

PROJECT MANUAL
FOR
CONSTRUCTION OF
J.G. Beacham Water Treatment Plant
Sludge Lagoon Cleanout

Bid Number: 26049

Volume 1 of 1
Specifications and Drawings



PUBLIC UTILITIES DEPARTMENT
UNIFIED GOVERNMENT
OF
ATHENS-CLARKE COUNTY
GEORGIA

June 2026

1230 Peachtree St. NE
Suite 2800
Atlanta, Georgia 30309
478-978-7600

Jacobs
Project No. EEXJ0046

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FOR
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J.G Beacham Water Treatment Plant
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NOTICE OF
INVITATION TO BID

#26049

FOR

J.G. Beacham Water Treatment Plant Sludge Lagoon Cleanout

THE UNIFIED GOVERNMENT OF ATHENS-CLARKE COUNTY, GEORGIA

Sealed bids will be accepted by the Unified Government of Athens-Clarke County Finance Department, Purchasing Division, 375 Satula Avenue, Athens, GA 30601, until **10:00 a.m. on Friday, July 24, 2026**, for **BID #26049, J.G. Beacham Water Treatment Plant Sludge Lagoon Cleanout**, according to plans and specifications. All bids will be opened in public and read aloud immediately following the specified closing time.

The Project consists of furnishing all superintendence, skilled and unskilled labor, materials, equipment, services, and all work necessary for the dredging, onsite dewatering, hauling, and disposal of water treatment plant sludge from a 3.2 acre lagoon.

A **NON-MANDATORY pre-bid conference** to respond to any questions related to the details of this project will be held at **10:00 a.m. ET, Wednesday, July 1, 2026**, in the Training Room at J.G. Beacham Water Treatment Plant, 800 Water Works Drive, Athens, GA 30601 in the Conference Room. Potential bidders are invited to attend. For questions regarding meeting location, please call (706) 613-3481.

Inquiries regarding this Invitation to Bid should be made to Edward Tulenko, Senior Buyer, (762) 400-6070, or email ACCBids@accgov.com. Technical questions may be directed to Project Manager Zac Alexander email zac.alexander@jacobs.com. All inquiries must be submitted by **10:00 a.m. ET, Friday, July 17, 2026**.

The advertisement, bid documents, and addenda are available at <https://www.accgov.com/bids>.

The estimated range of this project is between \$1,700,000 and \$2,400,000.

BONDING REQUIREMENTS: An original Bid Bond for 5 percent of the total bid must be submitted with the bid. Performance and Payment Bonds in the amount of 100 percent of the contract price will be required if contract is awarded.

Plans/Specifications/Contract Documents will be on file FOR INSPECTION ONLY at the following locations on or after Wednesday June 24, 2026.

Athens-Clarke County Public Utilities Department
124 E. Hancock Avenue
Athens, Georgia 30601

A qualified interpreter for the hearing impaired is available upon request at least 10 days in advance of the bid opening date. Please call (706) 613-3088, for more information. This service is in compliance with the Americans with Disabilities Act (ADA).

It is the policy of the Athens-Clarke County government that no person or business shall be excluded from participation, denied the benefits of, or otherwise discriminated against in relation to the award and performance of any contract or subcontract on the grounds of race, color, creed, national origin, age, or sex.

The Unified Government of Athens-Clarke County reserves the right to reject any or all bids, to waive any technicalities or irregularities, and to award the bid based on the highest and best interest of the Unified Government of Athens-Clarke County.

The Owner will in no way be liable for any costs incurred by any bidder or potential bidder in the preparation of its bid in response to this Invitation to Bid.

Jessica Beri
Purchasing Administrator
June 5, 2026

SECTION 00100
INSTRUCTIONS TO BIDDERS

1. CONTRACT DOCUMENTS

1.1. The Contract Documents include the Contract Agreement, Invitation to Bid, Contractor's Bid (including all documentation accompanying the Bid and any post-Bid documentation required by the Owner prior to the Notice of Award), Bonds, Specifications, Drawings, and Addendums, together with the Notice to Proceed, Work Change Directives, Change Orders, and the Engineer's written interpretations and clarifications issued in accordance with the General Conditions on or after the date of the Contract Agreement.

1.2. Shop Drawing submittals reviewed in accordance with the General Conditions, geotechnical investigations and soils reports, and drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the site, are not Contract Documents.

1.3. The Contract Documents shall define and describe the complete work to which they relate.

1.4. All bids received will become a part of the official contract file and may be subject to disclosure under the Georgia Open Records Act.

1.5. Bidders are expected to examine the Specifications, price schedule, and all instructions. Failure to do so will be at the Bidders' risk. Each offeror shall furnish the information required by the solicitation.

2. DEFINITIONS

2.1. Where the following words or the pronouns used in their stead occur herein, they shall have the following meaning:

2.1.1. "Owner" shall mean the Unified Government of Athens-Clarke County, Georgia, party of the first part to the Contract Agreement, or its authorized and legal representatives.

2.1.2. "Engineer" shall mean Jacobs Engineering, Inc. (Jacobs).

2.1.3. "Design Professional" shall mean Jacobs.

2.1.4. "Contractor" shall mean the party of the second part to the Contract Agreement, or the authorized and legal representative of such party.

2.1.5. "Work" and "Project" shall mean the entire completed construction required to be furnished under the Contract Documents.

2.1.6. “Contract Time” shall mean the number of consecutive calendar days as provided in the Contract Agreement for completion of the Project, beginning with and inclusive of the date of the Notice to Proceed.

2.1.7. “Liquidated Damages” shall be as stipulated in the Agreement.

2.1.8. “Products” shall mean materials or equipment permanently incorporated into the Project.

2.1.9. “Provide” shall mean to furnish and install.

2.1.10. “Balanced Bid” shall mean a Bid in which each of the unit prices and total amount bid for each of the listed items reasonably reflects the value of that item with regard to the entire job considering the prevailing cost of labor, material, and equipment in the relevant market. A Bid is unbalanced when, in the opinion of the Owner, any unit prices or total amounts bid on any of the listed items do not reasonably reflect such values.

2.1.11. “Substantial completion of the work”, solely for the purposes of Official Code of Georgia Annotated (O.C.G.A.) §13-10-80(b)(2)(c), shall be defined as occurring on the date of the written notification from the Engineer that the Project is ready for final inspection, as specified in the General Conditions.

2.1.12. “Satisfactorily completed”, solely for the purposes of O.C.G.A. §13-10-81(b), shall mean the completion of all work, certifications, and affidavits as specified in the, General Conditions.

3. PREPARATION AND EXECUTION OF BID

3.1. Each Bid must be prepared to represent that it is based solely upon the materials and equipment specified in the Contract Documents.

3.2. Each Bid must be submitted on the Bid Forms which are attached to the Contract Documents. All blank spaces for Bid prices, both words and figures, must be filled in, in ink. In case of discrepancy, the amount shown in words will govern. All required enclosed certifications must be fully completed and executed when submitted.

3.3. Bid Timetable: The anticipated schedule of the bid process is as follows:

Bid Documents Available:		June 24, 2026
Pre-Bid Conference: (Non-Mandatory)	10:00 a.m.	July 1, 2026
Deadline for submission of questions:	10:00 p.m.	July 17, 2026
Bid Due Date and Opening:	10:00 p.m.	July 24, 2026
Bids valid until:	120 Days after Bid Opening Date	

3.4. All bid copies must be submitted in a sealed envelope or container with the OUTER MOST Container stating the company name, address, telephone number, the BID number, and title

BID #26049 J.G. Beacham Water Treatment Plant Sludge Lagoon Cleanout. If you have an ACCGov Vendor Number please include it on the sealed envelope or container. If you do not know your vendor number, please email: vendor@accgov.com. If you do not have a vendor number but you are awarded this RFP, you will be invited to submit your vendor registration per the following instructions:
<https://www.accgov.com/DocumentCenter/View/88465>.

Please Note: The ACCGov Vendor Number is not required to submit a proposal, and new vendor registrations **will not** be processed for bidding/proposal purposes only.

- ☐ **One (1) marked original of the complete signed bid**
- ☐ **One (1) marked COPY of the complete signed bid**
- ☐ **Two (2) USB Flash Drives with all required Bid Documents combined into one single PDF file**

are to be delivered to:

Unified Government of Athens-Clarke County
Finance Department, Purchasing Division
375 Satula Avenue
Athens, GA. 30601

Hand-delivered copies may be delivered to the above address only between the hours of 8:00 a.m. and 5:00 p.m. ET, Monday through Friday, excluding holidays observed by the Unified Government of Athens-Clarke County.

Bidders are responsible for informing any commercial delivery service, if used, of all delivery requirements and for ensuring that the required address information appears on the outer wrapper or envelope used by such service. No responsibility shall attach to the Unified Government of Athens-Clarke County for premature opening of a bid not properly addressed and identified, and/ or delivered to the proper designation.

3.5. The Bidder shall provide on the outside of the sealed envelope the following information, otherwise the Bid will not be opened and will be returned to the Bidder:

3.5.1. Bidder's Name

3.5.2. Georgia General Contractor License Number

3.6. If forwarded by mail, the sealed envelope containing the Bid must be enclosed in another envelope addressed to the Unified Government of Athens-Clarke County, Finance Department/ Purchasing Division, 375 Satula Avenue, Athens, Georgia 30601.

3.7. Any and all Bids not meeting the aforementioned criteria for Bid submittal may be declared non-responsive, and subsequently returned to the Bidder.

3.8. The Contractor, in signing a Bid on the whole or any portion of the Project, shall conform to the following requirements:

3.8.1. The Bid submittal must be signed by a company officer who is legally authorized to enter into a contractual relationship in the name of the Bidder.

3.8.2. Bids which are not signed by individuals making them shall have attached thereto a power of attorney evidencing authority to sign the Bid in the name of the person for whom it is signed.

3.8.3. Bids which are signed for a partnership shall be signed by all of the partners or by an attorney-in-fact. If a Bid is signed by an attorney-in-fact, there should be attached to the Bid a power of attorney executed by the partners evidencing authority to sign the Bid.

3.8.4. Bids which are signed for a corporation shall have the correct corporate name thereof and the signature of the president or other authorized officer of the corporation manually written below the corporate name following the wording "By." The corporation seal shall also be affixed to the Bid and Bid Bond.

3.8.5. The Bidder shall complete, execute, and include the following mandatory documents, which are attached to these Contract Documents. Bids received without all of the mandatory documents may be rejected:

3.8.5.1. Section 00300 Bid Form, to include acknowledgement of all addendums issued.

3.8.5.2. Section 00410 Bid Bond, in the amount of no less than 5 percent of the total base bid.

3.8.5.3. Section 00417 Corporate Certificate, if the Bidder is a corporation, or Section 00418, Partnership Certificate, if the Bidder is a partnership.

3.8.5.4. Section 00427 Georgia Security and Immigration Compliance Act Affidavits for the Bidder.

3.8.5.5. Section 00480 Non-collusion Affidavit of Prime Bidder.

3.8.6. The following mandatory documents, which are attached to these Contract Documents, shall be submitted by the apparent low bidder in both hard and electronic copy within 48 hours of bidder being notified of apparent low bid status, or Bid may be deemed non-responsive:

3.8.6.1. Section 00419 Subcontractor Listing Form.

3.8.6.2. Section 00481 Non-collusion Affidavit of Subcontractor, from all Subcontractors.

3.9. Any and all Bids not meeting the aforementioned criteria for Bid submittal may be declared non-responsive, and subsequently returned.

3.10. Cost Incurred by Bidders: All expenses involved with the preparation and submission of the Bid to the Unified Government of Athens-Clarke County, or any work performed in connection therewith shall be borne by the Bidder. No payment will be made for any responses received or for any other effort required of or made by Bidder(s) prior to commencement of work as defined by a Contract approved by the governing body of the Unified Government of Athens-Clarke County.

4. METHOD OF BIDDING

4.1. The unit or lump sum price for each of the several items in the Bid of each Bidder shall include its pro rata share of overhead and profit so that the sum of the products, obtained by multiplying the quantity shown for each item by the unit price, represents the total Bid.

4.2. The Bidder must include a unit or lump sum price for all items shown on the Bid Form; failure to comply may be cause for rejection. Additionally, Unbalanced Bids will be subject to rejection. Conditional Bids will not be accepted. The special attention of all Bidders is called to this provision, for should conditions make it necessary to revise the quantities, no limit will be fixed for such increased or decreased quantities or extra per unit compensation allowed.

4.3. Unbalanced Bids: The Unified Government of Athens-Clarke County may reject a Bid as non-responsive if the prices bid are materially unbalanced between the line items or sub-line items. A Bid is materially unbalanced when it is based on prices significantly less than cost for some work or prices which are significantly overstated in relation to cost for other work, and if there is a reasonable doubt that the Bid will result in the lowest overall cost to the Unified Government of Athens-Clarke County even though it may be the low evaluated Bid, or if it is so unbalanced as to be tantamount to allowing an advance payment.

4.4. Discrepancy in Unit Price: In case of a discrepancy between a unit price and an extended price and total amount, the unit price will be presumed to be correct, subject, however, to correction to the same extent and in the same manner as any other mistake.

5. ADDENDUMS AND INTERPRETATIONS

5.1. No interpretation of the meaning of the Drawings, Specifications, or other pre-bid documents will be made to any Bidder orally.

5.2. The contact person for this Bid is Jessica Beri, Purchasing Administrator, or Ed Tulenko, Senior Buyer, (762) 400-6066, fax (706) 316-2759 or email accbids@accgov.com. Explanation(s) desired by offeror(s) regarding the meaning or interpretation of this Bid must be requested in writing from the contact person via facsimile or email at the above number or email address. Technical questions may be directed to the Engineer Project Manager Zac Alexander. Every request for such interpretation should be made in writing via email to zac.alexander@jacobs.com all requests for interpretation or questions must be received by the time and dated stated in the above bid timetable.

5.3. Any and all such interpretations and any supplemental instructions will be in the form of written Addendums to the Contract Documents which, if issued, will be mailed, shipped, or faxed to all prospective Bidders (at the respective addresses furnished) prior to the date fixed for the opening of Bids.

5.4. The Unified Government of Athens-Clarke County will issue responses to inquiries and any other corrections or amendments it deems necessary in written addendums issued prior to the Bid opening date. Bidders should not rely on any representations, statements, or explanations other than those made in this Invitation for Bid or in any addendum to this Invitation for Bid. Where there appears to be a conflict between the Invitation for Bid and any addendum issued, the latest addendum issued will prevail.

5.5. Failure of Bidders to receive or acknowledge any addendum shall not relieve the Bidder of any obligation under the Bid. All addendums shall become part of the Contract Documents.

5.6. Bidders are cautioned to re-visit the Georgia Procurement Registry site to obtain notification of any addendums, which may be issued. The Unified Government of Athens-Clarke County assumes no responsibility for Bidders' failure to receive and acknowledge any addendums issued.

5.7. Each bidder is responsible for inspecting the site and for reading and being thoroughly familiar with the Contract Documents. The failure or omission of any Bidder to inspect the site shall in no way relieve any Bidder from any obligation with respect to his Bid.

6. BID MODIFICATIONS

6.1. Bidders may modify their Bids by telegraphic communication at any time prior to the scheduled closing time for receipt of Bids, provided such telegraphic communication is received by the Owner prior to the closing time, and provided further, the Owner is satisfied that a written confirmation of the telegraphic modification over the signature of the Bidder was mailed prior to the closing time. The telegraphic communication should not reveal the Bid price but should provide the addition or subtraction or other modification so that the final prices or terms will not be known by the Owner until the sealed Bid is opened. If written confirmation is not received within 2 business days from the closing time, no consideration will be given to the telegraphic modification.

6.2. Late Submittal, Late Modifications, and Late Withdrawals: Bid submittals received after the Bid opening date and time are late and will not be considered. Requests received after the Bid opening date for modifications to or to withdraw bids are also late and will not be considered. No responsibility shall attach to the Unified Government of Athens-Clarke County for the premature opening of a Bid not properly addressed and identified, and/or delivered to the improper designation.

7. BID SECURITY

7.1. Each Bid must be accompanied by an Original Bid Bond with original signatures for both Bidder and Surety, and Power of Attorney (with Surety Seal), prepared on the form of Bid Bond included herein or a Surety Company's Standard Bid Bond, duly executed by the Bidder as principal and having as surety thereon a surety company authorized to do business in the State of Georgia. Bid Bonds must contain, at a minimum, the following:

7.1.1. Bidder named as Principal on Bid Bond.

7.1.2. Unified Government of Athens-Clarke County named as Obligee. Specific Bid Project referenced on Bid Bond.

7.1.3. Bid Bond meets minimum dollar amount (5 percent of total bid sum).

7.1.4. Bid Bond signed by same representative signing Bid.

7.1.5. Attorney-in-fact representing Surety listed on Power of Attorney (exact name).

7.1.6. Bid Bond dated the same date as Power of Attorney and Bid Form.

7.2. The Surety must be on the Federal Treasury's list of approved sureties (<https://www.fiscal.treasury.gov/surety-bonds/list-certified-companies.html>). The Bid Bond amount must be within the Surety's underwriting limit, and the Surety must be authorized to do business in Georgia.

7.3. If for any reason whatsoever the successful Bidder withdraws from the competition after opening of the Bids, or if Bidder refuses to execute and deliver the Contract and Bonds required within 10 days after receipt of notice of the acceptance of Bid, the Owner may proceed to enforce the provisions of the Bid Bond.

7.4. If awarded Bidder refuses to enter into a Contract, the Owner will retain bid security as liquidated damages, but not as a penalty.

8. RECEIPT AND OPENING OF BIDS

8.1. The Owner may consider a minor irregularity of any Bid not prepared and submitted in accordance with the provisions hereof and may waive any minor irregularities or reject any and all Bids. Any Bid may be withdrawn prior to the above scheduled time for the opening of Bids or authorized postponement thereof. Any Bid received after the time and date specified shall not be opened.

8.2. If a Bidder, after the Bid opening determines that its Bid contained an appreciable error, the Bidder may withdraw its Bid, subject to the provisions of, and, if the mistake meets the criteria in, O.C.G.A. Section 36-91-52.

8.3. Withdrawal of Bid: A Bidder may withdraw its Bid before the expiration of the time during which Bids may be submitted without prejudice to the Bidder, by submitting a written request of withdrawal to the Purchasing Administrator.

8.4. Rejection of Bids: The Unified Government of Athens-Clarke County reserves the right to accept or reject any and all Bids and reserves the right to waive any irregularities or informalities or technical defects and to accept or reject any Bid, if in the judgment of the Unified Government of Athens-Clarke County its best interest will be served.

8.5. Award may be refused to any Bidder who, in the opinion of the Unified Government of Athens-Clarke County, is not a responsible Bidder, is in default of any Bid, proposal, purchase order, or contract with the Unified Government of Athens-Clarke County prior to the date of Bid under consideration, or whose performance under any prior proposal or contract was determined by the Unified Government of Athens-Clarke County to be unsatisfactory. The Bidder's performance on behalf of other entities (public or private) may be considered.

8.6. Bid submittals received after said time or at any place other than the time and place as stated in the notice may not be considered.

9. SUBCONTRACTS

9.1. Names of principal subcontractors must be listed using the Subcontractor Listing Form and attached to the Bid. There shall be only one subcontractor named for each classification listed or specific trade.

9.2. The Bidder is specifically advised that any person, firm, or other party to whom it is proposed to award a subcontract under this Contract must be acceptable to the Owner.

9.3. The Contractor shall not subcontract more than 50 percent of the total cost of the Project.

10. CONDITIONS OF THE PROJECT

10.1. Each Bidder must be informed fully of the conditions relating to the construction of the Project and the employment of labor thereon. Failure to do so will not relieve a successful Bidder of the obligation to furnish all material and labor necessary to carry out the provisions of the Contract. Insofar as possible, the Contractor, in carrying out the work, must employ such methods or means as will not cause any interruption of or interference with the work of any other Contractor.

10.2. The Bidder is advised to examine the location of the Project and to be informed fully as to its conditions; the conformation of the ground; the character, quality, and quantity of the products needed before and during the prosecution of the work; the general and local conditions; and all other matters which can in any way affect the work to be done under the Contract. Failure to examine the site will not relieve the successful Bidder of an obligation to furnish all products and labor necessary to carry out the provisions of the Contract.

10.3. The Bidder shall notify the Owner of the date and time Bidder proposes to examine the location of the Project. The Bidder shall confine examination to the specific areas designated for the proposed construction, including easements and public rights-of-way. If, due to some unforeseen reason, the Owner's proceedings for obtaining the proposed construction site (including easements) have not been completed, the Bidder may enter the site only with the express consent of the property owner. The Bidder is solely responsible for any damages caused by examination of the site.

10.4. The Contractor will not be given extra payments for conditions which can be determined by examining the site and documents.

11. NOTICE OF SPECIAL CONDITIONS

11.1. If any special federal, state, county, or city laws, and municipal ordinances, and the rules and regulations of any authorities having jurisdiction over construction of the Project, enclosed herein referred to, or applicable by law to the Project, conflict with requirements of the Contract Documents, then the most stringent requirement prevails.

12. OBLIGATION OF BIDDER

12.1. By submission of a Bid, the Bidder warrants that Bidder has inspected the site and has read and is thoroughly familiar with the Contract Documents (including all addendums). The failure or omission of any Bidder to examine any form, instrument, or document shall in no way relieve any Bidder from any obligation in respect to the Bid.

12.2. By submission of a Bid, the Bidder warrants that it has notified, prior to the opening of Bids, the Engineer and/or Owner, in writing, of any conflict, error, ambiguity, or discrepancy which the Bidder may discover prior to the opening of Bids, which would affect the cost of the Project on the performance of the constructed work.

13. METHOD OF AWARD

13.1. It is the intent of the Owner to award the Contract to the responsive, responsible Bidder submitting the lowest Base Bid complying with the conditions of the Contract Documents. Add alternates may be accepted as part of the initial Contract or by Change Order at the Bid Price at any time during the Contract duration.

13.2. The Bidder to whom the award is made will be notified. The Owner reserves the right to reject any and all Bids and to waive any minor irregularities in Bids received whenever such rejection or waiver is in the Owner's best interest.

13.3. A responsive Bidder shall be one:

13.3.1. Who submits a Bid in the proper form without qualification or intent other than as called for in the Contract Documents;

13.3.2. Who binds himself or herself on behalf of the Bid to the Owner with the proper Bid Bond completed and attached;

13.3.3. Who properly completes all forms required to be completed and submitted at the time of the Bidding and, if the apparent low bidder, the documents required within 24 hours of bid opening;

13.3.4. Who shall furnish all data required by these Contract Documents

13.4. A responsible Bidder shall be one who can fulfill the following requirements:

13.4.1. Bidder shall maintain a permanent place of business. This requirement applies to the Bidder where the Bidder is a division of a corporation, or where the Bidder is 50 percent or more owned by a person, corporation, or firm.

13.4.2. Bidder shall demonstrate adequate construction experience and sufficient equipment resources to properly perform the work under and in conformance with the Contract Documents. This evaluation will be based upon a list of completed or active projects and a list of construction equipment available to the Bidder to perform the work. The Owner may make such investigations as deemed necessary to determine the ability of the Bidder to perform the work, and the Bidder shall furnish to the Owner all such information and data for this purpose as the Owner may reasonably request. The Owner reserves the right to reject any Bid if the evidence submitted by, or investigation of, such Bidder fails to satisfy the Owner that such Bidder is properly qualified to carry out the obligations of the Contract and to complete the Project contemplated therein.

13.4.3. Bidder shall demonstrate financial resources of sufficient strength to meet the obligations incident to the performance of the work covered by these Contract Documents. The ability to obtain the required Performance and Payment Bonds will not alone demonstrate adequate financial capability.

13.5. Acceptance of the Bidder's documentation and substantiation or Contract Award by the Owner does not relieve the Bidder of liability for non-performance as covered in the Contract Documents and the Bidder will not be exempted from any other legal recourse the Owner may elect to pursue.

13.6. Notwithstanding any delay in the preparation and execution of the formal Contract Agreement, each Bidder shall be prepared, upon written notice of Bid acceptance, to commence work within 10 days following receipt of official written order of the Owner to proceed, or on a date stipulated in such order.

13.7. The accepted Bidder shall assist and cooperate with the Owner in preparing the formal Contract Agreement, and within 10 days following its presentation shall execute same and return it to the Owner.

14. EMPLOYMENT OF LOCAL LABOR

14.1. Preference in employment on the Project shall, insofar as practical, be given to qualified local labor.

15. AMERICANS WITH DISABILITY ACT (ADA)

15.1. A qualified interpreter for the hearing impaired is available upon request at least 10 days in advance of the Bid opening date. Please call (706) 613-3088 for more information for the hearing impaired. This service is in compliance with the Americans with Disabilities Act (ADA).

16. MINORITY BUSINESS ENTERPRISE STATEMENT

16.1. It is the policy of the Unified Government of Athens-Clarke County that no person or business shall be excluded from participation, denied the benefits of, or otherwise be discriminated against in relation to the award and performance of any contract or subcontract on the grounds of race, color, creed, national origin, age, or sex.

17. HOLD HARMLESS AND INDEMNIFICATION

17.1. The Bidder agrees, insofar as it legally may, to indemnify and hold harmless the Unified Government of Athens-Clarke County, its officers, employees, and agents from and against all loss, costs, and expenses, including attorney's fees, claims, suits, and judgments whatsoever in connection with injury to or death of any person or persons or loss of or damage to property resulting from any and all operations performed by Bidder, its officers, employees, and agents under any of the terms of this Contract.

18. INDEPENDENT CONTRACTOR

18.1. The Contractor shall not be an employee of the Unified Government of Athens-Clarke County, but shall be an independent contractor. Nothing in this Contract Agreement shall be construed as authority for the Contractor to make commitments which shall bind the Unified Government of Athens-Clarke County, or to otherwise act on behalf of the Unified Government of Athens-Clarke County, except as the Unified Government of Athens-Clarke County may expressly authorize in writing.

END OF SECTION

**SECTION 00300
BID FORM**

TO: UNIFIED GOVERNMENT OF ATHENS-CLARKE COUNTY, GEORGIA

FROM: _____
(Bidder's Company Name)

FOR: Bid #26049, J.G. Beacham Water Treatment Plant Sludge Lagoon Cleanout

Submitted: _____, 20__

The undersigned Bidder, in compliance with your Invitation to Bid for the construction of this Project, having examined the Contract Documents, the site of the proposed work and being familiar with all of the conditions surrounding the construction of the proposed Project, including the availability of materials and labor, hereby proposes to construct the Project in accordance with the Contract Documents.

The Bidder proposes and agrees, if this Bid is accepted, to contract with the Unified Government of Athens-Clarke County, Georgia, in the form of Contract Agreement specified, to furnish all necessary products, machinery, tools, apparatus, means of transportation, and labor necessary to complete the construction of the Work in full and complete accordance with the reasonably intended requirements of the Contract Documents to the full and entire satisfaction of the Unified Government of Athens-Clarke County, Georgia, with a definite understanding that no money will be allowed for extra work except as set forth in the Contract Documents, for the following prices:

BASE BID FORM						
	QTY	UNIT	DESCRIPTION	SPECIFICATION / DETAIL	UNIT PRICE	TOTAL PRICE
ITEM 1 - MOBILIZATION						
a	1	LS	Mobilization		\$_____/LS	\$
ITEM 2 – EROSION, SEDIMENTATION, AND POLLUTION CONTROL						
a	2	EA	Construction Exits (Co)	Spec 02125	\$_____/EA	\$
b	580	LF	Silt Fence - Belted "C-Pop" (Sd1)	Spec 02125 Detail Sd1-S	\$_____/LF	\$
c	36,300	SF	Grassing - Temporary and Permanent (DS2 & DS3)	Spec 02125 Detail Ds2	\$_____/SF	\$
ITEM 3 – SLUDGE LAGOON CLEANOUT, DEWATERING, HAULING AND DISPOSAL						
a	7,000	DRY TONS	Sludge Cleanout, Dewatering, and Disposal	Spec 46 70 01	\$_____/ DRY TONS	\$

BASE BID FORM						
	QTY	UNIT	DESCRIPTION	SPECIFICATION / DETAIL	UNIT PRICE	TOTAL PRICE
ITEM 4 – CASH ALLOWANCES						
a	1	LS	Materials Sampling and Testing		\$ 10,000/LS	\$
b	1	LS	Engineer-Directed Work		\$ 100,000/LS	\$

BID TOTAL, ITEMS 1 THROUGH 4, INCLUSIVE, THE AMOUNT OF _____
_____ DOLLARS (\$_____).

The Bidder agrees hereby to commence Work under this Contract, with adequate personnel and equipment, on a date to be specified in the written Notice to Proceed from the Engineer, and to fully complete all Work under this Contract within the time limits stated in the Agreement. The Bidder further agrees to pay as liquidated damages for each consecutive calendar day thereafter required to complete all work as provided in the Agreement.

The Bidder declares an understanding that the quantities shown for unit price items are subject to either increase or decrease, and that should the quantities of any of the items of Work be increased, the Bidder proposes to do the additional Work at the unit prices stated herein; should the quantities be decreased, the Bidder also understands that payment will be made on the basis of actual quantities at the unit price bid and will make no claim for additional costs or anticipated profits for any decrease in quantities. The Bidder also understands that actual quantities will be determined upon completion of Work, at which time adjustment will be made to the Contract amount by direct increase or decrease.

In case of discrepancies between the figures shown in the unit prices and the totals, the unit prices shall apply and the totals shall be corrected to agree with the unit prices. In case of discrepancies between written amounts and figures, written amounts shall take precedence over figures and the sum of all Bid extensions (of unit prices) plus lump sum items shall take precedence over the Bid Total.

The Bidder furthermore agrees that, in the case of a failure to execute the Contract Agreement and Bonds within 10 days after receipt of conformed Contract Documents for execution, the attached Bid Bond accompanying this Bid and the monies payable thereon shall be paid into the funds of the Owner as liquidated damages for such failure.

Attached hereto is a Bid Bond for the sum of _____
_____ Dollars (\$_____) according to
the conditions of "Instructions to Bidders" and provisions thereof.

Bidder acknowledges receipt of the Following Addendums:

Addendum No. __, dated: _____	Addendum No. __, dated: _____
Addendum No. __, dated: _____	Addendum No. __, dated: _____
Addendum No. __, dated: _____	Addendum No. __, dated: _____

Bidder: _____

By: _____
(name signed)

(name printed or typed)

Title: _____

Address: _____

Phone: _____

Attest: _____
(name signed)

(name printed or typed)

Title: _____

(SEAL)

Note: Attest for a corporation must be by the corporate secretary. For a partnership, the Attest must be by another partner. For an individual, the Attest must be by a notary.

Note: If the Bidder is a corporation, the Bid shall be signed by an officer of the corporation. If the bid is by a partnership, it shall be signed by a partner. If signed by others, authority for signature shall be attached.

ACC-PUD BID #26049
J.G. BEACHAM WTP SLUDGE LAGOON CLEANOUT

The full names and addresses of persons or parties interested in the foregoing Bid, as principals, are as follows:

Name	Address

END OF SECTION

**SECTION 00410
BID BOND**

GEORGIA, ATHENS-CLARKE COUNTY

KNOW ALL MEN BY THESE PRESENTS, that we, _____, as Principal, and _____, as Surety, are held and firmly bound unto the Unified Government of Athens-Clarke County, Georgia, in the sum of _____ Dollars (\$_____) lawful money of the United States of America, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, personal representatives, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has submitted to the Owner a Bid for construction of Bid #26049 Project Name_____.

NOW THEREFORE, the conditions of this obligation are such that if the Bid be accepted, the Principal shall, within 10 business days after receipt of conformed Contract Documents, execute a Contract in accordance with the Bid upon the terms, conditions, and prices set forth therein, and in the form and manner required by the Contract Documents and execute sufficient and satisfactory separate Performance and Payment Bonds payable to the Owner, each in an amount of 100 percent of the total Contract Price, in form satisfactory to the Owner, then this obligation shall be void; otherwise, it shall be and remain in full force and effect in law; and the Surety shall, upon failure of the Principal to comply with any or all of the foregoing requirements within the time specified above, immediately pay to the aforesaid Owner, upon demand, the amount hereof in good and lawful money of the United States of America, not as a penalty, but as liquidated damages.

This bond is given pursuant to and in accordance with Official Code of Georgia Annotated (O.C.G.A.) §36-91-1 et seq. and all the provisions of the law referring to this character of bond as set forth in said Sections or as may be hereinafter enacted and these are hereby made a part hereof to the same extent as if set out herein in full.

IN WITNESS WHEREOF, the said Principal has hereunder affixed its signature and seal, and said Surety has hereunto caused to be affixed its corporate signature and seal, by its duly authorized officers, on this _____ day of _____, 20____.

ACC-PUD BID #26049
J.G. BEACHAM WTP SLUDGE LAGOON CLEANOUT

Contractor – Principal:

By: _____
(name signed)

(name printed or typed)

Title: _____

Address: _____

Attest: _____

(name signed)

(name printed or typed)

Title: _____

(SEAL)

Note: Attest for a corporation must be by the corporate secretary. For a partnership, attest must be by another partner. For an individual, attest must be by a notary.

Surety:

By: _____
(name signed)

(name printed or typed)

Title: _____

Address: _____

Attest: _____

(name signed)

(name printed or typed)

Title: _____

(SEAL)

Note: Surety companies executing Bond must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the state where the Project is located.

Surety and Insurers must have an A.M. Best Financial Strength Rating of A or higher, with a Financial Size Category of VII or higher.

END OF SECTION

**SECTION 00417
CORPORATE CERTIFICATE**

I, _____, certify that I am the Secretary of the Corporation named as Bidder in the foregoing Bid; that _____, who signed said Bid on behalf of the Contractor, was then _____ of said Corporation; that said Bid was duly signed for and on behalf of said Corporation by authority of its Board of Directors, and is within the scope of its corporate powers; and that said Corporation is organized under the laws of the State of _____.

This _____ day of _____, 20__.

Corporate
Secretary:

(name signed)

(name printed or typed)

(AFFIX CORPORATE SEAL)

END OF SECTION

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SECTION 00418
PARTNERSHIP CERTIFICATE

GEORGIA, ATHENS-CLARKE COUNTY

On this _____ day of _____, 20____, before me personally who executed the above instrument, who, being by me first duly sworn, did depose and say that he or she is a general partner in the firm

of _____

and that said firm consists of himself or herself, and

and that he or she executed the foregoing instrument on behalf of said firm for the uses and purposes stated therein, and that no one except the above named members of the firm have any financial interest whatsoever in said proposed contract.

Partner Signature

Partner Signature

Partner Signature

Partner Signature

Subscribed and sworn to me this ____ day of _____, 20__.

Notary Public: _____
(name signed)

(name printed or typed)

Commission Expires: _____
(Date)

(SEAL)

END OF SECTION

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ACC-PUD BID #26049
J.G. BEACHAM WTP SLUDGE LAGOON CLEANOUT

_____	_____

_____	_____

_____	_____

_____	_____

_____	_____

_____	_____

Use additional sheets if required.

Bidder _____

By: _____

Title: _____

(Provide signature identical to that shown on the Bid Form.)

END OF SECTION

SECTION 00427
GEORGIA SECURITY AND IMMIGRATION COMPLIANCE
ACT AFFIDAVITS

The Unified Government of Athens-Clarke County and Contractor agree that compliance with the requirements of Official Code of Georgia Annotated (O.C.G.A.) § 13-10-91, as amended, are conditions of this Agreement for the physical performance of services.

If employing or contracting with any subcontractor(s) in connection with this Agreement, Contractor further agrees:

- (1) To secure from the subcontractor(s) an affidavit attesting to the subcontractor's compliance with by O.C.G.A. § 13-10-91(b), as amended; such affidavit being in a form similar to and containing the same information as the form attached hereto; and
- (2) To obtain such subcontractor affidavit(s) when the subcontractor(s) is retained. Contractor shall have such forms available for inspection and submit to the Owner, if so requested by the Owner.

The failure of Contractor to supply the affidavit of compliance at the time of the Bid will be cause for the Bid being deemed non-responsive. Failure of Contractor to continue to satisfy the obligations of O.C.G.A. § 13-10-91, as amended, throughout the entire contract period shall constitute a material breach of the contract. Upon notice of such breach, Contractor shall be entitled to cure the breach within 10 days, upon providing satisfactory evidence of compliance with the terms of this Agreement and State law. Should the breach not be cured, the Unified Government of Athens-Clarke County shall be entitled to all available remedies, including termination of the contract and damages.

SEE AFFIDAVITS ON FOLLOWING PAGES

**CONTRACTOR AFFIDAVIT & AGREEMENT UNDER O.C.G.A. § 13-10-91(b)(1)
(effective July 1, 2013)**

By executing this affidavit, the undersigned Contractor verifies its compliance with O.C.G.A. § 13-10-91, as amended, stating affirmatively that the individual, firm or corporation which is engaged in the physical performance of services on behalf of The Unified Government of Athens-Clarke County, Georgia, has registered with, is authorized to use, and uses the federal work authorization program commonly known as E-Verify, or any subsequent replacement program, in accordance with the provisions and deadlines established in O.C.G.A. § 13-10-91, as amended.

Furthermore, the undersigned will continue to use the federal work authorization program throughout the contract period and the undersigned Contractor will contract for the physical performance of services in satisfaction of such contract only with subcontractors who present an affidavit to the contractor with the information required by O.C.G.A. § 13-10-91(b). Contractor hereby attests that its federal work authorization user identification number and date of authorization are as follows:

Federal Work Authorization User Identification Number

Date of Authorization

Name of Contractor: _____

Name of Project: _____

Name of Public Employer: The Unified Government of Athens-Clarke County Georgia

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

Executed on ____, ____, 20__ in _____.

Signature of Authorized Officer or Agent

Printed Name and Title of Authorized Officer or Agent

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

Notary Public
My Commission Expires:

SECTION 00480
NON-COLLUSION AFFIDAVIT OF PRIME BIDDER

STATE OF _____

COUNTY OF _____

_____, being first duly sworn, deposes and says that:

(1) He or she is _____
(Owner, Partner, Officer, Representative or Agent)

of _____, the Bidder that has submitted the attached Bid;

(2) He or she is fully informed respecting the preparation and contents of the attached Bid and of all pertinent circumstances respecting such Bid;

(3) Such Bid is genuine and is not a collusive or sham Bid;

(4) Neither the said Bidder nor any of its officers, partners, owners, agents, representatives, employees, or parties in interest, including this Affiant, has in any way colluded, conspired, connived or agreed, directly or indirectly, with any other Bidder, firm, or person to submit a collusive or sham Bid in connection with the Contract for which the attached Bid has been submitted or to refrain from bidding in connection with such Contract, or has in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other Bidder, firm, or person to fix the price or prices in the attached Bid or of any other Bidder, or to fix any overhead, profit, or cost element of the Bid price or the Bid price of any other Bidder, or to secure through any collusion, conspiracy, connivance, or unlawful agreement any advantage against the Unified Government of Athens-Clarke County, Georgia, or any person interested in the proposed Contract; and

(5) The price or prices quoted in the attached Bid are fair and proper and are not tainted by any collusion, conspiracy, connivance, or unlawful agreement on the part of the Bidder or any of its agents, representatives, owners, employees, or parties in interest, including this Affiant.

Bidder: _____

By: _____
(name signed)

(name printed or typed)

Title: _____

Date: _____

Subscribed and sworn to me this ____ day of _____, 20____

Notary Public: _____
(name signed)

(name printed or typed)

Commission Expires: _____

(AFFIX CORPORATE SEAL)

END OF SECTION

SECTION 00481
NON-COLLUSION AFFIDAVIT OF SUBCONTRACTOR

STATE OF _____ COUNTY OF _____

_____, being first duly sworn, deposes and says that:

(1) He or she is the _____
(Owner, Partner, Officer, Representative or Agent)

of _____, hereinafter referred to as the "Subcontractor,"

(2) He or she is fully informed respecting the preparation and contents of the Subcontractor's Proposal submitted by the Subcontractor to _____ the Bidder, for certain work in connection with the construction of Bid #26049, J.G. Beacham Water Treatment Plant Sludge Lagoon Cleanout;

(3) Such Subcontractor's bid is genuine and is not a collusive or sham bid;

(4) Neither the Subcontractor nor any of its officers, partners, owners, agents, representatives, employees, or parties in interest, including the affiant, has in any way colluded, conspired, connived, or agreed, directly or indirectly with any other Bidder, firm, or person to submit a collusive or sham Proposal in connection with such Contract or has in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other Bidder, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against the Unified Government of Athens-Clarke County or any person interested in the proposed Contract; and

(5) The price or prices quoted in the attached Bid are fair and proper and are not tainted by any collusion, conspiracy, connivance, or unlawful agreement on the part of the Bidder or any of its agents, representatives, owners, employees, or parties in the interest, including this Affiant.

Subcontractor: _____

By: _____
(name signed)

(name printed or typed)

Title: _____

Date: _____

Subscribed and sworn to me this ___ day of _____, 20____

Notary Public: _____
(name signed)

(name printed or typed)

Commission Expires: _____

(AFFIX CORPORATE SEAL)

END OF SECTION

**SECTION 00500
AGREEMENT**

**AGREEMENT BETWEEN OWNER AND CONTRACTOR
FOR CONSTRUCTION CONTRACT**

This Agreement is by and between **Unified Government of Athens-Clarke County, Georgia**, a body corporate and politic and a political subdivision of the State of Georgia (hereinafter called the Owner) and _____ (hereinafter called the Contractor). Owner and Contractor, in consideration of the mutual covenants set forth herein, agree as follows:

1. ARTICLE 1 - WORK

1.1. Contractor will furnish all products, tools, construction equipment, skill, and labor of every description necessary to carry out and to complete in a good, firm, substantial workmanlike manner construction of the Bid #26049, J.G. Beacham Water Treatment Plant Sludge Lagoon Cleanout, and will complete work in strict conformity with the Contract Documents.

2. ARTICLE 2 - THE PROJECT

2.1. Bid #26049, J.G. Beacham Water Treatment Plant Sludge Lagoon Cleanout, (hereinafter called the Project).

3. ARTICLE 3 – ENGINEER AND DESIGN PROFESSIONAL

3.1. Jacobs Engineering Group, Inc. (hereinafter called the Engineer), which is to act as Owner's representative, assumes all duties and responsibilities, and has the rights and authority assigned to Engineer in the Contract Documents in connection with the completion of the Work in accordance with the Contract Documents.

3.2. The Project has been designed by Jacobs (hereinafter called the Designer and/or Architect), which assumes all duties and responsibilities, when directed by the Engineer, and have the rights and authority assigned to the Designer in the Contract Documents in connection with the completion of the Work in accordance with the Contract Documents.

4. ARTICLE 4 - CONTRACT TIMES

4.1. Time of the Essence

4.1.1. All Contract Times and/or time limits as defined by the General Conditions or as may be stated elsewhere in the Contract Documents are of the essence and are an essential element of this Contract.

4.2. Days to Achieve Substantial Completion and Final Payment

4.2.1. The Work shall be Substantially Complete within 180 consecutive calendar days after the date when the Contract Times commence to run as provided in paragraph 2.03 of the General Conditions.

4.2.2. The Work shall be completed and ready for final payment, Final Completion, in accordance with paragraph 14.07 of the General Conditions within 220 consecutive calendar days after the date when the Contract Times commence to run.

4.3. Liquidated Damages

4.3.1. Contractor and Owner recognize that time is of the essence and is an essential element of this Agreement and that Owner will suffer financial loss if the Work is not completed within the times specified in paragraph 4.2 above, plus any extensions thereof allowed in accordance with Article 12 of the General Conditions. The parties also recognize the delays, expense, and difficulties involved in proving in a legal proceeding the actual loss suffered by Owner if the Work is not completed on time.

4.3.2. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty), Contractor shall pay Owner \$500.00 for each day after the time specified in paragraph 4.2 above for Substantial Completion until the Work is Substantially Complete.

4.3.3. After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Times or any proper extension thereof granted by Owner, Contractor shall pay Owner \$500.00 for each day that expires after the time specified in paragraph 4.2 above for completion and readiness for final payment until the Work is completed and ready for final payment.

4.3.4. If the Contractor abandons the Contract before commencement of the Work or defaults in completion of all the Work after commencement thereof, the Contractor shall be liable for all such liquidated damages. These fixed liquidated damages, as stated above, are not established as a penalty but are calculated and agreed upon in advance by the Owner and the Contractor due to the uncertainty and impossibility of making a determination as to the actual and consequential damages incurred by the Owner and the general public of Athens-Clarke County, Georgia, as a result of the failure on the part of the Contractor to complete the Work on time. Such liquidated damages referred to herein are intended to be and are cumulative and shall be in addition to every other remedy now or hereafter enforceable at law, in equity, by statute, or under the Contract.

5. ARTICLE 5 - CONTRACT PRICE

5.1. The Owner hereby agrees to pay to the Contractor for the faithful performance of this Contract Agreement, subject to additions and deductions as provided in the Specifications and Bid, in lawful money of the United States of America, the sum of _____ dollars and _____ cents (\$_____) which sum shall also pay for loss or damage arising out of the nature of the Work aforesaid, or from the action of the elements, or from unforeseen obstructions or difficulties encountered in the prosecution of the Work, and for all expenses incurred by, or in consequence of the Work, its suspension or discontinuance and for well and faithfully completing the Work and the whole thereof, as herein provided, and for replacing defective work or products for a period of 1 year after Final Completion, in accordance with paragraph 14.07 of the General Conditions.

6. ARTICLE 6 - PAYMENT PROCEDURES

6.1. Submittal and Processing of Payments

6.1.1. Contractor shall submit Applications for Payment in accordance with Article 14 of the General Conditions. Applications for Payment will be processed by Engineer as provided in the General Conditions.

6.2. Progress Payments; Retainage

6.2.1. Owner shall make progress payments, no more than once monthly, based upon the Contract Price and the Contractor's Applications for Payment, as recommended by Engineer, during performance of the Work as provided below. All such payments will be measured by the Schedule of Values established as provided in paragraph 2.07.A of the General Conditions.

6.2.2. If the Contractor has made application for payment as provided above, the Engineer will issue a Certificate for Payment to the Owner, with a copy to the Contractor, for such amount as the Engineer determines to be properly due, or the Engineer will state, in writing, itemized and specific reasons for withholding a Certificate as provided herein.

6.2.3. After the Engineer has issued a Certificate for Payment, the Owner will pay to the Contractor the amount covering work completed plus stored products, less retention, less such amounts as Engineer may determine or Owner may withhold as set-offs, including but not limited to liquidated damages, and less aggregate of previous payments made.

6.2.4. Retention: The Owner will retain the following amounts from each properly certified Application for Payment:

6.2.4.1. Until the value of the Work completed, including stored materials, is at least 50 percent of the total Contract Price, the Owner will retain 10 percent of the value of all work satisfactorily completed, including stored materials.

6.2.4.2. When the value of the completed work totals at least 50 percent of the Contract Price, the Owner will discontinue retaining additional amounts provided the Work is progressing satisfactorily and there is no specific cause for retaining a larger sum.

6.2.4.3. The Owner may elect to reinstate retention of 10 percent of the value of the Work completed if at any time the Contractor fails to make satisfactory progress, any Contract Times are not met, or if there is other specific cause. Satisfactory progress is identified as conforming to the construction Progress Schedule as required by the Contract Documents.

6.2.4.4. No form of collateral in lieu of cash will be acceptable as retainage.

6.2.4.5. Amounts retained by the Contractor from payments due to suppliers and subcontractors (expressed as a percentage) shall not exceed that being retained by the Owner.

6.2.5. All prior certificates or estimates upon which payments have been made are approximate only, and subject to correction by subsequent estimates and/or in the final payment.

6.2.6. In the event of a conflict, Official Code of Georgia Annotated (O.C.G.A.) Sections 13-10-80 through 13-10-83 shall supersede and control any provisions to the contrary in this Article 6.

6.3. Final Payment

6.3.1. Will be made in accordance with paragraph 14.07 of the General Conditions and upon final completion and acceptance of the Work as recommended by Engineer.

7. ARTICLE 7 - INTEREST

7.1. All moneys not paid when due as provided in Article 14 of the General Conditions shall bear interest in accordance with the requirements of paragraph 14.02 of the General Conditions.

8. ARTICLE 8 – CONTRACTOR’S REPRESENTATIONS

8.1. In order to induce Owner to enter into this Agreement, Contractor makes the following representations:

8.1.1. Contractor has examined and carefully studied the Contract Documents and the other related data identified in the Bidding Documents.

8.1.2. Contractor has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

8.1.3. Contractor is familiar with and is satisfied as to all federal, state, and local Laws and Regulations that may affect cost, progress, and performance of the Work. Contractor is familiar with state and/or local watering uses and restrictions, if any, that are in place at the time Bid is made.

8.1.4. Contractor has carefully studied all Technical Data: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all Drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) which have been identified in the Supplementary Conditions as provided in paragraph 4.02 of the General Conditions and (2) reports and drawings of a Hazardous Environmental Condition, if any, at the Site which has been identified in the Supplementary Conditions as provided in paragraph 4.06 of the General Conditions.

8.1.5. Contractor has obtained and carefully studied (or assumes responsibility for doing so) all additional or supplementary examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the Site that may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, including any specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents, and safety precautions and programs incident thereto.

8.1.6. Contractor does not consider that any further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract Documents.

8.1.7. Contractor is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.

8.1.8. Contractor has correlated the information known to Contractor, information and observations obtained from visits to the Site, reports and drawings identified in the Contract Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Contract Documents.

8.2. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.

8.3. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

9. ARTICLE 9 - CONTRACT DOCUMENTS

9.1. Contents

9.1.1. The Contract Documents consist of the following:

9.1.1.1. Invitation to Bid

9.1.1.2. Specifications as listed in the table of contents of the Project Manual, including:

- Section 00300 Contractor's Bid Form
- Section 00500 Agreement
- Sections 00610 and 00620 Bonds

9.1.1.3. Appendices as listed in the table of contents of the Project Manual.

9.1.1.4. Drawings as listed in the table of contents of the Project Manual.

9.1.1.5. _____ Addendums issued and as acknowledged in the Bidding Documents and conformed in the Project Specifications and Drawings.

9.1.2. The following which may be delivered or issued on or after the Effective Date of the Agreement and are not attached hereto:

9.1.2.1. Notice to Proceed.

9.1.2.2. Work Change Directives.

9.1.2.3. Change Order(s).

9.1.2.4. Engineer's written interpretations and clarifications issued in accordance with the General Conditions on or after the date of the Contract Agreement.

9.1.3. The documents listed in paragraph 9.1.1 are attached to this Agreement (except as expressly noted otherwise above).

9.1.4. There are no Contract Documents other than those listed above in this Article 9.

9.1.5. The Contract Documents may only be amended, modified, or supplemented as provided in paragraph 3.04 of the General Conditions.

10. ARTICLE 10 - MISCELLANEOUS

10.1. Terms

10.1.1. Terms used in this Agreement will have the meanings stated in the General Conditions.

10.2. Assignment of Contract

10.2.1. No assignment by a party hereto of any rights under or interests in the Contract will be binding on another party hereto without the written consent of the party sought to be bound; and, specifically but without limitation, moneys that may become due and moneys that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

10.3. Successors and Assigns

10.3.1. Owner and Contractor each bind themselves, their partners, successors, assigns, and legal representatives to the other party hereto, their partners, successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

10.4. Severability

10.4.1. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon Owner and Contractor, who agree that the Contract Documents shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

ACC-PUD BID #26049
J.G. BEACHAM WTP SLUDGE LAGOON CLEANOUT

IN WITNESS WHEREOF, Owner and Contractor have executed this Contract Agreement under their respective seals on the day and date first above written in six counterparts each of which shall, without proof or accounting for the other counterparts, be deemed an original Contract.

This Agreement will be effective on _____, 20__ (which is the Effective Date of the Agreement).

APPROVED AS TO FORM BEFORE EXECUTION

By: _____
Athens-Clarke County Attorney's Office

Owner: UNIFIED GOVERNMENT OF ATHENS-CLARKE COUNTY, GEORGIA

By: _____
(name signed)

KELLY GIRTZ

Title: MAYOR

Address: 301 COLLEGE AVENUE
ATHENS, GEORGIA

Attest: _____
(name signed)

CHRISTINE M. HOWARD

Title: CLERK OF COMMISSION
(SEAL)

Contractor: _____

By: _____
(name signed)

(name printed or typed)

Title: _____

Address: _____

Attest: _____
(name signed)

(name printed or typed)

Title: _____
(SEAL)

Note: If the Contractor is a corporation, the Contract Agreement shall be signed by the president or vice president, attested by the secretary, and the corporate seal affixed. If the Contractor is a partnership, the Contract Agreement shall be signed in the partnership name by one of the partners, with indication that he or she is a general partner.

END OF SECTION

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**SECTION 00550
PRE-AWARD OATH**

STATE OF GEORGIA

COUNTY OF CLARKE

In accordance with Official Code of Georgia Annotated (O.C.G.A.) §36-91-21(e), we, the undersigned of _____
being first duly sworn, depose and say that:

We have not directly or indirectly violated O.C.G.A. §36-91-21 (d), and more specifically, we have not

Prevented or attempted to prevent competition in such bidding or proposals by any means whatever,

Prevented or endeavored to prevent anyone from making a bid or proposal thereof by any means whatever, nor

Caused or induced another to withdraw a bid or proposal for the work.

We, the undersigned, to the best of our knowledge, affirm that no other officers, agents, or other persons acted for or represented the Contractor in the bidding for and procurement of this Contract.

Signature	Printed Name	Title	Date
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Subscribed and sworn before me on this ____ day of _____, 20__

_____ My Commission Expires:_____

Notary Public

(SEAL)

END OF SECTION

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SECTION 00610
PERFORMANCE BOND

GEORGIA, ATHENS-CLARKE COUNTY

BOND NO. _____

KNOW ALL MEN BY THESE PRESENTS, that we, _____,
as Principal (hereinafter known as Contractor), and we, _____, as Surety,
do hereby acknowledge ourselves indebted and firmly bound and held unto the Unified
Government of Athens-Clarke County, Georgia, for use and benefit of those entitled thereto, in
the sum of _____
_____ Dollars (\$_____) for the payment of which will and
truly to be made, in lawful money of the United States of America, we do hereby bind ourselves,
successors, assigns, heirs, and personal representatives.

BUT THE CONDITION OF THE FOREGOING OBLIGATION OR BOND IS THIS:

WHEREAS, the Owner has engaged the said Contractor for the sum of _____
_____ Dollars (\$_____) for construction of
Bid #26049, J.G. Beacham Water Treatment Plant Sludge Lagoon Cleanout, as more fully
appears in a written Contract Agreement bearing the date of _____, 20____, a copy of which
Contract Agreement is by reference hereby made a part hereof.

NOW, THEREFORE, if said Contractor shall fully and faithfully perform all the undertakings
and obligations under the said Contract Agreement hereinbefore referred to and shall fully
indemnify and save harmless the said Owner from all costs and damage whatsoever which it may
suffer by reason of any failure on the part of said Contractor to do so, and shall fully reimburse
and repay the said Owner any and all outlay and expense which it may incur in making good any
such default, and shall correct all defects in products and workmanship appearing within 1 year
of the completion of all work, then this obligation shall be null and void, otherwise, it shall remain
in full force and effect.

And for value received it is hereby stipulated and agreed that no change, extension of time,
alteration or addition to the terms of the said Contract Agreement, or in the work to be performed
thereunder, or the Specifications accompanying the same shall in any way affect the obligations
under this Contract Agreement or Bond, and notice is hereby waived of any such damage,
extension of time, alteration or addition to the terms of the Contract Agreement or to the work or
to the Contract Documents.

This bond is given pursuant to and in accordance with the provisions of Official Code of Georgia
Annotated (O.C.G.A.) Section 36-91-1 *et seq.* and all the provisions of the law referring to this
character of Bond as set forth in said Sections or as may be hereinafter enacted, and these are
hereby made a part hereof to the same extent as if set out herein in full.

IN WITNESS WHEREOF, the said Contractor has hereunder affixed its signature and seal, and said Surety has hereunto caused to be affixed its corporate signature and seal, by its duly authorized officers, on this ____ day of _____, 20____, executed in four counterparts.

Contractor – Principal:

By:

(name signed)

(name printed or typed)

Title:

Address:

Attest:

(name signed)

(name printed or typed)

Title:

(SEAL)

Surety:

By:

(name signed)

(name printed or typed)

Title:

Address:

Attest:

(name signed)

(name printed or typed)

Title:

(SEAL)

Note: Surety companies executing Bonds must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the state where the Project is located.

Surety and Insurers must have an A.M. Best Financial Strength Rating of A or higher, with a Financial Size Category of VII or higher.

END OF SECTION

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**SECTION 00620
PAYMENT BOND**

GEORGIA, ATHENS-CLARKE COUNTY

BOND NO. _____

KNOW ALL MEN BY THESE PRESENTS, that we, _____, as Principal (hereinafter known as Contractor), and we, _____ as Surety, are held and firmly bound unto the Unified Government of Athens-Clarke County, Georgia, (hereinafter called the Owner), in the penal sum of _____

Dollars (\$_____) lawful money of the United States of America, for the payment of which sum will and truly to be made, we bind ourselves, our heirs, personal representatives, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS, said Contractor has entered into a certain Contract Agreement with said Owner, dated _____, 20__, for construction of Bid #26049, J.G. Beacham Water Treatment Plant Sludge Lagoon Cleanout, (hereinafter called the Contract), which Contract Agreement and the Contract Documents for said work shall be deemed a part hereof as fully as if set out herein.

NOW, THEREFORE, the condition of this obligation is such, that if said Contractor and all subcontractors to whom any portion of the Work provided for in said Contract Agreement is sublet and all assignees of said Contractor and of such subcontractors shall promptly make payments to all persons supplying them with labor, products, services, or supplies for or in the prosecution of the work provided for in such Contract Agreement, or in any amendment or extension of or addition to said Contract Agreement, and for the payment of reasonable attorney's fees, incurred by the claimant in suits on this Bond, then the above obligation shall be void; otherwise, it shall remain in full force and effect.

HOWEVER, this Bond is subject to the following conditions and limitations:

- (a) Any person, firm, or corporation that has furnished labor, products, or supplies for or in the prosecution of the work provided for in said Contract Agreement shall have a direct right of action against the Contractor and Surety on this Bond, which right of action shall be asserted in a proceeding, instituted in the county in which the work provided for in said Contract Agreement is to be performed or in any county in which Contractor or Surety does business. Such right of action shall be asserted in proceedings instituted in the name of the claimant or claimants for its use and benefit against said Contractor and Surety or either party (but not later than 1 year after the final settlement of said Contract Agreement) in which action such claim or claims shall be adjudicated and judgement rendered thereon.
- (b) The Principal and Surety hereby designate and appoint the _____, as the agent of each party to receive and accept service of process or other pleading issued or filed in any proceeding instituted on this Bond and hereby consent that such service shall be the same as personal service on the Contractor and/or Surety.

- (c) In no event shall the Surety be liable for a greater sum than the penalty of this Bond, or subject to any suit, action, or proceeding thereon that is instituted later than 1 year after the final settlement of said Contract Agreement.
- (d) This Bond is given pursuant to and in accordance with provisions of Official Code of Georgia Annotated (O.C.G.A.) Section 36-91-1 *et seq.* hereinafter, and all the provisions of law referring to this character of Bond as set forth in said Sections or as may be hereinafter enacted, and these are hereby made a part hereof to the same extent as if set out herein in full.

IN WITNESS WHEREOF, the said Contractor has hereunder affixed its signature and seal, and said Surety has hereunto caused to be affixed its corporate signature and seal, by its duly authorized officers, on this ____ day of _____, 20__, executed in four counterparts.

Contractor – Principal:

By: _____

(name signed)

(name printed or typed)

Title: _____

Address: _____

Attest: _____

(name signed)

(name printed or typed)

Title: _____

(SEAL)

Surety:

By: _____

(name signed)

(name printed or typed)

Title: _____

Address: _____

Attest: _____

(name signed)

(name printed or typed)

Title: _____

(SEAL)

Note: Surety companies executing Bonds must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the state where the Project is located.

Surety and Insurers must have an A.M. Best Financial Strength Rating of A or higher, with a Financial Size Category of VII or higher.

END OF SECTION

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**SECTION 00700
GENERAL CONDITIONS**

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ARTICLE 1 DEFINITIONS AND TERMINOLOGY

1.01 Defined Terms

- A. Wherever used in the Bidding Requirements or Contract Documents and printed with initial capital letters, the terms listed below will have the meanings indicated, which are applicable to both the singular and plural thereof. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.
1. *Addenda*: Written or graphic instruments issued prior to the opening of Bids that clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.
 2. *Agreement*: The written instrument which is evidence of the agreement between Owner and Contractor covering the Work.
 3. *Application for Payment*: The form acceptable to Engineer that is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.
 4. *Asbestos*: Any material that contains more than 1 percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration (OSHA).
 5. *Bid*: The offer or proposal of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
 6. *Bidder*: The individual or entity who submits a Bid directly to Owner.
 7. *Bidding Documents*: The Bidding Requirements and the proposed Contract Documents (including all Addenda).
 8. *Bidding Requirements*: The Advertisement or Invitation to Bid, Instructions to Bidders, bid security of acceptable form, if any, and the Bid Form with any supplements.
 9. *Change Order*: A document recommended by Engineer which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the Agreement.
 10. *Claim*: A demand or assertion by Owner or Contractor seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.
 11. *Contract*: The entire and integrated written agreement between the Owner and Contractor concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.
 12. *Contract Documents*: Those items so designated in the Agreement. Only printed or hard copies of the items listed in the Agreement are Contract Documents. Approved Shop Drawings, other Contractor's submittals, and the

- reports and drawings of subsurface and physical conditions are not Contract Documents.
13. *Contract Price*: The moneys payable by Owner to Contractor for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of paragraph 11.03 in the case of Unit Price Work).
 14. *Contract Times*: The number of days or the dates stated in the Agreement to: (i) achieve Milestones, if any, (ii) achieve Substantial Completion; and (iii) complete the Work so that it is ready for final payment as evidenced by Engineer's written recommendation of final payment.
 15. *Contractor*: The individual or entity with whom Owner has entered into the Agreement.
 16. *Cost of the Work*: See paragraph 11.01A for definition.
 17. *Designer*: shall be an individual or entity named as such in the Agreement.
 18. *Drawings*: That part of the Contract Documents prepared or approved by Engineer that graphically shows the scope, extent, and character of the Work to be performed by Contractor. Shop Drawings and other Contractor submittals are not Drawings as so defined.
 19. *Effective Date of the Agreement*: The date indicated in the Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.
 20. *Engineer*: The individual or entity named as such in the Agreement.
 21. *Field Order*: A written order issued by Engineer that requires minor changes in the Work but which does not involve a change in the Contract Price or the Contract Times.
 22. *Final Completion*: The time at which the Work has progressed to a point where, in the opinion of the Engineer, the Contractor has satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance certificates of inspection, marked-up record documents, and other documents as specified in the Contract Documents.
 23. *General Requirements*: Sections of Division 01 of the Specifications. The General Requirements pertain to all sections of the Specifications.
 24. *Hazardous Environmental Condition*: The presence at the Site of Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto in connection with the Work.
 25. *Hazardous Waste*: The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.
 26. *Laws and Regulations; Laws or Regulations*: Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

27. *Liens*: Charges, security interests, or encumbrances upon Project funds, real property, or personal property.
28. *Liquidated Damages*: amounts shall be as stipulated in the Agreement and/or Section 01011, Unique Requirements. Liquidated damages shall apply to the Contract Times for the Project. Liquidated Damages shall be both additive and cumulative. Liquidated Damages shall end upon Substantial Completion, Completion of the Work associated with each Milestone Date, and upon final completion of the Work.
29. *Milestone*: A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.
30. *Notice of Award*: The written notice by Owner to the Successful Bidder stating that upon timely compliance by the Successful Bidder with the conditions precedent listed therein, Owner will sign and deliver the Agreement.
31. *Notice to Proceed*: A written notice given by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work under the Contract Documents.
32. *Owner*: The individual or entity with whom Contractor has entered into the Agreement and for whom the Work is to be performed.
33. *PCBs*: Polychlorinated biphenyls.
34. *Petroleum*: Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.
35. *Progress Schedule*: A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor's plan to accomplish the Work within the Contract Times.
36. *Project*: The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part.
37. *Project Manual*: The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.
38. *Radioactive Material*: Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.
39. *Related Entity*: An officer, director, partner, employee, agent, consultant, or subcontractor.
40. *Resident Project Representative*: The authorized representative of Engineer who may be assigned to the Site or any part thereof.
41. *Samples*: Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.

- 42. *Schedule of Submittals*: A schedule, prepared and maintained by Contractor, of required submittals and the time requirements to support scheduled performance of related construction activities.
- 43. *Schedule of Values*: A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.
- 44. *Shop Drawings*: All drawings, diagrams, illustrations, schedules, specified design-related submittals, and other data or information that are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work.
- 45. *Site*: Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements for access thereto, and such other lands furnished by Owner which are designated for the use of Contractor.
- 46. *Specifications*: That part of the Contract Documents consisting of written requirements for materials, equipment, systems, standards and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable thereto.
- 47. *Subcontractor*: An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work at the Site.
- 48. *Substantial Completion*: The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, to provide the following:
 - a. The Owner full time, uninterrupted, continuous operation of the Work; and
 - b. All required functional, performance, and operational or startup testing has been successfully demonstrated for all components, devices, equipment, and systems to the satisfaction of the Engineer in accordance with the requirements of the Specifications; and
 - c. All required inspections and other work necessary for the Engineer to certify "substantially complete" have been completed.The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion thereof.
- 49. *Submittals*: All administrative documents, Shop Drawings, Samples, product data, manufacturer's literature, quality control documents, design related documents, record documents, contract close-out documents, and/or any other specified document prepared or assembled by or for Contractor and submitted by Contractor to the Owner and/or Engineer.
- 50. *Successful Bidder*: The Bidder submitting a responsive Bid to whom Owner makes an award.
- 51. *Supplementary Conditions*: That part of the Contract Documents which amends or supplements these General Conditions.

- 52. *Supplier*: A manufacturer, fabricator, supplier, distributor, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or any Subcontractor.
- 53. *Underground Facilities*: All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, stormwater, other liquids or chemicals, or traffic or other control systems.
- 54. *Unit Price Work*: Work to be paid for on the basis of unit prices.
- 55. *Work*: The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.
- 56. *Work Change Directive*: A written statement to Contractor issued on or after the Effective Date of the Agreement and signed by Owner and recommended by Engineer ordering an addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the change ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.

1.02 Terminology

- A. The following words or terms are not defined but, when used in the Bidding Requirements or Contract Documents, have the following meaning.
- B. Intent of Certain Terms or Adjectives:
 - 1. The Contract Documents include the terms “as allowed,” “as approved,” “as ordered,” “as directed” or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action or determination will be solely to evaluate, in general, the Work for compliance with the requirements of and information in the Contract Documents and conformance with the design concept of the completed Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such

term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of paragraph 9.09 or any other provision of the Contract Documents.

C. Day:

1. The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.

D. Defective:

1. The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:
 - a. Does not conform to the Contract Documents, or
 - b. Does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents, or
 - c. Has been damaged prior to Engineer’s recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with paragraph 14.04 or 14.05).

E. Furnish, Install, Perform, Provide:

1. The word “furnish,” when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.
2. The word “install,” when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.
3. The words “perform” or “provide,” when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.
4. When “furnish,” “install,” “perform,” or “provide” is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of Contractor, “provide” is implied.

F. Unless stated otherwise in the Contract Documents, words or phrases which have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2 PRELIMINARY MATTERS

2.01 Delivery of Bonds and Evidence of Insurance

- A. When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner such bonds as Contractor may be required to furnish.
 - 1. Agreement and bonds shall not be dated when delivered to the Owner for signature. Owner will date both the bonds and Agreement with the same date when the Agreement is executed.
 - 2. Certified copies of Power of Attorney for the bonds must be dated prior to submittal to the Owner with a date which is within the previous 15 days.
 - 3. Certified copies of Power of Attorney and bonds must each have original corporate seal of surety. Each counterpart bond shall have its own individual certified Power of Attorney.
 - 4. Signature of attorney-in-fact for Surety Company on bonds must be one of persons authorized to sign on certified copies of Power of Attorney.
 - 5. If Contractor is a corporation, Agreement and bonds must have original corporate seal of Contractor affixed, must show title of person signing on behalf of Contractor, and must be attested by Corporate Secretary or Assistant Corporate Secretary.
- B. Evidence of Insurance: Before any Work at the Site is started, Contractor shall deliver to the Owner, with copies to each additional insured, certificates of insurance (and other evidence of insurance which Owner or any additional insured may reasonably request) which Contractor is required to purchase and maintain in accordance with ARTICLE 5.

2.02 Copies of Documents

- A. Owner will furnish to Contractor up to four printed or hard copies of the Contract Documents. Additional copies will be furnished, upon request, at the Owner's cost of reproduction.
- B. Owner may also, if requested by Contractor, furnish Contractor with one electronic copy of the Drawings and other Contract Documents. Contractor agrees it will only use the same for performing the Work and will not disseminate the same except to its subcontractors where necessary to perform the Work. Contractor shall obtain written acceptance of any subcontractor to these limitations before disseminating the same to such subcontractor. Electronic copies of the Contract Documents will be provided as a convenience to Contractor. The Owner and Engineer assume no liability and shall be held harmless for any discrepancies between the hard copy and electronic copy of the Contract Documents.

2.03 Commencement of Contract Times, Notice to Proceed

- A. Contract Times will commence to run on the date established in the Notice to Proceed. A Notice to Proceed may be given at any time within 120 days after the Effective Date of the Agreement.

2.04 Starting the Work

- A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work shall be done at the Site prior to the date on which the Contract Times commence to run, in accordance with the Notice to Proceed.

2.05 Before Starting Construction

- A. Preliminary Schedules: Within 10 days after the Commencement of Contract Time (unless otherwise specified in the General Requirements), Contractor shall submit to Engineer for timely review:
 - 1. A preliminary Progress Schedule; indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract Documents;
 - 2. A preliminary Schedule of Submittals which indicates each required Submittal and the dates for submitting, time for reviewing and processing each Submittal (periodic Submittals may be listed by a common monthly date); and
 - 3. A preliminary schedule of values for all of the work in a format acceptable to the Engineer and in accordance with the requirements specified in the General Requirements.

2.06 Preconstruction Conference

- A. A Preconstruction Conference shall be held at a Time and Place determined by the Engineer.

2.07 Initial Acceptance of Schedules

- A. At least 10 days before submission of the first Application for Payment a conference attended by Contractor, Engineer, and others as appropriate will be held to review for acceptability to Engineer as provided below the schedules submitted in accordance with paragraph 2.05A. Contractor shall have an additional 10 days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to Contractor until acceptable schedules are submitted to Engineer.
 - 1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work nor interfere

- with or relieve Contractor from Contractor's full responsibility therefor. The Progress Schedule may subsequently be adjusted in accordance with paragraph 6.04 and applicable provisions of the General Requirements.
2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals. The Schedule of Submittals may subsequently be adjusted in accordance with paragraph 6.04 and applicable provisions of the General Requirements.
 3. Contractor's Schedule of Values will be acceptable to the Engineer as to form and substance if it is provided in accordance with the requirements specified in the General Requirements.
- B. Before any work at the site is started which is governed by the Construction Industry Licensing Board of Georgia (Official Code of Georgia Annotated [O.C.G.A.] Section 43-14-1 et seq.), or its rules or regulations, Contractor shall inform himself of those rules and regulations, and qualifications for licensure, and if requested shall deliver proof of compliance to the Owner and Engineer.

ARTICLE 3 CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

3.01 Intent

- A. The individual components of the Contract Documents are complementary; what is required by one is as binding as if required by all.
- B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents. Any labor, documentation, services, materials, or equipment that may reasonably be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the intended result will be provided whether or not specifically called for at no additional cost to Owner.
- C. Clarifications and interpretations of the Contract Documents shall be issued by Engineer as provided in paragraph 3.04.
- D. Where the word "similar" occurs on the Plans, it shall have a general meaning and not be interpreted as being identical, and all details shall be worked out in relation to their location and their connection with other parts of the Work.
- E. Each and every clause or other provision required by law to be inserted in these Contract Documents shall be deemed to be inserted herein, and they shall be read and enforced as though it were included herein, and if through mistake or otherwise, any such provision is not inserted, or if not correctly inserted, then upon the application of either party, the Contract Documents shall forthwith be physically amended to make such insertion.

- F. Wherever in the Contract Documents the terms “as ordered,” “as directed,” “as required,” “as allowed,” “as approved” or terms of like effect or import are used, or the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” or “satisfactory” or adjectives of like effect or import are used to describe a requirement, direction, review or judgment of the Engineer as to the Work, it is intended that such requirement, direction, review or judgment will be solely to evaluate, in general, the completed Work for compliance with the requirements of and information in the Contract Documents and conformance with the design concept of the completed Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective shall not be effective to assign to the Engineer any duty or authority to supervise or direct the furnishing or performance of Work or any duty or authority to undertake responsibility contrary to the provisions of paragraph 9.09 or any other provision of the Contract Documents.
- G. “Imperative” or “Command” type language is used in the Contract Documents. This command language refers to and is directed to the Contractor.
- H. All products (material or equipment) identified in the Contract Documents and all products incidental to the identified products, shall be new and unused and provided by Contractor unless specified otherwise.
- I. Emphasis, such as italics or quotes, has been used throughout the Contract Documents. Use of emphasis shall not change the meaning of the term emphasized.

3.02 Reference Standards

- A. Standards, Specifications, Codes, Laws, and Regulations:
 - 1. Reference to standards, specifications, manuals, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard, specification, manual, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.
 - 2. No provision of any such standard, specification, manual or code, or any instruction of a Supplier shall be effective to change the duties or responsibilities of Owner, Contractor, or Engineer, or any of their subcontractors, consultants, agents, or employees from those set forth in the Contract Documents. No such provision or instruction shall be effective to assign to Owner or Engineer, or any of their Related Entities, any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

3.03 Reporting and Resolving Discrepancies

A. Reporting Discrepancies:

1. Contractor's Review of Contract Documents Before Starting Work: Before undertaking each part of the Work, Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures therein and all applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy which Contractor may discover and shall obtain a written interpretation or clarification from Engineer before proceeding with any Work affected thereby.
2. Contractor's Review of Contract Documents During Performance of Work: If, during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents or between the Contract Documents and any provision of any Law or Regulation applicable to the performance of the Work or of any standard, specification, manual or code, or of any instruction of any Supplier, Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by paragraph 6.16A) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in paragraph 3.04.

B. Resolving Discrepancies:

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the Contract Documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents, and:
 - a. The provisions of any standard, specification, manual, code, or instruction (whether or not specifically incorporated by reference in the Contract Documents); or
 - b. The provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).
 - c. In resolving discrepancies within the Contract Documents, precedence shall be given in the following descending order:
 - 1) Change Orders.
 - 2) Work Change Directives.
 - 3) Field Orders.
 - 4) Engineer's written interpretations and clarifications.
 - 5) Notice to Proceed.
 - 6) Addenda.
 - 7) Contract Agreement.
 - 8) General Conditions.
 - 9) Specifications.

- 10) Drawings (Figure dimensions on Drawings shall take precedence over scale dimensions and detailed drawings shall take precedence over general drawings).
- 11) Bidding Requirements.

3.04 Amending and Supplementing Contract Documents

- A. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof by either a Change Order or a Work Change Directive.
- B. The requirements of the Contract Documents may be supplemented and minor variations and deviations in the Work may be authorized, by one or more of the following ways:
 1. A Field Order;
 2. Engineer's approval of a Shop Drawing or Sample; (Subject to the provisions of paragraph 6.17D.3); or
 3. Engineer's written interpretation or clarification.

3.05 Reuse of Documents

- A. Contractor and any Subcontractor or Supplier or other individual or entity performing or furnishing all of the Work under a direct or indirect contract with Contractor, shall not:
 1. Have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or Engineer's consultants, including electronic media editions; or
 2. Reuse any of such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Designer.
- B. The prohibition of this paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein shall preclude Contractor from retaining copies of the Contract Documents for record purposes.

3.06 Electronic Data

- A. Copies of data furnished by Owner or Engineer to Contractor or Contractor to Owner or Engineer that may be relied upon are limited to the printed copies (also known as hard copies). Files in electronic media format of text, data, graphics, or other types are furnished only for the convenience of the receiving party. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.

- B. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within 60 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the transferring party.
- C. When transferring documents in electronic media format, the transferring party makes no representations as to long term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by the data's creator.

ARTICLE 4 AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS; REFERENCE POINTS

4.01 Availability of Lands

- A. Owner shall furnish the Site. Owner shall notify Contractor of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work. Owner will obtain in a timely manner and pay for easements for permanent structures or permanent changes in existing facilities. If Contractor and Owner are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, as a result of any delay in Owner's furnishing the Site or a part thereof, Contractor may make a Claim therefor as provided in paragraph 10.05.
- B. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.
- C. Owner has begun to obtain all lands, rights-of-way and easements as indicated in the Contract Documents. However, delays obtaining such lands may occur. If Owner is unable to obtain lands as indicated in the Contract Documents, Owner will notify the Contractor of those lands which are not yet acquired and those areas where lands are available. Contractor shall begin the Work upon such land and rights-of-way as Owner has acquired in accordance with the Notice to Proceed.

4.02 Subsurface and Physical Conditions

- A. Reports and Drawings:
 - 1. Those reports of explorations and tests of subsurface conditions at or contiguous to the Site used in preparing the Contract Documents; and
 - 2. Those drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) used in preparing the Contract Documents.

3. It shall be the Contractor's responsibility to review the "Report of Geotechnical Exploration" and become familiar with the existing Subsurface and Physical Conditions at each site.
 4. Technical Data for this contract is as follows: none.
- B. Limited Reliance by Contractor on Technical Data Authorized: Contractor may rely upon the general accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified above. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their Related Entities with respect to:
1. The completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or
 2. Other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or
 3. Any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions, or information.

4.03 Differing Subsurface or Physical Conditions

- A. Notice: If Contractor believes that any subsurface or physical condition at or contiguous to the Site that is uncovered or revealed either:
1. Is of such a nature as to establish that any "technical data" on which Contractor is entitled to rely as provided in paragraph 4.02 is materially inaccurate; or
 2. Is of such a nature as to require a change in the Contract Documents; or
 3. Differs materially from that shown or indicated in the Contract Documents; or
 4. Is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;
 5. Then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by paragraph 6.16A), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except as aforesaid) until receipt of written order to do so.
- B. Engineer's Review: After receipt of written notice as required by paragraph 4.03.A, Engineer will promptly review the pertinent condition, determine the necessity of Owner's obtaining additional exploration or tests with respect thereto, and advise Owner in writing (with a copy to Contractor) of Engineer's findings and conclusions.

C. Possible Price and Times Adjustments

1. The Contract Price or the Contract Times, or both, may be equitably adjusted to the extent that the existence of such differing subsurface or physical condition causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:
 - a. Such condition must meet any one or more of the categories described in paragraph 4.03.A; and
 - b. With respect to Work that is paid for on a Unit Price Basis, any adjustment in Contract Price will be subject to the provisions of paragraphs 9.07 and 11.03.
2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times if:
 - a. Contractor knew or should have known of the existence of such conditions at the time Contractor made a final commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract; or
 - b. The existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such final commitment; or
 - c. Contractor failed to give the written notice as required by paragraph 4.03.A.
3. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, a Claim may be made therefor as provided in paragraph 10.05. However, Owner and Engineer, and any of their Related Entities shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

4.04 Underground Facilities

- A. Shown or Indicated: The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the Site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities, including Owner, or by others. Unless it is otherwise expressly provided in these General Conditions:
 1. Owner and Engineer shall not be responsible for the accuracy or completeness of any such information or data; and

2. The cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:
 - a. Reviewing and checking all such information and data,
 - b. Locating all Underground Facilities shown or indicated in the Contract Documents,
 - c. Coordination of the Work with the owners of such Underground Facilities, including Owner, during construction, and
 - d. The safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.
- B. Not Shown or Indicated:
 1. If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated, or not shown or indicated with reasonable accuracy in the Contract Documents, Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by paragraph 6.16.A), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer. Engineer will promptly review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the consequences of the existence or location of the Underground Facility. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.
 2. If Engineer concludes that a change in the Contract Documents is required, a Work Change Directive or a Change Order will be issued to reflect and document such consequences. An equitable adjustment may be made in the Contract Price or Contract Times, or both, to the extent that they are attributable to the existence or location of any Underground Facility that was not shown or indicated or not shown or indicated with reasonable accuracy in the Contract Documents and that Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment in Contract Price or Contract Times, Owner or Contractor may make a Claim therefor as provided in paragraph 10.05.
- C. The dimensions and descriptions given on the Drawings for adjacent work by others, if any, (including any existing facilities or utilities previously constructed for Owner) are based on the design drawings and not as-built drawings. Prior to commencing the Work, the Contractor shall verify all as-built conditions and information whenever existing facilities or utilities may impact the Work. Failure of Contractor to so verify all as-built conditions prior to commencing the Work shall bar Contractor from later seeking additional compensation for conflicts with existing facilities or utilities.

- D. Prior to the construction or installation of any proposed facility or pipeline, the Contractor shall expose all existing utilities true to their vertical and horizontal location, within the vicinity of the Work. To avoid conflicts between existing and proposed facilities or utilities, the Contractor shall either relocate the existing or proposed utility on a temporary or permanent basis, or shall take whatever means necessary to protect the existing facilities or utilities during the installation of proposed utilities, as approved by the Engineer. No separate payment will be made for the relocation of existing utilities or for any work associated with the protection of existing facilities or utilities.

4.05 Reference Points

- A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.
- B. Engineer may check the lines, elevations, reference marks, batter boards, and the like, set by Contractor, and Contractor shall correct any errors disclosed by such check. Such a check shall not be considered as approval of Contractor's work and shall not relieve Contractor of the responsibility for accurate construction of the entire Work. Contractor shall furnish personnel to assist Engineer in checking lines and grades.
- C. The Contractor shall review the Contract Documents and determine the presence and location of any property or rights-of-way monuments or markers, and assess the possibility of disruption to these monuments or markers. It will be the Contractor's responsibility to flag, erect guard post, or provide offset references for the protection or the re-monumentation of these property or rights-of-way monuments or markers. In the event these monuments or markers are covered over or disrupted, it will be the Contractor's responsibility to re-establish those monuments or markers of property or rights-of-way, which were present prior to Work on the project.
- D. It shall be the Contractor's responsibility to verify all reference points shown on the Contract Documents prior to beginning Work on the site. This verification shall be conducted by professionally qualified personnel in a manner which will verify the accuracy of the information shown in the Contract Documents. On projects that involve the connection to, or additions to existing structures, the elevations of these existing structures shall also be verified. Any findings that differ from those shown on the Contract Documents shall be submitted in writing to the Engineer for resolution.

- E. Additional surveys necessary for the construction staking shall be performed by the Contractor, the cost of which shall be incorporated into the appropriate items of Work. On projects in which payment is classified by depth of cut, the construction staking shall be performed in a manner that will allow for the determination of cut classification. During construction of the project, the Contractor shall keep a daily log and record of the location of all underground pipes, all structures, and any deviation from the Drawings. The Contractor shall keep and furnish this daily log and record in a manner which will allow the Engineer to incorporate these items into the Contract Documents.

4.06 Hazardous Environmental Condition at Site

- A. Reports and Drawings: Reference is made to paragraph 4.02A for the identification of those reports and drawings relating to a Hazardous Environmental Condition identified at the Site, if any, that have been used by the Engineer in the preparation of the Contract Documents.
- B. Limited Reliance by Contractor on Technical Data Authorized: Contractor may rely upon the general accuracy of the “technical data” contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such “technical data” is identified herein, paragraph 4.02A. Except for such reliance on such “technical data,” Contractor may not rely upon or make any claim against Owner or Engineer, or any of their Related Entities with respect to:
 - 1. The completeness of such reports and Drawings for Contractor’s purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto; or
 - 2. Other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or
 - 3. Any Contractor interpretation of or conclusion drawn from any “technical data” or any such other data, interpretations, opinions or information.
- C. Contractor shall not be responsible for any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work. Contractor shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible.
- D. If Contractor encounters a Hazardous Environmental Condition or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, Contractor shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by paragraph 6.16A); and (iii) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any.

- E. Contractor shall not be required to resume Work in connection with such condition or in any affected area until after Owner has obtained any required permits related thereto and delivered to Contractor written notice: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work; or (ii) specifying any special conditions under which such Work may be resumed safely. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, either party may make a Claim therefor as provided in paragraph 10.05.
- F. If after receipt of such written notice Contractor does not agree to resume such Work, based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may issue a Work Change Directive or Change Order as appropriate. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of an adjustment in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a Claim therefor as provided in paragraph 10.05. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with ARTICLE 7.
- G. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this paragraph 4.06.G shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- H. The provisions of paragraphs 4.02, 4.03, and 4.04 do not apply to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 5 BONDS AND INSURANCE

5.01 Performance, Payment, and Other Bonds

- A. Contractor shall furnish performance and payment bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all of Contractor's obligations under the Contract Documents. These bonds shall remain in effect until one year after the date when final payment is made by the Owner or until completion of the correction period specified in paragraph 13.07, whichever is later, except as provided otherwise by Laws or Regulations or by the Contract Documents. Contractor shall also furnish such other bonds as are required by the Contract Documents.

- B. All bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by a single Surety that is named in the current list of “Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies” as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. All bonds signed by an agent must be accompanied by a certified copy of the agent’s authority to act.
- C. If the surety on any bond furnished by Contractor is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of paragraph 5.01.B, Contractor shall promptly notify Owner and Engineer and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the requirements of paragraphs 5.01.B and 5.02.

5.02 Licensed Sureties and Insurers

- A. All bonds and insurance required by the Contract Documents to be purchased and maintained by Owner or Contractor shall be obtained from surety or insurance companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds or insurance policies for the limits and coverages so required. Such surety and insurance companies also shall meet such additional requirements and qualifications as may be provided herein. Such Surety and insurance companies shall also meet additional requirements and qualifications as provided below:
 - 1. All bonds, insurance contracts, and certificates of insurance shall be either executed by or countersigned by a licensed resident agent of the surety or insurance company having its place of business in the State of Georgia and in all ways complying with the insurance laws of the State of Georgia. Surety shall be in good standing with Georgia’s Insurance Commissioner’s Office.
 - 2. Surety and Insurers must have an A.M. Best Financial Strength Rating of A or higher, with a Financial Size Category of VII or higher.
 - 3. The surety shall have an underwriting limitation in Circular 570 in excess of the Contract Amount.

5.03 Certificates of Insurance

- A. Contractor shall deliver to Owner, with copies to each additional insured identified in Section 00828, Insurance certificates of insurance (and other evidence of insurance requested by Owner or any other additional insured) which Contractor is required to purchase and maintain.
- B. Owner shall deliver to Contractor, with copies to each additional insured identified in Section 00828, Insurance certificates of insurance (and other evidence of insurance requested by Contractor or any other additional insured) that Owner is required to purchase and maintain, if any.

5.04 Contractor's Liability Insurance

- A. Contractor shall purchase and maintain such liability and other insurance as is appropriate for the Work being performed and as will provide protection from claims set forth below which may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable:
1. Claims under workers' compensation, disability benefits, and other similar employee benefit acts;
 2. Claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees;
 3. Claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees;
 4. Claims for damages insured by reasonably available personal injury liability coverage which are sustained:
 - a. By any person as a result of an offense directly or indirectly related to the employment of such person by Contractor, or
 - b. By any other person for any other reason;
 5. Claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom; and
 6. Claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.
- B. The policies of insurance required by this paragraph 5.04 shall:
1. With respect to insurance required by paragraphs 5.04.A.3 through 5.04.A.6 inclusive, include as additional insured (subject to any customary exclusion regarding professional liability) Owner and Engineer, and any other individuals or entities identified in Section 00828, Insurance all of whom shall be listed as additional insureds, and include coverage for the respective officers, directors, partners, employees, agents, consultants, and subcontractors of each and any of all such additional insureds, and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby;
 2. Include at least the specific coverages and be written for not less than the limits of liability provided in Section 00828, Insurance or required by Laws or Regulations, whichever is greater;
 3. Include completed operations insurance;
 4. Include contractual liability insurance covering Contractor's indemnity obligations under paragraphs 6.11 and 6.20;

5. Contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured identified in Section 00828, Insurance to whom a certificate of insurance has been issued (and the certificates of insurance furnished by the Contractor pursuant to paragraph 5.03 will so provide);
 6. Remain in effect at least until final payment and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work in accordance with paragraph 13.07; and
 7. With respect to completed operations insurance, and any insurance coverage written on a claims-made basis, remain in effect for at least two years after final payment.
 - a. Contractor shall furnish Owner and each other additional insured identified in Section 00828, Insurance to whom a certificate of insurance has been issued, evidence satisfactory to Owner and any such additional insured of continuation of such insurance at final payment and 1 year thereafter.
- C. The limits of liability for the insurance required by paragraph 5.04.B.2 of the General Conditions shall provide coverage specified in Section 00828, Insurance or greater where required by Laws and Regulations.

5.05 Owner's Liability Insurance

- A. In addition to the insurance required to be provided by Contractor under paragraph 5.04, Owner, at Owner's option, may purchase and maintain at Owner's expense Owner's own liability insurance as will protect Owner against claims which may arise from operations under the Contract Documents.

5.06 Property Insurance

- A. Contractor shall purchase and maintain property insurance as required in Section 00828, Insurance.

5.07 Waiver of Rights

- A. Owner and Contractor intend that all policies purchased in accordance with paragraph 5.06 by Contractor will protect Owner, Contractor, Subcontractors, and Engineer, and all other individuals or entities identified herein as insureds or additional insureds (and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them) in such policies and will provide primary coverage for all losses and damages caused by the perils or causes of loss covered thereby. All such policies shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any of the insureds or additional insureds thereunder. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Contractor as trustee or otherwise payable under any policy so issued.

5.08 Receipt and Application of Insurance Proceeds

- A. Any insured loss under the policies of insurance required by paragraph 5.06 will be adjusted with Owner and made payable to Owner for the insureds, as their interests may appear, subject to the requirements of any applicable mortgage clause and of paragraph 5.08.B. Owner shall deposit in a separate account any money so received and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof, and the Work and the cost thereof covered by an appropriate Change Order.
- B. Owner shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within 15 days after the occurrence of loss to Owner's exercise of this power. If such objection be made, Owner shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, Owner shall adjust and settle the loss with the insurers.

5.09 Acceptance of Bonds and Insurance, Option to Replace

- A. If Owner has any objection to the coverage afforded by or other provision of the insurance required to be purchased and maintained by Contractor in accordance with this ARTICLE 5 on the basis of its not complying with the Contract Documents, Owner will notify Contractor in writing thereof within 10 days of the date of delivery of such certificate to Owner in accordance with paragraph 2.01. Contractor will provide such additional information in respect of insurance provided by Contractor as Owner may reasonably request.

5.10 Partial Use, Acknowledgement of Property Insurer

- A. If Owner finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in paragraph 14.05, no such use or occupancy shall commence before the insurers providing the property insurance pursuant to paragraph 5.06 have acknowledged notice thereof and in writing effected any changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy.

ARTICLE 6 CONTRACTOR'S RESPONSIBILITIES

6.01 Supervision and Superintendence

- A. Contractor shall supervise, provide quality control, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for the means, methods,

- techniques, sequences, and procedures of construction. Contractor shall not be responsible for the negligence of Owner or Engineer in the design or specification of a specific means, method, technique, sequence, or procedure of construction which is shown or indicated in and expressly required by the Contract Documents.
- B. At all times during the progress of the Work, Contractor shall assign a competent Superintendent thereto who shall not be replaced, except under extraordinary circumstances, without written notice to Owner and Engineer. Contractor shall also designate, in writing, a representative, hereinafter referred to as Project Manager, assigned to the Project on a full-time basis during execution of the Work who shall have authority to act on behalf of Contractor, including executing the orders or directions of the Engineer without delay. This Superintendent and/or Project Manager shall have full authority to promptly supply products, tools, plant equipment, and labor as may be required to diligently prosecute the Work. All communications given to or received from the Superintendent and/or the Project Manager shall be binding on Contractor.
- C. If at any time during the Project the Superintendent or Project Manager leaves the Project site while Work is in progress, Engineer shall be notified and provided with the name of Contractor's representative having responsible charge.
- D. Contractor also shall designate the person responsible for Contractor's quality control while Work is in progress. Engineer shall be notified in writing prior to any change in quality control representative assignment.
- E. Prior to the execution of the Agreement, Contractor shall furnish to the Owner and Engineer the names, resumes, 24-hour contact information and other relevant information associated with the Project Manager and the Superintendent that are to be assigned to this project. The Project Manager and Superintendent must be acceptable to the Owner and Engineer.

6.02 Labor, Working Hours

- A. Contractor shall provide competent, skilled, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall at all times maintain good discipline and order at the Site. Contractor shall, upon demand from the Engineer, immediately remove any manager, superintendent, foreman, or workman whom the Engineer or Owner may consider incompetent or undesirable.
- B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours. Contractor will not permit the performance of Work on a Saturday, Sunday, or any legal holiday without Owner's written consent (which will not be unreasonably withheld) given after prior written notice to Engineer.

- C. Regular working hours are defined as 8 hours per day, Monday through Friday, excluding holidays, occurring between the hours of 7:00 a.m. and 7:00 p.m., or as specified elsewhere. Requests to work other than regular working hours shall be submitted to Engineer not less than 48 hours prior to any proposed weekend work or scheduled extended work weeks. Occasional unscheduled overtime on weekdays may be permitted provided reasonable notice is given to Engineer.
- D. Contractor shall pay all extra costs incurred by the Owner associated with work, outside of normal working hours, including additional support services, inspection services, testing services, utilities or other applicable costs. The cost associated with the Owner's inspection overtime will be in the range of \$75.00 to \$120.00 per hour per individual, depending upon individuals assigned to the Project, the type of work being inspected, and the date of the invoice (that is, allowing for salary escalation). Contractor will not be responsible for extra costs associated with inspection overtime for work in excess of 40 hours per week when such overtime work is explicitly required by the Contract Documents.
- E. Except in the case of emergencies or other unusual circumstances, no work shall be permitted on the project on Sunday.
- F. The Engineer will determine to what extent extraordinary onsite personnel work is required during Contractor's overtime work or working hours outside regular scheduled work hours.

6.03 Services, Materials, and Equipment

- A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, startup, and completion of the Work.
- B. All materials and equipment incorporated into the Work shall be as specified or, if not specified, shall be of good quality and new, except as otherwise provided in the Contract Documents. All products provided on this Project shall be products currently manufactured by the manufacturer (that is, products shall not be discontinued or out-of-date products nor shall they be of the last production run of the product). Contractor shall incorporate the previous sentence in any contract or agreement between Contractor and subcontractor or supplier supplying products provided on this Project. All special warranties and guarantees required by the Specifications shall expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.

- C. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.
- D. Without limiting the responsibility or liability of the Contractor pursuant to this agreement, all warranties given by manufacturers on materials or equipment incorporated in the work are hereby assigned by the Contractor to the Owner. Such assignment shall be effective upon completion of Contractor's warranty period. If requested, the Contractor shall execute formal assignments of said manufacturer's warranties to the Owner. All such warranties shall be directly enforceable by the Owner. Such assignment shall in no way affect the Contractor's responsibilities and duties during the warranty period.

6.04 Progress Schedule

- A. Contractor shall provide all resources, labor, materials, equipment, services, and the like necessary to adhere to the Progress Schedule established in accordance with paragraph 2.07 and the General Requirements as updated and adjusted from time to time as provided below.
 - 1. Contractor shall submit to Engineer for acceptance (to the extent indicated in paragraph 2.07 and the General Requirements) an updated Progress Schedule and an updated Schedule of Submittals with each partial payment request, but no less than monthly. Contractor's failure to provide acceptable updated Progress Schedule and Schedule of Submittals will delay processing of the pay request until receipt of the acceptable updated Progress Schedule and/or an updated Schedule of Submittals. Such updates and adjustments shall comply with any provisions of the General Requirements applicable thereto.
 - 2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of ARTICLE 12. Adjustments in Contract Times may only be made by a Change Order.
 - 3. If the Progress Schedule reflects a completion date prior to the completion date established by the Agreement, this shall afford no basis to claim for delay should Contractor not complete the Work prior to the projected completion date. Instead, all "float" between the completion date in Contractor's schedule and the completion date established in the Agreement shall belong to and is exclusively available to the Owner. Should a change order be executed with a revised completion date, the Progress Schedule shall be revised to reflect the new completion date.
 - 4. Number of anticipated abnormal weather conditions, as defined in the General Requirements, shall be included on the critical path of Project Schedule.

6.05 Substitutes and "Or-Equals"

- A. See Section 01630, Substitution and Options of the Specifications.

6.06 Concerning Subcontractors, Suppliers, and Others

- A. Contractor shall not employ any Subcontractor, Supplier or other person or organization, (including those who are to furnish the principal items of materials or equipment), whether initially or as a substitute, to whom or which Owner may have reasonable objection. Acceptance of any Subcontractor, other person or organization by Owner shall not constitute a waiver of any right of Owner to reject defective Work. Contractor shall not be required to employ any Subcontractor, other person or organization against whom Contractor has reasonable objection. If more than 25 percent of the work (as measured by dollar value and not including specialty work that is customarily subcontracted) is to be performed by one or more subcontractors then Contractor is obligated to notify Owner in writing of this intent with the submission of the Bid and to provide such supplemental information within 5 days of the bid as outlined under the Bidding Requirements.
- B. If the General Conditions require the identity of certain Subcontractors, Suppliers, or other individuals or entities to be submitted to Owner in advance for acceptance by Owner by a specified date prior to the Effective Date of the Agreement, and if Contractor has submitted a list thereof in accordance with the General Conditions, Owner's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the Bidding Documents or the Contract Documents) of any such Subcontractor, Supplier, or other individual or entity so identified may be revoked on the basis of reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity. No acceptance by Owner of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of any right of Owner or Engineer to reject defective Work.
- C. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions. Nothing in the Contract Documents:
 - 1. Shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier or other individual or entity, nor
 - 2. Shall create any obligation on the part of Owner or Engineer to pay or to see to the payment of any moneys due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.
- D. Contractor shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work under a direct or indirect contract with Contractor.

- E. Contractor shall require all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work to communicate with Engineer through Contractor.
- F. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.
- G. All Work performed for Contractor by a Subcontractor or Supplier shall be pursuant to an appropriate agreement between Contractor and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer.
- H. Owner or Engineer may furnish to any Subcontractor, Supplier, or other person or organization, to the extent practicable, information about amounts paid on their behalf to Contractor in accordance with Contractor's Applications for Payment.
- I. Specialty Subcontractors: Contractor shall use the services of Specialty Subcontractors on those parts of the Work which is declared specialty work in Specifications and which, under normal contracting practices, is best performed by Specialty Subcontractors, as required by the Engineer in Engineer's sole discretion, at no additional cost to the Owner. If Contractor desires to perform specialty work, Contractor shall submit a request to the Owner, accompanied by evidence that Contractor's own organization has successfully performed the type of work in question, is presently competent to perform the type of work, and the performance of the work by Specialty Subcontractors will result in materially increased costs or inordinate delays.

6.07 Patent Fees and Royalties

- A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if to the actual knowledge of Owner or Engineer its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by Owner in the Contract Documents.
- B. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

6.08 Permits

- A. Unless otherwise provided in Section 01060 or these General Conditions, Contractor shall obtain and pay for all construction permits and licenses. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of opening of Bids, or, if there are no Bids, on the Effective Date of the Agreement. Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

6.09 Laws and Regulations

- A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.
- B. If Contractor performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work. However, it shall not be Contractor's primary responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under paragraph 3.03.
- C. Changes in Laws or Regulations not known at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time of performance of the Work may be the subject of an adjustment in Contract Price or Contract Times. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in paragraph 10.05.
- D. Where professional Engineering and or Architectural services are required in connection with any of the components required by the Contract, all Bidders and component suppliers must make certain that there is full compliance with all applicable laws of the State of Georgia and any other state governing professional Engineering and/or Architecture. The Owner and Engineer do not warrant that any entity listed as an acceptable manufacturer is or will be in compliance with such laws.
- E. Any fines levied against the Owner for failure of Contractor to properly maintain required National Pollutant Discharge Elimination System (NPDES) erosion and sediment control measures or any other related requirements will be doubled in their amounts and deducted as set-offs from payments due Contractor.

6.10 Taxes

- A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

6.11 Use of Site and Other Areas

A. Limitation on Use of Site and Other Areas:

1. Contractor shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work.
2. Should any claim be made by any such owner or occupant because of the performance of the Work, Contractor shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.
3. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused by or based upon Contractor's performance of the Work.

- B. Removal of Debris During Performance of the Work: During the progress of the Work Contractor shall keep the Site and other areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.
- C. Cleaning: Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for use by Owner. At the completion of the Work Contractor shall remove from the Site all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.
- D. Loading Structures: Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

6.12 Record Documents

- A. Contractor shall maintain the Site Record Documents in a safe place as specified in the General Requirements. Upon completion of the Work, these record documents, Samples, and Shop Drawings shall be delivered to Engineer for Owner.

6.13 Safety and Protection

- A. Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to:
 - 1. All persons on the Site or who may be affected by the Work;
 - 2. All the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
 - 3. Other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.
- B. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify owners of adjacent property and of Underground Facilities and other utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property.
- C. All damage, injury, or loss to any property referred to in paragraph 6.13.A.2 or 6.13.A.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or , or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).
- D. Contractor's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with paragraph 14.07.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

- E. The property, improvements or facilities at the site shall be replaced or restored to a condition as good as when Contractor entered upon the Work. In case of failure on the part of Contractor to restore such property, or make good such damages or injury, the Owner may, after 48 hours written notice or sooner in the case of an emergency, proceed to repair, rebuild, or otherwise restore such property, improvements, or facilities as may be deemed necessary. The cost thereof will be deducted from any monies due or which may become due Contractor under this Contract.

6.14 Safety Representative

- A. Contractor shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

6.15 Hazard Communication Programs

- A. Contractor shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

6.16 Emergencies

- A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent threatened damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby or are required as a result thereof. If Engineer determines that a change in the Contract Documents is required because of the action taken by Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued.

6.17 Shop Drawings, Samples and Other Submittals

- A. Contractor shall submit Submittals to Engineer for review and approval in accordance with the acceptable Schedule of Submittals (as required by paragraph 2.07). Each submittal will be identified as Engineer may require.
 - 1. Shop Drawings:
 - a. Submit number of copies specified in the Specifications.
 - b. Data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide and to enable Engineer to review the information for the limited purposes required by paragraph 6.17.D.

2. Samples:
 - a. Submit number of Samples specified in the Specifications.
 - b. Clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require enabling Engineer to review the submittal for the limited purposes required by paragraph 6.17.D.
- B. Where any Submittal is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.
- C. Submittal Procedures:
 1. Before submitting each Shop Drawing or Sample, Contractor shall have determined and verified:
 - a. All field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;
 - b. The suitability of all materials with respect to intended use, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work;
 - c. All information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto; and
 - d. Shall also have reviewed and coordinated each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents.
 2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review and approval of that submittal.
 3. With each submittal, Contractor shall give Engineer specific written notice of any variations, that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be both a written communication separate from the Shop Drawing's or Sample Submittal; and, in addition, by a specific notation made on each Shop Drawing or Sample submitted to Engineer for review and approval of each such variation.
- D. Engineer's Review:
 1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.

2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.
3. Engineer's review and approval shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of paragraph 6.17.C.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer's review and approval shall not relieve Contractor from responsibility for complying with the requirements of paragraph 6.17.C.1.

E. Resubmittal Procedures:

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.

F. Excessive Submittal Resubmission: Engineer will record time required by Engineer and/or Designer for excessive Submittal review occasioned by Contractor's resubmission, in excess of two resubmissions of any required Submittal, caused by unverified, unchecked or un-reviewed, incomplete, inaccurate or erroneous, or nonconforming Submittals. Upon receipt of Engineer's accounting of time and costs, Contractor will reimburse Owner for the charges of Engineer review for excessive resubmissions through set-offs from the recommended Owner payments to Contractor as established in paragraph 14.02.D.1.c of these General Conditions.

G. In the event that Contractor requests a substitution for a previously approved item, Contractor shall reimburse Owner for Engineer's charges for such time as may be required to perform all reviews of the substitute item, unless the change is specifically requested by the Owner.

6.18 Continuing the Work

- A. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as permitted by paragraph 15.04 or as Owner and Contractor may otherwise agree in writing.

6.19 Contractor's General Warranty and Guarantee

- A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer and its Related Entities shall be entitled to rely on representation of Contractor's warranty and guarantee.
- B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:
 - 1. Abuse, modification, or improper maintenance or operation by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or
 - 2. Normal wear and tear under normal usage.
- C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:
 - 1. Observations by Engineer;
 - 2. Recommendation by Engineer or payment by Owner of any progress or final payment;
 - 3. The issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;
 - 4. Use or occupancy of the Work or any part thereof by Owner;
 - 5. Any review and approval of a Submittal or the issuance of a notice of acceptability by Engineer;
 - 6. Any inspection, test, or approval by others; or
 - 7. Any correction of defective Work by Owner.

6.20 Indemnification

- A. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable. If through the negligent act or omission on the part of

- Contractor, any other contractor or any subcontractor shall suffer loss or damage on the Work, Contractor shall settle with such other Contractor or subcontractor by agreement or arbitration if such other Contractor or Subcontractor will so settle. If such other contractor or Subcontractor shall assert any claim against Owner, Engineer, and/or Designer on account of any damage alleged to have been sustained, Owner shall notify Contractor, who shall indemnify and save harmless Owner, Engineer, and/or Designer against any such claims.
- B. In any and all claims against Owner or Engineer or any of their respective consultants, agents, officers, directors, partners, or employees by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under paragraph 6.20.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.
- C. Contractor, Subcontractors, Suppliers and others on the Project, or their sureties, shall maintain no direct action against the Engineer and/or Designer, their officers, employees, affiliated corporations, consultants, and Subcontractors, for any claim arising out of, in connection with, or resulting from the engineering services performed. Only the Owner will be the beneficiary of any undertaking by the Engineer and/or Designer.

6.21 Delegation of Professional Design Services

- A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable law.
- B. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer.

- C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such design professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.
- D. Pursuant to this paragraph 6.21, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in paragraph 6.17.D.1.
- E. Contractor shall not be responsible for the adequacy of the performance or design criteria required by the Contract Documents.

ARTICLE 7 OTHER WORK AT THE SITE

7.01 Related Work at Site

- A. Owner may perform other work related to the Project at the Site with Owner's employees or via other direct contracts therefor, or have other work performed by utility owners. If such other work is not noted in the Contract Documents, then:
 - 1. Written notice thereof will be given to Contractor prior to starting any such other work; and
 - 2. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times that may be allowed as a result of such other work, a Claim may be made therefor as provided in paragraph 10.05.
- B. Contractor shall afford each other contractor who is a party to such a direct contract, each utility owner and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work, and shall properly coordinate the Work with theirs. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering their work and will only cut or alter their work with the written consent of Engineer and the others whose work will be affected. The duties and responsibilities of Contractor under this paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of Contractor in said direct contracts between Owner and such utility owners and other contractors.

- C. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this ARTICLE 7, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

7.02 Coordination

- A. If Owner contracts with others for the performance of other work on the Site, Contractor shall attend and participate in coordination meetings with the other on-site contractors.
- B. Unless otherwise provided in these General Conditions, Owner shall have sole authority and responsibility for such coordination with other contractors.

7.03 Legal Relationships

- A. Paragraphs 7.01.A and 7.02 are not applicable for utilities not under the control of Owner.
- B. Each other direct contract of Owner under paragraph 7.01.A shall provide that the other contractor is liable to Owner and Contractor for the reasonable direct delay and disruption costs incurred by Contractor as a result of the other contractor's actions or inactions.
- C. Contractor shall be liable to Owner and any other contractor for the reasonable direct delay and disruption costs incurred by such other contractor as a result of Contractor's action or inactions.

7.04 Claims Between Contractors

- A. Should Contractor cause damage to the work or property of any separate contractor at the site, or should any claim arising out of Contractor's performance of the Work at the site be made by any separate contractor against Contractor, Owner, Engineer, and/or Designer or any other person, Contractor shall promptly attempt to settle with such other contractor by agreement, or to otherwise resolve the dispute by mediation, arbitration, or at law.
- B. Contractor shall, to the fullest extent permitted by Laws and Regulations, indemnify and hold Owner, Engineer, and/or Designer and the officers, directors, employees, agents, and other consultants of each and any of them harmless from and against all claims, costs, losses and damages, (including, but not limited to, all fees and charges of Engineers, architects, attorneys and other professionals and all court or arbitration or other dispute resolution costs) arising directly, indirectly or consequentially out of or resulting from any action, legal or equitable, brought by any separate contractor

against Owner, Engineer, and/or Designer or the officers, directors, employees, agents, or other consultants of each and any of them to the extent based on a claim arising out of Contractor's performance of the Work. Should a separate contractor cause damage to the Work or property of Contractor or should the performance of work by any separate contractor at the site give rise to any other claim, Contractor shall not institute any action, legal or equitable, against Owner, Engineer, and/or Designer or the officers, directors, employees, agents, or other consultants of each and any of them or permit any action against any of them to be maintained and continued in its name or for its benefit in any court or before any mediator or arbitrator which seeks to impose liability on or to recover damages from Owner, Engineer, and/or Designer or the officers, directors, employees, agents, or other consultants of each and any of them on account of any such damage or claim.

- C. If Contractor is delayed at any time in performing or furnishing Work by any act or neglect of a separate contractor and Owner and Contractor are unable to agree as to the extent of any adjustment in Contract Times attributable thereto, Contractor may make a claim for an extension of times in accordance with ARTICLE 12. An extension of the Contract Times shall be Contractor's exclusive remedy with respect to Owner, Engineer, and/or Designer and the officers, directors, employees, agents, or other consultants of each and any of them for any delay, disruption, interference or hindrance caused by any separate contractor. This paragraph does not prevent recovery from Owner, Engineer, and/or Designer for activities that are their respective responsibilities.

ARTICLE 8 OWNER'S RESPONSIBILITIES

8.01 Communications to Contractor

- A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

8.02 Replacement of Engineer

- A. In case of termination of the employment of Engineer, Owner shall appoint an engineer whose status under the Contract Documents shall be that of the former Engineer.

8.03 Furnish Data

- A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

8.04 Pay When Due

- A. Owner shall make payments to Contractor when they are due as provided in paragraphs 14.02.C and 14.07.C.

8.05 Lands and Easements, Reports and Tests

- A. Owner's duties in respect of providing lands and easements and providing engineering surveys to establish reference points are set forth in paragraphs 4.01 and 4.05. Paragraph 4.02 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of subsurface conditions and drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site that have been used by Engineer in preparing the Contract Documents.

8.06 Insurance

- A. Owner's responsibilities, if any, in respect to purchasing and maintaining liability and property insurance are set forth in ARTICLE 5.

8.07 Change Orders

- A. Owner is obligated to execute Change Orders as indicated in paragraph 10.03.

8.08 Inspections, Tests, and Approvals

- A. Owner's responsibility in respect to certain inspections, tests, and approvals is set forth in paragraph 13.03.B.

8.09 Limitations on Owner's Responsibilities

- A. The Owner shall not supervise, direct, or have control or authority over, or be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

8.10 Undisclosed Hazardous Environmental Condition

- A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in paragraph 4.06.

8.11 Evidence of Financial Arrangements

- A. If and to the extent Owner has agreed to furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract Documents, Owner's responsibility in respect thereof will be as set forth in these General Conditions.

ARTICLE 9 ENGINEER'S STATUS DURING CONSTRUCTION

9.01 Owner's Representative

- A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract Documents and will not be changed without written consent of Owner and Engineer.

9.02 Visits to Site

- A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.
- B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in paragraph 9.09. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

9.03 Project Representative

- A. If Owner and Engineer agree, Engineer will furnish a Resident Project Representative to assist Engineer in providing more extensive observation of the Work. The authority and responsibilities of any such Resident Project Representative and assistants will be as provided in these General Conditions, and limitations on the responsibilities thereof will be as provided in paragraph 9.09. If Owner designates another representative or agent to represent Owner at the Site who is not Engineer's consultant, agent or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in these General Conditions.

9.04 Authorized Variations in Work

- A. Engineer may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. These may be accomplished by a Field Order and will be binding on Owner and also on Contractor, who shall perform the Work involved promptly. If Owner or Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, and the parties are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefore as provided in paragraph 10.05.

9.05 Rejecting Defective Work

- A. Engineer will have authority to reject Work that Engineer believes to be defective, or that Engineer believes will not produce a completed Project that conforms to the Contract Documents, or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Engineer will also have authority to require special inspection or testing of the Work as provided in paragraph 13.04, whether or not the Work is fabricated, installed, or completed.

9.06 Shop Drawings, Change Orders and Payments

- A. In connection with Engineer's authority and limitations thereof, as to Shop Drawings and Samples, see paragraph 6.17.
- B. In connection with Engineer's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, see paragraph 6.21.
- C. In connection with Engineer's authority as to Change Orders, see ARTICLE 10, ARTICLE 11, and ARTICLE 12.
- D. In connection with Engineer's authority as to Applications for Payment, see ARTICLE 14.

9.07 Determinations for Unit Price Work

- A. Engineer will have authority to determine the actual quantities and classifications of items of Unit Price Work performed by Contractor, and the written decisions of Engineer on such matters will be final, binding on Owner and Contractor and not subject to appeal (except as modified by Engineer to reflect changed factual conditions).

9.08 Decisions on Requirements of Contract Documents and Acceptability of Work

- A. Engineer will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. All matters in question and other matters between Owner and Contractor arising prior to the date final payment is due relating to the acceptability of the Work, and the interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, will be referred initially to Engineer in writing within 30 days of the event giving rise to the question.
- B. Engineer will, with reasonable promptness, render a written decision on the issue referred. If Owner or Contractor believes that any such decision entitles them to an adjustment in the Contract Price or Contract Times or both, a Claim may be made under paragraph 10.05. The date of Engineer's decision shall be the date of the event giving rise to the issues referenced for the purposes of paragraph 10.05.B.
- C. Engineer's written decision on the issue referred will be final and binding on Owner and Contractor, subject to the provisions of paragraph 10.05.
- D. When functioning as interpreter and judge under this paragraph 9.08, Engineer will not show partiality to Owner or Contractor and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity.

9.09 Limitations on Engineer's Authority and Responsibilities

- A. Neither Engineer's authority or responsibility under this ARTICLE 9 or under any other provision of the Contract Documents nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.
- B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.
- C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.

- D. Engineer's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by paragraph 14.07.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals that the results certified indicate compliance with the Contract Documents.
- E. The limitations upon authority and responsibility set forth in this paragraph 9.09 shall also apply to, the Resident Project Representative, if any, and assistants, if any.

ARTICLE 10 CHANGES IN THE WORK; CLAIMS

10.01 Authorized Changes in the Work

- A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work by a Change Order, or a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).
 - 1. Owner may, in anticipation of possibly ordering an addition, deletion or revision to the Work, request Contractor to prepare a proposal of cost and times to perform Owner's contemplated changes in the Work. Contractor's written proposal shall be transmitted to the Engineer promptly, but not later than 14 days after Contractor's receipt of Owner's written request and shall remain a firm offer for a period not less than 60 days after receipt by Engineer.
 - 2. Contractor is not authorized to proceed on an Owner contemplated change in the Work prior to Contractor's receipt of a Change Order (or Work Change Directive) incorporating such change into the Work.
 - 3. Owner's request for proposal or Contractor's failure to submit such proposal within the required time period will not justify a claim for an adjustment in Contract Price or Contract Time.
 - 4. The Owner shall not be liable to the Contractor for any costs associated with the preparation of proposal associated with Owner's contemplated changes in the Work.
- B. If Owner and Contractor are unable to agree on entitlement to, or on the amount or extent, if any, of an adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a Work Change Directive, a Claim may be made therefor as provided in paragraph 10.05.

10.02 Unauthorized Changes in the Work

- A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents as amended, modified, or supplemented as provided in paragraph 3.04, except in the case of an emergency as provided in paragraph 6.16 or in the case of uncovering Work as provided in paragraph 13.04.B.

10.03 Execution of Change Orders

- A. Owner and Contractor shall execute appropriate Change Orders recommended by Engineer covering:
 - 1. Changes in the Work which are: (i) ordered by Owner pursuant to paragraph 10.01.A, (ii) required because of acceptance of defective Work under paragraph 13.08.A or Owner's correction of defective Work under paragraph 13.09, or (iii) agreed to by the parties;
 - 2. Changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive; and
 - 3. Changes in the Contract Price or Contract Times which embody the substance of any written decision rendered by Engineer pursuant to paragraph 10.05; provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, Contractor shall carry on the Work and adhere to the Progress Schedule as provided in paragraph 6.18.A.
- B. In signing a Change Order, the Owner and Contractor acknowledge and agree that:
 - 1. The stipulated compensation (Contract Price or Contract Time, or both) set forth in the Change Order includes payment for (i) the Cost of the Work covered by the Change Order, (ii) Contractor's fee for overhead and profit, (iii) interruption of Progress Schedules, (iv) delay and impact, including cumulative impact, on other work under the Contract Documents, and (v) extended home office and jobsite overhead;
 - 2. The Change Order constitutes full mutual accord and satisfaction for the change to the Work;
 - 3. No reservation of rights to pursue subsequent claims on the Change Order will be made by either party; and
 - 4. No subsequent claim or amendment of the Contract Documents will arise out of or as a result of the Change Order.

10.04 Notification to Surety

- A. If notice of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times) is required by the provisions of any bond to be given to a surety, the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

10.05 Claims and Disputes

- A. Engineer's Decision Required: All Claims, except those waived pursuant to paragraph 14.09, shall be referred to the Engineer for decision. A decision by Engineer shall be required as a condition precedent to any exercise by Owner or Contractor of any rights or remedies either may otherwise have under the Contract Documents or by Laws and Regulations in respect of such Claims.
- B. Notice: Written notice stating the general nature of each Claim shall be delivered by the claimant to Engineer and the other party to the Contract promptly (but in no event later than 10 days) after the start of the event giving rise thereto. The responsibility to substantiate a Claim shall rest with the party making the Claim. Notice of the amount or extent of the Claim, with supporting data shall be delivered to the Engineer and the other party to the Contract within 20 days (and monthly thereafter for continuing events) after the start of such event (unless Engineer allows additional time for claimant to submit additional or more accurate data in support of such Claim). A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of paragraph 12.01.B. A Claim for an adjustment in Contract Time shall be prepared in accordance with the provisions of paragraph 12.02.B. Each Claim shall be accompanied by claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant believes it is entitled as a result of said event. The opposing party shall submit any response to Engineer and the claimant within 30 days after receipt of the claimant's last submittal (unless Engineer allows additional time).
- C. Engineer's Action: Engineer will review each Claim and, within 30 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any, take one of the following actions in writing:
 - 1. Deny the Claim in whole or in part,
 - 2. Approve the Claim, or
 - 3. Notify the parties that the Engineer is unable to resolve the Claim if, in the Engineer's sole discretion, it would be inappropriate for the Engineer to do so. For purposes of further resolution of the Claim, such notice shall be deemed a denial.
- D. In the event that Engineer does not take action on a Claim within said 30 days, the Claim shall be deemed denied.

- E. Engineer's written action under paragraph 10.05.C or denial pursuant to paragraphs 10.05.C.3 or 10.05.D will be final and binding upon Owner and Contractor, unless Owner or Contractor invoke the dispute resolution procedure set forth in ARTICLE 16 within 30 days of such action or denial.
- F. No Claim for an adjustment in Contract Price or Contract Times will be valid if not submitted in accordance with this paragraph 10.05.
- G. Contractor, Subcontractors, Suppliers and others on the Project, or their surety, shall maintain no direct action against the Engineer or Designer, its officers, employees, affiliated corporations, and Subcontractors, for any claim arising out of, in connection with, or resulting from the Engineering services performed. Only the Owner will be the beneficiary of any undertaking with the Engineer.

ARTICLE 11 COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

11.01 Cost of the Work

- A. **Costs Included:** The term Cost of the Work means the sum of all costs, except those excluded in paragraph 11.01.B, necessarily incurred and paid by Contractor in the proper performance of the Work. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the costs to be reimbursed to Contractor will be only those additional or incremental costs required because of the change in the Work or because of the event giving rise to the Claim. Except as otherwise may be agreed to in writing by Owner, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall include only the following items, and shall not include any of the costs itemized in paragraph 11.01.B.
 - 1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time at the Site. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by Owner.
 - 2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make

payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained.

3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, who will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this paragraph 11.01.
4. Costs of special consultants (including but not limited to Engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.
5. Supplemental costs including the following:
 - a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.
 - b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.
 - c. Rentals of all construction equipment and machinery, and the parts thereof whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.
 - 1) Full rental cost for rented, leased, and/or owned equipment shall not exceed the rates listed in the Rental Rate Blue Book published Equipment Watch, a unit of Primedia, Inc., as adjusted to the regional area of the Project. The most recent published edition in effect at the commencement of the actual equipment use shall be used.
 - 2) Rates shall apply to equipment in good working condition. Equipment not in good condition, or larger than required, may be rejected by Engineer or accepted at reduced rates.

- 3) Equipment in Use: Actual equipment use time documented by the Engineer shall be the basis that the equipment was on and used at the Project site. In addition to the leasing rate above, equipment operational costs shall be paid at the estimated operating cost, payment category (and the table below), and associated rate set forth in the Blue Book if not already included in the lease rate.

The hours of operation shall be based upon actual equipment usage to the nearest quarter hour, as recorded by the Engineer.

- 4) Equipment when idle (Standby): Idle or standby equipment is equipment on-site or in transit to and from the Work site and necessary to perform the Work under the modification but not in actual use. Idle equipment time, as documented by the Engineer, shall be paid at the leasing rate determined in paragraph 11.01.A.5.c, excluding operational costs.
- 5) Where a breakdown occurs on any piece of equipment, payment shall cease for that equipment and any other equipment idled by the breakdown. If any part of the Work is shut down by the Owner, standby time will be paid during non-operating hours if diversion of equipment to other Work is not practicable. Engineer reserves the right to cease standby time payment when an extended shutdown is anticipated.

Actual Usage	Blue Book Payment Category
Less than 8 hours	Hourly Rate
8 or more hours but less than 7 days	Daily Rate
7 or more days but less than 30 days	Weekly Rate
30 days or more	Monthly Rate

- d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, imposed by Laws and Regulations.
- e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.
- f. Losses and damages (and related expenses) caused by damage to any of the Work that has been completed and accepted by the Owner, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance and furnishing of the Work (except losses and damages within the deductible amounts of property insurance established by Owner in accordance with paragraph 5.06.D.), provided they have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written

consent and approval of Owner. No such losses, damages and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's fee. If, however, any such loss or damage to the Work that has been accepted by Owner requires reconstruction and Contractor is placed in charge thereof, Contractor shall be paid for services, a fee proportionate to that stated in paragraph 12.01.C.

- g. The cost of utilities, fuel, and sanitary facilities at the Site.
- h. Minor expenses such as telegrams, long distance telephone calls, telephone service at the Site, expresses, and similar petty cash items in connection with the Work.
- i. The costs of premiums for all bonds and insurance Contractor is required by the Contract Documents to purchase and maintain.

B. Costs Excluded: The term Cost of the Work shall not include any of the following items:

- 1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in paragraph 11.01.A.1 or specifically covered by paragraph 11.01.A.4, all of which are to be considered administrative costs covered by the Contractor's fee.
- 2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
- 3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
- 4. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.
- 5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in paragraphs 11.01.A and 11.01.B.

C. Contractor's Fee: When all the Work is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in paragraph 12.01.C.

- D. Documentation: Whenever the Cost of the Work for any purpose is to be determined pursuant to paragraphs 11.01.A and 11.01.B, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data.

11.02 Allowances

- A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.
- B. Cash Allowances:
1. Contractor agrees that:
 - a. The cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and
 - b. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.
- C. Contingency Allowance:
1. Contractor agrees that a contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.
- D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

11.03 Unit Price Work

- A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.
- B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by Contractor will be made by Engineer subject to the provisions of paragraph 9.07.

- C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.
- D. Owner or Contractor may make a Claim for an adjustment in the Contract Price in accordance with paragraph 10.05 if:
 - 1. The quantity of any item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement;
 - 2. There is no corresponding adjustment with respect any other item of Work; and
 - 3. Contractor believes that Contractor is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a decrease in Contract Price and the parties are unable to agree as to the amount of any such increase or decrease.

ARTICLE 12 CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIME

12.01 Change of Contract Price

- A. The Contract Price may only be changed by a Change Order. Any Claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of paragraph 10.05.
- B. The value of any Work covered by a Change Order or of any Claim for an adjustment in the Contract Price will be determined as follows:
 - 1. Where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of paragraph 11.03); or
 - 2. Where the Work involved is not covered by unit prices contained in the Contract Documents:
 - a. By a lump sum value fixed by the Owner, which may include an allowance for overhead and profit (not necessarily in accordance with paragraph 12.01.C.2); or
 - b. By new unit price items fixed by the Owner (not necessarily derived in accordance with paragraph 11.01); or
 - 3. Where the Work involved is not covered by unit prices contained in the Contract Documents and when this method is selected by the Owner, on the basis of the Cost of the Work (determined as provided in paragraph 11.01) plus a Contractor's fee for overhead and profit (determined as provided in paragraph 12.01.C).

- C. Contractor's Fee: The Contractor's fee for overhead and profit shall be determined as follows:
1. A mutually acceptable fixed fee; or
 2. If a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
 - a. For costs incurred under paragraphs 11.01A.1 and 11.01A.2, the Contractor's fee shall be 15 percent;
 - b. For costs incurred under paragraph 11.01A.3, the Contractor's fee shall be 5 percent based on subcontractor's actual Cost of the Work;
 - c. Where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of paragraph 12.01.C.2.a is that the Subcontractor who actually performs the Work, at whatever tier, will be paid a fee of 15 percent of the costs incurred by such Subcontractor under paragraphs 11.01A.1 and 11.01A.2 and that any higher tier Subcontractor and Contractor will each be paid a fee of 5 percent of the amount paid to the next lower tier Subcontractor; except the maximum total allowable cost to Owner shall be the Cost of the Work plus a maximum collective aggregate fee for Contractor and all tiered Subcontractors of 26.8 percent;
 - d. No fee shall be payable on the basis of costs itemized under paragraphs 11.01A.4, 11.01A.5, and 11.01.B;
 - e. The amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to 5 percent of such net decrease; and
 - f. When both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with paragraphs 12.01.C.2.a through 12.01.C.2.e, inclusive.

12.02 Change of Contract Time

- A. The Contract Times may only be changed by a Change Order. Any Claim for an adjustment in the Contract Times shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of paragraph 10.05.
- B. Any adjustment of the Contract Times covered by a Change Order or any Claim for an adjustment in the Contract Times will be determined in accordance with the provisions of this ARTICLE 12.

- C. All time limits stated in the Contract Documents are of the essence of the Agreement. Contractor shall proceed with the Work at a rate of progress which will insure completion within the Contract Time. It is expressly understood and agreed by and between Contractor and the Owner, that the Contract Time for the Work described herein is a reasonable time, taking into consideration the average climatic and economic conditions, and other factors prevailing in the locality of the Work. If Contractor shall fail to perform the Work required within the Contract Time, or extended Contract Time if authorized by Change order, then Contractor shall pay to the Owner the full amount of liquidated damages specified in the Contract Documents for each calendar day that Contractor shall be in default after the time stipulated in the Contract Documents.

12.03 Delays

- A. Where Contractor is prevented from completing any part of the Work within the Contract Times due to delay beyond the control of Contractor, the Contract Times may be extended in an amount equal to the time lost due to such delay if a Claim is made therefor as provided in paragraph 12.02.A. Delays beyond the control of Contractor shall include, but not be limited to, acts or neglect by Owner, acts or neglect of utility owners or other contractors performing other work as contemplated by ARTICLE 7, fires, floods, epidemics, abnormal weather conditions, freight embargo, acts of war (declared or not declared), or acts of God.
- B. If Owner, Engineer, or other contractors or utility owners performing other work for Owner as contemplated by ARTICLE 7, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor may be entitled to an equitable adjustment in the Contract Price or the Contract Times, or both. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
- C. If Contractor is delayed in the performance or progress of the Work by fire, flood, epidemic, abnormal weather conditions, acts of God, acts or failures to act of utility owners not under the control of Owner, or other causes not the fault of and beyond control of Owner and Contractor, then Contractor may be entitled to an equitable adjustment in Contract Times, if such adjustment is essential to Contractor's ability to complete the Work within the Contract Times. Such an adjustment shall be Contractor's sole and exclusive remedy for the delays described in this paragraph 12.03.C.
- D. Owner, Engineer and the Related Entities of each of them shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of Engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

- E. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delays within the control of Contractor. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of Contractor.

**ARTICLE 13 TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR
ACCEPTANCE OF DEFECTIVE WORK**

13.01 Notice of Defects

- A. Prompt notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor. All defective Work may be rejected, corrected, or accepted as provided in this ARTICLE 13.

13.02 Access to Work

- A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and governmental agencies with jurisdictional interests will have access to the Site and the Work at reasonable times for their observation, inspecting, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's Site safety procedures and programs so that they may comply therewith as applicable.

13.03 Tests and Inspections

- A. Contractor is responsible for the initial and subsequent inspections of Contractor's Work to ensure that the Work conforms to the requirements of the Contract Documents. Contractor shall give Engineer timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel to facilitate required inspections or tests. Contractor shall establish an inspection program and a testing plan acceptable to the Engineer and shall maintain complete inspection and testing records available to Engineer.
- B. Owner shall employ and pay for the services of an independent testing laboratory to perform all non-contractor inspections, tests, or approvals required by the Contract Documents except:
 - 1. For inspections, tests, or approvals covered by paragraphs 13.03.C and 13.03.D;
 - 2. That costs incurred in connection with tests or inspections conducted pursuant to paragraph 13.04.B shall be paid as provided in said paragraph 13.04.C; and
 - 3. As otherwise specifically provided in the Contract Documents.
- C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals; pay all costs in connection therewith; and furnish Engineer the required certificates of inspection or approval.

- D. Contractor shall be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to Owner and Engineer.
- E. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, it must, if requested by Engineer, be uncovered for observation.
- F. Uncovering Work as provided in paragraph 13.03.E shall be at Contractor's expense unless Contractor has given Engineer timely notice of Contractor's intention to cover the same and Engineer has not acted with reasonable promptness in response to such notice.

13.04 Uncovering Work

- A. If any Work is covered contrary to the written request of Engineer, it must, if requested by Engineer, be uncovered for Engineer's observation and replaced at Contractor's expense.
- B. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, furnishing all necessary labor, material, and equipment.
- C. If it is found that the uncovered Work is defective, Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in paragraph 10.05.
- D. If, the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, Contractor may make a Claim therefor as provided in paragraph 10.05.

13.05 Owner May Stop the Work

- A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, Owner may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work shall not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.
- B. If Owner stops Work under paragraph 13.05.A, Contractor shall be entitled to no extension of Contract Time or increase in Contract Price.

13.06 Correction or Removal of Defective Work

- A. Promptly after receipt of notice, Contractor shall correct all defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by Engineer, remove it from the Project and replace it with Work that is not defective. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or removal (including but not limited to all costs of repair or replacement of work of others).
- B. When correcting defective Work under the terms of this paragraph 13.06 or paragraph 13.07, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.
- C. Contractor shall promptly segregate and remove rejected products from the Site.

13.07 Correction Period

- A. If within 1 year after the date of Final Payment (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents) or by any specific provision of the Contract Documents, any Work is found to be defective, or if the repair of any damages to the land or areas made available for Contractor's use by Owner or permitted by Laws and Regulations as contemplated in paragraph 6.11.A is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:
 - 1. Repair such defective land or areas; or
 - 2. Correct such defective Work; or
 - 3. If the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and

4. Satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others or other land or areas resulting therefrom.
- B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by Contractor.
- C. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.
- D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this paragraph 13.07, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.
- E. Contractor's obligations under this paragraph 13.07 are in addition to any other obligation or warranty. The provisions of this paragraph 13.07 shall not be construed as a substitute for or a waiver of the provisions of any applicable statute of limitation or repose.
- F. Repetitive malfunction of an equipment or product item shall be cause for replacement and extension of the correction period to a date one year following acceptable replacement. "Repetitive Malfunction" shall be defined as the third failure of an equipment or product following original acceptance.
- G. Ten months after Substantial Completion Contractor's Project Manager and Superintendent shall attend and actively participate in an onsite half-day Lessons Learned workshop to be led or conducted by the Engineer.

13.08 Acceptance of Defective Work

- A. If, instead of requiring correction or removal and replacement of defective Work, Owner (and, prior to Engineer's recommendation of final payment, Engineer) prefers to accept it, Owner may do so. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness) and the diminished value of the Work to the extent not otherwise paid by Contractor

pursuant to this sentence. If any such acceptance occurs prior to Engineer's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and Owner shall be entitled to an appropriate decrease in the Contract Price, reflecting the diminished value of Work so accepted. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in paragraph 10.05. If the acceptance occurs after such recommendation, an appropriate amount will be paid by Contractor to Owner.

13.09 Owner May Correct Defective Work

- A. If Contractor fails within a reasonable time as defined by the Engineer after written notice from Engineer to correct defective Work or to remove and replace rejected Work as required by Engineer in accordance with paragraph 13.06.A, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, Owner may, after 7 days written notice to Contractor, correct or remedy any such deficiency.
- B. In exercising the rights and remedies under this paragraph 13.09, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, take possession of Contractor's tools, appliances, construction equipment and machinery at the Site, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this paragraph.
- C. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred or sustained by Owner in exercising the rights and remedies under this paragraph 13.09 will be charged against Contractor, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, Owner may make a Claim therefor as provided in paragraph 10.05. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.
- D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this paragraph 13.09.

ARTICLE 14 PAYMENTS TO CONTRACTOR AND COMPLETION

14.01 Schedule of Values

- A. The Schedule of Values established as provided in paragraph 2.07.A will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed.

14.02 Progress Payments

A. Applications for Payments:

1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.
2. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.
3. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

B. Review of Applications:

1. Engineer will, within 10 days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to Owner or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.

2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations on the Site of the executed Work as an experienced and qualified design professional and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:
 - a. The Work has progressed to the point indicated;
 - b. The quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, to the results of any subsequent tests called for in the Contract Documents, to a final determination of quantities and classifications for Unit Price Work under paragraph 9.07, and to any other qualifications stated in the recommendation); and
 - c. The conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.
3. By recommending any such payment Engineer will not thereby be deemed to have represented that:
 - a. Inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract Documents; or
 - b. That there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.
4. Engineer's review of Contractor's Work for neither the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:
 - a. To supervise, direct, or control the Work, or
 - b. For the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or
 - c. For Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or
 - d. To make any examination to ascertain how or for what purposes Contractor has used the moneys paid on account of the Contract Price, or
 - e. To determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.

5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in paragraph 14.02.B.2. Engineer may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent inspections or tests, revise or revoke any such payment recommendation previously made, to such extent as may be necessary in Engineer's opinion to protect Owner from loss because:
 - a. The Work is defective, or completed Work has been damaged, requiring correction or replacement;
 - b. The Contract Price has been reduced by Change Orders;
 - c. Owner has been required to correct defective Work or complete Work in accordance with paragraph 13.09; or
 - d. Engineer has actual knowledge of the occurrence of any of the events enumerated in paragraph 15.02.A.

C. Payment Becomes Due:

1. Owner and Contractor agree that all partial payments and final payments shall be subject to the Georgia Prompt Pay Act, as originally enacted and amended, and as set forth in O.C.G.A. Section 13-11-1 through 13-11-11, except as provided below to the extent authorized by law:
 - a. Interest Rate: For purposes of computing interest on late payments, the rate of interest shall be one-half percent per month or a pro-rata fraction thereof on the unpaid balance as may be due.
 - b. Payment Periods:
 - 1) When Contractor has performed in accordance with the provisions of these Contract Documents, the Owner shall pay Contractor within 45 days of receipt by the Owner or the Owner's representative of any properly completed Application for Payment, based upon work completed or service provided pursuant to the terms of these Contract Documents.
 - 2) When a subcontractor has performed in accordance with the provisions of its subcontract and the subcontract conditions precedent to payment have been satisfied, Contractor shall pay to that subcontractor and each subcontractor shall pay to its subcontractor, within 10 days of receipt by Contractor or subcontractor of each periodic or final payment, the full amount received for such subcontractors work and materials based on work completed or service provided under the subcontract, less retainage expressed as a percentage, but such retainage shall not exceed that retainage being held by the Owner, provided that the subcontractor has provided or provides such satisfactory reasonable assurances of continued performance and financial responsibility to complete its work as Contractor in its reasonable discretion may require, including but not limited to a payment and performance bond.

- c. Interest on Late Payment: Except otherwise provided in these Contract Documents and/or in O.C.G.A. Section 13-11-5, if a periodic or final payment to Contractor is delayed by more than the time allotted in paragraph b of this Prompt Payment Clause or if a periodic or final payment to a subcontractor is delayed more than 10 days after receipt of periodic or final payment by Contractor or Subcontractor, the Owner, Contractor, or Subcontractor, as the case may be, shall pay interest to its Contractor or Subcontractor beginning on the day following the due dates as provided in paragraph b of this Prompt Payment Clause at the rate of interest as provided herein. Interest shall be computed per month or a pro-rata fraction thereof on the unpaid balance. There shall be no compounded interest. No interest is due unless the person or entity being charged interest received "Notice" as provided in paragraph d of this Prompt Payment Clause. Acceptance or progress payments or final payment shall release all claims for interest on said payments.
- d. Notice of Late Payment and Request of Interest: Any person or entity asserting entitlement to interest on any periodic or final payment pursuant to the provisions of this Prompt Payment Clause shall provide "notice" to the person or entity being charged interest of the charging party's claim to interest on late payment. "Notice" shall be in writing, served by U.S. Certified Mail - Return Receipt Requested at the time the properly completed Application for Payment is received by the Owner or Owner's representative, and shall set forth the following:
 - 1) A short and concise statement that interest is due pursuant to the provisions of the Georgia Prompt Pay Act and this Prompt Payment Clause;
 - 2) The principal amount of the periodic or final payment which is allegedly due to the charging party; and
 - 3) The first day and date upon which the charging party alleges that said interest will begin to accrue, pursuant to the provisions of the Georgia Prompt Pay Act and this Prompt Payment Clause.
 - 4) These "Notice" provisions are of the essence; therefore, failure to comply with any requirement as set for the in the Prompt Payment Clause precludes the right to interest on any alleged late payment to which said "Notice" would otherwise apply.
- 2. Integration with the Georgia Prompt Pay Act: Unless otherwise provided in these Contract Documents, the parties hereto agree that these provisions of this Prompt Payment Clause supersede and control all provisions of the Georgia Prompt Pay Act (O.C.G.A. Section 13-11-1 through 13-11-11 (1994)), as originally enacted and as amended, and that any dispute arising between the parties hereto as to whether or not the provisions of this contract or the Georgia Prompt Pay Act control will be resolved in favor of these Contract Documents and its terms.

D. Reduction in Payment:

1. Owner may refuse to make payment of the full amount recommended by Engineer because:
 - a. Claims have been made against Owner on account of Contractor's performance or furnishing of the Work;
 - b. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens;
 - c. There are other items entitling Owner to a set-off against the amount recommended; or
 - d. Items entitling Owner to retain set-offs from the amount recommended, including but not limited to:
 - 1) Owner compensation to Engineer and/or Designer at an estimated average rate of \$120.00 per each extra personnel hour for labor plus expenses because of the following Contractor-caused events:
 - (a) Delays necessitating a time extension for the performance of Engineer's services;
 - (b) Witnessing retesting of corrected or replaced defective Work;
 - (c) Return visits to manufacturing facilities to witness factory testing or retesting;
 - (d) Submittal reviews in excess of three reviews by Engineer for substantially the same Submittal;
 - (e) Evaluation of proposed substitutes and in making changes to Contract Documents occasioned thereby;
 - (f) Hours worked by Contractor, in excess of normal work hours as defined by paragraph 6.02 of the General Conditions, necessitating Engineer or Designer to work overtime;
 - (g) Return visits to the Project for Designers for Commissioning Activities not performed on the initial visit;
 - (h) Fines levied against the Owner for Contractor's performance of NPDES Erosion and Sedimentation Control Measures or other permit violations; and
 - (i) The repair, rebuilding, or restoration of property improvements or facilities by the Owner as outlined in paragraph 6.13;
 - 2) Liability for liquidated damages incurred by Contractor as set forth in the Agreement.
 - e. Owner has actual knowledge of the occurrence of any of the events enumerated in paragraphs 14.02.B.5.a through 14.02B.5.c or paragraph 15.02.A.

2. If Owner refuses to make payment of the full amount recommended by Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, when Contractor corrects to Owner's satisfaction the reasons for such action.
3. If it is subsequently determined that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by paragraph 14.02.C.1.

14.03 Contractor's Warranty of Title

- A. Contractor warrants and guarantees that title to all Work, materials, and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to Owner no later than the time of payment free and clear of all Liens.
- B. No materials or supplies for the Work shall be purchased by Contractor or Subcontractor subject to any chattel mortgage or under a conditional sale contract or other agreement by which an interest is retained by the seller. Contractor warrants that Contractor has good title to all materials and supplies used by Contractor in the Work, free from all liens, claims, or encumbrances.
- C. Contractor shall indemnify and save Owner harmless from all claims growing out of the lawful demands of Subcontractors, laborers, workmen, mechanics, material men, and furnishers of machinery and parts thereof, equipment, power tools, and all supplies, including commissary, incurred in the furtherance of the performance of this Contract. Contractor shall at Owner's request, furnish satisfactory evidence that all obligations of the nature hereinabove designated have been paid, discharged, or waived. If Contractor fails to do so, then Owner may, after having served written notice on the said Contractor either pay unpaid bills, of which Owner has written notice, direct, or withhold from Contractor's unpaid compensation a sum of money deemed reasonably sufficient to pay any and all such lawful claims until satisfactory evidence is furnished that all liabilities have been fully discharged whereupon payment to Contractor shall be resumed, in accordance with the terms of this Contract, but in no event shall the provisions of this sentence be construed to impose any obligations upon Owner to either Contractor or Contractor's Surety. In paying any unpaid bills of Contractor, Owner shall be deemed the agent of Contractor and any payment so made by Owner shall be considered as payment made under the Contract by Owner to Contractor and Owner shall not be liable to Contractor for any such payment made in good faith.

14.04 Substantial Completion

- A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete (except for items specifically listed by Contractor as incomplete) and request that Engineer issue a certificate of Substantial Completion. Specific items of Work that must be completed prior to the Engineer's issuance of a certificate of Substantial Completion include, but are not limited to, the following:
1. Correction of all deficient Work items listed by all state, local, and other regulatory agencies or departments.
 2. All Submittals must be received and approved by the Engineer, including, but not necessarily limited to, the following:
 - a. Record documents;
 - b. Factory test reports, where required;
 - c. Equipment and structure test reports;
 - d. Manufacturer's Certificate of Proper Installation;
 - e. Operating and maintenance information, instructions, manuals, documents, drawings, diagrams, and records; and
 - f. Spare parts lists.
 3. All additional warranty or insurance coverage requirements have been provided.
 4. All manufacturer/vendor-provided operator training is complete and documented.
 5. Other items of Work specified elsewhere in the Project Manual as being prerequisite for Substantial Completion.
- B. Promptly after Contractor's notification; Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.
- C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment. Owner shall have 7 days after receipt of the tentative certificate during which to make written objection to Engineer as to any provisions of the certificate or attached list. If, after considering such objections, Engineer concludes that the Work is not substantially complete, Engineer will within 14 days after submission of the tentative certificate to Owner notify Contractor in writing, stating the reasons therefor. If, after consideration of Owner's objections, Engineer considers the Work substantially complete, Engineer will within said 14 days execute and deliver to Owner and Contractor a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as Engineer believes justified after consideration of any objections from Owner.

- D. At the time of delivery of the tentative certificate of Substantial Completion, Engineer will deliver to Owner and Contractor a written recommendation as to division of responsibilities pending final payment between Owner and Contractor with respect to security, operation, safety, and protection of the Work, maintenance, heat, utilities, insurance, and warranties and guarantees. Unless Owner and Contractor agree otherwise in writing and so inform Engineer in writing prior to Engineer's issuing the definitive certificate of Substantial Completion, Engineer's aforesaid recommendation will be binding on Owner and Contractor until final payment.
- E. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to complete or correct items on the tentative list.

14.05 Partial Use

- A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions.
 - 1. Owner at any time may request Contractor in writing to permit Owner to use or occupy any such part of the Work which Owner believes to be ready for its intended use and substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor will certify to Owner and Engineer that such part of the Work is substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.
 - 2. Contractor at any time may notify Owner and Engineer in writing that Contractor considers any such part of the Work ready for its intended use and substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.
 - 3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of paragraph 14.04 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.
 - 4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of paragraph 5.06 regarding property insurance.

14.06 Final Inspection

- A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

14.07 Final Payment

- A. Application for Payment:
 - 1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance certificates of inspection, marked-up record documents (as provided in paragraph 6.12), and other documents, Contractor may make application for final payment following the procedure for progress payments. Under no circumstances will Contractor's application for final payment be accepted by the Engineer until all Work required by the Contract Documents has been completed.
 - 2. The final Application for Payment shall be accompanied (except as previously delivered) by:
 - a. All documentation called for in the Contract Documents, including but not limited to the evidence of insurance required by paragraph 5.04.B.7;
 - b. Consent of the surety, if any, to final payment;
 - c. A list of all Claims against Owner that Contractor believes are unsettled; and
 - d. Complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of or Liens filed in connection with the Work.
 - 3. In lieu of the releases or waivers of Liens specified in paragraph 14.07.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (i) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (ii) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner or Owner's property might in any way be responsible have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien.

B. Engineer's Review of Application and Acceptance:

1. If on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation – all as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract Documents have been fulfilled, Engineer will indicate in writing Engineer's recommendation of payment and present the Application to Owner for payment. Thereupon Engineer will give written notice to Owner and Contractor that the Work is acceptable subject to the provisions of paragraph 14.09. Otherwise, Engineer will return the Application to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application. If the Application and accompanying documentation are appropriate as to form and substance, Owner shall in accordance with the applicable State or local General Law, pay Contractor the amount recommended by Engineer.

C. Payment Becomes Due:

1. Forty-five days after the presentation to Owner of the Application for Payment and accompanying documentation, the amount recommended by Engineer, less any sum Owner is entitled to set off against Engineer's recommendation, including but not limited to liquidated damages, will become due and will be paid by Owner to Contractor.

14.08 Final Completion Delayed

- A. If, through no fault of Contractor, final completion of the Work is significantly delayed, and if Engineer so confirms, Owner shall, upon receipt of Contractor's final Application for Payment (for Work fully completed and accepted) and recommendation of Engineer, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by Owner for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if bonds have been furnished as required in paragraph 5.01, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by Contractor to Engineer with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

14.09 Waiver of Claims

- A. The making and acceptance of final payment will constitute:
1. A waiver of all Claims by Owner against Contractor, except Claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to paragraph 14.06, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from Contractor's continuing obligations under the Contract Documents; and
 2. A waiver of all Claims by Contractor against Owner other than those previously made in accordance with the requirements herein and expressly acknowledged by Owner in writing as still unsettled.

ARTICLE 15 SUSPENSION OF WORK AND TERMINATION

15.01 Owner May Suspend Work

- A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by notice in writing to Contractor and Engineer which will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor may be granted an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension if Contractor makes a Claim therefor as provided in paragraph 10.05.

15.02 Owner May Terminate for Cause

- A. The occurrence of any one or more of the following events will justify termination for cause:
1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the Progress Schedule established under paragraph 2.07 as adjusted from time to time pursuant to paragraph 6.04);
 2. Contractor's disregard of Laws or Regulations of any public body having jurisdiction;
 3. Contractor's disregard of the authority of Engineer;
 4. Contractor's violation in any substantial way of any provisions of the Contract Documents;
 5. If Contractor abandons the Work, or sublets this Contract or any part thereof, without the previous written consent of Owner, or if the Contract or any claim thereunder shall be assigned by Contractor otherwise than as herein specified;
 6. Contractor is adjudged bankrupt or insolvent;
 7. Contractor makes a general assignment for the benefit of creditors;
 8. A trustee or receiver is appointed for Contractor or for any of Contractor's property;

9. Contractor files a petition to take advantage of any debtor's relief act, or to reorganize under the bankruptcy or applicable laws;
 10. Contractor repeatedly fails to supply sufficient skilled workmen, materials or equipment;
 11. Contractor fails to make satisfactory progress toward timely completion of the Work;
 12. Contractor repeatedly fails to make prompt payments to Subcontractors or Material Suppliers for labor, materials or equipment.
- B. If one or more of the events identified in paragraph 15.02.A occur, Owner may, after giving Contractor (and Surety) 7 days written notice of its intent to terminate the services of Contractor, unless Contractor otherwise cures the deficiency in accordance with paragraph 15.02.D.
1. Exclude Contractor from the Site, and take possession of the Work and of all Contractor's tools, appliances, construction equipment, and machinery at the Site, and use the same to the full extent they could be used by Contractor (without liability to Contractor for trespass or conversion);
 2. Incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere; and
 3. Complete the Work as Owner may deem expedient.
- C. If Owner proceeds as provided in paragraph 15.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Owner arising out of or relating to completing the Work, such excess will be paid to Contractor. If such claims, costs, losses, and damages exceed such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this paragraph Owner shall not be required to obtain the lowest price for the Work performed.
- D. Notwithstanding paragraphs 15.02.B and 15.02.C, Contractor's services will not be terminated if Contractor begins within 7 days of receipt of notice of intent to terminate to correct its failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt of said notice.
- E. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue. Any retention or payment of moneys due Contractor by Owner will not release Contractor from liability.

- F. If and to the extent that Contractor has provided a performance bond under the provisions of paragraph 5.01.A, the termination procedures of that bond shall supersede the provisions of paragraphs 15.02.B, and 15.02.C.
- G. Any termination by Owner pursuant to this paragraph 15.02 may result in the disqualification of Contractor for bidding on future contracts of Owner.

15.03 Owner May Terminate for Convenience

- A. Upon 7 days written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):
 - 1. Completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;
 - 2. Direct expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses;
 - 3. All reasonable costs including 10 percent overhead and profit for Work thereafter performed as specified in such notice; reasonable administrative costs of settling and paying such claims arising out of termination of work under purchase orders or subcontracts; and
 - 4. Reasonable expenses directly attributable to termination.
- B. Contractor shall submit within 30 calendar days after receipt of notice of termination a written statement setting forth its proposal for an adjustment to the Contract Price to include only the incurred costs described in this clause. Owner shall review, analyze, and verify such proposal and negotiate and equitable amount and the Contract may be modified accordingly.
- C. Contractor shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

15.04 Contractor May Stop Work or Terminate

- A. If, through no act or fault of Contractor, (i) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (ii) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (iii) Owner fails for 45 days to pay Contractor any sum finally determined to be due, then Contractor may, upon 7 days written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the Contract and recover from Owner payment on the same terms as provided in paragraph 15.04.

- B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, 7 days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this paragraph 15.04 are not intended to preclude Contractor from making a Claim under paragraph 10.05 for an adjustment in Contract Price or Contract Times nor otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this paragraph.

ARTICLE 16 DISPUTE RESOLUTION

16.01 Methods and Procedures

- A. Dispute resolution methods and procedures, if any, shall be as set forth in these General Conditions. If no method and procedure has been set forth, and subject to the provisions of paragraphs 9.09 and 10.05, Owner and Contractor may exercise such rights or remedies as either may otherwise have under the Contract Documents or by Laws or Regulations in respect of any dispute. Contractor shall carry on the Work and maintain the progress schedule during the dispute resolution proceedings, unless otherwise agreed by Contractor and Owner in writing.

ARTICLE 17 MISCELLANEOUS

17.01 Giving Notice

- A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if:
1. Delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or
 2. Delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.
- B. All notices required of Contractor shall be performed in writing to the appropriate entity.

17.02 Computation of Times

- A. When any period of time is referred to in the Contract Documents by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

17.03 Cumulative Remedies

- A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract Documents. The provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

17.04 Survival of Obligations

- A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will survive final payment, completion, and acceptance of the Work or termination or completion of the Contract or termination of the services of Contractor.

17.05 Controlling Law

- A. This Contract, and any dispute arising from the subject matter of this Contract, is to be controlled by the laws of the State of Georgia. The Superior Court of Athens-Clarke County, Georgia, or if federal jurisdiction is applicable, the United States District Court for the Middle District of Georgia, Athens Division, shall be the proper venue for any litigated disputes arising from this Contract or its subject matter.

17.06 Headings

- A. Articles and paragraph headings are inserted for convenience only and do not constitute parts of these general conditions.

17.07 Addresses

- A. Both the address given in the Bid Form upon which this Agreement is founded, and Contractor's office at or near the site of the Work are hereby designated as places to either of which notices, letters, and other communications to Contractor shall be certified, mailed, or delivered. The delivering at the above named place, or depositing in a postpaid wrapper directed to the first-named place, in any post office box regularly maintained by the post office department, of any notice, letter or other communication to Contractor shall be deemed sufficient service thereof upon date of such delivery or mailing. The first-named address may be changed at any time by an instrument in writing, executed by Contractor, and delivered to and acknowledged by the owner and Engineer. Nothing herein contained shall be deemed to preclude or render inoperative the service of any notice, letter, or other communication upon Contractor personally.

17.08 Forms and Record

- A. The form of all Submittals, notices, change orders and other documents permitted or required to be used or transmitted under the Contract Documents shall be determined by the Engineer.
- B. Contractor shall maintain throughout the term of the Contract, and retain for not less than four years after completion thereof, complete and accurate records of all Contractor's costs which relate to the work performed, including the extra work, under the terms of the Contract.
- C. The Owner, or its authorized representative, shall have the right at any reasonable time to examine and audit the original records.
- D. Records to be maintained and retained by Contractor shall include, but not be limited to:
 - 1. Payroll records accounting for total time distribution of Contractor's employees working full or part time on the Work;
 - 2. Cancelled payroll checks or signed receipts for payroll payments in cash;
 - 3. Invoices for purchases, receiving and issuing documents, and all other unit inventory records for Contractor's stores, stock, or capital items;
 - 4. Paid invoices and cancelled checks for materials purchase, subcontractors, and any other third parties' charges;
 - 5. Original estimate and change order estimate files and detailed worksheets;
 - 6. All project-related correspondence; and
 - 7. Subcontractor and supplier change order files (including detailed documentation covering negotiated settlements).
- E. Owner shall also have the right to audit: any other supporting evidence necessary to substantiate charges related to this agreement (both direct and indirect costs, including overhead allocations as they may apply to costs associated with this agreement); and any records necessary to permit evaluation and verification of Contractor compliance with contract requirements and compliance with provisions for pricing change orders, payments, or claims submitted by Contractor or any payees thereof. Contractor shall also be required to include the right to audit provision in the contracts (including those of a lump-sum nature) of all subcontractors, insurance agents, or any other business entity providing goods and services.

17.09 Assignment

- A. Contractor shall not assign the whole or any part of this Contract or any monies due or to become due hereunder without written consent of the Owner. In case Contractor assigns all or any part of any monies due or to become due under this Contract, the instrument of assignment shall contain a clause substantially to the effect that it is agreed that the right of the assignee in and to any monies due or to become due to Contractor shall be subject to prior liens of all persons, firms, and corporations for services rendered or materials supplied for the performance of the Work called for under this Contract.

17.10 Authority of the Engineer and Designer

- A. The Engineer will act as the Owner's representative during the construction period. The Engineer will decide questions which may arise as to quality and acceptability of products furnished and Work performed. The Engineer will interpret the intent of the Contract Documents in a fair and unbiased manner. The Engineer will make visits to the site and determine if the Work is proceeding in accordance with the Contract Documents. The Engineer will judge as to the accuracy of quantities submitted by Contractor in partial payment estimates and the acceptability of the Work which these quantities represent. The decisions of the Engineer will be final and conclusive.
- B. The Engineer shall call for the services of the Designer in the following activities:
 - 1. Performing technical reviews of shop drawings, product data and samples, after the Engineer has reviewed and deem them acceptable for a detailed review;
 - 2. Interpreting the intent of the Contract Documents, when in the opinion of the Engineer, the intent is not apparent;
 - 3. Reviewing proposed change orders, when such changes may affect the intent of the original design;
 - 4. Responding to Contractor's Requests For Information, when in the opinion of the Engineer, the Engineer does not have sufficient knowledge to respond to the request;
 - 5. Reviewing changes to the Project, which have first been reviewed and recommended by the Engineer for acceptance, as to their effect on the intent of the original design;
 - 6. Performing a final pre-startup inspection;
 - 7. Observing the final testing and startup of the Project;
 - 8. Determining that the Project is ready for final acceptance;
 - 9. Performing technical reviews of operation and maintenance manuals, after the Engineer has reviewed and deem them acceptable for a detailed review; and
 - 10. Attending Progress Meetings, periodic site visits, input on quality and acceptability of products furnished and Work performed.

- C. Designer will be authorized to observe all Work done and all products furnished, including preparation, fabrication, and manufacture of the products to be used, but the Designer will not be authorized to alter or waive any requirements of the Contract Documents. The Designer may reject products or suspend the Work until any question at issue can be referred to and decided by the Engineer.
- D. The Engineer shall provide the Designer with the following:
 - 1. Minutes of all meetings between the Engineer and Contractor;
 - 2. An updated Schedule of Submittals, as prepared by Contractor; and
 - 3. A copy of all the Engineer's responses to Requests for Information.
- E. All communication between the Designer and Contractor shall go through the Engineer. There shall be no duties or responsibilities between Contractor and Designer.
- F. Owner shall decide all conflicts between the Engineer and Designer when the conflicts are based on opinion or interpretation of the Contract Documents.

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SECTION 00828
INSURANCE

PART 1 GENERAL

1.01 General:

- A. The following general requirements apply to any and all Work under this Contract. All Contractors and Subcontractors of any tier must comply. The Owner reserves the right to adjust or waive any or all requirements based on receipt of additional information pertinent to this Contract.
- B. Evidence of Insurance Required Before Work Begins: No Contractor or Subcontractor shall commence any work of any kind under this Contract until all insurance requirements contained in this Contract shall have been complied with as outlined below, and until evidence of such compliance satisfactory to the Owner as to form and content has been filed with the Owner. The Accord Certificate of Insurance or a pre-approved substitute is the required form in all cases where reference is made to a Certificate of Insurance or an approved substitute.
- C. Minimum Financial Security Requirements:
 - 1. Any and all companies providing insurance required by this Contract must meet certain minimum financial security requirements set forth below. These requirements conform to the ratings published by A.M. Best & Co. in the current Best's Key Rating Guide - Property-Casualty. The ratings for each company must be indicated on the Accord Certificate of Insurance Form. For all Contracts, regardless of size, companies providing insurance must have:
 - a. Current Best's Rating not less than A, and
 - b. Current Best's Financial Size Category not less than Class VII, and
 - c. Current authorization to conduct and transact insurance contracts by the Insurance Commissioner, State of Georgia.
 - 2. If the issuing company does not meet these minimum requirements, or for any other reason shall be or become unsatisfactory to the Owner, written notification shall be mailed by the Owner to the Contractor who shall promptly obtain a new policy issued by an insurer acceptable to the Owner, and shall submit evidence of the same to the Owner as required herein.

3. Upon failure of the Contractor to furnish, deliver, and maintain such insurance as herein provided, this Contract, at the election of the Owner, may be declared forthwith suspended, discontinued, or terminated. Failure of the Contractor to take out and/or maintain any required insurance shall not relieve the Contractor from any liability under the Contract, nor shall these requirements be construed to conflict with the obligation of the Contractor concerning indemnification.
- D. Insurance Required for Duration of Contract: Any and all Insurance required by this Contract shall be maintained during the entire length of this Contract, including any extensions thereto, and until all Work has been completed to the satisfaction of the Owner. The Owner shall have the right to inquire into the adequacy of the insurance coverages set forth in this Contract and to negotiate such adjustments as reasonably appear necessary.
- E. The Contractor shall submit to the Owner, along with the Insurance Certificate(s), a copy of the Insurer's cancellation notice for any and all Insurance policies required by the Contract.
- F. Additional Insureds: The Owner, Engineer, and Designer shall be covered as Additional Insured under any and all Insurance required by this Contract, and such insurance shall be primary with respect to the Additional Named Insured. Confirmation of this shall appear on the Accord Certificate of Insurance, and on any and all applicable insurance policies. However, this requirement does not apply to Workers' Compensation or Professional Liability Insurance. Copies of endorsements showing that the Owner and each additional insured identified herein have been added to the policies as an additional insured shall be attached to each of the certificates. Include the following parties or entities as additional insured:
 1. The Unified Government of Athens-Clarke County, 301 College Avenue, Athens, Georgia 30601.
 2. Jacobs Engineering Group, Inc., Ten 10th Street NW, Suite 1400, Atlanta, GA 30309.
 3. Design Professional as named in the Contract Agreement.
- G. Mandatory Subcontractor Compliance: Contractor shall incorporate a copy of these insurance requirements in each and every contract with each and every Subcontractor of any tier, and shall require each and every Subcontractor of any tier to comply with all such requirements. Contractor agrees that if for any reason Subcontractor fails to procure and maintain insurance as required, all such required insurance shall be procured and maintained by Contractor at Contractor's expense.

H. Authorization and Licensing of Agent:

1. Each and every agent acting as Authorized Representative on behalf of a Company affording coverage under this Contract shall warrant, when signing the Accord Certificate of Insurance, that specific authorization has been granted by the companies for the agent to bind coverage as required and to execute the Accord Certificate of Insurance as evidence of such coverage; that the coverage required by the Owner may be broader than the original policies; and that these requirements have been conveyed to the Companies, which acknowledge and assent to these terms and conditions.
2. In addition, each and every agent shall warrant when signing the Accord Certificate of Insurance that the agent is licensed to do business in the State of Georgia and that the company or companies are currently in good standing in the State of Georgia.

1.02 Certificates of Insurance:

- A. Contractor shall deliver to Owner, at the time of execution of the Contract Agreement, with copies to each additional insured, certificates of insurance (and other evidence of insurance requested by Owner or any other additional insured) which Contractor is required to purchase and maintain.
- B. Copies of endorsements showing that the Owner and each additional insured identified herein have been added to the policies as an additional insured shall be attached to each of the certificates.
- C. Insurance certificate must specifically show coverage applies for contractual liability for Contractor's indemnity obligations under Paragraphs 6.07, 6.11 and 6.20 of the General Conditions.
- D. In addition to the requirement for the policy limits specified below, the applicable insurance certificate must show that the entire aggregate policy limits for general liability coverage will apply specifically for the Project.
- E. Each insurance certificate for all coverages other than Workers' Compensation Insurance must show that a waiver of rights of recovery against any of the insured or the additional insured is in effect.
- F. Certificate for Contractor's liability insurance must show coverage of claims for damages because of bodily injury, sickness or death of any person or property damage resulting from the ownership, maintenance, or use of mobile equipment.

- G. Each insurance certificate must show coverage is underwritten with an insurance carrier who is rated no less than the Minimum Financial Security Requirements provided above.
- H. Certificate for Workers' Compensation Insurance must show that coverage includes executive officers and Contractor's leased employees, temporary staff, and part-time employees.
- I. Owner may waive specific insurance coverages set forth in Paragraph 5.04 of the General Conditions where Contractor provides equivalent insurance coverage by way of a different combination of policies.

1.03 Coverages and Limits:

- A. The Contractor shall provide all coverages listed below.
- B. Workers' Compensation and Employer's Liability Insurance: The Contractor shall procure and maintain Workers' Compensation and Employer's Liability Insurance in the following limits, such insurance to cover each and every employee who is or may be engaged in work under the Contract:

Workers' Compensation	Statutory
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Employer's Liability

Bodily Injury by Accident/Disease	\$1,000,000 each accident
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Bodily Injury by Accident/Disease	\$1,000,000 each employee
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Bodily Injury by Accident/Disease	\$1,000,000 policy limit
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- C. Comprehensive General Liability Insurance: The Contractor shall procure and shall maintain, during the life of the Contract Agreement, such Comprehensive General Liability and Broad Form Property Damage Insurance as shall protect Contractor and any Subcontractor performing work covered by this Contract from claims for damages for bodily injury, including accidental death, as well as from claims for property damages, which may arise from operations under the Contract Agreement, whether such operations are by the Contractor or by any Subcontractor or by anyone directly or indirectly employed by either Contractor or Subcontractor. The amount of insurance shall not be less than the following:

General Aggregate for each annual period	\$6,000,000.00
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Products Comp/Ops Aggregate for each annual period	\$2,000,000.00
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Personal and Advertising Injury	\$1,000,000.00
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Each Occurrence	\$3,000,000.00
Fire Damage (Any one fire)	\$50,000.00
Medical Expenses (Any one person)	\$10,000.00

The insurance shall include coverage of the following hazards:

Underground
Explosion/Collapse

Note: For the purpose of insurance coverage, each detonation of blasting is a single occurrence.

Contractor may provide General Liability, Automobile Liability, and Employer's Liability with lower limits provided that the umbrella/excess liability insurance limits are increased such that the total of the basic limits and umbrella/excess limits remains the same or higher.

- D. Owner's Protective Liability: The Contractor shall procure and maintain, during the life of the Contract Agreement, Owner's Protective Liability Insurance with the same limits as the Comprehensive General Liability coverage.
- E. Excess Liability: Contractor shall procure and maintain Umbrella/Excess Liability insurance providing protection for at least the hazards insured under the primary liability policies with the following limits:

General Aggregate	\$3,000,000.00
Each Occurrence	\$3,000,000.00

- F. Automobile Liability: The Contractor shall procure and maintain during the life of the Contract Agreement, Comprehensive Automobile Liability Insurance. The insurance shall include coverage for owned, non-owned and hired vehicles. Amounts shall not be less than the following:

Comprehensive Single Limits (CSL)	\$1,000,000.00
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- G. Pollution Liability: Contractor shall obtain Pollution Liability insurance covering third party bodily injury and property damage. The amount of insurance shall not be less than the following:

General Aggregate	\$5,000,000.00
Each Occurrence	\$5,000,000.00

- H. Materials and Equipment Floater: The Contractor shall procure and maintain, during the life of the Contract Agreement, Materials and Equipment Floater Insurance to protect the interests of the Owner, the Contractor, and Subcontractors against loss by vandalism, malicious mischief, and all hazards included in a standard All Risk Endorsement. The amount of the insurance shall at all times equal or exceed the full amount of the Contract. The policies shall be in the names of the Owner and the Contractor.
- I. Property Insurance: The Contractor shall obtain "All Risk" Property Insurance for the Contractor's tools, personal property, or equipment (including rail or conveyor systems, ventilation systems, office trailers, and other equipment that will not become part of the final completed work and is not covered in another insurance policy required for this Project) whether owned, rented, or leased.
- J. Deductibles and Self-Insured Retention: Any deductibles or self-insured retentions will be borne by the Contractor. All deductibles or self-insured retentions must be declared to and approved by the Owner. At the option of the Owner, either the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects the Owner, its officers, officials, and employees; or the Contractor shall procure a bond guaranteeing payment of losses and related investigations, claims administration, and defense expenses. The costs of implementation of such option will be addressed by a change order.
- K. The Contractor is responsible for losses within the deductible limits.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

SECTION 01010
SUMMARY OF WORK

PART 1 GENERAL

1.01 DESCRIPTION

- A. The Work to be performed under this Contract shall consist of providing all labor, materials, tools, equipment, and incidentals, and performing all work required to construct complete in place and ready to operate:
 - 1. Install, maintain and remove erosion and sedimentation control devices.
 - 2. Remove, dewater, haul, and dispose of sludge solids from the existing sludge lagoon at the J. G. Beacham Water Treatment Plant (WTP).
 - 3. Site restoration.
- B. All Work described above shall be performed as shown on the Drawings and as specified.

1.02 PROJECT LOCATION

- A. All of the Project is located at J. G. Beacham WTP in Athens-Clarke County, at 800 Water Works Drive, Athens, GA 30601. The equipment and materials to be furnished will be installed at the locations shown on the Drawings.

1.03 QUANTITIES

- A. The Owner reserves the right to alter the quantities of work to be performed or to extend or shorten the improvements at any time when and as found necessary, and the Contractor shall perform the work as altered, increased, or decreased. Payment for such increased or decreased quantity will be made in accordance with Article 11 of the General Conditions. No allowance will be made for any change in anticipated profits, nor shall such changes be considered as waiving or invalidating any conditions or provisions of the Contract and Bond.

1.04 PARTIAL OWNER OCCUPANCY

- A. The existing facilities to which these improvements are being made will continue operation during the period of construction.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

SECTION 01011
UNIQUE REQUIREMENTS

PART 1 GENERAL

1.01 SCOPE

- A. The scope of this section is to convey to the Contractor unique and unusual stipulations and requirements which have been established for this Project. Some of the stipulations and requirements are a result of negotiations with various entities and organizations which have an interest in this Project. Some requirements are based on technical aspects of the Project which are not otherwise conveyed to the Contractor. The provisions of this section shall supersede the provisions of the Division 1 through 49 Specifications but shall not supersede the Bidding Requirements, Contract Forms or conditions of the Contract.

1.02 SUBMITTALS

- A. Sequence Submittal: Submit a proposed sequence in accordance with Section 01340, Submittals, Shop Drawings, Product Data and Samples with appropriate times of starting and completion of tasks to Engineer for review.

1.03 EXISTING FACILITY OPERATIONS

- A. During sludge removal operations, backwash water and sludge blowdown will continue to flow into the backwash lagoon. The backwash lagoon must remain structurally sound and available for normal plant operations throughout the entire sludge removal operation.
- B. All temporary piping, conduit or other utilities that cross plant roadways shall have ramps and bridging installed such that the utilities are protected while permitting the passage of normal 2-wheel drive pickup traffic.
- C. The Contractor shall coordinate the work with the Owner so that the construction will not restrain or hinder the operation of the existing facilities. If, at any time, any portion of the facilities are out of service, the Contractor must obtain approval from the Owner as to the date, time and length of time that portion of the facilities are out of service, giving a minimum of 2 working days' notice.
- D. Before any roadway or facilities are temporarily blocked off, the Owner's approval shall be obtained to coordinate operations for the facilities, giving a minimum of 2 working days' notice.

1.04 UTILITY NOTIFICATION AND COORDINATION

- A. Coordinate work with various utilities within Project limits. Notify applicable utilities prior to commencing work, if damage occurs, or if conflicts or emergencies arise during work.
 - 1. Georgia Power Company:
Phone: 706-357-6543
 - 2. Atlanta Gas Light Company:
Phone: 1-800-427-5463
 - 3. Call Before You Dig (Utilities Protection Center of Georgia):
Phone: 1-800-282-7411
 - 4. Athens-Clarke County DOT (ACCDOT):
Phone: 706-613-3440
 - 5. Georgia DOT (GDOT):
Phone: 404-656-5267

1.05 SEQUENCING

- A. The Contractor shall be solely responsible for all construction sequencing.

1.06 FINES ASSOCIATED WITH NPDES PERMITS

- A. Any fine levied against the Owner for failure of Contractor to properly maintain required National Pollution Discharge Elimination System (NPDES) erosion and sediment control measures or any other related requirements will be doubled in their amounts and deducted as set-offs from payment due Contractor.
- B. Contractor must maintain the existing treatment facility's National Pollution Discharge Elimination System (NPDES) permit requirements at all times. Fines for violations caused by the Contractor's operations will be paid by funds deducted from the Contractor's pay request. A copy of the facility's NPDES permit is included as Appendix A.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

**SECTION 01016
OCCUPANCY**

PART 1 GENERAL

1.01 PARTIAL OCCUPANCY BY OWNER

- A. Whenever, in the opinion of the Engineer, any section or portion of the Work or any structure is in suitable condition, it may be put into use upon the written order of the Engineer and such usage will not be held in any way as an acceptance of said Work or structure, or any part thereof, or as a waiver of any of the provisions of these Specifications and the Contract. Pending final completion and acceptance of the Work, all necessary repairs and replacements, due to defective materials or workmanship or operations of the Contractor, for any section of the Work so put into use shall be performed by the Contractor at Contractor's own expense.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

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SECTION 01025
MEASUREMENT AND PAYMENT

PART 1 GENERAL

1.01 SCOPE

- A. Section 00300, Bid Form lists each item of the Project for which payment will be made. No payment will be made for any items other than those listed in the Bid.
- B. Required items of work and incidentals necessary for the satisfactory completion of the work which are not specifically listed in the Bid, and which are not specified in this section to be measured or to be included in one of the items listed in the Bid, shall be considered as incidental to the work. All costs thereof, including Contractor's overhead costs and profit, shall be considered as included in the lump sum or unit prices bid for the various items. The Contractor shall prepare the Bid accordingly.
- C. Work includes furnishing all plant, labor, equipment, tools, and materials not furnished by the Owner, and performing all operations required to complete the work satisfactorily, in place, as specified and as indicated on the Drawings.
- D. All estimated quantities stipulated in the Bidder's Unit Price Form or other Contract Documents are approximate and are to be used only:
 - 1. As a basis for estimating the probable cost of the Work.
 - 2. For the purpose of comparing the bids submitted for the Work.
- E. The basis of payment for work and materials will be the actual amount of work done and materials furnished. Payment for assessment and assessment-related activities or any other items of work for payment will be made on a linear foot, vertical foot, square foot, square yard, cubic yard, tons, or each based on the Contractor's measurement, contingent on verification by the Owner or Owner's Representative. Contractor agrees he will make no claim for damages, anticipated profits, or otherwise on account of any difference between the amounts of work actually performed and materials actually furnished.
- F. When submitting pay requests for periodic payment, the following documentation should be submitted at a minimum:
 - 1. Contractor Payment Checklist.
 - 2. Application for Payment Form.

3. Payments Summary Sheet.
4. Narrative of Work Performed.
5. Updated Schedule for Assigned Work Activities.
6. Photo Documentation of Construction Activities Illustrating Pre and Post Conditions.

G. Additional instructions and/or requirements may be provided by the Owner or Engineer at the project Pre-Construction meeting.

1.02 REFERENCES

A. Codes, specifications, and standards:

1. Manual for Erosion and Sediment Control of Georgia, latest edition.
2. Georgia Environmental Protection Division, Rule 391-3-6-.17 Water Quality Control.

1.03 DESCRIPTIONS

- A. Measurement of an item of work will be by the unit indicated in the Bid.
- B. Payment will include all necessary and incidental related work not specified to be included in any other item of work listed in the Bid.
- C. Unless otherwise stated in individual sections of the Specifications or in the Bid, no separate payment will be made for any item of work, materials, parts, equipment, supplies, or related items required to perform and complete the work. The costs for all such items required shall be included in the price bid for the item of which it is a part.
- D. Payment will be made by extending unit prices multiplied by quantities provided and then summing the extended prices to reflect actual work. Such price and payment shall constitute full compensation to the Contractor for furnishing all plant, labor, equipment, tools, and materials not furnished by the Owner and for performing all operations required to provide to the Owner the entire Project, complete in place, as specified and as indicated on the Drawings.
- E. "Products" shall mean materials or equipment permanently incorporated into the work.

1.04 MOBILIZATION

- A. All fixed costs for the Project shall be included in the lump sum price bid for item 1. This shall include, but not be limited to, mobilization, demobilization, and Project setup.
- B. Fifty percent of the lump sum amount will be eligible for payment upon commencement of the dredging operation. The balance will be eligible for payment at the completion of the Project.

1.05 EROSION, SEDIMENTATION AND POLLUTION CONTROL

- A. General:
 - 1. No separate payment shall be made for temporary and/or permanent erosion and sedimentation controls, except as noted below. All other temporary and/or permanent erosion and sedimentation control costs shall be included in the unit price bid for the item to which it pertains.
 - 2. Quantities for payment shall be based upon actual quantity constructed and authorized by the Engineer.
 - 3. Payment will constitute full compensation for all costs associated with pay item, including installation, maintenance, repair, and removal.
 - 4. All items to be installed and maintained per the Manual for Erosion and Sediment Control of Georgia, latest edition.
- B. Payment Schedule:
 - 1. For the following items, Contractor shall be paid 85 percent of Extended Bid Unit Price at installation and 15 percent of Extended Bid Unit Price at removal, upon submittal of required documentation to the Engineer. The Engineer shall inspect prior to both payments.
 - a. Co – Construction Exit.
 - b. Sd1 – Sediment Barrier (Silt Fence).
 - 2. For all remaining items within “EROSION, SEDIMENTATION AND POLLUTION CONTROL” section of the Bid Form, Contractor shall be paid 100 percent of Extended Bid Unit Price at installation/construction.
- C. Construction Exits (Co): All costs for construction exits, including installation, maintenance, repair, and removal, shall be included in the unit price bid.

- D. Sediment Barrier (Silt Fence) (Sd1): All costs for silt fence, for all types, including installation, maintenance, repair, and removal, shall be included in the unit price bid.
- E. Grassing (DS2 and DS3):
 - 1. The unit price bid for Grassing shall be for one-time cleanup of the area to be grassed and grassing, whether permanent, temporary, or both, regardless of width of disturbed area. Any other costs for labor, materials, and equipment for cleanup and grassing of the disturbed area shall be included in the unit price bid for the item to which it pertains.
 - 2. No additional payment will be made for those areas where the Contractor must reseed due to inadequate watering and maintenance; loss of seeds caused by site erosion (wind and rain), inadequate germination of the seeds, inadequate coverage/density, or providing permanent species at the appropriate season after temporary grassing has been performed.
 - 3. Grass seeding shall match in kind the existing adjacent grass of previously landscaped areas.
 - 4. No additional payment will be made for providing a temporary species of grass where the seasonal limitations do not allow for the proper germination of a permanent species of grass. Any additional cost anticipated for sowing a temporary species shall be included in the price bid for the item to which it pertains.
 - 5. Measurement for payment for grassing shall be for the actual area grassed, as directed and approved by the Engineer.

1.06 SLUDGE CLEANOUT, DEWATERING, HAULING AND DISPOSAL

- A. All variable costs for the Project shall be included in the unit price bid. Quantities eligible for payment will be each ton of dry solids, as determined by the Total Solids analysis, disposed at an approved location. The Contractor shall be paid for the actual quantity in dry tons removed and disposed in accordance with the unit cost per dry ton bid whether greater than or less than 7,000 dry tons.
- B. Sludge sampling and testing to determine percent total solids content (percent TS) will be performed by the Owner and will follow established laboratory procedures.

- C. The quantity of dry tons of residuals will be calculated on a per truckload basis by the Engineer. The Contractor shall maintain a record of truck loads (including date, time, driver, and truck number, if any) and uniform manifest documents indicating the net weights (verified by the scale operator) and submit the documents to the Engineer with the request for payment.

$$\text{Amount Due Contractor} = W \times \%TS \times UP$$

Where:

W = Weight of truckload (tons) as reported on the uniform manifest document.

%TS = Percent total solids of residuals for the day the truckload is hauled, as determined by the Owner's laboratory analysis.

UP = Unit Price (in dollars) per Dry Ton

1.07 CASH ALLOWANCES

A. General:

1. The Contractor shall include in the Bid Total all allowances stated in the Contract Documents. These allowances shall cover the net cost of the services provided by a firm selected by the Owner. The Contractor's handling costs, labor, overhead, profit, and other expenses contemplated for the original allowance shall be included in the items to which they pertain and not in allowances.
2. No payment will be made for nonproductive time on the part of testing personnel due to the Contractor's failure to properly coordinate testing activities with the work schedule or the Contractor's problems with maintaining equipment in good working condition. The Contractor shall make all necessary excavations and shall supply any samples of materials necessary for conducting compaction and density tests.
3. No payment shall be provided for services which fail to verify required results.

- B. Should the net cost be more or less than the specified amount of the allowance, the Contract will be adjusted accordingly by change order. The amount of change order will not recognize any changes in handling costs at the site, labor, overhead, profit, and other expenses caused by the adjustment to the allowance.

C. Documentation:

1. Submit copies of the invoices for work proposed under the respective allowance during the payment period with each periodic payment request from the firm providing the services.
2. Submit results of services provided which verify required results.

D. Schedule of Cash Allowances:

1. Materials Sampling and Testing: Allow the amount provided in the Bid for the services of a testing laboratory, selected by the Owner, to conduct analytical tests for percent of solids of the residuals being hauled to disposal.
2. Engineer-Directed Work: This allowance may be used, as authorized and directed by the Engineer, to pay the cost of additional work resulting from unforeseen Site conditions or any other items of work. This work shall be added to the overall Work only by Change Order, as defined in the General Conditions. The cost amounts of additional work shall be determined as specified in the General Conditions. This work is not shown or specified in the Drawings and Specifications bid by the Contractor and is not covered by another line item in the Bid, and may be required only in the event the Engineer or Owner establishes the need for additional work.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

**SECTION 01060
REGULATORY REQUIREMENTS**

PART 1 GENERAL

1.01 SCOPE

- A. Permits: No permits or licenses are required for the execution of the Project.
- B. The Contractor shall take proper safety and health precautions to protect the Work, the workers, the public, and the property of others.
- C. The Contractor shall also be responsible for all materials delivered and work performed until completion and acceptance of the Work.
- D. Contractor shall file the Notice of Intent required under the National Pollutant Discharge Elimination System (NPDES) General Permit GAR100002.
- E. Contract shall conduct its operations and provide the means necessary as to allow the WTP sludge lagoon discharge to comply with the requirements of the WTP's National Pollutant discharge Elimination System (NPDES) Permit No. GAG640000. A copy is included in Appendix A.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

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SECTION 01091
CODES AND STANDARDS

PART 1 GENERAL

1.01 DESCRIPTION

- A. Whenever reference is made to conforming to the standards of any technical society, organization, body, code, or standard, it shall be construed to mean the latest standard, code, specification, or tentative specification adopted and published at the time of advertisement for Bids. This shall include the furnishing of materials, testing of materials, fabrication, and installation practices. In those cases where the Contractor's quality standards establish more stringent quality requirements, the more stringent requirement shall prevail. Such standards are made a part hereof to the extent which is indicated or intended.
- B. The inclusion of an organization under one category does not preclude that organization's standards from applying to another category.
- C. In addition, all work shall comply with the applicable requirements of local codes, utilities and other authorities having jurisdiction.
- D. All material and equipment, for which an Underwriters Laboratories (UL) Standard, an American Gas Association (AGA) or National Sanitation Foundation (NSF) approval, or an ASME requirement is established, shall be so approved and labeled or stamped. The label or stamp shall be conspicuous and not covered, painted, or otherwise obscured from visual inspection.
- E. The standards which apply to this Project are not necessarily restricted to those organizations which are listed in Article 1.02 of this section.

1.02 STANDARD ORGANIZATIONS

A. Piping and Valves:

ACPA	American Concrete Pipe Association
ANSI	American National Standards Institute
API	American Petroleum Institute
ASME	American Society of Mechanical Engineers
AWWA	American Water Works Association
CISPI	Cast Iron Soil Pipe Institute
DIPRA	Ductile Iron Pipe Research Association
FCI	Fluid Controls Institute
MSS	Manufacturers Standardization Society

NCPI	National Clay Pipe Institute
NSF	National Sanitation Foundation
PPI	Plastic Pipe Institute Uni-Bell PVC Pipe Association

B. Materials:

AASHTO	American Association of State Highway and Transportation Officials
ANSI	American National Standards Institute
ASTM	American Society for Testing and Materials

C. Painting and Surface Preparation:

NACE	National Association of Corrosion Engineers
SSPC	Steel Structures Painting Council

D. Steel and Concrete:

ACI	American Concrete Institute
AISC	American Institute of Steel Construction, Inc.
AISI	American Iron and Steel Institute
CRSI	Concrete Reinforcing Steel Institute
NRMA	National Ready-Mix Association
PCA	Portland Cement Association
PCI	Prestressed Concrete Institute

E. Welding:

ASME	American Society of Mechanical Engineers
AWS	American Welding Society

F. Government and Technical Organizations:

AIA	American Institute of Architects
APHA	American Public Health Association
APWA	American Public Works Association
ASA	American Standards Association
ASAE	American Society of Agricultural Engineers
ASCE	American Society of Civil Engineers
ASQC	American Society of Quality Control
ASSE	American Society of Sanitary Engineers
CFR	Code of Federal Regulations
CSI	Construction Specifications Institute
EDA	Economic Development Administration
EPA	Environmental Protection Agency
FCC	Federal Communications Commission
FmHA	Farmers Home Administration
FS	Federal Specifications

IAI	International Association of Identification
ISEA	Industrial Safety Equipment Association
ISO	International Organization for Standardization
ITE	Institute of Traffic Engineers
NBFU	National Board of Fire Underwriters
NFPA	National Fluid Power Association
NBS	National Bureau of Standards
NISO	National Information Standards Organization
OSHA	Occupational Safety and Health Administration
SI	Salt Institute
SPI	The Society of the Plastics Industry, Inc.
USDC	United States Department of Commerce
WEF	Water Environment Federation

G. General Building Construction:

AHA	American Hardboard Association
AHAM	Association of Home Appliance Manufacturers
AITC	American Institute of Timber Construction
APA	American Parquet Association, Inc.
APA	American Plywood Association
BHMA	Builders Hardware Manufacturers Association
BIFMA	Business and Institutional Furniture Manufacturers Association
DHI	Door and Hardware Institute
FM	Factory Mutual Fire Insurance Company
HPMA	Hardwood Plywood Manufacturers Association
HTI	Hand Tools Institute
IME	Institute of Makers of Explosives
ISANTA	International Staple, Nail and Tool Association
ISDSI	Insulated Steel Door Systems Institute
IWS	Insect Screening Weavers Association
MBMA	Metal Building Manufacturers Association
NAAMM	National Association of Architectural Metal Manufacturers
NAGDM	National Association of Garage Door Manufacturers
NCCLS	National Committee for Clinical Laboratory Standards
NFPA	National Fire Protection Association
NFSA	National Fertilizer Solutions Association
NKCA	National Kitchen Cabinet Association
NWMA	National Woodwork Manufacturers Association
NWWDA	National Wood Window and Door Association
RMA	Rubber Manufacturers Association
SBC	SBCC Standard Building Code
SDI	Steel Door Institute
SIA	Scaffold Industry Association
SMA	Screen Manufacturers Association

SPRI	Single-Ply Roofing Institute
TCA	Tile Council of America
UBC	Uniform Building Code

H. Roadways:

AREA	American Railway Engineering Association
DOT	Georgia Department of Transportation
SSRBC	Standard Specifications, Construction of Transportation Systems, Georgia Department of Transportation
DOT&PW	Athens-Clarke County Department of Transportation and Public Works

I. Plumbing:

AGA	American Gas Association
NSF	National Sanitation Foundation
PDI	Plumbing Drainage Institute
SPC	SBCC Standard Plumbing Code

1.03 SYMBOLS

A. Symbols and material legends shall be as scheduled on the Contract Drawings.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

SECTION 01200
PROJECT MEETINGS

PART 1 GENERAL

1.01 SCOPE

- A. Work under this section includes all scheduling and administration of pre-construction and progress meetings as herein specified and necessary for the proper and complete performance of this Work.
- B. Scheduling and Administration by the Engineer:
 - 1. Prepare agenda.
 - 2. Make physical arrangements for the meetings.
 - 3. Preside at meetings.
 - 4. Record minutes and include significant proceedings and decisions.
 - 5. Distribute copies of the minutes to participants.

1.02 PRECONSTRUCTION CONFERENCE

- A. The Engineer shall schedule the preconstruction conference prior to the issuance of the Notice to Proceed.
- B. Representatives of the following parties are to attend the meeting:
 - 1. Owner.
 - 2. Engineer.
 - 3. Contractor and superintendent.
 - 4. Major subcontractors.
 - 5. Representatives of governmental or regulatory agencies when appropriate.
- C. The agenda for the preconstruction conference shall consist of the following at a minimum:
 - 1. Distribution and discussion a list of major subcontractors and a tentative construction schedule.
 - 2. Critical work sequencing.
 - 3. Designation of responsible personnel and emergency telephone numbers.
 - 4. Processing of field decisions and change orders.
 - 5. Adequacy of distribution of Contract Documents.
 - 6. Schedule and submittal of shop drawings, product data, and samples.
 - 7. Pay request format, submittal cutoff date, pay date and retainage.
 - 8. Procedures for maintaining record documents.

9. Use of premises, including office and storage areas and Owner's requirements.
10. Major equipment deliveries and priorities.
11. Safety and first aid procedures.
12. Security procedures.
13. Housekeeping procedures.
14. Work hours.

1.03 PROJECT COORDINATION MEETINGS

- A. Schedule regular monthly meetings as directed by the Engineer.
- B. Hold called meetings as the progress of the Work dictates.
- C. The meetings shall be held at the location indicated by the Engineer.
- D. Representatives of the following parties are to attend the meetings:
 1. Engineer.
 2. Contractor and superintendent.
 3. Major subcontractors as pertinent to the agenda.
 4. Owner's representative as appropriate.
 5. Representatives of governmental or other regulatory agencies as appropriate.
- E. The minimum agenda for progress meetings shall consist of the following:
 1. Review and approve minutes of previous meetings.
 2. Review work progress since last meeting.
 3. Note field observations, problems, and decisions.
 4. Identify problems which impede planned progress.
 5. Review offsite fabrication problems.
 6. Review Contractor's corrective measures and procedures to regain planned schedule.
 7. Review Contractor's revision to the construction schedule as outlined in the Supplementary Conditions.
 8. Review submittal schedule; expedite as required to maintain schedule.
 9. Maintain quality and work standards.
 10. Review changes proposed by the Owner for their effect on the construction schedule and completion date.
 11. Complete other current business.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

**SECTION 01310
CONSTRUCTION SCHEDULES**

PART 1 GENERAL

1.01 SCOPE

- A. The Work under this section includes preparing, furnishing, distributing, and periodic updating of the construction schedules as specified herein.
- B. The purpose of the schedule is to demonstrate that the Contractor can complete the overall Project within the Contract Time and meet all required interim milestones.

1.02 SUBMITTALS

- A. Overall Project Schedule:
 - 1. Submit the Overall Project Schedule (OPS) within 10 days after date of the Notice to Proceed.
 - 2. The Engineer will review the schedule and return it within 10 days after receipt.
 - 3. If required, resubmit within 10 days after receipt of a returned copy.
- B. Near Term Schedule:
 - 1. Submit the first Near Term Schedule (NTS) within 10 days of the Notice to Proceed.
 - 2. The Engineer will review the schedule and return it within 10 days after receipt.
- C. Submit an update of the OPS and NTS with each progress payment request.
- D. Submit the number of copies required by the Contractor, plus four copies to be retained by the Engineer.

1.03 APPROVAL

- A. Approval of the Contractor's detailed construction program and revisions thereto shall in no way relieve the Contractor of any of Contractor's duties and obligations under the Contract. Approval is limited to the format of the schedule and does not in any way indicate approval of, or concurrence with, the Contractor's means, methods, and ability to carry out the Work.

1.04 OVERALL PROJECT SCHEDULE

- A. The Contractor shall submit to the Owner for approval a detailed OPS of the Contractor's proposed operations for the duration of the Project. The OPS shall be in the form of a Gantt/bar chart.
- B. Gantt/Bar Chart Schedule:
 - 1. Each activity with a duration of 5 days or more shall be identified by a separate bar. Activities with a duration of more than 20 days shall be subdivided into separate activities.
 - 2. The schedule shall include activities for shop drawing preparation and review, fabrication, delivery, and installation of major or critical path materials and equipment items.
 - 3. The schedule shall show the proposed start and completion dates for each activity. A separate listing of activity start and stop dates and working day requirements shall be provided unless the information is shown in text form on the Gantt/bar chart.
 - 4. The schedule shall identify the Notice to Proceed date, the Contract Completion date, major milestone dates, and a critical path.
 - 5. The schedule shall be printed on a maximum 11-inch by 17-inch size paper. If the OPS needs to be shown on multiple sheets, a simplified, one page, summary bar chart showing the entire Project shall be provided.
 - 6. The schedule shall have a horizontal time scale based on calendar days and shall identify the Monday of each week.
 - 7. The schedule shall show the precedence relationship for each activity.

1.05 NEAR TERM SCHEDULE

- A. The Contractor shall develop and refine a detailed NTS showing the day-to-day activities with committed completion dates which must be performed during the upcoming 30-day period. The detailed NTS shall represent the Contractor's best approach to the Work which must be accomplished to maintain progress consistent with the OPS.
- B. The NTS shall be in the form of Gantt/bar chart and shall include a written narrative description of all activities to be performed and describe corrective action to be taken for items that are behind schedule.

1.06 UPDATING

- A. Show all changes occurring since previous submission of the updated schedule.
- B. Indicate progress of each activity and show actual completion dates.

- C. The Contractor shall be prepared to provide a narrative report at the Project Coordination Meetings. The report shall include the following:
1. A description of the overall Project status and comparison to the OPS.
 2. Identify activities which are behind schedule and describe corrective action to be taken.
 3. A description of changes or revisions to the Project and their effect on the OPS.
 4. A description of the NTS of the activities to be completed during the next 30 days. The report shall include a description of all activities requiring participation by the Engineer and/or Owner.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

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SECTION 01320
CONSTRUCTION PHOTOGRAPHS AND VIDEOS

PART 1 GENERAL

1.01 SCOPE

- A. The Contractor shall furnish all equipment, labor, and materials required to provide the Owner with digital construction photographs and audio/video recordings of the Project.
- B. Photographs and audio/video recordings shall become the property of the Owner. None of the photographs or audio/video recordings shall be published without express written permission of the Owner.

1.02 PRE- AND POST-CONSTRUCTION PHOTOGRAPHS

- A. Prior to the beginning of any work, the Contractor shall take project photographs of the work area to record existing conditions.
- B. Following completion of the work, additional photographs shall be made showing the same areas and features as in the pre-construction photographs.
- C. All conditions which might later be subject to disagreement shall be shown in sufficient detail to provide a basis for decisions.

1.03 PROGRESS PHOTOGRAPHS

- A. The photographs shall include the date and time marking of the photograph. All photographs shall be labeled electronically to indicate date and description of work shown.
- B. A minimum of six photographs shall be submitted. The view selection shall be as agreed to with the Engineer.

1.04 PRE- AND POST-CONSTRUCTION AUDIO/VIDEO RECORDINGS

- A. Prior to the beginning of any work, the Contractor shall make audio/video recordings of the work area to record existing conditions.
- B. Following completion of the work, another recording shall be made showing the same areas and features as in the pre-construction recording.

- C. All conditions which might later be subject to a disagreement shall be shown in sufficient detail to provide a basis for decisions.
- D. The recordings shall include the date and time markings on the video. All videos shall be provided with an audio narration, stating a description of what is shown, approximate station of the area shown, and street address and property owner where appropriate.
- E. Audio/video recordings shall be made in electronic format. The quality and content shall be subject to the approval of the Engineer.
- F. The audio/video submittal shall be provided with a label containing the following information: Project title, date of recording, project station/locations shown on the recording.

1.05 SUBMITTALS

- A. Photographs shall be provided on compact discs (CDs) or USB drive. File format shall be .JPEG.
- B. Pre-construction photographs shall be submitted to the Engineer within 15 calendar days after the date of the Notice to Proceed. Post-construction photographs shall be submitted prior to final acceptance of the Project.
- C. Progress photographs shall be submitted with each payment request. Each pay request must have accompanying photographs of all work accomplished during the period for which payment is being requested. If the photographs are not included with the pay request, the pay request shall not be processed, but shall be returned to the Contractor.
- D. Audio/Video Recordings:
 - 1. The pre-construction recording shall be submitted prior to the first partial payment request.
 - 2. The post-construction recording shall be submitted with the final payment request.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

SECTION 01340
SUBMITTALS, SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

PART 1 GENERAL

1.01 SCOPE

- A. The Work under this section includes submittal to the Engineer of Shop Drawings, product data, and samples required by the various sections of these Specifications.
- B. Submittal Contents: The submittal contents required are specified in each section.
- C. Definitions: Submittals are categorized as follows:
 - 1. Submittals:
 - a. Action Submittal: Written and graphic information submitted by Contractor that requires Engineer's approval.
 - b. Deferred Submittal: Information submitted by Contractor for portions of design that are to be submitted to permitting agency for approval prior to installation of that portion of the Work, along with Engineer's review documentation that submittal has been found to be in general conformance with Project's design.
 - c. Informational Submittal: Information submitted by Contractor that requires Engineer's review and determination that submitted information is in accordance with the Conditions of the Contract.
 - 2. Shop Drawings:
 - a. Shop Drawings shall include technical data, drawings, diagrams, procedure and methodology, performance curves, schedules, templates, patterns, test reports, calculations, instructions, measurements, and similar information as applicable to the specific item for which the Shop Drawing is prepared.
 - b. Provide newly prepared information, on reproducible sheets, with graphic information at accurate scale (except as otherwise indicated) or appropriate number of prints hereof, with name of preparer (firm name) indicated. The Contract Drawings shall not be traced or reproduced by any method for use as or in lieu of detail Shop Drawings. Show dimensions and note which are based on field measurement. Identify materials and products in the work shown. Indicate compliance with standards and special coordination requirements. Do not allow Shop Drawing copies without appropriate final "Action" markings by the Engineer to be used in connection with the Work.

- c. Drawings shall be presented in a clear and thorough manner. Details shall be identified by reference to sheet and detail, Specification section, schedule, or room numbers shown on the Contract Drawings.
 - d. Minimum assembly drawings sheet size shall be 24 by 36 inches.
 - e. Minimum detail sheet size shall be 8-1/2 by 11 inches.
 - f. Minimum Scale:
 - 1) Assembly Drawings Sheet, Scale: 1 inch = 30 feet.
 - 2) Detail Sheet, Scale: 1/4 inch = 1 foot.
3. Product Data:
- a. Product data includes standard printed information on materials, products and systems, not specially prepared for this Project, other than the designation of selections from among available choices printed therein.
 - b. Collect required data into one submittal for each unit of work or system, and mark each copy to show which choices and options are applicable to the Project. Include manufacturer's standard printed recommendations for application and use, compliance with standards, application of labels and seals, notation of field measurements which have been checked, and special coordination requirements.
4. Samples:
- a. Samples include both fabricated and un-fabricated physical examples of materials, products, and units of work, both as complete units and as smaller portions of units of work, either for limited visual inspection or, where indicated, for more detailed testing and analysis.
 - b. Provide units identical with final condition of proposed materials or products for the work. Include "range" samples, not less than three units, where unavoidable variations must be expected, and describe or identify variations between units of each set. Provide full set of optional samples where the Engineer's selection is required. Prepare samples to match the Engineer's sample where indicated. Include information with each sample to show generic description, source or product name and manufacturer, limitations and compliance with standards. Samples are submitted for review and confirmation of color, pattern, texture, and "kind" by the Engineer. The Engineer will not "test" samples except as otherwise indicated, for other requirements, which are the exclusive responsibility of the Contractor.

5. Miscellaneous submittals related directly to the Work (non-administrative) include warranties, maintenance agreements, workmanship bonds, project photographs, survey data and reports, physical work records, statements of applicability, quality testing and certifying reports, copies of industry standards, Record Drawings, field measurement data, operating and maintenance materials, overrun stock, security/protection/safety keys and similar information, devices and materials applicable to the Work but not processed as Shop Drawings, product data, or samples.

1.02 SPECIFIC CATEGORY REQUIREMENTS

- A. General: Except as otherwise indicated in the individual work sections, comply with general requirements specified herein for each indicated category of submittal.

1. Submittals shall contain:
 - a. The date of submittal and the dates of any previous submittals
 - b. The Project title
 - c. Numerical submittal numbers, starting with the Section that the submittal references (such as 02665 for Water Mains and Accessories submittals), followed by a submittal number (02665.01, .02, and so on) and version (02665.XX.01, .02, and so on)
 - d. The Names of:
 - 1) Contractor.
 - 2) Supplier.
 - 3) Manufacturer.
 - e. Identification of the product, with the Specification section number, permanent equipment tag numbers, and applicable Drawing No.
 - f. Field dimensions, clearly identified as such.
 - g. Relation to adjacent or critical features of the Work or materials.
 - h. Applicable standards, such as ASTM International (ASTM) or Federal Specification numbers.
 - i. Notification to the Engineer in writing, at time of submissions, of any deviations on the submittals from requirements of the Contract Documents.
 - j. Identification of revisions on resubmittals.
 - k. An 8-inch by 3-inch blank space for Contractor and Engineer stamps.
 - l. Contractor's stamp, initialed or signed, certifying to review of submittal, verification of products, field measurements and field construction criteria, and coordination of the information within the submittal with requirements of the Work and of Contract Documents.

- m. Submittal sheets or Drawings showing more than the particular item under consideration, shall have all but the pertinent description of the item for which review is requested crossed out.

1.03 PROCEDURES

- A. Direct submittals to Engineer at the following, unless specified otherwise.
 - 1. Jacobs
Attn: Craig Hensley
 - 2. E-mail: Craig.Hensley@jacobs.com
- B. Electronic Submittals: Submittals shall, unless specifically accepted, be made in electronic format.
 - 1. Each submittal shall be an electronic file in Adobe Acrobat Portable Document Format (PDF). Use the latest version available at time of execution of the Agreement.
 - 2. Electronic files that contain more than 10 pages in PDF format shall contain internal bookmarking from an index page to major sections of the Document.
 - 3. PDF files shall be set to open “Bookmarks and Page” view.
 - 4. Add general information to each PDF file, including title, subject, author, and keywords.
 - 5. PDF files shall be set up to print legibly at 8.5-inch by 11-inch, 11-inch by 17-inch, or 22-inch by 34-inch. No other paper sizes will be accepted.
 - 6. Submit new electronic files for each resubmittal.
 - 7. Include a copy of the Transmittal of Contractor’s Submittal form, located at end of section, with each electronic file.
 - 8. Engineer will reject submittal that is not electronically submitted, unless specifically accepted.
 - 9. Provide Engineer with authorization to reproduce and distribute each file as many times as necessary for Project documentation.
 - 10. Detailed procedures for handling electronic submittals will be discussed at the preconstruction conference.
- C. Transmittal of Submittal:
 - 1. Contractor shall:
 - a. Review each submittal and check for compliance with Contract Documents.

- b. Stamp each submittal with uniform approval stamp before submitting to Engineer.
 - 1) Stamp to include Project name, submittal number, Specification number, Contractor's reviewer name, date of Contractor's approval, and statement certifying submittal has been reviewed, checked, and approved for compliance with Contract Documents.
 - 2) The Engineer will not review submittals that do not bear Contractor's approval stamp and will return them without action.
 - 2. Complete, sign, and transmit with each submittal package, Transmittal of Contractor's Submittal form. Use either the form attached at end of this section or in a format approved by Engineer.
 - 3. Identify each submittal with the following:
 - a. Numbering and Tracking System:
 - 1) Sequentially number each submittal.
 - 2) Resubmission of submittal shall have original number with sequential alphabetic suffix.
 - b. Specification section and paragraph to which submittal applies.
 - c. Project title and Engineer's project number.
 - d. Date of transmittal.
 - e. Names of Contractor, Subcontractor or Supplier, and manufacturer as appropriate.
 - 4. Identify and describe each deviation or variation from Contract Documents.
- D. Format:
 - 1. Do not base Shop Drawings on reproductions of Contract Documents.
 - 2. Package submittal information by individual section. Do not combine different specification sections together in submittal package, unless otherwise directed in Specification.
 - 3. Present in a clear and thorough manner and in sufficient detail to show kind, size, arrangement, and function of components, materials, and devices, and compliance with Contract Documents.
 - 4. Index with labeled tab dividers in orderly manner.
- E. Timeliness: Schedule and submit in accordance with Schedule of Submittals, and requirements of individual sections.
- F. Processing Time:
 - 1. Time for review shall commence on Engineer's receipt of submittal.
 - 2. Engineer will act upon Contractor's submittal and transmit response to Contractor not later than 30 days after receipt, unless otherwise specified.

3. Resubmittals will be subject to same review time.
4. No adjustment of Contract Times or Price will be allowed as a result of delays in progress of work caused by rejection and subsequent resubmittals.

G. Resubmittals: Clearly identify each correction or change made.

H. Incomplete Submittals:

1. Engineer will return entire submittal for Contractor's revision if preliminary review deems it incomplete.
2. When any of the following are missing, submittal will be deemed incomplete:
 - a. Contractor's review stamp, completed and signed
 - b. Transmittal of Contractor's Submittal, completed and signed.

I. Submittals not required by Contract Documents:

1. Will not be reviewed and will be returned stamped "Not Subject to Review."
2. Engineer will keep one copy and return submittal to Contractor.

1.04 ACTION SUBMITTALS

A. Prepare and submit Action Submittals required by individual Specification sections.

B. Shop Drawings:

1. Identify and Indicate:
 - a. Applicable Contract Drawing and Detail number, products, units and assemblies, and system or equipment identification or tag numbers.
 - b. Equipment and Component Title: Identical to title shown on Drawings.
 - c. Critical field dimensions and relationships to other critical features of work; Note dimensions established by field measurement
 - d. Project-specific information drawn accurately to scale
2. Manufacturer's standard schematic drawings and diagrams as follows:
 - a. Modify to delete information that is not applicable to the Work.
 - b. Supplement standard information to provide information specifically applicable to the Work.
3. Product Data: Provide as specified in individual specifications.

- C. Action Submittal Dispositions: Engineer will review, comment, stamp, and distribute as noted:
1. Approved:
 - a. Contractor may incorporate product(s) or implement Work covered by submittal.
 - b. Distribution: Electronic.
 2. Approved as Noted:
 - a. Contractor may incorporate product(s) or implement Work covered by submittal, in accordance with Engineer's notations.
 - b. Distribution: Electronic.
 3. Partial Approval, Resubmit as Noted:
 - a. Make corrections or obtain missing portions, and resubmit.
 - b. Except for portions indicated, Contractor may begin to incorporate product(s) or implement Work covered by submittal, in accordance with Engineer's notations.
 - c. Distribution: Electronic.
 4. Revise and Resubmit:
 - a. Contractor may not incorporate product(s) or implement Work covered by submittal.
 - b. Distribution: Electronic.

1.05 INFORMATIONAL SUBMITTALS

A. General:

1. Refer to individual Specification sections for specific submittal requirements.
2. Engineer will review each submittal. If submittal meets conditions of the Contract, Engineer will forward copy to appropriate parties. If Engineer determines submittal does not meet conditions of the Contract and is therefore considered unacceptable, Engineer will retain one copy and return remaining copy with review comments to Contractor, and require that submittal be corrected and resubmitted.

B. Certificates:

1. General:
 - a. Provide notarized statement that includes signature of entity responsible for preparing certification.
 - b. Certificate must be signed by officer or other individual authorized to sign documents on behalf of that entity.
2. Welding: In accordance with individual Specification sections
3. Installer: Prepare written statements on manufacturer's letterhead certifying installer complies with requirements as specified in individual Specification section.

4. Material Test: Certificate must be prepared by qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements.
 5. Certificates of Successful Testing or Inspection: Submit when testing or inspection is required by Laws and Regulations or governing agency or specified in individual Specification sections.
- C. Construction Photographs and Videos in accordance with Section 01320, Construction Photographs and Videos, and as may otherwise be required in Contract Documents.
- D. Closeout Submittals: In accordance with Section 01780, Contract Closeout.
- E. Contractor-design Data (related to temporary construction):
1. Written and graphic information.
 2. List of assumptions.
 3. List of performance and design criteria.
 4. Summary of loads or load diagram, if applicable.
 5. Calculations.
 6. List of applicable codes and regulations.
 7. Name and version of software.
 8. Information requested in individual Specification section.
- F. Schedules:
1. Schedule of Submittals: Prepare separately and submit a Schedule of Submittals.
 - a. Show for each, at a minimum, the following:
 - 1) Specification section number.
 - 2) Identification by numbering and tracking system as specified under Paragraph 1.03C Transmittal of Submittal.
 - 3) Estimated date of submission to Engineer, including reviewing and processing time.
 - b. On a monthly basis, submit updated Schedule of Submittals to Engineer if changes have occurred or resubmittals are required.
 2. Progress Schedules: In accordance with Section 01310, Construction Schedules.
- G. Special Guarantee: Supplier's written guarantee as required in individual specification sections.
- H. Statement of Qualification: Evidence of qualification, certification, or registration as required in Contract Documents to verify qualifications of professional land surveyor, engineer, materials testing laboratory, specialty Subcontractor, trade, consultant, installer, and other professionals.

- I. Submittals Required by Laws, Regulations, and Governing Agencies:
 - 1. Promptly submit notifications, reports, certifications, payrolls, and otherwise as may be required, directly to the applicable federal, state, or local governing agency or their representative.
 - 2. Transmit to Engineer for Owner's records one copy of correspondence and transmittals (to include enclosures and attachments) between Contractor and governing agency.

- J. Test, Evaluation, and Inspection Reports:
 - 1. General: Shall contain signature of person responsible for test or report.
 - 2. Factory:
 - a. Identification of product and specification section, type of inspection or test with referenced standard or code.
 - b. Date of test, Project title and number, and name and signature of authorized person.
 - c. Test results
 - d. If test or inspection deems material or equipment not in compliance with Contract Documents, identify corrective action necessary to bring into compliance.
 - e. Provide interpretation of test results, when requested by Engineer.
 - f. Other items as identified in individual Specification sections.
 - 3. Field:
 - a. As a minimum, include the following:
 - 1) Project title and number.
 - 2) Date and time.
 - 3) Record of temperature and weather conditions.
 - 4) Identification of product and specification section.
 - 5) Type and location of test, Sample, or inspection, including referenced standard or code.
 - 6) Date issued, testing laboratory name, address, and telephone number, and name and signature of laboratory inspector.
 - 7) If test or inspection deems material or equipment not in compliance with Contract Documents, identify corrective action necessary to bring into compliance.
 - 8) Provide interpretation of test results, when requested by Engineer.
 - 9) Other items as identified in individual specification sections.

1.06 ROUTING OF SUBMITTALS

- A. Submittals and routine correspondence shall be routed as follows:
 - 1. Supplier to Contractor (through representative if applicable).

2. Contractor to Engineer.
3. Engineer to Contractor and Owner.
4. Contractor to Supplier.

PART 2 PRODUCTS

2.01 MANUFACTURER'S LITERATURE

- A. Where content of submitted literature from manufacturers includes data not pertinent to this submittal, clearly indicate which portion of the contents is being submitted for the Engineer's review.
- B. Submit the number of copies which are required to be returned (not to exceed three) plus three copies which will be retained by the Engineer.

PART 3 EXECUTION

3.01 CONTRACTOR'S COORDINATION OF SUBMITTALS

- A. Prior to submittal for the Engineer's review, the Contractor shall use all means necessary to fully coordinate all material, including the following procedures:
 1. Determine and verify all field dimensions and conditions, catalog numbers, and similar data.
 2. Coordinate as required with all trades and all public agencies involved.
 3. Submit a written statement of review and compliance with the requirements of all applicable Technical Specifications as well as the requirements of this section.
 4. Clearly indicate in a letter or memorandum on the manufacturer's or fabricator's letterhead, all deviations from the Contract Documents.
- B. Each and every copy of the Shop Drawings and data shall bear the Contractor's stamp showing that they have been so checked. Shop Drawings submittal to the Engineer without the Contractor's stamp will be returned to the Contractor for conformance with this requirement.
- C. The Owner may backcharge the Contractor for costs associated with having to review a particular Shop Drawing, product data, or sample more than two times to receive a "No Exceptions Taken" mark.
- D. Grouping of Submittals:
 1. Unless otherwise specifically permitted by the Engineer, make all submittals in groups containing all associated items.

2. No review will be given to partial submittals of Shop Drawings for items which interconnect and/or are interdependent. It is the Contractor's responsibility to assemble the Shop Drawings for all such interconnecting and/or interdependent items, check them, and then make one submittal to the Engineer along with Contractor's comments as to compliance, non-compliance or features requiring special attention.
- E. Schedule of Submittals: Within 30 days of Contract award and prior to any Shop Drawing submittal, the Contractor shall submit a schedule showing the estimated date of submittal and the desired approval date for each Shop Drawing anticipated. A reasonable period shall be scheduled for review and comments. Time lost due to unacceptable submittals shall be the Contractor's responsibility and some time allowance for resubmittal shall be provided. The schedule shall provide for submittal of items which relate to one another to be submitted concurrently.

3.02 TIMING OF SUBMITTALS

- A. Make all submittals far enough in advance of scheduled dates for installation to provide all required time for reviews, for securing necessary approvals, for possible revision and resubmittal, and for placing orders and securing delivery.
- B. In scheduling, allow sufficient time for the Engineer's review following the receipt of the submittal.

3.03 REVIEWED SHOP DRAWINGS

- A. Engineer Review:
 1. Allow a minimum of 30 days for the Engineer's initial processing of each submittal requiring review and response, except allow longer periods where processing must be delayed for coordination with subsequent submittals. The Engineer will advise the Contractor promptly when it is determined that a submittal being processed must be delayed for coordination. Allow a minimum of 2 weeks for reprocessing each submittal. Advise the Engineer on each submittal as to whether processing time is critical to progress of the Work, and therefore the Work would be expedited if processing time could be shortened.
 2. Acceptable submittals will be marked "No Exceptions Taken." A minimum of three copies will be retained by the Engineer for the Engineer's and the Owner's use and the remaining copies will be returned to the Contractor.

3. Submittals requiring minor corrections before the product is acceptable will be marked "Make Corrections Noted." The Contractor may order, fabricate, and ship the items included in the submittals, provided the indicated corrections are made. Drawings must be resubmitted for review and marked "No Exceptions Taken" prior to installation or use of products.
 4. Submittals marked "Amend and Resubmit" must be revised to reflect required changes and the initial review procedure must be repeated.
 5. The "Rejected - See Remarks" notation is used to indicate products which are not acceptable. Upon return of a submittal so marked, the Contractor shall repeat the initial review procedure using acceptable products.
 6. Only two copies of items marked "Amend and Resubmit" and "Rejected - See Remarks" will be reviewed and marked. One copy will be retained by the Engineer and the other copy with all remaining unmarked copies will be returned to the Contractor for resubmittal.
- B. No work or products shall be installed without a Drawing or submittal bearing the "No Exceptions Taken" notation. The Contractor shall maintain at the job site a complete set of Shop Drawings bearing the Engineer's stamp.
- C. Substitutions: If the Contractor obtains the Engineer's approval for the use of products other than those which are listed first in the Contract Documents, the Contractor shall, at the Contractor's own expense and using methods approved by the Engineer, make any changes to structures, piping, and electrical work that may be necessary to accommodate these products.
- D. Use of the "No Exceptions Taken" notation on Shop Drawings or other submittals is general and shall not relieve the Contractor of responsibility for furnishing products of the proper dimension, size, quality, quantity, materials, and all performance characteristics, to efficiently perform the requirements and intent of the Contract Documents. The Engineer's review shall not relieve the Contractor of responsibility for errors of any kind on the Shop Drawings. Review is intended only to assure conformance with the design concept of the Project and compliance with the information given in the Contract Documents. The Contractor is responsible for dimensions to be confirmed and correlated at the job site. The Contractor is also responsible for information that pertains solely to the fabrication processes or to the technique of construction and for the coordination of the work of all trades.

3.04 RESUBMISSION REQUIREMENTS

A. Shop Drawings:

1. Revise initial Drawings as required and resubmit as specified for initial submittal, with the resubmittal number shown.
2. Indicate on Drawings all changes which have been made other than those requested by the Engineer.

B. Project Data and Samples: Resubmit new data and samples as specified for initial submittal, with the resubmittal number shown.

3.05 SUPPLEMENTS

A. The supplement listed below, following “END OF SECTION,” is part of this specification.

1. Transmittal of Contractor’s Submittal Form.

END OF SECTION

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 Public Utilities water, wastewater, conservation.	TRANSMITTAL OF CONTRACTOR'S SUBMITTAL (ATTACH TO EACH SUBMITTAL) DATE: _____		
TO: _____ _____ _____ _____ FROM: _____ Contractor _____ _____ _____	Submittal No.: _____ ☐ New Submittal ☐ Resubmittal Project: _____ Project No.: _____ Specification Section No.: _____ (Cover only one section with each transmittal) Schedule Date of Submittal: _____ _____		
SUBMITTAL TYPE:		☐ Shop Drawing	☐ Sample
		☐ Deferred	☐ Informational

The following items are hereby submitted:

Number of Copies	Description of Item Submitted (Type, Size, Model Number, Etc.)	Spec. and Para. No.	Drawing or Brochure Number	Contains Variation to Contract	
				No	Yes

Contractor hereby certifies that (i) Contractor has complied with the requirements of Contract Documents in preparation, review, and submission of designated Submittal and (ii) the Submittal is complete and in accordance with the Contract Documents and requirements of laws and regulations and governing agencies.

By: _____
Contractor (Authorized Signature)

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**SECTION 01510
TEMPORARY FACILITIES**

PART 1 GENERAL

1.01 SCOPE

- A. Temporary facilities required for this Work include but are not necessarily limited to:
 - 1. Temporary utilities such as water and electricity,
 - 2. First aid facilities,
 - 3. Sanitary facilities,
 - 4. Potable water, and
 - 5. Temporary enclosures and construction facilities.

1.02 GENERAL

- A. First aid facilities, sanitary facilities, and potable water shall be available on the Project site on the first day that any activities are conducted onsite. The other facilities shall be provided as the schedule of the Project warrants.
- B. Maintenance: The Contractor shall use all means necessary to maintain temporary facilities in proper and safe condition throughout progress of the Work. In the event of loss or damage, immediately make all repairs and replacements necessary, at no additional cost to the Owner.
- C. Removal: The Contractor shall remove all such temporary facilities and controls as rapidly as progress of the Work will permits.

1.03 UTILITIES

- A. Temporary Utilities:
 - 1. General:
 - a. The Contractor shall provide and pay all costs for all water, electricity, and other utilities required for the performance of the Work.
 - b. The Contractor shall pay all costs for temporary utilities until Project completion.
 - c. Costs for temporary utilities shall include all power, water, and the like necessary for testing equipment as required by the Contract Documents.

2. Temporary Water: The Contractor shall provide all necessary temporary piping, and upon completion of the Work, will remove all such temporary piping. Contractor shall provide and remove water meters.
3. Temporary Electricity:
 - a. The Contractor shall provide all necessary wiring for the Contractor's use.
 - b. Contractor shall furnish, locate, and install area distribution boxes such that the individual trades may use, their own construction type extension cords to obtain adequate power, and artificial lighting at all points where required by inspectors and for safety.

1.04 FIRST AID FACILITIES

- A. The Contractor shall provide a suitable first aid station, equipped with all facilities and medical supplies necessary to administer emergency first aid treatment. The Contractor shall have standing arrangements for the removal and hospital treatment of any injured person. All first aid facilities and emergency ambulance service shall be made available by the Contractor to the Owner and the Engineer's personnel.

1.05 SANITARY FACILITIES

- A. Prior to starting the Work, the Contractor shall furnish, for use of Contractor's personnel on the job, all necessary toilet facilities which shall be secluded from public observation. These facilities shall be either chemical toilets or shall be connected to the Owner's sanitary sewer system. All facilities, regardless of type, shall be kept in a clean and sanitary condition and shall comply with the requirements and regulations of the area in which the Work is performed. Adequacy of these facilities will be subject to the Engineer's review and maintenance of same must be satisfactory to the Engineer at all times.

1.06 POTABLE WATER

- A. The Contractor shall be responsible for furnishing a supply of potable drinking water for employees, subcontractors, inspectors, engineers, and the Owner who are associated with the Work.

1.07 ENCLOSURES AND CONSTRUCTION FACILITIES

- A. The Contractor shall furnish, install, and maintain, for the duration of construction, all required scaffolds, tarpaulins, canopies, steps, bridges, platforms, and other temporary construction necessary for proper completion of the Work in compliance with all pertinent safety and other regulations.

1.08 **PARKING FACILITIES**

- A. Parking facilities for the Contractor's and Contractor's subcontractors' personnel shall be the Contractor's responsibility. The storage and work facilities provided by the Owner will not be used for parking by the Contractor's or Subcontractor's personnel.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

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**SECTION 01540
JOB SITE SECURITY**

PART 1 GENERAL

1.01 BARRICADES, LIGHTS, AND SIGNALS

- A. The Contractor shall furnish and erect such barricades, fences, lights, and danger signals, and shall provide such other precautionary measures for the protection of persons or property and of the Work as necessary. Barricades shall be painted in a color that will be visible at night. From sunset to sunrise, the Contractor shall furnish and maintain at least one light at each barricade, and sufficient numbers of barricades shall be erected to keep vehicles from being driven on or into any Work under construction.
- B. The Contractor will be held responsible for all damage to the Work due to failure of barricades, signs, and lights. Whenever evidence is found of such damage, the Contractor shall immediately remove the damaged portion and replace it at the Contractor's cost and expense. The Contractor's responsibility for the maintenance of barricades, signs, and lights shall not cease until the Project has been accepted by the Owner.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

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**SECTION 01562
DUST CONTROL**

PART 1 GENERAL

1.01 SCOPE

- A. Blowing dust caused by construction operations will be limited by applying water or employing other appropriate means or methods to maintain dust control, subject to the approval of the Owner. At a minimum, this may require the use of a water wagon twice per day to suppress dusty conditions.

1.02 PROTECTION OF ADJACENT PROPERTY

- A. The Bidders shall visit the site and note the buildings, landscaping, roads, parking areas, and other facilities near the Work site that may be damaged by their operations. The Contractor shall make adequate provision to fully protect the surrounding area, and will be held fully responsible for all damages resulting from Contractor's operations.
- B. The Contractor shall protect all existing facilities (indoors or outdoors) from damage by dust, fumes, spray, or spills (indoors or outdoors). The Contractor shall protect motors, bearings, electrical gear, instrumentation, and building or other surfaces from dirt, dust, welding fumes, paint spray, spills, or droppings causing wear, corrosion, malfunction, failure, or defacement by enclosure, sprinkling, or other dust palliatives, masking and covering, exhausting, or containment.

1.03 NUISANCE DUST CONTROL

- A. The Contractor shall comply with Georgia Environmental Protection Division Air Pollution Standards for nuisance dust control.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

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**SECTION 01630
SUBSTITUTION AND OPTIONS**

PART 1 GENERAL

1.01 SCOPE

- A. This section outlines the restrictions and requirements for substitutions, product and manufacturer options, and construction method options.

1.02 DEFINITIONS

- A. For the purposes of these Contract Documents, a "substitute item" shall be defined as one of the following:
 - 1. A product or manufacturer offered as a replacement for a specified product or manufacturer; or
 - 2. A product or manufacturer offered in addition to a specified product or manufacturer.
- B. For the purposes of these Contract Documents, a "substitute construction method" shall be defined as one of the following:
 - 1. A means, method, technique, sequence, or procedure of construction offered as a replacement for a specified means, method, technique, sequence, or procedure of construction; or
 - 2. A means, method, technique, sequence, or procedure of construction offered in addition to a specified means, method, technique, sequence, or procedure of construction.

1.03 GENERAL

- A. An item or construction method offered where no specific product, manufacturer, means, method, technique, sequence, or procedure of construction is specified or shown on the Drawings shall not be considered a substitute and shall be at the option of the Contractor, subject to the provisions in the Contract Documents for that item or construction method.
- B. For products specified only by a referenced standard, the Contractor may select any product by any manufacturer, which meets the requirements of the Specifications, unless indicated otherwise in the Contract Documents.
- C. If the manufacturer is named on the Drawings or in the Specifications as an acceptable manufacturer, products of that manufacturer meeting all requirements of the Specifications and Drawings are acceptable.

- D. Whenever the Engineer's design is based on a specific product of a particular manufacturer, that manufacturer will be shown on the Drawings and/or listed first in the list of approved manufacturers in the Specifications. Any Bidder intending to furnish products of manufacturers other than the first-listed manufacturer, or furnish substitute items, shall:
1. Verify that the item being furnished will fit in the space allowed, perform the same functions, and have the same capabilities as the item specified;
 2. Include in its Bid the cost of all accessory items which may be required by the other listed substitute product;
 3. Include the cost of any architectural, structural, mechanical, piping, electrical; or other modifications required; and
 4. Include the cost of required additional work by the Engineer, if any, to accommodate the item.
- E. Whenever a product specification includes minimum experience requirements which the manufacturer selected by the Contractor cannot meet, the manufacturer shall furnish the Owner with a cash deposit, or bond acceptable to the Owner in an amount equal to the cost of the product; said bond shall remain in effect until the experience requirement has been met.

1.04 APPROVALS

- A. Approval of the Engineer for a substitution by an acceptable manufacturer is dependent on determination that the product offered:
1. Is essentially equal in function, performance, quality of manufacture, ease of maintenance, reliability, service life, and other criteria to the product on which the design is based; and
 2. Will require no major modifications to structures, electrical systems, control systems, or piping systems.

1.05 SUBSTITUTIONS AND OPTIONS

- A. After Notice to Proceed:
1. Substitute items will be considered only if the term "equal to" precedes the names of acceptable manufacturers in the Specification.
 2. Where items are specified by referenced standard or specified as indicated in paragraph 1.03A, such items shall be submitted to the Engineer for review.
 3. The Contractor shall submit Shop Drawings on the substitute item for the Engineer's review in accordance with the Section 01340, Submittals, Shop Drawings, Product Data and Samples.

B. Prior to Opening of Bids:

1. No consideration or approvals will be made for products specified by a referenced standard, or specified as indicated in paragraph 1.03A. Such consideration may occur only after the Notice to Proceed.
2. No consideration or approvals will be made for products being offered where the term "equal to" precedes the name of an approved product. Such substitution consideration may occur only after the Notice to Proceed.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

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**SECTION 01710
CLEANING**

PART 1 GENERAL

1.01 SCOPE

- A. This section covers the general cleaning which the Contractor shall be required to perform both during construction and before final acceptance of the Project unless otherwise shown on the Drawings or specified elsewhere in these Specifications.

1.02 QUALITY ASSURANCE

- A. Daily, and more often if necessary, the Contractor shall conduct inspections verifying that cleanliness requirements are being met.
- B. In addition to the standards described in this section, the Contractor shall comply with all pertinent requirements of governmental agencies having jurisdiction.

1.03 HAZARD CONTROL

- A. The Contractor shall store volatile wastes in covered metal containers and remove such wastes from the premises daily.
- B. The Contractor shall prevent accumulation of wastes which create hazardous conditions.
- C. The Contractor shall not burn or bury any rubbish or waste materials on the site.
- D. The Contractor shall not dispose of volatile wastes into sanitary or storm sewers.

1.04 DISPOSAL OF SURPLUS MATERIALS

- A. Unless otherwise shown on the Drawings, specified, or directed, the Contractor shall, off the Site, legally dispose of all surplus excavated materials and materials and equipment from demolition, and shall provide Contractor's own suitable, offsite spoil area.

1.05 EXCESS MATERIALS

- A. The Owner has no obligation, implied or written, to purchase any excess materials provided to the Project by the Contractor. All excess materials are the property of the Contractor unless the Owners purchases such materials through a change order.

PART 2 PRODUCTS

2.01 CLEANING MATERIALS AND EQUIPMENT

- A. The Contractor shall provide all required personnel, equipment, and materials needed to maintain the specified standard of cleanliness.

2.02 COMPATIBILITY

- A. The Contractor shall use only the cleaning materials and equipment which are compatible with the surface being cleaned, as recommended by the manufacturer of the material or as approved by the Engineer.

PART 3 EXECUTION

3.01 PROGRESS CLEANING

A. General:

1. The Contractor shall retain all stored items in an orderly arrangement allowing maximum access, not impeding drainage or traffic and providing the required protection of materials.
2. The Contractor shall not allow the accumulation of scrap, debris, waste material, and other items not required for construction of this Work.
3. The Contractor shall, on at least a weekly basis and more often if necessary, completely remove all scrap, debris, and waste material from the site.
4. The Contractor shall provide adequate storage for all items awaiting removal from the site, observing all requirements for fire protection and protection of the environment.

B. Site:

1. The Contractor shall, on at least a daily basis and more often if necessary, inspect the site and pick up all scrap, debris, and waste material. The Contractor shall remove all such items to the place designated for their storage.
2. The Contractor shall, on a weekly basis and more often if necessary, inspect all arrangements of materials stored on the site; restack or otherwise service all arrangements to meet the requirements of paragraph 3.01.
3. The Contractor shall at all times maintain the site in a neat and orderly condition which meets the approval of the Engineer.

3.02 FINAL CLEANING

- A. Definitions: Except as otherwise specifically provided, "clean" for the purpose of this section shall be interpreted as meaning the level of cleanliness generally provided by commercial building maintenance subcontractors using commercial quality building maintenance equipment and materials.
- B. General: Prior to completion of the Work, the Contractor shall remove from the site all tools, surplus materials, equipment, scrap, debris, and waste. The Contractor shall conduct final progress cleaning as described in paragraph 3.01.
- C. Site: Unless otherwise specifically directed by the Engineer, the Contractor shall hose down all paved areas on site and all public sidewalks directly adjacent to the site; and shall rake clean other surfaces of the grounds. The Contractor shall completely remove all resultant debris.
- D. Restoration of Landscape Damage: Any landscape feature scarred or damaged by the Contractor's equipment or operations shall be restored as nearly as possible to original condition at the Contractor's expense. The Engineer shall decide what method of restoration shall be used.
- E. Post-Construction Cleanup or Obliteration: The Contractor shall obliterate all signs of temporary construction facilities such as haul roads, work areas, structures, foundations of temporary structures, stockpiles of excess or waste materials, or any other vestiges of construction, as directed by the Engineer.
- F. Timing: The Contractor shall schedule final cleaning as approved by the Engineer to enable the Owner to accept a completely clean Project.

3.03 CLEANING DURING OWNER'S OCCUPANCY

- A. Should the Owner occupy the Work or any portion thereof prior to its completion by the Contractor and acceptance by the Owner, responsibilities for interim and final cleaning of the occupied spaces shall be as determined by the Engineer in accordance with the Supplementary Conditions of the Contract Documents.

END OF SECTION

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**SECTION 01740
WARRANTIES AND BONDS**

PART 1 GENERAL

1.01 PROJECT MAINTENANCE AND WARRANTY

- A. The Contractor shall maintain and keep in good repair the Work covered by these Drawings and Specifications until acceptance by the Owner.
- B. The Contractor shall warrant for a period of 1 year from the date of Owner's written acceptance of certain segments of the Work and/or Owner's written final acceptance of the Project, as defined in the Contract Documents, that the completed Work is free from all defects due to faulty products or workmanship, and the Contractor shall promptly make such corrections as may be necessary by reason of such defects. The Owner will give notice of observed defects with reasonable promptness. If the Contractor should fail to make such repairs, adjustments, or other work that may be made necessary by such defects, the Owner may do so and charge the Contractor the cost thereby incurred. The Performance Bond shall remain in full force and effect throughout the warranty period.
- C. The Contractor shall not be obligated to make replacements which become necessary because of ordinary wear and tear, or as a result of improper operation or maintenance, or as a result of improper work or damage by another Contractor or the Owner, or to perform any work which is normally performed by a maintenance crew during operation.
- D. The Contractor shall, at Contractor's own expense, furnish all labor, materials, tools, and equipment required and shall make such repairs and removals and shall perform such work or reconstruction as may be made necessary by any structural or functional defect or failure resulting from neglect, faulty workmanship, or faulty materials, in any part of the Work performed by the Contractor. Such repair shall also include refilling of trenches, excavations, or embankments which show settlement or erosion after backfilling or placement.
- E. Except as noted on the Drawings or as specified, all structures such as embankments and fences shall be returned to their original condition prior to the completion of the Contract. Any and all damage resulting from the Contractor's operations to any facility not designated for removal, shall be promptly repaired by the Contractor at no cost to the Owner.

- F. The Contractor shall be responsible for all road and entrance reconstruction and repairs and maintenance of same for a period of 1 year from the date of final acceptance. If repairs and maintenance are not made immediately and it becomes necessary for the owner of the road to make such repairs, the Contractor shall reimburse the owner of the road for the cost of such repairs.
- G. If the Contractor fails to proceed to remedy the defects upon notification within 15 days of the date of such notice, the Owner reserves the right to cause the required materials to be procured and the work to be done, as described in the Drawings and Specifications, and to hold the Contractor and the sureties on Contractor's bond liable for the cost and expense thereof.
- H. Notice to Contractor for repairs and reconstruction will be made in the form of a registered letter addressed to the Contractor at Contractor's home office.
- I. Neither the foregoing paragraphs nor any provision in the Contract Documents, nor any special guarantee time limit implies any limitation of the Contractor's liability under the laws of the State of Georgia.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.01 SUPPLEMENTS

- A. The supplement listed below, following "END OF SECTION," is part of this specification
 - 1. Certification of Warranty Commencement.

END OF SECTION

CERTIFICATION OF WARRANTY COMMENCEMENT

Owner: Unified Government of Athens-Clarke County, Georgia

Project: _____

Contractor: _____

Bid No. : _____

This document certifies the Contractor's acceptance of the commencement and ending dates for the one-year warranty period and/or the terms of any special guarantees, as defined in the Contract Documents for the Project. The warranty shall apply to the entire Project from the date of Owner's written final acceptance of the Project, and/or to certain segments of the Work from the date of Owner's written acceptance of those certain segments, and/or to any special guarantees as defined in the Contract Documents for the Project, as indicated below.

Check all boxes below that are applicable and enter appropriate information and dates:

☐ **Owner's Written Final Acceptance of the Project:**

Date of Owner's Written Final Acceptance of the Project (Warranty Start Date)	Warranty End Date

☐ **Owner's Written Acceptance of Certain Segments of the Work, as follows:**

Description of Segments of the Work (Equipment and Materials Included)	Date of Owner's Written Acceptance of Certain Segments of the Work (Warranty Start Date)	Warranty End Date

☒ **Applicable Special Guarantees:**

Description of Special Guarantees	Date of Owner's Written Acceptance of Items Covered by Special Guarantee	Special Guarantee Period	Warranty End Date

Contractor Certification

Warranty (ies) acknowledged and certified to comply with the Contract Documents. Certification shall be signed by the same signatory as the Contract Agreement.

Contractor:

By:

Date:

(name signed)

(name printed or typed)

Title:

Engineer Acknowledgement

Engineer:

By:

Date:

(name signed)

(name printed or typed)

Owner Acknowledgement

Owner acknowledges receipt of Warranty (ies) associated with the Work

Owner: Unified Government of Athens-Clarke County, Georgia

By:

Date:

(name signed)

(name printed or typed)

SECTION 01780
CONTRACT CLOSEOUT

PART 1 GENERAL

1.01 SUBMITTALS

- A. Contract Closeout Submittals: Submit prior to application for final payment.
 - 1. Section 00700 General Conditions, Part 14.07:
 - a. Consent of Surety to Final Payment,
 - b. Releases or Waivers of Liens and Claims against the Owner by the Contractor, and
 - c. Release from Agreements, if applicable.
 - 2. Section 01320 Construction Photographs and Videos:
 - a. Post-construction photographs and videos
 - 3. Section 01720: Record Documents:
 - a. Drawings.
 - b. Specifications.
 - c. Contract Modifications (including Change Orders).
 - d. Engineer Field Orders.
 - e. Requests for Information and Clarification Memorandum.
 - f. Reviewed Shop Drawings, product data and samples.
 - g. Test Records.
 - 4. Section 01740, Warranties and Bonds:
 - a. Warranty Documentation.

1.02 RELEASES FROM AGREEMENTS

- A. The Contractor shall furnish the Owner written releases from property owners or public agencies where side agreements or special easements have been made, or where Contractor's operations have not been kept within the Owner's construction easement.
- B. If the Contractor is unable to secure written releases:
 - 1. The Contractor shall inform the Owner of the reasons.
 - 2. The Owner or its representatives will examine the site, and the Owner will direct the Contractor to complete Work that may be necessary to satisfy terms of the side agreement or special easement.
 - 3. If the Contractor refuses to perform this Work, the Owner reserves the right to have it done by separate contract and deduct the cost of same from the Contract Price, or require the Contractor to furnish a satisfactory Bond in a sum to cover legal claims for damages.

4. When the Owner is satisfied that Work has been completed in accordance with the Contract Documents and terms of side agreement or special easement, the Owner reserves the right to waive the requirement for written release if:
 - a. The Contractor's failure to obtain such statement is due to the grantor's refusal to sign, and this refusal is not based upon any legitimate claims that the Contractor has failed to fulfill the terms of the side agreement or special easement, or
 - b. The Contractor is unable to contact or has had undue hardship in contacting the grantor.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

SECTION 02125
EROSION, SEDIMENTATION AND POLLUTION CONTROL

PART 1 GENERAL

1.01 SCOPE

- A. The Work specified in this section consists of providing, maintaining, and removing temporary erosion and sedimentation controls.
- B. The Contractor shall comply with all requirements of the erosion and sediment control permit or land disturbance activity permit (whichever is applicable) as well as the requirements of the Georgia Erosion & Sediment Control Act of 1975 and latest amended (the Act), Erosion & Sediment Control Manual of Practice (edition in effect on January 1st of the year in which this Agreement is executed), section 402 of the Federal Clean Water Act of 1987, and applicable Local Issuing Authority ordinances, rules, regulations, and laws.
- C. The Contractor shall provide a Notice of Intent (NOI) to the Georgia Environmental Protection Division in accordance with the provision of the National Pollutant Discharge Elimination System (NPDES) General Permit No. GAR100002 (Infrastructure Construction Project) (NPDES Permit). A copy of the general permit shall be provided to the Owner at the preconstruction meeting. The Contractor shall comply with the requirements of this permit and the requirements as stated on the Drawings and herein throughout the entire Project. The Contractor will monitor for compliance in accordance with this permit.
- D. The Contractor shall establish an individual as the individual in charge of erosion and sedimentation control on a 24-hour basis. His name and phone number shall be provided to the Owner at the preconstruction meeting. The Contractor shall ensure this individual is trained in erosion and sediment control, Level 1A, to oversee Contractor responsibilities and has a valid certification number issued by the Georgia Soil and Water Conservation Commission. This certificate number shall be provided to the Owner at the preconstruction meeting.
- E. Temporary erosion controls include, but are not limited to, grassing, mulching, watering, and reseeding onsite surfaces and spoil and borrow area surfaces, and providing interceptor ditches at ends of berms and at those locations which will ensure that erosion during construction will be either eliminated or maintained within acceptable limits as established by the Act of 1975, Section 402 of the Federal Clean Water Act, and applicable codes, ordinances, rules, regulations, and laws of local and municipal authorities having jurisdiction.

- F. Temporary sedimentation controls include, but are not limited to, silt dams, traps, barriers, filter stone, and appurtenances at the foot of sloped surfaces which will ensure that sedimentation pollution will be either eliminated or maintained within acceptable limits as established by the Federal Clean Water Act of 1987, as amended.
- G. Basic Principles:
1. Dewater solids sufficiently so that stacked or heaped solids do not slump, collapse or run, including during and after rainfall.
 2. Conduct the dredging and deposition activities in such a manner to fit the topography, soil type, and condition.
 3. Minimize the area of dewatered solids and the duration of exposure to erosion elements.
 4. Stabilize or remove dewatered solids immediately. Do not allow any solids to remain on site unstabilized for 14 days or more.
 5. Safely convey runoff from the site to an outlet such that erosion will not be increased offsite.
 6. Retain sediment onsite that was generated onsite.
 7. No construction activities shall occur within a dedicated stream buffer, unless otherwise approved by the Unified Government of Athens-Clarke County and the Georgia Environmental Protection Division.
 8. All erosion and sedimentation control measures shall be designed for a minimum 25-year storm event.
 9. Construct erosion and sedimentation control devices prior to or concurrent with land disturbing activities.
 10. Minimize encroachment upon watercourses.
- H. Temporary Erosion and Sedimentation Control: In general, temporary erosion and sedimentation control procedures shall be directed toward:
1. Preventing soil erosion at the source.
 2. Preventing silt and sediment from entering any waterway if soil erosion cannot be prevented.
 3. Preventing silt and sediment from migrating downstream in the event it cannot be prevented from entering the waterway.
- I. Permanent Erosion Control: Permanent erosion control measures shall be implemented to prevent sedimentation of the waterways and to prevent erosion of the Project site.

1.02 QUALITY ASSURANCE

- A. General: The Contractor shall perform all work under this section in accordance with all pertinent rules and regulations including, but not necessarily limited to, those stated herein and these Specifications.
- B. Conflicts: Where provisions of pertinent rules and regulations conflict with these Specifications, the more stringent provisions shall govern.
- C. The Contractor shall provide to the Unified Government of Athens-Clarke County, prior to initiating land disturbance activities, the name and 24-hour phone number of the individual responsible for inspection, installation, and maintenance of erosion and sedimentation control devices on a 24-hour every-day basis.

1.03 QUALITY STANDARDS

- A. Part III, Special Condition, Management Practices, Permit Violations and Other Limitations of the General Permit, allows for the discharge of waterline flushing provided flows are not contaminated with process materials or pollutants. Chlorine shall be removed prior to discharging water from waterline.
- B. Erosion control features installed shall be effectively maintained to control erosion within the limits of the Project and to control the discharge of stormwater from disturbed areas such that turbidity of the stream shall not exceed 25 NTU higher than the turbidity level of the stream immediately up stream of construction. Turbidity testing will be done by the Engineer. Any erosion control devices damaged by the Contractor or any subcontractors either by neglect, by construction methods, or for any other reasons including acts of nature, shall be immediately repaired by the Contractor at no additional cost to the Owner.

1.04 DUST CONTROL

- A. Dust from any of the Contractor's activities shall be controlled to keep dust pollution to a minimum. The Contractor shall comply with Georgia Environmental Protection Division Air Pollution Standards for Nuisance Dust Control. The Contractor may be directed to wet areas where dust may be or is a problem to achieve the desired results.

PART 2 PRODUCTS

2.01 TEMPORARY EROSION AND SEDIMENTATION CONTROL MATERIALS

- A. Silt Fence: Silt fence shall meet the requirements of Section 171-Temporary Silt fence shall conform to the requirements of the latest version of the Department of Transportation, State of Georgia, Standard Specification.

- B. Hay bales shall be clean, seed-free cereal hay type.
- C. Stone Check Dams: Stone shall conform to the requirements of Section 805.01 of the Georgia Department of Transportation Standard Specification, latest edition, for Stone Dumped Rip Rap, except that the stone shall be 8 inches or less at the greatest dimension.

2.02 RIP RAP

- A. The Contractor shall use sound, tough, durable stones resistant to the action of air and water. Slabby or shaley pieces will not be acceptable. Specific gravity shall be 2.0 or greater. Rip rap shall have less than 66 percent wear when tested in accordance with American Association of State Highway and Transportation Officials (AASHTO) T-96. Unless shown or specified otherwise, stone rip rap shall be Type 1 rip rap.
- B. Type 1 Rip Rap: The largest pieces shall have a maximum volume of 2 cubic feet. At least 35 percent of the mass shall consist pieces that weigh 125 pounds or more. The remainder shall be well graded down to the finest sizes. Rock fines shall comprise a maximum of 10 percent of the total mass. Rock fines are defined as material passing a No. 4 sieve. Rip rap size shall conform to Georgia Department of Transportation Section 805.01 Stone Dumped Rip Rap, Type 1.
- C. Type 3 Rip Rap: The largest pieces shall have a maximum approximate volume of 1 cubic foot. At least 35 percent of the mass shall consist of pieces which weigh 15 pounds or more. The remainder shall be well graded down to the finest sizes. Rock fines shall comprise a maximum of 10 percent of the total mass. Rock fines are defined as material passing a No. 4 sieve. Rip rap size shall conform to Georgia Department of Transportation Section 805.01 Stone Dumped Rip Rap, Type 3.
- D. 200 Pound Rip Rap: Minimum weight of individual stones shall be 200 pounds.

2.03 STONE

- A. Crushed stone shall meet the requirements of the Georgia Department of Transportation Specification 800.01, Group I (limestone, marble or dolomite) or Group II (quartzite, granite or gneiss). Stone size shall be between No. 57 and No. 4, inclusive.

2.04 FILTER FABRIC (GEOTEXTILE FABRIC)

- A. Filter fabric for use under rip rap shall be a monofilament, polypropylene woven fabric or a non-woven fabric meeting the Specifications as established by Task Force 25 for the Federal Highway Administration. The filter fabric shall have an equivalent opening size (EOS) of 70.

2.05 CONCRETE

- A. Concrete shall have a compressive strength of not less than 3,000 pounds per square inch (psi), with not less than 5.5 bags of cement per cubic yard and a slump between 3 and 5 inches. Ready-mixed concrete shall be mixed and transported in accordance with ASTM International (ASTM) C94. Reinforcing steel shall conform to the requirements of ASTM A615, Grade 60.

2.06 SLOPE STABILIZATION

- A. Matting and blankets shall meet the requirements of Section 713 and Section 716 of the Georgia Department of Transportation Standard Specifications, latest edition. The Contractor shall use products listed on the Georgia Department of Transportation QPL-49 for matting and Georgia Department of Transportation QPL-62 for blankets.

2.07 GRASSING

- A. Grassing materials shall meet the requirements of the following sections of the Georgia Department of Transportation Standard Specifications, latest edition:

Material	Section
Topsoil	893.01
Seed and Sod	890
Fertilizer	891.01
Agricultural Lime	882.02
Mulch	893.02
Inoculants	893.04

- B. Seed species shall be provided as shown in Table 1 of this section.
- C. Mulch Binder: Mulch on slopes exceeding three (horizontal) to one (vertical) shall be held in place by the use of a mulch binder, as approved by the Unified Government of Athens-Clarke County. The mulch binder shall be non-toxic to plant and animal life and shall be approved by the Unified Government of Athens-Clarke County.

- D. Water: Water shall be free of excess and harmful chemicals, organisms, and substances, which may be harmful to plant growth or obnoxious to traffic. Salt or brackish water shall not be used. Water shall be furnished by the Contractor.

PART 3 EXECUTION

3.01 GENERAL

- A. Standards: The Contractor shall provide all materials and promptly take all actions necessary to achieve effective erosion and sedimentation control in accordance with the Georgia Erosion and Sedimentation Act of 1975, as amended, Section 402 of the Federal Clean Water Act, and applicable codes, ordinances, rules, regulations, and laws of local and municipal authorities having jurisdiction.
- B. Implementation: The Contractor shall have the responsibility to actively take all steps necessary to control soil erosion and sedimentation.
- C. Erosion and sedimentation controls shall be constructed in accordance with the Manual for Erosion and Sedimentation Control in Georgia, latest edition, these Specifications, and Standard Detail Drawings.

3.02 TEMPORARY EROSION AND SEDIMENTATION CONTROL

- A. Temporary erosion and sedimentation control procedures should be initially directed toward preventing silt and sediment from entering waterways. The preferred method is to provide an undisturbed natural buffer, extending a minimal 25 feet from the top of the bank, to filter the runoff. Should this buffer prove infeasible due to construction activities being too close to the waterway, or if the amount of sediment overwhelms the buffer, the Contractor shall place silt fences to filter the runoff and, if necessary, place permanent rip rap to stabilize the creek banks.
- B. Silt dams, silt fences, traps, barriers, check dams, appurtenances, and other temporary measures and devices shall be installed as indicated on the approved plans, and working Drawings, shall be maintained until no longer needed, and shall then be removed. Deteriorated hay bales and dislodged filter stone shall be replaced with new materials.
- C. Where permanent grassing is not appropriate, and where the Contractor's temporary erosion and sedimentation control practices are inadequate, the Engineer may direct the Contractor to provide temporary vegetative cover with fast-growing seedlings.

- D. All erosion and sedimentation control devices, including check dams, shall be inspected by the Contractor at least weekly and after each rainfall occurrence, and cleaned out and repaired by the Contractor as necessary.
- E. Temporary erosion and sedimentation control devices shall be installed and maintained from the initial land disturbance activity until the satisfactory completion and establishment of permanent erosion control measures. At that time, temporary devices shall be removed.

3.03 PERMANENT EROSION CONTROL

- A. Permanent erosion control shall include:
 - 1. Restoring the work site to its original contours, unless shown otherwise on the Drawings or directed by the Engineer.
 - 2. Permanent vegetative cover shall be performed in accordance with paragraph 3.04 of this section.
 - 3. Permanent stabilization of steep slopes and creeks shall be performed in accordance with paragraph 3.05 of this section.
- B. Permanent erosion control measures shall be implemented as soon as practicable after the completion of pipe installation or land disturbance for each segment of the Project or up to 1,000 linear feet of pipe trench, whichever is smaller. In no event shall implementation be postponed when no further construction activities will impact that portion or segment of the Project. Partial payment requests may be withheld for those portions of the Project not complying with this requirement.

3.04 GRASSING

- A. General:
 - 1. Grassing shall be performed as shown on the approved Erosion Control Plan, and in accordance with the Georgia Department of Transportation Standard Specification Section 700.
 - 2. All references to grassing, unless noted otherwise, shall relate to establishing permanent vegetative cover as specified herein for seeding, fertilizing, mulching, and the like.
 - 3. When final grade has been established, all bare soil, unless otherwise required by the Contract Documents, shall be seeded, fertilized, and mulched in an effort to restore to a protected condition. Critical areas shall be sodded as approved or directed by the Engineer.
 - 4. Specified permanent grassing shall be performed at the first appropriate season following establishment of final grading in each section of the site.

- B. The Contractor shall replant grass removed or damaged in residential areas using the same variety of grass and at the first appropriate season. Where sod is removed or damaged, replant such areas using sod of the same species of grass at the first appropriate season. Outside of residential or landscaped areas, grass the entire area disturbed by the work on completion of work in any area. In all areas, promptly establish successful stands of grass.
- C. Grassing activities shall comply with the Manual for Erosion and Sediment Control in Georgia, specifically for the selection of species, with the exception that kudzu shall not be permitted, planting dates and application rates for seeding, fertilizer, and mulching. Where permanent vegetative cover (grassing) cannot be immediately established (due to season or other circumstances) the Contractor shall provide temporary vegetative cover. The Contractor must return to the site (at the appropriate season) to install permanent vegetation in areas that have received temporary vegetative cover.
- D. Grassed areas will be considered acceptable when a viable stand of grass covers at least 98 percent of the total area with no bare spots exceeding 1 square foot, and the ground surface is fully stabilized against erosion.

3.05 RIP RAP

- A. Unless shown otherwise on the Drawings, rip rap shall be placed where ordered by the Engineer, at all points where banks of streams or drainage ditches are disturbed by excavation, or at all points where natural vegetation is removed from banks of the streams or drainage ditches. The Contractor shall carefully compact backfill and place rip rap to prevent subsequent settlement and erosion. This requirement applies equally to construction alongside a stream or drainage ditch, as well as stream or drainage ditch crossings.
- B. When trenching across a creek, the Contractor shall place rip rap a distance of 10 feet upstream and 10 feet downstream from the top of the trench excavation. Place rip rap across creek bottom, across creek banks, and extend rip rap placement 5 feet beyond the top of each creek bank.
- C. Preparation of Foundations: The ground surface upon which the rip rap is to be placed shall be brought in reasonably close conformity to the correct lines and grades before placement is commenced. Where filling of depressions is required, the new material shall be compacted with hand or mechanical tampers. Unless at creek banks or otherwise shown or specified, rip rap shall begin in a toe ditch constructed in original ground around the toe of the fill or the cut slope. The toe ditch shall be 2 feet deep in original ground, and the side next to the fill or cut shall have that same slope. After the rip rap is placed, the toe ditch shall be backfilled and the excess dirt spread neatly within the construction easement.

- D. Placement of Filter Fabric: The surface to receive fabric shall be prepared to a relatively smooth condition free from obstructions, depressions, and debris. The fabric shall be placed with the long dimension running up the slope and shall be placed to provide a minimum number of overlaps. The strips shall be placed to provide a minimum width of 1 foot of overlap for each joint. The filter fabric shall be anchored in place with securing pins of the type recommended by the fabric manufacturer. Pins shall be placed on or within 3 inches of the centerline of the overlap. The fabric shall be placed so that the upstream strip overlaps the downstream strip. The fabric shall be placed loosely so as to give and therefore avoid stretching and tearing during placement of the stones. The stones shall be dropped no more than 3 feet during construction. The fabric shall be protected at all times during construction from clogging due to clay, silts, chemicals, or other contaminants. Any contaminated fabric or any fabric damaged during its installation or during placement of rip rap shall be removed and replaced with uncontaminated and undamaged fabric at no expense to the Owner.
- E. Placement of Rip Rap:
1. Rip rap shall be placed on a 6-inch layer of soil, crushed stone, or sand overlaying the filter fabric. This 6-inch layer shall be placed to maximize the contact between the soil beneath the filter fabric and the filter fabric. Rip rap shall be placed with its top elevation conforming with the finished grade or the natural slope of the stream bank and stream bottom.
 2. Stone rip rap shall be dumped into place to form a uniform surface and to the thickness specified on the Drawings. The thickness tolerance for the course shall be minus 6 inches and plus 12 inches. If the Drawings or the Bid do not specify a thickness, the course shall be placed to a thickness of not less than 18 inches.

3.06 EROSION CONTROL MATTING

- A. The erosion control matting shall be placed after areas have been seeded. Matting shall be installed in accordance with the manufacturer's recommendations. Matting shall be held in place by 6-inch long wire staples or wooden pegs. Staples or pegs shall be provided at all overlaps and ends, as well as throughout the mat, based on slope length and grade and soil type. On slopes 2.5H:1V or steeper, the top of the matting shall be placed in an anchor trench a minimum of 6 inches deep.

Table 1

SEEDING REQUIREMENTS

Sowing Season	Species	Rates per 1,000 Square Feet		
March 15 – August 14	Common Bermuda (hulled) (Giant Bermuda Seed, including NK-37, is not acceptable.)	2 lbs	35 lbs 6-12-12	25 lbs
	Annual Ryegrass	2 lbs		
Total		4 lbs		
August 15 – March 14	Common Bermuda (unhulled)	2 lbs	45 lbs 6-12-12	25 lbs
	Annual Ryegrass	2 lbs		
Total		4 lbs		

END OF SECTION

SECTION 46 70 01
LAGOON SLUDGE REMOVAL, HAULING, AND DISPOSAL

PART 1 GENERAL

1.01 SCOPE

- A. This section contains requirements and conditions governing performance of the work in removing sludge from the Owner's J. G. Beacham Water Treatment Plant Backwash Lagoon (lagoon), dewatering the sludge on site, and subsequent hauling of the dewatered material to a permitted landfill for disposal.
- B. The Contractor shall furnish all equipment, material, tools, supplies, chemicals, skill and labor to remove the solids from the lagoon, perform dewatering and hauling for disposal.

1.02 DEFINITIONS

- A. The term "sludge" as used in this section, shall mean all solids prior to mechanical dewatering.
- B. The term "residuals" as used in this section, shall mean all solids that have been mechanically dewatered.

1.03 CONTRACTOR'S RESPONSIBILITY

- A. The Contractor is responsible for determining and planning his method of sludge removal, dewatering, hauling and disposal. The methods selected by the Contractor must facilitate completion of the Project within the time limit set forth and must be in accordance with all applicable federal, state or local laws and permits issued by regulatory agencies. The method must also be approved by the Engineer before the Contractor begins work.

1.04 SUBMITTALS

- A. Submit product data in accordance with the requirements of Section 01340, Submittals, Shop Drawings, Product Data and Samples of these specifications.
- B. Complete and detailed description of the Contractor's proposed work procedures and methodology shall be submitted to the Engineer within 14 calendar days of issuance of Notice to Proceed, including, but not limited to the following:
 - 1. Sludge removal methods.
 - 2. Sludge dewatering methods.

3. Centrate or filtrate disposal method.
 4. Centrate or filtrate peak and daily volume flow rate and total suspended solids.
 5. Residuals transportation methods off site.
 6. Description of watertight containers used in hauling operation.
 7. Residuals disposal location.
 8. Proof of consent to dispose of residuals at disposal location.
 9. Haul route.
 10. Accidental spill containment and cleanup plan.
 11. Staging Area and Dewatering Area Location Plan.
 12. Wet weather operations.
 13. Equipment requirements.
 14. Template of the uniform manifest document that will accompany each truckload from the Water Treatment Plant to the final disposal/reuse site. As a minimum, the manifest shall provide the following information:
 - a. Date and time of disposal.
 - b. Weight and volume of residuals.
 - c. Name and location of disposal or reuse site.
 - d. Record of receipt of residuals by disposal or reuse site.
 - e. Method of disposal.
 - f. Truck identification.
 - g. Driver's name and signature.
 - h. Signature of Contractor or Contractor's designated representative.
 15. If the Contractor plans to dispose of residuals in a municipal or private landfill, the Contractor shall submit documentation that the landfill meets the requirements of the Resource Conservation and Recovery Act (RCRA) and applicable state regulations.
 16. If the Contractor plans to beneficially reuse residuals, the Contractor shall submit documentation that all federal, state, and local guidelines or requirements are being complied with.
- C. Sequencing: The Contractor shall provide a plan and sequence of construction so that the operation of the facilities will not be interrupted at any time without the Engineer's approval. The plan shall describe all operations, and duration and sequence of operation. The plan shall indicate all temporary measures and connection to avoid interruptions. The plan shall be subject to the Engineer's review and approval.
- D. Overall Project schedule in accordance with Section 01310, Submittals, Shop Drawings, Product Data and Samples of these Specifications, covering all work to be performed.
- E. Plan to abate nuisance noise, lights, and odors resulting from the site activities.

- F. Hazard communication information including product information on polymer and other chemicals to be used. Include material safety data sheets. The polymer shall be suitable for discharge to waterways that serve as a potable water source.
- G. Safety Plan (for informational purposes only).

1.05 RESIDUALS CHARACTERISTICS

- A. Sludge has accumulated in the lagoon at the Owner's Water Treatment Plant. The sludge in the lagoon is a byproduct of the sedimentation and filtration treatment processes of water from the North Oconee and Middle Oconee Rivers to produce potable water.
- B. Quantity: The Contractor shall be required to remove the sludge down to the bottom of the lagoon, without damage to the integrity of the bottom and side slopes of the lagoon. Refer to Section 00300, Bid Form for the approximate amount of sludge to be removed.
- C. An accurate or complete description of the characteristics of the solids in the lagoon is not available. The characteristics of the solids can vary from being a flowable semi-liquid to a heavy, thick, pasty, or gritty semi-liquid or solid.
- D. It is not anticipated that the sludge is a hazardous waste as defined by federal and state regulations. However, the Contractor, at his own expense, is responsible for collecting any additional samples and performing any additional analyses as necessary to bid and complete the work in accordance with all local, state, and federal regulations and to obtain approval for disposal of the residuals. The Contractor shall coordinate these sampling activities with the Owner. The Owner's point of contact is Mr. Will Cottrell, 800 Waterworks Drive, Athens, Georgia 30601, Telephone 706-613-3289.
- E. The Owner has taken a single composite sample of lagoon sludge and has had it analyzed for various chemical and physical characteristics. The report of this analysis will be made available to Bidders during contract bidding. The Owner makes no warranty as to the representative nature of the results of this analysis to be the actual characteristics of the lagoon sludge. These results are being provided for information only and are not part of the Contract.

1.06 MOBILIZATION AND DEMOBILIZATION

- A. The Contractor shall provide the facilities and equipment necessary to move personnel and equipment to and from the work site, to setup temporary offices, to install any temporary utilities (including electrical power and water for the dewatering equipment and construction trailer), to prepare the site for the work, to demobilize, and to clean up the site upon completion of the work.

1.07 SAFETY AND PROTECTION

- A. The Contractor shall comply with Owner's safety rules while on Owner's property, and with all other applicable, regulatory safety requirements.
- B. The Contractor shall keep Owner informed of any recordable accidents or safety violations on the site and related claims.
- C. The Contractor shall initiate, maintain, and supervise all safety precautions and programs in connection with the work. The Contractor shall take all necessary precautions for the safety of, and provide the necessary protection to prevent damage, injury, or loss to:
 - 1. All persons on the work site or who may be affected by the work.
 - 2. All the work and materials and equipment to be incorporated therein, whether in storage on or off the site.
 - 3. Other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities and underground facilities not designated for removal, relocation or replacement in the course of the work.
- D. Safety Plan:
 - 1. Before any work at the site is started, the Contractor shall prepare a written plan for Project-specific safety precautions and programs, complete with respect to procedures and actions that the Contractor intends Contractor and others to follow in order for Contractor and others to comply with all applicable Laws and Regulations, as well as specific site requirements.
 - 2. The Contractor shall revise plan for safety precautions and programs at appropriate times to reflect changes in construction conditions, the work, means, methods, techniques, sequences and procedures of construction.

- E. Safety Representative: The Contractor shall designate a qualified and experienced safety representative at the site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.
- F. Hazard Communication Programs: The Contractor shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employees at the site in accordance with Laws or Regulations.
- G. Emergencies: In emergencies affecting the safety or protection of persons or the work or property at the site or adjacent thereto, Contractor, without special instruction or authorization from Owner or Engineer, is obligated to act to prevent threatened damage, injury or loss. The Contractor shall give Engineer prompt written notice if the Contractor believes that any significant changes in the work or variations from the Contract Documents have been caused thereby. If Engineer determines that a change in the Contract Documents is required because of the action taken by the Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued to document the consequences of such action.

1.08 PROTECTION OF WORK AND PROPERTY

- A. No blasting or use of explosives will be allowed on the site.
- B. During the performance of the work, the Contractor is responsible for adapting its means, methods, techniques, sequences and procedures of construction to allow Owner to maintain operation at the existing level of facility production consistent with applicable permit requirements, and Laws and Regulations. In performing such work and in cooperating with the Owner to maintain operations, it may be necessary for the Contractor to plan, design, and provide various temporary services, utilities, connections, temporary piping and heating, access, and similar items which will be included within the Contract Price.

1.09 SITE CONDITIONS

- A. The backwash lagoon is bounded on the North by an internal treatment facility access road and related buildings. It is bounded on the East by the Norfolk Southern railroad tracks and the North Oconee River. On the South and West sides is the Water Treatment Plant. The Contractor shall be required to abate any contribution to air, water or land pollution including such nuisances as odors, noise, surface or groundwater contamination, or other conditions resulting from the sludge removal, dewatering and residuals hauling operation.

- B. The Contractor shall comply with all traffic regulations. The Contractor shall be responsible for repairing any damage to the plant entrance road and other paved areas that is caused by the Contractor's operations at no additional cost to the Owner.
- C. It shall be the Contractor's responsibility to determine the condition of the backwash lagoon as required to remove the sludge from the lagoon.
- D. Examination: After Effective Date of the Agreement and before work at site is started, Contractor, Engineer, and Owner shall make thorough examination of pre- existing conditions including existing roads (plant roads) structures, and other improvements in vicinity of work, as applicable, which might be affected by the Contractor operations. Periodic reexamination shall be jointly performed. Record observations, including photographs and videotape for signature of Engineer and Contractor.
- E. Documentation: the Contractor shall submit photographs, videotape, and other records documenting examination in accordance with Section 01320, Construction Photographs and Videos of these Specifications. Engineer will return one record copy of observation documents to Contractor to be kept on file in Contractor's field office as site records. These observation documents are intended for use as indisputable evidence in ascertaining whether and to what extent damage occurred as a result of Contractor's operations, and are for protection of adjacent property owners, Contractor, and Owner.
- F. Access and work space at the site is limited. The Contractor shall schedule and coordinate his work as needed to minimize interference with the Owner's operation of the Water Treatment Plant and to allow the Owner to maintain continuous operation of the Water Treatment Plant. Available staging areas are identified on the Site Plan included in the Drawings.
- G. The Contractor shall not trespass the Norfolk Southern railroad right-of-way to the north and east of the lagoon.
- H. The backwash lagoon includes a berm on the north, east, and west sides. It is the Contractor's responsibility to protect the berm and associated equipment, piping, electrical components, and utilities related to the lagoon during the Contractor's operation. Any damage to the equipment, piping, or electrical system caused by the Contractor's operations shall be repaired at no additional cost to the Owner. The Contractor shall coordinate with the Owner and have utilities located in the berm if the Contractor's methods will disturb the berm.

- I. The Contractor shall be responsible for removing and disposing of any debris in the backwash lagoon including, but not limited to, residuals, cattails, brush, and other vegetation. Rock is known to be present in the lagoon, particularly in the berm located on the northern edge adjacent to the onsite creek. Rock shall be left undisturbed as much as practicable. The Owner is not responsible for damage to the Contractor's equipment due to rock or other debris.
- J. The Contractor must plan for his operations to meet all the requirements of the State of Georgia National Pollution Discharge Elimination System (NPDES) General Permit No. GAG640000 for Filter Backwash Discharges. The Contractor shall take necessary precautions so that the discharge from the lagoon to its receiving waters complies with the requirements of the NPDES permit. Precautions may include, but are not limited to, installation of a micron filter curtain in the overflow spillway. The Contractor shall sample the overflow daily during operations and submit the results to the Engineer within 3 days. If any sample exceeds 45 mg/L, the Contractor shall cease all Contractor operations until modifications to the Contractors precautions are implemented satisfactory to the Owner and Engineer. Owner will be responsible for compliance sampling. A copy of the facility's NPDES permit is provided in Appendix A.
- K. The Contractor shall appropriately prepare the surface of the staging area to accommodate their proposed mechanical dewatering system as approved by the Engineer.

1.10 PROTECTION OF THE ENVIRONMENT

- A. The Contractor's operations shall in no way contribute to air, water, or land pollution, including such nuisances as odors, insects, noise, surface or groundwater contamination, or any other condition that would have a detrimental effect on the environment and shall meet all local, state, and federal regulations for handling and disposal/beneficial reuse of the residuals.
- B. Dewatered residuals (if taken off site) must be in covered, closed, watertight containers. Leakage from tanks will not be allowed.
- C. The Contractor shall be responsible and take necessary precautions to prevent nuisance odors from leaving the plant site during residuals removal operations. Stored or stockpiled residuals must be placed in closed, watertight containers if odors are detected by the Engineer.
- D. Noise emanating from tools or equipment shall not exceed legal noise levels. The Contractor shall take every action required to comply with local noise control ordinance.

- E. A 200-foot buffer must be maintained from the top bank of the North Oconee River to the site of any construction activity at all times.
- F. The Contractor shall provide a skirted boom upstream of the backwash lagoon overflow for protection from oil leaks.
- G. The Contractor shall minimize air pollution from construction operations. Burning of waste materials, rubbish, or other debris will not be permitted on or adjacent to the site. Give unpaved streets, roads, detours, or haul roads used in the area a dust- preventive treatment or periodically water to prevent dust. Strictly adhere to applicable environmental regulations for dust prevention.
- H. The Contractor shall take necessary precaution to prevent the spread of sludge, mud, dirt or other debris to any paved road.
- I. The Contractor shall meet all local and state sedimentation and erosion control requirements.

1.11 PERMIT REQUIREMENTS

- A. The Contractor shall obtain all permits or agreements required for any part of the work. The Contractor shall pay all fees for permits, easements, or agreements that he obtains and all fees shall be included in the Bid price.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.01 SEQUENCING

- A. The Contractor shall begin sludge removal at the southeastern and southwestern edges of the lagoon near the filter backwash effluent pipes as shown on the site plan in Drawings. The sludge removal process may then proceed toward the middle of the lagoon or other areas as directed by the Owner or Engineer. The approximate locations of the two filter backwash effluent pipes are shown on the Site Plan in Drawings.
- B. Plan the work and carry it out with minimum interference of water plant operations. Prior to starting the work, confer with the Owner and Engineer to develop an approved work schedule. The Owner reserves the right to stop Contractor operations at no additional cost to the Owner.
- C. It may be necessary to do certain parts of the construction work outside normal working hours in order to avoid undesirable conditions. The Contractor shall coordinate this work in advance with the Engineer and perform it at agreed-upon times, at no additional cost to the Owner.

- D. The Contractor may be working onsite at the same time as other Contractors. The Contractor shall coordinate their schedules with the other Contractors and shall meet at a preconstruction conference, if required as determined by Engineer, for that purpose.

3.02 SLUDGE REMOVAL FROM BACKWASH LAGOON

- A. Contractor removal and hauling operations shall be limited to Monday through Saturday, 7:00 a.m. to 7:00 p.m., local time, unless notified otherwise by the Engineer. The Contractor shall not work during City holidays, unless agreed to otherwise by the Engineer.
- B. The sludge shall be removed by an effective means as determined by the Contractor and approved by the Engineer.
- C. The Contractor shall provide all equipment and temporary piping required for sludge removal. The Contractor shall not use any Owner equipment or facilities.
- D. The Contractor shall conduct his sludge removal operations to prevent damage to the lagoon.
- E. It is not anticipated that the sludge is a hazardous waste as defined by federal and state regulations. If such hazardous waste is encountered, such situation would be considered a changed site condition and addressed as such in accordance with the General Conditions.

3.03 SLUDGE DEWATERING

- A. The Contractor shall be required to dewater and maintain the removed sludge on the Owner's site to the minimum percent total solids by weight required at the residuals disposal site, and to meet any other requirements specified at the residuals disposal site.
- B. The Contractor is solely responsible for providing subgrade and appropriate working pad for the Mechanical Dewatering Equipment System. The system shall be capable of receiving sludge from the lagoon, dewatering the sludge to the minimum percent solids target, and returning the filtrate back to the backwash lagoon.
- C. The Contractor shall coordinate and provide all utilities, pumps, interconnecting piping, and appurtenances for the system.
- D. The Contractor shall dispose of filtrate or centrate to the sewer via a manhole on site in accordance with any restrictions on industrial discharge from the site.

3.04 SAMPLING

- A. The Owner or Owner's Representative will collect all samples required for measurement of work performed. The Contractor shall provide access for the collection of representative samples of residuals being hauled from the plant.
- B. Residuals sampling and testing to determine percent total solids content (%TS) will be done at a state certified laboratory and will follow established laboratory procedures. The Owner or Owner's Representative will collect one sample from the residuals stockpile each day and from this sample will determine the %TS for that day.
- C. The weight of residuals shall be recorded on a per truckload basis by the Contractor. The weight of each truck shall be provided to the Engineer by the Contractor. Any other means of determining the dry tonnage of sludge removed, dewatered, and disposed may be proposed by the Contractor and requires approval by the Engineer.
- D. The dry tonnage of residuals eligible for payment during any period will be calculated as the sum of the dry tonnage disposed over the Contract period. Dry tonnage will be calculated based on the weight of residuals hauled by truckload multiplied by the %TS of the residuals for the day the truckload was hauled.
- E. Solids Verification: At Contractor's option, the Contractor may verify residuals solids content through the use of an approved independent laboratory. Residuals sampling shall be arranged so that split samples can be obtained at the same time by both the Contractor and Engineer. Established sampling procedures (that is storing, shipping, etc.), shall be utilized to maintain the integrity of the samples. Given the precision of the solids determination procedure, only solids content values that deviate by more than 5 percent for the same split sample will be taken into consideration when verifying the Engineer's method. For cases of greater than 5 percent variation in solids content for the same split sample, the Engineer's and Contractor's values will be averaged and the resultant mean will be used in determining the dry weight of residuals removed for that truckload only.

3.05 OFF SITE RESIDUALS HAULING

- A. The Contractor shall follow the requirements of Section 01710, Cleaning of these Specifications for the disposal of dewatered sludge.
- B. The Contractor shall be responsible for hauling the residuals from the Owner's plant site to a permitted landfill and shall obtain and pay for any permits or fees required.

- C. The Contractor is responsible for providing any special measures for traffic control, including flaggers, signs, or detours.
- D. The Contractor shall obey all laws, regulations, and requirements of the agencies having jurisdiction of the haul routes.
- E. The Contractor shall take precautions to prevent spillage of residuals onto roadways. The Contractor shall be responsible for any spills that occur as a result of his residuals removal or hauling operations. Spilled residuals shall be removed immediately and cleanup work completed the same day that the spill occurs. Cleanup of spilled residuals left unresolved for more than 12 hours or considered a public nuisance may be performed or contracted by the Owner on an emergency basis and the cost will be withheld from the Contractor's payment. This in no way will relieve the Contractor of responsibility for the spill or subsequent results of the spill.
- F. The Engineer may stop work if the roads are not maintained clean during residuals hauling.

3.06 RESIDUALS DISPOSAL

- A. The residuals shall be disposed in accordance with all applicable laws and regulations. The Contractor will follow the direction of the landfill operator regarding where and how to place the residuals at the landfill.
- B. The Contractor shall provide the Engineer a copy of the uniform manifest document that accompanies each truckload. A copy shall be provided to the Engineer within 5 calendar days of the truckload reaching the disposal/reuse site. Failure to provide this documentation will invalidate any request for payment associated with the associated truckload.
- C. The Contractor shall notify the Engineer immediately of any problems encountered during residuals disposal/reuse.
- D. All requirements for buffer zones, incorporation of residuals, land use limitations, loading rates, storing or stockpiling of residuals, and all other guidelines or requirements must be complied with.
- E. The definitions contained in Georgia Environmental Protection Division Rules 391-3-4-.01, Solid Waste Management, shall be applicable to this Project. The term waste shall include excess and surplus materials and shall include liquid and solid wastes.
- F. Except for items or materials to be salvaged, recycled, or otherwise reused, remove waste materials from Project site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.

- G. Except as otherwise specified, do not allow waste materials that are to be disposed of to accumulate onsite.
- H. Remove and transport waste in a manner that will prevent spillage on adjacent surfaces and areas.
- I. Burning: Do not burn waste materials onsite.
- J. Waste removed from the Project site shall be disposed of in sites permitted by the Georgia Environmental Protection Division for the acceptance of the type of waste being disposed. The acceptable types of permitted disposal facilities are as follows:
 - 1. Inert Waste Landfills.
 - 2. Municipal Solid Waste Landfills.
 - 3. Municipal Solid Waste Landfills permitted to receive only construction and demolition wastes.
- K. Exceptions to Paragraph F are as follows:
 - 1. Hazardous waste shall be disposed of in accordance with Georgia Environmental Protection Division Rules 391-3-11, Hazardous Waste Management, and any other applicable regulations.
 - 2. Asbestos-containing waste shall also be handled and disposed of in accordance with Georgia Environmental Protection Division Rules 391-3-14, Asbestos Removal and Encapsulation, and any other applicable regulations.
 - 3. Excess earth material and excess excavated rock material may be placed on sites for which the Contractor provides to the Owner a signed affidavit from the property owner that the placement of such material is acceptable to the property owner. The Contractor and property owner shall be responsible for all permitting of such disposal.
- L. No waste shall be placed at a transfer station facility.
- M. The Contractor shall maintain records related to all waste removed from the Project site to allow the Owner or the Engineer to readily determine the following:
 - 1. Date waste removed from Project site.
 - 2. Name of hauler (company and driver) transporting such waste.
 - 3. General description of waste transported.
 - 4. "Truck tickets" or manifests indicating the waste disposal site and amount of waste disposed therein.

- N. For all wastes hauled to any landfill, the hauler of such wastes must be licensed under Permit by Rule in accordance with Georgia Environmental Protection Division Rules 391-3-4-.06, Collection, Transportation, Processing, and Disposal.

3.07 SITE RESTORATION

- A. On completion of work, the Contractor shall be responsible for repairing any damage to the site or roads which occurred as a result of work performed on this Project and restore all areas to a similar condition as at the start of the Project. All utility connections shall be completely removed.

END OF SECTION

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**General NPDES Permit
for Drinking Water Treatment Plant Dischargers
Permit No. GAG640000**

SUMMARY OF CHANGES

Cover Page

- Changed the name of the permit to improve clarity of the type of permitted discharges.

Part I – Coverage Under This General Permit

- Added language for eligibility for coverage and Notice of Intent (NOI) requirements.
- Added language for discharges to impaired waters.

Part III – Effluent Limitations and Monitoring Requirements:

- Added Parts III.A.1 to III.A.2 to improve permit clarity.
 - Tables III.A.1 – Limitations applicable to facilities using surface water as a raw water source
 - Tables III.A.2 – Limitations applicable to facilities using ground water as a raw water source
- Added a total phosphorus monitoring to quantify nutrient loading from drinking water treatment plants covered under this general permit.
- Added *Escherichia coli* or fecal coliform bacteria monitoring for facilities that use surface water as raw source water to determine if drinking water treatment plants are significant contributors of bacteria to surface water.
- Added aluminum or monitoring for drinking water treatment plants that use surface water as a raw source based on the treatment of drinking water used.
- Added aluminum, iron, and arsenic monitoring for all facilities utilizing ground water as source water since these are common pollutants in groundwater.
- Added a new total residual chlorine limit of 0.011 mg/L along with a 12-month compliance schedule to meet the new limit

Part V – Approved Sludge Management Plan

- Added language to reflect authorization for permittees to dispose of sludge to another permitted facility/a third party for further processing and/or ultimate disposal.

Part VI – Definitions

- Added language to define various treatment systems and to enhance permit clarity.

Standard Conditions and Boilerplate Modifications:

The permit boilerplate includes modified language or added language consistent with current NPDES permits.

Final Permit Determinations and Public Comments:

- ☐ Final issued permit did not change from the draft permit placed on public notice.
- ☒ Public comments were received during public notice period.
- ☐ Public hearing was held on
- ☒ Final permit includes changes from the draft permit placed on public notice. See attached permit revisions and/or permit fact sheet revisions.

**Public Comments and EPD Responses on the draft
General NPDES Permit for Drinking Water Treatment Plant Dischargers Permit No. GAG640000**

Comment	Response to Comment
1. Clarifications on the new Total Residual Chlorine Limit of 0.011 mg/L 2. There is no recorded 7Q10 for the receiving stream. There are ways to estimate the 7Q10. Will these be allowed in order to use the dilution calculation for the interim Total Residual Chlorine (TRC) limit?	The Georgia Water Quality Control Act (GA Rules and Regulations), Chapter 391-3-6-.05 describes the narrative toxicity standards for all waters of the State. The GA Rules and Regulations state that waters shall not have toxic, corrosive, acidic, and caustic substances from municipal discharges that can be harmful to humans, animals or aquatic life. The General Permit for Drinking Water Treatment Plant Dischargers (General Permit) must protect the narrative toxicity standards to be considered protective of all receiving waters across Georgia. A daily maximum total residual chlorine (TRC) limit of 0.011 mg/L has been included in the draft permit based on US EPA’s chronic TRC criterion of 11 µg/L in the receiving stream assuming a 7Q10 of zero. The assumed 7Q10 of zero is necessary in the General Permit to ensure all receiving waterbodies that may receive discharges from drinking water treatment plants are protected. The proposed TRC limit may be below the detection limit of the analytical method prescribed in the federal regulations in 40 CFR 136. In accordance with Part II.A.g in the draft permit, if the facility’s effluent TRC is lower than the detection limit of the analytical method used, the facility should report TRC as “non detect” in the Discharge Monitoring Reports. The detection limit of the method will also be reported.
A 12-month deadline for compliance is an unreasonable time-table. Any design, permitting and construction could not happen so quickly. Two or three years would be the soonest possible.	The current General Permit issued on January 6, 2016, includes a total residual chlorine limit and the existing facilities covered under this permit already use chlorine for disinfection. Hence facilities are already equipped with a dechlorination system and a 12-month compliance schedule has been maintained in the final permit allowing time to optimize treatment.

Comment	Response to Comment
Clarifications on drinking water sludge disposal.	The current permit, issued on January 6, 2016, and proposed final permit do not authorize land application of drinking water sludge. The ultimate disposal and land application of drinking water sludge is regulated under the federal regulations in 40 CFR Part 257 and the recovered materials provisions under Chapter 391-3-4.04(7) of the Georgia Solid Waste Management Rules. The federal regulations in 40 CFR Part 503 and Chapter 391-3-6.17 of the GA Rules and Regulations do not authorize the disposal of sludge generated during the treatment of drinking water; therefore, land application of drinking water sludge cannot be permitted under those regulations. These regulations authorize the disposal and land application of sewage sludge generated from a publicly owned wastewater treatment plant. However, drinking water sludge may be land applied if requirements of 40 CFR 257 and the recovered materials provisions under Chapter 391-3-4.04(7) of the Georgia Solid Waste Management Rules can be met.

PERMIT REVISIONS

General NPDES Permit No. GAG640000 for Drinking Water Treatment Plant Dischargers

Were there any revisions between the draft permit placed on public notice and the final permit being proposed? ☒ Yes ☐ No

If yes, specify:

Part.II.B.b & c Revised language from:

- b. Sludge must be disposed of in a permitted landfill or sent to a permitted third party for further treatment and ultimate disposal (Refer to Part V for reporting requirements).
- c. Although this permit does not authorize for land application, drinking water sludge may be land applied if requirements contained in 40 CFR Part 257 and the recovered materials provisions under Chapter 391-3-4-.04(7) of the Solid Waste Management Rules are met.

To:

- b. Sludge may be sent to another permitted facility or third party for further treatment and/or ultimate disposal (Refer to Part V for reporting requirements).
- c. Sludge generated by drinking water treatment plants shall be disposed in accordance with the federal regulations under 40 CFR 258 and the Georgia Rules for Solid Waste Management in Chapter 391-3-4. If land applying the generated sludge, the permittee shall comply with the requirements in 40 CFR 257 and the recovered materials requirements in the Georgia Rules for Solid Waste Management Chapter 391-3-4-.04(7).

PERMIT REVISIONS

- Part II.K.2 Revised the compliance date from December 21, 2020 to December 21, 2025 to align with the amended federal regulation in 40 CFR 127 becoming effective in January 2021.
- Part V Removed the word “sewage” as these types of facilities do not generate sewage sludge.



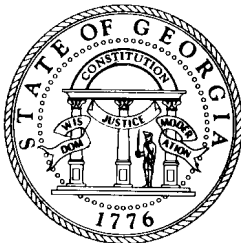
**AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
GENERAL PERMIT FOR DRINKING WATER TREATMENT PLANT DISCHARGERS**

In accordance with the provisions of the Georgia Water Quality Control Act (Georgia Laws 1964, p. 416, as amended), hereinafter called the State Act; the Federal Water Pollution Control Act, as amended (33 U.S. C. 1251 et seq.), hereinafter called the Federal Act; and the Rules and Regulations promulgated pursuant to each of these Acts, new and existing water treatment plant filter backwash and basin washdown point sources within the State of Georgia, upon receipt of a Notice of Coverage, are authorized to discharge filter backwash associated with drinking water treatment plant activity to the waters of the State of Georgia in accordance with effluent limitations, monitoring requirements and other conditions set forth in the permit.

This permit is issued in reliance upon the submitted Notices of Intent, any other applications upon which this permit is based, supporting data entered therein or attached thereto, and any subsequent submittal of supporting data.

This general permit shall become effective on January 1, 2021.

This permit and the authorization to discharge shall expire at midnight, December 31, 2025.



Director,
Environmental Protection Division

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PART I. COVERAGE UNDER THIS GENERAL PERMIT

A. Eligibility for Coverage

To obtain authorization under this general permit, the person discharging to waters of the state must meet the eligibility requirements identified below:

1. Facilities that discharge wastewaters associated with drinking water production from conventional, direct filtration, or membrane filtration Water Treatment Plants (WTP). These discharges include filter backwash water and sedimentation basin washdown water.

B. Permit Application (Notice of Intent) (NOI) – Requirements

Any person wishing to maintain coverage under this general permit shall submit an NOI in accordance with the Federal Regulations, 40 CFR 122.22

1. NOI for Existing Discharges Already Covered Under Applicable General Permit:
 - a. The owner/operator of a WTP currently covered under the existing NPDES general permit that is seeking coverage under this permit must submit a complete application (NOI) to the Georgia EPD within 180 days of the expiration date of this permit. For any facility covered under the existing NPDES general permit that meets this deadline, authorization under this general permit is automatically continued until coverage is granted under this permit. If a complete NOI is not submitted within 180 days of this permit expiration date, permit coverage will be terminated.
 - b. The NOI shall be on forms as may be prescribed and furnished by EPD. The NOI requires the following information to be submitted:
 - i. Name of facility;
 - ii. Any and all information related to the facility contact person;
 - iii. Location and mailing address of your facility;
 - iv. Topographic map(s);
 - v. A brief description of the operation;
 - vi. Outfall location of final discharge;
 - vii. Any and all information related to Impaired Waters and Total Maximum Daily Loads (TMDLs);
 - viii. Other information provided on the NOI application as prescribed by EPD.
 - c. EPD may delay the permittee's authorization for further review, may notify applicants that additional effluent limitations are necessary, or may deny coverage under this permit and require submission of an application for an individual or alternative general permit. EPD will notify permittees in writing of the delay, of the need for additional effluent limits, or of the request for submission of an individual NPDES permit application or alternative general permit applications.

2. Submittal of NOI and Notice of Termination (NOT)

The NOI and supporting documentation or the NOT must be signed by the owner or other authorized person in accordance with Part II.O of this permit and submitted to Georgia EPD's Online Application System (GEOS).

C. Discharge(s) To Impaired Waters

1. This general permit does not authorize discharges of pollutants of concern into impaired waters, unless the effluent discharge limits are consistent with the Total Maximum Daily Load (TMDL). Discharges that include pollutants of concern must be consistent with an EPA-approved or EPA/EPD established TMDL and applicable state law. Impaired waters are those that do not meet applicable water quality standards and are identified by an EPA-approved or EPA/EPD established TMDL and/or the State of Georgia's 303(d) list. Pollutants of concern are those pollutants for which the water body is listed as impaired and which contribute to the listed impairment.
2. The facility otherwise eligible for coverage, or currently covered, under this general permit must determine whether its discharge(s) contributes directly or indirectly to a water body that is included on the latest 303(d) list or otherwise designated by EPD as impaired or is included in an EPA/EPD-approved or EPA/EPD established TMDL. If the facility has discharges meeting this criterion, it must obtain an individual permit.

D. Transfer of Ownership or Control

Coverage under this general permit may not be transferred. If the entity operating the facility changes, a new Notice of Intent must be submitted at least 30 days in advance of when the new owner will take over operation. The owner to whom the permit was originally issued should give Notice of Termination prior to the new owner.

E. Termination of Coverage

1. EPD may deny coverage under this permit based on an incomplete or incorrect NOI submittal. The Director may at any time revoke coverage under this permit in accordance with the State Rules, Section 391-3-6-.15(11).
2. In order to terminate permit coverage, the permittee must submit a complete and accurate Notice of Termination (NOT). The permittee is responsible for complying with the terms of this permit until authorization is terminated.
3. A permittee must submit a NOT within 30 days after one or more of the following conditions have been met:
 - a. A new permittee has taken over responsibility of the facility covered under an existing NOI;

- b. All discharges have ceased for which permit coverage was obtained and the permittee does not expect to discharge during the remainder of the permit term or any of the discharges covered under this permit.

F. Expiration of Permit

This permit will expire five (5) years from the effective date. The permittee must re-apply for permit coverage 180 days prior to the expiration of this permit unless the permit has been terminated consistent with 40 CFR §122.64(b). If this permit is not reissued or replaced prior to the expiration date, the permit will be administratively continued and remain in force and effect. Any permittee who has submitted a completed application as provided by EPD 180 days prior to the expiration date of the permit and has been granted permit coverage will automatically remain covered by the administratively continued permit until the earlier of:

1. Reissuance or replacement of this permit, at which time the permittee must comply with the application conditions of the new permit to maintain authorization to discharge;
2. Issuance of an individual permit for the discharges;
3. A formal decision by the permitting authority not to reissue this general permit, at which time the permittee must seek coverage under an individual permit; and/or
4. The permitting authority grants the permittee's request for termination of permit coverage.

PART II. MONITORING AND REPORTING

A. Monitoring

- a. Fecal coliform bacteria and *Escherichia Coli* will be reported as the geometric mean of the values for the samples collected during the time periods.
- b. The monthly average is the arithmetic mean of values obtained for samples collected during a calendar month.
- c. The weekly average is the arithmetic mean of values obtained for samples collected during a 7-day period. The week begins 12:00 midnight Saturday and ends at 12:00 midnight the following Saturday. To define a different starting time for the sampling period, the permittee must notify the EPD in writing. For reporting required by Part II.L. of this permit, a week that starts in one month and ends in another month shall be considered part of the second month. The permittee may calculate and report the weekly average as a 7-day moving average.
- d. Effluent samples required by Part III of this permit shall be collected after the final treatment process and before discharge to receiving waters. Composite samples, if required, may be collected before disinfection with written EPD approval.
- e. Flow measurements shall be conducted using the flow measuring device(s) in accordance with the approved design of the facility. If instantaneous measurements are required, then the permittee shall have a primary flow measuring device that is correctly installed and maintained. If continuous recording measurements are required, then flow measurements must be made using continuous recording equipment. Calibration shall be maintained of the continuous recording instrumentation to $\pm 10\%$ of the actual flow.

Flow shall be measured manually to check the flow meter calibration at a frequency of once a month. If secondary flow instruments are in use and malfunction or fail to maintain calibration as required, the flow shall be computed from manual measurements or by other method(s) approved by EPD until such time as the secondary flow instrument is repaired. For facilities which utilize alternate technologies for measuring flow, the flow measurement device must be calibrated semi-annually by qualified personnel.

Records of the calibration checks shall be maintained.

- f. If secondary flow instruments malfunction or fail to maintain calibration as required in II.A.e., the flow shall be computed from manual measurements taken at the times specified for the collection of composite samples.
- g. Some parameters will be reported as "not detected" when they are below the detection limit and will then be considered in compliance with the effluent limit. The detection limit will also be reported.

B. Sludge Disposal and Monitoring Requirements

- a. The permittee shall develop and implement procedures to ensure adequate year-round sludge disposal. The permittee shall monitor and maintain records documenting the quantity of sludge removed from the facility. The total quantity of sludge removed from the facility during the reporting period shall be reported on the Discharge Monitoring Reports as required under Part II.L. of this permit. The quantity shall be reported on a dry weight basis (dry tons).
- b. Sludge may be sent to another permitted facility or third party for further treatment and/or ultimate disposal (Refer to Part V for reporting requirements).
- c. Sludge generated by drinking water treatment plants shall be disposed in accordance with the federal regulations under 40 CFR 258 and the Georgia Rules for Solid Waste Management in Chapter 391-3-4. If land applying the generated sludge, the permittee shall comply with the requirements in 40 CFR 257 and the recovered materials requirements in the Georgia Rules for Solid Waste Management Chapter 391-3-4-.04(7).

C. Effluent Toxicity and Biomonitoring Requirements

The permittee shall comply with effluent standards or prohibitions established by Section 307(a) of the Federal Act and with Chapter 391-3-6-.03(5) of the State Rules and may not discharge toxic pollutants in concentrations or combinations that are harmful to humans, animals, or aquatic life.

If toxicity is suspected in the effluent, the EPD may require the permittee to perform any of the following actions:

- a. Acute biomonitoring tests;
- b. Chronic biomonitoring tests;
- c. Stream studies;
- d. Priority pollutant analyses;
- e. Toxicity reduction evaluations (TRE); or
- f. Any other appropriate study.

The EPD will specify the requirements and methodologies for performing any of these tests or studies. Unless other concentrations are specified by the EPD, the critical concentration used to determine toxicity in biomonitoring tests will be the effluent instream wastewater concentration (IWC) based on the permitted monthly average flow of the facility and the critical low flow of the receiving stream (7Q10). The endpoints that will be reported are the effluent concentration that is lethal to 50% of the test organisms (LC50) if the test is for acute toxicity and the no observed effect concentration (NOEC) of effluent if the test is for chronic toxicity.

The permittee must eliminate effluent toxicity and supply the EPD with data and evidence to confirm toxicity elimination.

D. Representative Sampling

Samples and measurements of the monitored waste shall represent the volume and nature of the waste stream. The permittee shall maintain a written sampling plan and monitoring schedule.

E. Reporting

- a. Unless otherwise specified in this permit, quarterly samples shall be taken during the periods January-March, April-June, July-September, and October-December.
- b. Unless otherwise specified in this permit, semiannual samples shall be taken during the periods January-June and July-December.
- c. Unless otherwise specified in this permit, annual samples shall be taken during the period of January-December.

F. Monitoring Procedures

All analytical methods, sample containers, sample preservation techniques, and sample holding times must be consistent with the techniques and methods listed in 40 CFR Part 136. The analytical method used shall be sufficiently sensitive. EPA approved methods must be applicable to the concentration ranges of the NPDES permit samples.

G. Recording of Results

For each required parameter analyzed, the permittee shall record:

- a. The exact place, date, and time of sampling, and the person(s) collecting the sample. For flow proportioned composite samples, this shall include the instantaneous flow and the corresponding volume of each sample aliquot, and other information relevant to document flow proportioning of composite samples;
- b. The dates and times the analyses were performed;
- c. The person(s) who performed the analyses;
- d. The analytical procedures or methods used; and
- e. The results of all required analyses.

H. Additional Monitoring By Permittee

If the permittee monitors required parameters at the locations designated in III.A. more frequently than required, the permittee shall analyze all samples using approved analytical methods specified in II.G. The results of this additional monitoring shall be included in calculating and reporting the values on the Discharge Monitoring Report forms. The permittee shall indicate the monitoring frequency on the report. The EPD may require in writing more frequent monitoring, or monitoring of other pollutants not specified in this permit.

I. Records Retention

The permittee shall retain records of:

- a. All laboratory analyses performed including sample data, quality control data, and standard curves;
- b. Calibration and maintenance records of laboratory instruments;
- c. Calibration and maintenance records and recordings from continuous recording instruments;
- d. Process control monitoring records;
- e. Facility operation and maintenance records;
- f. Copies of all reports required by this permit;
- g. All data and information used to complete the permit application; and
- h. All monitoring data related to sludge use and disposal.

These records shall be kept for at least three years. Sludge handling records must be kept for at least five years. Either period may be extended by EPD written notification.

J. Penalties

Both the Federal and State Acts provide that any person who falsifies or tampers with any monitoring device or method required under this permit, or who makes any false statement, representation, or certification in any record submitted or required by this permit shall, if convicted, be punished by a fine or by imprisonment or by both. The Acts include procedures for imposing civil penalties for violations or for negligent or intentional failure or refusal to comply with any final or emergency order of the Director of the EPD.

K. Reporting Requirements

1. The permittee must electronically report the DMR, OMR and additional monitoring data using the web based electronic NetDMR reporting system, unless a waiver is granted by EPD.
 - a. The permittee must comply with the Federal National Pollutant Discharge Elimination System Electronic Reporting regulations in 40 CFR §127. The permittee must electronically report the DMR, OMR, and additional monitoring data using the web based electronic NetDMR reporting system online at: <https://netdmr.epa.gov/netdmr/public/home.htm>
 - b. Monitoring results obtained during the calendar month shall be summarized for each month and reported on the DMR. The results of each sampling event shall be reported on the OMR and submitted as an attachment to the DMR.
 - c. The permittee shall submit the DMR, OMR and additional monitoring data no later than 11:59 p.m. on the 15th day of the month following the sampling period.
 - d. All other reports required herein, unless otherwise stated, shall be submitted to the EPD Office listed on the permit issuance letter signed by the Director of EPD.
2. **No later than December 21, 2025,** the permittee must electronically report the following compliance monitoring data and reports using the online web based electronic system approved by EPD, unless a waiver is granted by EPD:
 - a. Sewer Overflow/Bypass Event Reports;
 - b. Noncompliance Notification;
 - c. Other noncompliance; and
 - d. Bypass

L. Other Reports

All other reports required in this permit not listed above in Part II.L.2 or unless otherwise stated, shall be submitted to the EPD Office listed on the permit issuance letter signed by the Director of EPD.

M. Signatory Requirements

All reports, certifications, data or information submitted in compliance with this permit or requested by EPD must be signed and certified as follows:

- a. Any State or NPDES Permit Application form submitted to the EPD shall be signed as follows in accordance with the Federal Regulations, 40 C.F.R. 122.22:

1. For a corporation, by a responsible corporate officer. A responsible corporate officer means:
 - i. 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
 - ii. the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding \$25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
 2. For a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or
 3. For a municipality, State, Federal, or other public facility, by either a principal executive officer or ranking elected official.
- b. All other reports or requests for information required by the permit issuing authority shall be signed by a person designated in (a) above or a duly authorized representative of such person, if:
1. The representative so authorized is responsible for the overall operation of the facility from which the discharge originates, e.g., a plant manager, superintendent or person of equivalent responsibility;
 2. The authorization is made in writing by the person designated under (a) above; and
 3. The written authorization is submitted to the Director.
- c. Any changes in written authorization submitted to the permitting authority under (b) above which occur after the issuance of a permit shall be reported to the permitting authority by submitting a copy of a new written authorization which meets the requirements of (b) and (b.1) and (b.2) above.
- d. Any person signing any document under (a) or (b) above 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 qualified 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.”

PART III. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

A.1.a EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Facilities Using Surface Water as a Raw Source Water:

The discharge from the water treatment plant shall be limited and monitored by the permittee as specified below starting on the effective date of the permit and continuing for 12 months:

Parameters	Discharge limitations in mg/L unless otherwise specified		Monitoring Requirements		
	Monthly Average	Weekly Average	Measurement Frequency	Sample Type	Sample Location
Flow (MGD)	Report	Report	One Day/Week	Instantaneous	Effluent
Total Suspended Solids	30	45	One Day/Month	Grab	Effluent
Total Recoverable Aluminum ⁽¹⁾	Report	Report	One Day/Month	Grab	Effluent
Total Recoverable Iron ⁽²⁾	Report	Report	One Day/Month	Grab	Effluent
Total Phosphorus, as P	Report	Report	One Day/Month	Grab	Effluent
<i>Escherichia coli</i> (#/100 mL) ⁽³⁾	Report	Report	One Day/Month	Grab	Effluent
Fecal Coliform Bacteria (#/100 mL) ⁽³⁾	Report	Report	One Day/Month	Grab	Effluent

Parameters	Discharge limitations in mg/L unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
pH, Daily Minimum – Daily Maximum (Standard Unit)	6.0 – 8.5	One Day/Month	Grab	Effluent
Total Residual Chlorine, Daily Maximum ⁽⁴⁾	Report	One Day/Month	Grab	Effluent

- (1) Total recoverable aluminum monitoring requirement is only applicable if aluminum-based chemicals are used in the treatment process. The permittee must use the appropriate No Data Indicator (NODI) code in the Discharge Monitoring Reports if monitoring is not required.
- (2) Total recoverable iron monitoring requirement is only applicable if iron-based chemicals are used in the treatment process. The permittee must use the appropriate No Data Indicator (NODI) code in the Discharge Monitoring Reports if monitoring is not required.
- (3) Either fecal coliform bacteria or *Escherichia coli* monitoring is required. Refer to your Notice of Coverage Letter to determine the applicable bacteria effluent monitoring requirements.
- (4) Total residual chlorine (TRC) monitoring requirements only apply if chlorine is in use at the facility. The TRC limit shall be calculated as follows:

$$\text{Dilution Factor} = (7Q_{10} + \text{Wastewater Discharge Flow}) / \text{Wastewater Discharge Flow}$$

$$\text{Daily maximum TRC limit} = 0.011 \text{ mg/L} \times \text{Dilution Factor}$$

The limit for TRC shall be the lower of either 0.5 mg/L or the calculated TRC limitation. If the TRC limit calculation is greater than 0.5 mg/L, the permittee will be required to meet the technology-based limit of 0.5 mg/L.

A.1.b EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Facilities Using Surface Water as a Raw Source Water:

The discharge from the water treatment plant shall be limited and monitored by the permittee as specified below starting 12 months after the effective date of the permit:

Parameters	Discharge limitations in mg/L unless otherwise specified		Monitoring Requirements		
	Monthly Average	Weekly Average	Measurement Frequency	Sample Type	Sample Location
Flow (MGD)	Report	Report	One Day/Week	Instantaneous	Effluent
Total Suspended Solids	30	45	One Day/Month	Grab	Effluent
Total Recoverable Aluminum ⁽¹⁾	Report	Report	One Day/Month	Grab	Effluent
Total Recoverable Iron ⁽²⁾	Report	Report	One Day/Month	Grab	Effluent
Total Phosphorus, as P	Report	Report	One Day/Month	Grab	Effluent
<i>Escherichia coli</i> (#/100 mL) ⁽³⁾	Report	Report	One Day/Month	Grab	Effluent
Fecal Coliform Bacteria (#/100 mL) ⁽³⁾	Report	Report	One Day/Month	Grab	Effluent

Parameters	Discharge limitations in mg/L unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
pH, Daily Minimum – Daily Maximum (Standard Unit)	6.0 – 8.5	One Day/Month	Grab	Effluent
Total Residual Chlorine, Daily Maximum ⁽⁴⁾	0.011	One Day/Month	Grab	Effluent

- (1) Total recoverable aluminum monitoring requirement is only applicable if aluminum-based chemicals are used in the treatment process. The permittee must use the appropriate No Data Indicator (NODI) code in the Discharge Monitoring Reports if monitoring is not required.
- (2) Total recoverable iron monitoring requirement is only applicable if iron-based chemicals are used in the treatment process. The permittee must use the appropriate No Data Indicator (NODI) code in the Discharge Monitoring Reports if monitoring is not required.
- (3) Either fecal coliform bacteria or *Escherichia coli* monitoring is required. Refer to your Notice of Coverage Letter to determine the applicable bacteria effluent monitoring requirements.
- (4) Total residual chlorine (TRC) monitoring requirements only apply if chlorine is in use at the facility. The permittee must use the appropriate No Data Indicator (NODI) code in the Discharge Monitoring Reports if monitoring is not required.

A.2.a EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Facilities Using Groundwater as a Raw Source Water:

The discharge from the water treatment plant shall be limited and monitored by the permittee as specified below starting on the effective date of the permit and continuing for 12 months:

Parameters	Discharge limitations in mg/L unless otherwise specified		Monitoring Requirements		
	Monthly Average	Weekly Average	Measurement Frequency	Sample Type	Sample Location
Flow (MGD)	Report	Report	One Day/Week	Instantaneous	Effluent
Total Suspended Solids	30	45	One Day/Month	Grab	Effluent
Total Recoverable Aluminum	Report	Report	One Day/Month	Grab	Effluent
Total Recoverable Iron	Report	Report	One Day/Month	Grab	Effluent
Total Recoverable Arsenic	Report	Report	One Day/Month	Grab	Effluent
Total Phosphorus, as P ⁽¹⁾	Report	Report	One Day/Month	Grab	Effluent

Parameters	Discharge limitations in mg/L unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
pH, Daily Minimum – Daily Maximum (Standard Unit)	6.0 – 8.5	One Day/Month	Grab	Effluent
Total Residual Chlorine, Daily Maximum ⁽²⁾	Report	One Day/Month	Grab	Effluent

⁽¹⁾ Total phosphorus, as P monitoring requirement is only applicable if phosphorus-based chemicals are used in the treatment process.

⁽²⁾ Total residual chlorine (TRC) monitoring requirements only apply if chlorine is in use at the facility. The permittee must use the appropriate No Data Indicator (NODI) code in the Discharge Monitoring Reports if monitoring is not required.
The TRC limit shall be calculated as follows:

$$\text{Dilution Factor} = (7Q_{10} + \text{Wastewater Discharge Flow}) / \text{Wastewater Discharge Flow}$$

$$\text{Daily maximum TRC limit} = 0.011 \text{ mg/L} \times \text{Dilution Factor}$$

The limit for TRC shall be the lower of either 0.5 mg/L or the calculated TRC limitation. If the TRC limit calculation is greater than 0.5 mg/L, the permittee will be required to meet the technology-based limit of 0.5 mg/L.

A.2.b EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Facilities Using Groundwater as a Raw Source Water:

The discharge from the water treatment plant shall be limited and monitored by the permittee as specified below starting 12 months after the effective date of the permit:

Parameters	Discharge limitations in mg/L unless otherwise specified		Monitoring Requirements		
	Monthly Average	Weekly Average	Measurement Frequency	Sample Type	Sample Location
Flow (MGD)	Report	Report	One Day/Week	Instantaneous	Effluent
Total Suspended Solids	30	45	One Day/Month	Grab	Effluent
Total Recoverable Aluminum	Report	Report	One Day/Month	Grab	Effluent
Total Recoverable Iron	Report	Report	One Day/Month	Grab	Effluent
Total Recoverable Arsenic	Report	Report	One Day/Month	Grab	Effluent
Total Phosphorus, as P ⁽¹⁾	Report	Report	One Day/Month	Grab	Effluent

Parameters	Discharge limitations in mg/L unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
pH, Daily Minimum – Daily Maximum (Standard Unit)	6.0 – 8.5	One Day/Month	Grab	Effluent
Total Residual Chlorine, Daily Maximum ⁽²⁾	0.011	One Day/Month	Grab	Effluent

- ⁽¹⁾ Total phosphorus, as P monitoring requirement is only applicable if phosphorus-based chemicals are used in the treatment process.
- ⁽²⁾ Total residual chlorine (TRC) monitoring requirements only apply if chlorine is in use at the facility. The permittee must use the appropriate No Data Indicator (NODI) code in the Discharge Monitoring Reports if monitoring is not required.

PART IV. MANAGEMENT AND OPERATIONAL REQUIREMENTS

A. Management Requirements

1. Facility Operation

The permittee shall maintain and operate efficiently all treatment or control facilities and related equipment installed or used by the permittee to achieve compliance with this permit. Efficient operation and maintenance include effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. Back-up or auxiliary facilities or similar systems shall be operated only when necessary to achieve permit compliance.

2. Change In Discharge

Any anticipated facility expansions, or process modifications which will result in new, different, or increased discharges of pollutants require the submission of a new NPDES permit application. If the changes will not violate the permit effluent limitations, the permittee may notify EPD without submitting an application. The permittee should notify EPD if their water intake changes or their water treatment process changes significantly. The Notice of Coverage may then be modified to specify and limit any pollutants not previously limited.

3. Noncompliance Notification

A permittee who does not comply with any permit effluent limit shall provide EPD with an oral report within 24 hours from the time the permittee becomes aware of the circumstances, followed by a written report within 5 days. The written report shall contain:

- a. A description of the noncompliance and its cause; and
- b. The period of noncompliance, including the exact date and times; or, if not corrected, the anticipated time the noncompliance is expected to continue; and
- c. The steps taken to reduce, eliminate, and prevent recurrence of the noncomplying discharge.

4. Anticipated Noncompliance Notification

The permittee shall give written notice to the EPD at least 10 days before:

- a. Any planned changes in the permitted facility; or
- b. Any activity which may result in noncompliance with the permit.

5. Other Noncompliance

The permittee must report all instances of noncompliance not reported under other specific reporting requirements, at the time monitoring reports are submitted. The reports shall contain the information required under conditions of twenty-four hour reporting.

6. Operator Certification Requirements

The person responsible for the daily operation of the facility must be a Certified Operator in compliance with the Georgia State Board of Examiners for Certification of Water and Wastewater Plant Operators and Laboratory Analysts Act, as amended. The class level for the certified Operator must comply with the minimum plant or system classification level specified in Section 391-3-6-.39 of Rules for Safe Drinking Water. In lieu of a wastewater operator certification, the appropriate certification requirements for a water plant operator for this facility will be sufficient.

7. Laboratory Analyst Certification Requirements

Laboratory Analysts must be certified in compliance with the Georgia State Board of Examiners for Certification of Water and Wastewater Treatment Plant Operators and Laboratory Analysts Act, as amended. In lieu of wastewater laboratory analyst certification, the appropriate certification requirements for a water laboratory analyst for this facility will be sufficient.

8. Bypassing

Any diversion of wastewater from or bypassing of wastewater around the permitted treatment works is prohibited, except if:

- a. Bypassing is unavoidable to prevent loss of life, personal injury, or severe property damage;
- b. There are no feasible alternatives to bypassing; and
- c. The permittee notifies the EPD at least 10 days before the date of the bypass.

Feasible alternatives to bypassing include use of auxiliary treatment facilities and retention of untreated waste. The permittee must take all possible measures to prevent bypassing during routine preventative maintenance by installing adequate back-up equipment.

The permittee shall operate the facility and the sewer system to minimize discharge of pollutants from combined sewer overflows or bypasses and may be required by the EPD to submit a plan and schedule to reduce bypasses, overflows, and infiltration.

Any unplanned bypass must be reported following the requirements for noncompliance notification specified in Part IV.A.4. The permittee may be liable for any water quality violations that occur as a result of bypassing the facility.

9. Power Failures

If the primary source of power to this water pollution control facility is reduced or lost, the permittee shall use an alternative source of power to reduce or control all discharges to maintain permit compliance.

10. Adverse Impact

The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge disposal which might adversely affect human health or the environment.

11. Upset Provision

Provision under 40 CFR 122.41(n)(1)-(4), regarding "Upset" shall be applicable to any civil, criminal, or administrative proceeding brought to enforce this permit.

B. Responsibilities

1. Compliance

The permittee must comply with this permit. Any permit noncompliance is a violation of the Federal Act, State Act, and the State Rules, and is grounds for:

- a. Enforcement action;
- b. Denial of coverage under this permit.

It shall not be a defense of the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity to maintain compliance with the conditions of this permit.

2. Right of Entry

The permittee shall allow the Director of the EPD, the Regional Administrator of EPA, and their authorized representatives, agents, or employees after they present credentials to:

- a. Enter the permittee's premises where a regulated activity or facility is located, or where any records required by this permit are kept;
- b. Review and copy any records required by this permit;
- c. Inspect any facilities, equipment, practices, or operations regulated or required by this permit; and
- d. Sample any substance or parameter at any location.

3. Submittal of Information

The permittee shall furnish any information required by the EPD to determine whether cause exists to modify, revoke and reissue, or terminate this permit or to determine compliance with this permit. The permittee shall also furnish the EPD with requested copies of records required by this permit. If the permittee determines that any relevant facts were not included in a permit application or that incorrect information was submitted in a permit application or in any report to the EPD, the permittee shall promptly submit the additional or corrected information.

4. Availability of Reports

Except for data determined to be confidential by the Director of EPD under O.C.G.A. 12-5-26 or by the Regional Administrator of EPA under the Code of Federal Regulations, Title 40, Part 2, all reports prepared to comply with this permit shall be available for public inspection at an EPD office. Effluent data, permit applications, permittee names and addresses, and permits shall not be considered confidential.

5. Civil and Criminal Liabilities

The permittee is liable for civil or criminal penalties for noncompliance with this permit and must comply with applicable State and Federal laws including promulgated water quality standards. The permit cannot be interpreted to relieve the permittee of this liability even if it has not been modified to incorporate new requirements.

6. Property Rights

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

7. Contested Hearings

Any person aggrieved or adversely affected by any action of the Director of the EPD shall petition the Director for a hearing within 30 days of notice of the action.

8. Severability

The provisions of this permit are severable. If any permit provision or the application of any permit provision to any circumstance is held invalid, the provision does not affect other circumstances or the remainder of this permit.

9. Previous Permits

All previous State wastewater permits issued to this facility, whether for construction or operation, are hereby revoked on the effective date of this permit. This action is taken to assure compliance with the Georgia Water Quality Control Act, as amended, and the Federal Clean Water Act, as amended. Receipt of the permit constitutes notice of such action. The conditions, requirements, terms and provisions of this permit authorizing discharge under the National Pollutant Discharge Elimination System govern discharges from this facility.

PART V. APPROVED SLUDGE MANAGEMENT PLAN

1. This general permit allows for sludge generated at the facility to be sent to another permitted facility and/or third party for further treatment and/or ultimate disposal.
2. The permittee will report on an annual basis the amount of sludge sent to the off-site preparer/permitted facility during the most recent calendar year. The annual report shall be submitted to EPD no later than February 19 of the following year.
3. The permittee will maintain sludge handling records in accordance with Part II.B. of the Permit.
4. The permittee will notify EPD in writing of any planned changes to the permittee's sludge use or disposal practices.

PART VI. DEFINITIONS

- a. **“Applicant”** means the owner of the site or the operator of the site.
- b. **“Coagulation”** means a process using coagulant chemicals and mixing by which colloidal and suspended materials are destabilized and agglomerated into flocs.
- c. **“Composite Sample”** means a combination of at least 5 discrete sample aliquots of at least 100 milliliters, collected over periodic intervals from the same location, during the operating hours of a facility for at least 8 hours. The composite must be flow proportional.
- d. **“Conventional filtration treatment”** means a series of processes including coagulation, flocculation, sedimentation, and filtration resulting in substantial particulate removal.
- e. **“CWA”** means the Clean Water Act (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) found at 33 USC 1251 et seq.
- f. **“Department”** means the Georgia Department of Natural Resources.
- g. **“Direct Filtration”** means a series of processes including coagulation and filtration but excluding sedimentation resulting in substantial particulate removal.
- h. **“Director”** means the Director of the EPD.
- i. **“Discharge of a Pollutant”** means any addition of any “pollutant” or combination of pollutants to “waters of the State” from any “point source.” This definition includes additions of pollutants into waters of the State from: surface runoff which is collected or channeled by man; discharges through pipes, sewers, or other conveyances owned by a State, municipality, or other persons which do not lead to treatment works; and discharges through pipes, sewers, or other conveyances, leading into privately owned treatment works. This term does not include an addition of pollutants by any “indirect discharger.”
- j. **“DMR”** means discharge monitoring report.
- k. **“Division”** means the Environmental Protection Division of the Department of Natural Resources.
- l. **“Effluent”** means wastewater that is discharged (treated or partially treated).
- m. **“Effluent limitation”** means any restriction imposed by the Director on quantities, discharge rates, and concentrations of “pollutant” which are “discharge” from “point sources” into waters of the United States, the waters of the “contiguous zone,” or the ocean.
- n. **“EPA” or “US EPA”** means the United States Environmental Protection Agency and any of its authorized personnel.
- o. **“EPD”** means the Environmental Protection Division of the Department of Natural Resources.

- p. **“Federal Act”** mean The Clean Water Act.
- q. **“Filtration”** means a process for removing particulate matter from water by passage through porous media.
- r. **“Flocculation”** means a process to enhance agglomeration or collection of smaller floc particles into larger, more easily settleable particles through gentle stirring by hydraulic or mechanical means.
- s. **“Grab Sample”** means an individual sample of at least 100 milliliters collected at a randomly-selected time over a period not exceeding 15 minutes.
- t. **“General Permit”** means an NPDES permit issued under Title 40 of the Code of Federal Regulations (40 CFR), Part 122.28 authorizing a category of discharges under the Federal Clean Water Act (Federal Act) within a geographical area.
- u. **“Influent”** means wastewater, treated or untreated, that flows into a treatment plant.
- v. **“Membrane filtration”** is a pressure or vacuum driven separation process in which particulate matter larger than 1 micrometer is rejected by an engineered barrier, primarily through a size-exclusion mechanism, and which has measurable removal efficiency of a target organism that can be verified through the application of a direct integrity test. This definition includes the common membrane technologies of microfiltration, ultrafiltration, nanofiltration, and reverse osmosis.
- w. **“MGD”** means millions gallons per day.
- x. **“Monthly Average”** means the arithmetic mean of values obtained for samples collected during a calendar month, other than for fecal coliform bacteria and *Escherichia Coli*.
- y. **“Notice of Intent (NOI)”** means the form used by a potential permittee to notify the EPD that they intend to seek coverage under a general permit.
- z. **“Notice of Termination (NOT)”** means the form used by a permittee to notify the EPD that they wish to cease coverage under a general permit”
- aa. **“Operator” or “certified operator”** means the person who has direct general charge of the day-to-day field operation of the septage storage, pretreatment, and disposal systems and who is responsible for the quality of the treated septage; and who holds a valid certification acceptable to the Division.
- bb. **“Owner”** means any person owning a facility that discharges to waters of the State.
- cc. **“Permittee”** means the owner or operator of the water treatment plant that has submitted a Notice of Intent (NOI) for coverage under this general permit and who is authorized for coverage under this permit.

- dd. **“Point Source”** means any discernible, confined, or discrete conveyance, including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff.
- ee. **“Pollutant”** means dredges spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, industrial wastes, municipal waste, and agricultural waste discharged into the waters of the state.
- ff. **“Rules”** means the Georgia Rules and regulations for Water Quality Control.
- gg. **“Sedimentation”** means a process of removal of solids before filtration by gravity or separation.
- hh. **“Slow Sand Filtration”** means a process involving passage of raw water through a bed of sand at low velocity (generally less than 0.4 m/h) resulting in substantial particulate removal by physical and biological mechanisms.
- ii. **“State Act”** means the Georgia Water Quality Control Act (Official Code of Georgia Annotated; Title 12, Chapter 5, Article 20).
- jj. **“State Rules”** means the Georgia Rules and regulations for Water Quality Control, Chapter 391-3-6, as amended.
- kk. **“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 confined and retained completely upon the property of a single individual, partnership, or corporation.
- ll. **“Weekly Average”** means the arithmetic mean of values obtained for samples collected during a 7-day period, other than for fecal coliform bacteria and *Escherichia Coli*. The week begins 12:00 midnight Saturday and ends at 12:00 midnight the following Saturday. For reporting required of this permit, a week that starts in one month and ends in another month shall be considered part of the second month. The permittee may calculate and report the weekly average as a 7-day moving average.



The Georgia Environmental Protection Division proposes to reissue the General NPDES Permit GAG640000, which authorizes discharges from drinking water treatment plants. The draft permit places conditions on the discharge of pollutants to waters of the State.

Technical Contact:

Benoit Causse
benoit.causse@dnr.ga.gov
404-463-4958

Draft permit:

- ☐ First issuance
- ☐ Reissuance with no or minor modifications from previous permit
- ☒ Reissuance with substantial modifications from previous permit
- ☐ Modification of existing permit
- ☒ Requires EPA review

1. GENERAL PERMIT & ELIGIBILITY FOR COVERAGE INFORMATION

1.1 NPDES Permit No.: GAG640000

1.2 Eligibility for Coverage

This permit may cover all new and existing point source discharges of filter backwash water and sedimentation basin washdown water from drinking water treatment plants into waters of the state of Georgia.

1.3 Terminating Coverage

The Division may deny coverage under this permit based on incomplete or incorrect Notice of Intent submittal. The Director may at any time revoke coverage under this permit in accordance with the State Rules.

1.4 Notice of Termination (NOT)

A permittee that has ceased operation of a facility for which permit coverage was obtained must submit a NOT to the Division within thirty (30) days after the activity has ceased.

1.5 SIC Code and Description

SIC Code 4941 – Water Supply: Establishments primarily engaged in distributing water for sale for domestic, commercial, and industrial use.

1.6 Description of the Water Treatment Plant*Conventional Filtration Treatment*

A conventional treatment system passes raw water through a sedimentation tank to remove larger settleable solids, such as sand and large organic matter. After sedimentation, a coagulant or flocculant may be injected to improve solids removal. The water may then pass through another sedimentation basin and granular filter or slow sand filter to remove additional pollutants. The filter removes solids that did not settle in the sedimentation basin.

Direct Filtration Treatment

A direct filtration treatment system performs coagulation, flocculation, and filtration without sedimentation. The coagulant or flocculant may be injected to improve solids removal. The water then passes through a filter to remove the floc and additional pollutants.

Membrane Filtration

Membrane filtration uses semi-permeable membranes to separate pollutants from water. Water is forced across the membrane by a driving force (i.e., water pressure). Pollutants are filtered out and either become stuck to the membrane or concentrated in a reject solution. The type of substances removed will be dependent on the membrane type, pore size, water pressure, and characteristics of the raw water.

1.7 Type of Wastewater Discharge

- | | | | |
|-------------------------------------|---------------------|--------------------------|---------------------|
| ☒ | Process wastewater | ☐ | Stormwater |
| ☐ | Domestic wastewater | ☐ | Combined (Describe) |
| ☐ | Other (Describe) | | |

1.8 Wastewaters and Solids Generated

The primary wastewaters produced in filtration Water Treatment Plants (WTP) include filter backwash and filter-to-waste. Filter backwash and filter-to-waste are expected to comprise most of the wastewater discharge.

Filter Backwash

Filter media is usually cleaned by flushing with water in the reverse direction to normal flow, with sufficient force to separate particles from the media. A typical backwashing operation lasts from 10 to 25 minutes with maximum flow rates of 15 to 20 gallons per minute (gpm) per square foot. High-water flow is used, generating a large volume of filter backwash water. Small plants may produce filter backwash sporadically; but larger plants with numerous filters may produce backwash continuously as filters are rotated for backwashing. Filter backwashing can comprise 2 to 10 percent of the total plant production of finished water. Relative to raw water, spent backwash shows higher concentrations of *Giardia lamblia* and *Cryptosporidium*. However, the quality of spent filter backwash varies from plant to plant.

Filter-to-Waste

Filter-to-waste is the initial flow generated after backwashing. The filter-to-waste does not meet the drinking water quality criteria to be sent directly into the water distribution system. Filter-to-waste is expected to contain pollutants similar to filter backwash wastewater with lower concentrations. Filter to waste amounts to approximately 0.5 percent of the total amount of water filtered at a treatment plant.

Basin Washdown

Storage basins or lagoons are often used for dewatering residuals and sludge. Periodically these units need to be cleaned by draining the remaining water from the unit and removing and disposing of the built-up residuals and sludge. Before the units are refilled and put back into service, the pipes, lining and other components need to be washed down. Frequency of basin washdown can vary depending on the size of the WTP. While this wastewater stream is intermittent, depending on the size of the basins or lagoons, it could be of notable volume.

Solids:

As explained above, solids will be generated as part of the wastewater treatment process from filter backwashing and basin washdown. This general permit does not regulate solids generated as a part of day to day drinking water treatment operations. This general permit authorizes permittees to dispose of sludge in a permitted landfill or send sludge to an off-site preparer for further treatment and ultimate disposal.

2. APPLICABLE REGULATIONS

2.1 State Regulations

Chapter 391-3-5 of the Georgia Rules and Regulations for Safe Drinking Water

Chapter 391-3-6 of the Georgia Rules and Regulations for Water Quality Control

Chapter 391-3-4 of the Georgia Rules and Regulations for Solid Waste Management

2.2 Federal Regulations

Source	Activity	Applicable Regulation
Non-POTW	Process Water Discharge	40 CFR 122
		40 CFR 125
		40 CFR 127
		40 CFR 133
		40 CFR 136
	Non-Process Water Discharges	40 CFR 122
		40 CFR 125
		40 CFR 127
		40 CFR 127
		40 CFR 136
	Sludge Use and Disposal	40 CFR 257
		40 CFR 258

3. WATER QUALITY STANDARDS & RECEIVING WATERBODY INFORMATION

Section 301(b)(1)(C) of the Clean Water Act (CWA) requires the development of limitations in permits necessary to meet water quality standards. Federal Regulations 40 CFR 122.4(d) require that conditions in NPDES permits ensure compliance with the water quality standards which are composed of use classifications, numeric and or narrative water quality criteria and an anti-degradation policy. The use classification system designates the beneficial uses that each waterbody is expected to achieve, such as drinking water, fishing, or recreation. The numeric and narrative water quality criteria are deemed necessary to support the beneficial use classification for each water body. The antidegradation policy represents an approach to maintain and to protect various levels of water quality and uses.

3.1 Receiving Waterbody Classification and Information for Various Waterbodies:

Specific Water Quality Criteria for Classified Water Usage [391-3-6-.03(6)]:

Drinking Water Supplies: Those waters approved as a source for public drinking water systems permitted or to be permitted by the Environmental Protection Division. Waters classified for drinking water supplies will also support the fishing use and any other use requiring water of a lower quality.

- (i) Bacteria: The provisions of paragraph 391-3-6-.03(6)(a)(i)1. shall apply until the effective date of EPA's final approval of the criteria specified in paragraph 391-3-6-.03(6)(a)(i)2.
 - 1. For the months of May through October, when water contact recreation activities are expected to occur, fecal coliform not to exceed a geometric mean of 200 counts per 100 mL based on at least four samples collected from a given sampling site over a 30-day period at intervals not less than 24 hours. Should water quality and sanitary studies show fecal coliform levels from non-human sources exceed 200 counts per 100 mL (geometric mean) occasionally, then the allowable geometric mean fecal coliform shall not exceed 300 counts per 100 mL in lakes and reservoirs and 500 counts per 100 mL in free flowing freshwater streams. For the months of November through April, fecal coliform not to exceed a geometric mean of 1,000 counts per 100 mL based on at least four samples collected from a given sampling site over a 30-day period at intervals not less than 24 hours and not to exceed a maximum of 4,000 counts per 100 mL for any sample.
 - 2. The State does not encourage swimming in these surface waters since a number of factors which are beyond the control of any State regulatory agency contribute to elevated levels of bacteria.
- (ii) Dissolved oxygen: A daily average of 6.0 mg/L and no less than 5.0 mg/L at all times for waters designated as trout streams by the Wildlife Resources Division. A daily average of 5.0 mg/L and no less than 4.0 mg/L at all times for water supporting warm water species of fish.
- (iii) pH: Within the range of 6.0 - 8.5.
- (iv) No material or substance in such concentration that, after treatment by the public water treatment system, exceeds the maximum contaminant level established for that substance by the Environmental Protection Division pursuant to the Georgia Rules for Safe Drinking Water.
- (v) Temperature: Not to exceed 90°F. At no time is the temperature of the receiving waters to be increased more than 5°F above intake temperature except that in estuarine waters the increase will not be more than 1.5°F. In streams designated as primary trout or smallmouth bass waters by the Wildlife Resources Division, there shall be no elevation of natural stream temperatures. In streams designated as secondary trout waters, there shall be no elevation exceeding 2°F of natural stream temperatures.

Recreation: General recreational activities such as water skiing, boating, and swimming, or for any other use requiring water of a lower quality, such as recreational fishing. These criteria are not to be interpreted as encouraging water contact sports in proximity to sewage or industrial waste discharges regardless of treatment requirements:

- (i) Bacteria:

1. Coastal and estuarine waters: Culturable enterococci not to exceed a geometric mean of 35 counts per 100 mL. The geometric mean duration shall not be greater than 30 days. There shall be no greater than a ten percent excursion frequency of an enterococci statistical threshold value (STV) of 130 counts per 100 mL in the same 30-day interval.
 2. All other recreational waters: Culturable E. coli not to exceed a geometric mean of 126 counts per 100 mL. The geometric mean duration shall not be greater than 30 days. There shall be no greater than a ten percent excursion frequency of an E. coli statistical threshold value (STV) of 410 counts per 100 mL in the same 30-day interval.
- (ii) Dissolved Oxygen: A daily average of 6.0 mg/L and no less than 5.0 mg/L at all times for waters designated as trout streams by the Wildlife Resources Division. A daily average of 5.0 mg/L and no less than 4.0 mg/L at all times for waters supporting warm water species of fish.
- (iii) pH: Within the range of 6.0 - 8.5.
- (iv) Temperature: Not to exceed 90°F. At no time is the temperature of the receiving waters to be increased more than 5°F above intake temperature except that in estuarine waters the increase will not be more than 1.5°F. In streams designated as primary trout or smallmouth bass waters by the Wildlife Resources Division, there shall be no elevation of natural stream temperatures. In streams designated as secondary trout waters, there shall be no elevation exceeding 2°F natural stream temperatures.

Fishing: Propagation of Fish, Shellfish, Game and Other Aquatic Life; secondary contact recreation in and on the water; or for any other use requiring water of a lower quality.

- (i) Dissolved Oxygen: A daily average of 6.0 mg/L and no less than 5.0 mg/L at all times for water designated as trout streams by the Wildlife Resources Division. A daily average of 5.0 mg/L and no less than 4.0 mg/L at all times for waters supporting warm water species of fish.
- (ii) pH: Within the range of 6.0 - 8.5.
- (iii) Bacteria: The provisions of paragraph 391-3-6-.03(6)(c)(iii)1. shall apply until the effective date of EPA's final approval of the criteria specified in paragraphs 391-3-6-.03(6)(c)(iii)2 and 391-3-6-.03(6)(c)(iii)3.
1. For the months of May through October, when water contact recreation activities are expected to occur, fecal coliform not to exceed a geometric mean of 200 counts per 100 mL based on at least four samples collected from a given sampling site over a 30-day period at intervals not less than 24 hours. Should water quality and sanitary studies show fecal coliform levels from non-human sources exceed 200 counts per 100 mL (geometric mean) occasionally, then the allowable geometric mean fecal coliform shall not exceed 300 counts per 100 mL in lakes and reservoirs and 500 counts per 100 mL in free flowing freshwater streams. For the months of November through April, fecal coliform not to exceed a geometric mean of 1,000

counts per 100 mL based on at least four samples collected from a given sampling site over a 30-day period at intervals not less than 24 hours and not to exceed a maximum of 4,000 counts per 100 mL for any sample.

2. Estuarine waters: For the months of May through October, when water contact recreation activities are expected to occur, culturable enterococci not to exceed a geometric mean of 35 counts per 100 mL. The geometric mean duration shall not be greater than 30 days. There shall be no greater than a ten percent excursion frequency of an enterococci statistical threshold value (STV) of 130 counts per 100 mL the same 30-day interval. Should water quality and sanitary studies show enterococci levels from non-human sources exceed 35 counts per 100 mL (geometric mean) occasionally, then the allowable geometric mean enterococci shall not exceed 53 counts per 100 mL in lakes and reservoirs and 88 counts per 100 mL in free flowing freshwater streams. For the months of November through April, culturable enterococci not to exceed a geometric mean of 175 counts per 100 mL. The geometric mean duration shall not be greater than 30 days. There shall be no greater than a ten percent excursion frequency of an enterococci statistical threshold value (STV) of 650 counts per 100 mL the same 30-day interval.
3. All other fishing waters: For the months of May through October, when water contact recreation activities are expected to occur, culturable E. coli not to exceed a geometric mean of 126 counts per 100 mL. The geometric mean duration shall not be greater than 30 days. There shall be no greater than a ten percent excursion frequency of an E. coli statistical threshold value (STV) of 410 counts per 100 mL in the same 30-day interval. Should water quality and sanitary studies show E. coli levels from non-human sources exceed 126 counts per 100 mL (geometric mean) occasionally, then the allowable geometric mean E. coli shall not exceed 189 counts per 100 mL in lakes and reservoirs and 315 counts per 100 mL in free flowing freshwater streams. For the months of November through April, culturable E. coli not to exceed a geometric mean of 630 counts per 100 mL. The geometric mean duration shall not be greater than 30 days. There shall be no greater than a ten percent excursion frequency of an E. coli statistical threshold value (STV) of 2050 counts per 100 mL in the same 30-day interval.
4. The State does not encourage swimming in these surface waters since a number of factors which are beyond the control of any State regulatory agency contribute to elevated levels of bacteria.
5. For waters designated as shellfish growing areas by the Georgia DNR Coastal Resources Division, the requirements will be consistent with those established by the State and Federal agencies responsible for the National Shellfish Sanitation Program. The requirements are found in National Shellfish Sanitation Program Guide for the Control of Molluscan Shellfish, 2007 Revision (or most recent version), Interstate Shellfish Sanitation Conference, U.S. Food and Drug Administration.

- (iv) Temperature: Not to exceed 90°F. At no time is the temperature of the receiving waters to be increased more than 5°F above intake temperature except that in estuarine waters the increase will not be more than 1.5°F. In streams designated as primary trout or smallmouth bass waters by the Wildlife Resources Division, there shall be no elevation of natural stream temperatures. In streams designated as secondary trout waters, there shall be no elevation exceeding 2°F natural stream temperatures.

4. EFFLUENT LIMITS AND PERMIT CONDITIONS

4.1 Reasonable Potential Analysis (RP)

Title 40 of the Federal Code of Regulations, 40 CFR 122.44(d) requires delegated States to develop procedures for determining whether a discharge causes, has the reasonable potential to cause, or contributes to an instream excursion above a narrative or numeric criteria within a State water. If such reasonable potential is determined to exist, the NPDES permit must contain pollutant effluent limits and/or effluent limits for whole effluent toxicity. Georgia's Reasonable Potential Procedures are based on Georgia's Rules and Regulations for Water Quality Control (Rules), Chapter 391-3-6. The chemical specific and biomonitoring data and other pertinent information in EPD's files will be considered in accordance with the review procedures specified in the Rules in the evaluation of a permit application and in the evaluation of the reasonable potential for an effluent to cause an exceedance in the numeric or narrative criteria.

Refer to Section 4.2 for reasonable potential analysis on effluent toxicity.

4.2 Whole Effluent Toxicity (WET)

Chronic WET test measures the effect of wastewater on indicator organisms' growth, reproduction and survival. Effluent toxicity is predicted when the No Observable Effect Concentrations (NOEC) for a test organism is less than the facility's Instream Wastewater Concentration (IWC). WET testing also requires a measure of test sensitivity known as the Percent Minimum Significant Difference (PMSD). See Table below from Section 10.2.8.3 (page 52) of EPA 821-R-02-013 *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms*, 4th Edition, 2002 for PMSD variability criteria.

PMSD is calculated for each species tested as follows:

$$\text{MSD} = \frac{\text{Minimum Significant Data (MSD)}}{\text{Control Mean}} \times 100 \quad \%$$

TABLE 6. VARIABILITY CRITERIA (UPPER AND LOWER PMSD BOUNDS) FOR SUBLETHAL HYPOTHESIS TESTING ENDPOINTS SUBMITTED UNDER NPDES PERMITS.¹

Test Method	Endpoint	Lower PMSD Bound	Upper PMSD Bound
Method 1000.0, Fathead Minnow Larval Survival and Growth Test	growth	12	30
Method 1002.0, <i>Ceriodaphnia dubia</i> Survival and Reproduction Test	reproduction	13	47
Method 1003.0, <i>Selenastrum capricornutum</i> Growth Test	growth	9.1	29

¹ Lower and upper PMSD bounds were determined from the 10th and 90th percentile, respectively, of PMSD data from EPA's WET Interlaboratory Variability Study (USEPA, 2001a; USEPA, 2001b).

The effluent from the water treatment plant will not be considered toxic if the No Observed Effect Concentration (NOEC) is greater than or equal to the Instream Wastewater Concentration (IWC). EPD does not anticipate effluent from dischargers covered under this general permit to be toxic; therefore, WET testing has not been included in the draft permit.

4.3 Applicable Water Quality Based Effluent Limitations (WQBELs)

When drafting a National Pollutant Discharge Elimination System (NPDES) permit, a permit writer must consider the impact of the proposed discharge on the quality of the receiving water. Water quality goals for a waterbody are defined by state water quality standards. By analyzing the effect of a discharge on the receiving water, a permit writer could find that technology-based effluent limitations (TBELs) alone will not achieve the applicable water quality standards. In such cases, the Clean Water Act (CWA) and its implementing regulations require development of water quality-based effluent limitations (WQBELs). WQBELs help meet the CWA objective of restoring and maintaining the chemical, physical, and biological integrity of the nation's waters and the goal of water quality that provides for the protection and propagation of fish, shellfish, and wildlife and recreation in and on the water (*fishable/swimmable*).

WQBELs are designed to protect water quality by ensuring that water quality standards are met in the receiving water and downstream uses are protected. On the basis of the requirements of Title 40 of the *Code of Federal Regulations* (CFR) 125.3(a), additional or more stringent effluent limitations and conditions, such as WQBELs, are imposed when TBELs are not sufficient to protect water quality.

The term *pollutant* is defined in CWA section 502(6) and § 122.2. Pollutants are grouped into three categories under the NPDES program: conventional, toxic, and nonconventional. Conventional pollutants are those defined in CWA section 304(a)(4) and § 401.16 (BOD₅, TSS, fecal coliform, pH, and oil and grease). Toxic (priority) pollutants are those defined in CWA section 307(a)(1) and include 126 metals and manmade organic compounds. Nonconventional pollutants are those that do not fall under either of the above categories (conventional or toxic pollutants) and include parameters such as chlorine, ammonia, nitrogen, phosphorus, chemical oxygen demand (COD), and whole effluent toxicity (WET).

4.4 Conventional Pollutants

4.4.1 Source Water: Surface Water

Pollutants of Concern	Basis
pH	The pH limit of 6.0-8.5 SU (daily minimum – daily maximum) is in accordance with the instream Water Quality Standards in Section 3.1 above.
Total Suspended Solids (TSS)	The EPA's secondary treatment standards establish the minimum treatment requirements for publicly-owned treatment works (POTW) treating domestic sewage. Water treatment plants eligible for coverage under this general permit have similar pollutants in their discharge and employ similar wastewater treatment processes to small POTWs. EPD used the secondary treatment standards for establishing TSS limits for the general permit; therefore, the monthly average TSS limit of 30 mg/L has been included in the draft permit.
Fecal Coliform Bacteria (FCB)	The source water (surface water) may contain FCB at levels of concern; therefore, effluent monitoring for these bacteria has been included in the draft permit to be protective of all receiving waters across Georgia. Monitoring for fecal coliform bacteria in the effluent is only required for discharges to waters of the state designated as fishing waters or drinking water supplies.
<i>Escherichia coli</i> (<i>E.coli</i>)	The source water (surface water) may contain <i>E. Coli</i> at levels of concern; therefore, effluent monitoring for these bacteria has been included in the draft permit to be protective of all receiving waters across Georgia. Monitoring for <i>E. Coli</i> in the effluent is only required for discharges to waters of the state designated as recreational waters.

4.4.2 Source Water: Groundwater

Pollutants of Concern	Basis
pH	The pH limit of 6.0-8.5 SU (daily minimum – daily maximum) is in accordance with the instream Water Quality Standards in Section 3.1 above.
Total Suspended Solids (TSS)	The EPA's secondary treatment standards establish the minimum treatment requirements for publicly-owned treatment works (POTW) treating domestic sewage. Water treatment plants eligible for coverage under this general permit have similar pollutants in their discharge and employ similar wastewater treatment processes to small POTWs. EPD used the secondary treatment standards for establishing TSS limits for the general permit; therefore, the monthly average TSS limit of 30 mg/L has been included in the draft permit.
Fecal Coliform Bacteria (FCB)	The source water (Groundwater) is very unlikely to contain FCB at levels of concern; therefore, effluent monitoring for these bacteria has not been included in the draft permit.
<i>Escherichia coli</i> (<i>E.coli</i>)	The source water (Groundwater) is very unlikely to contain <i>E. Coli</i> at levels of concern; therefore, effluent monitoring for these bacteria has not been included in the draft permit.

4.5 Nonconventional Pollutants

4.5.1 Source Water: Surface Water

Pollutants of Concern	Basis
Total Residual Chlorine (TRC)	A daily maximum TRC limit of 0.011 mg/L has been included in the draft permit to be protective of all receiving waters across Georgia. The limit has been determined using US EPA's chronic TRC criterion of 11 µg/L in the receiving stream. Since the proposed TRC limit is more stringent than the limit in the current permit, a <u>12-month compliance schedule</u> has been included in the draft permit to allow time for facilities to install dechlorination equipment, and/or make some operational changes, and/or develop testing procedures. The proposed TRC limit may be below the detection limit of the analytical method. In accordance with Part II.A.g in the draft permit, if the facility's effluent TRC is lower than the analytical detection limit the facility should report TRC as "non detect" in the Discharge Monitoring Reports. The detection limit of the method will also be reported.
Total Phosphorus (TP)	Phosphorous is an essential nutrient for plant growth but excessive amounts of phosphorus in a waterbody have the potential to create problems. In addition, phosphorus is the nutrient typically limiting primary productivity in freshwater ecosystems. Phosphorus is likely to be present in the source water (surface water) and may accumulate in the filter. Phosphorus-based chemicals, such as polyphosphates, may be used in the treatment process at some facilities. In accordance with <i>Georgia's Plan for the adoption of Nutrient Criteria, 2013</i>, EPD is monitoring and limiting nutrients, protecting the instream water quality standard for chlorophyll-a, specifically in the freshwater lakes. Total phosphorus monitoring has been included in the draft permit to quantify phosphorus loading to the receiving streams and associated watersheds from drinking water treatment plant dischargers

Total Recoverable Aluminum

Aluminum-based coagulants, such as alum and poly-aluminum chloride, are commonly used in coagulation and clarification to remove solid particles from raw water sources at WTPs. Filter backwashing occurs after coagulation and clarification processes, therefore, there is a likely potential for elevated levels of aluminum in the discharges; therefore, total recoverable aluminum monitoring has been included in the draft permit.

The monitoring requirement is only applicable to WTPs that use aluminum-based coagulants and is intended to assess whether the metal is present at levels of concern in the discharge.

Total Recoverable Iron

Iron salts may be used as coagulants to remove solid particles from raw water sources at WTPs. Filter backwashing occurs after coagulation and clarification processes, therefore, there is a likely potential for elevated levels of iron in the discharges; therefore, total recoverable iron monitoring has been included in the draft permit.

The monitoring requirement is only applicable to WTPs that use iron-based coagulants and is intended to assess whether the metal is present at levels of concern in the discharge.

4.5.2 Source Water: Groundwater

Pollutants of Concern	Basis
Total Residual Chlorine (TRC)	A daily maximum TRC limit of 0.011 mg/L has been included in the draft permit to be protective of all receiving waters across Georgia. The limit has been determined using US EPA's chronic TRC criterion of 11 µg/L in the receiving stream. Since the proposed TRC limit is more stringent than the limit in the current permit, a <u>12-month compliance schedule</u> has been included in the draft permit to allow time for facilities to install dechlorination equipment, and/or make some operational changes, and/or develop testing procedures. The proposed TRC limit may be below the detection limit of the analytical method. In accordance with Part II.A.g in the draft permit, if the facility's effluent TRC is lower than the analytical detection limit the facility should report TRC as "non detect" in the Discharge Monitoring Reports. The detection limit of the method will also be reported.
Total Phosphorus (TP)	Phosphorus-based chemicals, such as polyphosphates, may be used in the treatment process at some facilities; therefore, total phosphorus monitoring has been included in the draft permit. The monitoring requirement is only applicable to WTPs that use phosphorus-based coagulants and is intended to quantify phosphorus loading to the receiving streams.
Total Recoverable Aluminum	Aluminum may be present in the source water (groundwater); therefore, monitoring for this parameter has been included in the draft permit to assess whether it is present at levels of concern in the discharge.
Total Recoverable Iron	Iron may be present in the source water (groundwater); therefore, monitoring for this parameter has been included in the draft permit to assess whether it is present at levels of concern in the discharge.
Total Recoverable Arsenic	Arsenic may be present in the source water (groundwater); therefore, monitoring for this parameter has been included in the draft permit to assess whether it is present at levels of concern in the discharge.

4.6 Calculations for Effluent Limits

4.6.1 Total Suspended Solids:

Q = Flow
C = Concentration
M = Mass

- *Weekly Average Concentration:*

$$\begin{aligned}[C]_{\text{Weekly/Max}} &= [C]_{\text{Monthly}} (\text{mg/L}) \times 1.5 \\ &= 30 \times 1.5 \\ &= 45 \text{ mg/L}\end{aligned}$$

5. OTHER PERMIT REQUIREMENTS AND CONSIDERATIONS

5.1 Sludge Management Plan (SMP)

This general permit authorizes permittees to dispose of sludge in a permitted landfill or send sludge to a permitted third party for further treatment and ultimate disposal.

Disposing of sludge via land application is not permitted under this general permit. Refer to section below for more information about land application of sludge.

5.2 Land Application of Drinking Water Sludge

40 CFR Part 503 of the federal regulations and Chapter 391-3-6.17 of the Georgia Water Quality Control Rules do not regulate sludge generated during the treatment of drinking water; therefore, land application of drinking water sludge cannot be permitted under those regulations.

However, drinking water sludge may be land applied if requirements of 40 CFR 257 and the recovered materials provisions under Chapter 391-3-4.04(7) of the Georgia Solid Waste Management Rules can be met. The Georgia Department of Agriculture may also have requirements regarding land application of drinking water sludge.

5.2 Compliance Schedules

The proposed permit includes a more stringent total residual chlorine (TRC) limit. A 12-month compliance schedule to meet the new TRC limitation has been included in the draft permit. Based on best professional judgment, the proposed compliance schedule represents the shortest reasonable period of time to allow the permittee to upgrade the treatment process and test new equipment before the limit becomes effective.

5.3 Anti-Backsliding

The limits in this permit are in compliance with the 40 C.F.R. 122.44(l), which requires a reissued permit to be as stringent as the previous permit.

6. REPORTING

6.1 Compliance office

The compliance office will be identified in the Notice of Coverage letter.

6.2 E-Reporting

The permittee is required to electronically submit documents in accordance with 40 CFR Part 127.

7. REQUESTED VARIANCES OR ALTERNATIVES TO REQUIRED STANDARDS

Not applicable.

8. PERMIT EXPIRATION

The permit will expire five years from the effective date. Facilities covered under the general permit requesting reissuance are required to submit a new Notice of Intent (NOI) no later than 180 days prior to the expiration date of the permit.

9. PROCEDURES FOR THE FORMULATION OF FINAL DETERMINATIONS

9.1 Comment Period

The Georgia Environmental Protection Division (EPD) proposes to issue General NPDES permit GAG640000 subject to the effluent limitations and special conditions outlined above. These determinations are tentative.

The NOI, draft permit, fact sheet, and other supporting information are available for review at 2 Martin Luther King Jr. Drive, Suite 1152 East, Atlanta, Georgia 30334, between the hours of 8:00 a.m. and 4:30 p.m., Monday through Friday. For additional information, you can contact 404-463-1511.

9.2 Public Comments

Persons wishing to comment upon or object to the proposed determinations are invited to submit same in writing to the EPD address above, or via e-mail at EPDcomments@dnr.ga.gov within 30 days of the initiation of the public comment period. All comments received prior to that date will be considered in the formulation of final determinations regarding the application. The permit number should be placed on the top of the first page of comments to ensure that your comments will be forwarded to the appropriate staff.

9.3 Public Hearing

Any applicant, affected state or interstate agency, the Regional Administrator of the U.S. Environmental Protection Agency (EPA) or any other interested agency, person or group of persons may request a public hearing with respect to an NPDES permit application if such request is filed within thirty (30) days following the date of the public notice for such application. Such request must indicate the interest of the party filing the request, the reasons why a hearing is requested, and those specific portions of the application or other NPDES form or information to be considered at the public hearing.

The Director shall hold a hearing if he determines that there is sufficient public interest in holding such a hearing. If a public hearing is held, notice of same shall be provided at least thirty (30) days in advance of the hearing date.

In the event that a public hearing is held, both oral and written comments will be accepted; however, for the accuracy of the record, written comments are encouraged. The Director or a designee reserves the right to fix reasonable limits on the time allowed for oral statements and such other procedural requirements, as deemed appropriate.

Following a public hearing, the Director, unless it is decided to deny the permit, may make such modifications in the terms and conditions of the proposed permit as may be appropriate and shall issue the permit.

If no public hearing is held, and, after review of the written comments received, the Director determines that a permit should be issued and that the determinations as set forth in the proposed permit are substantially unchanged, the permit will be issued and will become final in the absence of a request for a contested hearing. Notice of issuance or denial will be made available to all interested persons and those persons that submitted written comments to the Director on the proposed permit.

If no public hearing is held, but the Director determines, after a review of the written comments received, that a permit should be issued but that substantial changes in the proposed permit are warranted, public notice of the revised determinations will be given and written comments accepted in the same manner as the initial notice of application was given and written comments accepted pursuant to EPD Rules, Water Quality Control, subparagraph 391-3-6-.06(7)(b). The Director shall provide an opportunity for public hearing on the revised determinations. Such opportunity for public hearing and the issuance or denial of a permit thereafter shall be in accordance with the procedures as are set forth above.

9.4 Final Determination

At the time that any final permit decision is made, the Director shall issue a response to comments. The issued permit and responses to comments can be found at the following address:

<http://epd.georgia.gov/watershed-protection-branch-permit-and-public-comments-clearinghouse-0>

9.5 Contested Hearings

Any person who is aggrieved or adversely affected by the issuance or denial of a permit by the Director of EPD may petition the Director for a hearing if such petition is filed in the office of the Director within thirty (30) days from the date of notice of such permit issuance or denial. Such hearing shall be held in accordance with the EPD Rules, Water Quality Control, subparagraph 391-3-6-.01.

Petitions for a contested hearing must include the following:

1. The name and address of the petitioner;
2. The grounds under which petitioner alleges to be aggrieved or adversely affected by the issuance or denial of a permit;
3. The reason or reasons why petitioner takes issue with the action of the Director;
4. All other matters asserted by petitioner which are relevant to the action in question.

ANALYTICAL REPORT

PREPARED FOR

Attn: Bomani Wilson
Athens-Clarke County Georgia
780 Barber Street
Athens, Georgia 30601

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JOB DESCRIPTION

Water Treatment Plant Solids - GA

JOB NUMBER

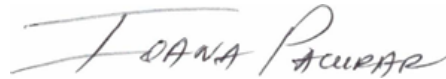
705-42332-1

Eurofins Atlanta

Job Notes

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Southeast, LLC Project Manager.

Authorization



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Authorized for release by
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(770)457-8177

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Definitions/Glossary

Client: Athens-Clarke County Georgia
Project/Site: Water Treatment Plant Solids - GA

Job ID: 705-42332-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
E	Result exceeded calibration range.
S1-	Surrogate recovery exceeds control limits, low biased.

GC Semi VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
S1+	Surrogate recovery exceeds control limits, high biased.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

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Ver: 10/10/2022/2025

Case Narrative

Client: Athens-Clarke County Georgia
Project: Water Treatment Plant Solids - GA

Job ID: 705-42332-1

Job ID: 705-42332-1

Eurofins Atlanta

Job Narrative 705-42332-1

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

Receipt

The sample was received on 9/9/2025 9:50 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.8°C.

GC/MS VOA

Method 8260D - TCLP: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 705-82613 were outside control limits for one or more analytes. See QC Sample Results for detail.

Method 8260D - TCLP: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 705-82276 and analytical batch 705-82613 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC/MS Semi VOA

Method 8270E - TCLP: 3 & 4 Methylphenol is being flagged with an E because the spike concentration is above the calibration range. The spike recovery is within limits. (LCS 705-82279/2-A) and (705-42513-A-1-E MS)

Method 8270E - TCLP: The continuing calibration verification (CCV) associated with batch 705-83187 recovered above the upper control limit for Nitrobenzene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 8270E - TCLP: Six surrogates are used for this analysis. The laboratory's SOP allows one acid and one base of these surrogates to be outside acceptance criteria without performing re-extraction/re-analysis. The following sample contained an allowable number of surrogate compounds outside limits: Lagoon Sludge Sample (705-42332-1). These results have been reported and qualified.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Herbicides

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Pesticides

Method 8081B - TCLP: The laboratory control sample (LCS) for preparation batch 705-82413 and analytical batch 705-82053 recovered outside control limits for the following analytes: gamma-BHC (Lindane). These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8081B - TCLP: The continuing calibration verification (CCV) associated with batch 705-82659 recovered above the upper control limit for Chlordane (technical), Endrin, gamma-BHC (Lindane), Heptachlor and Heptachlor epoxide. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is: Lagoon Sludge Sample (705-42332-1).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

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Case Narrative

Client: Athens-Clarke County Georgia
Project: Water Treatment Plant Solids - GA

Job ID: 705-42332-1

Job ID: 705-42332-1 (Continued)

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Metals

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

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Client Sample Results

Client: Athens-Clarke County Georgia
Project/Site: Water Treatment Plant Solids - GA

Job ID: 705-42332-1

Client Sample ID: Lagoon Sludge Sample

Lab Sample ID: 705-42332-1

Date Collected: 09/04/25 12:20

Matrix: Solid

Date Received: 09/09/25 09:50

Method: SW846 8260D - Volatile Organic Compounds by GC/MS - TCLP

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.10	mg/L			09/18/25 14:25	1
2-Butanone	ND	F2 F1	1.0	mg/L			09/18/25 14:25	1
Carbon tetrachloride	ND		0.10	mg/L			09/18/25 14:25	1
Chlorobenzene	ND		0.10	mg/L			09/18/25 14:25	1
Chloroform	ND		0.10	mg/L			09/18/25 14:25	1
1,2-Dichloroethane	ND		0.10	mg/L			09/18/25 14:25	1
1,1-Dichloroethene	ND		0.10	mg/L			09/18/25 14:25	1
Tetrachloroethene	ND		0.10	mg/L			09/18/25 14:25	1
Trichloroethene	ND		0.10	mg/L			09/18/25 14:25	1
Vinyl chloride	ND		0.10	mg/L			09/18/25 14:25	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	100		70 - 126				09/18/25 14:25	1
Dibromofluoromethane (Surr)	92		77 - 121				09/18/25 14:25	1
Toluene-d8 (Surr)	89		79 - 119				09/18/25 14:25	1

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) - TCLP

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		0.10	mg/L		09/19/25 10:22	09/21/25 03:52	1
2,4-Dinitrotoluene	ND		0.10	mg/L		09/19/25 10:22	09/21/25 03:52	1
Hexachlorobenzene	ND		0.10	mg/L		09/19/25 10:22	09/21/25 03:52	1
Hexachlorobutadiene	ND		0.10	mg/L		09/19/25 10:22	09/21/25 03:52	1
Hexachloroethane	ND		0.10	mg/L		09/19/25 10:22	09/21/25 03:52	1
2-Methylphenol	ND		0.10	mg/L		09/19/25 10:22	09/21/25 03:52	1
3 & 4 Methylphenol	ND		0.10	mg/L		09/19/25 10:22	09/21/25 03:52	1
Nitrobenzene	ND		0.10	mg/L		09/19/25 10:22	09/21/25 03:52	1
Pentachlorophenol	ND		0.25	mg/L		09/19/25 10:22	09/21/25 03:52	1
Pyridine	ND		0.10	mg/L		09/19/25 10:22	09/21/25 03:52	1
2,4,5-Trichlorophenol	ND		0.25	mg/L		09/19/25 10:22	09/21/25 03:52	1
2,4,6-Trichlorophenol	ND		0.10	mg/L		09/19/25 10:22	09/21/25 03:52	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	43	S1-	48 - 126			09/19/25 10:22	09/21/25 03:52	1
2-Fluorophenol (Surr)	36		29 - 120			09/19/25 10:22	09/21/25 03:52	1
Nitrobenzene-d5 (Surr)	45		41 - 129			09/19/25 10:22	09/21/25 03:52	1
Phenol-d5 (Surr)	34		21 - 120			09/19/25 10:22	09/21/25 03:52	1
p-Terphenyl-d14 (Surr)	50		48 - 130			09/19/25 10:22	09/21/25 03:52	1
2,4,6-Tribromophenol (Surr)	38	S1-	53 - 132			09/19/25 10:22	09/21/25 03:52	1

Method: SW846 8081B - Organochlorine Pesticides (GC) - TCLP

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chlordane (technical)	ND		0.00050	mg/L		09/18/25 11:39	09/18/25 20:27	1
Endrin	ND		0.00010	mg/L		09/18/25 11:39	09/18/25 20:27	1
gamma-BHC (Lindane)	ND	*+	0.000050	mg/L		09/18/25 11:39	09/18/25 20:27	1
Heptachlor	ND		0.000050	mg/L		09/18/25 11:39	09/18/25 20:27	1
Heptachlor epoxide	ND		0.000050	mg/L		09/18/25 11:39	09/18/25 20:27	1
Methoxychlor	ND		0.00050	mg/L		09/18/25 11:39	09/18/25 20:27	1
Toxaphene	ND		0.0050	mg/L		09/18/25 11:39	09/18/25 20:27	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	74		50 - 130			09/18/25 11:39	09/18/25 20:27	1

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Client Sample Results

Client: Athens-Clarke County Georgia
Project/Site: Water Treatment Plant Solids - GA

Job ID: 705-42332-1

Client Sample ID: Lagoon Sludge Sample

Lab Sample ID: 705-42332-1

Date Collected: 09/04/25 12:20

Matrix: Solid

Date Received: 09/09/25 09:50

Method: SW846 8081B - Organochlorine Pesticides (GC) - TCLP (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene (Surr)	100		46 - 120	09/18/25 11:39	09/18/25 20:27	1

Method: SW846 8151A - Herbicides (GC) - TCLP

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	ND		0.040	mg/L		09/18/25 13:39	09/19/25 13:46	1
Silvex (2,4,5-TP)	ND		0.040	mg/L		09/18/25 13:39	09/19/25 13:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCAA (Surr)	79		49 - 120	09/18/25 13:39	09/19/25 13:46	1

Method: SW846 6010D - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.25	mg/L		09/18/25 14:00	09/19/25 13:50	1
Barium	ND		0.50	mg/L		09/18/25 14:00	09/19/25 13:50	1
Cadmium	ND		0.025	mg/L		09/18/25 14:00	09/19/25 13:50	1
Chromium	ND		0.050	mg/L		09/18/25 14:00	09/19/25 13:50	1
Lead	ND		0.050	mg/L		09/18/25 14:00	09/19/25 13:50	1
Selenium	ND		0.10	mg/L		09/18/25 14:00	09/19/25 13:50	1
Silver	ND		0.025	mg/L		09/18/25 14:00	09/19/25 13:50	1

Method: SW846 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.0050	mg/L		09/19/25 08:38	09/19/25 19:01	1

Detection Summary

Client: Athens-Clarke County Georgia
Project/Site: Water Treatment Plant Solids - GA

Job ID: 705-42332-1

Client Sample ID: Lagoon Sludge Sample

Lab Sample ID: 705-42332-1

☐ No Detections.

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This Detection Summary does not include radiochemical test results.

Eurofins Atlanta

Login Sample Receipt Checklist

Client: Athens-Clarke County Georgia

Job Number: 705-42332-1

Login Number: 42332

List Source: Eurofins Atlanta

List Number: 1

Creator: Sims, Christion

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
The cooler does not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Sample custody seals, if present, are intact.	True	
Sample collection date/times are provided.	True	
The samples do not appear to have been compromised or tampered with.	True	
Containers are not broken or leaking.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Appropriate sample containers were rec'd and sufficient volume for all analyses.	True	
Samples are received within Holding Time (excluding tests with immediate HTs).	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Is there sufficient air space in bottle for bacteriological analysis.	True	

Surrogate Summary

Client: Athens-Clarke County Georgia
Project/Site: Water Treatment Plant Solids - GA

Job ID: 705-42332-1

Method: 8260D - Volatile Organic Compounds by GC/MS

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		BFB (70-126)	DBFM (77-121)	TOL (79-119)			
LCS 705-82613/3	Lab Control Sample	94	93	96			

Surrogate Legend

BFB = 4-Bromofluorobenzene

DBFM = Dibromofluoromethane (Surr)

TOL = Toluene-d8 (Surr)

Method: 8260D - Volatile Organic Compounds by GC/MS

Matrix: Solid

Prep Type: TCLP

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		BFB (70-126)	DBFM (77-121)	TOL (79-119)			
705-42332-1	Lagoon Sludge Sample	100	92	89			
705-42332-1 MS	Lagoon Sludge Sample	98	90	100			
705-42332-1 MSD	Lagoon Sludge Sample	93	89	95			
LB 705-82276/1-A	Method Blank	79	97	96			

Surrogate Legend

BFB = 4-Bromofluorobenzene

DBFM = Dibromofluoromethane (Surr)

TOL = Toluene-d8 (Surr)

Method: 8270E - Semivolatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)							
		FBP (48-126)	2FP (29-120)	NBZ (41-129)	PHL (21-120)	TPHd14 (48-130)	TBP (53-132)		
LCS 705-82279/2-A	Lab Control Sample	98	100	102	91	108	104		

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)

2FP = 2-Fluorophenol (Surr)

NBZ = Nitrobenzene-d5 (Surr)

PHL = Phenol-d5 (Surr)

TPHd14 = p-Terphenyl-d14 (Surr)

TBP = 2,4,6-Tribromophenol (Surr)

Method: 8270E - Semivolatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: TCLP

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)							
		FBP (48-126)	2FP (29-120)	NBZ (41-129)	PHL (21-120)	TPHd14 (48-130)	TBP (53-132)		
705-42332-1	Lagoon Sludge Sample	43 S1-	36	45	34	50	38 S1-		
705-42513-A-1-E MS	Matrix Spike	102	106	111	96	110	105		
705-42513-A-1-F DU	Duplicate	99	103	107	92	107	99		
LB 705-81799/1-C	Method Blank	95	100	102	91	105	102		

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)

2FP = 2-Fluorophenol (Surr)

Eurofins Atlanta

Surrogate Summary

Client: Athens-Clarke County Georgia
Project/Site: Water Treatment Plant Solids - GA
NBZ = Nitrobenzene-d5 (Surr)
PHL = Phenol-d5 (Surr)
TPHd14 = p-Terphenyl-d14 (Surr)
TBP = 2,4,6-Tribromophenol (Surr)

Job ID: 705-42332-1

Method: 8081B - Organochlorine Pesticides (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	DCBP2 (50-130)	TCX2 (46-120)
LCS 705-82413/2-A	Lab Control Sample	107	105
LCS 705-82413/3-A	Lab Control Sample	102	101

Surrogate Legend

DCBP = DCB Decachlorobiphenyl (Surr)

TCX = Tetrachloro-m-xylene (Surr)

Method: 8081B - Organochlorine Pesticides (GC)

Matrix: Solid

Prep Type: TCLP

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	DCBP2 (50-130)	TCX2 (46-120)
705-42171-C-1-J MS	Matrix Spike	185 S1+	104
705-42171-C-1-K MS	Matrix Spike	199 S1+	104
705-42171-C-1-M DU	Duplicate	163 S1+	112
705-42332-1	Lagoon Sludge Sample	74	100
LB 705-81511/1-E	Method Blank	109	109

Surrogate Legend

DCBP = DCB Decachlorobiphenyl (Surr)

TCX = Tetrachloro-m-xylene (Surr)

Method: 8151A - Herbicides (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	DCPAA2 (49-120)	
LCS 705-81621/2-A	Lab Control Sample	91	

Surrogate Legend

DCPAA = DCAA (Surr)

Method: 8151A - Herbicides (GC)

Matrix: Solid

Prep Type: TCLP

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	DCPAA2 (49-120)	
705-42332-1	Lagoon Sludge Sample	79	
705-42949-A-1-E MS	Matrix Spike	98	
705-42949-A-1-F DU	Duplicate	85	
LB 705-80696/1-D	Method Blank	93	

Surrogate Legend

DCPAA = DCAA (Surr)

Eurofins Atlanta

Lab Chronicle

Client: Athens-Clarke County Georgia
Project/Site: Water Treatment Plant Solids - GA

Job ID: 705-42332-1

Client Sample ID: Lagoon Sludge Sample

Lab Sample ID: 705-42332-1

Date Collected: 09/04/25 12:20

Matrix: Solid

Date Received: 09/09/25 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
TCLP	Leach	1311			82276	GB	EET ATL	09/17/25 18:12 - 09/18/25 10:25 ¹
TCLP	Analysis	8260D		1	82613	AG	EET ATL	09/18/25 14:25
TCLP	Leach	1311			82271	GB	EET ATL	09/17/25 18:12 - 09/18/25 10:25 ¹
TCLP	Prep	3510C			82279	TT	EET ATL	09/19/25 10:22
TCLP	Analysis	8270E		1	83187	T1C	EET ATL	09/21/25 03:52
TCLP	Leach	1311			82271	GB	EET ATL	09/17/25 18:12 - 09/18/25 10:25 ¹
TCLP	Prep	3510C			82413	AN	EET ATL	09/18/25 11:39
TCLP	Analysis	8081B		1	82659	UH	EET ATL 2	09/18/25 20:27
TCLP	Leach	1311			82271	GB	EET ATL	09/17/25 18:12 - 09/18/25 10:25 ¹
TCLP	Prep	8151A			81621	TT	EET ATL	09/18/25 13:39
TCLP	Analysis	8151A		1	82542	UH	EET ATL	09/19/25 13:46
TCLP	Leach	1311			82271	GB	EET ATL	09/17/25 18:12 - 09/18/25 10:25 ¹
TCLP	Prep	3010A			82691	EF	EET ATL	09/18/25 14:00
TCLP	Analysis	6010D		1	83029	DS	EET ATL	09/19/25 13:50
TCLP	Leach	1311			82271	GB	EET ATL	09/17/25 18:12 - 09/18/25 10:25 ¹
TCLP	Prep	7470A			82838	GR	EET ATL	09/19/25 08:38
TCLP	Analysis	7470A		1	83095	GR	EET ATL	09/19/25 19:01

¹ This procedure uses a method stipulated length of time for the process. Both start and end times are displayed.

Laboratory References:

EET ATL = Eurofins Atlanta, 3080 Presidential Dr, Atlanta, GA 30340, TEL (770)457-8177

EET ATL 2 = Eurofins Atlanta Building A, 3080 Presidential Pkwy, Atlanta, GA 30340, TEL (770)457-8177

QC Sample Results

Client: Athens-Clarke County Georgia
Project/Site: Water Treatment Plant Solids - GA

Job ID: 705-42332-1

Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: LCS 705-82613/3

Matrix: Solid

Analysis Batch: 82613

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.200	0.187		mg/L		94	76 - 122
2-Butanone	0.400	0.386	J	mg/L		97	74 - 131
Carbon tetrachloride	0.200	0.169		mg/L		84	72 - 133
Chlorobenzene	0.200	0.191		mg/L		95	75 - 121
Chloroform	0.200	0.195		mg/L		98	72 - 121
1,2-Dichloroethane	0.200	0.169		mg/L		84	72 - 127
1,1-Dichloroethene	0.200	0.164		mg/L		82	69 - 130
Tetrachloroethene	0.200	0.190		mg/L		95	74 - 129
Trichloroethene	0.200	0.172		mg/L		86	72 - 129
Vinyl chloride	0.200	0.215		mg/L		108	65 - 132

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	94		70 - 126
Dibromofluoromethane (Surr)	93		77 - 121
Toluene-d8 (Surr)	96		79 - 119

Lab Sample ID: LB 705-82276/1-A

Matrix: Solid

Analysis Batch: 82613

Client Sample ID: Method Blank

Prep Type: TCLP

Analyte	LB Result	LB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.10	mg/L			09/18/25 13:18	1
2-Butanone	ND		1.0	mg/L			09/18/25 13:18	1
Carbon tetrachloride	ND		0.10	mg/L			09/18/25 13:18	1
Chlorobenzene	ND		0.10	mg/L			09/18/25 13:18	1
Chloroform	ND		0.10	mg/L			09/18/25 13:18	1
1,2-Dichloroethane	ND		0.10	mg/L			09/18/25 13:18	1
1,1-Dichloroethene	ND		0.10	mg/L			09/18/25 13:18	1
Tetrachloroethene	ND		0.10	mg/L			09/18/25 13:18	1
Trichloroethene	ND		0.10	mg/L			09/18/25 13:18	1
Vinyl chloride	ND		0.10	mg/L			09/18/25 13:18	1

Surrogate	LB %Recovery	LB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	79		70 - 126		09/18/25 13:18	1
Dibromofluoromethane (Surr)	97		77 - 121		09/18/25 13:18	1
Toluene-d8 (Surr)	96		79 - 119		09/18/25 13:18	1

Lab Sample ID: 705-42332-1 MS

Matrix: Solid

Analysis Batch: 82613

Client Sample ID: Lagoon Sludge Sample

Prep Type: TCLP

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	ND		0.200	0.194		mg/L		97	71 - 133
2-Butanone	ND	F2 F1	0.400	ND	F1	mg/L		169	50 - 150
Carbon tetrachloride	ND		0.200	0.169		mg/L		85	70 - 139
Chlorobenzene	ND		0.200	0.200		mg/L		100	78 - 128
Chloroform	ND		0.200	0.196		mg/L		98	68 - 132
1,2-Dichloroethane	ND		0.200	0.178		mg/L		89	70 - 133

Eurofins Atlanta

QC Sample Results

Client: Athens-Clarke County Georgia
Project/Site: Water Treatment Plant Solids - GA

Job ID: 705-42332-1

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 705-42332-1 MS

Matrix: Solid

Analysis Batch: 82613

Client Sample ID: Lagoon Sludge Sample

Prep Type: TCLP

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1,1-Dichloroethene	ND		0.200	0.223		mg/L		112	69 - 139
Tetrachloroethene	ND		0.200	0.198		mg/L		99	74 - 135
Trichloroethene	ND		0.200	0.179		mg/L		89	77 - 136
Vinyl chloride	ND		0.200	0.188		mg/L		94	66 - 138
Surrogate	MS %Recovery	MS Qualifier	Limits						
4-Bromofluorobenzene	98		70 - 126						
Dibromofluoromethane (Surr)	90		77 - 121						
Toluene-d8 (Surr)	100		79 - 119						

Lab Sample ID: 705-42332-1 MSD

Matrix: Solid

Analysis Batch: 82613

Client Sample ID: Lagoon Sludge Sample

Prep Type: TCLP

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	ND		0.200	0.180		mg/L		90	71 - 133	8	42
2-Butanone	ND	F2 F1	0.400	ND	F2	mg/L		128	50 - 150	28	20
Carbon tetrachloride	ND		0.200	0.162		mg/L		81	70 - 139	4	22
Chlorobenzene	ND		0.200	0.185		mg/L		93	78 - 128	8	50
Chloroform	ND		0.200	0.190		mg/L		95	68 - 132	3	20
1,2-Dichloroethane	ND		0.200	0.166		mg/L		83	70 - 133	7	41
1,1-Dichloroethene	ND		0.200	0.208		mg/L		104	69 - 139	7	56
Tetrachloroethene	ND		0.200	0.181		mg/L		91	74 - 135	9	20
Trichloroethene	ND		0.200	0.170		mg/L		85	77 - 136	5	51
Vinyl chloride	ND		0.200	0.180		mg/L		90	66 - 138	4	23
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
4-Bromofluorobenzene	93		70 - 126								
Dibromofluoromethane (Surr)	89		77 - 121								
Toluene-d8 (Surr)	95		79 - 119								

Method: 8270E - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: LCS 705-82279/2-A

Matrix: Solid

Analysis Batch: 82769

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 82279

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,4-Dichlorobenzene	1.00	0.918		mg/L		92	19 - 143
2,4-Dinitrotoluene	1.00	0.949		mg/L		95	10 - 150
Hexachlorobenzene	1.00	0.999		mg/L		100	60 - 144
Hexachlorobutadiene	1.00	0.874		mg/L		87	46 - 139
Hexachloroethane	1.00	0.914		mg/L		91	47 - 121
2-Methylphenol	1.00	0.966		mg/L		97	38 - 117
3 & 4 Methylphenol	2.00	1.84	E	mg/L		92	30 - 122
Nitrobenzene	1.00	0.923		mg/L		92	59 - 119
Pentachlorophenol	1.00	0.894		mg/L		89	10 - 150
Pyridine	1.00	0.283		mg/L		28	10 - 120

Eurofins Atlanta

QC Sample Results

Client: Athens-Clarke County Georgia
Project/Site: Water Treatment Plant Solids - GA

Job ID: 705-42332-1

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 705-82279/2-A

Matrix: Solid

Analysis Batch: 82769

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 82279

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,4,5-Trichlorophenol	1.00	0.861		mg/L		86	16 - 150
2,4,6-Trichlorophenol	1.00	0.921		mg/L		92	16 - 150

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl (Surr)	98		48 - 126
2-Fluorophenol (Surr)	100		29 - 120
Nitrobenzene-d5 (Surr)	102		41 - 129
Phenol-d5 (Surr)	91		21 - 120
p-Terphenyl-d14 (Surr)	108		48 - 130
2,4,6-Tribromophenol (Surr)	104		53 - 132

Lab Sample ID: LB 705-81799/1-C

Matrix: Solid

Analysis Batch: 82769

Client Sample ID: Method Blank

Prep Type: TCLP

Prep Batch: 82279

Analyte	LB Result	LB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		0.10	mg/L		09/18/25 10:22	09/19/25 01:52	1
2,4-Dinitrotoluene	ND		0.10	mg/L		09/18/25 10:22	09/19/25 01:52	1
Hexachlorobenzene	ND		0.10	mg/L		09/18/25 10:22	09/19/25 01:52	1
Hexachlorobutadiene	ND		0.10	mg/L		09/18/25 10:22	09/19/25 01:52	1
Hexachloroethane	ND		0.10	mg/L		09/18/25 10:22	09/19/25 01:52	1
2-Methylphenol	ND		0.10	mg/L		09/18/25 10:22	09/19/25 01:52	1
3 & 4 Methylphenol	ND		0.10	mg/L		09/18/25 10:22	09/19/25 01:52	1
Nitrobenzene	ND		0.10	mg/L		09/18/25 10:22	09/19/25 01:52	1
Pentachlorophenol	ND		0.25	mg/L		09/18/25 10:22	09/19/25 01:52	1
Pyridine	ND		0.10	mg/L		09/18/25 10:22	09/19/25 01:52	1
2,4,5-Trichlorophenol	ND		0.25	mg/L		09/18/25 10:22	09/19/25 01:52	1
2,4,6-Trichlorophenol	ND		0.10	mg/L		09/18/25 10:22	09/19/25 01:52	1

Surrogate	LB %Recovery	LB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	95		48 - 126	09/18/25 10:22	09/19/25 01:52	1
2-Fluorophenol (Surr)	100		29 - 120	09/18/25 10:22	09/19/25 01:52	1
Nitrobenzene-d5 (Surr)	102		41 - 129	09/18/25 10:22	09/19/25 01:52	1
Phenol-d5 (Surr)	91		21 - 120	09/18/25 10:22	09/19/25 01:52	1
p-Terphenyl-d14 (Surr)	105		48 - 130	09/18/25 10:22	09/19/25 01:52	1
2,4,6-Tribromophenol (Surr)	102		53 - 132	09/18/25 10:22	09/19/25 01:52	1

Lab Sample ID: 705-42513-A-1-E MS

Matrix: Solid

Analysis Batch: 82769

Client Sample ID: Matrix Spike

Prep Type: TCLP

Prep Batch: 82279

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1,4-Dichlorobenzene	ND		1.00	0.947		mg/L		95	48 - 130
2,4-Dinitrotoluene	ND		1.00	0.958		mg/L		96	50 - 130
Hexachlorobenzene	ND		1.00	1.05		mg/L		105	54 - 130
Hexachlorobutadiene	ND		1.00	0.968		mg/L		97	45 - 130
Hexachloroethane	ND		1.00	0.946		mg/L		95	50 - 150
2-Methylphenol	ND		1.00	0.996		mg/L		100	50 - 120

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QC Sample Results

Client: Athens-Clarke County Georgia
Project/Site: Water Treatment Plant Solids - GA

Job ID: 705-42332-1

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 705-42513-A-1-E MS

Matrix: Solid

Analysis Batch: 82769

Client Sample ID: Matrix Spike

Prep Type: TCLP

Prep Batch: 82279

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
3 & 4 Methylphenol	ND		2.00	1.93	E	mg/L		96	50 - 150
Nitrobenzene	ND		1.00	1.04		mg/L		104	56 - 135
Pentachlorophenol	ND		1.00	0.992		mg/L		99	45 - 117
Pyridine	ND		1.00	0.569		mg/L		57	50 - 150
2,4,5-Trichlorophenol	ND		1.00	0.896		mg/L		90	53 - 128
2,4,6-Trichlorophenol	ND		1.00	0.956		mg/L		96	54 - 132

Surrogate	MS %Recovery	MS Qualifier	Limits
2-Fluorobiphenyl (Surr)	102		48 - 126
2-Fluorophenol (Surr)	106		29 - 120
Nitrobenzene-d5 (Surr)	111		41 - 129
Phenol-d5 (Surr)	96		21 - 120
p-Terphenyl-d14 (Surr)	110		48 - 130
2,4,6-Tribromophenol (Surr)	105		53 - 132

Lab Sample ID: 705-42513-A-1-F DU

Matrix: Solid

Analysis Batch: 82769

Client Sample ID: Duplicate

Prep Type: TCLP

Prep Batch: 82279

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
1,4-Dichlorobenzene	ND		ND		mg/L		NC	
2,4-Dinitrotoluene	ND		ND		mg/L		NC	
Hexachlorobenzene	ND		ND		mg/L		NC	
Hexachlorobutadiene	ND		ND		mg/L		NC	
Hexachloroethane	ND		ND		mg/L		NC	
2-Methylphenol	ND		ND		mg/L		NC	
3 & 4 Methylphenol	ND		ND		mg/L		NC	
Nitrobenzene	ND		ND		mg/L		NC	
Pentachlorophenol	ND		ND		mg/L		NC	
Pyridine	ND		ND		mg/L		NC	
2,4,5-Trichlorophenol	ND		ND		mg/L		NC	
2,4,6-Trichlorophenol	ND		ND		mg/L		NC	

Surrogate	DU %Recovery	DU Qualifier	Limits
2-Fluorobiphenyl (Surr)	99		48 - 126
2-Fluorophenol (Surr)	103		29 - 120
Nitrobenzene-d5 (Surr)	107		41 - 129
Phenol-d5 (Surr)	92		21 - 120
p-Terphenyl-d14 (Surr)	107		48 - 130
2,4,6-Tribromophenol (Surr)	99		53 - 132

Eurofins Atlanta

QC Sample Results

Client: Athens-Clarke County Georgia
Project/Site: Water Treatment Plant Solids - GA

Job ID: 705-42332-1

Method: 8081B - Organochlorine Pesticides (GC)

Lab Sample ID: LCS 705-82413/2-A

Matrix: Solid

Analysis Batch: 82053

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 82413

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Endrin	0.00800	0.00910		mg/L		114	77 - 137
gamma-BHC (Lindane)	0.00800	0.0101	*+	mg/L		126	69 - 123
Heptachlor epoxide	0.00800	0.00861		mg/L		108	75 - 139

Surrogate	LCS %Recovery	LCS Qualifier	Limits
DCB Decachlorobiphenyl (Surr)	107		50 - 130
Tetrachloro-m-xylene (Surr)	105		46 - 120

Lab Sample ID: LCS 705-82413/2-A

Matrix: Solid

Analysis Batch: 82659

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 82413

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Heptachlor	0.00800	0.00893		mg/L		112	66 - 134
Methoxychlor	0.0280	0.0273		mg/L		98	59 - 135

Lab Sample ID: LCS 705-82413/3-A

Matrix: Solid

Analysis Batch: 82053

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 82413

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chlordane (technical)	0.0400	0.0460		mg/L		115	67 - 130
Toxaphene	0.0800	0.0769		mg/L		96	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
DCB Decachlorobiphenyl (Surr)	102		50 - 130
Tetrachloro-m-xylene (Surr)	101		46 - 120

Lab Sample ID: LB 705-81511/1-E

Matrix: Solid

Analysis Batch: 82053

Client Sample ID: Method Blank

Prep Type: TCLP

Prep Batch: 82413

Analyte	LB Result	LB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chlordane (technical)	ND		0.00050	mg/L		09/17/25 14:38	09/17/25 22:31	1
Endrin	ND		0.00010	mg/L		09/17/25 14:38	09/17/25 22:31	1
gamma-BHC (Lindane)	ND		0.000050	mg/L		09/17/25 14:38	09/17/25 22:31	1
Heptachlor epoxide	ND		0.000050	mg/L		09/17/25 14:38	09/17/25 22:31	1
Toxaphene	ND		0.0050	mg/L		09/17/25 14:38	09/17/25 22:31	1

Surrogate	LB %Recovery	LB Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	109		50 - 130	09/17/25 14:38	09/17/25 22:31	1
Tetrachloro-m-xylene (Surr)	109		46 - 120	09/17/25 14:38	09/17/25 22:31	1

Eurofins Atlanta

QC Sample Results

Client: Athens-Clarke County Georgia
Project/Site: Water Treatment Plant Solids - GA

Job ID: 705-42332-1

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LB 705-81511/1-E

Matrix: Solid

Analysis Batch: 82659

Client Sample ID: Method Blank

Prep Type: TCLP

Prep Batch: 82413

Analyte	LB Result	LB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Heptachlor	ND		0.000050	mg/L		09/17/25 14:38	09/18/25 11:56	1
Methoxychlor	ND		0.00050	mg/L		09/17/25 14:38	09/18/25 11:56	1

Lab Sample ID: 705-42171-C-1-J MS

Matrix: Solid

Analysis Batch: 82053

Client Sample ID: Matrix Spike

Prep Type: TCLP

Prep Batch: 82413

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Endrin	ND	F1	0.00800	0.0100		mg/L		125	67 - 136
gamma-BHC (Lindane)	ND	*+ F1	0.00800	0.00962		mg/L		120	59 - 127
Heptachlor epoxide	ND		0.00800	0.00826		mg/L		103	61 - 129
Surrogate	MS %Recovery	MS Qualifier	MS Limits						
DCB Decachlorobiphenyl (Surr)	185	S1+	50 - 130						
Tetrachloro-m-xylene (Surr)	104		46 - 120						

Lab Sample ID: 705-42171-C-1-J MS

Matrix: Solid

Analysis Batch: 82659

Client Sample ID: Matrix Spike

Prep Type: TCLP

Prep Batch: 82413

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Heptachlor	ND		0.00800	0.00852		mg/L		107	59 - 132
Methoxychlor	ND		0.0280	0.0268		mg/L		96	57 - 135

Lab Sample ID: 705-42171-C-1-K MS

Matrix: Solid

Analysis Batch: 82053

Client Sample ID: Matrix Spike

Prep Type: TCLP

Prep Batch: 82413

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chlordane (technical)	ND	F1	0.0400	0.0497		mg/L		124	53 - 133
Toxaphene	ND		0.0800	0.0817		mg/L		102	72 - 136
Surrogate	MS %Recovery	MS Qualifier	MS Limits						
DCB Decachlorobiphenyl (Surr)	199	S1+	50 - 130						
Tetrachloro-m-xylene (Surr)	104		46 - 120						

Lab Sample ID: 705-42171-C-1-M DU

Matrix: Solid

Analysis Batch: 82053

Client Sample ID: Duplicate

Prep Type: TCLP

Prep Batch: 82413

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chlordane (technical)	ND	F1	ND		mg/L		NC	30
Endrin	ND	F1	ND		mg/L		NC	17
gamma-BHC (Lindane)	ND	*+ F1	ND	*+	mg/L		NC	26
Heptachlor epoxide	ND		ND		mg/L		NC	30
Toxaphene	ND		ND		mg/L		NC	30

Eurofins Atlanta

QC Sample Results

Client: Athens-Clarke County Georgia
Project/Site: Water Treatment Plant Solids - GA

Job ID: 705-42332-1

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: 705-42171-C-1-M DU

Matrix: Solid

Analysis Batch: 82053

Client Sample ID: Duplicate

Prep Type: TCLP

Prep Batch: 82413

	DU	DU	
Surrogate	%Recovery	Qualifier	Limits
DCB Decachlorobiphenyl (Surr)	163	S1+	50 - 130
Tetrachloro-m-xylene (Surr)	112		46 - 120

Lab Sample ID: 705-42171-C-1-M DU

Matrix: Solid

Analysis Batch: 82659

Client Sample ID: Duplicate

Prep Type: TCLP

Prep Batch: 82413

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Heptachlor	ND		ND		mg/L		NC	24
Methoxychlor	ND		ND		mg/L		NC	30

Method: 8151A - Herbicides (GC)

Lab Sample ID: LCS 705-81621/2-A

Matrix: Solid

Analysis Batch: 82542

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 81621

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,4-D	0.500	0.400		mg/L		80	52 - 120
Silvex (2,4,5-TP)	0.500	0.448		mg/L		90	52 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
DCAA (Surr)	91		49 - 120

Lab Sample ID: LB 705-80696/1-D

Matrix: Solid

Analysis Batch: 82542

Client Sample ID: Method Blank

Prep Type: TCLP

Prep Batch: 81621

Analyte	LB Result	LB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	ND		0.040	mg/L		09/18/25 13:39	09/19/25 10:38	1
Silvex (2,4,5-TP)	ND		0.040	mg/L		09/18/25 13:39	09/19/25 10:38	1

Surrogate	LB %Recovery	LB Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCAA (Surr)	93		49 - 120	09/18/25 13:39	09/19/25 10:38	1

Lab Sample ID: 705-42949-A-1-E MS

Matrix: Solid

Analysis Batch: 82542

Client Sample ID: Matrix Spike

Prep Type: TCLP

Prep Batch: 81621

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
2,4-D	ND		0.500	0.395		mg/L		79	51 - 120
Silvex (2,4,5-TP)	ND		0.500	0.451		mg/L		90	51 - 120

Surrogate	MS %Recovery	MS Qualifier	Limits
DCAA (Surr)	98		49 - 120

Eurofins Atlanta

QC Sample Results

Client: Athens-Clarke County Georgia
Project/Site: Water Treatment Plant Solids - GA

Job ID: 705-42332-1

Method: 8151A - Herbicides (GC) (Continued)

Lab Sample ID: 705-42949-A-1-F DU

Matrix: Solid

Analysis Batch: 82542

Client Sample ID: Duplicate

Prep Type: TCLP

Prep Batch: 81621

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
2,4-D	ND		ND		mg/L		NC	30
Silvex (2,4,5-TP)	ND		ND		mg/L		NC	30
Surrogate	%Recovery	DU Qualifier	DU	Limits				
DCAA (Surr)	85			49 - 120				

Method: 6010D - Metals (ICP)

Lab Sample ID: LCS 705-82691/2-A

Matrix: Solid

Analysis Batch: 83029

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 82691

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	5.00	5.15		mg/L		103	80 - 120
Barium	5.00	5.03		mg/L		101	80 - 120
Cadmium	5.00	5.09		mg/L		102	80 - 120
Chromium	5.00	5.05		mg/L		101	80 - 120
Lead	5.00	5.09		mg/L		102	80 - 120
Selenium	5.00	5.06		mg/L		101	80 - 120
Silver	0.500	0.497		mg/L		99	80 - 120

Lab Sample ID: LB 705-82271/1-B

Matrix: Solid

Analysis Batch: 83029

Client Sample ID: Method Blank

Prep Type: TCLP

Prep Batch: 82691

Analyte	LB Result	LB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.25	mg/L		09/18/25 14:00	09/19/25 13:10	1
Barium	ND		0.50	mg/L		09/18/25 14:00	09/19/25 13:10	1
Cadmium	ND		0.025	mg/L		09/18/25 14:00	09/19/25 13:10	1
Chromium	ND		0.050	mg/L		09/18/25 14:00	09/19/25 13:10	1
Lead	ND		0.050	mg/L		09/18/25 14:00	09/19/25 13:10	1
Selenium	ND		0.10	mg/L		09/18/25 14:00	09/19/25 13:10	1
Silver	ND		0.025	mg/L		09/18/25 14:00	09/19/25 13:10	1

Lab Sample ID: 680-267052-A-4-C MS

Matrix: Solid

Analysis Batch: 83029

Client Sample ID: Matrix Spike

Prep Type: TCLP

Prep Batch: 82691

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	ND		5.00	5.20		mg/L		104	50 - 150
Barium	ND		5.00	5.06		mg/L		101	50 - 150
Cadmium	ND		5.00	5.12		mg/L		102	50 - 150
Chromium	ND		5.00	5.08		mg/L		102	50 - 150
Lead	ND		5.00	5.12		mg/L		102	50 - 150
Selenium	ND		5.00	5.12		mg/L		102	50 - 150
Silver	ND		0.500	0.501		mg/L		100	50 - 150

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QC Sample Results

Client: Athens-Clarke County Georgia
Project/Site: Water Treatment Plant Solids - GA

Job ID: 705-42332-1

Method: 6010D - Metals (ICP) (Continued)

Lab Sample ID: 680-267052-A-4-D MSD

Matrix: Solid

Analysis Batch: 83029

Client Sample ID: Matrix Spike Duplicate

Prep Type: TCLP

Prep Batch: 82691

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	ND		5.00	5.14		mg/L		103	50 - 150	1	30
Barium	ND		5.00	5.01		mg/L		100	50 - 150	1	30
Cadmium	ND		5.00	5.06		mg/L		101	50 - 150	1	30
Chromium	ND		5.00	5.02		mg/L		100	50 - 150	1	30
Lead	ND		5.00	5.06		mg/L		101	50 - 150	1	30
Selenium	ND		5.00	5.10		mg/L		102	50 - 150	0	30
Silver	ND		0.500	0.495		mg/L		99	50 - 150	1	30

Method: 7470A - Mercury (CVAA)

Lab Sample ID: LCS 705-82838/2-A

Matrix: Solid

Analysis Batch: 83095

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 82838

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.0400	0.0407		mg/L		102	80 - 120

Lab Sample ID: LB 705-82271/1-D

Matrix: Solid

Analysis Batch: 83095

Client Sample ID: Method Blank

Prep Type: TCLP

Prep Batch: 82838

Analyte	LB Result	LB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.0050	mg/L		09/19/25 08:38	09/19/25 17:03	1

Lab Sample ID: 705-43128-D-1-G MS

Matrix: Solid

Analysis Batch: 83095

Client Sample ID: Matrix Spike

Prep Type: TCLP

Prep Batch: 82838

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	ND		0.0400	0.0410		mg/L		103	75 - 125

Lab Sample ID: 705-43128-D-1-H MSD

Matrix: Solid

Analysis Batch: 83095

Client Sample ID: Matrix Spike Duplicate

Prep Type: TCLP

Prep Batch: 82838

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	ND		0.0400	0.0410		mg/L		103	75 - 125	0	20

Eurofins Atlanta

Accreditation/Certification Summary

Client: Athens-Clarke County Georgia
Project/Site: Water Treatment Plant Solids - GA

Job ID: 705-42332-1

Laboratory: Eurofins Atlanta

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Florida	NELAP	E87582	06-30-26

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
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- 13
- 14
- 15

Method Summary

Client: Athens-Clarke County Georgia
Project/Site: Water Treatment Plant Solids - GA

Job ID: 705-42332-1

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	EET ATL
8270E	Semivolatile Organic Compounds (GC/MS)	SW846	EET ATL
8081B	Organochlorine Pesticides (GC)	SW846	EET ATL 2
8151A	Herbicides (GC)	SW846	EET ATL
6010D	Metals (ICP)	SW846	EET ATL
7470A	Mercury (CVAA)	SW846	EET ATL
1311	TCLP Extraction	SW846	EET ATL
3010A	Preparation, Total Metals	SW846	EET ATL
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	EET ATL
5030B	Purge and Trap	SW846	EET ATL
7470A	Preparation, Mercury	SW846	EET ATL
8151A	Extraction (Herbicides)	SW846	EET ATL

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET ATL = Eurofins Atlanta, 3080 Presidential Dr, Atlanta, GA 30340, TEL (770)457-8177

EET ATL 2 = Eurofins Atlanta Building A, 3080 Presidential Pkwy, Atlanta, GA 30340, TEL (770)457-8177

Sample Summary

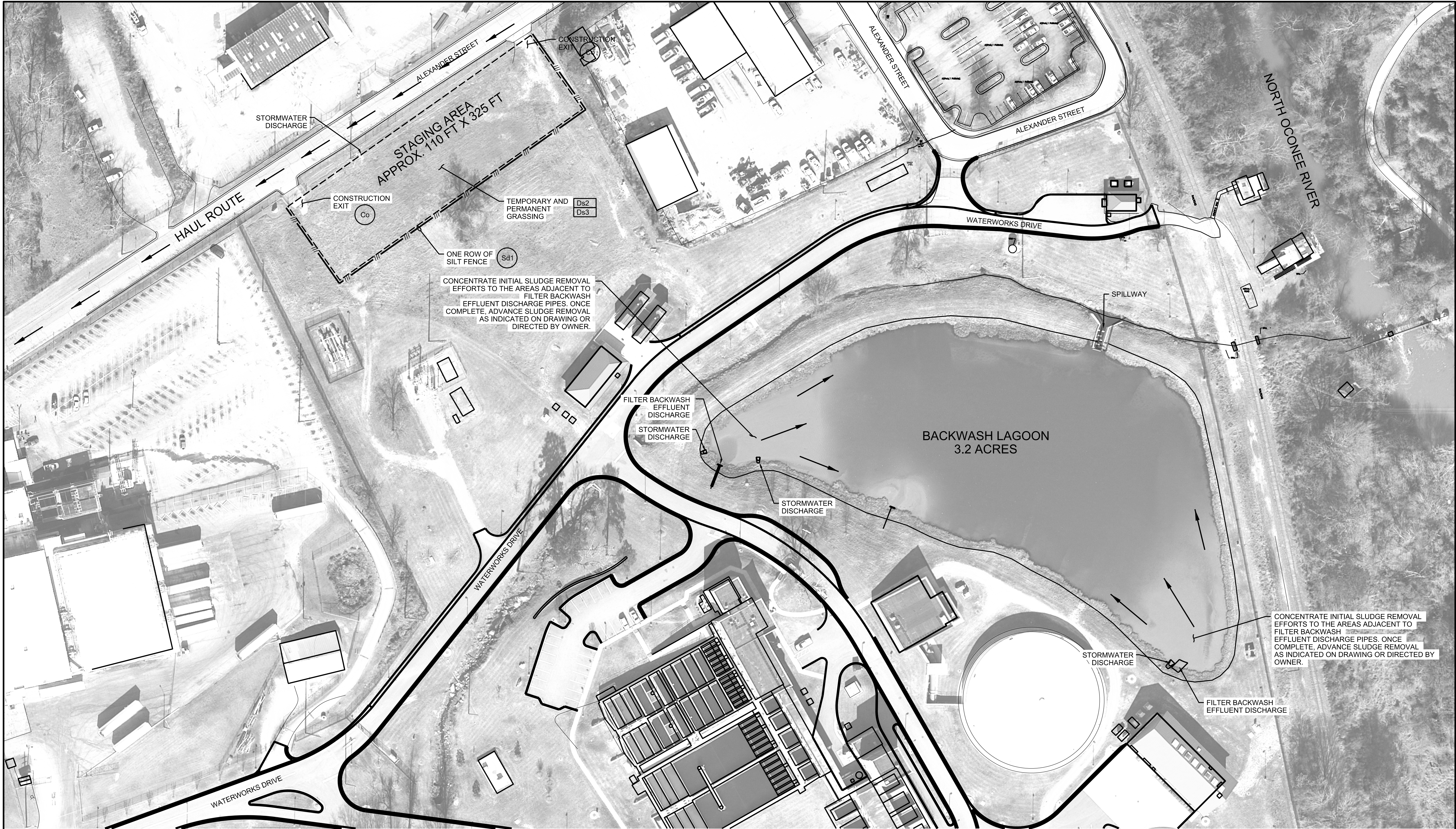
Client: Athens-Clarke County Georgia
Project/Site: Water Treatment Plant Solids - GA

Job ID: 705-42332-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
705-42332-1	Lagoon Sludge Sample	Solid	09/04/25 12:20	09/09/25 09:50	Georgia

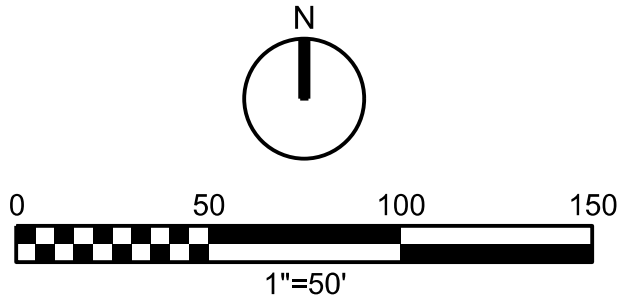
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END OF REPORT



LEGEND

- > DIRECTION OF WORK
- > HAUL ROUTE
- SILT FENCE
- - - TEMPORARY SECURITY FENCE



SITE PLAN AND EROSION CONTROL-AERIAL IMAGE
BID# _____ SLUDGE LAGOON CLEANOUT
J.G. BECHAM WATER TREATMENT PLANT
ATHENS, GA

DRAWING NO.

1

Jacobs

[illegible]

STRUCTURAL PRACTICES			
CODE	PRACTICE	DETAIL	MAP SYMBOL DESCRIPTION
S1	TEMPERARY EROSION CONTROL		Temporary silt fence or sedimentation structure, a silt fence or sediment trap from discharge to existing permanent easement
S2	PERMANENT EROSION CONTROL		Permanent silt fence or sedimentation structure, a permanent silt fence or sediment trap from discharge to the permanent easement
S3	SURFACE IMPROVEMENT		Gravel or crushed rock surface, road surface improvement, gravel or crushed rock surface
S4	STABILITY		Retaining wall or slope stabilization, retaining wall or slope stabilization, retaining wall or slope stabilization
S5	TOPE		Removal of existing top of the road, removal of existing top of the road, removal of existing top of the road
S6	TEMPORARY EROSION CONTROL		To prevent discharge from the road, to prevent discharge from the road, to prevent discharge from the road
S7	PERMANENT EROSION CONTROL		To prevent discharge from the road, to prevent discharge from the road, to prevent discharge from the road
VEGETATIVE PRACTICES			
CODE	PRACTICE	DETAIL	DESCRIPTION
V1	PLANTING		Planting of vegetation, planting of vegetation, planting of vegetation
V2	PLANTING		Planting of vegetation, planting of vegetation, planting of vegetation
V3	PLANTING		Planting of vegetation, planting of vegetation, planting of vegetation
V4	PLANTING		Planting of vegetation, planting of vegetation, planting of vegetation
V5	PLANTING		Planting of vegetation, planting of vegetation, planting of vegetation
V6	PLANTING		Planting of vegetation, planting of vegetation, planting of vegetation
V7	PLANTING		Planting of vegetation, planting of vegetation, planting of vegetation
V8	PLANTING		Planting of vegetation, planting of vegetation, planting of vegetation
V9	PLANTING		Planting of vegetation, planting of vegetation, planting of vegetation
V10	PLANTING		Planting of vegetation, planting of vegetation, planting of vegetation
V11	PLANTING		Planting of vegetation, planting of vegetation, planting of vegetation
V12	PLANTING		Planting of vegetation, planting of vegetation, planting of vegetation
V13	PLANTING		Planting of vegetation, planting of vegetation, planting of vegetation
V14	PLANTING		Planting of vegetation, planting of vegetation, planting of vegetation
V15	PLANTING		Planting of vegetation, planting of vegetation, planting of vegetation
V16	PLANTING		Planting of vegetation, planting of vegetation, planting of vegetation
V17	PLANTING		Planting of vegetation, planting of vegetation, planting of vegetation
V18	PLANTING		Planting of vegetation, planting of vegetation, planting of vegetation
V19	PLANTING		Planting of vegetation, planting of vegetation, planting of vegetation
V20	PLANTING		Planting of vegetation, planting of vegetation, planting of vegetation
V21	PLANTING		Planting of vegetation, planting of vegetation, planting of vegetation
V22	PLANTING		Planting of vegetation, planting of vegetation, planting of vegetation
V23	PLANTING		Planting of vegetation, planting of vegetation, planting of vegetation
V24	PLANTING		Planting of vegetation, planting of vegetation, planting of vegetation
V25	PLANTING		Planting of vegetation, planting of vegetation, planting of vegetation
V26	PLANTING		Planting of vegetation, planting of vegetation, planting of vegetation
V27	PLANTING		Planting of vegetation, planting of vegetation, planting of vegetation
V28	PLANTING		Planting of vegetation, planting of vegetation, planting of vegetation
V29	PLANTING		Planting of vegetation, planting of vegetation, planting of vegetation
V30	PLANTING		Planting of vegetation, planting of vegetation, planting of vegetation
V31	PLANTING		Planting of vegetation, planting of vegetation, planting of vegetation
V32	PLANTING		Planting of vegetation, planting of vegetation, planting of vegetation
V33	PLANTING		Planting of vegetation, planting of vegetation, planting of vegetation
V34	PLANTING		Planting of vegetation, planting of vegetation, planting of vegetation
V35	PLANTING		Planting of vegetation, planting of vegetation, planting of vegetation
V36	PLANTING		Planting of vegetation, planting of vegetation, planting of vegetation
V37	PLANTING		Planting of vegetation, planting of vegetation, planting of vegetation
V38	PLANTING		Planting of vegetation, planting of vegetation, planting of vegetation
V39	PLANTING		Planting of vegetation, planting of vegetation, planting of vegetation
V40	PLANTING		Planting of vegetation, planting of vegetation, planting of vegetation
V41	PLANTING		Planting of vegetation, planting of vegetation, planting of vegetation
V42	PLANTING		Planting of vegetation, planting of vegetation, planting of vegetation
V43	PLANTING		Planting of vegetation, planting of vegetation, planting of vegetation
V44	PLANTING		Planting of vegetation, planting of vegetation, planting of vegetation
V45	PLANTING		Planting of vegetation, planting of vegetation, planting of vegetation
V46	PLANTING		Planting of vegetation, planting of vegetation, planting of vegetation
V47	PLANTING		Planting of vegetation, planting of vegetation, planting of vegetation
V48	PLANTING		Planting of vegetation, planting of vegetation, planting of vegetation
V49	PLANTING		Planting of vegetation, planting of vegetation, planting of vegetation
V50	PLANTING		Planting of vegetation, planting of vegetation, planting of vegetation
V51	PLANTING		Planting of vegetation, planting of vegetation, planting of vegetation
V52	PLANTING		Planting of vegetation, planting of vegetation, planting of vegetation
V53	PLANTING		Planting of vegetation, planting of vegetation, planting of vegetation
V54	PLANTING		Planting of vegetation, planting of vegetation, planting of vegetation
V55	PLANTING		Planting of vegetation, planting of vegetation, planting of vegetation
V56	PLANTING		Planting of vegetation, planting of vegetation, planting of vegetation
V57	PLANTING		Planting of vegetation, planting of vegetation, planting of vegetation
V58	PLANTING		Planting of vegetation, planting of vegetation, planting of vegetation
V59	PLANTING		Planting of vegetation, planting of vegetation, planting of vegetation
V60	PLANTING		Planting of vegetation, planting of vegetation, planting of vegetation
V61	PLANTING		Planting of vegetation, planting of vegetation, planting of vegetation
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ANCHORING MULCH:

1. STRAW OR HAY MULCH CAN BE PRESSED INTO THE SOIL WITH A DISK HARROW WITH THE STRIPS OF MULCH EITHER STRAIGHT OR WITH A SPECIAL "PACKER DISK". DISKS MAY BE SIXTIE O OR SEERATED AND SHOULD BE 20 INCHES OR MORE IN DIAMETER AND 8 TO 12 INCHES APART. THE EDGES OF THE DISK SHOULD BE DULL ENOUGH NOT TO CUT THE MULCH BUT TO PRESS IT INTO THE SOIL. MULCH WILL BE MORE EFFECTIVE IN TRAPPING SOIL MOISTURE IF MULCH SHALL BE ANCHORED IMMEDIATELY AFTER APPLICATION. STRAW OR HAY MULCH SPREAD WITH SPECIAL BLOWER-TYPE EQUIPMENT MAY BE ANCHORED. TACKIFIERS, BINDERS, AND HYDRAULIC MULCH WITH TACKIFIER SPECIFICALLY DESIGNED FOR TACKING STRAW CAN BE USED TO ANCHOR OR MULCHES. MULCHES CAN ALSO BE ANCHORED WITH TACKIFIERS, TACKIFIERS, PLASTIC MESH OR NETTING WITH MESH NO LARGER THAN ONE INCH BY ONE INCH SHALL BE INSTALLED ACCORDING TO MANUFACTURERS SPECIFICATIONS.
2. ANCHORING APPROPRIATE NETTING OR TACKIFIERS SHALL BE USED TO ANCHOR THE OPENINGS OF THE NETTING SHALL NOT BE LARGER THAN THE AVERAGE SIZE OF THE WOOD WASTE CHIPS.
3. POLYETHYLENE FILM SHALL BE ANCHOR TRENCHED AT THE JOINTS AS WELL AS INCREMENTALLY AS NECESSARY.

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SPECIES	BROADCAST RATES 2/ - PLS 3/		RESOURCE AREA	PLANTING RATES BY RESOURCE AREA PLANTING DATES												REMARKS
	PER ACRE	PER 1000 SQ. FT.		— OPTIMUM — PERMISSIBLE BUT MARGINAL												
				J F M A M J J A S O N D												
MILLET, PEARL (PENNESETUM GLAUCUM)			M-L												88,000 SEED PER POUND. QUICK DENSE COVER. MAY REACH 5 FEET IN HEIGHT. NOT RECOMMENDED FOR MIXTURES.	
ALONE	50 LBS	1.1 LB	P													
			C													
RYEGRESS, ANNUAL (LOLIUM TEMULENTUM)			M-L												227,000 SEED PER POUND. DENSE COVER. VERY COMPETITIVE VERY COMPETITIVE AND IS NOT TO BE USED IN MIXTURES	
ALONE	40 LBS	0.9 LB	P													
			C													
SUDANGRASS (SORGHUM SUDANESE)			M-L												55,000 SEED PER POUND. GOOD ON DROUGHTY SITES. NOT RECOMMENDED FOR MIXTURES.	
ALONE	60 LBS	1.4 LB	P													
			C													
MILLET, BROWNTOP (PANICUM FASCICULATUM)			M-L												137,000 SEED PER POUND. QUICK DENSE COVER. WILL PROVIDE TOO MUCH COMPETITION IN MIXTURES IF SEEDED AT HIGH RATES.	
ALONE	40 LBS	0.9 LB	P													
IN MIXTURES	10 LBS	0.2 LB	C													

SPECIFICATIONS

GRADING AND SHAPING

- EXCESSIVE WATER RUNOFF SHALL BE REDUCED BY PROPERLY DESIGNED AND INSTALLED EROSION CONTROL PRACTICES SUCH AS CLOSED DRAINS, DITCHES, DIKES, DIVERSIONS, SEDIMENT BARRIERS, AND OTHERS.

SEEDBED PREPARATION

- WHEN A HYDRAULIC SEEDER IS USED, SEEDBED PREPARATION IS NOT REQUIRED.
- WHEN USING CONVENTIONAL OR HAND-SEEDING, SEEDBED PREPARATION IS NOT REQUIRED IF THE SOIL MATERIAL IS LOOSE AND NOT SEALED BY RAINFALL.
- WHEN SOIL HAS BEEN SEALED BY RAINFALL OR CONSISTS OF SMOOTH UNDISTURBED CUT SLOPES, THE SOIL SHALL BE PITTED, TRENCHED, OR OTHERWISE SCARIFIED TO PROVIDE A PLACE FOR SEED TO LODGE AND GERMINATE.

LIME AND FERTILIZER

- AGRICULTURAL LIME IS NOT REQUIRED UNLESS SOIL TESTS INDICATE OTHERWISE.
- APPLY AGRICULTURAL LIME AT A RATE DETERMINED BY SOIL TEST FOR
- APPLY FERTILIZER BEFORE LAND PREPARATION AND DISK, RIP, OR CHISEL TO INCORPORATE.
- ON SLOPED TO STEEP FOR, OR INACCESSIBLE TO EQUIPMENT, APPLY FERTILIZER HYDRAULICALLY, PREFERABLY IN THE FIRST PASS WITH SEED AND SOME HYDRAULIC MULCH, THEN TOPPED WITH THE REMAINING REQUIRED APPLICATION RATE

SEEDING

- SELECT A GRASS OR GRASS-LEGUME MIXTURE SUITABLE TO THE AREA AND SEASON OF THE YEAR.
- APPLY SEED UNIFORMLY BY HAND, CYCLONE SEEDER, DRILL, CULTI-PACKER-SEEDER, OR HYDRAULIC SEEDER (SLURRY INCLUDING SEED AND FERTILIZER). DRILL OR CULTIPACKER-SEEDERS SHOULD NORMALLY PLACE SEED ONE-HALF TO ONE INCH DEEP. IF SEED BY HAND, SOIL SHOULD BE "RAKED" LIGHTLY TO COVER SEED WITH SOIL.

MULCHING

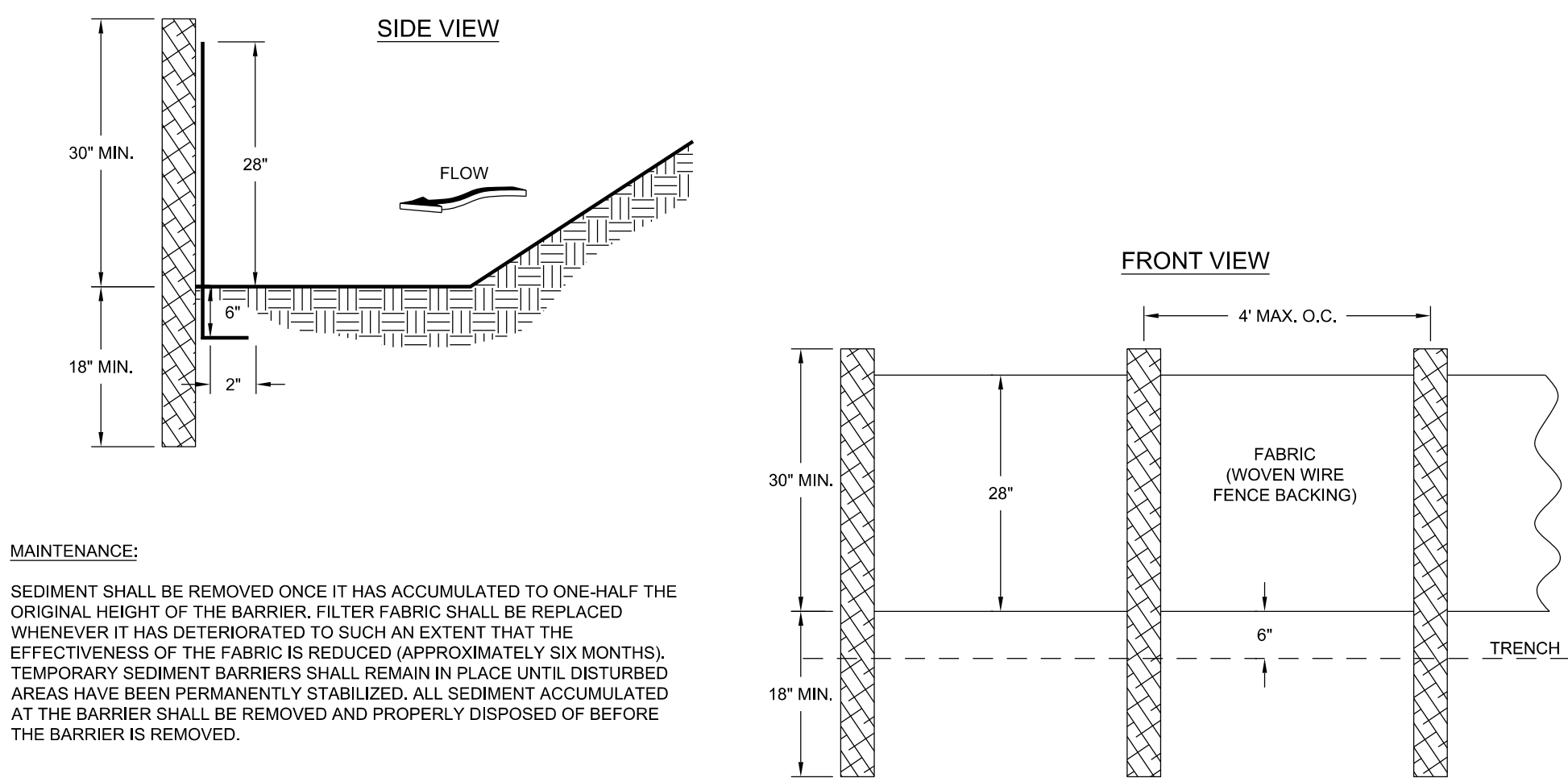
- TEMPORARY VEGETATION CAN, IN MOST CASES, BE ESTABLISHED WITHOUT THE USE OF MULCH, PROVIDED THERE IS LITTLE TO NO EROSION POTENTIAL. MULCH WITHOUT SEEDING SHOULD BE CONSIDERED FOR SHORT TERM PROTECTION. SEE D1 - DISTURBED AREA STABILIZATION (WITH MULCHING ONLY).

IRRIGATION

- IF WATER IS APPLIED, IT MUST BE AT A RATE NOT CAUSING RUNOFF AND EROSION. THOROUGHLY WET THE SOIL TO A DEPTH THAT WILL INSURE GERMINATION OF THE SEED. SUBSEQUENT APPLICATIONS SHOULD BE MADE WHEN NEEDED.

* REVISED FEB 2014 PER 6TH EDITION OF MANUAL FOR EROSION & SEDIMENT CONTROL IN GEORGIA.

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[illegible]

1. USE STEEL OR WOOD POSTS OR AS SPECIFIED BY THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.

Sd1-S

VERT UNDER ENTRANCE (IF NEEDED)

DIVERSION RIDGE (SEE NOTE 6)

COARSE AGGREGATE NO. 57 TO NO. 4 STONE INCLUSIVE

GEOTEXTILE UNDERLINER

APPLY WATER TO WASH WHEELS IF NECESSARY

GEOTEXTILE UNDERLINER

ENTRANCE ELEVATION

COARSE AGGREGATE (N.S.A. R-2)

50' MIN.

20' MIN.

6" MIN.

FLOW

FLOW

NOTES:

1. AVOID LOCATING ON STEEP SLOPES OR AT CURVES ON PUBLIC ROADS.
2. REMOVE ALL VEGETATION AND OTHER UNSUITABLE MATERIAL FROM THE FOUNDATION AREA. GRAZE AND GROW FOR POSITIVE DRAINAGE.
3. AGGREGATE SIZE SHALL BE IN ACCORDANCE WITH NATIONAL STONE ASSOCIATION R-2 (1.5"-3" STONE).
4. GRAVEL PAD SHALL HAVE A MINIMUM THICKNESS OF 6".
5. PAD WIDTH SHALL BE EQUAL FULL WIDTH AT ALL POINTS OF VEHICULAR EGRESS, BUT NO LESS THAN 20'.
6. A DIVERSION RIDGE SHOULD BE CONSTRUCTED WHEN GRADE TOWARD PAVED AREA IS GREATER THAN 2%.
7. INSTALL PIPES TO THE ENTRANCE IF NEEDED TO MAINTAIN DRAINAGE DITCHES.
8. WHEN WASHING IS REQUIRED, IT SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN (DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE ENTRANCE TO A SEDIMENT CONTROL DEVICE)
9. MAINTAIN AREA IN A MANNER THAT PREVENTS TRACKING AND/OR FLOW OF MUD ONTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.

CONSTRUCTION
ENTRANCE
NTS

04311

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