

INVITATION TO BID

PROPOSAL

BID NO. 10-8-3-4

**SITE DEVELOPMENT FOR THE CHATHAM COUNTY COMMUNICATIONS
TOWER**

PREBID CONF: 2:00PM, MARCH 2, 2010

BID OPENING: 2:00PM, MARCH 16, 2010

THE COMMISSIONERS OF CHATHAM COUNTY, GEORGIA

PETE LIAKAKIS, CHAIRMAN

COMMISSIONER HELEN J. STONE

COMMISSIONER HARRIS ODELL JR.

COMMISSIONER JAMES J. HOLMES

COMMISSIONER DAVID M. GELLATLY

COMMISSIONER PATRICK O. SHAY

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.**

☒ GENERAL INFORMATION AND INSTRUCTIONS TO BID WITH ATTACHMENTS

☒ SURETY REQUIREMENTS (A Bid Bond of 5% with this ITB)

☒ PROPOSAL

☐ PLANS/DRAWINGS - (Plans and Specifications are available and must be purchased at the Purchasing Department for \$50 non-refundable)

☒ BID SCHEDULE

☐ PERFORMANCE BOND - UPON AWARD OF CONTRACT

☐ PAYMENT BOND - UPON AWARD OF CONTRACT

☐ CONTRACT

☒ LEGAL NOTICE

☒ AFFIDAVIT OF PAYMENT

☒ ATTACHMENTS: A. DRUG FREE WORKPLACE; B. NONDISCRIMINATION STATEMENT; C. DISCLOSURE OF RESPONSIBILITY STATEMENT; D. IMMIGRATION & SECURITY FORM; E. CONTRACTOR/SUBCONTRACTOR AFFIDAVIT & AGREEMENT.

☐ 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 female owned businesses. In order to accurately document participation, businesses submitting bids or proposals are encouraged to report ownership status. A minority or female business is defined as a business with 51% or greater minority or female ownership. Please check ownership status as applicable:

African-American _____ Asian American _____ Hispanic _____

Native American or Alaskan Indian _____ Female _____

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 NUMBERS _____

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
POST OFFICE BOX 15180
SAVANNAH, GEORGIA 31416
(912) 790-1622

Date: February 10, 2010

BID NO. 10-8-3-4

GENERAL INFORMATION FOR INVITATION FOR BID/PROPOSAL

This is an invitation to submit a bid or proposal to supply Chatham County with construction, equipment, supplies and/or services as indicated herein. Sealed bids or proposals will be received at the Office of the Purchasing Agent, **at The Chatham County Citizens Service Center, 1117 Eisenhower Drive, Suite C, Savannah, Georgia, up to 2:00PM, MARCH 16, 2010** at which time they will be opened and publicly read. **The County reserves the right to reject all bids or proposals for any bid or proposal that is non-responsive or not responsible.**

Instructions for preparation and submission of a bid or proposal are contained in this Invitation For Bid/Proposal package. Please note that specific forms for submission of a bid/proposal are required. Bids must be typed or printed in ink. If you do not submit a bid/proposal, return the signed bid invitation sheet and state the reason; otherwise, your name may be removed from our bidders list.

A pre-bid conference has been scheduled to be conducted **at the Chatham County Purchasing & Contracting Office located at The Chatham County Citizens Service Center, 1117 Eisenhower Drive, Suite C, Savannah, Georgia, at 2:00PM, MARCH 2, 2010** 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 not Special Purpose Local Option Sales Tax (SPLOST) Project. See paragraph 2.22 for MBE/WBE participation goals.

INSTRUCTIONS TO BIDDERS/PROPOSERS

- 1.1 **Purpose:** The purpose of this document is to provide general and specific information for use in submitting a bid or proposal to supply Chatham County with equipment, supplies, and/or services as described herein. All bids/proposals 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 Bid Proposals:** All bid proposals 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 proposal. **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 Bid Proposals:** All bid proposals shall be:

- a. **Submitted in sealed opaque envelopes, 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: Purchasing Agent, Post Office Box 15180, Savannah, Georgia 31416.**
 2. **Hand Delivery: Purchasing Agent, Chatham County Citizens Service Center, 1117 Eisenhower Drive, Suite C, Savannah, Georgia.**

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 **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.
- 1.9 **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.
- 1.10 **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.
- 1.11 **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.
- 1.12 ***Local Preference:** On 27 March, 1998 the Board of Commissioners adopted a Local Vendor Preference Ordinance. This Ordinance does not apply to construction contracts. However, contractors are encouraged to apply the same method when awarding bids to local and local M/WBE businesses when ever possible in order to promote growth in Chatham County's economy. **NOTE: Local Preference does not apply to Public Works Construction contracts.**

- 1.13 **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. Also, any contractor or subcontractor that has pending litigation with the County will not be considered for contract award.

**** 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.

- 1.14 **Performance Evaluation:** On April 11, 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.

- 1.15 **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 April 8, 1994.

- 1.16 **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 July 1, 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).

A copy of your licence must be a part of your bid documents at the time of the bid opening.

- 1.17 **Immigration:** On July 1, 2008 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.

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.

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 mention 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 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:** Unless otherwise specified by the County, the bidder shall unconditionally guarantee the materials and workmanship 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 unresponsive 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 (912) 201-4300 for additional information.

- 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.

Minimum Limits: \$1 million per claim/occurrence

Coverage Requirement: If claims-made, retroactive date must precede or coincide with the contract effective date or the date of the Notice to Proceed. The professional must state 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.

Minimum Limits: All-Risk coverage equal 100% of contract value

Coverage Requirements: 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) 652-7905 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 or contractor 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 Not Used.

2.22 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/FBE 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 12% MBE and 5% WBE.

- c. A Minority/Female Business Enterprise (M/FBE) is a business concern that is at least 51% owned by one or more minority/female individuals (2) and whose daily business operations are managed and directed by one or more of the minority/female owners.

2.23 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.

- 2.24 **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 IFBs will be read allowed at public bid openings. After Bid Tabulations, the IFB 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.

- 2.25 **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.

- 2.26 **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 th three (3) years following completion. Again, this is contract specific to the County contracts only.

- 2.27 **EXCEPTIONS**-All proceedings, records, contracts and other public records relating to procurement transactions shall be open to the inspection of any citizen, or any interested person, firm or corporation, in accordance with the Georgia Open Records Act except as provided below:

- a. Cost estimates relating to a proposed procurement transaction prepared by or for a public body shall not be open to public inspection.
- b. Any competitive sealed bidding bidder, upon request, shall be afforded the opportunity to inspect bid records within a reasonable time after the opening of all bids but prior to award, except in the event that the County decides not to accept any of the bids and to rebid the contract. Otherwise, bid records shall be open to public inspection only after award of the contract. Any competitive negotiation offeror, upon request, shall be afforded the opportunity to inspect proposal records within a reasonable time after the evaluation and

negotiations of proposals are completed but prior to award except in the event that the County decides not to accept any of the proposals and to reopen the contract. Otherwise, proposal records shall be open to the public inspection only after award of the contract except as provided in paragraph "c" below. Any inspection of procurement transaction records under this section shall be subject to reasonable restrictions to ensure the security and integrity of the records.

- c. Trade secrets or proprietary information submitted by a bidder, offeror or contractor in connection with a procurement transaction shall not be subject to public disclosure under the Georgia Open Records Act; however, the bidder, offeror or contractor must invoke the protections of this section prior to or upon submission of the data or other materials, and must identify the data or other materials to be protected and state the reasons why protection is necessary.
- d. Nothing contained in this section shall be construed to require the County, when procuring by "competitive negotiation" (Request for Proposal), to furnish a statement of the reasons why a particular proposal was not deemed to be the most advantageous to the County.

2.28 **REFERENCES - \$500,000 or more:** On July 25, 2003 the Board of Commissioners directed that all construction projects with a bid of \$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: _____
 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.

\$499,000 and less: Provide references from owners of at least three (3) projects of various sizes for which contractor was the prime contractor. 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 Price Change: Preference shall be given to the bidder submitting the lowest and best firm price as his bid. Should it be found that due to unusual market conditions it is to the best interest of the County to accept a price with an escalation clause, the following shall apply:

The contract price shall be frozen for a specified period. This period must be shown on your bid 10-8-3-4 Cost data to support any proposed increase must be submitted to the Purchasing Agent not less than ten (10) days prior to the effective date of any such requested price increase.

Any adjustment allowed shall consist of bona fide material cost increases which may be passed on to the consumer.

No adjustment shall be made to compensate a supplier for inefficiency in operation, or for additional profit.

Bids indicating "price in effect at time of shipment" will be considered invalid.

3.2. 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.

3.2.1. **FORCE ACCOUNT:** When no agreement is reached for additional work to be done at Lump Sum or Unit Prices, then such additional work shall be done based on the following Cost-Plus-Percentage basis of payment. The Georgia Department of Transportation specifications for the use of a force account will not be used.

a. For work performed by the prime contractor/general contractor, the contractor shall be reimbursed for actual cost incurred in doing the work, and an additional payment of 15% to cover overhead and profit.

b. For work performed by a sub-contractor, the sub-contractor shall be reimbursed for actual cost incurred in doing the work, and an additional payment of 10% to cover overhead and profit. The contractor shall be allowed an overhead and profit mark-up not to exceed 7% on the subcontractor's price. The County shall not recognize subcontractors of subcontractors.

c. The term "Actual Cost" shall include the cost of material and labor as follows:

i. Material cost - Direct cost of material, sales tax, freight and equipment rental.

ii. Labor cost - Man hour cost listed separately by trade, payroll costs including workman's compensation, social security, pension and retirement.

d. The term "Overhead and Profit" shall include bonds (Payment & Performance, Roof & Wall), insurance (Liability, Builders Risk), permits, supervision costs (cost of subcontractor to supervise own work, cost of contractor to supervise work of sub-contractor), proposal preparation and all administrative costs.

3.2.2. NOT USED

3.3 **SURETY REQUIREMENTS and Bonds:** (Check where applicable)

☒ 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.

☒ B. Contractor(s) 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 sureties 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, and;
- 3.4 **Warranty Requirements:** (Check where applicable):
- a. Provisions of item 2.12 apply.
 - b. Warranty required.
 - 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
 - b. One-time Purchase
- X c. Other **ONE TIME CONTRACT**

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 will 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:

Site Development for the Chatham County Communications Tower

BID NO. 10-8-3-4

The work will consist of furnishing all materials, labor and equipment for the site development for the Chatham County Communications Tower located near the Chatham County Sheriff's Complex/Detention Center at 1050 Carl Griffin Drive. The site development project is specifically geared to prepare the site for the installation of a new communications tower for the Sheriff's Complex. This project is essential to provide the Sheriff's Operations with a reliable communications site that will support both daily operations as well as emergency regional communications. The existing tower is old and could collapse in a high wind situation.

The work consists of clearing, grading, storm drainage, concrete paving, fencing & gates, electrical service, and the foundation for an equipment building and generator.(actual building and generator are not part of this contract).

A location map, typical sections, construction plan, technical specifications and other details for the project are provided elsewhere in these contract documents.

Note: This is a Lump Sum contract.

COMMENCEMENT AND COMPLETION:

WORK SHALL BEGIN WITHIN 10 DAYS AFTER RECEIPT OF "NOTICE TO PROCEED". ALL WORK SHALL BE COMPLETED WITHIN 30 CALENDAR DAYS AFTER THE TEN DAY PERIOD.

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* SHEET FILLED OUT (Page 24 of ITB)
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 M/WBE SUBCONTRACTORS / SUPPLIERS.
6. SECTION 2.28 OF ITB (page 15) 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. COMPLETE AND SUBMIT ALL *ATTACHMENTS* TO THE ITB (Attachments A thru E).
8. SUBMIT A COPY OF YOUR *STATE OF GEORGIA CONTRACTORS LICENSE*.

SIGNATURE

NAME / TITLE

COMPANY

ADDRESS

PHONE / FAX NO'S.

BID SHEET

SITE DEVELOPMENT FOR THE CHATHAM COUNTY COMMUNICATIONS TOWER

SITE CLEARING / EARTHWORK	\$ _____
SOIL EROSION CONTROL	\$ _____
TREE PROTECTION	\$ _____
AGGREGATE BASE COURSE	\$ _____
STORM DRAINAGE	\$ _____
CHAIN LINK FENCES & GATES	\$ _____
GRASSING	\$ _____
FOUNDATION FOR BUILDING / GENERATOR	\$ _____
TOTAL BID	\$ _____

NAME / TITLE

COMPANY

ADDRESS

PHONE / FAX NO'S.

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

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 Site Development for the Chatham County Communications Tower (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
_____, _____ (herein after
"Company"),

Title _____ Name of Bidder _____
in consideration of the privilege to bid/or propose on the following Chatham
County project procurement Site Development for the Chatham County Communications
Tower 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 _____

2008 by _____ representing him/herself to be

_____ of the company named herein.

Notary Public

My Commission expires:

Resident State: _____

Attachment D

IMMIGRATION AND SECURITY FORM

SB529 (The Ga Security and Immigration and Compliance Act) requires contractors to file an affidavit that the contractor and its subcontractors have registered and participate in a federal work authorization program intended to insure that only lawful citizens or lawful immigrants are employed by the contractor or subcontractor. This requirement of SB529 is a phased-in affidavit filing requirement based on the size of the contractor. Contractors with 500 or more employees are required to file an affidavit of compliance beginning 7/1/07. However, because the requirement is set forth in OCGA 13-10-91 which is a part of Chapter 10 of Title 13 governing public works contracts, the affidavit filing requirements of SB529 therefore only apply to public works contracts.

- A. In order to insure compliance with the Immigration Reform and Control Act of 1986 (IRCA), D.L. 99-603 and the Georgia Security and Immigration Compliance Act OCGA 13-10-90 et.seq., Contractor must initial one of the sections below:

____ Contractor has 500 or more employees and Contractor warrants that Contractor has complied with the Immigration Reform and Control Act of 1986 (IRCA), D.L. 99-603 and the Georgia Security and Immigration Compliance Act by registering at <https://www.vis-dhs.com/EmployerRegistration> and verifying information of all new employees; and by executing any affidavits required by the rules and regulations issued by the Georgia Department of Labor set forth at Rule 300-10-1-.01 et.seq.

____ Contractor has 100-499 employees and Contractor warrants that no later than July 1, 2008, Contractor will register at <https://www.vis-dhs.com/EmployerRegistration> to verify information of all new employees in order to comply with the Immigration Reform and Control Act of 1986 (IRCA), D.L. 99-603 and the Georgia Security and Immigration Compliance Act; and by executing any affidavits required by the rules and regulations issued by the Georgia Department of Labor set forth at Rule 300-10-1-.01 et.seq.

____ Contractor has 99 or fewer employees and Contractor warrants that no later than July 1, 2009, Contractor will register at <https://www.vis-dhs.com/EmployerRegistration> to verify information of all new employees in order to comply with the Immigration Reform and Control Act of 1986 (IRCA), D.L. 99-603 and the Georgia Security and Immigration Compliance Act; and by executing any affidavits required by the rules and regulations issued by the Georgia Department of Labor set forth at Rule 300-10-1-.01 et.seq.

- B. Contractor warrants that Contractor has included a similar provision in all written agreements with any subcontractors engaged to perform services under this Contract.

Signature

Title

Firm Name: _____

Street/Mailing Address: _____

City, State, Zip Code: _____

Telephone Number: _____

Email Address: _____

Attachment E

CONTRACTOR AFFIDAVIT AND AGREEMENT

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 contracting with (name of public employer) has registered with and is participating in a federal work authorization program* [any of the electronic verification of work authorization programs operated by the United States Department of Homeland Security or any equivalent federal work authorization program operated by the United States Department of Homeland Security to verify information of newly hired employees, pursuant to the Immigration Reform and Control Act of 1986 (IRCA), P.L. 99-603], in accordance with the applicability provisions and deadlines established in O.C.G.A. 13-10-91.

The undersigned further agrees that, should it employ or contract with any subcontractor(s) in connection with the physical performance of services pursuant to this contract with (name of public employer), contractor will secure from such subcontractor(s) similar verification of compliance with O.C.G.A. 13-10-91 on the Subcontractor Affidavit provided in Rule 300-10-01-.08 or a substantially similar form. Contractor further agrees to maintain records of such compliance and provide a copy of each such verification to the (name of the public employer) at the time the subcontractor(s) is retained to perform such service.

EEV / Basic Pilot Program* User Identification Number

BY: Authorized Officer or Agent
(Contractor Name)

Date

Title of Authorized Officer or Agent of Contractor

Printed Name of Authorized Officer or Agent

SUBSCRIBED AND SWORN
BEFORE ME ON THIS THE

____ DAY OF _____, 200__

Notary Public
My Commission Expires:

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

SUBCONTRACTOR AFFIDAVIT

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 (name of public employer) has registered with and is participating in a federal work authorization program* [any of the electronic verification of work authorization programs operated by the United States Department of Homeland Security or any equivalent federal work authorization program operated by the United States Department of Homeland Security to verify information of newly hired employees, pursuant to the Immigration Reform and Control Act of 1986 (IRCA), P.L. 99-603], in accordance with the applicability provisions and deadlines established in O.C.G.A. 13-10-91.

EEV / Basic Pilot Program* User Identification Number

BY: Authorized Officer or Agent
(Subcontractor Name)

Date

Title of Authorized Officer or Agent of Subcontractor

Printed Name of Authorized Officer or Agent

SUBSCRIBED AND SWORN
BEFORE ME ON THIS THE

____ DAY OF _____, 200__

Notary Public

My Commission Expires:

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

ATTACHMENT F

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 of 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.

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

INDEX TO
SECTION 02110 – SITE CLEARING

Paragraph	Title	Page
PART 1 – GENERAL		
1.1	Section Includes	02110-1
1.2	Related Sections	02110-1
1.3	Measurement and Payment	02110-1
1.4	Regulatory Requirements	02110-1
PART 2 – PRODUCTS		
2.1	Materials	02110-1
PART 3 – EXECUTION		
3.1	Preparation	02110-1
3.2	Protection	02110-2
3.3	Clearing	02110-3
3.4	Removal	02110-3
3.5	Disposal	02110-3
3.6	Grubbing	02110-4

SECTION 02110**SITE CLEARING****PART 1 – GENERAL****1.1 SECTION INCLUDES**

- A. Removal of surface debris.
- B. Removal of trees, shrubs, and other plant life.
- C. Topsoil excavation.

1.2 RELATED SECTIONS

- A. Section 02204 - Earthwork.

1.3 MEASUREMENT AND PAYMENT

- A. Site Clearing: Clearing, grubbing and other items to be removed will be included in the lump sum price in the proposal for "Site Development." Includes clearing site, removing stumps, loading and removing waste materials from site.

1.4 REGULATORY REQUIREMENTS

- A. Conform to applicable City of Savannah code for environmental requirements, and disposal of debris.
- B. Coordinate clearing Work with utility companies.

PART 2 – PRODUCTS**2.1 MATERIALS**

- A. Provide tree protection materials as detailed on the construction drawings.

PART 3 – EXECUTION**3.1 PREPARATION**

- A. Verify existing plant life designated to remain is tagged or identified.
- B. Identify a waste area for placing removed materials.

3.2 PROTECTION

- A. All trees on site will be saved except those marked specifically by the Owner's representative for removal during construction. No trees, including those marked for removal on site or any other tree, may be removed prior to the preconstruction conference. All trees not to be removed will be protected from injury to their roots and to their top to a distance three feet (3') beyond the drip-line and no grading, trenching, pruning, or storage of materials may go in this area except as provided by an Owner's representative stakeout. Contractor will pay a penalty for any tree removed from the site that has not been marked specifically for removal. Contractor also will pay for any tree that dies due to damage during construction. This applies to all trees on site whether or not they are shown on the plans.
- B. Contractor shall not be held accountable for damages to trees resulting from placement of fill or removal of soils where such action is required by the contract documents. Any tree, the trunk of which is within 10 feet of any footing or trench, shall be exempt from these penalties except Contractor shall exercise all reasonable precautions to preserve even these trees. Contractor agrees to pay fines as established below in the event he or any of his subcontractors causes loss or removal of trees designated to be saved under provisions of this contract.

The fines are as follows:

<u>Caliper</u>	<u>Fine</u>
1" - 2"	\$ 150.00
2" - 3"	200.00
3" - 4"	250.00
4" - 5"	400.00
5" - 6"	500.00
6" - 7"	600.00
7" - 8"	750.00
8" - 11"	1,500.00
12" - 20"	2,000.00
21" & larger	\$ 2,500.00

- C. Trees shall be graded by Owner's representative as to variety, condition, and site importance, with above figures acting as a maximum fine. Lowest assessment amount shall be no less than one-half of the above fine figures.
- D. Protect bench marks, survey control points, and existing structures from damage or displacement.
- E. Protect all remaining utilities.
- F. Clearing operations shall be conducted to prevent damage by falling trees to trees left standing, to existing structures and installations, and to those under construction, and to provide for the safety of employees and others.

3.3 CLEARING

- A. Clear areas required for access to site and execution of work. Clearing shall consist of felling and cutting trees into sections, and satisfactory disposal of trees and other vegetation designated for removal, including downed timber, snags, brush, and rubbish occurring within area to be cleared. Trees, stumps, roots, brush, and other vegetation in areas to be cleared shall be removed completely from the site, except such trees and vegetation as may be indicated or directed to be left standing. Trees designated to be left standing within cleared areas shall be trimmed of dead branches 1-1/2-inch or more in diameter. Limbs and branches to be trimmed shall be neatly cut close to the trunk of the tree or main branches. Cuts more than 1-1/2-inches in diameter shall be painted with approved treewound paint. Trees and vegetation to be left standing shall be protected from damage incidental to clearing, grubbing, and construction operations, by the erection of chain link fences per City of Savannah detail. Such barriers must be placed and be approved by the OWNER before construction observations can proceed (See 3.2). Clearing shall also include removal and disposal of structures obtruding, encroaching upon, or otherwise obstructing the work.

3.4 REMOVAL

- A. Where indicated or directed, trees and stumps shall be removed from areas outside those areas designated for clearing and grubbing. Work shall include felling of such trees and removal of their stumps and roots. Trees shall be disposed of as hereinafter specified.
- B. Remove debris, rock, and other extracted plant life from site.

3.5 DISPOSAL

- A. Disposal of trees, branches, snags, brush, stumps, etc., resulting from clearing and grubbing shall be the Contractor's responsibility and shall be disposed of by burning, removal from site, or a combination of both. All costs in connection with disposing of materials will be at the Contractor's expense. Material disposed of by burning shall be burned in a manner avoiding all hazards, such as damage to existing structures, construction in progress, trees, and vegetation. Contractor shall be responsible for compliance with all local and State laws and regulations relative to the building of fires. Disposal by burning shall be kept under constant attendance until fires have burned out or extinguished. All liability of any nature resulting from disposal of cleared and grubbed material shall become the Contractor's responsibility. Disposal of all materials cleared and grubbed will be in accordance with rules and regulations of the State of Georgia. No material will be burned unless directed to do so by the OWNER. Contractor shall obtain a permit to burn on site from local fire department, before beginning the work.

3.6 GRUBBING

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

END OF SECTION

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SECTION 02204 – EARTHWORK

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SECTION 02204**EARTHWORK****PART 1 – GENERAL****1.1 SECTION INCLUDES**

- A. Grading.
- B. Excavation.
- C. Backfilling.
- D. Compaction.
- E. Remove and Replace Topsoil.
- F. Dressing of Shoulders and Banks.
- G. Stone Drainage Filter
- H. Water Control
- I. Testing

1.2 RELATED SECTIONS

- A. Section 02110 – Site Clearing

1.3 MEASUREMENT AND PAYMENT

- A. Grading to subgrades, construction of ditches, dressing of disturbed areas, removing and replacing topsoil, excavating, backfilling and compacting to required elevations, testing, staking, and construction supervision shall be included in the contract lump sum price for "Grading."
- B. Unsuitable Material - Payment will be made on a contract unit price for each cubic yard removed. Payment will include excavation and disposal of unsuitable material.
- C. Borrow - Payment will be made on a contract unit price for each cubic yard in place. Payment will include furnishing materials required in excess of suitable materials available on site.
- D. Earthwork - All earthwork associated with the installation of bulkheads, headwalls, wingwalls, weir structures, drainage filters, rip-rap, etc. shall not be measured for direct payment. Payment for the earthwork shall be included in the item to which it pertains.

- E. Dewatering - No direct payment shall be made for dewatering. Dewatering shall be included in the item to which it pertains.
- F. Proof Rolling - Payment will be made at the contract unit price. Payment will include furnishing a loaded truck, truck driver, fuel and rolling the designated areas.

1.4 REFERENCES (LATEST REVISION)

- A. ASTM D 448 – Sizes of Aggregate for Road and Bridge Construction.
- B. ASTM D 1557 – Laboratory Compaction Characteristics of Soil Using Modified Effort.
- C. ASTM D 2487 – Classification of Soils for Engineering Purposes (Unified Soil Classification System).
- D. ASTM D 2922 – Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).
- E. ASTM D 6938 – In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth).
- F. ASTM D 3740 – Minimum Requirements for Agencies Engaged in Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction.
- G. ASTM E 329 – Agencies Engaged in Construction Inspection and/or Testing.

1.5 SUBMITTALS

- A. Materials Source: Submit gradation analysis, proctor results, and soil classification for all borrow material.

1.6 QUALITY ASSURANCE

- A. Perform work in accordance with Federal, State of Georgia and City of Savannah standards.

1.7 TESTING

- A. Laboratory tests for moisture density relationship for fill materials shall be in accordance with ASTM D 1557, (Modified Proctor).
- B. In place density tests in accordance with ASTM D 2922.
- C. Testing laboratory shall operate in accordance with ASTM D 3740 and E 329 and be acceptable to the Engineer.
- D. The testing laboratory and Project Engineer/Project Representative shall be given a minimum of 48 hours notice prior to taking any of the tests.

- E. Testing shall be Contractor's responsibility and performed at Contractor's expense by a commercial testing laboratory operating in accordance with subparagraph C above.
- F. Test results shall be furnished to the Engineer prior to continuing with associated or subsequent work.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. Borrow shall consist of sand or sand-clay soils capable of being readily shaped and compacted to the required densities, and shall be reasonably free of roots, trash, rock larger than 2-inches, and other deleterious material.
- B. All soils used for structural fills shall have a PI (plastic index) of less than 10, and a LL (liquid limit) of less than 30. Fill soils shall be dried or wetted to appropriate moisture contents prior to compaction. Additionally, fill soils used for the top 2 feet of fill beneath roads and parking lots shall have no more than 15% passing the # 200 sieve. Fill soils used for house lots shall have no more than 25% passing the # 200 sieve.
- C. Contractor shall furnish all borrow material.
- D. Contractor shall be responsible for and bear all expenses in developing borrow sources including securing necessary permits, drying the material, haul roads, clearing, grubbing, excavating the pits, placing, compaction and restoration of pits and haul roads to a condition satisfactory to property owners and in compliance with applicable federal, state, and local laws and regulations.

2.2 SOURCE QUALITY CONTROL

- A. If tests indicate materials do not meet specified requirements, change material and retest.
- B. Provide materials of each type from same source throughout the Work.

PART 3 – EXECUTION

3.1 TOPSOIL

- A. Contractor shall strip topsoil and stockpile on site at a location determined by the Owner at the Contractor's expense.
- B. Topsoil shall be placed to a depth of 4 inches over all disturbed or proposed landscaped areas.
- C. Topsoil shall be provided at Contractor's expense if it is not available from site.

- D. Any remaining topsoil determined by the Owner or Engineer to be useful will be stored on site at a location determined by the Owner at the Contractor's expense.
- D. Do not excavate wet topsoil.

3.2 EXCAVATION

- A. Suitable excavation material shall be transported to and placed in fill areas within limits of the work.
- B. Unsuitable material encountered in areas to be paved and under building pads, shall be excavated 2 feet below final grade and replaced with suitable material from site or borrow excavations. Contractor shall notify Engineer if more than 2 feet of excavation is needed to replace unsuitable material.
- C. Unsuitable and surplus excavation material not required for fill shall be disposed of off site.
- D. Proper drainage, including sediment and erosion control, shall be maintained at all times. Methods shall be in accordance with the National Pollutant Discharge Elimination System standards and other local, state and federal regulations.
- E. Unsuitable materials as stated herein are defined as highly plastic clay soils, of the CH and MH designation, border line soils of the SC-CH description, and organic soils of the OL and OH description based on the Unified Soils Classification System. Further, any soils for the top two feet of pavement subbase shall have no more than 15% passing the # 200 sieve.

3.3 GROUND SURFACE PREPARATION FOR FILL

- A. All vegetation, roots, brush, heavy sods, heavy growth of grass, decayed vegetable 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, or benched, or broken up as directed, in such a manner where fill material will bond with the existing surface.
- C. Surfaces on which fill is to be placed and compacted shall be wetted or dried as may be required to obtain the specified compaction.

3.4 FILL

- A. Shall be placed in successive horizontal layers 8 inches to 12 inches in loose depth for the full width of the cross-section and compacted as required.

3.5 FINISHED 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. Unpaved areas to within 0.1 feet of elevations shown on the drawings provided such deviation does not create low spots that do not drain.
- D. Paved Areas - Subgrade to within 0.05 feet of the drawing elevations less the compacted thickness of the base and paving.
- E. Ditches and lagoon banks shall be finished graded, dressed and seeded within 14 calendar days of work to reduce erosion and permit adequate drainage.

3.6 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 limits of construction shall be disposed of by the Contractor.

3.7 PROTECTION

- A. Graded areas shall be protected from traffic, erosion, settlement, or any washing away occurring from any cause prior to acceptance.
- B. Contractor shall be responsible for protection of below grade utilities shown on the drawings or indicated by the Owner at all times during earthwork operations.
- C. Repair or re-establishment of graded areas prior to final acceptance shall be at the Contractors expense.
- D. Site drainage shall be provided and maintained by Contractor during construction until final acceptance of the project. Drainage may be by supplemental ditching, or pumping if necessary, prior to completion of permanent site drainage.

3.8 DRAINAGE

- A. Contractor shall be responsible for providing surface drainage away from all construction areas. This shall include maintenance of any existing ditches or those constructed in the immediate vicinity of the work. Contractor shall provide proper and effective measures to prevent siltation of wetlands, streams, and ditches on both the Owner's property, and those properties downstream.

3.9 FIELD QUALITY CONTROL

- A. Compaction testing shall be performed in accordance with ASTM D 2922. Where tests indicate the backfill does not meet specified requirements, the backfill shall

be reworked or removed and replaced, and then retested at the Contractor's expense.

- B. Unpaved areas - at least 90% of maximum laboratory density within 2% optimum moisture content unless otherwise approved by the Engineer.
- C. Paved Areas and Under Structures - top 6 inch layer of subbase to at least 98% of maximum laboratory density within 2% optimum moisture content. Layers below top 6 inches shall be compacted to 95% of maximum laboratory density within 2% optimum moisture content.
- D. Rolling and compaction equipment and methods shall be subject to approval by the Engineer. Approval in no way relieves Contractor of the responsibility to perform in correct and timely means.

3.10 PROOF ROLLING

- A. Shall be required on the subbase of all curb and gutter and paved areas and on the base of all paved areas where designated by the Engineer. Proof rolling shall take place after all underground utilities are installed and backfilled. The operation shall consist of rolling the subbase or base with a fully loaded ten (10) wheeled dump truck. A full load shall consist of ten (10) to twelve (12) cubic yards of soil or rock. The dump truck shall be capable of traveling at a speed of two (2) to five (5) miles per hour and be in sound mechanical shape with no exhaust leaks or smoking from burning oil. The Engineer shall determine number of passes and areas rolled.

END OF SECTION

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SECTION 02210 – SOIL EROSION CONTROL

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SECTION 02210**SOIL EROSION CONTROL****PART 1 – GENERAL****1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Special Conditions apply to this section.

1.2 DESCRIPTION OF WORK

- A. Extent of soil erosion control work includes all measures necessary to meet the requirements of this section.

Erosion and sediment control measures shall be installed prior to any construction activity.

Soil erosion and sediment control measures shall include all temporary and permanent means of protection and trapping soils of the construction site during land disturbing activity. Activity covered in this contract shall meet standards of NPDES General Permit for the state where work is performed.

1.3 PURPOSES

- A. Contractor is to achieve the following goals:
1. Minimize soil exposure by proper timing of grading and construction.
 2. Retain existing vegetation whenever feasible.
 3. Vegetate and mulch denuded areas as soon as possible.
 4. Divert runoff away from denuded areas.
 5. Minimize length and steepness of slopes when it is practical.
 6. Reduce runoff velocities with sediment barriers or by increasing roughness with stone.
 7. Trap sediment on site.
 8. Inspect and maintain erosion control measures.

1.4 QUALITY ASSURANCE

- A. Manufacturer's Qualifications: Firms regularly engaged in the manufacture of soil erosion control systems products of types and sizes required, whose materials have been in satisfactory use for not less than 5 years.

- B. Codes and Standards: Comply with all applicable Local, State and Federal Standards pertaining to soil erosion control.

Georgia Projects

- C. The 24-hour contact for erosion and sedimentation control measures is:

Name: George Bowen

Address: 46 Ramsgate Road
Savannah, GA

Phone: 912-920-1977

1.5 SUBMITTALS

- A. Product Data: Submit manufacturer's technical product data and installation instruction for soil erosion control materials and products.

1.6 MEASUREMENT AND PAYMENT

- A. No unit measurements will be made for soil erosion control. Payment will be made at the lump sum price as shown on the bid proposal. The cost of soil erosion control shall include all equipment, labor and materials necessary to comply with the State of Georgia Erosion and Sediment Control Program.

PART 2 – PRODUCTS

2.1 GRASSING MATERIALS

- A. Refer to Section 02902 - Grassing.
1. General: All grass seed shall be free from noxious weeds, grade A recent crop, recleaned and treated with appropriate fungicide at time of mixture. Deliver to site in original sealed containers with dealer's guarantee as to year grown, percentage of purity, percentage of germination and date of the test by which percentages of purity and germination were determined. All seed sown shall have a date of test within six months of the date of sowing.
 2. Type of Seed: Either Annual Rye or Common Bermuda Grass seed will be used depending on time of year in which seeding is to occur.
 3. Mulch: Straw.

4. Fertilizer: Commercial balanced 4-12-12 fertilizer.

2.2 HAY BALES

- A. Standard size, densely baled straw or hay, wrapped with synthetic or wire bands (two minimum per bale).

2.3 SILT FENCE

- A. Silt fence shall be a woven geotextile fabric sheet. Fabric shall be a 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 filaments resistant to deterioration due to ultra-violet and/or heat exposure. Fabric should be finished so the filaments will retain their relative position with respect to each other. Fabric shall be free of defects, rips, holes, or flaws.

Fabric shall meet the following requirements:

Woven Fabrics	
Grab Strength	90 lbs.
Burst Strength	175 PSI
UV Resistance	80%

2.4 CHEMICALS FOR DUST CONTROL

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

2.5 RIP-RAP

- A. Shall be hard quarry or field stone of such quality the pieces will not disintegrate on exposure to water, sunlight, or weather. Stone shall range in weight from a minimum of 25 pounds to a maximum of 125 pounds. At least 50 percent of the stone shall weigh more than 60 pounds. The stone shall have a minimum dimension of 12 inches.

2.6 PRODUCT REVIEW

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

PART 3 – EXECUTION

3.1 GENERAL

- A. All disturbed soil areas except those to support paving shall be graded and protected from erosion by grassing. Disturbed areas must be grassed within fourteen (14) days of work ending unless work is to begin again before twenty-one (21) days. Storm water conveyance systems shall have sediment barriers installed at all entrances, intersections, change in direction and discharge points.

3.2 GRASSING

- A. Refer to Section 02902 - Grassing.

3.3 SEDIMENT BARRIERS

- A. Hay Bales for Sheet Flow Applications:

1. Excavate a 4 inch deep trench the width of a bale and length of proposed barrier. Barrier should be parallel to the slope. Place barrier 5 to 6 feet away from toe of slope, unless otherwise instructed.
2. Place bales in the trench with their ends tightly abutting. Corner abutment is not acceptable. A tight fit is important to prevent sediment from escaping through spaces between the bales.
3. Backfill the trench with previously excavated soil and compact it. Backfill soil should conform to ground level on downhill side of barrier and should be built up to 4 inches above ground on uphill side of bales.
4. Inspect and repair or replace damaged bales promptly. Remove hay bales when uphill sloped areas have been permanently stabilized.

3.4 SILT FENCE

- A. Silt fence shall be placed at approximate location shown and installed in accordance with the detail on the construction drawings. Contractor shall maintain silt fence as required by state regulations.

3.5 DUST CONTROL

- A. Dust raised from vehicular traffic will be controlled by wetting down access road with water or by the use of a deliquescent chemical, such as calcium chloride, if relative humidity is over 30%. Chemicals shall be applied in accordance with manufacturer's recommendations.
- B. Contractor shall use all means necessary to control dust on and near the work, or off-site borrow areas when dust is caused by operations during performance of work or if resulting from the condition in which any subcontractor leaves the site. Contractor shall thoroughly treat all surfaces required to prevent dust from being a nuisance to the public, neighbors, and concurrent performance of work on site.

3.6 SEDIMENT BASIN

- A. A sediment basin equal in volume to 3,600 cubic feet per disturbed acre is required. The sediment basin/lagoon adjacent to the outfall for the site shall be constructed and stabilized prior to any additional land disturbed activity.

3.7 RIP-RAP

- A. Rip-Rap shall be placed at the locations shown and installed in accordance with the detail on the construction drawings.

3.8 CONSTRUCTION EXIT

- A. Construct exit at the location shown per detail on the construction drawings. Contractor shall maintain construction exit as required by state regulations.

3.9 INLET PROTECTION

- A. Install inlet protection per detail on the construction drawings. Contractor shall maintain inlet protection as required by state regulations until all disturbed surfaces are stabilized.

END OF SECTION

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SECTION 02231**AGGREGATE BASE COURSE****PART 1 – GENERAL****1.1 SECTION INCLUDES**

- A. Aggregate for Access Road and Tower Site.

1.2 RELATED SECTIONS

- A. Section 02204 - Earthwork

1.3 MEASUREMENT AND PAYMENT

- A. Aggregate Base Course: Payment will be made at the contract unit price. Payment will include supplying all material, labor, and equipment, stockpiling, scarifying substrate surface, placing where required, and compacting.

1.4 REFERENCES (LATEST REVISION)

- A. ASTM C 131 – Resistance to Degradation of Small-Size Course Aggregate by Abrasion and Impact in the Los Angeles Machine.
- B. ASTM D 1557 – Laboratory Compaction Characteristics of Soil Using Modified Effort.
- C. ASTM D 2922 – Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).
- D. ASTM D 6938 – In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth).
- E. ASTM D 3740 – Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Soil and Rock Used in Engineering Design and Construction.
- F. ASTM E 329 – Agencies Engaged in Construction Inspection and/or Testing.

1.5 QUALITY ASSURANCE

- A. Perform work in accordance with the Georgia Department of Transportation Standard Specifications Construction of Transportation Systems, 2001 Edition.

1.6 TESTING

- A. Laboratory tests for moisture density relationship for fill materials shall be in accordance with ASTM D 1557, (Modified Proctor).

- B. In place density tests in accordance with ASTM D 1556 or ASTM D 2922.
- C. Testing laboratory shall operate in accordance with ASTM D 3740 and E 329 and be acceptable to the Engineer.
- D. Testing laboratory and Project Engineer/Project Representative shall be given a minimum of 48 hours notice prior to taking any tests.
- E. Testing shall be Contractor's responsibility and performed at Contractor's expense by a commercial testing laboratory operating in accordance with subparagraph C above.
- F. Test results shall be furnished to the Engineer prior to continuing with associated or subsequent work.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. Aggregate for Access Road shall consist of processed and blended granite crushed stone. Aggregates shall be free from lumps and balls of clay, organic matter, objectionable coatings, and other foreign material and shall be durable and sound. Coarse aggregate shall have a percentage of wear not to exceed 65% after 500 revolutions as determined by ASTM C 131. Coarse aggregate shall meet applicable requirements of Section 800, Coarse Aggregate of the Georgia Department of Transportation Standard Specifications Construction of Transportation Systems, 2001 Edition. Material shall meet the following gradation requirements of Section 815.

Sieve Size	Percent by Weight Passing
2"	100
1-1/2"	97 - 100
3/4"	60 - 90
#10	25 - 45
#60	5 - 30
#200	4 - 11

- B. Aggregate Site shall be Granite No. 57 stone.

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Verify subbase has been tested, is dry, and slopes and elevations are correct.
- B. ON SITE OBSERVATIONS OF WORK: The Owner's Representative or Engineer will have the right to require any portion of the work be completed in their presence and if the work is covered up after such instruction, it shall be exposed by the Contractor for observation at no additional cost to the Owner.

However, if the Contractor notifies the Owner such work is scheduled, and the Owner fails to appear within 48 hours, the Contractor may proceed. All work completed and materials furnished shall be subject to review by the Owner, Engineer, or Project Representative. Improper work shall be reconstructed, and all materials, which do not conform to the requirements of the specifications, shall be removed from the work upon notice being received from the Engineer for the rejection of such materials. Engineer shall have the right to mark rejected materials to distinguish them as such.

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

3.2 PREPARATION

- A. Subbase shall be graded and shaped conforming to the lines, grades, and cross sections required and cleaned of all foreign substances prior to constructing base course. Do not place base on soft, muddy or frozen surfaces. Correct irregularities in subbase slope and elevation by scarifying, reshaping, and recompacting.
- B. At the time of base course construction, subbase shall contain no frozen material.
- C. Surface of subbase shall be checked by the Engineer or Project Representative for adequate compaction and surface tolerances. Ruts or soft yielding spots appearing in areas of subbase course having inadequate compaction, and areas not smooth or which vary in elevation more than 3/8-inch above or below required grade established on the plans, shall be corrected to the satisfaction of the Engineer or Project Representative. Base material shall not be placed until subbase has been properly prepared and test results have so indicated.

3.3 AGGREGATE PLACEMENT

- A. Aggregate shall be placed with an acceptable spreader in accordance with Georgia Department of Transportation Standard Specifications Construction of Transportation Systems, 2001 Edition Section 310 and in accordance with all terms included in these specifications. (Spreader shall contain a hopper, adjustable screed and designed so there will be a uniform, steady flow of material from the hopper. Spreader shall be capable of laying material without segregation across full width of the lane to a uniform thickness and to a uniform loose density.) Spreaders are not required on curb and gutter road sections.
- B. Level and contour surfaces to elevations and slopes indicated.
- C. Add small quantities of fine aggregate to coarse aggregate as appropriate to assist compaction.
- D. Add water to assist compaction. If excess water is apparent, remove aggregate and aerate to reduce moisture content.

- E. Use mechanical tamping equipment in areas inaccessible to compaction equipment.
- F. While at optimum moisture ($\pm 1\text{-}1/2\%$), compact base course with rollers capable of obtaining required density. Vibratory, flatwheel, and other rollers accepted by the Engineer may be used to obtain required compaction. Rolling shall continue until base is compacted to 98% of the maximum laboratory dry density as determined by ASTM D 1557. In-place density of the compacted base will be determined in accordance with ASTM D 2922.

3.4 OMITTED

3.5 TOLERANCES

- A. Flatness: Maximum variation of 1/4 inch measured with an acceptable 10-foot straight edge.
- B. Scheduled Compacted Thickness: Within 3/8 inch.
- C. Variation from Design Elevation: Within 3/8 inch.
- D. Depth measurements for compacted thickness shall be made by test holes through the base course. Where base course is deficient, correct such areas by scarifying, adding base material and recompact as directed by the Engineer.

3.6 FIELD QUALITY CONTROL

- A. Density and moisture testing will be performed in accordance with ASTM D 1557, ASTM D 2922, and ASTM D 6938.
- B. If tests indicate Work does not meet specified requirements, remove Work, replace and retest.

END OF SECTION

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SECTION 02720

STORM DRAINAGE

PART 1 – GENERAL

1.1 SECTION INCLUDES

- A. Construction of pipes, drainage inlets, manholes, headwalls, and various drainage structures.

1.2 OMITTED

1.3 OPTIONS

- A. The bid form and specifications describe several pipe materials. The Owner will select the one to be used. Where manufacturers of material or equipment are named in the specifications the Contractor may use equipment or materials of other manufacturers provided they are reviewed and accepted by the Engineer as equivalent to those specified.

1.4 REFERENCES (Latest Revision)

- A. ASTM D 3740 – Minimum Requirements for Agencies Engaged in Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction.
- B. ASTM E 329 – Agencies Engaged in Construction Inspection and/or Testing.
- C. ASTM C 76 – Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe.
- D. ASTM C 443 – Joints for Concrete Pipe and Manholes, Using Rubber Gaskets.
- E. ASTM B 745/B 745M – Corrugated Aluminum Pipe for Sewers and Drains.
- F. ASTM D 1056 – Flexible Cellular Materials - Sponge or Expanded Rubber.
- G. ASTM F 2306/F 2306M – 12 to 60-Inch (300 to 1,500 mm) Annular Corrugated Profile-Wall Polyethylene (PE) Pipe and Fittings for Gravity-Flow Storm Sewer and Subsurface Drainage Applications.
- H. ASTM D 1751 – Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Non-extruding and Resilient Bituminous Types).
- I. ASTM D 1752 – Preformed Sponge Rubber Cork and Recycled PVC Expansion Joint Fillers for Concrete Paving and Structural Construction.
- J. ASTM D 2321 – Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity Flow Applications.
- K. ASTM C 150 – Portland Cement.
- L. ASTM C 144 – Aggregate for Masonry Mortar.

- M. ASTM C 207 – Hydrated Lime for Masonry Purposes.
- N. ASTM C 62 – Building Brick (Solid Masonry Units Made From Clay or Shale).
- O. ASTM C 55 – Concrete Brick.
- P. ASTM C 478 – Precast Reinforced Concrete Manhole Sections.
- Q. ASTM C 1433 – Precast Reinforced Concrete Box Sections for Culverts, Storm Drains, and Sewers.
- R. ASTM D 1557 – Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort.
- S. ASTM D 2922 – Test Methods For Density Of Soil and Soil Aggregate In Place by Nuclear Methods (Shallow Depth).
- T. ASTM F 405 – Corrugated Polyethylene (PE) Tubing and Fittings.
- U. ASTM C 913 – Precast Concrete Water and Wastewater Structures.
- V. ASTM D 3212 – Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals.
- W. ASTM F 477 – Elastomeric Seals (Gaskets) for Joining Plastic Pipe.
- X. AASHTO M 294 – Corrugated Polyethylene Pipe, 300 to 1500-mm Diameter.
- Y. ASTM F667 – Large Diameter Corrugated Polyethylene Pipe and Fittings.

1.5 QUALITY ASSURANCE

- A. Material Review - Contractor will furnish the Engineer and Owner a description of all material before ordering. Engineer will review the Contractor's submittals and provide in writing an acceptance or rejection of material.
- B. Manufacturer - Material and equipment shall be standard products of a manufacturer who has manufactured them for a minimum of 2-years and provides published data on their quality and performance.
- C. Subcontractor - A subcontractor for any part of the work must have experience on similar work, and if required, furnish the Engineer with a list of projects and the Owners or Engineers who are familiar with their competence.
- D. Design - Devices, equipment, structures and systems not designed by the Engineer and the Contractor wishes to furnish, shall be designed by either a Registered Professional Engineer or by someone the Engineer accepts as qualified. If required, complete design calculations and assumptions shall be furnished to the Engineer or Owner before ordering.
- E. Testing Agencies - Soil tests shall be taken by a testing laboratory operating in accordance to ASTM D-3740 and E-329 and be acceptable to the Engineer prior to engagement. Mill certificates of tests on materials made by manufacturers will be accepted provided the manufacturer maintains an adequate testing laboratory,

makes regularly scheduled tests, spot checked by an outside laboratory and furnishes satisfactory certificates.

1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Material shall be unloaded in a manner avoiding damage and shall be stored where it will be protected and will not be hazardous to traffic. Contractor shall repair any damage caused by the storage. Material shall be examined before installation. Neither damaged nor deteriorated material shall be used in the work.

1.7 SEQUENCING AND SCHEDULING

- A. Contractor shall arrange the work so sections of pipes between structures are backfilled, checked, pavement replaced and the section placed in service as soon as reasonable after installation.

1.8 ALTERNATIVES

- A. The intention of these specifications is to produce the best system for the Owner. If the Contractor suggests alternate material, equipment or procedures will improve the results at no additional cost, the Engineer and Owner will examine the suggestion, and if accepted, it may be used. The basis upon which acceptance of an alternate will be given is its value to the Owner and not for the Contractor's convenience.

1.9 GUARANTEE

- A. Contractor shall guarantee the quality of materials, equipment and workmanship for a minimum period of 12-months or as required by the local governing agency after acceptance. Defects discovered during this period shall be repaired by the Contractor at no cost to the Owner.

1.10 EXISTING UTILITIES

- A. All known utility facilities are shown schematically on the construction drawings, and are not necessarily accurate in location as to plan or elevation. Utilities such as service lines or unknown facilities not shown, will not relieve the Contractor of responsibility under this requirement. "Existing Utilities Facilities" means any utility existing on the project in its original, relocated or newly installed position. Contractor will be held responsible for the cost of repairs to damaged underground facilities; even when such facilities are not shown on the drawings.
- B. The Contractor shall call for underground utility locations before starting work. Underground utilities location service can be contacted at 1-800-282-8411 (GA).

1.11 MEASUREMENT AND PAYMENT

- A. Pipe Culverts and Storm Drains – The length of pipe will be paid for on a linear foot basis, as measured along the centerline, from end of pipe to end of pipe, end of pipe to center of structure or center of structure to center of structure. Payment of which will constitute full payment for all pipe, joints, filter fabric and bedding, including trenching, dewatering, excavation, backfill and compaction, surface clean-up, and all incidental labor and material necessary to complete the construction of pipe as required by this section of the specifications.

1.12 TESTING

- A. Laboratory tests for moisture density relationship for fill materials shall be in accordance with ASTM D 1557, (Modified Proctor).
- B. In place density tests in accordance with ASTM D 1556 or ASTM D 2922.
- C. Testing laboratory shall operate in accordance with ASTM D 3740 and E 329 and be acceptable to the Engineer.
- D. Testing laboratory and Project Engineer/Project Representative shall be given a minimum of 48-hours notice prior to taking any tests.
- E. Testing shall be the Contractor's responsibility and shall be performed at Contractor's expense by a commercial testing laboratory operating in accordance with subparagraph C above.
- F. Test results shall be furnished to the Engineer prior to continuing with associated or subsequent work.

PART 2 – PRODUCTS

2.1 PIPE

- A. Concrete Pipe – Shall be reinforced Class III, Class IV, or Class V and shall conform to ASTM Specification C-76. Pipe less than 48-inch inside diameter shall be manufactured without lifting holes. Joints shall be either 'O' ring watertight flexible rubber, or tongue and groove as indicated on the plans. Gasketed single offset joints may be used in lieu of 'O' ring joints if approved by the Engineer.
 - 1. 'O' Ring Joints – Shall be water tight flexible rubber gasket and shall meet ASTM Specification C-443.
 - 2. Gasketed single offset joint shall be soil tight and shall meet ASTM Specification C-443.
 - 3. Tongue and groove joints shall utilize mastic sealant and the exterior shall be wrapped with geotextile material.
- B. Subgrade Drain – Shall be heavy duty corrugated polyethylene perforated pipe manufactured by Advanced Drainage Systems (ADS) or equivalent and shall conform to ASTM F-405.

2.2 DRAINAGE STRUCTURES

- A. Details – See plans.
- B. Concrete – Reinforced and non-reinforced.
 - 1. Minimum compressive strength = 3,000 p.s.i. at 28-days.

2. Reinforcing shall be covered by a minimum 1-inch of concrete for top slabs and 1-1/2-inches for walls and bases and 3-inches where concrete is deposited directly against the ground.
 3. Expansion joint filler materials shall conform to ASTM D 1751 or D 1752.
- C. Mortar – Connection 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 ASTM C-144 and shall be of an approved 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-207, Type S. 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 S. 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, C-913, or C-1433 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 ASTM C443 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 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.
 3. Leaks – No leaks in the manhole 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."
- F. Frame, cover & grating shall conform to the details shown on the project drawings. Grates in pavement and in other flush-mounted type surfaces shall be of a "bicycle-safe" configuration consisting of 45 degree diagonal bars or slotted grates with a maximum clear opening of 1-inch and a maximum length of 9-inches. In any case, the long dimension of the openings should be located transverse to the direction of traffic when possible.

2.3 FILTER FABRIC

- A. Shall be a non-woven heat-bonded fiber of polypropylene and nylon filaments equivalent to Mirafi 140 N. The fabric shall be finished so the filaments will retain their relative position with respect to each other. The fabric shall contain stabilizers and/or inhibitors added to the base plastic to make the filaments resistant to deterioration due to ultraviolet and/or heat exposure. The product shall be free of flaws, rips, holes, or defects.

2.4 OMITTED

2.5 SOILS AND STONE AGGREGATES

- A. Stone aggregate shall be clean crushed granite or concrete meeting the gradation requirements of grade No. 57.
- B. Soils used for bedding, haunching, and initial backfill shall be as shown in the following table and shall meet the requirements and classifications of ASTM D2321 and ASTM D2487.

Class	Type	Soil Group Symbol D 2487	Description	Percentage Passing Sieve Sizes		
				1-1/2 inch (40 mm)	No. 4 (4.75 mm)	No. 200 (0.075 mm)
IB	Manufactured, Processed Aggregates; dense-graded, clean.	None	Angular, crushed stone (or other Class 1A materials) and stone/sand mixtures with gradations selected to minimize migration of adjacent soils; contain little or no fines.	100%	≤50%	<5%
II	Coarse – Grained Soils, clean	GW	Well-graded gravels and gravel-sand mixtures; little or no fines.	100%	<50% of “Coarse Fraction”	<5%
		GP	Poorly-graded gravels and gravel-sand mixtures; little or no fines.		>50% of “Coarse Fraction”	
		SW	Well-graded sands and gravelly sands; little or no fines.			
		SP	Poorly-graded sands and gravelly sands; little or no fines.			
	Coarse-Grained Soils; borderline clean to w/fines.	Eg. GW-GC, SP-SM.	Sands and gravels that are borderline between clean and with fines.	100%	Varies	5% to 12%
III	Coarse-Grained Soils with Fines	GM	Silty gravels, gravel-sand-silt mixtures.	100%	<50% of “Coarse Fraction”	5%
		GC	Clayey gravels, gravel-sand-clay mixtures.		>50% of “Coarse Fraction”	
		SM	Silty sands, sand-silt mixtures.			
		SC	Clayey sands, sand-clay mixtures.			
IVA	Fine-grained soils (inorganic)	ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands, silts with slight plasticity.	100%	100%	>50%
		CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.			

2.6 PRODUCT REVIEW

- A. The Contractor shall provide the Engineer with a complete description of all products before ordering. The Engineer will review all products by the submittal of shop drawings before they are ordered.

PART 3 – EXECUTION

3.1 ON SITE OBSERVATIONS OF WORK

- A. The line, grade, deflection, and infiltration of storm sewers shall be tested by the Contractor under the direction of the Engineer. The Owner's Representative or Engineer will have the right to require any portion of the work be completed in their 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 Engineer such work is scheduled and the Engineer fails to appear within 48-hours, the Contractor may proceed. All work completed and material furnished shall be subject to review by the Engineer or Project Representative. All improper work shall be reconstructed. All materials that do not conform to the requirements of the specifications shall be removed from the work upon notice being received from the Engineer for the rejection of such materials. Engineer shall have the right to mark rejected materials to distinguish them as such.

Contractor shall give the Project Engineer or Project Representative a minimum of 48-hours notice for all required observations or tests. Storm sewers shall be dry for observation by the Engineer. Lines under water shall be pumped out by the Contractor prior to observation, at no additional cost to the Owner.

It will also be required of the Contractor to keep accurate, legible records of the location of all storm sewer lines and appurtenances. These records will be prepared in accordance with the paragraph on "Record Data and Drawings" in the Special Conditions. Final payment to the Contractor will be withheld until all such information is received and accepted.

3.2 EXCAVATION FOR PIPE AND STRUCTURES

- 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 approved method.
- E. Sheet piling, bracing or shoring shall be used as necessary for the protection of the work and safety of personnel.

3.3 TRENCHING FOR PIPE

- A. Trenching for Pipe – The width of trenches at any point below the top of pipe shall be not greater than the outside diameter of the pipe plus 4-feet to permit

satisfactory jointing and thorough bedding, haunching, backfilling and compacting under and around pipes. Sheet piling and bracing where required shall be placed within the trench width as specified. Care shall be taken not to over-excavate. Where trench widths are exceeded, redesign with a resultant increase in cost of stronger pipe or special installation procedures shall be necessary. Cost of this re-design and increased cost of pipe or installation shall be borne by the Contractor without additional cost to the Owner. When installing pipe in a positive projecting embankment installation, the embankment shall be installed to an elevation of at least 1-foot above the top of the pipe for a width of five pipe diameters on each side of the pipe before installation of the pipe.

- B. Removal of Unsuitable Material – Where wet or otherwise unstable soil, incapable of supporting the pipe is encountered in the bottom of the trench, such material shall be removed to the depth required and replaced to the proper grade with stone or sand foundation as determined by the Engineer. This foundation shall be compacted to 95% modified proctor.

3.4 PROTECTION OF UTILITY LINES

- A. Existing utility lines shown on the drawings or the locations of which are made known to the Contractor prior to excavation, and are to be retained, as well as utility lines constructed during excavation operations, shall be protected from damage during excavation and backfilling, and if damaged, shall be repaired at the Contractor's expense. If the Contractor damages any existing utility lines not shown on the drawings or the locations of which are not known to the Contractor, report thereof shall be made immediately. If the Engineer determines repairs shall be made by the Contractor, such repairs will be ordered under the clause of the GENERAL CONDITIONS of the contract entitled "CHANGES." When utility lines to be removed are encountered within the area of operations, the Contractor shall notify the Engineer in ample time for the necessary measures to be taken to prevent interruption of service.

3.5 FOUNDATION AND BEDDING

- A. Stone Foundation – Where the subgrade of the pipe is unsuitable material, the Contractor shall remove the unsuitable material to a depth determined by the Engineer or Geotechnical Consultant and furnish and place stone foundation in the trench to stabilize the subgrade.
- B. Sand Foundation – Where the character of the soil is unsuitable, even though dewatered, additional excavation to a depth determined by the Engineer or Geotechnical Consultant shall be made and replaced with clean sand furnished by the Contractor.
- C. Bedding for the pipe shall provide a firm surface of uniform density throughout the entire length of pipe. Before laying pipe, the trench bottom shall be de-watered by the use of well points. Where well points will not remove the water, the Contractor shall construct sumps and use pumps to remove all water from the bedding surface. The pipe shall be carefully bedded in stone accurately shaped and rounded to conform to the lowest 1/3 of the outside portion of circular pipe, or to the lower curved portion of arch pipe for the entire length of the pipe. Bell holes and depressions for joints shall be only of such length, depth, and width as required for properly making the particular type joint.

D. Concrete Pipe:

1. Materials for bedding concrete pipe shall be either Class II, Class III, or Class IB if processed, to minimize migration of adjacent material.
2. The depth of bedding shall be equal to $1/24$ the outer diameter of the pipe or 3-inches, whichever is greater.
3. The bedding area under the center of the pipe for a width of $1/3$ the outer diameter of the pipe, known as the middle bedding, shall be loosely placed. The remainder of the bedding for the full width of the trench shall be compacted to a minimum density of 85% for Class II bedding and 90% for Class III bedding as determined by ASTM D1557.

3.6 HAUNCHING, INITIAL BACKFILL, AND FINAL BACKFILL

- A. Haunching – After the bedding has been prepared and the pipe is installed, Class II or Class III soil shall be placed along both sides of the pipe in layers not exceeding 6-inches in compacted depth. Care shall be taken to insure thorough compaction and fill under the haunches of the pipe. Each layer shall be thoroughly compacted with mechanical tampers and rammers. Haunching shall extend up to the spring line of the pipe and be compacted to the following densities:
 1. RCP: Minimum density shall be 90% as determined by ASTM D1557.
- B. Initial Backfill – Reinforced concrete pipe does not specifically require initial backfill. Initial backfill for reinforced concrete pipe can be the same as final backfill.
- C. Final Backfill – For all pipes, it should extend to the surface and shall be select materials compacted to a minimum of 98% as determined by ASTM D1557 if the pipe is under pavement. If the pipe is in grassed areas final backfill may be native materials compacted to a minimum density of 90% as determined by ASTM D1557.

3.7 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 approval 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 the trench backfill shall conform to requirements of Section 02902 - "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. Place pipe in trench with the invert conforming to required elevations, slopes and alignment. Provide bell holes in pipe bedding in order to insure uniform pipe support. Fill all voids under the pipe by working in backfill material.
- C. Subgrade Drain Tubing - Shall be laid as detailed on the construction drawings with the invert conforming to required elevations and alignment.

3.8 JOINTS IN PIPES

- A. Concrete Pipe – Joints in concrete pipe shall be either 'O' ring watertight flexible rubber or tongue and groove as indicated on the plans. Gasketed, single offset joints may be used if approved by the Engineer. Maintain pipe alignment and prevent infiltration of fill material at joints during installation.
 - 1. 'O' ring and single offset joints shall meet the requirements of ASTM C443. They shall utilize either a rubber gasket with a circular cross section or a rectangular cross section. Gaskets shall have no more than one splice, except two (2) splices of the gasket will be permitted if the nominal diameter of the pipe exceeds 54-inches. Manufacturer's recommendations and requirements shall be followed.
 - 2. Tongue and groove joints shall utilize a bituminous mastic such as Ram-Nek or approved equal. The joint surfaces shall be primed according to manufacturer's recommendations. Care shall be taken to insure the mastic material completely and uniformly seals the joint.
 - 3. All tongue and groove joints shall receive one (1) layer of filter fabric completely around the exterior of the joint. The filter fabric shall be a minimum of 2-feet wide, centered on the joint, and overlapped a minimum of 1-foot.
- C. Subgrade Drain Tubing - Joints shall be joined using snap couplings. When installing sock wrapped pipe, overlap sock ends over coupling and secure with polyethylene tape.

3.9 FIELD QUALITY CONTROL

- A. Soil and density tests shall be made by a testing laboratory approved by the Engineer and shall be made at the Contractor's expense. Laboratory tests of the soil shall be made in accordance with ASTM D 1557. In-place density tests shall be made in accordance with ASTM D 2922. Results of the tests shall be furnished to the Engineer.

The minimum number of tests required shall be:

Haunching and Initial
Backfill in all areas....

1 per 100-linear feet of pipe, minimum of one per run of pipe for both the haunching and initial backfill zones.

Final Backfill over pipe

in traffic areas.....	1 per 100-linear feet or less for each 4-feet of depth or portion thereof.
Final Backfill over pipe in non-traffic areas.....	1 per 500-linear feet or less for each 6-feet of depth or portion thereof.

The minimum percent of compaction of the backfill material (in accordance to ASTM D1557) shall be the following:

In traffic Areas. 98% of maximum laboratory density.

In non-traffic Areas . . . 90% of maximum laboratory density, unless otherwise approved by the Engineer.

- B. 50% of pipes under roadways shall be televised and video recorded. The video observation shall include a complete pan view of each joint. If the video observation indicates problems, further televising may be required. Additional televising and video recording will be at no additional cost to the Owner.

3.10 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.

3.11 REMOVE AND REPLACE PAVEMENT

- A. Pavement shall only be removed after prior written authorization by the Owner. Pavement removed and replaced shall be constructed in accordance with the latest specifications of the State Department of Transportation. Traffic shall be maintained and controlled per State Department of Transportation regulations..

3.12 CONNECT PIPE TO EXISTING STRUCTURES

- A. The Contractor shall connect pipe to the existing structure where indicated. For brick or precast structures, a hole not more than 4-inches larger than the outside diameter of the new pipe shall be cut or cored neatly in the structure, the new pipe laid so it is flush with the inside face of the structure, and the annular space around the pipe filled with a damp, expanding mortar or grout to make a watertight seal.

END OF SECTION

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SECTION 02831 – CHAIN LINK FENCES AND GATES

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SECTION 02831**CHAIN LINK FENCES AND GATES****PART 1 – GENERAL****1.1 SECTION INCLUDES**

- A. Fence framework, fabric, and accessories.
- B. Excavation for post bases; concrete foundation for posts, and center drop for gates.
- C. Manual gates and related hardware.

1.2 OMITTED**1.3 MEASUREMENT AND PAYMENT**

- A. Fencing and Gates: Payment for chain-link fence, complete, will be included in the price for the item of which the fencing is a part.
- B. Post Footings: Each unit footing, to the depth specified. Includes excavation, concrete placed, finishing.

1.4 REFERENCES (Latest Revision)

- A. ASTM A 90/A 90M – Weight (Mass) of Coating on Iron and Steel Articles with Zinc or Zinc-Alloy Coatings.
- B. ASTM A 116 – Metallic-Coated, Steel Woven Wire Fence Fabric.
- C. ASTM A 121 – Metallic-Coated Carbon Steel Barbed Wire.
- D. ASTM A 123/A 123M – Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
- E. ASTM A 153/A 153M – Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
- F. ASTM A 392 – Zinc-Coated Steel Chain-Link Fence Fabric.
- G. ASTM A 1011 – Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, and Ultra-High Strength.
- H. ASTM A 653/A 653M – Steel Sheet, Zinc Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
- I. ASTM A 491 – Aluminum-Coated Steel Chain-Link Fence Fabric.

- J. ASTM F 668 – Polyvinyl Chloride (PVC) and Other Organic Polymer-Coated Steel Chain-Link Fence Fabric.
- K. ASTM A 428/A 428M – Weight (Mass) of Coating on Aluminum-Coated Iron or Steel Articles.
- L. ASTM C 94/C 94M – Ready-Mixed Concrete.
- M. ASTM F 567 – Installation of Chain-Link Fence.
- N. ASTM F 1043 – Strength and Protective Coatings on Steel Industrial Chain Link Fence Framework.
- O. ASTM F 1083 – Pipe, Steel, Hot-Dipped Zinc-Coated (Galvanized) Welded, for Fence Structures.
- P. Chain Link Fence Manufacturers Institute (CLFMI) – Product Manual.

1.5 SYSTEM DESCRIPTION

- A. Fence Height: as indicated on Drawings.
- B. Line Post Spacing: At intervals not exceeding 10 feet.
- C. Fence Post and Rail Strength: Conform to ASTM F1043 Heavy Industrial Fence.

1.6 SUBMITTALS FOR REVIEW

- A. Product Data: Provide data on fabric, posts, accessories, fittings and hardware.
- B. Shop Drawings: Indicate plan layout, spacing of components, post foundation dimensions, hardware anchorage, and schedule of components.

1.7 SUBMITTALS FOR INFORMATION

- A. Manufacturer's Installation Instructions: Indicate installation requirements.

1.8 SUBMITTALS FOR CLOSEOUT

- A. Project Record Documents: Accurately record actual locations of property perimeter posts relative to property lines and easements.

1.9 QUALITY ASSURANCE

- A. Perform Work in accordance with ASTM F567 and manufacturer's instructions.

1.10 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.

PART 2 – PRODUCTS

2.1 OMITTED

2.2 MATERIALS

- A. Framing (Steel): ASTM F1083 Schedule 40 galvanized steel pipe, welded construction, minimum yield strength of 25 ksi; coating conforming to ASTM F1043 Type A on pipe exterior and interior.
- B. Fabric Wire (Steel): ASTM A392 zinc coated wire fabric.
- C. Barbed Wire: ASTM A121 galvanized steel; 12 gage thick wire, 3 strands, 4 points at 3 inch oc.
- D. Concrete: ASTM C94; Normal Portland Cement, 2,500 psi strength at 28 days, 3 inch slump.

2.3 COMPONENTS

- A. Line Posts: 2.38 inch diameter.
- B. Corner and Terminal Posts: 2.88.
- C. Gate Posts: 4.5 inch diameter.
- D. Top and Brace Rail: 1.66 inch diameter, plain end, sleeve coupled.
- E. Gate Frame: 1.66 inch diameter for fittings and truss rod fabrication.
- F. Fabric: 2 inch diamond mesh interwoven wire, 9 gage thick, top selvage twisted tight, bottom selvage knuckle end closed.
- G. Tension Wire: 6 gage thick steel, single strand.
- H. Tension Band: Pressed steel, 14 gage thickness x ¾-inch wide.
- I. Tie Wire: Aluminum alloy steel wire.

2.4 ACCESSORIES

- A. Caps: Cast steel galvanized; sized to post diameter, set screw retainer.

- B. Fittings: Sleeves, bands, clips, rail ends, tension bars, fasteners and fittings; steel.
- C. Extension Arms: Cast steel galvanized to accommodate 3 strands of barbed wire, single arm, sloped to 45 degrees.
- D. Gate Hardware: Fork latch with gravity drop, Center gate stop and drop rod, Mechanical keepers; three 180 degree gate hinges per leaf and hardware for padlock.

2.5 FINISHES

- A. Components and Fabric: Galvanized to ASTM A123; 2.0 oz/sq ft coating.
- B. Hardware: Galvanized to ASTM A153, 2.0 oz/sq ft coating.
- C. Accessories: Same finish as framing.

PART 3 – EXECUTION

3.1 INSTALLATION

- A. Install framework, fabric, accessories and gates in accordance with ASTM F567. manufacturer's instructions.
- B. Place fabric on outside of posts and rails.
- C. Set posts plumb, in concrete footings with top of footing 2 inches above finish grade. Slope top of concrete for water runoff.
- D. Brace each gate and corner post to adjacent line post with horizontal center brace rail. Install brace rail one bay from end and gate posts.
- E. Provide top rail through line post tops and splice with 6 inch long rail sleeves.
- F. Install center and bottom brace rail on corner gate leaves.
- G. Do not stretch fabric until concrete foundation has cured 7 days.
- H. Fasten fabric to top rail, line posts, braces, and bottom tension wire with tie wire at maximum 15 inches on centers.
- I. Attach fabric to end, corner, and gate posts with tension bars and tension bar clips.
- J. Install bottom tension wire stretched taut between terminal posts.
- K. Do not attach the hinged side of gate from building wall; provide gate posts.

- L. Install gate with fabric and barbed overhang to match fence. Install three hinges per leaf, latch, catches, drop bolt.
- M. Provide concrete center drop to footing depth and drop rod retainers at center of double gate openings.

3.2 ERECTION TOLERANCES

- A. Maximum Variation from Plumb: 1/4-inch.
- B. Maximum Offset from True Position: 1-inch.
- C. Components shall not infringe on adjacent property lines.

3.3 OMITTED

END OF SECTION

INDEX TO
SECTION 02902 - GRASSING

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SECTION 02902

GRASSING

PART 1 – GENERAL

1.1 SECTION INCLUDES

- A. Seeding, planting grass, and fertilizing graded areas behind the structures, pipeline rights-of-way, roadway shoulders and other disturbed areas.
- B. Seed protection.
- C. Maintaining seeded areas until final acceptance.

1.2 RELATED WORK

- A. Section 02204 - Earthwork: Grading.

1.3 DELIVERY, STORAGE, AND HANDLING

- A. Deliver grass seed in original containers showing analysis of seed mixture, percentage of pure seed, year of production, net weight, date of packaging, and location of packaging. Damaged packages are not acceptable.
- B. Deliver fertilizer in waterproof bags showing weight, chemical analysis, and name of manufacturer. Damaged bags are not acceptable.
- C. Deliver sod on pallets.
- D. All material shall be acceptable to Engineer prior to use.

1.4 PLANTING DATES

- A. This specification provides for the establishment of a permanent grass cover between the dates of March 1 and September 30. If finished earth grades are not completed in time to permit planting and establishment of the permanent grass during the favorable season between the dates specified above unless otherwise accepted, the Contractor will be required to plant a temporary cover to protect the new graded areas from erosion and to keep windborne dust to a minimum. The temporary cover shall be planted between October 1 and February 28 unless otherwise permitted.

1.5 MEASUREMENT AND PAYMENT

- A. When the season or stage of the project is such the results of grassing work cannot be determined, conditional acceptance will be made on the work completed. When conditional acceptance is made for the items of work covered, the Contractor shall be entitled to 50% of bid price for the actual work placed and

shall receive the remaining 50% of bid price when final acceptance is made. Conditional acceptance shall not apply to the remaining items of work, and full bid price payment shall be made when the work is acceptably placed and completed in accordance with the specifications.

- B. Payment for grassing will be made at the contract unit price for the item "Grassing" and such payment shall constitute full compensation for furnishing and placing seed and fertilizer or sod where directed and protecting and maintaining seed and sod in all graded and disturbed areas.

PART 2 – PRODUCTS

2.1 SEED

- A. 100% common Bermuda.
- B. All seed shall conform to all State Laws and to all requirements and regulations of the State Department of Agriculture.
- C. The several varieties of seed shall be individually packaged or bagged, and tagged to show name of seed, net weight, origin, germination, lot number, and other information required by the State Department of Agriculture.
- D. The Engineer reserves the right to test, reject, or accept all seed before seeding.

2.2 FERTILIZER

- A. 4-12-12, commercial fertilizer of approved type, conforming to state fertilizer laws.

2.3 SEEDING SCHEDULE

- A.

<u>SEED</u>	<u>RATE</u>	<u>PLANTING DATES</u>
Bermuda	15-lbs/acre	March 1 - September 30
Rye	75-lbs/acre	October 1 - February 28
- B. In areas where existing grass is to be matched, Contractor shall sow seed at the rate and dates recommended by seed distributor.

2.4 LIME

- A. Agricultural grade, ground limestone.

2.5 SOD

- A. Sod shall be densely rooted, good quality centipede grass, free from noxious weeds. The sod shall be obtained from areas where the soil is reasonably fertile. The sod shall be raked free of all debris and the grass mowed to 2-inches before cutting. The sod shall contain practically all of the dense root system and not be less than 1-inch thick. Sod shall be cut in uniform strips not less than 12-inches in width and not less than 24-inches in length.

2.6 ACCESSORIES

- A. Straw Mulch: Oat or wheat straw, reasonably free from weeds, foreign matter detrimental to plant life, and in dry condition.
- B. Excelsior Mulch: Excelsior mulch shall consist of wood fibers cut from sound, green timber. The average length of the fibers shall be 4 to 6-inches. The cut shall be made in such a manner as to provide maximum strength of fiber, but at a slight angle to the natural grain of the wood to cause splintering of the fibers when weathering in order to provide adherence to each other and to the soil.
- C. Wood cellulose fiber shall be made from wood chip particles manufactured particularly for discharging uniformly on the ground surface when dispersed by a hydraulic water sprayer. It shall remain in uniform suspension in water under agitation and blend with grass seed and fertilizer to form a homogenous slurry. The mulch fibers shall intertwine physically to form a strong moisture holding mat on the ground surface and allow rainfall to percolate into the underlying soil. The mulch shall be heat processed to contain no germination or growth-inhibiting factors. It shall be dyed (non-toxic) an appropriate color to facilitate metering of material.

2.7 PRODUCT REVIEW

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

PART 3 – EXECUTION

3.1 PREPARATION

- A. The areas to be seeded shall be made smooth and uniform and shall conform to the finished grade indicated on the plans.
- B. Remove foreign materials, plants, roots, stones, and debris from surfaces to be seeded.
- C. Grassing areas, if not loose, shall be loosened to a minimum depth of 3-inches before fertilizer, seed or sod is applied.

3.2 STAND OF GRASS

- A. Before acceptance of the seeding performed for the establishment of permanent vegetation, the Contractor will be required to produce a satisfactory stand of perennial grass whose root system shall be developed sufficiently to survive dry periods and the winter weather and be capable of re-establishment in the spring.
- B. Before acceptance of the seeding performed for the establishment of temporary vegetation, the Contractor will be required to produce a stand of grass sufficient to control erosion for a given area and length of time before the next phase of construction or the establishment of permanent vegetation is to commence.

3.3 SEEDING DATES

- A. Seeding shall be performed during the periods and at the rates specified in the seeding schedules. Seeding work may, at the discretion of the Contractor, be performed throughout the year using the schedule prescribed for the given period. Seeding work shall not be conducted when the ground is frozen or excessively wet. The Contractor will be required to produce a satisfactory stand of grass regardless of the period of the year the work is performed.

3.4 APPLYING LIME AND FERTILIZER

- A. Following advance preparation and placing selected material for shoulders and slopes, lime, if called for based on soil tests and fertilizer, shall be spread uniformly over the designated areas, and shall be thoroughly mixed with the soil to a depth of approximately 2-inches. Fertilizer shall be applied at the rate of 500 pounds per acre for the initial application unless otherwise directed by the Engineer. Lime shall be applied at the rate determined by the soil test. Unless otherwise provided, lime will not be applied for temporary seeding. In all cases where practicable, acceptable mechanical spreaders shall be used for spreading fertilizer. On steep slopes subject to slides and inaccessible to power equipment, the slopes shall be adequately scarified. Fertilizer may be applied on steep slopes by hydraulic methods as a mixture of fertilizer and seed. When fertilizer is applied with combination seed and fertilizer drills, no further incorporation will be necessary. The fertilizer and seed shall be applied together when Wood Cellulose Fiber Mulch is used. Any stones larger than 2-1/2-inches in any dimension, larger clods, roots, or other debris brought to the surface shall be removed.

3.5 SEEDING

- A. Seed shall be sown within 24 hours following the application of fertilizer and lime and preparation of the seedbed as specified in Section 3.4. Seed shall be uniformly sown at the rate specified by the use of acceptable mechanical seed drills. Rotary hand seeders, power sprayers or other satisfactory equipment may be used on steep slopes or on other areas inaccessible to seed drills.
- B. The seeds shall be covered and lightly compacted by means of cultipacker or light roller if the drill does not perform this operation. On slopes inaccessible to

compaction equipment, the seed shall be covered by dragging spiked chains, by light harrowing or by other satisfactory methods.

- C. Apply water with fine spray immediately after each area has been sown.
- D. Do not sow seed when ground is too dry, during windy periods or immediately following a rain.
- E. If permitted by the special provisions, wood cellulose fiber mulch or excelsior fiber mulch may be used.

3.6 SEED PROTECTION (STRAW MULCH)

- A. All seeded areas seeded with permanent grasses shall be uniformly mulched in a continuous blanket immediately following seeding and compacting operations, using at least 2 tons of straw per acre.

3.7 SEED PROTECTION (EXCELSIOR MULCH)

- A. Seed shall be sown as specified in Section 3.5. Within 24 hours after the covering of seed, excelsior mulch shall be uniformly applied at the rate of 2 tons per acre. The mulch may be applied hydraulically or by other acceptable methods. Should the mulch be placed in a dry condition, it shall be thoroughly wetted immediately after placing. The Engineer may require light rolling of the mulch to form a tight mat.

3.8 SEED PROTECTION (WOOD CELLULOSE FIBER MULCH)

- A. After the lime has been applied and ground prepared as specified in Section 3.4, wood cellulose fiber mulch shall be applied at the rate of 1,500 pounds per acre in a mixture of seed and fertilizer. Hydraulic equipment shall be used for the application of fertilizer, seed, and slurry of the prepared wood pulp. This equipment shall have a built-in agitation system with an operating capacity sufficient to agitate, suspend, and homogeneously mix a slurry of the specified amount of fiber, fertilizer, seed, and water. The slurry distribution lines shall be large enough to prevent stoppage. The discharge line shall be equipped with a set of hydraulic spray nozzles which will provide an even distribution of the slurry on the various areas to be seeded. The slurry tank shall have a minimum capacity of 1,000 gallons.

The seed, fertilizer, wood pulp mulch, and water shall all be combined into the slurry tank for distribution of all ingredients in one operation by the hydraulic seeding method specified herein. The materials shall be combined in a manner recommended by the manufacturer. The slurry mixture shall be regulated so the amounts and rates of application shall result in a uniform application of all materials at rates not less than the amount specified. Using the color of the wood pulp as a guide, the equipment operator shall spray the prepared seedbed with a uniform visible coat. The slurry shall be applied in a sweeping motion, in an arched stream to fall like rain, allowing the wood fibers to build upon each other until an even coat is achieved.

3.9 SODDING

- A. Sod shall be placed between March 1st and December 1st.
- B. Sod shall be placed within 48 hours of cutting.
- C. Sod shall be moist when laid and placed on moist ground. The sod shall be carefully placed by hand, beginning at the toe of slopes and working upwards. The length of the strips shall be at right angles to the flow of surface water. All joints shall be tightly butted and end joints shall be staggered at least 12-inches. The sod shall be immediately pressed firmly into the ground by tamping or rolling. Fill all joints between strips with fine screened soil. Sod on slopes shall be pegged with sod pegs to prevent movement. The sod shall be watered, mowed, weeded, repaired, or otherwise maintained, to insure the establishment of a uniform healthy stand of grass until acceptance.

3.10 MAINTENANCE

- A. Maintain seeded surfaces until final acceptance.
- B. Maintenance shall consist of providing protection against traffic, watering to ensure uniform seed germination and to keep surface of soil damp, and repairing any areas damaged as a result of construction operations or erosion.

3.11 ACCEPTANCE

- A. Before acceptance of the seeding performed for the establishment of permanent vegetation, the Contractor will be required to produce a satisfactory stand of perennial grass whose root system shall be developed sufficiently to survive dry periods and the winter weather and be capable of reestablishment in the spring.

END OF SECTION

1

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.

2

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LEGAL NOTICE

CC NO. 164063

Invitation to Bid

Sealed Bids will be received until 2:00 P.M. on MARCH, 16, 2010 and publicly opened in Chatham County Purchasing & Contracting Department, at The Chatham County Citizens Service Center, 1117 Eisenhower Drive, Suite C, Savannah, Georgia, for: BID NO : 10-8-3-4 Site Development for the Chatham County Communications Tower.

PRE-BID CONFERENCE: 2:00 P.M., MARCH 2, 2010. Conference will be held at the Chatham County Citizens Service Center, 1117 Eisenhower Drive, Suite C, Savannah, Georgia. Your attendance is encouraged.

Bid Packages and Plan sheets are available from the office of the Chatham County Purchasing & Contracting Department, at the above address. **There is a \$50 non-refundable charge for this package.**

The Bid Package can be downloaded and printed from the County website www.chathamcounty.org All firms requesting to do business with Chatham County must also register on-line at www.chathamcountyvims.com

The Bid Package and Plans must still be picked up and purchased from the Purchasing & Contracting Office.

Bid Bond shall be 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"



WILLIAM R. PARSON, CPPO, PURCHASING AGENT

SAVANNAH NEWS/PRESS INSERT: Feb17 , Mar.1, 2010

Please send affidavit to:
Chatham County Purchasing & Contracting Department
P.O. Box 15180
Savannah, Georgia 31416
(912) 790-1622