



October 15, 2025

ADDENDUM #2

CTE Renovation and Misc Improvement North Knox Jr/Sr High School

The original bid documents and drawings dated September 23, 2025, for the aforementioned project are amended as noted in this Addendum for the purpose of correcting and/or clarifying the original bid documents and drawings and shall take precedence over them. These changes and all incidental items required to provide the following corrections and/or clarifications shall be included even though not specifically described and shall become a part of the Contract Documents. This Addendum is to be sent to all bidders receiving bid documents and drawings and receipt of this Addendum is to be noted by each bidder in their bid proposal.

Revised documents and/or drawings included with this written Addendum include the following:

Specifications –

- **27 05 04-Communications Backbone Cabling_ADDENDA 1**

Drawings –

- **Architectural – A7**
- **Electrical – E1, E4, E14, E15**

Clarifications

- Regarding the door contacts and motion sensors for the exterior door monitoring system, demolition of the existing cabling and sensors that are currently installed at the exterior door openings where the CTE renovation work is to be performed will be coordinated with Sonitrol. This work will be performed by Sonitrol on a time-and-material basis and will be paid for directly by the Owner to Sonitrol. The Contractor shall be responsible for coordination of this work with Sonitrol.
- The installation of new cabling, sensors and any new wire mold required for the exterior door openings, or the relocation and reinstallation of existing cables to remain in-place serving existing door openings or new door openings shall be performed by Sonitrol. This work will be performed by Sonitrol on a time-and-material basis and will be paid for directly by the Owner to Sonitrol. The Contractor shall be responsible for coordination of this work with Sonitrol.
- All interior technology work such as overhead cameras, HDMI cabling, WAPs, fiber, ethernet cabling, media player and speakers, CAT6E cabling, communications, etc., shall be by the Contractor and included in the base bid amount.

Questions

1. Bidder question - *"There is a minimum order for each color/style on the Artform panels. The current design shown does not show that minimum. Do you still want to include this in the bid?"*

Answer – Please submit your bid to include the minimum. Sheet A7 has been modified to include installation of the additional panels in the Interview #2 and Broadcasting rooms.

2. Bidder question - *"Cline, Special Lite, and Kawneer are all in the flush aluminum door spec. However, the spec calls for embossed face sheets (orange peel type) and Cline doesn't offer that as they only do vertical ribbed texture. Kawneer and Special Lite only do the embossed and do not offer the vertical ribbed face sheet like Cline does. Please confirm if vertical ribbed texture is acceptable – otherwise Cline will have to be thrown out of spec."*

Answer – Vertical ribbed texture is not approved for this project. If Cline does not offer embossed, they will not be an option for this project. Special Lite and Kawneer are both still approved manufacturers.

3. Bidder question - *"For alternate #1 there are three type W1 windows. Two are called out to have tempered glass (keyed note 1) and the middle one in Business Management E120 is called out to have fire-rated non-impact rated glass (keyed note 19). It stands to reason that these would all be either fire-rated or non-rated as they are in the same corridor. Please clarify intent."*

Answer – The drawings are correct. Only one set of W1 windows is located in a fire-rated wall. See LS - Life Safety Plan in bid set for location of fire-rated walls.

4. Bidder question - *"Regarding SPEC Section 270504-4 2.01.4, it states "(Not required for this project). But 2.01.5 does not say it is not required. Can you confirm if new Outdoor fiber is to be provided and installed for this project? I do not find anything in the drawings indicating that we are to install new fiber."*

Answer – No new outdoor fiber is required for this project. The only fiber needed will be from room B11/B12 to relocated IDF-E if existing fiber doesn't reach. The spec section has been updated.

5. Bidder question - *“Per the drawings, we are to relocate the existing 2-post rack with the existing horizontal and backbone cabling included, for bidding purposes, are we to assume all cabling will reach the new destination? If not, will a drawing be issued showing the path of the existing backbone cable and the number of horizontal voice/data cables to be replaced?”*

Answer – Yes, the existing IDF-E 2-post rack is to be relocated to new location. Unfortunately, there is no map or list of IDF-E for ethernet cabling ran to equipment or devices outside of project area which will need to be extended to new IDF-E location via couplers ensure same category rating. If horizontal ethernet cabling is in the project area, cabling shall be removed and new ethernet cabling installed to new rooms/devices as shown on drawing.

6. Bidder question - *“There is a camera that is at the end of a hallway that has icon of 180 degree. Can you confirm if the school is wanting to change the existing camera that is there to a 180-degree camera?”*

Answer – The camera with the 180 degree icon is located at the end of Corridor E107. This is a new hallway so there is not an existing camera at this location. However, further review of the field work located one near the door to the existing FACS area. This has been updated to be relocated to Corridor E107.

Approved Substitutions

Packaged Outdoor Central-Station Air-Handling Units

After reviewing the submitted product information, Greenheck has been approved as a manufacturer of the outdoor air handling unit.

Greenheck

www.greenheck.com

Schofield, WI 54476

Outdoor Ductwork

After reviewing the submitted product information, Tuff Duct Systems has been approved as a manufacturer of the outdoor ductwork.

Tuff Duct Systems by Hranec Corporation

<https://tuffductsystems.com/>

Uniontown, PA 15401

Fire-Rated Glass

After reviewing the submitted product information, Pyran Platinum (non-impact) and Pyran Platinum L (laminated impact rated) fire-rated glass by Schott has been approved as a manufacturer of the fire-rated glass.

Schott

www.schott.com

Rye Brook, NY 10573

Fiber Cable

Prysmian is an approved manufacturer of the cabling.

Rejected Substitutions

Distribution Gear Package

ABB Electrification

Reason – Facility currently has Square D and Eaton and would prefer to keep like components.

End of Addendum #2

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Engineering + Architecture

Cc: file
Scott Stenftenagel, Clerk of the Works

**SECTION 27 05 04
COMMUNICATIONS BACKBONE CABLING**

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1. SUMMARY

- a. Section Includes: Pathways.

1) UTP cable.

- (a) Optical fiber cabling.

(1) Cable connecting hardware, patch panels, and cross-connects.

(2) Cabling identification products.

- (b) Related Sections:

(1) Division 27 Section "Sleeves and Sleeve Seals for Communications Pathways and Cabling.

(2) Division 27 Section "Communications Equipment Room Fittings" for associated communications cabling associated with system panels and devices.

(3) Division 27 Section "Communications Horizontal Cabling" for associated communications cabling associated with system panels and devices.

(4) Division 27 Section "Telecommunications Grounding and Bonding".

- b. DEFINITIONS

1) BICSI: Building Industry Consulting Service International.

2) Cross-Connect: A facility enabling the termination of cable elements and their interconnection or cross-connection.

3) EMI: Electromagnetic interference.

4) IDC: Insulation displacement connector. LAN: Local area network.

(a) RCDD: Registered Communications Distribution Designer.

(b) UTP: Unshielded twisted pair.

5) Furnish: Supply and deliver to Project site, ready for unloading, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.

6) Install: Operations at project site including unloading, temporarily storing, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.

(a) Provide: Furnish and install, complete and ready for the intended use.

- c. BACKBONE CABLING DESCRIPTION

1) Backbone cabling system shall provide interconnections between communications equipment rooms, main terminal space, and entrance facilities in the telecommunications cabling system structure. Cabling system consists of backbone cables, intermediate and main cross-connects, mechanical terminations, and patch cords or jumpers used for backbone-to-backbone cross connection.

2) Backbone cabling cross-connects may be located in communications equipment rooms or at entrance facilities. Bridged taps and splitters shall not be used as part of backbone cabling.

3) Backbone cabling will include a Fiber Trunk Cable from the Elementary MDF to the Middle School MDF. This will be placed in underground conduit placed by others. Any splicing in this section will be fusion spliced.

- d. PERFORMANCE REQUIREMENTS

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- 1) General Performance: Backbone cabling system shall comply with transmission standards in TIA/EIA-568-C.I, when tested according to test procedures of this standard.
- e. ACTION SUBMITTALS
 - 1) Product Data with Shop Drawings:
 - (a) Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for equipment racks and cabinets. Include rated capacities, operating characteristics, electrical characteristics, and furnished specialties and accessories.
 - (1) Provide as a single complete system submittal with master product list referencing each paragraph in this section specifying product.
- f. INFORMATIONAL SUBMITTALS
 - 1) Qualification Data: For Installer, qualified layout technician, installation supervisor, and field inspector.
- g. QUALITY ASSURANCE
 - 1) All Work specified under this Section shall be fully compliant with following: ANSI/TIA-568-C.1-2009 "Commercial Building Telecommunications Cabling
 - (a) Standard (Currently Ratified) including all addenda and subsets."
 - (1) ANSI/TIA-569-C-2012 " Telecommunications Pathways and Spaces (Currently Ratified) including all addenda and subsets."
 - (2) ANSI/TIA-606-B-2012 "Administrative Standard for Telecommunications Infrastructure (Currently Ratified) including all addenda and subsets."
 - (3) ANSI-TIA-607-B-2012 "Generic Telecommunications Bonding and Grounding (Earthing) for Customer Premises (Currently Ratified) including all addenda and subsets."
 - (4) ANSI/TIA-758-B-2012 "Customer-owned Outside Plant Telecommunications Infrastructure Standard (Currently Ratified) including all addenda and subsets."
 - (b) In addition, all Work shall fully comply with these specifications and related Drawings and all manufacturers' recommended installation practices.
 - (c) Installer Qualifications: Cabling Installer must have personnel certified by BICSI on staff and shall have a thorough understanding of all standards referenced in this Section.
 - (d) Layout Responsibility: Preparation of Shop Drawings and Cabling Administration Drawings, Cabling Administration Drawings, and field testing program development by an RCDD.
 - (1) Installation Supervision: Installation shall be under the direct supervision of Registered Technician, who shall be present when any work of this Section is performed at Project site.
 - (2) Testing Supervisor: Currently certified by BICSI as an RCDD to supervise on site testing.
 - (e) C. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
 - 2) Telecommunications Pathways and Spaces: Comply with TIA/EIA-569-A. Grounding: Comply with ANSI-J-STD-607-A.
- h. DELIVERY, STORAGE, AND HANDLING
 - 1) Test cables upon receipt at Project site.
 - (a) Test optical fiber cable to determine the continuity of the strand end to end. Use optical loss test set.

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- (1) I. Test optical fiber cable while on reels. Use an optical time domain reflectometer to verify the cable length and locate cable defects, splices, and connector, including the loss value of each. Retain test data and include the record in maintenance data.
 - (2) 2. Test each pair of UTP cable for open and short circuits.
 - i. PROJECT CONDITIONS
 - 1) Environmental Limitations: Do not deliver or install cables and connecting materials until wet work in spaces is complete and dry, and temporary HV AC system is operating and maintaining ambient temperature and humidity conditions at occupancy levels during the remainder of the construction period.
 - j. COORDINATION
 - 1) Coordinate layout and installation of telecommunications pathways and cabling with Owner's telecommunications and LAN equipment and service suppliers.

PART 2 - PRODUCTS

2.01 PATHWAYS

- A. All communication, data and control cable shall be installed in conduit. General Requirements: Comply with TIA/EIA-569-B.
- B. Cable Support: NRTL labeled for support of Category 6 cabling, designed to prevent degradation of cable performance and pinch points that could damage cable.
- C. Support brackets with cable tie slots for fastening cable ties to brackets.
 - 1. I. J-hooks.
 - a. Straps and other devices.
 - 1) Cable Trays:
 - (a) Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - (1) Cooper B-Line, Inc.
 - (2) Caddy
 - (3) ECable Tray Material: Metal, suitable for indoors, and protected against corrosion by electroplated zinc galvanizing, complying with ASTM B 633, Type 1, not less than 0.000472 inches thick.
 - (4) Basket Cable Trays: None called out on this project.
 - (b) Conduit and Boxes: Comply with requirements in Division 26 Section "Raceway and Boxes for Electrical Systems." Flexible metal conduit shall not be used.
 - (1) Outlet boxes shall be no smaller than 2 inches wide, 3 inches high, and 2-1 /2 inches deep.

2. TRUNK CABLE

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following: NO COPPER TRUNK CALLED OUT ON THIS PROJECT.
 - 1) Belden CDT Inc.; Electronics Division.
 - (a) Berk-Tek; a Nexans company.
 - (1) CommScope, Inc.
 - (2) General Cable
 - (3) Mohawk; a division of Belden CDT.
 - (4) Superior Essex Inc.
 - (b) Description: 100-ohm, 4-pair UTP.
 - (1) Comply with ICEA S-90-661 for mechanical properties.
 - (2) Comply with TIA/EIA-568-C.1 for performance specifications.
 - (3) Comply with TIA/EIA-568-C.2, Category 6.

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- (4) Listed and labeled by an NRTL acceptable to authorities having jurisdiction as complying with UL 444 and NFPA 70 for the following types:
 - (5) Communications, Plenum Rated: Type CMP or MPP, complying with
 - (6) NFPA 262.
 - 3. UTP CABLE HARDWARE
 - a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) PANDUIT
 - (a) General Requirements for Cable Connecting Hardware: Comply with TIA/EIA- 568-C.2, IDC type, with modules designed for punch-down caps or tools. Cables shall be terminated with connecting hardware of same category or higher.
 - (b) Patch Panel: Modular panels housing multiple-numbered jack units with IDC-type connectors at each jack for permanent termination of pair groups of installed cables.
 - (1) Number of Jacks per Field: One for each four-pair UTP cable indicated.
 - (c) Jacks and Jack Assemblies: Modular, color-coded, eight-position modular receptacle units with integral IDC-type terminals.
 - (d) Patch Cords: Factory-made, 4-pair cables in lengths as required for proper connectivity at the patch panel; terminated with 8-position modular plug at each end. Excessive slack at the patch panel is not acceptable. Coordinate with Architect /Owner.
 - 2) Patch cords shall have bend-relief-compliant boots and color-coded icons to ensure Category 6 performance. Patch cords shall have latch guards to protect against snagging.
 - (a) Patch cords shall have color-coded boots for circuit identification.
 - (b) Provide (2) per 4-pair installed.
- 4. OPTICAL FIBER CABLE INDOOR
 - a. Manufacturers: Corning Cable System, Prysmian
 - b. Subject to compliance with requirements, provide products by one of the following:
 - 1) Corning Cable Systems.
 - (a) Description: SINGLEMODE FREEDOM One Tight Buffered, Interlocking Armored Cable, Riser, 12 fiber, Single Mode (OS2)
 - (b) Jacket:
 - (1) Cable cordage jacket, fiber, unit, and group color shall be according to TIA/EIA-598-B.
 - (2) Imprinted with fiber count, fiber type, and aggregate length at regular intervals not to exceed 40 inches.
- 5. OPTICAL FIBER CABLE OUTDOOR (NOT REQUIRED ON THIS PROJECT)
 - a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) Corning Cable Systems.
 - (a) Description: SINGLEMODE ALTOX Loose Tube, Gel-Free Cable, 12 Fiber, Single Mode (OS2) max. attenuation 0.4 db/km
 - (b) Jacket:
 - (1) Cable cordage jacket, fiber, unit, and group color shall be according to TIA/EIA-598-B.
 - (2) Imprinted with fiber count, fiber type, and aggregate length at regular intervals not to exceed 40 inches.
- 6. OPTICAL FIBER CABLE HARDWARE

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- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) Corning Cable Systems.
 - (a) Panduit
 - (b) Panels: Modular panels housing multiple-numbered, duplex cable connectors.
 - (1) Number of Connectors per Field: One for each fiber of cable or cables assigned to field, plus spares and blank positions adequate to suit specified expansion criteria. Provide as required to house terminations of all fiber cable installed.
 - (c) Patch Cords: Factory-made, dual-fiber cables in lengths as required for proper connectivity at the patch panel. Excessive slack at the patch panel is not acceptable. Coordinate with Architect/Owner. Provide (1) per each pair of fiber strands installed.
 - (d) Cable Connecting Hardware:
 - (1) Comply with Optical Fiber Connector Interchangeability Standards (FOCIS) specifications of TIA/EIA-604-2, TIA/EIA-604-3-A, and TIA/EIA-604-12. Comply with ANSI/TIA-568-C.3.
 - (2) All connectors will be LC type, utilizing fusion spliced pigtails. Insertion loss not more than 0.5 dB.
- 7. GROUNDING
 - a. Comply with ANSI/TIA-607-B-2012.
 - 8. LIGHTNING PROTECTION
 - a. Provide proper lightning protection where applicable.
 - 9. IDENTIFICATION PRODUCTS
 - a. Comply with ANSI/TIA-606-B-2012 and UL 969 for a system of labeling materials, including label stocks, laminating adhesives, and inks used by label printers.
 - 10. SOURCE QUALITY CONTROL
 - a. Factory test cables on reels according to ANSI/TIA-568-C.1.
 - b. Factory test UTP cables according to ANSI/TIA-568-C.2.
 - c. Factory test multimode optical fiber cables according to TIA/EIA-526-14-A and ANSI/TIA-568-C.3.
 - 1) Cable will be considered defective if it does not pass tests and inspections.
 - 2) Prepare test and inspection reports.

PART 3 - EXECUTION

3.01 ENTRANCE FACILITIES

- A. Coordinate backbone cabling with the protectors and demarcation point provided by communications service provider.
 - 1. CLEANING AND PROTECTION
 - a. Protect system components from damage and deterioration during installation. Protect equipment from dust and debris during installation. After installation maintain equipment protection. Notify other trades of equipment sensitivity to dust and debris. Clean equipment upon final completion of Work.
 - b. Before final acceptance, clean system components.
 - 2. WIRING METHODS
 - a. Wiring Method: Install cables in raceways and cable trays except within consoles, cabinets, desks, and counters and except in accessible ceiling spaces, in attics, and in gypsum board partitions where unenclosed wiring method may be used. Conceal raceway and cables except in unfinished spaces.
 - 1) This Project is a plenum environment. All cabling should be plenum rated.

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- 2) Comply with requirements for raceways and boxes specified in Division 26 Section "Raceway and Boxes for Electrical Systems."
 - (a) Wiring Method: Conceal conductors and cables in accessible ceilings, walls, and floors where possible.
 - (b) Wiring within Enclosures: Bundle, lace, and train cables within enclosures. Connect to terminal points with no excess and without exceeding manufacturer's limitations on bending radii. Provide and use lacing bars and distribution spools.
3. INSTALLATION OF PATHWAYS
 - a. Cable Trays: Comply with NEMA VE 2 and ANSI/TIA-569-B-2012.
 - b. Comply with requirements for demarcation point, pathways, cabinets, and racks specified in Division 27 Section "Communications Equipment Room Fittings." Drawings indicate general arrangement of pathways and fittings.
 - c. Comply with ANSI/TIA-569-B-2012 for pull-box sizing and length of conduit and number of bends between pull points.
 - d. Comply with requirements in Division 26 Section "Raceway and Boxes for Electrical Systems" for installation of conduits and wireways.
 - 1) Install manufactured conduit sweeps and long-radius elbows whenever possible.
 - 2) Pathway Installation in Communications Equipment Rooms:
 - (a) Position conduit ends adjacent to a corner on backboard where a single piece of plywood is installed, or in the corner of room where multiple sheets of plywood are installed around perimeter walls of room.
 - (1) Install cable trays to route cables if conduits cannot be located in these positions.
 - (2) Secure conduits to backboard when entering room from overhead.
 - (3) Extend conduits 3 inches above finished floor.
 - (4) Install metal conduits with grounding bushings and connect with grounding conductor to grounding system.
 - (b) Backboards: Install backboards with 96-inch dimension vertical. Butt adjacent sheets tightly, and form smooth gap-free corners and joints.
4. INSTALLATION OF CABLES
 - a. Comply with NECA 1.
 - b. General Requirements for Cabling: Comply with ANSI/TIA-568-C.I.
 - 1) Comply with BICSI ITSIM, Ch. 6, "Cable Termination Practices."
 - (a) Install 110-style IDC termination hardware unless otherwise indicated.
 - (1) Terminate all conductors; no cable shall contain unterminated elements. Make terminations only at indicated outlets, terminals, cross-connects, and patch panels.
 - (2) Cables may not be spliced. Secure and support cables at intervals not exceeding 30 inches and not more than 6 inches from cabinets, boxes, fittings, outlets, racks, frames, and terminals.
 - (3) Install lacing bars to restrain cables, to prevent straining connections, and to prevent bending cables to smaller radii than minimums recommended by manufacturer.
 - (4) Bundle, lace, and train conductors to terminal points without exceeding manufacturer's limitations on bending radii, but not less than radii specified in BICSI ITSIM, "Cabling Termination Practices" Chapter. Use lacing bars and distribution spools.
 - (5) Do not install bruised, kinked, scored, deformed, or abraded cable. Do not splice cable between termination, tap, or junction points. Remove and discard cable if damaged during installation and replace it with new cable.

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- (6) Cold-Weather Installation: Bring cable to room temperature before de reeling. Heat lamps shall not be used for heating.
- (7) In the communications equipment room, install a 10-foot- long service loop on each end of cable.
- (8) Pulling Cable: Comply with BICSI ITSIM, Ch. 4, "Pulling Cable." Monitor cable pull tensions.
- (9) Provide patch cords as directed by the Owner.
- (b) UTP Cable Installation: Comply with ANSI/TIA-568-C.2.
 - (1) Do not untwist UTP cables more than 1 /2 inch from the point of termination to maintain cable geometry.
- (c) Optical Fiber Cable Installation: Comply with ANSI/TIA-568-C.3.
 - (1) Cable may be terminated on connecting hardware that is rack or cabinet
 - (2) mounted.
- 2) Open-Cable Installation:
 - (a) Install cabling with horizontal and vertical telecommunications spaces with terminating interconnection equipment.
 - (b) guides in hardware and
 - (1) Suspend UTP cable not in a wireway or pathway, a minimum of 8 inches above ceilings by cable supports not more than 60 inches apart.
 - (2) Cable shall not be run through structural members or in contact with pipes, ducts, or other potentially damaging items.
- 3) Group connecting hardware for cables into separate logical fields.
- 4) Separation from EMI Sources:
 - (a) Comply with BICSI TDMM and ANSI/TIA-569-B-2012 recommendations for separating unshielded copper voice and data communication cable from potential EMI sources, including electrical power lines and equipment.
 - (1) Separation between open communications cables or cables in nonmetallic raceways and unshielded power conductors and electrical equipment shall be as follows:
 - (2) Electrical Equipment Rating Less Than 2 kV A: A minimum of 5 inches. Electrical Equipment Rating between 2 and 5 kVA: A minimum of 12 inches. Electrical Equipment Rating More Than 5 kVA: A minimum of 24 inches.
 - (3) Separation between communications cables in grounded metallic raceways and unshielded power lines or electrical equipment shall be as follows:
 - (4) Electrical Equipment Rating Less Than 2 kVA: A minimum of 2-1 /2 inches.
 - (5) Electrical Equipment Rating between 2 and 5 kVA: A minimum of 6 inches. Electrical Equipment Rating More Than 5 kVA: A minimum of 12 inches.
 - (6) Separation between communications cables in grounded metallic raceways and power lines and electrical equipment located in grounded metallic conduits or enclosures shall be as follows:
 - (7) Electrical Equipment Rating Less Than 2 kVA: No requirement. Electrical Equipment Rating between 2 and 5 kVA: A minimum of 3 inches. Electrical Equipment Rating More Than 5 kVA: A minimum of 6 inches.
 - (8) Separation between Communications Cables and Electrical Motors and Transformers, 5 kVA or HP and Larger: A minimum of 48 inches.

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- (9) Separation between Communications Cables and Fluorescent Fixtures: A minimum of 5 inches.
5. FIRESTOPPING
 - a. Comply with requirements in Division 07 Section "Penetration Firestopping." Comply with ANSI/TIA-569-B-2012, "Firestopping."
 - b. Comply with BICSI TDMM, "Firestopping Systems" Article.
 6. GROUNDING
 - a. Install grounding according to BICSI TDMM, "Grounding, Bonding, and Electrical Protection" Chapter.
 - b. Comply with ANSI/TIA-607-B-2012.
 - c. Locate grounding bus bar to minimize the length of bonding conductors. Fasten to wall allowing at least 2-inch clearance behind the grounding bus bar. Connect grounding bus bar with a minimum No. 4 AWG grounding electrode conductor from grounding bus bar to suitable electrical building ground.
 - d. Bond metallic equipment to the grounding bus bar, using not smaller than No. 6 AWG equipment grounding conductor.
 7. IDENTIFICATION
 - a. Identify system components, wiring, and cabling complying with ANSI/TIA-606-B- 201 2. Comply with requirements for identification specified in Division 26 Section "Identification for Electrical Systems."
 - 1) Administration Class: 2.
 - (a) Color-code cross-connect fields and apply colors to voice and data service backboards, connections, covers, and labels.
 - (b) Comply with requirements in Division 09 Section "Interior Painting" for painting backboards. For fire-resistant plywood, do not paint over manufacturer's label.
 - (c) See Division 27 Section "Communications Horizontal Cabling" for additional identification requirements. See Evaluations for discussion about TIA/EIA standard as it applies to this Section. Paint and label colors for equipment identification shall comply with ANSI/EIA-606-B-2012 for Class 2 level of administration.
 - (d) Comply with requirements in Division 27 Section "Communications Horizontal Cabling" for cable and asset management software.
 - 2) Cable Schedule: Install in a prominent location in each equipment room and wiring closet. List incoming and outgoing cables and their designations, origins, and destinations. Protect with rigid frame and clear plastic cover. Furnish an electronic copy of final comprehensive schedules for Project.
 - 3) Cabling Administration Drawings: Show building floor plans with cabling administration-point labeling. Identify labeling convention and show labels for telecommunications closets, backbone pathways and cables, entrance pathways and cables, terminal hardware and positions, horizontal cables, work areas and workstation terminal positions, grounding buses and pathways, and equipment grounding conductors.
 - (a) Cable and Wire Identification:
 - (1) Label each cable within 4 inches of each termination and tap, where it is accessible in a cabinet or junction or outlet box, and elsewhere as indicated.
 - (2) Each wire connected to building-mounted devices is not required to be numbered at device if color of wire is consistent with associated wire connected and numbered within panel or cabinet.
 - (3) Exposed Cables and Cables in Cable Trays and Wire Troughs: Label each cable at intervals not exceeding 25 feet.

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- (4) Label each terminal strip and screw terminal in each cabinet, rack, or panel.
 - (5) Individually number wiring conductors connected to terminal strips and identify each cable or wiring group being extended from a panel or cabinet to a building-mounted device with name and number of particular device as shown.
 - (6) Label each unit and field within distribution racks and frames.
 - (7) Identification within Connector Fields in Equipment Rooms and Wiring Closets: Label each connector and each discrete unit of cable terminating and connecting hardware. Where similar jacks and plugs are used for both voice and data communication cabling, use a different color for jacks and plugs of each service.
 - (8) Labels shall be preprinted or computer-printed type with printing area and font color that contrasts with cable jacket color but still complies with requirements in ANSI/TIA- 606-B-2012, for the following:
 - (9) Cables use flexible vinyl or polyester that flexes as cables are bent.
8. FIELD QUALITY CONTROL
- a. Testing Agency: a qualified testing agency to perform tests and inspections.
 - 1) Tests and Inspections:
 - (a) I. Visually inspect UTP and optical fiber jacket materials for NRTL certification markings. Inspect cabling terminations in communications equipment rooms for compliance with color-coding for pin assignments, and inspect cabling connections for compliance with ANSI/TIA-568-C.1.
 - (1) Visually inspect cable placement, cable termination, grounding and bonding, equipment and patch cords, and labeling of all components.
 - (2) Test UTP copper cabling for DC loop resistance, shorts, opens, intermittent faults, and polarity between conductors. Test operation of shorting bars in connection blocks. Test cables after termination but not cross-connection.
 - (3) Test instruments shall meet or exceed applicable requirements in ANSI/TIA68-C.2. Perform tests with a tester that complies with performance requirements in "Test Instruments (Normative)" Annex, complying with measurement accuracy specified in "Measurement Accuracy (Informative)" Annex. Use only test cords and adapters that are qualified by test equipment manufacturer for channel or link test configuration.
 - (4) Optical Fiber Cable Tests:
 - (5) Test instruments shall meet or exceed applicable requirements in ANSI/TIA68-C.2. Use only test cords and adapters that are qualified by test equipment manufacturer for channel or link test configuration.
 - (6) Link End-to-End Attenuation Tests:
 - (7) Horizontal and singlemode backbone link measurements: Test at 1310 and 1550 nm. The max attenuation should be 0.5 per TIA-568. Max loss should be 0.3 per fusion splice or less. The typical loss is .05 (fusion).
 - (8) Attenuation test results for backbone links shall be less than 2.0 dB. Attenuation test results shall be less than that calculated according to equation in ANSI/TIA-568-C. I.
 - (b) Data for each measurement shall be documented. Data for submittals shall be printed in a summary report that is formatted similar to Table I 0.1 in BICSI TDMM, or transferred from the instrument to the computer, saved as text files, and printed and submitted.

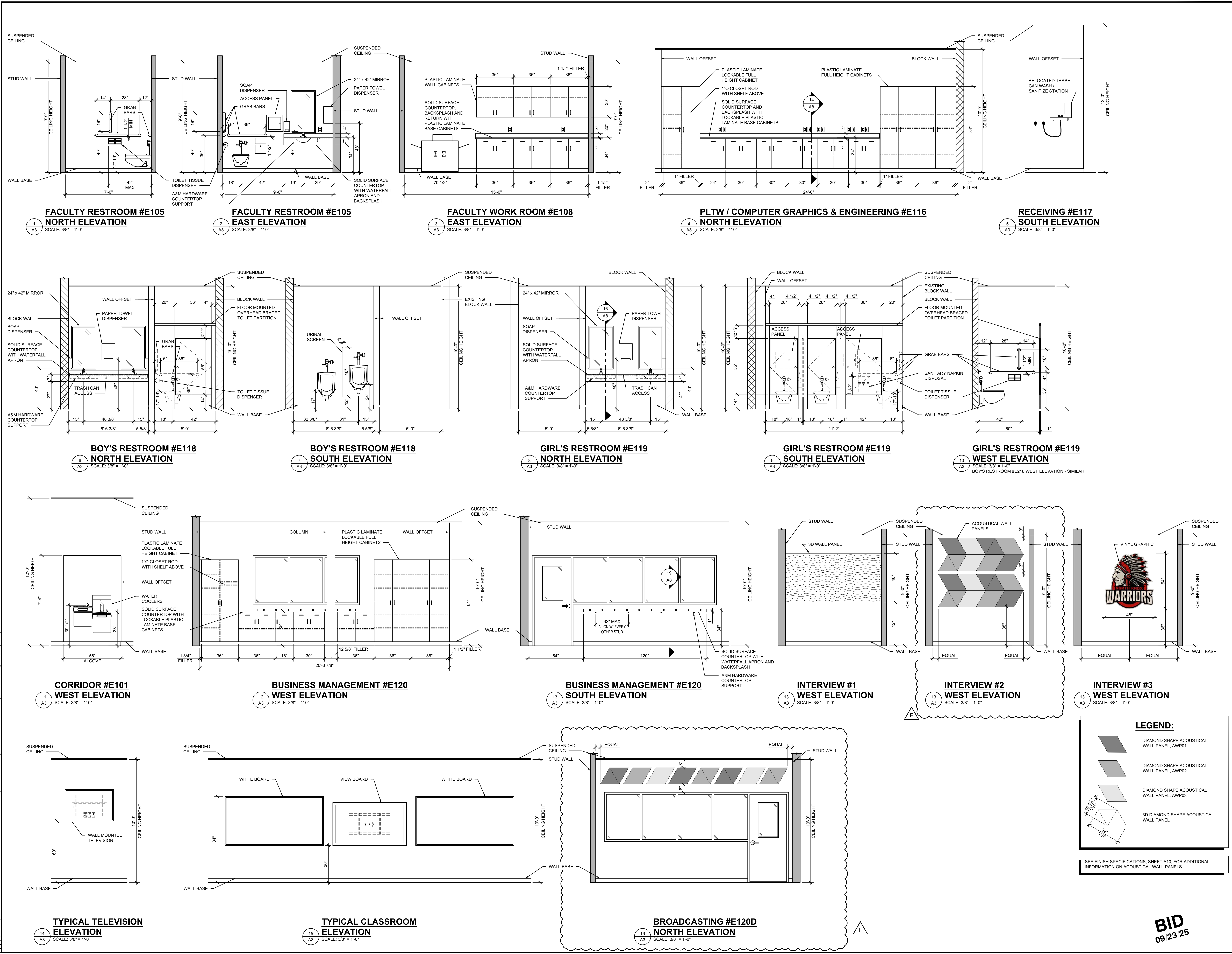
Three i Design 39299 / North Knox CTE Renovation and Misc. Improvements	27 05 04 - 9	COMMUNICATIONS BACKBONE CABLING
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- (c) Remove and replace cabling where test results indicate that they do not comply with specified requirements.
- 2) End-to-end cabling will be considered defective if it does not pass tests and inspections.
 - (a) Prepare test and inspection reports.

END OF SECTION

Three i Design 39299 / North Knox CTE Renovation and Misc. Improvements	27 05 04 - 10	COMMUNICATIONS BACKBONE CABLING
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Oct 15, 2025 - 7:05am N:\Clients\Knox School Corporation\251384_High School CTE Detailed Design\251384.dwg Plotted By: jwangel



THREE I DESIGN
ENGINEERING ARCHITECTURE
WWW.THREEIDESIGN.COM PHOENIX, AZ 85004

REV	DATE	BY	ITEM
A	07/07/25	LEW	ISSUED FOR 50% REVIEW
B	08/04/25	LEW	ISSUED FOR 75% REVIEW
C	09/02/25	LEW	ISSUED FOR 85% REVIEW
D	09/22/25	LEW	ISSUED FOR 100% REVIEW
E	09/23/25	LEW	ISSUED FOR BID
F	10/15/25	LEW	ISSUED FOR ADDENDUM #2

CTE RENOVATION AND MISC. IMPROVEMENTS

NORTH KNOX SCHOOL CORPORATION

NORTH KNOX JR-SR HIGH SCHOOL

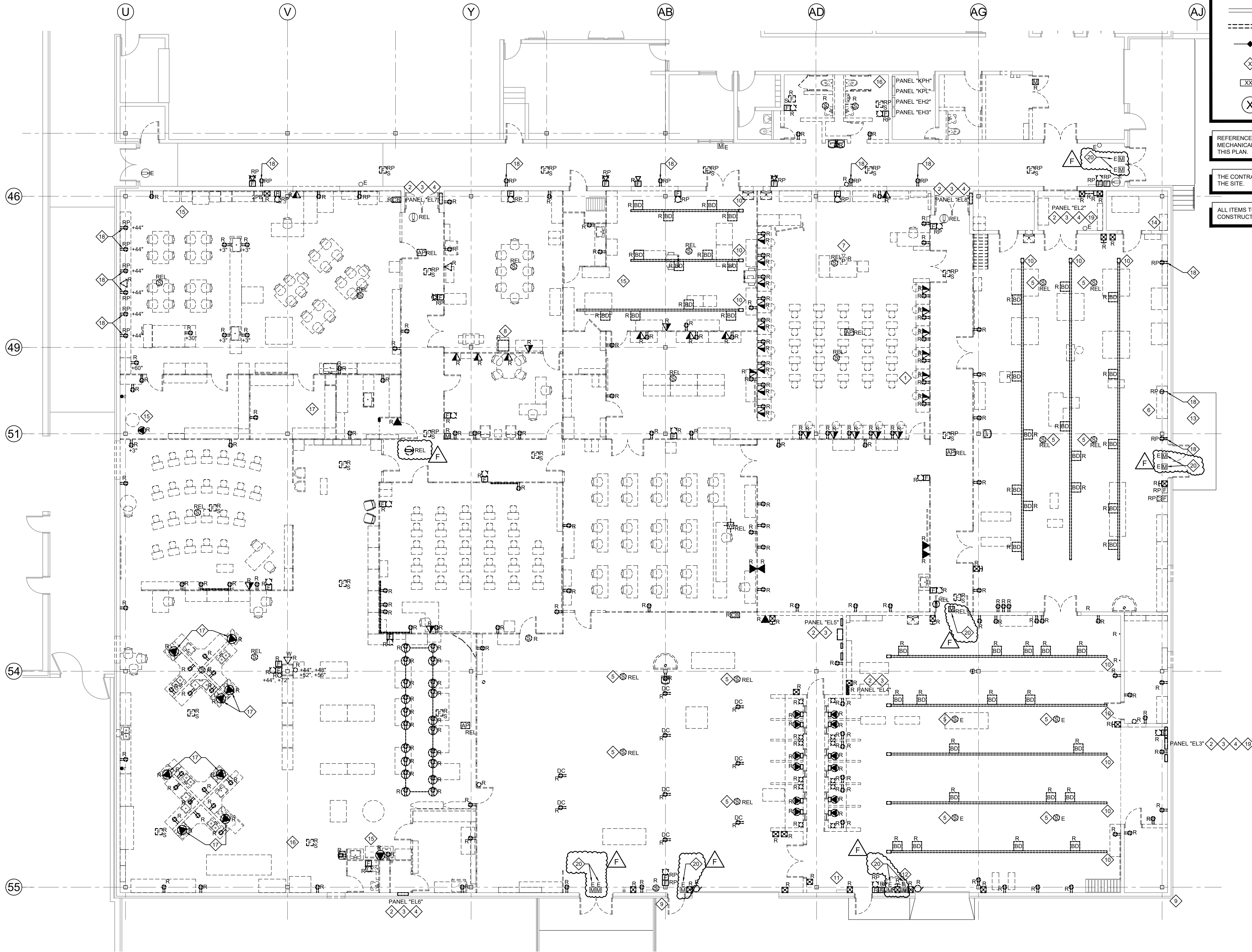
INTERIOR ELEVATIONS

DRAWN BY:	DESIGNED BY:
LEW	GP
CHECKED BY:	DATE:
	05/28/25
SCALE:	AS NOTED
PROJECT NUMBER:	25138A
SHEET NO.:	A7

BID

09/23/25

Oct 15, 2025 - 1:17pm N:\Clients\North Knox School Corporation\25138A_High School CTE Detailed Design\25138A_E1.dwg Plotted By: mgaruga



ELECTRICAL DEMOLITION PLAN
SCALE: 1/8" = 1'-0"

LEGEND:

- EXISTING CONDITION TO REMAIN
- ITEM TO BE REMOVED
- LIMITS OF FLOOR FINISH REMOVAL
- DEMOLITION KEYNOTE
- ROOM NUMBER
- COLUMN LABEL

REFERENCE ARCHITECTURAL, STRUCTURAL, PLUMBING, AND MECHANICAL PLANS FOR ADDITIONAL ITEMS NOT INDICATED ON THIS PLAN.

THE CONTRACTOR SHALL REMOVE ALL OLD MATERIALS FROM THE SITE.

ALL ITEMS TO REMAIN SHALL BE PROTECTED DURING CONSTRUCTION AND RETURNED IN ORIGINAL CONDITION.

GENERAL NOTES:

- CONTRACTOR SHALL CONFIRM EXISTING RECEPTACLE CIRCUITS HAVE DEDICATED GROUND. IF NOT CONTRACTOR SHALL PROVIDE AND INSTALL A DEDICATED GROUND.
- CONTRACTOR SHALL REMOVE ELECTRICAL DEVICES IN BLOCK WALL AS INDICATED ON THIS SHEET. CONTRACTOR SHALL FILL IN WALL CAVITY TO MATCH WALL ELEVATION.
- CONTRACTOR SHALL REMOVE EXISTING FACEPLATES. SEE ELECTRICAL LEGEND FOR NEW FACEPLATE DETAILS.
- "E" INDICATES EXISTING TO REMAIN. "R" INDICATES DEVICE TO BE REMOVED. REMOVE DEVICE ALONG WITH CONDUIT AND WIRE BACK TO SOURCE. "REL" INDICATES DEVICE TO BE RELOCATED. "RP" INDICATES REPLACE DEVICE. REMOVE EXISTING DEVICE. KEEP CONDUIT AND WIRE IN ITS ORIGINAL LOCATION BACK TO SOURCE UNLESS NOTED OTHERWISE INDICATED.
- CONTRACTOR SHALL TEMPORARILY REMOVE WIRELESS ACCESS POINTS IN PROJECT AREA AND STORE IN SECURE LOCATION. WIRELESS ACCESS POINTS TO BE RE-USED, SEE NEW POWER AND DATA PLAN DRAWING E3.
- CONTRACTOR SHALL TEMPORARILY SUPPORT ANY DEVICE REMAINING IN CEILING FROM STRUCTURE ABOVE SO THAT NO DAMAGE IS DONE TO DEVICES. IF DAMAGES OCCUR, CONTRACTOR SHALL PROVIDE AND INSTALL A NEW OR LIKE DEVICE.
- REMOVE ALL EXISTING CONDUITS, ELECTRICAL WIRING, CONTROL WIRING, PNEUMATIC TUBING, PIPING, DUCTWORK, GRILLS, DEVICES, BOXES, RACEWAYS, TRANSITION STRIP THAT ARE NOT TO BE UTILIZED AND/OR INCORPORATED INTO NEW CONSTRUCTION.
- REMOVE ALL EXISTING ANCHORS, SCREWS, FASTENERS, ETC. LEFT IN PLACE AFTER REMOVAL OF EXISTING EQUIPMENT, DEVICES, BOXES, TRANSITIONS, THRESHOLDS, COMPONENTS, ETC. INCLUDING PLASTIC, LEAD AND DRIVEN ANCHORS.
- NEATLY PATCH AND FILL ALL HOLES, CHIPS, CRACKS IN CMU WALLS AND CONCRETE FLOORS LEFT BY REMOVAL OF ANCHORS, SCREWS, FASTENERS, ETC. COORDINATE FILL MATERIAL WITH FINISHES MANUFACTURER. FILL HOLES TO MATCH TEXTURE OF EXISTING SURFACE.
- REMOVE ALL EXISTING STRIPS, PULLEYS, HANGERS, CABLES AND MISC. SUPPORTS FROM EXISTING STEEL JOISTS, ROOF DECK PANELS AND CONCRETE CEILING STRUCTURE, ETC.
- AFTER REMOVAL OF CONDUITS, PIPING, DUCTWORK, ETC. NEATLY IN-FILL ALL THRU-WALL, CONCRETE FLOOR AND CONCRETE DECK PENETRATIONS TO MATCH EXISTING SURFACES INCLUDING BUT NOT LIMITED TO EXISTING BRICK AND CMU CONSTRUCTION.
- WHERE WELDED SUPPORTS AND HANGERS ARE REMOVED FROM STEEL TUBE COLUMNS, OR OTHER STRUCTURAL STEEL COMPONENTS, NEATLY GRIND AND SMOOTH WELD AND COLUMN TO SMOOTH UNIFORM SURFACE.
- NEATLY PATCH EXISTING WALLS AND FLOORS WHERE EXISTING CMU WALLS ARE TO BE REMOVED. EXISTING EXPOSED SURFACES SHALL BE FILLED, PATCHED AND SMOOTHED ACCORDINGLY TO A UNIFORM FINISH TO MATCH ADJACENT CONSTRUCTION.
- CONTRACTOR SHALL RELOCATE EXISTING TOA POWER AMPLIFIER #BA-260 AS REQUIRED TO NEW SPEAKER LOCATIONS.

DEMOLITION NOTES:

- CONTRACTOR SHALL REMOVE NETWORK SWITCH AND TURN OVER TO SCHOOL IT DEPARTMENT AS A SPARE.
- CONTRACTOR SHALL REMOVE BRANCH FEEDER CIRCUITS IN THEIR ENTIRETY, INCLUDING CONDUIT AND WIRE FROM POWER PANELS TO FIELD DEVICE LOCATION.
- CONTRACTOR SHALL REMOVE MAIN BREAKER FEEDER CIRCUITS IN THEIR ENTIRETY, INCLUDING WIRE FROM POWER PANELS TO BOILER ROOM. CONTRACTOR SHALL CUT CONDUITS AT FLOOR LEVEL AND CAP.
- CONTRACTOR SHALL REMOVE POWER PANEL. COORDINATE WITH GENERAL CONTRACTOR FOR PATCHING AND REPAIRING WALL WITH LIKE MATERIALS TO MATCH EXISTING WALL ELEVATION.
- CONTRACTOR SHALL TEMPORARILY REMOVE SPEAKERS TIED TO MEDIA PLAYER IN WOOD SHOP, METAL WORK, AND METAL FABRICATING AREA. CONTRACTOR SHALL STORE IN SECURE LOCATION. SPEAKERS AND MEDIA PLAYER TO BE RE-USED, SEE DRAWING E3.
- CONTRACTOR SHALL TEMPORARILY REMOVE MEDIA PLAYER IN WOOD SHOP AND STORE IN A SECURE LOCATION. MEDIA PLAYER TO BE RE-USED, SEE DRAWING E3.
- CONTRACTOR SHALL REMOVE PROJECTORS AND TURN OVER TO SCHOOL REPRESENTATIVE.
- CONTRACTOR SHALL RELOCATE EXISTING IT RACK TO ROOM E106. RE-WORK ETHERNET CABLES TO NEW LOCATION. PROVIDE AND INSTALL NEW ETHERNET CABLES IF EXISTING CABLES ARE UNABLE TO BE ROUTED TO NEW LOCATION.
- EXISTING EXTERIOR CCTV CAMERAS TO REMAIN. CONTRACTOR SHALL PROVIDE AND INSTALL NEW CAT6 CABLE FROM IT RACK TO EXISTING CCTV CAMERAS. IT RACK LOCATED IN ROOM E106.
- CONTRACTOR SHALL REMOVE BUS DUCTS IN THEIR ENTIRETY, INCLUDING WIRE AND CONDUIT FROM BUS DUCTS.
- REMOVE EXISTING WELDING EXHAUST FAN AND ASSOCIATED CONDUIT/WIRING AND SUPPORTS IN THEIR ENTIRETY. COORDINATE REMOVAL OF FAN WITH MECHANICAL CONTRACTOR AND EXTERIOR WALL REPAIR WITH GENERAL CONTRACTOR.
- REMOVE EXISTING GENERAL EXHAUST FAN AND ASSOCIATED CONDUIT/WIRING AND SUPPORTS IN THEIR ENTIRETY. COORDINATE REMOVAL OF FAN WITH MECHANICAL CONTRACTOR AND EXTERIOR WALL REPAIR WITH GENERAL CONTRACTOR.
- REMOVE EXISTING DUST COLLECTION FAN AND ASSOCIATED CONDUIT/WIRING AND SUPPORTS IN THEIR ENTIRETY. COORDINATE REMOVAL OF FAN WITH MECHANICAL CONTRACTOR AND EXTERIOR WALL REPAIR WITH GENERAL CONTRACTOR. EXISTING HOUSEKEEPING PAD SHALL REMAIN.
- REMOVE EXISTING PAINT BOOTH EXHAUST FAN AND ASSOCIATED CONDUIT/WIRING AND SUPPORTS IN THEIR ENTIRETY. COORDINATE REMOVAL OF FAN WITH MECHANICAL CONTRACTOR AND ROOF PATCHING AND REPAIR WITH GENERAL CONTRACTOR.
- REMOVE EXISTING EXHAUST FAN AND ASSOCIATED CONDUIT/WIRING AND SUPPORTS IN THEIR ENTIRETY. COORDINATE REMOVAL OF FAN WITH MECHANICAL CONTRACTOR AND ROOF PATCHING AND REPAIR WITH GENERAL CONTRACTOR. TYPICAL FOUR (4) FANS.
- REMOVE EXISTING EXHAUST FAN AND ASSOCIATED CONDUIT/WIRING AND SUPPORTS IN THEIR ENTIRETY. COORDINATE REMOVAL OF FAN WITH MECHANICAL CONTRACTOR. REUSE EXISTING ROOF OPENING FOR NEW EXHAUST FAN AND CURB ON ROOF IN SAME LOCATION. TYPICAL THREE (3) FANS.
- REMOVE EXISTING EXHAUST FAN HOOD AND ASSOCIATED CONDUIT/WIRING AND SUPPORTS IN THEIR ENTIRETY. COORDINATE REMOVAL OF FAN WITH MECHANICAL CONTRACTOR AND ROOF PATCHING AND REPAIR WITH GENERAL CONTRACTOR. TYPICAL EIGHT (8) HOODS.
- CONTRACTOR SHALL REMOVE RECEPTACLE CIRCUITS BUT LEAVE CONDUIT TO CEILING IN PLACE TO BE REUSED FOR FUTURE CIRCUITS.
- FIRE VENDOR SHALL RELOCATE EXISTING FIRE PANEL TIED TO CONTRACTORS AT PANELS EL2 AND EL3. THESE FIRE ALARM PANELS ARE TO BE RE-USED FOR NEW CONTRACTOR PANELS. SEE E3 FOR LOCATIONS.
- CONTRACTOR SHALL COORDINATE EXISTING CABLING AND SENSORS FOR EXTERIOR DOOR OPENINGS WITH SONITROL. SONITROL TO PERFORM WORK ON A TIME AND MATERIAL BASIS PAID DIRECTLY BY THE OWNER TO SONITROL.

CTE RENOVATION AND MISC. IMPROVEMENTS NORTH KNOX SCHOOL CORPORATION NORTH KNOX JR-SR HIGH SCHOOL

ELECTRICAL DEMOLITION PLAN

DRAWN BY: LKT DESIGNED BY: NDH

CHECKED BY: NIKZ DATE: 05/28/25

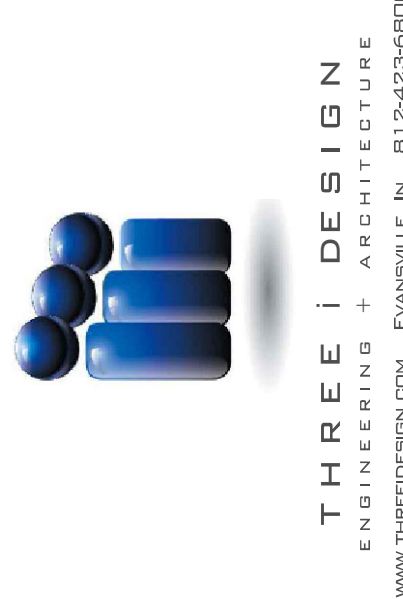
SCALE: 1/8" = 1' - 0"

PROJECT NUMBER:
25138A

SHEET NO.:

E1

BID
09/23/25



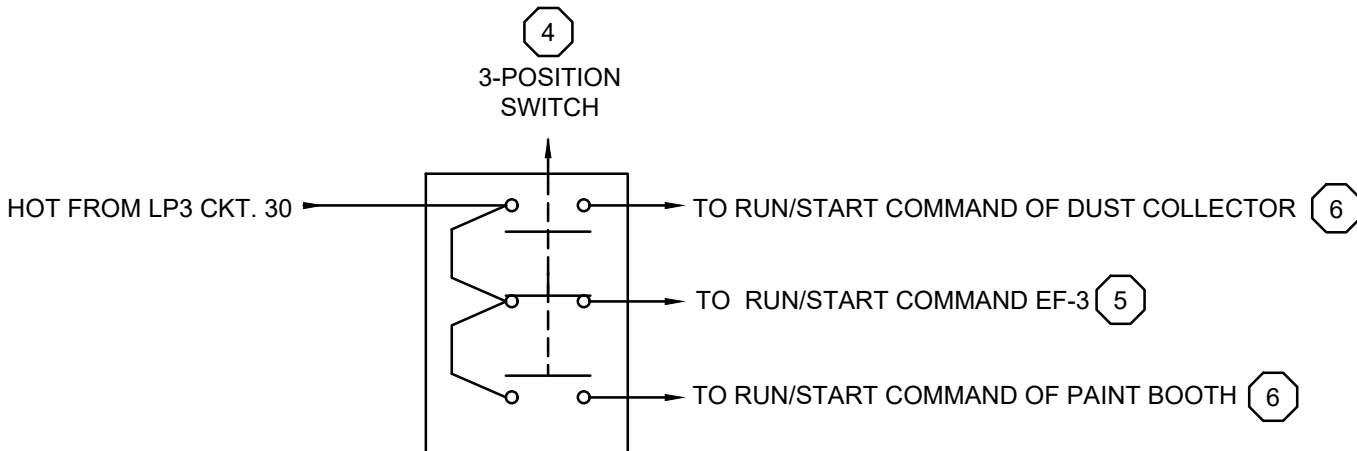
REV	DATE	BY	ITEM
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B	08/04/25	NDH	ISSUED FOR 75% REVIEW
C	09/02/25	NDH	ISSUED FOR 85% REVIEW
D	09/22/25	NDH	ISSUED FOR 100% REVIEW
E	09/23/25	NDH	ISSUED FOR BID
F	10/15/25	NDH	ISSUED FOR ADDENDUM #2

GENERAL NOTES:

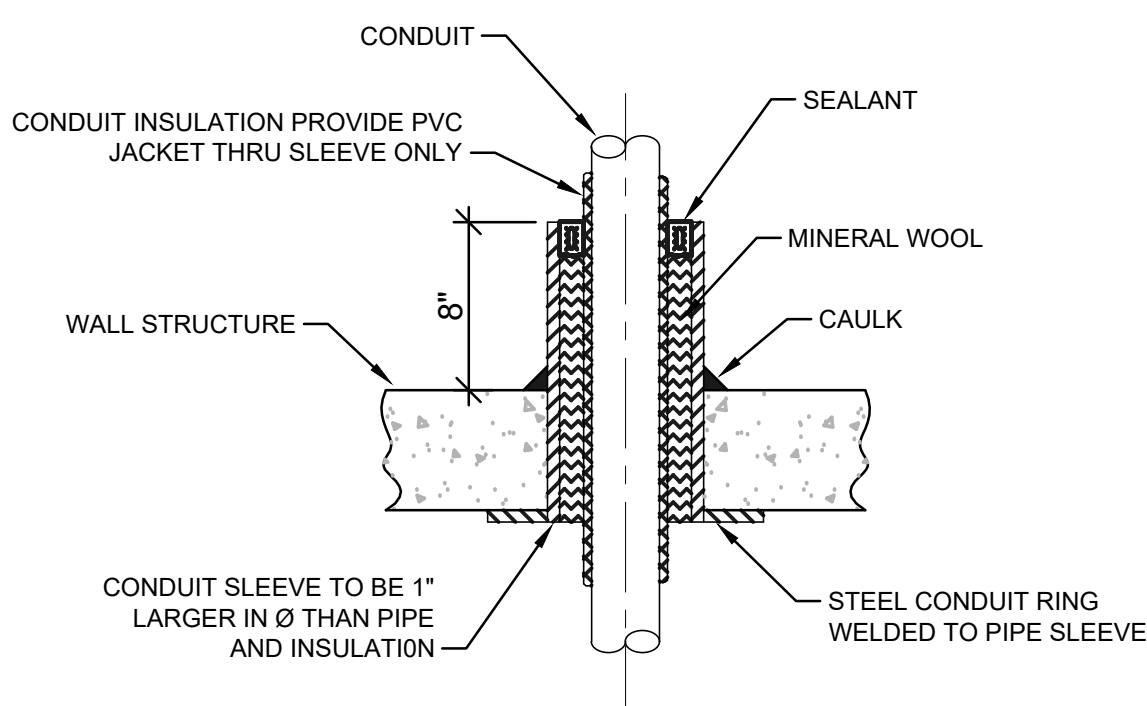
- CONTRACTOR SHALL CONFIRM EXISTING RECEPTACLE CIRCUITS HAVE DEDICATED GROUND. IF NOT CONTRACTOR SHALL PROVIDE AND INSTALL A DEDICATED GROUND.
- CONTRACTOR SHALL REMOVE ELECTRICAL DEVICES IN BLOCK WALL AS INDICATED ON THIS SHEET. CONTRACTOR SHALL FILL IN WALL CAVITY TO MATCH WALL ELEVATION.
- CONTRACTOR SHALL TEMPORARILY SUPPORT ANY DEVICE REMAINING IN CEILING FROM STRUCTURE ABOVE SO THAT NO DAMAGE IS DONE TO DEVICES. IF DAMAGES OCCUR, CONTRACTOR SHALL PROVIDE AND INSTALL A NEW OR LIKE DEVICE.
- ALL EXISTING AND/OR NEW EXPOSED CONDUITS, WIRE MOLDS, INNER-DUCT, JUNCTION BOXES OR WALL/CEILING MOUNTED SUPPORTS SHALL BE PAINTED TO MATCH WALL FINISH. SEE PAINT SPECIFICATION ON SHEET A10.

CONSTRUCTION NOTES:

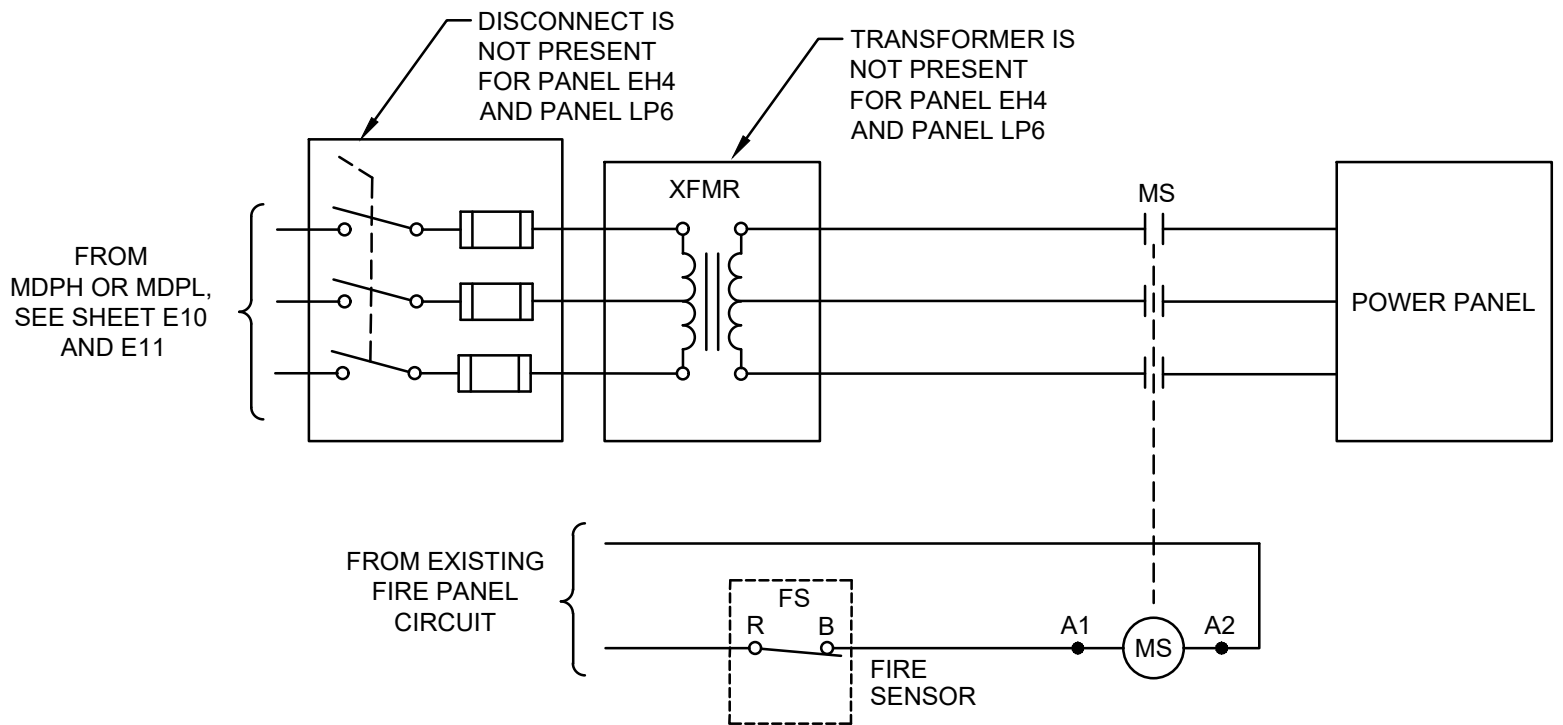
- CONTRACTOR SHALL PROVIDE AND INSTALL (8) TEMPORARY POWER FEEDS TO CLASSROOMS INCLUDING (4) DEDICATED FEEDS FOR CHARGING CARTS AND (4) FEEDS FOR MISCELLANEOUS EQUIPMENT. COORDINATE WITH OWNER FOR FINAL LOCATION OF EQUIPMENT PRIOR TO INSTALLATION OF ELECTRICAL DEVICES.
- CONTRACTOR SHALL COORDINATE WITH OWNER FOR FINAL LOCATION OF EQUIPMENT PRIOR TO INSTALLATION OF DATA DEVICES. NORTH KNOX TECHNICAL STAFF HAS ALREADY RUN THREE ETHERNET DROPS FOR THE PHYSICAL CLASSROOMS INTO THE GYM SPACE.
- CONTRACTOR SHALL PROVIDE AND INSTALL (1) TEMPORARY EMERGENCY LIGHT FIXTURE ABOVE EACH CLASSROOM. MOUNT TO BOTTOM OF EXISTING TRUSSES, TIE INTO EXISTING LIGHT CIRCUIT.
- CONTRACTOR SHALL PROVIDE AND INSTALL (1) DOUBLE GANG RECESSED BOX WITH (1) HEAVY DUTY OIL/WATER/UST TIGHT THREE-POSITION SELECTOR SWITCH EQUAL TO SQUARE D 30 0MM 9001K SERIES LABELED "DUST COLLECTION/PAINT BOOTH/OFF" AND (1) NEMA 1 STAINLESS STEEL FLUSH PLATE, COLOR WHITE WITH (1) HOLE EQUAL TO SQUARE D 9001K26. MOUNT AT 44" AFF TO CENTER.
- TEMPERATURE CONTROLS CONTRACTOR SHALL INTERLOCK EF-1 WITH THREE-WAY SELECTOR SWITCH. SEE MECHANICAL SHEET M3 FOR ADDITIONAL DETAIL.
- CONTRACTOR SHALL INTERLOCK DUST COLLECTOR AND PAINT BOOTH WITH THREE-WAY SELECTOR SWITCH. SEE MECHANICAL SHEET M3 FOR ADDITIONAL DETAIL.
- ALL CONDUIT PENETRATIONS THROUGH NEW WALL CONSTRUCTION SHALL HAVE A SLEEVE INSTALLED AND SEALED TO THE WALL CONSTRUCTION. SEALANT SHOULD BE INSTALLED BETWEEN THE PIPE SLEEVE AND THE CONDUIT. UTILIZE FIRE SEALANT WHERE CONDUIT PASSES THROUGH FIRE RATED WALL CONSTRUCTION. USE REGULAR SEALANT WHERE CONDUIT PASSES THROUGH NON-FIRE RATED WALL CONSTRUCTION.
- CONTRACTOR SHALL PROVIDE AND INSTALL (5) SQUARE D #HU381NRB, SAFETY SWITCH, HEAVY DUTY, NON-FUSED, VIEWING WINDOW, 600V, 30A, 3 POLE, NEUTRAL INSTALLED. PROVIDE AND INSTALL (4) #10 AND #10 GND WITH (1) 3/4" CONDUIT FROM PANEL TO DISCONNECT.
- CONTRACTOR SHALL PROVIDE AND INSTALL (1) DOUBLE GANG BOX WITH (1) GRACE PESDs #R-3W, VOLTAGE INDICATOR FLASHING LEDS WITH (1) NEMA 1 STAINLESS STEEL FACEPLATE, COLOR WHITE WITH (1) 30MM HOLE.
- CONTRACTOR SHALL PROVIDE AND INSTALL (1) HOFFMAN #A36H30DLPSPT, CONTINUOUS HINGE ENCLOSURE WITH 3-POINT LATCH TYPE 4, 36"x30"x12", MILD STEEL FOR CONTACTOR ENCLOSURE. PROVIDE AND INSTALL (1) SQUARE D #LC1G400KUEN, 400A, HIGH POWER CONTACTOR, 4 POLE, 4 NO, WITH AUXILIARY CONTACT BLOCK #LAGN113 1NO & 1NC, 100-250V CONTROL CIRCUIT. TIE TO PANEL FEED FOR LP3.
- CONTRACTOR SHALL PROVIDE AND INSTALL (2) HOFFMAN #A36H30DLPSPT, CONTINUOUS HINGE ENCLOSURE WITH 3-POINT LATCH TYPE 4, 36"x30"x12", MILD STEEL FOR CONTACTOR ENCLOSURE. PROVIDE AND INSTALL (1) SQUARE D #LC1G225KUEN, 225A, HIGH POWER CONTACTOR, 4 POLE, 4 NO, WITH AUXILIARY CONTACT BLOCK #LAGN113 1NO & 1NC, 100-250V CONTROL CIRCUIT. TIE ONE CONTACTOR TO PANEL FEED FOR EH4 AND ONE CONTACTOR TO PANEL LP6.
- CONTRACTOR SHALL PROVIDE AND INSTALL (1) HOFFMAN #A36H30DLPSPT, CONTINUOUS HINGE ENCLOSURE WITH 3-POINT LATCH TYPE 4, 36"x30"x12", MILD STEEL FOR CONTACTOR ENCLOSURE. PROVIDE AND INSTALL (1) SQUARE D #LC1G538KUEN, 538A, HIGH POWER CONTACTOR, 4 POLE, 4 NO, WITH AUXILIARY CONTACT BLOCK #LAGN113 1NO & 1NC, 100-250V CONTROL CIRCUIT. TIE TO PANEL FEED FOR LP5.
- CONTRACTOR SHALL PROVIDE AND INSTALL STRAIN RELIEF CONNECTORS FOR SOOW CORD TO OVERHEAD CONDUIT FOR DISCONNECT AND QUAD RECEPTACLE.
- CONTRACTOR SHALL PROVIDE AND INSTALL UNISTRUT DISCONNECT AND QUAD RECEPTACLE SUPPORT FRAME AS INDICATED. SEE SHEET E3 FOR LOCATIONS AND E15 FOR LEGEND DETAIL.
- CONTRACTOR SHALL PROVIDE AND INSTALL (1) CAT5E CABLING FROM IDF-A IN ROOM A24 TO GYM. CONTRACTOR SHALL COORDINATE WITH OWNER FOR FINAL LOCATION OF DATA EQUIPMENT PRIOR TO INSTALLATION.



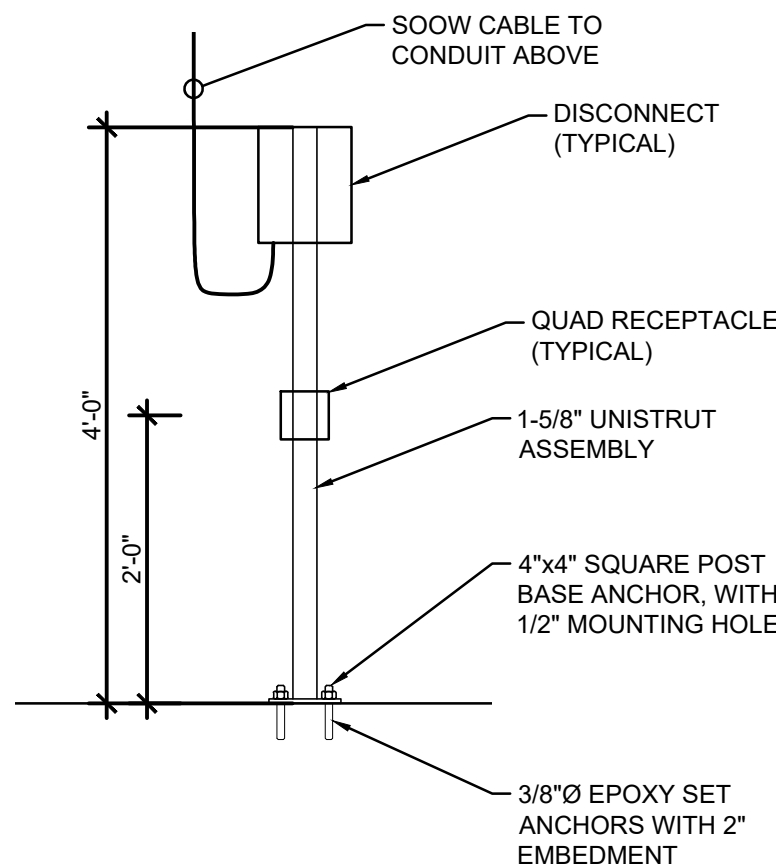
THREE-WAY POSITION
SWITCH WIRING DIAGRAM
SCALE: NONE



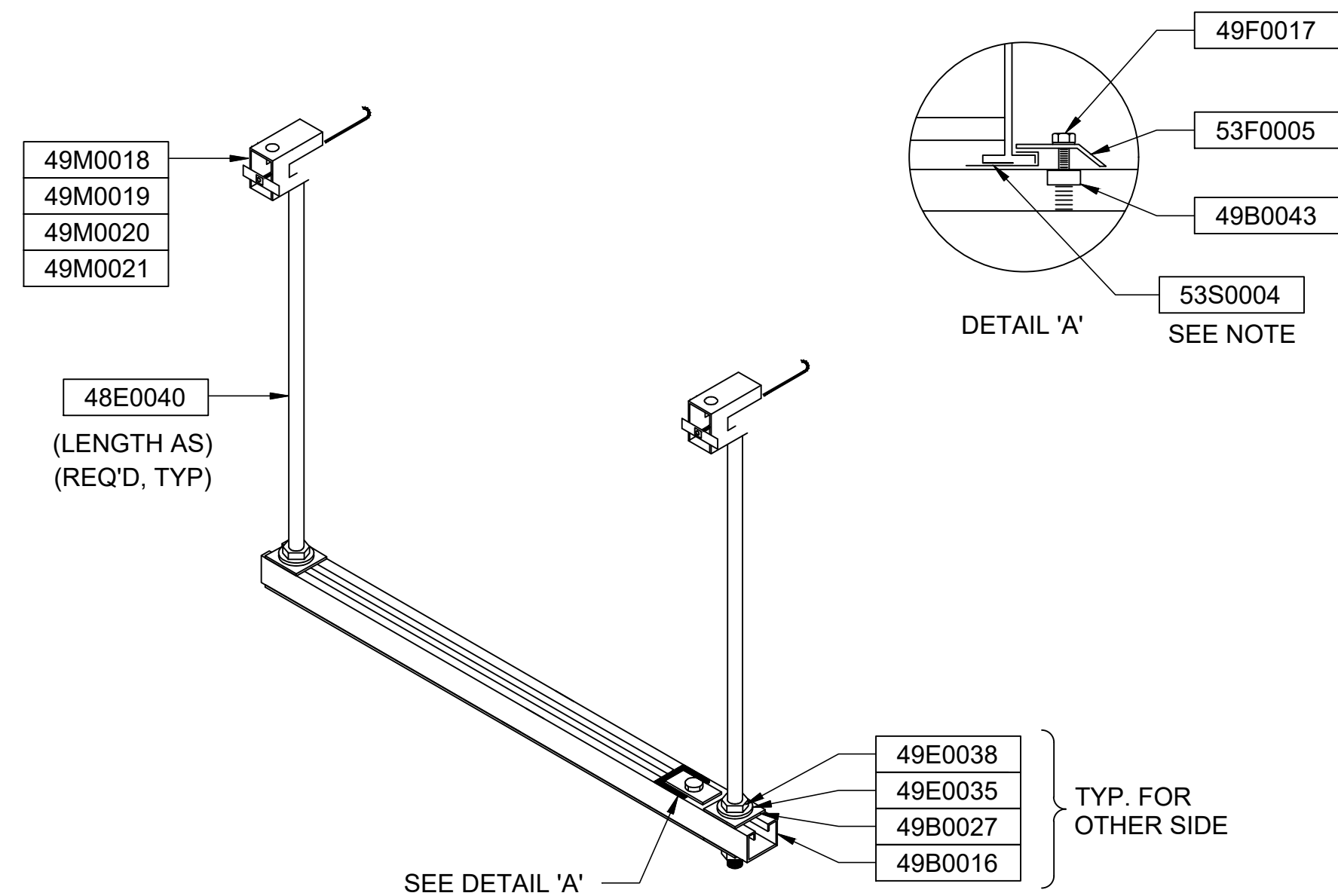
CONDUIT SLEEVE
PENETRATION DETAIL (TYPICAL)
SCALE: NONE



POWER PANEL
CONTACTOR WIRING DIAGRAM (TYPICAL)
SCALE: NONE

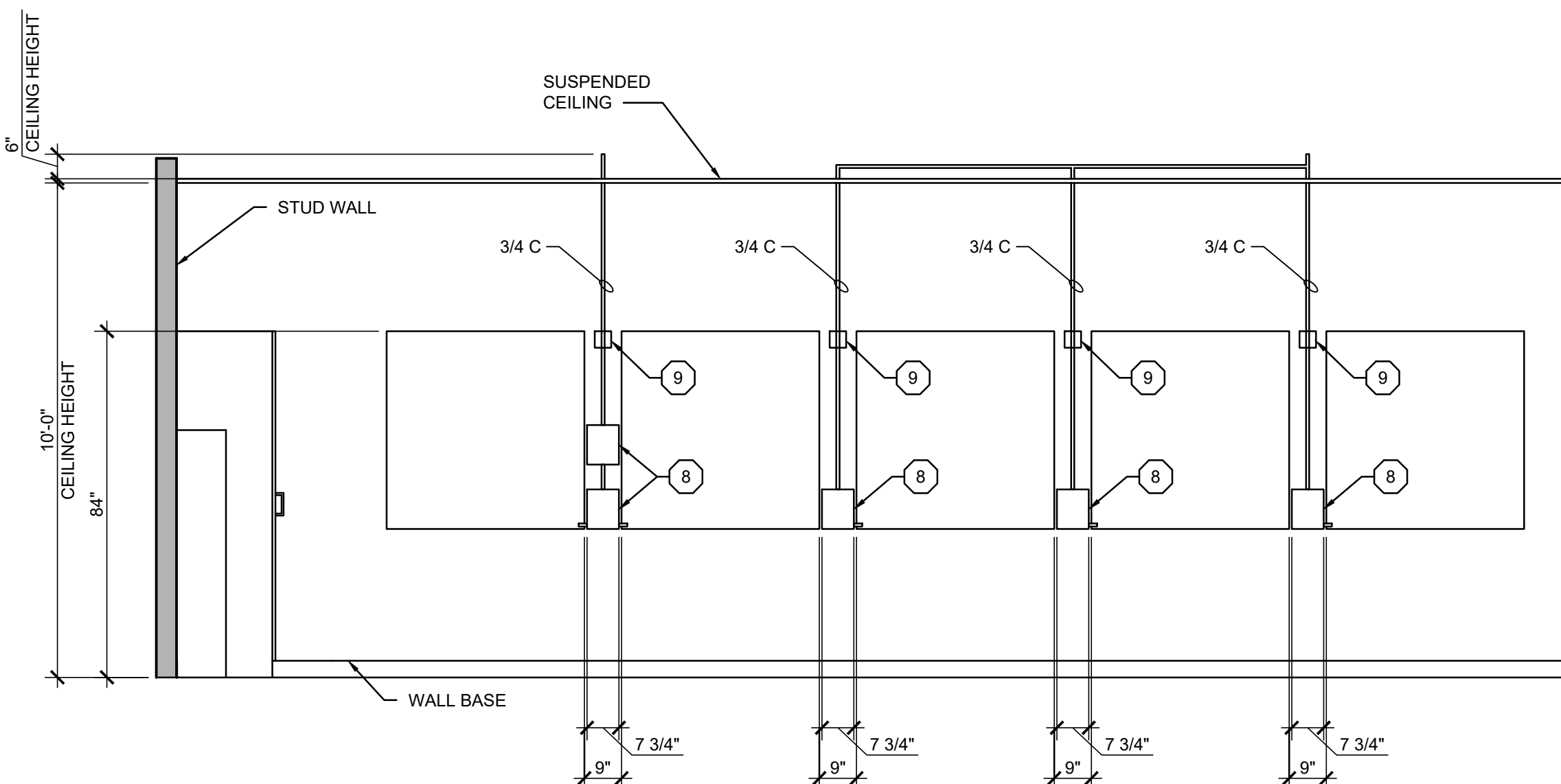


UNISTRUT DISCONNECT AND QUAD
RECEPTACLE SUPPORT FRAME (TYPICAL)
SCALE: NONE

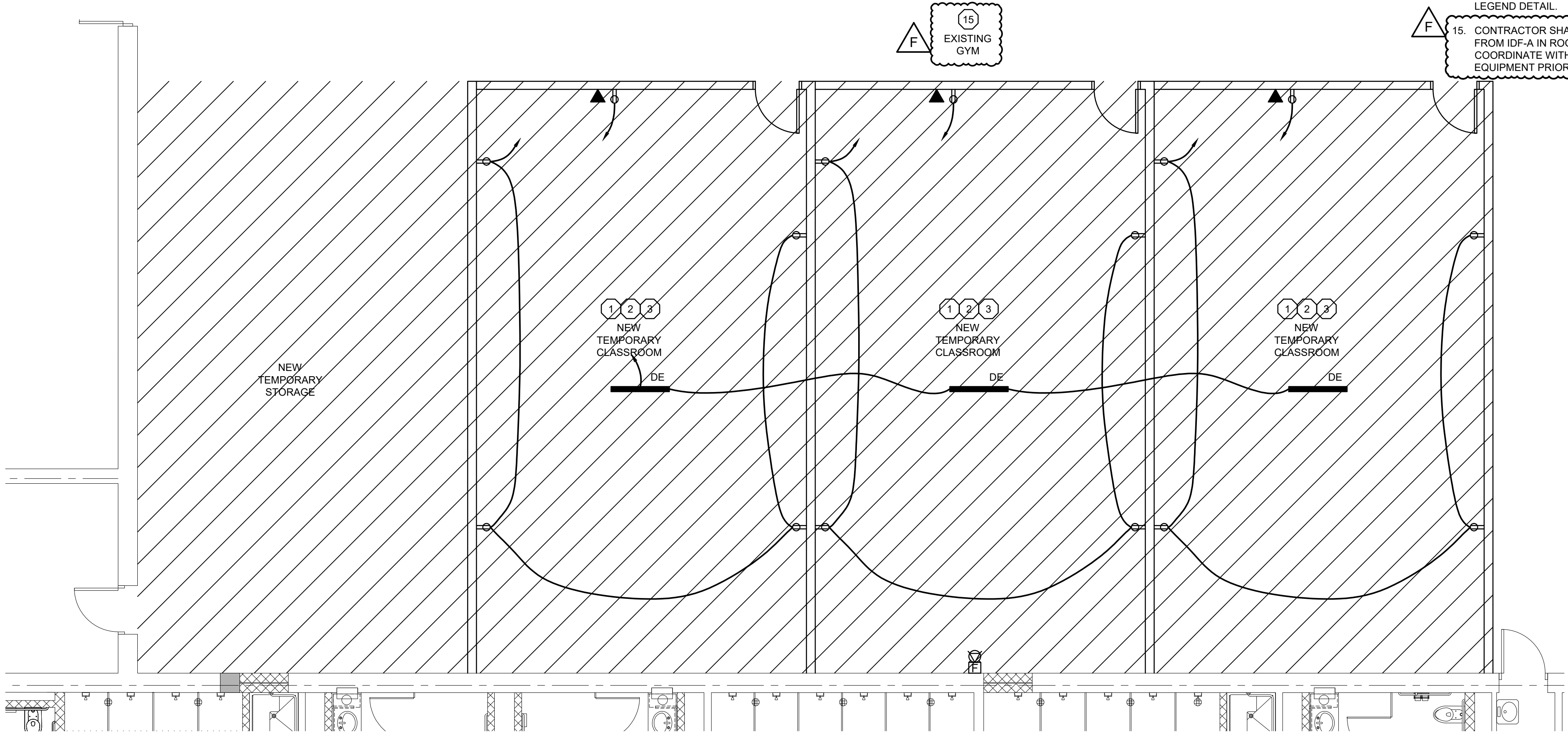


ITEM	QTY.	DESCRIPTION
53S0004	2	NYLON PAD, B-LINE #99-NY36
53F0005	2	CLIP, HOLD DOWN / EXPANSION GUIDE, B-LINE #9SS6-1205
49F0017	2	1/2-13 x 1 1/2 S.S. BOLT
49E0035	4	1/2\" LOCK WASHER, S.S.
49E0036	2	1/2\" FLAT WASHER, S.S.
49E0038	2	1/2\"-13 HEX HEAD NUT, S.S.
48E0040	2	1/2-13 GALV. THREADED ROD
49B0043	2	1/2-13 SPRING NUT, UNISTRUT #P1010
49B0027	2	FLAT PLATE FITTING W/ 9/16\" Ø HOLE, UNISTRUT #P1064
49B0016	1	CHANNEL, GALV. UNISTRUT #P1000-HS
49M0018	2	BEAM CLAMP, FLANGE WIDTH 3\" - 6\", B-LINE #B750-J4
49M0019	2	BEAM CLAMP, FLANGE WIDTH 5\" - 9\", B-LINE #B750-J4
49M0020	2	BEAM CLAMP, FLANGE WIDTH 8\" - 12\", B-LINE #B750-J9
49M0021	2	BEAM CLAMP, FLANGE WIDTH 11\" - 15\", B-LINE #B750-J12

ELECTRICAL SUPPORT
FRAME (TYPICAL)
SCALE: NONE



AG MECHANICAL & ENGINEERING
CLASSROOM E112 SOUTH ELEVATION
SCALE: 3/8\" = 1'-0\"



TEMPORARY CLASSROOM ELECTRICAL PLAN
SCALE: 3/16\" = 1'-0\"

BID
09/23/25

FIRE ALARM LEGEND:

- ALL FIRE ALARM DEVICES SHALL BE PROVIDED BY VENDOR. CONTRACTOR SHALL PROVIDE AND INSTALL ALL BOXES, CONDUIT, AND CABLING. FINAL TERMINATIONS BY VENDOR. COORDINATE WITH VENDOR FOR ANY ADDITIONAL REQUIREMENTS NOT INDICATED. FOR CABLING NOT IN CONDUIT, CABLING SHALL BE PLENUM-RATED "CMP" FOR COMMUNICATIONS CABLE AND "FPLP" FOR FIRE ALARM CABLE.
- CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR PRELIMINARY REVIEW. AFTER ENGINEER REVIEWS THE SHOP DRAWINGS, THE ENGINEER, THE CONTRACTOR, OWNER'S REPRESENTATIVE SHALL MEET AT THE SITE TO REVIEW THE SHOP DRAWINGS. THE CONTRACTOR SHALL UPDATE THE SHOP DRAWINGS BASED ON THE ON-SITE REVIEW COMMENTS. THE CONTRACTOR SHALL SUBMIT THE REVISED SHOP DRAWINGS FOR FINAL REVIEW AND APPROVAL.
- F** PROVIDE AND INSTALL MANUAL PULL STATION. INSTALL PULL STATION AT 44" TO CENTER ABOVE FINISHED FLOOR TO BOTTOM, UNLESS NOTED OTHERWISE. MANUAL PULL STATION SHALL BE RED BACKGROUND WITH WHITE LETTERS.
- E₃** PROVIDE AND INSTALL WHITE PHOTOELECTRIC SMOKE DETECTOR. INSTALL DETECTOR ON CEILING AS REQUIRED.
- F₃** PROVIDE AND INSTALL AUDIO-VISUAL ALARM DEVICE. WHITE BACKGROUND WITH RED LETTERS. INSTALL ON WALL AT 80" ABOVE FINISHED FLOOR TO BOTTOM OR 6" BELOW CEILING TO TOP, WHICHEVER IS LOWER.
- F₄** PROVIDE AND INSTALL VISUAL ONLY ALARM DEVICE. WHITE BACKGROUND WITH RED LETTERS. INSTALL ON WALL AT 80" ABOVE FINISHED FLOOR TO BOTTOM OR 6" BELOW CEILING TO TOP, WHICHEVER IS LOWER.
- E₄** PROVIDE AND INSTALL WHITE PHOTOELECTRIC HEAT DETECTOR. INSTALL DETECTOR ON CEILING AS REQUIRED.

LIGHTING LEGEND:

- \$** OUTLET BOX AND 20A, 120-277V, SINGLE POLE SPECIFICATION GRADE TOGGLE SWITCH WITH WHITE NYLON FACEPLATE. INSTALL AT 44" ABOVE FINISHED FLOOR TO CENTER AND LOCATE WITHIN 12" OF STRIKE SIDE OF DOOR, UNLESS NOTED OTHERWISE. PROVIDE HUBBELL "CSB120W" OR EQUAL.
- \$³** OUTLET BOX AND 20A, 120-277V, THREE-WAY SPECIFICATION GRADE TOGGLE SWITCH WITH WHITE NYLON FACEPLATE. INSTALL AT 44" ABOVE FINISHED FLOOR TO CENTER AND LOCATE WITHIN 12" OF STRIKE SIDE OF DOOR, UNLESS NOTED OTHERWISE. PROVIDE HUBBELL "CSB320W" OR EQUAL.
- \$⁴** OUTLET BOX AND 20A, 120-277V, FOUR-WAY SPECIFICATION GRADE TOGGLE SWITCH WITH WHITE NYLON FACEPLATE. INSTALL AT 44" ABOVE FINISHED FLOOR TO CENTER AND LOCATE WITHIN 12" OF STRIKE SIDE OF DOOR, UNLESS NOTED OTHERWISE. PROVIDE HUBBELL "CSB420W" OR EQUAL.
- \$^D** OUTLET BOX AND 20A, 120-277V, SPECIFICATION GRADE WHITE DIMMER SWITCH WITH WHITE NYLON FACEPLATE. INSTALL AT 44" ABOVE FINISHED FLOOR TO CENTER AND LOCATE WITHIN 12" OF STRIKE SIDE OF DOOR, UNLESS NOTED OTHERWISE. SYNERGY "SD 10".

SOUND SYSTEM LEGEND:

- CEILING SPEAKERS THAT ARE QUAM SYSTEM 12 OR QUAM SYSTEM 1 ARE TO BE RELOCATED. PROVIDE NEW CABLING AND SPEAKERS AS REQUIRED TO NEW LOCATIONS. CONTRACTOR SHALL RELOCATE EXISTING JCA POWER AMPLIFIER #BA-260 AS REQUIRED TO NEW SPEAKER LOCATIONS. SEE SHEET E3 FOR LOCATIONS.
- CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR PRELIMINARY REVIEW. AFTER ENGINEER REVIEWS THE SHOP DRAWINGS, THE ENGINEER, THE CONTRACTOR, OWNER'S REPRESENTATIVE SHALL MEET AT THE SITE TO REVIEW THE SHOP DRAWINGS. THE CONTRACTOR SHALL UPDATE THE SHOP DRAWINGS BASED ON THE ON-SITE REVIEW COMMENTS. THE CONTRACTOR SHALL SUBMIT THE REVISED SHOP DRAWINGS FOR FINAL REVIEW AND APPROVAL.
- SP** QUAM SYSTEM 12 FOR CEILING MOUNTED SPEAKER.
- SP** QUAM SYSTEM 1 FOR WALL MOUNTED SPEAKER. MOUNT AT 8' AFF.

CAMERA LEGEND:

- ALL CAMERA DEVICES SHALL BE PROVIDED BY VENDOR. CONTRACTOR SHALL PROVIDE AND INSTALL ALL BOXES, CONDUIT, AND CABLING. FINAL TERMINATIONS BY VENDOR. COORDINATE WITH VENDOR FOR ANY ADDITIONAL REQUIREMENTS NOT INDICATED.
- 11** 180° POE CAMERA, CEILING MOUNT. PROVIDE AND INSTALL ALL NECESSARY MOUNTING HARDWARE. PROVIDE AND INSTALL (1) CAT6E - BLUE CABLE, ROUTE CAT6E - BLUE CABLE BACK TO CONTROL PANEL IN IT ROOM E106.
- C** **DOORCAM** #HDBT, OVERHEAD CAMERA. CONTRACTOR SHALL PROVIDE AND INSTALL (2) HDMI CABLE FROM OVERHEAD CAMERA TO TV IN ROOM E111 (1) FOR SEWING CAMERA AND (1) FOR COOKING CAMERA. PROVIDE AND INSTALL (1) HDMI CABLE FROM OVERHEAD CAMERA TO SMARTBOARD IN ROOM E103. CONTRACTOR SHALL PROVIDE AND INSTALL (1) CAT6E - BLUE CABLE FOR POWER-OVER-ETHERNET FROM IDF-E IN ROOM E106. CONTRACTOR SHALL PROVIDE AND INSTALL (1) IN CEILING RECEPTACLE FOR EACH OVERHEAD CAMERA, TIE TO NEAREST CIRCUIT.

SECURITY SYSTEM LEGEND:

- ALL SECURITY DEVICES SHALL BE PROVIDED BY SONITROL. SONITROL SHALL PROVIDE AND INSTALL ALL BOXES, CONDUIT, AND CABLING. FINAL TERMINATIONS BY SONITROL. COORDINATE WITH SONITROL FOR ANY ADDITIONAL REQUIREMENTS NOT INDICATED. CONTACT SHERRI WRIGHT, (812)-253-9460. CABLING SHALL BE PLENUM-RATED "CMP" FOR COMMUNICATIONS CABLE AND "FPLP" FOR FIRE ALARM CABLE.
- M** MOTION SENSOR DEVICE - EX-ITING. CONTRACTOR SHALL RELOCATE. MATCH EXISTING IF MOTION SENSOR IS REQUIRED. COORDINATE WITH SONITROL.

DATA LEGEND:

- ALL DATA DEVICES SHALL BE PROVIDED BY CONTRACTOR. CONTRACTOR SHALL PROVIDE AND INSTALL ALL BOXES, CONDUIT, AND CABLING. FINAL TERMINATIONS BY VENDOR. COORDINATE WITH VENDOR FOR ANY ADDITIONAL REQUIREMENTS NOT INDICATED. FOR CABLING NOT IN CONDUIT, CABLING SHALL BE PLENUM-RATED "CMP" FOR COMMUNICATIONS CABLE AND "FPLP" FOR FIRE ALARM CABLE.
- ▼** DATA ONLY OUTLET LOCATION. PROVIDE AND INSTALL TWO YELLOW CAT6 DATA CABLES (EXCEPT FOR TEACHER DESK LOCATIONS PROVIDE AND INSTALL (1) CAT6 GREEN - PHONE CABLE AND (1) CAT6 YELLOW - DATA CABLE) IN DOUBLE GANG OUTLET BOX AND 3/4" CONDUIT TO ACCESSIBLE CEILING CAVITY. INSTALL OUTLET BOX AT 18" ABOVE FINISHED FLOOR TO CENTER, UNLESS NOTED OTHERWISE. PROVIDE WHITE COVER WITH 4 OUTLETS AND RJ45 CONNECTORS. DATA CONNECTIONS SHALL BE YELLOW. PROVIDE TERMINATIONS ON BOTH ENDS OF EACH CABLE AND TEST. CABLES SHALL BE ROUTED TO CLOSEST IT ROOM.
- ▽** DATA ONLY OUTLET LOCATION. PROVIDE AND INSTALL ONE YELLOW CAT6 DATA CABLE IN SINGLE GANG OUTLET BOX AND 3/4" CONDUIT TO ACCESSIBLE CEILING CAVITY. INSTALL OUTLET BOX AT 18" ABOVE FINISHED FLOOR TO CENTER, UNLESS NOTED OTHERWISE. PROVIDE WHITE COVER WITH 4 OUTLETS AND RJ45 CONNECTORS. DATA CONNECTIONS SHALL BE YELLOW. PROVIDE TERMINATIONS ON BOTH ENDS OF EACH CABLE AND TEST. CABLES SHALL BE ROUTED TO CLOSEST IT ROOM.
- HDMI** **▼** HDMI OUTLET LOCATION. PROVIDE AND INSTALL SINGLE GANG OUTLET BOX AND 1-1/4" CONDUIT TO ACCESSIBLE CEILING CAVITY. PROVIDE RAPID RUN CABLE FROM HDMI OUTLET AT TEACHER'S DESK TO SMARTBOARD LOCATIONS WITH 10' EXCESS SERVICE LOOP COILED ABOVE CEILING GRID. PROVIDE HDMI CONNECTORS AND TERMINATIONS ON BOTH ENDS OF EACH CABLE AND TEST.
- AP** CEILING MOUNTED WIRELESS ACCESS POINT. WIRELESS ACCESS POINT SHALL BE OWNER PROVIDED AND INSTALLED. PROVIDE AND INSTALL ONE ORANGE CAT6 DATA CABLE AT LOCATION SHOWN WITH 20' EXCESS CABLE SERVICE LOOP COILED ABOVE CEILING GRID IN ACCESSIBLE LOCATION. CONTRACTOR SHALL PROVIDE AND INSTALL A DISJUNCT JACK IN THE CEILING AT THE WIRELESS ACCESS POINT AND USE A PATCH CABLE TO THE WIRELESS ACCESS DEVICE. MATCH CAT6 COLOR (ORANGE). CABLE SHALL NOT BE SUPPORTED BY CEILING GRID. PROVIDE TERMINATIONS ON BOTH ENDS OF EACH CABLE AND TEST. DATA CABLE SHALL BE ROUTED TO EITHER IT ROOM. **SISCO** CATALYST 9120AX.

POWER LEGEND:

- **#** DUPLEX RECEPTACLE. PROVIDE AND INSTALL (1) 120V, 20A, 2P, 3W, GROUNDING, SPECIFICATION GRADE RECEPTACLE. WHITE WITH WHITE NYLON PLATE IN SINGLE GANG OUTLET BOX AND 3/4" CONDUIT TO ACCESSIBLE CEILING CAVITY. BUSH CONDUIT ENDS. INSTALL OUTLET BOX AT 18" ABOVE FINISHED FLOOR TO CENTER, UNLESS NOTED OTHERWISE. *XX" IS DIMENSION RECEPTACLE SHALL BE MOUNTED AFF TO CENTER. HUBBELL "BR20WHI" AND "NP89W" OR EQUAL.
- **G** DUPLEX RECEPTACLE. PROVIDE AND INSTALL (1) 120V, 20A, 2P, 3W, GROUNDING, SPECIFICATION GRADE RECEPTACLE. WHITE WITH WHITE NYLON PLATE IN SINGLE GANG OUTLET BOX AND 3/4" CONDUIT TO ACCESSIBLE CEILING CAVITY. BUSH CONDUIT ENDS. INSTALL OUTLET BOX AT 18" ABOVE FINISHED FLOOR TO CENTER, UNLESS NOTED OTHERWISE. *XX" IS DIMENSION RECEPTACLE SHALL BE MOUNTED AFF TO CENTER. HUBBELL "G20WLA" AND "NP26W" OR EQUAL.
- **#** **Q** QUADPLEX RECEPTACLE. PROVIDE AND INSTALL (2) 120V, 20A, 2P, 3W, GROUNDING, SPECIFICATION GRADE RECEPTACLE. WHITE WITH WHITE NYLON PLATE IN DOUBLE GANG OUTLET BOX AND 3/4" CONDUIT TO ACCESSIBLE CEILING CAVITY. BUSH CONDUIT ENDS. INSTALL OUTLET BOX AT 18" ABOVE FINISHED FLOOR TO CENTER, UNLESS NOTED OTHERWISE. *XX" IS DIMENSION RECEPTACLE SHALL BE MOUNTED AFF TO CENTER. HUBBELL "BR20WHI" AND "NP82W" OR EQUAL.
- **CD** CORD REEL RECEPTACLE IN CEILING CAVITY OR AT ACOUSTICAL CEILING. PROVIDE RECEPTACLE ABOVE CEILING GRID. PROVIDE GROMMET FOR CORD. COORDINATE THE LOCATION OF CORD REELS WITH OWNER PRIOR TO ROUGH IN. **LEGEND** #RCDD123N25R20, QUAD RB, NO GFCI, 25' LENGTH, 3/4"12 120V
- **30** **120** NON-FUSIBLE, 3 POLE, 3 WIRE, 30A 240VAC DISCONNECT SQUARE D CAT. NO. DUJ321. 120V HOT AND NEUTRAL WIRES TO BE SWITCHED. ONE POLE NOT USED. DISCONNECT SWITCH TO BE MOUNTED ON WALL WITH THE TOP OF THE DISCONNECT TO BE 4'-0" ABOVE FINISHED FLOOR. VERIFY FINAL LOCATION OF DISCONNECT WITH OWNER REPRESENTATIVE PRIOR TO FINAL INSTALLATION. PROVIDE AND INSTALL (2) #10 AND #10 GND WITH (1) 3/4" CONDUIT FROM PANEL TO DISCONNECT.
- **30** **120** NON-FUSIBLE, 3 POLE, 3 WIRE, 30A 240VAC DISCONNECT SQUARE D CAT. NO. DUJ321. 120V HOT AND NEUTRAL WIRES TO BE SWITCHED. ONE POLE NOT USED. DISCONNECT SWITCH TO BE MOUNTED ON UNISTRUT SUPPORT FRAME WITH THE TOP OF THE DISCONNECT TO BE 4'-0" ABOVE FINISHED FLOOR. UNISTRUT SUPPORT FRAME SHALL BE ANCHORED TO THE FLOOR AND NOT BE A TRIPPING HAZARD. VERIFY FINAL LOCATION OF DISCONNECT WITH OWNER REPRESENTATIVE PRIOR TO FINAL INSTALLATION. PROVIDE AND INSTALL (2) #10 AND #10 GND WITH (1) 3/4" CONDUIT FROM PANEL TO DISCONNECT.
- **30** **120** NON-FUSIBLE, 3 POLE, 3 WIRE, 60A 240VAC DISCONNECT SQUARE D CAT. NO. DUJ322. 120V HOT AND NEUTRAL WIRES TO BE SWITCHED. ONE POLE NOT USED. DISCONNECT SWITCH TO BE MOUNTED ON WALL WITH THE TOP OF THE DISCONNECT TO BE 4'-0" ABOVE FINISHED FLOOR. VERIFY FINAL LOCATION OF DISCONNECT WITH OWNER REPRESENTATIVE PRIOR TO FINAL INSTALLATION. PROVIDE AND INSTALL (2) #6 AND #10 GND WITH (1) 3/4" CONDUIT FROM PANEL TO DISCONNECT.
- **30** **240** NON-FUSIBLE, 3 POLE, 3 WIRE, 30A 240VAC DISCONNECT SQUARE D CAT. NO. VHU361. DISCONNECT SWITCH TO BE MOUNTED ON WALL WITH THE TOP OF THE DISCONNECT TO BE 4'-0" ABOVE FINISHED FLOOR. VERIFY FINAL LOCATION OF DISCONNECT WITH OWNER REPRESENTATIVE PRIOR TO FINAL INSTALLATION.
- **30** **240** NON-FUSIBLE, 3 POLE, 3 WIRE, 30A 240VAC DISCONNECT SQUARE D CAT. NO. VHU361. DISCONNECT SWITCH TO BE MOUNTED ON UNISTRUT SUPPORT FRAME WITH THE TOP OF THE DISCONNECT TO BE 4'-0" ABOVE FINISHED FLOOR. UNISTRUT SUPPORT FRAME SHALL BE ANCHORED TO THE FLOOR AND NOT BE A TRIPPING HAZARD. VERIFY FINAL LOCATION OF DISCONNECT WITH OWNER REPRESENTATIVE PRIOR TO FINAL INSTALLATION. PROVIDE AND INSTALL (2) #10 AND #10 GND WITH (1) 3/4" CONDUIT FROM PANEL TO DISCONNECT.
- **30** **240** NON-FUSIBLE, 3 POLE, 3 WIRE, 60A 240VAC DISCONNECT SQUARE D CAT. NO. VHU362. DISCONNECT SWITCH TO BE MOUNTED ON WALL WITH THE TOP OF THE DISCONNECT TO BE 4'-0" ABOVE FINISHED FLOOR. VERIFY FINAL LOCATION OF DISCONNECT WITH OWNER REPRESENTATIVE PRIOR TO FINAL INSTALLATION. MOUNT WELDING RECEPTACLE TO BOTTOM OF THE DISCONNECT ENCLOSURE. MATCH WELDING RECEPTACLE WITH WELDERS. PROVIDE AND INSTALL (2) #6 AND #10 GND WITH (1) 3/4" CONDUIT FROM PANEL TO DISCONNECT.
- **30** NON-FUSIBLE, 3 POLE, 3 WIRE, 30A 600VAC DISCONNECT SQUARE D CAT. NO. VHU361. DISCONNECT SWITCH TO BE MOUNTED ON WALL WITH THE TOP OF THE DISCONNECT TO BE 5'-0" ABOVE FINISHED FLOOR. VERIFY FINAL LOCATION OF DISCONNECT WITH OWNER REPRESENTATIVE PRIOR TO FINAL INSTALLATION. PROVIDE AND INSTALL (3) #12 AND #12 GND WITH (1) 3/4" CONDUIT FROM PANEL TO DISCONNECTS.
- **10** **240** NON-FUSIBLE, 3 POLE, 3 WIRE, 100A 240VAC DISCONNECT SQUARE D CAT. NO. VHU363. DISCONNECT SWITCH TO BE MOUNTED ON WALL WITH THE TOP OF THE DISCONNECT TO BE 4'-0" ABOVE FINISHED FLOOR. VERIFY FINAL LOCATION OF DISCONNECT WITH OWNER REPRESENTATIVE PRIOR TO FINAL INSTALLATION. MOUNT WELDING RECEPTACLE TO BOTTOM OF THE DISCONNECT ENCLOSURE. MATCH WELDING RECEPTACLE WITH WELDERS. PROVIDE AND INSTALL (2) #3 AND #8 GND WITH (1) 1" CONDUIT FROM PANEL TO DISCONNECT.
- **Q** QUADPLEX RECEPTACLE. PROVIDE AND INSTALL (2) 120V, 20A, 2P, 3W, GROUNDING, SPECIFICATION GRADE RECEPTACLE. GRAY WITH STAINLESS STEEL PLATE IN DOUBLE GANG OUTLET BOX AND HUBBELL "BR20WHY" OR EQUAL. MOUNT 12" BELOW DISCONNECT WHERE SHOWN ON SHEET E3.
- **240V, 2 POLE, 3 WIRE PLUG RECEPTACLE. MATCH PLUG RECEPTACLE TO APPLIANCE AS REQUIRED. PROVIDE AND INSTALL (2) #6 AND #10 GND WITH 3/4" CONDUIT.**

CALL SYSTEM LEGEND:

- PROVIDE AND INSTALL NEW IP BASED HANDSETS IN CLASSROOMS FOR PAGING CAPABILITIES. CONTRACTOR SHALL PROVIDE AND INSTALL (1) CAT6 CABLE TO EACH HANDSET FROM IT ROOM #E106.
- CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR PRELIMINARY REVIEW. AFTER ENGINEER REVIEWS THE SHOP DRAWINGS, THE ENGINEER, THE CONTRACTOR, OWNER'S REPRESENTATIVE SHALL MEET AT THE SITE TO REVIEW THE SHOP DRAWINGS. THE CONTRACTOR SHALL UPDATE THE SHOP DRAWINGS BASED ON THE ON-SITE REVIEW COMMENTS. THE CONTRACTOR SHALL SUBMIT THE REVISED SHOP DRAWINGS FOR FINAL REVIEW AND APPROVAL.

CLOCK SYSTEM LEGEND:

- CLOCKS SHALL BE MOUNTED ABOVE DOOR OPENINGS IN CLASSROOMS AND WALL MOUNTED IN CORRIDORS. SEE SHEET E4 FOR LOCATIONS. PROVIDE AND INSTALL (1) CAT6 POE CABLE TO EACH IP DIGITAL CLOCK.
- CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR PRELIMINARY REVIEW. AFTER ENGINEER REVIEWS THE SHOP DRAWINGS, THE ENGINEER, THE CONTRACTOR, OWNER'S REPRESENTATIVE SHALL MEET AT THE SITE TO REVIEW THE SHOP DRAWINGS. THE CONTRACTOR SHALL UPDATE THE SHOP DRAWINGS BASED ON THE ON-SITE REVIEW COMMENTS. THE CONTRACTOR SHALL SUBMIT THE REVISED SHOP DRAWINGS FOR FINAL REVIEW AND APPROVAL.
- CD** **BOGEN** BCBD 3300 SERIES WIRED DIGITAL CLOCK. FLUSH MOUNTED, 110V, COLOR RED, #BCBD-33F-404-1R FOR ABOVE THE DOOR CLOCKS IN CLASSROOMS.
- CD** **BOGEN** BCBD 3300 SERIES WIRED DIGITAL CLOCK, WALL DOUBLE MOUNTED, 110V, COLOR RED, #BCBD-33F-404-1R WITH DOUBLE MOUNT POLE #BCAB-4GD-01S-0 FOR WALL MOUNTED CLOCKS IN CORRIDORS. PLEASE NOTE THESE REQUIRES TWO (2) DIGITAL CLOCKS PER ONE (1) DOUBLE POLE MOUNT. MOUNT AT 8' AFF.

GENERAL NOTES:

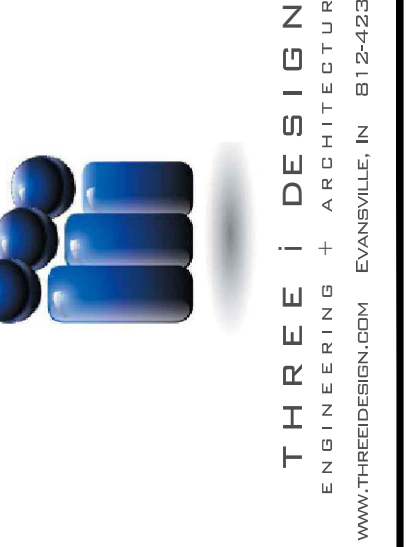
1. ALL INTERIOR TECHNOLOGY WORK SUCH AS OVERHEAD CAMERAS, HDMI CABLING, WAPs, FIBER, ETHERNET CABLING, MEDIA PLAYER, SPEAKERS, CAT6 CABLING AND COMMUNICATIONS SHALL BE BY THE CONTRACTOR AND INCLUDED IN THE BASE BID AMOUNT.

LIGHTING FIXTURE SCHEDULE:							
SYMBOL	DESCRIPTION	MANUFACTURER	MODEL	LAMP	LUMENS	WATTS	NOTES:
	2'x2' CPX LED PANEL, MULTIVOLT, 3500K	LITHONIA	CPX 2X2 4000LM 80CRI 35K SWL MIN10 2T MVOLT	LED	4425	36.3	
	2'x2' CPX LED PANEL, MULTIVOLT, 3500K	LITHONIA	CPX 2X2 4000LM 80CRI 35K SWL MIN10 2T MVOLT E10WLCP	LED	4425	36.3	LIGHT FIXTURE WITH BATTERY PACK
	2'x4' CPX LED PANEL, MULTIVOLT, 3500K	LITHONIA	CPX 2X4 4000LM 80CRI 35K SWL MIN10 2T MVOLT	LED	5037	39.29	
	2'x4' CPX LED PANEL, MULTIVOLT, 3500K	LITHONIA	CPX 2X4 4000LM 80CRI 35K SWL MIN10 2T MVOLT E10WLCP	LED	5037	39.29	LIGHT FIXTURE WITH BATTERY PACK
	4' PENDANT MOUNT LED, 1000 LUMENS, 80CRI, 3500K, WHITE FINISH	AXIS	TB4DLED-1000-80-35-SO-4-W-UNV-1-SA	LED	1000	50	STEM MOUNTED. CONTRACTOR SHALL VERIFY STEM LENGTH PRIOR TO ORDERING. MATCH EXISTING ELEVATION.
	4' PENDANT MOUNT LED, 1000 LUMENS, 80CRI, 3500K, WHITE FINISH, BATTERY PACK	AXIS	TB4DLED-1000-80-35-SO-4-W-UNV-1-SA-B	LED	1000	50	STEM MOUNTED WITH BATTERY BACKUP. CONTRACTOR SHALL VERIFY STEM LENGTH PRIOR TO ORDERING. MATCH EXISTING ELEVATION.
	4' PENDANT MOUNT LED, 1000 LUMENS, 80CRI, 3500K, WHITE FINISH	AXIS	TB4SLED-1000-80-35-SO-4-W-UNV-1-SC	LED	1000	50	SURFACE MOUNTED
	4' PENDANT MOUNT LED, 1000 LUMENS, 80CRI, 3500K, WHITE FINISH, BATTERY PACK	AXIS	TB4SLED-1000-80-35-SO-4-W-UNV-1-SC-B	LED	1000	50	SURFACE MOUNTED, WITH BATTERY BACKUP
	EXIT SIGN FIXTURE, BRUSHED ALUMINUM HOUSING, SINGLE FACE, GREEN LETTERING, NICKEL-CADMIUM BATTERY	LITHONIA	EDGR-1-G-EL	LED		34	FOR DOUBLE FACE USE #EDGR-2-GW-EL

CTE RENOVATION AND MISC. IMPROVEMENTS
NORTH KNOX SCHOOL CORPORATION
NORTH KNOX JR-SR HIGH SCHOOL

REV	DATE	BY	ITEM
A	07/07/25	NDH	ISSUED FOR 50% REVIEW
B	08/04/25	NDH	ISSUED FOR 75% REVIEW
C	09/02/25	NDH	ISSUED FOR 85% REVIEW
D	09/22/25	NDH	ISSUED FOR 100% REVIEW
E	09/23/25	NDH	ISSUED FOR BID
F	10/15/25	NDH	ISSUED FOR ADDENDUM #2

LEGENDS	
DRAWN BY: CRD	DESIGNED BY: NDH
CHECKED BY: NKZ	DATE: 05/28/25
SCALE: AS NOTED	
PROJECT NUMBER: 25138A	
SHEET NO: E15	



BID
09/23/25