER, including any electronic media, shall belong exclusively to OWNER and be subject to public inspection in accordance with the Virginia Freedom of Information Act. Trade secrets or proprietary information submitted by a Bidder shall not be subject to public disclosure under the Virginia Freedom of Information Act; however, the Bidder must invoke the protection of this section prior to, or upon submission of, the data or other materials, and must identify the data or other materials to be protected and state the reasons why protection is necessary to the extent that such protected material is separately packaged and so identified in the Bid Submittal envelope.

16. CANCELLATION OF CONTRACT: Unless otherwise specified in the ITB, the OWNER may terminate the resulting contract for its convenience upon thirty (30) days written notice to the Bidder. The Bidder shall not be paid for any service rendered or expense incurred after receipt of such notice except such fees and expenses incurred prior to the effective date of termination that are necessary for curtailment of the Bidder’s work under this contract.

17. INSURANCE COVERAGE: Unless otherwise specified in the ITB, the Bidder shall maintain the following insurance to protect it from claims under the Workmen’s Compensation Act, and from any other claims for personal injury, including death, and for damage to property that may arise from operations under the Contract, whether such operations be by itself or by any subcontractor, or anyone directly or indirectly employed by either of them.

<u>TYPE OF COVERAGE</u>	<u>LIMITS</u>
Workers’ Compensation and Employer’s Liability including coverage under United States Longshoremen’s and Harbor Worker’s Act where applicable	Statutory, including Employer’s Liability of \$100,000.00 Each Accident \$500,000.00 Disease-Policy Limit \$100,000.00 Disease-Each Employee
Comprehensive General Liability endorsement coverage.	Including the Broad Form C.G.L.
Premises – Operations Bodily Injury Liability and Property Damage Liability Combined	\$500,000 Each Occurrence \$1,000,000 Aggregate
Automobile Bodily Injury Liability and Property Damage Liability Combined covering all automobiles, trucks, tractors, trailers, or other automobile equipment, whether owned, non-owned, or hired by the Bidder	\$500,000 Per Accident
Umbrella/Excess Liability	\$1,000,000 Each Occurrence \$2,000,000 Aggregate

The Bidder shall purchase and/or maintain insurance coverage on his tools, equipment and machinery and shall waive subrogation to the OWNER for damage thereto.

The OWNER reserves the right to require insurance of any Bidder in greater amounts provided notice of such requirements is stated in the Solicitation.

18. OBLIGATION OF BIDDER: By submitting a proposal, the Bidder covenants and agrees that he has satisfied himself, from his own investigation of the conditions to be met, that he fully understands his obligation and that he will not make any claim for, or have right to cancellation or relief from the contract because of any misunderstanding or lack of information.

19. UNAUTHORIZED ALIENS: In accordance with Virginia Code § 2.2-4311.1. Compliance with federal, state, and local laws and federal immigration law requires that the contractor does not, and shall not during the performance of any awarded contract, knowingly employ an unauthorized alien as defined in the federal Immigration Reform and Control Act of 1986.

20. COOPERATIVE PROCUREMENT

- i. This procurement is being conducted on behalf of the OWNER in accordance with the provisions of §2.2-4304 of the Virginia Public Procurement Act.
- ii. If approved by the bidder, the contract resulting from this procurement may be used by other public bodies to purchase at contract prices and in accordance with the contract terms. The bidder shall deal directly with any public body it approves to use the contract. Failure to extend a contract to another public body will have no effect on consideration of bidder's bid/proposal.
- iii. With the approval of the bidder, any public body using the resultant contract has the option of executing a separate contract with the bidder to add terms and conditions required by statute, ordinances, or regulations, or to remove terms and conditions which conflict with its governing statutes, ordinances, or regulations.
- iv. The OWNER, its officials and staff are not responsible for placement of orders, invoicing, payments, contractual disputes, or any other transactions between the bidder and any other public bodies, and in no event shall the OWNER, its officials or staff be responsible for any costs, damages or injury resulting to any party from use of an OWNER contract. If, when preparing such a contract, the additional terms and conditions of a public body seeking to purchase pursuant to cooperative procurement are unacceptable to the bidder, the bidder may withdraw its consent to extension of the contract to that particular public body.
- v. The OWNER assumes no responsibility for any notification of the availability of the contract for use by other public bodies, but the bidder may carry out such notification.

SPECIAL TERMS AND CONDITIONS

A. AWARD: The owner reserves the right to reject any or all bids, to waive informalities in any bid, to purchase any whole or part of the items listed in the bid, to make a separate award of each item, a group of items or all items, and to award to other than the lowest bidder if deemed to be in the best interest of the OWNER.

B. AVAILABILITY OF FUNDS: It is understood and agreed between the parties herein that OWNER shall be bound hereunder only to the extent of the funds available or which may hereafter become available for the purpose of this agreement. Unless canceled or rejected, a responsive bid from the lowest responsible bidder shall be accepted as submitted, except that, if the bid from the lowest responsible bidder exceeds available funds, the OWNER may negotiate with the apparent low bidder to obtain a contract price within available funds in accordance with Terms and Conditions, Item J, below.

C. SPECIFICATION DOCUMENTATION: (Safety Data Sheets), for the item being bid must be included in the bid submission. Failure to provide such documentation will cause your bid to be rejected as non-responsive.

D. EVALUATION:

In evaluating bids, OWNER will consider whether or not the bids comply with the prescribed requirements, and such alternates, prices, and other data as may be requested in the procurement documents or prior to award of a contract.

In evaluating Bidders, OWNER will consider the qualifications of Bidders and may consider the qualifications and experience of suppliers and other individuals or entities related to the equipment. OWNER may also consider factors such as life cycle costs and additional costs to accommodate the Manufacturer's standard equipment.

E. BEST VALUE DETERMINATION:

The OWNER will evaluate the bids using the information provided in the bid packages and any such additional information that the OWNER obtains in order to determine the overall best value to the OWNER.

Price will be used as the base factor in determining the successful Bidder. The Bid price for each Bidder will be adjusted by the present worth of the expected 20-year cost differences, if any, to the OWNER associated with the use of alternate materials. ("adjusted base price") Examples of potential cost differences may include construction costs due to differences in dimensions or layout, operating costs (maintenance), future repair costs, and other potential costs identified during bid package review.

Once the adjusted base price is determined, this value will be weighted using the following factors:

- (a) Manufacturer's warranty
- (b) Proven track record of service and support and strength of references
- (c) Breadth and depth of the Manufacturer's experience with similar systems
- (d) Other factors as determined by the OWNER during review of the bid packages

Each factor will be considered by the OWNER and given an "importance weight", which represents the level of importance this factor has relative to the cost of the system. Each importance weight will be presented as a dollar amount and will represent the maximum worth of the factor.

Each bid package will be evaluated by the OWNER and a score (0 through 5, with 5 being the best score) will be assigned to each Bidder for each factor.

For each factor, the score will be divided by 5 and then multiplied by the importance weight to obtain a "weighted score". The sum of the weighted scores for each Bidder will be subtracted from the adjusted base price. The resulting "final price factor" will act as the basis for selection of the successful Bidder.

The following table provides an example best value determination for a hypothetical bidder of alternate equipment. Note that all values used in the example, including the importance weights and the hypothetical "other factor" used, are examples for demonstration purposes only and do not represent actual values to be used during the evaluation of Bids.

REMAINDER OF PAGE INTENTIONALLY LEFT BLANK

Example “Best Value” Determination for Bidder “A”				
Bid Price:				\$100,000
Cost Difference Adjustments due to differences from named equipment:				\$4,000
Adjusted Base Price (Bid price + Cost Difference Adjustments)				\$104,000
<i>Factor</i>	<i>Importance Weight (\$)</i>	<i>Score (0 – 5)</i>	<i>Weighted Score (\$)</i>	
Warranty	\$5,000	4	\$4,000	
Service Availability	\$10,000	3	\$6,000	
References / Proven Track Record	\$5,000	3	\$3,000	
Experience Breadth & Depth	\$10,000	4	\$8,000	
Other Factor: Additional Agreement Terms & Conditions	\$3,000	2	\$800	
Sum of Weighted Scores:				(\$21,800)
Final Price Factor: (Adjusted Base Price – Sum of Weighted Scores)				\$82,200

The OWNER shall have the final determination for all estimated cost adjustments to the base price, determination of factors and importance weights, and determination of factor scores.

F. BID ACCEPTANCE PERIOD: Any bid in response to this solicitation shall be valid for (60) days. At the end of (60) days the bid may be withdrawn at the written request of the bidder. If the bid is not withdrawn at that time it remains in effect until an award is made or the solicitation is canceled.

G. IDENTIFICATION OF BID/PROPOSAL ENVELOPE: The signed bid/proposal should be returned in a separate envelope or package, sealed, and identified as follows:

<u>ITB No 1751</u>		
<u>Sewer Rehabilitation</u>		
From: _____	<u>May 3, 2017</u>	<u>2:00 PM</u>
Name of Bidder	Due Date	Time Due

Street or Box Number		

City, State, Zip Code		
ATTN: <u>Casey McCracken, Purchasing Officer</u>		

The outer (or delivery) envelope should be addressed as directed on Page 2, second bullet of the solicitation.

If a bid/proposal is not contained in an outer (or delivery) envelope, the bidder takes the risk that the envelope, even if marked as described above, may be inadvertently opened and the information compromised which may cause the bid or proposal to be disqualified. Bids/proposals may be hand delivered to the designated location in the office issuing the solicitation. No other correspondence, other than bid documents, should be placed in the inner envelope.

H. PRICE ESCALATION/DE-ESCALATION: Prime consideration will be given for firm pricing for the duration of the contract. However, in the event that prevailing market conditions warrant an adjustment in bid prices contained in the contract, the following escalation/de-escalation clause shall be the only clause applicable or acceptable to OWNER.

1. Bidder shall give written notice to OWNER of any proposed changes to contract prices not less than thirty (30) calendar days prior to the effective date of said (unit) price change.
2. Such notice must be accompanied by a certified letter showing the increase in price from Bidder's source of supply.
3. Any price change is not applicable to orders already issued and in process at time of written notice.
4. OWNER reserves the right to cancel a contract resulting from this request and solicit a new contract if the Purchasing Officer feels the price escalation is not in the best interest of OWNER. Other bidders from the original bid will be taken into consideration as to the best interest of OWNER. Cancellation of the contract shall not affect any outstanding orders.
5. Any revision of prices shall become effective thirty (30) calendar days from the date the escalation notice is received by the Purchasing Officer, provided they do not conflict with item 6 below.
6. All approved price changes resulting from this escalation clause shall be firm for a minimum period of ninety (90) calendar days.
7. Contract shall be limited to a maximum of one (1) price escalation per calendar year unless otherwise specified in this request.
8. During the term of this agreement, Bidder agrees to notify OWNER if any escalated prices are at a later date de-escalated and Bidder agrees to pass those de-escalated changes on to OWNER.

I. EXTRA CHARGES NOT ALLOWED: By submitting their (bids/proposals), all (bidders/offerors) certify and warrant that the price offered for *F.O.B. destination* includes only the actual freight rate costs at the lowest and best rate and is based upon the actual weight of the goods to be shipped. Except as otherwise specified herein, standard commercial packaging, packing and shipping containers shall be used. All shipping containers shall be legibly marked or labeled on the outside with purchase order number, commodity description, and quantity.

J. NEGOTIATION WITH THE LOWEST BIDDER: Unless all bids are cancelled or rejected, OWNER reserves the right granted by § 2.2-4318 of the *Code of Virginia* to negotiate with the lowest responsive, responsible bidder to obtain a contract price within the funds available to the agency whenever such low bid exceeds OWNER's available funds. For the purpose of determining when such negotiations may take place, the term "available funds" shall mean those funds which were budgeted by OWNER for this contract prior to the issuance of the written Invitation to Bid. Negotiations with the low bidder may include both modifications of the bid price and other items required to be performed. The OWNER shall initiate such negotiations by written notice to the lowest responsive, responsible bidder that its bid exceeds the available funds and that the agency wishes to negotiate a lower contract price. The times, places, and manner of negotiating shall be agreed to by OWNER and the lowest responsive, responsible bidder(s).

ATTACHMENT A SPECIFICATIONS

1. Scope of Work:

- A) The bidder must be capable of performing remediation by trenchless “fold and form” PVC liner. The scope of work will be dictated by the need of OWNER to make remediation in a timely manner in order to maintain reliable services to its customers and to meet coordination needs of construction projects such as roads, storm sewer, paving etc. There is no specified amount of work to be performed under this contract but it is expected that jobs will be less than 500 feet and shall require mobilization within two weeks. Issues such as conflicts with other utilities, pipe collapses and congested working environment can be expected. Time frame for footage greater than 500’ is 2 months.

2. Description:

- A) Work included: Furnish all labor, materials, tools and equipment necessary to provide for the complete rehabilitation of deteriorated gravity and force main sewer lines as specified herein.
- B) General: This specification defines the approved method and material for the rehabilitation of existing sewer lines by the use of a fold and form PVC pipeliner.
- C) Definition: The fold and form pipeliner process is defined as the reconstruction of gravity and force main sanitary sewers by insertion of a folded PVC pipeliner into the existing sewer and the reformation of the pipeliner into a circular pipeliner. The liner shall be reformed into its original extruded configuration by a combination of a steam and pressurization, which biaxially reorients the molecules of the PVC liner and allows the liner to conform to the shape of the existing pipe while locking at each joint and expanding into each service to form a concave dimple. Thus the PVC liner’s new configuration is its new memory and is a continuously extruded (no fused joints), tight fitting liner that controls migration of water between the existing pipe and the pipeliner.

3. Quality Assurance:

- A) Standards: Comply with all standards specified in this Section.
- B) Qualifications of manufacturers: products used in this Work shall be produced by manufacturers regularly engaged in the manufacture of similar items and with a history of quality production acceptable to the OWNER.
- C) Qualifications of installers: Use experienced workmen to ensure proper installation of the products specified herein. In the acceptance or rejection of installed Work, no allowance shall be made for the lack of experience on the part of the workmen.

4. Submittals:

- A) General: All submittals shall be made in accordance these specifications. The Bidder shall furnish engineering data covering design and installation. Submittal shall be made in a timely manner so that the project schedule can be met.
- B) Shop drawings: As a minimum, the following data and shop drawing information shall be submitted to the OWNER for review and approval:
 - i) Before beginning work, the Bidder shall submit to OWNER for approval, the Bidder’s specific technical data with complete physical properties of the liner and dimensions pertinent to this job.
 - ii) A certificate of “Compliance with Specification” shall be furnished for all materials supplied.

- iii) Before commencement of installation, the Bidder shall submit to OWNER for approval, the standard reforming temperature/pressure/cool-down schedule.
- iv) The Bidder shall submit a work plan to OWNER for acceptance. The work plan will address preparation steps required per-installation.
- v) The Bidder shall submit information to OWNER for approval of the procedure and the steps to be followed for the installation of the Fold and Form pipeliner method selected, even if the process is named in the specification. Any proposed changes in installation procedures shall require submittal of revised procedures for acceptance by OWNER.
- vi) The Bidder shall submit to OWNER for approval, full details about component materials and their properties, except those protected by trade secrets, which may harm their claim to the product.

5. Reference Specifications:

- A) This specification references AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM) standard specifications, which are made a part hereof by such reference and shall be the latest edition and revision thereof.

D-638	Standard Test method for Tensile Properties of Plastics
D-790	Standard Test method for Flexural Properties of Unreinforced and Reinforced Plastics
D-792	Standard Test Method for Specific Gravity Plastics
D-2444	Standard Test Method for impact Strength
D-2152	Standard test Method for Extrusion Quality using Acetone Immersion
PI-1057	Standard Test method for Extrusion Quality using Heat Reversion
D-2837	Obtaining Hydrostatic Design Basis for Thermoplastic pipe Materials

6. Responsibility for Materials:

- A) Material furnished by Bidder: The Bidder shall be responsible for all material furnished by him and shall replace at his own expense all such material found defective in manufacture or damaged in handling after delivery by the manufacturer. This shall include the furnishing of all materials and labor required for the replacement of installed material discovered defective prior to the final acceptance of the work.
- B) Material Furnished by OWNER: The Bidder's responsibility for material furnished by the OWNER shall begin at the point of delivery to Bidder. Materials already on the site shall become the Bidder's responsibility on the date of the award of the Contract. The Bidder shall examine all material furnished by the OWNER at the time and place of delivery to him and shall reject all defective material. Any material furnished by the OWNER and installed by the Bidder without discovery of such defects will, if found defective prior to final acceptance of the Work, be replaced with sound material by the OWNER. The Bidder however, shall, at his own expense, furnish all supplies, labor and facilities necessary to remove said defective material and install the sound material in a manner satisfactory to the OWNER.

7. Product Handling:

- A) All materials furnished by the Bidder shall be delivered and distributed by the Bidder. Materials furnished by the OWNER shall be picked up by the Bidder at points designated by the OWNER and hauled to and distributed at the site.
 - i) Pipe, manholes, etc., shall be loaded and unloaded by lifting with hoists or skidding so as to avoid shock or damage. Under no circumstances shall such materials be dropped. Pipe handled on skidways shall not be skidded or rolled against pipe already on the ground.
 - ii) In distributing the material at the site of work, each piece shall be unloaded opposite or near the place where it is to be laid in the trench.

iii) Pipe shall be so handled that any coating and lining shall not be damaged. If, however, any part of the coating or lining is damaged, the repair shall be made by the Bidder at his expense in a manner satisfactory to the OWNER.

B) Storage of materials: The Bidder shall be responsible for the safe storage of material furnished by or to him, and accepted by him, and intended for the Work, until it has been incorporated in the completed Project. The interior of all pipes, fittings and other accessories shall be kept free from dirt and foreign matter at all times.

C) Damaged material: Any material furnished by the OWNER that becomes damaged by the Bidder after acceptance shall be replaced by the Bidder at his own expense.

8. Warranty:

A) All equipment and materials supplied under this Section shall be warranted to be free from defects in materials and workmanship for a minimum of one (1) year following acceptance by the OWNER.

9. Products:

A) PVC PIPELINER MATERIAL SPECIFICATIONS

i) Properties: The PVC pipeliner shall be manufactured from virgin PVC resin, which has no fillers, and has the following minimum physical properties:

(a) COMBUSTIBILITY	-	SELF-EXTINGUISHING	
(b) TENSILE MODULUS	-	ASTM D-638	177,000 PSI@73F
(c) FLEXURE MODULUS	-	ASTM D-790	150,000 PSI@73F
(d) TENSILE STRENGTH	-	ASTM D-790	5,000 PSI@73F
(e) BRITTLE POINT	-	ASTM D-746	-31 C
(f) SPECIFIC GRAVITY	-	ASTM D-792	1.28
(g) IZOD IMPACT	-	ASTM D-256	22FT-LB/IN
(h) HARDNESS	-	ASTM D-2240	70D

B) Characteristics: The PVC pipeliner must be capable of up-sizing a minimum of one size (i.e., 8” to 10”, 10” to 12”, etc.), to ensure the pipeliner’s ability to attain a tight fit. Additionally, the pipeliner must be capable of lining bends (such as are created by offsets) up to 90° without vertical buckling or “rippling”. Furthermore, no degradation of the pipeliner’s physical properties may occur due to processing during installation.

C) Alternative Materials: Alternative materials for pipeliner shall be prequalified by OWNER.

D) Markings: The pipeliner shall be marked at maximum 5 foot intervals with coded number system to indicate manufacturer, size (diameter and SDR), material, extrusion date and production shift that fabricated the pipeliner. The marking code shall be changed with each production shift change.

E) Dimensions: Outside diameter and minimum wall thickness shall be manufactured to a size that when installed will fit the internal circumference of the conduit specified. Allowance shall be made of misaligned and missing conduit.

F) Installation Method: The pipeliner shall be continuously extruded with a minimum length which shall be that deemed necessary by the Bidder to effectively span the distance from the inlet to the outlet of the respective manholes unless otherwise specified. The Bidder shall verify the lengths in the field before manufacturing. Individual insertion runs can be made through more than one manhole section at a time as determined in the field by the Bidder and approved by OWNER.

10. Shipping and Handling:

- A) Pipeliner shall be coiled in continuously extruded lengths (no joints) on wooden reels with a minimum of a 48” diameter core for protection from kinking and gouging during shipping, handling, and storage.
- B) All costs associated with transportation/shipping of materials to the job site is the sole responsibility and at the cost of Bidder.

11. Material Testing:

- A) Each production lot of pipeliner shall be inspected and tested at the time of manufacture for defects in accordance with ASTM D-2444, ATM D-2152, and ASTM D-2122. All pipeliner shall be homogeneous, uniform in color, free of cracks, holes, foreign material, blisters and deleterious faults. A production lot of pipeliner shall include markings to clearly discern from other production lots.

12. Execution:

A) Pipeliner Installation:

i) Access to the project site:

- (a) Access to the site of the project under construction shall be primarily by respective pipeline easement and/or existing State road rights-of-way. Access through private property will not be permitted without the explicit written permission of the property owner. One (1) copy of such written permission shall be given to the OWNER for his review and records. At all locations where the Bidder desires to enter the easement from a state road, an access approach will be constructed. All construction within the State road right-of-way shall conform to the standards and requirements of the State Highway Department.
- (b) Whenever such access approaches are in use, a flagman shall be posted at the State road. Whenever such access approaches are not in use, a barricade, a chain, fence or gate will be installed to prevent unauthorized and accidental entry to the project site.
- (c) The Bidder shall not employ those portions of the pipeline easement, which have had pipe line construction completed by others, as an access route, without express permission from the OWNER in writing.

ii) Pre-Installation Preparations: The Bidder’s work plan shall address the following minimum preparations/steps, unless approved otherwise by OWNER.

- (a) The bidder shall provide a projected start date and finish date for any work is to begin.
- (b) The bidder shall work with OWNER to determine location and storage of any equipment and materials required for the job. The bidder shall not store any equipment or material on OWNER property without knowledge and consent from the OWNER.

B) Safety: The Bidder shall carry out operations under this section in strict accordance with all applicable OSHA Standards. Particular attention is drawn to those safety requirements involving work on an elevated platform and entry into a confined space. It shall be the Bidder’s responsibility to comply with OSHA Standards and Regulations pertaining to all aspects of the work.

C) Cleaning: It shall be the responsibility of the Bidder to clean the existing sewer to be rehabilitated and to remove all internal debris out of the sewer immediately before the television inspection.

D) Pre-Installation TV Camera Inspection: It shall be the responsibility of the Bidder to video (TV) inspect the sewer pipe immediately before the PVC pipeliner installation to assure that the existing pipe conditions are acceptable for pipeliner installation.

- E) Diversion Pumping: When required for acceptable completion of the PVC pipeliner process, the Bidder shall provide for continuous sewage flow around the section(s) of pipe designated for the installation of pipeliner by use of a diversion pump. The pump and bypass lines shall be of adequate capacity and size to handle the flow.
- F) Sewer Obstructions: If the pre-installation video (TV) inspection reveals an obstruction in the existing sewer (heavy solids, dropped joints, protruding service taps or collapsed pipe) which will prevent completion of the PVC pipeliner installation, then an Obstruction Removal (by remote device) or Point of Repair shall be made by the Bidder with the approval of OWNER.
- G) Sags in Sewer: If the pre-installation video (TV) inspection reveals a sagging joint less than 90% clearance, and OWNER deems it necessary, the Bidder shall take the necessary steps to eliminate the sagging joint. The cost to do this elimination is incidental to the cost of the lines. If the pre-installation video (TV) inspection reveals an offset joint with less than 80% clearance, the Bidder shall eliminate the offset joint by use of a point of repair. The OWNER's engineer shall be the individual to determine the percent of clearance.

13. Installation Procedure:

- A) All approved installation instructions and procedures submitted shall be carefully followed during installation. Any proposed changes in installation procedures shall require submittal of revised procedures and acceptance by OWNER.
- B) Liner Insertion: The pipeliner shall be inserted into the existing sewer with a power winch and steel cable connected to the end of the liner by use of an appropriate pulling head. The pipe to be lined, shall be of equal O.D. or greater than the liner, so that the liner can be fed into the existing sewer. Length of the pipeliner to be inserted at any time shall be governed by the winch drum capacity and winching power available and consideration of size and condition of the sewer.
 - i) During inspection, precautions such as some type of cover shall be provided on the leading edge of the pipeliner to prevent the ragged edges of the existing pipe from scarring the outside of the liner as it is pulled into the pipe. Once insertion is initiated, it is desirable to continue the pull at a rate of no greater than 5 to 10 feet per minute to completion.
- C) Liner Reformation and Processing: It is appropriate to check temperature and pressure while reforming and processing and may be accomplished through suitable temperature and pressure gauges placed at the insertion and termination points. Through the use of heat and pressure the PVC pipeliners shall unfold and expand sufficiently to press against the wall of the existing sewer pipe, lock into the joints, and form dimples at the services. Pipeliners shall produce visible recognizable service dimples and shall visibly conform to joints in the host pipe to ensure a tight fit. The heat, pressure, and period of processing shall be in accordance with the manufacturer's recommendations for establishing a new thermoplastic memory. For PVC pipeliners, processing temperatures range from 225 to 235 degrees F and pressures in the range of 5 to 10 PSI, but may vary based upon field conditions, but in no case shall ever exceed 15 PSI for protection of the host pipe.
 - i) The Bidder shall maintain pressure on the liner, the heat shall be discontinued, and cool air in sufficient volume shall be injected to reduce the temperature to below 100 degrees F before relieving the pressure. The pipeliner shall be continuous over the entire length of the insertion and be as free as commercially practical from visual defects such as foreign inclusions. Pressure testing shall be completed prior to reestablishing services.
- D) Service Reconnection: Once the pipeliner has been reformed and processed, the Bidder shall reconnect the existing live service connections. These services shall be reconnected by remote cutting method. The service reconnection method selected by the Bidder must be approved by OWNER.

- E) Finished Pipe: The installed pipeliner shall be continuous over the entire length of each pipe segment from manhole to manhole and shall be free from visual defects such as foreign inclusions, concentrated ridges, discoloration, pitting, varying wall thickness (within the bounds of the existing sewer pipe having different I.D.) and other deformities.

Pipeliner with gashes, nicks, abrasions, or any such physical damage which may have occurred during storage and/or handling, which are larger/deeper than 10 percent (10%) of the wall thickness shall not be used and shall be removed from the construction site. The pipeliner passing through or terminating in a manhole shall be carefully cut out in a shape and manner approved by OWNER. The invert and benches shall be streamlined and improved for smooth flow. The installed pipeliner shall meet the leakage requirements of the pressure test as specified.

- F) Process Limitation: Though the installation process may be licensed or proprietary in nature, the Bidder **SHALL NOT** change any material, thickness, design values or procedural matters stated or approved in the SUBMITTALS, without OWNER'S prior knowledge and pre-approval.

14. Manhole Sealing and Benches:

- A) The PVC pipeliner, by nature of the processing, creates a tight seal at the insertion and termination points of the manholes; therefore no further work requirements are necessary. The liner within the manhole shall be neatly cut off at least a minimum of 4" away from the manhole wall. The invert in the manhole shall be a smooth continuation of the pipe(s) and shall be merged with other lines, if any. Channel cross-section shall be U-shaped with a minimum height of half pipe diameter to three-fourths of the pipe diameter for fifteen inch and larger. The side channels shall be built up with mortar/concrete to provide benches at a maximum of a 1 in 12 pitch towards the channel.
- B) All manholes shall be individually inspected for water migration, cutoffs, benches, and invert works.

15. Testing of the Liner:

- A) General: Testing will be required after the pipeline has been installed in the existing sewer pipe. The test is a low-pressure air test of the pipeliner before any service connections to the pipeliner have been made. The purpose of this test is to check the integrity of the pipeliner and to verify that the pipeliner has not been damaged when pulling it into the sewer pipe.
- B) Plugging of Test Section: After a manhole-to-manhole section of sewer pipe has been lined, it shall be plugged at each manhole with pneumatic plugs. The design of the plugs shall be such that they will hold against the test pressure without requiring external blocking or bracing. One of the plugs shall have three air hose connections, one for inflation of the plug, one for reading of the pressure into the sealed line and one for introducing air into the sealed line.

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C) Low Pressure Test:

i) The test section shall be pressurized to 4 PSI and held above 3.5 PSI for not less than two (2) minutes. Air shall be added if necessary to keep the pressure above 3.5 PSI. At the end of this two (2) minutes stabilization period, the pressure shall be noted (must be 3.5 PSI in.) and the time period shall begin. If the pressure drops 0.5 PSI in less time than given below in (a), the section of pipe shall have failed the test.

(a) When the prevailing groundwater is above the sewer liner pipe being tested, test pressure shall be increased 0.43 PSI for each foot that the water table is above the invert.

<u>SEWER SIZE</u> (Inches)	<u>MINIMUM TEST TIME</u> (Minutes)
8	4
10	5
12	6
15	7.5
18	7.5

(b) If the time for the pressure to drop 0.5 PSI is 125% or less of the time given in the table, the line shall immediately be re-pressurized to 3.5 PSI and the test repeated.

(c) The pressure gauges used shall be supplied by the Bidder and have minimum divisions of .010 PSI.

D) Post Lining TV Inspection: It shall be the responsibility of the Bidder to provide the OWNER with a post liner TV Inspection after the service connections have been reinstated. The OWNER will view the TV inspection prior to final acceptance of the line.

E) Restoration of the Project Area: Upon completion of the installation work, testing, and televising, Bidder shall restore/clear the project area affected by his operations. No trash, rubbish, etc., shall be stored at any site whether the work is in progress or not.

16. Care and Restoration of Property:

- A) All heavy equipment shall be operated with care to prevent damage to existing structures and/or wires.
- B) On paved surfaces, the Bidder shall not use or operate tractors, bulldozers, or other power-operated equipment that treads or wheels of which are so shaped as to cut or otherwise damage surfaces.
- C) All surfaces which have been damaged by the Bidder's operations shall be restored to a condition at least equal to that in which they were found immediately prior to the beginning of operations. Suitable materials and methods shall be used for such restoration.
- D) The restoration of existing property or structures shall be done as promptly as practical and shall not be left until the end of the construction period.

17. Protection of Existing Structures, Property and Rights-of-Way:

A) All existing pipes, poles, wires, fences, curbing, property-line markers, and other structures which, in the opinion of the OWNER must be preserved in place without being temporarily or permanently relocated, shall be carefully supported and protected from injury by the Bidder, and in case of injury, the Bidder shall notify the appropriate party so that proper steps may be taken to repair any and all damage done. When the owners do not wish to make the repairs themselves, all damage shall be repaired by the Bidder, or, if not promptly done by him, the OWNER may have the repairs made at the expense of the Bidder.

- B) The Bidder shall consult the OWNER or his representatives prior to removing or disturbing any tree, shrub, bush, fence, sidewalk, building structure, or improvement that may be encountered in the line of the sewer line or in the path of the easement, or right-of-way secured by the OWNER. Immediately upon completion of sewer line rehabilitation through each piece of private property, the Bidder shall replace the sod, lawns, bushes, shrubs, or whatever else may have been removed, disturbed or altered during the progress of the work.
- C) The price bid for rehabilitating the sewer in the manner described shall be full compensation for all materials, labor, equipment, and incidentals required to install the pipeliner within the sewer. Payment shall be for actual linear footage of pipeliner installed in the field and shall be measured between the center lines of the manholes. Payment for the liner will include the cost of sealing the liner in the manholes, reworking the manhole inverts and benches, etc. Payment shall be based on the depth of the deeper flow line of the rehabilitated segment.
- D) Television inspection (pre-installation and post rehabilitation), cleaning and all relevant SUBMITTALS shall be incidental to the project.
- E) All costs for testing the pipeliner after installation shall be considered incidental to the cost of the project.
- F) All other payments shall be made as per bid items. No payment shall be made for work considered incidental or complimentary to a pay item already in bid. The Bidder shall clarify, for his own benefit, all work required for any item, incidental or otherwise, prior to bidding.

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**ATTACHMENT B
 BID SHEET**

(this completed page must be included with your bid submittal)

Bidders must state if the bid prices will remain firm for the full one-year contract period or if the bid prices will be subject to escalation/de-escalation.

Prices will remain firm for the entire initial contract period: YES NO

Price will be subject to escalation/de-escalation: YES NO

Item #	Description	Unit	Unit Cost
1	6 Inch PVC Pipe Liner SDR 35	Linear Foot	
2	8 Inch PVC Pipe Liner SDR 35	Linear Foot	
3	10 Inch PVC Pipe Liner SDR 35	Linear Foot	
4	12 Inch PVC Pipe Liner SDR 35	Linear Foot	

Note: Combine all costs to include labor, cleaning of lines, equipment, transportation, etc into the linear foot cost.

THIS COMPLETED PAGE MUST BE INCLUDED WITH YOUR BID SUBMITTAL

**ATTACHMENT C
 QUALIFICATIONS & REFERENCES
 (this completed page must be included with your bid submittal)**

The bidder must have the capability and capacity in all respects to fully satisfy all of the contractual requirements. To that end, please provide the following information:

1. **YEARS IN BUSINESS:** Indicate the length of time you have been in business providing this type of construction service.
 _____ years _____ months.

2. **REFERENCES:** Indicate below, at a minimum, two (2) recent references for whom you have provided this type of construction service. Include the date service was furnished and the name and address of the person the OWNER has your permission to contact.

Date Provided	Client and Address	Contact Person and Phone Number
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

THIS COMPLETED PAGE MUST BE INCLUDED WITH YOUR BID SUBMITTAL