

INVITATION TO BID

PROPOSAL

**BID NO. 12-0055-4**

**PENROSE DRIVE DRAINAGE IMPROVEMENTS**

**PREBID CONF: 2:00PM, MAY 30, 2012**

**BID OPENING: 2:00PM, JUNE 14, 2012**

THE COMMISSIONERS OF CHATHAM COUNTY, GEORGIA

PETE LIAKAKIS, CHAIRMAN

COMMISSIONER HELEN J. STONE

COMMISSIONER TABITHA ODELL

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.**

  X   GENERAL INFORMATION AND INSTRUCTIONS TO BID WITH ATTACHMENTS

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

  X   PROPOSAL

       PLANS/DRAWINGS - Plans and specifications must be purchased at Clayton Digital Reprographics by logging into [www.cdrepro.com](http://www.cdrepro.com). Login to DFS. New users must register. For technical support contact Roger Oliver at (912) 352-3880, fax (912) 352-3881 or email: [cdrsouth@cdrepro.com](mailto:cdrsouth@cdrepro.com).

  X   BID SCHEDULE

       PERFORMANCE BOND - not required for this project

       PAYMENT BOND - not required for this project

       CONTRACT

  X   LEGAL NOTICE

  X   ATTACHMENTS: A. DRUG FREE WORKPLACE; B. NONDISCRIMINATION STATEMENT; C. DISCLOSURE OF RESPONSIBILITY STATEMENT; D. CONTRACTOR/SUBCONTRACTOR AFFIDAVIT & AGREEMENT; E. DEBARMENT CERTIFICATION; F. CAP AGREEMENT; G. M/WBE PARTICIPATION COMPLIANCE REPORT; H. *SAVE* AFFIDAVIT.

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

**COUNTY TAX CERTIFICATE REQUIREMENT** - Contractor must supply a copy of their Tax Certificate from their location in the State of Georgia, as proof of payment of the occupational tax where their office is located.

CURRENT TAX CERTIFICATE NUMBER

CITY \_\_\_\_\_

COUNTY \_\_\_\_\_

OTHER \_\_\_\_\_

The Chatham County of Commissioners have established goals to increase participation of minority and woman owned businesses. In order to accurately document participation, businesses submitting bids or proposals are encouraged to report ownership status. A minority or woman business is defined as a business with 51% or greater minority of woman ownership. Please check ownership status as applicable:

African-American \_\_\_\_\_ Asian American \_\_\_\_\_ Hispanic \_\_\_\_\_

Native American or Alaskan Indian \_\_\_\_\_ Woman \_\_\_\_\_

In the award of "Competitive Sealed Proposals", minority/woman 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  
1117 EISENHOWER DRIVE, SUITE C  
SAVANNAH, GEORGIA 31406  
(912) 790-1622

Date: **May 11, 2012**

**BID NO. 12-0055-4**

**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, JUNE 14, 2012** 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 and held at **The Chatham County Citizens Service Center, 1117 Eisenhower Drive, Suite C, Savannah, Georgia, at 2:00PM, MAY 30, 2012** 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 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, 1117 Eisenhower Drive, Suite C, 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).

**See Checklist for Submitting Bid ( page 22) for the type of license required for this project.**

## 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 to submit a bid for the purpose of restricting competition.
- 2.12 **Award of Contract:** The contract, if awarded, will be awarded to that responsible bidder whose bid/proposal will be most advantageous to Chatham County, price and other factors considered. The Board of Commissioners will make the determination as to which bid or proposal that serves as the best value to Chatham County.
- 2.13 **Procurement Protests:** Objections and protests to any portion of the procurement process or actions of the County staff may be filed with the Purchasing Agent for review and resolution. The Chatham County Purchasing Procedures Manual, Article IX - Appeals and Remedies shall govern the review and resolution of all protests.
- 2.14 **Qualification of Business (Responsible Bidder or Proposer):** A responsible bidder or proposer is defined as one who meets, or by the date of the bid acceptance can meet, certifications, all requirements for licensing, insurance, and registrations, or other documentation required by the Design Professional engaged to develop Scope of work, specifications and plans. These documents will be listed in the Special Conditions further on in this solicitation. Chatham County has the right to require any or all bidders to submit documentation of the ability to perform, provide, or carry out the service or provide the product requested.
- Chatham County has the right to disqualify the bid or proposal of any bidder or proposer as being unresponsive or irresponsible whenever such bidder/proposer cannot document the ability to deliver the requested product.
- 2.15 **Chatham County Tax Certificate Requirement:** A current Chatham County Tax Certificate is required unless otherwise specified.

Please contact the Building Safety and Regulatory Services (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.

<u>Minimum Limits:</u>	\$1 million per claim/occurrence
<u>Coverage Requirement:</u>	If claims-made, retroactive date must precede or coincide with the contract effective date or the date of the Notice to Proceed. The professional <u>must state</u> if tail coverage has been purchased and the duration of the coverage.

- b. **Builder's Risk: (For Construction or Installation Contracts)** Covers against insured perils while in the course of construction.

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 County's Rights Concerning Award:

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

- (a) Whether the bidder or principals are currently ineligible, debarred, suspended, or otherwise excluded from bidding or contracting by any state or federal agency, department, or authority;
- (b) Whether the bidder or principals have been terminated for cause or are currently in default on a public works contract;
- (c) Whether the bidder can demonstrate sufficient cash flow to undertake the project as evidenced by a Current Ratio of 1.0 or higher;
- (d) Whether the bidder can demonstrate a commitment to safety with regard to Workers' Compensation by having an Experience Modification Rate (EMR) over the past three years not having exceeded an average of 1.2; and
- (e) Whether the bidder's past work provides evidence of an ability to successfully complete public works projects within the established time, quality, or cost, or to comply with the bidder's contract obligations.
- (f) Whether the bidder has made a **Good Faith Effort** to meet local participation goals as set forth herein in Paragraph 2.22.

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/WBE certification and development. In order to accurately document participation, businesses submitting bids, quotes or proposals are encouraged to report ownership status. A bidder or vendor that is certified by any agency of the Federal Government or State of Georgia may submit a copy of their certification with their bid as proof of qualifications. Bidders that intend to engage in joint ventures or utilize subcontractors must submit to the County Contracts Administrator, a report on Minority/Woman Business Enterprise participation.

**Goals established for this project is 30% MBE/ WBE combined.**

- c. A Minority/Woman Business Enterprise (M/WBE) 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. **For all questions regarding M/WBE participation and Good Faith Effort only**, contact : **Arneja Riley, Chatham County M/WBE Coordinator, 124 Bull Street, Suite 310 Savannah, Ga. 31401. Ph 912-652-7860; fax 912-652-7849; e-mail [alriely@chathamcounty.org](mailto:alriely@chathamcounty.org) or <http://purchasing.chathamcounty.org>**

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 DEBARRED OR SUSPENDED SUBCONTRACTORS:** CONTRACTOR shall not subcontract, and shall ensure that no subcontracts are awarded at any tier, to any individual, firm, partnership, joint venture, or any other entity regardless of the form of business organization, that is on the Federal Excluded Parties List System (EPLS) at <https://www.epls.gov> or the State of Georgia, DOAS, State Purchasing Exclusion listing. Contractor shall immediately notify County in the event any subcontractor is added to either Federal or State listing after award of the subcontract.

**2.29 CONE OF SILENCE:**

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

## 2.30 OWNER'S RIGHT TO NEGOTIATE WITH THE LOWEST BIDDER:

In the event *all* responsive and responsible bids are in excess of the budget, the Owner, in its sole and absolute discretion and in addition to the rights set forth above, reserves the right either to (i) supplement the budget with additional funds to permit award to the lowest responsive and responsible bid, or (ii) to negotiate with the lowest responsive and responsible bidder (after taking all deductive alternates) only for the purpose of making changes to the Project that will result in a cost to the Owner that is within the budget, as it may be amended.

2.31 **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.**

**2.32 CONSTRUCTION APPRENTICE PROGRAM HIRING:**

Chatham County has established a Construction Apprentice Program (CAP) to train area residents in the building trades. Successful Contractor shall be required to make a good faith effort to utilize labor from the CAP Program on this project when feasible. A Good Faith Effort will be demonstrated by documentation of inquiry into CAP labor available and resulting hiring of CAP labor or providing reasons for Contractor not utilizing any CAP labor. Form demonstrating Good Faith Effort is enclosed as Attachment F. Contractor shall complete the form and return with their first pay request. All questions regarding CAP student hiring should be directed to Construction Program Manager, Tara Sinclair at (912) 604-9574.

**2.33 SECURITY AND IMMIGRATION COMPLIANCE ACT AND SYSTEMATIC ALIEN**

**VERIFICATION FOR ENTITLEMENTS (SAVE):** On July 1, 2008, the Georgia Security and Immigration Compliance Act (SB 529, Section 2) became effective. All contractors and subcontractors 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.

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

## **ADDITIONAL CONDITIONS**

**3.1 Firm Fixed Price:** Contractor shall provide a firm fixed price which will be valid for acceptance within 90 days of receipt of bid

**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. **LIQUIDATED DAMAGES:** Failure to complete the work within the duration plus any extension authorized in writing by the County Engineer shall entitle the County to deduct as "Liquidated Damages" from the monies due the Contractor the amount of **\$200** for each calendar day in excess of the authorized construction time.

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

- X A.** Such bidder shall post a bid bond, certified check or money order made payable to the Chatham County Finance Department in the amount of 5% of the bid price.
- 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.

- D. Bidder acknowledges Chatham County's right to require a Performance and Payment Bond of a specific kind and origin. "Performance Bond" means a bond with good and sufficient surety or surities for the faithful performance of the contract and to indemnify the governmental entity for any damages occasioned by a failure to perform the same within the prescribed time. Such bond shall be payable to, in favor of, and for the protection of the governmental entity for which the work is to be done. "Payment Bond" means a bond with good and sufficient surety or sureties payable to the governmental entity for which the work is to be done and intended for the use and protection of all subcontractors and all persons supplying labor, materials, machinery, and equipment in the prosecution of the work provided for in the public works construction contract.
- X E. Forfeit the amount of the Bid Bond if he/she fails to enter into a contract with Chatham County to do and/or furnish everything necessary to provide service and/or accomplish the work stated and/or specified in this bid proposal for the bid amount, and;
- 3.4 **Warranty Requirements:** (Check where applicable):
- a. Provisions of item 2.12 apply.
- b. Warranty required.
- X 1. Standard warranty shall be offered with bid.
2. Extended warranty shall be offered with bid. The cost of the extended warranty will be listed separately on the bid sheet.
- 3.5 **Terms of Contract:** (check where applicable):
- a. Annual Contract
- 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.

## 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 23 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” (ON ATTACHMENT G) SHOWING % OF PROJECT THAT IS PROJECTED TO GO TO M/WBE SUBCONTRACTORS / SUPPLIERS MUST BE COMPLETELY FILLED OUT.**
- 6. SECTION 2.28 OF ITB (page 16) 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 H).**
- 8. SUBMIT A COPY OF YOUR CURRENT *STATE OF GEORGIA UTILITY CONTRACTORS LICENSE.***

---

NAME / TITLE

---

COMPANY

---

ADDRESS

---

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 not 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 as liquidated damages 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 as liquidated damages 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:

### **PENROSE DRIVE DRAINAGE IMPROVEMENTS**

**BID NO. 12-0055-4**

The project is located at the intersection of Penrose Drive and Riverside Drive in Unincorporated Chatham County, Georgia.

The work will consist of furnishing all materials, labor and equipment for:

installing approximately 33 feet of 18" reinforced concrete pipe under the pavement of Riverside Drive, with a new ditch inlet to intercept flow and a new flared end section for discharge into the roadside ditch. All associated work is included on the construction drawings.

A location map, construction plans, technical specifications and special provisions for the project is provided elsewhere in these contract documents.

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

### **COMMENCEMENT AND COMPLETION:**

**WORK SHALL BEGIN WITHIN 10 DAYS AFTER RECEIPT OF "NOTICE TO PROCEED".  
ALL WORK SHALL BE COMPLETED WITHIN 45 CALENDAR DAYS AFTER THE TEN  
DAY PERIOD.**



BID PROPOSAL : PENROSE DRIVE DRAINAGE IMPROVEMENTS					
<b>EARTHWORK, ROADWAY AND GRADING</b>					
NO.	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	Mobilization	1	LS		
2	Grading Complete	1	LS		
3	Remove and Replace Asphalt Pavement	12	SY		
SUBTOTAL - EARTHWORK, CLEARING AND GRADING					
<b>STORM DRAINAGE</b>					
NO.	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
4	18" Ø RCP Drainage Pipe	33	LF		
5	Ditch Inlet	1	EA		
6	18" Flared End Section	1	EA		
7	Rip Rap (Choked with #57 Stone)	7	SY		
SUBTOTAL - STORM DRAINAGE					
<b>EROSION CONTROL AND MISCELLANEOUS</b>					
NO.	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
8	Soil Erosion Control	1	LS		
9	Silt Fence - Type A	50	LF		
10	Traffic Control	1	LS		
11	Field Condition Allowance	1	LS	\$ 5,000.00	\$ 5,000.00
SUBTOTAL - EROSION CONTROL AND MISCELLANEOUS					
<b>TOTAL PROJECT : PENROSE DRIVE DRAINAGE IMPROVEMENTS</b>					

CONTRACTOR: \_\_\_\_\_

PHONE NUMBER: \_\_\_\_\_

CONTRACTOR SIGNATURE: \_\_\_\_\_

DATE: \_\_\_\_\_

ADDRESS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

### 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 **Penrose Drive Drainage Improvements.**

(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 Penrose Drive Drainage Improvements. 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

B-1

## 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

### 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).

D-2



**ATTACHMENT E**

**CHATHAM COUNTY, GEORGIA**

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

The undersigned certifies, by submission of this proposal or acceptance of this contract, that neither Contractor nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntary 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.

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

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

---

(Printed or typed Name of Signatory)

---

(Signature)

---

(Date)

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

---

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

---

---

**Attachment F**

**Construction Apprentice Program Documentation**

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

Contractor \_\_\_\_\_

Name of Project \_\_\_\_\_

Contract No. \_\_\_\_\_

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

Date of Inquiry	# of Available Participants
-----------------	-----------------------------

_____	_____
-------	-------

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

# _____	Trade Category _____
# _____	Trade Category _____
# _____	Trade Category _____

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

---

---

---

---

---

Any questions regarding the Construction Apprentice Program and available participant labor should be directed to Tara Sinclair at (912) 604-9574.

## Attachment G

### Chatham County Minority and Women Business Enterprise Program Proposed MWBE Participation Report

Name of Bidder: \_\_\_\_\_

Name of Project: \_\_\_\_\_

Bid No: \_\_\_\_\_

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

MBE Total \_\_\_\_\_%      WBE Total \_\_\_\_\_%      MWBE Combined \_\_\_\_\_%

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

Signature \_\_\_\_\_ Print \_\_\_\_\_

Phone (     ) \_\_\_\_\_ Fax (     ) \_\_\_\_\_

Attachment H

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

By executing this affidavit under oath, as an applicant for a Chatham County, Georgia Business License or Occupation Tax Certificate, Alcohol License, Taxi Permit, Contract or other public benefit as reference in O.C.G.A. Section 50-36-1, I am stating the following with respect to my bid for a City of Savannah contract for

\_\_\_\_\_. [Name of natural person applying on behalf of individual, business, corporation, partnership, or other private entity]

1.) \_\_\_\_\_ I am a citizen of the United States.

OR

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

OR

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

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

Signature of Applicant: \_\_\_\_\_ Date \_\_\_\_\_

Printed Name: \_\_\_\_\_

SUBSCRIBED AND SWORN

\_\_\_\_\_  
\*

BEFORE ME ON THIS THE  
citizens.

\_\_\_\_ DAY OF \_\_\_\_\_, 20 \_\_\_\_

Alien Registration number for non-

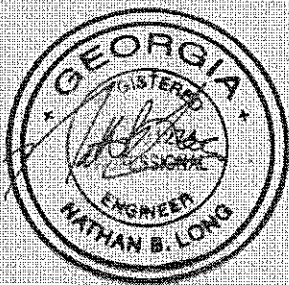
Notary Public

My Commission Expires:

**TECHNICAL SPECIFICATIONS  
FOR:**

**PENROSE DRIVE DRAINAGE IMPROVEMENTS**

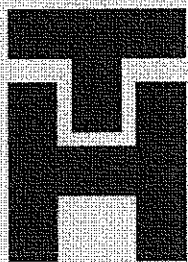
**PREPARED FOR:  
CHATHAM COUNTY**



**23205.0012**

**APRIL 2012**

Prepared by:



**THOMAS & HUTTON**

Savannah, GA | Charleston, SC | Myrtle Beach, SC | Brunswick, GA | Wilmington, NC

**PROJECT DESCRIPTION and SPECIAL CONDITIONS**  
**For**  
**Penrose Drive Drainage Improvements**

**Project Description:**

The project is located at the intersection of Penrose Drive and Riverside Drive in Unincorporated Chatham County, Georgia.

The work consists of installing approximately 33 feet of 18" reinforced concrete pipe under the pavement of Riverside Drive, with a new ditch inlet to intercept flow and a new flaired end section for discharge into the roadside ditch. All associated work is included on the construction drawings.

Soil erosion and sedimentation control is required and must be implemented prior to, and maintained during construction of the work. Construction phasing and maintenance of traffic is required. A traffic control plan must be submitted and approved before the Contractor will be issued notice to proceed.

The project includes liquidated damages for not completing work within the specified time.

The easements and right of way shown on the drawings shall be used as staging and storage areas. At the completion of the project the Contractor shall restore all areas to equal or better than its preconstruction condition.

**Contract Documents**

**Technical Specifications**

- |    |             |                                    |
|----|-------------|------------------------------------|
| A. | 03 00 00    | Concrete                           |
| B. | 31 00 00    | Earthwork                          |
| C. | 31 25 00 GA | Erosion and Sediment Controls (GA) |
| D. | 31 37 00    | Rip-Rap                            |
| E. | 32 12 16 GA | Asphalt Paving                     |
| F. | 32 92 00    | Turf and Grassing                  |
| G. | 33 40 00    | Storm Drainage Utilities           |

**Drawings**

- |    |      |   |
|----|------|---|
| A. | CO   | Cover Sheet, Vicinity Map, Schedule of Drawings |
| B. | G1.1 | General Notes and General Notes and Sheet Index |
| C. | V1.1 | Survey Control Sheet                            |
| D. | C3.1 | Grading, Drainage and ESPC Plan                 |
| E. | C3.2 | Grading, Drainage and ESPC Details              |

F.	EC.1	Erosion, Sedimentation & Pollution Control Notes
G.	EC.2	Erosion, Sedimentation & Pollution Control Notes
H.	EC.3	Erosion, Sedimentation & Pollution Control Notes
I.	EC.4	Erosion, Sedimentation & Pollution Control Notes

### **Work Hours and Traffic Control**

Work hours shall be limited to 7:00 am to 5:30 pm Monday through Friday and shall exclude all holidays observed by Chatham County.

Ingress and egress from the project site shall be made via Penrose Drive from Islands Expressway. The Contractor shall prepare a Traffic Control Plan describing all necessary traffic control devices, flagmen, notifications shall be provided for by the Contractor and approved by the Chatham County Department of Engineering. Not less than one lane of traffic shall remain open at all times. Open trenches shall be plated over and secured at the end of each day of work. The Contractor shall obtain an Encroachment Permit from the Department of Public Works prior to any work within road rights of way.

### **Pre-Construction Inspection**

A pre-construction conditions photographic record is required and must be submitted to Chatham County Department of Engineering for approval prior to start of any land disturbing work. The preconstruction photographic record shall consist of a bound photo album (such as a 3-ring binder with plastic sleeves) with 3" by 5" color photographs. Each photograph shall be described as to location and feature represented. Special emphasis shall be given to the condition of the US 80 shoulder and roadway pavement at the point of ingress and egress.

The preconstruction photographic record shall be provided to and accepted by the County prior to issuance of Notice to Proceed. This is in addition to other inspections and surveys required of the Contractor or performed by the County.

### **Post-Construction Inspection**

The Contractor shall provide and pay all costs of a video inspection record of the completed pipe produced by a qualified sewer inspection company or agency (Chatham County or City of Savannah inspection crews are acceptable, however the Contractor shall remain responsible for paying all costs). The video inspection record shall be provided on standard DVD and compatible with County viewing software. All deficiencies identified by the inspection shall be corrected by the Contractor prior to acceptance of the work as substantially complete.

Prior to final inspection of the project, the Contractor shall restore the site to a condition equal or better than its preconstruction condition. This includes but is not limited to restoration of all grasses, replacement of mailboxes, pavement and road repair, and cleaning up debris. All deficiencies identified by the inspection shall be corrected by the Contractor prior to acceptance of the work as substantially complete.

### **Construction Staking and Control of Work**

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

### **Erosion and Sedimentation Control**

The Contractor will be responsible for installation, maintenance and repair of the sedimentation and erosion control facilities and for any modifications or adjustments necessary for the project to remain in compliance with the Georgia Erosion and Sedimentation Act during performance of the work. The Contractor will have on site at all times of construction activity a Georgia Soil and Water Conservation Commission Level 1A certified person.

The contractor shall perform sediment and erosion control inspection and reporting requirements, testing and recording water quality [turbidity], recording daily precipitation amounts, and other duties as described in the contract documents. Inspection reports shall be provided on forms provided by the County or as approved by the County. Signed copies of the Contractor's reports shall be submitted to the County with each Request for Payment.

The total contract amount will be reduced by an amount as specified in the fines section below for each occurrence of failure to conform to the sediment and erosion control requirements of the contract. For the purpose of this paragraph an occurrence shall be defined as each 24-hour period with consecutive 24-hour periods being measured as separate occurrences. This fee shall be in addition to any penalties or assessments made against the Contractor for non-compliance of the Georgia Water Quality Control Act.

### **Fines and Liquidated Damages**

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

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

### **Field Condition Allowance**



The Field Condition Allowance shown on the bid sheet shall belong to Chatham County. Bidders shall not use this Allowance to assume any Contractor costs known or unknown at the bidding. Chatham County must approve use of the Allowance. Bidders shall include this Field Condition Allowance within their base bid. Any unused allowance shall revert to Chatham County.

#### **Other Special Requirements**

The Contractor shall provide approved means and methods upstream and downstream of the excavation to control water as needed in any open excavations as required for construction. The Contractor's means and methods shall apply to a normal dry weather and extreme wet weather conditions and shall not impede natural drainage through the construction site.

Watering of vegetative covers past the date of substantial completion of the work shall be provided on seeded areas to achieve full coverage to match existing conditions and as accepted by Chatham County.

#### **Documentation to be Provided with Requests for Payment**

In addition to the documentation described elsewhere in the Contract Documents, the Contractor shall submit with each request for payment the following:

Inspection reports of the sediment and erosion control facilities as described in the General Permit No. GAR100002. A copy of the Georgia Soil and Water Conservation Commission certification card(s) of the person(s) completing the reports shall also be submitted. Missing or incomplete documentation of inspection reports may be cause for delay/denial of payment.

Copies of material delivery tickets. The Contractor shall be responsible for collecting these documents at the time of delivery. The delivery tickets shall not relieve the Contractor of his responsibility to ensure the materials are in accordance with the contract documents. Missing or incomplete documentation of delivered materials may be cause for delay/denial of payment.

Prior to submitting a request for payment, the Contractor shall review the extent of work completed with the County's representative for accuracy and completeness.

## TABLE OF CONTENTS

		<b>PAGE NUMBERS</b>		
<b>TECHNICAL PROVISIONS</b>				
03 00 00	Concrete	03 00 00-1	-	03 00 00-8
31 00 00	Earthwork	31 00 00-1	-	31 00 00-6
31 25 00GA	Erosion and Sedimentation Controls (GA)	31 25 00GA-1	-	31 25 00GA-11
31 37 00	Rip-Rap	31 37 00-1	-	31 37 00-2
32 12 16 GA	Asphalt Paving	32 12 16-1	-	32 12 16-6
32 92 00	Turf and Grasses	32 92 00-1	-	32 92 00-6
33 40 00	Storm Drainage Utilities	33 40 00-1	-	33 40 00-12

**INDEX TO**  
**SECTION 03 00 00 – CONCRETE**

<b>Paragraph</b>	<b>Title</b>	<b>Page</b>
<b>PART 1 – GENERAL</b>		
1.1	Section Includes	03 00 00–1
1.2	Related Sections	03 00 00–1
1.3	Measurement and Payment	03 00 00–1
1.4	References	03 00 00–1
1.5	Performance Requirements	03 00 00–2
1.6	Submittals for Review	03 00 00–2
1.7	Quality Assurance	03 00 00–2
1.8	Regulatory Requirements	03 00 00–3
1.9	Environmental Requirements	03 00 00–3
1.10	Guarantee	03 00 00–3
1.11	Testing	03 00 00–3
<b>PART 2 – PRODUCTS</b>		
2.1	Form Materials	03 00 00–3
2.2	Reinforcement	03 00 00–4
2.3	Concrete Materials	03 00 00–4
2.4	Accessories	03 00 00–4
2.5	Concrete Mix – By Performance Criteria	03 00 00–4
2.6	Source Quality Control and Tests	03 00 00–5
<b>PART 3 – EXECUTION</b>		
3.1	Examination	03 00 00–5
3.2	Construction Observation	03 00 00–5
3.3	Subgrade	03 00 00–5
3.4	Preparation for Placing	03 00 00–5
3.5	Forming	03 00 00–6
3.6	Reinforcement	03 00 00–6
3.7	Placing Concrete	03 00 00–6
3.8	Joints	03 00 00–6
3.9	Finishing	03 00 00–7
3.10	Joint Sealing	03 00 00–7
3.11	Tolerances	03 00 00–7
3.12	Omitted	03 00 00–7
3.13	Concrete Curing	03 00 00–7
3.14	Field Quality Control	03 00 00–8
3.15	Protection	03 00 00–8

**SECTION 03 00 00****CONCRETE****PART 1 – GENERAL****1.1 SECTION INCLUDES**

- A. Concrete road base.

**1.2 RELATED SECTIONS**

- A. Section 31 00 00 – Earthwork: Preparation of site for paving and base.
- B. Section 32 11 23 – Aggregate Base Courses: Base course.
- C. Section 32 12 16 GA – Asphaltic Surface Courses.

**1.3 MEASUREMENT AND PAYMENT**

- A. Concrete – No separate payment will be made for concrete. Payment for this item shall be included in the price for "Remove and Replace Asphalt Pavement" as shown on the bid form.
- B. Payment shall constitute full compensation for furnishing all materials, plant, equipment, tools, forms, inserts, and for all labor and incidentals necessary to complete the work required by these specifications. No payment will be made for any material wasted, used for convenience of the Contractor, unused or rejected.

**1.4 REFERENCES (LATEST REVISION)**

- A. ACI 117 – Specifications for Tolerances for Concrete Construction and Materials.
- B. ACI 301 – Specifications for Structural Concrete.
- C. ACI 304R – Guide for Measuring, Mixing, Transporting and Placing Concrete.
- D. ACI 318 – Building–Code Requirements for Structural Concrete and Commentary.
- E. ACI 330R – Guide for the Design and Construction of Concrete Parking Lots.
- F. ASTM A 185 – Steel Welded Wire Reinforcement, Plain, for Concrete.
- G. ASTM A 497 – Steel Welded Wire Reinforcement, Deformed, for Concrete.
- H. ASTM A 615 – Deformed and Plain Carbon–Steel Bars for Concrete Reinforcement.
- I. ASTM C 31 – Making and Curing Concrete Test Specimens in the Field.
- J. ASTM C 33 – Concrete Aggregates.

- K. ASTM C 39 – Compressive Strength of Cylindrical Concrete Specimens.
- L. ASTM C 94 – Ready-Mixed Concrete.
- M. ASTM C 150 – Portland Cement.
- N. ASTM C 172 – Sampling Freshly Mixed Concrete.
- O. ASTM C 260 – Air-Entraining Admixtures for Concrete.
- P. ASTM C 309 – Liquid Membrane-Forming Compounds for Curing Concrete.
- Q. ASTM C 494 – Chemical Admixtures for Concrete.
- R. ASTM C 920 – Elastomeric Joint Sealants.
- S. ASTM E 1155 – Test Method for Determining FF Floor Flatness and FL Floor Levelness Numbers.
- T. ASTM C 1116 – Fiber-Reinforced Concrete.
- U. ASTM D 1751 – Preformed Expansion Joint Filler for Concrete Paving and Structural Construction. (Nonextruding and Resilient Bituminous Type).
- V. ASTM D 3740 – Minimum Requirements for Agencies Engaged in Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction.
- W. ASTM E 329 – Agencies Engaged in Construction Inspection and/or Testing.

#### **1.5 PERFORMANCE REQUIREMENTS**

- A. Paving: Designed for residential streets.

#### **1.6 SUBMITTALS FOR REVIEW**

- A. Section 01 33 00 – Submittals Procedures.
- B. Product Data: Provide data on joint filler, admixtures, and curing compounds.
- C. Concrete Design Mix.

#### **1.7 QUALITY ASSURANCE**

- A. Perform work in accordance with ACI 301, ACI 318, and ACI 330R.
- B. Obtain cementitious materials from same source throughout.
- C. Conform to ACI 117 – Specifications for Tolerances for Concrete Construction and Materials.
- D. Engineer reserves the right to mark and reject portions of concrete not within tolerance as specified.

**1.8 REGULATORY REQUIREMENTS**

- A. Conform to Chatham County, and GDOT standards for paving work on public property.

**1.9 ENVIRONMENTAL REQUIREMENTS**

- A. Do not place concrete when base surface temperature is less than 40 degrees F, or surface is wet or frozen.

**1.10 GUARANTEE**

- A. Contractor shall guarantee the quality of materials and workmanship for a period of 12 months after acceptance. Defects discovered during this period shall be repaired by Contractor at no cost to the Owner.

**1.11 TESTING**

- A. Testing laboratory shall operate in accordance with ASTM D 3740 and E 329 and be acceptable to the Engineer.
- B. Testing laboratory and Project Engineer/Project Representative shall be given a minimum of 48 hours notice prior to taking any tests.
- C. Owner shall select and engage the testing laboratory. Testing laboratory shall be responsible to the Owner and Owner's Engineer. Payment for laboratory and all tests shall be by Owner, except Owner specifically reserves the right to deduct from Contractor's payment, expense, and charges of testing laboratory when:
  - 1. Contractor gives notice work is ready for inspection and testing, and fails to be ready for the test, and/or
  - 2. Testing of the Contractor's work, products, or materials fail, and retesting is required, and/or
  - 3. Contractor abuses services or interferes with the work of testing laboratory in conduct of this work.
- D. Test results shall be furnished to the Engineer prior to continuing with associated or subsequent work.

**PART 2 – PRODUCTS****2.1 FORM MATERIALS**

- A. Wood or steel form material, profiled to suit conditions.
- B. Joint Filler: ASTM D1751 type; 1/2 inch thick.

**2.2 REINFORCEMENT**

- A. Reinforcing Steel: ASTM A 615, Grade 60 billet steel deformed bars; uncoated finish.
- B. Welded Steel Wire Fabric: Plain type, ASTM A 185; uncoated finish.
- C. Fiber reinforcement: Shall conform to ASTM C 1116 as manufactured by Fibermesh Company or equivalent. Concrete mix design shall utilize between 0.5% and 1.0% fiber content.

**2.3 CONCRETE MATERIALS**

- A. Cement: ASTM C 150, Type I – Normal.
- B. Fine and Coarse Mix Aggregates: ASTM C 33. Coarse aggregate shall consist of granite stone.
- C. Water: Potable, not detrimental to concrete.
- D. Air Entrainment: ASTM C 260.
- E. Chemical Admixture: ASTM C 494, Type A – Water Reducing.

**2.4 ACCESSORIES**

- A. Curing Compound: ASTM C309, clear with fugitive dye.
- B. Sealant: Joints shall be sealed per detail on project drawings, conforming to ASTM C 920, Type S or M, Grade P or NS, Class 25.

**2.5 CONCRETE MIX – BY PERFORMANCE CRITERIA**

- A. Provide concrete to the following criteria:
  - 1. Flexible Strength: 700 psi.
  - 2. Compressive Strength: 5,000 psi @ 7 days.
  - 3. Slump: 4 to 5 inches.
- B. Use accelerating admixtures in cold weather only when acceptable to Engineer. Use of admixtures will not relax cold weather placement requirements.
- C. Use calcium chloride only when accepted by Engineer.
- D. Use set retarding admixtures during hot weather only when accepted by Engineer.

**2.6 SOURCE QUALITY CONTROL AND TESTS**

- A. All sampling and testing services shall be performed, at Owner's expense, by a testing agency operating in accordance to ASTM D 3740 and E 329 latest edition and acceptable to the Engineer.
- B. Contractor shall submit to the Engineer a design mix on each class of concrete proposed for use. The mix shall be prepared by an acceptable testing laboratory. Compressive strength of at least four specimens of the design mix shall indicate 15% higher than 28 days strengths specified. During the work, Contractor shall make three test cylinders for each 50 cubic yards, or fraction thereof, of concrete placed each day. One cylinder shall be tested at 7 days and the other two at 28 days in accordance with ASTM C 39. Copies of all test reports shall be furnished to the Engineer.

**PART 3 – EXECUTION****3.1 EXAMINATION**

- A. Verify subgrade conditions under provisions of Section 31 00 00 – Earthwork.
- B. Verify compacted subgrade is acceptable and ready to support concrete and imposed loads.
- C. Verify slopes and elevations of subgrade are correct.

**3.2 CONSTRUCTION OBSERVATION**

- A. Engineer or Project Representative will have the right to require any portion of work be completed in their presence and if work is covered up after such instruction, it shall be exposed by Contractor for observation. However, if Contractor notifies the Engineer such work is scheduled, and Engineer fails to appear within 48 hours, Contractor may proceed. All work completed and materials furnished shall be subject to review by the Engineer or Project Representative. Improper work shall be reconstructed. All materials, which do not conform to requirements of specifications, shall be removed from the work upon notice being received from Engineer for rejection of such materials. Engineer shall have the right to mark rejected materials to distinguish them as such.

**3.3 SUBGRADE**

- A. Prepare subgrade in accordance with Section 31 00 00 – Earthwork.

**3.4 PREPARATION FOR PLACING**

- A. Water shall be removed from excavations before concrete is deposited. Hardened concrete debris and other foreign materials shall be removed from the interior of forms and inside of mixing and conveying equipment. The reinforcement shall be made secure in position and shall be subject to examination and acceptance.



- B. Moisten subgrade to minimize absorption of water from fresh concrete.
- C. Coat surfaces of manhole, inlet, and catch basin frames with oil to prevent bond with concrete pavement.
- D. Notify Engineer minimum 48 hours prior to commencement of concreting operations.

### **3.5 FORMING**

- A. Place and secure forms to correct location, dimension, profile, and gradient.
- B. Assemble formwork to permit easy stripping and dismantling without damaging concrete.
- C. Place joint filler in position, in straight lines. Secure to formwork during concrete placement.
- D. Forms shall be constructed to the shape, line, and grade required and shall be maintained sufficiently rigid to prevent deformation under load. Form work and details of construction joints shall conform to ACI-318, Chapter 6.

### **3.6 REINFORCEMENT**

- A. Place reinforcement as indicated.
- B. Interrupt reinforcement at expansion joints.

### **3.7 PLACING CONCRETE**

- A. Placing of concrete shall conform to Chapter 5 of the American Concrete Institute Standard A.C.I. 318. Concrete having attained initial set or having contained water for more than 45 minutes shall not be used in the work. Concrete shall not be dropped freely more than 5 feet. Concrete shall be mixed and placed only when the temperature is at least 40 degrees F and rising. Concrete shall be placed only upon surfaces free from frost, ice, mud and other detrimental substances or conditions. When placed on dry soil or pervious material, water proof paper or polyethylene sheeting shall be laid over surfaces to receive the concrete.
- B. Ensure reinforcement, inserts, embedded parts, formed joints and forms are not disturbed during concrete placement.
- C. Place concrete continuously over the full width of panel and between predetermined construction joints. Do not break or interrupt successive pours so cold joints will not occur.
- D. Place concrete to elevations indicated on the contract drawings.

### **3.8 JOINTS**

- A. Place expansion joints at 50 foot intervals and radius points.

- B. Place contraction joints at 10 foot intervals. Align curb, gutter, and sidewalk joints.
- C. Place joint filler between paving components and building or other appurtenances. Recess top of filler 1/8 inch.
- D. Saw cut contraction joints 3/16 inch wide at an optimum time after finishing. Cut 1/3 into depth of slab.

### **3.9 FINISHING**

- A. Paving: Light broom.
- B. Place curing compound on exposed concrete surfaces immediately after finishing. Apply in accordance with manufacturer's instructions.

### **3.10 JOINT SEALING**

- A. Separate pavement from vertical surfaces with 1/2 inch thick joint filler.
- B. Place joint filler in pavement pattern placement sequence. Set top to required elevations. Secure to resist movement by wet concrete.
- C. Extend joint filler from bottom of pavement to within 1/8 inch of finished surface.

### **3.11 TOLERANCES**

- A. Section 01 45 00 – Quality Control.
- B. General Site Concrete:
  - 1. Maximum Variation of Surface Flatness: 1/4 inch in 10 feet.
  - 2. Maximum Variation From True Position: 1/4 inch.

### **3.12 OMITTED**

### **3.13 CONCRETE CURING**

- A. Immediately after placement and finishing, concrete shall be protected from moisture loss for not less than 7 days. For surfaces not in contact with forms, curing compound shall be uniformly applied after water sheen disappears from the concrete. Formed surfaces shall receive an application of curing compound if forms are removed during the 7 day curing period. Curing compound shall not be applied during rainfall.
- B. Curing compound shall be applied under pressure at the rate of 1 gallon per 150 square feet by mechanical sprayers. The spraying equipment shall be of the fully atomizing type. At time of use, curing compound shall be thoroughly mixed with a fugitive dye uniformly dispersed throughout the sprayer. Care shall be taken to prevent application to joints where concrete bond is required, to reinforcement steel and to joints where joint sealer is to be placed. The compound shall form a

uniform continuous coherent film which will not crack or peel and shall be free from pinholes and other imperfections. Concrete surfaces subjected to heavy rainfall within 3 hours after curing compound has been applied shall be resprayed by above method and at above coverage at no additional expense to the Owner.

- C. No pedestrian or vehicular traffic shall be allowed over the surface for seven days unless surface is protected by planks, plywood, or sand. Protection shall not be placed until at least 12 hours after application of the curing compound.
- D. Protect concrete by suitable methods to prevent damage by mechanical injury or excessively hot or cold temperatures.

### **3.14 FIELD QUALITY CONTROL**

- A. Section 01 45 00 – Quality Control: Field observations and testing.
- B. Three concrete test cylinders will be taken for every 50 or less cubic yards of each class of concrete placed each day.
- C. One additional test cylinder will be taken during cold weather and cured on site under same conditions as concrete it represents.
- D. One slump test will be taken for each set of test cylinders taken.
- E. Maintain records of placed concrete items. Record date, location of pour, quantity, air temperature, and test samples taken.

### **3.15 PROTECTION**

- A. Immediately after placement, protect pavement from premature moisture loss, excessive hot or cold temperatures, and mechanical injury.
- B. Do not permit vehicular traffic over pavement or curb for seven days minimum after finishing. Do not permit pedestrian traffic over concrete for three days.

END OF SECTION

**INDEX TO**  
**SECTION 31 00 00 – EARTHWORK**

<b>Paragraph</b>	<b>Title</b>	<b>Page</b>
<b>PART 1 – GENERAL</b>		
1.1	Section Includes	31 00 00-1
1.2	Related Sections	31 00 00-1
1.3	Measurement and Payment	31 00 00-1
1.4	References	31 00 00-2
1.5	Submittals	31 00 00-2
1.6	Quality Assurance	31 00 00-2
1.7	Testing	31 00 00-2
<b>PART 2 – PRODUCTS</b>		
2.1	Materials	31 00 00-3
2.2	Source Quality Control	31 00 00-3
<b>PART 3 – EXECUTION</b>		
3.1	Topsoil	31 00 00-3
3.2	Excavation	31 00 00-4
3.3	Ground Surface Preparation for Fill	31 00 00-4
3.4	Fill	31 00 00-4
3.5	Finished Grading	31 00 00-4
3.6	Disposal of Waste Material	31 00 00-5
3.7	Protection	31 00 00-5
3.8	Drainage	31 00 00-5
3.9	Field Quality Control	31 00 00-5

**SECTION 31 00 00****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 31 25 00GA – Erosion and Sedimentation Controls (GA)

**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 Complete."
- B. Unsuitable Material – No separate payment will be made for the removal of unsuitable material. This item will include excavation and disposal of unsuitable material and be included in the lump sum price for "Grading Complete."
- C. Borrow – No separate payment will be made for borrow. The cost for borrow shall be included in the item to which it pertains. Payment will include furnishing materials required in excess of suitable materials available on site.
- D. Earthwork – All earthwork associated with the installation of pipes, drainage structures, 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.

**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 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 Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction.
- F. 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 County of Chatham 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 6938.
- 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. Owner shall select and engage the testing laboratory. Testing laboratory shall be responsible to the Owner and Owner's Engineer. Payment for laboratory and all tests shall be by the Owner, except Owner specifically reserves the right to deduct from Contractor's payment, expenses and charges of testing laboratory when:
  - 1. Contractor gives notice the work is ready for inspection and testing, and fails to be ready for the test, and/or
  - 2. Testing of the Contractor's work, products or materials fail, and retesting is required, and/or

- 3. Contractor abuses the services or interferes with the work of the testing laboratory in the conduct of this work.
- 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 will be hauled off site at the Contractors expense.

- E. 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.

### **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 Contractor's 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 6938. 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 acceptance by the Engineer. Acceptance in no way relieves Contractor of the responsibility to perform in correct and timely means.
- E. Number of Tests – Under paved areas, no less than one density test per horizontal layer per 5,000 square feet of subbase shall be made. In unpaved areas, no less than one density test per horizontal layer per 10,000 square feet of fill area shall be made.

END OF SECTION

General Permit  
No. GAR100001

**State of Georgia  
Department of Natural Resources  
Environmental Protection Division**

**Authorization To Discharge Under The  
National Pollutant Discharge Elimination System  
Storm Water Discharges Associated With Construction Activity  
For Stand Alone Construction Projects**

In compliance with the provisions of the Georgia Water Quality Control Act (Georgia Laws 1964, p. 416, as amended), hereinafter called the "State Act," the Federal Clean Water Act, as amended (33 U.S.C.1251 et seq.), hereinafter called the "Clean Water Act," and the Rules and Regulations promulgated pursuant to each of these Acts, new and existing storm water point sources within the State of Georgia that are required to have a permit, upon submittal of a Notice of Intent, are authorized to discharge storm water associated with construction activity to the waters of the State of Georgia in accordance with the limitations, monitoring requirements and other conditions set forth in Parts I through VI hereof.

This permit shall become effective on August 1, 2008.

This permit and the authorization to discharge shall expire at midnight, July 31, 2013.

Signed this 1st day of August 2008.



Director,  
Environmental Protection Division

**TABLE OF CONTENTS**

<b><u>Section</u></b>	<b><u>Page</u></b>
<b>Part I. COVERAGE UNDER THIS PERMIT</b>	
A. Permit Area.....	4
B. Definitions.....	4
C. Eligibility.....	7
D. Authorization.....	8
E. Continuing Obligations of Permittees.....	9
<b>Part II. NOTICE OF INTENT REQUIREMENTS</b>	
A. Deadlines for Notification.....	9
B. Notice of Intent Contents.....	9
C. Notice of Intent Submittal.....	11
D. Fees.....	11
E. Renotification.....	11
<b>PART III. SPECIAL CONDITIONS, MANAGEMENT PRACTICES, PERMIT VIOLATIONS AND OTHER LIMITATIONS</b>	
A. Prohibition on Non-Storm Water Discharges.....	11
B. Releases in Excess of Reportable Quantities.....	11
C. Discharges into, or within One Mile Upstream of and within the Same Watershed as, Any Portion of a Biot Impaired Stream Segment.....	12
D. Management Practices and Permit Violations.....	13
<b>Part IV. EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN</b>	
A. Deadlines for Plan Preparation and Compliance.....	16
B. Signature and Plan Review.....	17
C. Keeping Plans Current.....	17
D. Contents of Plan.....	17
1. Checklist.....	18
2. Site Description.....	18
3. Controls.....	18
4. Inspections.....	21
5. Maintenance.....	22
6. Sampling Requirements.....	22
7. Non-storm Water Discharges.....	25
E. Reporting.....	25
F. Retention of Records.....	26

Part V. STANDARD PERMIT CONDITIONS

A. Duty to Comply.....26

B. Continuation of the Expired General Permit.....27

C. Need to Halt or Reduce Activity Not a Defense.....27

D. Duty to Mitigate.....27

E. Duty to Provide Information.....27

F. Other Information.....27

G. Signatory Requirements.....27

H. Oil and Hazardous Substance Liability.....28

I. Property Rights.....28

J. Severability.....28

K. Other Applicable Environmental Regulations and Laws.....28

L. Proper Operation and Maintenance.....29

M. Inspection and Entry.....29

N. Permit Actions.....29

Part VI. TERMINATION OF COVERAGE

A. Notice of Termination Eligibility.....29

B. Notice of Termination Contents.....29

C. Notice of Termination Submittal.....30

APPENDIX A. EPD District Offices.....31

APPENDIX B. Nephelometric Turbidity Unit (NTU) Table.....33

## Part I. COVERAGE UNDER THIS PERMIT

### A. Permit Area.

This permit regulates point source discharges of storm water to the waters of the State of Georgia from construction activities, as defined in this permit.

**B. Definitions.** All terms used in this permit shall be interpreted in accordance with the definitions as set forth in the Georgia Water Quality Control Act (Act) and the Georgia Rules and Regulations for Water Quality Control Chapter 391-3-6 (Rules), unless otherwise defined in this permit:

1. "Best Management Practices" (BMPs) means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent and minimize erosion and resultant sedimentation, which are consistent with, and no less stringent than, those practices contained in the "Manual for Erosion and Sediment Control in Georgia" (Manual) published by the State Soil and Water Conservation Commission as of January 1 of the year in which the land-disturbing activity was permitted to prevent or reduce the pollution of waters of Georgia. BMPs also include treatment requirements, operating procedures, and practices to control site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.
2. "Buffer" means the area of land immediately adjacent to the banks of State waters in its natural state of vegetation, which facilitates the protection of water quality and aquatic habitat.
3. "Certified Personnel" means a person who has successfully completed the appropriate certification course approved by the State Soil and Water Conservation Commission.
4. "Commencement of Construction" means the initial disturbance of soils associated with clearing, grading, or excavating activities or other construction activities.
5. "Common Development" means a contiguous area where multiple, separate, and distinct construction activities will be taking place at different times on different schedules under one plan of development.
6. "Construction Activity" means the disturbance of soils associated with clearing, grading, excavating, filling of land, or other similar activities which may result in soil erosion. Construction activity does not include agricultural and silvicultural practices, but does include agricultural buildings.
7. "CPESC" means Certified Professional in Erosion and Sediment Control with current certification by Certified Professional in Erosion and Sediment Control Inc., a corporation registered in North Carolina, which is also referred to as CPESC or CPESC, Inc.
8. "Design Professional" means a professional licensed by the State of Georgia in the field of: engineering, architecture, landscape architecture, forestry, geology, or land surveying; or a person that is a Certified Professional in Erosion and Sediment Control (CPESC) with a current certification by Certified Professional in Erosion and Sediment Control Inc.
9. "CWA" means Federal Clean Water Act (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972).
10. "Director" means the Director of the Environmental Protection Division or an authorized representative.
11. "Division" means the Environmental Protection Division of the Department of Natural Resources.
12. "Erosion" means the process by which land surface is worn away by the action of wind, water, ice or gravity.

13. "Filling" means the placement of any soil or solid material either organic or inorganic on a natural ground surface or an excavation.
14. "Final Stabilization" means that all soil disturbing activities at the site have been completed, and that for unpaved areas and areas not covered by permanent structures and areas located outside the waste disposal limits of a landfill cell that has been certified by EPD for waste disposal, 100% of the soil surface is uniformly covered in permanent vegetation with a density of 70% or greater, or equivalent permanent stabilization measures (such as the use of rip rap, gabions, permanent mulches or geotextiles) have been used. Permanent vegetation shall consist of: planted trees, shrubs, perennial vines; a crop of perennial vegetation appropriate for the time of year and region; or a crop of annual vegetation and a seeding of target crop perennials appropriate for the region. Final stabilization applies to each phase of construction.
15. "General Contractor" means the operator of the stand alone construction or site.
16. "Impossible" means the monitoring location(s) are either physically or legally inaccessible, or access would cause danger to life or limb.
17. "Landfill" means an area of land or an excavation in which waste materials are placed for permanent disposal, and which is not a land application unit, surface impoundment, injection well or waste pile as defined by Georgia NPDES General Permit GAR000000, and which area of land or excavation must be certified by EPD before it can begin waste disposal operations.
18. "Landfill Cell(s)" means a defined area within a landfill where waste materials are permanently disposed and that must be certified by EPD for use before such cell(s) can begin receiving waste materials after which those activities associated with waste receipt and disposal in the landfill cell(s) shall not be considered construction activity as defined by this permit.
19. "Local Issuing Authority" means the governing authority of any county or municipality which is certified pursuant to Official Code of Georgia Section 12-7-8(a).
20. "Mass Grading" means the movement of earth by mechanical means to alter the gross topographic features (elevations, slopes, etc.) to prepare a site for final grading and the construction of facilities (buildings, roads, parking, etc.).
21. "Nephelometric Turbidity Unit (NTU)" means a numerical unit of measure based upon photometric analytical techniques for measuring the light scattered by fine particles of a substance in suspension.
22. "NOI" means Notice of Intent to be covered by this permit (see Part II).
23. "NOT" means Notice of Termination (see Part VI).
24. "Operator" means the entity that has the primary day-to-day operational control of those activities at the construction site necessary to ensure compliance with Erosion, Sedimentation and Pollution Control Plan requirements and permit conditions.
25. "Other Water Bodies" means ponds, lakes, marshes and swamps which are waters of the State.
26. "Outfall" means the location where storm water, in a discernible, confined and discrete conveyance, leaves a facility or construction site or, if there is a receiving water on site, becomes a point source discharging into that receiving water.
27. "Owner" means the legal title holder to the real property on which is located the facility or site where construction activity takes place.

28. "Permittee" means any entity that has submitted a Notice of Intent.
29. "Phase" or "Phased" means sub-parts or segments of construction projects where the sub-part or segment is constructed and stabilized prior to completing the entire construction site.
30. "Point Source" means any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure or container from which pollutants are or may be discharged. This term also means sheetflow which is later conveyed via a point source to waters of the State. This term does not include return flows from irrigated agriculture or agricultural storm water runoff.
31. "Primary Permittee" means the Owner or the Operator or both of a tract of land for a construction project subject to this permit.
32. "Primary Trout Waters" means streams supporting a self-sustaining population of Rainbow, Brown, or Brook Trout as indicated in the Rules and Regulations for Water Quality Control, Chapter 391-3-6 at [www.gaepd.org](http://www.gaepd.org).
33. "Proper design" and "properly designed" means designed in accordance with the design requirements and specifications contained in the "Manual for Erosion and Sediment Control in Georgia" (Manual) published by the State Soil and Water Conservation Commission as of January 1 of the year in which the land-disturbing activity was permitted and amendments to the Manual as approved by the State Soil and Water Conservation Commission up until the date of NOI submittal.
34. "Receiving Water(s)" means waters of the State supporting warm water fisheries, or waters of the State classified as trout streams, into which the runoff of storm water from a construction activity will actually discharge, either directly or indirectly.
35. "Secondary Trout Waters" means streams with no evidence of natural trout reproduction but capable of supporting trout throughout the year as indicated in the Rules and Regulations for Water Quality Control, Chapter 391-3-6 at [www.gaepd.org](http://www.gaepd.org).
36. "Sediment" means solid material, both organic and inorganic, that is in suspension, is being transported, or has been moved from its site of origin by, wind, water, ice, or gravity as a product of erosion.
37. "Sedimentation" means the action or process of forming or depositing sediment.
38. "Sheetflow" means runoff which flows over the ground surface as a thin, even layer, not concentrated in a channel.
39. "Site" or "Construction Site" means a facility of any type on which construction activities are occurring or are to occur which may result in the discharge of pollutants from a point source into the waters of the State.
40. "Stand Alone Construction" or "Stand Alone Construction Project" means construction activities that are not part of a common development where the primary permittee chooses not to use secondary permittees.
41. "Storm Water" means storm water runoff, snow melt runoff, and surface runoff and drainage.
42. "Structural Erosion and Sediment Control Practices" means measures for the stabilization of erosive or sediment producing areas by utilizing the mechanical properties of matter for the purpose of either changing the surface of the land or storing, regulating or disposing of runoff to prevent excessive sediment loss.
43. "Sub-contractor" means an entity employed or retained by the permittee to conduct any type of construction activity at a stand alone construction site.



44. "Surface Water Drainage Area" means the hydrologic area starting from the lowest downstream point where the storm water from the construction activity enters the receiving water(s) and following the receiving water(s) upstream to the highest elevation of land that divides the direction of water flow. This boundary will connect back with the storm water entrance point. Boundary lines follow the middle of the highest ground elevation or halfway between contour lines of equal elevation.

45. "Trout Streams" means waters of the State classified as either primary trout waters or secondary trout waters, as designated in the Rules and Regulations for Water Quality Control, Chapter 391-3-6 at [www.gaepd.org](http://www.gaepd.org).

46. "Utility Company or Utility Contractor" means, for purposes of this Permit, an entity or sub-contractor that is responsible, either directly or indirectly, for the construction, installation, and maintenance of conduits, pipes, pipelines, cables, wires, trenches, vaults, manholes, and similar structures or devices for the conveyance of natural gas (or other types of gas), liquid petroleum products, electricity, telecommunications (telephone, data, television, etc.), water or sewage.

47. "USGS Topographic Map" means a current quadrangle, 7½ minute series map prepared by the United States Department of the Interior, Geological Survey.

48. "Vegetative Erosion and Sediment Control Practices" means measures for the stabilization of erosive or sediment producing areas by covering the soil with: (1) permanent seeding, sprigging or planting, producing long-term vegetative cover; (2) temporary seeding, producing short-term vegetative cover; or (3) sodding, covering areas with a turf of perennial sod forming grass.

49. "Waters Supporting Warm Water Fisheries" means all waters of the State that sustain, or have the potential to sustain, aquatic life but excluding trout waters and man-made conveyances primarily intended to transport storm water.

50. "Waters of Georgia" or "Waters of the State" means any and all rivers, streams, creeks, branches, lakes, reservoirs, ponds, drainage systems, springs, wells, wetlands, and all other bodies of surface or subsurface water, natural or artificial, lying within or forming a part of the boundaries of the State which are not entirely confined and retained completely upon the property of a single individual, partnership, or corporation.

### **C. Eligibility.**

#### **1. Construction Activities.** This permit authorizes, subject to the conditions of this permit:

a. all discharges of storm water associated with stand alone construction projects that will result in land disturbance equal to or greater than one (1) acre occurring on or before, and continuing after, the effective date of this permit, (henceforth referred to as existing storm water discharges from construction activities) except for discharges identified under Part I.C.3.; and

b. all discharges of storm water associated with stand alone construction projects that will result in land disturbance equal to or greater than one (1) acre occurring after the effective date of this permit, (henceforth referred to as existing storm water discharges from construction activities).

c. coverage under this permit is not required for discharges of storm water associated with minor land disturbing activities (such as home gardens and individual home landscaping, repairs, maintenance work, fences and other related activities which result in minor soil erosion) conducted outside of the 25 foot buffer along the banks of all State waters requiring a buffer and outside of the 50 foot buffer along the banks of all State waters classified as 'trout streams' requiring a buffer on individual residential lots sold to homeowners where all planned construction activities on that lot have been completed and have undergone final stabilization.

**2. Mixed Storm Water Discharges.** This permit may only authorize a storm water discharge from a construction site or construction activities that is mixed with a storm water discharge from an industrial source or activity other than construction where:

- a. the industrial source or activity other than construction is located on the same site as the construction activity and is an integral part of the construction activity;
- b. the storm water discharges associated with industrial activity from the areas of the site where construction activities are occurring are in compliance with the terms of this permit; and
- c. storm water discharges associated with industrial activity from the areas of the site where industrial activity other than construction are occurring are covered by a different NPDES general permit or individual permit authorizing such discharges and the discharges are in compliance with a different NPDES permit.

**3. Limitations on Coverage.** The following storm water discharges from construction sites are not authorized by this permit:

- a. storm water discharges associated with an industrial activity that originate from the site after construction activities have been completed and the site has undergone final stabilization;
- b. discharges that are mixed with sources of non-storm water other than discharges which are identified in Part III.A.2. of this permit and which are in compliance with Part IV.D.7. (non-storm water discharges) of this permit;
- c. storm water discharges associated with industrial activity that are subject to an existing NPDES individual or general permit. Such discharges may be authorized under this permit after an existing permit expires provided the existing permit did not establish numeric limitations for such discharges; and
- d. storm water discharges from construction sites that the Director (EPD) has determined to be or may reasonably be expected to be contributing to a violation of a water quality standard.

**4. Compliance with Water Quality Standards.** No discharges authorized by this permit shall cause violations of Georgia's in-stream water quality standards as provided by the Rules and Regulations for Water Quality Control, Chapter 391-3-6-.03.

#### **D. Authorization.**

1. Any person desiring coverage under this permit must submit a Notice of Intent (NOI) to the EPD and the NOI must be received by the EPD in accordance with the requirements of Part II, using NOI forms provided by the EPD (or an exact photocopy thereof), in order for storm water discharges from construction sites to be authorized.

2. Unless notified by the Director to the contrary, a permittee who submits an NOI in accordance with the requirements of this permit is authorized to discharge storm water from construction sites under the terms and conditions of this permit fourteen (14) days after the date that the NOI is postmarked. The Director may deny coverage under this permit and require submittal of an application for an individual NPDES permit or alternative general NPDES permit based on a review of the NOI or other information. Should the Director deny coverage under this permit, coverage under this permit is authorized until the date specified in the notice of denial by the Director.

3. Where a new permittee is to begin work on-site after an NOI for the facility/construction site has been submitted, that new permittee must submit a new NOI in accordance with Part II.

**E. Continuing Obligations of Permittees.** Unless and until responsibility for a site covered under this permit is properly terminated according to the terms of the permit, the initial permittee remains responsible for compliance with all applicable terms of the permit and for any violations of said terms.

## **Part II. NOTICE OF INTENT REQUIREMENTS**

### **A. Deadlines for Notification.**

1. Except as provided in Part II.A.2., II.A.3. and II.A.5., Owners or Operators or both who intend to obtain coverage under this general permit for storm water discharges from a construction site (where construction activities begin after issuance of this permit), shall submit a Notice of Intent (NOI) in accordance with the requirements of this Part at least fourteen (14) days prior to the commencement of construction activities.

2. For sites where construction activities, subject to this permit, are occurring on the effective date of this permit, the Owner or Operator or both shall submit an NOI in accordance with the requirements of this part no later than sixty (60) days after the effective date of this permit.

3. A discharger is not precluded from submitting an NOI in accordance with the requirements of this part after the dates provided in Parts II.A.1. or II.A.2. of this permit. In such instances, EPD may bring an enforcement action for failure to submit an NOI in a timely manner or for any unauthorized discharges of storm water associated with construction activity that have occurred on or after the dates specified in Part II.A.1. and II.A.2.

4. Where an Owner or an Operator or both changes after an NOI has been filed, the subsequent Owner or Operator or both must file a new NOI in accordance with this Part, at least seven (7) days before beginning work at the facility/construction site. In the event a lender or other secured creditor acquires legal title to the facility/construction site, such party must file a new NOI in accordance with this Part by the earlier to occur of (a) seven (7) days before beginning work at the facility/construction site; or (b) thirty (30) days from acquiring legal title to the facility/construction site. Stabilization and BMP installation and/or maintenance measures of a disturbed site, by the subsequent Owner or Operator, may occur in advance of filing a new NOI, without violation of this permit.

5. For sites where construction activities will result in land disturbance equal to or greater than one (1) acre that are required as a result of storm- or emergency-related repair work, the Owner or Operator or both shall notify the appropriate EPD District Office within three (3) days of commencement of said construction activities. The Owner or Operator or both shall submit the NOI to the appropriate EPD district office as soon as possible after the storm- or emergency-related event but no later than fourteen (14) days after the commencement of construction activities and shall submit the Plan in accordance with Part IV.A.6.

### **B. Notice of Intent Contents.**

**1. Primary Permittee.** A single Notice of Intent for the primary permittee (i.e., one NOI signed by the Owner or the Operator or both) shall be signed in accordance with Part V.G. of this permit and shall include the following information:

a. The site/project name, GPS location of a construction exit in the form degrees/minutes/seconds as determined by GPS unit, city (if applicable) and county of the construction site for which the notification is submitted. The site location information must be sufficient to accurately locate the construction site;

b. The Operator's legal name, address, and telephone number; or the Owner's legal name, address, and telephone number;

c. The name and telephone number of the individual to whom the permittee has assigned the responsibility for the daily operational control (i.e., construction superintendent, etc.) of the site;

d. The name of the initial receiving water(s) or if unnamed the first named blue line stream indicated on the appropriate USGS Topographic map, and when the discharge is through a municipal separate storm sewer system (MS4), the name of the local government operating the municipal separate storm sewer system and the name of the receiving water(s) which receives the discharge from the MS4, and the permittee's determination of whether the receiving water(s) supports warm water fisheries or is a trout stream as indicated in the Rules and Regulations for Water Quality Control, Chapter 391-3-6 at [www.gaepd.org](http://www.gaepd.org);

e. The name of the receiving water(s) located within one (1) linear mile upstream of and within the same watershed as, any portion of an Impaired Stream Segment identified as "not supporting" its designated use(s) shown on Georgia's 2008 and subsequent "305(b)/303(d) List Documents (Final)" for the criteria violated, "Bio F" (Impaired Fish Community) and/or "Bio M" (Impaired Macroinvertebrate Community), within Category 4a, 4b or 5, and the potential cause is either "NP" (nonpoint source) or "UR" (urban runoff) at [www.gaepd.org/Documents/305b.html](http://www.gaepd.org/Documents/305b.html);

f. An estimate of project start date and completion date, a schedule for the timing of the various construction activities, the number of acres of the site on which soil will be disturbed, and the surface water drainage area (if applicable). For projects that began on or before the effective date of this permit, the start date must be the actual start date of construction;

g. A certification that an Erosion, Sedimentation and Pollution Control Plan (Plan) has been prepared in accordance with Part IV of this permit, and that such Plan provides for compliance with this permit provided however, that for construction activities that began on or before the effective date of this permit, the certification shall state that a Plan will be prepared in accordance with Part IV of this permit, and that such Plan will provide for compliance with this permit;

h. The type of construction activity category (from those listed on the NOI) conducted at the site;

i. The location of the receiving water(s) or outfall(s) or a combination of receiving water(s) and outfall(s) to be monitored on a map or drawing of appropriate scale. When it is determined by the primary permittee that some or all of the outfall(s) will be monitored, the applicable nephelometric turbidity unit (NTU) selected from Appendix B (i. e. i.e., based upon the size of the construction site and the surface water drainage area) must be shown for each outfall to be monitored. The following certification shall be signed in accordance with Part V.G. of this permit:

"I certify that the receiving water(s) or the outfall(s) or a combination of receiving water(s) and outfall(s) will be monitored in accordance with the Erosion, Sedimentation and Pollution Control Plan."

j. For stand alone construction disturbing more than 50 acres, which began after the effective date of this permit, include a single copy of the Erosion, Sedimentation, and Pollution Control Plan;

k. NOIs may be submitted for separate phases of projects with a total planned disturbance greater than 5.0 acres, provided that each phase shall not be less than 1.0 acre. Phased NOIs shall include all documentation required by this permit for each phase, including fees; and

l. Any other information specified on the NOI in effect at the time of submittal.

**C. Notice of Intent Submittal.** NOIs are to be submitted by return receipt certified mail (or similar service) to both the appropriate EPD District Office according to the schedule in Appendix A of this permit and to the Local Issuing Authority in jurisdictions authorized to issue a Land Disturbance Activity permit for the permittee's construction site pursuant to O.C.G.A. 12-7-1, et seq. If an electronic submittal service is provided by EPD then the NOI may be submitted electronically so long as a paper copy is also submitted by return receipt or similar service. The permittee shall retain a copy of the proof of submittal at the construction site or the proof of submittal shall be readily available at a designated alternative location from commencement of construction until such time as a Notice of Termination (NOT) is submitted in accordance with Part VI.

**D. Fees.** Any applicable fees shall be submitted by the **Primary Permittee** in accordance with Rules and Regulations for Water Quality Control (Rules) promulgated by the Board of Natural Resources. By submitting an NOI for coverage under this permit the primary permittee agrees to pay any fees required, now or in the future, by such Rules authorized under O.C.G.A. Section 12-5-23(a)(5)(A), which allows the Board of Natural Resources to establish a fee system. Fees may be assessed on land disturbing activity proposed to occur on or after the effective date of this permit and shall be paid in accordance with such Rules.

**E. Renotification.** Upon issuance of a new or different general permit for some or all of the storm water discharges covered by this permit, the permittee is required to notify the EPD of their intent to be covered by the new or different general permit. The permittee must submit a new Notice of Intent in accordance with the notification requirements of the new or different general permit.

### **PART III. SPECIAL CONDITIONS, MANAGEMENT PRACTICES, PERMIT VIOLATIONS AND OTHER LIMITATIONS**

#### **A. Prohibition on Non-Storm Water Discharges.**

1. Except as provided in Part I.C.2. and III.A.2., all discharges covered by this permit shall be composed entirely of storm water.

2. The following non-storm water discharges may be authorized by this permit provided the non-storm water component of the discharge is explicitly listed in the Erosion, Sedimentation and Pollution Control Plan and is in compliance with Part IV.D.7.: discharges from fire fighting activities; fire hydrant flushing; potable water sources including water line flushing; irrigation drainage; air conditioning condensate; springs; uncontaminated ground water; and foundation or footing drains where flows are not contaminated with process materials or pollutants.

#### **B. Releases in Excess of Reportable Quantities.**

1. The discharge of hazardous substances or oil in the storm water discharge(s) from a site shall be prevented. This permit does not relieve the permittee of the reporting requirements of Georgia's Oil or Hazardous Material Spills or Releases Act (O.C.G.A. §§12-14-2, et seq.), 40 CFR Part 117 and 40 CFR Part 302. Where a release containing a hazardous substance in an amount equal to or in excess of a reporting quantity established under either Georgia's Oil or Hazardous Material Spills or Releases Act (O.C.G.A. §§12-14-2, et seq.), 40 CFR 117 or 40 CFR 302 occurs during a 24 hour period, the permittee is required to notify EPD at (404) 656-4863 or (800) 241-4113 and the National Response Center (NRC) at (800) 424-8802 in accordance with the requirements of Georgia's Oil or Hazardous Material Spills or Releases Act (O.C.G.A. §§12-14-2, et seq.), 40 CFR 117 and 40 CFR 302 as soon as he/she has knowledge of the discharge.

2. This permit does not authorize the discharge of hazardous substances or oil resulting from an on-site spill.

**C. Discharges into, or within One Mile Upstream of and within the Same Watershed as, Any Portion of a Biota Impaired Stream Segment.**

For construction activities where the NOI was submitted within 90 days after the effective date of this permit, the requirements of Part III.C. of this permit are not applicable.

Any permittee who intends to obtain coverage under this permit for storm water discharges associated with construction activity into an Impaired Stream Segment, or within one (1) linear mile upstream of and within the same watershed as, any portion of an Impaired Stream Segment identified as "not supporting" its designated use(s), as shown on Georgia's 2008 and subsequent "305(b)/303(d) List Documents (Final)" at the time of NOI submittal, must satisfy the requirements of Part III.C. of this permit if the Impaired Stream Segment has been listed for criteria violated, "Bio F" (Impaired Fish Community) and/or "Bio M" (Impaired Macroinvertebrate Community), within Category 4a, 4b or 5, and the potential cause is either "NP" (nonpoint source) or "UR" (urban runoff). Those discharges that are located within one (1) linear mile of an Impaired Stream Segment, but are not located within the watershed of any portion of that stream segment, are excluded from this requirement. Georgia's 2008 and subsequent 305(b)/303(d) List Documents (Final) can be viewed on the EPD website, [www.gaepd.org/Documents/305b.html](http://www.gaepd.org/Documents/305b.html).

1. If a Total Maximum Daily Load (TMDL) Implementation Plan for sediment has been finalized at least six (6) months prior to the permittee's submittal of the NOI, the Erosion, Sedimentation and Pollution Control Plan (Plan) must address any site-specific conditions or requirements included in the TMDL Implementation Plan that are applicable to the permittee's discharge(s) to the Impaired Stream Segment within the timeframe specified in the TMDL Implementation Plan. If the TMDL Implementation Plan establishes a specific numeric wasteload allocation that applies to an permittee's discharge(s) to the Impaired Stream Segment, then the permittee must incorporate that allocation into the Erosion, Sedimentation and Pollution Control Plan and implement all necessary measures to meet that allocation. A list of TMDL Implementation Plans can be viewed on the EPD website, [www.gaepd.org](http://www.gaepd.org).

2. In order to ensure that the permittee's discharge(s) do not cause or contribute to a violation of State water quality standards, the Plan must include at least four (4) of the following best management practices (BMPs) for those areas of the site which discharge into or within one (1) linear mile upstream and within the same watershed as the Impaired Stream Segment:

- a. During construction activities, double the width of the 25 foot undisturbed vegetated buffer along all State waters requiring a buffer and the 50 foot undisturbed vegetated buffer along all State waters classified as "trout streams" requiring a buffer. During construction activities, EPD will not grant variances to any such buffers that are increased in width pursuant to this section.
- b. Increase all temporary sediment basins and retrofitted storm water management basins to provide sediment storage of at least 3600 cubic feet (134 cubic yards) per acre drained.
- c. Use baffles in all temporary sediment basins and retrofitted storm water management basins to at least double the conventional flow path length to the outlet structure.
- d. Place a large sign (minimum 4 feet x 8 feet) on the site visible from the roadway identifying the construction site, the permittee(s), and the contact person(s) and telephone number(s).
- e. Use anionic polyacrylamide (PAM) and/or mulch to stabilize areas left disturbed for more than seven (7) calendar days in accordance with Part III.D.1. of this permit.
- f. Conduct turbidity and Total Suspended Solids (TSS) sampling after every rain event of 0.5 inch or greater within any 24 hour period, recognizing the exceptions specified in Part IV.D.6.d. of this permit.

- g. Comply with the applicable end-of-pipe turbidity effluent limit, without the "BMP defense" as provided for in O.C.G.A. 12-7-6(a)(1).
- h. Limit the total planned site disturbance to less than 50% impervious surfaces (excluding any State-mandated buffer areas from such calculations).
- i. Limit the amount of area disturbed at any one time to no greater than 25 acres or 50% of the total planned site, whichever is less.
- j. Use "Dirt II" techniques to model and manage storm water runoff (e.g., seep berms, sand filters, anionic PAM), available on the EPD website, [www.gaepd.org](http://www.gaepd.org).
- k. Add appropriate organic soil amendments (e.g., compost) and conduct pre- and post-construction soil sampling to a depth of 6 (six) inches to document improved levels of soil carbon after final stabilization of the construction site.
- l. Use mulch filter berms, in addition to a silt fence, on the site perimeter wherever storm water may be discharged.
- m. Apply the appropriate Georgia Department of Transportation approved erosion control matting or blankets or bonded fiber matrix to all slopes steeper than 3:1.
- n. Use appropriate erosion control matting or blankets instead of concrete in construction storm water ditches and storm drainages designed for a 25 year, 24 hour rainfall event.
- o. Use anionic PAM under a passive dosing method (e.g., flocculant blocks) within construction storm water ditches and storm drainages that feed into temporary sediment basins and retrofitted management basins.
- p. Install sod for a minimum 20 foot width, in lieu of seeding, along the site perimeter wherever storm water may be discharged.
- q. Use a surface draining skimmer designed to drain temporary sediment basins and retrofitted storm water management basins over a minimum three (3) day period.
- r. Certified personnel shall conduct inspections at least twice every seven (7) calendar days and within 24 hours of the end of the storm that is 0.5 inches rainfall or greater in accordance with Part IV.D.4.a.(2). (a) – (c) of this permit.
- s. Apply the appropriate compost blankets (minimum depth 1.5 inches) to protect soil surfaces until vegetation is established during the final stabilization phase of the construction activity.
- t. Use alternative BMPs whose performance has been documented to be superior to conventional BMPs as certified by a Design Professional (unless disapproved by EPD or the State Soil and Water Conservation Commission).

#### **D. Management Practices and Permit Violations.**

1. Best management practices, as set forth in this permit, are required for all construction activities, and must be implemented in accordance with the design specifications contained in the "Manual for Erosion and Sediment Control in Georgia" (Manual) published by the State Soil and Water Conservation Commission as of January 1 of the year in which the land-disturbing activity was permitted to prevent or reduce the pollution of waters of Georgia.

Proper design, installation, and maintenance of best management practices shall constitute a complete defense to any action by the Director or to any other allegation of noncompliance with Part III.D.3. and Part III.D.4.

2. Failure to properly design, install, or maintain best management practices shall constitute a violation of this permit for each day on which such failure occurs. BMP maintenance as a result of the permittee's routine inspections shall not be considered a violation for the purposes of this paragraph. If during the course of the permittee's routine inspection BMP failures are observed which have resulted in sediment deposition into Waters of the State, the permittee shall correct the BMP failures and shall submit a summary of the violations to EPD in accordance with Part V.A.2. of this permit.

3. A discharge of storm water runoff from disturbed areas where best management practices have not been properly designed, installed, and maintained shall constitute a separate violation for each day on which such discharge results in the turbidity of receiving water(s) being increased by more than ten (10) nephelometric turbidity units for waters classified as trout streams or more than twenty-five (25) nephelometric turbidity units for waters supporting warm water fisheries, regardless of a permittee's certification under Part II.B.1.i. This paragraph shall not apply to any land disturbance associated with the construction of single-family homes which are not part of a subdivision or planned common development unless five (5) acres or more will be disturbed.

4. When the permittee has elected to monitor outfall(s), the discharge of storm water runoff from disturbed areas where best management practices have not been properly designed, installed, and maintained shall constitute a separate violation for each day on which such condition results in the turbidity of the discharge exceeding the value selected from Appendix B applicable to the construction site. As set forth therein, the nephelometric turbidity unit (NTU) value shall be selected from Appendix B based upon the size of the construction site, the surface water drainage area and whether the receiving water(s) supports warm water fisheries or is a trout stream as indicated in the Rules and Regulations for Water Quality Control, Chapter 391-3-6 at [www.gaepd.org](http://www.gaepd.org).

#### **Part IV. EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN**

An Erosion, Sedimentation and Pollution Control Plan (Plan) shall be designed, installed and maintained for the entire construction activity covered by this permit. The Erosion, Sedimentation and Pollution Control Plan must be prepared by a design professional as defined by this permit. All persons involved in Plan preparation shall have completed the appropriate certification course, pursuant to O.C.G.A. 12-7-19 (b), approved by the State Soil and Water Conservation Commission. The design professional preparing the Plan must include in the Plan and sign in accordance with Part V.G. of this permit the following certification:

"I certify that the permittee's Erosion, Sedimentation and Pollution Control Plan provides for an appropriate and comprehensive system of best management practices required by the Georgia Water Quality Control Act and the document "Manual for Erosion and Sediment Control in Georgia" (Manual) published by the State Soil and Water Conservation Commission as of January 1 of the year in which the land-disturbing activity was permitted, provides for the sampling of the receiving water(s) or the sampling of the storm water outfalls and that the designed system of best management practices and sampling methods is expected to meet the requirements contained in the General NPDES Permit No. GAR 100001."

The Plan shall include any additional certifications regarding the design professional's site visit in accordance with the Rules for Erosion and Sedimentation Control promulgated by the Board of Natural Resources:

"I certify under penalty of law that this Plan was prepared after a site visit to the locations described herein by myself or my authorized agent, under my supervision."

The Plan shall include, as a minimum, best management practices, including sound conservation and engineering practices to prevent and minimize erosion and resultant sedimentation, which are consistent with, and no less



stringent than, those practices contained in the "Manual for Erosion and Sediment Control in Georgia" (Manual) published by the State Soil and Water Conservation Commission as of January 1 of the year in which the land-disturbing activity was permitted and O.C.G.A. 12-7-6, as well as the following:

(i). Except as provided in Part IV.(iii). below, no construction activities shall be conducted within a 25 foot buffer along the banks of all State waters, as measured horizontally from the point where vegetation has been wrested by normal stream flow or wave action, except where the Director has determined to allow a variance that is at least as protective of natural resources and the environment in accordance with the provisions of O.C.G.A. 12-7-6, or where a drainage structure or a roadway drainage structure must be constructed, provided that adequate erosion control measures are incorporated in the project plans and specifications and are implemented. The buffer shall not apply to the following activities provided that adequate erosion control measures are incorporated into the project plans and specifications are implemented:

- (1) public drinking water system reservoirs,
- (2) stream crossings for water lines, provided that the stream crossings occur at an angle, as measured from the point of crossing, within 25 degrees of perpendicular to the stream and cause a width of disturbance of not more than 50 feet within the buffer,
- (3) stream crossings for sewer lines, provided that the stream crossings occur at an angle, as measured from the point of crossing, within 25 degrees of perpendicular to the stream and cause a width of disturbance of not more than 50 feet within the buffer,
- (4) buffer crossing for fences, provided that the crossings occur at an angle, as measured from the point of crossing, within 25 degrees of perpendicular to the stream and cause a width of disturbance of not more than 50 feet within the buffer, and
- (5) stream crossings for aerial utility lines, provided that: (a) the new utility line right-of-way width does not exceed 100 linear feet, (b) utility lines are routed and constructed so as to minimize the number of stream crossings and disturbances to the buffer, (c) only trees and tree debris are removed from within the buffer resulting in only minor soil erosion (i.e., disturbance to underlying vegetation is minimized), and (d) functional native riparian vegetation is re-established in any bare or disturbed areas within the buffer. The Plan shall include a description of the stream crossings with details of the buffer disturbance including area and length of buffer disturbance, estimated length of time of buffer disturbance, and justification;

(ii). No construction activities shall be conducted within a 50 foot buffer, as measured horizontally from the point where vegetation has been wrested by normal stream flow or wave action, along the banks of any State waters classified as 'trout streams' except when approval is granted by the Director for alternate buffer requirements in accordance with the provisions of O.C.G.A. 12-7-6, or where a roadway drainage structure must be constructed; provided, however, that small springs and streams classified as 'trout streams' which discharge an average annual flow of 25 gallons per minute or less shall have a 25 foot buffer or they may be piped, at the discretion of the permittee, pursuant to the terms of a rule providing for a general variance promulgated by the Board of Natural Resources including notification of such to EPD and the Local Issuing Authority of the location and extent of the piping and prescribed methodology for minimizing the impact of such piping and for measuring the volume of water discharged by the stream. Any such pipe must stop short of the downstream permittee's property, and the permittee must comply with the buffer requirement for any adjacent trout streams. The buffer shall not apply to the following activities provided that adequate erosion control measures are incorporated into the project plans and specifications are implemented:

- (1) public drinking water system reservoirs,
- (2) stream crossings for water lines, provided that the stream crossings occur at an angle, as measured from the point of crossing, within 25 degrees of perpendicular to the stream and cause a width of disturbance of not more than 50 feet within the buffer,
- (3) stream crossings for sewer lines, provided that the stream crossings occur at an angle, as measured from the point of crossing, within 25 degrees of perpendicular to the stream and cause a width of disturbance of not more than 50 feet within the buffer,

- (4) buffer crossing for fences, provided that the crossings occur at an angle, as measured from the point of crossing, within 25 degrees of perpendicular to the stream and cause a width of disturbance of not more than 50 feet within the buffer, and
  - (5) stream crossings for aerial utility lines, provided that: (a) the new utility line right-of-way width does not exceed 100 linear feet, (b) utility lines are routed and constructed so as to minimize the number of stream crossings and disturbances to the buffer, (c) only trees and tree debris are removed from within the buffer resulting in only minor soil erosion (i.e., disturbance to underlying vegetation is minimized), and (d) functional native riparian vegetation is re-established in any bare or disturbed areas within the buffer. The Plan shall include a description of the stream crossings with details of the buffer disturbance including area and length of buffer disturbance, estimated length of time of buffer disturbance, and justification; and
- (iii). Except as provided above, for buffers required pursuant to Part IV.(i). and (ii)., no construction activities shall be conducted within a buffer and a buffer shall remain in its natural, undisturbed, state of vegetation until all land-disturbing activities on the construction site are completed. After the submittal of a Notice of Termination, a buffer may be thinned or trimmed of vegetation as long as a protective vegetative cover remains to protect water quality and aquatic habitat and a natural canopy is left in sufficient quantity to keep shade on the stream bed.

The Erosion, Sedimentation and Pollution Control Plan shall identify all potential sources of pollution which may reasonably be expected to affect the quality of storm water discharges from the construction site. In addition, the Plan shall describe and the applicable permittee shall ensure the implementation of practices which will be used to reduce the pollutants in storm water discharges associated with construction activity at the site and to assure compliance with the terms and conditions of this permit. The applicable permittee must implement and maintain the provisions of the Plan required under this part as a condition of this permit.

Except as provided in Part IV.A.2., a single Erosion, Sedimentation and Pollution Control Plan must be prepared by the primary permittee for the stand alone construction project.

#### **A. Deadlines for Plan Preparation and Compliance.**

1. Except as provided in Part IV.A.2. and Part IV.A.6., the Erosion, Sedimentation and Pollution Control Plan shall be completed prior to submitting the NOI and prior to conducting any construction activity by any permittee.
2. For construction activities that began on or before the effective date of this permit and were subject to the regulations under the previous permit, the permittee(s) shall continue to operate under the existing Plan.
3. For construction activities that begin after the effective date of this permit, the primary permittee shall be required to prepare the Plan for that phase of the stand alone development that corresponds with the NOI being submitted and the primary permittee(s) shall implement the Plan on or before the day construction activities begin.
4. Additional Plan Submittals.
  - a. For all projects identified under Part I.C.1.b., which begin after the effective date of this permit, in a jurisdiction where there is no certified Local Issuing Authority regulating that project, a single copy of the Plan must be submitted to the EPD Watershed Protection Branch and a second copy of the Plan must be submitted to the appropriate EPD District Office prior to or concurrent with the NOI submittal. The EPD Watershed Protection Branch will review Plans for deficiencies using the applicable Erosion, Sedimentation and Pollution Control Plan Checklist established by the State Soil and Water Conservation Commission as of January 1 of the year in which the land-disturbing activity was permitted.
  - b. For sites that are equal to or greater than 50 acres of disturbed area, regardless of the existence of a certified Local Issuing Authority in the jurisdiction, one of the following submissions is also required:

- (i) for all projects which begin after the effective date of this permit a single copy of the NOI and a single copy of the Plan shall be submitted to the appropriate EPD District Office.
- (ii) for all projects which began on or before the effective date of this permit single copy of the NOI and a single copy of the Plan, if amended, shall be submitted to the appropriate EPD District Office.

5. For stand alone projects that begin construction activity after the effective date of this permit, the primary permittee must retain the design professional who prepared the Erosion, Sedimentation and Pollution Control Plan, except when the primary permittee has requested in writing and EPD has agreed to an alternate design professional, to inspect the installation of the initial sediment storage requirements and perimeter control BMPs which the design professional designed within seven (7) days after installation. The design professional shall determine if these BMPs have been installed and are being maintained as designed. The design professional shall report the results of the inspection to the primary permittee within seven (7) days and the permittee must correct all deficiencies within two (2) business days of receipt of the inspection report from the design professional unless weather related site conditions are such that additional time is required.

6. For storm- or emergency-related repair work, the permittee shall implement appropriate BMPs and certified personnel (provided by the primary permittee) shall inspect at least once every seven (7) calendar days and within 24 hours of the end of a storm that is 0.5 inches rainfall or greater. If the storm- or emergency-related repair work will not be completed within sixty (60) days of commencement of construction activity, a single copy of the Plan shall be submitted to EPD and the permittee shall comply with all requirements of this permit on the sixty-first (61st) day.

#### **B. Signature and Plan Review.**

1. The Erosion, Sedimentation and Pollution Control Plan shall be signed in accordance with Part V.G., and be retained on the site (or, if not possible, at a readily accessible location) which generates the storm water discharge in accordance with Part IV.F. of this permit.

2. The primary permittee shall make Plans available upon request to the EPD; to designated officials of the local government reviewing soil erosion and sediment control plans, grading plans, or storm water management plans; or in the case of a storm water discharge associated with construction activity which discharges through a municipal separate storm sewer system with an NPDES permit, to the local government operating the municipal separate storm sewer system.

3. EPD may notify the primary permittee at any time that the Plan does not meet one or more of the minimum requirements of this Part. Within seven (7) days of such notification (or as otherwise provided by EPD), the primary permittee shall make the required changes to the Plan and shall submit to EPD either the amended Plan or a written certification that the requested changes have been made.

**C. Keeping Plans Current.** The primary permittee(s) shall amend their Plan whenever there is a change in design, construction, operation, or maintenance, which has a significant effect on BMPs with a hydraulic component (i.e., those BMPs where the design is based upon rainfall intensity, duration and return frequency of storms) or if the Plan proves to be ineffective in eliminating or significantly minimizing pollutants from sources identified under Part IV.D.3. Amendments to the Plan must be certified by a design professional as provided in this permit.

**D. Contents of Plan.** The Erosion, Sedimentation and Pollution Control Plan shall include, as a minimum, best management practices, including sound conservation and engineering practices to prevent and minimize erosion and resultant sedimentation, which are consistent with, and no less stringent than, those practices contained in the "Manual for Erosion and Sediment Control in Georgia" (Manual) published by the State Soil and Water Conservation Commission as of January 1 of the year in which the land-disturbing activity was permitted, as well as the following:

**1. Checklist.** Each plan shall include the applicable Erosion, Sedimentation and Pollution Control Plan Checklist established by the State Soil and Water Conservation Commission as of January 1 of the year in which the land-disturbing activity was permitted. The Checklist is available on the EPD website, [www.gaepd.org](http://www.gaepd.org).

**2. Site description.** Each Plan shall provide a description of pollutant sources and other information as indicated:

- a. A description of the nature of the construction activity;
- b. A description and chart or timeline of the intended sequence of major activities which disturb soils for major portions of the site (i.e., initial sediment storage requirements and perimeter BMPs, clearing and grubbing activities, excavation activities, grading activities, infrastructure activities, immediate and final stabilization activities);
- c. Estimates of the total area of the site and the total area of the site that is expected to be disturbed by excavation, grading, or other activities;
- d. An estimate of the runoff coefficient or peak discharge flow of the site prior to the construction activities and after construction activities are completed and existing data describing the soil or the quality of any discharge from the site;
- e. A site map indicating drainage patterns and approximate slopes anticipated after major grading activities, areas of soil disturbance, an outline of areas which are not to be disturbed, the location of major structural and nonstructural controls identified in the Plan, the location of areas where stabilization practices are expected to occur, surface waters (including wetlands), and locations where storm water is discharged to a surface water; and
- f. Identify the receiving water(s) and areal extent of wetland acreage at the site;

**3. Controls.** Each Plan shall include a description of appropriate controls and measures that will be implemented at the construction site including: (1) initial sediment storage requirements and perimeter control BMPs, (2) intermediate grading and drainage BMPs, and (3) final BMPs. For construction sites where there will be no mass grading and the initial sediment storage requirements and perimeter control BMPs, intermediate grading and drainage BMPs, and final BMPs are the same, the Plan may combine all of the BMPs into a single phase Plan. The Plan will include appropriate staging and access requirements for construction equipment. Plans submitted after the effective date of this permit shall limit the amount of disturbed area to no greater than 50 acres at any one time without prior written authorization from the appropriate EPD District Office according to the schedule in Appendix A of this permit. EPD will approve or disapprove such requests within 35 days of receipt. Failure of EPD to act within 35 days shall be considered an approval of such requests. If the EPD District Office approves a request to disturb 50 acres or more at any one time, the Plan must include at least four (4) of the best management practices listed in Part III.C.2. of this permit.

The Plan will clearly describe for each major activity identified in Part IV.D.2.b. appropriate control measures and the timing during the construction process that the measures will be implemented. The primary permittee is encouraged to utilize the document, Developing Your Stormwater Pollution Prevention Plan: A Guide for Construction Sites, EPA 833-R-060-04, May 2007 ([www.epa.gov/npdes/pubs/sw\\_swppp\\_guide.pdf](http://www.epa.gov/npdes/pubs/sw_swppp_guide.pdf)), when preparing the Plan. The description and implementation of controls shall address the following minimum components:

a. Erosion and sediment controls.

- (1). Stabilization measures. A description of interim and permanent stabilization measures, including site-specific scheduling of the implementation of the measures. Site plans should ensure that existing vegetation is preserved and that disturbed portions of the site are stabilized.

Stabilization measures may include: temporary seeding, permanent seeding, mulching, geotextiles, sod stabilization, vegetative buffer strips, protection of trees, preservation of mature vegetation, and other appropriate measures. A record of the dates when major grading activities occur, when construction activities temporarily or permanently cease on a portion of the site, and when stabilization measures are initiated shall be included in the Plan. Except as provided in paragraphs IV.D.3.(a).(1).(a) and (b) below, stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased.

(a). Where the initiation of stabilization measures by the 14th day after construction activity temporarily or permanently cease is precluded by snow cover or other adverse weather conditions, stabilization measures shall be initiated as soon as practicable.

(b). Where construction activity will resume on a portion of the site within 21 days from when activities ceased, (e.g., the total time period that construction activity is temporarily ceased is less than 21 days) then stabilization measures do not have to be initiated on that portion of site by the 14th day after construction activity temporarily ceased.

(2). Structural practices. A description of structural practices to divert flows from exposed soils, store flows or otherwise limit runoff and the discharge of pollutants from exposed areas of the site to the degree attainable. Such practices may include silt fences, earth dikes, drainage swales, sediment traps, check dams, subsurface drains, pipe slope drains, level spreaders, storm drain inlet protection, rock outlet protection, reinforced soil retaining systems, gabions, and temporary or permanent sediment basins. Structural practices should be placed on upland soils to the degree attainable. The installation of these devices may be subject to Section 404 of the CWA.

(3). Sediment basins. For common drainage locations a temporary (or permanent) sediment basin providing at least 1800 cubic feet (67 cubic yards) of storage per acre drained, or equivalent control measures, shall be provided until final stabilization of the site. The 1800 cubic feet (67 cubic yards) of storage area per acre drained does not apply to flows from off-site areas and flows from on-site areas that are either undisturbed or have undergone final stabilization where such flows are diverted around both the disturbed area and the sediment basin. For drainage locations where a temporary sediment basin providing at least 1800 cubic feet (67 cubic yards) of storage per acre drained, or equivalent controls is not attainable, sediment traps, silt fences, wood mulch berms or equivalent sediment controls are required for all side slope and down slope boundaries of the construction area. When the sediment fills to a volume at most of 22 cubic yards per acre for each acre of drainage area, the sediment shall be removed to restore the original design volume. This sediment must be properly disposed. Sediment basins may not be appropriate at some construction projects. Careful consideration must be used to determine when a sediment basin is not to be used and a written rationale explaining the decision not to use sediment basins must be included in the Plan. Notwithstanding any other provisions of this paragraph, perennial and intermittent waters of the State shall not be used for temporary or permanent sediment detention.

(4). Alternative BMPs. The use of alternative BMPs whose performance has been documented to be equivalent or superior to conventional BMPs as certified by a Design Professional may be allowed (unless disapproved by EPD or the State Soil and Water Conservation Commission).

(5). High performance BMPs. The use of infiltration trenches, seep berms, sand filters, dry wells, polyacrylamide, etc. for minimizing point source discharges except for large rainfall events is encouraged.

b. Storm water management. A description of measures that will be installed during the construction process to control pollutants in storm water discharges that will occur after construction operations have been completed. Structural measures should be placed on upland soils to the degree attainable. The installation of these devices may be subject to Section 404 of the CWA. This permit only addresses the installation of storm water management measures, and not the ultimate operation and maintenance of such structures after the construction activities have been completed and the site has undergone final stabilization. Operators are only responsible for the installation and maintenance of storm water management measures prior to final stabilization of the site, and are not responsible for maintenance after storm water discharges associated with construction activity have been eliminated from the site.

(1). Such practices may include: storm water detention structures (including wet ponds); storm water retention structures; flow attenuation by use of open vegetated swales and natural depressions; infiltration of runoff on-site; and sequential systems (which combine several practices). The Plan shall include an explanation of the technical basis used to select the practices to control pollution where flows exceed pre-development levels.

(2). Velocity dissipation devices shall be placed at discharge locations and along the length of any outfall channel for the purpose of providing a non-erosive velocity flow from the structure to a water course so that the natural physical and biological characteristics and functions are maintained and protected (e.g., no significant changes in the hydrological regime of the receiving water(s)).

(3). Installation and use of Green Infrastructure approaches and practices that mimic natural processes and direct storm water where it can be infiltrated, evapotranspired or re-used with significant utilization of soils and vegetation rather than traditional hardscape collection, conveyance and storage structures are encouraged to the maximum extent practicable. Green Infrastructure practices or approaches include permeable or porous paving, vegetated swales instead of curbs and gutters, green roofs, tree boxes, rain gardens, constructed wetlands, infiltration planters, vegetated median strips, protection and enhancement of riparian buffers and floodplains, and the overall reduction in site disturbance and impervious area. Design information on Green Infrastructure practices and other ways to manage storm water can be found in the Georgia Stormwater Management Manual ([www.georgiastormwater.com](http://www.georgiastormwater.com)) and the Georgia Green Growth Guidelines ([crd.dnr.state.ga.us](http://crd.dnr.state.ga.us)). Additional information on Green Infrastructure can be found at: [cfpub.epa.gov/npdes/home.cfm?program\\_id=298](http://cfpub.epa.gov/npdes/home.cfm?program_id=298), [greenvalues.cnt.org/green-infrastructure](http://greenvalues.cnt.org/green-infrastructure), and [www.epa.gov/npdes/pubs/gi\\_action\\_strategy.pdf](http://www.epa.gov/npdes/pubs/gi_action_strategy.pdf).

c. Other controls.

(1). Waste disposal. Locate waste collection areas away from streets, gutters, watercourses and storm drains. Waste collection areas, such as dumpsters, are often best located near construction site entrances to minimize traffic on disturbed soils. The Plan should include secondary containment around liquid waste collection areas to further minimize the likelihood of contaminated discharges. Solid materials, including building materials, shall not be discharged to waters of the State, except as authorized by a Section 404 permit.

(2). Off-site vehicle tracking of dirt, soils, and sediments and the generation of dust shall be minimized or eliminated to the maximum extent practical. The Plan shall include the best management practice to be implemented at the site or construction activity.

(3). All permittees shall ensure and demonstrate that their Plan is in compliance with applicable State and local waste disposal, sanitary sewer or septic system regulations.

(4). The Plan shall include best management practices for the remediation of all petroleum spills and leaks as appropriate.

(5). The Plan shall include best management practices for concrete washdown of tools, concrete mixer chutes, hoppers and the rear of vehicles. Washout of the drum at the construction site is prohibited.

#### 4. Inspections.

##### a. Permittee requirements.

(1). Each day when any type of construction activity has taken place at a primary permittee's site, certified personnel provided by the primary permittee shall inspect: (a) all areas at the primary permittee's site where petroleum products are stored, used, or handled for spills and leaks from vehicles and equipment; (b) all locations at the primary permittee's site where vehicles enter or exit the site for evidence of off-site sediment tracking; and (c) measure rainfall once each 24 hour period at the site. These inspections must be conducted until a Notice of Termination is submitted.

(2). Certified personnel (provided by the primary permittee) shall inspect the following at least once every seven (7) calendar days and within 24 hours of the end of a storm that is 0.5 inches rainfall or greater (unless such storm ends after 5:00 PM on any Friday or on any non-working Saturday, non-working Sunday or any non-working Federal holiday in which case the inspection shall be completed by the end of the next business day and/or working day, whichever occurs first): (a) disturbed areas of the primary permittee's construction site that have not undergone final stabilization; (b) areas used by the primary permittee for storage of materials that are exposed to precipitation that have not undergone final stabilization; and (c) structural control measures. Erosion and sediment control measures identified in the Plan applicable to the primary permittee's site shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving water(s). For areas of a site that have undergone final stabilization, the permittee must comply with Part IV.D.4.a.(3). These inspections must be conducted until a Notice of Termination is submitted.

(3). Certified personnel (provided by the primary permittee) shall inspect at least once per month during the term of this permit (i.e., until a Notice of Termination is received by EPD) the areas of the site that have undergone final stabilization. These areas shall be inspected for evidence of, or the potential for, pollutants entering the drainage system and the receiving water(s). Erosion and sediment control measures identified in the Plan shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving water(s).

(4). Based on the results of each inspection, the site description and the pollution prevention and control measures identified in the Erosion, Sedimentation and Pollution Control Plan, the Plan shall be revised as appropriate not later than seven (7) calendar days following each inspection. Implementation of such changes shall be made as soon as practical but in no case later than seven (7) calendar days following each inspection.

(5). A report of each inspection that includes the name(s) of personnel making each inspection, the date(s) of each inspection, major observations relating to the implementation of the Erosion, Sedimentation and Pollution Control Plan, and actions taken in accordance with Part IV.D.4.a.(4). of the permit shall be made and retained at the site or be readily available at a designated

alternate location until the entire site or that portion of a construction project that has been phased has undergone final stabilization and a Notice of Termination is submitted to EPD. Such reports shall identify any incidents of non-compliance. Where the report does not identify any incidents of non-compliance, the report shall contain a certification that the construction site is in compliance with the Erosion, Sedimentation and Pollution Control Plan and this permit. The report shall be signed in accordance with Part V.G. of this permit.

**5. Maintenance.** The Plan shall include a description of procedures to ensure the timely maintenance of vegetation, erosion and sediment control measures and other protective measures identified in the site plan.

**6. Sampling Requirements.** This permit requires the monitoring of nephelometric turbidity in receiving water(s) or outfalls in accordance with this permit. This paragraph shall not apply to any land disturbance associated with the construction of single-family homes which are not part of a subdivision or planned common development unless five (5) acres or more will be disturbed. The following procedures constitute EPD's guidelines for sampling turbidity.

a. *Sampling Requirements* shall include the following:

(1) A USGS topographic map, a topographic map or a drawing (referred to as a topographic map) that is a scale equal to or more detailed than a 1:24000 map showing the location of the site or the stand alone construction; (a) the location of all perennial and intermittent streams and other water bodies as shown on a USGS topographic map, and all other perennial and intermittent streams and other water bodies located during mandatory field verification, into which the storm water is discharged and (b) the receiving water and/or outfall sampling locations. When the permittee has chosen to use a USGS topographic map and the receiving water(s) is not shown on the USGS topographic map, the location of the receiving water(s) must be hand-drawn on the USGS topographic map from where the storm water(s) enters the receiving water(s) to the point where the receiving water(s) combines with the first blue line stream shown on the USGS topographic map;

(2). A written narrative of site specific analytical methods used to collect, handle and analyze the samples including quality control/quality assurance procedures. This narrative must include precise sampling methodology for each sampling location;

(3). When the permittee has determined that some or all outfalls will be monitored, a rationale must be included for the NTU limit(s) selected from Appendix B. This rationale must include the size of the construction site, the calculation of the size of the surface water drainage area, and the type of receiving water(s) (i.e., trout stream or supporting warm water fisheries); and

(4). Any additional information EPD determines necessary to be part of the Plan. EPD will provide written notice to the permittee of the information necessary and the time line for submittal.

b. *Sample Type.* All sampling shall be collected by "grab samples" and the analysis of these samples must be conducted in accordance with methodology and test procedures established by 40 CFR Part 136 (unless other test procedures have been approved); the guidance document titled "NPDES Storm Water Sampling Guidance Document, EPA 833-B-92-001" and guidance documents that may be prepared by the EPD.

(1). Sample containers should be labeled prior to collecting the samples.

(2). Samples should be well mixed before transferring to a secondary container.



(3). Large mouth, well cleaned and rinsed glass or plastic jars should be used for collecting samples. The jars should be cleaned thoroughly to avoid contamination.

(4). Manual, automatic or rising stage sampling may be utilized. Samples required by this permit should be analyzed immediately, but in no case later than 48 hours after collection. However, samples from automatic samplers must be collected no later than the next business day after their accumulation, unless flow through automated analysis is utilized. Dilution of samples is not required. Samples may be analyzed directly with a properly calibrated turbidimeter. Samples are not required to be cooled.

(5). Sampling and analysis of the receiving water(s) or outfalls beyond the minimum frequency stated in this permit must be reported to EPD as specified in Part IV.E.

*c. Sampling Points.*

(1). For construction activities the primary permittee must sample all receiving water(s), or all outfall(s), or a combination of receiving water(s) and outfall(s). Samples taken for the purpose of compliance with this permit shall be representative of the monitored activity and representative of the water quality of the receiving water(s) and/or the storm water outfalls using the following minimum guidelines:

(a). The upstream sample for each receiving water(s) must be taken immediately upstream of the confluence of the first storm water discharge from the permitted activity (i.e., the discharge farthest upstream at the site) but downstream of any other storm water discharges not associated with the permitted activity. Where appropriate, several upstream samples from across the receiving water(s) may need to be taken and the arithmetic average of the turbidity of these samples used for the upstream turbidity value.

(b). The downstream sample for each receiving water(s) must be taken downstream of the confluence of the last storm water discharge from the permitted activity (i.e., the discharge farthest downstream at the site) but upstream of any other storm water discharge not associated with the permitted activity. Where appropriate, several downstream samples from across the receiving water(s) may need to be taken and the arithmetic average of the turbidity of these samples used for the downstream turbidity value.

(c). Ideally the samples should be taken from the horizontal and vertical center of the receiving water(s) or the storm water outfall channel(s).

(d). Care should be taken to avoid stirring the bottom sediments in the receiving water(s) or in the outfall storm water channel.

(e). The sampling container should be held so that the opening faces upstream.

(f). The samples should be kept free from floating debris.

(g). Permittees do not have to sample sheetflow that flows onto undisturbed natural areas or areas stabilized by the project. For purposes of this section, stabilized shall mean, for unpaved areas and areas not covered by permanent structures and areas located outside the waste disposal limits of a landfill cell that has been certified by EPD for waste disposal, 100% of the soil surface is uniformly covered in permanent vegetation with a density of 70% or greater, or equivalent permanent stabilization measures (such as the use of rip rap, gabions, permanent mulches or geotextiles) have been used. Permanent

vegetation shall consist of: planted trees, shrubs, perennial vines; a crop of perennial vegetation appropriate for the time of year and region; or a crop of annual vegetation and a seeding of target crop perennials appropriate for the region. Final stabilization applies to each phase of construction.

(h). All sampling pursuant to this permit must be done in such a way (including generally accepted sampling methods, locations, timing, and frequency) as to accurately reflect whether storm water runoff from the construction site is in compliance with the standard set forth in Parts III.D.3. or III.D.4., whichever is applicable.

*d. Sampling Frequency.*

(1). The primary permittee must sample in accordance with the Plan at least once for each rainfall event described below. For a qualifying event, samples must be taken within forty-five (45) minutes of:

(a) the accumulation of the minimum amount of rainfall for the qualifying event, if the storm water discharge to a monitored receiving water or from a monitored outfall has begun at or prior to the accumulation, or

(b) the beginning of any storm water discharge to a monitored receiving water or from a monitored outfall, if the discharge begins after the accumulation of the minimum amount of rainfall for the qualifying event.

(2). However, where manual and automatic sampling are impossible (as defined in this permit), or are beyond the permittee's control, the permittee shall take samples as soon as possible, but in no case more than twelve (12) hours after the beginning of the storm water discharge.

(3). Sampling by the permittee shall occur for the following events:

(a). For each area of the site that discharges to a receiving stream, the first rain event that reaches or exceeds 0.5 inch and allows for monitoring during normal business hours\* (Monday thru Friday, 8:00 AM to 5:00 PM and Saturday 8:00 AM to 5:00 PM, excluding all non-working Federal holidays, when construction activity is being conducted by the primary permittee) that occurs after all clearing and grubbing operations have been completed in the drainage area of the location selected as the sampling location;

(b). In addition to (a) above, for each area of the site that discharges to a receiving stream, the first rain event that reaches or exceeds 0.5 inch and allows for monitoring during normal business hours\* that occurs either 90 days after the first sampling event or after all mass grading operations have been completed in the drainage area of the location selected as the sampling location, whichever comes first;

(c). At the time of sampling performed pursuant to (a) and (b) above, if BMPs are found to be properly designed, installed and maintained, no further action is required. If BMPs in any area of the site that discharges to a receiving stream are not properly designed, installed and maintained, corrective action shall be defined and implemented within two (2) business days, and turbidity samples shall be taken from discharges from that area of the site for each subsequent rain event that reaches or exceeds 0.5 inch during normal business hours\* until the selected turbidity standard is attained, or until post-storm event inspections determine that BMPs are properly designed, installed and maintained; and

(d). Existing construction activities, i.e., those that are occurring on or before the effective date of this permit, that have met the sampling required by (a) above shall sample in accordance with (b). Those existing construction activities that have met the sampling required by (b) above shall not be required to conduct additional sampling other than as required by (c) above.

\*Note that the permittee may choose to meet the requirements of (a) and (b) above by collecting turbidity samples from any rain event that reaches or exceeds 0.5 inch and allows for monitoring at any time of the day or week.

**7. Non-storm water discharges.** Except for flows from fire fighting activities, sources of non-storm water listed in Part III.A.2. of this permit that are combined with storm water discharges associated with construction activity must be identified in the Plan. The Plan shall identify and ensure the implementation of appropriate pollution prevention measures for the non-storm water component(s) of the discharge.

#### **E. Reporting.**

1. The applicable permittees are required to submit a summary of the monitoring results to the EPD at the address shown in Part II.C. by the fifteenth day of the month following the reporting period. Reporting periods are months during which samples are taken in accordance with this permit. Sampling results shall be in a clearly legible format. Upon written notification, EPD may require the applicable permittee to submit the sampling results on a more frequent basis. Sampling and analysis of any storm water discharge(s) or the receiving water(s) beyond the minimum frequency stated in this permit must be reported in a similar manner to the EPD. The sampling reports must be signed in accordance with Part V.G. Sampling reports must be submitted to EPD until such time as a NOT is submitted in accordance with Part VI.

2. All written correspondence required by this permit shall be submitted by return receipt certified mail (or similar service) to the appropriate District Office of the EPD according to the schedule in Appendix A of this permit. The permittee shall retain a copy of the proof of submittal at the construction site or the proof of submittal shall be readily available at a designated location from commencement of construction until such time as a NOT is submitted in accordance with Part VI.

3. All monitoring results shall include the following information:

- a. The date, exact place, and time of sampling or measurements;
- b. The name(s) of the individual(s) who performed the sampling and measurements;
- c. The date(s) analyses were performed;
- d. The time(s) analyses were initiated;
- e. The name(s) of the individual(s) who performed the analyses;
- f. References and written procedures, when available, for the analytical techniques or methods used; and
- g. The results of such analyses, including the bench sheets, instrument readouts, computer disks or tapes, etc., used to determine these results.
- h. Results which exceed 1000 NTU shall be reported as "exceeds 1000 NTU."

#### **F. Retention of Records.**

1. The primary permittee shall retain the following records at the construction site or the records shall be readily available at a designated alternate location from commencement of construction until such time as a NOT is submitted in accordance with Part VI:

- a. A copy of all Notices of Intent submitted to EPD;
- b. A copy of the Erosion, Sedimentation and Pollution Control Plan required by this permit;
- c. The design professional's report of the results of the inspection conducted in accordance with Part IV.A.5. of this permit;
- d. A copy of all monitoring information, results, and reports required by this permit;
- e. A copy of all inspection reports generated in accordance with Part IV.D.4.a. of this permit;
- f. A copy of all violation summaries and violation summary reports generated in accordance with Part III.D.2. of this permit; and
- g. Daily rainfall information collected in accordance with Part IV.D.4.a.(1)(c) of this permit.

2. Copies of all Notices of Intent, Notices of Termination, reports, plans, monitoring reports, monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, Erosion, Sedimentation and Pollution Control Plans, records of all data used to complete the Notice of Intent to be covered by this permit and all other records required by this permit shall be retained by the permittee who either produced or used it for a period of at least three years from the date that the NOT is submitted in accordance with Part VI of this permit. These records must be maintained at the permittee's primary place of business or at a designated alternative location once the construction activity has ceased at the permitted site. This period may be extended by request of the EPD at any time upon written notification to the permittee.

### **Part V. STANDARD PERMIT CONDITIONS**

#### **A. Duty to Comply.**

1. Each permittee must comply with all applicable conditions of this permit. Any permit noncompliance constitutes a violation of the Georgia Water Quality Control Act (O.C.G.A. §§12-5-20, et seq.) and is grounds for enforcement action; for permit termination; or for denial of a permit renewal application. Failure of a primary permittee to comply with any applicable term or condition of this permit shall not relieve any other primary permittee from compliance with their applicable terms and conditions of this permit.

2. Each permittee must document in their records any and all known violations of this permit at his/her site within seven (7) days of his/her knowledge of the violation. A summary of these violations must be submitted to EPD by the permittee at the addresses shown in Part II.C. within fourteen (14) days of his/her discovery of the violation.

3. Penalties for violations of permit conditions. The Federal Clean Water Act and the Georgia Water Quality Control Act (O.C.G.A. §§12-5-20, et seq.) provide that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit, makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction be punished by a fine or by imprisonment, or by both. The Federal Clean Water Act and the Georgia Water Quality Control Act also provide procedures for imposing civil penalties which may be levied for violations of the Acts, any permit condition or limitation established pursuant to the Acts, or negligently or intentionally failing or refusing to comply with any final or emergency order of the Director.

**B. Continuation of the Expired General Permit.** This permit expires on the date shown on the cover page of this permit. However, an expired general permit continues in force and effect until a new general permit is issued, final and effective. Construction sites that have not obtained coverage under the permit by the permit expiration date cannot become authorized to discharge under the continued permit.

**C. Need to Halt or Reduce Activity Not a Defense.** It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

**D. Duty to Mitigate.** The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

**E. Duty to Provide Information.** The permittee shall furnish to the Director; a State or local agency approving soil erosion and sedimentation control plans, grading plans, or storm water management plans; or in the case of a storm water discharge associated with construction activity which discharges through a municipal separate storm sewer system with an NPDES permit, to the local government operating the municipal separate storm sewer system, any information which is requested to determine compliance with this permit. In the case of information submitted to the EPD such information shall be considered public information and available under the Georgia Open Records Act.

**F. Other Information.** When the permittee becomes aware that he failed to submit any relevant facts or submitted incorrect information in the Notice of Intent or in any other report required to be submitted to the EPD, the permittee shall promptly submit such facts or information.

**G. Signatory Requirements.** All Notices of Intent, Notice of Terminations, Erosion, Sedimentation and Pollution Control Plans, reports, certifications or other information either submitted to the EPD or the operator of a large or medium municipal separate storm sewer system, or that this permit requires be maintained by the permittee, shall be signed as follows:

1. All Notices of Intent shall be signed as follows:

a. For a corporation: by a responsible corporate officer. For the purpose of this permit, a responsible corporate officer means: (1) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation; or (2) the manager of one or more manufacturing, production or operating facilities provided the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or

c. For a municipality, State, Federal, or other public facility: by either a principal executive officer or ranking elected official.

2. All reports, certification statements, or other reports required by the permit and other information requested by the EPD shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

- a. The authorization is made in writing by a person described above and submitted to the EPD;
- b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of manager, Operator, superintendent, or position of equivalent responsibility or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may be either a named individual or any individual occupying a named position);
- c. Changes to authorization. If an authorization under Part II.B. is no longer accurate because a different Operator has responsibility for the overall operation of the construction site, a new Notice of Intent satisfying the requirements of Part II.B. must be submitted to the EPD prior to or together with any reports, information, or applications to be signed by an authorized representative; and
- d. *Certification.* Documents shall be signed by the party that contracts for the document and that party shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that certified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

**H. Oil and Hazardous Substance Liability.** Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under the Georgia Hazardous Waste Management Act, O.C.G.A. § 12-8-60, et seq. or under Chapter 14 of Title 12 of the Official Code of Georgia Annotated; nor is the Operator relieved from any responsibilities, liabilities or penalties to which the permittee is or may be subject under Section 311 of the Clean Water Act or Section 106 of Comprehensive Environmental Response Compensation And Liability Act.

**I. Property Rights.** The issuance of this permit does not convey any property rights of any sort, nor any exclusive privileges, nor does it authorize any injury to private property nor any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

**J. Severability.** The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.

**K. Other Applicable Environmental Regulations and Laws.** Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or regulation under authority preserved by Section 510 of the Clean Water Act. Nothing in this permit, unless explicitly stated, exempts the permittee from compliance with other applicable local, state and federal ordinances, rules, regulations, and laws. Furthermore, it is not a defense to compliance with this permit that a local government authority has approved the permittee's Erosion, Sedimentation and Pollution Control Plan or failed to take enforcement action against the permittee for violations of the Erosion, Sedimentation and Pollution Control Plan, or other provisions of this permit.

No condition of this permit shall release the permittee from any responsibility or requirements under other environmental statutes or regulations.

**L. Proper Operation and Maintenance.** The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit and with the required plans. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. Proper operation and maintenance requires the operation of backup or auxiliary facilities or similar systems, installed by an permittee only when necessary to achieve compliance with the conditions of the permit.

**M. Inspection and Entry.** The permittee shall allow the Director or an authorized representative of EPA, EPD or to designated officials of the local government reviewing soil erosion and sediment control plans, grading plans, or storm water management plans; or, in the case of a construction site which discharges through a municipal separate storm sewer system, an authorized representative of the municipal operator of the separate storm sewer system receiving the discharge, upon the presentation of credentials and other documents as may be required by law, to:

1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this permit; and
2. Have access to and copy at reasonable times, any records that must be kept under the conditions of this permit; and
3. Inspect at reasonable times any facilities or equipment (including monitoring and control equipment).

**N. Permit Actions.** This permit may be revoked and reissued, or terminated for cause including but not limited to changes in the law or regulations. The filing of a request by the permittee for termination of the permit, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

## **Part VI. TERMINATION OF COVERAGE**

**A. Notice of Termination Eligibility.** Notice of Termination, signed in accordance with Part V.G. of this permit, must be submitted:

1. For construction activities, by the permittee where the entire stand alone development has undergone final stabilization and all storm water discharges associated with construction activity that are authorized by this permit have ceased. For construction activities where the primary permittee has elected to submit NOIs for separate phases of the stand alone development, the phase or phases of the stand alone development on the NOT shall correspond to the phase or phases on the NOI and shall have undergone final stabilization and all storm water discharges associated with construction activity that are authorized by this permit shall have ceased.
2. By the Owner or Operator when the Owner or Operator of the site changes. Where storm water discharges will continue after the identity of the Owner or Operator changes, the permittee must, prior to filing the Notice of Termination, notify any subsequent Owner or Operator of the permitted site as to the requirements of this permit.

### **B. Notice of Termination Contents:**

1. The permittee's legal name, address, telephone number;
2. The site/project name, GPS location of a construction exit in the form degrees/minutes/seconds as determined by GPS unit, site location, city (if applicable) and county of the site for which the notification is submitted. This information must correspond to the similar information as provided on the NOI. Where a mailing address for the site is not available, the location can be described in narrative terms and county where the construction site is located;

3. The NPDES permit number for the storm water discharge associated with construction activity identified by the Notice of Termination;
4. The name of the receiving water(s), and when the discharge is through a municipal separate storm sewer system (MS4), the name of the local government operating the municipal separate storm sewer system and the name of the receiving water(s) which receives the discharge from the MS4;
5. Any other information specified on the NOT in effect at the time of submittal; and
6. The following certification signed in accordance with Part V.G. (signatory requirements):

"I certify under penalty of law that either: (a) all storm water discharges associated with construction activity from the portion of the construction activity where I was an Owner or Operator have ceased or have been eliminated; (b) all storm water discharges associated with construction activity from the identified site that are authorized by General NPDES Permit No. GAR 100001 have ceased; (c) I am no longer an Owner or Operator at the construction site and a new Owner or Operator has assumed operational control for those portions of the construction site where I previously had ownership or operational control; and that discharging pollutants in storm water associated with construction activity to waters of Georgia is unlawful under the Georgia Water Quality Control Act and the Clean Water Act where the discharge is not authorized by a NPDES permit."

**C. Notice of Termination Submittal.** All Notices of Termination by this permit shall be submitted by return receipt certified mail (or similar service) to the appropriate EPD District Office according to the schedule in Appendix A of this permit and to the Local Issuing Authority in jurisdictions authorized to issue a Land Disturbance Activity permit for the permittee's construction site pursuant to O.C.G.A. 12-7-1, et seq.



## APPENDIX A

### EPD DISTRICT OFFICES

All required correspondence, including but not limited to the Notice of Intents, Notice of Terminations, certifications, Erosion, Sedimentation and Pollution Control Plans and any other reports, shall be sent to the following District Offices of EPD.

**A. For facilities/construction sites located in the following counties:** Bibb, Bleckley, Chattahoochee, Crawford, Dooly, Harris, Houston, Jones, Lamar, Macon, Marion, Meriwether, Monroe, Muscogee, Peach, Pike, Pulaski, Schley, Talbot, Taylor, Troup, Twiggs, Upson

Information shall be submitted to: West Central District Office  
Georgia Environmental Protection Division  
2640 Shurling Drive  
Macon, GA 31211-3576  
(478) 751-6612

**B. For facilities/construction sites located in the following counties:** Burke, Columbia, Emanuel, Glascock, Jefferson, Jenkins, Johnson, Laurens, McDuffie, Montgomery, Richmond, Screven, Treutlen, Warren, Washington, Wheeler, Wilkinson

Information shall be submitted to: East Central District Office  
Georgia Environmental Protection Division  
1885-A Tobacco Road  
Augusta, GA 30906-8825  
(706) 792-7744

**C. For facilities/construction sites located in the following counties:** Baldwin, Banks, Barrow, Butts, Clarke, Elbert, Franklin, Greene, Hall, Hancock, Hart, Jackson, Jasper, Lincoln, Madison, Morgan, Newton, Oconee, Oglethorpe, Putnam, Stephens, Taliaferro, Walton, Wilkes

Information shall be submitted to: Northeast District Office  
Georgia Environmental Protection Division  
745 Gaines School Road  
Athens, GA 30605-3129  
(706) 369-6376

**D. For facilities/construction sites located in the following counties:** Carroll, Clayton, Coweta, DeKalb, Douglas, Fayette, Fulton, Gwinnett, Heard, Henry, Rockdale, Spalding

Information shall be submitted to: Mountain District - Atlanta Satellite  
Georgia Environmental Protection Division  
4244 International Parkway, Suite 114  
Atlanta, GA 30354-3906  
(404) 362-2671

**E. For facilities/construction sites located in the following counties:** Bartow, Catoosa, Chattooga, Cherokee, Cobb, Dade, Dawson, Fannin, Floyd, Forsyth, Gilmer, Gordon, Habersham, Haralson, Lumpkin, Murray, Paulding, Pickens, Polk, Rabun, Towns, Union, Walker, White, Whitfield

Information shall be submitted to: Mountain District - Cartersville Office  
Georgia Environmental Protection Division  
P.O. Box 3250  
Cartersville, GA 30120-1705  
(770) 387-4900

**F. For facilities/construction sites located in the following counties:** Appling, Atkinson, Bacon, Brantley, Bryan, Bulloch, Camden, Candler, Charlton, Chatham, Clinch, Coffee, Effingham, Evans, Glynn, Jeff Davis, Liberty, Long, McIntosh, Pierce, Tattnall, Toombs, Ware, Wayne

Information shall be submitted to: Coastal District - Brunswick Office  
Georgia Environmental Protection Division  
One Conservation Way  
Brunswick, GA 31520-8687  
(912) 264-7284

**G. For facilities/construction sites located in the following counties:** Baker, Ben Hill, Berrien, Brooks, Calhoun, Clay, Colquitt, Cook, Crisp, Decatur, Dodge, Dougherty, Early, Echols, Grady, Irwin, Lanier, Lee, Lowndes, Miller, Mitchell, Quitman, Randolph, Seminole, Stewart, Sumter, Telfair, Terrell, Thomas, Tift, Turner, Webster, Wilcox, Worth

Information shall be submitted to: Southwest District Office  
Georgia Environmental Protection Division  
2024 Newton Road  
Albany, GA 31701-3576  
(912) 430-4144

**H. For facilities/construction sites required to submit Plans required under Part IV.A.4.a. of this Permit:**

Information shall be submitted to: Watershed Protection Branch  
Environmental Protection Division  
4220 International Parkway, Suite 101  
Atlanta, Georgia 30354  
(404) 675-6240

## APPENDIX B

### Nephelometric Turbidity Unit (NTU) TABLES

#### Cold Water (Trout Stream)

		Surface Water Drainage Area, square miles							
		0-4.99	5-9.99	10-24.99	25-49.99	50-99.99	100-249.99	250-499.99	500+
Site Size, acres	1.00-10	25	50	75	150	300	500	500	500
	10.01-25	25	25	50	75	150	200	500	500
	25.01-50	25	25	25	50	75	100	300	500
	50.01-100	20	25	25	35	59	75	150	300
	100.01+	20	20	25	25	25	50	60	100

#### Warm Water (Supporting Warm Water Fisheries)

		Surface Water Drainage Area, square miles							
		0-4.99	5-9.99	10-24.99	25-49.99	50-99.99	100-249.99	250-499.99	500+
Site Size, acres	1.00-10	75	150	200	400	750	750	750	750
	10.01-25	50	100	100	200	300	500	750	750
	25.01-50	50	50	100	100	200	300	750	750
	50.01-100	50	50	50	100	100	150	300	600
	100.01+	50	50	50	50	50	100	200	100

To use these tables, select the size (acres) of the construction site. Then, select the surface water drainage area (square miles). The NTU matrix value arrived at from the above tables is the one to use in Part III.D.4.

Example 1: For a site size of 12.5 acres and a cold water drainage area of 37.5 square miles, the NTU value to use in Part III.D.4. is 75 NTU.

Example 2: For a site size of 51.7 acres and a warm water drainage area of 72 square miles, the NTU value to use in Part III.D.4. is 100 NTU.

## APPENDIX C



# Erosion & Sedimentation Inspection and Maintenance Report

To be completed every 7 days AND within 24-hours of a qualifying rainfall event of 0.5 inches or more.

Project: \_\_\_\_\_

Time/date of last rainfall: \_\_\_\_\_ Amount of last rainfall: \_\_\_\_\_ inches

Inspector: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Describe the most recent land disturbance/phase of the project: \_\_\_\_\_

Date of the most recent disturbance: \_\_\_\_\_

Is site in compliance? Y or N If not, complete the following information for each deficiency.

1. Deficiency(ies):  Corrective actions:	Location: _____  Code: I M GC
2. Deficiency(ies):  Corrective actions:	Location: _____  Code: I M GC
3. Deficiency(ies):  Corrective actions:	Location: _____  Code: I M GC
4. Deficiency(ies):  Corrective actions:	Location: _____  Code: I M GC

Photo document deficiencies and retain in permanent file.  
Include site map identifying locations of all deficiencies.  
Return original reports to construction site file and copy in permanent office file.

Codes: I Immediate - Must be corrected within 24 hours.  
M Minor - Must be corrected within 72 hours.  
GC General Condition - Must be maintained monthly.

Please Contact \_\_\_\_\_ for questions regarding this report.



**INDEX TO**  
**SECTION 31 25 00GA – EROSION AND SEDIMENTATION CONTROLS (GA)**

<b>Paragraph</b>	<b>Title</b>	<b>Page</b>
<b>PART 1 – GENERAL</b>		
1.1	Section Includes	31 25 00GA-1
1.2	Related Sections	31 25 00GA-1
1.3	Purposes	31 25 00GA-1
1.4	Quality Assurance	31 25 00GA-2
1.5	Submittals	31 25 00GA-2
1.6	Measurement and Payment	31 25 00GA-2
<b>PART 2 – PRODUCTS</b>		
2.1	Vegetative Materials	31 25 00GA-2
2.2	Structural Materials	31 25 00GA-3
2.3	Chemical Materials	31 25 00GA-3
<b>PART 3 – EXECUTION</b>		
3.1	General	31 25 00GA-4
3.2	On-Site Observation	31 25 00GA-4
3.3	Vegetative Practices	31 25 00GA-4
3.4	Structural Measures	31 25 00GA-5
3.5	Chemical Measures	31 25 00GA-6
3.6	Monitoring and Reporting	31 25 00GA-7
3.7	Sampling and Analysis	31 25 00GA-7

Appendix "C" – General Permit No. GAR100001 – Stand Alone

Appendix "D" – Suggested Monitoring and Report Forms

**SECTION 31 25 00GA****EROSION AND SEDIMENTATION CONTROLS (GA)****PART 1 – GENERAL****1.1 SECTION INCLUDES**

- A. Soil erosion, sediment, and pollution control measures shall include all temporary and permanent means of soil protection, trapping soils and containment of pollutants on the construction site during land disturbing activities. Activities covered in this section are regulated by the Manual for Erosion and Sediment Control in Georgia (latest revision) and Georgia's National Pollutant Discharge Elimination System Permit (NPDES), General Permit No. GAR100001.
- B. Reporting
- C. Sampling

**1.2 RELATED SECTIONS**

- A. Section 31 00 00 – Earthwork
- B. Section 33 40 00 – Storm Drainage Utilities

**1.3 PURPOSES**

- A. The purpose of this section is to achieve the following goals:
  - 1. Minimize soil exposure by proper timing of clearing grading and construction.
  - 2. Retain existing vegetation whenever feasible.
  - 3. Vegetate and mulch disturbed areas as soon as possible.
  - 4. Divert runoff away from disturbed areas.
  - 5. Minimize length and steepness of slopes when it is practical.
  - 6. Reduce runoff velocities with check dams or surface roughing.
  - 7. Trap sediment on site.
  - 8. Inspect and maintain erosion, sedimentation, and pollution control measures.
  - 9. Report on condition of Best Management Practices (BMPs).
  - 10. Sample site run off per Georgia's NPDES Permit.



**1.4 QUALITY ASSURANCE**

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

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

**1.5 SUBMITTALS**

- A. Product Data: Submit manufacturer's technical product data and installation instruction for soil erosion, sedimentation and pollution 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 for "Soil Erosion Control" as shown on the bid proposal. The cost of soil erosion control shall include all equipment, labor, maintenance, monitoring, reporting, and materials necessary to comply with the State of Georgia NPDES Permit and the plans.
- B. Silt Fence: Payment will be made at the unit price as listed on the Bid Proposal.

**PART 2 – PRODUCTS****2.1 VEGETATIVE MATERIALS**

- A. Mulch
  - 1. Dry straw or hay.
  - 2. Wood chips, sawdust or bark.
  - 3. Cutback asphalt.
- B. Temporary Seeding
  - 1. Annual Ryegrass
  - 2. Browntop Millet
- C. Permanent Seeding
  - 1. Common Bermuda
  - 2. Centipede
- D. Sod

1. Common Bermuda
2. Centipede
3. St. Augustine
4. Other types as specified by Southbridge Golf Course Superintendent.

E. Fertilizer

1. Commercial 6-12-12

## 2.2 STRUCTURAL MATERIALS

A. Sediment Barrier

1. Bales of densely baled hay or straw wrapped with synthetic or wire bands (minimum two) per bale.
2. Silt Fence – Shall be a woven geotextile fabric sheet of plastic yarn composed of a long chain synthetic polymer with at least 85% by weight propylene, ethylene, amide, ester or vinylidene chloride, and shall contain stabilizers and/or inhibitors added to the base plastic to make the filaments resistant to deterioration due to ultra-violet and/or heat exposure. The fabric shall be finished so the filaments will retain their relative position with respect to each other. The fabric shall be free of defects, rips, holes, or flaws. The manufacturer shall have either an approved color mark yarn in the fabric or label the fabricated silt fence with both the manufacturer and fabric name every 100'.

The fabric shall meet the following requirements:

Grab Strength	90 lbs.
Mullen Burst Strength	150 lbs.
UV Resistance	80 %

B. Storm Drain Outlet Protection

1. Geotextile fabric equivalent to Mirafi 140N.
2. Rip-rap (See detail for size).

## 2.3 CHEMICAL MATERIALS

- A. Dust Control – Calcium Chloride, Anionic Asphalt Emulsion, Latex Emulsion, or Resin-in-Water Emulsion.

## **PART 3 – EXECUTION**

### **3.1 GENERAL**

- A. All disturbed soil areas except those to support paving shall be graded and protected from erosion with vegetative materials. Sedimentation discharge from the construction site into natural drainage ways and storm drainage systems shall be prevented by means of vegetative measures and temporary structural practices. These vegetative measures and structural practices are known as Best Management Practices (BMPs). Rainfall, pollution control measures, and construction exit condition shall be monitored and reported on each day when construction activities take place. Erosion and sedimentation control measures shall be monitored and reported on every seven days and within 24 hours of a qualifying rainfall event of 0.5 inches or more. Sampling of construction site discharging water shall be sampled within 45 minutes of a qualifying rainfall event and analyzed immediately or no later than 48 hours after collection. The above reports shall be submitted to the Georgia EPD by the fifteenth day of the month following the reporting period.
- B. The Contractor (Operator) is considered a "Primary Permittee" and shall submit a Notice of Intent (NOI) in accordance with General Permit No. GAR100001 at least 14 days prior to the commencement of construction activities. Contractor shall retain a copy of the Erosion, Sedimentation, and Pollution Control Plan and Comprehensive Monitoring Program required by above permit at construction site or be readily available at a designated alternate location from date of project initiation to date of final stabilization. Copies of all Notice of Intent, Notice of Termination, plans, monitoring reports and all other records required by above permit shall be retained by Contractor for a period of at least three years from date the site is finally stabilized. Copies of Notice of Intent (NOI), Notice of Termination (NOT) and General Permit Number GAR100001 are found at the end of this section.

### **3.2 ON-SITE OBSERVATION**

- A. Engineer is required by General Permit No. GAR100001 to check the installation of Erosion, Sedimentation and Pollution Control measures within one week after initial construction activities commence. The Contractor shall notify Engineer within 24 hours of control measures installation for the above site visit. Engineer, within the above parameters, shall check subsequent installation of control measures.

### **3.3 VEGETATIVE PRACTICES**

- A. Seeding
  - 1. Seed shall be applied uniformly by hand, cyclone seeder, drill, cultipacker seeder, or hydraulic seeder. Drill or cultipacker seeders shall place seed 1/4" to 1/2" deep. Soil shall be raked lightly to cover seed with soil if seeded by hand.
  - 2. During times of drought, water shall be applied at a rate not causing runoff and erosion. The soil shall be thoroughly wetted to depth insuring

germination of the seed. Subsequent applications of water shall be made when needed.

3. Refer to Section 32 92 00 – Turf and Grasses for additional seeding requirements.

B. Sodding

1. Bring soil surface to final grade. Clear surface of trash, woody debris, stones, and dirt clods larger than 1". Mix fertilizer into soil surface. Apply sod to soil when surface is not muddy or frozen. Lay sod with tight joints and in straight lines. Do not overlap joints. Stagger joints and do not stretch sod. On slopes steeper than 3:1, sod shall be anchored with pins or other approved methods. Installed sod shall be rolled or tamped to provide good contact between sod and soil. Irrigate sod and soil to a depth of 4" immediately after installation. Irrigation shall be used to supplement rainfall for a minimum of 2–3 weeks.
2. Refer to Section 32 92 00 – Turf and Grasses for additional sodding requirements.

### 3.4 STRUCTURAL MEASURES

A. Sediment Barrier

1. Standard size, densely baled straw or hay, wrapped with synthetic or wire bands (two minimum per bale).
2. Silt fence may be used in areas of higher sheet flow rates. The drainage area shall not exceed ¼ acre for every 100' of silt fence. **Silt fence shall not be installed across streams, ditches, waterways or other concentrated flow areas.** Silt fence shall be installed according to this specification, as shown on the construction drawings or as directed by the Engineer. See details on the construction drawings for installation requirements.
  - a. Type C – A 36" wide filter fabric silt fence with wire reinforcement shall be used where runoff flows or velocities are particularly high or where slopes exceed a vertical height of 10'. Along stream buffers and other sensitive areas, two rows of Type C silt fence shall be used. See plans for silt fence locations.
3. Where all runoff is to be stored behind the silt fence (where no stormwater disposal system is present), the slope lengths contributing runoff to a silt fence barrier cannot exceed those listed below.

<u>Land Slope</u> (Percent)	<u>Maximum Slope Length</u> <u>Above Fence</u> (Feet)
< 2	100
2 to 5	75
5 to 10	50
10 to 20	25

&gt; 20\*

15

\*In areas where the slope is greater than 20%, a flat area length of 10' between the toe of the slope and the fence shall be provided.

4. Sediment shall be removed once it has accumulated to one-half the original height of the barrier. Filter fabric shall be replaced whenever it has deteriorated to such an extent that the effectiveness of the fabric is reduced (approximately six months). Barriers shall remain in place until disturbed areas have been permanently stabilized. All sediment accumulated at the barrier shall be removed and properly disposed of before the barrier is removed.

B. Storm Drain Outlet Protection

1. Outlet protection aprons shall be constructed at all storm drain outlets, road culverts, paved channel outlets discharging into natural or constructed channels. Apron will extend from end of the conduit, channel, or structure to the point of entry into an existing stream or publicly maintained drainage system. Apron length, width, and stone size shall conform to details on the construction drawings. Apron shall be constructed with no slope along its length. Invert elevation of the downstream end of apron shall be equal to the elevation of the receiving channel invert. There shall be no overfall at the end of apron. Apron shall be located so there are no bends in the horizontal alignment.
2. Subgrade for geotextile fabric and rip-rap shall follow required lines and grades shown on the construction drawings. Compact any subgrade fill required to the density of surrounding undisturbed material. Low areas in subgrade on undisturbed soil may also be filled by increasing rip-rap thickness. Geotextile fabric shall be protected from punching or tearing during installation. Repair any damage by removing rip-rap and placing another piece of fabric over the damaged area. All connecting joints shall overlap a minimum of 1'. If damage is extensive, replace entire geotextile fabric. Rip-rap shall be placed by equipment or hand. Minimum thickness of rip-rap shall be 1.5 times the maximum stone diameter. Immediately after construction, stabilize all disturbed areas around apron with vegetation.
3. Check outlet apron after heavy rains to see if any erosion around or below the rip-rap has taken or if stones have been dislodged. Immediately make all needed repairs to prevent further damage.

### 3.5 CHEMICAL MEASURES

A. Dust Control

1. Dust raised from vehicular traffic shall be controlled by wetting down roads with water or by the use of chemicals. Chemicals shall be applied in accordance with the manufacturer's recommendations.

### 3.6 MONITORING AND REPORTING

- A. Each day, when any type of construction activity takes place on the construction site, Contractor's qualified personnel shall monitor and record rainfall, inspect all areas where petroleum products are stored, used or handled for spills and leaks from vehicles and equipment and check all locations where vehicles enter or exit the site for evidence of off site sediment tracking. These inspections shall be conducted until a Notice of Termination (NOT) is submitted. For linear construction where a phased activity is conducted, this paragraph applies to the active phase(s) of work.
- B. Once every seven calendar days and within 24 hours of the end of a storm 0.5 inches or greater, Contractor's qualified personnel shall inspect disturbed areas of the construction site that have not undergone final stabilization, areas used for storage of materials that are exposed to precipitation that have not undergone final stabilization and structural control measures (BMPs). Erosion and sediment control measures identified in the Erosion, Sedimentation, and Pollution Control Plan shall be observed to ensure they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving water(s). These inspections must be conducted until a Notice of Termination is submitted. For linear construction where a phase activity is conducted, this paragraph applies to the active phase(s) of work.
- C. Contractor's qualified personnel shall inspect a least once per month during the term of the General Permit, areas of the construction site having undergone final stabilization. These areas shall be inspected for evidence of, or the potential for, pollutants entering the drainage system and receiving water(s). Erosion and sediment control measure shall be observed to ensure they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measure are effective in preventing significant impacts to receiving water(s). For linear construction, monthly inspections in accordance with this paragraph shall be made for those phases on which final stabilization has been completed.
- D. Contractor shall prepare a report summarizing the scope of inspections, name(s) of qualified personnel making the inspections, date(s) of inspections, major observations relating to the implementation of the Erosion, Sedimentation and Pollution Control Plan and any actions taken. This report shall be retained on the construction site or be readily available at a designated alternate location until the entire site or portion of a construction project that was phased, has undergone final stabilization and a Notice of Termination (NOT) is submitted to EPD. Such reports shall identify any incidents of non-compliance. Where the report does not identify any incidents of non-compliance, the re report shall contain a certification that the facility is in compliance with the Erosion, Sedimentation and Pollution Control Plan and the General Permit. The report shall be signed in accordance with the General Permit.

### 3.7 SAMPLING AND ANALYSIS

- A. Contractor must manually or automatically sample in accordance with the Comprehensive Monitoring Plan (CMP) at least once for each rainfall event

described below. For a qualifying event, samples must be taken within forty-five (45) minutes of:

1. The accumulation of the minimum amount of rainfall, if the storm water discharge to a monitored receiving water or from a monitored outfall has begun at or prior to the accumulation.
2. The beginning of any storm water discharge to a monitored receiving water or from a monitored outfall, if the discharge begins after the accumulation of the minimum amount of rainfall.

However, where manual and automatic sampling are impossible (as defined in the permit), or are beyond the Contractor's control, the Contractor shall take samples as soon as possible, but in no case more than 12 hours after the beginning of the storm water discharge.

B. Sampling shall occur for the following events:

1. For each area of the site discharging to a receiving stream, the first rain event reaching or exceeding 0.5 inch and allows for monitoring during normal business hours\* (Monday thru Friday, 8:00 a.m. to 5:00 p.m. and Saturday 8:00 a.m. to 5:00 p.m. when construction activity is being conducted by the Primary permittee) occurring after all clearing and grubbing operations are completed in the drainage area of the location selected as the sampling location;
2. In addition to (1) above, for each area of the site discharging to a receiving stream, the first rain event reaching or exceeding 0.5 inch and allows for monitoring during normal business hours\* occurring either 90 days after the first sampling event or after all mass grading operations are completed in the drainage area of the location selected as the sampling location, whichever comes first.
3. At the time of the sampling performed pursuant to (1) and (2) above, if BMPs are found to be properly designed, installed, and maintained, no further action is required. If BMPs in any area of the site discharging to a receiving stream are not properly designed, installed, and maintained, corrective action shall be defined and implemented within two business days, and turbidity samples shall be taken from discharges of the same area for each subsequent rain event reaching or exceeding 0.5 inch during normal business hours\* until the selected turbidity standard is attained, or until post-storm event inspections determine BMPs are properly designed, installed, and maintained;
4. Existing construction activities, i.e., those occurring on or before the effective date of this permit, having met the sampling required by (1) above shall sample in accordance with (2). Those existing construction activities having met the sampling required by (2) above shall not be required to conduct additional sampling other than as required by (3) above.

\* Note the Permittee may choose to meet the requirements of (1) and (2) above by collecting turbidity samples from any rain event reaching or exceeding 0.5 inch and allows for monitoring at any time of the day or week.

5. For linear construction, if at any time during the life of the project, BMPs have not been properly designed, installed or maintained for the construction activities that discharge into a receiving water which is not being sampled, the Contractor shall sample that receiving water for the first rainfall event greater than or equal to 0.5 inches thereafter and for every rainfall event greater than or equal to 0.5 inches until BMPs are properly designed, installed and maintained.

C. Sampling shall be collected by "grab samples" and the analysis of these samples must be conducted in accordance with methodology and test procedures established in the General Permit. Sample containers shall be labeled prior to collecting the samples. Samples shall be well mixed before transferring to a secondary container. Large mouth, well cleaned and rinsed glass or plastic jars shall be used for collecting samples. The jars shall be cleaned thoroughly to avoid contamination. Manual or automatic sampling shall be utilized. Samples required by the General Permit shall be analyzed immediately, but in no case later than 48 hours after collection. However, samples from automatic samplers must be collected no later than the next business day after their accumulation, unless flow through automated analysis is utilized. Samples are not required to be cooled. Samples taken for the purpose of compliance with the General Permit shall be representative of the monitored activity and representative of the water quality of the receiving water(s) and/or the storm water outfalls using the following minimum guidelines:

1. The upstream sample for each receiving water(s) must be taken immediately upstream of the confluence of the first storm water discharge from the permitted construction site but downstream of any other storm water discharges not associated with the site. Where appropriate, several upstream samples from across the receiving water(s) may need to be taken and the average turbidity of these samples used for an upstream turbidity value.
2. The downstream sample for each receiving water(s) must be taken downstream of the confluence of the last storm water discharge from the construction site but upstream of any other storm water discharge not associated with the site. Where appropriate, several downstream samples from across the receiving water(s) may need to be taken and the average turbidity of these samples used for a downstream turbidity value.
3. Samples shall be taken from the horizontal and vertical center of the receiving water(s) or the storm water outfall channel(s).
4. Care shall be taken to avoid stirring the bottom sediments in the receiving water(s) or in the outfall storm water channel(s).
5. Sampling container shall be held so the opening faces upstream.



6. Samples shall be kept from floating debris.
- D. For all construction sites and common developments other than linear construction projects, the Contractor shall sample all receiving water(s), or all outfall(s) or a combination of receiving water(s) and outfall(s). For linear construction projects, the Contractor must sample all perennial and intermittent streams and other water bodies shown on an USGS topographic map and all other field verified perennial and intermittent streams and other water bodies, or all outfalls into such streams and other water bodies, or a combination thereof.
  - E. Contractor shall provide and implement all safety equipment and procedures necessary for sampling during hazardous weather conditions and in the event of biological, chemical or physical hazards
  - F. Contractor shall submit a summary of the monitoring results to the EPD at the address shown in the General Permit by the fifteenth day of the month following the reporting period. For a monitoring period during which no qualifying rainfall events occur, a monitoring report must be submitted stating such. Monitoring periods are calendar months beginning with the first month after the effective date of the General Permit. Monitoring reports shall be signed in accordance with the General Permit and submitted to EPD until such time as a NOT is submitted.
  - G. Contractor must retain copies of all monitoring results and monitoring information reported. In addition to other record keeping requirements, the monitoring information shall include:
    1. Date, exact place, and time of sampling or measurements.
    2. Name(s) of the individual(s) who performed the sampling and measurements.
    3. Date(s) analyses were performed.
    4. Time(s) analyses were initiated.
    5. Name(s) of the individual(s) who performed the analyses.
    6. References and written procedures, when available, for the analytical techniques or methods used. A quality control/quality assurance program must be included in the written procedures.
    7. The results of such analyses, including the bench sheets, instrument readouts, computer disks or tapes, used to determine these results.
    8. Results exceeding 1,000 NTU shall be reported as "Exceeds 1,000 NTU."
  - H. Suggested monitoring and report forms are found at the end of this section.

End of Section



**INDEX TO**  
**SECTION 31 37 00 – RIP-RAP**

<b>Paragraph</b>	<b>Title</b>	<b>Page</b>
<b>PART 1 – GENERAL</b>		
1.1	Section Includes	31 37 00-1
1.2	Related Sections	31 37 00-1
1.3	Allowable Tolerances	31 37 00-1
1.4	Measurement and Payment	31 37 00-1
1.5	References	31 37 00-1
<b>PART 2 – PRODUCTS</b>		
2.1	Materials	31 37 00-1
2.2	Product Review	31 37 00-1
<b>PART 3 – EXECUTION</b>		
3.1	Preparation	31 37 00-2
3.2	Placement	31 37 00-2

**SECTION 31 37 00****RIP-RAP****PART 1 – GENERAL****1.1 SECTION INCLUDES**

- A. Material placed as bank protection and erosion control.

**1.2 RELATED SECTIONS**

- A. Section 31 25 00GA – Erosion and Sedimentation Control (GA)

**1.3 ALLOWABLE TOLERANCES**

- A. Depth of rip-rap blanket as shown on the drawings and in these specifications is a minimum depth.

**1.4 MEASUREMENT AND PAYMENT**

- A. Rip-Rap: Payment for rip rap shall be made at the unit price as listed on the bid proposal. Payment shall include rip rap installation and #57 stone for choking.

**1.5 REFERENCES (LATEST REVISION)**

- A. ASTM C 150 – Portland Cement.

**PART 2 – PRODUCTS****2.1 MATERIALS**

- A. Stone Rip-Rap: Shall be hard quarry or field stone of such quality the pieces will not disintegrate on exposure to water, sunlight, or weather. Stone shall be solid and non-friable and range in weight from a minimum of 25 pounds to a maximum of 150 pounds. At least 50 percent of the stone pieces shall weigh more than 60 pounds. The stone pieces shall have a minimum dimension of 12 inches. Documents indicating stone analysis, source and other pertinent data (i.e. – filter fabric) shall be submitted for review by the Engineer prior to delivery.
- B. Filter Fabric: Shall be a woven fabric of monofilament and multifilament yarn equivalent to Mirafi FW700. Fabric shall be finished so the filaments will retain their relative position with respect to each other. Fabric shall contain stabilizers and/or inhibitors added to make filaments resistant to deterioration due to ultraviolet and/or heat exposure. Fabric shall be free of flaws, rips, holes, or defects.

**2.2 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 PREPARATION**

- A. The surface to receive rip-rap shall be prepared to a relatively smooth condition free of obstruction, depressions, debris, rises, and soft or low density pockets of material. Contours and elevations on construction drawings are to the surface of rip-rap material.

### **3.2 PLACEMENT**

- A. Filter fabric shall be placed with the long dimension running up slope. The strips shall be placed to provide a minimum width of one foot of overlap for each joint. Fabric shall be anchored in place with securing pins of the type recommended by fabric manufacturer. Pins shall be placed on or within 3 inches of the overlap. Place fabric so upstream strip will overlap the downstream strip. Fabric shall be placed loosely to give and avoid stretching and tearing during placement of the stones.
- B. Minimum depth or thickness of stone blanket shall be 12 inches with no under tolerance. Stones shall be dropped no more than three feet during construction. Placing shall begin at bottom of slope. Provide a toe trench if required as detailed on the construction drawings. Entire mass of stone shall be placed to conform with lines, grades, and thickness shown on the plans. Rip-rap shall be placed to its full course thickness at one operation and in such a manner as to avoid displacing the underlying material. Placing of rip-rap in layers, or by dumping into chutes, or by similar methods likely to cause segregation, will not be permitted.

Larger stones shall be well distributed and the entire mass of stone shall conform to gradation specified. All material used in rip-rap protection shall be placed and distributed so there will be no large accumulations of either the larger or smaller sizes of stone.

Smaller #57 size granite stone shall be used to choke (tighten) rip rap. This stone shall be placed multiple times during the rip rap installation process to ensure a compact rip rap section.

It is the intent of these specifications to produce a fairly compact rip-rap protection in which all sizes of material are placed in their proper proportions. Hand placing or rearranging of individual stones by mechanical equipment may be required to secure the results specified.

END OF SECTION

**INDEX TO**  
**SECTION 32 11 23 – AGGREGATE BASE COURSES**

<b>Paragraph</b>	<b>Title</b>	<b>Page</b>
<b>PART 1 – GENERAL</b>		
1.1	Section Includes	32 11 23-1
1.2	Related Sections	32 11 23-1
1.3	Measurement and Payment	32 11 23-1
1.4	References	32 11 23-1
1.5	Quality Assurance	32 11 23-1
1.6	Testing	32 11 23-1
<b>PART 2 – PRODUCTS</b>		
2.1	Materials	32 11 23-2
<b>PART 3 – EXECUTION</b>		
3.1	Examination	32 11 23-3
3.2	Preparation	32 11 23-3
3.3	Aggregate Placement	32 11 23-3
3.4	Omitted	32 11 23-4
3.5	Tolerances	32 11 23-4
3.6	Field Quality Control	32 11 23-4

**SECTION 32 11 23****AGGREGATE BASE COURSES****PART 1 – GENERAL****1.1 SECTION INCLUDES**

- A. Aggregate base course.

**1.2 RELATED SECTIONS**

- A. Section 31 00 00 – 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.
- B. Filter Fabric: No separate payment will be made for filter fabric. Cost for the fabric shall be included in the unit price for "Gravel Maintenance Road (excluding sod)" as listed in the Bid Proposal.

**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 6938 – In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth).
- D. ASTM D 3740 -- Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Soil and Rock Used in Engineering Design and Construction.
- E. 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 6938.

- 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. Owner shall select and engage the Testing Laboratory. Testing Laboratory shall be responsible to the Owner and Owner's Engineer. Payment for laboratory and all tests shall be by the Owner, except Owner specifically reserves the right to deduct from Contractor's payment, expenses and charges of Testing Laboratory when:
  - 1. Contractor gives notice the work is ready for inspection and testing, and fails to be ready for the test, and/or
  - 2. Testing of the Contractor's work, products, or materials fail, and retesting is required, and/or
  - 3. Contractor abuses the services or interferes with the work of the testing laboratory in the conduct of this work.
- 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 shall consist of processed and blended 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. Filter Fabric: Shall be a woven fabric of monofilament and multifilament yarn equivalent to Mirafi FW700. Fabric shall be finished so the filaments will retain their relative position with respect to each other. Fabric shall contain stabilizers and/or



inhibitors added to make filaments resistant to deterioration due to ultraviolet and/or heat exposure. Fabric shall be free of flaws, rips, holes, or defects.

## **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:** Owner's Representative or Engineer will have the right to require any portion of the work be completed in their presence. If the work is covered up after such instruction, it shall be exposed by Contractor for observation at no additional cost to the Owner. However, if Contractor notifies Owner such work is scheduled, and the Owner fails to appear within 48 hours, 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. All materials, which do not conform to requirements of specifications, shall be removed from the work upon notice being received from Engineer for 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 ( $\pm 1-1/2\%$ ), 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 6938.

#### **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 recompacting as directed by the Engineer.

#### **3.6 FIELD QUALITY CONTROL**

- A. Field observation.
- B. Density and moisture testing will be performed in accordance with ASTM D 1557 and ASTM D 6938.
- C. If tests indicate Work does not meet specified requirements, remove Work, replace and retest.
- D. Frequency of Tests:
  - 1. Base Density and Thickness – One test per 5,000 square feet.

END OF SECTION

**INDEX TO**  
**SECTION 32 12 16GA – ASPHALT PAVING**

<b>Paragraph</b>	<b>Title</b>	<b>Page</b>
<b>PART 1 – GENERAL</b>		
1.1	Section Includes	32 12 16GA-1
1.2	Related Sections	32 12 16GA-1
1.3	Measurement and Payment	32 12 16GA-1
1.4	References	32 12 16GA-1
1.5	Quality Assurance	32 12 16GA-2
1.6	Environmental Requirements	32 12 16GA-2
1.7	Guarantee	32 12 16GA-2
1.8	Testing	32 12 16GA-3
<b>PART 2 – PRODUCTS</b>		
2.1	Tack Coat	32 12 16GA-3
2.2	Asphaltic Cement and Additives	32 12 16GA-3
2.3	Aggregates	32 12 16GA-3
2.4	Source Quality Control and Tests	32 12 16GA-4
<b>PART 3 – EXECUTION</b>		
3.1	Examination	32 12 16GA-4
3.2	Preparation	32 12 16GA-4
3.3	Placement	32 12 16GA-5
3.4	Tolerances	32 12 16GA-5
3.5	Field Quality Control	32 12 16GA-6

**SECTION 32 12 16GA****ASPHALT PAVING****PART 1 – GENERAL****1.1 SECTION INCLUDES**

- A. Surface Course
- B. Binder Course

**1.2 RELATED SECTIONS**

- A. Section 31 00 00 – Earthwork
- B. Section 03 0 00 – Concrete

**1.3 MEASUREMENT AND PAYMENT**

- A. Asphaltic Concrete Surface Course: No separate payment shall be made for asphaltic concrete surface course. Payment for this item shall be included in the price for "Remove and Replace Asphalt Pavement" as listed on the bid proposal.
- B. Tack Coat: No separate payment shall be made for tack coat. Payment for this item shall be included in the price for "Remove and Replace Asphalt Pavement" as listed on the bid proposal.
- C. Payment for pavement and tack coat will be in full for preparing and cleaning, providing all materials, labor and equipment including placing, compacting and testing.

**1.4 REFERENCES (LATEST REVISION)**

- A. ASTM D 946 – Penetration-Graded Asphalt-Cement for Use in Pavement Construction.
- B. ASTM E 329 – Agencies Engaged in Construction Inspection and/or Testing.
- C. ASTM D 3740 – Minimum Requirements for Agencies Engaged in Testing and/or Inspection of Soil and Rock Used in Engineering Design and Construction.
- D. ASTM D 2726 – Bulk Specific Gravity and Density of Non-Absorptive Compacted Bituminous Mixtures.
- E. ASTM D 2950 – Density of Bituminous Concrete in Place by Nuclear Methods.
- F. ASTM D 1754 – Effect of Heat and Air on Asphalt Materials (Thin-film Oven Test).
- G. ASTM D 1188 – Bulk Specific Gravity and Density of Compacted Bituminous Mixtures Using Coated Samples.

**1.5 QUALITY ASSURANCE**

- A. Perform work in accordance with Georgia Department of Transportation Standard Specifications Construction of Transportation Systems, 2001 Edition.
- B. Mixing Plant: Conform to Georgia Department of Transportation Standard Specifications Construction of Transportation Systems, 2001 Edition.

**1.6 ENVIRONMENTAL REQUIREMENTS**

- A. Do not place asphalt mixture when ambient air temperature is less than that indicated in the Table nor when the surface is wet or frozen.

Lift Thickness	Min. Air Temperature, Degrees F.
1" or Less	55
1.1" to 2"	45
2.1" to 3"	35
3.1" to 4"	30
4.1" to 8"	Contractor's Discretion

- B. Mixture shall be delivered to the spreader at a temperature between 250 degrees F and 325 degrees F.

**1.7 GUARANTEE**

- A. Contractor shall guarantee the quality of materials and workmanship for a period of 12 months after acceptance. Defects discovered during this period shall be repaired by the Contractor at no cost to the Owner.

**1.8 TESTING**

- A. Testing laboratory shall operate in accordance with ASTM D 3740 and E 329 and be acceptable to the Engineer.
- B. Testing laboratory and Project Engineer/Project Representative shall be given a minimum of 48 hours notice prior to taking any tests.
- C. Owner shall select and engage the Testing Laboratory. Testing Laboratory shall be responsible to the Owner and Owner's Engineer. Payment for laboratory and all tests shall be by the Owner, except Owner specifically reserves the right to deduct from Contractor's payment, expenses and charges of Testing Laboratory when:
  1. Contractor gives notice the work is ready for inspection and testing, and fails to be ready for the test, and/or
  2. Testing of the Contractor's work, products or materials fail, and retesting is required, and/or
  3. Contractor abuses the services or interferes with the work of the testing laboratory in the conduct of this work.

- D. Test results shall be furnished to the Engineer prior to continuing with associated or subsequent work.

## **PART 2 – PRODUCTS**

### **2.1 TACK COAT**

- A. Material: Shall be PG67-22, asphalt cement, conforming to Sections 413 and 820 of the Georgia Department of Transportation Standard Specifications Construction of Transportation Systems, 2001 Edition. When the temperature in the shade exceeds 70 degrees F, an emulsion such as CRS – 2h or CRS – 3 may be used.

### **2.2 ASPHALT CEMENT AND ADDITIVES**

- A. Asphalt Cement: Shall conform to the requirements of Section 820 of the Georgia Department of Transportation Standard Specifications Construction of Transportation Systems, 2001 Edition. The material shall be PG67-22.
- B. Anti-Stripping: Shall conform to requirements of Section 831 of the Georgia Department of Transportation Standard Specifications Construction of Transportation Systems, 2001 Edition.

### **2.3 AGGREGATES**

- A. General: Mineral aggregate shall be composed of fine aggregate or a combination of fine and coarse aggregate. Coarse aggregate shall be the portion of material retained on a No. 8 sieve.
- B. Fine aggregate shall be considered the portion passing a No. 8 sieve. Fine aggregate, coarse aggregate, and any additives in combination with the specified percentage of asphalt cement shall meet the requirements of tests specified, before acceptance may be given for their individual use.
- C. Fine Aggregate: Shall conform to the requirements of Section 802 of the Georgia Department of Transportation Standard Specifications Construction of Transportation Systems, 2001 Edition.
- D. Coarse Aggregate: Shall be granite stone and conform to the requirements of Section 802.02 of the Georgia Department of Transportation Standard Specifications Construction of Transportation Systems, 2001 Edition.
- E. Surface Course: Shall consist of fine and coarse aggregate and mineral filler uniformly mixed with hot asphalt cement in an acceptable mixing plant. Job mix formula and design limits shall conform to 9.5 mm Superpave Level B requirements.
- F. Intermediate or Binder Course: Shall consist of fine and coarse aggregate and mineral filler uniform mixing with hot asphalt cement in an acceptable mixing

plant. Job mix formula and design limits shall conform to 19 mm Superpave requirements.

## **2.4 SOURCE QUALITY CONTROL AND TESTS**

- A. Section 01 45 00 – Quality Control and Section 01 45 23 – Testing and Inspecting Services.
- B. Submit proposed mix design for review prior to beginning of work.
- C. Test samples in accordance with the requirements of these specifications.

## **PART 3 – EXECUTION**

### **3.1 EXAMINATION**

- A. On-Site Observations: Owner's Representative or Engineer will have the right to require any portion of work be completed in their presence. If work is covered up after such instruction, it shall be exposed by the Contractor for observation at no additional cost to Owner. However, if Contractor notifies Engineer such work is scheduled, and Engineer fails to appear within 48 hours, the Contractor may proceed. All work completed and materials furnished shall be subject to review by the Engineer or Project Representative. Improper work shall be reconstructed. All materials, which do not conform to requirements of specifications, shall be removed from the work upon notice being received from Engineer for 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.

- B. Contractor shall verify base has been tested, is dry, and gradients and elevations are correct.

### **3.2 PREPARATION**

- A. Apply tack coat in accordance with Section 413 of the Georgia Department of Transportation Standard Specifications Construction of Transportation Systems, 2001 Edition. Rate of application shall be 0.04 to 0.06 gallons per square yard of surface.
- B. Work shall be planned so no more tack coat than is necessary for the day's operation is placed on the surface. All traffic not essential to the work should be kept off the tack coat.
- C. Apply tack coat to contact surfaces of curbs and gutters. Apply in manner so exposed curb or gutter surfaces are not stained.
- D. Coat surfaces of manhole frames and inlet frames with oil to prevent bond with asphalt pavement. Do not tack coat these surfaces.

### 3.3 PLACEMENT

- A. Construction shall be in accordance with Section 400 of the Georgia Department of Transportation Standard Specifications Construction of Transportation Systems, 2001 Edition
- B. Asphaltic concrete shall not be placed on a wet or frozen surface.
- C. Compaction shall commence as soon as possible after the mixture has been spread to the desired thickness. Compaction shall be continuous and uniform over the entire surface. Do not displace or extrude pavement from position. Hand compact in areas inaccessible to rolling equipment. Perform rolling with consecutive passes to achieve even and smooth finish without roller marks. Compaction rolling shall be complete before material temperature drops below 185° F.
- D. Areas of pavement with deficient thickness or density shall be removed and replaced at no additional cost to the Owner.

### 3.4 TOLERANCES

- A. General: All paving shall be subject to visual and straightedge evaluation during construction operations and thereafter prior to final acceptance. A 10 foot straightedge shall be maintained in the vicinity of the paving operation at all times for the purpose of measuring surface irregularities on all paving courses. The straightedge and labor for its use shall be provided by the Contractor. The surface of all courses shall be checked with the straightedge as necessary to detect surface irregularities. Irregularities such as rippling, tearing or pulling, which in the judgment of the Engineer indicate a continuing problem in equipment, mixture or operating technique, will not be permitted to recur. The paving operation shall be stopped until appropriate steps are taken by the Contractor to correct the problem.
- B. Flatness: All irregularities in excess of 1/8 inch in 10 feet for surface courses and 3/16 inch in 10 feet for intermediate and base courses shall be corrected.
  - 1. General Paving: Less than 1/4 inch.
  - 2. Accessible Routes: Shall not exceed 1/4 inch. However, accessible routes shall not exceed maximum ADA allowable slopes. Contractor shall remove and replace any and all portions of the accessible route that exceed maximum ADA allowable slopes.
  - 3. Variation from Design Elevation: Less than 1/4 inch.
  - 4. Scheduled Compacted Thickness: Less than 1/4 inch under tolerance.
  - 5. Pavement Deficient in Thickness: When measurement of any core indicates the pavement is deficient in thickness, additional cores will be drilled 10 feet either side of the deficient core along the centerline of the lane until the cores indicate the thickness conforms to the above specified requirements. A core indicating thickness deficiencies is



considered a failed test. Pavement deficient in thickness shall be removed and replaced with the appropriate thickness of materials. If the Contractor believes the cores and measurements taken are not sufficient to indicate fairly the actual thickness of the pavement, additional cores and measurements will be taken, provided the Contractor will bear the extra cost of drilling the cores and filling the holes in the roadway as directed.

### 3.5 FIELD QUALITY CONTROL

- A. Acceptance of the in-place density of the surface course shall be in accordance with the Georgia Department of Transportation Standard Specifications Construction of Transportation Systems, 2001 Edition.
- B. Density Testing: Performed in accordance with ASTM D-2726 and ASTM D-2950. Core samples for each day's operation shall be taken, tested and results reported to the Engineer the following day. The areas sampled shall be properly restored by the Contractor at no additional cost to the Owner. Nuclear gauge tests shall be taken during the asphaltic concrete placement.
  - 1. The pavement core and nuclear gauge densities shall range between 94% and 96% of the theoretical maximum laboratory density.
- C. Temperature:
  - 1. Asphaltic concrete shall not exceed 325 degrees F at any time.
  - 2. Asphaltic concrete shall not be placed once the temperature of the mix falls below 250 degrees F or the delivered temperature is more than 15 degrees F below the batch plant's delivery ticket.
  - 3. Temperature at time of loading shall be recorded on the truck delivery ticket.
- D. Frequency of Tests:
  - 1. Asphaltic Concrete – One test for each 250 tons placed.
    - a. Asphalt extraction and gradation test.
    - b. Core Sample
  - 2. Field determination of density by nuclear method every 5,000 square feet during construction of the asphaltic concrete binder/surface course.
  - 3. Core Samples – One set of tests every 300 feet. Each set of tests shall consist of one at centerline of roadway and one within 1 foot of the face of gutter. Each roadway must have a minimum of two test sets.

END OF SECTION

**INDEX TO**  
**SECTION 32 92 00 – TURF AND GRASSES**

<b>Paragraph</b>	<b>Title</b>	<b>Page</b>
<b>PART 1 – GENERAL</b>		
1.1	Section Includes	32 92 00-1
1.2	Related Work	32 92 00-1
1.3	Delivery, Storage & Handling	32 92 00-1
1.4	Planting Dates	32 92 00-1
1.5	Measurement and Payment	32 92 00-1
<b>PART 2 – PRODUCTS</b>		
2.1	Seed	32 92 00-2
2.2	Seeding Schedule	32 92 00-2
2.3	Fertilizer	32 92 00-2
2.4	Lime	32 92 00-2
2.5	Omitted	32 92 00-2
2.6	Omitted	32 92 00-2
2.7	Omitted	32 92 00-2
2.8	Omitted	32 92 00-2
2.9	Product Review	32 92 00-3
<b>PART 3 – EXECUTION</b>		
3.1	Preparation	32 92 00-3
3.2	Stand of Grass	32 92 00-3
3.3	Seeding Dates	32 92 00-3
3.4	Applying Lime and Fertilizer	32 92 00-3
3.5	Seeding	32 92 00-4
3.6	Omitted	32 92 00-4
3.7	Omitted	32 92 00-4
3.8	Omitted	32 92 00-4
3.9	Omitted	32 92 00-4
<b>PART 4 – MAINTENANCE, WARRANTY, AND ACCEPTANCE</b>		
4.1	Maintenance	32 92 00-4
4.2	Warranty	32 92 00-5
4.3	Acceptance	32 92 00-5

**SECTION 32 92 00****TURF AND GRASSES****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. Civil plans and specifications.

**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. Store in cool, dry locations away from contaminants.
- B. Deliver fertilizer in waterproof bags showing weight, chemical analysis, and name of manufacturer. Damaged bags are not acceptable. Store in cool, dry locations away from contaminants.
- 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 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 permanent grass during the favorable season between dates specified above unless otherwise accepted, Contractor will be required to plant a temporary cover to protect 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 project is such results of grassing work cannot be determined, conditional acceptance will be made on work completed. When conditional acceptance is made for items of work covered, Contractor shall be entitled to 50% of bid price for the actual work placed and shall receive 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 work is acceptably placed and completed in accordance with specifications.

- B. Temporary and Permanent Grassing: No separate payment will be made for temporary grassing. Payment shall be included in the lump sum price for "Soil Erosion Control" as listed on the bid proposal.

## **PART 2 – PRODUCTS**

- A. Contractor shall submit source and species certification documents to Owner's Representative for review prior to installation. Supply complete information on all analysis/test methodologies and results; laboratory certifications, manufacturer's specifications, and agency approvals to the Project Engineer prior to placement of soil mixtures. In addition, provide the Project Engineer with thoroughly mixed sample of soil mixes for acceptance prior to placement. Landscape Contractor shall make modifications and improvements to soil mixes deemed necessary by the soil analysis to meet requirements specified here in before, and to ensure proper growing medium for plant material.

### **2.1 SEED**

- A. All seed shall conform to State Laws and requirements and regulations of the State Department of Agriculture.
- B. The varieties of seed, as specified in Section 2.2, 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.
- C. Engineer reserves the right to test, reject, or accept all seed before seeding.

### **2.2 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

### **2.3 FERTILIZER**

- A. Commercial fertilizer of accepted type, conforming to State fertilizer laws at the rate as recommended by soils test.

### **2.4 LIME**

- A. Agricultural grade, ground limestone at the rate as recommended by soils test.

### **2.5 OMITTED**

### **2.6 OMITTED**

### **2.7 OMITTED**

### **2.8 OMITTED**

**2.9 PRODUCT REVIEW**

- A. 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. Areas to be seeded shall be made smooth and uniform and shall conform to the finished grade indicated on 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.
- D. Amendments to soils shall be incorporated into loosened 3-inch top soil layer as recommended by soils tests.
- E. Contractor shall provide Topsoil Analysis Tests performed by a State Agricultural Experiment Station, Soil and Water Conservation District, State University, or other qualified private testing laboratory, as acceptable to Landscape Architect/Project Engineer. Soils test shall identify existing pH and nutrient levels, as well as recommended adjustments based on the type of grass to be installed.

**3.2 STAND OF GRASS**

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

**3.3 SEEDING DATES**

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

**3.4 APPLYING LIME AND FERTILIZER**

- A. Following advance preparation and placing selected material for shoulders and slopes, lime and fertilizer, if called for based on soil tests, shall be spread uniformly over the designated areas, and shall be thoroughly mixed with the soil to a depth

of approximately 2 inches. Fertilizer and lime shall be applied at the rate recommended by required soils 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 application of fertilizer and lime and preparation of the seedbed as specified in Section 3.4. Seed shall be uniformly sown at 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. 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 OMITTED**

### **3.7 OMITTED**

### **3.8 OMITTED**

### **3.9 OMITTED**

## **PART 4 – MAINTENANCE, WARRANTY AND ACCEPTANCE**

### **4.1 MAINTENANCE**

- A. Maintain grassed 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. Maintenance shall also include, but is not limited to, watering, weeding, cultivating, removal of dead material, lawn mowing, fertilizing, and other

necessary operations.

- C. The Contractor shall maintain all proposed plantings until the date of substantial completion issued by the Owner.

#### **4.2 WARRANTY**

- A. All grassed areas shall be guaranteed by Contractor to be alive and healthy for a one year period from date of substantial completion issued by the Owner. A final walk through with the Owner shall be conducted at end of warranty period to determine if any areas require replanting. At end of warranty period, sod shall show evidence of rooting to underlying soil and shall have no competitive weed growth from either the sod or from between sod joints.
- B. Any grassed area which is dead or not showing satisfactory growth shall be replaced at Contractor's expense at the end of warranty period. All replacement shall be of original quality. Replacement required because of vandalism, excessive use, or other causes beyond the control of Contractor are not part of this contract.

#### **4.3 ACCEPTANCE**

- A. Before acceptance of seeding performed for the establishment of permanent vegetation, Contractor will be required to produce a satisfactory stand of perennial grass whose root system shall be developed sufficiently to survive dry periods and winter weather and be capable of reestablishment in spring.
- B. A minimum coverage of 80% density over 100% of the disturbed area is required for seeded areas before project acceptance. Sprig and sod areas shall have 95% coverage over 100% of the disturbed area prior project acceptance.

END OF SECTION

**INDEX TO**  
**SECTION 33 40 00 – STORM DRAINAGE UTILITIES**

<b>Paragraph</b>	<b>Title</b>	<b>Page</b>
<b>PART 1 – GENERAL</b>		
1.1	Section Includes	33 40 00-1
1.2	Related Sections	33 40 00-1
1.3	Omitted	33 40 00-1
1.4	References	33 40 00-1
1.5	Quality Assurance	33 40 00-2
1.6	Product Delivery, Storage, and Handling	33 40 00-3
1.7	Sequencing and Scheduling	33 40 00-3
1.8	Alternatives	33 40 00-3
1.9	Guarantee	33 40 00-3
1.10	Existing Utilities	33 40 00-3
1.11	Measurement and Payment	33 40 00-3
1.12	Testing	33 40 00-4
<b>PART 2 – PRODUCTS</b>		
2.1	Pipe	33 40 00-5
2.2	Drainage Structures	33 40 00-5
2.3	Filter Fabric	33 40 00-6
2.4	Tracing Wire	33 40 00-6
2.5	Soils and Stone Aggregates	33 40 00-6
2.6	Product Review	33 40 00-7
<b>PART 3 – EXECUTION</b>		
3.1	On Site Observations of Work	33 40 00-7
3.2	Excavation for Pipe and Structures	33 40 00-8
3.3	Trenching for Pipe	33 40 00-8
3.4	Protection of Utility Lines	33 40 00-8
3.5	Foundation and Bedding	33 40 00-9
3.6	Haunching, Initial Backfill, and Final Backfill	33 40 00-9
3.7	Placing Pipe	33 40 00-10
3.8	Joints in Pipes	33 40 00-10
3.9	Field Quality Control	33 40 00-11
3.10	Drainage Structures	33 40 00-12



**SECTION 33 40 00**  
**STORM DRAINAGE UTILITIES**

**PART 1 – GENERAL**

**1.1 SECTION INCLUDES**

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

**1.2 RELATED SECTIONS**

- A. 31 00 00 – Earthwork.
- B. 31 37 00 – Rip Rap.

**1.3 OMITTED**

**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 Monolithic 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 6938 – In Place Density and Water Content of Soil and Soil–Aggregate 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 Engineer with a list of projects and Owners or Engineers who are familiar with their competence.
- D. Design – Devices, equipment, structures and systems not designed by Engineer and 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 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 Contractor suggests alternate material, equipment or procedures will improve results at no additional cost, the Engineer and Owner will examine suggestion, and if accepted, it may be used. The basis upon which acceptance of an alternate will be given is its value to Owner and not for Contractor's convenience.

#### **1.9 GUARANTEE**

- A. Contractor shall guarantee 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 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 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) or 811.

#### **1.11 MEASUREMENT AND PAYMENT**

- A. Pipe Culverts and Storm Drains – 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 specifications.

- B. Drainage Structures – Payment will be made on a contract unit price basis. Payment will constitute full payment for all dewatering, excavation, formwork, precast concrete, backfill, compaction, frames, gratings or covers, concrete, brick and all miscellaneous materials, surface clean-up and labor necessary to complete the construction.
- C. Sheet piling and Bracing – Will not be measured for direct payment. All costs and charges in connection therewith shall be reflected and included in the item of work to which it pertains.
- D. Tracing Wire – No separate payment will be made for wire. Cost of furnishing and placing tracing wire shall be included in the contract unit price for installing pipe.

#### **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 6938.
- 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. Owner shall select and engage the testing laboratory. Testing laboratory shall be responsible to the Owner and Owner's Engineer. Payment for laboratory and all tests shall be by Owner, except Owner specifically reserves the right to deduct from Contractor's payment, expenses and charges of testing laboratory when:
  - 1. Contractor gives notice work is ready for inspection and testing, and fails to be ready for the test, and/or
  - 2. testing of the Contractor's work, products, or materials fail, and retesting is required, and/or
  - 3. Contractor abuses the services or interferes with work of testing laboratory in conduct of this work.
- 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 acceptable to 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.

### 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 accepted gradation. Hydrated lime may be added to the mixture of sand and cement in an amount equal to 25% of cement volume used. Hydrated lime shall conform to ASTM C-207, Type S. 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, alkalis and organic impurities. The mortar shall be used within 30 minutes from time ingredients are mixed with water.
- D. Precast – Shall be constructed in accordance with ASTM C-478, C-913, or C-1433 and conform to 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. Primer shall be applied to all contact surfaces of manhole joints at the factory in accordance with manufacturer's instructions.

2. Steps – Shall be polypropylene equivalent to M.A. Industries, Type PS-1 or PS-1-PF. Steps shall be installed at the manhole factory and in accordance with recommendations of 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; mixing liquid shall be straight bonding agent equivalent to "Acryl 60."

E. Frame, cover & grating shall conform to details shown on the project drawings.

### 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 filaments will retain their relative position with respect to each other. Fabric shall contain stabilizers and/or inhibitors added to the base plastic to make filaments resistant to deterioration due to ultraviolet and/or heat exposure. The product shall be free of flaws, rips, holes, or defects.

### 2.4 TRACING WIRE

- A. Tracing wire shall be #12 gauge insulated single strand copper wire.

### 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 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.			

		SW	Well-graded sands and gravelly sands; little or no fines.		>50% of "Coarse Fraction "	
		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. Contractor shall provide the Engineer with a complete description of all products before ordering. 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 Contractor under direction of Engineer. Owner's Representative or Engineer will have the right to require any portion of work be completed in their presence and if work is covered up after such instruction, it shall be exposed by Contractor for observation. However, if Contractor notifies Engineer such work is scheduled and the Engineer fails to appear within 48-hours, 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 not conforming to requirements of specifications shall be removed from the work upon notice being received from Engineer for 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 Contractor prior to observation, at no additional cost to the Owner.

It will also be required of Contractor to keep accurate, legible records of the location of all storm sewer lines and appurtenances. These records will be prepared in accordance with 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 acceptable method.
- E. Sheet piling, bracing or shoring shall be used as necessary for 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 top of pipe shall be not greater than outside diameter of 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 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 top of pipe for a width of five pipe diameters on each side of pipe before installation of pipe.
- B. Removal of Unsuitable Material – Where wet or otherwise unstable soil, incapable of supporting the pipe is encountered in bottom of trench, such material shall be removed to depth required and replaced to proper grade with stone or sand foundation as determined by Engineer. This foundation shall be compacted to 95% modified proctor.

### **3.4 PROTECTION OF UTILITY LINES**

- A. Existing utility lines shown on drawings or 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 Contractor's expense. If the Contractor damages any existing utility lines not shown on drawings or locations of which are not known to Contractor, report



thereof shall be made immediately. If Engineer determines repairs shall be made by Contractor, such repairs will be ordered under the clause in GENERAL CONDITIONS of contract entitled "CHANGES." When utility lines to be removed are encountered within the area of operations, Contractor shall notify Engineer in ample time for necessary measures taken to prevent interruption of service.

### **3.5 FOUNDATION AND BEDDING**

- A. Stone Foundation – Where the subgrade of pipe is unsuitable material, Contractor shall remove unsuitable material to a depth determined by Engineer or Geotechnical Consultant and furnish and place stone foundation in trench to stabilize subgrade.
- B. Sand Foundation – Where the character of soil is unsuitable, even though dewatered, additional excavation to a depth determined by Engineer or Geotechnical Consultant shall be made and replaced with clean sand furnished by Contractor.
- C. Bedding for pipe shall provide a firm surface of uniform density throughout the entire length of pipe. Before laying pipe, trench bottom shall be de-watered by the use of well points. Where well points will not remove the water, Contractor shall construct sumps and use pumps to remove all water from bedding surface. Pipe shall be carefully bedded in stone accurately shaped and rounded to conform to lowest 1/3 outside portion of circular pipe, or lower curved portion of arch pipe for the entire length of 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. Depth of bedding shall be equal to 1/24 the outer diameter of pipe or 3 inches, whichever is greater.
  - 3. Bedding area under the center of pipe, for a width 1/3 outer diameter of pipe, known as middle bedding, shall be loosely placed. Remainder of bedding for 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 pipe is installed, Class II or Class III soil shall be placed along both sides of pipe, in layers not exceeding 6 inches in compacted depth. Care shall be taken to insure thorough compaction and fill under haunches of the pipe. Each layer shall be thoroughly compacted with mechanical tampers and rammers. Haunching shall extend up to the spring line of pipe and be compacted to following densities:
  - 1. RCP: Minimum density shall be 90% as determined by ASTM D1557.

- B. 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 pipe is under pavement. If 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, 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. Contractor will be responsible for maintaining these newly constructed ditches and take immediate action subject to acceptance, keeping erosion of the ditch bottom and slopes to a minimum during life of contract. No additional compensation will be given to Contractor for the required diversion of drainage and/or dewatering of trenches. Grassing the trench backfill shall conform to requirements of Section 32 92 00 – "Turf and Grasses."
- B. Concrete Pipe: Laying shall proceed upgrade with spigot ends of bell and spigot pipe and tongue ends of tongue and groove pipe pointing in the direction of 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. Tracing Wire – Tracing wire will be installed on all storm sewers and subgrade drain directly on top of the pipe. The wire shall be secured to pipe with tape or other acceptable methods at spacings of no more than 36 inches apart. Where subgrade drains branch off from main lines, the wire insulation shall be stripped so bare wires can and shall be jointed securely together and wrapped with a rubberized insulation tape. The insulated wire must maintain electrical continuity. The tracing wire shall also be stubbed up into each drainage structure. This tracing wire system shall be checked and tested by Contractor, in presence of Engineer, prior to acceptance of the installation. All equipment, meters, detectors, etc., needed for testing shall be furnished by the Contractor.

### 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 accepted 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 splices of the gasket will be permitted if nominal diameter of 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 accepted equivalent. The joint surfaces shall be primed according to manufacturer's recommendations. Care shall be taken to ensure mastic material completely and uniformly seals the joint.
3. All tongue and groove joints shall receive one layer of filter fabric completely around exterior of the joint. Filter fabric shall be a minimum of 2 feet wide, centered on the joint, and overlapped a minimum of 1 foot.

### 3.9 FIELD QUALITY CONTROL

- A. Soil and density tests shall be made by a testing laboratory acceptable to the Engineer and shall be made at 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 6938. Results of 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 accepted by the Engineer.

- B. It is the Contractor's responsibility to assure backfill is sufficient to limit pipe deflection to no more than 5%. When flexible pipe is used, a deflection test shall be made by the Contractor on entire length of installed pipeline, not less than 30-days after completion of all backfill and placement of any fill. Deflection shall be determined by use of a deflection device or by use of a spherical, spheroidal, or elliptical ball, a cylinder, or circular sections fused to a common shaft. The ball,

cylinder, or circular sections shall have a diameter, or minor diameter as applicable, of 95% of inside pipe diameter. The ball, cylinder, or circular sections shall be of a homogeneous material throughout, shall have a density greater than 1.0 as related to water at 39.2 degrees F, and shall have a surface brinell hardness of not less than 150. The device shall be center bored and through bolted with a 1/4 inch minimum diameter steel shaft having a yield strength of 70,000 p.s.i. or more, with eyes at each end for attaching pulling cables. The eye shall be suitably backed with flange or heavy washer; a pull exerted on opposite end of shaft shall produce compression throughout remote end of ball, cylinder, or circular section. Circular sections shall be spaced so the distance from external faces of front and back sections shall equal or exceed diameter of circular section. Failure of the ball, cylinder, or circular section to pass freely through a pipe run, either by being pulled through by hand or by being flushed through with water, shall be cause for rejection of a run. When a deflection device is used for the test in lieu of a ball, cylinder, or circular sections described, such device shall be given acceptance prior to use. Device shall be sensitive to 1.0% of pipe diameter being measured and shall be accurate to 1.0% of the indicated dimension. Installed pipe showing deflections greater than 5% of normal pipe diameter shall be retested by a run from the opposite direction. If retest also fails, the suspect pipe shall be repaired or replaced at no cost to Owner.

### **3.10 DRAINAGE STRUCTURES**

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

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

### 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.

### # 3

#### 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.

LEGAL NOTICE

CC NO. 165238

Invitation to Bid

Sealed Bids will be received until 2:00 P.M. on JUNE 14, 2012 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 : 12-0055-4 PENROSE DRIVE DRAINAGE IMPROVEMENTS.

PRE-BID CONFERENCE: 2:00 P.M., MAY 30, 2012. A PreBid Conference will be held at the Chatham County Citizens Service Center, 1117 Eisenhower Drive, Suite C, Savannah, Georgia. You are encouraged to attend.

Bid Packages and Plan sheets are available and must be purchased from Clayton Digital Reprographics (CDR) located at 1000-I Eisenhower Drive, Savannah, Georgia, 31406. CDR phone: 912-352-3880, fax 912-352-3881, e-mail: [cdrsouth@cdrepro.com](mailto:cdrsouth@cdrepro.com)

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

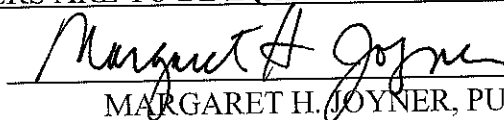
For any additional questions regarding this bid , please contact Robert Marshall, Senior Procurement Specialist, at 912-790-1622.or [rmarshall@chathamcounty.org](mailto:rmarshall@chathamcounty.org)

Bid Bond shall be required at the time of bid. (5% of total bid)

Payment and Performance Bonds are not be required for this project.

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

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



MARGARET H. JOYNER, PURCHASING AGENT

SAVANNAH NEWS/PRESS INSERT: May 22, 2012

Please send affidavit to:

Chatham County Purchasing & Contracting Department

P.O. Box 15180

Savannah, Georgia 31416

(912) 790-1622