

ADVERTISEMENT FOR BIDS

Sealed proposals will be received in the Office of the Procurement Coordinator, Greenville Utilities Commission, 401 S. Greene Street, Greenville, North Carolina 27834 until 2:00 PM (EDST) on February 6, 2019 and immediately thereafter publicly opened and read for the the furnishing and delivery two (2) wall-mounted channel grinders and all associated appurtenances in accordance with the Contract Documents to Green Mill Run and Fork Swamp Regional Pump Stations. Provide design services consisting of system design, shop drawings, operations and maintenance manuals. Provide field services for installation, testing startup, and training as specified .

Instructions for submitting bids and complete specifications will be available in the Office of the Procurement Coordinator, Greenville Utilities Commission, 401 S. Greene Street, Greenville, North Carolina during regular office hours, which are 8:30AM – 5:00PM Monday through Friday. Greenville Utilities Commission reserves the right to reject any or all bids. **Late bids will not be considered.**

SECTION I
GENERAL INSTRUCTIONS FOR FORMAL BIDS
RELATED TO THE PURCHASE OF APPARATUS, SUPPLIES,
MATERIALS, AND EQUIPMENT

1.0 NOTICE TO BIDDERS

Sealed bids, subject to the conditions made a part hereof, will be received in the Office of the Procurement Coordinator, Greenville Utilities Commission, 401 S. Greene Street, Greenville, North Carolina 27834 until 2:00 PM (EDST) on February 6, 2019, the day of opening. Bids submitted in a fax or e-mail in response to this Invitation for Bids **will not be acceptable**.

2.0 STANDARD FORMS REQUIRED

Each bidder must submit a proposal on the enclosed bid forms. **The bid must be signed by an authorized official of the firm. Return only the attached Proposal Form. Do not return the Advertisement for Bids, Instructions to Bidders or Specifications.**

3.0 PREPARATION OF BID

Bids must be in sealed envelopes clearly marked on the outside with the name of the bid and the bid opening date and time. Bid shall be addressed to PROCUREMENT COORDINATOR, GREENVILLE UTILITIES COMMISSION, P. O. BOX 1847, 401 S. GREENE STREET, GREENVILLE, NORTH CAROLINA 27835-1847.

4.0 TIME FOR OPENING BIDS

Bids will be opened promptly and read at the hour and on the date set forth in the advertisement in the Office of the Procurement Coordinator, Greenville Utilities Main Office, 401 S. Greene Street, Greenville, North Carolina. Bidders or their authorized agents are invited to be present.

5.0 DEPOSIT

A deposit is **NOT** required for this bid.

6.0 NC SALES TAX

Do **not** include NC sales taxes in bid figure; however, Greenville Utilities Commission (GUC) does pay sales tax. Sales tax should be added to the invoice as a separate item.

7.0 FEDERAL EXCISE TAX

GUC is exempt from Federal Excise Tax and will issue a Federal Exemption Certificate upon request to the successful bidder.

8.0 EXCEPTIONS TO BE CLEARLY STATED

If bid is not in strict accordance with Section II, "Specifications," bidder must list or note all exceptions **on the Request for Proposal Form**, otherwise, it is fully understood that the successful bidder will furnish equipment and/or materials exactly as specified. GUC reserves the right to accept or reject bids with noted minor deviations from specifications and to determine the lowest responsible, responsive bid from the standpoint of quality, performance, and price.

9.0 EVALUATION AND AWARD OF BIDS

GUC reserves the right to reject any and all bids, to waive any and all informalities, and to disregard all nonconforming or conditional bids or counter proposals. In evaluating bids, GUC shall consider whether the bids comply with the prescribed requirements, plus all alternates or options requested. GUC reserves the right to include or exclude any option or alternative in GUC's opinion is in GUC's best interests. If a bid is to be awarded, it will be awarded to the lowest responsible, responsive bidder whose evaluation by GUC indicates that the award will be in GUC's best interests. Only firm prices will be considered for award of this bid.

10.0 PROMPT PAYMENT DISCOUNTS

Bidders are urged to compute all discounts into the price offered. If a prompt payment discount is offered, it may be considered in the award of the contract.

11.0 NUMERICAL ERRORS

In the case of a discrepancy between a unit price and the extension (the unit price multiplied by the number of units), the unit price governs. In the case where numerical bids are stated both in numbers and in words, the words govern.

12.0 BID WITHDRAWAL

A bidder must notify GUC in writing of its request to withdraw a bid within seventy-two (72) hours after the bid opening, not including Saturdays, Sundays, or holidays. In order to justify withdrawal, the bidder must demonstrate that a substantial error exists and that the bid was submitted in good faith.

13.0 MINORITY BUSINESS PARTICIPATION PROGRAM

GUC has adopted an Affirmative Action and Minority and Women Business Enterprise Plan (M/WBE) Program. Firms submitting a proposal are attesting that they also have taken affirmative action to ensure equality of opportunity in all aspects of employment, and to utilize M/WBE suppliers of materials and/or labor.

14.0 QUANTITIES

Quantities specified are only estimates of GUC's requirements. GUC reserves the right to purchase more or less than the stated quantities at prices indicated in the submitted Proposal Form based on our actual needs.

15.0 DELIVERY

Shipments will be made to GUC only upon releases from a purchase order issued by GUC in accordance with its current needs.

Time is of the essence with respect to all deliveries under this Agreement.

Delivery of all equipment, materials, or supplies shall be made Free on Board (FOB) as specified in Section P-01015 of the attached project manual. The agreed price for such equipment, materials, or supplies shall include all costs of delivery and ownership, and risks of loss shall not be transferred from Provider to GUC until express written acceptance of delivery and inspection by GUC. Delivery hours are between 8:00 AM and 4:30 PM Monday-Friday only. **GUC's purchase order number is to be shown on the packing slip or any related documents.** GUC reserves the right to refuse or return any delivery with no purchase order number or which is damaged. GUC will not be charged a restocking fee for any delivery which is refused or returned.

16.0 DELIVERY TIME

Delivery time is to be stated by the bidder and will be a factor in the evaluation of bids.

17.0 CONTRACT PERIOD

NA

18.0 MANUFACTURER

Bidder is to specify the manufacturer of items being quoted.

19.0 CONTACT INFORMATION AND INQUIRIES

Questions regarding this bid request should be directed to Cleve Haddock, CLGPO, Procurement Coordinator, Finance Department at (252) 551-1533, haddocgc@guc.com.

All inquiries or requests for information shall be received by January 29th, 2019 at close of business. Questions received after this time may not be considered. Greenville Utilities Commission will not be responsible for or bound by any oral instructions made by an employee(s) of GUC regarding this request for proposal.

20.0 TERMS AND CONDITIONS

The attached Terms and Conditions apply to all purchases made by Greenville Utilities Commission (GUC) and must be considered as part of the bid proposal.

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SECTION II

GREENVILLE UTILITIES COMMISSION

**SPECIFICATIONS FOR TWO WALL-MOUNTED CHANNEL GRINDERS AND ALL
ASSOCIATED APPURTENANCES, DESIGN SERVICES, SHOP DRAWINGS, OPERATIONS
AND MAINTENANCE MANUALS, AND FIELD SERVICES AS SPECIFIED HEREIN**

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PROJECT MANUAL

**GREENVILLE UTILITIES COMMISSION
GREENVILLE, NORTH CAROLINA**

**REGIONAL PUMP STATION IMPROVEMENTS
GRINDER PROCUREMENT**



2018.11.16 15:51:35-05'00'

November 2018

B&V Project No. 199509

**BLACK & VEATCH
International Company
Business License F-0794
11000 Regency Parkway, Suite 410
Cary, North Carolina 27518**

GREENVILLE UTILITIES COMMISSION
REGIONAL PUMP STATION IMPROVEMENTS
GRINDER PROCUREMENT
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Section P-01015

PROJECT REQUIREMENTS

1. GENERAL DESCRIPTION OF GOODS AND SPECIAL SERVICES. The Goods and Special Services to be performed under these Contract Documents are generally described as follows:

Furnish and deliver two wall-mounted channel grinders and all associated appurtenances in accordance with the Contract Documents to Green Mill Run and Fork Swamp Regional Pump Stations. Provide design services consisting of system design, shop drawings, operations and maintenance manuals. Provide field services for installation, testing, startup, and training as specified herein.

The Project for which the Goods and Special Services under these Contract Documents may be the whole or only a part is generally described as follows:

Regional Pump Station Improvements – Grinder Installation

2. CONSTRUCTION CONTRACTS. Installation work related to this Contract at a construction site performed by construction contractors under separate contracts includes the following:

2.01. Regional Pump Station Improvements – Grinder Installation. This project will include the installation of the wall-mounted channel grinders, associated electrical, instrumentation, and structural modifications.

3. SHIPPING AND HANDLING. Seller shall ship the Goods to the Point of Destination in accordance with the Product Delivery Requirements section. Goods shall be unloaded and stored at the Point of Destination in accordance with Product Handling and Storage Requirements section.

Seller shall keep Owner and Engineer informed of all shipping dates. Seller shall provide Owner and Engineer at least 10 days notice of any anticipated shipping and delivery dates. Seller shall require the carrier responsible for transporting the Goods to provide Owner and Engineer not less than 24 hours notice of the anticipated hours of delivery.

4. POINT OF DESTINATION. Seller shall deliver the Goods to the appropriate site as designated in the Wall-Mounted Channel Grinders section at the following addresses:

Green Mill Run Regional Pump Station
430 West Arlington Blvd
Greenville, NC 27834

Fork Swamp Regional Pump Station
4698 Corey Road
Winterville, NC 28590

5. TIME OF COMPLETION. Seller agrees that the furnishing of Goods and Special Services will be completed in accordance with the following schedule:

<u>Milestone</u>	<u>Description</u>	<u>Completed on, or Before</u>
Shop Drawings	Initial submittal of complete Shop Drawings	6 weeks after Seller's Notice to Proceed
Delivery	Goods delivered to Point of Destination	12 weeks after Engineer's acceptance of Procurement Contract Shop Drawings
Project Completion	Successful completion of performance testing	2 weeks after Installation Contractor has completed installation

6. WARRANTY. Seller shall provide manufacturer's standard warranty to guarantee the Goods to be free from defects in workmanship, design and/or materials for a period of one (1) year from Project Completion or two (2) years from Delivery, whichever is earlier. Seller shall repair or replace without charge to the Owner any part of equipment which is defective or showing undue wear within the guarantee period, or replace the equipment with new equipment if the mechanical performance is unsatisfactory; furnishing all parts, materials, labor, etc., necessary to return the equipment to its specified performance level.

7. REFERENCE STANDARDS. Reference to standards, specifications, manuals, or codes of any technical society, organization, or association, or to the laws or regulations of any governmental authority, whether such reference be specific or by implication, shall mean the latest standard specification, manual, code, or laws or regulations in effect on the effective date of the Contract or Agreement, except as may be otherwise specifically stated in the Contract Documents. However, no provision of any referenced standard, specification, manual, or code, or any instruction of a Seller, shall be effective to change the duties or responsibilities of Owner, Seller, or Engineer, or any of their subcontractors, consultants, agents, or employees from those set forth in the

Contract Documents, nor shall any such provision or instruction be effective to assign to Owner, Engineer, or any agents, or employees, any duty or authority to supervise or direct the performance of the Goods and Special Services or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

End of Section

Section P-01018

DRAWINGS

1. SCOPE. This section lists the Drawings which cover the Goods and Special Services.

2. REFERENCE DRAWINGS. Each sheet has the following general title:

Greenville Utilities Commission
Regional Pump Station Improvements
Grinder Installation

The following Drawings are provided for reference to illustrate the general layout and location of the Goods and Special Services to be furnished by Seller and installed by the Installation Contractor:

Sheet Number	Title
M-10-101	Mechanical – Green Mill Run Regional Pump Station – Plans
M-10-102	Mechanical – Green Mill Run Regional Pump Station – Section
M-20-101	Mechanical – Fork Swamp Regional Pump Station – Plans
M-20-102	Mechanical – Fork Swamp Regional Pump Station – Plan & Section
E-10-101	Electrical – Green Mill Run Regional Pump Station – Plans
E-20-101	Electrical – Fork Swamp Regional Pump Station – Plans

End of Section



DRAWINGS FOR REFERENCE ONLY - NOT FOR CONSTRUCTION

NOTES:

1. CONTRACTOR SHALL INSTALL WALL-MOUNTED CHANNEL GRINDER EQUIPMENT INCLUDING VERTICALLY MOUNTED DRIVE UNIT, CONTROL PANEL, ANCHOR BOLTS, CUSTOM WALL FRAME, GUIDE RAILS, SUPPORT BASE, WALL MOUNTING HARDWARE, AND ALL OTHER APPURTENANCES FURNISHED UNDER GRINDER PROCUREMENT CONTRACT. REFER TO GRINDER PROCUREMENT CONTRACT INCLUDED IN APPENDIX A OF THE PROJECT MANUAL.

DESIGNED: KBP, AC
DETAILED: TJF
CHECKED: AT
APPROVED: MBS
DATE: 11/14/2018

0 1/2 1

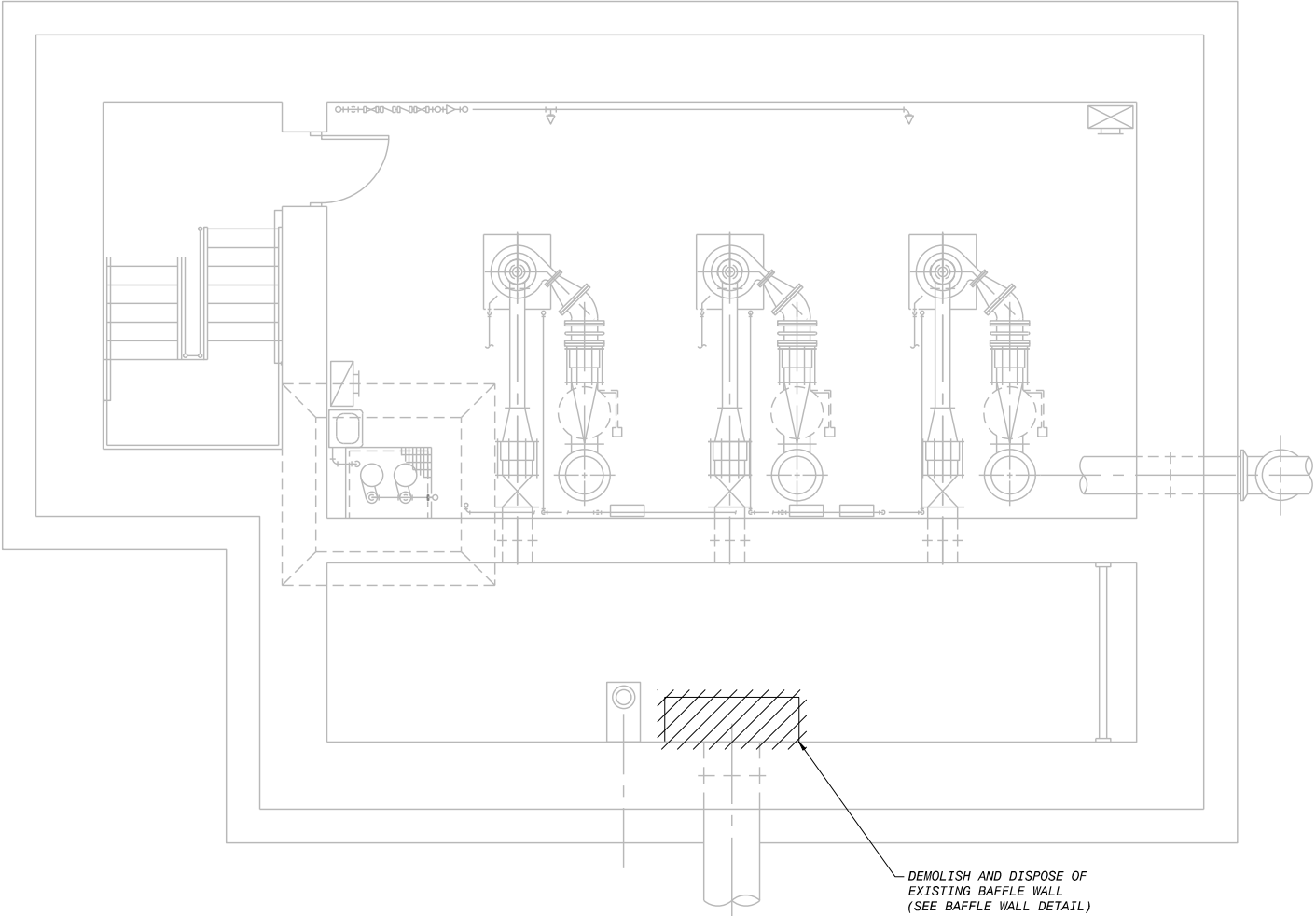
IF THIS BAR DOES NOT
MEASURE 1" THEN DRAWING IS
NOT TO FULL SCALE

PROJECT NO.
199509

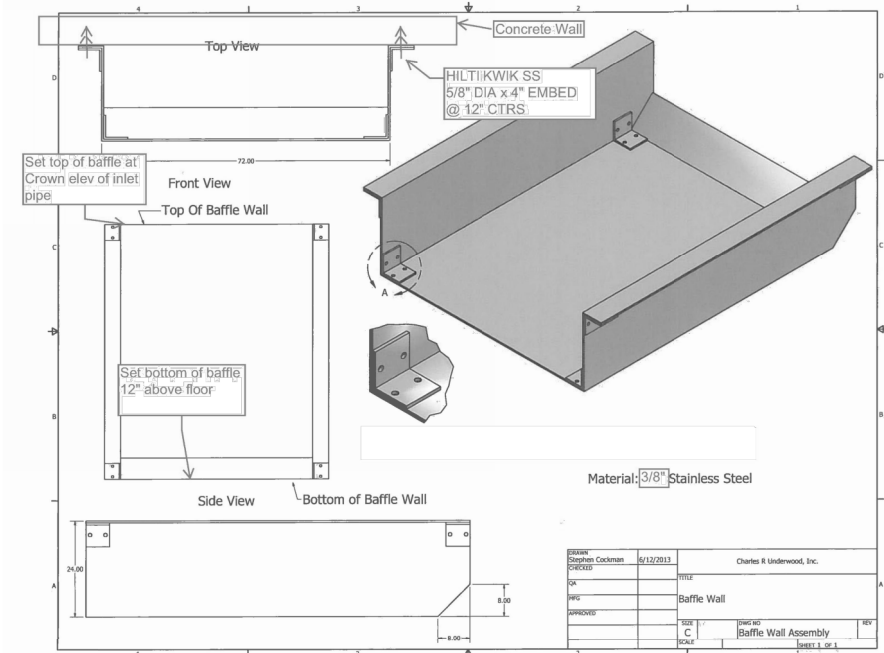
M-10-102
SHEET
7 OF 14

PLOTTED - 11/15/2018 10:46:15 AM SAVED - CHA02894, 11/15/2018 11:00:00 AM
 50,3000 - Mechanical Drawings

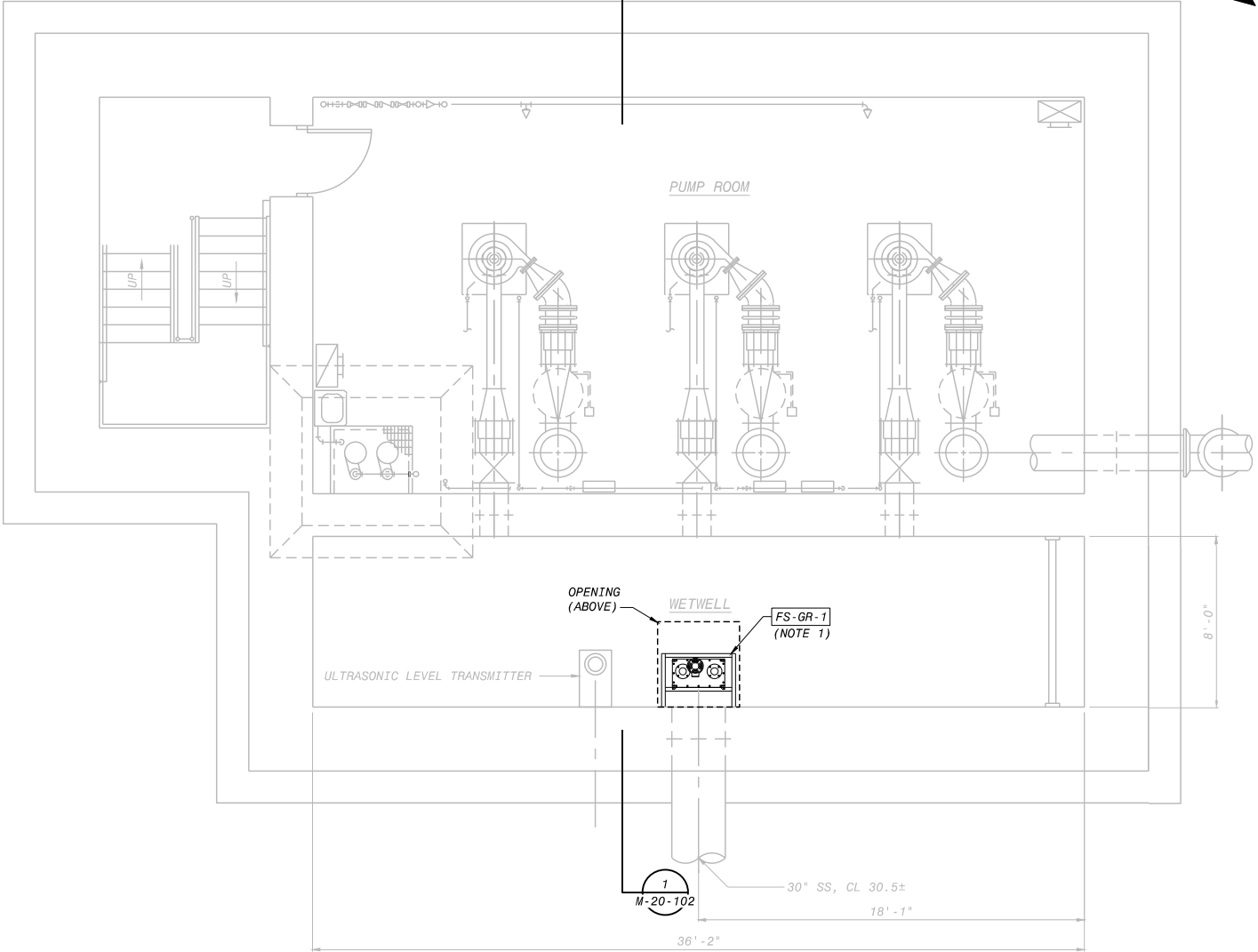
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DEMOLITION PLAN
 1/4" = 1'-0"



EXISTING BAFFLE WALL ASSEMBLY
 NTS

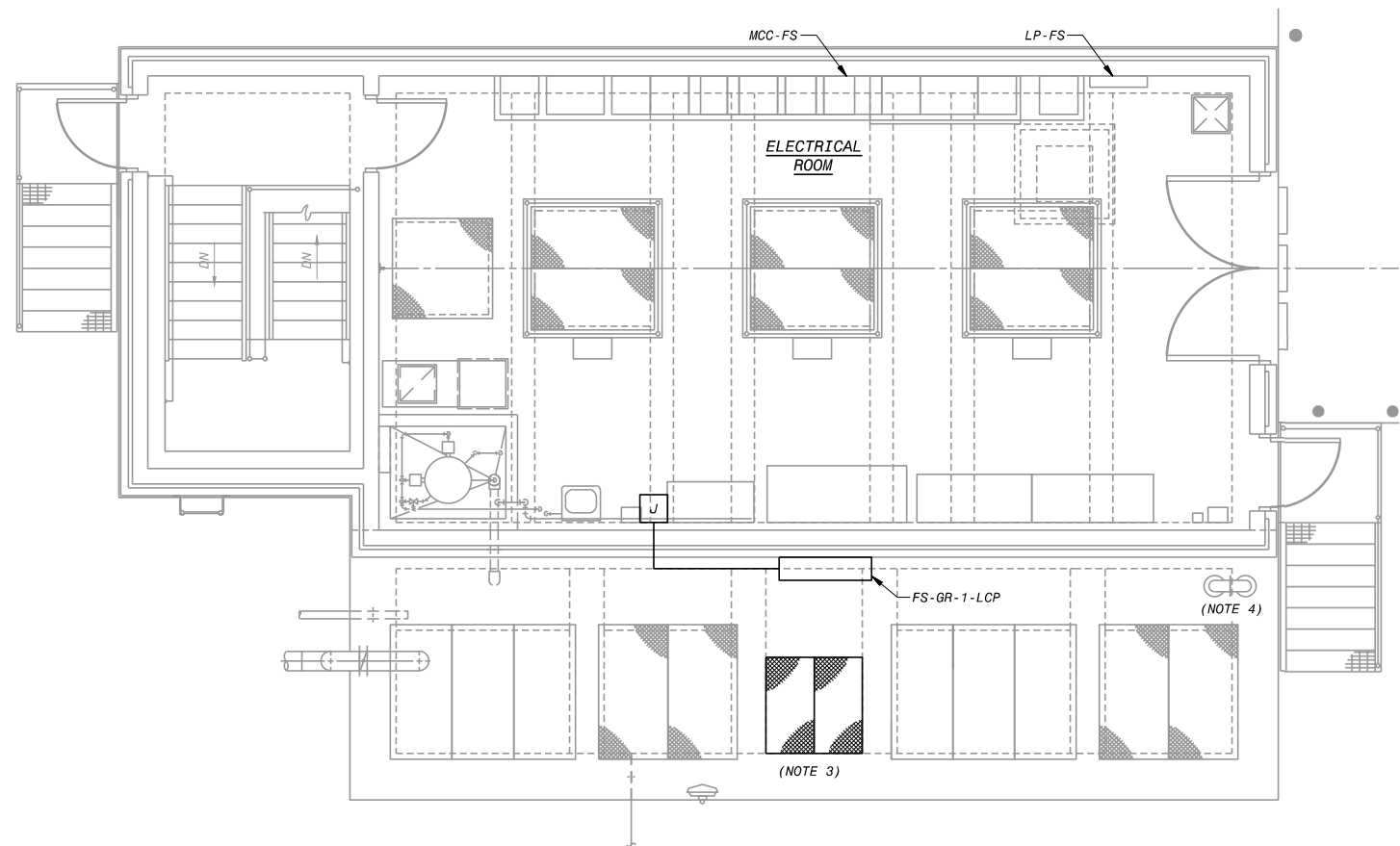
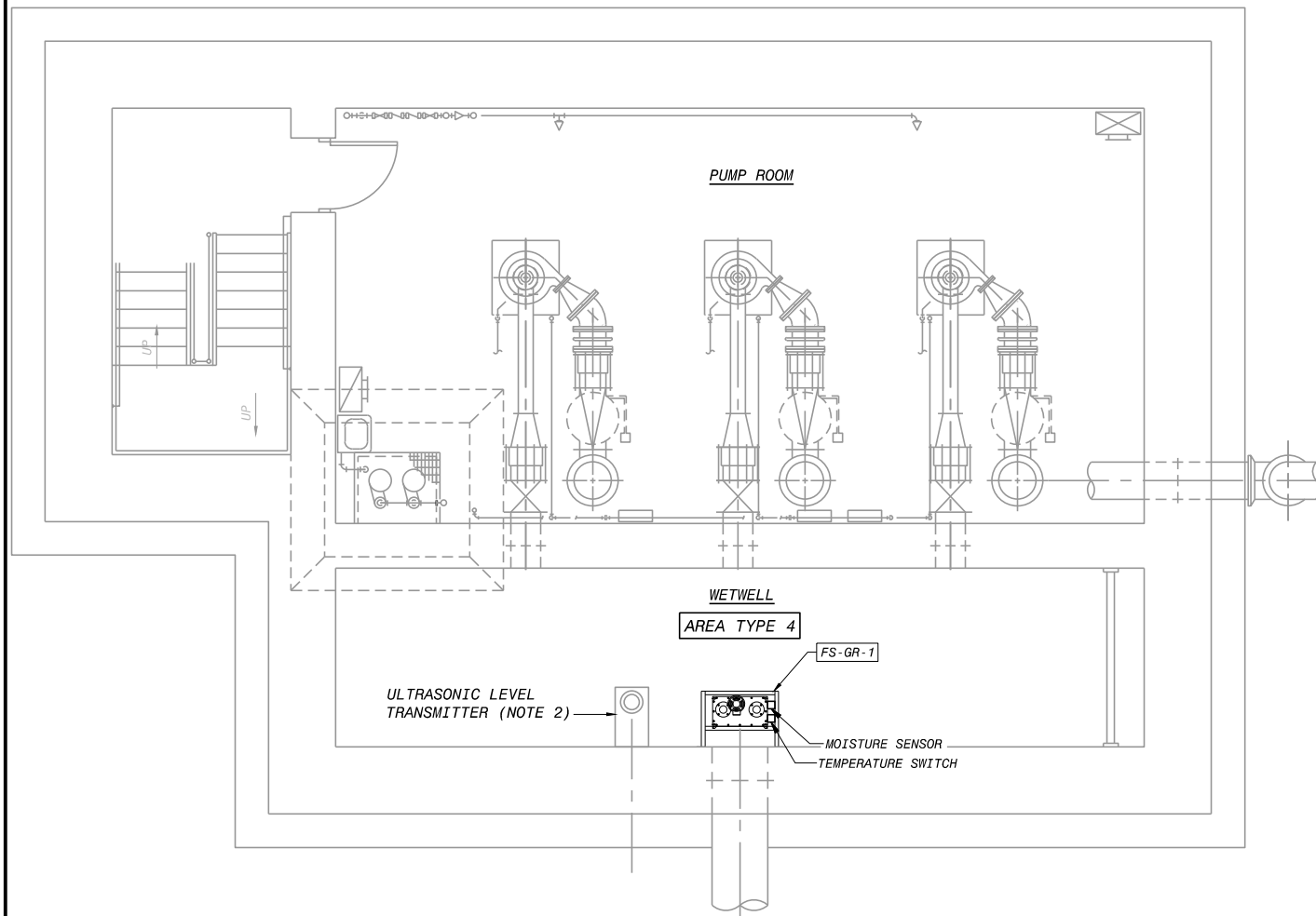


SECTIONAL PLAN
 1/4" = 1'-0"

NOTES:

1. CONTRACTOR SHALL INSTALL WALL-MOUNTED CHANNEL GRINDER EQUIPMENT INCLUDING VERTICALLY MOUNTED DRIVE UNIT, CONTROL PANEL, ANCHOR BOLTS, CUSTOM WALL FRAME, GUIDE RAILS, SUPPORT BASE, WALL MOUNTING HARDWARE, AND ALL OTHER APPURTENANCES FURNISHED UNDER GRINDER PROCUREMENT CONTRACT. REFER TO GRINDER PROCUREMENT CONTRACT INCLUDED IN APPENDIX A OF THE PROJECT MANUAL.

<div><div><div></div><div>BLACK & VEATCH</div></div><div>Black & Veatch International Company 9000 Regency Parkway, Suite 200 Cary, North Carolina 27516</div></div>		<div>GREENVILLE UTILITIES COMMISSION REGIONAL PUMP STATION IMPROVEMENTS GRINDER INSTALLATION</div>		<div>MECHANICAL FORK SWAMP REGIONAL PUMP STATION PLANS</div>		NO. BY	
						CHK APPR	
REVISIONS AND RECORD OF USE		DATE					



- NOTES:

GREENVILLE UTILITIES COMMISSION
REGIONAL PUMP STATION IMPROVEMENTS
GRINDER INSTALLATION

BLACK & VEATCH®

DESIGNED: CCM


DETAILED: AMJ

CHECKED: _____

APPROVED: _____

DATE: 11/12/2018

0 1/2 1



IF THIS BAR DOES NOT
MEASURE 1" THEN DRAWING IS
NOT TO FULL SCALE

PROJECT NO.
199509

E-20-101
SHEET
13 OF 14

REVISIONS AND RECORD OF USE

DATE _____

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FD7000
D9000
PLOTTED - JON79288, 11/16/2018 10:54:24 - ACH92894, 11/15/2018 3:30:23
50.3060 - Electrical Diagrams Drawings

DRAWINGS FOR REFERENCE ONLY - NOT FOR CONSTRUCTION

Section P-01300

SUBMITTALS PROCEDURES

1. SHOP DRAWINGS AND ENGINEERING DATA.

1.01. General. Shop Drawings and engineering data (submittals) covering all equipment and all fabricated components and materials which will become a permanent part of the Goods and Special Services under this Contract shall be submitted to Engineer for review. Submittals shall verify compliance with the Contract Documents and shall include drawings and descriptive information in sufficient detail to show the kind, size, arrangement, and the operation of component materials and devices; the external connections, anchorages, and supports required; the performance characteristics; and dimensions needed for installation and correlation with other materials and equipment.

Each submittal shall cover items from only one section of the specification unless the item consists of components from several sources. Seller shall submit a complete initial submittal including all components. When an item consists of components from several sources, Seller's initial submittal shall be complete including all components.

All submittals, regardless of origin, shall be approved by Seller and clearly identified with the name and number of this Contract, Seller's name, and references to applicable specification paragraphs and Drawings. Each copy of all submittals, regardless of origin, shall be stamped or affixed with an approval statement of Seller. Each submittal shall indicate the intended use of the item in the Goods and Special Services. When catalog pages are submitted, applicable items shall be clearly identified and inapplicable data crossed out. The current revision, issue number, and date shall be indicated on all drawings and other descriptive data.

Seller shall be solely responsible for the completeness of each submittal. Seller's stamp or affixed approval statement of a submittal, per Figure P-01300-F1, is a representation to Owner and Engineer that Seller accepts sole responsibility for determining and verifying all quantities, dimensions, field construction criteria, materials, catalog numbers, and similar data, and that Seller has reviewed and coordinated each submittal with the requirements of the Goods and Special Services and the Contract Documents.

All deviations from the Contract Documents shall be identified as deviations on each submittal and shall be tabulated in Seller's letter of transmittal using Figure P-01300-F2. Such submittals shall, as pertinent to the deviation, indicate essential details of all changes proposed by Seller (including modifications to

other facilities that may be a result of the deviation) and all required piping and wiring diagrams.

Drawings and the necessary data shall be submitted electronically to Engineer as specified below. Submittal documents shall be in black and white unless color is required for the review of the submittal. All electronic files shall be in Portable Document Format (PDF) as generated by Adobe Acrobat Professional Version 9.0 or higher. The PDF file(s) shall be fully indexed using the Table of Contents, searchable with thumbnails generated. PDF images must be at a readable resolution. For most documents, they should be scanned or generated at 300 dots per inch (dpi). Optical Character Recognition (OCR) capture must be performed on these images so that text can be searched, selected and copied from the generated PDF file. The PDF documents shall have a bookmark created in the navigation frame for each major entry ("Section" or "Chapter") in the Table of Contents. Thumbnails shall be generated for each page or graphic in the PDF file.

The opening view for each PDF document shall be as follows:

Initial View: Bookmarks and Page

Magnification: Fit In Window

The file shall open to the Seller's transmittal letter, with bookmarks to the left. The first bookmark shall be linked to the Table of Contents.

PDF document properties shall include the submittal number for the document title and the Seller's name for the author.

Electronic submittal file sizes shall be limited to 10 MB. When multiple files are required for a submittal the least number of files possible shall be created.

The Seller shall post submittals and retrieve the Engineer's submittal review comments through the Engineer's project website accessible through the Internet. Instruction on procedures for posting and retrieving submittals will be provided after award of the Contract.

Facsimiles (fax) will not be acceptable. Engineer will not accept submittals from anyone but Seller. Submittals shall be consecutively numbered in direct sequence of submittal and without division by subcontracts or trades.

1.02. Engineer's Review of Submittals. Engineer's review of submittals covers only general conformity to the Drawings and Specifications, external connections, and dimensions that affect the layout; it does not indicate thorough review of all dimensions, quantities, and details of the material, equipment, device, or item

covered. Engineer's review shall not relieve Seller of sole responsibility for errors, omissions, or deviations in the drawings and data, nor of Seller's sole responsibility for compliance with the Contract Documents.

Engineer's submittal review period shall be 21 consecutive calendar days and shall commence on the first calendar day following receipt of the submittal or resubmittal in Engineer's office.

When the drawings and data are returned with review status "NOT ACCEPTABLE" or "RETURNED FOR CORRECTION", the corrections shall be made as instructed by Engineer. The corrected drawings and data shall be resubmitted through the project website. Resubmittals by facsimile or e-mail will not be accepted. When the drawings and data are returned with review status "EXCEPTIONS NOTED", "NO EXCEPTIONS NOTED", or "RECORD COPY", no additional copies need be furnished unless specifically requested by Engineer.

1.03. Resubmittal of Drawings and Data. Seller shall accept full responsibility for the completeness of each resubmittal. Seller shall verify that all corrected data and additional information previously requested by Engineer are provided on the resubmittal.

When corrected copies are resubmitted, Seller shall direct specific attention to all revisions in writing and shall list separately any revisions made other than those called for by Engineer on previous submittals. Requirements specified for initial submittals shall also apply to resubmittals. Resubmittals shall bear the number of the first submittal followed by a letter (A, B, etc.) or a unique identification that indicates the initial submittal and correct sequence of each resubmittal.

If more than one resubmittal is required because of failure of Seller to provide all previously requested corrected data or additional information, Seller shall reimburse Owner for the charges of Engineer for review of the additional resubmittals. This does not include initial submittal data such as shop tests and field tests that are submitted after initial submittal.

Resubmittals shall be made within 30 days of the date of the letter returning the material to be modified or corrected, unless within 14 days Seller submits an acceptable request for an extension of the stipulated time period, listing the reasons the resubmittal cannot be completed within that time.

The need for more than one resubmittal, or any other delay in obtaining Engineer's review of submittals, will not entitle Seller to extension of the Contract Times unless delay of the Work is the direct result of a change in the Work authorized by a Change Order or failure of Engineer to review and return any submittal to Seller within the specified review period.

1.04. Color Selection. Seller shall submit samples of colors and finishes for all accepted products before Engineer will coordinate the selection of colors and finishes with Owner. Engineer will prepare a schedule of finishes that include the colors and finishes selected for both manufactured products and for surfaces to be field painted or finished and will furnish this schedule to Seller within 60 days after the date of acceptance of the last color or finish sample.

2. OPERATION AND MAINTENANCE DATA AND MANUALS. Adequate operation and maintenance information shall be supplied for all equipment requiring maintenance or other attention. The equipment supplier shall prepare a project specific operation and maintenance manual for each type of equipment indicated in the individual equipment sections or the equipment schedule.

Parts lists and operating and maintenance instructions shall be furnished for other equipment not listed in the individual equipment sections or the equipment schedule.

Operation and maintenance manuals shall include the following:

- a. Equipment function, normal operating characteristics, and limiting conditions.
- b. Assembly, installation, alignment, adjustment, and checking instructions.
- c. Operating instructions for startup, routine and normal operation, regulation and control, shutdown, and emergency conditions.
- d. Lubrication and maintenance instructions.
- e. Guide to troubleshooting.
- f. Parts lists and predicted life of parts subject to wear.
- g. Outline, cross section, and assembly drawings; engineering data; and wiring diagrams.
- h. Test data and performance curves, where applicable.

The operation and maintenance manuals shall be in addition to any instructions or parts lists packed with or attached to the equipment when delivered, or which may be required by Seller.

Three hard copies of each manual shall be submitted to Engineer prior to the date of shipment of the equipment. When the O&M manuals are returned with the review status "RETURNED FOR CORRECTION", the corrections shall be made as instructed by the Engineer, and two copies of the corrected portion(s) and one complete corrected copy of the O&M manual returned to the Engineer. After review by Engineer is complete four hard copies and one electronic copy of each operation and maintenance manual shall be prepared and delivered to Engineer not later than 30 days prior to placing the equipment in operation.

2.01. Hard Copy Operation and Maintenance Manuals. Hard copies submitted for review shall be temporarily bound in heavy paper covers bearing suitable identification. All manuals and other data shall be printed on heavy, first quality 8-1/2 x 11 inch paper, with standard three-hole punching. Drawings and diagrams shall be reduced to 8-1/2 x 11 inches or 11 x 17 inches. Where reduction is not practicable, larger drawings shall be folded separately and placed in envelopes, which are bound into the manuals. Each envelope shall be suitably identified on the outside. Each volume containing data for three or more items of equipment shall include a table of contents and index tabs. The final hard copy of each manual shall be prepared and delivered in substantial, permanent, three-ring or three-post binders with a table of contents and suitable index tabs.

2.02. Electronic Operation and Maintenance Manuals. Electronic manuals shall be in Adobe Acrobat's Portable Document Format (PDF) and shall be prepared at a resolution between 300 and 600 dots per inch (dpi), depending on document type. Optical Character Recognition (OCR) capture shall be performed on these documents. OCR settings shall be performed with the "original image with hidden text" option in Adobe Acrobat Exchange.

File size shall be limited to 10 MB. When multiple files are required the least number of files possible shall be created. File names shall be in the format O&M YYYYZ-V.pdf, where YYY is a three digit O&M manual submittal number, e.g. 001, Z is the letter signifying a resubmittal, A, B, C, etc, and V is a number used only when more than one 10 MB file is required for an O&M manual.

Documents prepared in PDF format shall be processed as follows:

1. Pages shall be searchable (processed for optical character recognition) and indexed when multiple files are required.
2. Pages shall be rotated for viewing in proper orientation.
3. A bookmark shall be provided in the navigation frame for each entry in the Table of Contents.
4. Embedded thumbnails shall be generated for each completed PDF file.
5. The opening view for PDF files shall be as follows:
Initial View: Bookmarks and Page

Page Number: Title Page (usually Page 1)

Magnification: Set to Fit in Window

Page: Single Page

6. Where the bookmark structure is longer than one page the bookmarks shall be collapsed to show the chapter headings only.
7. When multiple files are required the first file of the series (the parent file) shall list every major topic in the Table of Contents. The parent file shall also include minor headings bookmarked based on the Table of Contents. Major headings, whose content is contained in subsequent files (children) shall be linked to be called from the parent to the specific location in the child file. The child file shall contain bookmark entries for both major and minor headings contained in the child file. The first bookmark of any child file shall link back to the parent file and shall read as follows "Return to the *Equipment Name* Table of Contents", e.g. Return to the Polymer Feed System Table of Contents.
8. Drawings shall be bookmarked individually.
9. Files shall be delivered without security settings to permit editing, insertion and deletion of material to update the manual provided by the manufacturer.

2.03. Labeling. As a minimum, the following information shall be included on all final O&M manual materials, including CD-ROM disks, jewel cases, and hard copy manuals:

Equipment name and/or O&M title spelled out in complete words.

Project Name.

City Project/Contract Number.

Specification Section Number. Example: "Section 15500"

Manufacturer's name.

File Name and Date.

For example:

Backwash Pump Operation and Maintenance Manual

Somewhere Plant Expansion

Project/Contract No. _____

Specification Section 11110

Manufacturer

OM11110-001.pdf, 5/05/07

End of Section

SUBMITTAL No. _____

SECTION _____

Do not combine multiple sections together
unless required by specifications.

(*SELLER's Letterhead*)

SUBMITTAL IDENTIFICATION & SELLER'S APPROVAL STATEMENT

DATE: _____ COPIES _____ DRAWING SHEET NO. _____

Description submittal contents: _____

Location: _____

Manufacturer _____

REMARKS: _____

SELLER'S APPROVAL

(*SELLER*) has reviewed and coordinated the submitted documentation and verifies that the equipment and material meet the requirements of the Goods and Special Services and the Contract Documents. We accept sole responsibility for determining and verifying all quantities, dimensions, field construction criteria, materials, catalog numbers, and similar data contained in the submittal as required by the Contract Documents.

Deviations: ☐ None ☐ Yes (See attached Figure P-01300-2 for written description)

Approved By: _____ Date: _____

This approval does not release CONSTRUCTION CONTRACTOR from the contractual responsibilities.

Black & Veatch

Project No. _____ Phase _____

Contract No. _____

Project Description: _____

SECTION _____

SUBMITTAL IDENTIFICATION & SELLER'S APPROVAL STATEMENT

DEVIATIONS

This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There is no handwriting or other markings on the paper.

FIGURE P-01300-F2

Section P-01610

PRODUCT REQUIREMENTS

1. SCOPE. When an equipment specification section in this Contract references this section, the equipment shall conform to the general stipulations set forth in this section, except as otherwise specified in other sections.
2. COORDINATION. Seller shall coordinate all details of the equipment with other related parts of the Goods and Special Services, including verification that all structures, piping, wiring, and equipment components are compatible.
3. MANUFACTURER'S EXPERIENCE. Unless specifically named in the Specifications or otherwise specified, a manufacturer shall have furnished equipment of the type and size specified which has been in successful operation for not less than the past 5 years.
4. WORKMANSHIP AND MATERIALS. Seller shall guarantee all equipment against faulty or inadequate design, improper assembly or erection, defective workmanship or materials, and leakage, breakage, or other failure. Materials shall be suitable for service conditions.

All equipment shall be designed, fabricated, and assembled in accordance with recognized and acceptable engineering and shop practice. Individual parts shall be manufactured to standard sizes and thicknesses so that repair parts, furnished at any time, can be installed in the field. Like parts of duplicate units shall be interchangeable. Equipment shall not have been in service at any time prior to delivery, except as required by tests.

Except where otherwise specified, structural and miscellaneous fabricated steel used in equipment shall conform to AISC standards. All structural members shall be designed for shock or vibratory loads. Unless otherwise specified, all steel which will be submerged, all or in part, during normal operation of the equipment shall be at least 1/4 inch thick. When dissimilar metal components are used, consideration shall be given to prevention of galvanic corrosion.

5. LUBRICATION. Equipment shall be adequately lubricated by systems which require attention no more frequently than weekly during continuous operation. Lubrication systems shall not require attention during startup or shutdown and shall not waste lubricants.

Lubricants of the types recommended by the equipment manufacturer shall be provided in sufficient quantities to fill all lubricant reservoirs and to replace all consumption during testing, startup, and operation prior to acceptance of equipment by Owner. Lubricants for equipment where the lubricants may come

in contact with water before or during a potable water treatment process or with potable water shall be food grade lubricants. This includes lubricants for equipment not normally in contact with water, but where accidental leakage of the lubricants may contaminate the water.

Lubrication facilities shall be convenient and accessible. Oil drains and fill openings shall be easily accessible from the normal operating area or platform. Drains shall allow for convenient collection of waste oil in containers from the normal operating area or platform without removing the unit from its normal installed position.

6. ELECTRIC MOTORS. Unless otherwise specified, motors furnished with equipment shall meet the requirements specified in specific equipment sections.

7. DRIVE UNITS. The nominal input horsepower rating of each gear or speed reducer shall be at least equal to the nameplate horsepower of the drive motor. Drive units shall be designed for 24 hour continuous service.

7.01. Gearmotors. The use of gearmotors sharing an integral housing or cutgears into the motor output shaft, or that require removal of lubricant from the gear reducer to change out the motor will not be acceptable.

7.02. Gear Reducers. Each gear reducer shall be a totally enclosed unit with oil or grease lubricated, rolling element, antifriction bearings throughout.

Unless superseded by individual specification requirements each helical, spiral bevel, combination bevel-helical, and worm gear reducers shall have a service factor of at least 1.50 based on the nameplate horsepower of the drive motor. Cycloidal gear reducers shall have a service factor of at least 2.0 based on the nameplate horsepower of the drive motor. Shaft-mounted and flange-mounted gear reducers shall be rated AGMA Class III. Helical gear reducers shall have a gear strength rating to catalog rating of 1.5. Each gear reducer shall be designed and manufactured in compliance with applicable most current AGMA standards, except the L₁₀ bearing life shall be 200,000 hours.

The thermal horsepower rating of each unit shall equal or exceed the nameplate horsepower of the drive motor. During continuous operation, the maximum sump oil temperature shall not rise more than 100°F above the ambient air temperature in the vicinity of the unit and shall not exceed 200°F.

Each grease lubricated bearing shall be installed in a bearing housing designed to facilitate periodic regreasing of the bearing by means of a manually operated grease gun. Each bearing housing shall be designed to evenly distribute new grease, to properly dispose of old grease, and to prevent overgreasing of the bearing. The use of permanently sealed, grease lubricated bearings will not be

acceptable in large sized reducers. In small reducers, similar to basin equipment, permanently sealed grease lubricated bearings rated L₁₀ 200,000 hour life may be provided at the manufacturer's option. An internal or external oil pump and appurtenances shall be provided if required to properly lubricate oil lubricated bearings. A dipstick or a sight glass arranged to permit visual inspection of lubricant level shall be provided on each unit.

Gear reducers which require the removal of parts or the periodic disassembly of the unit for cleaning and manual regreasing of bearings will not be acceptable.

Certification shall be furnished by the gear reducer manufacturer indicating that the intended application of each unit has been reviewed in detail by the manufacturer and that the unit provided is fully compatible with the conditions of installation and service.

7.03. Adjustable Speed Drives. Not used.

7.04. V-Belt Drives. Not used.

8. ANCHOR BOLTS. Equipment suppliers shall design suitable anchor bolts for each item of equipment. Templates or setting drawings shall be delivered sufficiently early to permit setting the anchor bolts when the structural concrete is placed. Anchor bolts shall be at least 3/4 inch in diameter.

Unless otherwise indicated or specified, anchor bolts for items of equipment mounted on baseplates shall be long enough to permit 1-1/2 inches of grout beneath the baseplate and to provide adequate anchorage into structural concrete.

Anchor bolts in accordance with the design of the supplier shall be furnished by the Installation Contractor.

9. SPECIAL TOOLS AND ACCESSORIES. Equipment requiring periodic repair and adjustment shall be furnished complete with all special tools, instruments, and accessories required for proper maintenance. Equipment requiring special devices for lifting or handling shall be furnished complete with those devices.

10. SHOP PAINTING. All iron and steel surfaces of the equipment shall be protected with suitable protective coatings applied in the shop. Surfaces of the equipment that will be inaccessible after assembly shall be protected for the life of the equipment. Coatings shall be suitable for the environment where the equipment is installed. Exposed surfaces shall be finished, thoroughly cleaned, and filled as necessary to provide a smooth, uniform base for painting. Electric motors, speed reducers, starters, and other self-contained or enclosed components shall be shop primed or finished with an epoxy or polyurethane

enamel or universal type primer suitable for top coating in the field with a universal primer and aliphatic polyurethane system.

Surfaces to be coated after installation shall be prepared for painting as recommended by the paint manufacturer for the intended service, and then shop painted with one or more coats of a universal primer.

Machined, polished, and nonferrous surfaces which are not to be painted shall be coated with rust-preventive compound as recommended by the equipment manufacturer.

11. PREPARATION FOR SHIPMENT. Equipment shall be prepared for shipment as specified in Product Delivery Requirements section.

12. STORAGE. Handling and storage of equipment shall be as specified in Product Storage and Handling Requirements section.

13. INSTALLATION AND OPERATION. Installation and operation shall be as specified in respective equipment sections and Startup Requirements section.

14. OBSERVATION OF PERFORMANCE TESTS. Where the Specifications require the presence of Engineer, initial tests shall be observed or witnessed by Engineer. Owner shall be reimbursed by Seller for all costs of subsequent visits by Engineer to witness or observe incomplete tests, retesting, or subsequent tests.

15. PROGRAMMING SOFTWARE. Programming software shall be provided for any equipment which includes a programmable logic controller (PLC) or other digital controller that is user-programmable. The software shall be suitable for loading and running on a laptop personal computer operating with a Windows-based operating system. A copy of the manufacturer's original operating logic program shall be provided for use in maintaining and troubleshooting the equipment. Where multiple pieces of equipment, from the same or different vendors, use the same programming software, only one copy of the software need be provided.

End of Section

Section P-01612

PRODUCT DELIVERY REQUIREMENTS

1. SCOPE. This section covers packaging and shipping of materials and equipment provided as Goods under this Contract.
2. PREPARATION FOR SHIPMENT. All equipment shall be suitably packaged by Seller to facilitate handling and to protect against damage during transit and storage. All equipment shall be boxed, crated, or otherwise completely enclosed and protected during shipment, handling, and storage. All spare parts shall be packaged for long-term storage with each spare part included with manufacturer's part number, part cost, and phone number. All equipment shall be protected from exposure to the elements and shall be kept dry at all times.

Painted and coated surfaces shall be protected against impact, abrasion, discoloration, and other damage. Painted and coated surfaces which are damaged prior to acceptance of equipment shall be repainted to the satisfaction of Engineer.

Grease and lubricating oil shall be applied to all bearings and similar items.

3. SHIPPING. Before shipping each item of equipment shall be tagged or marked by Seller as identified in the delivery schedule or on the Shop Drawings. Complete packing lists and bills of equipment shall be included with each shipment.

End of Section

Section P-01614

PRODUCT STORAGE AND HANDLING REQUIREMENTS

1. SCOPE. This section covers delivery, storage, and handling of materials and equipment.

2. DELIVERY. Seller shall bear the responsibility for delivery of equipment, spare parts, special tools, and materials to the Point of Destination and shall comply with the requirements specified herein and shall provide required information concerning the shipment and delivery of the Goods specified in this Contract. These requirements also apply to any subsuppliers making direct shipments to the Point of Destination.

Installation Contractor shall, either directly or through contractual arrangements with others, accept responsibility for the safe handling and protection of the equipment and materials furnished under this Contract before and after receipt at the Point of Destination. Acceptance of the equipment shall be made after it is installed, tested, placed in operation and found to comply with all the specified requirements.

All items shall be checked against packing lists immediately on delivery to the site for damage and for shortages. Damage and shortages shall be remedied with the minimum of delay.

Delivery of portions of the equipment in several individual shipments shall be subject to review of Engineer before shipment. When permitted, all such partial shipments shall be plainly marked to identify, to permit easy accumulation, and to facilitate eventual installation.

3. STORAGE. Upon delivery, all equipment and materials shall immediately be stored and protected by the Installation Contractor until installed.

Stacked items shall be suitably protected from damage by spacers or load distributing supports that are safely arranged. No metalwork (miscellaneous steel shapes and reinforcing steel) shall be stored directly on the ground. Masonry products shall be handled and stored in a manner to hold breakage, chipping, cracking, and spalling to a minimum. Cement, lime, and similar products shall be stored off the ground on pallets and shall be covered and kept completely dry at all times. Pipe, fittings, and valves may be stored out of doors, but must be placed on wooden blocking. PVC pipe, geomembranes, plastic liner, and other plastic materials shall be stored off the ground on pallets and protected from direct sunlight.

Pumps, motors, electrical equipment, and all equipment with antifriction or sleeve bearings shall be stored in weathertight structures maintained at a temperature above 60°F. Electrical equipment, controls, and insulation shall be protected against moisture and water damage. All space heaters furnished in equipment shall be connected and operated continuously.

Equipment having moving parts, such as gears, bearings, and seals, shall be stored fully lubricated with oil, grease, etc., unless otherwise instructed by the Seller. Seller's storage instructions shall be carefully followed.

When required by the Seller, moving parts shall be rotated a minimum of twice a month to ensure proper lubrication and to avoid metal to metal "welding". Upon installation of the equipment, Installation Contractor shall, at the discretion of Engineer, start the equipment at one-half load for an adequate period of time to ensure that the equipment does not deteriorate from lack of use.

When required by the Seller, lubricants shall be changed upon completion of installation and as frequently as required thereafter during the period between installation and acceptance. New lubricants shall be put into the equipment by Installation Contractor at the time of acceptance.

Equipment and materials shall not show any pitting, rust, decay, or other deleterious effects of storage when installed.

In addition to the protection specified for prolonged storage, the packaging of spare units and spare parts shall be for export packing and shall be suitable for long-term storage in a damp location. Each spare item shall be packed separately and shall be completely identified on the outside of the container.

4. HANDLING. Stored items shall be laid out to facilitate their retrieval for use by others. Care shall be taken when removing the equipment for use to ensure the precise piece of equipment is removed and that it is handled in a manner that does not damage the equipment.

During handling, carbon steel constructed material including chains, straps, and forks on lifting equipment shall not directly contact any equipment or material constructed of stainless steel. It shall be the Installation Contractor's responsibility to correct any carbon steel contamination of stainless steel.

End of Section

Section P-01615

EQUIPMENT AND VALVE IDENTIFICATION

PART 1 – GENERAL

1-1. SCOPE. This section covers the furnishing and installation of nameplates and tags for identification of equipment, valves, panels, and instruments.

1-2. GENERAL. Except as otherwise specified in equipment, valve, and instrumentation sections, nameplates and tags shall be as specified herein. Nameplates or tags shall be provided for all equipment, valves, operator interfaces, control and electrical panels, cabinets, instruments, and instrument racks that have been named and/or tagged in the Contract Documents.

1-3. SUBMITTALS. Drawings and data shall be submitted for each type of tag provided including materials, colors, sizes, letter sizes, and installation instructions.

PART 2 - PRODUCTS

2-1. EQUIPMENT NUMBER PLATES. Not used.

2-2. EQUIPMENT INFORMATION PLATES. Equipment shall be provided with engraved or stamped equipment information plates securely affixed with mechanical fasteners to the equipment in an accessible and visible location. Equipment information plates shall be in addition to the number plates specified. Equipment information plates shall indicate the manufacturer's name, address, product name, catalog number, serial number, capacity, operating and power characteristics, labels of tested compliances, and any other pertinent design data. Equipment information plates listing the distributing agent only will not be acceptable.

2-3. VALVE AND GATE TAGS. Not used.

2-4. PANEL NAMEPLATES. Nameplates shall be provided on the face of each panel and cabinet. Panel identification nameplates shall be mounted at the top of the panel shall include the panel descriptive name and tag number as indicated in the Wall-Mounted Channel Grinders section, in two or three lines of text. Lettering shall be ¾ inch high.

Nameplates for devices mounted on or in the panel shall be inscribed with the text as indicated in the Wall-Mounted Channel Grinders sections. Where

nameplate information is not indicated in the Contract Documents, inscriptions shall be in accordance with information in the supplier's Shop Drawings as guided by information in the relevant specification section. Panel device nameplates shall have engraved letters 3/16 inch high.

Nameplate material and size shall be as specified above for equipment number plates. Nameplates shall be secured to the panel with stainless steel panhead screws.

2-5. INSTRUMENT TAGS. Not used.

PART 3 – EXECUTION

Not used.

End of Section

Section P-01650

STARTUP REQUIREMENTS

1. SCOPE. This section includes the requirements for startup and testing all items of equipment and systems that form a part of this Contract and training of Owner's personnel. The purpose of this section is to define the requirements for Seller in bringing individual equipment, systems, and facilities online and for proving proper operation and performance of those Goods. Seller will be required to develop, submit, and maintain detailed plans, including designation of management and staff, for these activities as specified herein.

Seller shall work with Installation Contractor as required to provide the startup assistance, performance testing, and training as specified.

2. SELLER'S FIELD SERVICES REPRESENTATIVE. Seller shall provide a technically qualified field-service representative for the installation, startup, and testing of equipment furnished, as specified in the Contract Documents. Seller shall submit qualifications and experience records for all key personnel to be involved in startup activities.

Seller's field services representative shall be employed full-time in installation, startup, and testing of similar equipment and facilities and work directly for the manufacturer. The representative shall have conducted startup activities similar to those required herein on at least two other projects of similar complexity. Owner or Engineer shall have the right to reject the manufacturer's field services representative at any time, for immediate replacement by the manufacturer, if the accepted qualifications are not representative of the actual experience or abilities of the representative, as determined by Owner or Engineer.

3. PERFORMANCE TESTING. Performance testing shall be conducted in accordance with the Contract Documents. Successful completion of all specified performance testing including all reports shall be achieved prior to completion of installation work by the Installation Contractor.

Performance testing shall include the functional operation of each piece of equipment. All moving parts of equipment and machinery shall be tested and adjusted so that they move freely and function satisfactorily. Functional testing shall demonstrate correct operation of all hardwired interlocks and controls.

Once functional testing of individual pieces of equipment is completed, individual systems functional testing shall commence. Individual system functional testing shall include startup of the complete system of mechanical, electrical, and

instrumentation and control equipment as a functional process system. Field inspection prior to startup and other testing required to verify readiness for automatic operation of the individual system shall be completed before commencement of individual system functional testing.

Individual system functional testing shall include operation in manual and automatic modes, startup operation, and shutdown in normal and emergency modes. Individual systems shall be tested over their entire operating range and for sufficient time to demonstrate the intended functionality of each piece of equipment and the system. If any part of a system shows evidence of unsatisfactory or improper operation during the test period, correction or repairs shall be made and the functional testing shall be repeated until satisfactory results are obtained.

Functional testing of all process and pumping equipment and drive motors, including auxiliary equipment, shall be in accordance with the appropriate and approved test codes, such as those specified by the American Society of Mechanical Engineers, Hydraulic Institute Standards, and IEEE.

4. TRAINING

4.01. General Training Requirements. Training shall be provided for all equipment as specified and shall be conducted by qualified factory service personnel. General requirements for equipment training are listed in this section and all costs required thereof included in the Contract. Where specific training requirements are provided in the equipment sections, any specific training requirements provided in the equipment specification shall be met in addition to the general training requirements provided herein.

Qualified factory service personnel shall instruct the Owner's operating personnel in correct operation and maintenance procedures. The instruction shall demonstrate startup, operation, control, adjustment, troubleshooting, servicing, maintenance, and shutdown of each item of equipment. Such instruction shall be provided while the respective representative's equipment is fully operational. Onsite instruction shall be given by qualified persons who have been made familiar in advance with the equipment and systems in the plant. The Seller shall have submitted, and had accepted, the O&M Manuals in accordance with the Submittals Procedures section prior to commencement of training.

4.02. Operations and Maintenance Training. Operations training shall provide a complete overview of all equipment, testing, adjusting, operation, and maintenance procedures. Operations training shall take the form of classroom instruction and hands-on training and shall cover.

- a. Documentation in the final Operations and Maintenance Manuals.
- b. Equipment/system startup and shutdown procedures.
- c. System operation procedures and all modes of operations and safety precautions.
- d. Procedures for dealing with abnormal conditions and emergency situations for which there is a specified system response.
- e. Procedures for troubleshooting.
- f. Mechanical Maintenance

End of Section

Section P-11319

WALL-MOUNTED CHANNEL GRINDERS

PART 1 - GENERAL

1-1. SCOPE. This section covers two wall mounted channel grinders to be furnished by Seller for installation by the Installation Contractor in the wetwells of the Green Mill Run and Fork Swamp Regional Pump Stations (GMRPS and FSRPS). The channel grinders shall be provided with vertically mounted drive units, control panel, anchor bolts, custom wall frame with overflow bar racks, guide rails, support base, wall mounting hardware, and all other appurtenances specified or otherwise required for proper operation.

Each grinder unit, including motor and all integral controls to be located inside the wetwells, shall be rated and labelled for use in a Class 1, Division 1, Group D area in accordance with the NEC.

1-2. GENERAL. Equipment furnished and installed under this section shall be fabricated, assembled, erected, and placed in proper operating condition in full conformity with shop drawings, specifications, engineering data, instructions, and recommendations of the equipment manufacturer, unless exceptions are noted by the Engineer.

1-2.01. Acceptable Products. The channel grinders shall be JWC Environmental "Channel Monster Model CDD-3210-XDS2.0", Franklin Miller "TM14032D Duplex Titan Taskmaster", or equal.

1-2.02. Products Requirements. The Product Requirements section shall apply to all equipment furnished under this section. If requirements in this specification differ from those in the Product Requirements, the requirements specified herein shall take precedence.

1-2.03. Seismic Design Requirements. Not used.

1-2.04. Power Supply. Unless otherwise indicated, power supply to the equipment shall be 480 volts, 60 Hz, three phase.

1-2.05. Identification. Equipment specified herein shall be identified in accordance with the Equipment and Valve Identification section.

1-2.06. Anchor Bolts. All anchor bolts, nuts and washers shall be AISI Type 316 stainless steel. All anchor bolts to be attached to structural concrete shall be designed by the grinder manufacturer and provided by the Installation Contractor.

Anchor bolts shall be epoxy anchors and shall have a minimum diameter of 3/4 inch.

1-3. SUBMITTALS.

1-3.01. Drawings and Data. Complete assembly, foundation, and installation drawings, together with detailed specifications and data covering material used, drive unit, parts, devices, and other accessories forming a part of the equipment furnished, shall be submitted in accordance with the Submittals Procedures section. The data and specifications for each unit shall include, but shall not be limited to, the following:

Channel Grinders

Manufacturer.

Type and Model.

Rpm at rated condition.

Net weight of channel grinder with wall-mount frame, support base, and guide rails.

Net weight of channel grinder and drive

Base and anchor bolts details.

Type, size, and manufacturer of bearings.

Motors

Name of manufacturer.

Type and model.

Type, size, and manufacturer of bearings and lubrication.

Rated size of motor, hp and service factor.

Insulation class and temperature rise.

Full load rotative speed.

Net weight.

Efficiency at full, 3/4, and 1/2 load.

Full load current.

Locked rotor current.

Torque per horsepower.

Gear Reducers

Name of manufacturer.

Type and model.

Input horsepower rating.

Efficiency.

Gear ratio.

Net weight.

Gear box type, size, manufacturer, design calculations, torque ratings, input hp, duty classification, shaft diameters, coupling information, service factors, and mounting bracket information.

Controls

Panel arrangement and outline dimensions.
Panel component Bill of Materials and manufacturer's Data Sheets.
Interconnection and schematic diagram.

1-3.02. Operation and Maintenance Data and Manuals. Operation and maintenance manuals shall be supplied in accordance with the Submittals Procedures section. The operation and maintenance manuals shall be in addition to any instruction or parts lists packed with or attached to the equipment when delivered.

1-4. SPARE PARTS. The following spare parts and accessories shall be furnished in boxes with identifying labels and delivered to the vicinity of the project site, as follows:

<u>Spare Parts</u>	<u>Quantity</u>
Complete grinder assembly with immersible motor	1

Spare Parts shall be packaged in accordance with the Product Delivery Requirements section and Product Storage and Handling Requirements section, with labels indicating the contents of each package. Each label shall indicate the manufacturer's name, equipment name, part nomenclature, part number, address of nearest distributor, and current list price. Spare Parts shall be delivered to Owner as directed.

Spare Parts materials subject to deterioration such as ferrous metal items and electrical components shall be properly protected by lubricants or desiccants and encapsulated in hermetically sealed plastic wrapping

PART 2 - PRODUCTS

2-1. SERVICE CONDITIONS. Each channel grinder will be wall mounted inside the wetwell at the discharge of the gravity sewer outfall pipe and suitable for the following conditions:

Liquid service.	Raw Sewage
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Liquid temperature range.

40 to 100°F

2-2. PERFORMANCE AND DESIGN REQUIREMENTS. Each wall mounted channel grinder shall be designed for the following operating conditions and requirements at rated speed unless otherwise noted:

<u>Location</u>	<u>GMRPS Wetwell</u>	<u>FSRPS Wetwell</u>
Unit designation	GM-GR-1	FS-GR-1
Grinder type	Dual shafted grinder with multiple cutting teeth	Dual shafted grinder with multiple cutting teeth
Maximum flow rate, mgd	6.5	6.5
Average daily flow rate, mgd	2.0	2.0
Motor nameplate rating, hp	5	5
Gravity sewer outfall pipe diameter, in	36	30
Gravity sewer outfall pipe invert elevation, ft	31.5±	29.25±
Wetwell top slab elevation, ft	45.0±	55.5±
Grinder bottom elevation, ft	30.50	28.25
Normal downstream water surface elevation (WSEL), ft	32.5±	28.9±
Maximum upstream head relative to bottom of grinder at maximum flow rate and normal downstream WSEL, in	35	32
Torque per horsepower, in-lb		
Continuous	1,000	1,000
Momentary peak loads	4,100	4,100
Maximum grinder footprint (length x width), in	18 x 36	18 x 36

2-3. MATERIALS. Each grinder shall be constructed of the following materials:

Shafts of the cutting cartridge	Hexagon cross-section, 4140 heat treated, chrome-moly steel, with min. tensile strength of 149,000 psi.
End housings, covers, and side rails	Ductile Iron, ASTM A536-84.
Wall frame, guide rails, and support brackets	AISI Type 304 stainless steel.
Cutters and spacers	Alloy steel, AISI 4130 heat treated alloy steel, surface ground for uniformity and through-hardened to at least Rockwell C 43.
Coil screen drums	Coil-wound 304 stainless steel rod.
Seal faces	Tungsten Carbide
Epoxy Coating Primer & Finish Coat	Carboline "Carboguard 891", Tnemec "Series N140 Pota-Pox Plus", or equal.

2-3.01. Stainless Steel. All stainless steel shall be pickled in accordance with ASTM A380 at the mill before being shipped. Pickling shall produce a modest etch and shall remove all embedded iron and heat tint. After fabrication, pickled surfaces shall be subjected to a 24 hour water test or a ferroxyl test to detect the presence of residual embedded iron. All pickled surfaces damaged during fabrication including welded areas shall be repickled or passivated in accordance with ASTM A380 as needed to remove all traces of iron contamination. All stainless steel surfaces shall be adequately protected during fabrication, shipping, handling, and installation to prevent contamination from iron or carbon steel objects or surfaces.

2-4.02. Shop Painting. All iron and steel parts, with exception to stainless steel, shall be shop cleaned in accordance with the coating manufacturer's recommendations and shall be painted with the epoxy coating system specified. The coating shall have a dry film thickness of at least 10 mils and shall consist of a prime (first) coat and one or more finish coats. At least 1 quart of the finish coat material shall be furnished with each grinder for field touch-up.

2-4. WALL-MOUNTED CHANNEL GRINDER CONSTRUCTION. The units shall be a two-shaft design with two parallel shafts alternately stacked with intermeshing cutters and spacers positioned on the shaft to form a helical pattern. Helical drum coils rotate in conjunction with the two shafts, which shall counter-rotate with the driven shaft operating at approximately 66 percent of the speed of the drive shaft.

Each grinder shall have two rotating screen drums which collect solids too large to pass through the screen drums and direct them to the cutters for solids reduction. Each grinder shall have a single motor and speed reducer to drive both the cutters and each screen drum

Alternatively, each grinder may employ two sets of counter rotating cutter stacks, wherein each stack of cutting cartridges intermesh with a second stack of disks with a single motor and speed reducer to drive all four intermeshing cutter stacks.

2-4.01. Wall Frame. Grinders shall be suitable for wall-mounted installations and furnished with custom wall frame and mount to fit the specified gravity sewer outfall pipe. All necessary wall mounting hardware shall be supplied by manufacturer to allow the grinder to be securely mounted to the wall.

2-4.02. Side Rails. The inside profile of the side rail shall be concave to closely follow the radial arc of the cutters. The side rails shall be affixed to the grinder to maintain a clearance not to exceed 5/16 inch between the major diameter of the cutter and the concave arc of the side rail, thus assuring that particles larger than that clearance are directed toward the cutters to assure fineness of grind.

2-4.03. Bearings and Seals. The radial and axial loads of the shafts shall be borne by four sealed oversize Conrad-type ball bearings, which shall be rated by the bearing manufacturer with a minimum basic dynamic load rating of 10,700 lbs. The bearings shall be protected by a combination of a tortuous path device and end face mechanical seals. Face materials shall be tungsten carbide to tungsten carbide, not requiring an external flush. The mechanical seal shall be rated at 90 PSI continuous duty by the seal manufacturer. The bearings and seals shall be housed in replaceable wear sleeves that support and align the bearings and seals.

Other bearing and seal grit systems may be acceptable provided the systems are designed to prevent the intrusion of water, residuals, and grit into the bearing housing and a three year warranty on seal and bearings is provided.

2-4.04. Cutters and Spacers. The inside configuration of the cutters and spacers shall be hexagonal so as to fit the shafts with a total clearance not to exceed 0.015 inch across the flats to assure positive drive and increasing the compression strength of the spacers.

2-4.05. Cutter Design. The cutter configuration shall consist of both shafts with individual cam cutters. To maintain particle size, the height of the tooth shall not exceed 1/2 inch above the root diameter. Cutter root diameter overlap shall not be less than 1/16 inch or greater than 1/4 inch to maintain the best possible cutting efficiency while incurring the least amount of frictional losses.

2-5. DRIVE UNITS.

2-5.01. Immersible Motors. Each channel grinder shall be driven by an immersible, explosion proof electric motor provided by the equipment manufacturer. The motor shall be capable of operating continuously in a minimum of 30 feet of submergence for up to 7 consecutive days.

Motor nameplate rating shall exceed the maximum power required under all operating conditions. Each motor shall have a voltage, frequency, and phase rating as required and shall have a service factor of 1.15. Motor insulation shall be moisture resistant, class F, 155°C. Each motor shall be NEMA Design B for continuous duty at 40°C ambient temperature, and designed for at least 10 starts per hour.

The motor bearings shall be antifriction, permanently lubricated type. The lower bearing shall be fixed to carry all thrust loads and the upper bearing free to move axially. The bearings shall have a calculated AFBMA L₁₀ Life Rating of 40,000 hours when operating at maximum operating capacity. Maximum shaft runout shall not exceed 2 mils under all operating conditions.

Each motor shall be capable of continuous operation in air under full load conditions, without exceeding the temperature rise limits for the motor insulation system.

Each channel grinder shall be equipped with one or more multiconductor cable assemblies for power and control. Each multiconductor assembly containing power cables shall be provided with a separate grounding conductor. Each cable assembly shall bear a permanently embossed code or legend indicating the cable is suitable for submerged use. Cable sizing shall conform to NEC requirements.

All cables shall be of sufficient length to terminate in the control panel, with 10 feet of slack which will be coiled on a cable hook at the top of the channel. Each cable shall be supported by AISI Series 300 corrosion-resistant stainless steel Kellems or woven grips to prevent damage to the cable insulation.

The cable entry water seal shall include strain relief and a grommet type seal designed so that a specific fastener torque is not required to ensure a watertight,

submersible seal. The cable entry junction box and motor shall be separated by a stator lead sealing gland or a terminal board. The junction box shall isolate the motor interior from moisture gaining access through the top of the stator housing.

Each motor shall be protected by one motor temperature switch embedded in each phase winding. Each switch shall be designed to operate at 140°C ($\pm 5^\circ\text{C}$). Each switch shall be normally closed automatic reset type rated 5 amps at 120 volts ac. The switches shall be wired in series with end leads wired to terminals within the motor housing.

Each motor housing shall be provided with a moisture detection system complete with all sensors, control power transformers, intrinsically safe control modules, and relays. The moisture detection system shall be rated for a 120 volt ac supply. The moisture detection system shall provide two normally open dry output contacts rated 5 amps at 120 volts ac. The contacts shall close when moisture is detected in the motor housing. All moisture detection system components shall be provided by the channel grinder manufacturer within the controller enclosure.

2-5.02. Couplings. The high speed shaft of the grinder, reducer, and motor shall be directly coupled with each other using two- and three-piece couplings.

2-6. CONTROLS.

2-6.01. General. Each channel grinder shall be furnished with a complete control system mounted in a NEMA 4X stainless steel enclosure to be installed outdoors on top of the wetwell. Controls shall include a motor controller utilizing a solid state logic design with line transient protection to 1,000 volts. A control transformer shall supply all low and intermediate control voltage. All transformer legs shall be fuse protected. The control transformer shall be provided by the channel grinder manufacturer within the controller enclosure. The controller shall provide thermal motor overload and single-phase protection.

2-6.02. Function. The control system shall contain the following components and functionality:

1. Main disconnect: 600 volt, 3 pole, 22,000 ampere interrupting at 480 volt circuit breaker with trip-indicating and padlockable "off" external handle.
2. "FORWARD-REVERSE" selector switch.
3. "ON-OFF-AUTO" selector switch. In the "OFF" position, the grinder shall not run. In the "ON" position, the grinder shall run continuously in the direction indicated by the "FORWARD-REVERSE" selector switch. In the

“AUTO” position, the grinder shall be controlled through the existing pump station PLC.

4. Low voltage, loss of phase, and over current protection.
5. Jam or overload protection. When a grinder jam condition occurs, the controller activate the GRINDER JAM indicator and relay and initiate the grinder jam clear sequence to stop the grinder and reverse the grinder rotation to clear the obstruction. If the jam is cleared, the controller shall return the grinder to normal operation. If three (3) reverses occur within a 30 second interval, the controller shall stop the grinder motor and activate the GRINDER FAIL indicator and relay.
6. Moisture and temperature protection, furnished inside motor controller.
7. Indicator lights for POWER ON, GRINDER RUNNING, GRINDER JAM, GRINDER FAIL, and MOTOR FAULT.
8. Isolated output contacts for “GRINDER JAM”, “GRINDER FAIL”, MOTOR FAULT”, “GRINDER RUNNING”, grinder in “ON” and “AUTO” mode.

PART 3 - EXECUTION

3-1. INSTALLATION. Installation shall be performed by the Installation Contractor in accordance with manufacturer’s instructions.

3-2. INSTALLATION CHECK. An experienced, competent, and authorized representative of the manufacturer shall visit the site of the Work and inspect, check, adjust if necessary, and approve the equipment installation. In each case, the manufacturer's representative shall be present when the equipment is placed in operation in accordance with the Startup Requirements section, and shall revisit the jobsite as often as necessary until all trouble is corrected and the equipment installation and operation are satisfactory in the opinion of Engineer.

The manufacturer's representative shall furnish a written report certifying that the equipment has been properly installed and lubricated; is in accurate alignment; is free from any undue stress imposed by connecting piping or anchor bolts; and has been operated under full load conditions and that it operated satisfactorily.

All costs for these services shall be included in the Contract Price.

3-3. TRAINING. Manufacturer’s qualified factory service personnel shall conduct on-site training to instruct Owner’s staff in operation and maintenance for the equipment provided herein. Specific requirements for training services are included in the Startup Requirements section.

All costs for these services shall be included in the Contract Price.

End of Section

SUBMIT BID ON ATTACHED PROPOSAL FORM

[Balance of page left blank intentionally]

Vendor Name: _____

GREENVILLE UTILITIES COMMISSION

PROPOSAL FORM

The undersigned bidder hereby declares that it has carefully examined the enclosed detailed specifications for furnishing GUC with the below listed item(s). The undersigned bidder further agrees, if this proposal is accepted within thirty (30) days from the date of the opening, to furnish any or all of the item(s) upon the quoted price.

ITEM NO.	QUANTITY	DESCRIPTION	DELIVERY TIME	UNIT PRICE
I	1	Furnish and deliver two wall-mounted channel grinders and all associated appurtenances in accordance with the Contract Documents to Green Mill Run and Fork Swamp Regional Pump Stations. Provide design services consisting of system design, shop drawings, operations and maintenance manuals. Provide field services for installation, testing startup, and training as specified		\$
			Total	\$ _____

Method of Award: Item(s) will be awarded as a total bid.

Complete and Check All Math: It is the responsibility of the Bidder to extend bid prices and supply a total for all item(s).

GREENVILLE UTILITIES COMMISSION

EXCEPTION/VARIATION FORM FOR TWO WALL MOUNTED CHANNEL GRINDERS AND

ALL ASSOCIATED APPURTENANCES, DESIGN SERVICES, SHOP DRAWINGS,

OPERATIONS AND MAINTENANCE MANUALS, AND FIELD SERVICES AS SPECIFIED

HEREIN

Provider's Certification: This is to certify that it is our intent to furnish equipment, material, services, etc. in absolute compliance with the bid specification except where expressly noted below.

Instructions: List all exceptions or variations to these bid specifications. Providers shall identify each exception or variation by specification page. The omission of exception or variation information shall be deemed by the Commission as the Provider's intent to absolutely comply with the bid specification. If additional space is required, Provider may reproduce this form as necessary.

Page #

Exception/Variation

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Authorized Signature of Certification: _____

Print Name: _____

Firm Represented: _____

Address: _____

E-VERIFY LETTER OF COMPLIANCE

1. I have submitted a proposal for contract or desire to enter into a contract with the Greenville Utilities Commission;
2. As part of my duties and responsibilities pursuant to said proposal and/or contract, I affirm that I am aware of and in compliance with the requirements of E-Verify, Article 2 of Chapter 64 of the North Carolina General Statutes, to include (mark which applies):
3. ____ After hiring an employee to work in the United States I verify the work authorization of said employee through E-Verify and retain the record of the verification of work authorization while the employee is employed and for one year thereafter; or
4. ____ I employ less than fifteen (15) employees in the State of North Carolina.
5. As part of my duties and responsibilities pursuant to said proposal and/or contract, I affirm that to the best of my knowledge and subcontractors employed as a part of this proposal and/or contract, are in compliance with the requirements of E-Verify, Article 2 of Chapter 64 of the North Carolina General Statutes, to include (mark which applies):
6. ____ After hiring an employee to work in the United States the subcontractor verifies the work authorization of said employee through E-Verify and retains the record of the verification of work authorization while the employee is employed and for one year thereafter; or
0. ____ Employ less than fifteen (15) employees in the State of North Carolina.

Specify subcontractor: _____

_____ (Company Name)

By: _____ (Typed Name)

_____ (Authorized Signatory)

_____ (Title)

_____ (Date)

SECTION III
TERMS AND CONDITIONS FOR THE PURCHASE OF
APPARATUS, SUPPLIES, MATERIALS, AND EQUIPMENT

These Terms and Conditions, made and entered into on this the ____ day of _____, by and between GREENVILLE UTILITIES COMMISSION OF THE CITY OF GREENVILLE, PITT COUNTY, NORTH CAROLINA, with one of its principal offices and places of business at 401 S. Greene Street, Post Office Box 1847, Greenville, Pitt County, North Carolina 27835-1847, hereinafter referred to as "GUC" and _____, a _____ organized and existing under and by virtue of the laws of the State of _____, with one of its principal offices and places of business at _____, hereinafter referred to as "PROVIDER";

1.0 TAXES

No taxes shall be included in any bid prices. GUC is exempt from Federal Excise Tax. GUC is not exempt from North Carolina state sales and use tax or, if applicable, Pitt County sales and use tax. Such taxes shall be shown as a separate item on the invoice.

2.0 INVOICES

It is understood and agreed that orders will be shipped at the established contract prices and quantities in effect on dates orders are placed. Invoicing at variance with this provision may subject the contract to cancellation. Applicable North Carolina sales tax shall be invoiced as a separate line item. All invoices must bear the GUC purchase order number. Mail all invoices to Greenville Utilities Commission, Finance Department, P. O. Box 1847, Greenville, NC 27835-1847.

3.0 PAYMENT TERMS

Payments for equipment, materials, or supplies will be made after the receipt and acceptance of the equipment, materials, supplies or services and after submission of a proper invoice. GUC's normal payment policy is thirty (30) days. GUC will not be responsible for any goods delivered without a purchase order having been issued. Payment will be made in U. S. currency only.

4.0 QUANTITIES

Quantities specified are only estimates of GUC's requirements. GUC reserves the right to purchase more or less than the stated quantities at prices indicated in the submitted Proposal Form based on our actual needs.

5.0 AFFIRMATIVE ACTION

The Provider will take affirmative action in complying with all Federal and State requirements concerning fair employment and employment of the handicapped, and concerning the treatment of all employees, without discrimination by reason of race, color, religion, sex, national origin, or physical handicap.

6.0 CONDITION AND PACKAGING

Unless otherwise indicated in the bid, it is understood and agreed that any item offered or shipped shall be new and in first class condition, that all containers shall be new and suitable for storage or shipment, and that prices include standard commercial packaging.

7.0 SAMPLES

Samples of items, if required, must be furnished free of expense to GUC, and if not destroyed, will, upon request, be returned at the Provider's expense. Request for the return of samples must be made at the bid opening, otherwise, the samples will become GUC's property. Each individual sample must be labeled with Provider's name.

8.0 SPECIFICATIONS

Any deviation from specifications must be clearly pointed out, otherwise, it will be considered that items offered are in strict compliance with specifications, and the Provider will be held responsible. Deviations must be explained in detail. **The Provider shall not construe this paragraph as inviting deviation or implying that any deviation will be acceptable.**

9.0 INFORMATION AND DESCRIPTIVE LITERATURE

Providers are to furnish all information requested. Further, as may be specified elsewhere, each Provider must submit with its proposal: cuts, sketches, descriptive literature, and/or complete specifications covering the products offered. Reference to literature submitted with a previous bid does not satisfy this provision. Bids which do not comply with these requirements will be subject to rejection.

10.0 AWARD OF CONTRACT

As directed by statute, qualified bids will be evaluated and acceptance made of the lowest responsible, responsive bid most advantageous to GUC as determined upon consideration of such factors as prices offered, the quality of the article(s) offered, the general reputation and performance capabilities of the Provider, substantial conformity with the specifications and other conditions set forth in the bid, the suitability of the article(s) for the intended use, the related services needed, the date(s) of delivery and performance, and such other factors deemed by GUC to be pertinent or peculiar to the purchase in question.

Acceptance of the order includes acceptance of all terms, conditions, prices, delivery instructions, and specifications as shown on this set of Terms and Conditions and in this order or attached to and made a part of this order.

The conditions of this order cannot be modified except by written amendment in the form of "Amended Purchase Order," which has been approved by GUC's Procurement Coordinator.

In the event of a Provider's failure to deliver or perform as specified, GUC reserves the right to cancel the order or any part thereof, without prejudice to GUC's other rights. The Provider agrees that GUC may return part of or all of any shipment at Provider's expense. GUC may charge the Provider with all reasonable expenses resulting from such failure to deliver or perform.

11.0 MEDIATION/BINDING ARBITRATION

In the event of any dispute between the Parties, the Parties agree to submit any dispute to non-binding mediation before a mutually agreeable Mediator prior to initiating litigation. If the Parties are unable to agree upon a Mediator within thirty (30) days after demand therefore, either Party may petition a Court of competent jurisdiction for the designation of a qualified Mediator for these purposes. Each Party shall bear its own costs and expenses of participating in the mediation (including, without limitation, reasonable attorneys' fees), and each Party shall bear one-half (1/2) of the costs and expenses of the Mediator. Unless otherwise agreed, the Parties will hold the mediation in Greenville, North Carolina. The matters discussed or revealed in the mediation session shall not be disclosed in any subsequent litigation.

In the event the matter is not resolved in mediation, either Party may request arbitration. The parties shall jointly select an Arbitrator, and shall be bound by the decision of the Arbitrator with respect to any dispute between the parties with respect to this Agreement. If the parties are unable to mutually agree upon an Arbitrator, the Parties shall each select an Arbitrator, and the two Arbitrators so selected shall select a third Arbitrator, and the decision of the majority of the Arbitrators shall be conclusive and binding upon the Parties. The Parties at all times agree to equally split the costs of any Arbitrator(s) selected in an effort to resolve the dispute between the Parties. Any party desiring to resolve a dispute under the terms of this Agreement shall notify the other Party in writing, and the Parties shall seek to agree upon a mutually agreed-upon Arbitrator within a period of ten (10) days from the date of such written demand. If the Parties are unable to agree within such ten (10) day period, the Parties shall each select an Arbitrator, and the two (2) Arbitrators so selected shall select a third Arbitrator within fifteen (15) days from the date of the written demand for arbitration, and a decision shall be rendered by the Arbitrator(s) so selected within five (5) days after such Arbitrator(s) is selected.

12.0 GOVERNMENT RESTRICTIONS

In the event any Governmental restrictions may be imposed which would necessitate alteration of the material, quality, workmanship, or performance of the items offered on this bid prior to their delivery, it shall be the responsibility of the successful Provider to notify the GUC Procurement Coordinator, at once, indicating in its letter the specific regulation which required such alterations. GUC reserves the right to accept any such alterations, including any price adjustments occasioned thereby, or, in the sole discretion of GUC, to cancel the contract.

13.0 INSURANCE

13.1 Coverage – During the term of the contract, the Provider at its sole cost and expense shall provide commercial insurance of such type and with the following coverage and limits:

13.1.1 Workers' Compensation – The Provider shall provide and maintain Workers' Compensation Insurance, as required by the laws of North Carolina, as well as employer's liability coverage with minimum limits of \$1,000,000 each accident, covering all Provider's employees who are engaged in any work under the contract. If any work is sublet, the Provider shall require the subcontractor to provide the same coverage for any of its employees engaged in any work under the contract.

13.1.2 General Liability – Commercial Liability Coverage written on an "occurrence" basis in the minimum amount of \$1,000,000 per occurrence.

13.1.3 Automobile – Automobile Liability Insurance, to include coverage for all owned, hired, and non-owned vehicles used in connection with the contract with a minimum combined single limit of \$1,000,000 per accident.

13.2 Requirements - Providing and maintaining adequate insurance coverage is a material obligation of the Provider. All such insurance shall meet all laws of the State of North Carolina. Such insurance coverage shall be obtained from companies that are authorized to provide such coverage and that are authorized to do business in North Carolina by the Commissioner of Insurance. The Provider shall at all times comply with the terms of such insurance policies and all requirements of the insurer under any of such insurance policies, except as they may conflict with existing North Carolina laws or this contract. The limits of coverage under each insurance policy maintained by the Provider shall not be interpreted as limiting the Provider's liability and obligations under the contract. It is agreed that the coverage as stated shall not be canceled or changed until thirty (30) days after written notice of such termination or alteration has been sent by registered mail to GUC's Procurement Coordinator.

14.0 PATENTS AND COPYRIGHTS

The Provider shall hold and save GUC, its officers, agents, and employees, harmless from liability of any kind, including costs and expenses, including reasonable attorney fees, on account of any copyrighted articles or any patented or unpatented invention, device or appliance manufactured or used in the performance of this contract.

15.0 PATENT AND COPYRIGHT INDEMNITY

The Provider will defend or settle, at its own expense, any action brought against GUC to the extent that it is based on a claim that the product(s) provided pursuant to this agreement infringe any U.S. copyright or patent; and will pay those costs, damages, and attorney fees finally awarded against GUC in any such action attributable to any such claim, but such defense, settlements, and payments are conditioned on the following: (1) that Provider shall be notified promptly in writing by GUC of any such claim; (2) that Provider shall have sole control of the defense of any action on such claim and of all negotiations for its settlement or compromise; (3) that GUC shall cooperate with Provider in a reasonable way to facilitate the settlement of defense of such claim; (4) that such claim does not arise from GUC modifications not authorized by the Provider or from the use of combination of products provided by the Provider with products provided by GUC or by others; and (5) should such product(s) become, or in the Provider's opinion likely to become, the subject of such claim of infringement, then GUC shall permit Provider, at Provider's option and expense, either to procure for GUC the right to continue using the product(s), or replace or modify the same so that it becomes non-infringing and performs in a substantially similar manner to the original product.

16.0 EXCEPTIONS

All proposals are subject to the terms and conditions outlined herein. All responses will be controlled by such terms and conditions and the submission of other terms and conditions, price catalogs, and other documents as part of a Provider's response will be waived and have no effect on this Request for Proposal or any other contract that may be awarded resulting from this solicitation. The submission of any other terms and conditions by a Provider may be grounds for rejection of the Provider's proposal. The Provider specifically agrees to the terms and

conditions set forth in this set of Terms and Conditions by affixing its name on the signatory page contained herein.

17.0 CONFIDENTIAL INFORMATION

Except as provided by statute and rule of law, GUC will keep trade secrets which the Provider does not wish disclosed confidential. Each page shall be identified in boldface at the top and bottom as "CONFIDENTIAL" by the Provider. Cost information shall not be deemed confidential. The determination of whether a matter is confidential will be determined by North Carolina law.

18.0 ASSIGNMENT

No assignment of the Provider's obligations or the Provider's right to receive payment hereunder shall be permitted without the express written consent of GUC, provided however, upon written request approved by the GUC Procurement Coordinator, solely as a convenience to the Provider, GUC may:

- Forward the Provider's payment check directly to any person or entity designated by the Provider, and
- Include any person or entity designated by Provider as a joint payee on the Provider's payment check.
- In no event shall such approval and action obligate GUC to anyone other than the Provider, and the Provider shall remain responsible for fulfillment of all contract obligations.

19.0 ACCESS TO PERSON AND RECORDS

GUC shall have reasonable access to persons and records of Provider as a result of all contracts entered into by GUC.

20.0 INSPECTION AT BIDDER'S SITE

GUC reserves the right to inspect, at a reasonable time, the item, plant, or other facilities of a prospective Provider prior to contract award and during the contract term as necessary for GUC's determination that such item, plant, or other facilities conform with the specifications/requirements and are adequate and suitable for the proper and effective performance of the contract. Provider may limit GUC's access to restricted areas.

21.0 AVAILABILITY OF FUNDS

Any and all payments of compensation of this specific transaction and any continuation or any renewal or extension are dependent upon and subject to the allocation of GUC funds for the purpose set forth in this Agreement.

22.0 GOVERNING LAWS

All contracts, transactions, agreements, etc., are made under and shall be governed by and construed in accordance with the laws of the State of North Carolina.

23.0 ADMINISTRATIVE CODE

Bids, proposals, and awards are subject to applicable provisions of the North Carolina Administrative Code and General Statutes and Laws of the State of North Carolina.

24.0 EXECUTION

In the discretion of GUC, failure of a duly authorized official of Provider to sign the Signatory Page may render the bid invalid.

25.0 CLARIFICATIONS/INTERPRETATIONS

Any and all questions regarding these Terms and Conditions must be addressed to the GUC Procurement Coordinator. Do not contact the user directly. **These Terms and Conditions are a complete statement of the parties' agreement and may only be modified in writing signed by Provider and the GUC Procurement Coordinator.**

26.0 SITUS

The place of all contracts, transactions, agreements, their situs and forum, shall be North Carolina, where all matters, whether in contract or tort, relating to the validity, construction, interpretation, and enforcement shall be determined.

27.0 TERMINATION OF AGREEMENT

GUC or Provider may terminate this Agreement for just cause at any time. Provider will be paid for all time and expenses incurred as of the termination date. Termination for just cause by either party shall be by certified letter and shall be effective thirty (30) days after signed and acknowledged receipt of said letter. Just cause shall be based on reasonable grounds, and there must be a fair and honest cause or reason for such action. The causes for termination, include, but are not limited to: (1) Provider's persistent failure to perform in accordance with the Terms and Conditions, (2) Provider's disregard of laws and regulations related to this transaction, and/or (3) Provider's substantial violation of the provisions of the Terms and Conditions.

28.0 DELIVERY

Shipments will be made only upon releases from a purchase order issued by GUC in accordance with GUC's current needs.

Time is of the essence with respect to all deliveries under this Agreement.

Delivery of all equipment, materials, or supplies shall be made Free on Board (FOB) as specified in Section P-01015 of the attached project manual. The agreed price for such equipment, materials, or supplies shall include all costs of delivery and ownership, and risks of loss shall not be transferred from Provider to GUC until express written acceptance of delivery and inspection by GUC. Delivery hours are between 8:00 AM and 4:30 PM Monday-Friday only. **GUC's purchase order number is to be shown on the packing slip or any related documents.** GUC reserves the right to refuse or return any delivery with no purchase order number or which is damaged. GUC will not be charged a restocking fee for any delivery which is refused or returned.

29.0 INDEMNITY PROVISION

Provider agrees to indemnify and save GREENVILLE UTILITIES COMMISSION of the City of Greenville, Pitt County, North Carolina, and the City of Greenville, North Carolina, its co-owners, joint venturers, agents, employees, and insurance carriers harmless from any and all losses, claims, actions, costs, expenses including reasonable attorney fees, judgments, subrogations, or other damages resulting from injury to any person (including injury resulting in death), or damage (including loss or destruction) to property of whatsoever nature of any person arising out of or incident to the performance of the terms of this Contract by Provider, including, but not limited to, Provider's employees, agents, subcontractors, and others designated by Provider to perform work or services in, about, or attendant to, the work and services under the terms of this Contract. Provider shall not be held responsible for any losses, expenses, claims, subrogations, actions, costs, judgments, or other damages, directly, solely, and proximately caused by the negligence of Greenville Utilities Commission of the City of Greenville, Pitt County, North Carolina. Insurance covering this indemnity agreement by the Provider in favor of Greenville Utilities Commission of the City of Greenville, Pitt County, North Carolina, and the City of Greenville, North Carolina, shall be provided by Provider.

30.0 FORCE MAJEURE

Neither party shall be considered in default in the performance of its obligations hereunder to the extent that the performance of any such obligation is prevented or delayed by any cause, existing or future, which is beyond the reasonable control of such party. In any such event of force majeure, the parties shall advise each other of such event, and the parties shall negotiate an equitable adjustment to their respective obligations under this Agreement.

31.0 WARRANTY(IES)

The Provider hereby includes all warranties, whether expressed or implied, including, but not limited to, the Implied Warranty of Merchantability and the Implied Warranty of Fitness for a Particular Purpose.

32.0 INTEGRATED CONTRACT

These Terms and Conditions, Instructions to Bidders, Specifications, and the selected Provider's bid represents the entire contract between the Parties. No verbal or other written agreement(s) shall be held to vary the provisions of this Agreement.

33.0 CONTRACT PROVISIONS

Each of the provisions of these Terms and Conditions shall apply to the full extent permitted by law, and the invalidity in whole or in part of any provision shall not affect the remainder of such provision or any other provisions.

34.0 E-VERIFY

E-Verify - I understand that E-Verify is the federal E-Verify program operated by the United States Department of Homeland Security and other federal agencies, or any successor or equivalent program used to verify the work authorization of newly hired employees pursuant to federal law in accordance with NCGS §64-25 et seq. I am aware of and in compliance with the requirements of E-Verify and Article 2 of Chapter 64 of the North Carolina General Statutes. To the best of my knowledge, any subcontractors employed by me as a part of this contract are in

compliance with the requirements of E-Verify and Article 2 of Chapter 64 of the North Carolina General Statutes.

35.0 IRAN DIVESTMENT ACT CERTIFICATION

By acceptance of this purchase order, Vendor/Contractor certifies that, as of the date of the purchase order or contract, it is not on the Final Divestment List as created by the State Treasurer pursuant to N.C.G.S. § 143-6A-4. In compliance with the requirements of the Iran Divestment Act and N.C.G.S. § 143C-6A-5(b), Vendor/Contractor shall not utilize in the performance of the contract any subcontractor that is identified on the Final Divestment List.

36.0 UNIFORM GUIDANCE

Contracts funded with federal grant or loan funds must be procured in a manner that conforms with all applicable federal laws, policies, and standards, including those under the Uniform Guidance (2 C.F.R. Part 200).

37.0 NOTICES

Notices to the Parties should be sent to the names and addresses specified below:

Cleve Haddock, CLGPO
Procurement Coordinator
Greenville Utilities Commission
P.O. Box 1847
Greenville, NC 27835-1847

Vendor Specified on Page 1 of Section III when awarded.

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