

## **ADVERTISEMENT FOR BIDS**

Sealed proposals will be received in the Office of the Procurement Manager, Greenville Utilities Commission, 401 S. Greene Street, Greenville, North Carolina 27834 until 3:00 pm (EDST) on August 23, 2022 and immediately thereafter publicly opened and read for the furnishing of:  
High Speed Turbo Blower Equipment.

Instructions for submitting bids and complete specifications will be available in the Office of the Procurement Manager, 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.**

### **Notice to Bidders:**

**Greenville Utilities Commission is committed to the health and safety of our customers and employees. We are taking the spread of COVID-19 very seriously and continue to monitor the latest Local, State, and Federal guidance.**

## SECTION I

### GENERAL INSTRUCTIONS FOR FORMAL BIDS

### RELATED TO THE PURCHASE OF APPARATUS, SUPPLIES,

### MATERIALS AND EQUIPMENT

AUGUST 23, 2022

#### **1.0 NOTICE TO BIDDERS**

Sealed bids, subject to the conditions made a part hereof, will be received in the Office of the Procurement Manager, Greenville Utilities Commission, 401 S. Greene Street, Greenville, North Carolina 27834 until 3:00 pm (EDST) on the day of opening. **Bids submitted in a fax or e-mail in response to this Invitation for Bids will not be acceptable. Late Bids will not be considered.**

#### **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 MANAGER, GREENVILLE UTILITIES COMMISSION, 401 S. GREENE STREET, GREENVILLE, NORTH CAROLINA 27834.

#### **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 Manager, 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 and best responsible 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 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 only upon individual releases from a blanket 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) GUC Warehouse, 701 Utility Way, Greenville, North Carolina 27834, unless otherwise specified. 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 and will be considered in the evaluation of bids. Failure by the successful bidder to meet quoted delivery shall be interpreted as non-compliance with these specifications and may be deemed sufficient cause for removal of the manufacturer and/or distributor from our lists as acceptable manufacturers or bidders.

## **17.0 MANUFACTURER**

Bidder is to specify the manufacturer of cables being quoted. If requested, bidder shall identify the place of manufacturer of all cables quoted.

## **18.0 CONTACT INFORMATION**

Questions regarding this bid request should be directed to Cleve Haddock, CLGPO, Procurement Manager at (252) 551-1533, [haddocgc@guc.com](mailto:haddocgc@guc.com). All questions must be received by end of business day, August 12, 2022.

## **19.0 CONTRACT PERIOD**

NA

## **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.**

**GREENVILLE UTILITIES COMMISSION**  
**SPECIFICATIONS FOR HIGH SPEED BLOWER EQUIPMENT**

**AUGUST 23, 2022**

**1. General**

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**1.1 Summary**

- .1 Work Included: Furnish, and test, Quantity One (1) NX500D (500 HP) CSA/UL/CE Listed, factory assembled high speed, dual layer bump foil air bearing, dual core turbo blower system. The packaged blower system shall be complete, including sound enclosure, motors, variable frequency drives, control panels, programmable logic controllers, inlet air filter/silencers, blow-off valves, check valves, discharge valves, flexible connectors and other appurtenances as shown on the Drawings, as specified herein, and as needed for a complete and operational blower system. Nuts, bolts, pipe spools & elbows, washers, lock-washers and gaskets needed to install the loose appurtenances are not part of the scope of supply.
- .2 Blower shall be complete pre-packaged unit consisting of Permanent Magnet Synchronous Motor, integrated air filter, variable speed drive, and PLC (programmable logic controller) based Local Control Panel.
- .3 The equipment shall be furnished by a single Manufacturer.

**1.2 System Description**

- .1 The system shall include factory assembled dual core high speed turbo blower with integral variable frequency drive and programmable logic controller in a complete package that does not require lubrication of the bearings for operation.
- .2 All equipment including controls and drives specified herein shall be specifically designed for this service and the environment encountered in this installation.
- .3 Equipment shall be designed and capable of either continuous or intermittent operation.
- .4 All equipment, supports, anchors and fasteners shall be of adequate strength to withstand loads associated with starting, turbulence, thrusts, thermal expansion and contraction and other loads encountered under normal operating conditions.
- .5 The equipment, sizes, materials, and arrangements described in this specification section are based on recommendations by equipment Manufacturers and shall be considered minimum limits of acceptability. The equipment Manufacturer shall be responsible for design, arrangement and performance of all equipment supplied under this section.  
Arrangements other than those shown on Drawings shall be subject to the Engineer's approval.

**1.3 Reference Standards**

- .1 Conform to the latest edition of the following reference standards:

- a) American Gear Manufacturers Association (AGMA)
  - i. AGMA 6001, Design and Selection of Components for Enclosed Gear Drives.
- b) American National Standards Institute (ANSI)
  - i. ANSI H35.1, Alloy and Temper Designation Systems for Aluminum.
  - ii. ANSI B16.1, Cast Iron Pipe Flanges and Flange Fittings, Class 25, 125, 250 and 800.
  - iii. ANSI B16.5, Pipe Flanges and Flanged Fittings.
  - iv. ANSI-B11.19, Performance Requirements for Safeguarding.
- c) American Society of Mechanical Engineers
  - i. ASME PTC-10-65, Power Test Code (PTC) for Centrifugal Compressors and Exhausters.
- d) American Society for Testing and Materials
  - i. ASTM A36, Specifications for Structural Steel.
  - ii. ASTM A48, Specification for Gray Iron Castings.
  - iii. ASTM A276, Stainless Steel and Heat-Resisting Steel Bars and Shapes.
- e) ABMA STD 9, Load Ratings and Fatigue Life for Ball Bearings.
- f) Institute of Electrical and Electronic Engineers (IEEE)
  - i. IEEE 519: Harmonic Specifications.
- g) National Electrical Manufacturers Association (NEMA).

#### **1.4 Submittals**

- .1 Product Data: Provide construction details, material descriptions, dimensions of individual components and profiles and finishes for each component.
- .2 Shop Drawings: Provide plans, elevations, sections, details and attachments to other work.
  - a) Detail equipment assemblies and indicate dimensions, weights, loads, required clearances, method of field assembly, components and location and size of each field connection.
  - b) Manufacturer and model number of all equipment within this specification and an itemized list of components being furnished.
  - c) Layout drawings and equipment cut sheets showing dimensions, clearances, sizes, arrangement, and size of connections, supports, anchors and total weights of the supplied product.
  - d) Detailed specifications and data describing the materials of construction.
  - e) Wiring Diagrams: For power, signal and control wiring diagrams, including terminals and numbers.
  - f) Motor requirements in accordance with applicable motor specification section.
  - g) Equipment weights and lifting points.
- .3 Information Submittals:
  - a) Factory functional and motor performance test reports.
  - b) Special shipping, storage and protection and handling instructions.

- c) Manufacturer's instructions for installation.
  - d) Manufacturer's equipment installation report.
  - e) Location of nearest stocking distributor for spare parts.
  - f) Recommended spare parts list to maintain the equipment in service for a period of three years. Include a list of special tools required for checking, testing, parts replacement, and maintenance with current pricing information.
  - g) List special tools, materials and supplies furnished with equipment for use prior to and during start-up and for future maintenance.
  - h) Warranty certificate.
- .4 Performance Data: Blower certified past performance test reports for each blower (as outlined later in this specification) and including, but not limited to, certified blower curves showing pressure, capacity, horsepower demand and blower efficiency over the entire operating range of the blower. The equipment Manufacturer shall also indicate separately the pressure, capacity, horsepower demand and efficiency required at the design point(s).
- .5 Submit complete instruction manual for operation and maintenance of the equipment in accordance with this section. Include the following data:
- a) Alignment, adjustment, and repair instructions.
  - b) Manufacturer's installation and operation instructions.
  - c) Assembly diagrams.
  - d) Troubleshooting guide.
  - e) Recommended spare parts lists and predicted life of parts subject to wear.
  - f) Scheduled maintenance intervals.
  - g) Manufacturer's service plans.

## 1.5 Quality Assurance

- .1 The packaged blower system, including blower, motor, controls and all appurtenances to form an integrated system, shall be supplied by one Manufacturer who shall provide all the equipment and appurtenances regardless of Manufacturer.
- .2 Manufacturer Qualifications:
- a) Manufacturer shall be experienced in manufacturing high speed turbo blowers similar to those indicated for this Project and have a record of over Fifteen (15) years of continuous successful in-service performance in Canada and/or USA for similar municipal wastewater treatment applications.
  - b) Manufacturer must have similar blowers permanently installed and operational in at least sixty (60) wastewater treatment facilities in North America. Twenty (20) of these facilities must be similar in design to what is specified. Manufacturer must have a minimum of five (5) installed and operational blowers in wastewater treatment facilities in North Carolina.
  - c) Manufacturer shall have a history of manufacturing, providing, and servicing this equipment for at least Fifteen (15) years in North America.
  - d) A list of similar installations shall be furnished, to show conformance with article 1.4 B.1 to B.3, with the Manufacturer's bid as well as with the shop drawing submittal, including names and telephone numbers of contacts.

- e) Manufacturer shall have a domestic service facility and factory personnel located within four hours of driving time from of Greenville NC.
- f) Manufacturer shall be available 24/7 through a telephone call to support the operator on-site. Manufacturer shall have a trained service technicians within 24-48 hours on site. Service calls must be responded to within 45 minutes.

## **1.6 Equivalent and Alternatives**

- .1 Acceptable Manufacturers:
  - a) Basis of Bid
    - i. APG-Neuros
  - b) Alternatives:
    - i. Pre-Approved Alternate.
  - c) The equipment shown in the project documents was based on the quality and product design of the Manufacturer of the Basis of Bid offer, the owner will rely on the equipment of the Basis of Bid offer for its offer.
  - d) Alternatives: The use of an alternative is subject to review and consideration and can be approved or rejected by the owner's sole discretion.
  - e) Any manufacturer seeking pre-approval must submit 14 days prior to the bid date sufficient technical documentation, including product performance, shop drawings, evidence of past performance with details of experience, references, and list of specification deviations.
  - f) Technical documentation provided by the alternate manufacturer must include information verifying that the vendor of the Alternate meets the hydraulic profile and performance requirements, and make all structural building, HVAC mechanical, electrical, instrumentation and control alterations required at no additional cost to the City. Any design drawing modifications to accommodate alternates must be submitted to the owner in accordance with all City Standards.
- .2 Work shown on the drawings is based on APG-Neuros blowers. If an alternate Manufacturer is allowed, it shall be the responsibility of the alternate manufacturer to perform any required redesign and coordination associated with, but not limited to, mechanical equipment layout, electrical wiring, conduit and controls and structural/architectural work at no additional cost to the Owner. The proposed redesign shall be subject to review and approval of the Owner.

## **1.7 Delivery, Storage And Handling**

- .1 The equipment, material and spare parts shall be shipped complete except where partial disassembly is required by transportation regulations or for the protection of components.
- .2 Spare parts shall be packed in containers bearing labels clearly designating contents and pieces of equipment for which they are intended.
- .3 The owner shall unload, store and safeguard equipment, materials, and spare parts in accordance with the Manufacturer's instructions.

## **1.8 Warranty**

- .1 Manufacturer shall provide an equipment warranty in the Owner's name for a one (1) year period from substantial completion of the blower equipment.



- .2 Blower warranty shall cover all material provided by the Manufacturer for the project for the period required in paragraph A including core, VFD, valves, harmonic filters, transformers, and external control panels. Blower warranty offering a coverage period other than what is specified herein will not be accepted.
- .3 Blower Manufacturer shall include a maintenance service contract for the duration of the warranty. Maintenance service contract shall account for bi-annual visits to the owner's facility for blower maintenance, inspection, implementation of upgrades and refresher training of the staff performed by the Manufacturer's certified technician.
- .4 Blower shall have built in provisions for remote access via VPN or cellular communication for Manufacturer to remotely monitor blower operation, troubleshoot, and apply upgrades. The owner shall enroll the equipment in the blower Manufacturers remote technical support program during the warranty period.

**1.9 Spare Parts**

- .1 Furnish the following recommended spare parts with the blower:
  - a) One (1) set of inlet air filter
- .2 Furnish one set of special tools required for complete assembly or disassembly of blower system components for each type or size of blower specified, together with a storage box (or boxes) for the same. This tool kit shall be sufficiently complete to permit normal repair and maintenance of all equipment furnished under this project.

**2. Equipment**

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**2.1 Equipment Performance**

- .1 Aeration Blower shall meet the following design conditions. Blower will be evaluated based on the data in the table below. Guaranteed wire power table must be supplied with the bid. Failure to complete and submit guaranteed wire power table with the bid will result in immediate rejection.

Total Number of Blowers	One (1)
Method of Operation	In parallel, continuous, alternating start
Bearing Type	double-layer bump foil air bearing
Drive Type	Direct

Design Ambient Barometric Pressure (PSIA)	14.48
Design Site Elevation (MASL)	As indicated on the drawings
Design Maximum Inlet Air Temperature (°F) and Relative Humidity (%)	95°F / 80%
Design Discharge Pressure (PSIG)	10.00
System Design Maximum Flow at Maximum Inlet Air Temperature and Design Discharge Pressure	11,000
System Design Average Flow at Maximum Inlet Air Temperature and Design Discharge Pressure	6,000
System Design Minimum Flow at Maximum Inlet Air Temperature and Design Discharge Pressure	2,700
Design Blower Flow Rate (SCFM)	11,000
Discharge Flange Size (ANSI 150 lb.) (in)	12
Maximum Power Consumption (wire to air) at Design Blower Capacity at maximum design temperature and Relative Humidity conditions	406
VFD-Rated Maximum Motor Horsepower (bhp)	500
Available Power Voltage	480
Available Power Phase	3 phase
Maximum Noise at 3 Feet	80 ± 2 dBa
Allowable vibration level	< 4 mm/sec

- .2 Blower will be evaluated based on the data in Table 1. Guaranteed wire power Table 1 must be supplied with the bid. Failure to complete and submit guaranteed wire power table with the bid will result in immediate rejection.

<b>Table 1. Guaranteed Wire To Air Power</b>									
Design Point	Number Of Blowers	Blower Airflow	Total System	Discharge	Inlet Temperature	Inlet Press	Relative	Blower Wire	Total System Wire to
		SCFM	SCFM	PSIG	Deg. F	PSIA	%	kW	kW
1	1	11,000	11,000	10	95	14.48	80		
2	1	8,500	8,500	10	95	14.48	80		
3	1	6,000	6,000	10	95	14.48	80		
4	1	2,700	2,700	10	95	14.48	80		

**Note: Performance data is based on ASME PTC 10 Type 2 test.**

## 2.2 General

- .1 Blower shall have a double-layer type bump foil air bearing and shall not require oils or lubricants for adequate operation. Bearing shall be manufacturer from Inconel alloy and be Teflon coated. Magnetic bearings, single-layer or leaf type air bearings are unacceptable and are cause for immediate rejection.
- .2 Blower shall be capable of variable speed operation with a minimum turndown of seventy-five percent (75%) from its maximum flow capacity and shall use integral variable frequency drives. Each blower shall be capable of operating continuously and satisfactorily at any point between the minimum and maximum flows without any surge, vibration, hunting, or excessive heating of bearings or motor.
- .3 Blower shall be designed to operate with Manufacturer's supplied Master Control Panel in order to maximize overall system efficiency.
- .4 Complete blower package shall be UL & CSA Listed, with no exception. UL & CSA Listing nameplate to be on package exterior. UL & CSA listing must be for the complete package.
- .5 Blower shall be factory tested per ASME PTC-10 Type 2 Performance test to verify flow and wire power at design conditions as well as blower maximum conditions. The acceptance criteria are 4% tolerances on flow, 2% tolerances on pressure and 1% tolerance on power.
- .6 Neither special foundations nor anchoring shall be required for installation.
- .7 All elastomeric materials for couplings, valves, etc., shall be rated for a minimum 250° F temperature.

## 2.3 High Speed Blower

- .1 Blower shall be designed to maintain a minimum rise-to-surge of 3.0 psig at the maximum flow point and design pressure.
- .2 Blower impeller shall be a single-stage backswept blade high efficiency configuration designed using Computational Fluid Dynamics (CFD) milled from forged aluminum alloy Type 7075 (cast impellers are not permitted), with first critical speed at least 120 percent of the maximum allowable operating speed. The impeller shall be mounted directly to the motor shaft and shall be dynamically balanced. The use of dual impellers is not permitted.
- .3 Bearings shall be sized for a minimum of expected ten (10) years between scheduled overhauls or inspections.
- .4 Blower shall be supplied with a sound enclosure covering the entire blower package. The sound enclosure shall be designed for easy inspection and maintenance of all blower package components. Quick release panels shall provide easy and quick access for routine maintenance of the blower and the package components.
- .5 The currently designed blower system layout is based on blowers that do not reject heat to the blower room as heat will be discharged into the process air and do not require separate exhaust connections for ventilation of cooling air.

Blower shall not allow heat caused by motor or electrical cooling to be exhausted into the blower room. Blower and integral VFD shall not require any external cooling devices such as cooling fans, ducting, or external glycol cooling.

If an alternate blower manufacturer is allowed, they shall carry out all the necessary modifications for additional cooling fans and piping to direct the extracted heat away from the blower room and will be responsible for all costs relating to design and construction of piping to convey cooling air directly from the blower enclosure to the building exterior including but not limited to the design of any additional piping, ducting, pipe/duct supports, fittings, expansion joints, penetrations, controls, and the redesign of the structure to accommodate the pipe or duct penetrations. If the cooling fan is not "ducted", the alternate blower manufacturer will be responsible for additional ventilation or modification to the existing ventilation system to exhaust heat to the blower room.

- .6 Blower shall be cooled by forced air convection and an internal closed loop water glycol system. No external cooling provisions shall be permitted.
- .7 Integrated blower instrumentation and PLC programming shall enable measurement and display of shaft vibration, and temperatures in the motor windings and bearings.
- .8 Blower shall be supplied with blower core built in vibration isolating mounts. The blower Manufacturer shall be responsible for demonstrating the vibration of the blower core below the 4 mm/s design limit.
- .9 Blower shall be supplied with a discharge cone that will be designed to reduce discharge flow speeds below 82 feet/sec, to minimize discharge piping noise and losses, and increase overall efficiency.

## 2.4 Appurtenances

- .1 Blower shall be supplied with two (2) 12" EPDM expansion joints to be installed on the discharge piping prior to the main air header to mitigate the transmission of vibration to the discharge piping and allow for thermal expansion of the discharge components. The flexible connector shall be suitable for the maximum operating discharge flow temperature and pressure.
- .2 Blower shall be supplied with two (2) 12" wafer style, dual plate check valves that shall be installed on the discharge cones. Check valves shall be of iron body with aluminum internals and silicon seat.
- .3 Blower shall be supplied with two (2) 12" manually operated discharge isolation valves. Valve shall be lug type with iron body, 316 stainless steel disc, 416 stainless steel stem, and viton seat.
- .4 Blower shall be supplied with one (1) 30" EPDM inlet expansion joint to be installed on the inlet flange of the blower
- .5 Blower shall be equipped with two (2) integrated electro-pneumatic blow-off valve actuated by blower pressure and an open/closed status signal is available through the blower PLC.
- .6 Blow-off valve discharge shall be supplied with a properly sized blow-off silencer for discharge noise levels not to exceed 90 dBa at 5 feet from

blower at HMI height.

- .7 Blower shall be provided with an integrated combination intake high performance silencer system. Intake high performance silencer performance losses shall be included by the blower vendor in the blower performance calculation. The intake high performance silencer system shall be integrated into the overall blower enclosure.
- .8 Integrated blower dual filtration shall be comprised of a coarse pre-filter and a fine pleated filter media with 90% by weight per ASHRAE 52-76 with an 98% efficiency @ 10 microns (nom). Filter element shall be removable without disconnecting the inlet duct and shall be cleanable by maintenance personnel as a preventative maintenance procedure.
- .9 Blower shall be equipped with the following Manufacturer's integrated instrumentation and display on blower HMI.
  - a) Inlet differential pressure sensors for filter monitoring
  - b) Discharge differential pressure sensor
  - c) Inlet and discharge temperature sensors
  - d) Bearing temperature sensor
  - e) Motor temperature sensor
  - f) Ambient pressure transducer
  - g) Vibration sensor

## **2.5 Motors**

- .1 Blower shall be supplied with a high-speed Permanent Magnet Synchronous Motor (PMSM) operating on 460/480 Volts, 3 Phase, 60 Hertz input power to the VFD. Induction or Permanent Magnet Brushless DC Motors shall not be acceptable.
- .2 The maximum allowable motor horsepower shall be as specified in paragraph 2.1 Equipment Performance.
- .3 The motor shall have a 1.15 service factor.
- .4 The Manufacturer shall provide phase monitoring to quickly open the blow off valve and protect the blower if a voltage spike greater than 110% occurs.

## **2.6 Inverter/VFD**

- .1 Blower shall be equipped with a high efficiency UL listed VFD (Variable Frequency Drive) with 97% efficiency at full rated motor speed and power. VFD Manufacturer shall be KEB America. Proprietary or Non-UL listed VFDs shall not be accepted. If the blower Manufacturer does not use a VFD manufactured by a reputable frequency drive manufacturer in the USA or Canada, a design change must be made to accommodate it. No Substitutions or equal permitted.
- .2 Each VFD shall have an operation in the USA for manufacturing, support,

and provision of replacement parts.

- .3 Each VFD shall be supplied with a passive harmonic filter that reduces the THD (Total Harmonic Distortion) in compliance with IEEE 519 rating. The harmonic filters shall have built-in line input reactors and be supplied by MTE or Manufacturer approved equal. Harmonic filter shall be mounted inside the blower enclosure. External Harmonic filter is not permitted.
- .4 If the blower equipment is designed to operate with a power supply rated other than the 480 VAC, 3 phase, 60 Hz power, the blower manufacturer shall provide power transformation for each blower as required. The power transformation shall be integral to the blower equipment or provided with a NEMA rated enclosure located near the blower equipment. The transformer may be supplied as a combination unit with an integral harmonic filter.
- .5 Each VFD shall have a sinusoidal filter on its output consisting of an L (inductor) and C (capacitor) filter.

## 2.7 Controls And Instrumentation

- .1 General
  - a) All components in the control panel shall be completely factory wired and shall include all necessary controls for both the manual/local and automatic/remote operation as indicated on the Drawings and Specifications.
  - b) The incoming power provided to the panel shall be 480 volt, 3 phases. A suitable thermal-magnetic main circuit breaker sized no less than 125% greater than the connected load shall be provided along with all transformers, relays, etc. necessary to make the panel fully functional. Surge protective devices (SPD) shall be provided to protect the electrical and control components from excessive voltage and current: Type 1 SPD to protect the 480V loads (VFD) and Type 2 SPD to protect the 120V loads (PLC controller box). The SPD locations shall be strategically selected to have surge immunity and the MCOV shall be not less than 115% of nominal voltage.
  - c) Wiring shall comply with all UL Standards.
  - d) All electrical connections to external devices and equipment shall be provided by the OTHERS.
  - e) Equipment and controls furnished by other Manufacturers shall be provided in accordance with their instructions, where applicable.
  - f) The blower shall have an Allen Bradley CompactLogix L33 PLC for operation, adjustment, and monitoring. If the blower Manufacturer does not use a PLC based control system in the blower package, a design change must be implemented to accommodate it. No similar or equal shall be accepted.
  - g) The system shall have an Allen-Bradley PanelView Plus 7 performance 10-inch HMI touchscreen
- .2 Miscellaneous electrical devices
  - a) A 120 VAC to 24 VDC power supply shall be provided to power the

programmable controller inputs and other 24 VDC powered devices. The power supply shall be properly sized for the LCP (local control panel) total load.

- b) Provide noise filter to provide clean, noise-free power to programmable controllers.
- .3 Operator Interface: Provide the following indicators on the operator interface:
- a) Blower Status (RUN/STOPPED)
  - b) Operator Mode Selection
  - c) System pressure display
  - d) Blower Local / Remote Control
  - e) Blower Speed Indication Status
  - f) Blower Run Times (hours)
  - g) Blower Amp Draw (amps)
  - h) System Pressure
  - i) System Flow
- .4 Operator interface device
- a) The device shall include the following displays:
    - i. History: displays history of sequential alarms with date and time of occurrence.
    - ii. Status: One-touch access to display current system operating status. When the system is running, the display shall show the set point pressure, actual pressure, flow, and speed (0-100%).
    - iii. Alarm Information: Last alarms recorded in memory are displayed with related detailed information on the alarm including time of occurrence, date, and blower's main operating parameters at the time of alarm and how to correct the alarm condition. Each log shall include individual blower run status, VFD mode, flow, and alarm type.
    - iv. Alarm List: One-touch access to an Alarm List of all possible alarms and their current status.
    - v. Daily Log/Total: Displays the individual equipment run times and run times since last reset.
    - vi. Scroll Key: Used to scroll up and down through data.
  - b) Provide Setup Menu system for adjusting all alarm set points, dead band, delays, etc. Display and adjust flow and pressure set points and time delays. Set equipment alternation to manual or automatic. Set the hour of the day for automatic alternation. Restore all factory defaults. Protect adjustable settings with a password.
- .5 Alarm systems
- a) Local indication of alarm conditions shall be provided on the face of the control panel via a general amber alarm light. Specific alarm messages shall be provided on the operator interface screen.
  - b) All alarm conditions shall be displayed at the operator PanelView Plus 7 performance 10-inch HMI terminal and shall provide output capability to display all alarm conditions at future SCADA system. No other similar or equal HMI will be acceptable.

## .6 SCADA System

- a) The following outputs shall be provided to the plant PLC and SCADA system via Ethernet/IP communication.
  - i. All alarms
  - ii. All equipment status (On/Off, In Remote/Not in Remote, Off)
  - iii. All parameters displayed at the operator interface (blower PLC)
  - iv. Motor speed
  - v. Airflow
  - vi. Discharge pressure
  - vii. Blower run: output
  - viii. Blower stop: output
  - ix. Blower fault: output
  - x. Remote on: output, enabled when touch screen is placed in remote
- b) The following inputs shall be provided from the plant PLC and SCADA system
  - i. Remote Command: 4-20 mA input for remote control of blower speed
  - ii. Remote start: input
  - iii. Remote stop: input

## .7 System Function

- a) Blower LCP shall consist of a PLC-based control system physically located inside the blower enclosure with the following:
  - i. True Programmable Logic Controller:
    - Allen Bradley CompactLogix L33 PLC with Multifunctional PanelView Plus 7 performance 10-inch touch screen display capability. If the blower Manufacturer does not use a PLC based control system in the blower package, a design change must be made to accommodate it. No substitution or equal permitted.
    - If a microprocessor-based control system for each blower is provided, the blower manufacturer shall provide a Master Control Panel (MCP) with PLC-based control system with OIU integrated with each blower's microprocessor-based control system.
    - The PLC shall provide local and remote control, monitoring, and diagnostic capability.
  - ii. Blower controls shall provide real time monitoring of discharge pressure vs. suction air flow graph indicating current operating point and boundaries.
  - iii. Blower shall have the ability to be controlled in four different modes.
    - Speed (blower functions independently on speed control)
    - Pressure
    - Flow
    - Dissolved Oxygen
  - iv. The blower PLC shall have a minimum of 4 operating methods.
    - Local control
    - TCP/IP control
    - Remote Terminal Block control



- Remote Terminal Block start/stop & Touch screen mode
- v. Blower PLC shall allow the blower to automatically restart, when operating in Terminal Block Mode, in the event of a power failure. The blower PLC shall automatically reset all faults and alarms in the PLC and restart the blower.
  - vi. Blower LCP shall perform dynamic speed changes when the blower operating point approaches the surge boundary. The PLC automatically increases the speed of the blower such that surge is avoided and the blower BOV is not engaged.
  - vii. Blower LCP shall automatically perform dynamic adjustments to the blower operating range during seasonal ambient temperature variations such that attainable maximum and minimum flow is always optimized. Dynamic adjustments shall not expose the blower to surge.
  - viii. Blower PLC shall be capable of time control blower synchronization based on pre-set, user defined settings for flow and speed. The user shall define pre-set operating schedule in the blower PLC. The blower PLC shall allow for a minimum of 6 daily set points for time control ability.
  - ix. Blower shall have built in provisions for remote access via VPN or cellular communication for the blower Manufacturer to monitor operation and troubleshoot remotely.
  - x. Blower PLC shall allow for alternating operating schedules such that the service hours per blower is either 2:1, 3:1, 4:1 or 5:1 with respect to the standby unit. Ratio Alternation function permits the owner to balance the run time of all blowers or stagger the hours of use to facilitate maintenance scheduling.
  - xi. Blower PLC controls shall include intuitive, user-friendly fault menus for ease of monitoring diagnostics and troubleshooting.
  - xii. Blower shall include built in automatic surge protection.
  - xiii. Blower controls shall include built in measurement or calculation for the following parameters:
    - Flow (calculated)
    - Speed (calculated)
    - Temperature (inlet and discharge air, motor, bearing)
    - Pressure
  - xiv. Blower PLC shall be accessible through a touch screen control panel and shall control the blow-off valve for each blower.
  - xv. All integrated controls shall be enclosed in a sub-panel located inside the blower enclosure.
  - xvi. Turbo Blower PLC shall be capable for communication through Ethernet /IP communication protocol.

## 2.8 Shop Painting

- .1 The blower enclosure shall be painted in Manufacturer's standard color. Painted carbon steel enclosures shall be Zinc primed and dual powder coated with a total dry film thickness of 4 mils dft.

## 2.9 Factory Acceptance Tests

- .1 All equipment shall be factory tested in accordance with a pre-approved Test Procedure by the Engineer during submittals approval.
- .2 Tests shall be performed on the actual assembled unit being supplied for this project. Prototype model tests and calculated values based on previous model testing will not be acceptable.
  - a) Functional Package Test: Blower shall be given a factory mechanical test to assure mechanical integrity. If the test indicates that adjustments are necessary to ensure conformance with specifications, such adjustments shall be made prior to shipment. Unless otherwise specified, a certified report of a mechanical test of each blower furnished shall be provided. The mechanical test shall consist of operating the units at or near design conditions for a minimum of one (1) hour. Test data shall include duration of the test, bearing temperatures, speed, brake horsepower, pressure and temperature rise and vibration level.
  - b) Performance Test: A certified report of a performance test of the blowers furnished shall be submitted to the Engineer for review. The performance test shall be performed in accordance with the American Society of Mechanical Engineers (ASME-PTC10- 1997 (TYPE 2) Power Test Code for Displacement Compressors, Vacuum Pumps and Blowers and shall demonstrate the durability with the applicable performance criteria specified.
- .3 In the event the blower fails to meet the performance requirements specified, the Engineer shall have the right to require the Manufacturer to modify or replace the blower to meet the performance requirements specified.
- .4 Any subsequent tests as may be necessary to ensure compliance with these Specifications shall be performed at no additional cost to the Owner.
- .5 Performance tests shall cover the design points 1, 2, 3 and 4 contained in paragraph 2.1.B  
– Table 1 of this specification. Any additional test points requested beyond these points can be provided at the additional cost of \$1300 USD per test point, for a maximum of three additional test points.
- .6 The Manufacturer shall notify the Owner at least 30 days prior to conducting the factory acceptance tests. The owner shall confirm their decision and/or acceptance of the proposed date within five (5) days of receipt of the Manufacturer's notification.
- .7 The Manufacturer shall complete production and acceptance testing of the product on a schedule pre-agreed to with the owner. Should there be a delay of more than fifteen (15) days for the owner to take delivery, the Manufacturer shall invoice the amount allocated for delivery on the order and store the product on their premises until delivery is approved.

### **3. Execution**

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#### **3.1 General**

- .1 Install and adjust equipment in accordance with the Drawings, approved

shop drawings and the Manufacturer's instructions. Do not operate the equipment until the installation is approved by the Manufacturer's representative.

.2 Assembly and Installation

- i. Do not drill, cut or weld any component to the blower enclosure or accessories. Only bolted connections will be allowed in the field.
- ii. Manufacturer to certify installation readiness prior to start-up for conformance to Manufacturer's instructions.

.3 Manufacturer's Services:

- a) Provide the services of a qualified, factory-trained representative of the Manufacturer for review of each part of the installation before approval. The OWNER shall provide a firm date for the required services with a minimum of four (4) weeks advanced notice. Any changes to this date will result in a penalty of \$1500 USD and the negotiation of a new date.
- b) Hold a Pre-Start-Up meeting with the Manufacturer to verify proper blower installation, Start-Up procedure and operating conditions.
- c) Each day shall consist of eight (8) hours at the project site excluding travel time and breaks.  
Provide services at no additional cost to the Owner.
  - i. Equipment installation review – One (1) day in one (1) trip
  - ii. Startup and Training of Owner's personnel – Three (3) days in one (1) trip
  - iii. Operation review (6 months later) – Two (2) days in one (1) trip
- d) Prior to equipment start-up, the OWNER, with the assistance of the Manufacturer's representative, shall re-inspect all equipment for proper assembly, installation, and calibration:
  - i. All components shall operate without alarms or shutdowns, except as intended, for eight consecutive hours.
  - ii. Equipment shall operate through the design performance range consistent with available flows. Adjust, balance, calibrate and verify that the equipment, safety devices, controls and process system operate within the design conditions.

.4 Operator Training

- a) Provide training sessions to instruct the Owner's personnel in the operation and maintenance of the system, in accordance with Section 01 79 00 - Training. Training of the Owner's personnel to be provided by an experienced factory engineer. Training to include a hands-on demonstration of all aspects of the operation and a simulation of all control and alarm functions.
- b) OWNER is responsible for overall coordination of training activities.
- c) OWNER to coordinate training activities with MANUFACTURER and integrate with other training components if necessary. Provide training only after Engineer's acceptance of treatment facility Operating and Maintenance Manuals. OWNER to set training date at least four (4) weeks' notice prior.

- Notes:**
- (1) All materials will be purchased in box quantities unless otherwise stated.**
  - (2) Bidders are to specify on the attached Proposal Form the name brand of all items quoted and the expected delivery time.**

**Method of Award:**

**Item(s) will be awarded as a total bid.**

[Balance of page left blank intentionally]

**SUBMIT BIDS ON ATTACHED PROPOSAL FORM**

**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 items upon the quoted price. If your firm is unable to furnish in accordance with our specifications and you wish to offer a substitute, please provide us with full details of the approved equivalent.

Quotations can be mailed or delivered to Cleve Haddock, Procurement Manager, 401 South Greene Street, Greenville, N.C. 27834. Greenville Utilities reserves the right to reject any and all quotes that are not in GUC's best interest.

<b>High Speed Turbo Blower</b>	<b>Delivery Weeks</b> _____	<b>Price</b> \$ _____
	<b>Brand</b> _____	

**Complete and Check All Math:** It is the responsibility of the Bidder to extend bid prices and supply a total for all items.

[Balance of page left blank intentionally]

It is certified that this proposal is made in good faith and without collusion or connection with any other person bidding on the same above listed items. It is also certified that this proposal is made in good faith and without collusion or connection with any GUC employee(s).

We quote you as per instructions above. If invoice is paid within \_\_\_\_\_ days from date of receipt of invoice, a discount of \_\_\_\_\_% will be allowed.

Firm Name: \_\_\_\_\_ Phone: (\_\_\_\_) \_\_\_\_\_

Address: \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_

Fax (\_\_\_\_) \_\_\_\_\_ E-mail \_\_\_\_\_

Authorized Official \_\_\_\_\_ Title \_\_\_\_\_  
Typed Name

\_\_\_\_\_  
Signature Date \_\_\_\_\_

**Three (3) copies of your proposal should be received no later than August 23, 2022 at 3:00 pm (EDST).**

**NO BIDS CONSIDERED UNLESS SUBMITTED ON THIS FORM(S)**  
**(RETURN ONLY THIS FORM(S) AND EXCEPTION, E-VERIFY)**

**Letter of Compliance to E-Verify for Greenville Utilities Commission**

1. I have submitted a bid 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 bid 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 bid and/or contract, I affirm that to the best of my knowledge and subcontractors employed as a part of this bid 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
7. \_\_\_\_ Employ less than fifteen (15) employees in the State of North Carolina.  
Specify subcontractor: \_\_\_\_\_

\_\_\_\_\_ (Company Name)

By: \_\_\_\_\_ (Typed Name)

\_\_\_\_\_ (Authorized Signatory)

\_\_\_\_\_ (Title)

\_\_\_\_\_ (Date)

**GREENVILLE UTILITIES COMMISSION**

**GREENVILLE, NORTH CAROLINA**

**EXCEPTION FORM**

**Specifications for:** High Speed Turbo Blower Equipment.

**Bidder's Certification:** This is to certify that it is our intent to furnish **Price, Equipment, Materials, Services, Etc.,** in absolute compliance with the bid specification except where expressly noted below.

**Instructions:** The following is a list of exceptions to the bidding documents and/or specifications pertaining to the furnishing of the requested materials. Bidders shall identify each exception by specification page and paragraph number on this form. The omission of exception assumes complete compliance with the Specifications.

<u>Page/Paragraph #</u>	<u>Exception/Variation</u>
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Firm Represented: \_\_\_\_\_

Typed Name: \_\_\_\_\_

Authorized Signature of Certification: \_\_\_\_\_

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, or supplies 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 Purchasing Buyer II.

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 Purchasing Buyer II, 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 Purchasing Buyer II.

#### **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 Purchasing Buyer II, 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 Purchasing Buyer II. 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 Purchasing Buyer II.**

## **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) GUC Warehouse, 701 Utility Way, Greenville, North Carolina 27834, unless otherwise specified. 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 Manager  
Greenville Utilities Commission  
P.O. Box 1847  
Greenville, NC 27835-1847

Vendor Specified on Page 1 of Section III when awarded.



GREENVILLE UTILITIES COMMISSION

By: \_\_\_\_\_  
Anthony C. Cannon

Title: General Manager/CEO  
(Authorized Signatory)

Date: \_\_\_\_\_

Attest: \_\_\_\_\_

Name (Print): Amy Wade

Title: Executive Secretary

Date: \_\_\_\_\_

(OFFICIAL SEAL)

COMPANY NAME:

By: \_\_\_\_\_

Name (Print): \_\_\_\_\_

Title: \_\_\_\_\_  
(Authorized Signatory)

Date: \_\_\_\_\_

Attest: \_\_\_\_\_

Name (Print): \_\_\_\_\_

Title: Corporate Secretary

Date: \_\_\_\_\_

(CORP. SEAL)

APPROVED AS TO FORM AND LEGAL CONTENT:

By: \_\_\_\_\_  
Phillip R. Dixon

Title: General Counsel

Date: \_\_\_\_\_