

INVITATION TO BID

BID NO. 14-0088-4

PIPEMAKERS CANAL DOUBLE 24" PIPE REPLACEMENT

PRE-BID CONFERENCE: 2:00 PM, AUGUST 5, 2014

BID OPENING: 2:00 PM, AUGUST 19, 2014

THE COMMISSIONERS OF CHATHAM COUNTY, GEORGIA

ALBERT J. SCOTT, CHAIRMAN

COMMISSIONER HELEN J. STONE

COMMISSIONER YUSUF K. SHABAZZ

COMMISSIONER JAMES J. HOLMES

COMMISSIONER LORI L. BRADY

COMMISSIONER TONY CENTER

COMMISSIONER DEAN KICKLIGHTER

COMMISSIONER PATRICK J. FARRELL

COMMISSIONER PRISCILLA D. THOMAS

R. JONATHAN HART, COUNTY ATTORNEY

CHATHAM COUNTY, GEORGIA

DOCUMENT CHECK LIST

The following documents, when marked, are contained in and made a part of this Bid Package or are required to be submitted with the bid. It is the responsibility of the bidder to read, complete and sign, where indicated, and return these documents with his/her bid. **FAILURE TO DO SO MAY BE CAUSE FOR DISQUALIFYING THE BID.**

 X GENERAL INFORMATION AND INSTRUCTIONS TO BID WITH ATTACHMENTS

 X SURETY REQUIREMENTS - **A Bid Bond of 5% with this ITB.**

 X PROPOSAL

 X PLANS/DRAWINGS – **Plans must be purchased at Clayton Digital Reprographics by logging into www.cdrepro.com. Login to DFS. New users must register. For technical support contact CDR at (912) 447-5445, fax (912) 233-7020 or email: cdwest@cdrepro.com.**

 X BID SCHEDULE

 PERFORMANCE BOND – **Required at the time of contract.**

 PAYMENT BOND – **Required at the time of contract.**

 CONTRACT

 X LEGAL NOTICE

 X ATTACHMENTS: A. DRUG FREE WORKPLACE; B. NONDISCRIMINATION STATEMENT; C. DISCLOSURE OF RESPONSIBILITY STATEMENT; D. CONTRACTOR & SUBCONTRACTOR AFFIDAVIT AND AGREEMENT, E. BIDDER'S CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION, F. M/WBE PARTICIPATION REPORT, G. SYSTEMATIC ALIEN VERIFICATION FOR ENTITLEMENTS, H. CHATHAM APPRENTICE PROGRAM DOCUMENTATION

 X DOCUMENTATION OF ABILITY TO PERFORM BID REQUIREMENTS. THIS MAY BE REQUIRED OF BIDDERS AFTER SUBMISSION OF BIDS.

COUNTY TAX CERTIFICATE REQUIREMENT - Contractor must supply a copy of their Tax Certificate from their location in the State of Georgia, as proof of payment of the occupational

tax where their office is located.

CURRENT TAX CERTIFICATE NUMBER

CITY _____

COUNTY _____

OTHER _____

The Chatham County of Commissioners have established goals to increase participation of minority and woman owned businesses. In order to accurately document participation, businesses submitting bids or proposals are encouraged to report ownership status. A minority or woman owned business is defined as a business with at least 51% ownership by one or more minority/female individuals and whose daily business operations are managed and directed by one (1) or more of the minority/female owners. Please check ownership status as applicable:

African-American _____ Asian American _____ Hispanic _____

Native American or Alaskan Indian _____ Woman _____

In the award of "Competitive Sealed Proposals", minority/female participation may be one of several evaluation criteria used in the award process when specified as such in the Request for Proposal.

RECEIPT IS HEREBY ACKNOWLEDGED OF ADDENDA NUMBER(S) _____

The undersigned bidder certifies that he/she has received the above listed and marked documents and acknowledges that his/her failure to return each, completed and signed as required, may be cause for disqualifying his/her bid.

BY: _____

DATE

SIGNATURE

TITLE: _____

COMPANY: _____

CHATHAM COUNTY, GEORGIA
OFFICE OF THE PURCHASING AGENT
1117 EISENHOWER DRIVE - SUITE C
SAVANNAH, GEORGIA 31406
(912) 790-1622

Date: July 15, 2014

BID NO. 14-0088-4

GENERAL INFORMATION FOR INVITATION FOR BID

This is an invitation to submit a bid to supply Chatham County with construction, equipment, supplies and/or services as indicated herein. Sealed bids will be received at the Office of the Purchasing Agent, at **The Chatham County Citizens Service Center, 1117 Eisenhower Drive, Suite C, Savannah, Georgia 31406 up to 2:00PM local time, AUGUST 19, 2014,** at which time they will be opened and publicly read. **The County reserves the right to reject all bids that are non-responsive or not responsible.**

Instructions for preparation and submission of a bid are contained in this Invitation For Bid package. Please note that specific forms for submission of a bid are required. Bids must be typed or printed in ink.

A **Pre-bid Conference** has been scheduled to be conducted at **The Chatham County Citizens Service Center, 1117 Eisenhower Drive, Suite C, Savannah, Georgia, on , AUGUST 5, 2014, at 2:00PM,** to discuss the specifications and resolve any questions and/or misunderstanding that may arise. **You are encouraged to attend.**

Any changes to the conditions and specifications must be in the form of a written addendum to be valid; therefore, the Purchasing Agent will issue a written addendum to document each approved change. Generally when addenda are required, the bid opening date will be changed.

Chatham County has an equal opportunity purchasing policy. Chatham County seeks to ensure that all segments of the business community have access to supplying the goods and services needed by County programs. The County affirmatively works to encourage utilization of disadvantaged and minority business enterprises in our procurement activities. The County provides equal opportunity for all businesses and does not discriminate against any persons or businesses regardless of race, color, religion, age, sex, national origin or handicap. The terms "disadvantaged business," "minority business enterprise," and "minority person" are more specifically defined and explained in the **Chatham County Purchasing Ordinance and Procedures Manual, Article VII - Disadvantaged Business Enterprises Program.**

This project IS a Special Purpose Local Option Sales Tax (SPLOST) Project. See paragraph 2.25 for MBE/WBE participation goals.

INSTRUCTIONS TO BIDDERS

1.1 **Purpose:** The purpose of this document is to provide general and specific information for use in submitting a bid to supply Chatham County with equipment, supplies, and/or services as described herein. All bids are governed by the Code of Chatham County, Chapter 4, Article IV, and the laws of the State of Georgia.

1.2 **How to Prepare Bids:** All bids shall be:

- a. Prepared on the forms enclosed herewith, unless otherwise prescribed, and **all documents must be submitted.**
- b. Typewritten or completed with pen and ink, signed by the business owner or authorized representative, with all erasures or corrections initialed and dated by the official signing the bid. **ALL SIGNATURE SPACES MUST BE SIGNED.**

Bidders are encouraged to review carefully all provisions and attachments of this document prior to submission. Each bid constitutes an offer and may not be withdrawn except as provided herein.

1.3 **How to Submit Bids:** All bids shall be:

- a. **An original and duplicate copy must be submitted in a sealed opaque envelope, plainly marked with the bid number and title, date and time of bid opening, and company name.**
- b. Mailed or delivered as follows in sufficient time to ensure receipt by the Purchasing Agent on or before the time and date specified above.
 1. **Mailing Address: Chatham County Purchasing and Contracting, 1117 Eisenhower Drive, Suite C, Savannah, Georgia 31406.**
 2. **Hand Delivery: Purchasing Agent, Chatham County Citizens Service Center, 1117 Eisenhower Drive, Suite C, Savannah, Georgia 31406.**

BIDS NOT RECEIVED BY THE TIME AND DATE SPECIFIED WILL NOT BE OPENED OR CONSIDERED.

1.4 **How to Submit an Objection:** Objections from bidders to this invitation to bid and/or these specifications should be brought to the attention of the County Purchasing Agent in the following manner:

- a. When a pre-bid conference is scheduled, bidders shall either present their oral objections at that time or submit their written objections at least two (2) days prior to the scheduled pre-bid conference.
 - b. When a pre-bid conference is not scheduled, the bidder shall submit any objections he may have in writing not less than five (5) days prior to the opening of the bid.
 - c. The objections contemplated may pertain to form and/or substance of the invitation to bid documents. Failure to object in accordance with the above procedure will constitute a waiver on the part of the business to protest this invitation to bid.
- 1.5 **Failure to Bid:** If a bid is not submitted, the business should return this invitation to bid document, stating reason therefore, and indicate whether the business should be retained or removed from the County's bidders list.
- 1.6 **Errors in Bids:** Bidders or their authorized representatives are expected to fully inform themselves as to the conditions, requirements, and specifications before submitting bids. Failure to do so will be at the bidder's own risk. In case of error in extension of prices in the bid, the unit price will govern.
- 1.7 **Standards for Acceptance of Bid for Contract Award:** The County reserves the right to reject any or all bids and to waive any irregularities or technicalities in bids received whenever such rejection or waiver is in the best interest of the County. The County reserves the right to reject the bid of a bidder who has previously failed to perform properly or complete on time contracts of a similar nature, or a bid from a bidder whom investigation shows is not in a position to perform the contract.
- 1.8 **Bid Tabulation:** Tabulations for all bids will be posted for thirty (30) days after the bid opening in the Office of Purchasing and Contracting, 1117 Eisenhower Drive, Suite C, Savannah, Georgia 31406 or can be reviewed on the Purchasing web site 24/48 hours after opening at <http://purchasing.chathamcounty.org>.
- 1.9 **Bidder:** Whenever the term "bidder" is used it shall encompass the "person," "business," "contractor," "supplier," "vendor," or other party submitting a bid or proposal to Chatham County in such capacity before a contract has been entered into between such party and the County.
- 1.10 **Responsible / Responsive Bidder:** *Responsible Bidder* means a person or entity that has the capability in all respects to perform fully and reliably the contract requirements. *Responsive Bidder* means a person or entity that has submitted a bid or proposal that

conforms in all material respects to the requirements set forth in the invitation for bids or request for proposals.

- 1.11 **Compliance with Laws:** The bidder and/or contractor shall obtain and maintain all licenses, permits, liability insurance, workman's compensation insurance and comply with any and all other standards or regulations required by federal, state or County statute, ordinances and rules during the performance of any contract between the contractor and the County. Any such requirement specifically set forth in any contract document between the contractor and the County shall be supplementary to this section and not in substitution thereof.
- 1.12 **Contractor:** Contractor or subcontractor means any person or business having a contract with Chatham County. The Contractor/Vendor of goods, material, equipment or services certifies that they will follow equal employment opportunity practices in connection with the awarded contract as more fully specified in the contract documents.
- 1.13 **Local Preference:** On 27 March 1998, the Board of Commissioners adopted a **"Local Vendor"** Preference Ordinance that gives the lowest Chatham County vendor submitting a responsible bid/quote the opportunity to match the lowest price offered by an out-of-County vendor. If the County vendor confirms in writing to match within 24 hours, the award will be made to the Chatham County vendor. The lowest Chatham County responsive bidder will be afforded the "right to first refusal". "Local Vendor" is defined as a business or supplier which operates and maintains a regular place of business within the geographical boundaries of Chatham County or one of the local Municipalities of the County AND all real and personal property taxes are paid prior to award of a contract or purchase. **"NOT APPLICABLE TO PUBLIC WORKS CONSTRUCTION PROJECTS AND REVENUE PRODUCING BIDS."** However, contractors are encourage to apply the same method when awarding bids to local M/WBE-businesses whenever possible in order to promote growth in Chatham County's economy.
- 1.14 **Debarred Firms and Pending Litigation:** Any potential proposer/firm listed on the Federal or State of Georgia Excluded Parties Listing (Barred from doing business) **will not** be considered for contract award. Proposers **shall disclose** any record of pending criminal violations (Indictment) and/or convictions, pending lawsuits, etc., and any actions that may be a conflict of interest occurring within the past five (5) years. Any proposer/firm previously defaulting or terminating a contract with the County will not be considered.

**** All bidders or proposers are to read and complete the Disclosure of Responsibility Statement enclosed as an Attachment to be returned with response. Failure to do so may result in your solicitation response being rejected as non-responsive.**

Bidder acknowledges that in performing contract work for the Board, bidder shall not utilize any firms that have been a party to any of the above actions. If bidder has engaged any firm to work on this contract or project that is later debarred, Bidder shall sever its

relationship with that firm with respect to Board contract.

- 1.15 **Performance Evaluation:** On 11 April 2008, the Chatham County Board of Commissioners approved a change to the County Purchasing Ordinance requiring Contractor/Consultant Performance Evaluations, as a minimum, annually, prior to contract anniversary date. Should Contractor/Consultant performance be unsatisfactory, the appointed County Project Manager for the contract may prepare a Contractor/Consultant Complaint Form or a Performance Evaluation to the County Purchasing Agent.
- 1.16 **Payment of Taxes:** No contract shall be awarded unless all real and personal property taxes have been paid by the successful contractor and/or subcontractors as adopted by the Board of Commissioners on 8 April 1994.
- 1.17 **State Licensing Board for General Contractors:** Pursuant to Georgia law, the following types of contractors must obtain a license from the State Licensing Board of Residential and General Contractors by 1 July, 2008:

***Residential - Basic Contractor** (Contractor work relative to detached one-family and two-family residences and one-family townhouses not over three stories in height).

***Residential - Light Commercial Contractor** (Contractor work or activity related to multifamily and multiuse light commercial buildings and structures).

***General Contractor** (Contractor work or activity that is unlimited in scope regarding any residential or commercial projects).

See "Checklist for Submitting Bid" for the type of license required for this project.

- 1.18 **Immigration:** On 1 July, the Georgia Security and Immigration Compliance Act (SB 529, Section 2) became effective. All contractors and subcontractors with 100 or more employees entering into a contract or performing work must sign an affidavit that he/she has used the E-Verify System. E-Verify is a no-cost federal employment verification system to insure employment eligibility. Affidavits are enclosed in this solicitation. You may download M-274 Handbook for Employers at <http://www.dol.state.ga.us/spotlight/employment/rules>. You may go to <http://www.uscis.gov> to find the E-Verify information.

Systematic Alien Verification for Entitlements (SAVE) Program: O.C.G.A. 50-36-1, required Georgia's counties to comply with the federal **Systematic Alien Verification for Entitlements (SAVE) Program**. SAVE is a federal program used to verify that applicants for certain "public benefits" are legally present in the United States. Contracts with the County are considered "public benefits." Therefore, the successful bidder will be required to provide the Affidavit Verifying Status for Chatham County Benefit Application prior to receiving any County contract. The affidavit is included as part of this bid package but is

only required of the successful bidder.

Protection of Resident Workers. Chatham County Board of Commissioners actively supports the Immigration and Nationality Act (INA) which includes provisions addressing employment eligibility, employment verification, and nondiscrimination. Under the INA, employers may hire only persons who may legally work in the United States (i.e., citizens and nationals of the U.S.) and aliens authorized to work in the U.S. The employer must verify the identity and employment eligibility of anyone to be hired, which includes completing the Employment Eligibility Verification Form (I-9). The Contractor shall establish appropriate procedures and controls so no services or products under the Contract Documents will be performed or manufactured by any worker who is not legally eligible to perform such services or employment.

- 1.19 **Chatham Apprentice Program Hiring:** Chatham County has established a Chatham Apprentice Program (CAP) to train area residents in the building trades. Successful Contractor shall be required to make a good faith effort to utilize labor from the CAP Program on this project when feasible. A Good Faith Effort will be demonstrated by documentation of inquiry into CAP labor available and resulting hiring of CAP labor or providing reasons for Contractor not utilizing any CAP labor. Form demonstrating Good Faith Effort is enclosed in this bid package. Contractor shall complete the form and return with their first pay request. All questions regarding CAP student hiring should be directed to Daniel Dodd-Ramirez at (912) 232-6747.

GENERAL CONDITIONS

- 2.1 **Specifications:** Any obvious error or omission in specifications shall not inure to the benefit of the bidder but shall put the bidder on notice to inquire of or identify the same from the County. Whenever herein mentioned is made of any article, material or workmanship to be in accordance with laws, ordinances, building codes, underwriter's codes, A.S.T.M. regulations or similar expressions, the requirements of these laws, ordinances, etc., shall be construed to be the minimum requirements of these specifications.
- 2.2 **Multiple Bids:** No vendor will be allowed to submit more than one (1) bid. Any alternate proposals must be brought to the Purchasing Agent's attention during the Pre-bid Conference or submitted in writing at least five (5) days preceding the bid opening date.
- 2.3 Not Used.
- 2.4 **Prices to be Firm:** Bidder warrants that bid prices, terms and conditions quoted in his bid will be firm for acceptance for a period of sixty (60) days from bid opening date, unless otherwise stated in the bid.
- 2.5 **Completeness:** All information required by Invitation for Bids/Proposals must be completed and submitted to constitute a proper bid or proposal.

- 2.6 **Quality:** All materials, or supplies used for the construction necessary to comply with this proposal shall be of the best quality, and of the highest standard of workmanship. Workmanship employed in any construction, repair, or installation required by this proposal shall be of the highest quality and meet recognized standards within the respective trades, crafts and of the skills employed.
- 2.7 **Guarantee/Warranty:** Unless otherwise specified by the County, the bidder shall unconditionally guarantee the materials and workmanship for one (1) year on all material and/or services. If, within the guarantee period, any defects occur which are due to faulty material and or services, the contractor at his expense, shall repair or adjust the condition, or replace the material and/or services to the complete satisfaction of the County. These repairs, replacements or adjustments shall be made only at such time as will be designated by the County as being least detrimental to the operation of County business.
- 2.8 **Liability Provisions:** Where bidders are required to enter or go onto Chatham County property to take measurements or gather other information in order to prepare the bid or proposal as requested by the County, the bidder shall be liable for any injury, damage or loss occasioned by negligence of the bidder, his agent, or any person the bidder has designated to prepare the bid and shall indemnify and hold harmless Chatham County from any liability arising therefrom. The contract document specifies the liability provisions required of the successful bidder in order to be awarded a contract with Chatham County.
- 2.9 **Cancellation of Contract:** The contract may be canceled or suspended by Chatham County in whole or in part by written notice of default to the Contractor upon non-performance or violation of contract terms. An award may be made to the next low bidder, for articles and/or services specified or they may be purchased on the open market and the defaulting Contractor (or his surety) shall be liable to Chatham County for costs to the County in excess of the defaulted contract prices. See the contract documents for complete requirements.
- 2.10 **Patent Indemnity:** Except as otherwise provided, the successful bidder agrees to indemnify Chatham County and its officers, agents and employees against liability, including costs and expenses for infringement upon any letters patent of the United States arising out of the performance of this Contract or out of the use or disposal for the account of the County of supplies furnished or construction work performed hereunder.
- 2.11 **Certification of Independent Price Determination:** By submission of this bid, the bidder certifies, and in the case of a joint bid each party thereto certifies as to its own organization, that in connection with this procurement:
- (1) The prices in this bid have been arrived at independently, without consultation, communication, or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other bidder or with any competitor;

- (2) Unless otherwise required by law, the prices which have been quoted in this bid have not been knowingly disclosed by the bidder and will not knowingly be disclosed by the bidder prior to opening, directly or indirectly to any other bidder or to any competitor; and
 - (3) No attempt has been made or will be made by the bidder to induce any other person or firm to submit or not be submit a bid for the purpose or restricting competition.
- 2.12 **Award of Contract:** The contract, if awarded, will be awarded to that responsible bidder whose bid/proposal will be most advantageous to Chatham County, price and other factors considered. The Board of Commissioners will make the determination as to which bid or proposal that serves as the best value to Chatham County.
- 2.13 **Procurement Protests:** Objections and protests to any portion of the procurement process or actions of the County staff may be filed with the Purchasing Agent for review and resolution. The Chatham County Purchasing Procedures Manual, Article IX - Appeals and Remedies shall govern the review and resolution of all protests.
- 2.14 **Qualification of Business (Responsible Bidder or Proposer):** A responsible bidder or proposer is defined as one who meets, or by the date of the bid acceptance can meet, certifications, all requirements for licensing, insurance, and registrations, or other documentation required by the Design Professional engaged to develop Scope of Work, specifications and plans. These documents will be listed in the Special Conditions further on in this solicitation. Chatham County has the right to require any or all bidders to submit documentation of the ability to perform, provide, or carry out the service or provide the product requested.
- Chatham County has the right to disqualify the bid or proposal of any bidder or proposer as being unresponsive or irresponsible whenever such bidder/proposer cannot document the ability to deliver the requested product.
- 2.15 **Chatham County Tax Certificate Requirement:** A current Chatham County Tax Certificate is required unless otherwise specified. Please contact the Building Safety and Regulatory Services at (912) 201-4300 for additional information.
- NOTE:** No contract shall be awarded unless all real and personal property taxes have been paid by the successful contractor and/or subcontractors as adopted by the Board of Commissioners on 8 April 1994.
- 2.16 **Insurance Provisions, General:** The selected contractor shall be required to procure and maintain for the duration of the contract insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder by the Contractor, his agents, representatives, employees or subcontractors.

The cost of such insurance shall be included in the Bid.

It is every contractor's responsibility to provide the County Purchasing and Contracting Division current and up-to-date Certificates of Insurance for multiple year contracts before the end of each term. Failure to do so may be cause for termination of contract.

2.16.1 General Information that shall appear on a Certificate of Insurance:

- I. Name of the Producer (Contractor's insurance Broker/Agent).
- II. Companies affording coverage (there may be several).
- III. Name and Address of the Insured (this should be the Company or Parent of the firm Chatham County is contracting with).
- IV. A Summary of all current insurance for the insured (includes effective dates of coverage).
- V. A brief description of the operations to be performed, the specific job to be performed, or contract number.
- VI. Certificate Holder (This is to always include Chatham County).

Chatham County as an Additional Insured: Chatham County invokes the defense of sovereign immunity. In order not to jeopardize the use of this defense, the County **is not** to be included as an Additional Insured on insurance contracts.

2.16.2 **Minimum Limits of Insurance** to be maintained for the duration of the contract:

- a. **Commercial General Liability:** Provides protection against bodily injury and property damage claims arising from operations of a Contractor or Tenant. This policy coverage includes: premises and operations, use of independent contractors, products/completed operations, personal injury, contractual, broad form property damage, and underground, explosion and collapse hazards. Minimum limits: \$1,000,000 bodily injury and property damage per occurrence and annual aggregate.
- b. **Worker's Compensation and Employer's Liability:** Provides statutory protection against bodily injury, sickness or disease sustained by employees of the Contractor while performing within the scope of their duties. Employer's Liability coverage is usually included in Worker's Compensation policies, and insures common law claims of injured employees made in lieu of or in addition to a Worker's Compensation claim. Minimum limits: \$500,000 for each accident, disease policy limit, disease each employee and Statutory Worker's Compensation limit.
- c. **Business Automobile Liability:** Coverage insures against liability claims arising out of the Contractor's use of automobiles. Minimum limit: \$1,000,000 combined single limit per accident for bodily injury and property damage. Coverage should be written on an Any Auto basis.

2.16.3 Special Requirements:

- a. **Claims - Made Coverage:** The limits of liability shall remain the same as the occurrence basis, however, the Retroactive date shall be prior to the coincident with the date of any contract, and the Certificate of Insurance shall state the coverage is claims-made. The Retroactive date shall also be specifically stated on the Certificate of Insurance.
- b. **Extended Reporting Periods:** The Contractor shall provide the County with a notice of the election to initiate any Supplemental Extended Reporting Period and the reason(s) for invoking this option.
- c. **Reporting Provisions:** Any failure to comply with reporting provisions of the policies shall not affect coverage provided in relation to this request.
- d. **Cancellation:** Each insurance policy that applies to this request shall be endorsed to state that it shall not be suspended, voided, or canceled, except after thirty (30) days prior to written notice by certified mail, return receipt requested, has been given to the County.
- e. **Proof of Insurance:** Chatham County shall be furnished with certificates of insurance and with original endorsements affecting coverage required by this request. The certificates and endorsements are to be signed by a person authorized by the insurer to bind coverage on its behalf. All certificates of insurance are to be submitted prior to, and approved by, the County before services are rendered. The Contractor must ensure Certificate of Insurance are updated for the entire term of the County.
- f. **Insurer Acceptability:** Insurance is to be placed with an insurer having an A.M. Best's rating of A and a five (5) year average financial rating of not less than V. If an insurer does not qualify for averaging on a five year basis, the current total Best's rating will be used to evaluate insurer acceptability.
- g. **Lapse in Coverage:** A lapse in coverage shall constitute grounds for contract termination by the Chatham County Board of Commissioners.
- h. **Deductibles and Self-Insured Retention:** Any deductibles or self-insured retention must be declared to, and approved by, the County. At the option of the County, either: the insurer shall reduce or eliminate such deductibles or self-insured retention as related to the County, its officials, officers, employees, and volunteers; or the Contractor shall procure a bond guaranteeing payment of related suits, losses, claims, and related investigation, claim administration and defense expenses.

- 2.16.4 **Additional Coverage for Specific Procurement Projects:**
- a. **Professional Liability:** Insure errors or omission on behalf of architects, engineers, attorneys, medical professionals, and consultants.

<u>Minimum Limits:</u>	\$1 million per claim/occurrence
<u>Coverage Requirement:</u>	If claims-made, retroactive date must precede or coincide with the contract effective date or the date of the Notice to Proceed. The professional <u>must state</u> if tail coverage has been purchased and the duration of the coverage.
 - b. **Builder's Risk: (For Construction or Installation Contracts)** Covers against insured perils while in the course of construction.

<u>Minimum Limits:</u>	All-Risk coverage equal 100% of contract value
<u>Coverage Requirements:</u>	Occupancy Clause - permits County to use the facility prior to issuance of Notice of Substantial Completion.
- 2.17 **Compliance with Specification - Terms and Conditions:** The Invitation to Bid, Legal Advertisement, General Conditions and Instructions to Bidders, Specifications, Special Conditions, Vendor's Bid, Addendum, and/or any other pertinent documents form a part of the bidders proposal or bid and by reference are made a part hereof.
- 2.18 **Signed Bid Considered Offer:** The signed bid shall be considered an offer on the part of the bidder, which offer shall be deemed accepted upon approval by the Chatham County Board of Commissioners, Purchasing Agent or his designee. In case of a default on the part of the bidder after such acceptance, Chatham County may take such action as it deems appropriate, including legal action for damages or lack of required performance.
- 2.19 **Notice to Proceed:** The successful bidder or proposer shall not commence work under this Invitation to Bid until a written contract is awarded and a Notice to Proceed is issued by the Purchasing Agent or his designee. If the successful bidder does commence any work or deliver items prior to receiving official notification, he does so at his own risk.
- 2.20 **Payment to Contractors:** Instructions for invoicing the County for products delivered to the County are specified in the contract document.
- a. Questions regarding payment may be directed to the Finance Department at (912) 652-7900 or the County's Project Manager as specified in the contract documents.
 - b. Contractors will be paid the agreed upon compensation upon satisfactory delivery of the products or completion of the work as more fully described in the contract document.

- c. Upon completion of the work or delivery of the products, the Contractor will provide the County with an affidavit certifying all suppliers, persons or businesses employed by the Contractor for the work performed for the County have been paid in full.
- d. Chatham County is a tax exempt entity. Every contractor, vendor, business or person under contract with Chatham County is required by Georgia law to pay State sales or use taxes for products purchased in Georgia or transported into Georgia and sold to Chatham County by contract. Please consult the State of Georgia, Department of Revenue, Sales and Use Tax Unit in Atlanta (404) 656-4065 for additional information.

2.21 **Owner's Rights Concerning Award:** The Owner reserves the right, and sole and complete discretion to waive technicalities and informalities. The Owner further reserves the right, and sole and complete discretion to reject all bids and any bid that is not responsive or that is over the budget, as amended. In judging whether the bidder is responsible, the Owner will consider, but is not limited to consideration of, the following:

- a. Whether the bidder or principals are currently ineligible, debarred, suspended, or otherwise excluded from bidding or contracting by any state or federal agency, department, or authority;
- b. Whether the bidder or principals have been terminated for cause or are currently in default on a public works contract;
- c. Whether the bidder can demonstrate a commitment to safety with regard to Workers' Compensation by having an experience Modification Rate (EMR) over the past three years not having exceeded an average of 1.2; and
- d. Whether the bidder's past work provides evidence of an ability to successfully complete public works projects within the established time, quality, or cost, or to comply with the bidder's contract obligations; and
- e. Whether the bidder has made a Good Faith Effort to meet local participation goals for local economic impact for Disadvantaged Business Enterprises and Small Business Enterprises.

2.22 **Owner's Right to Negotiate with the Lowest Bidder:**

In the event all responsive and responsible bids are in excess of the budget, the Owner, in its sole and absolute discretion and in addition to the rights set forth above, reserves the right either to (i) supplement the budget with additional funds to permit award to the lowest responsive and responsible bid, or (ii) to negotiate with the lowest responsive and

responsible bidder (after taking all deductive alternates) only for the purpose of making changes to the Project that will result in a cost to the Owner that is within the budget, as it may be amended.

2.23 Debarred or Suspended Subcontractors.

CONTRACTOR shall not subcontract, and shall ensure that no subcontracts are awarded at any tier, to any individual, firm, partnership, joint venture, or any other entity regardless of the form of business organization, that is on the Federal Excluded Parties List System (EPLS) at <https://www.epls.gov> or the State of Georgia, DOAS, State Purchasing Exclusion listing, or other local government entity. This includes pending litigation or claims with the County or other government entities. Contractor shall immediately notify County in the event any subcontractor is added to a Federal, State or other Government Entity listing after award of the subcontract.

2.24 Cone of Silence:

Lobbying of Procurement Evaluation Committee members, County Government employees, and elected officials regarding this product or service solicitation, Invitation to Bid (ITB) or Request for Proposal (RFP) or contract by any member of a proposer's staff, or those people employed by any legal entity affiliated with an organization that is responding to the solicitation is strictly prohibited. Negative campaigning through the mass media about the current service delivery is strictly prohibited. Such actions may cause your proposal to be rejected.

2.25 The Chatham County Board of Commissioners has adopted an aggressive program that establishes goals for minority/female, small and disadvantaged business participation in construction, professional services, and general procurement.

- a. The Chatham County Board of Commissioners under Georgia law may reject any bid as non-responsive if they feel a bidder did not exercise "Good Faith Effort" in obtaining the goal established for M/WBE participation.
- b. The Chatham County Board of Commissioners adopted a policy establishing goals oriented to increase participation of minority and female owned businesses, through MBE/WBE certification and development. In order to accurately document participation, businesses submitting bids, quotes or proposals are encouraged to report ownership status. A bidder or vendor that is certified by any agency of the Federal Government or State of Georgia may submit a copy of their certification with their bid as proof of qualifications. Bidders that intend to engage in joint ventures or utilize subcontractors must submit to the County Contracts Administrator, a report on Minority/Female Business Enterprise participation.

Goals established for this project is 30% Combined.

- c. A Minority/Female Business Enterprise (M/WBE) is a business concern that is at least 51% owned by one or more minority/female individuals and whose daily business operations are managed and directed by one (1) or more of the minority/female owners.

- 2.26 Bidders or proposers are required to make a **Good Faith Effort**, where subcontracting is to be utilized in performing the contract, to subcontract with or purchase supplies from qualified M/WBEs. Bidders or proposers are required to state if they intend to subcontract any part of the work. Goals will be established for each contract at the onset. **Forms** requiring the signatures of bidders or proposers are enclosed as **Attachments** and must be completed and returned with your bid response. If forms are not completed and submitted, the bid may be considered nonresponsive.

Each bidder or proposer is required to maintain records of such efforts in detail adequate to permit a determination of compliance with these requirements. All contracts will reflect **Good Faith Efforts** and reporting requirements for the term of the contract. The County particularly urges general contractors to give emphasis to subcontracting with local area firms. **For information on the program or M/WBE contractors/vendors please contact Connell C. Heyward, Chatham County Minority and Women Business Coordinator, 124 Bull Street, Suite 310, Savannah, Georgia 31401, (912) 652-7926 phone, or (912) 652-7849 fax. Email: cheyward@chathamcounty.org**

- 2.27 **GEORGIA OPEN RECORDS ACT** - The responses will become part of the County's official files without any obligation on the County's part. Ownership of all data, materials and documentation prepared for and submitted to Chatham County in response to a solicitation, regardless of type, shall belong exclusively to Chatham County and will be considered a record prepared and maintained or received in the course of operations of a public office or agency and subject to public inspection in accordance with the Georgia Open Records Act, Official Code of Georgia Annotated, Section 50-18-70, et. Seq., unless otherwise provided by law.

Responses to RFPs shall be held confidential from all parties other than the County until after the contract is awarded by the Board of Commissioners.

The vendor and their bid price in response to ITBs will be read allowed at public bid openings. After Bid Tabulations, the ITB shall be available for public viewing.

Chatham County shall not be held accountable if material from responses is obtained without the written consent of the vendor by parties other than the County, at any time during the solicitation evaluation process.

- 2.28 **GEORGIA TRADE SECRET ACT of 1990** - In the event a Bidder/Proposer submits trade secret information to the County, the information must be clearly labeled as a Trade

Secret. The County will maintain the confidentiality of such trade secrets to the extent provided by law.

2.29 **CONTRACTOR RECORDS** -The Georgia Open Records Act is applicable to the records of all contractors and subcontractors under contract with the County. This applies to those specific contracts currently in effect and those which have been completed or closed for up three (3) years following completion.

2.30 **REFERENCES - \$500,000 or more:** For bidders to be responsive each must provide information on the most recent five (5) projects with similar scope of work as well as other information to determine experience and qualifications as follows:

a. Project Name: _____

Location: _____

Owner: _____

Address: _____

City and State: _____

Contact: _____

Phone & Fax: _____

*Architect or Engineer: _____

Contact: _____

Phone & Fax: _____

b. The awarded bid amount and project start date.

Final cost of project and completion date.

Number of change orders.

Contracted project completion in days.

Project completed on time. Yes _____ No _____ Days exceeded _____.

List previous contracts your company performed for Chatham County by Project Title, date and awarded/final cost.

Has contractor ever failed to complete a project? If so, provide explanation.

Have any projects ever performed by contractor been the subject of a claim or lawsuit by or against the contractor? If yes, please identify the nature of such claim or lawsuit, the court in which the case was filed and the details of its resolution.

\$499,000 and less: Provide references from owners of at least three (3) projects of various sizes. Include government owners if possible. If the contractor has performed any work for the Chatham County Board of Commissioners within the last five (5) years, at least one (1) of the three (3) owner references must be from the appropriate party within the Chatham County Government. Provide in the format as in (a) above on the attached form.

Failure to provide the above information may result in your firm's bid being rejected

and ruled as non-responsive.

NOTE: FORMS FOR YOU TO FILL OUT FOR YOUR REFERENCES ARE ATTACHED TO THE BACK OF THIS BID PACKAGE.

ADDITIONAL CONDITIONS

- 3.1 **METHOD OF COMPENSATION.** The compensation provided for herein shall include all claims by the CONTRACTOR for all costs incurred by the CONTRACTOR in the conduct of the Project as authorized by the approved Project Compensation Schedule and this amount shall be paid to the CONTRACTOR after receipt of the invoice and approval of the amount by the COUNTY. The COUNTY shall make payments to the CONTRACTOR within thirty (30) days from the date of receipt of the CONTRACTOR's acceptable statement on forms prepared by the CONTRACTOR and approved by the COUNTY.

Should the Project begin within any one month, the first invoice shall cover the partial period from the beginning date of the Project through the last day of the month (or on a mutually agreeable time) in which it began. The invoices shall be submitted each month until the Project is completed. Invoices shall be itemized to reflect actual expenses for each individual task; also refer to the requirements concerning changes, delays and termination of work under Sections I-8, 9, and 10 of the contract. Each invoice shall be accompanied by a summary progress report which outlines the work accomplished during the billing period and any problems that may be inhibiting the Project execution. The terms of this contract are intended to supersede all provisions of the Georgia Prompt Pay Act.

As long as the gross value of completed work is less than 50% of the total contract amount, or if the contractor is not maintaining his construction schedule to the satisfaction of the engineer, the County shall retain 10% of the gross value of the completed work as indicated by the current estimate approved by the engineer.

After the gross value of completed work becomes to or exceed 50% of the total contract amount within a time period satisfactory to the County, then the total amount to be retained may be reduced to 5% of the gross value of the completed work as indicated by the current estimate approved by the engineer, until all pay items are substantially completed.

When all work is completed and time charges have ceased, pending final acceptance and final payment the amount retained may be further reduced at the discretion of the County.

The CONTRACTOR may submit a final invoice to the County for the remaining retainage upon COUNTY'S acceptance of the Certificate of Substantial Completion. Final payment constituting the entire unpaid balance due shall be paid by the COUNTY to the

CONTRACTOR when work has been fully completed and the contract fully performed, except for the responsibilities of the CONTRACTOR which survive final payment. The making of final payment shall constitute a waiver of all claims by Chatham County except those arising from unsettled liens, faulty or defective work appearing after substantial completion, failure of the work to comply with the requirements of the Contract Documents, or terms of any warranties required by the Contractor Documents or those items previously made in writing and identified by the COUNTY as unsettled at the time of final application for payment. Acceptance of final payment shall constitute a waiver of all claims by the CONTRACTOR, except those previously made in writing and identified by the CONTRACTOR as unsettled at the time of final application for payment.

3.3 SURETY REQUIREMENTS and Bonds: (check where applicable)

- X A. Such bidder shall post a bid bond, certified check or money order made payable to the Chatham County Finance Department in the amount of 5% of the bid price.
- X B. Contractor(s) shall be required at time of contract to shall post a payment/performance bond, certified check or money order made payable to the Chatham County Finance Department 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 specifications and will be delivered per contract. Such bonds will also guarantee quality performance of services and timely payment of invoices to any subcontractors.
- X C. Whenever a bond is provided, it shall be executed by a surety authorized to do business in the State of Georgia and approved by Chatham County.
- X D. Bidder acknowledges Chatham County's right to require a Performance and Payment Bond of a specific kind and origin. "Performance Bond" means a bond with good and sufficient surety or surities for the faithful performance of the contract and to indemnify the governmental entity for any damages occasioned by a failure to perform the same within the prescribed time. Such bond shall be payable to, in favor of, and for the protection of the governmental entity for which the work is to be done. "Payment Bond" means a bond with good and sufficient surety or

sureties payable to the governmental entity for which the work is to be done and intended for the use and protection of all subcontractors and all persons supplying labor, materials, machinery, and equipment in the prosecution of the work provided for in the public works construction contract.

- X E. **Forfeit the amount of the Bid Bond if he/she fails to enter into a contract with Chatham County to do and/or furnish everything necessary to provide service and/or accomplish the work stated and/or specified in this bid proposal for the bid amount.**

3.4 **WARRANTY REQUIREMENTS:**

- a. Provisions of item 2.7 apply.
 - b. Warranty required.
- X 1. Standard warranty shall be offered with bid.
2. Extended warranty shall be offered with bid. The cost of the extended warranty will be listed separately on the bid sheet.

3.5 **TERMS OF CONTRACT:** (check where applicable):

- a. Annual Contract (With automatic renewal options for four (4) additional one (1) year terms if all parties agree)
- b. One-time Purchase
- X c. Other **ONE TIME CONTRACT**

3.6 **AUDITS AND INSPECTIONS:**

At any time during normal business hours and as often as the County may deem necessary, the Contractor and his subcontractors shall make available to the County and/or representatives of the Chatham County Department of Internal Audit for examination of all its records with respect to all matters covered by this Contract. It shall also permit the County and/or representatives of the Department of Internal Audit to audit, inspect, examine and make copies, excerpts or transcripts from such records of personnel, conditions of employment and other data relating to all matters covered by this Contract. All documents to be audited shall be available for inspection at all reasonable times in the main offices of the County or at the offices of the Contractor as requested by the County.

CONVERSATIONS OR CORRESPONDENCE REGARDING THIS SOLICITATION OR

**REPORT BETWEEN PROSPECTIVE OFFERORS AND PERSONS OUTSIDE THE
CHATHAM COUNTY PURCHASING OFFICE WILL NOT BE CONSIDERED
OFFICIAL OR BINDING UNLESS OTHERWISE SPECIFICALLY AUTHORIZED
WITHIN THIS DOCUMENT.**

The undersigned bidder or proposer certifies that he/she has carefully read the preceding list of instructions to bidders and all other data applicable hereto and made a part of this invitation; and, further certifies that the prices shown in his/her bid/proposal are in accordance with all documents contained in this Invitation for Bids/ Proposals package, and that any exception taken thereto may disqualify his/her bid/proposal.

This is to certify that I, the undersigned bidder, have read the instructions to bidder and agree to be bound by the provisions of the same.

This _____ day of _____ 20 _____.

BY _____

SIGNATURE

TITLE

COMPANY

Phone / Fax No's.

CHATHAM COUNTY, GEORGIA

SURETY REQUIREMENTS

A Bid Bond for five percent (5%) of the amount of the bid is required to be submitted with each bid.

A Performance Bond for one hundred percent (100%) of the bid shall be required of the successful bidder.

The Bidder certifies that he/she has examined all documents contained in this bid package, and is familiar with all aspects of the proposal and understands fully all that is required of the successful bidder. The Bidder further certifies that his/her bid shall not be withdrawn for thirty (30) days from the date on which his bid is publicly opened and read.

The Bidder agrees, if awarded this bid, he/she will:

- A. Furnish, upon receipt of an authorized Chatham County Purchase Order, all items indicated thereon as specified in this bid proposal for the bid amount, or;
- B. Enter a contract with Chatham County to do and/or furnish everything necessary to provide the service and/or accomplish the work as stated and/or specified in this bid proposal for the bid amount, and;
- C. Furnish, if required, a Performance Bond, and acknowledges Chatham County's right to require a Performance Bond of a specific kind and origin, and;
- D. Forfeit the amount of the Bid Bond if he/she fails to enter a contract with Chatham County as stated in (B) above, within fifteen (15) days of the date on which he/she is awarded the bid, and/or;
- E. Forfeit the amount of the Performance Bond if he/she fails to execute and fulfill the terms of the contract entered. The amount of forfeiture shall be:
 - 1. The difference between his/her bid and the next lowest, responsible bid that has not expired or been withdrawn, or;
 - 2. The difference between his/her bid and the amount of the lowest, responsible bid received as a result of rebidding, including all costs related to rebidding.

COMPANY

DATE

SIGNATURE

TITLE

TELEPHONE NUMBER

PROPOSAL

SPECIFICATIONS FOR:

BID NO. 14-0088-4

PIPEMAKERS CANAL DOUBLE 24" PIPE REPLACEMENT

The project is located in Garden City East of Highway 21 generally along the Pipemakers Canal waterway, a distance of approximately 900 feet.

The work consists of clearing trees and vegetation, installing new storm drain pipe, raising of a rock surfaced maintenance road and associated work as detailed on the construction drawings. A soil erosion and sedimentation control plan is required and must be implemented prior to, and maintained during construction of the work. Capacity for storm water drainage must be maintained at all times. Relocation of Garden City effluent force main is included.

This shall be a unit price contract. Quantities are approximate and payment shall be for actual in-place work measurements.

COMMENCEMENT AND COMPLETION:

WORK SHALL BEGIN WITHIN 10 DAYS AFTER RECEIPT OF "NOTICE TO PROCEED". ALL WORK SHALL BE COMPLETED WITHIN 120 CALENDAR DAYS AFTER THE TEN DAY PERIOD.

**PIPEMAKERS CANAL
DOUBLE 24" PIPE REPLACEMENT
BID SCHEDULE - JULY 9, 2014**

ITEM NO.	DESCRIPTION	EST. QTY.	UNIT	UNIT PRICE	TOTAL PRICE
1	Mobilization (Less than 5% of total project cost)	JOB	Lump Sum		
2	Clearing and Grubbing	0.80	ACRE		
3	Select Fill in Place	1000	CY		
4	Site Grading Including all excavation and disposal	JOB	Lump Sum		
5	Geogrid (Tensar TX 5) as directed by owner	1450	SY		
6	6" Stone Access Road, including filter fabric	1450	SY		
7	54" RCP Including dewatering and maintenance of flow	32	LF		
8	54" Headwall	1	EA		
9	Air Relief Valve in Manhole	1	EA		
10	Remove existing force main including disposal	JOB	Lump Sum		
11	16" ductile iron force main with fittings and joint restraint	105	LF		
12	Connect to existing force main with fittings	2	EA		
13	16" HDPE/PVC Bypass Line	125	LF		
14	16" Inline Stopple including installation and removal	2	EA		
15	Silt Fence	1000	LF		
16	Construction Exit	1	EA		
17	Jute Mesh, as directed by owner	2000	SY		
18	Temporary Grassing	2000	SY		
19	Permanent Grassing	2000	SY		
20	Riprap with concrete, including filter fabric underlay	20	SY		
21	Turbidity Curtain	1	EA		
22	Field Condition Allowance	JOB	Lump Sum		\$20,000.00
				TOTAL PROJECT COST	

NAME / TITLE

COMPANY

ADDRESS

PHONE / FAX NO'S.

E-MAIL

LIST OF SUBCONTRACTORS

I do _____, do not _____, propose to subcontract some of the work on this project. I propose to subcontract work to the following subcontractors:

[illegible]

SIGNED: _____
CONTRACTOR

SPECIAL CONDITIONS

SECTION 01600

PART 1 – PROJECT DESCRIPTION

The project is located in Garden City East of Highway 21 generally along the Pipemakers Canal waterway, a distance of approximately 900 feet.

The work consists of clearing trees and vegetation, installing new storm drain pipe, raising of a rock surfaced maintenance road and associated work as detailed on the construction drawings. A soil erosion and sedimentation control plan is required and must be implemented prior to, and maintained during construction of the work. Capacity for storm water drainage must be maintained at all times. Relocation of Garden City effluent force main is included.

PART 2 – CONTRACT DOCUMENTS

2.1 Technical Specifications:

- A. 01600 Special Conditions
- B. 02100 Clearing
- C. 02200 Earthwork
- D. 02270 Erosion and Sedimentation Control
- E. 02400 Storm Drainage
- F. 02558 Force Main

2.2 Drawings:

- A. 1 Cover
- B. 2 General Notes and Legend
- C. 3 Plan and Profile
- D. 4 Cross Sections, Profile and Details
- E. 5 Erosion and Sediment Control Notes
- F. 6 Construction Details
- G. 7 Construction Details

PART 3 – PRE-CONSTRUCTION INSPECTIONS

A pre-construction conditions video (standard DVD format) is required and must be submitted to Chatham County Department of Engineering for approval prior to start of any land disturbing work. Special emphasis shall be given to record pre-disturbance condition of roadways, driveways, buildings, utilities and other improvements located within or within 100 feet of the project limits. This is in addition to other inspections and surveys required of the Contractor or performed by the County. The video shall be prepared by a professional photographer having experience in similar work and approved by the County. A voice narrative shall identify location and features of the pre-construction video. A typewritten version of the voice narrative shall be provided upon request.

PART 4 - STAKING

The County shall engage a surveyor registered by the State of Georgia to provide initial construction stakeout and demarcation project limits and property lines. Ongoing control of the project work shall be the responsibility of the Contractor. The cost to reestablish initial project controls shall be paid for by the Contractor. The Contractor shall provide access and schedule all work in order to accommodate the survey work by the County's surveyor.

PART 5 – DOCUMENTATION

5.1 Documentation to be provided with requests for payment

- A. In addition to the documentation described elsewhere in the Contract Documents, the Contractor shall submit with each request for payment the following:
 - 1. Copies of material delivery tickets. The Contractor shall be responsible for collecting these documents at the time of delivery. The delivery tickets shall not relieve the Contractor of his responsibility to ensure the materials are in accordance with the contract with the contract documents. Missing or incomplete documentation of delivered materials may be cause for delay/denial of payment.
 - 2. Prior to submitting a request for payment, the Contractor shall review the extent of work completed with the County's representative for accuracy and completeness.

PART 6 – EROSION AND SEDIMENTATION CONTROL

6.1 The Contractor shall be fully responsible for compliance with the Georgia Water Quality Control Act and completing the approved sediment and erosion control plan contained in the contract documents.

- A. The design engineer shall accomplish shall accomplish the initial inspection of the Best Management Practice (BMP) system installation. The Contractor shall perform no land disturbing activities (other than that which is necessary for installation of the BMPs) until after the design engineer has provided to the Contractor a letter stating approval of the initial BMP installations.
- B. The Contractor shall be responsible for all inspections of the BMP system (Excluding the initial inspections as described above) and for maintaining records at the site for inspection. This includes water quality monitoring testing and recording requirements.
- C. The Contractor shall provide the Owner copies of all inspection reports and other records within 7 days of the date of such reports/records.

- D. The Contractor shall be responsible for preparation of plans, applying for, and obtaining erosion control permit for any impacted areas, or lay down areas proposed by the contractor that are not included in the current plan documents.

PART 7 – FINES AND LIQUIDATED DAMAGES

7.1 Fine

- A. A \$200 per day fee shall be assessed against the Contractor and withheld from the Contract Price for each and every day that the erosion and sedimentation control plan is not in proper operation. This fee shall be in addition to any penalties or assessments made against the Contractor for non-compliance of the Georgia Water Quality Control Act.

7.2 Liquidated Damages

- A. Liquidated Damages shall be assessed at \$200 per calendar day for work not completed within the Contract period. The full amount of liquidated damages will be deducted from the final payment to the Contractor.

PART 8 – ALLOWANCE

8.1 Field Condition Allowance

- A. The Field Condition Allowance shown on the bid sheet shall belong to Chatham County. The purpose of this Allowance is to allow the County to designate actions associated with completion of the project which are not indicated on the plans, but which are dictated by field conditions. Bidders shall not use this Allowance to assume any Contractor costs known or unknown at the bidding. Chatham County must approve use of the Allowance. All bidders shall include this Field Condition Allowance within their base bid. Any unused allowance shall revert to Chatham County.

PART 9 – SPECIAL REQUIREMENTS OF CONSTRUCTION

1. The canal can be bypassed with pumps to the extent that the normal flow can be handled Without backing up water beyond normal dry weather conditions into tributary ditches or onto private property. Because these conditions vary greatly by location and antecedent weather conditions, the Contractor is advised that generally no backing up of water will be allowed except by specific approval by the County.
2. Canal Water Data: County records on water depth and flow in the canal are limited to the sluice gate structure located near the mouth of the canal at the Savannah River (inside the Georgia Ports Authority facility). At the sluice gate structure, the normal dry weather water elevation is minus 3 feet NAVD88 datum (4 feet of water in the canal). During wet weather events, the water level in the canal at the sluice gate structure may reach elevation 5 feet

NAVD88 or greater depending upon the severity of the rain event. Because the sluice gate structure is a mechanical system subject to operational failure, the County cannot guarantee full operational efficiency during the project period and observed water levels may be different than cited herein.

The estimated flow is 1100 cfs for a 50 year storm event (9 inches in 24 hours). The contractor shall monitor weather and provide measures to protect and enable work in these conditions.

3. Under normal conditions the canal is not tidally influenced by virtue of the sluice gate structure. Because the sluice gate structure is a mechanical system subject to operational failure, the County cannot guarantee full operational efficiency during the project period possibly causing the canal to be tidally influenced. Functional operation of the sluice gate structure or its non-operation shall not be cause for any claim by the Contractor for unforeseen conditions or additional payment.
4. Geogrid shall be placed over areas of sub grade prior to the placement and compaction of fill. Geogrid placement will only be performed at the direction of the engineer or owner. Quantities for geogrid are included in the bid schedule.
5. The County will pay for all materials testing as required by the contract. Testing will be performed by an independent testing lab that is hired by the County. The County will not pay for testing in support of contractor operations/schedule. The contractor will be required to pay for failed tests as outlined in part 22 of section 01600.
6. Measurement of select fill will be by the cross section of in place compacted material.
7. Clearing debris may not be chipped and spread on the project site.
8. All rip rap shall have concrete slurry within the placed rip rap unless otherwise noted on the construction plans.
9. Trees will be cut off flush with the ground and leave the stumps in place in areas outside of the access road limits. This will allow for undisturbed earth around the access roads. Removal of stumps shall be at the direction of the engineer or owner.
10. The project site may be accessed at Highway 21. A construction exit will be required at this location.
11. The Contractor shall comply with all local, state and federal regulations as they pertain to construction activities (erosion control, etc.).
12. All efforts have been made to identify every underground and above ground utility, however, the contractor has the ultimate obligation to proceed with caution when a suspected utility line is present in the excavation. Any lines, which are not shown to be abandoned, shall be repaired immediately if broken during construction.

13. During the placement and compaction of backfill, the contractor shall take all necessary measures to place backfill and compact it at the proper moisture content so that there will be no pumping of the backfill during placement. No fill shall be placed on top of any fill material that is found to be pumping even if the fill that is being placed is meeting and passing the compaction requirements. If any fill is found to be pumping, it shall be stabilized by the contractor at no additional cost or time to the Owner before placing the next lift. Any backfill lifts shall be no more than 12" but shall not exceed the capacity of compaction equipment.
14. Any agreement made by the Contractor for additional accesses from the property owners along the project route shall be made in writing. A copy of any agreements shall be furnished to the Owner, Engineer, and Construction Inspector.
15. Work hours shall be limited to 7:00 am to 7:00 pm Monday through Friday and shall exclude weekends and holidays unless otherwise approved by Chatham County.
16. **The Contractor shall obtain an Encroachment permit from the Department of Public Works prior to any work within County rights of way.** All work is to be performed within the existing rights of way and easements as shown on the plans unless coordinated with others. Permission to use private property outside of these areas shall be obtained by the Contractor in writing. Copies of such agreements shall be provided to the Chatham County Engineering Department.
17. Watering past the date of substantial completion of the work shall be provided on seeded areas to achieve full coverage to match existing conditions and as accepted by Chatham County.
18. A detailed construction schedule for the project shall be provided to and approved by Chatham County prior to beginning demolition or construction.

PART 10 – MEASUREMENT AND PAYMENT

10.1 Measurement

The items listed in the proposal shall be considered as sufficient to complete the work in accordance with the drawings and specifications. Any portion of the work not listed in the bid form shall be deemed to be a part of the item, which it is associated with and shall be included in the cost of the unit shown on the bid form. Payment for the unit shown on the bid form shall be considered to cover the cost of all labor, material, equipment and performing all operations necessary to complete the work in place. The unit of measurement shall be the unit shown on the bid form. Payment for unit price items shall be based upon the actual quantity multiplied by the unit prices. Where work is to be performed at a lump sum price, the lump sum shall include all operations and elements necessary to complete the work. No payment will be made for any material wasted, unused, rejected or used for the convenience of the Contractor.

10.2 Payment

A. Mobilization

Mobilization of equipment and commencement of project. This will be paid as a lump sum fee, not to exceed 5% of the bid price.

B. Earthwork

1. Payment will be made at the contract unit price for select fill in place which includes furnishing all products, materials, equipment, labor and supervision to complete the placement of fill to raise the access road.
2. Payment will be made at the lump sum price for site grading and shall include dressing of the project site, compaction, staking, supervision, excavation and disposal any items outlined in the special conditions.

C. Clearing

Clearing and grubbing to construct the project will be included in the unit price per acre for "Clearing". The removal of fence, piping and other miscellaneous items will be part of the contractors clearing price.

D. Erosion and Sedimentation Control

Payment for erosion and sedimentation control shall be based on the unit prices as shown on the bid proposal. The cost of erosion control shall include all equipment, labor and materials necessary to comply with the State of Georgia Erosion and Sediment Control Manual.

E. Storm Drainage

1. Pipe Culverts: The length of culverts will be paid for on a linear foot basis, as measured along the centerline, from end of culvert to end of culvert. Payment will constitute full compensation for all culverts, joints, filter fabric, bedding, trenching, excavation, backfill, compaction, dewatering, maintenance for flow and all incidental labor and material necessary to complete the construction of the culverts as required by the plans and specifications.
2. Headwalls: Payment will be made on a contract unit price of each type. Payment will constitute full compensation for the excavation, formwork, all materials and incidentals necessary to complete the construction.

F. 6" Access Road Stone Base with Filter Fabric

Payment will be made on a per square yard basis. Payment will constitute full compensation for all materials, labor and supervision needed to complete the work as shown on the plans. Cost off filter fabric underlayment should be included.

G. Geogrid

The installation of geogrid will be paid on a per square yard basis. Payment will constitute full compensation for all materials, labor and supervision needed to complete the work as shown on the plans. Geogrid will only be installed at the direction of the owner.

H. Force Main

Payment for the force main relocation shall be based on the unit prices as shown on the bid proposal. The unit prices shall include labor, materials and supervision to remove and relocate the existing force main.

SECTION 02100
CLEARING

PART 1 - PRODUCTS

NONE IN THIS SECTION.

PART 2 - EXECUTION

2.01 CLEARING:

- A. Clearing shall consist of the felling, and cutting of trees into sections, and the satisfactory disposal of the trees and other vegetation designated for removal, including down timber, snags, brush, fences, rubbish and other objectionable material occurring within the area of construction. Only those trees, shrubs, etc. that fall within the limits of construction shall be removed. Clearing shall also include the removal and disposal of structures that obtrude, encroach upon, or otherwise obstruct the work. Clearing operations shall be conducted so as to prevent damage by falling trees to trees left standing, to existing structures and installation, and to those under construction, and so as to provide for the safety of employees and others.

2.02 GRUBBING:

- A. Grubbing shall consist of the removal and disposal of stumps, roots larger than 1/2 inch in diameter, and matted roots from the designated grubbing areas. This material, together with logs and other organic or metallic debris not suitable for foundation and subgrade purposes, shall be excavated and removed to a depth of not less than 18-inches below the original surface level of the ground in embankment areas and not less than 2-feet below the finished earth surface in excavated areas. Depressions made by grubbing shall be filled with suitable material and compacted to make the surface conform with the original adjacent surface of the ground.

2.03 DISPOSAL:

- A. Disposal of trees, branches, snags, brush, stumps, etc., resulting from the clearing and grubbing shall be the responsibility of the Contractor and shall be disposed of by removal from the site of this work. All costs in connection with disposing of the material will be at the Contractor's expense. All liability of any nature resulting from the disposal of the cleared and grubbed material shall become the responsibility of the Contractor. The disposal of all materials cleared and grubbed will be in accordance with the rules and regulations of the local, State, and Federal authorities.

END OF SECTION

SECTION 02200
EARTHWORK

PART 1 - PRODUCTS

1.01 MATERIALS:

- A. General: Where the terms "approved", "suitable", "unsuitable" and similar designations are used in specifications section pertaining to earthwork, it means earth or material designated as being approved, suitable or unsuitable for their intended use by the Owner.
- B. Suitable Soil Materials are defined as those complying with ASTM D-2487 soil classification-groups: SM, SW, SC, and SP.
 - Fill material that will be used in undercut areas under the proposed access roads shall be SM, SW, or SP.
 - Fill material that will be used to construct any access roads on raised fill shall be as noted above with the addition of SC.
- C. Unsuitable Soil Materials are defined as those complying with ASTM D-2487 soil classification groups GC, MH, ML, CL, CH, OL, OH, PT. Clays, silts, and organic soils will be considered as unsuitable materials. Excess water in materials will not be a basis for establishing unsuitable material regardless of gradation.
- D. Backfill and Fill Materials shall be suitable soil materials, free of clay, rock or gravel larger than 2" in any dimension, debris, waste, frozen materials, vegetable and other deleterious matter. Suitable materials for earth fill shall generally be composed of sands, clay-sand and silt-sand mixtures.

Prior to placement of any fill material the contractor shall submit samples for review and approval. Any fill material that is placed prior to approval shall be removed at the contractor's expense.

PART 2 - EXECUTION

2.01 EXCAVATION

- A. Excavation is unclassified and includes excavation to subgrade elevations indicated, regardless of character of materials and obstructions encountered.
- B. All excavation shall be in conformity with the lines, grades and cross sections shown on the Plans or established by the Owner. All suitable material removed in the excavation shall be used as far as practicable in formation of embankment, subgrades and shoulders and at such other places as may be indicated on the drawings or directed by the Owner.
- C. Unauthorized Excavation consists of removal or loosening of materials beyond indicated subgrade elevations or dimensions without specific directions of the Owner. Unauthorized excavation, as well as remedial work directed by Owner, and as specified herein shall be at Contractor's expense.

Under footings, foundation bases, or retaining walls, fill unauthorized excavations by extending indicated bottom elevation of footing or base to the bottom of the excavation, without altering required top elevation.

Elsewhere, backfill and compact unauthorized excavations as specified for authorized excavations of same classification, unless otherwise directed by the Owner.

- D. Additional Excavation: When excavation has reached required subgrade elevations and unsuitable materials exist, carry excavations deeper and replace excavated materials as directed by the Owner. Dispose of unsuitable material offsite.

The Contractor shall dispose of unsuitable and surplus materials offsite.

- E. Dewatering: Prevent surface water and subsurface or ground water flowing into excavations and from flooding project site and surrounding area. Do not allow water to accumulate in excavations. Remove water to prevent softening of foundation bottoms, undercutting footings, and soil changes detrimental to stability of subgrades and foundations. Provide and maintain pumps, well points, sumps, suction and discharge lines, and other dewatering system components necessary to convey water away from excavations.

Establish and maintain temporary drainage ditches and other diversions outside excavation limits to convey rain water and water removed from excavations to collecting or run-off areas. Do not use trench excavations as temporary drainage ditches.

The Contractor will be responsible for all damage incurred in handling water conditions.

- F. Material Storage: Stockpile satisfactory excavated materials where directed, until required for backfill or fill. Place, grade and shape stockpiles for proper drainage and to minimize erosion. Locate and retain soil materials away from edge of excavations.
- G. Excavation for Structures: Conform to elevations and dimensions shown within a tolerance of plus or minus 0.10', and extending of sufficient distance from footings and foundations to permit placing and removal of concrete framework, installations to permit placing and removal of concrete framework, installation of services, other constructions, and for inspection.

In excavating for footings and foundations, take care not to disturb bottom of excavation. Excavate by hand to final grade before concrete reinforcement is placed. Trim bottoms to required lines and grades to leave solid base to receive other work.

- H. Proper drainage shall be maintained at all times.

2.02 BORROW

- A. Shall be excavated and hauled by the Contractor from his own sources and shall meet the requirements as specified.
- B. Borrow shall be procured by the Contractor.
- C. Contractor shall bear all expenses in developing borrow sources including drying material, haul roads, excavation and hauling

2.03 GROUND SURFACE PREPARATION FOR FILL

- A. All vegetation such as roots, brush, heavy sods, heavy growth of grass, decayed vegetation matter, rubbish, and other unsuitable material within the areas to be filled shall be stripped and removed prior to beginning the fill operation.
- B. Sloped ground surfaces steeper than 1 vertical to 4 horizontal, on which fill is to be placed shall be plowed, stepped, benched or broken up as directed, in such a manner that the fill material will bond with the existing surface.
- C. Surfaces on which fill is to be placed and compacted shall be plowed, wetted or dried as may be required to obtain the specified compaction.

2.04 BACKFILL/FILL PLACEMENT OPERATIONS:

- A. During the placement and compaction of backfill, the contractor shall take all necessary measures to place backfill and compact it at the proper moisture content so that there will be no pumping of the backfill during placement. No fill shall be placed on top of any fill material that is found to be pumping even if the fill that is being placed is meeting and passing the compaction requirements. If any fill is found to be pumping, it shall be stabilized by the contractor at no additional cost or time to the Owner before placing the next lift. Any backfill lifts shall be no more than 12" but shall not exceed the capacity of compaction equipment.

2.05 FINISH GRADING

- A. All areas covered by the project including excavated and filled sections and adjacent transition areas shall be smooth graded and free from irregular surface changes.
- B. Degree of finish shall be that ordinarily obtainable from either blade-grader or scraper operations, supplemented with hand raking and finishing, except as otherwise specified.
- C. The finished surface of unpaved areas shall be not more than 0.05' feet above or below the established grade or designed cross-section. Grading shall be done in order that no ponding will occur.
- D. Ditches shall be finished smooth to reduce erosion and permit adequate drainage.

2.06 DISPOSAL OF WASTE MATERIAL

- A. All vegetation, roots, brush, sod, broken pavements, curb and gutter, rubbish, and other unsuitable or surplus material stripped or removed from the limits of construction shall be legally disposed of by the Contractor.

2.07 PROTECTION

- A. The Contractor shall be responsible for protection of low grade utilities shown on the drawings or indicated to him by the Owner at all times during earthwork operations.

- B. Graded areas shall be protected from traffic, erosion, settlement, or any washing away that may occur from any cause prior to acceptance.
- C. Any repair or reestablishment of grades prior to final acceptance shall be at the Contractors expense.

PART 3 - TESTING

3.01 COMPACTION TESTING

- A. General: Compaction of earth fill and all pavement subgrades shall be performed to the percentage of maximum standard of dry densities and to the depths as indicated below:
- B. Roadway Subgrades: 100% Standard (ASTM Test D-698)
- C. Fill under all structures, slabs, and backfill behind walls: 98% Standard (ASTM Test D-698).
 - 1. Unpaved Areas to be grassed, sodded or landscaped: 90% Standard (ASTM Test D-698) full depth.

All other areas not described above: as directed by the Owner.

- E. Moisture Control: All compaction shall be performed at material moisture contents within 3 percentage points, plus or minus, of optimum. Where subgrade or layer of soil material must be moisture conditioned before compaction, uniformly apply water to surface of subgrade, or layer of soil material, to prevent free water appearing on surface during or subsequent to compaction operations. Remove, and replace, or scarify and air dry, soil material that is too wet to permit compaction to specified density. Soil material that has been removed because it is too wet to permit compaction may be stockpiled or spread and allowed to dry. Assist drying by dicing, harrowing or pulverizing until moisture content to a satisfactory value.
- F. Field Density Tests: Tests shall be made in accordance with ASTM Method D-1556 and/or ASTM 2922. Minimum testing frequency shall be based on the most stringent of the following requirements (as applicable). Additional tests may be required by the Owner in areas he deems critical.
 - One every layer of fill,
 - One every 200 cubic yards of fill,
 - One every 250 square yards of roadway subgrade of fill,
 - One every building subgrade
 - Areas where degree of compaction is in question

If in opinion of Owner, based on testing service reports and inspection, subgrade or fills which have been placed are below specified density, additional compaction and testing will be required.

SECTION 02258
FORCEMAIN

PART 1 – PRODUCTS

Materials used in the work shall be those named in the Bid Form. In multiple type bids, the selection of the type of material will be at the option of the Owner. Material and equipment used in the work shall conform to one of the following:

1.01 FORCE MAIN PIPE:

- A. Ductile iron pipe shall conform to AWWA C-150, AWWA C-151 and ASTM A-746 latest revision. All pipe shall be class 50 unless otherwise noted.

1. Ductile Iron Joints:

- a. Mechanical Joints: In cast and ductile iron pipe shall conform to ANSI Specification A 21.11
- b. Restrained Joints: Restrained joints for pipe, valves, and fittings shall be mechanical joints with ductile iron retainer glands or push-on type joints equal to "Lok-Ring", TR flex", or "Super-Lock" and shall have a minimum rated working pressure of 250 psi. The joints shall be in accordance with the applicable portions of AWWA C111. The manufacturer of the joints shall furnish certification, witnessed by an independent laboratory, that the joints furnished have been tested at a pressure of 500 psi without signs of leakage or failure. Restrained joints shall be capable of being deflected after assembly.

2. Ductile Iron Fittings: Fittings shall consist of bends, tees, crosses, caps and plugs, reducers, tapped tees, sleeves, etc.

- a. Fittings for Push-On and Mechanical Joint Pipe: Shall be ductile iron, manufactured in accordance with ANSI A21.10 (AWWA C-110) or ANSI A21.53 (AWWA C-153) standards. Fittings shall be designed to accommodate the type of pipe used.
- b. Thrust blocking shall be at least one (1) cubic foot of 3,000 psi concrete. Blocking shall be provided at all bends deflecting 22 -1/2 degrees or more and bear directly against undisturbed trench wall.

3. Coatings and Linings: All ductile iron pipes and fittings shall be bituminous coated on the outside and lined with Protecto 401 Ceramic Epoxy in the inside.

- a. Coating on the outside shall be an asphaltic coating approximately 1 mil thick. The finished coating shall be continuous, smooth, neither brittle when cold or sticky when exposed to the sun, and shall be strongly adherent to the iron.
- b. Protecto 401 Ceramic Epoxy interior lining shall conform to ASTM E-96-66, ASTM B-117, ASTM 6-95, ASTM D-714-87.

The interior of the pipe shall receive 40 mils nominal dry film thickness of Protecto 401. Lining application, inspection, certification, handling and surface

preparation of the area to receive the protective coating shall be in accordance with the Protecto 401 manufacturer specifications and requirements.

1.02 STONE BACKFILL:

- A. Shall be graded crushed granite with the following gradation:

<u>Square Opening Size</u>	<u>Percent Passing</u>
1"	100%
3/4"	90-100%
3/8"	0 to 65%
No. 4	0 to 25%

1.03 SAND BACKFILL:

- A. Shall be clean sand free from clay and organic material. Not more than 10% shall pass the No. 100 sieve.

1.04 BORROW:

- A. Where it is determined that sufficient suitable material is not available from the site to satisfactorily backfill the pipe to at least 2 feet above the top of the pipe, the Contractor shall furnish suitable sandy borrow material to accomplish the requirement. The material shall have not more than 60% passing the No. 100 sieve, nor more than 20% passing the No. 200 sieve.

1.05 AIR RELEASE VALVE:

- A. Shall be designed for sewage service. The valve shall be constructed of a cast iron body, stainless steel or bronze trim, and stainless steel float. The inlet shall be 2 inches, 5/16 inch orifice and have a venting capacity of 35 cfm. The working pressure shall be as specified in the contract. It shall conform to the detail shown. A copy of the O&M Manual shall be given to the Owner prior to acceptance.

1.06 MANHOLES:

- A. Precast Concrete - Precast manholes shall have a minimum wall thickness of five inches. Cone sections shall have a minimum wall thickness of 8" (inch) at their top. Manholes shall be manufactured with 4,000 P.S.I. concrete, type II cement that meet ASTM C-150 and absorption shall not exceed 6%. Wall reinforcement shall meet ASTM C-478 and also have a No. 4 rebar hoop around each pipe opening. The flat top slab sections shall handle HS-20 traffic loadings. Bottom slabs shall be 6 inches thick for manholes up to and including 48 inches in diameter and 8 inches thick for larger diameter manholes and be reinforced with No. 4 rebar at 9"(inch) O.C.E.W. All items shall be wet cast. Dry casting or low slump concrete will not be allowed. All bases will have proper lifting hooks in the bottom slabs (min. of 3) and there shall be no penetrating lifting holes on any structures. No holes will be allowed within 6" (six) inches of any joint on structures. All manholes shall have a coating as per Section 02555.

This shall be the minimum requirements for wall and slab thickness/rebar. It shall be the responsibility of the Contractor to insure that the manhole(s) are designed properly for the loading conditions as indicated on the plans. Should the loading conditions require greater structural integrity than the minimum, as herein specified, it shall be the responsibility of the Contractor to utilize the maximum design.

Manhole sections shall be free from large honeycomb, cracks, spalls, large chips, exposed reinforcing, and broken bells and spigots. Edges of bells and spigots shall be even and straight. Mastic shall be "Ram-nek," or equivalent, with primer. The primer shall be applied to all contact surfaces of the manhole joint at the factory in accordance with the manufacturer's instructions.

- B. Frames and Covers - Manhole frame and covers shall be out of gray cast iron per ASTM A48, Class 35 without perforations and suitable for addition of cast iron or steel rings for upward adjustment of top. The word "SANITARY" shall be cast into the face of the cover in 1.5" (inches) to 2" (inch) letters raised flush with the top of the cover. Frames and covers shall have machine ground seats, a coating of coal tar pitch varnish, and be an approved equal to U.S. Foundry and Manufacturing Corp. No. USF 195-ORS. All manhole rings and covers shall be made water-tight by means of dovetail grooves and gaskets in the cover. Provide circular cover with two (2) pulls for removing manhole cover spaced at 180 degrees and weighing not less than 120 pounds.

Proof Load Testing: Traffic service castings shall have a first article proof load test conducted and the results of that proof load test shall be made available to the City upon request. The proof load test shall be conducted in accordance with the methods and procedures outlined in AASHTO M306-04, Section 5, Proof Load Testing. The casting shall be tested on a suitable and calibrated load testing machine and the casting shall hold a 40,000 pound proof load for one minute without experiencing any cracks or detrimental permanent deformation.

- C. Pipe Connections - Pipe/manhole connector shall be one piece rubber boot secured to pipe with stainless steel clamp band and to the manhole with stainless steel expansion ring. Kor-N-Seal Boot, A-lock or equal. Space between Kor-N-Seal boot and pipe OD shall be filled with non-shrink grout.
- D. Steps - Steps in manholes shall be 3/8"(inch) steel rods coated with polypropylene material.

1.07 DETECTOR TAPE:

- A. Will be used over all force main pipe. The tape shall be laid 18 inches from the top of the pipe and will be equivalent to Terra-Tape by Griffolyn Co., Inc., of Houston, Texas. The tape shall be "green" with the words "Force Main Below" or similar wording noted on the tape.

1.08 TRACING WIRE:

- A. All force mains below grade shall have a #14 gauge insulated single strand copper wire installed directly on top of the pipe line. The wire shall be secured to the pipe with tape or other accepted methods at spacing's of no more than 36" apart. Where appurtenances connect to the force main, the wire insulation shall be stripped so that the bare wires can and shall be joined securely together and wrapped with a rubberized insulation tape. The insulation tape shall completely cover all areas of the exposed wire. The insulated wire must maintain electrical continuity. This tracing wire system shall be checked and tested by the contractor in the presence of the owner or project representative, prior to acceptance of the force main installation. All equipment, meters, detectors, etc. needed for testing shall be furnished by the Contractor.
- B. A metal post shall be installed at the top of the canal bank where the force main has been relocated. Tracing wire shall be connected to the post and shall be marked as a Sanitary Sewer Force Main.

1.09 TEMPORARY BY PASS:

- A. PVC pipe shall be in accordance with ASTM D-2241 and AWWA C-905. The pipe shall be green in color and shall be class 200.
- B. HDPE pipe shall be in accordance with ASTM PE-3608 and AWWA C-906. The pipe shall be class 160.

1.10 PRODUCT REVIEW:

- A. The Contractor shall provide the Owner with a complete description of all products before ordering. The Owner will review all products before they are ordered.

PART 2 – EXECUTION

2.01 CONSTRUCTION OBSERVATION:

- A. The Owner will have the right to require that any portion of the work be done in his presence and if the work is covered up after such instruction, it shall be exposed by the Contractor for observation. However, if the Contractor notifies the Owner that such work is scheduled and the Owner fails to appear within 48 hours, the Contractor may proceed without him. All work done and materials furnished shall be subject to review by the Owner. Improper work shall be reconstructed. All materials which do not conform to the requirements of the specifications shall be removed from the work upon notice being received from the Owner for the rejection of such materials. The Owner shall have the right to mark rejected materials so as to distinguish them as such.

The Contractor shall give the Project Owner or Project Representative a minimum of 48 hours notice for all required observations or tests.

It will also be required of the Contractor to keep accurate, legible records of the location of all force mains and appurtenances. Final payment to the Contractor will be withheld until all such information is received and accepted.

2.02 LOCATION AND GRADE:

- A. The grade and the position of all force mains and other structures are shown on the drawings. Master control lines and bench marks have been provided by the Owner. The Contractor shall be responsible for the proper location and grade of the force mains.

2.03 EXCAVATION:

- A. The Contractor shall perform all excavations of every description and of whatever substance encountered to the depth shown on the plans or specified for all force mains and other appurtenances. All excavations shall be properly dewatered before installations are made, by the use of well points, pumping or other methods accepted by the Owner. The top portion of trenches may be excavated with sloping or vertical sides, except that the width of trench to a height of 2' above the top of the pipe shall not exceed 2' greater than the diameter of the pipe.

Where the character of the soil is such that the Owner determines it unsuitable for bedding, an additional foot of excavation will be authorized and the excavation backfilled with sand backfill. The bottom of all trenches shall be rounded to conform to the bottom of the pipe, so as to afford full bearing on the pipe barrel. Excavation in excess of the depths and widths required for pumping stations, force mains, and other structures shall be corrected by pouring sub foundations of Class "A" concrete and half cradles at the Contractor's expense.

2.04 BRACING AND SHEETING:

- A. The sides of all trenches and excavations shall be securely held by stay bracing, or by skeleton or solid sheeting and bracing, as required by the soil conditions encountered, to protect the adjoining property and for safety. Where shown on the drawings or where directed by the Owner, the Contractor must install solid sheeting to protect adjacent property and utilities. The sheeting shall be steel or timber and the Contractor shall submit design data, including the section modulus of the members and the arrangement for bracing at various depths, to the Owner for review before installing the sheeting. It shall penetrate at least 3' below the pumping station or force main invert. Sheeting shall be removed in units where the backfilling has reached the elevation necessary to protect the pumping station, force main, adjoining property and utilities.

When sheeting or shoring cannot be safely removed, it shall be left in place. Timber left in place shall be cut off at least 2' below the surface. No separate payment shall be made for bracing and sheeting except where shown on the drawings or authorized by the Owner.

2.05 LAYING FORCE MAIN:

- A. The force main shall be laid in a ditch prepared in accordance with Paragraph 2.03 "Excavation", so that after the force main is complete, the interior surface shall conform on the bottom accurately to the grades and alignment fixed or given by the Owner. Special care should be taken to provide a firm bedding in good material, select borrow, stone backfill or Class "A" concrete, as authorized, for the length of each joint and of the circumference. Holes shall be provided to relieve bells from bedding strain, but not so large as to allow separation of the bell from the barrel by settlement after backfilling. All pipe shall be cleaned out and left clean. Every third joint shall be filled around

immediately after being properly placed. The recommendations of the manufacturer of the particular pipe joint used shall be adhered to.

2.06 AIR RELEASE VALVE:

- A. The manhole and installation of the valve shall be in accordance with the detail. Prior to deciding on the location of any air release valve, the Contractor shall provide the Owner with an accurate profile of the installed force main so that high points in the system can be determined.

2.07 BACKFILLING:

- A. All trenches and excavation shall be backfilled immediately after the pipes are laid therein, unless other protection of the pipe line is directed. The backfilling material shall be selected and deposited with special reference to the future safety of the pipes. Except where special methods of bedding and tamping are provided for, clean earth or sand shall be solidly tamped about the pipe up to a level at least 2' above the top of the pipes and shall be carefully deposited to uniform layers, each layer solidly tamped or rammed with proper tools so as not to injure or disturb the pipeline. The remainder of the backfilling of the trench shall be carried on simultaneously on both sides of the pipe in 8" – 12" layers in such a manner that injurious side pressure does not occur. The material used shall be selected from excavated material anywhere on the work if any of this material is suitable.

Under the traffic areas the top 12" of backfill material shall be compacted to a density of not less than 100% at optimum moisture. Below the 12" line and to and including the area around the pipe the density shall not be less than 95% at optimum moisture. In areas other than traffic areas, the backfill material shall be compacted to a density equal to the surrounding soils. Compaction tests shall be conducted in accordance with ASTM D-1556 or D-2922 by an independent testing laboratory. The tests are to be taken at the direction of the Owner to average not more than 100 foot intervals. Laboratory tests shall conform to ASTM D-698. Whenever the trenches have not been properly filled, or if settlement occurs, they shall be refilled, smoothed off and finally made to conform to the surface elevation of the ground. Backfilling shall be carefully performed and the original surface restored to the full satisfaction of the Owner immediately after the installation.

2.08 STONE BACKFILL:

- A. Where, in the opinion of the Owner, the subgrade of the pipe trench is unsuitable material, the Contractor shall remove the unsuitable material 6" deep and furnish and place stone backfilling the trench to stabilize the subgrade. Attention is invited to the fact that the presence of water does not necessarily mean that stone backfill is required. If well points or other types of dewatering will remove the water, the Contractor shall be required to completely dewater the trench in lieu of stone backfill. Stone backfill will be limited to areas where well pointing and other conventional methods of dewatering will not produce a dry bottom. Stone shall be placed 6" deep and 2' wider than the pipe at the barrel. The pipe shall be carefully bedded in the stone as specified or in accordance with the manufacturer's recommendations.

2.09 LEAKAGE:

- A. The Contractor shall furnish equipment and plugs and subject the force mains to hydrostatic tests at 100 psi for a period of 2 hours. Any leaks shall be located and repaired. Each section tested shall be slowly filled with water, care being taken to expel all air from the pipes. No pipe installation will be accepted until the leakage during the pressure test is less than the number of gallons listed for each 1,000 feet of pipe tested.

6" & less – 0.9 gallons	12" – 1.8 gallons
8" – 1.2 gallons	14" – 2.1 gallons
10" – 1.5 gallons	16" – 2.4 gallons

2.10 CLOSING PIPE:

- A. When the work or pipe laying is suspended, either fro night or at other times, the end of the force main must be closed with a tight cover. The Contractor will be held responsible for keeping the force main free from obstruction.

2.11 ACCEPTANCE OF PORTIONS OF THE WORK:

- A. The Owner reserves the right to accept and use any portion of the work whenever it is considered to his interest to do so. The Owner shall have power to direct on what line the Contractor shall work and the order thereof.

2.12 RECORD DATA:

- A. It will be required of the Contractor to keep accurate, legible records of the location of all force mains. This record data will include survey coordinates of all bends and fittings on the force main. These records will be made available to the Owner before his final review for incorporation into the Owner's Record Drawings. Final payment to the Contractor will be withheld until all such information is received and accepted.

2.13 COMPACTION TESTING:

- A. Soil and compaction tests shall be made by a testing laboratory accepted by the Owner and shall be made at the Owners direction and expense. Failed tests shall be rescheduled at the Owners direction and retesting shall be paid for by the Contractor. Laboratory tests of the soil shall be made in accordance with ASTM D-698. In-place density tests shall be made in accordance with ASTM D-1556 or D-2922. Results of the tests shall be furnished to the Owner.

The minimum number of tests required shall be:

Backfill over in traffic areas 1 per 100 LF or less for each 4 feet of depth or portion thereof.

Backfill over sewer in non-traffic areas 1 per 200 lf or less for each 6 fee of depth or portion thereof.

END OF SECTION

SECTION 02270

EROSION AND SEDIMENTATION CONTROL

PART 1 – PRODUCTS

1.01 CHEMICALS FOR DUST CONTROL:

- A. Calcium Chloride, Anionic Asphalt Emulsion, Latex Emulsion or Resin-in-Water Emulsion may be used for dust control.

1.02 SILT FENCE FABRIC:

- A. Silt fence fabric shall be a woven fabric certified to meet FHWA's Task Force 25 minimum roll average per ASTM-D-4354. The geotextile fabric shall be a woven sheet of plastic yarn, of a long chain synthetic polymer composed of at least 85% by weight propylene, ethylene, amide, ester, or vinylidene chloride, and shall contain stabilizer and/or inhibitors added to the base plastic to make the filaments resistant to deterioration due to ultra-violet and/or heat exposure. The fabric should be finished so that the filaments will retain their relative position with respect to each other. The fabric shall be free of defects, rips, holes, or flaws.

The fabric shall meet the following requirements:

Woven Fabrics

Grab Strength	90 lbs.
Mullen Burst Strength	250 lbs.
UV Resistance	90%
Permittivity	15 gal/min/sf.

Product shall be equivalent to EXXON GTF-180 Fabric or AMOCO Woven Construction Fabric No. 1380.

Silt fencing shall not be placed in waterways or areas of concentrated flow. Type "C" wire-reinforced silt fence shall be used where fill slopes exceed 3:1.

”

1.03 HAY BALES:

- A. Hay bales rectangular in shape shall be bound with wire or nylon to securely contain the material. Pine straw bales may be used in lieu of hay bales. Bales shall be placed in a single row, lengthwise, on the contour and embedded in the soil to a depth of four (4) inches. Bales must be securely anchored in place by stake or bars driven through the bales.

1.04 PLASTIC FILTER FABRIC:

- A. Plastic filter fabric shall be a pervious sheet of plastic yarn, of a long chain synthetic polymer composed of at least 85% by weight propylene, ethylene, amide, ester, or vinylidene chloride, and shall contain stabilizers and/or inhibitors added to the base plastic to make the filaments resistant to deterioration due to ultra-violet and/or heat exposure. The cloth should be finished so that the filaments will retain their relative

position with respect to each other. The cloth shall be free of defects, rips, holes, or flaws. During shipment and storage, the filter fabric shall be wrapped in a protective material. The fabric shall meet the following requirements.

Woven Fabrics:

Tensile Strength (any direction)	200 lbs.
Bursting Strength	400 psi
Elongation Before Breaking	15%
Permittivity	4 gal/min/sf

Product shall be equivalent to EXXON GTF-400E or AMOCO Woven Construction Fabric No. 2002.

- B. Seams - Fabric may be sewn together with thread of a material having the same chemical requirements as the material forming the fabric or shall be bonded by cementing or by heat. The strength of the seams shall be equal to that of the unaged fabric. Fabrics to be used under Rip-Rap are allowed to be bonded or sewn together forming sections not less than six feet wide.

1.05 STONE:

- A. Stone shall be hard quarry, granite or field stone and shall be of such quality that the stone will not disintegrate on exposure to water or weather. The stone size, type and weight shall be as shown in conjunction with the structure with which it is associated.

1.06 RIP-RAP:

- A. Rip-rap shall be hard quarry or field stone, and shall be of such quality that they will not disintegrate on exposure to water and weather. The stone shall range in weight from a minimum of 25 pounds to a maximum of 150 pounds. At least 50 percent of the stone pieces shall weigh more than 60 pounds. The stone pieces shall have a minimum plane dimension of 12 inches. The filter fabric for permanent Rip-rap shall be Mirafi 140N or equivalent. Rip Rap shall not be placed on slopes steeper than 1.5 horizontal to 1.0 vertical.

PART 2 – EXECUTION

2.01 GENERAL:

- A. Every effort shall reasonably be employed by the Contractor to control erosion with the use of, but not limited to, terraces, grassing, and silt fencing during the project. All erosion and sedimentation control measures or facilities, whether temporary or permanent, shall be continuously maintained by the Contractor so as to be effective, or as ordered by the Owner.

2.02 CONSTRUCTION EXIT:

- A. Construction exits shall be located at the exits of the project to remove mud from the tires of all vehicles leaving the site. The construction exit shall consist of a minimum of six (6) inch thick pad of washed stone meeting Section AASHTO M288-96, Section 7.4, Stabilization Requirements. The aggregate size shall be in accordance with National Stone Association R-2 (1 ½"-3 ½" diameter in size and of the necessary length to accomplish the task for which it is intended. The pad may require periodic top dressing with 2" of similar stone. Geotextiles are required and a Separation/Stabilization fabric to keep the aggregate stone from becoming contaminated with sub grade soils. The geotextile shall be based on AASHTO M288-96 Specifications. The entrance area must be excavated to a depth of 3 inches and be cleaned of all vegetation and roots. Geotextile underliner must be placed the full length and width of the entrance.

2.03 DISTURBED AREA STABILIZATION:

- A. Vegetative cover will be placed on completed areas. This vegetative plan will be carried out on road cut and fill slopes, shoulders, and other critical areas created by construction. Plant grass seed as soon as construction in an area is completed. Planting will be made to control erosion, to reduce damage from sediment and runoff to downstream areas and to improve the safety and beauty of the development area.

Conventional Seeding Equipment - Grade, shape and smooth where needed to provide for safe equipment operation at seeding time and for maintenance purposes. The lime and fertilizer in dry form will be spread uniformly over the area immediately before seedbed preparation. A seedbed will be prepared by scarifying to a depth of 1 to 4 inches as determined on site. The seedbed must be well pulverized, smoothed and firmed. Seeding will be by a cultipacker-seeder, drill, rotary seeder, mechanical seeder, hand seeder or hydro-seeding. Seed will be distributed uniformly over a freshly prepared seedbed and covered lightly. Within 24 hours after seeding, with exception to hydro-seeding, straw or hay mulch will be spread uniformly over the area, leaving about 25 percent of the ground surface exposed. Mulch will be spread with blower-type mulch equipment or by hand and anchored immediately after it is spread. A disk harrow with the disk set straight or a special packer disk may be used to press the mulch into the soil.

Temporary and permanent seeding shall be in accordance with the seeding schedule shown on the construction plans.

2.04 DUST CONTROL ON DISTURBED AREAS:

- A. Dust raised from vehicular traffic will be controlled by wetting down the access road with water or by the use of a deliquescent chemical, such as calcium chloride, if the relative humidity is over 30%. Chemicals shall be applied in accordance with the manufacturer's recommendations. Calcium chloride, anionic asphalt emulsion, latex emulsion or resin-in-water emulsion may be used for dust control.

2.05 SEDIMENT BARRIER:

- A. Sediment barrier shall be constructed of hay bales (pine bales) anchored and embedded into the soil to prevent washout or water washing under the barrier. A minimum of two (2) re-bars, steel pickets or 2" x 2" stakes shall be used per bale and shall be long enough to extend through the bale and be driven into the ground a minimum of 1-1/2 feet. Where two (2) rows are called for, the bales shall be staggered. Bales shall be embedded in the soil to a depth of 4 inches.

Bales shall be placed in a single row, lengthwise, on the contour and embedded in the soil to a depth of four (4) inches. Bales must be securely anchored in place by stakes or bars driven through the bales.

2.06 SILT FENCE:

- A. Silt fence shall be placed at the approximate location shown on the plans and installed in accordance with the Georgia Erosion and Sediment Control Manual recommendations. Type "C" wire-reinforced silt fence shall be used where fill slopes exceeds 3:1. Silt fence shall not be placed in waterways or areas of concentrated flow.

2.07 STONE PLACEMENT:

- A. The minimum thickness or depth of the stone layer shall be shown on the drawings or the detail with which the device is associated. When used with a plastic filter fabric, the stone placing shall begin in a trench at the bottom of the slope with the filter fabric wrapped in stone. The entire mass of stone shall be placed so as to be in conformance with the lines, grades, and thickness shown on the drawings.

2.08 RIP-RAP:

- A. Rip-rap shall be placed in accordance with the notes on the drawings. Any rip rap that shall be permanent shall have an underlayment of filter fabric.

2.09 STORM DRAIN OUTLET PROTECTION:

- A. Storm drain outlets shall have a rock or other energy dispersion device associated with it, as called for on the drawings.

To prevent undermining of the rip-rap apron a separation geotextile shall be used beneath the entire length of apron. The geotextile shall be specified in accordance with AASHTO M288-96, Section 7.5, "Permanent Erosion Control Requirements".

2.10 INLET SEDIMENT TRAP:

- A. The Contractor shall erect silt fence at and around inlets under construction. Sufficient quantities of selected devices shall be utilized to completely protect the entire length of the inlet.

2.11 SITE RESTORATION:

- A. The site shall be restored in a manner suitable to accommodate the erosion control device or system of devices for the use which they are intended.

2.12 SITE SAFETY:

- A. The Contractor shall incorporate and utilize all necessary fencing and other safety barriers as necessary, or directed by Owner, to prevent trespassing into potentially dangerous areas of the erosion control area.

END OF SECTION

SECTION 02400
STORM DRAINAGE

PART 1 - PRODUCTS

1.01 PIPE:

- A. Concrete Pipe - Shall be reinforced Class III and shall conform to ASTM Specification C-76.
 - 1. Joints - Shall be water tight flexible rubber gasket and shall meet ASTM Specification C-443 and AASHTO M-198.
 - 2. Filter Fabric - Mirafi 140N or equivalent.
 - a. Concrete pipe shall be designed with no lifting holes. The lifting holes will jeopardize the structural integrity and hydraulic capacity of the pipe once installed.
 - b. A minimum depth of 12 inches cover is required for RCP Class III.

1.02 DRAINAGE STRUCTURES:

- A. Details - See plans.

Drainage structures include headwalls and inlets.
- B. Concrete - Reinforced and non-reinforced.
 - 1. Shall have a minimum compressive strength of 3,000 PSI in 28 days. Concrete shall be ready mixed conforming to ASTM C-94.
 - 2. Reinforcing steel shall conform to ASTM A-615, Grade 60. Mesh reinforcing shall conform to ASTM A-185. Reinforcing shall be covered by a minimum 1" of concrete for covers and 1-1/2" for walls and flooring and 3" where concrete is deposited directly against the ground.
 - 3. Expansion joint filler materials shall conform to ASTM Specification D-1751, to AASHTO M-90 or shall be resin impregnated fiberboard conforming to the physical requirements of ASTM Specification D-1752.
- C. Mortar:
 - 1. Mortar used at connections of pipe and drainage structures shall be composed of one part by volume of portland cement and two parts of sand. The portland cement shall conform to ASTM C-150, Type I or II. The sand shall conform to AASHTO Standard M-45 and shall be of an accepted gradation. Hydrated lime may be added to the mixture of sand and cement in an amount equal to 25% of the volume of cement used. Hydrated lime shall conform to ASTM C-141, Type A. The quantity of water in the mixture shall be sufficient to produce a workable mortar, but shall in no case exceed 7 gallons of water per sack of cement. Water shall be clean and free of harmful acids, alkalies and organic impurities. The mortar shall be used within 30 minutes from the time the ingredients are mixed with water.
- D. Brick Masonry - Brick shall conform to ASTM Specification C-62, Grade SW or C-55, Grade P-I or P-II. Mortar for jointing and plastering shall consist of one part portland cement and two parts fine sand. Lime may be added to the mortar in the amount not more than 25% of the volume of cement. The joints shall be completely filled and shall be smooth and free from surplus mortar on the inside of the structure. Brick structures shall be plastered with 1/2-inch of mortar over the entire outside surface of the walls. For square or rectangular structures, brick shall be laid in stretcher courses with a header

course every sixth course, and for round structures, brick shall be laid radially with every sixth course a stretcher course.

E. Precast - Shall be constructed in accordance with ASTM C-478 and conform to the details on the project drawings.

1. Joints - Shall be tongue and groove sealed with flexible gaskets or mastic sealant. Gaskets shall be O-Ring or Type A or B "Tylox" conforming to A.S.T.M. C-443 and mastic shall be "Ram-nek", or equivalent, with primer. The primer shall be applied to all contact surfaces of the manhole joint at the factory in accordance with the manufacturer's instructions.
2. Steps - Shall be aluminum alloy equivalent to Neenah R-1982-W or polypropylene equivalent to M.A. Industries, Type PS-1 or PS-1-PF. The steps shall be installed at the manhole factory and in accordance with the recommendations of the step manufacturer. Manholes will not be acceptable if steps are not installed accordingly, and properly aligned vertically.
3. Leaks - No leaks in the manholes or inlets will be acceptable. All repairs made from inside the manhole shall be made with mortar composed of one part portland cement and two parts clean sand; the mixing liquid shall be straight bonding agent equivalent to "Acryl 60".

1.03 STONE BACKFILL:

A. Shall be graded crushed granite with the following gradation:

<u>Square Opening Size</u>	<u>Percent Passing by Weight</u>
1"	100%
3/4"	90% to 100%
3/8"	0% to 65%
No. 4	0% to 25%
No. 100	0% to 10%

1.04 SAND BACKFILL:

A. Shall be free from clay and organic material. Not more than 10% shall pass the No. 100 sieve.

1.05 BORROW:

A. Where it is determined by the Owner that sufficient suitable material is not available from the site to satisfactorily backfill the pipe to at least 2 feet above the top of the pipe, the Contractor shall furnish suitable sandy borrow material to accomplish the requirements. The material shall have not more than 60% passing the No. 100 sieve, nor more than 20% passing the No. 200 sieve.

PART 2 - EXECUTION & TESTING

2.01 LOCATION AND GRADE:

- A. The line and grade of the sewer and ditches and the position of all manholes and other structures are shown on the drawings. The grade line as given on the profile or mentioned in these specifications means the invert or bottom of the inside of the pipe or bottom of ditch. The Contractor shall be responsible for the proper locations and grade of the sewers.

2.02 EXCAVATION FOR PIPE:

- A. Excavated material shall be piled a sufficient distance from the trench banks to avoid overloading to prevent slides or cave-ins.
- B. Remove from site all material not required or suitable for backfill.
- C. Grade as necessary to prevent water from flowing into excavations.
- D. Remove all water accumulating in the excavation from surface flow, seepage or otherwise, by pumping or other accepted method.
- E. Sheet piling, bracing or shoring as necessary for the protection of the work and safety of personnel.

2.03 TRENCHING FOR PIPE:

- A. Trenching for Pipe – Shall be as indicated on the drawings.
- B. Removal of Unstable Material - Where wet or otherwise unstable soil, incapable of supporting the pipe, as determined by the Owner, is encountered in the bottom of the trench, such material shall be removed to the depth required and replaced to the proper grade with select material, compacted as provided in the paragraph "BACKFILLING PIPE", hereinafter.

2.04 BRACING AND SHEETING:

- A. The sides of all trenches shall be securely held by stay bracing, or by skeleton or solid sheet piling and bracing, as required by the soil conditions encountered, to protect the adjoining property and for safety. Where shown on the drawings or where directed by the Owner, the Contractor must install solid sheet piling to protect adjacent property and utilities. The sheet piling shall be steel or timber and the Contractor shall submit design data, including the section modules of the members and the arrangement for bracing at various depths, to the Owner for review before installing the sheet piling. It shall penetrate at least 3 feet below the pipe invert. Sheet piling shall be removed in units when the backfilling has reached the elevation necessary to protect the pipe, adjoining property and utilities.

When sheet piling or shoring above the elevation cannot be safely removed, it shall be left in place. Timber left in place shall be cut off at least 2 feet below the surface. No separate payment shall be made for bracing and sheet piling except where shown on the drawings or authorized by the Owner.

2.05 BEDDING:

- A. The bedding surface for the pipe shall provide a firm foundation of uniform density throughout the entire length of the pipe. The trench bottom shall be dewatered before laying pipe by the use of well points. Where the nature of the soil is such that well points will not remove the water, the Contractor shall construct sumps and use sump pumps to remove all water from the bedding surface. The pipe shall be carefully bedded in a foundation that has been accurately shaped and rounded to conform to the lowest one-fourth (1/4) of the outside portion of circular pipe, or to the lower curved portion of arch

pipe for the entire length of the pipe. When necessary, the bedding shall be tamped to compact it to 98% of optimum density. Bell holes and depressions for joints shall be only of such length, depth and width as required for properly making the particular type joint.

- B. Stone Backfill - Where, in the opinion of the Owner, the subgrade of the pipe trench is unsuitable material, the Contractor shall remove the unsuitable material six inches (6") deep and furnish and place stone backfill in the trench to stabilize the subgrade. The stone shall be 3/4-inch graded but variations in the gradation will be permitted upon acceptance by the Owner. Attention is invited to the fact that the presence of water does not necessarily mean that stone backfill is required. If well points or other types of dewatering will remove the water, the Contractor shall be required to completely dewater the trench in lieu of stone backfill. Stone backfill will be limited to areas where well pointing and other conventional methods of dewatering will not produce a dry bottom. Pipe shall be carefully bedded in the stone as specified above.

2.06 PLACING PIPE:

- A. Each pipe shall be carefully examined before being laid, and defective or damaged pipe shall not be used. Pipe lines shall be laid to the grades and alignment indicated. Proper facilities shall be provided for lowering sections of pipe into trenches. Under no circumstances shall pipe be laid in water, and no pipe shall be laid when trench conditions or weather are unsuitable for such work. Diversion of drainage or dewatering of trenches during construction shall be provided as necessary. All pipe in place shall have been checked before backfilling. When storm drain pipe terminates in a new ditch, the headwall or end section together with ditch pavement, if specified, shall be constructed immediately as called for on the plans. Ditch slopes and disturbed earth areas shall be grassed and mulched as required. The Contractor will be responsible for maintaining these newly constructed ditches and take immediate action subject to acceptance to keep erosion of the ditch bottom and slopes to a minimum during the life of the contract. No additional compensation will be given to the Contractor for the required diversion of drainage and/or dewatering of trenches. Grassing of the completed earth surface of the trench backfill shall conform to the technical specification for Grassing.
- B. Concrete Pipe - Laying shall proceed upgrade with the spigot ends of bell and spigot pipe and the tongue ends of tongue and groove pipe pointing in the direction of the flow.

2.07 JOINTS IN PIPES:

- A. Concrete Pipe - Flexible watertight joint shall be made with rubber-type gaskets for concrete pipe. The design of joints and the physical requirements for rubber-type gaskets shall conform to ASTM Specification C-443 or AASHTO Standard M-198. Gaskets and jointing materials shall have not more than one splice, except that two splices of the rubber gasket type will be permitted if the nominal diameter of the gasket exceeds 54-inches.
 - 1. Installation of Filter Fabric at Joint - After each joint is joined together, the Contractor shall place two layers of filter fabric around the joint a minimum width of four feet, centered on the joint.

2.08 BACKFILLING PIPE:

- A. After the bedding has been prepared and the pipe installed, select material from excavation or borrow, at a moisture content that will facilitate compaction, shall be placed along both sides of the pipe in layers not exceeding six-inches (6") in compacted depth. The backfill shall be brought up evenly on both sides of the pipe for the full length of the pipe. Care shall be taken to insure thorough compaction of the fill under the haunches of the pipe. Each layer shall be thoroughly compacted with mechanical tampers or rammers. This method of filling and compaction shall continue until the fill has reached an elevation of at least 12-inches above the top of the pipe. The remainder of the trench shall be backfilled and compacted by spreading and rolling or compacted by mechanical tampers or rammers in layers not to exceed 8-inches. Soil density relations tests and moisture density relations tests may be performed by a testing firm or laboratory and shall

be taken as directed in conformance with the compaction requirements specified in subparagraph "COMPACTION" hereinafter. Deficiencies shall be corrected by the Contractor without additional cost to the Owner. Where it is necessary in the opinion of the Owner, any sheeting and/or portions of bracing used shall be left in place. Untreated sheeting shall not be left in place beneath structures or pavements.

- B. For pipe placed in fill sections, the backfill material and the placement and compaction procedures shall be as specified above and in subparagraph "COMPACTION" hereinafter. The fill material shall be uniformly spread in layers longitudinal on both sides of the pipe, not exceeding six inches (6") in compacted depth, and shall be compacted by rolling parallel with pipe or by mechanical tamping or ramming. Prior to commencing normal filling operations, the crown width of the fill at a height of 12-inches above the top of the pipe shall extend a distance of not less than twice the outside diameter on each side of the pipe or 12 feet, whichever is less. After the backfill has reached at least 12-inches above the top of the pipe, the remainder of the fill shall be placed and thoroughly compacted in layers not exceeding 8-inches.
- C. In compacting by rolling or operating heavy equipment parallel with the pipe, displacement of or injury to the pipe shall be avoided. Movement of construction machinery over a culvert at any stage of the construction shall be at the Contractor's risk. Any pipe damaged thereby shall be repaired or replaced at the expense of the Contractor.

2.09 COMPACTION:

- A. Soil and compaction tests shall be made by a testing laboratory accepted by the Owner and shall be made at the Owner's direction and expense. Failed tests shall be rescheduled at the Owner's direction and retesting shall be paid for by the Contractor. Laboratory tests of the soil shall be made in accordance with ASTM D-1556 or ASTM 2922. Results of the tests shall be furnished to the Owner by the testing laboratory.

The minimum number of tests required shall be:

Backfill over pipe in traffic areas . . . 1 per 100 lf or less for each 4 feet of depth or portion thereof. (Minimum of 2 for any line segment)

Backfill over pipe in non-traffic areas . . 1 per 200 lf or less for each 6 feet of depth or portion thereof.

The minimum percent of compaction of the backfill material (in accordance to AASHTO T-99) shall be the following:

In traffic areas . . . 100%

In non-traffic areas . 95%

2.10 DRAINAGE STRUCTURES:

- A. Drainage structures shall be constructed of the materials specified for each type and in accordance with the details shown on the drawings.

2.11 LEAKAGE:

- A. All visible leaks shall be repaired, regardless of the amount of leakage.

2.12 CLEANING:

- A. Before acceptance of the sewer system it shall be tested and cleaned to the satisfaction of the Owner. Where any obstruction is met, the Contractor will be required to clean the sewers by means of rods and swabs or other instruments. The pipe line shall be straight and show a uniform grade.

2.13 CLOSING PIPE:

- A. When the work or pipe laying is suspended, either for night or at other times, the end of the sewer must be closed with a tight cover. The Contractor will be held responsible for keeping the sewer free from obstruction.

2.14 REGRADE EXISTING DITCH:

- A. Designated existing ditches shall be regraded and shaped to provide a bottom with a uniform slope, without depressions that hold water, and that conforms to the plan grades. The side slopes shall be smooth and uniform, dressed by hand if necessary, conforming to the indicated slopes.

END OF SECTION

ATTACHMENT A

DRUG - FREE WORKPLACE CERTIFICATION

THE UNDERSIGNED CERTIFIES THAT THE PROVISIONS OF CODE SECTIONS 50-24-1 THROUGH 50-24-6 OF THE OFFICIAL CODE TO GEORGIA ANNOTATED, RELATED TO THE **DRUG-FREE WORKPLACE**, HAVE BEEN COMPLIED WITH IN FULL. THE UNDERSIGNED FURTHER CERTIFIES THAT:

1. A Drug-Free Workplace will be provided for the employees during the performance of the contract; and
2. Each sub-contractor under the direction of the Contractor shall secure the following written certification:

(CONTRACTOR)
certifies to Chatham County that a Drug-Free Workplace will be provided for the employees during the performance of this contract known as procurement **Pipemakers Canal Double 24" Pipe Replacement** (PROJECT) pursuant to paragraph (7) of subsection (B) of Code Section 50-24-3. Also, the undersigned further certifies that he/she will not engage in the unlawful manufacture, sale, distribution, possession, or use of a controlled substance or marijuana during the performance of the contract.

CONTRACTOR

DATE

NOTARY

DATE

ATTACHMENT B

PROMISE OF NON-DISCRIMINATION STATEMENT

Know All Men By These Presence, that I (We), _____
Name

Title Name of Bidder

(herein after Company) in consideration of the privilege to bid/or propose on the following
Chatham County project procurement **Pipemakers Canal Double 24" Pipe Replacement**
hereby consent, covenant and agree as follows:

- (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 the bid submitted to Chatham County or the performance of the 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 with the Company, including those companies owned and controlled by racial minorities, and women;
- (3) In connection herewith, I (We) acknowledge and warrant that this Company has been made aware of, understands and agrees to take affirmative action to provide minority and women owned companies with the maximum practicable opportunities to do business with this Company on this contract;
- (4) That the promises of non-discrimination as made and set forth herein shall be continuing throughout the duration of this contract with Chatham County;
- (5) That the promises of non-discrimination as made and set forth herein shall be and are hereby deemed to be made a part of and incorporated by reference in the contract which this Company may be awarded;
- (6) That the failure of this Company to satisfactorily discharge any of the promises of non-discrimination as made and set forth above may constitute a material breach of contract entitling the County to declare the contract in default and to exercise appropriate remedies including but not limited to termination of the contract.

Signature

Date

ATTACHMENT C

DISCLOSURE OF RESPONSIBILITY STATEMENT

Failure to complete and return this information will result in your bid/offer/proposal being disqualified from further competition as non-responsive.

1. List any convictions of any person, subsidiary, or affiliate of the company, arising out of obtaining, or attempting to obtain a public or private contract or subcontract, or in the performance of such contract or subcontract.

2. List any indictments or convictions of any person, subsidiary, or affiliate of this company for offenses such as embezzlement, theft, fraudulent schemes, etc. or any other offenses indicating a lack of business integrity or business honesty which affects the responsibility of the contractor.

3. List any convictions or civil judgments under states or federal antitrust statutes.

4. List any violations of contract provisions such as knowingly (without good cause) to perform, or unsatisfactory performance, in accordance with the specifications of a contract.

5. List any prior suspensions or debarments by any governmental agency.

6. List any contracts not completed on time.

7. List any penalties imposed for time delays and/or quality of materials and workmanship.

8. List any documented violations of federal or any state labor laws, regulations, or standards, occupational safety and health rules.

I, _____, as _____
Name of individual Title & Authority

of _____, declare under oath that

Company Name _____

the above statements, including any supplemental responses attached hereto, are true.

Signature

State of _____

County of _____

Subscribed and sworn to before me on this _____ day of _____

20__ by _____ representing him/herself to be

_____ of the company named herein.

Notary Public

My Commission expires:

Resident State: _____

ATTACHMENT D

CONTRACTOR AFFIDAVIT under O.C.G.A. § 13-10-91(b)(1)

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

Federal Work Authorization User Identification Number

Date of Authorization

Name of Contractor

Name of Project

Name of Public Employer

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

Executed on _____, ___, 201__ in _____(city), _____(state).

Signature of Authorized Officer or Agent

Printed Name and Title of Authorized Officer or Agent

SUBSCRIBED AND SWORN BEFORE ME
ON THIS THE _____ DAY OF _____, 201__.

NOTARY PUBLIC

My Commission Expires:

SUBCONTRACTOR AFFIDAVIT under O.C.G.A. § 13-10-91(b)(3)

By executing this affidavit, the undersigned subcontractor verifies its compliance with O.C.G.A. 13-10-91, stating affirmatively that the individual, firm or corporation which is engaged in the physical performance of services under a contract with _____ (name of contractor) on behalf of CHATHAM COUNTY has registered with, is authorized to use and uses the federal work authorization program commonly known as E-Verify, or any subsequent replacement program, in accordance with the applicable provisions and deadlines established in O.C.G.A. § 13-10-91. Furthermore, the undersigned subcontractor will continue to use the federal work authorization program throughout the contract period and the undersigned subcontractor will contract for the physical performance of services in satisfaction of such contract only with sub-subcontractors who present an affidavit to the subcontractor with the information required by O.C.G.A. § 13-10-91 (b). Additionally, the undersigned subcontractor will forward notice of the receipt of an affidavit from a sub-subcontractor to the contractor within five (5) business days of receipt. If the undersigned subcontractor receives notice of receipt of an affidavit from any sub-subcontractor that has contracted with a sub-subcontractor to forward, within five (5) business days of receipt, a copy of such notice to the contractor. Subcontractor hereby attests that its federal work authorization user identification number and date of authorization are as follows:

Federal Work Authorization User Identification Number

Date of Authorization

Name of Subcontractor

Name of Project

Name of Public Employer

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

Executed on _____, ___, 201__ in _____(city), _____(state).

Signature of Authorized Officer or Agent

Printed Name and Title of Authorized Officer or Agent

SUBSCRIBED AND SWORN BEFORE ME

ON THIS THE _____ DAY OF _____, 201__.

NOTARY PUBLIC

My Commission Expires:

ATTACHMENT E

CHATHAM COUNTY, GEORGIA

**BIDDER'S CERTIFICATION REGARDING DEBARMENT, SUSPENSION,
INELIGIBILITY AND VOLUNTARY EXCLUSION**

The undersigned certifies, by submission of this proposal or acceptance of this contract, that neither Contractor nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency, State of Georgia, City of Savannah, Board of Education or local municipality. Bidder agrees that by submitting this proposal that Bidder will include this clause without modification in all lower tier transactions, solicitations, proposals, contracts and subcontracts. Where the Bidder or any lower tier participant is unable to certify to this statement, that participant shall attach an explanation to this document.

Bidder must verify Sub-Tier Contractors and Suppliers are not debarred, suspended, ineligible, pending County litigation or pending actions from any of the above government entities.

Certification - the above information is true and complete to the best of my knowledge and belief.

(Printed or typed Name of Signatory)

(Signature)

(Date)

NOTE: The penalty for making false statements in offers is prescribed in 18 U.S.C. 1001

END OF DOCUMENT Mod. CC P & C 6/2005

ATTACHMENT F

Chatham County
Minority and Women Business Enterprise Program
M/WBE Participation Report

Name of Bidder: _____

Name of Project: _____

Bid No: _____

M/WBE Firm	Type of Work	Contact Person/ Phone #	City, State	%	MBE or WBE

MBE Total _____

WBE Total _____%

M/WBE Combined _____%

The undersigned should enter into a formal agreement with M/WBE Contractor identified herein for work listed in this schedule conditioned upon execution of contract with the Chatham County Board of Commissioners.

Signature _____ Print _____

Phone (____) _____

Fax (____) _____

ATTACHMENT G

Systematic Alien Verification for Entitlements (SAVE)
Affidavit Verifying Status for Chatham County Benefit Application

By executing this affidavit under oath, as an applicant for a Chatham County, Georgia Business License or Occupation Tax Certificate, Alcohol License, Taxi Permit, Contract or other public benefit as reference in O.C.G.A. Section 50-36-1, I am stating the following with respect to my bid for a Chatham County contract for _____. [Name of natural person applying on behalf of individual, business, corporation, partnership, or other private entity]

1.) _____ I am a citizen of the United States.

OR

2.) _____ I am a legal permanent resident 18 years of age or older.

OR

3.) _____ I am an otherwise qualified alien (8 § USC 1641) or non-immigrant under the Federal Immigration and Nationality Act (8 USC 1101 et seq.) 18 years of age or older and lawfully present in the United States.*

In making the above representation under oath, I understand that any person who knowingly and willfully makes a false, fictitious, or fraudulent statement or representation in an affidavit shall be guilty of a violation of Code Section 16-10-20 of the Official Code of Georgia.

Signature of Applicant:

Date

Printed Name:

SUBSCRIBED AND SWORN
BEFORE ME ON THIS THE
____ DAY OF _____, 20____

* _____
Alien Registration number for non-citizens.

Notary Public
My Commission Expires:

ATTACHMENT H

Chatham Apprentice Program Documentation

(must be submitted to Arneja Riley County MWBE Coordinator with 1st Pay Request)

Contractor _____

Name of Project _____

Contract No. _____

1) Contractor has contact CAP office to determine availability of specific labor classes which may be utilized for the project:

Date of Inquiry

of Available Participants

2) Anticipated number of CAP students that will be hired and related trade category:

Trade Category _____

Trade Category _____

Trade Category _____

3) If CAP students are not anticipated to be hired for this project, the contractor must briefly explain.

Any questions regarding the Construction Apprentice Program and available participant labor should be directed to Daniel Dodd-Ramirez at (912) 232-6747.

REFERENCE FORM

REFERENCES - \$499,999 or less: On July 25, 2003 the Board of Commissioners directed that all construction projects with a bid of \$499,999 or less, for bidders to be responsive each must provide information on the most recent three (3) projects with similar scope of work as well as other information to determine experience and qualifications as follows. If the contractor has performed any work for the Chatham County Board of Commissioners within the last five (5) years, at least one (1) of the three (3) owner references must be from the appropriate party within the Chatham County Government

- a. Project Name: _____
 Location: _____
 Owner: _____
 Address: _____
 City and State: _____
 Contact: _____
 Phone & Fax: _____
 *Architect or Engineer: _____
 Contact: _____
 Phone & Fax: _____
 Email: _____
- b. The awarded bid amount and project start date. _____
- c. Final cost of project and completion date. _____
- d. Number of change orders. _____
- e. Contracted project completion in days. _____
- f. Project completed on time. Yes _____ No _____ Days exceeded _____
- g. List previous contracts your company performed for Chatham County by Project Title, date and awarded/final cost. _____
- h. Has contractor ever failed to complete a project? _____ If so, provide explanation. _____
- i. Have any projects ever performed by contractor been the subject of a claim or lawsuit by or against the contractor? _____ If yes, please identify the nature of such claim or lawsuit, the court in which the case was filed and the details of its resolution. _____

REFERENCE FORM

REFERENCES - \$499,999 or less: On July 25, 2003 the Board of Commissioners directed that all construction projects with a bid of \$499,999 or less, for bidders to be responsive each must provide information on the most recent three (3) projects with similar scope of work as well as other information to determine experience and qualifications as follows. If the contractor has performed any work for the Chatham County Board of Commissioners within the last five (5) years, at least one (1) of the three (3) owner references must be from the appropriate party within the Chatham County Government

- a. Project Name: _____
 Location: _____
 Owner: _____
 Address: _____
 City and State: _____
 Contact: _____
 Phone & Fax: _____
 *Architect or Engineer: _____
 Contact: _____
 Phone & Fax: _____
 Email: _____
- b. The awarded bid amount and project start date. _____
- c. Final cost of project and completion date. _____
- d. Number of change orders. _____
- e. Contracted project completion in days. _____
- f. Project completed on time. Yes _____ No _____ Days exceeded _____
- g. List previous contracts your company performed for Chatham County by Project Title, date and awarded/final cost.
- h. Has contractor ever failed to complete a project? _____ If so, provide explanation.
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CHECKLIST FOR SUBMITTING BID

Sign below and submit this sheet with Bid

NOTE: All of the following items must be submitted with your Bid to be considered "responsive".

1. ACKNOWLEDGMENT OF ANY/ALL ADDENDUMS (Page 3 of ITB).
2. ORIGINAL SURETY BOND (5% OF BID) ALONG WITH SURETY REQUIREMENTS SHEETS FILLED OUT.
3. BID SHEET COMPLETELY FILLED OUT AND SIGNED.
4. "LIST OF SUBCONTRACTORS" SHEET FILLED OUT WITH ALL SUBCONTRACTORS AND SUPPLIERS.
5. "% TO MBE SUBCONTRACTORS/SUPPLIERS' SHEET COMPLETELY FILLED OUT SHOWING \$ AMOUNT AS WELL AS % OF PROJECT THAT IS PROJECTED TO GO TO MBE/WBE SUBCONTRACTORS/SUPPLIERS.
6. SECTION 2.31 OF ITB - **REFERENCES:** Read this section and submit the correct number of "References" (based on total dollar amount of project) Note: Supply ALL the information that is requested for each Reference. NOTE: *Forms for Reference Information are attached to this Bid Package.*
7. ALL FIRMS REQUESTING TO DO BUSINESS WITH CHATHAM COUNTY MUST REGISTER ON-LINE AT [HTTP://PURCHASING.CHATHAMCOUNTY.ORG](http://PURCHASING.CHATHAMCOUNTY.ORG).
8. COMPLETE AND SUBMIT ALL ATTACHMENTS TO THE ITB (Attachments A thru H). D-2 IS TO BE FILLED OUT FOR EACH SUBCONTRACTOR.

NAME/TITLE

COMPANY NAME

ADDRESS

CITY/STATE/ZIP

PHONE NUMBER

FAX NUMBER

LEGAL NOTICE

CC NO. 165898

Invitation to Bid

Sealed Bids will be received until 2:00 P.M. on AUGUST 19, 2014 and publicly opened in Chatham County Purchasing & Contracting Department, at The Chatham County Citizens Service Center, 1117 Eisenhower Drive, Suite C, Savannah, Georgia 31406, for: BID NO : 14-0088-4 PIPEMAKERS CANAL DOUBLE 24" PIPE REPLACEMENT

PRE-BID CONFERENCE: Conference will be held at The Chatham County Citizens Service Center, 1117 Eisenhower Drive, Suite C, Savannah, Georgia on AUGUST 5, 2014, at 2:00 PM. You are encouraged to attend.

Plans are available and must be purchased from Clayton Digital Reprographics (CDR) located at 1101 Chatham Parkway, Suite A2, Garden City, Georgia, 31408. CDR phone: 912-447-5445, fax 912-233-7020, e-mail: cdwest@cdrepro.com

The Bid Package can be downloaded and printed from the County website <http://purchasing.chathamcounty.org> Also, all firms requesting to do business with Chatham County must also register on-line at website: <http://purchasing.chathamcounty.org>

For any additional questions regarding this bid, please contact Robert Marshall, Senior Procurement Specialist, at 912-790-1622 or rmarshall@chathamcounty.org

Bid Bond is required at the time of bid. (5% of total bid)
Payment and Performance Bonds (100% of bid) will be required for this project at the time of contract award.

CHATHAM COUNTY HAS THE AUTHORITY TO REJECT ALL BIDS AND WAIVE MINOR FORMALITIES.

"CHATHAM COUNTY IS AN EQUAL OPPORTUNITY EMPLOYER, M/F/H, ALL BIDDERS ARE TO BE EQUAL OPPORTUNITY EMPLOYERS"


MARGARET H. JOYNER, PURCHASING AGENT

SAVANNAH NEWS/PRESS INSERT: Jul.21, Aug. 4, 2014

Please send affidavit to:

Chatham County Purchasing & Contracting Department
1117 Eisenhower Drive, Suite C
Savannah, Georgia 31406
(912) 790-1622