

ADVERTISEMENT FOR BIDS

Sealed bids will be received in the Office of the Procurement Manager, Greenville Utilities Commission, 401 S. Greene Street, Greenville, North Carolina 27834 until 2:00 PM (EDST) on March 4, 2020 and immediately thereafter publicly opened and read for the furnishing of Audio/Video, Operator Console, Video Wall System and Installation for the New Emergency Operations Center.

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.**

SECTION I

GENERAL INSTRUCTIONS FOR FORMAL BIDS

RELATED TO THE PURCHASE OF APPARATUS, SUPPLIES,

MATERIALS, EQUIPMENT AND BUILD

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 2:00 PM (EDST) on March 4, 2020, 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 bid on the enclosed bid forms. Include and electronic copy of your bid. The bid must be signed by an authorized official of the firm. Return only the attached Bid Form(S). 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 BID SECURITY

Each Bid shall be accompanied by cash, cashier's check, or certified check drawn on a bank insured with the Federal Deposit Insurance Corporation or the Savings Association Insurance Fund, payable to the Owner, in an amount not less than five percent (5%) of the total bid as a guarantee that a Purchase Order, if awarded, will be accepted. In lieu thereof, a Bid Bond may be submitted by the Bidder in an amount not less than five percent (5%) of the total bid.

6.0 PERFORMANCE AND PAYMENT BONDS

6.1 The Successful Bidder shall be required to furnish separate Performance and Payment Bonds executed on the forms bound herein in amounts at least equal to one hundred percent (100%) of the Contract price as security for the faithful performance of this Contract and as security for the payment of all persons performing labor and furnishing materials and equipment in connection with this Contract.

6.2 Performance and Payment Bonds shall be with a Surety company authorized and licensed to do business in the State of North Carolina and shall be for the full Contract sum.

7.0 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.

8.0 FEDERAL EXCISE TAX

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

9.0 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 Bid 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.

10.0 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 bids. 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.

11.0 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.

12.0 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.

13.0 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.

14.0 MINORITY BUSINESS PARTICIPATION PROGRAM

GUC has adopted an Affirmative Action and Minority and Women Business Enterprise Plan (M/WBE) Program. Firms submitting a bid 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.

15.0 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.

16.0 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, 801 Mumford Road, 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.

17.0 CONTRACT PERIOD **NA**

18.0 MANUFACTURER

Bidder is to specify the manufacturer of items being quoted if applicable.

19.0 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 Bid Form based on our actual needs.

20.0 CONTACT INFORMATION

Questions regarding this bid request should be directed to Cleve Haddock, CLGPO, Procurement Manager, at (252) 551-1533, haddockc@guc.com. **All questions regarding this bid must be received by or before 5:00 pm (EDST) on February 10, 2020.**

21.0 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.

SECTION II
GREENVILLE UTILITIES COMMISSION
SPECIFICATIONS FOR, AUDIO/VIDEO, OPERATOR CONSOLE,
VIDEO WALL SYSTEM AND INSTALLATION FOR THE NEW EMERGENCY
OPERATIONS CENTER
MARCH 4, 2020

General Information

1.0 Project Description

The purpose of this document is to outline the technical specifications and requirements for installation of three (3) command and control room systems, including an Audio-Video (AV) System, Operator Console System and a Video Wall System relative to Greenville Utilities Commission, herein termed “Commission”, new Emergency Operations Center, herein termed “EOC”.

The Specifications are separated into three (3) Sections.

Section 1 details the supply and installation of an Audio/Visual System that includes video displays, wall processing system, KVM platform, and audio/video equipment. Section 2 details the supply of a custom Operator Console System installation of five (5) Operator Consoles and two (2) future Operator Consoles. Section 3 details the supply and integration of a Video Wall System including a structure that supports the primary video wall displays and flanking displays. Sections 1, 2 and 3 comprise the Complete System. Components will be necessary for 24/7 operations in the new center to provide AV for integration of a multi-purpose video wall and desktop CPU components.

The Commission relies on the EOC as the nerve center and emergency response clearinghouse for emergency issues arising from all Commission departments (Electric, Gas, and Water Resources).

The successful vendor is to provide all the provisions of this specification and bid documents.

The Complete System shall be built for functional use in the mission-critical Emergency Operations Center and designed to provide twenty-four (24) hour by three hundred sixty-five (365) day operations and to be located at the property of Greenville Utilities Commission (GUC), Pitt County Parcel 83675, Rock Spring Rd, Greenville, North Carolina. The anticipated construction on the building will be completed by September 2020. The projected move in date will be December 2020.

The successful vendor shall be able to supply the Complete System as a totally integrated solution. All requirements, including the specifications contained within each system document,

and Appendices, Design-build drawings, and other information shall be provided by the Commission.

2.0 Vendor's General Obligations

The Vendor shall assume responsibility for the design and fabrication of the Complete System in conformance to Commission specifications and/or drawings. The Vendor shall also assume responsibility for any described testing and installation. The Commission's obligation shall include, but not be limited to, the following list and other obligations required to perform the functions described in this specification.

- a) Design engineering, including adaptation of Commission furnished design plans, existing equipment limitations, and supplied project information.
- b) The Vendor shall be responsible to meet all dimensional requirements including any radius specified by drawings.
- c) Supply the fabrication and assembly of the Complete System including any noted options.
- d) Vendor must provide new equipment with no previous title ship and may be asked for documentation verifying these requirements.
- e) Factory acceptance testing (FAT) of the entire contract deliverables prior to packing and shipment of Complete System with Commission representatives as witnesses. The FAT to include a complete staging of the system and functional test of the hardware and software.
- f) Project Engineering Services including project management, project scheduling, weekly progress reports and final submittal documentation with equipment manuals, drawings, and other documentation, including installation procedures.
- g) The Vendor shall include a recommended on-hand stocking list of spare parts for the Complete System in the bid submittal.
- h) Specialized tools, test equipment or software described in specification to provide a "turn-key" solution. All specialized tools and software are to be transferred to Commission upon completion of the Site Acceptance Test (SAT).
- i) Complete System shipment via air-ride furniture van method to the Control Room located in Greenville, NC. The use of common carrier or moving van for the shipping of equipment is considered an unacceptable method that could damage and delay the project.
- j) Installation of the complete system including structure, subassemblies, components, and unit low voltage wiring, system start up, testing of Vendor installed electronics and training of Commission personnel. Training shall include component level operation, general maintenance and basic troubleshooting procedures.
- k) Site acceptance testing (SAT) of the entire contract deliverables.
- l) Coordinate with Commission, at their discretion, to provide a 90-day follow up training session, similar to the initial training.

3.0 Commission's General Obligations

Commission shall supply the following items and services as part of the Complete System.

- a) Primary AC power source for the Complete System, including power cabling to the connecting junction point of the system as detailed.
- b) Climate controlled environment for the Complete System location within Commission Control Room to be maintained between 67-80 degrees Fahrenheit and 25-55% relative humidity. Control Room will be substantially complete prior to any placement of consoles, furniture or A/V gear. Construction activities that create dust, debris or fumes will be complete prior to installation commencement.
- c) Technical review and approval of the manufacturer's design, documentation, and testing procedures.
- d) Participation in factory and site acceptance tests (FAT/SAT).
- e) Coordination of Vendor's activities with Commission operating requirements, and the other Vendors associated with this specification.
- f) Any Commission furnished equipment for installation into the Complete System by the Vendor.
- g) Supply of video signals (including, but not limited to, HDMI, composite video, s-video, RGB or other as determined by the application) not listed as a requirement for a supplied product in this specification, for display on the VDS (Video Display System) and operator console system to termination point specified by Vendor in design/build approval process.
- h) Access to Commission's existing equipment that is to be integrated into the Complete System, prior to installation.

4.0 Quality Standards

Design, materials, manufacturing, testing, and documentation shall conform to the following codes and standards. Vendor may be required to prove conformity upon request by the Commission.

- a) Supplier ISO 9001 registered or equivalent policies.
- b) Occupational Safety and Health Act (OSHA), and Commission safety standards.
- c) Electronic Industries Association (EIA).
- d) National Electric Code (NEC), latest revision, and Local, City, and County electrical and building codes.
- e) National Electronics Manufacturing Association (NEMA).
- f) Institute of Electrical and Electronic Engineers (IEEE).
- g) Federal Communications Commission (FCC) interference standards for class B devices.

Manufacturer of the control room systems shall have an in-house quality control program to ensure that all material and services are in accordance with or exceed all applicable specifications in connection with any contracts of which manufacturer is the prime or sub-Vendor.

5.0 Project Documentation

To ensure that the Complete System to be supplied conforms to the specific provisions and general intent of the Specification, the Vendor shall submit drawings and documents, including standard and custom hardware and software design, reference, technical, user, and maintenance documentation covering all System equipment to Commission for review. No work in the manufacturing or procurement of the Complete System shall be permitted to occur until Commission has approved its corresponding submittal package, as detailed below. Submittals are due three (3) weeks after Bid award.

a) Submittal Documentation, one copy unless otherwise indicated:

1. The Vendor must submit a Project Plan that details the project scope, deliverables and noted milestones in a detailed project schedule, at a minimum. This Project Plan will be used to determine that the Vendor understands the overall scope of this project. The Project Plan is subject to Commission approval, via a hard copy signature, prior to any work being started on this project.
2. Detailed layout drawings scaled to depict the location, alignment, type of equipment structure anchoring details, mechanical and electrical installation information of the Complete System for approval.
3. Revised approval drawings resubmitted to Commission within five (5) business days for a maximum two (2) revision cycles and re-submittal processes.
4. System overview documentation to be delivered during the project cycle in AutoCAD 2000 -2013 format.
5. Bill of Material, wiring schematics, and data sheets for all major components for approval.
6. Provide periodic Project Schedule updates when impacted by Vendor or Commission changes that affect the overall Project Schedule.
7. Provide bi-weekly project status e-mails to Commission or coordinate regular conference calls with Commission through project completion.
8. Complete System Parts List for submittal and approval.
9. Factory and Site Acceptance Test format and checklist(s) for use during testing.

b) Final Documentation

1. The Vendor shall supply two (2) sets of all final documentation (both drawings and other documents) that shall include all changes that occur prior to system acceptance by Commission. All documentation and drawings prepared specifically for Commission shall also be supplied on electronic media (CD-ROM).

2. Site planning manual that provides mechanical and electrical installation details. These documents shall include drawings of all display system parts and related hardware, indicating mounting details, clearance requirements, electrical connections and power requirements, and environmental restrictions including schematics.
3. Operation, references, technical, and maintenance manuals for all system equipment and test equipment. These documents shall include the diagnostic manuals, user manuals, and instruction manuals as well as any available troubleshooting aids.
4. Existing standard software and firmware manuals covering the display processing hardware. Manuals to be provided in both hardcopy and .PDF format.
5. Software functional, operating, and design documents, including reference and system user documentation. Information to be provided in both hardcopy and .PDF format.
6. List of recommended standby parts for the Complete System with ordering instructions.
7. Wiring diagram of power and distribution for the Complete System.
8. A certificate of compliance shall accompany the shipment of each deliverable product under this Contract. This certificate shall verify that the product has been checked and has passed the Vendor's quality control inspection and test procedures described in the Vendor's quality assurance plan.
9. The Vendor shall supply two (2) copies of the signal diagram, updated to reflect the final configuration (AS-BUILT) upon project completion. These drawings must be 11 inches by 17 inches or larger.

6.0 Bid Documentation

Bidder to supply a completed compliance response to the specification. Failure to complete the compliance sections may disqualify the bidder from award.

Bidder to supply the following drawings that depict bidder's intent to supply:

- a) Spatial plan of the control room depicting the Audio/Video System, Operator Console System and Video Wall system as proposed.
- b) Side elevation (Section View) depicting the Video Wall System.
- c) Dimensioned drawings of the Operator Console System that depict the countertop plan and section view of the interior of the console.
- d) Elevation view of the Video Wall System

Bidder to supply a detailed schedule, including design and product deliverables, noted milestones and follow-up training will be provided as part of the bid submittal.

Bidder to supply a detailed Bill of Material (BOM) and indicate any assumptions or exceptions/substitutions to the specification.

Bidder to supply a signal drawing detailing the connectivity of the proposed Audio/Visual system to include make and model information for all major components.

Bidder to supply proof of five (5) years' experience delivering control room systems within electric utilities or equivalent experience.

Bidder to supply five (5) references from completed projects within the last 5 years. References should be from electric utility control room environments and be of similar scope, size and complexity.

7.0 Project Payment Schedule

Payments will be made to Vendor according to the following schedule/milestones:

- Contract Signing-10%
- Approval Drawings & Notice to Proceed-20%
- Substantial Delivery of Equipment On-Site-30%
- Substantial Completion of Installation-30%
- Commissioning & In-Field Training-8%
- Final Drawings % Project Completion Documentation-2%

8.0 Appendix

The following appendix are included/attached to this request for bid to aid in the Vendor's preparation of bid:

- a) Appendix A: Drawing Submittal Set (CT Consultants).
- b) Appendix B: GUC Schematics (CT Consultants).
- c) Appendix C: GUC Render 2.
- d) Appendix D: GUC Render 3.

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Section 1 – Audio/Video System

1.0 Video Display System Functional Requirements

- a) Control Room – Video Wall. Facing operators are a total of twelve (12) 55” diagonal LED backlit LCD flat panel displays, comprising a 6 wide by 2 high video wall. These video displays are intended to allow operators to display applications registered on a display wall processor system and are positioned to maximize sightlines to the operators.
- b) Control Room – Flanking Displays. Facing operators are a total of two (2) wall mounted 86” diagonal LED backlit LCD flat panel displays. These two displays shall be wall mounted using tilting wall mounts on the wall to the immediate sides of the main video wall. These displays are each connected to their own video wall controller.
- c) Conference Room. Mounted inside the conference room that is attached to the control room is one (1) wall mounted 86” diagonal LED backlit LCD flat panel display. This display shall be wall mounted using a low-profile wall mount on the wall at the head of the conference table.

2.0 Video Display System Technical Requirements

- a) 55” Displays. Quantity of twelve (12) LED backlit LCD flat panel displays capable of displaying full 1920 x 1080 graphics. The 55” displays located in the Control Room shall be of the following specifications supplied by Planar equivalent to model MX55HDX. Accepted displays also include Christie Digital FHD553XE-R or Mitsubishi Data Wall LM55P3. Both panels feature a 1.7mm bezel. These displays shall have the following features:
 1. LED backlit
 2. Tiled Bezel Width: $\leq 1.7\text{mm}$
 3. Aspect Ratio: 16:9
 4. Display Resolution: Full HD (1920 x 1080)
 5. Brightness (Typical): $\geq 800\text{ cd/m}^2$
 6. Contrast Ratio (Typical): $\geq 4000:1$
 7. Viewing Angle (Typ.): 178°
 8. Input: HDMI
 9. Rated for 24/7 use
 10. Power Consumption (Typ.): 194W
 11. Depth: 3.54” (incl. mount)

b) Quantity of three (3) 86" diagonal LED backlit LCD panels capable of displaying Ultra HD 3840 x 2160 graphics. The 86" displays located in the Control Room and Conference Room shall be of the following specifications:

1. Display Technology: Edge-lit LED backlit LCD
2. Display depth: 3.4" (incl. mount)
3. Aspect Ratio: 16:9
4. Display Resolution: Ultra HD (3840 x 2160)
5. Brightness (Typ): 500 cd/m²
6. Contrast Ratio (Typ): 1200:1
7. Response Time (Typical): 8 ms
8. Refresh Rate: 120 Hz
9. Viewing Angle (Typ): $\geq 178^\circ$
10. Output: Analog audio RCA L/R or 3.5mm audio
11. Rated for 24/7 use
12. Power Consumption (Typ): 230W

3.0 Video Display Wall Mounting

All mounting of Video Display LCD Panels to meet the following requirements;

- a) Flat panel displays to be secured to a wall using a wall mount system designed to support the load of the display technology.
- b) Wall structure to be anchored according to local building codes to ensure safety and stability.
- c) Display Mounting – 55" Displays. Each display shall be mounted to the wall using approved mounts. The mounts should be designed to be a low-profile wall mount. The displays shall not protrude more than 3.6" into the control room. The wall mount must provide for alignment on six (6) axis for uniform image gap across the entire array.
- d) Display Mounting – 86" Displays. Each display shall be mounted to the wall using approved mounts. The mounts should be designed to be a low-profile wall mount. The displays shall not protrude more than 3.6" into the control room. The wall mount must provide for alignment on six (6) axis for uniform image gap across the entire array.

4.0 Video Wall Processing Functional Requirements

Control Room & Conference Room. Facing operators is one (1) video wall, controlled by a single multi-output display wall controller, three (3) large format flat panel displays, each controlled by a single output video wall controller, and an audio system with a small form-factor video wall

controller as an available source. These video display monitors are intended to allow operators to display applications from their local workstations and are in place to increase situational awareness for all operators and supervisors.

5.0 Video Wall Processing Technical Requirements

- a) Video Distribution/Video Wall Processor Software. Requirements of software to support distribution of video to the video wall should include:
1. Easy integration and layout of sources onto displays.
 2. Source must be able to be stretched/reduced to areas less than or greater than the size of 1920 x 1080 resolution.
 3. Layout tool/interface must be able to run multiple instances separately of the control tool.
 4. Different permissions levels to allow different levels of customization for end-user vs. developer/maintenance staff.
 5. Active Directory integration via LDAP.
 6. Inexpensive licensing of additional workstations to do layouts/control: such as for developer/maintenance.
 7. Be upgradable and expandable.
 8. Create and Save Layouts.
 9. Mimic operation of the video wall control software from a web-based client (may exclude system management functions).
 10. Record and review user action logs.
 11. Must have the ability to utilize a software-based application to capture, encode, and transmit to the video wall, full framerate video of individual applications from a host workstation while the source application is not topmost on the workstation display.
- b) Video Wall Processor Hardware – Video Wall, Flanking Displays, Audio System, and Conference Room. The video wall controllers located in these rooms shall be of the following specifications supplied by INTEL equivalent to model NUC 7i7DNKE or approved equal. Requirements of hardware to support distribution of video/audio to these should include:
1. One small form-factor PC Chassis per display
 2. HDMI output
 3. Board Factor: UCFF (4" x 4")
 4. OpenGL 4.5 and DirectX 12.0 Support

- c) Video Wall Processor Encoding Hardware. Connected to the video wall processing system is two (2) hardware encoders to facilitate the capture of cable/satellite STB video. The encoders located in the Control Room shall be of the following specifications supplied by ProVideoInstruments (PVI) equivalent to model VECASTER PRO 4K or approved equal. Features of the hardware encoder should include:

1. Multicast Protocols out: RTMP HLS HTTP RTSP UDP
2. Up to 4k resolution
3. H.264 encoding
4. HDMI 2.0 input
5. Rack-mountable
6. 4 encoder engines/scalers per channel
7. Gigabit hardware
8. Low latency

6.0 A/V Components Functional Requirements

Control Room-Console Audio. Facing each of the operators will be one (1) table top stereo speaker bar, and one (1) table top touch screen controller. There is a total of five (5) table top stereo speaker bars connected to a digital audio distribution system. These audio components are intended to allow operators to listen to audio sources from multiple locations at each of their consoles.

7.0 A/V Components Technical Requirements

- a) Control Room – Stereo Speaker Bar. Quantity of one (1) table top stereo speaker bar per operator. Each stereo speaker bar shall be freestanding. The stereo speaker bars located in the Control Room shall have the following features:
1. Rear Inputs: 1 analog 3.5mm input, 1 analog 3.5mm output.
 2. Height: $\leq 3''$
 3. Width: $\leq 18''$
 4. Adjustable volume with mute capability
- b) Control Room – DSP. Quantity of one (1) multi-channel digital signal processor (DSP) capable of controlling many audio system components. The DSP located in the Control Room shall have the following features:
1. Network Audio Channels: 128x128
 2. Analog Channels: 24

3. Configurable Flex Channels: 8
 4. Output THD: $\leq 0.003\%$, +10 dBu max output level
 5. Output Freq. Response: 20Hz to 20kHz @ all settings +0.2/-0.5 dB
 6. Power Consumption (Max): $\leq 120W$
- c) Control Room – Touch Panels. Each touch panel shall be mounted to a table top style mount or box using approved mounts. The touch panels should be designed to provide an easy access to the controls by the operator and must work with the above-mentioned DSP. The touch panels located in the Control Room shall have the following features:
1. Front Panel Control: 7” Capacitive touch screen
 2. Power requirement: 12V DC @1A (12W)
 3. Optional power requirement: PoE
 4. USB Micro AB type input
- d) Control Room – Audio System Network I/O Expanders. A total of five (5) network I/O expanders will be mounted inside the operator consoles, one per console. The Commission’s Radio Console is a potential input to the Audio System, but is currently engineered to not be a source. The I/O expanders located in the Control Room shall have the following features:
1. 8 software definable flex channels (mic/line input w/ phantom power, or line level output). Single channel granularity allows the user to configure any combination of inputs / outputs from 8 x 0 through to 0 x 8
 2. Microphone fault detection when used as mic/line inputs
 3. Audio-to-USB bridging
 4. Control and interface with external devices using TCP/IP, RS232 and GPIO
 5. PoE+ Capability
 6. Rack mountable
- e) Control Room – Audio System Network Switch. Quantity of one (1) 24-port network switch. The network switch located in the Control Room shall have the following features:
1. 10/100/1000 Ports
 2. PoE Capability: 802.3af (PoE) and 802.3at (PoE+)
 3. PoE Power Budget: 370W
 4. Max Power Consumption: 446.1W/100V
 5. IGMP v1/v2 Snooping

6. Multicast Filtering
 7. QoS: 802.1p priority queues
- f) Control Room – 2-channel Power Amplifiers. Quantity of one (1) 2-channel power amplifiers mounted in the A/V rack. The 2-channel power amplifiers located in the Control Room shall have the following features:
1. Channels: 2
 2. Power Output (WPC): 300@8Ω, 500@4Ω, 700@2Ω, 1400@4Ω Bridged
- g) Control Room – 4-channel Power Amplifiers. Quantity of three (3) 4-channel power amplifiers mounted in the A/V rack. The 4-channel power amplifiers located in the Control Room shall have the following features:
1. Channels: 4
 2. Power Output (WPC): 100@8Ω, 100@4Ω, 200@4/8Ω Bridged
- h) Control Room – In-Wall Volume Controls. Quantity of five (5) in-wall volume controls mounted in the Conference Room, Kitchen, Office, and Restrooms. The volume controls located in these rooms shall have the following features:
1. Power Handling: 100WPC RMS, 200WPC Peak
 2. Impedance Magnifying: 1x, 2x, 4x, 8x
 3. Pop-free switching between steps
 4. UL listed
 5. Weatherproof
 6. Color: White
- i) Control Room – HDMI Audio De-Embedder. Quantity of two (2) audio de-embedders mounted in the Control Room. The audio de-embedders located in the Control Room shall have the following features:
1. HDCP compliant
 2. HDMI audio de-embedding with analog stereo outputs
 3. Supports PC and Video resolutions up to 4K
 4. Rack Mountable
 5. Supports HDMI data rates up to 10.2 Gbps, Deep color up to 12-bit, CEC pass-through

- j) Control Room – 6.5” In-Ceiling speakers. Quantity of fourteen (14) in-ceiling speakers mounted in the Control Room, Conference Room, Kitchen, Office, and Restrooms. The in-ceiling speakers located in these rooms shall have the following features:
 - 1. 6.5” speaker
 - 2. 110° Nominal Coverage
 - 3. Power Capacity: 150W continuous program power, 75W continuous pink noise
 - 4. Nominal Sensitivity: 89 dB
 - 5. Nominal Impedance: 16 Ω
 - 6. Suitable for use in air handling spaces (UL-2043 listed)
 - 7. Attachment loop on back can for secondary support
 - 8. Color: White
- k) Control Room – Desktop Speakers. Quantity of five (5) desktop speakers for Commission’s Radio Console, one (1) per desk. Speakers shall have AUX input, headphone jack and volume control.
- l) Conference Room – Stereo Speaker Bar. Quantity of one (1) wall-mountable stereo speaker bar. The stereo speaker bar located in the Conference Room shall have the following features:
 - 1. Rear Inputs: 1 analog 3.5mm input, 2 optical inputs, 1 subwoofer output
 - 2. Bluetooth connectivity
 - 3. Wall-Mountable

8.0 Interconnections Technical Requirements

- a) The Vendor shall supply all video and data cabling for the AS and VDS. DVI/HDMI cables should be used, and adapters from the PC output may be utilized to convert to DVI/HDMI. Cabling shall meet the following requirements:
 - 1. High performance digital cabling will be used where possible. The Vendor's documentation shall identify specific precautions to be followed when installing and connecting these cables and connectors so that the full performance capabilities of this equipment can be used.
 - 2. Identification of wires shall be in accordance with Commission signals standards, where each end of a wire shall include a tag displaying the following information:
 - a. Wire number
 - b. Source/Destination connections

3. Cable to be labeled the same at each end corresponding to an approved signal diagram. The labels shall be a self-laminating, pre-printed label in Arial font. No hand-written labels will be accepted.
4. No plenum cable is required for this control room build.
5. Plug-type connectors with captive fasteners shall be used for all interconnections. The connectors shall be polarized to prevent improper assembly. Each end of each interconnection cable shall be marked with the cable number and the identifying number and location of each of the cable's terminations; this information shall agree with the drawings. Each cable shall be continuous between components; no intermediate splices or connectors shall be used. Terminations shall be entirely within the enclosures.
6. All data cabling shall use Cat6 or better rated twisted pair wire. All data connectors shall be Cat6 or better and shall be wired to EIA/TIA 568-B standards.
7. All wiring between amplifiers and speakers shall be 14 AWG 2 conduct stranded speaker wire. No shielding is required.
8. All USB cables shall be capable of USB 2.0 high speed or better.
9. No digital video cables shall exceed 35' in length without the use of an approved extender or amplifier.
10. No USB cables shall exceed 15' in length without the use of an approved extender or amplifier.
11. All fiber cables shall be multimode, with no splice points or patches.
12. All fiber cables shall be complete from point A to point B.
13. All fiber cables shall be terminated with appropriate locking connectors as per device specs.
14. No zip ties or permanent wire management shall be used.
15. If a cable becomes damaged, split, or torn during installation, it must be replaced.
16. No field splices or repairs shall be done to any cables.

9.0 A/V Equipment Rack Technical Requirements

- a) A/V Rack. (1) A/V Rack to be located in the Control Room. The A/V rack shall be of the following specifications supplied by APC equivalent to model Netshelter AR3100 or approved equal. The rack shall have the following features:
 1. 42RU, 4-post open A/V rack
 2. Meets EIA standards for 19" server racks
 3. Construction Material: Steel

4. Color: Black
 5. Overall Dimensions: 600 x 1070mm
 6. Vertical cable management
 7. EIA 3/8" Universal square holes with cage nuts, or 10-32 tapped mounting holes
 8. Vented front and rear lockable doors
 9. Adjustable depth mounting rails
 10. UL Certified
 11. Vertical Rear Cable Lacing Bars (Left and Right side)
- b) A/V Rack Power Distribution. Mounted inside the A/V rack and SCADA rack are six (6) 8 outlets power filters. The power filters located in the A/V rack shall be of the following specifications supplied by APC equivalent to model G50-NET2B or approved equal. Features of the power filters should include:
1. 100/120v
 2. 15A
 3. NEMA 5-15 power cords
 4. At least 8 5-15R plugs
 5. EMI/RFI filtering/elimination
- c) A/V Rack Cooling. Mounted inside the A/V rack are two (2) controlled cooling fans. The cooling fans located in the A/V rack shall be of the following specifications supplied by ACINFINITY equivalent to modes Cloudplate T9 PRO or approved equal. Features of the cooling fans should include:
1. Up to 300 CFM
 2. Noise: ≤ 38 dBA
 3. Programmable Thermostat
 4. Configurable for Intake or Exhaust
 5. Variable Fan Speeds
 6. Externally Mountable Thermal Probe
- d) Network Patch Panels. Mounted inside the A/V rack are two (2) rack mountable 24-port network patch panels. The patch panels located in the A/V rack shall be of the following specifications supplied by Cable Matters equivalent to model 180013 or approved equal.

1. 1RU
 2. Connector 1: RJ45 connectors (Cat6 Straight Through)
 3. Connector 2: 110
 4. 24 ports
 5. Color: Black
 6. Connectors allow PoE+ applications
 7. Connectors labeled for T568B wiring
 8. Uses CableMatters model 180005X25-BLK Cat6 keystones or approved equal
- e) Conference Room – In Wall A/V Storage Box. Mounted behind the large format LCD display in the Conference Room is one (1) in wall storage box. The in-wall storage box located in the Conference Room shall be of the following specifications supplied by Milestone/Chief Manufacturing equivalent to model PAC526FWP4 or approved equal. The in-wall box shall have the following features:
1. x4 125v/15A surge protected outlets
 2. Isolated ground
 3. Drywall and stud mountable
 4. Landscape/Portrait mounting options
 5. EMI filter

10.0 System Control and Distribution Technical Requirements

- a) Control Room – IR Repeater System. Mounted inside the A/V rack shall be two (2) IR repeater systems. The IR repeater systems shall be of the following specifications supplied by Kramer equivalent to model PT-5R/T or approved equal. The IR repeater shall have the following features:
1. UTP Cat5 or better connection between receiver and transmitter
 2. IR outputs on receiver: 2
 3. Range: Up to 250m via twisted pair cabling
- b) Control Room – KVM switch. Sitting on top of each of the five consoles, shall be one (1) KVM switch. The KVM switch shall be of the following specifications supplied by Startech equivalent to model SV231QDVIUA or approved equal. The KVM switch shall have the following features:

1. Supports up to 4 monitors, each up to 2560x1600
 2. Analog audio switching
 3. KVM ports: 2
 4. Rack Mountable
 5. USB PC interface
 6. Port Selection: Push button
 7. Color: Black
 8. DVI-D video connections
 9. 3.5mm audio connections
 10. USB 2.0 switching
- c) Control Room –Network Switch. Mounted in the A/V rack in the Control Room is one (1) 24-port network switch. The network switch located in the Control Room shall be of the following specifications supplied by Netgear equivalent to model JGS524Ev2 or approved equal. The network switch shall have the following features:
1. 10/100/1000 Ports
 2. IGMP v1/v2 Snooping
 3. Multicast Filtering
 4. QoS: 802.1p priority queues
- d) Control Room & Server Room – DVI & Audio Extenders. Mounted in the customer provided server rack with the SCADA PC are twenty (20) DVI & Audio Extenders. These extenders shall be of the following specifications supplied by BlackBox equivalent to model AVX-DVI-FO-MINI or approved equal. The extenders shall have the following features:
1. Programmable EDID
 2. Extends Full HD video and 24-bit stereo with no signal loss
 3. Max Resolution: Up to 1920x1200@60Hz
 4. Transmits over single strand of single mode fiber
 5. Supports 24-bit color
 6. Immune to EMI/RFI

7. Connectors: Transmitter unit: Video input: DVI-D M; Audio input: (1) 3.5-mm jack (stereo); Fiber interconnect: (1) LC; Receiver unit: Video output: DVI-D M; Audio output: (1) 3.5-mm jack (stereo); Fiber interconnect: (1) LC
 8. Fiber Distance: Single-mode fiber: 1.5 km (0.9 mi.); Multimode fiber: 500 m (1640 ft.)
- e) Control Room & Server Room – Fiber Splitters. Mounted in the customer provided server rack with the SCADA PC are four (4) fiber splitters. These splitters shall be of the following specifications supplied by BlackBox equivalent to model AVX-DVI-FO-SP8 or approved equal. The fiber splitters shall have the following features:
1. Input: 1 LC
 2. Output: 8 LC
 3. Full HD video and 24-bit stereo audio capabilities
- f) Server Room – USB Extenders. Mounted in the customer provided server rack with the SCADA PC are five (5) USB Extenders. These USB extenders shall be of the following specifications supplied by BlackBox equivalent to model IC404A-R2 or approved equal. The USB extender shall have the following features:
1. Extends USB 1.1 or 2.0 up to 1640' over MM fiber
 2. Ports: 4
 3. Extends Full HD video and 24-bit stereo with no signal loss
 4. True Plug-and-Play capability, no drivers required

11.0 Recommended Spare Parts

Provide a separate line item detailing recommended spare parts for the Audio/Video System. Recommendations can be made on a line item basis. These recommendations should include the Vendors justification for the purchase of said spares by Commission as part of the awarded purchase from this specification.

12.0 Warranty Service/Maintenance

The Supplier shall support Owner VDS operation for a period of one (1) year from Owner Site Acceptance Test (SAT). Supplier is required in their bid response to outline their standard warranty coverage provided for Owner. However, at a minimum, Supplier will provide the following services:

- a) Telephone technical support with a return call within two (2) hours of initial trouble call placement by Owner during Supplier's normal business hours.
- b) On-site technical support within seventy-two (72) hours of determination of need resulting from telephone technical support call.

Supplier shall provide optional pricing for extended services to include;

- a) scheduled preventative maintenance for the entire system to be performed annually.
- b) Extension of the Manufacturers standard warranties for the duration of five (5) years from date of acceptance.

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21. Bid Schedule

Description	Unit Price	Extended Price
A/V Component Labor		
A/V Component Material (Total)		
Annual Cost for scheduled preventative maintenance (Optional)		
Extension of Manufacturer's Warranty for five (5) years use (Optional)		
A/V Component Material Breakdown		
55" diagonal LED backlit LCD monitors		
86" diagonal LED backlit LCD monitors		
Display Mounts – 55" monitors		
Display Mounts – 86" monitors		
Video Distribution/Video Wall Processor Software		
Video Wall Processor Hardware		
Video Wall Processor Hardware – Flanking Displays		
Video Wall Processor Encoding Hardware		
Operator stereo speaker bar		
Operator table-top touch screen controller		
Control Room = Multi-channel digital signal processor		
Operator Audio System Network I/O Expanders		
Control Room – Audio System Network Switch		
Control Room – 2-channel Power Amplifiers		
Control Room – 4-channel Power Amplifiers		
Control Room – In-Wall Volume Controls		
Control Room – HDMI Audio De-Embedder		
Control Room – 6.5" In-Ceiling speakers		
Conference Room – Stereo Speaker		

Bar		
A/V Rack		
A/V Rack Power Distribution		
A/V Rack Controlled Cooling Fans		
A/V Rack Mounted 24-port Network Patch Panels		
Conference Room – In-Wall A/V Storage Box		
Control Room – A/V Rack Mounted IR Repeater System		
Control Room – KVM Switch		
Control Room – A/V Rack Mounted 24-port Network Switch		
Control Room – DVI & Audio Extenders		
Server Room – DVI & Audio Extenders		
Control Room – Fiber Splitters		
Server Room – Fiber Splitters		
Server Room – USB Extenders		

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Section 2 – Operator Console System

1.0 Operator Console Systems Specification: Mechanical Requirements

The operator console system shall provide Commission with a robust, aesthetic, and ergonomic workstation system. The entire operator console system shall accommodate the following functional requirements:

- a) Accommodations of a full range of computers, monitors, printers, power distribution, telecommunications gear and operator interface devices.
- b) Shall be of modular design for ease of facilitating future equipment retrofits and reconfigurations without major modification to the base unit, interior components and exterior panels.
- c) Materials must be of industrial grade designed to withstand continuous 24 hours a day, 365 days a year of use.

2.0 Operator Console Systems Specification: Structural Requirements

The operator console frame system shall be constructed with the following components:

- a) A combination of formed & welded 14-gauge steel, with perforated horizontal channels to form a modular box structure, frame or bay.
- b) Bay frames to be powder coated texture black (matte or satin) to ensure no corrosion.
- c) The console base frame system to be open at the bottom of the structure to accept cabling from underneath.
- d) Manufacturing tolerances shall be: Linear +/- 1mm per weldment / part / assembly.
- e) Leveling foot pads having a minimum of 1.375" vertical height adjustment for leveling on existing floor.
- f) Ventilation to support convection cooling of the PC's and other powered peripherals housed within. Ventilation fans (other than those standard within PC's) are not accepted as a method of maintaining ambient air temperature to support PC operation. However, ventilation fans may be necessary in targeted areas where racked components reside and additional ventilation is required.
- g) Bolted together to create a uniform ground. 1 ground stud per operator console position shall be included in 1 bay to complete the ground circuit. Commission to connect to ground stud.
- h) Support the exterior panel elements, door hinges and the various equipment mounting kits and accessories, such as slide out processor trays, storage shelving, rack rails, etc.
- i) Readily accept future reconfigurations and additions with no on site cutting, drilling or machining is required. This is with the exception of the desktop surface.

- j) Adequate cable management raceways. Each unit to be constructed to provide a clear access way for wires and cables to be routed from one end of the fully assembled console to the other with minimal restriction. Cable raceways should allow for cable drops at any point in the horizontal run. Panduit style raceways are not acceptable.

3.0 Operator Console Systems Specification: Components Requirements

- a) PC slide-out tray with 360° swivel - Tray to be securely attached to the bay structure and allow access to the PC from both the front and the rear of the bay. PC storage must be a minimum of 20"H x 20"W x 12"D. PC tray to be powder coated texture black (matte or satin).
- b) Industrial Power Strip - Power strip to include over current protection via circuit breaker. Extension cords will not be accepted. Each power strip should have sufficient cord length to run from one side of the console to the other and reach the outlets near the ends of each operator location. All electrically operated hardware shall be plugged directly to the provided power strips located in each console. The power strips shall conform to the following requirements:
 - 1. All metal housing
 - 2. 6 outlets
 - 3. Heavy duty, 14/3 SJTW cord with integral molded plug NEMA 5-20P
 - 4. Integrated 20A, 120 VAC circuit breakers
 - 5. CSA Certified UL 1363 listed in the United States
- c) Grommets - Included as per drawings, 3.25" grommet hole with plastic grommet and press fit cover with a 3" nominal hole. Grommets to be matte black.
- d) Slat wall system / monitor mounts - Each console shall be equipped with a quantity of fixed position tilt/swivel monitor mounts to achieve a clean monitor bank array. These mounts will attach to a multi-use slat wall system. The slat wall system rail elevation to be installed so that top of monitors does not exceed 40" AFF at seated position, this is to maintain proper sight lines throughout the room. The slat wall system rail height is not permitted to be taller than 4". Peripheral displays may require alternative mounting utilizing dynamic adjustable mounts. Other monitor mounting types (such as full articulating) may be permitted but must be approved by the Commission.
- e) Work surface lift feature - Consoles shall have a sit/stand (height adjustable) capable work surface as shown in the included drawings that will raise the entire operator position via a desktop mounted control with LED height indication with 3 user programmable presets. The operation of the sit/stand mechanism is to be a series of synchronized individual enclosed motorized linear actuators capable of lifting a distributed load of at least 70 pounds per linear foot at a speed of 1.5" per second. Each actuator to have a point load of 280 pounds per column. Console manufacture shall list the minimum and maximum height adjustment constraints within industry standard ergonomics. Where instances occur where work surfaces are right next to each other, a 2" minimum gap is required for safety to avoid any pinch points.

- f) Power and Signal units - Each console shall be equipped with auxiliary Power and Signal utilities across the console work surface. These utilities shall be configurable to be populated as required by the Commission. These utilities should be conveniently located for easy connection by operator.
- g) Desktop Task Light - Each console shall be equipped with LED desktop lights to ensure adequate work surface illumination at each operator position. These task lights shall have the identical finish of the desk monitor articulation arms. The lights shall be at least 225 lumens, dimmable, 3000K or 3500K color temperature, power consumption less than 7 watts. The task lights shall use an articulating arms style to reposition the light with a minimum reach of 25". The task lights shall have replaceable LED elements in the event of failure.
- h) Rack Rail System - System components, where applicable, shall be mounted within a console bay using rack rails to accept 19" rack able equipment. The rack system shall be mounted within the console as specified by Commission as needed.

4.0 Operator Console Systems Specification: Millwork Requirements

Vertical Panels, including doors - All exterior panels (vertical surfaces) for the operator console system shall be supported by and enclose the structural base, where applicable. The panels should be easily removed for convenient access to the equipment mounted in the console. The Vendor must provide materials that meet the following minimum requirements.

- a) Cladding shall be attached to console frame with concealed fastening.
- b) Equipment facings are easily removed without the use of tools for quick access.
- c) Both front and rear doors to be hinged. All casework panel hingers to be 125° concealed, snap on mounting, with 3-point adjustment.
- d) Enclosure panels, access doors and panels shall be covered on all surfaces and manufactured with 11/16" industrial grade particle board core or MDF, with minimum density of 45 pounds and edge banded with a minimum of .5mm PVC edge banding. Interior surfaces are to be black laminate (HPL) while exterior surfaces to be laminate color of customer's choice (HPL). Minimum requirements are a VPG Type 335, interior and exterior laminates to be the same thickness to insure a balanced panel.
- e) All panel equipment cutouts shall be custom sized for each piece of equipment.
- f) No detail shall be permitted which causes eye distraction.
- g) Door and drawer pull handles to be ADA compliant.

Drawers - All drawer units must be of box design and use dovetail construction at the joints. Drawer faces should be screwed to box construction. Drawer construction to be a minimum 1 2" thick solid wood. All box drawers designated for file storage should include file folder hanging rack systems suitable for storing 8.5"x11" documents within hanging folders. Each drawer slide should be:

- a) Rated for a minimum of 100-pound load capacity for all utility drawers.

- b) Rated for a minimum of 150-pound load capacity for all file box drawers and map box drawers.
- c) All drawers rated for 100-pound load capacity or less (box drawers) must include self-closing mechanism at the end of the slide travel.

Countertops - The horizontal work surface shall be constructed to meet the following:

- a) High-pressure post form grade high wear plastic laminate type HW350 on work-surface. Bottom of surface to be finished with equivalent type laminate in a black finish on 1" industrial grade particle board core, with a minimum density of 45 pounds.
- b) Vendor shall recommend a work surface edge trim at operator interface or position that shall be constructed in a manner that conforms to sound ergonomic practices. This must be a robust solution that will hold up to the rigors of a 24/7 operation. Standard T-mold profiles will not be accepted. Rubberized or texture coated profiles will not be accepted. Acceptable materials for this application are solid surface only, such as Corian, Meganite or Zodiac.
- c) The work surface edge trim on 3 sides shall be milled in the same profile and use the same material.
- d) All work surface core material will be 1" thick particle board with the surface laminate being Wilsonart "White Tigris" #4783-60, all rubber "T" nosing will be black, and work surface edge will be Meganite "Ebony Granite" #710.
- e) The work surface edge trim on the rear of all consoles shall be flush edge t-molding.
- f) The work surface design sit down height shall be a minimum of 27" and a maximum of 30" above the finished floor.
- g) Options for horizontal and vertical laminated surfaces shall be presented to Commission as options after the contract has been awarded, premium selections must be made available.

5.0 Additional Casework

The Vendor to supply Commission a Coat Closet and Mobile Table constructed using the same manufacturing methods and materials identified in this specification.

- a) Coat Closet to match dimensionally the drawings supplied and require the provision of wall anchoring, shelving and 20 hangers. The casework construction including sides, back, top, toe kick, shelf, doors and handles to match all specifications in Section 4.0.
- b) Mobile Table to match dimensionally the drawings supplied and require the provision of casters suitable to handle the weight of the unit plus an additional 200lbs. The casters should be rated for carpet installations and be lockable. The countertop frame system shall be constructed using powder-coated metal or aluminum strut. The countertop to match all specifications in Section 4.0. All edges shall be solid surface.

6.0 Recommended Spare Parts

Provide a separate line item detailing recommended spare parts for the Operator Console System. Recommendations can be made on a line item basis. These recommendations should include the

Vendors justification for the purchase of said spares by Commission as part of the awarded purchase from this specification.

7.0 Warranty Service/Maintenance

The Vendor shall supply Commission with a standard warranty term for Operator Console System, including parts and labor as detailed.

- a) One (1) year after delivery for all mechanical components, including but not limited to hinges, sliders, ventilation kits, power distribution kits, and grommets.
- b) Three (3) years after delivery for all electro-mechanical components including lifting system.
- c) Five (5) years after delivery for all millwork components, including but not limited to countertops, edge banding, bull nose corners, doors, side panels, toe kicks, and miscellaneous storage unit millwork.
- d) Lifetime after delivery for all structural components, including but not limited to frame members, support members, hardware, and brackets.

7.0 Bid Schedule

Description	Unit Price	Extended Price
Operator Console Material		
Operator Console Labor		

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Section 3 – Video Wall System

1.0 Operations Display Wall System Mechanical Requirements

The display wall system is to provide operations with a clear system overview while maintaining ergonomic sight lines and ease of viewability. Understanding how each operator interacts with the system overview is essential to determine and establish a proper room layout in conjunction with the operator's console system. The display system shall provide the Commission with a stout, ergonomic and purpose-built system to accommodate the following functional requirements.

- a) Accommodations for servicing display components and technical gear.
- b) Cable management provisions for ease of installation and serviceability.
- c) Adequate ventilation to maintain proper temperature for all components.
- d) Materials must be of industrial grade designed to withstand continuous 24 hours a day, 365 days a year of use.

2.0 Operations Display Wall System Structural Requirements

The Display Wall frame system shall be constructed with the following components:

- a) Each structural frame shall be constructed to form a structural box frame weldment capable of supporting and servicing the display technology. Modular frames to be powder coated texture black (matte or satin) for anti-corrosive finish.
- b) The base frame system to be open at the bottom of the structure to accept cabling from underneath.
- c) Structure to be secured to building infrastructure according to local building codes to ensure structural rigidity. Anchoring and/or tieback to be installed by manufacturer and any onsite tie point provisions to be provided by General Contractor according to Vendors specifications.
- d) Manufacturing tolerances shall be: Linear +/- 1mm per weldment / part / assembly.
- e) Each frame shall include heavy duty leveling foot pads capable of supporting structural load and having a minimum of 1.375" vertical height adjustment for leveling on existing floor.
- f) The structural frames shall support the exterior panel elements.
- g) Structure to include adequate cable management raceways. Each unit to be constructed to provide a clear access way for wires and cables to be routed from one end of the fully assembled frame to the other with minimal restriction.
- h) System components, where applicable, shall be mounted within the structure or remotely in a secured climate-controlled environment provided by Commission's preference using rack rails to accept 19" rackable equipment.

3.0 Operations Display Wall System Cladding Requirements

The Display wall shall be enclosed with an aesthetic architectural finish to match other elements within the space. This can be done with a combination of plastic laminate paneling and/or acoustical panel treatments. Pending Commission's preference, storage may be a requirement which may require storage cabinetry to be integrated into the base of the structure.

- a) Vertical Panels, including doors - All exterior panels (vertical surfaces) for the video wall system shall be supported by and enclose the structural base, where applicable. The Vendor must provide materials that meet the following minimum requirements.
 1. Solid enclosure panels, access doors and panels shall be covered on all surfaces and manufactured with 1 1/16" industrial grade particle board core or MDF, with minimum density of 45 pounds and edge banded with a minimum of .5mm PVC edge banding. Interior surfaces are to be black laminate (HPL) while exterior surfaces to be laminate color of customer's choice (HPL). Minimum requirements are a VPG Type 335, interior and exterior laminates to be the same thickness to insure a balanced panel.
 2. No detail shall be permitted which causes eye distraction.
 3. Acoustical treatments to have a premium fabric wrap over fiberglass core with a density of 6-7 pounds per cubic foot. Panels to be a minimum of 1" thick and a noise reduction coefficient (NRC) of 0.85. Panels to meet a Class 1 fire rating or A per ASTM E84. Panel surface finish will be Guilford of Maine Framework Fabric "Gray Blue" #2553.

4.0 Recommended Spare Parts

Provide a separate line item detailing recommended spare parts for the Video Wall System. Recommendations can be made on a line item basis. These recommendations should include the Vendors justification for the purchase of said spares by Commission as part of the awarded purchase from this specification.

5.0 Warranty Service/Maintenance

The Vendor shall support Commission VDS operation for a period of one (1) year from Commission Site Acceptance Test (SAT). Vendor is required in their bid response to outline their standard warranty coverage provided for Commission. However, at a minimum, Vendor will provide the following services:

- a) One (1) year after delivery for all mechanical components, including but not limited to hinges, sliders, ventilation kits, power distribution kits, and grommets.
- b) Three (3) years after delivery for all acoustic paneling systems.
- c) Five (5) years after delivery for all millwork components, including but not limited to countertops, edge banding, bull nose corners, doors, side panels, toe kicks, and miscellaneous storage unit millwork.
- d) Lifetime after delivery for all structural components, including but not limited to frame members, support members, hardware, and brackets.

6.0 Bid Schedule

Description	Unit Price	Extended Price
Video Wall Material		
Video Wall Labor		

Method of Award: Items/Installation 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 items. It is certified that this bid 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 bid is made in good faith and without collusion or connection with any GUC employee(s).

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

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It is certified that this bid 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 bid is made in good faith and without collusion or connection with any GUC employee(s).

Each Bid shall be accompanied by cash, cashier's check, or certified check drawn on a bank insured with the Federal Deposit Insurance Corporation or the Savings Association Insurance Fund, payable to the Owner, in an amount not less than five percent (5%) of the total bid as a guarantee that a Purchase Order, if awarded, will be accepted. In lieu thereof, a Bid Bond may be submitted by the Bidder in an amount not less than five percent (5%) of the total bid (see attached Bid Bond form). The total bid price for which the five percent (5%) applies shall be the total of all schedules.

Certified check or cash for \$ _____ or bid bond for \$ _____ attached.

Firm Name _____ Phone (____) _____

Address _____

City _____ State _____ Zip Code _____

Fax (____) _____ E-Mail _____

Authorized Official _____ Title _____
Typed Name

_____ Date _____
Signature

Samples

BID BOND

KNOW ALL MEN BY THESE PRESENT, THAT WE _____

as Principal, and _____

as Surety, who is duly licensed to act as Surety in North Carolina, are held and firmly bound unto the Greenville Utilities Commission, Greenville, NC, as Obligee, in the penal sum of _____

_____ DOLLARS (\$ _____) (5% Bid Bond), lawful money of

the United States of America, for the payment of which, well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these present.

SIGNED, Sealed and dated this _____ day of _____, 2020.

WHEREAS, the said Principal is herewith submitting a Proposal for

and the Principal desires to file this Bid Bond in lieu of making the cash deposit as required by the bidding documents contained herein;

NOW, THEREFORE, THE CONDITION OF THE ABOVE OBLIGATION is such that if the principal shall be awarded the Purchase Order for which the bid is submitted and shall accept the Purchase Order within ten (10) days after the award of same to the principal, then this obligation shall be null and void; but if the principal fails to so accept such Purchase Order as required by the bidding documents contained herein, the Surety shall, upon demand, forthwith pay to the Obligee the amount set forth in the first paragraph hereof, and upon failure to forthwith make such payment, the Surety shall pay the Obligee an amount equal to double the amount of this Bid Bond as set forth in the first paragraph hereof. Power of Attorney from the Surety to its Attorney-in-Fact is attached hereto.

Principal

By _____ (SEAL)

Corporate Surety

By _____ (SEAL)

PERFORMANCE BOND/PAYMENT BOND

Date of Execution: _____

Name of Principal: _____

(Contractor) _____

Name of Surety: _____

Name of Contracting
Body: _____

Amount of Bond: _____

Project: _____

KNOW ALL THESE MEN BY THESE PRESENT, That We, the Principal and Surety above named, are held and firmly bound unto the above named Contracting Body, hereinafter called the Contracting Body, in the penal sum of the amount stated above the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these present.

THE CONDITION OF THIS OBLIGATION IS SUCH that whereas the Principal entered into a certain Contract with the Contracting Body, identified as shown above and hereto attached.

NOW, THEREFORE, if the Principal shall well and truly perform and fulfill all the undertakings, covenants, terms, conditions, and agreements of said Contract during the original term of said Contract and any extensions there of that may be granted by the Contracting Body, with or without notice to the Surety, and during the life of any guaranty required under the Contract, and shall also well and truly perform and fulfill all the undertakings, covenants, terms, conditions, and agreements of any and all duly authorized modifications of said Contract that may hereafter be made, notice of which modifications to the Surety being hereby waived, then, this obligation to be void; otherwise to remain in full force and virtue.

IN WITNESS WHEREOF, the above bounded parties have executed this instrument under the several seals on the date indicated above, the name and corporate seal of each corporate party being hereto affixed, and these present duly signed by its undersigned representative, pursuant to authority of its governing body.

Executed in five (5) counterparts.

Witness:

CONTRACTOR:

(Proprietorship or Partnership)

(Trade or Corporate Name)

ATTEST:

By: _____

By: _____

Title: _____
(Corporate Secretary or
Assistant Secretary Only)

Title: _____

(CORPORATE SEAL)

Witness:

SURETY COMPANY:

Countersigned:

By: _____

Title: _____
(Attorney-in-Fact)

_____ N.C. Licensed Resident Agent

_____ (Name and Address – Surety Agent)

(SURETY SEAL)

_____ Surety Company Name and N.C.
Regional or Branch Office Address

***SPACE FOR ATTACHING POWER OF ATTORNEY
(Performance Bond)***

**Three (3) copies of your bid should be received no later than
March 4, 2020 at 2:00 PM (EDST).**

**NO BIDS CONSIDERED UNLESS SUBMITTED ON THIS FORM(S) RETURN BID
SECURITY(S), THIS FORM, COST FORM(S), EXCEPTION FORM(S), E-VERIFY FORM AND
ALL BID AND PRICING FORM(S)
INCLUDE AN ELECTRONIC COPY OF YOUR BID.**

[Balance of page left blank intentionally]

GREENVILLE UTILITIES COMMISSION

EXCEPTION/VARIATION FORM FOR:

**AUDIO/VIDEO, OPERATOR CONSOLE, VIDEO WALL SYSTEM AND
INSTALLATION FOR THE NEW EMERGENCY OPERATIONS CENTER**

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.

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

Authorized Signature of Certification: _____
Print Name: _____

Firm Represented: _____
Address: _____

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)

SECTION III

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

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 Bid 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 bid: 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 Manager.

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 Manager, 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 Manager.

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 bids 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 Bid 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 bid. 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 Manager, 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, bids, 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 Manager. 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 Manager.**

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, 801 Mumford Road, 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.

[Balance of page left blank intentionally]

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)

VENDOR NAME

By: _____

Name (Print): _____

Title: _____
(Authorized Signatory)

Date: _____

Attest: _____

Name (Print): _____

Title: Corporate Secretary

Date: _____

(CORP. SEAL)

This instrument has been pre-audited in the manner required by the Local Government Budget and Fiscal Control Act.

By: _____
Jeff W. McCauley

Title: Chief Financial Officer

Date: _____

APPROVED AS TO FORM AND LEGAL CONTENT:

By: _____
Phillip R. Dixon

Title: General Counsel

Date: _____

CHANGE ORDER

GREENVILLE UTILITIES COMMISSION PROJECT CHANGE ORDER		Assigned by Finance Change Order Number: CO- _____																																
Department: _____	Date: _____	Capital Project Number: _____																																
Project Name: _____	Vendor Name: _____																																	
Initiated By: _____ <small>Name</small>	Vendor Address: _____																																	
<input type="checkbox"/> Owner <input type="checkbox"/> Engineer <input type="checkbox"/> Contractor	Vendor Contact: _____																																	
<input type="checkbox"/> Other _____																																		
<p>1. <u>TYPE OF CHANGE:</u> <input type="checkbox"/> Design <input type="checkbox"/> Engineering <input type="checkbox"/> Scope <input type="checkbox"/> Other _____</p> <p>2. <u>REASON FOR CHANGE:</u> <input type="checkbox"/> Owner <input type="checkbox"/> Vendor <input type="checkbox"/> Safety <input type="checkbox"/> Construction <input type="checkbox"/> Cost <input type="checkbox"/> Schedule</p> <p>3. <u>CHANGE ORDER DESCRIPTION:</u> _____</p> <p style="margin-top: 20px;"><i>Change Order Justification - _____</i></p>																																		
<p>4. <u>ACCOUNT NUMBER:</u> _____</p> <p>5. <u>SCHEDULE IMPACT:</u> <input type="checkbox"/> No impact <input type="checkbox"/> Schedule Impact 6. Project Delay Of: <input type="checkbox"/> Days <input type="checkbox"/> Weeks <input type="checkbox"/> Months <small>Check One</small></p> <p style="margin-left: 40px;">Start Date: _____ Finish Date: _____ Total Time Delay: _____</p>																																		
<p>7. <u>ESTIMATED COST:</u></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 40%;">Project Mgmt</td> <td style="width: 10%;">_____</td> <td style="width: 10%;"><input type="checkbox"/> Add</td> <td style="width: 10%;"><input type="checkbox"/> Deduct</td> </tr> <tr> <td>Engr/Design</td> <td>_____</td> <td><input type="checkbox"/> Add</td> <td><input type="checkbox"/> Deduct</td> </tr> <tr> <td>Construction</td> <td>_____</td> <td><input type="checkbox"/> Add</td> <td><input type="checkbox"/> Deduct</td> </tr> <tr> <td>Labor</td> <td>_____</td> <td><input type="checkbox"/> Add</td> <td><input type="checkbox"/> Deduct</td> </tr> <tr> <td>Materials</td> <td>_____</td> <td><input type="checkbox"/> Add</td> <td><input type="checkbox"/> Deduct</td> </tr> <tr> <td>Other Direct</td> <td>_____</td> <td><input type="checkbox"/> Add</td> <td><input type="checkbox"/> Deduct</td> </tr> <tr> <td>Indirect</td> <td>_____</td> <td><input type="checkbox"/> Add</td> <td><input type="checkbox"/> Deduct</td> </tr> <tr> <td>Total Change Order Amount:</td> <td>_____</td> <td><input type="checkbox"/> Add</td> <td><input type="checkbox"/> Deduct</td> </tr> </table>			Project Mgmt	_____	<input type="checkbox"/> Add	<input type="checkbox"/> Deduct	Engr/Design	_____	<input type="checkbox"/> Add	<input type="checkbox"/> Deduct	Construction	_____	<input type="checkbox"/> Add	<input type="checkbox"/> Deduct	Labor	_____	<input type="checkbox"/> Add	<input type="checkbox"/> Deduct	Materials	_____	<input type="checkbox"/> Add	<input type="checkbox"/> Deduct	Other Direct	_____	<input type="checkbox"/> Add	<input type="checkbox"/> Deduct	Indirect	_____	<input type="checkbox"/> Add	<input type="checkbox"/> Deduct	Total Change Order Amount:	_____	<input type="checkbox"/> Add	<input type="checkbox"/> Deduct
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Total Change Order Amount:	_____	<input type="checkbox"/> Add	<input type="checkbox"/> Deduct																															
<p>8. <u>REVISED CAPITAL PROJECT COST:</u> Original Budget: \$ _____ Revised Estimate to Complete: \$ _____</p>																																		
<p>APPROVED <input type="checkbox"/> DISAPPROVED <input type="checkbox"/> _____ Project Manager Date</p> <p>APPROVED <input type="checkbox"/> DISAPPROVED <input type="checkbox"/> _____ Department Head Date</p> <p>APPROVED <input type="checkbox"/> DISAPPROVED <input type="checkbox"/> _____ Assistant General Manager/Chief Operating Officer Date</p> <p>APPROVED <input type="checkbox"/> DISAPPROVED <input type="checkbox"/> _____ General Manager/Chief Executive Officer Date</p>																																		

RETURN TO FINANCE AFTER GM/CEO SIGNATURE