

BOARD OF EDUCATION
Office of Capital Programs
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Addendum No. 3

**Subject: SDP Contracts No. B-057 C, B-058 C, B-059 C and B-060 C of 2020/21
Major Renovation and Addition**

Location: Edwin Forrest Elementary School

This Addendum dated April 29, 2022 shall modify and become part of the Contract Documents. Any items not mentioned herein, or affected by this addendum, shall remain strictly in accordance with the original document, unless modified by prior addenda, if any.

NOTICE TO ALL BIDDERS:

N/A

1. MODIFICATIONS TO GENERAL AND SUPPLEMENTARY CONDITIONS (DIVISION 00)

N/A

2. MODIFICATIONS TO DIVISION 01 GENERAL REQUIREMENTS (DIVISION 01)

A. Section 01 10 00: Summary of Work: Insert the following:

1.17 COORDINATION BETWEEN GENERAL (GC) AND ELECTRICAL (EC)
CONTRACTORS

A. Clock removal and disposal will be by abatement contractor (asbestos paint and paper found in clocks). Wiring removal by EC.

N/A

3. CHANGES TO TECHNICAL SPECIFICATIONS (DIVISIONS 02-36):

Addendum No. 3 (cont'd)

- A. Specification Section 08 80 00:** Glass and Glazing: Section 2.2 E: Delete “1/4” clear interior lite of float (or tempered, where required) glass” and replace with the following:

1/4” clear interior lite of tempered glass.

- B. Specification Section 12 24 13:** Window Treatments: Delete “Eco-Veil group, 1350 Series” and replace with the following

Refer to Finish Specification on A-804

- C. Specification Section 23 73 13:** Modular Indoor Central-Station Air-Handling Units: Delete paragraph 2.1.A in its entirety and replace with the following:

- A. Subject to compliance with requirements, provide products by one of the following:

1. Carrier
2. JCI
3. Trane

- D. Specification Section 23 74 33:** Dedicated Outdoor Air Units: Delete paragraph 2.1.A in its entirety and replace with the following:

- A. Subject to compliance with requirements, provide products by one of the following:

1. Trane
2. Carrier
3. Addison

4. CLARIFICATIONS:

- A. Drawings AD-100, AD-101, AD-102, AD-103: Revise keynote D14 to read “Remove entire existing **ACT** ceiling...”
- B. Drawings A-120, A-121, A-122, A-123: Revise keynote #4 to read “Not Used”
- C. Drawing A-401: Revise keynote DC7 in its entirety to read “Remove existing windows and prepare the opening for new windows. Refer to general notes on finish plans A800 thru A804 for treatment of existing wood trims and sill to remain.”
- D. Drawing A-402: Revise keynote 7 to remove the line “& new solid surface Corian window sills”
- E. Drawing A-804: Finish Spec Table Under Section Miscellaneous: For Material FBB Revise “See elevation 9/A-805” to “See elevation 8/A-420 and 9/A-420”
- F. Drawing M-200: Mechanical Basement New Work Plan - Piping – At New Janitors Closet B-19A, add thermostat for UH-7 on wall between door and mop receptor.

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- G. Drawing M-300: Mechanical Room New Work Plan – Add the following general note:
1. Install all ductwork tight to structure except where otherwise noted.
- H. Drawing E-502: Wiring for Domestic Booster Pump “DBP-2” shall be 3#8+1#10GND in ¾" conduit.

5. QUESTIONS AND ANSWERS

RFI from The Bedwell Company dated Monday April 18, 2022 (1 question)

Question 1: U/G Tank Removal

Reference note on detail 2/A301 on the North Demolition Elevation and the notes on AD-100 regarding the Oil Tank Removal. Please provide details of the Oil Tank; The Tank Vault and Fill material and the Structural details of the walls and framing so we can determine the scope of work required for the Oil Tank Removal and Structural Restoration

Answer: Noted drawings and Section 01 1155 UST REMOVAL provide all available information for Underground Storage Tank Removal. Sand in vault shall be disposed offsite in accordance with Section 01 1145 SOIL MANAGEMENT. Contractor is responsible for temporary shoring of opening in wall for tank removal and restoration. Wall is assumed to be CMU. Design of shoring system must be submitted by a registered PA Structural Engineer for approval.

RFI from The Bedwell Company dated Monday April 18, 2022 (6 questions)

Question 2: Demo note D14 on AD-103 states “Remove entire existing ceiling including but not limited to suspended grid system, HVAC devices, furring, wire supports, hangers, wood trim, etc. ETR device to be inventoried, carefully removed, protected and stored on site as required to remounted in new ceiling.”

Drawing AD-104 indicates areas of existing plaster ceiling to remain except for new openings to accommodate ductwork and equipment over the third floor.

Keynote #4 on A-123 states “Remove and replace plaster ceiling above classrooms, coat rooms, offices on third floor.”

Drawing A-123 indicates that new ACT-1 is to be installed in the third-floor classrooms, offices and corridors. This drawing also shows that there is no ceiling (existing ceiling or underside of deck exposed) in the coat rooms.

Please confirm the following:

- **Question 2.1** We do not demolish any third-floor plaster ceilings except where needed to accommodate new ductwork and equipment.
Answer: Third floor plaster ceilings are to remain, except where needed to accommodate new ductwork and equipment.
- **Question 2.2:** Demo note D14 on AD-103 refers only to existing ACT ceilings and does not apply to existing plaster ceilings.

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Answer: Note D14 on AD-103 refers to ACT ceilings and does not apply to existing plaster ceilings.

- **Question 2.3:** Keynote #4 on A-123 is not applicable for any areas on the third floor.
Answer: Note #4 on A-123 is not applicable to the third floor.
- **Question 2.4:** The third-floor classrooms, offices and corridors are to receive new ACT ceilings as indicated on A-123.
Answer: Third floor spaces are to receive new ACT ceilings as indicated on A-123.
- **Question 2.5:** There is no [new] ceiling in the third-floor coat rooms (existing ceiling or underside of deck exposed).
Answer: No new ceilings are to be installed in the third floor coat rooms.
- **Question 2.6:** Reflected Ceiling Plan Note #3 is applicable where there is an existing plaster ceiling in the coat rooms on the third floor.
Answer: RCP Note #3 is applicable to the existing plaster ceiling in the coat rooms on the third floor.

RFI from The Bedwell Company dated Tuesday, April 18, 2022 (1 question)

Question 3: Windowsills

DC7 on A-401 indicates that existing sills are to be removed and replaced with new sills.

General Finish note #9 A-800, A-801, A-802 and A-803 indicates all existing wooden windowsills to remain and be refinished.

Keynote 7 on A-402 indicates that new solid surface corian window sills are to be installed.

Please confirm that General Finish Note #9 on A-800, A-801, A-802 and A-803 is not applicable.

Answer: Existing wooden windowsills are to remain and be refinished per note #9 on the A-800 Series drawings.

RFI from Smith Construction Inc. dated Tuesday, April 19, 2022 (1 question)

Question 4: On the finish schedule on A-804, WT-1 calls for the shade clothe to be Thermoveil Privacy Weave 0900 series (1%). On the spec they call for Eco-Veil 1350 5%. Please advise which is correct?

Answer: Shade is to be as designated on the finish schedule on A-804.

RFI from The Bedwell Company dated Tuesday, April 19, 2022 (2 questions)

Question 5: Plaster patch - Reflected ceiling plan Note 3 -Drawings A120, A121, A122 and A123 Reflected Ceiling Plan Note 3 states: All rooms to receive 150 SF plaster ceiling repair each. All corridors to receive 300 sf plaster ceiling repair on each floor and each wing. Repair all uneven ceiling surfaces to even smooth finish.

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- **Question 5.1** Confirm that the repair required by Note 3 is limited to a single skim coat of plaster.
Answer: Plaster repair refers to work described in Spec Section 090120 Maintenance of Plaster.
- **Question 5.2** Is Note 3 applicable to rooms that receive new ACT ceilings where the existing plaster ceiling is concealed?
Answer: Plaster repair note 3 is applicable to all rooms with existing plaster ceiling to remain whether concealed or exposed.

RFI from Dolan Mechanical Inc. dated Friday, April 22, 2022 (1 question)

Question 6: One of our suppliers is asking for a substitution consideration

Answer: Proposed substitutions are not reviewed or considered during the bidding period. See General Conditions GC-4.23 SUBSTITUTIONS (OR EQUAL) for procedures and requirements. Proposed substitutions must be equivalent to the basis of design or specified product or equipment, whether from a named manufacturer or not; otherwise, the basis of design or specified product or equipment must be provided.

RFI from Hyde Electric Corporation dated Monday, April 25, 2022 (7 questions)

Question 7: Will the school district or abatement contractor dispose of existing T-12 fluorescent tubes? Can you provide a quantity for pricing?

Answer: Electrical contractor is responsible for properly disposing of all existing lamps, ballasts, and fixtures. All fixtures shall be assumed to have T-12 fluorescent lamps.

Question 8: Will the school district remove all their equipment and supplies from electric room, boiler room, mechanical room B-26 and storage room B-26?

Answer: Yes

Question 9: Drawing E-500 Single Line: Do the five secondary circuits from transformer to MDS require a grounding conductor? If so, what size?

Answer: A grounding equipment conductor is not required between the utility transformer and Switchboard "MDS".

Question 10: Is the General Contractor responsible to core drill, seal and fire stop holes through the foundation walls per note in the specifications?

Answer: Each contractor is responsible to core drill and seal penetrations in exterior foundation walls that are associated with work that contractor is installing.

Question 11: Drawings E-500 Single Line: Please confirm typo "for continuation see drawing E401", should read E501.

Answer: Yes, on Dwg E-500, the feeder to Distribution Panel "PDP" should be changed to "FOR CONTINUATION SEE DRAWING E-501". Also, on Dwg E-501, the feeder to Distribution Panel "PDP" from Switchboard "MDS" should be changed to "FOR CONTINUATION SEE DRAWING E-500".

Question 12: Drawing E-400 thru E-404, E-502, E-503

- a. **Question 12.1:** Floor plans for mechanical equipment do not show wiring or disconnecting means for equipment. Can we use any type disconnect (cord & plug, single, double, three pole

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toggle switch) that meets code?

Answer: Note #2 on Drawings E-400 – E-404 refers to the Equipment Wiring Schedule on drawings E-502 and E-503 for wiring requirements, which include the circuiting, conduit, wiring, and disconnect means for each piece of mechanical and plumbing equipment to be wired for power. Requirements for disconnects are listed in specification section 26 28 16. Toggle switches may be used for indoor single phase equipment only, but must have provisions to be locked in the off position. Cord and plug should not be used unless equipment is provided with cord or drawings specifically indicate for a cord and plug to be used as means of disconnect for equipment.

- b. **Question 12.2:** Will the school district provide drawings for permit showing wiring and disconnecting means on the floor plan for License & Inspections or will that be the responsibility of the electrical contractor?

Answer: All required information is included in the contract drawings, though if deemed necessary by L&I to provide floor plans with wiring and disconnecting means shown, this would be provided by the school district.

Question 13: E-502, E-503: Who decides location of the thermostats? Drawings calls for box and plate, who provides conduit, wire and installation of thermostats?

Answer: Thermostat locations are shown on mechanical drawings. Where line-voltage thermostats are referenced in the Electrical Data Schedule on E-503, the associated conduit and wiring is by the EC. Refer to enclosed revised Dwg E-400 for line-voltage thermostat locations associated with unit heaters, as the EC is to wire the unit heaters via the line-voltage thermostats, per the Remarks column on drawing E-503.

RFI from The Bedwell Company dated Tuesday, April 26, 2022 (1 question)

Question 14: We request waiver of AWI membership noted in interior millwork spec's

Answer: SDP will waive the AWI QCP millwork certification requirement.

REVISED SPECIFICATION SECTIONS:

- Specification 085113 Aluminum Windows
-

REVISED DRAWINGS:

- A-420: Revised to provide additional corridor elevations
- E-400: Revised drawing to show MC provided, EC installed, line-voltage thermostats for unit heaters UH-1 through UH-7 in basement.
- E-503: Revised Mechanical Equipment – Electrical Data Schedule for EC to provide and install disconnects for IHRU equipment.

End of Addendum 3

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SECTION 085113

ALUMINUM WINDOWS

PART 1 GENERAL

1.1 GENERAL REQUIREMENTS

- A. Work of this Section, as shown or specified, shall be in accordance with the requirements of the Contract Documents.

1.2 SECTION INCLUDES

- A. Work of this Section includes all labor, materials, equipment, and services necessary to complete the aluminum windows as shown on the drawings and/or specified herein, including, but not limited to, the following:
 - 1. Aluminum replacement windows, fixed and operable.
 - 2. Miscellaneous insulation at window frames.
 - 3. Insulated metal panels.**
 - 4. Anchors, hardware and accessories including trim pieces and panning.

1.3 RELATED SECTIONS

- A. Unit Masonry - Section 042000.
- B. Joint Sealers - Section 079200.
- C. Glass and Glazing - Section 088000.

1.4 PERFORMANCE REQUIREMENTS

- A. Windows shall conform to the "Voluntary Specification for Aluminum Prime Windows & Sliding Glass Doors" as published by ANSI/AAMA 101/I.S.2-97 unless more stringent requirements are specified. Windows shall conform to minimum standards of AW-PG-100 for projected windows.
- B. Performance and Testing: Except as otherwise indicated, comply with air infiltration tests, water resistance tests and applicable load tests specified in ANSI/AAMA 101/I.S.2-97 for type and classification of window units required in each case.
 - 1. Testing: Where manufacturer's standard window units comply with requirements and have been tested in accordance with specified tests, provide certification by manufacturer to the Architect and Owner showing compliance with such tests; otherwise, perform required tests through an AAMA-accredited testing

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laboratory or agency, and provide certified test results to the Architect and Owner.

2. Test reports shall be not more than four years old.
 3. Sample submitted for tests shall be manufacturer's standard construction and whose overall dimensions shall be at least the lay-out size window and window/door unit required for this Project. Sequence of test shall be optional between manufacturer and the testing laboratory except that in all cases, air infiltration test shall be performed before water resistance test. Sash in sample shall contain the approximate configuration as that of windows to be tested.
 4. To evaluate testing and measure product performance, testing shall be conducted on manufacturer's standard product glazed with type of glazing material specified herein.
- C. A thermal transmittance test and a condensation resistance test shall be conducted according to AAMA 1503-04, "Voluntary Test Method for Thermal Transmittance and Condensation Resistance of Windows, Doors and Glazed Wall Sections." Standard test conditions as specified in Section 9.1 of the 1503.1-04 shall be used. Windows shall meet the following minimum criteria:
1. Condensation Resistance Test (CRF)
 - a. With window sash and ventilators closed and locked, test unit in accordance with AAMA 1502.7.
 - b. Condensation-Resistance Factor (CRF): Provide aluminum windows tested with insulating glass for thermal performance according to AAMA 1503, showing a minimum CRF of 56.
 2. Thermal Transmittance Test (Conductive U-Value)
 - a. With window sash and ventilators closed and locked, test unit in accordance with AAMA 1503.0.
 - b. Conductive thermal transmittance (U-value) shall be not more than 0.38 BTU/hr/sf/deg. F.
- D. Solar Heat-Gain Coefficient (SHGC): NFRC 200 maximum whole-window SHGC of 0.30.
- E. Provide anchorage of window to building substrate to withstand pressure or suction winds loads per requirements of the Building Code but not less than 30 psf.
- F. Forced-Entry Resistance: Comply with Performance Grade 10 requirements when tested according to ASTM F 588.
- G. Life Cycle Testing: When tested in accordance with AAMA 910, there is to be no damage to fasteners, hardware parts, support arms, activating mechanisms or any other damage which would cause the window to be inoperable at the conclusion of

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testing. Air infiltration and water resistance tests shall not exceed the primary performance requirements specified.

- H. Fabricate and install window to allow for thermal movement of materials when subject to a temperature differential from –30 deg. F. to +180 deg. F. without damage of any finish.

1.5 QUALITY ASSURANCE

- A. Manufacturers shall have been engaged in the manufacture of aluminum windows of grades specified for not less than 10 years.
- B. Take field measurements of existing openings prior to submitting shop drawings and show same on shop drawings for each opening. Note that the Contract Drawings show general locations and sizes of windows, but the Contractor shall remain responsible for all field measurements, quantities, etc.

1.6 SUBMITTALS

A. Shop Drawings

1. Shop drawings shall show in detail and fully indicate the location and the quantities of all the work, the kind, finish, size, section of each unit, overall and detail dimensions, factory and field joint locations, arrangements and details, location and detail of each piece of anchorage, flashings, supporting construction provisions for the work of others.
2. Shop drawings shall show all surrounding conditions on elevations and details, including steel, concrete, masonry, lintels, block, and anchorage; all correctly dimensioned.
3. Shop drawings of building elevations shall be at scale of 1/8" = 1'-0", or larger. Other shop drawings shall be at a scale that is normal to trade, or larger if required by Architect.
4. Contract drawings may not be used (reproduced, enlarged, reduced, etc.) by Subcontractor for shop drawings.
5. Shop drawings also shall fully demonstrate all requirements respecting the manufacture, finishing, handling, storage, carting sequence and erection of all materials specified herein.
6. Show joinery techniques, provision for horizontal and vertical expansion, drainage and weep systems, glass and metal thicknesses and framing member profiles.
7. Identify all materials, including metal alloys, glass types, fasteners, and glazing materials. Identify all shop and field sealants by product name and locate on drawings. Glazing details shall be at full size scale.
8. Show dimensioned position of glass edge relative to metal rabbet.

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9. Shop drawings shall show attachments of window assemblies to adjoining construction and location of all work; kind, finish and size of frames, overall and detail dimensions, location and detail of each anchorage; supporting and adjoining construction; provision for the work of other trades; and all other required information.
10. Contractor shall verify all measurements of existing window openings in the field before commencing fabrication.
11. Any proposed deviations from work shown on the Contract drawings shall be indicated and so identified on shop drawings for Architect's review.

B. Samples

1. Submit 12" long sample of extrusion with specified finish.
2. Full size corner section of all types of aluminum frame, showing construction, glass and finishing - 12" x 12".
3. All fasteners, straps, hardware, locks and keys, sealant, etc.

C. Submit certified test results as required herein.

D. Warranties as noted in 1.9.

E. Window manufacturer and Contractor for work of this section must each submit references of prior projects similar in size, scope and window type.

1.7 DELIVERY, STORAGE AND HANDLING

- A. Materials shall be packed, loaded, shipped, unloaded, stored and protected in a manner which will avoid abuse, damage and defacement in accordance with the recommendations contained in the AAMA Aluminum Curtain Wall Manual #10 entitled "Care and Handling of Architectural Aluminum from Shop to Site."
- B. Remove all paper type wrappings and interleavings that are wet or which could become wet when unloading materials.
- C. Store inside structure in space designated by Owner.
- D. Stack vertically or on edge so that water cannot accumulate on or within materials using wood or plastic shims between components to provide water drainage and air circulation.
- E. Cover materials with tarpaulins or plastic hung on frames to provide air circulation and prevent contaminants from contacting aluminum.
- F. Keep water away from stored assemblies.

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- G. The Contractor shall be responsible for taking the steps necessary to protect the materials from careless handling of tools, weld splatter, acids, roofing tar, solvents, abrasive cleaners, and other items that could damage window components and finish.

1.8 MANUFACTURER'S REPRESENTATIVE

- A. Contractor shall require representative of manufacturer of the windows to provide field instructions and supervision of the installation of the windows.
- B. Contractor shall require the manufacturer's representative to make sure that the subcontractor's workmen are fully instructed and trained in the handling and application of all the materials, and shall see that all the materials are correctly installed.
- C. Upon completion of the installation, the Contractor shall submit to the Architect in written form certification that the representative of the manufacturer of the windows has supervised the work of this Section and that all windows are correctly installed.

1.9 WARRANTIES

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace aluminum windows that fail in materials or workmanship within specified warranty period.

1. Failures include, but are not limited to, the following:

- a. Failure to meet performance requirements.
- b. Structural failures including excessive deflection, water leakage, or air infiltration.
- c. Faulty operation of movable sash and hardware.
- d. Deterioration of metals or other materials beyond that which is normal.
- e. Failure of insulating glass.

2. Warranty Period:

- a. Window: Five years from date of Substantial Completion.
- b. Insulated Glazing: Ten years from date of Substantial Completion.
- c. Painted Metal Finishes:
 - 1). Five years from date of Substantial Completion for AAMA 2603 Baked Enamel Finishes.
 - 2). Fifteen years from date of Substantial Completion for AAMA 2605 Superior Performance Finishes.

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PART 2 PRODUCTS

2.1 WINDOWS

- A. Basis of Design: Architectural Window Manufacturing Corporation; Series 3042i Projected.

2.2 PROJECTED AND FIXED WINDOWS

A. Aluminum Windows and Components

1. Extruded aluminum prime billet 6063-T5, aluminum sheet 3003 H14.
2. Minimum principal window member wall thickness 1/8".
3. Minimum frame and vent depth, front to back, shall be 4-1/4" frame depth and 3-1/2" sash depth. Vent to be flush with frame.
4. Windows must be flush vent design (overlapping vents will not be acceptable).
5. Vents and fixed lites must have an integral exterior bevel.
6. Fabricate aluminum windows in sizes indicated. Include a complete system for assembling components and anchoring windows.
7. Fabricate aluminum windows that are reglazable without dismantling sash or ventilator framing.
8. Vent sections must be tubes.

B. Hardware - General

1. All steel components 300 Series stainless steel (SS) (except roto-operator arms) i.e. - keepers, fasteners, hold open arms, tracks, etc.
2. All aluminum components 6063-T5 (T6) or 6105-T6.
3. Locking handles and cases, white bronze.
4. Hardware members bridging frame or vent thermal barrier to be nylon or suitable low conductivity, non-metallic material.

C. Thermally Improved Construction: Fabricate aluminum windows with an integral, concealed (products with exposed thermal barriers will not be acceptable), low-conductance thermal barrier; located between exterior materials and window members exposed on interior side; in a manner that eliminates direct metal-to-metal contact.

1. All exterior aluminum shall be separated from interior aluminum by a rigid, structural thermal barrier. For purposes of this specification, a structural thermal barrier is defined as a system that shall transfer shear during bending and,

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therefore, promote composite action between the exterior and interior extrusions.

2. No thermal short circuits shall occur between the exterior and interior.
 3. The thermal barrier shall be "Insulabar" or equal and shall consist of two glass reinforced polyamide nylon 6/6 struts mechanically crimped in raceways extruded in the exterior and interior extrusions.
 4. Poured and debridged urethane thermal barriers shall not be permitted.
- D. Weather Stripping: Provide full-perimeter weather stripping for each operable sash and ventilator.
1. Weather-Stripping Material: Manufacturer's standard system and materials complying with AAMA/WDMA/CSA 101/I.S.2/A440-08.
- E. Weep Holes: Provide weep holes and internal passages to conduct infiltrating water to exterior.
- F. Muntins: Where shown on drawings, muntins shall be 3/8" deep profiled extruded aluminum applied to the exterior of 1" deep insulating glass. Roll formed muntins shall not be acceptable. Exterior applied muntins, where applicable, must be pinned to an integral bevel on the frame or sash. Products using applied bevels will not be accepted.**
- G. Glass and Glazing: Shop glaze, see section 088000 for insulating glass description.
- H. Fabrication
1. General
 - a. Finish, fabricate and shop assemble frame and sash members into complete windows under responsibility of one manufacturer.
 - b. No bolts, screws or fastenings to bridge thermal barriers or impair independent frame movement.
 2. Ventilator: Miter all corners and mechanically stake over solid aluminum, corner block minimum 1/4" thick, set and sealed in epoxy leaving hairline joinery, then seal weathertight. Joinery methods must not discolor finish or be unsightly.
 3. Main Frame Members: Miter all corners and continuously weld along unexposed surfaces so as not to affect the structural or thermal integrity of the thermal barrier, then seal weathertight.
 4. Weather Stripping: Two rows (both inner and outer overlap contacts) in extruded races about perimeter of operating sash. Securely stake and join at corners.
 5. Glass Drainage: Provision shall be made to insure that water will not accumulate and remain in contact with the perimeter areas of sealed insulating glass.

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6. Hardware

- a. Hinges: Concealed stainless steel four-bar friction hinge with adjustable-slide friction shoe; two per ventilator.
- b. Locks: Cam-action, white bronze locking handle and keeper (two per ventilator over 42" wide).
- c. Limit Device: Integral adjustable stainless steel, stop (two per ventilator). Limit opening to 8".

2.3 INSECT SCREENS

- A. General: Design windows and hardware to accommodate screens in a tight-fitting, removable arrangement, with a minimum of exposed fasteners and latches. Locate screens on inside of window. Provide insect screens on all operable sash.
- B. Aluminum Insect Screen Frames: Manufacturer's standard aluminum alloy complying with SMA 1004. Fabricate frames with mitered or coped joints or corner extrusions, concealed fasteners, and removable PVC spline/anchor concealing edge of frame.
 1. Extruded-Aluminum Tubular Framing Sections and Cross Braces: Not less than 0.050" wall thickness.
 2. Finish: Match aluminum window members.
- C. Aluminum Wire Fabric: 18-by-16 mesh of 0.011" diameter, coated aluminum wire.
 1. Wire-Fabric Finish: Charcoal gray.

2.4 INSULATED PANELS:

- A. Overall thickness: 1"
- B. Exterior Face: Kynar paint on smooth .032" aluminum - color to be selected from manufacturer's standard.
- C. Interior Face: Kynar paint on smooth .032" aluminum - color to be selected from manufacturer's standard.
- D. Exterior Substrate: 3/16" corrugated plastic.
- E. Interior Substrate: 3/16" corrugated plastic.
- F. Core: Polyisocyanurate.

2.5 FINISH OF ALUMINUM

- A. Exterior of Window:
 1. Superior-Performance Organic Finish: AA-C12C40R1x (Chemical Finish: cleaned with inhibited chemicals; Chemical Finish: acid-chromate-fluoride-

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phosphate conversion coating; Organic Coating: as specified below). Prepare, pretreat, and apply coating to exposed metal surfaces to comply with AAMA 2605 and with coating and resin manufacturer's written instructions.

- a. **Fluoropolymer Two-Coat System:** Manufacturer's standard two-coat thermocured system consisting of specially formulated inhibitive primer and fluoropolymer color topcoat containing not less than 70 percent polyvinylidene fluoride resin by weight; complying with AAMA 2605.
- b. **Color:** As selected by Architect from manufacturer's standard non-mica, non-exotic, non-metallic colors. (Note: Exterior color may be different from interior color.)

B. Interior of Window:

1. **Baked-Enamel Finish: AA-C12C42R1x (Chemical Finish:** cleaned with inhibited chemicals; **Chemical Finish:** acid-chromate-fluoride-phosphate conversion coating; **Organic Coating:** as specified below). Apply baked enamel complying with paint manufacturer's written instructions for cleaning, conversion coating, and painting.
 - a. **Organic Coating:** Thermosetting, modified-acrylic enamel primer/topcoat system complying with AAMA 2603 **Organic Coating:** Thermosetting, modified-acrylic enamel primer/topcoat system complying with AAMA 2603.
 - b. **Color:** As selected by Architect from manufacturer's standard non-mica, non-exotic, non-metallic colors. (Note: Exterior color may be different from interior color.)

PART 3 EXECUTION

3.1 INSPECTION AND REMOVALS

- A. Examine surfaces and conditions where aluminum windows are to be installed and correct any conditions detrimental to the proper and timely completion of the work. Do not proceed with the work until unsatisfactory conditions are corrected to permit proper installation of the work.
- B. Verify dimensions taken at the job site affecting the work. Bring field dimensions which are at variance to the attention of the Architect. Obtain decision regarding corrective measures before the start of installation.

3.2 INSTALLATION

- A. Use only skilled tradesman with work done in accordance with approved Shop Drawings and specifications.

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- B. Plumb and align window faces in a single plane for each wall plane and erect windows and materials square and true adequately anchored to maintain positions permanently when subjected to normal thermal and building movement and specified wind loads.
- C. Adjust windows for proper operation after installation.
- D. Furnish and apply sealants to provide a weathertight installation at all metal-to-metal joints and intersections of frames and at opening perimeters. Wipe off excess material and leave all exposed surfaces and joints clean and smooth.
- E. Aluminum shall be insulated from direct contact with steel, masonry, concrete, or non-compatible materials by bituminous paint, zinc chromate primer, or other suitable insulation material.
- F. Blanket insulation shall be installed behind aluminum covers, panning and trim to insure thermally insulated seal.

3.3 ADJUSTING AND CLEANING

- A. After completion of window installation, windows shall be inspected, adjusted, put into working order and left clean, free of labels, etc.
- B. Glass that is broken, damaged, cracked, or permanently stained shall be replaced.
- C. Final cleaning of finish shall be in accordance with AAMA 610.1.

END OF SECTION

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NO.	DATE	REVISION
1	2022-04-28	ADDendum NO. 3
2	2022-03-31	PERMIT FOR NO.
3	2022-03-10	PERMIT FOR PERMIT

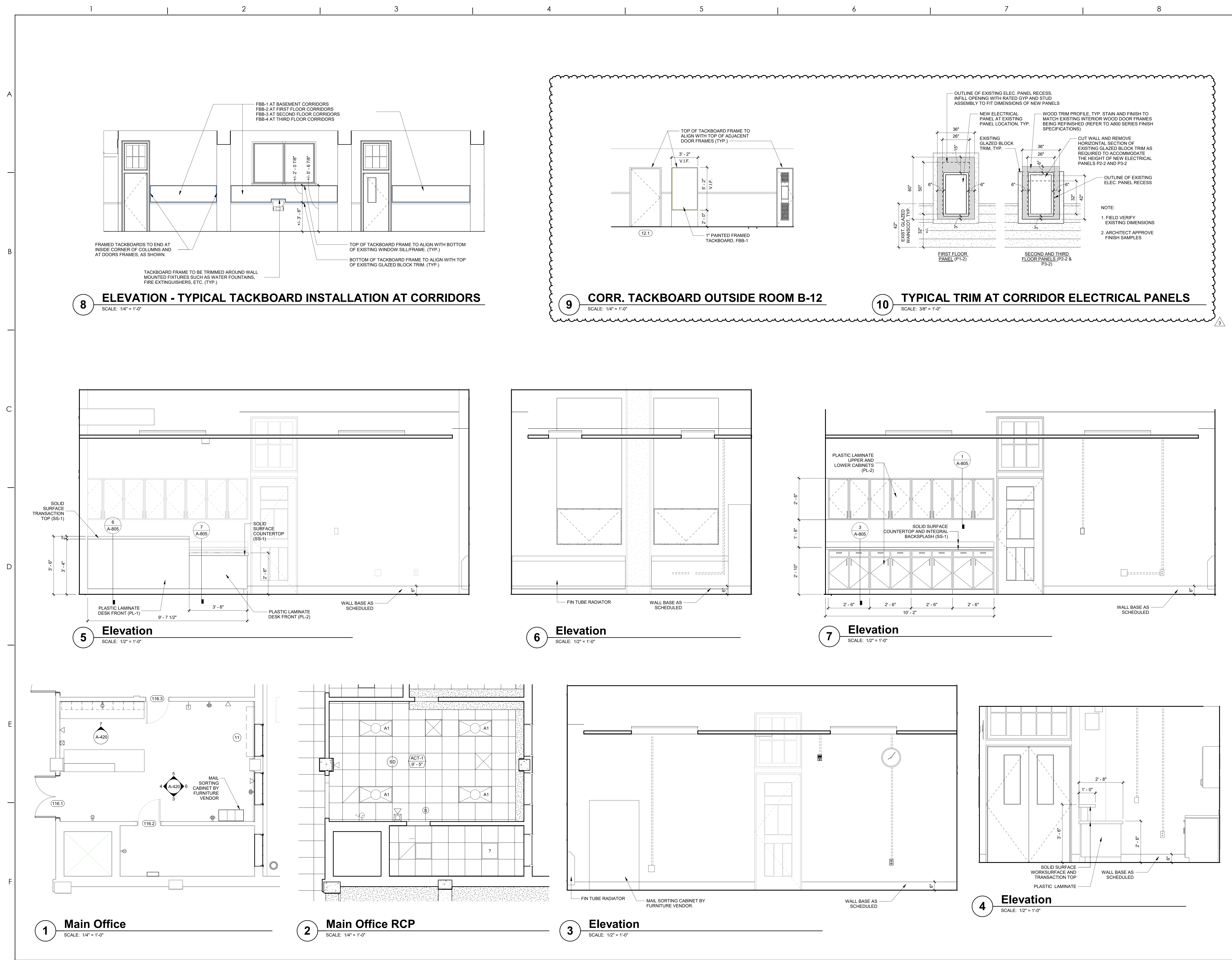
SCHOOL & LOCATION
**EDWIN FORREST
ELEMENTARY SCHOOL**
4300 BLEIGH AVENUE
PHILADELPHIA, PA 19136

PROJECT TITLE
MAJOR RENOVATIONS

DRAWING TITLE
MAIN OFFICE & TYPICAL CORRIDOR

DRAWING SCALE As indicated	
LOCATION NO. As indicated	FILE NO. 20.083
DRAWN BY KH, DC, MJF	CHECKED BY MC, LMJ
GC: 8-057 C OF 2020 / 21	MC: 8-058 C OF 2020 / 21
PC: 8-059 C OF 2020 / 21	EC: 8-060 C OF 2020 / 21

DRAWING NO.
A-420



8 ELEVATION - TYPICAL TACKBOARD INSTALLATION AT CORRIDORS
SCALE: 1/4" = 1'-0"

9 CORR. TACKBOARD OUTSIDE ROOM B-12
SCALE: 1/4" = 1'-0"

10 TYPICAL TRIM AT CORRIDOR ELECTRICAL PANELS
SCALE: 3/8" = 1'-0"

5 Elevation
SCALE: 1/2" = 1'-0"

6 Elevation
SCALE: 1/2" = 1'-0"

7 Elevation
SCALE: 1/2" = 1'-0"

4 Elevation
SCALE: 1/2" = 1'-0"

1 Main Office
SCALE: 1/4" = 1'-0"

2 Main Office RCP
SCALE: 1/4" = 1'-0"

3 Elevation
SCALE: 1/2" = 1'-0"

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NO.	DATE	REVISION
1	2022-03-10	ISSUED FOR PERM
2	2022-03-10	ISSUED FOR PERM
3	2022-04-28	ISSUED FOR NO. 3

SCHOOL & LOCATION
**EDWIN FORREST
ELEMENTARY SCHOOL**
4300 BLEIGH AVENUE
PHILADELPHIA, PA 19136

PROJECT TITLE
MAJOR RENOVATIONS

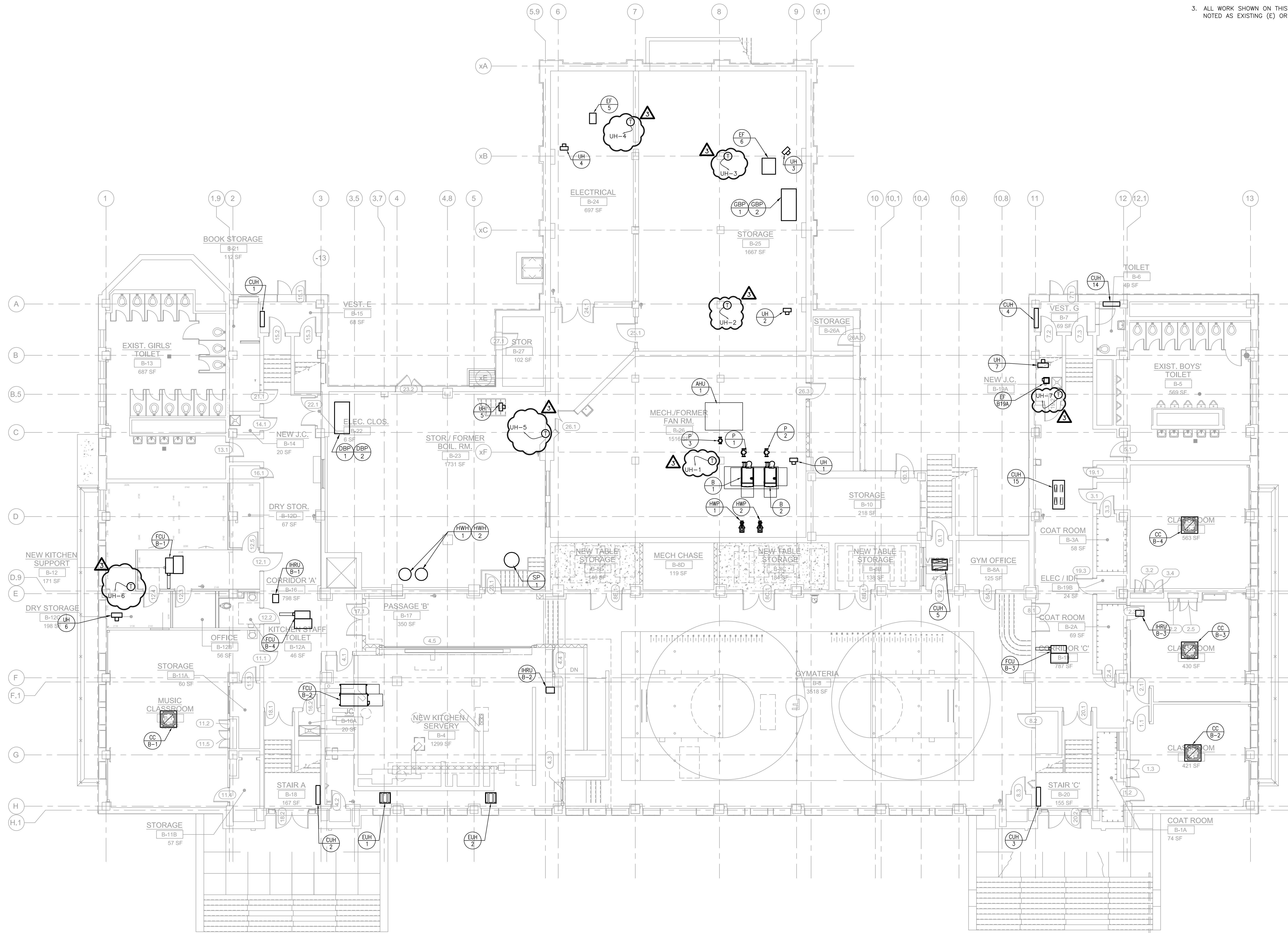
DRAWING TITLE
**BASEMENT-NEW WORK
EQUIPMENT PLAN**

DRAWING SCALE AS NOTED	
LOCATION NO. JDB	FILE NO. 20.083
DRAWN BY JDB	CHECKED BY RLD
GC: B-057 C OF 2020 / 21	MC: B-058 C OF 2020 / 21
PC: B-059 C OF 2020 / 21	EC: B-060 C OF 2020 / 21

DRAWING NO.
E-400

NOTES:

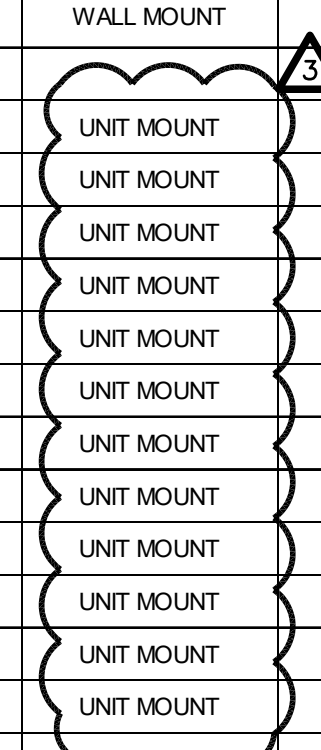
- FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES, REFER TO DRAWING E-001.
- THIS DRAWING SHOWS LOCATIONS OF MECHANICAL AND PLUMBING EQUIPMENT TO BE WIRED BY THE ELECTRICAL CONTRACTOR. REFER TO EQUIPMENT REQUIREMENTS SCHEDULE ON DWG E-502 AND E-503 FOR ELECTRICAL WIRING REQUIREMENTS FOR ALL OF THIS EQUIPMENT. COORDINATE FINAL LOCATION IN FIELD WITH RESPECTIVE CONTRACTORS.
- ALL WORK SHOWN ON THIS DRAWING IS TO BE NEW WORK, UNLESS OTHERWISE NOTED AS EXISTING (E) OR RELOCATED (REL).



1 BASEMENT-NEW WORK EQUIPMENT PLAN
SCALE: 1/8" = 1'-0"

NOTE: REFER TO MECHANICAL AND PLUMBING DRAWINGS FOR EQUIPMENT LOCATIONS

MECHANICAL EQUIPMENT - ELECTRICAL DATA SCHEDULE table with columns: EQUIPMENT NAME, V-Ø-Hz, HP/VVA, WIRE AND CONDUIT, CIRCUIT BREAKER, PANEL, CKT #(S), STARTER/DISCONNECT FURNISHED BY MCFPC, STARTER/DISCONNECT FURNISHED BY EC, THERMAL MOTOR SWITCH FURNISHED BY EC, SUPPLY SMOKE DETECTOR QUANTITY, RETURN SMOKE DETECTOR QUANTITY, REMARKS.



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Revision table with columns: NO., DATE, REVISION.

SCHOOL & LOCATION EDWIN FORREST ELEMENTARY SCHOOL 4300 BLEIGH AVENUE PHILADELPHIA, PA 19136

PROJECT TITLE MAJOR RENOVATIONS

DRAWING TITLE ELECTRICAL SCHEDULES

Table with drawing scale, location, and revision information.

DRAWING NO. E-503