



407 E. Blvd

Williamston, NC 27892

# INVITATION FOR BIDS

***Williamston Primary Intercom System***

***Bid Active Date: January 21, 2025 - February 11, 2025***

**Bid Opening Date: February 18, 2025 1:00 pm**

<b>Martin County Schools</b> <b>407 E. Blvd</b> <b>Williamston, NC 27892</b> <b>www.martin.k12.nc.us</b>	<b>Bid Number:210-12125-1</b> <b>Item: Intercom System</b> <b>Source of Funds: Safety Grant</b>
<b>Refer ALL Inquiries regarding this IFB to:</b> Amy Bennett Technology Director abennett@martin.k12.nc.us Preferred communication through email	<b>Issue Date: January 21, 2025</b> <b>Offers Accepted Until: February 11, 2025</b>

**BID NOTICE**

This IFB will be active from the issue date, until the closing date at 3pm Eastern Standard Time. All replies must be valid for a period of 30 days after the due date. All replies must reference the bid number listed above.

**EXECUTION**

In compliance with this invitation for bids and subject to all the conditions herein, the undersigned offers and agrees to furnish any or all services or goods upon which prices are offered, at the price(s) offered herein, within the time specified herein. By executing this offer, I certify that this offer is submitted competitively and without collusion.

**Failure to execute/sign an offer prior to submission shall render the offer invalid. Late offers are not acceptable.**

BIDDER:		
STREET ADDRESS:	P.O. BOX:	ZIP:
CITY, STATE & ZIP:	TELEPHONE NUMBER:	TOLL FREE TEL. NO
PRINT NAME & TITLE OF PERSON SIGNING:	FAX NUMBER:	
AUTHORIZED SIGNATURE:	DATE:	E-MAIL:

Offer valid for thirty (30) days from date of offer opening unless otherwise stated here: \_\_\_\_ days

**ACCEPTANCE OF BID:**

If any or all parts of this bid are accepted by Martin County Schools, an authorized representative shall affix their signature hereto and this document and the provisions of the Instructions to Bidders, special terms and conditions specific to this Invitation for Bids, the specifications, and the Martin County Board of Education Terms and Conditions (Attachment A) shall then constitute the written agreement between the parties. A copy of this agreement will be forwarded to the successful bidder(s).

For MARTIN COUNTY SCHOOLS USE ONLY  Offer accepted and contract awarded this ____ day of _____, 20____, as indicated on attached certification,  By _____ (Authorized Representative of Martin County Schools)
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## **Mandatory Pre Bid Meeting -**

### **Mandatory Pre-Bid Meeting Instructions**

To ensure all potential bidders have a clear understanding of the project requirements, a mandatory pre-bid meeting has been scheduled. Attendance is required for any company wishing to submit a bid. Failure to attend will result in disqualification from the bidding process.

#### **Meeting Details:**

- **Date:** Jan 29, 2025
- **Time:** 9:00 am
- **Location:** Williamston Primary School 400 West Blvd, Williamston, NC 27892

#### **Requirements for Attendance:**

##### **1. Company Representation:**

- Each bidder must have at least one representative from their company attend the meeting.
- The representative must be an employee or authorized agent of the company.

##### **2. Sign-In Procedure:**

- Attendees are required to sign in upon arrival (or register online for virtual meetings) to document their presence.
- Please arrive [insert recommended arrival time] to complete sign-in procedures and ensure a prompt start.

##### **3. Meeting Agenda:**

- Overview of the project and scope of work
- Review of bid requirements and submission process
- Site visit
- Questions and answers

##### **4. Documentation:**

- Attendees are encouraged to bring a copy of the bid package for reference.
- Additional materials or addenda provided during the meeting will become part of the official bid documents.

##### **5. Confirmation of Attendance:**

- A record of attendance will be maintained and included as part of the bidding eligibility verification process.
- Only companies with documented attendance will be allowed to submit a bid.

#### **Important Notes:**

- Questions or clarifications requested during the meeting will be addressed in a formal addendum if necessary.
- No alternative arrangements for attendance will be made. Failure to attend disqualifies the bidder.

Contact Information: For any questions regarding the pre-bid meeting, please contact: Amy Bennett, Director of Technology, [abennett@martin.k12.nc.us](mailto:abennett@martin.k12.nc.us)

We appreciate your cooperation and look forward to your participation.

**BID OPENING:**

*Bids will be publicly opened February 18, 2025 at 1:00 pm at 407 E BLVD Williamston, NC 27892 at 3:00 pm.*

**BID CLOSING DATE:**

All bids must be submitted no later than 3:00 pm on February 11, 2025. Late submissions will not be accepted under any circumstances.

**INSTRUCTIONS FOR BIDS**

**READ REVIEW AND COMPLY:** It shall be the offeror's responsibility to read this entire document, review all enclosures and attachments and comply with all requirements specified herein.

**INQUIRIES:**

All inquiries regarding this IFB should be submitted in writing. Inquiries can be submitted to the Martin County Schools Technology Director via email. Please refer to page 1 for contact information.

**NOTICE TO OFFEROR'S:** All bids are subject to the provisions of the Instructions for Bids, special terms and conditions specific to this IFB the specifications and the MCS BOE Standard Terms and Conditions.

MCS objects to and will not evaluate or consider any additional terms and conditions submitted with a bid response. This applies to any language appearing in or attached to the document as part of the offeror's response.

By execution and delivery of this document, the offeror agrees that any additional terms and conditions, whether submitted purposefully or inadvertently, shall have no force or effect.

**METHOD OF AWARD:** Solely determined by Martin County Public Schools, qualified bids will be evaluated and acceptance will be made to the lowest and best bid most advantageous to Martin County Schools as determined upon such considerations as: prices offered, the quality of articles offered, the general reputation and performance capabilities of the bidders, the substantial conformity with the specifications and other conditions set forth in the bid; the suitability of the articles for intended use; the standardization and compatibility with Martin County Schools operations, the related services needed; the date or dates and delivery and performance; and such other factors as deemed by Martin County Schools to be pertinent or peculiar to the purchase question.

**TABULATIONS:** Tabulations of bids and award information can be obtained by calling the purchaser on the first page of this document.

**INFORMATION AND DESCRIPTIVE LANGUAGE:** Offeror is to furnish all information requested and in the spaces provided in this document. In addition, each offeror must submit with their bid sketches, descriptive literature and/or complete specifications covering the product offered. Bids that do not comply with this requirement may be subject to rejection.

**BID MAILING/DELIVERY INSTRUCTIONS:**

Mail one original and two copies of the bid to the address below. The bid number should be included on the envelope.

**Sealed offers**, subject to the conditions made a part hereof, will be received at the address below, for furnishing and delivering the goods, software, and/or services as described herein.

<b><i>DELIVER TO:</i></b>
<b>Martin County Schools 407 E. Blvd Williamston, NC 27892 Bid Number:210-12125-1</b>

**LATE OFFERS**

Regardless of cause, late offers will not be accepted and will automatically be disqualified from further consideration. It shall be the Vendor’s sole risk to ensure delivery at the designated office by the designated time. Late offers will not be opened and may be returned to the Vendor at the expense of the Vendor or destroyed, if requested.

**NON-RESPONSIVE OFFERS**

Vendor offers will be deemed non-responsive and will be rejected without further consideration or evaluation if statements such as the following are included:

- “This offer does not constitute a binding offer”,
- “This offer will be valid only if this offer is selected as a finalist or in the competitive range”,
- “Vendor does not commit or bind itself to any terms and conditions by this submission”,
- “This document and all associated documents are non-binding and shall be used for discussion purposes only”,
- “This offer will not be binding on either party until incorporated in a definitive agreement signed by authorized representatives of both parties”, or
- A statement of similar intent.

**Description**

Martin County Schools intends to purchase and install intercom and bell systems for 3 schools in the following locations:

Martin County Schools intends to purchase and install intercom and bell systems for 3 schools in the following locations:

Jamesville Elementary School: 1220 Hardison Dr, Jamesville, NC 27846

Williamston Primary School: 400 West Blvd.Williamston, NC 27892

Rodgers Elementary School: 1220 Hardison Dr, Jamesville, NC 27846

**Approved Vendors**

Installing contractor shall meet the following qualifications:

- 1. The contractor shall be an established communications and electronics contractor that maintains a locally run and operated business and has done so for at least 10 years.
- 2. The contractor shall be a duly authorized distributor for at least 5 years of the equipment supplied with full manufacturer's warranty privileges.
- 3. The contractor shall hold an NC Electrical License
- 4. The contractor shall provide proof of certified installers. Certified by the manufacturer of the network connectivity they are providing for installation of their products.
- 5. The contractor shall have a RCDD on staff and provide credentials upon request.
- 6. The contractor shall have an established service office within 125-mile radius of the school district.
- 7. The contractor shall be able to provide phone support and remote PC support during normal business hours.
- 8. The contractor shall be able to provide normal service within 24 hours of a request and within 2 hours for emergency service needs.
- 9. The contractor must have installed similar systems for at least 3 school districts of similar size. Provide references below.

Reference #1

School District Name: \_\_\_\_\_

Address: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Contact Name: \_\_\_\_\_ Email: \_\_\_\_\_

Contact Phone: \_\_\_\_\_

Reference #2

School District Name: \_\_\_\_\_

Address: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Contact Name: \_\_\_\_\_ Email: \_\_\_\_\_

Contact Phone: \_\_\_\_\_

Reference #3

School District Name: \_\_\_\_\_

Address: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Contact Name: \_\_\_\_\_ Email: \_\_\_\_\_

Contact Phone: \_\_\_\_\_

**Product Specifications For Bid Package**

1. Bidder must submit manufacturer specifications sheets for all system components including network connectivity in the bid package.

**General System Requirements and Description**

The proposed Intercom replacement shall be a Hybrid System that consists of IP Speakers for all classroom/instructional spaces in the facility. Common areas, hallways and exterior horns shall be analog speakers that are connected to an IP based amplifier that is part of the proposed main equipment. Individual classroom/instructional spaces shall be a separate point on the system to allow two-way communication from the main office. The system shall be integrated to the owner's existing IP Phone system to allow existing staff phones to be used for individual room communication and All-call paging. Two of the manufacturers' administrative phones shall be installed in the main office. One at the reception desk and one in the principal's office. Digital call switches shall be installed in all classroom/instructional spaces in the facility.

**Approved Manufactures**

Bogen Communications Nyquist E7000 Series IP-Based System – Or Approved Equal  
(SEE APPENDIX A FOR SYSTEM REQUIREMENTS)

**Approved IP, Analog Speakers & Call Switches**

Model NQ-S1810CT-T1 (VoIP Ceiling Speaker) – Or Approved Equal

Model NQ-S1810WT-G3 (Wall Baffle) – Or Approved Equal

Model CSD2X2U-V2 (Drop-In Ceiling Speakers) – Or Approved Equal

Model MB8TSQ (Metal Box Speakers) – Or Approved Equal

Model WBS8T725 (Wooden Baffle Speakers) – Or Approved Equal

Model NQ-E7020-G (Digital Call Switch) – Or Approved Equal

Model SPT15A (Horn Loud Speaker) – Or Approved Equal

Model S810T725PG8U (Ceiling Speaker Grille Assemblies) – Or Approved Equal

Model S86T725 (Speaker Assembly) – Or Approved Equal

### **Hours of Access for Installation**

Installation may be performed during normal business hours for most work and areas that do not disturb classes. After school hours shall be required for any raceway installation that requires drilling of holes or anchors in the walls. No access during days that are scheduled for student testing.

### **Scope of Work**

The contractor shall furnish all materials, accessories, and labor necessary to deliver the Hybrid IP/Analog Intercom System. Any material and/or equipment necessary for the proper operation of the system, which is not specified or described herein, shall be deemed part of this Specification. Service shall include appropriate installation and materials as referenced in these specifications.

### **Owner Provided Equipment**

1. Network POE switches in MDF/IDFs and network support by owner.
2. PBX – SIP trunk License and programming of the existing phone system for integration to the IP Intercom system is by owner.

### **System Controller and Amplifiers**

1. The main controller/ head end equipment shall be rack mounted in the existing MDF rack. If rack space is not available, the contractor shall provide additional rack(s) as needed. Coordinate type and location with the owner.
2. The existing UPS/Battery Back up shall be used to provide power for the equipment.
3. IP Based Amplifiers should be of the same brand as the manufacture's main equipment being installed. These amplifiers shall be mounted in existing equipment racks in the MDF or IDFs as required. If rack space is not available, the contractor shall provide additional rack(s) as needed. Coordinate type and location with the owner.

### **IP and Analog Speakers**

1. IP Speakers to be installed for all classroom/instructional spaces in the facility. The contractor shall install lay-in type speakers when possible and surface mounted in areas with exposed or sheet rock ceilings.

2. The contractor shall Install a dedicated network drop for each classroom/instructional spaces in the facility to allow for individual two-way communication in that space. Each network drop shall consist of (1) Cat 6 data cable with a surface mounted box /Cat6 jack with patch cord at the speaker location. The network drops shall be installed at the nearest MDF or IDF locations. A dedicated patch panel shall be installed in each location for all cabling to be terminated on. Provide necessary patch cords and wire management in the rack. The owner shall provide necessary POE network Switches. The contractor shall make all necessary wiring connections for the system. The owner shall provide network programming support as needed on the existing network. All system programing is the contractor's responsibility.
3. Analog speakers shall be installed in the hallways, common areas, restrooms, administrative offices and exterior building locations. Install necessary individual speaker/amplifier circuits to allow proper zoning analog speakers for bell and page zones. This should be separated by classroom wings and or appropriate sections that allow zoning options by building sections. Minimum Separate zoning shall be as follows.
  - a) Hallways - one or more zones as required. Restrooms on the same hallway may be shared with hallway circuits
  - b) Café separate zone
  - c) Kitchen separate zone
  - d) Exterior - Horns separate zones as required. Shall not be connected to interior speaker circuits.
  - e) Office hallways and associated offices may be one circuit. This circuit shall be separate from other circuits.
4. Exterior Horns shall be installed to cover parking lots, bus loading, any areas designated as muster locations during building evacuation, and any walkways between buildings where students and staff may be located during class changes throughout the day.
5. Wiring for the analog speakers shall be two conductor shielded cable routed back to the nearest MDF/IDF. The wiring shall be terminated on 66 style punch blocks and each homerun is identified accordingly.

### **Digital Call Switches**

1. All classroom/instructional spaces shall have a digital call switch installed by the entrance door. The purpose of this location is to standardize throughout the facility, so all staff members know typically where they are located. This allows staff to easily access a call switch from the hallway as well as should it be necessary without having to navigate through the classroom in an emergency.
2. The call switch shall be mounted at 54" AFF when possible, to meet ADA requirements.
3. Mount on the same side on the doors in each room when possible. If the wall has obstructions, and the call switch cannot be installed near the door, consult with the IT Staff to make a determination on alternate locations.

4. Install surface mounted metal raceway and boxes as needed for the call switch location on block walls. For Sheetrock wall, recessed cut-in boxes may be installed and wiring concealed inside the wall.

### **Cabling Requirements**

1. Install all category 6 cabling according to NEC and Local Codes.
2. All data to be installed according to BICSI Standards and EIA/TIA Standards
3. Provide Plenum rated cable where applicable.
4. In exposed areas where cables will be exposed, the cable jacket shall be of similar color. Example: if cabling is installed surface mounted to white ceilings or walls, the cable jacket shall be white.
5. All Data drops shall be labeled on both ends. Consult with the IT department about a specific labeling scheme.
6. All Data drops shall be tested using certified Lan tester must be certified to a CAT6 rating as defined by ANSI/TIA Standards. A printout/Report of all test results must be submitted to the owner upon completion of the installation.

### **Existing Cable and Devices**

The National Electrical Code (NEC) requires any system being decommissioned in a facility to be entirely removed. This includes existing wiring no longer in use. The existing Speakers, wiring, and main system headend components shall be removed.

1. The Contactor shall be responsible for the removal of all existing Speakers, and Head End equipment only. The Owner shall be responsible for removal of the existing wiring.

### **Raceway**

1. The contractor shall provide and install all necessary raceways, boxes, sleeves, and firestop as necessary.
2. Some facilities do not have lay-in ceilings in some areas. J-hooks may be used for any of the locations. Any wiring below 10' shall be installed in conduit.
3. All exposed raceways shall be metal type raceway.
4. J Hooks shall be installed along the entire route at intervals no greater than 5 feet. All cabling installed must be in a J Hook pathway, cable tray, or conduit raceway. Exception:

Use of existing pathways is acceptable where applicable if the pathways are sufficient and meet NEC code and BICSI standards.

5. Underground raceway, if required, shall be PVC and transition to EMT above ground.

### **System Programming**

The installer shall complete all necessary programming of the system during the final installation and testing phase of the system. All necessary zone programming and bell schedules shall be provided by the school staff prior to completion of the project to ensure final programming can be completed at one time. This Programming shall include but not be limited to the following:

1. Custom Architectural number programming to match the dialing scheme requested by the owner for each room.
2. Create one or more page and bell zones as requested by the owner.
3. Create one or more bell schedules as requested by the owner.
4. User Login credentials for all staff members that will have direct access to the system for programming. This must include an initial setup on the staff computers as needed. The owner's IT staff may be required to assist with administrative rights to add any short cuts etc. to the computers.
5. Provide SIP Trunk Integration to the owners existing phone system to allow existing staff IP phones to access the intercom system for individual room calls and all-call paging.

### **System Training**

Provide user training to the school staff to include basic use and functions of the system, programming of the bells schedule, and any special features as requested by the owner. Training shall include at least up to two separate training sessions during the 1-year warranty period for up to 4 hours per session if required.

Provide extensive training on programming to the IT Department on all system programming features. The IT staff shall have full access to all programming areas of the entire system. Provide up to three separate training sessions during the 1-year warranty period for up to 4 hours per session if required or any combination of hours not to exceed 12 hours total.

### **System Testing**

Upon completion of the installation, test each speaker and call switch for proper operation.

Verify all audio levels are adequate for each classroom or other spaces. This shall include a test performed with the administrators and IT staff for final approval.

### **Warranty Information**

Provide a 1-Year Parts and Labor Warranty. This warranty covers the installed system against defects in material and workmanship for a period of 1-year from the date of acceptance from the owner. Any manufacturer warranty that exceeds the 1-year period shall be honored by the installer. The installer shall facilitate the warranty repair with the manufacturer. If this warranty repair is required after the 1-year labor warranty has expired, the installer shall provide labor and services necessary at their normal service rates billable to the owner.

### **As-Built Drawings and Closeout Documents**

Upon completion of the installation, the contractor shall provide the following documents. Provide two printed/bound copies and one electronic copy on USB thumb drive.

1. RCDD stamped drawings for the system. The drawings shall include the following:
  - a) Speaker locations, models and tap settings for each speaker.
  - b) Cable routes for each section and associated MDF or IDF Location shown on the drawing.
  - c) System Riser Diagram.
  - d) IP Speakers locations with data Label Identification Numbers
2. Provide O&M Manuals for the entire system including manufacturer user and programming documents.
3. LAN Test Results for all data drops installed for the system.
4. Back Up File/Database of the system programming from the system controller.
5. Warranty Letter

## **Approved Equal Systems**

**Alternate systems submitted for this bid should meet or exceed the following features and requirements.**

### **BOGEN NYQUIST E7000 SERIES IP-BASED COMMUNICATIONS SYSTEM**

E7000 Series is a software-based state-of-the-art IP-based paging and intercom solution that leverages the latest digital, mobile and software technologies to address today's educational environments, security challenges and mobile lifestyles. But to call it a paging and intercom system is to understate its capabilities in communication, safety and security. Bogen's E7000 is a suite of powerful, yet easy to use tools that allows educators to quickly and effectively manage campus and district-wide communications.

E7000 features a remarkably easy to use software suite with an intuitive web-based Graphical User Interface (GUI). E7000 is built upon Bogen's Nyquist software platform and is designed to leverage existing LAN/WAN and/or legacy 'home-run' cable infrastructure for cost effective deployments. IP phones and purpose-built E7000-compatible appliances provide convenient communication control and interoperability with third-party devices.

## **PART 1 – GENERAL**

### **1.01 GENERAL REQUIREMENTS**

- A. The conditions of the General Contract (General, Supplementary, and other Conditions) and the General Requirements are hereby made a part of this Section.
- B. All bids shall be based on the equipment as specified herein. The catalog numbers and model designations are that of the Bogen Nyquist E7000 Series IP-Based Communications System and the specifying authority must approve any alternative system.
- C. Contractors who wish to submit alternative equipment shall provide the specifying authority with the appropriate documentation. The submitted documentation must provide a feature by feature comparison identifying how the proposed equipment meets the operation and functionality of the system described in this specification. The alternative supplier-contractor must also provide a list to include six installations identical to the proposed system.
- D. The contractor shall provide the FCC registration number of the proposed system, where applicable.
- E. The contractor shall be responsible for providing a complete functional system, including all necessary components whether they are included in this specification or not.

### **1.02 SCOPE OF WORK**

- A. The contractor shall supply and install all equipment, accessories, and materials in accordance with these specifications and drawings to provide a complete and operating IP-Based Communications System including but not limited to:
  - 1. The platform shall provide complete Nyquist E7000 intercom and employ state of the art IP Technology including the minimum functions listed.

- a. Intercom call between staff locations and classrooms with Unlimited Station capacity
  - b. Interactive Facility Maps
  - c. User customizable Announcements with priority
  - d. Text-to-Speech Announcements
  - e. Emergency Classroom Check-In can be used to enhances campus security
  - f. Emergency or Normal Announcements are capable of being recorded and activated by a speed dial on an administrative console, DTMF, wireless panic button, mobile app, web browser or external IP networked system using HTTPS URL-based Application Programming Interface (API)
  - g. Internal clock is synchronized with NTP network time server whether on the LAN, WAN or Internet keeping the Scheduled events (Bells) and Announcements accurate within milliseconds.
  - h. Audio distribution allow for scheduled or manually activated audio to be activated from the Admin Web UI, contact closure, Admin phone and/or by use of Routines
  - i. Unlimited Schedules
  - j. Unlimited Time, Paging, and Audio Zones
  - k. Unlimited Page Stacking/Queueing
  - l. Unlimited Scheduled events
  - m. Unlimited Scheduled Audio events
  - n. Integrated Internet Radio Source
  - o. Email Notifications and Alerts the system can send an email with a system event, contact closure, or when a Routine has been activated to name a few
  - p. Supervised Station Status system can be setup to send an email when a Nyquist device goes offline.
  - q. Clock / Messaging Display capability improves school communications
  - r. Alert Filters – Allow facilities to monitor for such as weather events, earthquakes, tornados, tsunamis, volcanoes, public health, power outages, and many other National Weather Alerts emergencies and warnings.
  - s. Multi-Site All Call paging allows authorized users to make normal district wide pages
  - t. Multi-Facility Emergency All-Call paging allows authorized users to make emergency district wide pages
  - u. Administrative Graphical User Interface or GUI that can be used by technicians or Administrative: CoS and Roles define who has access to what parts of the GUI
  - v. Push-to-Talk Microphone
  - w. Ambient Noise Sensing
2. The system shall have a Routines feature that allows staff to activate via Admin Web UI, dial string, panic button, mobile app, API or with an Admin phone touch interface. Routines can automatically launch a procedure, or sequence of actions, that the E7000 system executes as a result of an input trigger. Routines are designed with school security plans and can support crisis plans for situations such as school lockdown, weather events, or emergency evacuation.
  3. Direct Inward Station Access or DISA allows administrator or first responder or emergency personnel with proper login codes to call into the system from outside the school into any classroom, zone, or entire facility with customer supplied SIP enabled Telephone Network. DISA is designed to allow remote monitoring, Facility All-Call or Zone Paging, and two-way conversation from outside the facility.
  4. Authorized staff can use the Admin Web UI to configure the Clock/Messaging Display function. They can use it to create messages that will display on monitors connected to the 10-Watt plenum-rated Intercom Modules with HDMI 1.3 (max. 1920 x 1080 @ 24/30 Hz) output or the NQ-GA10PV devices in a selected zone, multiple zones, or to specific stations. When creating the message, you can set

several options, including when and how long the messages are displayed, priority of messages, and the appearance of the messages. The schedule programming allows the event names to be displayed analog or digital clock along with day and date on an NQ-GA10PV Display. You can also remove messages from the message queue either manually or via a Routine.

5. The ADA requires that title II entities (State and local governments) and title III entities (businesses and nonprofit organizations that serve the public) communicate effectively with people who have communication disabilities. The goal is to ensure that communication with people with these disabilities is equally effective as communication with people without disabilities. With this in mind the Bogen Nyquist E7000 helps people who have vision disabilities with clear audio paging, massaging and hearing disabilities with visual messaging to any display to assist in communicating.
6. Interactive Facility Maps that are intuitive to use. Simply click on a classroom or area of the GUI and it can initiate an intercom, page or drill to another map level. In addition when the system is in Check-In mode the classroom has a pop up of a room's video feed via the Maps view if equipped. The system shall allow authorized staff to use the Map-based Audio/Video room monitoring during emergency check-in. Systems that don't have provisions for this are not considered equal.
7. In the event of wide area network or WAN outage every facility must be capable of operating standalone and allow for all features listed within this specification to work. Systems that rely on the WAN to operate shall not be considered for comparison in this bid.
8. Manage Check-In functionality that allows staff to quickly verify that they are aware that a check-in event is underway and are reporting classroom status for their assigned classrooms or areas. For staff to check-in all they have to do is press their Call Switch after they have completed their required check-in procedure. Examples of check-in events include but are not limited to weather related shelter-in-place, safety related lockdown, fire evacuation, room occupancy.
9. The E7000 has a Disable Audio feature that can be activated via contact closure from fire alarm or security system, Admin Web UI, dial string, panic button, mobile app., API or with an Admin phone touch interface. When the E7000 has its Audio Disabled the following features are disabled: programmed or manually activated audio distribution, Zone Paging, normal announcement files, All-Call Paging, manual normal tones and scheduled event tones.
10. Optional password protection for multi-site emergency all-Call, multi-site all-call, facility page. Emergency all-call page, all-call page, emergency announcement, announcement, zone page, alarm, and tone are used to prevent unauthorized use of the system.
11. Text-to-Speech option allows Admin Web UI users to add custom announcements into the system by simply typing the text that you want converted to speech for this announcement. The system will then generate a .wav file that can be used by the E7000 system. Systems that don't offer Text-to-Speech options shall not be equivalent.
12. Installation Wizards are available for installers to reduce the setup time on major components in the system programming. Included wizards are as follows: Customer Information, Dialing Length, Station, User, Time Zone, Network Time Server, and Zones as a minimum.

### **1.03 QUALITY ASSURANCE**

- A. All items of equipment shall be designed by the manufacturer to function as a complete system and shall be accompanied by the manufacturer's complete service notes and drawings detailing all interconnections.
- B. The contractor shall be an established communications and electronics contractor that maintains a locally run and operated business and has done so for at least 10 years. The contractor shall be a duly authorized distributor of the equipment supplied with full manufacturer's warranty privileges.
- C. The contractor shall show satisfactory evidence, upon request, that he or she maintains a fully equipped service organization capable of furnishing adequate inspection and service to the system. The contractor shall maintain at his or her facility the necessary spare parts in the proper proportion as recommended by the manufacturer to maintain and service the equipment being supplied.

### **1.04 SINGLE SOURCE RESPONSIBILITY**

- A. Except where specifically noted otherwise, all equipment supplied shall be the standard product of a single manufacturer of known reputation and a minimum of 30 years of experience in the industry. The supplying contractor shall have attended the manufacturer's installation and service training classes. A certificate of this training shall be provided with the contractor's submittal.

### **1.05 SAFETY / COMPLIANCE TESTING**

- A. The communications system and its components shall, where applicable, bear the label of a Nationally Recognized Testing Laboratory (NRTL), such as Environmental Technology Laboratory (ETL), and shall be listed by their re-examination service. All work must be completed in strict accordance with all applicable electrical codes, under direction of a qualified and factory-approved contractor, and to the approval of the owner.
- B. Bogen's Nyquist E7000 solution is consistent with those NEMA SB 40-2015 requirements that specifically apply to school paging and intercom systems only as outlined within the ANSI/NEMA SB 40-2015 standards publication.
- A. All system wiring shall be labeled at both ends of the cable. All labeling shall be based on the room numbers as indicated in the architectural graphics package.
- B. Wiring shall be done per manufacturer's recommendation (Cat 5 or West Penn #357) depending on speaker type. All terminal connections are to be on barrier strips.

### **1.06 WARRANTY**

- A. The Bogen Nyquist hardware products identified in this specification shall be warranted to be free from defects in materials and workmanship for five (5) years from the date of sale to the original purchaser; except for the NQ-SYCTRL, NQ-T1100 and NQ-T1000 which each carry a two (2) year warranty. The

Bogen Nyquist software products identified on this specification are warranted to be free from defects in material and workmanship for ninety (90) days from the date of sale to the original purchaser.

## **PART 2 - SYSTEM SPECIFICATION**

### **2.01 MANUFACTURERS**

- A. Manufacturers, subject to compliance with requirements specifications, provide the following system:
  - 1. Bogen Nyquist E7000 IP-based paging and intercom solution manufactured by Bogen Communications LLC.
- B. The specifying authority may approve any alternative system at the time of bid.
- C. The intent is to establish a standard of quality, function, and features. It is the responsibility of the contractor to ensure that the proposed product meets or exceeds every standard set forth in these specifications.
- D. The functions and features specified are vital to the operation of this facility; therefore, inclusion in the list of acceptable manufacturers does not release the contractor from strict compliance with the requirements of this specification.

### **2.02 EQUIPMENT**

- A. Nyquist NQ-SYSCTRL System Controller
  - 1. Configuration and management via a Web-based Graphical User Interface (GUI)
  - 2. Wizard based setup for quick installation
  - 3. Remote access from virtually any PC/MAC, tablet, or mobile device
  - 4. Continuous monitoring of stations and appliances to ensure system operation
  - 5. Dual network adapters to allow the System Controller to operate on two separate networks
  - 6. Music automatically added to music library and playlist from USB port
  - 7. Network-based audio that can be sourced (input) from any number of Nyquist appliances (NQ-P0100, NQ-A2xxx, NQ-A4xxx, etc.)
  - 8. Ample storage for music files, recorded announcements, and call recordings
  - 9. G722 and OPUS audio codec support to deliver superior HD audio quality
  - 10. Convection air cooled; fan-less design for quiet, maintenance-free operation
  - 11. Wall, rack, or shelf mountable
- B. Nyquist NQ-E7030 Analog Station Bridge (ASB)

1. 24 station interface supporting analog speakers and call switches
2. 120-Watts of available power at 25-Volts
3. Two dynamic talk paths/amplification channels
4. Support Category G wiring or better
5. 25/70-volt speaker(s), ceiling-mounted, wall-mounted, and paging horns
6. CAN Bus 2.0 interface designed for support of Nyquist Digital Call Switch (DCS) NQ-E7020 that can initiate Normal, Urgent, or Emergency priority calls, all with options for Privacy Mode
7. Analog/Mechanical Call Switches capable of placing Normal, Urgent, or Emergency priority calls, Bogen CA15C rocker style momentary call button
8. Wall, rack, or shelf mountable

C. Nyquist NQ-P0100 Matrix Mixer Pre-Amplifier (MMPA)

1. No less than four Mic/Line inputs used for analog audio input like AM/FM Tuner or CD Player
2. Channel 4 configurable for Push-to-Talk MIC application
3. Line Level output to drive external amplifier
4. Software programmable configuration and operation
  - a. Push-to-Talk Channel
  - b. Push-to-Talk Type
  - c. Push-to-Talk Zone
  - d. Mixer Channels
5. Configurable built-in DSP
  - a. Noise Gate
  - b. Compressor/Limiter functions, etc.
  - c. Tone Controls: Low Shelving, Mid Bandpass and Hi Shelving
  - d. Multi-band Parametric EQ
  - e. Variable Low-Cut/High-Pass filters
  - f. CH1 can be configured as a digital AES/EBU (AES3) input
6. USB 2.0 host port, Type-A connector (future use)
7. Powered by 100V – 240V Universal AC Mains
8. Wall, rack, or shelf mountable

D. The Nyquist two and four channel amplifiers available in the following number of channels and watts

1. NQ-A2060 two channel with 60 watts per channel
  2. NQ-A2120 two channel with 120 watts per channel
  3. NQ-A2300 two channel with 300 watts per channel
  4. NQ-A4060 four channel with 60 watts per channel
  5. NQ-A4120 four channel with 120 watts per channel
  6. NQ-A4300 four channel with 300 watts per channel
  7. These amplifiers shall include GUI based DSP controls; 16-band Graphic Equalizer; Signal Present and Clip Monitor; Adjustable High Pass, Low Pass, and Bandpass Filters; Noise Gate; Compressor/Limiter; and 7-band Parametric Equalizer. Outputs shall be provided for 4-, 8-ohm, 25V, and 70V distributed systems.
  8. Bridged or Mono Mode
  9. Integrated Digital Signal Processor
    - a. Noise Gate
    - b. Compressor/Limiter functions, etc.
    - c. Tone Controls: Low Shelving, Mid Bandpass and Hi Shelving
    - d. Multi-band Parametric EQ
    - e. Variable Low-Cut/High-Pass filters
  10. One Line-Level Input on two channel amplifiers
  11. Two Line-Level Inputs on the four channel amplifiers
  12. 100/1000 GB ethernet connection
  13. USB 2.0 host port, Type-A connector (future use)
  14. 100V – 240V Universal AC Mains
  15. Wall, rack, or shelf mountable
  16. The amplifiers shall carry the necessary safety agency listings for both the US and Canada. The amplifier shall employ convection air cooling. Amplifiers that require fans for cooling shall not be considered equal.
- E. Nyquist NQ-E7010 Input/Output Controller
1. Power over Ethernet 802.3af compliant
  2. 8 x Dry Contact Closure Inputs
  3. 8 x Relay Driver Outputs (Open-Collector)

4. USB 2.0 host port, Type-A connector (future use)
5. Software programmable configuration and operation including; Contact Type, Extension, Name, Close Interval, Actions (911, Audio, Alarm, Announcement, All-Call, Multi-Site-Emergency-All-Call, Emergency-Call, Emergency-All-Call, Hourly, Audio-Disabled, No Action, Page, Tone, Enable-Audio and Manual), Action ID, Zones, Close Extension, Dashboard Type, Dashboard Title, Dashboard Scope, Dashboard Text, Dashboard Style, Email and Routines
6. Wall, rack, or shelf mountable

F. Nyquist NQ-GA10P 10-Watt Intercom Module

1. Power over Ethernet 802.3af compliant
2. Low-impedance (8-ohm) speaker output. Designed for use with Drop-In Ceiling Speaker CSD2X2L/U
3. Network-based audio output (paging, intercom, audio distribution)
4. Talkback support
5. Push-to-Talk Microphone that can be routed anywhere over Bogen's Nyquist network
6. Ambient Noise Sensor connection for Amplifier volume output control
7. DSP-based noise rejection and voice bandwidth optimization
8. Web-based configuration
9. Analog Call Switch support (Bogen CA15C, or equivalent)
10. Digital Call Switch support (Bogen NQ-E7020)
11. Audio Active Control SPDT Relay Output Rated at 2A
12. In-wall, in-ceiling, shelf, or device mountable UL 2043 plenum-rated package
13. Integrated slotted mounting flanges
14. Available PS4815W 48VDC External Power Supply when PoE isn't available

G. Nyquist NQ-GA10PV 10-Watt Intercom Module with HDMI Clock/Messaging Display.

1. HDMI 1.3 (max. 1920 x 1080 @ 24/30 Hz) output that can be configured many ways:
  - a. Analog Clock with Messaging
  - b. Digital Clock with Messaging
  - c. Single Column Messaging
  - d. Two Column Messaging
  - e. Three Column Messaging
  - f. Priority Fullscreen Messaging

2. Power over Ethernet 802.3af compliant
3. Low-impedance (8-ohm) speaker output. Designed for use with Drop-In Ceiling Speaker CSD2X2L/U
4. Network-based audio output (paging, intercom, audio distribution)
5. Talkback support
6. Push-to-Talk Microphone that can be routed anywhere over Bogen's Nyquist network
7. Ambient Noise Sensor connection for Amplifier volume output control
8. DSP-based noise rejection and voice bandwidth optimization
9. Web-based configuration
10. Analog Call Switch support (Bogen CA15C, or equivalent)
11. Digital Call Switch support (Bogen NQ-E7020)
12. Audio Active Control SPDT Relay Output Rated at 2A
13. In-wall, in-ceiling, shelf, or device mountable UL 2043 plenum-rated package
14. Integrated slotted mounting flanges
15. Available PS4815W 48VDC External Power Supply when PoE isn't available

H. Nyquist NQ-S1810WT-G2 Classroom VoIP Wall Baffle Speaker(s) GEN-2

1. Adjustable volume in 3db increments 1/8, 1/4, 1/2, 1, 2, 4, and 8 Watts via web browser
2. Built-in 10W amplifier
3. MEMS digital microphone for talkback
4. Audio Active Control SPDT Relay Output Rated at 2A
5. Power over Ethernet 802.3af compliant
6. CAN Bus 2.0 Interface connects to Nyquist Digital Call Switches (NQ-E7020)
7. Capable of four (4) different wall mounting options:
  - a. 2X2 Wall Mount
  - b. Box Mount
  - c. Corner Mount
  - d. Tilted Mount

I. Nyquist NQ-S1810CT-G2 Classroom VoIP Ceiling Speaker(s) GEN-2

1. Adjustable volume in 3db increments 1/8, 1/4, 1/2, 1, 2, 4, and 8 Watts via web browser
2. Built-in 10W amplifier
3. MEMS digital microphone for talkback
4. Audio Active Control SPDT Relay Output Rated at 2A
5. Power over Ethernet 802.3af compliant
6. CAN Bus 2.0 Interface connects to Nyquist Digital Call Switches (NQ-E7020)
7. Optional hardware available:
  - a. RE84 Recessed Enclosure (Back box)
  - b. TB8 Time Bridge
  - c. MR8 Mounting Ring (for installation where RE84 is not used)

J. Nyquist NQ-GA20P2 Plenum-Rated 20-Watt Integrated Amplifier

1. Single 20-watt, 8-ohm speaker output
2. Single Balanced Line Output
3. Power over Ethernet Plus (PoE+) 802.3at compliant
4. Nyquist network-based audio output (paging, intercom, audio distribution)
5. Web-based configuration
6. Front panel Power and Status LEDs
7. In-wall, in-ceiling, shelf, or device mountable UL 2043 plenum-rated package
8. Integrated slotted mounting flanges
9. Available PS4830W 48VDC External Power Supply when PoE+ isn't available

K. NQ-T1100 VoIP Admin Phone Color Touch Display (aka Admin Station)

1. 7" 800 x 480-pixel color display with backlight
2. Touch screen display for one touch operation
3. Full-duplex hands-free speakerphone with AEC
4. Call hold
5. Mute

6. Redial, call return, auto answer
  7. PoE (802.3af) Class-3 support
  8. Headset with EHS support
  9. Dual Gigabit Ethernet ports
  10. Desk Mountable
  11. Optional Wall mount available
- L. NQ-T1000 VoIP Staff Phone LCD Display (aka Staff Station)
1. 132 x 64-pixel graphical LCD with backlight
  2. Two-port 10/100M Ethernet Switch
  3. Full-duplex hands-free speakerphone with AEC
  4. Call hold
  5. Mute
  6. Redial, call return, auto answer
  7. PoE (802.3af) Class-3 support
  8. Dual-color (red or green) illuminated LEDs for line status information
  9. Two 10/100M Ethernet ports
  10. Wall or desk mountable
- M. Optional third-party equipment support
1. Telephony interface device(s) for FXO/FXS analog port connectivity
  2. Third-party hardware FXS gateway support includes:
    - a. Two port FXS gateway Cisco SPA-112 typically used for analog interface to existing PBX CO port support
    - b. 24 port FXS gateway Yeastar TA-2400 typically used for analog staff phone support

## **2.03 COMPONENTS AND DESCRIPTIONS**

- A. The Nyquist E7000 Series Educational System is a software-based VoIP paging and intercom system.

B. The System must be capable of supporting IP wiring, 25-Volt speakers and analog call-switches, and equivalent competitive systems utilizing the existing architectural numbering scheme. The VoIP capabilities of the Nyquist system will enable the support of the features across the Nyquist appliances within the facility. The following sections define how the system handles each of the features in the system. Systems that do not allow the reuse of existing wiring or numbering scheme shall not be deemed acceptable. Systems that do not allow appliances to be seamlessly integrated via the existing customers LAN are not considered equal.

C. Nyquist E7000 Software

1. The Nyquist E7000 software is pre-installed on a Nyquist NQ-SYSCTRL System Controller or can be optionally installed on a dedicated dealer or customer supplied server. An unlimited number of facilities can be networked into a Nyquist-based District.
2. If the Nyquist Software is not a Nyquist NQ-SYSCTRL System Controller than the Minimum Server Requirements apply to dealer or customer supplied Server
  - a. Debian Linux OS (AMD 64-bit version) release 8.4.x – 8.11.0
  - b. Quad-core Intel-based processor running at 3.0 GHz or higher
  - c. 8 GB RAM
  - d. One 250 GB disk drive or larger
3. Redundant Array of Independent Disks (RAID) is recommended for redundancy and high availability.
4. Consider using a larger drive if large amounts of audio (for example, voice mail, announcements, recordings, and music) are being stored on the system. Other factors that should be considered are:
  - a. How often will backups be performed?
  - b. Will the system be backed up locally or remotely on a detachable drive, SAN/NAS, or NFS?
  - c. How many users will have voicemail ability?
  - d. How long will voicemail messages be stored?
  - e. Will voicemail messages be part of the local system backups?
  - f. NIC 10/100/1000 MB Ethernet port
  - g. One or more PCI/PCI Express (PCIe) slots if telephony network connectivity other than, or in addition to, SIP trunking
  - h. One or more PCI/PCIe type third-party telephony interface cards (for example, FXO, FXS, etc.) if telephony network connectivity other than, or in addition to, SIP trunking
5. Audio shall be transmitted between the System Controller and the Nyquist appliances using the customer supplied LAN/WAN using both G.722 and Opus 48k audio encoding and streaming technology to deliver High Definition DVD quality audio. Systems that do not use G.722 and Opus for audio encoding and streaming shall not be deemed equivalent.
6. Installers have the ability to verify that the Nyquist System Controller can access Internet-based URLs required for the system to run properly by clicking on the "Check Internet Site Access" on the license activation wizard. If the installer made mistakes in configuring the network the install has the ability to go back and make changes to the network by clicking on the "Network Wizard" button.
7. The Nyquist software and Nyquist appliances firmware shall be upgradeable via the Nyquist Web UI System Update page that contains a list of available Nyquist software updates. When automatic

software check and download are enabled, new software updates will automatically be downloaded and appear in the System Update list, and a dashboard message will be displayed to announce newly available software. Release notes can be viewed for each available update. System updates can be started via the System Update list. The System Update page includes a "Check for System Updates" button that can be used to manually check for and download available Nyquist software updates.

8. Prior to performing Nyquist updates the technician shall have the ability to verify if the default gateway, Network Time Protocol, and Domain Name Servers are configured and available, to obtain network interface and routing tables status, and to display the Nyquist E7000's public IP address. See "Check Internet Site Access" under "System Parameters". The E7000 system can be setup to automatic check for new Nyquist System software and automatic download of new Nyquist System Software
9. It shall be possible for a Nyquist facility to make "station-to-station" calls and "remote facility" All-Call pages to a single facility or to all Nyquist facilities in a district via the Nyquist Web UI or an Admin Station. Systems that require remote viewing software or other application software to be installed/loaded on to additional servers or PCs to make station-to-station calls and remote facility All-Call or district paging shall not be considered equivalent.
10. The Nyquist software is designed to handle all facility and district-wide communications, including but not limited to, inter-facility intercom calling and paging, district-wide Emergency All-Call and local facility point-to-point calls. Via the Nyquist Web UI, every facility shall be configured with the IP addresses of all the other remote facilities within the district. To ensure that these communications are operating correctly at all times the Nyquist appliances are supervised and remote facilities are monitored, if a device or facility has a fault the system can send and/or email and also display a message if a device changes state. System that don't provide Station Supervision and remote Facility Monitoring shall not be considered.
11. Nyquist can support an unlimited number of facilities; however, the maximum number of simultaneous remote facility intercom calls supported is based on the actual performance of the WAN and the Nyquist System Controller CPU load.
12. The voice quality of the facility calls may vary based on the WAN conditions. The maximum network bandwidth that All-Call and Zone Paging uses is average of 0.086 Mbps (Multicast G.722), and intercom calls average of 0.171 Mbps (unicast, G.722).
13. The system shall facilitate the repetitive playing of Normal or Emergency audio tones or announcements directed to an All-Call or a Paging Zone until stopped by the Nyquist user via the Web UI, an Admin Station, or a dry contact closure connected to the Nyquist I/O Controller NQ-E7010.
14. Through the use of Routines, a trained individual can create a routine that can perform a sequence of events that can include the repetitive playing of normal or emergency audio files, make or break contact closure(s), display different messages in different areas, send email(s), and place a phone call (if equipped) offsite and play a pre-recorded message. Routines can be triggered/started by Application Programming Interface (API) or the playing of normal or emergency audio files, make or break contact closure(s) or almost any feature or function in the E7000 system. The system must also be capable of executing multi-site Routines (e.g., supports District-wide lockdown). System that don't provide Routines are not equal.

15. A built-in Master Clock shall be included to automatically control class change bells or other time-based events. The Master Clock shall have an unlimited number of Events that may be programmed into any of the unlimited number of Facilities, unlimited number of Schedules, and unlimited number of Holiday events. The schedules shall be nameable for easy selection when assigning schedules to days or overriding a schedule. Schedules can be overridden via the Admin Web UI or Admin phone.
16. Network Time Synchronization. The system shall be capable of periodically updating/synchronizing the processor's time with a Network Time Server running Network Time Protocol (NTP) via the school's LAN network. Systems that do not provide Network Time Synchronization will not be deemed equivalent. The Nyquist server can be the NTP server for other devices on the LAN such as IP clocks and other IP devices.

#### D. Nyquist E7000 System Software Application

1. The Nyquist software is pre-installed on the Nyquist System Controller, and upon boot-up, users can log in to the Nyquist application via a web browser that supports WebRTC. Systems that require Com Port redirect software, client PC application, software or serial-to-Ethernet adapters for user access are not deemed equal. Communications between the System Controller and the Web UI(s) shall be via secure Hyper Text Transfer Protocol (HTTPS) connections (i.e., https://).
2. The Nyquist Web UI shall be configured with four different default user access levels, based on four unique user roles. Systems that do not provide unlimited access levels and unlimited number of user roles are not considered equal.
3. The four default roles shall be: admin, optech, operator, and user. These roles provide a starting point/example for administrators to create additional roles
4. Only a user assigned the admin role shall be able to provide access to users, giving them the ability to create, delete, edit, and view system parameters.
5. Only an Administrator shall have the ability to adjust roles and Class of Service (CoS) of users. The roles determine if users can view the definable data objects that can include configuration, alarms, and performance data and if users can perform certain operations based on the user's role and station's CoS. All changes to roles and CoS are effective immediately, without the need to restart the browser or reboot the System controller or server.
6. The Nyquist Web UI Dashboard shall provide full administrative capabilities to manage/operate the following system features:
  - a. Calling/Paging – Used to access directory, dial pad, Page Exclusion, Call Forwarding, Zone Page, Record Page, Prepending Page, All-Call, Emergency All-Call, Manage Check-in and operate Routines.
  - b. Multi-Site Calling/Paging – Used for Facility Page, Multi-Site All Call, and Multi-Site Emergency All Call.
  - c. Tones/Announcements – Used for Tones, Announcements, Alarms, Stop Announcement, Display Message, and Remove Message.
  - d. View Weekly Schedule – Used to show the current active Bell Schedules.
  - e. Audio Distribution – Used to distribute audio sources to Stations, Audio Zones or entire facility. Operators can create an unlimited number Audio Distributions as needed by the facility

- f. Enable or Disable Audio – Used to place the Nyquist system into Page Exclusion mode (i.e., “mute” the system) when a contact closure is supplied from the fire alarm panel. Systems that do not provide this capability are deemed not equal.
7. Systems that require application software to be installed on a PC to manage the above features shall not be considered.
8. To facilitate installation and configuration of the system, additional Web UI menus are required. The menus shall only be visible to users with the correct roles and CoS. The navigation menus found on the Web UI shall be as follows:
  - a. System Parameters – Allow installers to adjust core system parameters including Product License, Restart Server, Station Supervision, Email Configuration, System Update, Shut Down Server, Check Internet Site Access, Check Server Status, Edit system tools and adjust all the System Parameters.
  - b. Zones and Queues – Allow installers to create and modify Paging, Time, and Audio Zones. Installers can also setup Queues that can be used to eliminate feedback.
  - c. Schedules – Allow installers and administrators to create bell schedules for multiple Schools, predefine alternative schedules to run, prevent the bells from ringing on a holiday, and schedule an announcement to play. The system shall allow an unlimited number of schedules to operate simultaneously within a facility.
  - d. CoS Configuration – Allow the installer to create, modify, and delete CoS groups that control station access to the following features: Call-in Level, Zone Paging, All-Call Paging, Emergency All-Call, Inter-Facility Call/Page, Audio Distribution, Remote Pickup, Join Conversation, Call Forwarding, Walking Class of Service, External Call Routing, Call Transfer/3-way Calling, Manually Activate Tone Signals, Call Any Station, Manage Recording, Monitor Calls, Monitor Locations, Conference Admin, Conference User, Voicemail, Record Calls, Activate Alarm Signals, Disable Audio, Enable Audio, Allow Callee Auto-answer, District Paging, Inter-Facility Features, Manage Output Contacts, and Execute Routines.
  - e. Admin Groups – Allow the installer to create, modify, and delete software groupings of admin phones, staff phones, and Admin Web UIs that can ring when a station calls in with a call switch.
  - f. Stations – Allow the installer to set up, modify, and delete stations; set up Page Exclusion; view Station Status; and add New Stations.
  - g. Bridge Devices – Allow the installer to configure the Nyquist ASBs.
  - h. Amplifier Devices – Allow the installer to configure Nyquist Two and Four and PA Amplifiers
  - i. Audio – Allow the installer to upload and manage Announcements, Playlists, Recordings, Songs, Tones, and Internet Radio Services. The system must support the uploading of both MP3 and WAV files and make Audio file management simple for users. Systems that limit the size of Audio files shall not be considered equal.
  - j. Users – Allow the installer to manage users by giving them the proper roles and assign extensions if needed.
  - k. Roles – Allow the installer to grant users rights to Create, Delete, Edit, Restart System, Sort Menu, Systems Update, Manage, Import/Export, Restore, Settings, or View.
  - l. Facilities – Allow the installer to set up the district wide facilities for remote paging and calling.
  - m. Outside Lines – Allow the installer to set up FXS and FXO ports for inbound and outbound system calling.
  - n. SIP Trunks – Allow the installer to set up SIP trunks into the facility for inbound or outbound calling.
  - o. Call Details – Allow the installer to review the historical system activities that can be used for incident investigation or system troubleshooting.

- p. System Backup/Restore – Allow the installer to perform system backups or restores and allow the backups to be scheduled to run automatically.
- q. System Logs – Allow the installer to view and export log files, Nyquist-Intercom, and Web Server logs that can be used for troubleshooting and technical assistance.
- r. Paging Exclusions – Allow the installer to view and edit stations that are excluded from paging.
- s. Firmware – Update firmware for Nyquist speakers and appliances.
- t. Routines – Allow installers to create routines that are a sequence of actions, that the Nyquist system executes as a result of an input trigger. Routines can support crisis plans for situations such as school lockdowns, weather events, or emergency evacuations.
- u. Alert Filters – Allow installers to select the National Weather Alerts that the facility needs to monitor for such as weather events, earthquakes, tsunamis, volcanoes, public health, power outages, and many other emergencies.
- v. Systems that do not provide these options as a minimum shall not be considered equal.

#### E. Nyquist NQ-E7030 Analog Station Bridge

1. The Nyquist NQ-E7030 ASB allows facilities with existing Multicom or Quantum or compatible intercom systems to upgrade to Nyquist. Each ASB supports up to 24 speakers and call switches with 120-Watts of embedded 25 Volt power. The ASB is designed to drive almost any combination of 25 Volt speakers and horns.
2. The Nyquist ASB contains two 120-Watt amplifiers that are used dynamically by the system and allows two simultaneous amplified audio paths through the ASB. Either amplifier can be used for an intercom call and/or program (Paging, Time Tones and Audio) distribution.
3. Each of the 24 station interface ports - Support connections to as many as 24 individual 25 Volt speakers with one 25 Volt speaker connection per interface used for direct communication between the admin area and the classroom via Half-duplex talkback using the speaker as pickup and the 24 dry contact closure-type analog Call Switch connections allow for support of legacy Call-Switches like the CA15C.
4. On the back of the ASB is a CAN Bus 2.0 Interface designed to support the connection of 24 or more Nyquist NQ-E7020 Digital Call Switches DCS that can be associated with the programmed stations. Systems that don't support Digital Call Switches shall not be considered equal.
5. On the front of the ASB are two (2) x RGB full spectrum LED's. The POWER LED appears as solid red during initial power up, flashes green during a boot sequence, and appears solid green when fully booted. The STATUS LED uses the following indicators to provide information about the appliance:
  - a. Flashing red – No network connection found
  - b. Solid blue – The ASB is in an uninitialized state and is not associated to a server. (The server may be in a discovery mode.)
  - c. Solid green – The ASB is registered to a Nyquist server and is in normal operation
  - d. Flashing green – The ASB has an IP address but is not registered with the Nyquist server
  - e. Solid red – The ASB needs to be rebooted or reset so that the Nyquist application can resume
  - f. Flashing Blue – The ASB is updating.
6. USB 2.0 host port, type A connector designed for future applications.

7. On the front of the ASB you will also find the 10/100 Ethernet network connection. The ASB can be configured with a static IP address or use DHCP for connection to the customers network as required by the Network Administrator
8. The ASB gets its power from a universal mains power supply (100VAC – 240VAC)
9. The Nyquist NQ-E7030 ASB shall be rack, wall, or shelf mountable and shall include the required mounting bracket hardware.

F. Nyquist NQ-P0100 Matrix Mixer Pre-Amplifier (MMPA)

1. The Nyquist NQ-P0100 MMPA is designed to bring external audio into the Nyquist system. The MMPA interfaces with a local sound system by accepting one or more analog audio sources, mixing them, and outputting them to either, a) the network for Audio Distribution, or b) the MMPA's line level output that can then be inserted into an external amplifier to drive local sound system in gyms, cafeterias, auditoriums, etc. The MMPA supports the following:
  - a. Four software selectable Line/MIC Input channels via three XLR connectors and four sets of screw-terminals. Input channel four (4) shall be capable of being configured to support a Push-to-Talk microphone Bogen model DDU-250. Channel-1 can be configured as a digital AES/EBU (AES3) input. Line/Monitor output – The MMPA becomes a station on the Nyquist system, allowing users to call it directly or to include it in any of the Page, Time, or Audio Zones and can be direct one-way page by calling it extension.
  - b. The MMPA shall support the following features: Line-Level output to drive input on a local amplifier or self-amplified speaker; One USB 2.0 host port (Type-A connector) for future use; two (2) x RGB full spectrum LED status indicators.
  - c. Configurable built-in Digital Signal Processing for Noise Gate, Compressor/Limiter functions, etc., Tone Controls: Low Shelving, Mid Bandpass and Hi Shelving, Multi-band Parametric EQ, and Variable Low-Cut/High-Pass filters.
  - d. The MMPA is powered by Universal mains supply (100VAC – 240VAC).
  - e. The MMPA shall be wall or shelf mountable and shall include the required mounting bracket hardware.
2. The system shall be equipped a minimum of one (1) Nyquist MMPA that allows for up to four user-configurable audio inputs. The MMPA shall support Line, MIC, and digital AES/EBU (AES3) input sources. The system supports an unlimited number of MMPAs.

G. Nyquist NQ-E7010 Input/Output Controller

1. The Nyquist NQ-E7010 I/O Controller is designed to accept contact closure inputs and activate open-collector outputs to drive relay coils. These inputs and outputs are used to trigger events or to be triggered by an event or Routine within the Nyquist system.
  - a. PoE Class-1; IEEE 802.3af compliant with Optional 48VDC 15W power supply
  - b. Eight Dry Contact Closure Inputs that can be used with Fire Alarm Override Relays, external event triggers (for example, Lockdown Buttons, etc.)
  - c. Eight Relay Driver Outputs (Open-Collector) for use with Clock Correction (Sync Pulse), response to contact closure inputs, etc.
  - d. USB 2.0 host port, Type-A connector (future use)
  - e. Two (2) x RGB full spectrum LED Power and Status indicators

2. The Nyquist NQ-E7010 I/O Controller shall support wall or shelf-mounting options and shall include the required mounting bracket hardware.
  3. The Nyquist NQ-E7010 I/O Controller shall be designed for wall or shelf mounting.
- H. Nyquist NQ-S1810CT-G2 VoIP Ceiling Speaker with Talkback and NQ-S1810WT-G2 VoIP Wall Baffle Speaker with Talkback
1. The VoIP speakers shall not require traditional intercom wiring or transformer taps to manually set or adjust volume. Simply connecting them via Cat 5 or better to a PoE Switch or PoE Injector on the system's network should allow them to be ready to program into the system. Volume is controlled via the Nyquist Web UI. All Nyquist audio appliances shall use a wideband Opus codec for DVD quality Audio Distribution. Use of the Opus codec, along with G.722, allows for High Definition (HD) audio. Nyquist VoIP speakers shall be equipped with a digital MEMS microphone to achieve superior talkback audio. VoIP Speakers that utilize the speaker as the microphone shall not be considered equal.
  2. Software adjustable volume in 3db increments 1/8, 1/4, 1/2, 1, 2, 4, and 8 Watts via web browser allow the operators to adjust the Built-in 10W amplifier.
  3. The MEMS digital microphone provide unprecedented talkback from the classroom allowing staff to hear the slightest inflection in anyone's voice.
  4. Audio Activated Control Relay Output designed to override local classroom sound systems
  5. The Nyquist VoIP speaker are equipped with an audio activated control Relay Output that is normally open or closed and changes state when audio is active. This relay can be used to override a local sound system in the classroom.
  6. The VoIP Speakers shall be PoE IEEE 802.3af compliant allowing staff to effortlessly add additional speakers as needed on available PoE Ports throughout the campus. Making them easy to add move or change as the needs of the facility changes over time.
  7. Connection to optional Digital Call Switch Nyquist NQ-E7020, which can place Normal, Urgent, or Emergency priority calls and can provide station status and the ability for the user to enable and disable Privacy Mode
  8. The NQ-S1810WT VoIP Wall Baffle Speaker with Talkback design facilitates mounting the speaker up to four different ways:
    - a. 2x2 Wall Mount
    - b. Box Mount
    - c. Corner Mount
    - d. Tilted Mount
  9. The NQ-S1810CT VoIP Ceiling Speaker is designed to work with the same Bogen hardware used with our analog ceiling speakers to make the installation process easy for installers that have installed ceiling speaker in the past available accessories:

- a. RE84 Recessed Enclosure (Back box)
  - b. TB8 Time Bridge
  - c. MR8 Mounting Ring (for installation where RE84 is not used)
10. Like all Nyquist Appliances we support the most common network features to rapidly deploy Nyquist Appliances on the network such as DHCP with Option 66 and VLAN support to aid in this effort.
11. The VoIP Speakers come pre-assembled for faster installation
- I. Nyquist NQ-GA10P 10W Plenum-rated Intercom Modules
  1. The Nyquist NQ-GA10P is designed to make any 8-ohm speaker into an IP speaker with the following capabilities
    - a. Power-over-Ethernet (PoE) 802.3af compliant
    - b. Low-impedance (8-ohm) speaker output
    - c. Network-based audio output (paging, intercom, audio distribution)
    - d. Talkback support by just attaching a speaker to achieve half-duplex talkback
    - e. Push-to-Talk Microphone that can be routed anywhere over Bogen's Nyquist network
    - f. Ambient Noise Sensor connection for Amplifier volume output control
    - g. DSP-based noise rejection and voice bandwidth optimization
    - h. Web-based configuration
- J. Nyquist NQ-E7020 Digital Call Switch
  1. The Nyquist DCS has been exclusively designed for use with Nyquist appliances equipped with a CAN Bus 2.0 Interface. The CAN Bus 2.0 interface provides power and signal, and multiple DCSs can connect to each CAN Bus 2.0 interface. The DCS fits into a Single Gang/ Low Voltage installation using standard 'decora-plate' covers (supplied).
  2. The DCS is a capacitive touch button design, so it doesn't have any moving parts to wear out. The behavior of this switch is software definable. Systems that require membrane or mechanical rocker style call switches that can wear out over time shall not be acceptable.
  3. Normal call initiation involves touching the DCS one time. When a user touches the button on the DCS once, one of the three LED segments will light up green, a normal call will be placed, and the light will start blinking green. This is the indication that the Normal call has been placed to the VoIP Admin Phone or to a group of VoIP Admin Phones and that the phone or phones are ringing.
  4. Urgent call initiation involves touching the DCS one time. When a user touches the button on the DCS once, one of the three LED segments will light up yellow, an Urgent call will be placed, and the light will start blinking yellow. This is the indication that the Urgent call has been placed to the VoIP Admin Phone or to a group of VoIP Admin Phones.
  5. Emergency call initiation involves touching the DCS one or three times depending on station programming. When a user touches the button on the DCS once or three times within three seconds, all three LED segments will light up red, an Emergency call will be placed, and the light will start blinking red. This is the indication that the Emergency call has been placed to the VoIP Admin Phone or to a group of VoIP Admin Phones.

6. Single Press Emergency Call, if programmed, involves touching the DCS one time. When a user touches the button once, all three LED segments will light up red on the DCS, an Emergency call will be placed, and the light will start blinking red. This is the indication that the Emergency call has been placed to the VoIP Admin Phone or to a group of VoIP Admin Phones.
7. Normal and Urgent calls can easily be upgraded to an Emergency call after the DCS is flashing by touching the button on the DCS one time. The Normal or Urgent call will be replaced by an Emergency call. Systems that don't allow the staff to upgrade the priority of a call shall not be considered equivalent.
8. Privacy Mode – Pressing and holding the button on the DCS for four seconds will place the speaker into Privacy Mode. As the user continually touches the DCS button, all LED segments will turn purple; when all three LED segments are lit purple, the speaker is in Privacy Mode. If a call comes into the classroom when the station is in Privacy Mode, the microphone will be disabled; the user in the classroom can touch the DCS once and it will allow talkback. Once the call ends, the classroom will need to manually return the speaker into Privacy Mode, if desired. The user can disable Privacy Mode without placing a call by pressing and holding the button on the DCS for four seconds. As the user continually touches the DCS, all LED segments will turn blue. When all three LED segments are lit blue, the speaker is no longer in Privacy Mode. Systems that require mechanical or membrane switches to achieve Privacy Mode shall not be considered equal.
9. The colors specified above are created by three RGB full spectrum LED segments to provide installers and users with visual status and feedback when installing and using the DCS. When the DCS is being installed and the power is connected before the signal, the LED will light red. It will also light red if the speaker in the classroom stops communicating with the Nyquist System Controller, indicating a problem with the station.
10. In addition to providing visual call status indications, a call confirmation audio file shall be played on the associated loudspeaker when a call is placed via a DCS. The three call-in levels shall have distinct audio confirmation messages:
  - a. Call Placed
  - b. Urgent Call Placed
  - c. Emergency Call Placed
11. Emergency Link Transfer – If an Emergency call is unanswered by the VoIP Admin Phone and the Emergency Link Transfer is active, the Emergency call will be forwarded to the loudspeaker associated with the Emergency Link Station. Any station equipped with a loudspeaker can be programmed as the Emergency Link Station. Systems that do not provide Emergency Link Transfer shall not be considered equal.

K. Bogen Analog Call Switch CA-15C for use with the Nyquist ASB or NQ-GA10P(V)

1. The momentary Call Switch shall be capable of placing a combination of Normal/Urgent/Emergency Calls based on the software configuration of the Call Switch.
2. Normal/Emergency call configuration: Making a Normal call in this mode involves pressing the button on the Call Switch once. A call is then placed to the designated Admin Station. An Emergency call involves pressing the call switch at least four times. The Emergency call is then routed to the designated Admin Station. In both scenarios, the calling station number and call-in level (Normal or

Emergency) are displayed on the Admin Station or on a group of Admin Stations. Additionally, Emergency calls can be routed to an alternative Admin Station or Emergency Link.

3. Urgent/Emergency call configuration: Making an Urgent call in this mode involves pressing the button on the Call Switch once. A call is then placed to the designated Admin Station. An Emergency call involves pressing the button on the Call Switch at least four times. The Emergency call is then routed to the designated Admin Station. In both scenarios, the calling station number and call-in level (Urgent or Emergency) are displayed on the Admin Station or on a group of Admin Stations. Additionally, Emergency calls can be routed to an alternative Admin Station or Emergency Link.
  4. Emergency Only call configuration: Making an Emergency call in this mode involves pressing the Emergency call switch with Call Level Emergency one time. The call is then switched to the Admin Station. This requires the display of the station number and call-in level on the Admin Station or on a group of Admin Stations. Additionally, Emergency calls can be routed to any Admin Station, including Emergency Link.
  5. Emergency Link Transfer - If an Emergency call goes unanswered by the Admin Station and the Emergency link transfer is active, the Emergency call will be forwarded to the loudspeaker associated with the Emergency Link Station. Any station equipped with a loudspeaker can be programmed as the Emergency Link Transfer. Systems that do not provide Emergency Link Transfer shall not be considered equal.
  6. In addition to the mechanical click of a Call Switch button press, a call confirmation audio file shall be played on the associated loudspeaker when a call is placed. The three call-in levels shall have distinct audio confirmation messages:
    - a. Call Placed
    - b. Urgent Call Placed
    - c. Emergency Call Placed
- L. The Nyquist plenum-rated amplifier shall be a model NQ-GA20P2 20-watt integrated amplifier and shall utilize UL 2043 plenum-rated packaging.
1. One 20 watt 8-ohm speaker output (with PoE+)
  2. One Balanced Line Output
  3. RJ-45 for Nyquist network connection
  4. Power-over-Ethernet Plus (PoE+) 802.3at compliant
  5. Nyquist network-based audio output Web-based configuration
  6. Power and Status LEDs
  7. In-wall, in-ceiling, shelf, or device mountable UL 2043 plenum-rated package
  8. Optional 48VDC External Power Supply (PS4830W; sold separately)
- M. The Nyquist plenum-rated amplifier shall be a model NQ-GA20P2 20-watt integrated amplifier and shall utilize UL 2043 plenum-rated packaging. The amplifier shall be capable of being powered with an 802.3at compliant Power-over-Ethernet Plus (PoE+) switch, PoE+ power injector, or 48VDC external power supply PS4830W. The amplifier shall provide a frequency response from 20-20 kHz +/- 0.25 dB at rated power. Distortion shall be less than 0.05% THD+N. The amplifier shall include GUI based configuration. Output shall be provided for both line level or 8-ohm speaker connections. Audio line level output shall be 2.2V RMS @10kΩ (+27 dB) electronically balanced.

- N. The Nyquist based two channel amplifier shall be a model \_\_\_\_\_, rated at \_\_\_\_\_ watts RMS per channel (NQ-A2060/2x60 watts, NQ-A2120/2x120 watts, and NQ-A2300/2x300 watts) with switch selectable 2-Channel or 1-Channel bridged operation. The amplifier shall have one dedicated Balanced Line Input. The amplifier shall provide a frequency response from 20-20 kHz +/- 0.25 dB at rated power. Distortion shall be less than 0.03%. The amplifier shall include GUI based DSP controls; 16-band Graphic Equalize; Signal Present and Clip Monitor; Adjustable High Pass, Low Pass, and Bandpass Filters; Noise Gate; Compressor/Limiter; and 7-band Parametric Equalizer. Outputs shall be provided for 4-, 8-ohm, 25V, and 70V distributed systems. The amplifier shall be rack mountable 1/2 Rack Width - Wall, Rack, or Shelf mountable 1RU and 2RU packages or by using a 19" Rack Mount Kit (NQ-RMK03; sold separately). It shall carry the necessary safety agency listings for both the US and Canada. The amplifier shall employ convection air cooling. Amplifiers that require fans for cooling shall not be considered equal.
- O. The Nyquist based four channel amplifier shall be a model \_\_\_\_\_, rated at \_\_\_\_\_ watts RMS per channel (NQ-A4060/4x60 watts, NQ-A4120/4x120 watts, and NQ-A4300/4x300 watts) with switch selectable 4-Channel or 2-Channel bridged operation. The amplifier shall have two dedicated Balanced Line Inputs with both Phoenix plug and XLR connections for each input. The amplifier shall provide a frequency response from 20-20 kHz +/- 0.25 dB at rated power. Distortion shall be less than 0.03%. The amplifier shall include GUI based DSP controls; 16-band Graphic Equalizer; Signal Present and Clip Monitor; Adjustable High Pass, Low Pass, and Bandpass Filters; Noise Gate; Compressor/Limiter; and 7-band
- P. Nyquist NQ-T1100 VoIP Admin Phone – Color Touch Display (Admin Station)
1. The Nyquist Admin Station shall have the following features:
    - a. 7" 800 x 480-pixel color display with backlight
    - b. Touch screen display for one touch operation
    - c. Full-duplex hands-free speakerphone with AEC
    - d. Call hold
    - e. Mute
    - f. Redial, call return, auto answer
    - g. PoE (802.3af) Class-3 support
    - h. Headset with EHS support
    - i. Dual Gigabit Ethernet ports
    - j. Desk Mountable
    - k. Optional Wall mount capable
  2. The Nyquist Admin Station display panel shall show the time of day and day of week, the current bell schedule(s), and the station numbers and call-in priority of staff stations that are calling in. Depending upon the system programming, an Admin Station shall display menus to activate Zone Paging, All-Call Paging, Emergency All-Call Paging, District All-Call paging, alarm signals, and external functions.
  3. The Admin Station shall be capable of calling either the loudspeaker or Staff Station at each classroom location.
  4. The Admin Station shall display the classroom number of any station that calls 911. This allows front-office administrators to direct emergency personnel to the correct physical location in the building when they arrive. If a system is not connected to outside phone lines, then 911 calls can be routed to a designated station within the facility. The system shall automatically record all 911 calls made from any station. The 911 call recording shall begin as soon as 911 is dialed and continue until the call is terminated. Recorded calls shall be maintained on the system for later playback review and/or

retrieval by authorized personnel and/or authorities. Systems that do not provide this feature will not be deemed equal.

Q. Nyquist NQ-T1000 Staff VoIP Phone – LCD Display (Staff Station)

1. Nyquist Staff Station shall have the following features:
  - a. 132 x 64-pixel graphical LCD with backlight
  - b. Two-port 10/100M Ethernet Switch
  - c. Full-duplex hands-free speakerphone with AEC
  - d. Call hold
  - e. Mute
  - f. Redial, call return, auto answer
  - g. PoE (802.3af) Class-3 support
  - h. Dual-color (red or green) illuminated LEDs for line status information
  - i. Two 10/100M Ethernet ports
  - j. Wall or desk mountable
2. The classroom Staff Station shall be capable of the following features depending on how the station CoS is configured:
  - a. Emergency intercom call – Staff Stations shall be capable of making an Emergency intercom call, which is then routed to the assigned Admin Station. This requires the display of the architectural number and call in level on the Admin Station. Systems that do not provide this feature are not equivalent.
  - b. Speed dial
  - c. Toggle audio distribution on and off
  - d. Call Forward activation and deactivation for All-Calls/Busy/No Answer/Busy or No Answer
  - e. Conference Calling
  - f. Transfer Call
  - g. Dial Administrative station– Staff Stations can allow the user to dial the station number to call to the Admin phone or its associated speaker. The call shall be routed to the Admin Station showing the architectural number that is calling.
  - h. Emergency All-Call – An emergency page shall be broadcasted to all the stations in the facility.
  - i. Place Outside Call
  - j. Remote Answer
  - k. Single-Zone/All-Station Page
  - l. Call Waiting Tone for Outside Calls – It shall be possible to feed the call waiting tone to the Administrative Phone during a conversation.
  - m. Transfer call from VoIP speaker in classroom down to an associated Staff Station
  - n. Transfer call from analog speaker in classroom down to an associated Staff Station
  - o. Transfer call from VoIP Staff Station in classroom up to an associated VoIP speaker
  - p. Transfer call from Staff Station in classroom up to an associated analog speaker

R. Additional Loudspeakers for use with the Nyquist ASB

1. 25-Volt Classroom Speakers shall be Bogen:
  - a. Ceiling Mounted Speakers: CSD2X2U Drop-In Ceiling Speaker
  - b. Ceiling Mounted Speakers: S810T725PG8U Ceiling Speaker

- c. Wall Baffle Speakers: MB8TSQ/SL Metal Box Speaker
2. 25-Volt Hallway Speakers shall be Bogen:
    - a. Ceiling Mounted Speakers: CSD2X2U Drop-In Ceiling Speaker
    - b. Ceiling Mounted Speakers: S810T725PG8U Ceiling Speaker
    - c. Wall Baffle Speakers: MB8TSQ/SL Metal Box Speaker
  3. 25-Volt Outdoor/Gym/Locker Room Speakers shall be Bogen:
    - a. FMH15T mounted in BBSM6 surface-mounted vandal-resistant enclosure/BBFM6 flush-mounted vandal-resistant enclosure with FMHAR8 adapter ring and SGHD8 heavy duty grille
    - b. KFLDS30T Wide Dispersion Re-entrant Horn Loudspeakers
  4. 25-Volt Common Area Speakers shall be Bogen:
    - a. OCS1 Orbit Ceiling Speakers
    - b. OPS1 Orbit Pendant Speakers

## **2.04 SYSTEM CAPABILITIES**

- A. The communication system shall be a Bogen Nyquist E7000 Series Educational System and shall provide a comprehensive communications network between administrative areas and staff locations throughout the facility.
- B. The system shall provide no less than the following features and functions:
  1. Software-based, state-of-the-art, Voice over IP (VoIP) paging and intercom solution.
  2. The system shall provide a Web User Interface (Web UI) that shall allow users to configure and control the system, in accordance with their assigned User Role, from any Chrome or MS Edge Web browser enabled PC, Mac, or Android tablet or mobile device.
  3. Amplified-voice communication with analog loudspeakers shall use a shielded audio pair when connected to an ASB.
  4. The system shall support any combination of the following VoIP phone station types: NQ-T1100 Administrative VoIP Phone – Color Touch Display (Admin Station) or NQ-T1000 Staff VoIP Phone – LCD Display (Staff Station).
    - a. All VoIP phone station types shall utilize the same type of field wiring.
    - b. There shall be no limit to the number of Admin Stations that can be connected to a facility. Systems that require different head-end equipment to make Admin Stations function, or systems that limit the number of Admin or Staff Stations shall not be deemed acceptable.
  5. Future station alterations shall only require the Station Type to be changed in system programming. Alterations shall not require field wiring or system head-end alterations, unless an analog station device is being replaced by a VoIP station device or vice-versa.

6. The system shall be a global non-blocking system. The system shall be capable of unlimited amplified intercom paths per facility. Two amplified intercom paths shall be provided with each ASB for its complement of 24 stations. All hardware, etc., required to achieve the necessary number of amplified-voice intercom channels for this system shall be included in this submittal. ASB amplified-voice intercom channels shall provide voice-activated switching. Systems requiring the use of a push-to-talk switch on administrative telephones shall not be acceptable. There shall be an automatic level control for return speech during amplified-voice communications. The intercom amplifier shall also provide control over the voice switching sensitivity and delay times of the VOX circuitry on the ASB.
7. The system shall provide 911 Dial-Through via outside FXO/FXS lines or SIP trunks to ensure that one or more lines are always available for 911 calls. The 911 Dial-Through is available to any properly configured station (via CoS). When a station dials 911, the 911 call is processed as follows:
  - a. Call routes to an Emergency Group where the call can be answered.
  - b. The 911 CO lines can be pre-configured and reserved. If the 911 reserved lines are busy, the normal CO lines will be connected to route the 911 calls. If all the normal CO lines are busy, then one of the ongoing calls shall be disconnected and the 911 call shall be placed.
  - c. When 911 is dialed from any station, its designated Admin Station or Admin Group will receive a message that the station has dialed 911.
  - d. The system shall automatically record all 911 calls made from any station. The 911 call recording shall begin as soon as 911 is dialed and shall continue until the call is terminated. Recorded calls shall be maintained on the system for later playback review and/or retrieval by authorized personnel and/or authorities.
8. It is of highest importance that Emergency calls from stations receive prompt attention. Therefore, it is important that there be an alternative destination in case the Emergency call does not get answered at the primary location. Details are as follows:
  - a. Staff-generated Emergency calls shall be treated as the second highest system priority. Therefore, all Emergency calls shall announce at the top of the call queue of their respective Admin Station or Admin Group. Should that Emergency call go unanswered for 15 seconds, the call shall be re-routed to an alternative speaker station. Then, a tone will prompt the caller to make a verbal call for help and announces to the Emergency link station "Emergency." During the transfer, the original administrative telephone shall continue to ring the distinctive Emergency Ring. Should the Emergency Transfer-to-Station have an associated Admin Station, it will also ring for the Emergency call.
  - b. The Emergency Transfer-to-Station shall be software configurable.
  - c. Systems failing to transfer unanswered Emergency calls or failing to immediately connect to the designated Admin Station shall not be deemed as equal.
9. There shall be a Facility Wide Emergency All-Call feature. The Emergency All-Call shall be accessed from designated Admin Stations or the Nyquist Dashboard or by the activation of an external contact closure that shall give a microphone input Emergency status. The Emergency All-Call function shall have the highest system priority and shall override all other loudspeaker-related functions including Time Tones, Normal All-Call or Zone Pages, or Audio Distribution.
  - a. Considering that Emergency calls are to be treated with the highest level of concern, systems that do not regard Emergency All-Call with the highest priority shall not be deemed as equal.
  - b. Upon touching the Directory icon, a menu shall appear on the Admin Station display prompting the user to select the desired menu.

- c. The Emergency All-Call shall capture the highest-level system priority and shall be transmitted over all speakers in the facility. It shall also be capable of activating an external control output, which can be used to activate external relays to automatically override volume controls, local sound systems, or strobe circuits.
  - d. This Emergency All-Call feature can have a four-digit pin number associated with it that would be required to use the feature or override someone that is already using this feature.
  - e. Systems without Emergency All-Call or systems with All-Call that cannot be activated by external means or that do not capture complete system priority or activate an external relay, shall not be acceptable.
10. There shall be unlimited Alarm Tones (four by default). Each may be accessed by dialing \*91 and the two-digit tone number from any Admin Station, SIP Trunk, or FXO/FXS system interface. These Alarm Tones are separate from the Time Tones. Users shall be able to add an unlimited number of Alarm Tones to the system by uploading MP3 or WAV files. Systems that do not allow the user to upload MP3 and WAV files to customize the Alarm Tones or need to use external alarm/tone generators or special software or have less than four Emergency Alarm Tones shall not be acceptable.
11. Upon touching the Directory icon on an Admin Station, a menu shall appear on the display prompting the user to select from the sub-menus. The Alarms sub-menu is the first available. This precludes the user from having to memorize complicated key sequences to access Alarm Tones.
12. There shall be unlimited I/O Controller relay driver outputs accessible and controllable by properly authorized users via an Administrative Web UI. These outputs remain set until accessed and reset. Users shall have the ability to review the status of each relay driver output. Users shall be prompted through fields via a plain English menu, precluding users from having to remember any dialing sequences to control this feature. The system shall support an unlimited number of I/O Controllers, and each I/O Controller shall be able to interact with any and all other I/O Controllers on the system (i.e., an input on one I/O Controller can trigger an output on one or more different I/O Controllers). Systems that require the user to remember complicated dialing schemes or prompt the user via cryptic commands shall not be acceptable.
13. The I/O Controller can create a contact closure when the following operations are performed in the system:
- a. 911 call placed
  - b. Audio Distributed
  - c. Alarm is played
  - d. Announcement is played
  - e. All-Call performed
  - f. Multi-Site All-Call performed
  - g. Multi-Site Emergency-All-Call
  - h. Emergency-Call
  - i. Emergency-All-Call
  - j. Audio-Disabled
  - k. Page
14. The system shall provide software controlled and programmable control outputs for external relay activation for use with strobe lights, magnetic locks, card access systems, motion detectors, cameras,

or any low-voltage, dry contact creating device. Systems using dedicated security stations for control of external functions shall not be acceptable.

15. The system shall be capable of interfacing to PSTN/PBX/iPBX via both FXO/FXS line and SIP trunk connectivity.
16. The system shall be capable of providing each facility (i.e., (i.e., Nyquist location) an unlimited number of incoming FXO/FXS or SIP trunk lines that can be designated by the user to ring the designated Day Admin or Night Admin. Where an Admin Station is designated to receive outside line calls, the incoming call's Caller ID information shall appear on the display. The system shall also provide the ability to make outside line calls from Admin Stations. This ability shall be programmable for each Admin Station and there shall be an unlimited number of CoS available to assign to any station.
17. The system shall be capable of supporting DID, DISA, and Security DISA functions.
  - a. The system shall provide a password-protected Security DISA feature that shall only be accessible from authorized Police, Fire, Emergency personnel, or an off-premise security office that monitors the facility's security system. The Security DISA feature shall function as follows: Upon dialing the Security DISA phone number, the caller will receive a dial tone from the system, after which he or she must enter the assigned Security DISA passcode on the dial pad. Upon confirmation, the system will present the dial tone again and will allow the authorized personnel to dial any station/classroom on the system and monitor the activity without any pre-announce tone or privacy beep. This will allow the authorized personnel to audibly assess the situation and determine what actions need to be taken.
  - b. All DISA and Security DISA calls shall be automatically recorded by the system for later playback review and/or retrieval by authorized personnel and/or authorities.
18. The system shall provide for field-programmable three-, four-, five-, or six-digit architectural station numbers.
19. There shall be an automatic level control for return speech during amplified-voice communications.
20. Each station loudspeaker shall be assignable to all or any combination of Paging, Time, and/or Audio Zones. Systems that do not provide unlimited Paging, Time, and/or Audio Zones shall not be acceptable.
21. There shall be unlimited schedules with unlimited programmable events per facility. Each event shall sound one user-selected tone or external audio source. It shall be possible to assign each schedule to a day of the week or to manually change schedules from an authorized user via a web-based UI. Systems that do not provide unlimited schedules, events, and tones, or that require software to be installed on a PC to perform these functions shall not be acceptable.
  - a. The system shall provide multiple concurrent schedules per facility/location to accommodate split facilities (for example., combined Elementary and Middle School, combined Middle and High School, etc.).
  - b. The system must be capable of providing Class Change Music to be played from an external audio source or audio files that are stored in playlists on the system during class change periods or whenever a facility wants music to be played in an area (i.e., (i.e., one or more Time Zones) on an automated schedule.

- c. Each event shall be able to be directed to any one or more of the unlimited Time Zones.
  - d. Each of the unlimited Time Zones shall have a programmable, customizable Preannounce Tone and volume control that is unique unto itself.
  - e. Each event shall play any of the Normal tones or external audio. Each event may utilize a different tone. For example, the system shall be capable of sending the gymnasium, shop classes, and pool a separate, unique time tone to indicate "clean up." Minutes later, the entire facility can be sent a different time tone to indicate class change.
  - f. Each of the unlimited Time Tones may be manually activated by selected VoIP Admin Phones or via an authorized user with access to the Web UI. These tones shall remain active as long as the telephone remains off-hook or until canceled from the keypad or the Nyquist Web UI.
  - g. Systems that do not provide an unlimited number of schedules or do not provide automatic activation of schedules shall not be acceptable.
22. Internal Master Clock shall be included, allowing an unlimited number of events per facility. Systems that do not provide an internal master clock or that must supply an external master clock to meet these specifications shall not be acceptable.
23. The Nyquist E7000 is capable of synchronizing with an NTP server and automatically adjusting the Daylight Savings Time for any time zone in the world. The server that the Nyquist E7000 application is running on can also be used as an NTP server for other systems on the LAN (for example, IP Clocks and control systems).
24. There shall be a Zone Page/All-Call Page feature that is accessible by selected Admin Phones and FXO/FXS or SIP connection to the PSTN or PBX/iPBX.
25. There shall be an option to play a pre-announce tone at any loudspeaker selected for voice paging.
26. There shall be a voice-intercom feature that is accessible by CoS authorized staff phones, all Admin VoIP phones, and Admin Web UIs.
- a. There shall be a privacy beep played every 15 seconds at any selected loudspeaker to indicate that an intercom call is in progress.
  - b. There shall be a pre-announce tone played at any selected loudspeaker for intercom call communication.
  - c. For special applications, the privacy and pre-announce tone signals shall be capable of being disabled during system initialization.
  - d. There shall be a switch over to private telephone communications should the person at the classroom loudspeaker pick up his or her Staff Station and dial \*3 to transfer the call down to the associated classroom Staff Station.
27. There shall be various levels of telephonic communication accessible by all Admin Stations and Staff Stations.
- a. Staff Stations must be capable of being programmed to ring one Admin Station during day hours and a different Admin Station during night hours. Day and Night start hours shall be configurable. Staff Stations shall be capable of being assigned to any Admin station. Systems that limit the number and assignment of staff call-ins to an Admin Station shall not be acceptable.
28. Each VoIP speaker or ASB speaker equipped with a call switch (analog or digital) shall be configurable as one of three call-in types, as follows:

- a. Normal/Emergency
  - b. Urgent/Emergency
  - c. Emergency
29. Call buttons programmed for access Normal / Emergency or Urgent / Emergency shall be able to initiate an Emergency call by repeated flashing of the phone's hook switch, or repeated pressing of the DCS or the Call Switch. Systems that require additional switches and/or conductors to initiate an Emergency call, shall not be acceptable.
30. Normal and Urgent calls shall be placed into the queue for the designated Admin Station or Admin Web UI.
31. Each Admin Station call queue shall first be sorted per call priority (for example, Emergency, then Urgent, and then Normal). Calls are sorted within each priority level on a first-in, first-out basis. When a call is answered, it shall automatically be removed from the queue. Systems that do not sort calls per priority and order received shall not be acceptable.
- a. The display shall simultaneously display a minimum of three intercom calls pending.
  - b. Additional calls beyond three shall be indicated by a scrolling option on the right-hand side of the screen thus prompting the user that additional calls are waiting.
32. It shall be possible to answer any incoming call by picking up the handset while it is ringing. It shall not be necessary to press any buttons to answer a call unless the call has dropped into the queue.
33. Staff Stations shall receive a dial tone upon going off-hook. Outgoing calls are made by dialing the desired station. Incoming calls can be directed to the telephone or to the associated loudspeaker for a hands-free reply. There shall be a switchover from loudspeaker to private telephone communication when a person picks up the handset, dials \*3, and presses Enter/OK.
34. Staff Stations shall be programmable for any type of system access, provided by or restricted by the following CoS options:
- a. CoS Name
  - b. Call-in Level
  - c. Zone Paging
  - d. All-Call Paging
  - e. Emergency All-Call
  - f. Inter-Facility Call/Page
  - g. Audio Distribution
  - h. Remote Pickup
  - i. Join Conversation
  - j. Call Forwarding
  - k. Walking Class of Service
  - l. External Call Routing
  - m. Call Transfer/3-way Calling
  - n. Manually Activate Tone Signals
  - o. Call Any Station
  - p. Manage Recordings
  - q. Monitor Calls
  - r. Monitor Locations
  - s. Conference Admin
  - t. Conference User
  - u. Voicemail
  - v. Record Calls
  - w. Activate Alarm Signals
  - x. Disable Audio
  - y. Enable Audio
  - z. Allow Callee Auto-answer
  - aa. District Paging
  - bb. Inter-Facility Features
  - cc. Manage Output Contacts
  - dd. Execute Routines

35. Each Station in a facility can have a unique CoS programmed with an unlimited number of CoS combinations.
36. Staff Stations shall be able to make a Normal call to any Admin Station by dialing the Admin Station's extension number. Staff Stations shall also be able to initiate an Emergency Intercom Call by dialing \*\*\*\*. Emergency Calls shall ring the Designated Day/Night Admin Station. The system shall provide for each station to have a Personal Identification Number (PIN). By dialing the PIN at any system telephone, the administrator shall have access to Emergency paging regardless of the restrictions on the phone being used.
37. Admin Stations shall receive a dial tone upon going off-hook. Outgoing calls are made by dialing the desired stations. Incoming calls can be directed to the telephone or to the associated loudspeaker for a hands-free reply. There shall be an automatic switchover from loudspeaker to private telephone communication should the person pick up his or her handset.
38. The display shall normally show the time of day and day of week, bell schedule name, and the numbers of a minimum of three stations calling-in, along with the call-in status of each station (Normal, Urgent, Emergency). The Admin Station's display shall indicate the station number being dialed from the Admin Station.
39. The display shall also provide user-friendly menu selections to assist the operator when using the Nyquist system. Displays shall be in English for maximum ease-of-use. Systems that require the operator to memorize long lists of operating symbols or control codes shall not be acceptable.
40. Admin Stations shall be programmable for any type of system access, providing or restricting the following CoS options:
  - a. Call-in Level
  - b. Zone Paging
  - c. All-Call Paging
  - d. Emergency All-Call
  - e. Inter-Facility Call/Page
  - f. Audio Distribution
  - g. Remote Pickup
  - h. Join Conversation
  - i. Call Forwarding
  - j. Walking Class of Service
  - k. External Call Routing
  - l. Call Transfer/3-way Calling
  - m. Manually Activate Tone Signals
  - n. Call Any Station
  - o. Manage Recordings
  - p. Monitor Calls
  - q. Monitor Locations
  - r. Conference Admin
  - s. Conference User
  - t. Voicemail
  - u. Record Calls
  - v. Activate Alarm Signals
  - w. Disable Audio
  - x. Enable Audio
  - y. Allow Callee Auto-answer
  - z. District Paging
  - aa. Inter-Facility Features
  - bb. Manage Output Contacts
  - cc. Execute Routines
41. Program selection and its distribution or cancellation shall be accomplished from a designated Admin Station with the assistance of the menu display system. Distribution and cancellation shall be to any one or combination of speakers, any Audio Zone or Audio Zones, or All Zones. It shall be possible to provide an unlimited number of program channels for the user to pick from.
  - a. It shall be possible via an Admin Station to manually initiate any of the unlimited Normal Tones or Emergency Tones. The Tones shall be separate and distinctly different from the Alarm Tones.

- The Tone selected shall be capable of being played one time, continuously until it is canceled, or until the administrative display phone is placed back on-hook.
- b. Each Admin Station shall maintain a unique queue of all stations calling that Admin VoIP phone.
42. VoIP Wall Baffle and VoIP Ceiling Speakers shall be configurable as either a VoIP Speaker Only or as a VoIP Speaker with DCS.
- a. The Bogen Nyquist VoIP speakers are powered via PoE. Use an 802.3af compliant PoE network switch port or PoE Injector to power these speakers. One PoE network switch port or PoE Injector is required per VoIP speaker.
  - b. VoIP speakers can be equipped with a DCS that can be programmed as a Normal/Emergency, Urgent/Emergency, or Emergency Only and shall be able to initiate an Emergency call by touching the DCS one, two, or three times depending on the CoS and current call state of the DCS. If the station is authorized for Privacy Mode, the users can touch and hold for 4 seconds to enable Privacy Mode or hold for four seconds to disable Privacy Mode. Systems that require mechanical, membrane, or an additional number of switches to initiate an Emergency call, shall not be acceptable.
  - c. Emergency Calls from VoIP Speaker with DCS shall have priority over the Normal and Urgent calls in the queue on the Admin Stations and will show up at the top of the list. Systems that do not provide priority for Emergency Call shall not be acceptable.
  - d. Normal and Urgent calls shall be logged into queue for the designated Admin Stations.
    - 1. Admin Stations shall ring for when they receive a call, and then the call will be removed from the queue when the call is answered or when the Admin Queue times out (default is 30 minutes).
  - e. Each queue call shall first be sorted by call priority (Emergency, then Urgent, and then Normal). Calls are sorted within each priority level on a first-in, first-out basis. When a call is answered, it shall automatically be removed from the queue. Systems that do not sort calls by priority and order received, shall not be acceptable. The display shall simultaneously show a minimum of three staff calls pending. Additional staff calls beyond three shall be indicated by an arrow pointing down thus prompting the Admin user that additional calls are waiting.
  - f. It shall be possible to answer any incoming call simply by picking up the handset while it is ringing. It shall not be necessary to hit any buttons to answer a call unless the call has dropped into the queue.
43. System programming shall be from an authorized Nyquist Admin User via any web browser. A valid username and password shall be required to gain access to the following programmable functions:
- a. System Parameters – Allow installers to adjust core system parameters.
  - b. Zones – Allow installers to create and modify Paging, Time, and Audio Zones.
  - c. Schedules – Allow installers and administrators to create Bell Schedules for the facility, predefine alternative schedules to run. Holiday Events prevent the bells from ringing on a school holiday. The system shall allow an unlimited number of schedules to operate simultaneous within a facility.
  - d. Admin Groups – Allow the installer to create, modify, and delete software groupings of admin phones that can ring when a station calls in with a call switch.
  - e. CoS Configuration – Allow the installer to create, modify, and delete CoS groups that can have the following features defined: Call in Level, Zone Paging, All-Call Paging, Emergency All-Call, Inter-Facility Call/Page, Audio Distribution, Remote Pickup, Join Conversation, Call Forwarding,

- Walking Class of Service, External Call Routing, Call Transfer/3-way Calling, Manually Activate Tone Signals, Call any Station, Manage Recording, Monitor Calls, Monitor Locations, Conference Admin, Conference User, Voicemail, Record Calls, Activate Alarm Signals, Disable Audio, Enable Audio, Allow Callee Auto-answer, District Paging, Inter-Facility Features, and Execute Routines.
- f. Stations – Allow the installer to set up, modify, delete stations, set up Page Exclusion, view stations' status, and add a station.
  - g. Bridge Devices – Allow the installer to install the Nyquist ASBs.
  - h. Audio – Allow the installer to upload and manage Announcements, Playlists, Announcements, Songs, and Tones. The must support the uploading of both MP3 and WAV files making Audio file management simple for users. Systems that limit the size of Audio files shall not be considered equal.
  - i. Users – Allow the installer to manage users by giving them the proper Role and assign an Extension if needed.
  - j. Roles – Allow the installer to limit user to the following: create, delete, edit, restart server, sort menu, systems update, manage, import/export, restore, settings, or view.
  - k. Facilities – Allow the installer to set up the district wide facilities for remote paging and calling.
  - l. Outside Line – allow the installer to set up FXS and FXO ports for inbound and outbound system calling.
  - m. SIP Trunks – allow the installer to set up SIP trunks into the facility for inbound or outbound calling.
  - n. Call Details – allow the installer to review the historical system activities that can be used for incident investigation or system troubleshooting.
  - o. System Backup/Restore – allow the installer to preform system backup or restores and allow the backups to be schedule to run automatically.
  - p. System Logs – allow the installer to view and export Server, Nyquist-Intercom, and Web Server logs that can be used for trouble shooting and technical assistance.
  - q. Paging Exclusions – allow the installer to view and edit station that are excluded from paging.
  - r. Firmware – is used to update Nyquist appliances.
  - s. Routines – Allow installers to create routines that are a sequence of actions, that the Nyquist system executes as a result of an input trigger. Routines can support crisis plans for situations such as school lockdowns, weather events, or emergency evacuations
  - t. Alert Filters – Allow installers to select the National Weather Alerts that the facility needs to monitor for such as weather events, earthquakes, tsunami, volcanoes, public health, power outages, and many other emergencies.
  - u. Help –Provides information about the system, online help topics, and System Administrator Manual.
  - v. Systems not capable of supporting web-based configuration and control, or require plugins or dedicated application software, shall not be deemed as equal.
  - w. Systems that require a Serial-to-Ethernet converter, or require additional application software on a PC for configuration and/or control shall not be deemed as equal.

#### 44. Admin Groups

45. Admin Stations can be placed into Admin Groups, which are used if incoming calls are not answered by the assigned Admin Station or the Day or Night Admin associated with the Admin Station. Admin Groups act as an always answer feature by providing an alternate list of Admin Stations. If an incoming call is not answered by the assigned Admin Station within 30 seconds for normal calls or 15 seconds for emergency calls, all Admin Stations in the Admin Group will ring.

46. If Call Forwarding is enabled at the Admin Station, Nyquist tries the forwarded extension. If that station does not answer or is busy, the call timeout is reduced to 15 seconds. After 15 seconds, the call rolls over to the Admin Group.
47. If an Emergency level call receives no answer, the Admin Group will ring if the Day Admin or Night Admin does not answer.
48. Admin Stations can be assigned to multiple Admin Groups. A Day or Night Admin can also be assigned to one or more Admin Groups.
49. Call Detail Reporting
  - a. The Call Details feature allows the viewing and/or printing of detail records of every call in a facility in a call log format. Calls include scheduled announcements, paging, and internally and externally made or received telephone calls.
50. System Backup/Restore
  - a. The system backup feature allows users with access to back up the system database, voicemail, and recordings.
  - b. The system restore allows users with access to perform a system restore of previously backed up database, voicemail, and/or recordings.
  - c. The installer also can set up an automatic backup that can be performed daily, weekly, or monthly.
51. System Log Files
  - a. A log file records either events or messages that occur when software runs and is used when troubleshooting the system. The following parts of the Nyquist system generate log files:
    1. Server (This provides access to the Debian Linux OS server log files.)
    2. Intercom (This provides access to the Intercom application server log files)
    3. Web Server (This provides access to the web server log files.)
  - b. From the web-based UI, system logs can be viewed directly or exported via download to a PC, Mac, or Android device and then copied to removable media or attached to an email to technical support.
52. Paging Exclusions
  - a. For school testing and exams, the administrators shall be able to put stations into Page Exclusion mode. During this time, the stations will only receive Emergency All-Call pages – not music, tones, or All-Calls. Emergency pages will still be heard at the station even if that station is set to exclude paging.
53. Firmware
  - a. Installers can manage the available firmware. Because the Nyquist E7000 is constantly evolving and changing new versions of firmware will become available and the Firmware section allow installers or authorized users the ability to upload, check for updates, or configure the system to

automatically download new firmware for later installation. Systems that can't automatically check for new software are not considered equivalent.

54. Routines are designed to automatically launch a procedure, or sequence of actions, that the Nyquist system executes as a result of an input trigger.
55. Some of the events (triggered by dashboard, IP Phone, I/O Controller contact, or Routines API) that can be created are as follows:
  - a. Lockdown Routines
  - b. Emergency Evacuation Routines
  - c. Fire Alarm Routines
  - d. Weather Alert Routines
56. As you can see the power of Routines can support your facilities crisis plans for situations such as lockdown, lockout, weather events, or emergency evacuations.
57. Alert Filters Configuration - The Common Alerting Protocol (CAP) is an international standard format for emergency alerting and public warning. It is designed for all hazards related to weather events, earthquakes, tornado, tsunami, volcanoes, public health, power outages, and many other emergencies.
58. CAP elements and values are used when configuring alert filters for your Nyquist system. This part of the configuration allows installers to select or "Enable" or disable the filters needed for each facility. This filtered information can then be displayed on the NQ-GA10PV through the campus.
59. The growing list of information that can currently be displayed are as follows: 911 Telephone Outage, Administrative Message, Air Quality Alert, Air Stagnation Advisory, Arroyo And Small Stream Flood Advisory, Ashfall Advisory, Ashfall Warning, Avalanche Advisory, Avalanche Warning, Avalanche Watch, Beach Hazards Statement, Blizzard Warning, Blizzard Watch, Blowing Dust Advisory, Blowing Dust Warning, Brisk Wind Advisory, Child Abduction Emergency, Civil Danger Warning, Civil Emergency Message, Coastal Flood Advisory, Coastal Flood Statement, Coastal Flood Warning, Coastal Flood Watch, Dense Fog Advisory, Dense Smoke Advisory, Dust Advisory, Dust Storm Warning, Earthquake Warning, Evacuation - Immediate, Excessive Heat Warning, Excessive Heat Watch, Extreme Cold Warning, Extreme Cold Watch, Extreme Fire Danger, Extreme Wind Warning, Fire Warning, Fire Weather Watch, Flash Flood Statement, Flash Flood Warning, Flash Flood Watch, Flood Advisory, Flood Statement, Flood Warning, Flood Watch, Freeze Warning, Freeze Watch, Freezing Fog Advisory, Freezing Rain Advisory, Freezing Spray Advisory, Frost Advisory, Gale Warning, Gale Watch, Hard Freeze Warning, Hard Freeze Watch, Hazardous Materials Warning, Hazardous Seas Warning, Hazardous Seas Watch, Hazardous Weather Outlook, Heat Advisory, Heavy Freezing Spray Warning, Heavy Freezing Spray Watch, High Surf Advisory, High Surf Warning, High Wind Warning, High Wind Watch, Hurricane Force Wind Warning, Hurricane Force Wind Watch, Hurricane Local Statement, Hurricane Warning, Hurricane Watch, Hydrologic Advisory, Hydrologic Outlook, Ice Storm Warning, Lake Effect Snow Advisory, Lake Effect Snow Warning, Lake Effect Snow Watch, Lake Wind Advisory, Lakeshore Flood Advisory, Lakeshore Flood Statement, Lakeshore Flood Warning, Lakeshore Flood Watch, Law Enforcement Warning, Local Area Emergency, Low Water Advisory, Marine Weather Statement, Nuclear Power Plant Warning, Radiological Hazard Warning, Red Flag Warning, Rip Current Statement, Severe Thunderstorm Warning, Severe Thunderstorm Watch, Severe Weather Statement, Shelter In Place Warning, Short Term Forecast, Small Craft Advisory, Small Craft Advisory For Hazardous Seas, Small Craft Advisory

For Rough Bar, Small Craft Advisory For Winds, Small Stream Flood Advisory, Snow Squall Warning, Special Marine Warning, Special Weather Statement, Storm Surge Warning, Storm Surge Watch, Storm Warning, Storm Watch, Test, Tornado Warning, Tornado Watch, Tropical Depression Local Statement, Tropical Storm Local Statement, Tropical Storm Warning, Tropical Storm Watch, Tsunami Advisory, Tsunami Warning, Tsunami Watch, Typhoon Local Statement, Typhoon Warning, Typhoon Watch, Urban And Small Stream Flood Advisory, Volcano Warning, Wind Advisory, Wind Chill Advisory, Wind Chill Warning, Wind Chill Watch, Winter Storm Warning, Winter Storm Watch, and Winter Weather Advisory.

60. Systems that are not capable of displaying National Weather Service CAP information to give advanced warning to facilities shall not be considered equal.

### **PART 3 - EXECUTION**

#### **3.01 EXAMINATION**

- A. Examine conditions, with the installer present, for compliance with requirements and other conditions affecting the performance of the Nyquist E7000 Series Educational System.
- B. Do not proceed until unsatisfactory conditions have been corrected.

#### **3.02 EQUIPMENT MANUFACTURER'S REPRESENTATIVE**

- A. All work described herein to be done by the manufacturer's authorized representative shall be provided by a documented factory authorized representative of the basic line of equipment to be utilized.
- B. As further qualification for bidding and participating in the work under this specification, the manufacturer's representative shall hold a valid C-10 Contractor's License issued by the Contractor's State License Board of [your state]. The manufacturer's representative shall have completed at least 10 projects of equal scope, giving satisfactory performance, and shall have been in the business of furnishing and installing sound systems of this type for at least five years. The manufacturer's representative shall be capable of being bonded to ensure the owner of performance and satisfactory service during the guarantee period.
- C. The manufacturer's representative shall provide a letter with submittals from the manufacturer of all major equipment stating that the manufacturer's representative is an authorized distributor. This letter shall also state that the manufacturer guarantees service performance for the life of the equipment and that there will always be an authorized distributor assigned to service the area in which the system has been installed.
- D. The contractor shall furnish a letter from the manufacturer of the equipment. This letter shall certify that the equipment has been installed according to factory intended practices, that all the components used in the system are compatible, and that all new portions of the systems are operating satisfactorily. Further, the contractor shall furnish a written unconditional guarantee, guaranteeing all parts and all labor for a period of five years after final acceptance of the project by the owner.

#### **3.03 DIVISION OF WORK**

- A. While all work included under this specification is the complete responsibility of the contractor, the following division of actual work listed shall occur:
- B. The conduit, outlets, terminal cabinets, etc., which form part of the rough-in work, shall be furnished and installed completely by the electrical contractor.
- C. The balance of the system, including installation of speakers and equipment, making all connections, etc., shall be performed by the manufacturer's authorized representative. The entire responsibility of the system, its operation, function, testing and complete maintenance for one year after final acceptance of the project by the owner, shall also be the responsibility of the manufacturer's authorized representative.

### **3.04 INSTALLATION**

- A. The installation, adjustment, testing, and final connection of all conduit, wiring, boxes, cabinets, etc., shall conform to local electrical requirements and shall be sized and installed in accordance with the manufacturer's approved shop drawings.
- B. Low-voltage wiring may be run exposed above ceiling areas where they are easily accessible.
- C. The contractor shall install the new system at the location shown on the plans.
- D. All Staff Stations and Call Switches shall be wall-mounted:
  - 1. Mount at 54" AFF.
  - 2. All wiring should be concealed.
  - 3. Verify exact location with architect.
  - 4. Avoid mounting near doors to prevent students from activating and running out of the rooms.
- E. Admin Stations can be desk or wall mounted.
- F. Speaker and telephone lines run above ceiling and not in conduit shall be tie-wrapped to a ceiling joist with a maximum spacing of 8' between supports. No wires shall be laid on top of ceiling tile.
- G. Connect field cable to each Analog Speaker transformer using UL butt splices for #22 AWG wire.
- H. Contractor shall provide a minimum of eight hours of configuration and operational instruction to school personnel.
- I. On the first school day following installation of the Nyquist System, the contractor shall provide a technician to stand by and assist in system operation.
- J. Mark and label all demarks IDF and MDF points with destination point numbers. Rooms with more than one outlet shall be marked XXX-1, XXX-2, XXX-3, etc. where XXX is the room number.
- K. No graphic room number shall exceed the sequence from 000001 through 899999.
  - 1. All outside speakers shall be on a separate Page Zone and Time Zone.
  - 2. All zones shall be laid out not to exceed 40 Watts (@25V) maximum per zone.
  - 3. All hallway speakers shall be tapped at 1 Watt (@25V) maximum.
  - 4. All outside horns shall be tapped at 3.75 Watts (@25V) maximum.

5. All classroom speakers shall be tapped at ½ Watt (@25V) maximum.
  6. Large rooms, such as cafeterias, shall be tapped at 2 Watts (@25V) maximum.
- L. Plug disconnect: All major equipment components shall be fully pluggable by means of multi-pin receptacles and matching plugs to provide for ease of maintenance and service.
  - M. Protection of cables: Cables within terminal cabinets, equipment racks, etc., shall be grouped and bundled (harnessed) as to type and laced with No. 12 cord waxed linen lacing twine or T and B wire-ties, or hook and loop cable management. Edge protection material shall be installed on edges of holes, lips of ducts, or any other point where cables or harnesses cross a metallic edge.
  - N. Cable identification: Cable conductors shall be color-coded and individual cables shall be individually identified. Each cable identification shall have a unique number located approximately 1-1/2" from cable connection at both ends of cable. Numbers shall be approximately 1/4" in height. These unique numbers shall appear on the As-Built Drawings.
  - O. Shielding: Cable shielding shall be capable of being connected to common ground at point of lowest audio level and shall be free from ground at any other point. Cable shields shall be terminated in the same manner as conductors.
  - P. Provide complete "in service" instructions of system operation to school personnel. Assist in programming of telephone system.

### **3.05 GROUNDING**

- A. The contractor shall provide equipment grounding connections for Integrated Telecommunications/Time/Audio/Media System as indicated. Tighten connections to comply with tightening torques specified in UL Standard 486A to ensure permanent and effective grounds.
- B. The contractor shall provide ground equipment, conductor, and cable shields to eliminate shock hazard and to minimize the greatest extent possible, ground loops, common mode returns, noise pickup, cross talk, and other impairments.
- C. The contractor shall provide all necessary transient protection on the AC power feed and on all station lines leaving or entering the building.
- D. The contractor shall note on their drawings the type and locations of these protection devices and all wiring information.
- E. The contractor shall furnish and install a dedicated, isolated earth ground from the central equipment rack and bond to the incoming electrical service ground buss bar.

**END OF SECTION**

**BID TIMELINE**

<b>Bid Posted to IPS</b>	<b>January 21, 2025</b>
<b>Mandatory On Site Pre Bid Meeting</b>	<b>January 29, 2025</b>
<b>Bid Due Date</b>	<b>February 11, 2025</b>
<b>*Recommendation to Board of Education for approval</b>	<b>March 3, 2025</b>
<b><u>Final completion Date</u></b>	<b>August 1, 2025</b>

**VENDOR/CONTRACTOR INFORMATION**

Please specify the length of time your company has established.

## **FEDERAL UNIFORM GUIDANCE**

**This purchase contract will be funded in full/part by Federal Grants and are such subject to the federal uniform guidance purchasing procedures and provisions outlined below.**

### **§ 200.214 Suspension and debarment.**

Non-Federal entities are subject to the nonprocurement debarment and suspension regulations implementing Executive Orders 12549 and 12689, [2 CFR part 180](#). The regulations in [2 CFR part 180](#) restrict awards, subawards, and contracts with certain parties that are debarred, suspended, or otherwise excluded from or ineligible for participation in Federal assistance programs or activities. The Contractor certifies that, during the term of an award for all contracts by Martin County Schools resulting from this procurement process, neither it nor its principals is presently disbarred, suspended, proposed for disbarment, declared ineligible, or voluntarily excluded for participation by any federal department or agency.

### **§ 200.320 Methods of procurement to be followed**

In compliance with § 200.320 of the Federal Uniform Guidance, a firm fixed price contract award will be made in writing to the lowest responsive and responsible bidder. Any or all bids may be rejected if there is a sound documented reason.

### **§ 200.321 contracting with small and minority businesses, women's business enterprises, and labor surplus area firms.**

This contract will be funded by Federal Grants, which requires Martin County Schools to follow the UG guidelines outlined below. As a contractor for Martin County Schools, the contractor agrees to take affirmative steps listed in paragraphs (b) numbers (1) through (5).

(a) The non-Federal entity must take all necessary affirmative steps to assure that minority businesses, women's business enterprises, and labor surplus area firms are used when possible.

(b) Affirmative steps must include:

(1) Placing qualified small and minority businesses and women's business enterprises on solicitation lists;

(2) Assuring that small and minority businesses, and women's business enterprises are solicited whenever they are potential sources;

(3) Dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority businesses, and women's business enterprises;

(4) Establishing delivery schedules, where the requirement permits, which encourage participation by small and minority businesses, and women's business enterprises;

(5) Using the services and assistance, as appropriate, of such organizations as the Small Business Administration and the Minority Business Development Agency of the Department of Commerce; and

(6) Requiring the prime contractor, if subcontracts are to be let, to take the affirmative steps listed in [paragraphs \(b\)\(1\)](#) through [\(5\)](#) of this section.

### **Byrd Anti-Lobbying Amendment (31 U.S.C. 1352)**

For any award exceeding \$100,000, the contractor certifies that during and after the contract award term for all contracts awarded by Martin County Schools, that it is in compliance with all applicable provisions to the Byrd Anti-Lobbying Amendment (31 U.S.C. 1352). The contractor further certifies that:

- No Federal appropriated funds awarded will be paid for on behalf of the contractor, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of a Federal contract, the making of a Federal grant, the making of a Federal loan, the entering into a cooperative agreement, and the extension, continuation, renewal, amendment, or modification of a Federal contract, grant, loan, or cooperative agreement.
- If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence and officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal grant or cooperative agreement, the undersigned shall complete and submit Standard form- LLL, "Disclosure Form to Report Lobbying", in accordance with its instructions.
- The contractor shall require that the language of this certification be included in the award documents for all covered sub awards exceeding \$100,000 in Federal funds at all appropriate tiers and that all sub-recipients shall certify and disclose accordingly.

### **Access to Records**

The Contractor agrees to provide Martin County Schools, the comptroller General of the United States, or any of their authorized representatives access to any books, documents, papers and records of the contractor which are directly pertinent or pertaining to this contract for the purposes of making audits, excerpts and transcriptions. The contractor agrees to permit any of

the foregoing parties to reproduce by any means whatsoever or to copy excerpts and transcriptions as reasonably needed. The provisions herein are not intended to limit access to records under relevant N.C. and Federal regulations, such as North Carolina Public Records Law.

### **No Obligation by Federal Government**

All parties to this agreement acknowledge that the federal government is not a party to this contract and is not subject to any obligations or liabilities to the non-Federal entity, contractor or any other party pertaining to any matter resulting from the contract.

### **Program Fraud and False or Fraudulent Statements or Related Acts**

The Vendor/Contractor acknowledges that 31 U.S.C. Chapter 38 (Administrative Remedies for False Claims and Statements) applies to the Vendor/Contractor's actions pertaining to this contract.

### **NORTH CAROLINA GENERAL STATUTE GUIDELINES**

Pursuant to N.C. Gen. Stat § 133-32 and any bidder certifies and understands that It shall be unlawful for any contractor, subcontractor, or supplier who: (1) Has a contract with a governmental agency; (2) Has performed under such a contract within the past year; or (3) Anticipates bidding on such a contract in the future; to make gifts or to give favors to any officer or employee of a governmental agency who is charged with the duty of: (1) Preparing plans, specifications, or estimates for public contract; (2) Awarding or administering public contracts; or (3) Inspecting or supervising construction. It shall also be unlawful for any officer or employee of a governmental agency who is charged with the duty of: (1) Preparing plans, specifications, or estimates for public contracts; (2) Awarding or administering public contracts; or (3) Inspecting or supervising construction; willfully to receive or accept any such gift or favor.

Martin County Schools, in addition to its compliance with federal regulations and laws regarding small and minority businesses, also promotes the use of historically underutilized businesses. See N.C. Gen. Stat. § 143-48, § 143-128.4.

### **Martin County Board of Education**

#### **Federal Uniform Guidance**

#### **Addendum to Contract for Goods and Services**

*Revised February 24, 2022*

#### I. Definitions

A. **Construction Work.** "Construction work" is the construction, rehabilitation, alteration, conversion, extension, demolition or repair of buildings, highways, or other changes or improvements to real property, including facilities providing utility services. The term also includes the supervision, inspection, and other onsite functions incidental to the actual construction. (See 41 C.F.R. § 60-1.3).

B. **Federal Assisted Construction Contract.** "Federally assisted construction contract" is any agreement or modification thereof between any applicant and a person for construction work which is

paid for in whole or in part with funds obtained from the Government or borrowed on the credit of the Government pursuant to any Federal program involving a grant, contract, loan, insurance, or guarantee, or undertaken pursuant to any Federal program involving such grant, contract, loan, insurance, or guarantee, or any application or modification thereof approved by the Government for a grant, contract, loan, insurance, or guarantee under which the applicant itself participates in the construction work. (See 41 C.F.R. § 60-1.3)

II. Remedies

The Board reserves all rights and privileges under the applicable laws and regulations with respect to this procurement in the event of any breach of contract by either party, including but not limited to any administrative, contractual or legal remedies applicable as well as any appropriate sanctions and/or penalties.

III. Termination for Cause

The Board may terminate the Contract, in whole or in part, following written notice by the Board of a breach of the Contract by Contractor and the Contractor having fifteen (15) days to cure. In addition to any other remedies available to the Board in law or equity, the Board may procure upon such terms as the Board shall deem appropriate, Goods or Services substantially similar to those so terminated, in which case Contractor shall be liable to the Board for any excess costs for such similar supplies or services and any expenses incurred in connection therewith.\

IV. Termination for Convenience:

For good cause as determined by the Board in good faith, the Board shall have the right to terminate any work under this Contract, in whole or in part, at any time at its complete discretion by providing 30 days' notice in writing from Board to Contractor. If the Contract is terminated by the Board in accordance with this paragraph, Contractor will be paid in an amount which bears the same ratio to the total compensation as does the Goods or Services actually delivered or performed to the total originally contemplated in the Contract. The Board will not be liable to Contractor for any costs for completed Goods, Goods in process or materials acquired or contracted for, if such costs were incurred prior to the date of this Contract.

V. Changes

The Board may at any time, by a written change order, make changes within the general scope of the contract, in any one or more of the following: (a) specifications (including drawings and designs); (b) method or manner of performance of the work; (c) furnished facilities, equipment, materials, services, or site; or (d) the schedule for the performance of work. If any such change causes an increase or decrease in the cost of the work under the contract which was changed, an equitable adjustment may be made in the contract price and the contract may be modified in writing accordingly. Any claim by Contractor for adjustment under this clause must be asserted no later than 30 days from the date of receipt by the Contractor of the notification of change. Any change in the cost of work shall be authorized in writing by both parties.

VI. Equal Employment Opportunity.

A. During the performance of this contract, the Contractor agrees as follows:

The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff

or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

1. The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive considerations for employment without regard to race, color, religion, sex, or national origin.
2. The Contractor will send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the Contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
3. The Contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.
4. The Contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
5. In the event of the Contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the Contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions as may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.
6. The Contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance: Provided, however, that in the event a Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

**B. Copeland "Anti-Kickback" Act:**

1. Contractor. The Contractor shall comply with 18 U.S.C. § 874, 40 U.S.C. § 3145, and the requirements of 29 C.F.R. pt. 3 as may be applicable, which are incorporated by reference into this contract.
2. Subcontracts. The Contractor or subcontractor shall insert in any subcontracts the clause above and such other clauses as the Department of Labor may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower

tier subcontracts. The prime Contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all of these contract clauses.

3. Breach. A breach of the contract clauses above may be grounds for termination of the contract, and for debarment as a Contractor and subcontractor as provided in 29 C.F.R. § 5.12.

## VII. Davis-Bacon Act

### A. **Davis-Bacon Act, as amended (40 U.S.C. 3141-3148).**

The contractor shall comply Davis-Bacon Act (40 U.S.C. 3141-3144, and 3146-3148) as supplemented by Department of Labor regulations (29 CFR Part 5, "Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction"). As such, the Contractors shall be required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor. In addition, the Contractor shall pay wages not less than once a week. The Board must report all suspected or reported violations to the Federal awarding agency

### B. **Compliance with the Contract Work Hours and Safety Standards Act**

C. **Overtime requirements.** No Contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

D. **Violation; liability for unpaid wages; liquidated damages.** In the event of any violation of the clause set forth in paragraph (1) of this section the Contractor and any subcontractor responsible therefore shall be liable for the unpaid wages. In addition, such Contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1) of this section, in the sum of \$10 for each calendar day on which such an individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1) of this section.

E. **Withholding for unpaid wages and liquidated damages.** The Board shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the Contractor or subcontractor under any such contract or any other Federal contract with the same prime Contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime Contractor, such sums as may be determined to be necessary to satisfy any liabilities of such Contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2) of this section.

F. **Subcontracts.** The Contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime Contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1) through (4) of this section.

## VIII. Rights to Inventions Made Under a Contract or Agreement

- A. To the extent applicable, if the award meets the definition of "funding agreement" under 37

C.F.R. § 401.2(a) and the Board wishes to enter into a contract with a small business firm or nonprofit organization regarding the substitution of parties, assignment or performance of experimental, developmental, or research work under that "funding agreement," the Board will comply with the requirements of 37 C.F.R. Part 401 (Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements), and any implementing regulations issued. (See 2 C.F.R. Part 200, Appendix II, F)

IX. Clean Air Act and the Federal Water Pollution Control Act.

The following provisions apply to contracts of amounts in excess of \$150,000:

A. Clean Air Act

1. The Contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. § 7401 et seq.
2. The Contractor agrees to report each violation to the Board and understands and agrees that the Board will, in turn, report each violation as required to assure notification to the State of North Carolina, Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office.
3. The Contractor agrees to include these requirements in each subcontract exceeding \$150,000 financed in whole or in part with Federal assistance.

B. Federal Water Pollution Control Act

1. The Contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq.
2. The Contractor agrees to report each violation to the Board and understands and agrees that the Board will, in turn, report each violation as required to assure notification to the State of North Carolina, Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office.
3. The Contractor agrees to include these requirements in each subcontract exceeding \$150,000 financed in whole or in part with Federal assistance.

X. Suspension and Debarment

A. This contract is a covered transaction for purposes of 2 C.F.R. pt. 180 and 2 C.F.R. pt. 3000. As such the Contractor is required to verify that none of the Contractor, its principals (defined at 2 C.F.R. § 180.995), or its affiliates (defined at 2 C.F.R. § 180.905) are excluded (defined at 2 C.F.R. § 180.940) or disqualified (defined at 2 C.F.R. § 180.935).

B. The Contractor must comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C and must include a requirement to comply with these regulations in any lower tier covered transaction it enters into.

C. This certification is a material representation of fact relied upon by the Board. If it is later determined that the Contractor did not comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C, in addition to remedies available to the State of North Carolina and/or the Board, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment.

D. The bidder or proposer agrees to comply with the requirements of 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C while this offer is valid and throughout the period of any contract that may arise from this offer. The bidder or proposer further agrees to include a provision requiring such compliance in its lower tier covered transactions.

XI. Byrd Anti-Lobbying Amendment, 31 U.S.C. § 1352(as amended)

A. Contractors who apply or bid for an award of \$100,000 or more shall file the required certification regarding lobbying, which is attached hereto as Exhibit A. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant, or any other award covered by 31 U.S.C. § 1352. Each tier shall also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the recipient..

XII. Procurement of Recovered Materials.

A. In the performance of this contract, the Contractor shall make maximum use of products containing recovered materials that are EPA designated items unless the product cannot be acquired—

1. Competitively within a timeframe providing for compliance with the contract performance schedule;
2. Meeting contract performance requirements; or
3. At a reasonable price.

B. Information about this requirement, along with the list of EPA designated items, is available at EPA's Comprehensive Procurement Guidelines website, <https://www.epa.gov/smm/comprehensiveprocurement-guideline-cpg-program>.

XIII. Access to Records.

The following access to records requirements apply to this contract:

A. The Contractor agrees to provide the Board, the State of North Carolina, the Comptroller General of the United States, or any of their authorized representatives access to any books, documents, papers, and records of the Contractor which are directly pertinent to this contract for the purposes of making audits, examinations, excerpts, and transcriptions.

B. The Contractor agrees to permit any of the foregoing parties to reproduce by any means whatsoever or to copy excerpts and transcriptions as reasonably needed.

C. The Contractor agrees to provide the Administrator or his authorized representatives access to construction or other work sites pertaining to the work being completed under the contract.

XIV. DHS Seal, Logo, and Flags: The Contractor shall not use the DHS seal(s), logos, crests, or reproductions of flags or likenesses of DHS agency officials without specific pre approval.

XV. Compliance with Federal Law, Regulations, and Executive Orders  
This is an acknowledgement that financial assistance will be used to fund the contract only. The Contractor will comply with all applicable federal law, regulations, executive orders, policies, procedures, and directives.

XVI. No Obligation by Federal Government  
The Federal Government is not a party to this contract and is not subject to any obligations or liabilities to the non-Federal entity, Contractor, or any other party pertaining to any matter resulting from the contract.

- XVII. Program Fraud and False or Fraudulent Statements or Related Acts The Contractor acknowledges that 31 U.S.C. Chap. 38 (Administrative Remedies for False Claims and Statements) applies to the Contractor's actions pertaining to this contract.
- XVIII. Insurance and Reimbursement  
The Contractor shall assist and support the Board in any way during the claim process with its insurance carrier(s) and/or seeking reimbursement for expenses from the State of North Carolina, or other applicable local, state or federal agency.
- XIX. Responsibility  
The Contractor shall provide documentation establishing its integrity, compliance with public policy, record of past performance, and financial and technical resources prior to the execution of this contract.
- XX. Compliance with Local Board Policy  
The Contractor shall comply with all applicable Martin County Board of Education Policies, including but not limited to, Martin County Schools Federal Uniform Guidance Procurement Policy and Martin County Schools Federal Uniform Guidance Conflict of Interest Policy,

**EXHIBIT A. CERTIFICATION REGARDING LOBBYING (44 C.F.R. PART 18)**

Certification for Contracts, Grants, Loans, and Cooperative Agreements (To be submitted with each bid or offer exceeding \$100,000)

The undersigned \_\_\_\_\_ [Contractor] certifies, to the best of his or her knowledge, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. § 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

The Contractor, \_\_\_\_\_, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the

provisions of 31 U.S.C. § 3801 et seq., apply to this certification and disclosure, if any.

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Signature of Contractor's Authorized Official

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Name and Title of Contractor's Authorized Official

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Date

**ATTACHMENT A  
MARTIN COUNTY BOARD OF  
EDUCATION ("MCBOE")  
STANDARD CONTRACT TERMS  
AND CONDITIONS**

Last Updated: March 14, 2018

1. **Acceptance.** Contractor's acknowledgment of the terms of this Contract constitutes an agreement to comply with all terms and conditions set forth or referenced (i) in the Vendor Contract for Goods and/or Services, (ii) in the Standard Contract Terms and Conditions herein, (iii) on any attachments thereto, (iv) in any applicable solicitation documentation related to this Contract (including without limitation any request for proposals or invitation for bids or Contractor's response thereto) that deal with the same subject matter as this Contract, and (v) in any other terms and conditions of a written agreement signed by Contractor and the MCBOE that deals with the same subject matter as this Contract (collectively, the "Contract Documents"). The terms and provisions set forth in the Contract Documents shall constitute the entire agreement between Contractor and MCBOE with respect to the purchase by MCBOE of the (i) goods ("Goods") and/or (ii) services provided or work performed ("Services") as described in the Contract Documents. The agreements set forth in the Contract Documents are sometimes referred to herein as the "Contract." In the event of any conflict between any terms and conditions of the Contract Documents, the terms and conditions most favorable to MCBOE shall control. No additional or supplemental provision or provisions in variance herewith that may appear in Contractor's quotation, acknowledgment, invoice or in any other communication from Contractor to MCBOE shall be deemed accepted by or binding on MCBOE. MCBOE hereby expressly rejects all such provisions which supplement, modify or otherwise vary from the terms of the Contract Documents, and such provisions are superseded by the terms and conditions stated in the Contract Documents, unless and until MCBOE's authorized representatives expressly assent, in writing, to such provisions. Stenographic and clerical errors and omissions by MCBOE are subject to correction.
  
2. **Quantities.** Shipments must equal exact amounts ordered unless otherwise agreed to in writing by

MCBOE. The award of a term contract neither implies nor guarantees any minimum or maximum purchases.

3. **Prices.** If Contractor's price or the regular market price of any of the Goods or Services covered hereunder is lower than the price stated in the Contract Documents on the date of shipment of such Goods or Services, Contractor agrees to give MCBOE the benefit of such lower price on any such Goods or Services. In no event shall Contractor's price be higher than the price last quoted or last charged to MCBOE unless otherwise agreed to in writing. No charges for transportation, boxing, crating, etc. are allowable unless such charges are included in the Contract Documents. Should the Contract Documents include any provision allowing an increase in the contract price due to external conditions, Contractor shall inform MCBOE of such change and MCBOE shall have the right to terminate the Contract if desired.
4. **Price Adjustments (term contracts only).** Any price changes, downward or upward, which might be permitted during the contract period must be general, either by reason of market change or on the part of the Contractor to other customers.
  - a. **Notification:** Must be given to MCBOE in writing concerning any proposed price adjustments. Such notification shall be accompanied by a copy of manufacturer's official notice or other acceptable evidence that the change is general in nature.
  - b. **Decreases:** MCBOE shall receive full proportionate benefit immediately at any time during the contract period.
  - c. **Increases:** All prices shall be firm against any increase for 180 days from the effective date of the Contract. After this period, a request for increase may be submitted with MCBOE reserving the right to accept or reject the increase, or cancel the Contract. Such action by MCBOE shall occur not later than 15 days after the receipt by MCBOE of a properly documented request for price increase. Any increases accepted shall become effective not later than 30 days after the expiration of the original 15 days reserved to evaluate the request for increase.
5. **Invoices.** It is understood and agreed that orders will be shipped at the established Contract prices in effect on dates orders are placed. Invoicing at variance with this provision will subject the Contract to cancellation. Applicable North Carolina sales tax shall be invoiced as a separate item. Invoices shall be sent to MCBOE's accounts payable department with a copy to the MCBOE Project Coordinator.
6. **Freight on Board.** All shipments of Goods are freight on board destination unless otherwise stated in the Contract Documents.
7. **Taxes.** Any applicable taxes shall be invoiced as a separate item.
8. **Payment Terms.** Payment terms are Net 30 days after receipt of correct invoice or acceptance of Goods or Services, whichever is later.
9. **Condition and Packaging.** Unless otherwise provided by special terms and conditions or specifications, it is understood and agreed that any item offered or shipped has not been sold or used for any purpose and shall be in first class condition. All containers/packaging shall be suitable for handling, storage or shipment.
10. **Delays in Shipment.** Time and date of delivery are of the essence, except when delay is due to causes beyond Contractor's reasonable control and without Contractor's fault or negligence.
11. **Risk of Loss.** Contractor shall have the risk of loss of and damage to the Goods subject to the Contract Documents until such Goods are delivered to the destination and accepted by MCBOE or its nominee.
12. **Rejection.** All Goods and Services shall be received subject to MCBOE's inspection. Goods or Services that are defective in workmanship or material or otherwise not in conformity with the requirements of the Contract Documents may be rejected and returned at Contractor's expense or may be accepted at an appropriate reduction in price. MCBOE may require Contractor to promptly

replace or correct any rejected Goods or Services and, if Contractor fails to promptly replace or correct such Goods or Services, MCBOE may contract with a third party to replace such Goods and Services and charge Contractor the additional cost.

13. **Compliance with All Laws.** Contractor warrants that all performance hereunder shall be in accordance with all applicable federal, state and local laws, regulations and orders.
14. **E-Verify Compliance.** Pursuant to N.C. Gen. Stat. § 143-133.3, Contractor represents and warrants that it is aware of and in compliance with Article 2 of Chapter 64 of the North Carolina General Statutes, requiring use of the E-Verify system for employers who employ twenty-five (25) or more employees, and that it is and will remain in compliance with these laws at all times while providing services pursuant to this Contract. The Contractor shall also ensure that any of its subcontractors (of any tier) will remain in compliance with these laws at all times while providing subcontracted services in connection with this Contract.
15. **Iran Divestment.** Contractor certifies that it is not identified on a list created by the North Carolina State Treasurer pursuant to N.C. Gen. Stat. §147-86.58 as a person or entity engaging in investment activities in Iran. Contractor further certifies that in the performance of this Agreement it shall not use any contractor or subcontractor that is identified on such a list.
16. **Warranties.** Contractor warrants that all Goods and Services delivered hereunder will be free from defects in materials and workmanship and will conform strictly to the specifications, drawings, or samples specified or furnished. This warranty shall survive any inspection, delivery, acceptance or payment by MCBOE of the Goods and Services and shall run to MCBOE and any user of the Goods or Services. This express warranty is in addition to Contractor's implied warranties of merchantability and fitness for a particular purpose which shall not be disclaimed. In addition to any other rights available at law or equity, MCBOE shall be entitled to all rights and remedies provided by the Uniform Commercial Code, Chapter 25 of the North Carolina General Statutes, for breach of express warranties and implied warranties of merchantability or fitness for a particular purpose, including but not limited to consequential and incidental damages.
17. **Indemnification.** Contractor shall indemnify and hold harmless MCBOE, its officers, agents, employees and assigns from and against all claims, losses, costs, damages, expenses, attorney's fees and liability that any of them may sustain (a) arising out of Contractor's failure to comply with any applicable law, ordinance, regulation, or industry standard or (b) arising directly or indirectly out of Contractor's performance or lack of performance of the terms and conditions of the Contract. In the event that any Goods or Services sold and delivered or sold and performed under the Contract Documents shall be defective in any respect whatsoever, Contractor shall indemnify and save harmless MCBOE, its officers, agents, employees and assigns from all loss or the payment of all sums of money by reason of all accidents, injuries or damages to persons or property that shall happen or occur in connection with the use or sale of such Goods or Services and are contributed to by said condition. In the event Contractor, its employees, agents, subcontractors and or lower-tier subcontractors enter premises occupied by or under the control of MCBOE in the performance of the Contract Documents, Contractor agrees that it will indemnify and hold harmless MCBOE, its officers, agents, employees and assigns, from any loss, costs, damage, expense or liability by reason of property damage or personal injury of whatsoever nature or kind arising out of, as a result of, or in connection with such entry.
18. **Insurance.** Unless such insurance requirements are waived or modified by MCBOE or Insurance and Risk Management, Contractor certifies that it currently has and agrees to purchase and maintain during its performance under the Contract the following insurance from one or more insurance companies acceptable to MCBOE and authorized to do business in the State of North Carolina: **Automobile** - Contractor shall maintain bodily injury and property damage liability insurance covering all owned, non-owned and hired automobiles. The policy limits of such insurance shall not be less than \$1,000,000 combined single limit each person/each occurrence. **Commercial General Liability** - Contractor shall maintain commercial general liability insurance that shall protect Contractor from claims of bodily injury or property damage which arise from performance under the Contract. This insurance shall include coverage for contractual liability. The

policy limits of such insurance shall not be less than \$1,000,000 combined single limit each occurrence/mutual aggregate. Workers' Compensation and Employers' Liability Insurance - If applicable to Contractor, Contractor shall meet the statutory requirements of the State of North Carolina for workers' compensation coverage and employers' liability insurance. Contractor shall also provide any other insurance or bonding specifically recommended in writing by the DIRM or required by applicable law. Certificates of such insurance shall be furnished by Contractor to MCBOE and shall contain the provision that MCBOE be given 30 days' written notice of any intent to amend or terminate by either Contractor or the insuring company. Failure to furnish insurance certificates or to maintain such insurance shall be a default under the Contract and shall be grounds for immediate termination of the Contract.

19. **Termination for Convenience.** For good cause as determined by MCBOE in good faith, MCBOE shall have the right to terminate any work under the Contract Documents, in whole or in part, at any time at its complete discretion by providing 30 days' notice in writing from MCBOE to Contractor. If the Contract is terminated by MCBOE in accordance with this paragraph, Contractor will be paid in an amount which bears the same ratio to the total compensation as does the Goods or Services actually delivered or performed to the total originally contemplated in the Contract. MCBOE will not be liable to the Contractor for any costs for completed Goods, Goods in process or materials acquired or contracted for, if such costs were incurred prior to the date of this Contract.
20. **Termination for Default.** MCBOE may terminate the Contract, in whole or in part, immediately and without prior notice upon breach of the Contract by Contractor. In addition to any other remedies available to MCBOE in law or equity, MCBOE may procure upon such terms as MCBOE shall deem appropriate, Goods or Services substantially similar to those so terminated, in which case Contractor shall be liable to MCBOE for any excess costs for such similar supplies or services and any expenses incurred in connection therewith.
21. **Contract Funding.** It is understood and agreed between Contractor and MCBOE that MCBOE's obligation under the Contract is contingent upon the availability of appropriated funds from which payment for Contract purposes can be made. No legal liability on the part of MCBOE for any payment may arise until funds are made available to MCBOE's Finance Officer and until Contractor receives notice of such availability. Should such funds not be appropriated or allocated, MCBOE may at its discretion immediately terminate the Contract. MCBOE shall not be liable to Contractor for damages of any kind (general, special, consequential or exemplary) as a result of such termination.
22. **Accounting Procedures.** Contractor shall comply with any accounting and fiscal management procedures prescribed by MCBOE to apply to the Contract. Contractor shall assure such fiscal control and accounting procedures as may be necessary for proper disbursement of and accounting for all project funds.
23. **Improper Payments.** Contractor shall assume all risks attendant to any improper expenditure of funds under the Contract. Contractor shall refund to MCBOE any payment made pursuant to the Contract if it is subsequently determined by audit that such payment was improper under any applicable law, regulation or procedure. Contractor shall make such refunds within 30 days after MCBOE notifies Contractor in writing that a payment has been determined to be improper.
24. **Contract Transfer.** Contractor shall not assign, subcontract or otherwise transfer any interest in the Contract without the prior written approval of MCBOE.
25. **Contract Personnel.** Contractor agrees that it has, or will secure at its own expense, all personnel required to perform the services set forth in the Contract.
26. **Key Personnel.** Contractor shall not substitute for key personnel assigned to the performance of the Contract without prior written approval from MCBOE Project Coordinator. "Key personnel" are defined as those individuals identified by name or title in the Contract Documents or in written communication from Contractor. "MCBOE Project Coordinator" is the individual at MCBOE responsible for administering the Contract.

27. **Contract Modifications.** The Contract may be amended only by written amendment duly executed by both MCBOE and Contractor. However, minor modifications may be made by MCBOE Project Coordinator to take advantage of unforeseen opportunities that: (a) do not change the intent of the Contract or the scope of Contractor's performance; (b) do not increase Contractor's total compensation or method of payment; and (c) either improve the overall quality of the product or service to MCBOE without increasing the cost, or reduce the total cost of the product or service without reducing the quantity or quality. All such minor modifications to the Contract must be recorded in writing and signed by both the Project Coordinator and Contractor, and placed on file with the Contract. No price adjustments will be made unless the procedure has been included in the Contract and a maximum allowable amount stipulated.
28. **Relationship of Parties.** Contractor is an independent contractor and not an employee of MCBOE. The conduct and control of the work will lie solely with Contractor. The Contract shall not be construed as establishing a joint venture, partnership or any principal-agent relationship for any purpose between Contractor and MCBOE. Employees of Contractor shall remain subject to the exclusive control and supervision of Contractor, which is solely responsible for their compensation.
29. **Advertisement.** The Contract will not be used in connection with any advertising by Contractor without prior written approval by MCBOE.
30. **Nondiscrimination.** During the performance of the Contract, Contractor shall not discriminate against or deny the Contract's benefits to any person on the basis of sexual orientation, national origin, race, ethnic background, color, religion, gender, age or disability.
31. **Conflict of Interest.** Contractor represents and warrants that no member of MCBOE or any of its employees or officers has a personal or financial interest or will benefit from the performance of the Contract or has any interest in any Contract, subcontract or other agreement related to the Contract. Contractor shall not permit any member of MCBOE or any of its employees or officers to obtain a personal or financial interest or benefit from the performance of the Contract or to have any interest in any Contract, subcontract or other agreement related to the Contract, during the term of the Contract. Contractor shall cause this paragraph to be included in all Contracts, subcontracts and other agreements related to the Contract.
32. **Gratuities to MCBOE.** The right of Contractor to proceed may be terminated by written notice if MCBOE determines that Contractor, its agent or another representative offered or gave a gratuity to an official or employee of MCBOE in violation of policies of MCBOE.
33. **Kickbacks to Contractor.** Contractor shall not permit any kickbacks or gratuities to be provided, directly or indirectly, to itself, its employees, subcontractors or subcontractor employees for the purpose of improperly obtaining or rewarding favorable treatment in connection with a MCBOE Contract or in connection with a subcontract relating to a MCBOE Contract. When Contractor has grounds to believe that a violation of this clause may have occurred, Contractor shall promptly report to MCBOE in writing the possible violation.
34. **Monitoring and Evaluation.** Contractor shall cooperate with MCBOE, or with any other person or agency as directed by MCBOE, in monitoring, inspecting, auditing or investigating activities related to the Contract. Contractor shall permit MCBOE to evaluate all activities conducted under the Contract. MCBOE has the right at its sole discretion to require that Contractor remove any employee of Contractor from MCBOE property and from performing services under the Contract following provision of notice to Contractor of the reasons for MCBOE's dissatisfaction with the services of Contractor's employee.
35. **Financial Responsibility.** Contractor represents that it is financially solvent and able to perform under the Contract. If requested by MCBOE, Contractor agrees to provide a copy of its latest audited annual financial statements or other financial statements as deemed acceptable by MCBOE's Finance Officer. In the event of any proceedings, voluntary or involuntary, in bankruptcy or insolvency by or against Contractor, the inability of Contractor to meet its debts as they become due or in the event of the appointment, with or without Contractor's consent, of an assignee for the

benefit of creditors or of a receiver, then MCBOE shall be entitled, at its sole option, to cancel any unfulfilled part of the Contract without any liability whatsoever.

36. **Governmental Restrictions.** In the event any governmental restrictions are imposed which necessitate alteration of the material, quality, workmanship or performance of the items offered prior to their delivery, it shall be the responsibility of the Contractor to notify, in writing, the purchasing office at once, indicating the specific regulation which required such alterations. MCBOE reserves the right to accept any such alterations, including any price adjustments occasioned thereby, or to cancel the Contract.
37. **Inspection at Contractor's Site.** MCBOE reserves the right to inspect, at a reasonable time, the equipment/item, plant or other facilities of a prospective contractor prior to Contract award, and during the Contract term as necessary for MCBOE determination that such equipment/item, plant or other facilities conform with the specifications/ requirements and are adequate and suitable for the proper and effective performance of the Contract.
38. **Confidentiality Information. Student Information.** If, during the course of Contractor's performance of the Contract, Contractor should obtain any information pertaining to students' official records, Contractor agrees to keep any such information confidential and to not disclose or permit to be disclosed, directly or indirectly, to any person or entity any such student information. The Contract shall not be construed by either party to constitute a waiver of or to in any manner diminish the provisions for confidentiality of students' records. Additionally, pursuant to N.C.G.S. 115C-401.1, Prohibition on the Disclosure of Information about Students, it is unlawful for a person who enters into a contract with a local board of education to sell personally identifiable information that is obtained from a student as a result of that person's performance under the Contract. **Employee Personnel Information.** If, during the course of Contractor's performance of the Contract, Contractor should obtain any information pertaining to employees of MCBOE's personnel records, Contractor agrees to keep any such information confidential and to not disclose or permit to be disclosed, directly or indirectly, to any person or entity any such personnel information. **Other Confidential Information.** (a) Contractor agrees that it will at all times hold in confidence for MCBOE all designs, know-how, techniques, devices, drawings, specifications., patterns, technical information, documents, business plans, item requirements, forecasts and similar data, oral, written or otherwise, conveyed by MCBOE to Contractor in connection herewith or procured, developed, produced, manufactured or fabricated by Contractor in connection herewith or procured, developed, produced, manufactured or fabricated by Contractor in connection with Contractor's performance hereunder (collectively, "Information"). Contractor shall exercise the same degree of care to prevent disclosure of any Information to others as it takes to preserve and safeguard its own proprietary information, but in any event, no less than a reasonable degree of care. Contractor shall not, without the prior written consent of MCBOE, reproduce any Information; nor disclose Information to any party; nor use any Information for any purpose other than performance for the benefit of Contractor hereunder. (b) Any technical knowledge or information of Contractor which Contractor shall have disclosed or may hereafter disclose to MCBOE in connection with the Goods or other performance covered by the Contract shall not, unless otherwise specifically agreed upon in writing by MCBOE, be deemed to be confidential or proprietary information and shall be acquired by MCBOE free from any restrictions as part of the consideration of the Contract.
39. **Schematic Designs.** As provided by N.C.G.S. 115C-105.53(c), schematic designs of school buildings are not considered public records or subject to public inspection, and Contractor shall keep in confidence any such designs in its possession for purposes of this Contract.
40. **Intellectual Property.** Contractor agrees, at its own expense, to indemnify, defend and save MCBOE harmless from all liability, loss or expense, including costs of settlement and attorney's fees, resulting from any claim that MCBOE's use, possession or sale of the Goods or Services infringes any copyright, patent or trademark or is a misappropriation of any trade secret.
41. **No Pre-Judgment or Post-Judgment Interest.** In the event of any action by Contractor for breach of contract in connection with the Contract, any amount awarded shall not bear interest either before or after any judgment, and Contractor specifically waives any claim for interest.

42. **Background Checks.** At the request of MCBOE's Project Coordinator, Contractor (if an individual) or any individual employees of Contractor involved in the performance of the Contract shall submit to MCBOE criminal background check and drug testing procedures.
43. **Jessica Lunsford Act.** As required by N.C.G.S. 115C-332.1, all Contractors, subcontractors, consultants, sub-consultants, and vendors shall conduct prior to the start of service and annually thereafter a review of the State Sex Offender and Public Protection Registration Program, the State Sexually Violent Predator Registration Program, and the National Sex Offender Registry for all employees who will provide services under this contract that involve direct interaction with MCBOE students. For Contractor's convenience only, all of the required registry checks may be completed at no cost by accessing the United States Department of Justice Sex Offender Public Website at <http://www.nsopw.gov/>. Any employee of the contractor, subcontractor, consultant, sub-consultant, or vendor found to be registered on any of the lists identified herein shall not perform any work under this contract and shall not be permitted to enter property owned by Martin County Schools or Martin County on behalf of Martin County Schools. Failure to comply may result in legal action and termination of the contract for default.
44. **Safety Data Sheets.** Pursuant to the Hazard Communication Standard (29 C.F.R. §1910.1200, et seq.) and incorporated by reference, except as modified by 13 N.C.A.C. 07F .0101, Contractor shall provide all safety data sheets in accordance with federal and state regulations.
45. **Mediation.** If a dispute arises out of or relates to the Contract, or the breach of the Contract, the parties agree first to try in good faith to settle the dispute through negotiation. If the dispute cannot be settled through negotiation, Contractor agrees to offer to settle the dispute by mediation administered by the American Arbitration Association under its Commercial Mediation Rules, or administered by another mediator jointly selected by the parties, before resorting to litigation.
46. **Attorney's Fees.** In the event of legal proceedings related to the Contract, MCBOE shall be entitled to recover its costs and reasonable attorney's fees to the maximum extent allowed by law, should MCBOE be the prevailing party.
47. **No Third Party Benefits.** The Contract shall not be considered by Contractor to create any benefits on behalf of any third party. Contractor shall include in all contracts, subcontracts or other agreements relating to the Contract an acknowledgment by the contracting parties that the Contract creates no third party benefits.
48. **Force Majeure.** If MCBOE is unable to perform its obligations or to accept the services or goods because of Force Majeure (as hereinafter defined), the time for such performance by MCBOE or acceptance of services will be equitably adjusted by allowing additional time for performance or acceptance of services equal to any periods of Force Majeure. "Force Majeure" shall mean any delays caused by acts of God, riot, war, terrorism, inclement weather, labor strikes, material shortages and other causes beyond the reasonable control of MCBOE.
49. **Ownership of Documents.** All documents created pursuant to the Contract shall, unless expressly provided otherwise in writing, be owned by MCBOE. Upon the termination or expiration of the Contract, any and all finished or unfinished documents and other materials produced by Contractor pursuant to the Contract shall, at the request of MCBOE, be turned over to MCBOE. Any technical knowledge or information of Contractor which Contractor shall have disclosed or may hereafter disclose to MCBOE shall not, unless otherwise specifically agreed upon in writing by MCBOE, be deemed to be confidential or proprietary information and shall be acquired by MCBOE free from any restrictions as part of the consideration of the Contract.
50. **Strict Compliance.** MCBOE may at any time insist upon strict compliance with these terms and conditions notwithstanding any previous course of dealing or course of performance between the parties to the contrary.
51. **General Provisions.** MCBOE's remedies as set forth herein are not exclusive. Any delay or omission in exercising any right hereunder, or any waiver of any single breach or default hereunder, shall not be deemed to be a waiver of such right or of any other right, breach, or default. If action

be instituted by Contractor hereunder, MCBOE shall be entitled to recover costs and reasonable attorney's fees. Contractor may not assign, pledge, or in any manner encumber Contractor's rights under this Contract, or delegate the performance of any of its obligations hereunder, without MCBOE prior, express written consent.

52. **Contract Situs.** All matters, whether sounding in contract or tort relating to the validity, construction, interpretation and enforcement of the Contract, will be determined in Martin County, North Carolina. North Carolina law will govern the interpretation and construction of the Contract.
53. **Federal Tax Number or Social Security Number.** Upon request by MCBOE or its representatives, Contractor shall provide its federal tax identification number or, if Contractor is an individual, his or her Social Security Number.

**BIDDER INSTRUCTIONS:**

Please complete all sections of this proposal accurately and completely. The proposal must be for the product specified, no substitutions will be accepted. After completing each section, the proposal should be signed by the person designated to submit bids for your company.

**BIDDER'S PROPOSAL:**

<b>NAME:</b>
<b>DATE:</b>
<b>PRODUCT DELIVERY DATE:</b> <i>PLEASE PROVIDE AND ESTIMATED DELIVERY DATE FROM TIME OF PURCHASE ORDER RECEIPT FROM MARTIN COUNTY SCHOOLS</i>
<b>CONTACT PERSON:</b>
<b>PHONE NUMBER:</b>

Quantity	Item	Total
		\$
		\$
		\$
		\$
	<b>Sub Total</b>	\$
	<b>Shipping/Freight</b>	\$
	<b>Total Price</b>	\$

*\*Disclaimer: Martin County Schools is not tax exempt, tax will need to be included as a separate line item.\**

**VENDOR SPECIFICS**

*Please include in this section any information you deem pertinent relating to your proposal for this IFB.*

***It shall be the Vendor’s responsibility to read this entire document, review all enclosures and attachments, and comply with all requirements specified. By signing this document, the vendor agrees to follow all guidelines/provisions outlined in this IFB, Including, but not limited to the Martin County Schools IFB guidelines, the Federal Uniform Guidance Provisions, and the Martin County Schools contract award terms. In addition, the vendor agrees to follow the complete instructions, terms and conditions outlined in this document, and recognizes that failure to follow these instructions, terms and conditions will result in the vendor’s proposal being withdrawn from consideration.***

**Bidder Signature:** \_\_\_\_\_

*Must be signed by the person(s) authorized to submit proposals for the company*

*Martin County Schools Office use only*

Date IFB received:	Time Received:
Opened By:	Date/Time opened:
Signature:	

Bid Accepted     Bid Rejected

*If rejected, please specify the reasoning:*

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