

# **Farmington Public Schools**

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**Large Area AV**

**Request for Proposals (RFP)**

**March 2024**

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## **GENERAL TERMS AND CONDITIONS**

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# 1 GENERAL REQUIREMENTS

## 1.1 INTENT

It is the intent of Farmington Public Schools (here after referred to as the “District”) to solicit proposals from qualified vendors for a large area AV agreement for the two high schools, three middle schools and one K-8 STEAM school. The detailed specifications requested are described in **Section 2, Section 3,** and the **Appendix.**

It is desired that the vendors propose on all the services being requested in this Request for Proposal (RFP). vendors may partner with another provider to supply a complete and turnkey solution. If your response to the RFP contains proposed services or equipment from multiple providers, all responding parties must be clearly identified, and a synopsis of the partner relationship as well as the party that will serve as the prime vendor/contact for the District must be detailed. The District reserves the right to proceed with the vendor deemed most suitable.

## 1.2 SCHEDULE OF EVENTS

The anticipated timeline for the District’s selection of a large area AV solution is as follows (all times local time):

EVENT	DATE & TIME
Pre-bid meeting	<b>April 2<sup>nd</sup>, 2024 at 3:15 pm local time</b> North Farmington High School 32900 W 13 Mile Rd, Farmington Hills, MI 48334
Deadline for requests for clarification related to this RFP	April 4, end of day Contact: <a href="mailto:Amy.Sasina@plantemoran.com">Amy.Sasina@plantemoran.com</a>
Due date for proposals and public proposal opening	April 22, 2024, 1 pm local time
Anticipated award date	June 4, 2024
Implementation schedule	Summer 2024

**PLEASE NOTE:** The District reserves the right, in its sole and absolute discretion, to make modifications to the above selection timeline as it determines to be in its best interest.

## 1.3 PROPOSAL SUBMISSION

Each prospective vendor is responsible for submission of its proposal. Proposals or proposal revisions received after the due date and time will not be accepted or considered. The District is not liable for any delivery or postal delays. All proposals received after the due date and time will remain unopened and made available to the respective vendor for pickup, at its sole cost and expense, for a period of two weeks.

Proposals shall be submitted as follows by the deadline indicated in **Section 1.2, Schedule of events:**

- One printed signed original
- One printed bound copy
- One USB drives consisting of only **two files**:
  - One **single PDF** file of the submitted printed, signed, complete proposal
  - **Appendix A** in Excel format

Mark with company name and deliver to:

Farmington Public Schools  
32500 Shiawassee  
Farmington, MI 48336  
Attention: Patrick Gregory | Senior Technology Coordinator

All proposals must be in a sealed package and contain the wording “**Large Area AV**” on the package. The wording “**ORIGINAL**” is to appear on the outside of the binder containing the original signed proposal. If a bid bond or cashier’s check is used, an **original copy** of the bid bond must be submitted in the binder marked “Original.” Proposals **may not** be delivered via facsimile or email.

**All proposals MUST be returned using the Vendor Response Forms provided in Appendix A.**

### 1.3.1 Intent to propose

Each vendor who intends to submit a proposal in response to this RFP should communicate its intent via email to [gina.mancinelli@plantemoran.com](mailto:gina.mancinelli@plantemoran.com) with the subject line “[*Insert your company name*] Farmington Public Schools Large Area AV RFP – Intent to Propose.” Please refer to **Section 1.5, RFP clarifications and addenda**, for the contact information to address specific questions related to this RFP.

The intent to respond shall include the name of the prospective vendor, the name of the contact person, and that person’s email address.

### 1.3.2 Familial Disclosure Form

Proposals shall be accompanied by a sworn and notarized statement disclosing any familial relationship that exists between the vendor or any employee of the vendor and any member of the Board of Education or Superintendent of the District. The District shall not accept a proposal that does not include this sworn and notarized disclosure statement. The Familial Disclosure Form must accompany your proposal (see **Appendix A**).

### 1.3.3 Iran Linked Business Affidavit

In accordance with the Iran Economic Sanctions Act, Michigan Public Act No. 517 of 2012, all vendors must execute the Iran Linked Business Affidavit and include it in their proposals (see **Appendix A**). Said forms are included in the Vendor Response Forms. The District will not accept a proposal that does not include this sworn and notarized disclosure statement. The form must accompany your Proposal (see **Appendix A**).

## **1.4 VENDOR PRE-BID MEETING**

A Pre-bid meeting will be held for this project. Refer to **Section 1.2** above. Whereas the pre-bid meeting is not mandatory, it is highly suggested as architectural obstacles and challenges may not be apparent by just the drawings and specifications alone. The successful vendor is required to make themselves familiar with the work is to be performed.

## **1.5 RFP CLARIFICATIONS AND ADDENDA**

Please note that any addenda will be posted by the District to the bid site that housed the original RFP. Vendors are responsible for checking the site regularly to make themselves aware of any new addenda. When making requests for clarification, please identify the relevant section number (e.g., Section 2.3.1).

Requests for clarification shall be submitted by email only to:

Amy Sasina  
[amy.sasina@plantemorran.com](mailto:amy.sasina@plantemorran.com)

## **1.6 FINALITY OF DECISION**

Any decision made by the District, including the vendor selection, shall be final.

## **1.7 RELEASE OF CLAIMS**

Each vendor, by submitting its proposal, releases the District from any and all claims arising out of and related to this RFP process and selection of a vendor(s).

## **1.8 VENDOR BEARS BID COSTS**

A recipient of this RFP is responsible for any and all costs and liabilities incurred by it or others acting on its behalf in preparing or submitting a proposal or otherwise responding to this RFP, or any negotiations incidental to its proposal or this RFP.

## **1.9 IRREVOCABILITY OF PROPOSALS**

All proposals submitted shall not be withdrawn and shall be irrevocable for a minimum period of 90 calendar days following the due date for receipt of proposals set forth above.

## **1.10 PROPOSAL FORMAT**

To facilitate the comparison of vendor proposals, it is required that each proposal be organized into the following sections:

### **1.10.1 Executive summary**

The executive summary should at a minimum include the following:

- A. **Executive letter:** Highlight how the proposed solution achieves the objectives of the District. The letter should also outline any benefits offered in a large area AV agreement. This letter is to be signed by an officer of the organization submitting the proposal.
- B. **Organizational overview:** Provide a brief overview of the organization.
- C. **Experience:** Describe your company's experience with projects such as large area AV projects involving the K-12 school systems.

### 1.10.2 Vendor Response Forms

Supplied in this RFP are Vendor Response Forms (see **Appendix A**). In addition to requesting information on your company and pricing, you must clearly indicate whether you either comply or take exception to any of the sections in this RFP.

Any exceptions to this RFP must be explicitly noted in the vendor's proposal. Lack of listing all exceptions will be considered acceptance of all the terms, conditions, and specifications as presented in this RFP. Any exceptions to the terms and conditions contained in this RFP or the Contract attached to this RFP, or any other special considerations or conditions requested or required by the vendor **MUST** be specifically enumerated by the vendor and be submitted as part of its proposal, together with an explanation as to the reason such terms and conditions of the RFP or form of Agreement cannot be met, or, in the vendor's opinion, are not applicable to the vendor. The vendor shall be required and expected to meet the Specifications and requirements as set forth in this RFP and the form of Agreement in their entirety, except to the extent exceptions or special considerations or conditions are expressly set forth in the vendor's proposal and those exceptions or special considerations or conditions are expressly accepted by the District. Vendors must understand that unreasonable exceptions or too many exceptions to the RFP requirements or Agreement may subject the vendor's proposal to disqualification. Acceptance of any vendor exception to the RFP or Agreement will strictly be at the discretion of the District.

All vendors **MUST** submit the **Appendix A forms**.

### 1.10.3 Project plan

The vendor will include an overview of its project plan in its proposal.

### 1.10.4 Project team

Indicate the level of qualification of the staff who will be assigned to this project. Qualification will be based on certifications and years of experience with the materials proposal in similar configurations. Names of staff need not be provided; however, the response in this section will indicate the minimum level of experience that will be provided. If necessary, please include additional categories to address additional levels of staff or staff with different certifications and years of experience.

### 1.10.5 Product information

The vendor must include hard copies of the technical specifications and data sheets for the two high schools and four middle schools being proposed.

#### **1.10.6 Equipment list**

A complete equipment list showing quantities and unit prices of each product proposed.

#### **1.10.7 One-line diagram of the system**

Any proposed changes to the one-line diagrams provided in the bid documents shall be documented as part of the contractor's bid with a revised one-line diagram.

#### **1.10.8 Substitution spreadsheet**

Provide substitution spreadsheet for any item that varies from components included in **Sections 2 and 3**.

#### **1.10.9 Electronic copy**

An electronic format of the forms in **Appendix A** in a Microsoft Excel format ***MUST*** be included with your proposal. A portable document format (PDF) version of all other materials should also be included.

#### **1.10.10 Additional information**

Additional information may be provided at the vendor's discretion.

### **1.11 BID BONDS**

Every proposal shall be accompanied by either a cashier's check on a solvent bank or by a bond executed by a surety company authorized to do business in the state of Michigan. A 5% bid bond of initial purchase price or cashier's check shall be required. Such check or bond shall name the District as the recipient. The amount of such bid bond or cashier's check shall be forfeited as liquidated damages, costs, and expenses incurred by the District if the vendor, after selected as the large area AV vendor, shall fail within 30 days after the notice of such award to enter into Agreement with the District.

## **1.12 PERFORMANCE AND PAYMENT BONDS**

The District MAY require the selected vendor(s) to provide a performance bond upon award of the contract. The associated cost of the performance bond is to be shown as a separate line item — do NOT include this cost in your base bid. This bond shall be equal in amount to the total price to the District of purchased hardware, software, cabling, and services. The surety of the bond shall remain in effect for one year after all acceptance of the entire project has been executed by the District. In the event that the vendor(s) fails to perform its obligations under any agreement between the vendor(s) and the District, the bond shall be paid to the District. The vendor(s) further agrees to save and hold harmless the District and agents from all liability and damages of every description in connection with any subsequent agreements. Payment bonds shall be required under the following conditions: project award exceeds \$50,000 and project involves construction, alteration, or repair to the buildings. Vendors must include a letter from their bonding company within the proposal that states that they are bondable.

## **1.13 INSPECTION OF WORKSITE**

If necessary, vendors can request access for site visits from Farmington Public Schools by contacting the individual identified in **Section 1.5**, *RFP clarifications and addenda*.

## **1.14 MODIFICATION OF RFP**

Vendors may not modify the RFP text to affect the terms, conditions, or specifications found in this document; this is forbidden and will subject the proposal to rejection. In the event any text is modified, the original text as issued will apply. This clause does not apply to the vendor response areas of the RFP where it is expected that vendors will enter their text.

## **1.15 CONFIDENTIAL INFORMATION**

As a public entity, the District is subject to the Michigan Freedom of Information Act (FOIA). Information contained in proposals may be subject to FOIA requests.

## **1.16 RIGHT TO REQUEST ADDITIONAL INFORMATION**

The District reserves the right to request any additional information that might be deemed necessary after the completion of this document.

## **1.17 RIGHT OF REFUSAL**

The District reserves the right to accept or reject any or all proposals, in whole or in part; evaluate suggestions or exceptions; waive irregularities or informalities in the RFP process or any proposal, in its sole and absolute discretion; or select certain equipment from various vendor proposals, as well as the right to award the Contract to other than the low vendor based on the best interests of the District.

## **1.18 PROPOSAL PREPARATION COSTS**

The vendor is responsible for any and all costs incurred by the vendor or its subcontractors in responding to this RFP.

### 1.19 SYSTEM DESIGN

The successful vendor shall be responsible for all design, information gathering, and required programming to achieve a successful implementation.

### 1.20 PERMITS

The successful vendor shall be responsible for complying with all local, state, and federal codes applicable to this installation. This includes the Electrical Permit required by the state of Michigan for low voltage installations.

### 1.21 PRICING ELIGIBILITY PERIOD

All vendor proposal bids are required to be offered for a term of not less than 120 calendar days in duration. A claim of mistake in computation of a proposal shall not void the proposals after they are opened and accepted.

### 1.22 ADDITIONAL CHARGES

No additional charges, other than those listed on the price breakdown sheets, shall be made. Prices quoted will include verification and coordination of order, all costs for shipping, F.O.B. delivery to all sites, unpacking, setup, insurance, installation, operation, testing, and cleanup.

### 1.23 TURNKEY SOLUTION

All prices quoted must include all cables, connectors, etc., that will be necessary to make the system specified *fully operational* for the intent, function, and purposes stated herein.

### 1.24 FEDERAL OR STATE SALES, EXCISE, OR USE TAXES

Farmington Public Schools is a tax-exempt entity for all purposes except if the project makes enhancements and/or additions to real property.

### 1.25 PURCHASE QUANTITIES

The District reserves the right to adjust upward or downward the quantities of items purchased without altering the unit purchase price upon award and throughout the contract period.

### 1.26 AGREEMENT REQUIREMENTS

The District intends to use the Agreement contained in **Appendix B** for this project. Please review this attached Agreement and indicate whether the terms of the Agreement are acceptable. Include all Agreement exceptions in your proposal, if any.

The District considers this RFP legally binding and will require that this RFP and the vendor proposal be incorporated by reference into any resulting Agreement between the vendor(s) and the District. It should be understood by the vendor(s) that this means the District expects the vendor(s) to satisfy all requirements and reports listed herein. exceptions should be explicitly noted in the vendor proposal. **Lack of listing all**

**exceptions will be considered acceptance of all the terms, conditions, and specifications as presented in this RFP.**

### **1.27 SURVIVAL CLAUSE**

All duties and responsibilities of any party that, either expressly or by their nature, extend into the future shall extend beyond and survive the end of the Agreement term or termination of the Agreement.

### **1.28 FORCE MAJEURE CLAUSE**

See the proposed Agreement in **Appendix B**.

### **1.29 INCORPORATION BY REFERENCE**

The object of the Agreement is to formalize in one document the complete agreement between the parties, and to do so by specifically incorporating by reference into the Agreement the RFP, all addenda to the RFP, the vendor's proposal, and other related documents, as well as by including certain additional necessary or appropriate Agreement terms, particularly where the Agreement terms agreed to by the parties during the RFP negotiation process do not correspond with the RFP.

- A. **Order of precedence.** The Agreement documents, which are all incorporated herein by reference, include the following:
1. The Agreement, including all attachments hereto
  2. Vendor's proposal
  3. The RFP

To the extent that the terms and conditions of the Agreement documents are in conflict, the terms and conditions shall be interpreted in the above-referenced order from 1 to 3. However, the parties also agree that where there is not a conflict between any of the terms and conditions contained in the above-referenced Agreement documents, all of the Agreement Documents shall be binding upon both parties, except to the extent the exceptions contained in the vendor's proposal are not expressly accepted by the District in writing and incorporated into the Agreement.

### **1.30 RISK DURING EQUIPMENT STORAGE AND INSTALLATION**

Delivery shall be made in accordance with the implementation schedule referenced as part of the Agreement. It will be possible to allow for minor variances from this implementation schedule as mutually agreed upon by both parties and confirmed by prior written notice. The equipment shall be installed and placed into good working order by representatives of the vendor. During the time when the equipment is in transit and until the equipment is fully installed in good working order, the vendor and its insurer shall be responsible for the equipment and relieve the District of responsibility for all risk of loss or damage to the equipment. In addition, the vendor shall hold the District and agents harmless from any risk of loss or damage arising out of occurrences during the installation of the equipment.

### **1.31 SHIPPING OF EQUIPMENT**

All shipping and insurance costs to and from the site shall be included in the vendor's proposal. All payments to shipping agents and for insurance fees shall be made directly by the vendor. The District shall make no payments to any firm concerning the shipment, installation, and delivery of equipment that is not a part of the Agreement and for which exact payments are not described. The vendor shall be responsible for all arrangements for the shipment and receipt of equipment to the District's prepared site. The vendor shall provide all properly trained representatives to unpack all equipment and place the equipment in the proper locations. The vendor shall also be responsible for the removal of all debris and packing materials from the site resulting from the installation of the equipment.

### **1.32 STORED MATERIALS**

Vendors are NOT to bill for stored materials, unless specifically requested and approved prior to billing. If the District chooses to allow for billing of stored materials, vendors must provide the following:

- Photos of the equipment properly stored
- Packing/inventory lists
- Affidavit indicating that the equipment belongs to the District
- Proof of insurance, naming the District as an additional insured, in the limits indicated in **Section 1.41** below

### **1.33 GENERAL INDEMNIFICATION**

See proposed Agreement in **Appendix B**.

### **1.34 PATENTS, COPYRIGHTS, AND PROPRIETARY RIGHTS**

See proposed Agreement in **Appendix B**.

### **1.35 NONDISCRIMINATION BY VENDORS OR AGENTS OF THE VENDOR**

See proposed Agreement in **Appendix B**.

### **1.36 SUBCONTRACTORS**

See proposed Agreement in **Appendix B**.

### **1.37 EFFECT OF REGULATION**

See proposed Agreement in **Appendix B**.

### **1.38 PROJECT MANAGEMENT STAFF DESIGNATION**

The vendor understands that the successful installation, testing, and operation of the system that is the subject of this RFP shall be accomplished by a cooperative effort. To manage this process most effectively, the vendor shall designate a single representative to act as project manager, who shall have the authority to act on behalf of the vendor on all matters pertaining to the Agreement.

In the event that an employee of the vendor is, in the opinion of the District, uncooperative, inept, incompetent, or otherwise unacceptable, the vendor agrees to remove such person from responsibility in the project. In the event of such a removal, the vendor shall, within 15 days, fill this representative vacancy as described above. Regardless of whom the vendor has designated as the representative, the vendor organization remains the ultimate responsible party for performing the tasks and responsibilities presented in the Agreement.

### **1.39 ASSIGNMENTS**

The Agreement and any other interest herein may not be assigned or transferred, in whole or in part, by either party without the prior written consent of the other party, which consent shall not be unreasonably withheld, and any assignment or transfer without such consent shall be null and void. This Agreement shall be binding upon the successors and, subject to the above, assigns of either party.

### **1.40 VENDOR AS INDEPENDENT CONTRACTOR**

It is expressly agreed that the vendor is acting hereunder as an independent contractor, and under no circumstances shall any of the employees of either party be deemed the employees of the other for any purpose. The Agreement shall not be construed as authority for either party to act for the other party in any agency or other capacity or to make commitments of any kind for the account of, or on behalf of, the other party, except to the extent and for the purposes expressly provided for and set forth herein, and no partnership or joint venture is created hereby.

### **1.41 INSURANCE**

#### **1.41.1 Workers' compensation coverage**

The vendor shall procure and maintain, during the term of the Agreement, workers' compensation insurance, including employer's liability coverage, in accordance with all applicable statutes of the State of Michigan.

#### **1.41.2 Commercial general liability insurance**

The vendor, at the vendor's sole cost and expense, shall procure and maintain, during the life of the Agreement, commercial general liability insurance on an "occurrence basis" with limits of liability not less than \$1 million per occurrence and/or aggregate combined single limit, personal injury, bodily injury, and property damage. Coverage shall include the following features: (A) contractual liability; (B) products and completed operations; (C) independent contractors coverage; (D) broad form general liability extensions or equivalent; (E) deletion of all explosion, collapse, and underground (XCU) exclusions, if applicable; and (F) per agreement aggregate.

#### **1.41.3 Motor vehicle liability**

The vendor, at the vendor's sole cost and expense, shall procure and maintain, during the term of the Agreement, motor vehicle liability insurance, including applicable no-fault coverages, with limits of liability of not less than \$1 million per occurrence combined single-limit bodily injury and property damage. Coverage shall include all owned vehicles and all hired vehicles.

#### **1.41.4 Additional insured**

The following shall be named additional insureds: Farmington Public Schools, including all elected and appointed officials; all employees and volunteers; and all boards, commissions, and/or authorities and their board members, employees, and volunteers.

This coverage shall be primary to the additional insureds, and not contributing with any other insurance or similar protection available to the additional insureds, whether other available coverage be primary, contributing, or excess.

#### **1.41.5 Notice of cancellation or change**

Workers' compensation insurance, commercial general liability insurance, and motor vehicle liability insurance, as described above, shall include an endorsement stating the following: "Sixty (60) days Advance Written Notice of Cancellation or Non-Renewal shall be sent to Karla Swanson, 32500 Shiawassee, Farmington, Michigan 48336."

#### **1.41.6 Proof of insurance coverage**

The vendor shall provide the District, at the time the Agreement is executed, certificates of insurance and/or policies acceptable to the District, as listed below:

- A. Two copies of certificate of insurance for workers' compensation insurance
- B. Two copies of certificate of insurance for commercial general liability insurance
- C. Two copies of certificate of insurance for vehicle liability insurance
- D. Original policy, or binder pending issuance of policy, for owners and contractors protective liability insurance
- E. If so requested, certified copies of all policies shall be furnished

#### **1.41.7 Continuation of coverage**

If any of the above coverages expire during the term of the Agreement, the vendor shall deliver renewal certificates and/or policies to Farmington Public Schools at least 10 days prior to the expiration date.

#### **1.41.8 Failure to comply**

Failure to comply with the insurance requirements contained in the Agreement shall constitute a material violation and breach of the Agreement and may result in termination of the Agreement.

### **1.42 WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE**

The District has presented detailed technical specifications of the particular purpose for which the solution is intended. The District has provided detailed descriptions and criteria of how the system can be defined to accomplish this particular purpose. The District has also defined the exact procedures and techniques to be employed in testing whether the system has achieved the defined performance of this particular purpose. Given this advanced preparation concerning, and documentation about, the District's particular purpose, the vendor at the time this Agreement is in force has reason and opportunity to know (1) the particular

purpose for which equipment is required, and (2) that the District is relying on the vendor's experience and knowledge of this equipment to provide that which is most suitable and appropriate. Therefore, the vendor warrants that the system is fit for the purposes for which it is intended, as described in this document.

### **1.43 WARRANTY**

See **Sections 2** and **3** of this RFP for device warranty requirements.

### **1.44 FINAL ACCEPTANCE OF THE EQUIPMENT**

The proposed equipment shall be defined to be finally accepted by the District after all components of this RFP and all approved Change Orders have been installed completely, plus the items identified in **Sections 2** and **3**. The District or the District's Representative shall be the sole judge of whether all conditions for final acceptance criteria have been met.

### **1.45 STANDARD FORMS AND AGREEMENTS**

Any forms and Agreements the vendor(s) proposes to include as part of any agreement resulting from this RFP *must* be submitted as part of the proposal. Any forms and Agreements not submitted as part of its proposal and subsequently presented for inclusion may be rejected. This requirement includes, but is not limited to, the following types of forms: subcontractor, franchise, warranty agreements, maintenance contracts, and support agreements.

While the vendor may submit a suggested form of Agreement with its proposal, the award is subject to the negotiation of an Agreement to the reasonable satisfaction of the District, incorporating the terms and conditions of this RFP, the vendor's proposal, and the terms and conditions contained in the form of Agreement, which is also part of this RFP and subject to the review and approval by the District's legal counsel.

### **1.46 NONCOLLUSION COVENANT**

The vendor hereby represents and agrees that it has in no way entered into any contingent fee arrangement with any firm or person concerning of this RFP. The vendor certifies that its proposal is made without any previous understanding, agreement, or connection with any person, firm, or corporation making a proposal for the same services and is in all respects fair and without outside control, collusion, fraud, or otherwise illegal action.

### **1.47 ADVERTISEMENT**

The laws of the state of Michigan, the District's purchasing policies, and the legal advertisement for this RFP are made a part of any Agreement entered into in the same respect as if specifically set forth in that Agreement.

### **1.48 SELECTION CRITERION**

The selected vendor must be a well-established, financially stable firm committed to technology in K-12, will have a commitment to attracting and retaining an excellent staff of technical and product support

personnel, and will have a proven track record of support from installation planning through implementation and ongoing use. There should also be evidence of responsiveness to clients' suggestions for improvements. Finally, there must be a good fit between vendor staff and the District's staff to assure a good working relationship.

The vendors will be evaluated based on the following selection criteria:

- A. Compliance to RFP specifications
- B. Compliance to technical specifications
- C. Experience
- D. Cost
- E. Breadth of solution
- F. Other

The District will award this project as the right to purchase equipment at firm prices, as presented in **Appendix A**.

#### **1.49 SPECIAL NOTES**

Failure to include in the proposal all information outlined above may be cause for rejection of the proposal. The District reserves the right to accept or reject the vendor's replacement of any component if it is considered equal or superior to the Specifications. Such acceptance will be in writing.

#### **1.50 PAYMENT TERMS**

See proposed Agreement in **Appendix B**.

#### **1.51 SITE CLEANLINESS**

The vendor will ensure all work areas are free from debris caused by work performed under this project scope. At the end of each day, the site must be left in a clean and neat condition prior to completing work for that day, with debris properly disposed of in an efficient manner. Materials must be consolidated into an agreed upon space that is not obstructing any pathways within the respective buildings. Vendor may be asked to wear protective foot coverings or supply drop cloths to minimize impact to newly finished surfaces. Failure to properly clean may result in another contractor performing the cleanup work and back charging it to the vendor.

#### **1.52 CRIMINAL BACKGROUND SCREENING**

The vendor acknowledges that it has certified to the District that no owner, employee, agent, representative, contractor, and/or other personnel of the vendor will be on any District premises if they are a registered criminal sexual offender under the Sex Offenders Registration Act, Public Act 295 of 1994, or have been convicted of a "Listed Offense" as defined under Section 722 of the Sex Offenders Registration Act, MCL 28.722 (the Certification). The vendor acknowledges and agrees that if it is found to have submitted a false Certification or otherwise breaches or fails to comply with the requirements of the

Certification, the District may immediately terminate the Agreement, and, notwithstanding any other provision of this Agreement, the vendor shall be liable to the District for any and all costs and expenses incurred by the District to secure a replacement vendor to complete the Work in accordance with the Agreement documents, including, but not limited to, any costs or expenses required to be paid by the District to the replacement vendor in addition to those required to be paid to the vendor, all attorney and/or professional service fees, and any and all other actual and consequential damages incurred by the District.

The Criminal Background Check Form may be found in **Appendix A** and must accompany your proposal.

### **1.53 MANUFACTURER EQUIVALENT**

It is District's intent that this RFP promotes competition. Accordingly, the use of any patent, proprietary name, or manufacturer's name is for demonstrative purposes only and is not intended to curtail competition. The District, in its sole and absolute discretion, shall have the right to determine if the proposed equivalent devices/brands submitted by the vendor meet the specifications contained in this RFP and possess equivalent and/or better qualities. It is the vendor's responsibility to notify the District in writing if any specifications or suggested comparable equivalent devices/brands require clarification by the District on or before the deadline for written requests for clarifications.

## **PROJECT REQUIREMENTS & SPECIFICATIONS**

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## 2 HIGH SCHOOL AUDITORIUM SPECIFICATIONS

### 2.1 INTENT AND CURRENT TECHNICAL ENVIRONMENT OVERVIEW

The District intends to upgrade the AV equipment in the auditoriums at the high schools. The installation at the high schools is expected to occur during the summer of 2024 (refer to timeline in **Section 1.2**). The vendor shall furnish all equipment, accessories, and necessary material for a complete system as indicated on the plans and described hereinafter. The equipment specified is not all-inclusive. Miscellaneous hardware, cables, and components will be required for a complete installation. It is the sound vendor's responsibility to provide all parts needed for a complete and functioning system. The District currently has sound systems in each auditorium that were installed in 2017 that are to be reused with the enhancements added per this specification. The intent of this RFP is to provide the school district with an integrated districtwide system. Unless specified elsewhere, goals apply to both auditoriums at North Farmington High School (NFHS) and Farmington High School (FHS). The following key features are desired:

1. Auditorium Sound and Video Display Systems at FHS and NFHS need upgrades in certain areas. The existing systems were installed circa 2017. Certain aspects of their functionality and usage are desired to be upgraded or remediated.
2. It is desired that both High School auditorium systems be as operationally similar to each other such that a user trained on one system will be able to use the other school's system without additional training.
3. It is desired to replace and relocate the existing centrally placed video projectors. vendors are to provide new laser projectors, which will be relocated behind the existing back-of-house (BOH) control station. Two additional new projectors are to be installed in as close proximity as possible to display on newly installed electric screens to be hung diagonally outside the proscenium at stage left and stage right positions.
4. A new video distribution system utilizing Cat6A cable is to be provided, which is to accommodate all new projectors, existing backstage/green room/choir room/band room/dressing rooms, and lobby displays. New input locations are to be provided as well.
5. The existing Crestron Control System is inconsistently programmed between the two High Schools and subject to frequent failure. It is desired to replace this system to be consistent between the two buildings and free of frequent operational disruptions.
6. It is desired to have a "Principal's Mixer" added to the system to allow for impromptu uses of the space by less technically inclined users without the need for an auditorium sound system operator. Certain aspects of the video system are desired to work alongside this capability without a need for technical staff to be present. The system installed must interface with the existing mixing board and balance of the house system in such a way as to not interfere with a "full featured" technical usage of the system, such as a play or concert.

7. Additional video input and output locations on/near the stage are desired that do not currently exist.
8. Additional audio monitor out and monitor inputs are desired at certain non-existing locations. It is also desired to install dedicated fold-back monitors and associated amplifier to cover the rear of the stage.
9. It is desired to have the ability to have both auditoriums be able to broadcast video and audio to each other, the District's TV10 Studio, and District-wide using a Dante or similar type protocol riding on the District's network. The District's TV10 station desires to have inputs and outputs to and from the auditorium AV systems from both High Schools for rebroadcast. See Control and Video Distribution one-line diagram.
10. It is desired to upgrade the capability of the current Clearcom Wireless Production Intercom system at both schools to a minimum of a 10-belt pack capable system(s). Add six Clearcom FS2BP belt packs exist at each school or 12 total belt packs.
11. It is also desired to add two more production intercom jacks at the existing BOH control stations.
12. A two-way feed from the production intercom system of each auditorium is needed to be broadcast via the data network to be decoded at the TV10 Studio at NFHS to allow the District TV10 station to communicate with either school for the broadcast of live programming.
13. It is desired to have all existing audio, video, intercom, Dante, lighting, data wall jacks, and patch bay connectors cleaned, inspected, and tested for proper operation.
14. All video fiber connections to remote displays at FHS shall be replaced with network based Cat6A type video distribution system. All existing Cat5 connections at NFHS will be upgraded to Cat6A.
15. It is desired to have all existing equipment racks cleaned and dusted, with loose cables resecured, and extraneous cables removed. New 3-inch patch cables are desired for the stage manager rack patch bays, 12 at each school.
16. The existing Yamaha CL5 consoles need to be reconfigured to be consistent between the two buildings in a way applicable to the District's use of this equipment. Consistency of naming between buildings is needed for all Dante in/out.
17. The existing sound system equalization and gain structure is to be checked and adjusted as necessary. Outputs of each amplifier shall be checked, and corresponding loads and impedances tested.
18. At FHS, the existing auditorium speakers need to be raised and re-aimed. At NFHS, the existing arrays need to be adjusted and speakers eliminated.

19. The existing center ceiling monitor projector and lift are to be removed from the center house position and turned over to the owner.
20. The existing program audio feed to the hallways, lobbies, band room, choir room, dressing rooms, et al, needs to be reinstated at both High Schools are not currently operational in a number of these areas.
21. At NFHS one audio amplifier has been removed and needs to be replaced with a new unit of the same specifications. Provide one additional amplifier.
22. Problems exist with certain wireless microphones not working intermittently at FHS. The problem may be another user on the same channel. These issues must be remedied. If channel reassignment does not solve the problem, curative measures should be quoted.
23. The hanging microphones on stage are not currently accessible to the BOH Yamaha CL5 mixers. It is desired to have these routed to the inputs of the mixing console. Additionally, six new hanging microphones are to be provided for each auditorium. Two new jacks shall be added the house catwalk, four new jacks at the stage catwalk. Four new tie lines and jacks shall be installed, two on the stage catwalk and two on the house catwalk. A new patch panel at the stage manager rack panel will be required.
24. Two additional audio output jacks are to be installed on the stage catwalk tied to existing stage manager in/out panel.
25. It has been determined that there are some reliability issues with the QSC 500i Control Processor at one or both High Schools. It is desired to upgrade this unit with a current and compatible model and required programming performed.
26. The word ability in the above section shall be construed to mean that the function shall be included in the system pricing, programmed, and active upon system closeout and signoff. No additional monies shall be allocated to add a specified feature after the bidding due date.
27. The District does not desire to incur any recurring software costs in the maintenance of these systems. All software must be included at no additional charge to the District. If there are any ongoing software maintenance costs for the first five years, it must be clearly delineated in the RFP response. The successful vendor shall bear responsibility for any software maintenance costs not clearly delineated at bid time for the life of the systems.
28. **Any deviations of a specific system from these District goals shall be clearly delineated as a Bid Exception and included in the written response to this bid.** The District understands that certain features may add additional cost and will want to weigh the cost-versus-benefit of systems with varying degrees of features. *Voluntary alternates are encouraged.*

The cost for this should be provided in **Appendix A** and include all associated costs, including, but not limited to, shipping, handling, insurance, installation, equipment, cabling, and connector costs.

Systems must work with District supported operating systems: Windows 10/11, MacOS, and iOS.

Technical specifications for the AV equipment are provided in **Appendix A**. Please confirm in **Appendix A** that your proposed solution meets the requested specifications. If your solution does not meet the requested specifications, please provide reasoning.

## **2.2 GENERAL REQUIREMENTS**

This specification has been designed to meet the objectives of the District. If the components necessary to accomplish the stated objectives are not contained within this specification, vendors shall add the required items to accomplish them on their platform. If significant additions/departures from the specification are made, identify them in your response, including their purpose as they relate to meeting the objectives of this project. It is the sole responsibility of the vendor to assure that all hardware, connections, cabling, and software items have been identified that will permit the full, efficient, and complete function of the solution. Vendors are responsible for assuring that the solution as proposed is properly licensed. The omission or missed specification of any support component does not relieve the vendor from the responsibility for providing a proposal that includes all necessary functioning and compatible elements to permit the full, efficient, legal, and complete operation of the proposed solution.

The District is expecting a turnkey solution that will include acquisition, installation, detailed design, configuration, testing, documentation, and training on the new system.

### **2.2.1 New materials**

All equipment quoted by vendors shall be new.

### **2.2.2 Current software**

All software included to make the solution work shall be of the latest version. Any exceptions must be specifically noted.

### **2.2.3 Manufacturer and workmanship warranty**

A three-year warranty for materials and workmanship on all new equipment installed must be included.

### **2.2.4 Pre-installation walkthrough/site review**

The selected vendor shall be responsible for performing building walkthroughs with the District's Representative to do the following:

1. Verify rack locations, audio and visual locations and connections, cable requirements, and any unique installation issues
2. The vendor is responsible for identifying and documenting any items that are outside the project scope or listed in the specifications as unit price items; all items not noted shall become the vendor's responsibility to install at no additional cost

## 2.2.5 Plenum cable and general cabling requirements

All cable installed above the ceiling and within walls must be plenum-rated and meet the following cabling requirements:

### 2.2.5.1 Projector cabling requirements

1. The projector cabling must be a plenum-rated high-speed HDMI active optical cable that connects from the projector location to a podium, wall, or other location depending on the space.
2. Include costs to provide, install, and test at all locations for HDMI cables in the base bid.
3. Vendors are to provide a cut sheet with the submission of their bid and may be required to provide a sample faceplate upon request during the clarification process.
4. HDMI connection: The HDMI connection must deliver a clear, high-speed HDMI signal similar in quality to the image being displayed on a locally attached display device using an industry standard HDMI cable. The HDMI active optical cable must be HDCP, IEEE-568B, FCC, UL, and CE compliant and support 1080p video.

### 2.2.5.2 Cabling requirements

1. All wiring must be plenum-rated and should be run through the ceiling space and run down conduit or raceway provided by the selected vendor.
2. Specific colors for cabling will be designated by the district in consultation with the vendor upon inspection of the present conditions in each location.
3. Wiring above the ceiling shall be independently supported and not laid on top of or in direct contact with ceiling grids or panels, lighting, etc., or affixed to non-structural components such as sprinkler systems, gas, water pipes, etc.
4. "J" hooks shall be used to support cable and should be mounted off the deck or the building steel. Mounting on conduits, ducts, or pipes is not acceptable.
5. Cable shall be supported every five feet.
6. Vendor must comply with all EIA/TIA specifications as well as local building codes.
7. The installed solution must provide a high-quality signal.
8. Cabling must not introduce any detectable interference or distortion.
9. Cabling must maintain a consistent impedance from connector to connector.
10. Both connections must be electrically identical.
11. CAT6 cabling must be yellow, or other approved color, for the projector and other video-over-IP uses.
12. The vendor is also responsible for fire stopping all penetrations made and/or used.
13. Any firewalls penetrated to facilitate the routing of communication wiring shall, upon completion of that wiring, be fire stopped using approved methods as outlined in the National Electric Code and all applicable state, county, and city ordinances. The vendor shall be responsible for fire stopping all penetrations used for routing of the vendor's cable regardless of who made the penetration access. The vendor is responsible for coring, sleeving, and fire stopping penetrations through walls, floor, or ceilings as necessary to route cable.

14. The vendor is also responsible for providing all necessary documentation to show that the fire stopping meets all applicable federal, state, county, and city ordinances, including a copy of the fire marshal approval.

### **2.2.6 Asset tags**

The vendor is expected to apply District provided asset tags for all projectors, sound systems, and speakers. vendor must provide a listing of all serial numbers that the district will use for asset tracking. This list must include:

1. Item description
2. Model number
3. Serial number
4. Warranty end date
5. Installation date
6. Location (building and room name/number)

### **2.2.7 Equipment removal/recycle**

The vendor shall be required to provide, upon the District's approval, disposal or recycling services for hardware and cabling removed as part of this project. The vendor must provide a certificate/statement indicating how equipment and cabling was disposed of (e.g., disposed of in a *green* manner, recycled). Note that no equipment shall be placed in dumpsters or outside of buildings. Equipment must be either taken with the vendor on the day of removal or set in a location within the building as agreed upon with the district.

### **2.2.8 Alternate designs**

Recognizing variations and lead times in vendor equipment and design configurations, alternate solutions may be submitted. Alternate bids may be accepted when they satisfy the objectives of the specification providing efficiency, economy, or elegance unachievable through the base bid design. Alternative solutions are to be priced separately from the base bid. The vendor may propose alternate solutions only after responding to the base bid solutions requested. The acceptance of the voluntary solution will be at the discretion of the District.

For vendors proposing alternate designs (solutions) other than as requested by this specification/bill of materials, all designs must use products that meet or exceed the features provided in this specification/bill of materials. All products proposed for alternate solutions must be in production format at the time the proposals are opened. If the vendor is unable to provide the proposed product or feature by the proposed delivery date, the vendor will provide a resolution of equal or greater value to the District at no additional charge to the District, including services required to implement the solution.

## **2.3 TECHNICAL SYSTEM REQUIREMENTS: HIGH SCHOOL AUDITORIUM SYSTEM**

The following provides the technical requirements for the projection and sound system for each space.

### 2.3.1 Main amplifier rack system

The existing main amplifier racks are to be tested, documented as such, and reused. The QSC 500i controllers should be replaced at each school with a current model compatible unit and necessary programming provided. Reuse existing main amplifiers after testing and documenting their operability. Testing shall include checking load impedance and checking for amplifier power levels/distortion being within specifications.

### 2.3.2 Mixing console

The existing mixing consoles at both schools, Yamaha CL5, are to be reused and reconfigured to be consistent between the two buildings in a way applicable to the District's use of this equipment. Consistency of naming between buildings is needed for all Dante in/outs.

### 2.3.3 Digital signal processing equipment

Provide:

1. One BSS BLU806DA plus one BLU326DA expander to accommodate all signal processing functions and the seamless transition from the "Principal's Mixer mode" to "Full Mixing Console mode" operation per building.
2. Four analog input cards and four analog output cards.

The vendor must provide a copy of a dealer certification or manufacturer letter for the DSP products they are providing with submittals. Vendor must be certified and proficient in the programming of the product they are providing, no exceptions. Acceptable manufacturers are BSS Audio, Biamp, and QSC.

DSP's shall be configured such that the AMX button controller provides necessary switching to allow all audio resources to be routed to the Principal's mixer or to the Yamaha CL5 mixing console for usage in a non-technical mode (i.e. Principal's mixer) or for use with the Yamaha CL5 console.

### 2.3.4 Microphones/intercom/monitor jacks/input panels

All existing jacks are to be cleaned, documented as such, and tested. Report any defect to District consultant and a price to remediate. Do not proceed further without written approval to do so.

Four new microphone jacks are to be installed on the front of the stage and one each on each side of the proscenium inside wall. New raceway will need to be provided. Neutrik XLR-female jacks on stainless steel or anodized aluminum plates will be considered the standard of quality. These jacks are to be wired to the "Principal's Mixer" as specified below.

Provide intercom outlets at each location shown on prints. Provide Neutrik XLR-male connector in appropriate quantity at each location shown. All intercom jacks shall be mounted on stainless steel plates sized to fit the box provided by the electrical contractor.

### 2.3.5 Uninterruptable power supply

A rack mounted managed UPS shall be installed to allow a safe control system shutdown in the event of a power failure. The control system and digital signal processor shall be powered by these systems. A minimum of 120 Volt, 1500VA system shall be provided. Acceptable manufacturers are Tripplite, Middle Atlantic, Surgex, APC, or an approved equal shall be acceptable. Specifications of the APC SMT 1500RM2UC shall be the standard of acceptable models. Only models of comparable specifications shall be allowed. Install in a stage manager rack and setup for remote notification of UPS status. Provide a data drop as required.

### 2.3.6 Wireless production intercom system

It is required that the existing Clearcom system be upgraded to allow up to 25 wireless headsets in simultaneous use.

Base stations currently exist at each auditorium and the TV10 Studio at NFHS. Provide and install the software upgrade key to allow 25 belt-packs with six new belt-packs (per school), room appropriate antenna system, six single ear headsets, 24 rechargeable batteries, two gang chargers, and four replacement ear cushions per system. The system is to be connected to the District WAN by the selected vendor and any assistance required for District-wide communication is to be provided. Verify compatibility with existing FS-IIBP frequency range. The system components must be interchangeable with both High Schools' equipment. NO SUBSTITUTIONS ON THIS PRODUCT, however voluntary alternates will be considered.

The minimum equipment required is listed below. Please verify prior to bidding. Provide, install, and configure:

- Three Clearcom LQ-4W2 IP interface. Install one at FHS Auditorium, one at NFHS auditorium, and the third in the District's TV10 Studio at NFHS
- 12 Clearcom FSII-BPXX belt packs (six at each school), verify frequency compatibility before ordering, some of these will be used to replace non-functional existing units
- 12 Clearcom CC-300 single ear headsets (six per school)
- Two Clearcom CC-400 dual ear headset (one per school)
- Four Clearcom AC-60 5-unit gang charger (two per school)
- 24 rechargeable battery for belt packs above (12 per school)
- 12 Clearcom CC300/CC400 Replacement Ear Cushions (six per school)
- Two Clearcom FSII-TCVR-XX-US Antenna System, five stations (add one per school)
- Two Clearcom FSII-BASE-II-25BP-LICENSE 25 station capable license upgrade (antenna upgrade also required)
- (AR) Provide all required cabling and configuration required, as necessary
- Two new wired headset jacks at BOH mixing console location to this system.

### 2.3.7 Wireless microphones

The existing microphone systems are composed of 32 Shure ULXD4Q systems, eight handhelds and 24 belt-pack units. Several of the receivers seem to be experiencing channel interference, assumedly from an outside source. These units will need to be reprogrammed to a clear channel.

Additionally, new rechargeable batteries and gang chargers are to be provided for each existing microphone.

In addition, provide one new wireless handheld microphone and receiver, and one wireless lapel microphone and receiver at the stage manager rack with an antenna system to allow full stage coverage. Wire to the “Principal’s Mixer.” Provide two handheld Shure ULXD series to match existing.

### 2.3.8 Wired microphones

Provide (per school):

- Four AKG GN155 floor standing gooseneck microphones with CK31 capsule installed (or approved equal)
- Four 25’ quad shielded microphone cables, ProCo StarQuad or equivalent
- Six Shure MX202 series cardioids hanging microphones, black in color

The six choir microphone jacks on the upper catwalks at each school do not appear to be able to route to the existing console mixer inputs. Rewire these to the stage manager rack and add a custom jack panel by ProCo, RCI, or equal as necessary to accomplish this. In addition, two tie lines are required on the same catwalk, one on either end. Route and terminate all on the newly provided patch panel. Jacks and boxes exist for the microphone jacks. The new tie lines will require new boxes and jack plates. Radio Design Labs SMB-(X)B series boxes shall be the standard acceptable mounting device, or approved equivalent. No boxes by Wiremold or Panduit are considered equal at this time.

### 2.3.9 Hearing assistance system

Provide hearing assistance system Williams Sound or approved equal by Telex or Listen Technologies. Provide PPAT35 rack mount transmitter; RPK005 rack kit, ANT005 remote antenna, cable; and eight PPAR35 personal receivers, 16 EAR013 earphones, BAT026 rechargeable AA batteries (two for each receiver), and CHG1600A charger case. This system shall reside in the main amplifier cabinet in the control room. Provide external antenna at the location shown on prints with custom plate. Provide feed from processor to hearing assistance transmitter. mount in the main amplifier rack.

### 2.3.10 Control system

There are existing Crestron Control Systems, installed in 2017, that are currently dysfunctional. The new control system will be a video over IP design to allow free interchange of video sources on a District-wide level. The basis of design will be AMX with Extron accepted as an equal provided all functions are retained. A windowing processor will be included at each building. A control processor will also be required. Each

school is to have a tabletop touch-screen panel, a second rack-mounted touchscreen at the stage manager's rack, and at NFHS only, and a third rack mounted touch screen controller in the TV10 Studio at NFHS only.

The following is a list of required equipment but should not be considered all inclusive. It will be the successful contractor's responsibility to provide all necessary equipment and labor to provide a complete solution to the system's needs.

The following equipment will be the basis of design:

- A/R AMX N2622/N2615 4K/60 decoders to be located at each existing display or projector at NFHS
- A/R AMX N2622/N2615 4K/60 decoders to be located at each existing display or projector at FHS
- A/R AMX N2612 4K/60 encoders (per school)
- One AMX NMX-WP-N3510 Windowing Processor (per school)
- One AMX SC-N8002 control processor (per school)
- Three AMX VARIA-100 10" touchscreen panel (per school)
- One AMX TABLESTAND for touchscreen panel (at TV10 Studio)
- One AMX N4312D Dante processor
- One AMX PSR5 power supply
- One AMX NX-2200Netlinx integrated controller
- A/R AMX NMX-ACC-N9101 mounting brackets
- One AMX 4 button controller or equivalent (per school)
- (A/R) Commercial grade video and data patch cords, as required

Certain encoders (see system drawing) will require splitting and distribution of the HDMI output of one decoder. Provide a task appropriate HDMI splitter and required extension cables as needed. Splitters by Kramer, Extron, or approved equal are acceptable. Consumer grade equipment will not be accepted. All control modules, interconnecting cables, data drops required, and data routing switchers with required capability shall be provided by the selected vendor. Include all necessary cable and labor to provide as well as a data drop to the District's data network. Provide any configuration necessary for vendor provided equipment necessary to meet the District's goals. The windowing processor shall be located at the BOH mixing console location. The control processor shall be located at the stage manager rack (as feasible).

Programming to include but not limited to:

1. Opening splash page with school/District logo.
2. Lighting control page with presets for existing ETC lighting controllers.
3. System shutdown page with cancel option.
4. Video source and projector control page with volume control of each source.
5. Video routing page showing all available input and outputs.
6. Projector, lobby TV's, cafeteria TV's, back stage monitors, projection screens, and curtain control page.
7. Projector source selection page for all three projectors, lobby monitors, cafeteria monitors, back stage monitors, and District WAN feed.

8. Default routing to allow the three projectors to be fed by the stage HDMI inputs for operation in “Principal’s Mixer” mode. This should be the default mode after a “to be determined” timeout period of any other settings. Power to the three projectors and three screen drops shall be activated by a clearly labeled separate button controller located on or near the stage manager rack. The system default shall be three screens and three projectors activated by a single button push. Source selection of which of three jacks shall be routed to the projector will be by another three buttons or as otherwise approved. The default shall be the stage center HDMI jack if no other source selection button is selected.
9. Additional programming as required to match all existing capabilities.
10. Additional programming required to meet the District’s needs or correct deficiencies shall be available in the first year of operation following system completion signoff. Include up to 12 additional hours per building for new functions only. Glitches, bugs, or problems in the existing software are to be covered within the specified one-year warranty period at no additional charge. Pictures of existing Crestron system programming screen pages are attached in **Appendix C**.
11. Systems by Extron or Crestron with the same capabilities will be considered approved equals, provided they provide the full functionality required.

The following audio/video sources are to be programmed for source origination:

1. Existing stage manager rack HDMI input
2. BOH mixing console location HDMI input
3. Existing BOH Blu-ray player
4. New stage left HDMI input jack
5. New stage right HDMI input jack
6. TV10 studio feed
7. Stage manager rack SDI jack
8. Audio mixing console output
9. Auditorium camera feed

The following video display devices are to be programmed as a destination:

1. Auditorium center screen projector
2. Auditorium stage left screen projector
3. Auditorium stage right screen projector
4. Two lobby displays, routed as a group
5. Two cafeteria displays, routed as a group
6. Back stage, choir room, band room, dressing room, ticket booth, and green room displays, routed as a group (up to six)
7. District Ch. 1 video feed
8. District Ch. 2 video Feed
9. TV10/streaming studio feed
10. Center stage HDMI out

### **2.3.11 AV digital switching equipment**

Recommended switches used for the above system are Netgear GSM4212PX-100NAS Eight port switch and Netgear GSM4230PX-100NAS 24 port switch. These units have preset configurations that is compatible with the above system and are capable of transmitting Dante format data. Provide in BOH, Stage Manager rack, and ancillary display locations as required.

### **2.3.12 Loudspeakers**

Existing array speakers will be reused but need to be tested and re-aimed for better coverage of near audience seating.

Add two Foldback Monitors mounted on the proscenium inside walls to allow program audio to be heard on stage without the use of floor monitor speakers. Wire to an added amplifier and Dante monitor output of the Digital Signal Processor. Speakers are to be JBL C29AV with appropriate mounting hardware. Foldback amplifier to be MuxLab 500553 120-watt X 2 audio amplifier or equivalent.

### **2.3.13 Stage monitor speakers**

Additional low-level active stage monitor jacks will need to be installed at locations indicated on the drawings. Wire to new digital signal processor.

### **2.3.14 Power sequencer**

Reuse existing. Configure to trigger amplifier rack power from the stage manager's rack to allow use of the system for non-technical users.

### **2.3.15 Projection screens**

Provide and install two new powered electric screens will be provided with AMX control capabilities and backup manual control. The basis for design will be the following:

- Two Dalite 34492-LS Tensioned Cosmopolitan Electrol screen, 16:10 format, matte white, silent motor, 69" H X 110" W /130" diagonal.

Include hanging from the existing ceiling structure or from the catwalks above. Permanent power will be provided by others. Install manual controller on backstage wall. Provide raceway as necessary to conceal any wiring from public view. Provide required wiring to facilitate control by the AMX Control System specified. Provide temporary power until permanent power can be installed by others.

### **2.3.16 Auxiliary areas speaker amplifier**

Provide a JBL CSMA2120 120-watt, 70-volt amplifier, or equivalent, for dressing rooms, green rooms, lobby speakers, and other designated areas. Provide brackets for rack mounting. Configure inputs for proper routing to not have backstage announcements broadcasted on public area speakers. Rewire, as necessary. Mount in the rack with the easiest access to existing speaker lines. Provide Astatic 411B (or equal) handheld microphone mounted in the Stage Manager Rack. Provide input from the main sound system and Clearcom intercom system.

### **2.3.17 Auxiliary speakers**

Install new JBL Control 25, or approved equal, 70-volt speakers, or equivalent, in the choir room at FHS only with surface mounted 70-volt volume control.

### **2.3.18 Auxiliary “Principal’s Mixer” and Rack**

Provide a JBL CSM28 mixer mounted in a new Middle Atlantic RK series rack for control of the front of two wireless mics, multi-media player and four front stage microphone jacks. This shall function as a “Principal’s Mixer” for use of the system when no console operator is available. Wire to input of digital signal processor so that any device wired to the “Principal’s Mixer” may also be utilized in the “Mixing Console Operation” mode.

Provide with Middle Atlantic TD2LK 2RU locking drawer, PDLT-815RV-RN surge suppressed power strip with lights, and all required blank panels. The new DSP units may be mounted in this rack or in the console desk rack as well at vendor’s option.

Provide a Tascam DC-400U multi-media player in this rack as well.

### **2.3.19 Networked video distribution system**

Provide a video encoding processor to allow the auditorium feeds at each building to be broadcast over the District WAN.

Equipment provided shall be four (4) Black Box VS-2101X HDMI to H.264 Encoder (per school), or engineer approved equal.

Provide one (1) Canare 16XB/R-HD patch bay or Engineer approved equal, per school. Provide with twelve (12) Laird B4855R-BB-BK-002 24” 12G-SDI BNC patch cables, or approved equal (per school).

Provide one (1) Vizrt NC2I/O Studio I/O module. Install this unit and BNC patch bay in the Stage Manager rack. The patch bay shall be wired and labeled as per the Control and Video Distribution One-line diagram.

Provide all appropriate wiring and cables for a complete and functional installation. District staff will assist with programming of the NC2I/O unit.

Provide Black Magic SDI-HDM-3G HDMI to SDI converters as required to interface between the control system encoders and decoders, or approved equal.

### **2.3.20 Stage manager rack**

Reuse existing. Vacuum, dust, and clean all interior and exterior surfaces. Clean and test all connections.

### **2.3.21 HDMI splitters/extenders**

Provide as required. Splitter models by Extron, Kramer, AMX, Crestron or Engineer approved equal shall be acceptable. No consumer grade units shall be acceptable.

Extenders shall be capable of 1080P or greater resolution and appropriate for the distance required. Cat6A HdBaseT or Fiber Optic based extenders shall be acceptable.

If the cost of using splitters and extenders exceeds the cost of using a separate digital decoder (as previously specified), is the same or less, the digital decoder may be used in place of the splitter/extender configuration or combinations thereof for the most cost-effective solution to distributing video and audio to the ancillary displays located around the auditorium perimeter.

### **2.3.22 Laser video projectors**

Provide three Epson EB-PU1008B 8500 lumen laser projectors installed behind the existing BOH sound booth per school. Provide lenses as required for given throw distance and screen size. Provide video input, control, and temporary power for each unit. Permanent power to be provided by others. Equivalent models by Panasonic, Barco, and Digital Projection are acceptable.

Projectors are to be mounted on the balcony wall behind the BOH sound/lighting booth. Mounts by Chief, Peerless, or Premier are acceptable. Verify there is sufficient structural backing to wall mount as required. Provide an alternate mounting solution if wall mounting is not feasible.

***Existing lift and projector are to be removed and turned over to owner.***

### **2.3.23 Monitor display**

Install new 75" LED display in the choir room at FHS only. Wire to video distribution system and control system. Wall mounts by Chief, Peerless, or Premier are acceptable. The display shall be LG Commercial series or equivalent by Panasonic or Samsung.

### **2.3.24 CABLES**

Cables shall be as follows:

- A. Cluster horns or low frequency cabinets
  - 1. West Penn 210
  - 2. Belden equivalent
  
- B. 70 Volt speakers
  - 1. West Penn 25225 plenum-rated cable, gray
  - 2. Belden equivalent
  
- C. Microphone jacks
  - 1. West Penn 25292
  - 2. Belden equivalent

D. Intercom lines

1. West Penn D25454 or 25292B in blue to differentiate from microphone lines
2. Belden equivalent

## 2.4 ADD/ALTERNATES

### 2.4.1 Add/Alternate 1: HS-1

Provide price to provide and install a data jack in the auditorium balcony behind the BOH mixing console location to allow the Yamaha CL5 console to be temporarily relocated to the balcony area. Configure, as necessary.

### 2.4.2 Deduct/Alternate 2: HS-2

Delete screen in **Section 2.3.15, *Projection screens***, installation, and control functions, install fixed screen of same size. Dalite model 34689 Da-Snap 130” diagonal, or equal, shall be installed at the same location as the originally specified screens.

### 2.4.3 Add/Alternate 3: HS-3

Provide a cost to upgrade the 8500-lumen projector in **Section 2.3.22, *Laser video projectors*** to 10,000 lumens, Epson EB-PU2010B or equivalent.

### 2.4.4 Add/Alternate 4: HS-4

Provide a cost to extend the warranty of all systems to five years.

## 2.5 INTEGRATION SERVICES

The selected vendor is solely responsible for the installation method and integrity of all ceiling- and wall-mounted equipment included as part of its proposed solution. The successful vendor shall be responsible for ensuring the safety of the proposed installation in all cases.

### 2.5.1 Installation

- A. Installation must include all required labor and miscellaneous materials. The successful vendor will be responsible for visiting the site prior to installation to review any additional installation requirements and to finalize the appropriate mounting method.
- B. The successful bidder is solely responsible for the installation method and integrity of all mounts and installations. The successful vendor shall be responsible for ensuring the safety of the proposed installation in all cases. A minimum three-year warranty on workmanship is required. All mounts must adhere to the highest level of safety standards. The vendor is fully responsible for the mounting method and installation.
- C. Vendors shall perform any required programming and testing to make sure all systems work together.

- D. The vendor must provide the District with a test script for review. Upon approval of the test script, the vendor will provide the successful test results for each gym and cafeteria installed based on that script.

### **2.5.2 Installation commissioning**

Provide a technician familiar with all aspects of the installation for up to 16 hours to accompany the engineer on a site inspection of the system. The technician shall be prepared to perform repairs or troubleshooting as necessary if problems are encountered. The installing contractor shall turn over a 100% operational and tested system to the engineer. Failure to provide a complete and operational system at the time of commissioning may result in back charges for a return trip for the commissioning engineer.

### **2.5.3 Project management**

The selected vendor is responsible for assigning an experienced project manager to the project who will be responsible for meeting regularly with the District and the project team to coordinate the activities associated with bringing the project to successful completion.

### **2.5.4 Project plan**

The vendor shall provide a full installation schedule showing the workflow using a graphical representation (i.e., Gantt chart or similar). The vendor's installation schedule should indicate the size of each crew working at the site daily, along with timelines for site project completion. All punch list items associated with this project must be completed by the noted completion date.

### **2.5.5 Change order control**

Once selected, the vendor shall submit all change orders to the District's designate for approval. The District will not be responsible for work performed beyond the contract scope without a signed change order.

### **2.5.6 General implementation timing**

It is the intent of the District to start the full deployment of equipment and integration services requested in the RFP during summer 2024. The District expects the system to be live and all training complete by Aug. 16, 2024 All implementation efforts must be scheduled with the intent that minimal disruption to District business occurs.

### **2.5.7 Site availability and work hours**

Any work scheduled inside of buildings, or on the building premises, must be coordinated with the District. Arrangements must be made through the District for additional work hours, if needed.

Several sites will have events in session; the schedules for these activities are still being developed. Additionally, implementation efforts will need to be coordinated around summer cleaning efforts and construction projects. The implementation schedule must account for there being no disruption to summer activities. A detailed schedule will be developed by the awarded vendor based on input from the District and will be subject to the District's approval.

## 2.6 TRAINING: AT NO COST TO THE DISTRICT

The successful vendor will be responsible for providing training at NO COST to the district. Training shall include the following:

- A. Provide up to two four-hour training sessions covering all aspects of operation, maintenance, and warranty service procedures. Coordinate time with the District Representative.
- B. Provide up to a four-hour training session for administrative and selected users covering all aspects of maintenance, and warranty service procedures. Coordinate time with the District Representative.

## 2.7 WARRANTY

### 2.7.1 Warranty term

All vendors must include a three-year manufacturers and workmanship warranty as part of the proposal for the base bid equipment. Manufacturer warranty certificates must be provided for all equipment. A one-year warranty on control system software updates shall apply as well. All proposed warranties must include system software updates and releases at no additional charge. All warranties will commence upon final acceptance. Please refer to **Sections 2.10** and **3.9**, *Final acceptance*, for additional details.

## 2.8 ACCEPTANCE/TESTING CRITERIA

### 2.8.1 PERFORMANCE AND TESTING

- The sound contractor shall establish the optimum electrical gain settings of each stage of each sound system based on the gain settings that provide the highest overall system signal-to-noise ratio, lowest distortion, and a 10db crest (peaking) factor.
- The contractor shall measure the performance of and equalize the frequency response of the sound system using instrumentational procedures as required by this specification.
- The contractor shall document the results of measurements and performance tests as required by this specification.
- The main sound system shall be evaluated for loudspeaker coverage in all seating areas following the equalization of system frequency response in third octave bands.
- The frequency response of the main system shall be evaluated with a pink noise signal inputted into the system mixer (without the system microphones connected) and the resulting third octave band frequency response measured from at least two measurement positions in each major area of seats (minimum of eight measurement positions).
- The measurement microphone positions shall be distributed throughout the room and shall be representative of most seating positions in the room.
- The energy average, overall band level range, and standard deviation in each third octave band between 125 and 10,000 Hz shall be determined for the eight measurement positions described above.

- The third octave band equalizer of the system shall be adjusted to produce a flat average room response between 125 and 2500 Hz +/- 1.5 dB. The average room response shall be determined with the measurement positions described above.
- The overall coverage of the cluster loudspeaker shall be evaluated by measurement of the overall, A-weighted sound level of the system following third octave band equalization of the system as prescribed above.
- Measure the overall A-weighted slow response sound level with an ANSI Type 1 sound level meter while a pink noise signal is inputted into the system.
- Measure the sound level at a microphone elevation of 4 feet above the floor while the microphone is slowly traversed over the outer perimeter of the seating. Note on an architectural floor plan, all perimeter seat locations where the overall level measured on-axis of the center long-throw loud-speaker horn.
- Determine the extent of any seating coverage deviation outside +1, -3dB range by traversing the measurement microphone across seating areas in the vicinity of the perimeter deviation. Determine the extent of coverage that meets the +1, -3dB requirement and show it as a contour plot on the architectural floor plan.
- Following equalization of the third octave band frequency response and evaluation of the loudspeaker coverage, the system shall then be equalized for the feedback control using the set of tunable notch filters.
- Adjust the limiter for each system in accordance with the manufacturer's recommendations.
- Permanently mark all system component gain and filter setting on equipment faceplates and record copies on component faceplates for inclusion in the "as-built" drawings.
- Engraved lamacoid tags for all controls, amplifiers, and switches shall be installed.

### 2.8.2 Punch lists

After installation is complete, the vendor shall receive a punch list from the District. The vendor shall have 30 days to remedy the punch list. The District and/or District Representative shall review the punch list items. If any items remain after the vendor has indicated they were cleared, the vendor shall be charged \$500 for each subsequent visit by the District or District Representative to review punch-list items until the punch list is cleared.

### 2.8.3 Final acceptance

The vendor shall demonstrate that all work is complete, free from physical and electrical defects or deficiencies, and in satisfactory operating condition. The District shall be allowed to inspect and test the work performed and to notify the vendor of any deficiencies. The District or District Representative will be the sole judge as to whether the work has been completed properly. All material or equipment that is deemed not to comply with this RFP will be replaced by the vendor, at no charge to the District, prior to final payment.

## 2.9 DOCUMENTATION

Provide the following documentation:

1. One set of owner's manuals per building plus two spares for administration use (four total)
2. Cabling scheme and numbering
3. Copy of equalization curves and settings
4. As built diagrams for all components added and cabling thereof
5. System design one-line schematic, an extra copy is to be laminated and adhered to the back panel (technician side) of the main equipment rack
6. Two USB Drives with copies of the QSC and AMX Control Systems source code, screen pages, drivers, etc., for each school shall be provided, such that a complete system reinstall can be accomplished or the existing program modified for future use
7. On the aforementioned USB drives, a copy of the DSP programming files shall also be provided

### **2.9.1 Manufacturer system manuals**

The vendor will provide the District with all system manuals where system manuals are provided by the manufacturer.

### **2.9.2 Warranty documentation**

The vendor shall provide warranty documentation for all equipment installed.

### **2.9.3 Permit documentation**

The vendor shall provide proof of applicable successful inspection that is necessary to meet local, state, or federal codes and requirements.

### **2.9.4 Documentation turnover**

The vendor shall provide an inventory of all documentation (including test results) submitted to the District and shall obtain the signature of the recipient.

## **2.10 FINAL ACCEPTANCE**

The vendor shall demonstrate that all work is complete, free from physical and electrical defects or deficiencies, and in satisfactory operating condition. The District shall be allowed a reasonable period of time to inspect and test the work performed and to notify the vendor. The District or its designated representative will be the sole judge as to whether the work has been completed properly. All material or equipment that is deemed not to comply with this RFP will be replaced by the vendor, at no charge to the District, before final payment.

Upon notification that the project is completed, an electronic copy of the punch list will be prepared and presented to the vendor. To facilitate the closeout process, the vendor will present a complete list of all punch list items resolved with the date and item(s) completed and the documented resolution and return it to the District in an electronic format.

In accordance with the payment terms, the vendor will submit a final AIA Document G702 Application and Certificate for Payment. The District/District's Representative will present signoff/closeout documents to the vendor for signatures. A copy of the document will be given to the vendor.

The District reserves the right to inspect and approve or reject the installation before signoff. If the District rejects the workmanship or equipment functionally, the vendor must repair or replace it at its cost.

System warranty for products (hardware and software) and workmanship will not commence until project closeout. The system warranty start includes any manufacturer's warranty and additional extended warranties that may be purchased.

## 2.11 EXTENDED UNIT PRICES

Extended unit prices as presented in **Appendix A** are made available to any requesting Oakland County school district for the terms and period defined. vendors must indicate their acceptance of the terms to extend unit prices in **Appendix A**.

## 2.12 COSTS

Respond on the Vendor Response Form that is included in **Appendix A**. Provide all costs associated with the equipment and services specified in **Section 2**. Provide the following information:

- A. A complete, itemized equipment list
- B. Your base bid cost for the complete project plus performance bond; if any miscellaneous costs need to be included, be sure to identify and explain them
- C. Warranty period and terms

Base bid to include the following (refer to **Appendix A** for quantities):

## 2.13 OTHER COSTS

If any costs are associated with your proposed service that have not been identified in prior sections, they must be identified as *Other Costs* and detailed in each building section of the Base Cost Form in **Appendix A**. Any such charges will be clearly identified, and all nonrecurring and monthly costs provided. These other costs, if any, must be shown for each equipment category requested.

### 3 MIDDLE SCHOOL AUDIO/VIDEO SYSTEM SPECIFICATIONS

#### 3.1 INTENT AND CURRENT TECHNICAL ENVIRONMENT OVERVIEW

The District intends to upgrade the AV equipment in the cafeteriums in the three middle schools and STEAM Academy (K-8 school). The installation at these schools is expected to occur during the summer of 2024 (refer to the timeline in **Section 1.2**). The vendor shall furnish all equipment, accessories, and necessary material for a complete system in the East Middle School, Power Middle School, Warner Middle School, and STEAM Academy as indicated on the plans and described hereinafter. The equipment specified is not all-inclusive. Miscellaneous hardware, cables, and components will be required for a complete installation. It is the vendor's responsibility to provide all parts needed for a complete and functioning system.

The intent of this RFP is to provide the school district with an integrated District-wide system. The following key features are desired:

- A. The three middle schools and STEAM Academy have existing systems that the District is looking to add enhanced capabilities to.
- B. It is desired that all cafeteria sound systems be as operationally similar to each other as possible such that a user trained on one system will be able to use the other school's system without additional training.
- C. It is desired to have a "Principal's Mixer" type operation be added to the system to allow for impromptu uses of the space by less technically inclined users without the need for a sound system operator or the full mixing board capability. The system installed must interface with the existing mixing board and balance of the house system in such a way to not interfere with the full featured technical usage of the system, such as a play or concert.
- D. At Power Middle School, East Middle School, and Warner Middle School, it is desired to relocate the existing sound system location to the back of the room opposite the stage. The existing system at STEAM Academy is in a flush wall rack that is not easily accessed, lockable, or has enough expansion space to accommodate the additional capabilities desired. A new rack will be required at the three middle school locations to accommodate new equipment and additional features. STEAM Academy has an existing flush rack. It has plenty of additional rack space available, and the room layout prevents relocation of the rack to a new location.
- E. It is desired that a new portable mixing table with a digital console mixer be added at each school, which can be wheeled out and connected to the existing or new sound system via a Dante network. The District will add a lighting control console to this as well as part of another RFP.
- F. New floor standing choir microphones are desired for flexible usage for different events.
- G. Additional jacks will be required to be added to accommodate these choir microphones.

- H. Each school is to have 12 wireless lapel microphones and two wireless handheld microphones to accommodate the various uses of the sound system.
- I. The two wireless handheld microphones will be available in the “Principal’s Mixer” mode (i.e., no mixing console) for everyday use, such as during lunch time and staff meetings.
- J. At East Middle School, the existing projection screen is not operational and needs to be replaced.
- K. New monitor speakers and jacks required to operate them are to be installed.
- L. A new audio distribution system is to be provided which is to accommodate the transport of required audio channels from the equipment rack to the new mixing console location. Jacks and any required surface raceway will need to be installed at the new locations to facilitate this requirement.
- M. A new digital signal processor will be installed in the sound system racks to facilitate the usage of the “Principal’s Mixer mode” and the “Mixing Console Operation mode.” If any controls are required to affect a mode change, a DSP compatible control panel will be installed in the rack such that rack access is required to effect the change of modes.
- N. The systems are to be equalized such that speakers are as flat as possible over the entire audible range. Personnel experienced and fluent in such techniques shall be utilized for these settings, as well as setting up the system’s proper gain structure.
- O. A new digital feedback suppressor shall be incorporated to make use of the systems as feedback free as possible. This equipment shall also be set up by experienced personnel.
- P. It is desired to have all existing wall jacks replaced and patch bay connectors cleaned, inspected, and tested for proper operation. The District shall be notified of any problems found and the cost of remediation before proceeding to correct.
- Q. It is desired to have existing equipment racks cleaned and dusted, loose cables resecured, and extraneous cables removed.
- R. The word ability in the above section shall be construed to mean that the function shall be included in the system pricing, programmed, and active upon system closeout and signoff. No additional monies shall be allocated to add a specified feature after the bidding due date.
- S. The District does not desire to incur any recurring software costs in the maintenance of these systems. Any ongoing software maintenance costs for the first five years shall be included in the system price, and any current costs required for software maintenance shall be clearly delineated in the RFB response. The successful vendor shall bear responsibility for any software maintenance costs not clearly delineated at bid time for the life of the systems.

- T. Any deviations of an installed system, or design, from these District goals shall be clearly delineated as a bid exception and included in the written response to this bid.** The District understands that certain features may add additional cost and will want to weigh the cost-versus-benefit of systems with varying degrees of features. Any deviations from the above list not included or approved for removal by the District shall be corrected at the Contractor's expense prior to full payment and District signoff of the project. **VOLUNTARY ALTERNATES ARE ENCOURAGED.**
- U. It is desired that complete systems be installed at each of the three Middle Schools and STEAM Academy. Any deficiencies of equipment in the specifications or drawings not identified before the submission of bids time will be the successful contractor's responsibility to provide at no additional charge. Any mention of equipment not quantitatively defined per school shall be construed as to be one provided per system at each of four buildings.

## 3.2 GENERAL REQUIREMENTS

This specification has been designed to meet the objectives of the District. If the components necessary to accomplish the stated objectives are not contained within this specification, bidders shall add the required items to accomplish them on their platform. If significant additions/departures from the specification are made, identify them in your response, including their purpose as they relate to meeting the objectives of this project. It is the sole responsibility of the vendor to assure that all hardware, connections, cabling, and software items have been identified that will permit the full, efficient, and complete function of the solution. Vendors are responsible for assuring that the solution as proposed is properly licensed. The omission or missed specification of any support component does not relieve the vendor from the responsibility for providing a proposal that includes all necessary functioning and compatible elements to permit the full, efficient, legal, and complete operation of the proposed solution.

The District is expecting a turnkey solution that will include acquisition, installation, detailed design, configuration, testing, documentation, and training on the new system.

### 3.2.1 New materials

All equipment quoted by vendors shall be new.

### 3.2.2 Current software

All software included to make the solution work shall be the latest version. Any exceptions must be specifically noted.

### 3.2.3 Manufacturer and workmanship warranty

A three-year warranty for materials and workmanship on all new equipment installed must be included.

### 3.2.4 Pre-installation walkthrough/site review

The selected vendor shall be responsible for performing building walkthroughs with the District's Representative to do the following:

1. Verify rack locations, audio and visual locations and connections, cable requirements, and any unique installation issues
2. The vendor is responsible for identifying and documenting any items that are outside the project scope or listed in the specifications as unit price items; all items not noted shall become the vendor's responsibility to install at no additional cost

### **3.2.5 Plenum cable and general cabling requirements**

All cable installed above the ceiling and within walls must be plenum-rated and meet the following cabling requirements:

#### **3.2.5.1 General cabling requirements**

- A. All wiring must be plenum-rated and should be run through the ceiling space and run down conduit or raceway provided by the selected vendor.
- B. Specific colors for cabling will be designated by the district in consultation with the vendor upon inspection of the present conditions in each location.
- C. Wiring above the ceiling shall be independently supported and not laid on top of or in direct contact with ceiling grids or panels, lighting, etc., or affixed to non-structural components such as sprinkler systems, gas, water pipes, etc.
- D. "J" hooks shall be used to support cable and should be mounted off the deck or the building steel. Mounting on conduits, ducts, or pipes is not acceptable.
- E. Cable shall be supported every five feet.
- F. Vendor must comply with all EIA/TIA specifications as well as local building codes.
- G. The installed solution must provide a high-quality signal.
- H. Cabling must not introduce any detectable interference or distortion.
- I. Cabling must maintain a consistent impedance from connector to connector.
- J. Both connections must be electrically identical.
- K. CAT6 cabling must be yellow, or other approved color, for the projector and other video-over-IP uses.
- L. The vendor is also responsible for fire stopping all penetrations made and/or used.
- M. Any firewalls penetrated to facilitate the routing of communication wiring shall, upon completion of that wiring, be fire stopped using approved methods as outlined in the National Electric Code, and all applicable state, county, and city ordinances. The vendor shall be responsible for fire stopping all penetrations used for routing of the vendor's cable regardless of who made the penetration access. The vendor is responsible for coring, sleeving, and fire stopping penetrations through walls, floor, or ceilings as necessary to route cable.
- N. The vendor is also responsible for providing all necessary documentation to show that the fire stopping meets all applicable federal, state, county, and city ordinances, including a copy of the fire marshal approval.

### **3.2.6 Asset tags**

Vendor is expected to apply District provided asset tags for all projectors, sound systems, and speakers. Vendor must provide a listing of all serial numbers that the district will use for asset tracking. This list must include:

- Item description
- Model number
- Serial number
- Warranty end date
- Installation date
- Location (building and room name/number)

### 3.2.7 Equipment removal/recycle

The vendor shall be required to provide, upon the District's approval, disposal or recycling services for hardware and cabling removed as part of this project. The vendor must provide a certificate/statement indicating how equipment and cabling was disposed of (e.g., disposed of in a *green* manner, recycled). Note that no equipment shall be placed in dumpsters or outside of buildings. Equipment must be either taken with the vendor the day of removal or set in a location within the building as agreed upon with the district.

### 3.2.8 Alternate designs

Recognizing variations and lead times in vendor equipment and design configurations, alternate solutions may be submitted. Alternate bids may be accepted when they satisfy the objectives of the specification providing efficiency, economy, or elegance unachievable through the base bid design. Alternative solutions are to be priced separately from the base bid. The vendor may propose alternate solutions only after responding to the base bid solutions requested. The acceptance of the voluntary solution will be at the discretion of the District.

For vendors proposing alternate designs (solutions) other than as requested by this specification/bill of materials, all designs must use products that meet or exceed the features provided in this specification/bill of materials. All products proposed for alternate solutions must be in production format at the time the proposals are opened. If the vendor is unable to provide the proposed product or feature by the proposed delivery date, the vendor will provide a resolution of equal or greater value to the District, at no additional charge to the District, including services required to implement the solution.

## 3.3 TECHNICAL SYSTEM REQUIREMENTS: MIDDLE SCHOOL SYSTEMS

### 3.3.1 Rack system

For the three Middle Schools (not STEAM):

- The main equipment racks shall be a Middle Atlantic DWR-35-22PD wall mounted cabinet with locking rear doors and matching side panels or equal by Atlas-Soundolier or Middle Atlantic. All unused rack spaces must be enclosed by blank or vent panels. No open spaces shall be allowed. Provide locking front door and a complete system with all required accessories. At East, Warner, and Power, remove the equipment to be reused and mounted in the new rack. The new rack is to be mounted 12" nominally above the finished floor.
- All equipment shall be mounted by means of rack assemblies custom made for the piece of equipment. Shelves for equipment shall not be allowed. All equipment shall be hardwired within the

rack following EIA standards. All cabling shall be routed down the sides of the cabinets with inputs on one side and outputs on the other. No cables shall drape between equipment without being tied to buss ways on the side of the rack first. All wiring shall be neatly bundled and cut to length. Excess lengths of cable within the rack will not be allowed. Fill all unused spaces with appropriate size blank panels.

- The racks shall be constructed of 16 Gauge CRS with welded frame construction. Unit shall accommodate standard 19" rack panels and have 25 1/2" of mounting depth available. Adjustable mounting rails must be 11 Gauge CRS with tapped 10-32 screw holes. Conduit knockouts shall be provided at the top and bottom to accommodate 1/2" and 3/4" conduit. Racks shall be provided with adequate ventilation or fans to keep equipment within recommended operating temperatures. Provide 7" storage drawer and ground buss bar where not already available from the previous rack.
- Each rack shall have installed the required number of vertical 110 Volt outlets and a horizontal power conditioning device for surge suppression and line conditioning. Surge suppression unit must have a built-in circuit breaker and be sized accordingly for two times the maximum current draw. Plugging equipment in to accessory outlets in a daisy chain fashion shall not be acceptable. Middle Atlantic PD-920R-SP shall be considered the standard as minimally acceptable to meet this requirement.

At STEAM Academy, provide a new lock mechanism or key for the existing flush rack unit, or suitable equivalent. The existing flush rack is not labeled with a manufacturer but appears like those provided by House of Metal Enclosures (H.O.M.E.). Four new keys will be provided.

### **3.3.2 Mixing console**

The mixer shall be a Yamaha QL-1 16 buss mixing console with 32 channels each. The two Dante ports shall be extended to a wall or rack mounted plate to accommodate input from the portable mixing table console. Provide with two LA1L gooseneck lamps. Because it is desired to have a seamless transition from the Middle School AV experience to the High School equipment, NO SUBSTITUTIONS ARE ALLOWED ON THIS ITEM.

The mixer shall meet or exceed the following performance specifications: frequency response from microphone or line input to any output, +0/-1 dB 20 Hz to 20 KHz; total harmonic distortion of less than 0.005% 20 Hz to 20 KHz at +4 dBu output level and 20 dB headroom; dynamic range of 100 dB.; crosstalk of -60 dB, 20 – 20,000 Hz; equivalent input noise shall be -128 dBu terminated at 150 ohms; console shall be UL, CUL, and CE listed compliant.

### **3.3.3 Digital signal processors/equalizers**

Provide one BSS BLU806DA plus one BLU326DA expander to accommodate all signal processing functions and the seamless transition from the "Principal's Mixer mode" to "Full Mixing Console mode" operation, per building. vendor must provide a copy of a dealer certification or manufacturer letter for the product they are providing with submittals. vendor must be certified and proficient in the programming of the product they are providing, no exceptions. Acceptable manufacturers are BSS Audio, Biamp, and QSC. The Dante output shall be installed to allow the portable mixing table to instantly connect to the system while allowing the rack door to be fully closed and locked. Two redundant connections are to be provided at the designated mixing table location.

Provide one dbx AFS2 Feedback Suppression Processor on the output of the above DSP. NO SUBSTITUTIONS ARE ALLOWED ON THIS ITEM WITHOUT PRIOR APPROVAL.

### **3.3.4 Microphones/monitor jacks/input panels**

Provide phantom power for all microphone jacks. Microphone wall jacks shall be Neutrik XLR or approved equal. Provide quantities as shown on prints. All plates shall be stainless steel or anodized aluminum AND APPROPRIATELY LABELED.

Wire current microphone jacks at the stage. Wire each jack to “Principal’s Mixer” and to the main mixing console via the DSP. Provide two new monitor jacks at the stage locations noted on the drawings. Provide all necessary steel raceway and boxes to conceal and protect cabling. No exposed wire shall be permitted in any viewable area. Plenum-rated cable will be required.

### **3.3.5 Production intercom system**

Provide a four-station wireless Production Intercom master with belt-packs, and single-ear heavy duty headsets. The base station is to be installed in the BOH rack location. Provide a rack mounted station with a rack kit and power supply at the rack location. Provide antennas sufficient to cover all performance, audience, backstage, and choir/music room locations. Provide one Clearcom FS-Base-II, with four FS-II-BP, room appropriate antenna system, four Clearcom CC-300 single ear headsets, eight rechargeable batteries, a gang charger, and four replacement ear cushions per system. The system is to be connected to the District WAN by the selected vendor and any assistance required for District-wide communication is to be provided. The District’s desire is for the system components to be interchangeable with the High Schools’ equipment. NO SUBSTITUTIONS ON THIS PRODUCT, however, voluntary alternates will be considered.

Provide intercom outlets at each location shown on prints. Provide Neutrik XLR-male connector in appropriate quantity at each location shown. All intercom jacks shall be mounted on stainless steel plates sized to fit the box provided by the electrical contractor.

### **3.3.6 Wireless microphones**

Provide 12 wireless lapel microphone systems and two handheld wireless microphone systems with antenna splitter equipment capable of 14 receivers, power supply, external antennae, and antenna cable. Microphone systems shall be Shure SLX-D series or Engineer approved equivalent. The equipment list shall be as follows:

- Seven Shure SLX-D Dual Channel Receivers
- Two Shure SLXD14D/58 Handheld Microphone Transmitters
- 12 Shure SLX14D Beltpack Microphones
- Two Shure UA844+SWB/LC Antenna Splitters
- Two Shure PA725 10’ Antenna Cable (or longer if required)
- Two Shure UA505 Antenna Mounting Bracket
- Two Shure UAB-554-626 ½ Wave Antenna
- 16 Shure SB903 rechargeable batteries
- Two Shure SBC80-903 8 bay battery chargers

- One Shure SBC203 Dual Bay Drop in charger

Please verify all part numbers and packages to provide the required items. Frequency band J52 is preferred, with the G58 band as an alternate if required.

### **3.3.7 Wired microphones**

The vendor is to provide:

- Four AKG GN155 floor standing gooseneck microphones with CK31 capsule installed
- Eight 25' quad shielded microphone cables
- Two Shure SM58 handheld microphones
- Two Atlas Soundolier MS12CE microphone stand or equivalent
- Two Atlas Soundolier DS7E desk stand or equivalent

### **3.3.8 Hearing assistance system**

Provide hearing assistance system Williams Sound or approved equal by Williams Sound or Listen Technologies. Provide current model rack mount transmitter; rack kit, remote antenna, cable; and four personal receivers, eight dual earphones, and rechargeable AA batteries for each receiver and charger case. This system shall reside in the main amplifier cabinet in the control room. Provide external antenna at the location shown on prints with custom plate. Provide feed from processor to hearing assistance transmitter. Mount in main amplifier rack.

### **3.3.9 Portable rolltop mixing desk**

Provide an HSA custom portable console desk quote number 23072 with height and depth to accommodate the mixing console. Soundcraft Systems or Marshall are approved equals. Heavy duty casters and locking aluminum roll top are to be included. The color shall be ebony and the material construction is to be oak or similar hardwood.

Provide with Middle Atlantic CHAIR-TSK1-B Task Chair, PD-920-RS Power panel, 25' 20A extension cord, and blank panels in all unused rack spaces. Provide cables and hardware to extend the Dante jacks on the mixer to a box mounted on the user side of the modesty panel with Neutrik Cat6A Ethercon jack. Provide two heavy duty Cables to Go 00754 25' shielded Cat6A jumper cable. This table is also to house the building's lighting console, provided by others.

### **3.3.10 Loudspeakers**

Existing are to be reused.

### **3.3.11 Stage monitor speakers**

Provide four of one of the following JBL PRX812 powered monitor speakers and four 25' cables with Neutrik XLR connectors. Monitor jacks shall have mating connectors.

### **3.3.12 AC power panels**

Provide a Middle Atlantic PD-920-RS power strip and compatible vertical strip for the required number of outlets, or approved equal by SurgeX or Tripplite, as required. No daisy chaining of 110 VAC sockets between devices shall be allowed. Provide NEMA 20-amp power cord for each power strip provided. Provide in main amplifier rack.

### **3.3.13 Auxiliary "Principal's Mixer"**

Provide a JBL CSM28 mixer mounted in the sound rack for control of the front of stage microphone jacks. This shall function as a "Principal's Mixer" for use of the system when no console operator is available. Wire to input of digital signal processor so as any device wired to the "Principal's Mixer" may also be utilized in the "Mixing Console Operation" mode.

### **3.3.14 Multi-media player**

Provide a Denon DN-500CB media player for input of local sources by Bluetooth, USB, 3.5mm TRS jack, or CD format to the sound system, wired to the "Principal's Mixer." Approved equals are models by Marantz Professional or Tascam.

### **3.3.15 Existing cabling extension/relocation**

The existing racks at East, Warner, and Powers are to be removed, and any equipment not to be reused is to be turned over to the owner. Enclosure and extension of the existing microphone and speaker cabling shall be included in the scope of this RFP. Cable splices shall be made on terminal block and clearly identified as to their origin or destination (i.e., Mic 1 jack, Stage Left speaker, etc.).

### **3.3.16 CABLES**

Cables shall be as follows:

- A. Cluster horns or low frequency cabinets
  - 1. West Penn 25227
  - 2. Belden equivalent
- B. 70 Volt speakers
  - 1. West Penn 25225 plenum-rated cable, gray
  - 2. Belden equivalent
- C. Microphone jacks
  - 1. West Penn 25292 or plenum-rated equivalent
  - 2. Belden equivalent
- D. Intercom lines
  - 1. West Penn D25454 or 25292B in blue to differentiate from microphone lines
  - 2. Belden equivalent

### **3.3.17 ACCESSORIES**

Provide the following accessories with the system:

- Two Direct Boxes, BSS AR133 or equivalent
- Four 3.5mm TRS to dual RCA Y cables, 6'

### **3.3.18 PROJECTION SCREEN**

Provide an 18' diagonal 16:10 motorized projection screen to replace the currently defective one currently installed at East Middle School. Provide a low-voltage interface and install a switch to operate the system in vendor provided metal surface raceway. The electrical connection is to be provided by the District electrician. Screen material to be tensioned matte white with widest viewing angle possible with 189" diagonal. The screen shall be Dalite Cosmopolitan 70258L or similar series by Dalite or Draper.

## **3.4 ADD/ALTERNATES**

### **3.4.1 Deduct/Alternate 1: Mandatory alternate MS-1**

Price to delete the Production Intercom System specified in Section 3.3.5 in its entirety.

### **3.4.2 Add/Alternate 2: MS-2**

Extend warranty of all systems to 5 years.

## **3.5 INTEGRATION SERVICES**

The selected vendor is solely responsible for the installation method and integrity of all ceiling- and wall-mounted equipment included as part of its proposed solution. The successful vendor shall be responsible for ensuring the safety of the proposed installation in all cases.

### **3.5.1 Installation**

- A. Installation must include all required labor and miscellaneous materials. The successful vendor will be responsible for visiting the site prior to installation to review any additional installation requirements and to finalize the appropriate mounting method.
- B. The successful bidder is solely responsible for the installation method and integrity of all mounts and installations. The successful vendor shall be responsible for ensuring the safety of the proposed installation in all cases. A minimum three-year warranty on workmanship is required. All mounts must adhere to the highest level of safety standards. The vendor is fully responsible for the mounting method and installation.
- C. Vendors shall perform any required programming and testing to make sure all systems work together.
- D. The vendor must provide the District with a test script for review. Upon approval of the test script, the vendor will provide the test results for each gym and cafeteria installed based on that script.

### **3.5.2 Installation commissioning**

Provide a technician familiar with all aspects of the installation for up to 16 hours to accompany the engineer on a site inspection and punch listing of the system. The technician shall be prepared to perform repairs or troubleshooting as necessary if minor problems are encountered. The installing contractor shall turn over a 100% operational and tested system to the engineer. Failure to provide a complete and operational system at the time of commissioning may result in back charges for a return trip for the commissioning engineer.

### **3.5.3 Project management**

The selected vendor is responsible for assigning an experienced project manager to the project who will be responsible for meeting regularly with the District and the project team to coordinate the activities associated with bringing the project to successful completion.

### **3.5.4 Project plan**

The vendor shall provide a full installation schedule showing the workflow using a graphical representation (i.e., Gantt chart or similar). The vendor's installation schedule should indicate the size of each crew working at the site daily, along with timelines for site project completion. All punch list items associated with this project must be completed by the noted completion date.

### **3.5.5 Change order control**

Once selected, the vendor shall submit all change orders to the District's designate for approval. The District will not be responsible for work performed beyond the contract scope without a signed change order.

### **3.5.6 General implementation timing**

It is the intent of the District to start the full deployment of equipment and integration services requested in the RFP during summer 2024. The District expects the system to be live and all training complete by Aug. 18, 2023. All implementation efforts must be scheduled with the intent that minimal disruption to District business occurs.

### **3.5.7 Site availability and work hours**

Any work scheduled inside of buildings, or on the building premises, must be coordinated with the District. Arrangements must be made through the District for additional work hours, if needed.

Several sites will have summer school classes in session; the schedules for these activities are still being developed. Additionally, implementation efforts will need to be coordinated around summer cleaning efforts and construction projects. The implementation schedule must account for there being no disruption to summer activities. A detailed schedule will be developed by the awarded vendor based on input from the District and will be subject to the District's approval.

### 3.6 TRAINING: AT NO COST TO THE DISTRICT

The successful vendor will be responsible for providing training at NO COST to the District. Training shall include the following:

- Provide up to two four-hour training sessions, per building, covering all aspects of operation and warranty service procedures. Coordinate time with District or District Representative.
- Provide up to a four-hour training session for administrative and selected users covering all aspects of maintenance and warranty service procedures. Coordinate time with District or District Representative.

### 3.7 WARRANTY

#### 3.7.1 Warranty term

All vendors must include a three-year manufacturers and workmanship warranty as part of the proposal for the base bid equipment. Manufacturer warranty certificates must be provided for all equipment. All proposed warranties must include system software updates and releases at no additional charge. All warranties will commence upon final acceptance. Please refer to **Sections 2.10** and **3.9**, *Final acceptance*, for additional details.

### 3.8 ACCEPTANCE/TESTING CRITERIA

#### 3.8.1 Performance and testing

- The vendor shall establish the optimum electrical gain settings of each stage of each sound system based on the gain settings that provide the highest overall system signal-to-noise ratio, lowest distortion, and a 10db crest (peaking) factor.
- The vendor shall measure the performance of and equalize the frequency response of the sound system using instrumentational procedures as required by this specification.
- The vendor shall document the results of measurements and performance tests as required by this specification.
- The main sound system shall be evaluated for loudspeaker coverage in all seating areas following the equalization of system frequency response in third octave bands.
- The frequency response of the main system shall be evaluated with a pink noise signal inputted into the system mixer (without the system microphones connected) and the resulting third octave band frequency response measured from at least two measurement positions in each major area of seats (minimum of eight measurement positions).
- The measurement microphone positions shall be distributed throughout the room and shall be representative of most seating positions in the room.
- The energy average, overall band level range and standard deviation in each third octave band between 125 and 10,000 Hz shall be determined for the eight measurement positions described above.

- The third octave band equalizer of the system shall be adjusted to produce a flat average room response between 125 and 2500 Hz +/- 1.5 dB. The average room response shall be determined with the measurement positions described above.
- The overall coverage of the cluster loudspeaker shall be evaluated by measurement of the overall A-weighted sound level of the system following third octave band equalization of the system as prescribed above.
- Measure the overall A-weighted slow response sound level with an ANSI Type 1 sound level meter while a pink noise signal is inputted into the system.
- Measure the sound level at a microphone elevation of 4 feet above the floor while the microphone is slowly traversed over the outer perimeter of the seating. Note on an architectural floor plan, all perimeter seat locations where the overall level measured on-axis of the center long-throw loudspeaker horn.
- Determine the extent of any seating coverage deviation outside +1, -3dB range by traversing the measurement microphone across seating areas in the vicinity of the perimeter deviation. Determine the extent of coverage that meets the +1, -3dB requirement and show as a contour plot on the architectural floor plan.
- Following equalization of the third octave band frequency response and evaluation of the loudspeaker coverage, the system shall then be equalized for the feedback control using the set of tunable notch filters.
- Adjust the limiter for each system in accordance with the manufacturer's recommendations.
- Permanently mark all system component gain and filter setting on equipment faceplates and record copies on component faceplates for inclusion in the "as-built" drawings.
- Engraved lamicoid or P-touch type tags for all controls, amplifiers and switches shall be installed. Default settings on all analog equipment should be noted with a green dot or red arrow so as to return all controls to an operational setting should the system settings be changed inappropriately.

Prior to acceptance testing, vendor shall provide all inventory documentation to the District.

A District Representative shall be present during the acceptance testing. The vendor shall work with the District and/or District Representative to identify an acceptable time frame and schedule for acceptance testing prior to the completion of the installation.

### **3.8.2 Punch lists**

After installation is complete, the vendor shall receive a punch list from the District. The vendor shall have 30 days to remedy the punch list. The District and/or District Representative shall review the punch list items. If any items remain after the vendor has indicated they were cleared, the vendor shall be charged \$500 for each subsequent visit by the District or its designated representative to review punch-list items until the punch list is cleared.

### **3.8.3 Final acceptance**

The vendor shall demonstrate that all work is complete, free from physical and electrical defects or deficiencies, and in satisfactory operating condition. The District shall be allowed to inspect and test the

work performed and to notify the vendor of any deficiencies. The District or the District Representative will be the sole judge as to whether the work has been completed properly. All material or equipment that is deemed not to comply with this RFP will be replaced by the vendor, at no charge to the District, prior to final payment.

### **3.9 DOCUMENTATION**

Provide the following documentation in PDF and paper format:

- One set of owner's manuals per building plus one spare for administration use (five total)
- Cabling scheme and numbering
- Copy of equalization curves and settings
- As built diagrams for all components added and cabling thereof
- System design one-line schematic. An extra copy is to be laminated and adhered to the back panel (technician side) of the main equipment rack

A USB drive with a copy of the DSP programming files shall also be provided.

#### **3.9.1 Manufacturer system manuals**

The vendor will provide the District with all system manuals where system manuals are provided by the manufacturer.

#### **3.9.2 Warranty documentation**

The vendor shall provide warranty documentation for all equipment installed.

#### **3.9.3 Permit documentation**

The vendor shall provide proof of applicable successful inspection that is necessary to meet local, state, or federal codes and requirements.

#### **3.9.4 Documentation turnover**

No final payments shall be made until all documentation is turned over, and a signed copy of the transmittal of such is received with the closeout paperwork and pay application.

### **3.10 FINAL ACCEPTANCE**

The vendor shall demonstrate that all work is complete, free from physical and electrical defects or deficiencies, and in satisfactory operating condition. The District shall be allowed a reasonable period of time to inspect and test the work performed and to notify the vendor. The District or the District Representative will be the sole judge as to whether the work has been completed properly. All material or equipment that is deemed not to comply with this RFP will be replaced by the vendor, at no charge to the District, before final payment.

Upon notification that the project is completed, an electronic copy of the punch list will be prepared and presented to the vendor. To facilitate the closeout process, the vendor will present a complete list of all punch list items resolved with the date and item(s) completed and the documented resolution and return it to the District in an electronic format.

In accordance with the payment terms, the vendor will submit final AIA Document G702 Application and Certificate for Payment. The District/District's Representative will present signoff/closeout documents to the vendor for signatures. A copy of the document will be given to the vendor.

The District reserves the right to inspect and approve or reject the installation before signoff. If the District rejects the workmanship or equipment functionally, the vendor must repair or replace at its cost.

System warranty for products (hardware and software) and workmanship will not commence until project closeout. The system warranty start includes any manufacturer's warranty and additional extended warranties that may be purchased.

### 3.11 EXTENDED UNIT PRICES

Extended unit prices as presented in **Appendix A** are made available to any requesting Oakland County school district for the terms and period defined. vendors must indicate their acceptance of the terms to extend unit prices in **Appendix A**.

### 3.12 COSTS

Respond on the Vendor Response Form that is included in **Appendix A**. Provide all costs associated with the equipment and services specified in **Section 2**. Provide the following information:

- A. A complete, itemized equipment list
- B. Your base bid cost for the complete project plus performance bond; if any miscellaneous costs need to be included, be sure to identify and explain them
- C. Warranty period and terms

Base bid to include the following (refer to **Appendix A** for quantities):

### 3.13 OTHER COSTS

If any costs are associated with your proposed service that have not been identified in prior sections, they must be identified as *Other Costs* and detailed in each building section of the Base Cost Form in **Appendix A**. Any such charges will be clearly identified, and all nonrecurring and monthly costs provided. These other costs, if any, must be shown for each equipment category requested.

## **APPENDICES (PROVIDED SEPARATELY)**

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Appendix A: Vendor Response Forms

Appendix B: Sample Agreement

Appendix C: High School Information

Appendix D: Middle School Information